InnovExplo Inc. – Consulting Firm,
Mines & Exploration
560-B, 3e Avenue, Val-d'Or (Québec) J9P 1S4
Telephone: (819) 874-0447
Facsimile: (819) 874-0379
Toll-free: 1-866-749-8140
Email: info@innovexplo.com
Web site: www.innovexplo.com

North American Palladium Ltd.

TECHNICAL REPORT AND MINERAL RESOURCE ESTIMATE FOR THE FLORDIN DEPOSIT (according to Regulation 43-101 and Form 43-101F1)

Project Location

Desjardins Township
Province of Quebec, Canada
(NTS: 32F/07)
(UTM 358740E; 5463840N)
(Zone 18, NAD 83)

Prepared for

NORTH AMERICAN PALLADIUM LTD.
2116 -130 Adelaide St. W.
Toronto, Ontario
Canada, M5H 3P5

Prepared by:

Bruno Turcotte, M.Sc., P.Geo. (OGQ no.453)
InnovExplo – Consulting Firm
Val-d'Or (Québec)
E-mail: bruno.turcotte@innovexplo.com

Carl Pelletier, B.Sc., P.Geo. (OGQ no.384)
InnovExplo – Consulting Firm
Val-d'Or (Québec)
E-mail: carl.pelletier@innovexplo.com

March 31, 2010

TABLE OF CONTENTS

Item numbers in parentheses refer to the `CONTENTS OF THE TECHNICAL REPORT` in the section `FORM 43-101F1 - TECHNICAL REPORT` of Regulation 43-101 respecting standards of disclosure for mineral projects (GAZETTE OFFICIELLE DU QUÉBEC, December 14, 2005, Vol. 137, No. 50).

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

1.0 SUMMARY *(Item 3)*

On December 15, 2009, InnovExplo Inc was mandated by Tyson Birkett, Director of Exploration for Quebec for North American Palladium Ltd, to complete a Mineral Resource Estimate and a Technical Report for the Flordin Project in compliance with Regulation 43-101 and Form 43-101F1. The Mineral Resource Estimate covers the area for which historical resources were reported in the past. The Flordin Project is located near Lebel-sur-Quévillon, Québec, Canada. The issuer, North American Palladium Ltd, is a Canadian mineral exploration company trading publicly on the TSX in Toronto, Canada (TSX: PDL) and on the AMEX in New-York (AMEX: PAL). InnovExplo is an independent mining and exploration consulting firm based in Val-d'Or, Quebec.

The main author, Bruno Turcotte, M.Sc., P.Geo. (OGQ no.453), reviewed past surveys and all other data and relevant information judged adequate and reliable. The report was prepared under the supervision of Carl Pelletier, B.Sc., P.Geo. (OGQ no.384). The authors, Bruno Turcotte, M.Sc., P.Geo. and Carl Pelletier, B.Sc., P.Geo., are Qualified and Independent Persons as defined by Regulation 43-101. InnovExplo's technical support was provided by Serge Morin. Venetia Bodycomb of Vee Geoservices provided the linguistic editing.

The Flordin Project is approximately 40 km north of the town of Lebel-sur-Quévillon, Quebec, on NTS map sheet 32F/07. The project is located in the Desjardins Township. The approximate UTM coordinates for the geographic centre of the property are 358740E, 5463840N (Zone 18, NAD83). The Flordin property represents forty (40) contiguous ground-staked claims and covers an area of 593.09 hectares (40 mining titles; Fig. 4.2). The forty (40) mining titles are contiguous and owned by Cadiscor. In GESTIM, all titles are in good standing and registered 100% to Cadiscor Resources Inc.

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). To acquire the property, Cadiscor agreed to issue 300,000 common shares of Cadiscor to IAMGOLD and grant a 1% Net Smelter Return (NSR) production royalty on future commercial production from the property. Cadiscor will have a pre-emptive right at any time to purchase back this 1% NSR royalty for US $1,000,000. Moreover, 37 of the 40 claims are subject to a 20% NPI (Net Profit Interest) in favour of Flordin Mines Ltd. On May 26, 2009, North American Palladium completed a merger with Cadiscor Resources Inc and consequently retains 100% ownership of the Flordin property.

The Flordin Project lie within the Archean Superior Province. The rocks of the Superior Province are mainly Mesoarchean and Neoarchean in age and were significantly affected by post-Archean deformation only along its boundaries with Proterozoic orogens, such as the Trans-Hudson and Grenville orogens, and along major internal fault zones, such as the Kapuskasing structural zone. Tectonic stability has prevailed since ca. 2.6 Ga in large parts of the Superior Province. Proterozoic and younger activity is limited to rifting of the margins, emplacement of numerous mafic dyke swarms, compressional reactivation, and large-scale rotation at ca. 1.9 Ga and failed rifting at ca. 1.1 Ga. With the exception of the northwestern and northeastern Superior margins that were pervasively deformed and metamorphosed at 1.9 to 1.8 Ga, the craton has escaped ductile deformation.

The Flordin Project is located within the Abitibi Subprovince. The Abitibi Subprovince was divided into the Southern Volcanic Zone (SVZ) and the Northern Volcanic Zone (NVZ). The

Abitibi Subprovince displays a prominent E-W structural trend resulting from regional E-trending folds with an axial-planar schistosity that is characteristic of the Abitibi Greenstone Belt. The NVZ is interpreted as an intact segment with a complex stratigraphy composed of two mafic-felsic volcanic cycles that are interpreted as volcanic edifices forming an Archean ocean floor. Geochronological work supports a model of sequential arc development commencing with the 2730-2705 Ma NVZ, and followed by the younger 2705-2700 Ma SVZ. A subsequent NVZ-SVZ arc-arc collision was characterized by transpression and thrusting, which occurred between 2700 and 2690 Ma, whereas final terrane docking culminated with 2690-2680 Ma strike-slip tectonics. The limit between the NVZ and SVZ corresponds to the DPMFZ (Destor-Porcupine-Manneville Fault Zone).

The 2010 Mineral Resource Estimate was performed by Bruno Turcotte, M.Sc., P.Geo., under the supervision of Carl Pelletier, B.Sc., P.Geo., using all available results. The primary objective of InnovExplo's work was to confirm the presence of sufficient mineral resources within the Flordin property to justify further exploration work by North American Palladium Ltd (formerly Cadiscor Resources Inc). The Resource Estimate was calculated for the area between sections 5680E and 7000E from 3950N to 4150N, and from surface (0 m) to a depth of 425 metres. InnovExplo did not calculate a Mineral Resource Estimate for the Carthwright Zone. The Mineral Resource Estimate herein is not influenced by any penalizing factor. Mineral Resources are not Mineral Reserves since they have no demonstrable economic viability. The result of InnovExplo's work is a single Mineral Resource Estimate for the Flordin property with Measured, Indicated, and Inferred categories.

The authors, Carl Pelletier and Bruno Turcotte, are of the opinion that the current Mineral Resource Estimate can be classified as Measured, Indicated, and Inferred resources, and that the Estimate conforms to CIM standards and guidelines for reporting mineral resources and reserves. InnovExplo estimates the Flordin deposit has **Measured Resources of 29,700 metric tons grading 4.60 g/t Au for a total of 4,394 ounces, and Indicated Resources of 649,200 metric tons grading 4.24 g/t Au for a total of 88,420 ounces. Total Inferred Resources are estimated at 1,451,400 metric tons grading 3.63 g/t Au for a total of 169,261 ounces** at a cut-off grade of 2.0 g/t Au.

	Measured Resources			Indicated Resources			TOTAL (Measured + Indicated)		
Cut-Off (g/t)	Metric tonne (t)	Grade (g/t)	Ounces	Metric tonne (t)	Grade (g/t)	Ounces	Metric tonne (t)	Grade (g/t)	Ounces
1.0	46 700	3.46	5 193	1 024 400	3.31	108 853	1 071 100	3.31	114 046
2.0	29 700	4.60	4 394	649 200	4.24	88 420	678 900	4.25	92 814
3.0	20 700	5.51	3 670	409 500	5.27	69 324	430 200	5.28	72 994
4.0	14 800	6.33	3 012	256 100	6.35	52 301	270 900	6.35	55 313
5.0	9 100	6.97	2 039	158 100	7.55	38 398	167 200	7.52	40 436
6.0	5 500	7.96	1 408	102 100	8.69	28 530	107 600	8.65	29 938
7.0	3 400	8.89	971	66 300	9.88	21 070	69 700	9.84	22 042

* The Independent and Qualified Persons for the Mineral Resource Estimate, as defined by Regulation 43-101, are Carl Pelletier, B.Sc., P.Geo. and Bruno Turcotte, M.Sc., P.Geo. (InnovExplo inc), and the effective date of the estimate is February 23, 2010.
* Mineral Resources are not Mineral Reserves, having no demonstrable economic viability.
* Results are presented undiluted and in situ. The estimate includes 10 gold-bearing zones and covers the Flordin Project area over 1,320 metres E-W, 200 metres N-S, and from an elevation of 0 to -425 m.
* Resources were compiled using a cut-off grade between 1.0 g/t Au and 7.0 g/t Au.
* Cut-off grades must be re-evaluated in light of prevailing market conditions (gold price, exchange rate and mining cost).
* A fixed density of 2.80 g/cm3 was used.
* A minimum true thickness of 2.0 m was applied, using the grade of the adjacent material when assayed, or a value of zero when not assayed.
* High grade capping was done on the raw data and established at 32.0 g/t Au for diamond drill holes and channels. Drill hole and channel compositing were done.
* Compositing was not done over entire drill hole lengths. Instead, compositing was done on drill hole sections falling within the mineralized zone envelopes (composite = 1 metre for diamond drill holes and channels).
* Resources were evaluated from drill hole and channel results using an interpolation block model method.
* Ounce (troy) = Metric Tons x Grade / 31.10348. Calculations used metric units (metres, tonnes and g/t).
* The number of metric tons was rounded to the nearest hundred. Any discrepancies in the totals are due to rounding effects; rounding followed the recommendations in Regulation 43-101.
* InnovExplo is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political, marketing or other relevant issue that could materially affect the Mineral Resource Estimate.

The objective of InnovExplo's assignment was to prepare a Mineral Resource Estimate for the Flordin Project from a depth of 0 to 425 metres, and from sections 5680E to 7000E between 3950N and 4150N. The Mineral Resource Estimate presented herein meets this objective. In addition, observations made while carrying out the assignment led InnovExplo to believe that diamond drilling programs conducted to date do not provide a complete assessment of the Flordin Project's mineral potential.

Results of surface diamond drilling programs led to the recognition and delineation of a series of subparallel mineralized zones over a considerable strike length on the Flordin Project. Despite the number of holes already drilled on this property (335), a lot more drilling is needed to gain a satisfactory understanding of the positions and attitudes of the mineralized zones. Of the ten (10) identified zones, South-1 and "B" are the best known so far. Previous geologists encountered serious difficulties correlating gold-bearing intersections between diamond drill holes. The apparent lack of continuity cited by these workers can be explained by boudinage, minor drag folding, fault displacement and lensoid geometry, and possibly to an *en echelon* arrangement of the ore zones. Moreover, deviation surveys were not carried out in any of the pre-2007 diamond drill holes. This is significant because the results of Cadiscor's deviation surveys, starting in 2007, revealed that the magnetic nature of the rocks caused severe deviations that must have hindered past efforts at geological interpretation in cross-sections. Nevertheless, drift excavation in the South-1 and "B" zones confirmed it is possible to define geological continuity in the mineralized zones, and additional drilling should make it easier to connect these zones. The authors therefore believe that past difficulties in establishing geological continuity at the Flordin Project were, at least in part, due to a lack of geological information.

After conducting a detailed review of all pertinent information and upon completing the Mineral Resource Estimate herein, InnovExplo concludes the following:

- The Flordin Project contains at least ten (10) continuous mineralized zones;
- The envelopes of mineralized zones have dimensions ranging from 300 metres to 1,300 metres;

- Despite the current drill spacing, which is too wide, geological continuity seems steady throughout the mineralized zones;
- The shape and distribution of the lenses and the defined ore shoots (which probably plunge westward at -40°) will be useful for planning future diamond drill programs;
- The potential is high for upgrading the Inferred Resources to Indicated Resources with additional diamond drilling;
- The potential is high for adding new Resources in the extensions of known zones with additional diamond drilling;
- The potential is high for discovering new mineralized zones on the Flordin Project.

InnovExplo considers the present Mineral Resource Estimate to be reliable and thorough, and based on quality data and reasonable hypotheses using parameters compliant with Regulation 43-101 and the CIM's standards with regard to mineral reserve and resource estimates. InnovExplo believes that the Flordin Project is sufficiently advanced to form the basis for a diamond drilling program with the objective of preparing the project for a pre-feasibility study.

To prepare the project for an eventual mine start-up, InnovExplo recommends a work program comprising two (2) phases, with Phase II conditional upon the results of Phase I. Phase I of the program consists of diamond drilling and Mineral Resource Estimate. Phase II would consist of surface bulk sampling and a pre-feasibility study.

Phase I:

a) A **definition and exploration diamond drilling program** is recommended to bring the Flordin Project to the stage of a surface bulk sampling program and eventually to the pre-feasibility stage by improving technical information and reducing the financial risk. A total of one hundred (100) new diamond drill holes totalling 8,500 metres must be drilled between the cross-section 5380E and 6790E. The new diamond drill holes must be tested the mineralized zones up to 80 metres of vertical depth. The main reasons to complete a definition and exploration diamond drilling program are to:

- Confirm the geological and grade continuities of the Mineral Resources;
- Verify the geometry of the envelope of mineralized zones;
- Discover the maximum resources available for future mining;
- Obtaining Rock Quality Designation (RQD) measurements.

b) An **update of Mineral Resource Estimate** on the Fordin Project is recommended after the definition and exploration drilling from the Phase Ia. The main reasons to complete an update of Mineral Estimate are to:

- Adjust the geometry of the envelope of mineralized zones with the new geological information;
- Consider the new specific gravity value ontained by drilling;
- Determine if a new high-grade assay cutting value is necessary.
- Evaluate a maximum resource available for future pre-faisability study.

Phase II

1) **Phase IIa:** A **surface bulk sampling program** is recommended to bring the Flordin project to the pre-feasibility stage by improving the technical information and reducing the financial risk. The main reasons to complete a surface bulk sampling program are to:

    - Confirm the geological and grade continuities of the Mineral Resources;
    - Test the open-pit mining methods;
    - Proceed with a geomechanical study to determine the appropriate bench sizes and minimum mining width, and proceed with sampling of production holes;
    - Determine a realistic dilution factor; and
    - Reduce the financial risk.

2) **Phase IIb:** Based on the results obtained during the bulk sampling program, a decision should be made about proceeding with a **pre-feasibility study** to determine the economic viability of the Mineral Resources and to convert all or part of these Mineral Resources into Mineral Reserves.

The authors have prepared the estimated cost of the recommended program to be used for the project. The major cost for the two phases of the recommended program will be the diamond drilling (Phase Ia). The estimated cost for **Phase I**, which includes the definition and exploration diamond drilling program and an update of Mineral Resource Estimate, is **CAD $1,069,500** (including 15% contingencies). The estimated cost for **Phase II**, which includes surface bulk sampling and a pre-feasibility study, is **CAD $1,422,500**. For a total program of **CAD $2,492,000.**

2.0 INTRODUCTION AND TERMS OF REFERENCE *(Item 4)*

On December 15, 2009, InnovExplo Inc was mandated by Tyson Birkett, Director of Exploration for Quebec for North American Palladium Ltd, to complete a Mineral Resource Estimate and a Technical Report for the Flordin Project in compliance with Regulation 43-101 and Form 43-101F1. The Mineral Resource Estimate covers the area for which historical resources were reported in the past. The Flordin Project is located near Lebel-sur-Quévillon, Québec, Canada. The issuer, North American Palladium Ltd, is a Canadian mineral exploration company trading publicly on the TSX in Toronto, Canada (TSX: PDL) and on the AMEX in New-York (AMEX: PAL). InnovExplo is an independent mining and exploration consulting firm based in Val-d'Or, Quebec.

This report was prepared for the purpose of providing a Mineral Resource Estimate for the Flordin Project in the Lebel-sur-Quévillon area, and presents the results of a geological review of the Flordin Project.

InnovExplo reviewed the data provided by the issuer and/or by its agents. InnovExplo also consulted other information sources, such as government databases, that handle assessment work and the status of mining titles.

The main author, Bruno Turcotte, M.Sc., P.Geo. (OGQ no.453), reviewed past surveys and all other data and relevant information judged adequate and reliable. The report was prepared under the supervision of Carl Pelletier, B.Sc., P.Geo. (OGQ no.384). The authors, Bruno Turcotte, M.Sc., P.Geo. and Carl Pelletier, B.Sc., P.Geo., are Qualified and Independent Persons as defined by Regulation 43-101. InnovExplo's technical support was provided by Serge Morin. Venetia Bodycomb of Vee Geoservices provided the linguistic editing.

In 2007, InnovExplo was hired by Cadiscor Resources Inc. ("Cadiscor"; now North American Palladium), to supervise a drilling program on their Flordin property. Bruno Turcotte, as geologist for InnovExplo, examined and described some of the core as part of that program and supervised another InnovExplo geologist who also logged core. The authors have solid knowledge of the geological setting of the area and its mineral potential. The authors have a good understanding of mineral deposit exploration models for Archean gold deposits.

InnovExplo conducted a review and appraisal of the information used in the preparation of this report, as well as in its conclusions and recommendations, and believes that such information is valid and appropriate considering the status of the project and the purpose for which the report was prepared. The authors have fully researched and documented the conclusions and recommendations made in the report.

3.0 RELIANCE ON OTHER EXPERTS *(Item 5)*

The authors, Qualified and Independent Persons as defined by Regulation 43-101, were mandated by the issuer to study technical documentation, visit the property, and recommend a work program if warranted. The authors reviewed the mining titles, their status, any related agreements, and any technical data supplied to them by the issuer (or its agents) or collected from public technical information sources.

Data used for the Mineral Resource Estimate and documentation relating to the Flordin property mining titles (including their present status) were supplied by Tyson Birkett, Director of Exploration for Quebec for North American Palladium Ltd. InnovExplo is not qualified to express a legal opinion with respect to the property titles, current ownership or possible encumbrance status.

Many of the geological and technical reports that cover the property area were prepared prior to the implementation of National Instrument 43-101 in 2001 and Regulation 43-101 in 2005. However, the authors of such reports appear to be qualified, and the information prepared according to standards that were acceptable to the exploration community at the time. In some cases, the data is incomplete or does not fully meet the current requirements of Regulation 43-101. The authors cannot take responsibility for the information provided in such sources, but have no reason to believe that any information used in the preparation of the present report is invalid or contains misrepresentations.

The authors believe the information used to prepare the report, as well as its conclusions and recommendations, is valid and appropriate considering the status of the project and the purpose for which the report is prepared. The project's technical data are judged appropriate for producing a reasonable progressive economic mineral evaluation of the project.

The authors, by virtue of their technical review of the project's exploration potential, affirm that the work program and recommendations are in accordance with Regulation 43-101 and CIM technical standards.

4.0 PROPERTY DESCRIPTION AND LOCATION *(Item 6)*

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 (Fig. 4.1). The project is located in the Desjardins Township. The approximate UTM coordinates for the geographic centre of the property are 358740E, 5463840N (Zone 18, NAD83).

4.2 Mining titles status

Claim status was supplied by Tyson Birkett, Director of Exploration for Quebec for North American Palladium Ltd. Claim status was verified using GESTIM, the Québec government's claim management system available from the *Ministère des Ressources Naturelles, de la Faune et des Parcs* via their website at the following address: http://gestim.mines.gouv.qc.ca.

The Flordin property represents forty (40) contiguous ground-staked claims and covers an area of 593.09 hectares (40 mining titles; Fig. 4.2). The forty (40) mining titles are contiguous and owned by Cadiscor. In GESTIM, all titles are in good standing and registered 100% to Cadiscor Resources Inc. A detailed list of mining titles, ownership, and expiration dates is provided in Appendix II.

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). To acquire the property, Cadiscor agreed to issue 300,000 common shares of Cadiscor to IAMGOLD and grant a 1% Net Smelter Return (NSR) production royalty on future commercial production from the property. Cadiscor will have a pre-emptive right at any time to purchase back this 1% NSR royalty for US $1,000,000. Moreover, 37 of the 40 claims are subject to a 20% NPI (Net Profit Interest) in favour of Flordin Mines Ltd.

On May 26, 2009, North American Palladium completed a merger with Cadiscor Resources Inc and consequently retains 100% ownership of the Flordin property.

4.3 Environment

The GESTIM map does not show any restrictions with regards to mineral exploration work on the Flordin property.

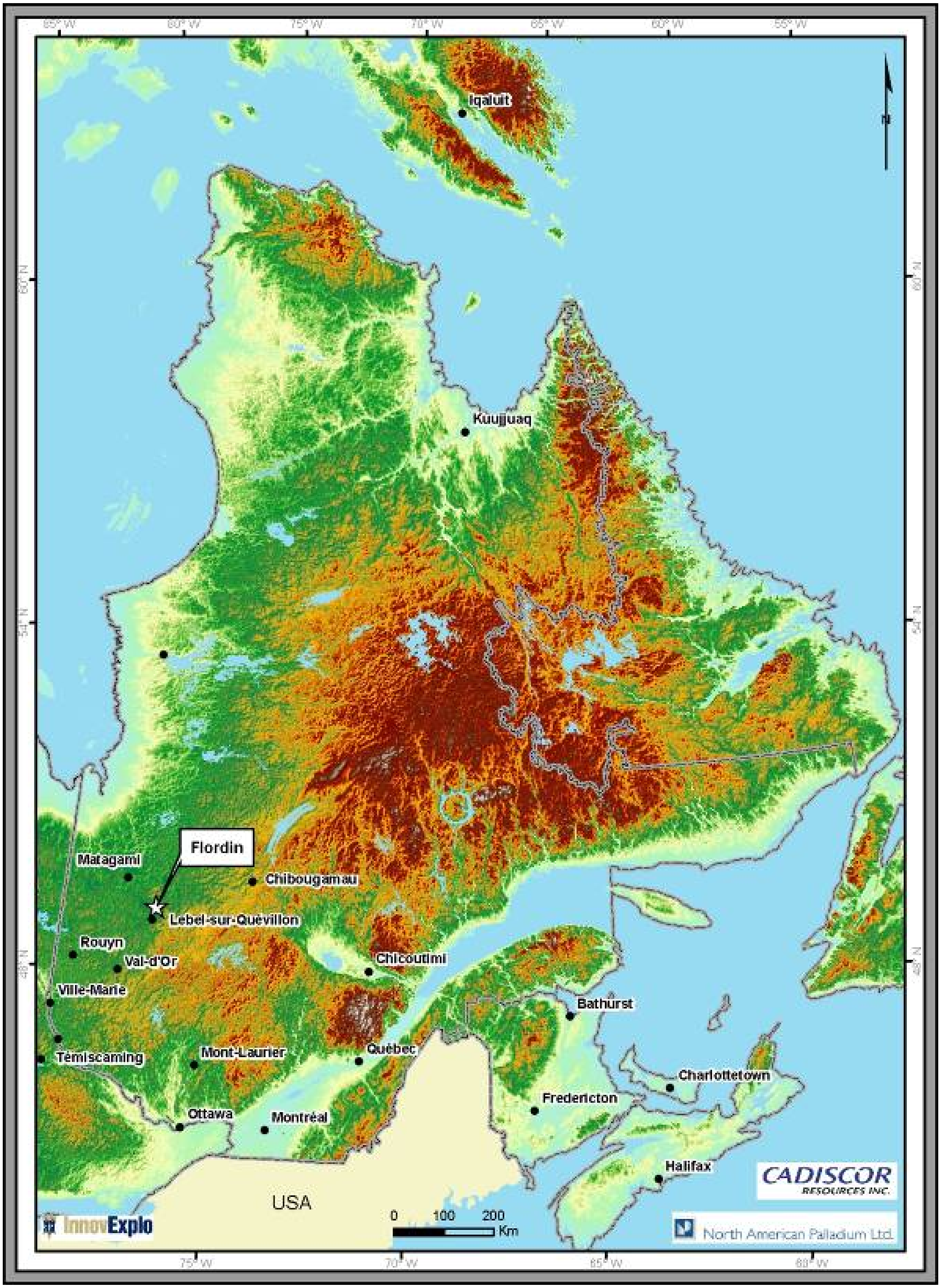

Figure 4.1 – Map showing the location of the Flordin Project in the province of Quebec

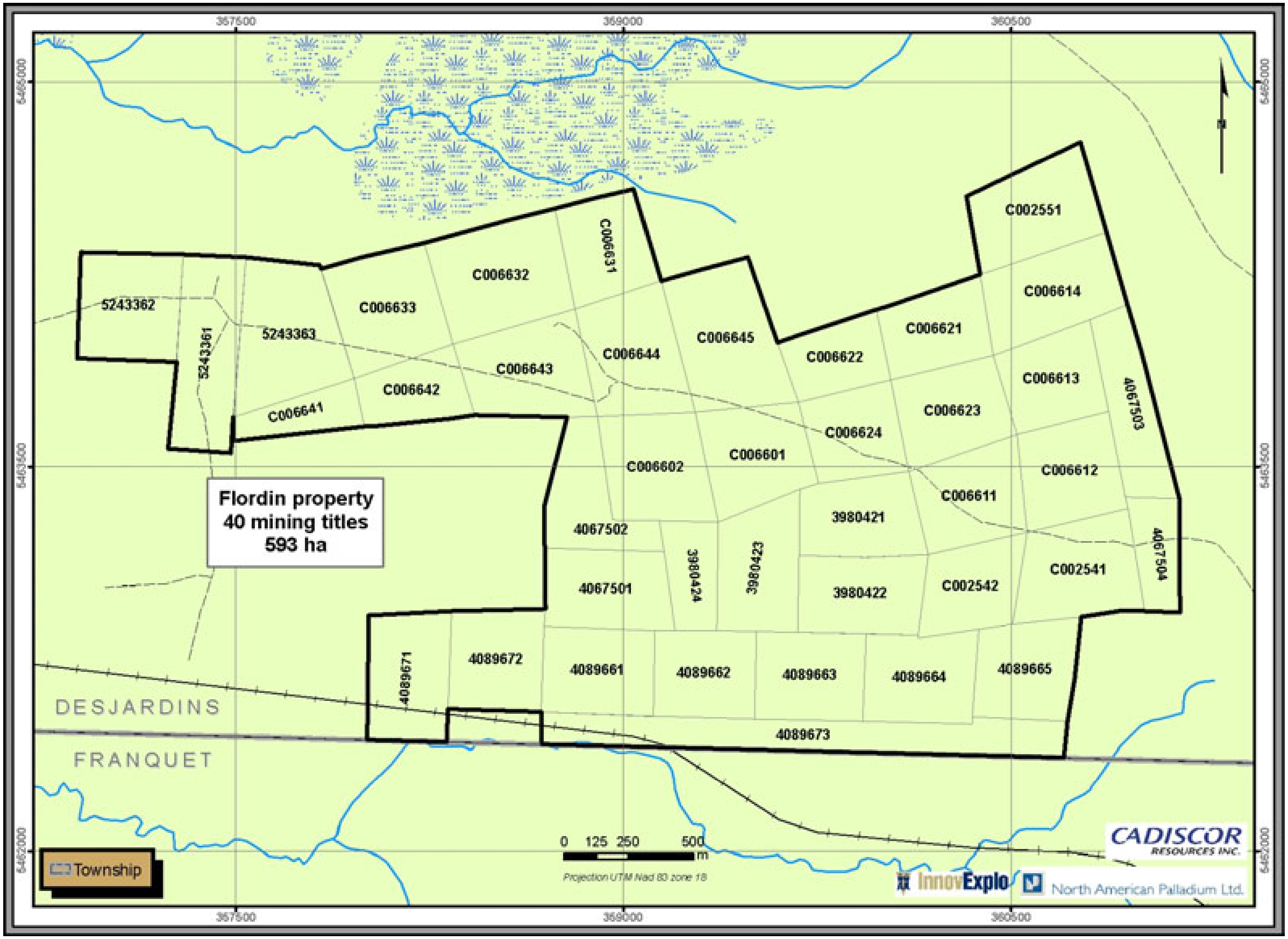

Figure 4.2 – Claim map of the Flordin property

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY *(Item 7)*

5.1 Accessibility

The Flordin Project is located in the Desjardins Township, approximately 40 kilometres north of Lebel-sur-Quévillon in the Jamésie region of northwestern Quebec, Canada (Fig. 5.1). The property is readily accessible by turning off provincial road 113 onto a seasonal gravel road built to access the property's interior.

5.2 Climate

The Flordin Project is characterized by a relatively cold and humid continental climate. Minimum winter temperatures are close to -20 °C, with an extreme record low of -43 °C. Maximum summer temperatures are close to 23 °C, with an extreme 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

The town of Lebel-sur-Quévillon, with a population of 3,000, is the closest service community. The project is located about 200 kilometres from Val-d'Or. Val-d'Or has quality manpower and is a place where companies can hire reliable, qualified and experienced staff. Electricity power to the property could be provided by Hydro-Québec, and ample water would be available from rivers and lakes for processing purposes.

5.4 Physiography

The Flordin property is located in the Abitibi Subprovince of the Canadian Shield. The topography of the area 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 depth varies from 0 to 10 metres, and consists of stratified clays as well as glacial and fluvio-glacial Pleistocene deposits.

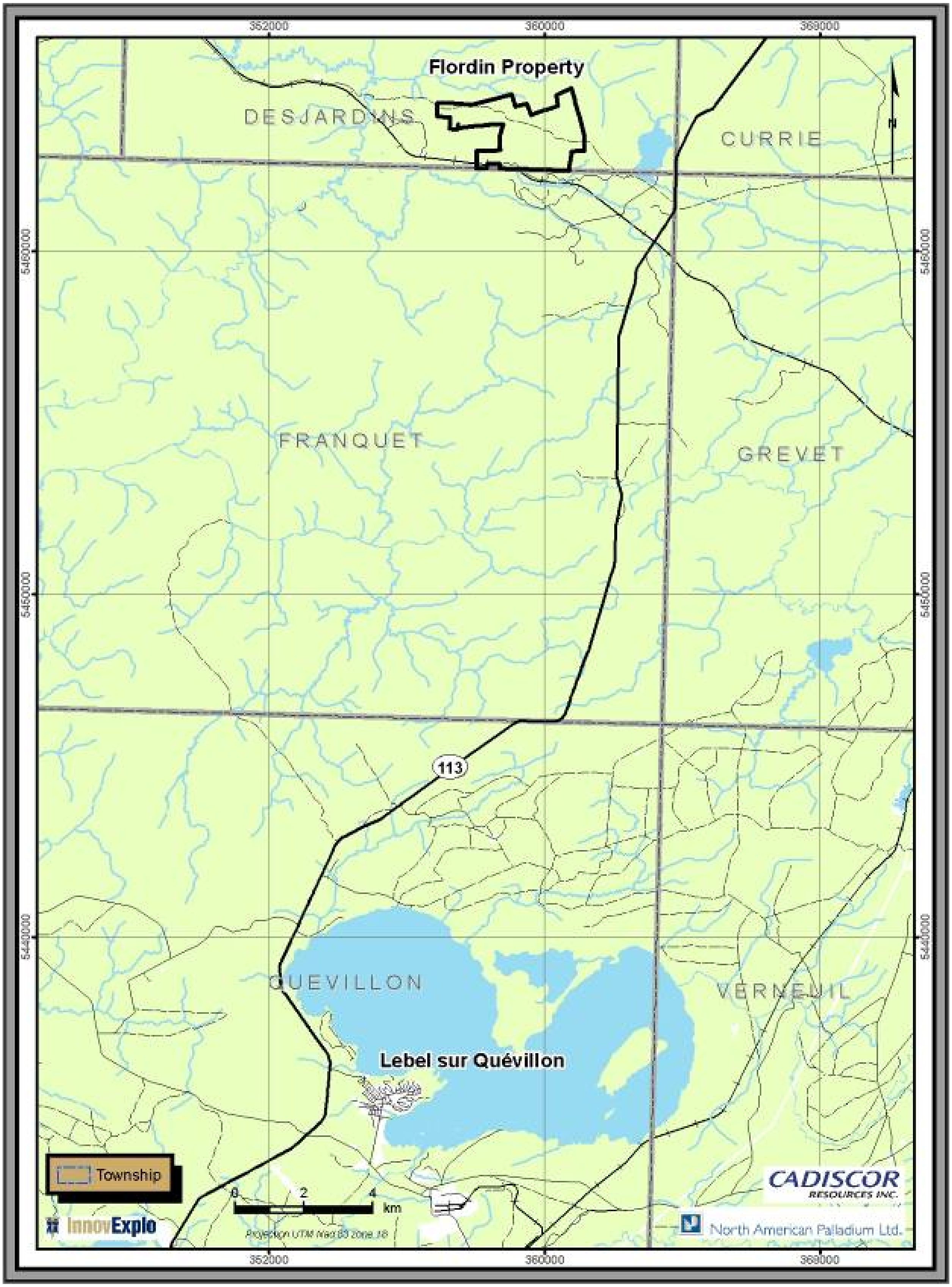

Figure 5.1 – Topography and accessibility of the Flordin property

6.0 HISTORY *(Item 8)*

The Flordin claim group has been the subject of a number of exploration ventures since 1935. These are summarized below and in Table 6.1.

From 1935 to 1936, the first reconnaissance work was carried out on the Flordin property by **Coniagas Mines Ltd** and **Hollinger Mines Ltd**, leading to the discovery of mineralization. Extensive surface work took place, including one hundred (100) diamond drill holes (4,745 metres) drilled on a three(3)-kilometre trend of gold-bearing veins. The work delineated the #1, #2 and Carthwright zones, of which the first two are now known as the "E" and "B" zones respectively. A total of 4,877 metres of trenching was also carried out on the Flordin property. Exploration work led to the announcement of reserves of 91,414 tons (82,930 metric tons) grading 0.305 oz/t (10.48 g/t Au) of gold.[1,2]

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 metres. Other work included the development of about 375 metres of drifts and crosscuts driven on three (3) levels. A total of 283 metres in 150 test holes and 540 metres in twenty-four (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 two (2) inches (5 cm) to nine (9) feet (2.75 m). Overall results were disappointing and the project was suspended in February of 1941.

The Flordin property lay dormant until 1978, when it was optioned by **Dalhousie Oil Corporation**. Five (5) surface diamond drill holes were drilled on the Carthwright Zone, for a total of 461 metres. 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 the Flordin property. From October 20, 1980 to May 7, 1982, sixteen (16) additional claims were added to the existing group of claims.

From July 1981 to October 1982, 71.8 kilometres of line were cut on the Flordin property. Geophysical and pedogeochemical surveys were performed and fifty-five (55) diamond holes drilled totalling 9,029 metres. Geophysics consisted of magnetometer and VLF surveys over most of the grid, and induced polarization and resistivity on 9.8 kilometres 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). Six hundred and seventeen (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.

---

[1] Tons = short tons; oz/t = ounces per short ton; tonnes or t = metric tons. Refer to Appendix I.

[2] Reported resources are historical. These historical "resources" and/or "reserves" should not be relied upon because it is unlikely they conform to current Regulation 43-101 criteria or to CIM Standards and Definitions, and they have not been verified to determine their relevance or reliability. They are included in this section for illustrative purposes only and should not be disclosed out of context.

Geological reserves were established for the “B” Zone between sections 2+40 W and 8+70 W where the drilling density and number of intersections were sufficient. Gauthier (1983) estimated indicated reserves to be approximately 470,000 metric tons grading 5.89 g/t Au (undiluted)[2]. Some trenching work was done near the future ramp, and geological mapping was performed across the property.

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

To gain access to the property, a road was constructed about 5 metres wide and 6.1 kilometres long. Construction began in mid-August 1986 and finished in mid-October of the same year. Sixty-eight (68) diamond drill holes totalling 9,705 metres were drilled on the Flordin prospect, testing several geologic structures for which economic grades had been reported and 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.

From October 1986 to February 1987, the first phase of underground exploration was carried out. The first round of the portal was blasted on October 7, 1986, before the the access road was finished. The last blast in the raises was made 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 16.6% to 50 metres below surface (Fig. 6.1). The total excavated length along the ramp was 202.4 m.

Figure 6.1 – Decline ramp excavated on the Flordin property

The “B” vein was exposed along its strike length over 203 metres in a drift (2.44 m x 2.44 m), 133 metres in three (3) raises (1.83 m x 1.83 m), and 23 metres in crosscuts (2.44 m x 2.44 m). The total advance was 563.2 metres, excluding safety bays. A total of 5,511 tonnes of ore and 7,905 tonnes 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’s face and the raise’s floor. The South-1 vein, discovered by surface drilling, was intersected by the ramp sump.

While previous reserves were calculated for the “B” Zone only, Duhaime and Veilleux (1987) included 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%. Proven Reserves were estimated to be 20,052 tonnes at 6.19 g/t Au.[2] Probable and Possible Reserves were calculated as 447,152 tonnes at 4.90 g/t Au and 63,720 at 5.08 g/t Au, respectively.[2] The total reserves reported by Duhaime and Veilleux (1987) were 530,924 tonnes at 4.97 g/t Au.[2]

The broken muck from drifts and raises was piled on a pad made from rock taken out of the portal and 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 metres of a raise. This broken muck was later transported some 70 kilometres 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 were 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 2.51 g/t Au. A total of 372.048 ounces was sold to the Royal Canadian Mint and 10.513 ounces were kept in the mill inventories (Tardif, 1987).

A second phase of underground exploration comprising 2,277 metres 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 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 Flordin Project, becoming project manager. An important diamond drilling program was carried out from September 1987 to January 1988, totalling 9,868 metres 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) of 95,000 metric tons at 5.3 g/t Au.[2] Also, the mineral inventory of subsidiary zones (“D”, “E” and South-2) was re-evaluated and increased to 417,868 metric tons at 4.6 g/t Au.[2] All mineralized structures were explored along a strike length of almost 1 kilometre and to a vertical depth of about 250 metres. Total gold reserves (undiluted) were increased to 815,737 tonnes at 5.1 g/t Au (Perrier, 1988).[2] During this time, outcrop stripping, geological mapping and channel sampling were carried out on the property surface.

In September 1988, Charteris (1988) calculated a new reserve estimate for gold mineralization in the Flordin deposit. Charteris (1988) estimated the total reserves to be 495,300 tonnes at 5.3 g/t Au.[2] While grades differ only slightly in the Perrier (1988) and Charteris (1988) estimates, the result is a difference of 320,400 tonnes in total reserves. The difference can be attributed to the parameters used: Perrier (1988) included a larger volume of “mineral inventory” for which correlation was less certain than the inventory used by Charteris (1988).

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 metres was carried out from October 15 to 25, 1988. Five (5) stopes were opened in the "B" vein, and 109 metres of narrow drifting (1.22 metres) 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 tonnes had been broken of which 4,879 tonnes was ore grading 4.71 g/t Au. Overall dilution was about 36%. A total of 4,053 tonnes of ore grading 4.71 g/t was milled and the recovery grade was 4.25 g/t Au.

Figure 6.2 – Drift driven within the South-1 vein

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 plotted on surveyed base maps and sections. One muck sample per 10-tonne truck was collected 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).

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 site at the time of this work.

In 2007-2008, **Cadiscor Resources Inc** undertook geological compilation work 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 metres 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 of 2009, Cadiscor became **North American Palladium Ltd**.

Table 6.1 – Review of historical exploration work on the Wesdome 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 indicated reserves for Carthwright Zone: 91,414 tons (82,930 metric tons) grading 0.305 oz/t (10.48 g/t Au)	Buro, 1988 Duhaime & Veilleux, 1987 Bartlett, 1936
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 Duhaime & Veilleux, 1987 Longley, 1940 Longley, 1939
1978	Dalhousie Oil Corporation	Property optioned 5 surface totalling 461 m DDH (FD78-1 to FD78-5)	Carthwright Zone established as lean iron formation within banded tuffs	Buro, 1988 Duhaime & Veilleux, 1987 Hobbs, 1978a Hobbs, 1978b
1980	Sullivan Mining Group Ltd	Property optioned Preliminary study	#2 Zone (“B” Zone) identified as most favourable zone for pursuing exploration work	Buro, 1988 Duhaime & Veilleux, 1987 Veilleux, 1980
1981	Sullivan Mining Group SOQUEM	Line-cutting (71.8 km) Magnetometer and VLF surveys (62 km) 13 surface DDH totalling 2,450 m (S-1 to S-13)	Several geophysical anomalies	Buro, 1988 Duhaime & Veilleux, 1987 Laverdière, 1982 Gauthier, 1983
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	Several geophysical anomalies Correlation between humus samples and “B” and Carthwright zones Historical indicated reserves for “B” Zone: 470,000 metric tons grading 5.89 g/t Au	Buro, 1988 Duhaime & Veilleux, 1987 Lavoie, 1982 Gauthier,1983

Year	Company	Work description	Other records	References
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 tonnes processed at Bachelor Lake Gold Mines mill	Excellent continuity in drift and raises (“B” Zone) Discovery of South-1 Zone Total of estimated reserves (diluted): 530,924 tonnes at 4.97 g/t Au Mill recovery of 91.7% with final grade of 2.51 g/t Au	Buro, 1988; 1989 Perrier, 1988 Bugnon, 1987 Tardif, 1987 Duhaime & Veilleux, 1987
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	Total reserves (undiluted): 815,737 tonnes at 5.1 g/t Au (Perrier, 1998) Total reserves (undiluted): 495,300 tonnes at 5.3 g/t Au (Charteris, 1988)	Buro, 1988; 1989 Perrier, 1988 Charteris, 1988
1988-1989	Western Premium Resources Corp Cambior Inc	Enlargement of existing ramp Drifting and raising Opening of 5 stopes Channelling and sampling 4,879 tonnes of ore broken with grade of 4.71 g/t Au Structural study	4879 tonnes of ore broken with grade of 4.71 g/t Au Overall dilution of 36% 4,053 tonnes of ore milled with grade of 4.71 g/t; recovery at mill of 4.25 g/t Au	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	Pelletier & Jourdain, 2008a

7.0 GEOLOGICAL SETTING *(Item 9)*

7.1 Archean Superior Province

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

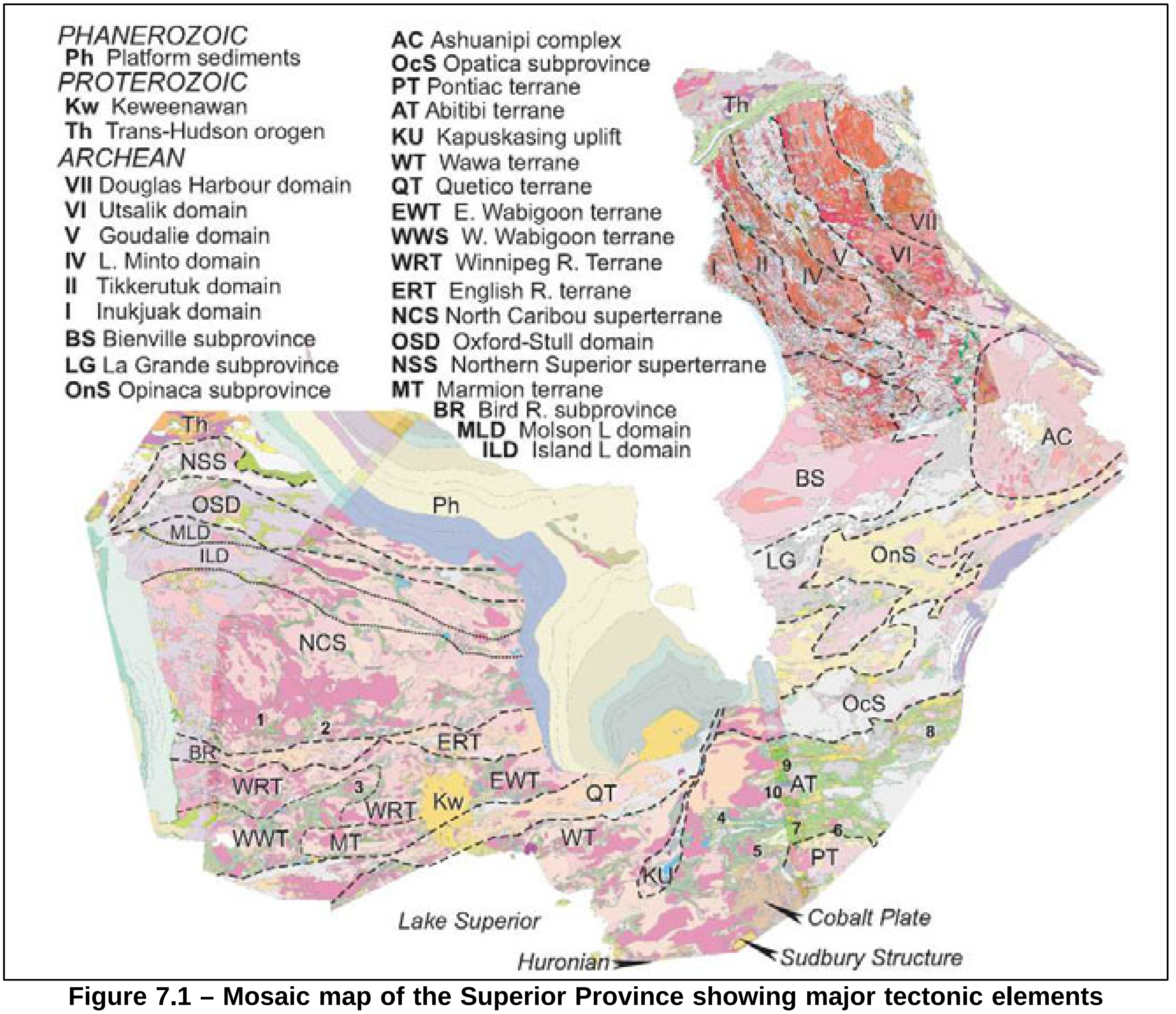

Figure 7.1 – Mosaic map of the Superior Province showing major tectonic elements from Percival, (2007). Data sources: Manitoba (1965), Ontario (1992), Thériault (2002), Leclair (2005).

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 are generally east-west in the south, west-northwest in the northwest, and northwest in the northeast (Fig. 7.1). The term “terrane” (Fig 7.1) is used in the sense of a geological domain with a distinct geological history prior to its amalgamation into the Superior Province during the 2.72 Ga to 2.68 Ga assembly events. A “superterrane” (Fig. 7.1) shows evidence for internal amalgamation of terranes prior to the Neoarchean assembly. “Domains” (Fig. 7.1) are defined as distinct regions within a terrane or superterrane.

7.2 Abitibi Subprovince

Domains of oceanic ancestry, identified by juvenile isotopic signatures and lack of Mesoarchean zircon inheritance, separate most of the continental fragments (Percival, 2007). These dominantly greenstone-granite terranes generally have long strike lengths and record geodynamic environments, including oceanic floor, plateaus, island arc, and back-arc settings (e.g., Thurston, 1994). The Abitibi terrane or Abitibi Subprovince is one such example in the southeastern Superior Province (Fig. 7.1). The Abitibi Subprovince—a Neoarchean granite-greenstone subprovince—is dominated by the Abitibi Greenstone Belt, one of the world’s largest contiguous areas of low grade Archean volcanic and sedimentary rocks. The Abitibi Greenstone Belt is also one of the world’s richest mining areas, and has produced major amounts of gold, copper, zinc, silver and iron from the Timmins, Kirkland Lake, Rouyn-Noranda Val-d’Or, Matagami and Chibougamau camps. The Abitibi Greenstone Belt has been intensely studied and explored, mainly due to its economic importance, excellent state of preservation of its rocks, and accessibility. The Abitibi Subprovince is bounded on the west by the Kapuskasing structural zone, a Neoarchean-Paleoproterozoic zone of intracratonic thrusting and strike-slip faulting (Percival and Card, 1983). In the southeast, it is in tectonic contact with Neoarchean rocks of the Pontiac Subprovince (Fig. 7.2) and with gneiss units of the Grenville Province that were deformed during Mesoproterozoic time.

The Abitibi Subprovince (Fig. 7.2) was divided into the Southern Volcanic Zone (SVZ) and the Northern Volcanic Zone (NVZ) by Chown et al. (1992). The Abitibi Subprovince displays a prominent E-W structural trend resulting from regional E-trending folds with an axial-planar schistosity that is characteristic of the Abitibi Greenstone Belt (Daigneault et al., 2002). The NVZ (Fig. 7.2) is interpreted as an intact segment with a complex stratigraphy composed of two mafic-felsic volcanic cycles that are interpreted as volcanic edifices forming an Archean ocean floor (Chown et al., 1992). Geochronological work (Corfu et al., 1989; Mortensen, 1993a, 1993b; Davis, 1992) supports a model of sequential arc development commencing with the 2730-2705 Ma NVZ, and followed by the younger 2705-2700 Ma SVZ. A subsequent NVZ-SVZ arc-arc collision was characterized by transpression and thrusting, which occurred between 2700 and 2690 Ma, whereas final terrane docking culminated with 2690-2680 Ma strike-slip tectonics (Mueller et al., 1996). The limit between the NVZ and SVZ corresponds to the DPMFZ (Destor-Porcupine-Manneville Fault Zone) as shown on Figure 7.2.

Metasedimentary rocks of the Abitibi Greenstone Belt include early turbiditic flysch and late conglomeratic molasse sequences (Mueller and Donalson, 1992). Turbiditic sequences commonly occur along the faulted boundaries between lozenge-shaped domains. These sequences, including the Porcupine, Cadillac, and Kewagama groups in the south and the Taibi, Caopatina, and Chicobi Lake groups in the north, consist of turbiditic greywacke and

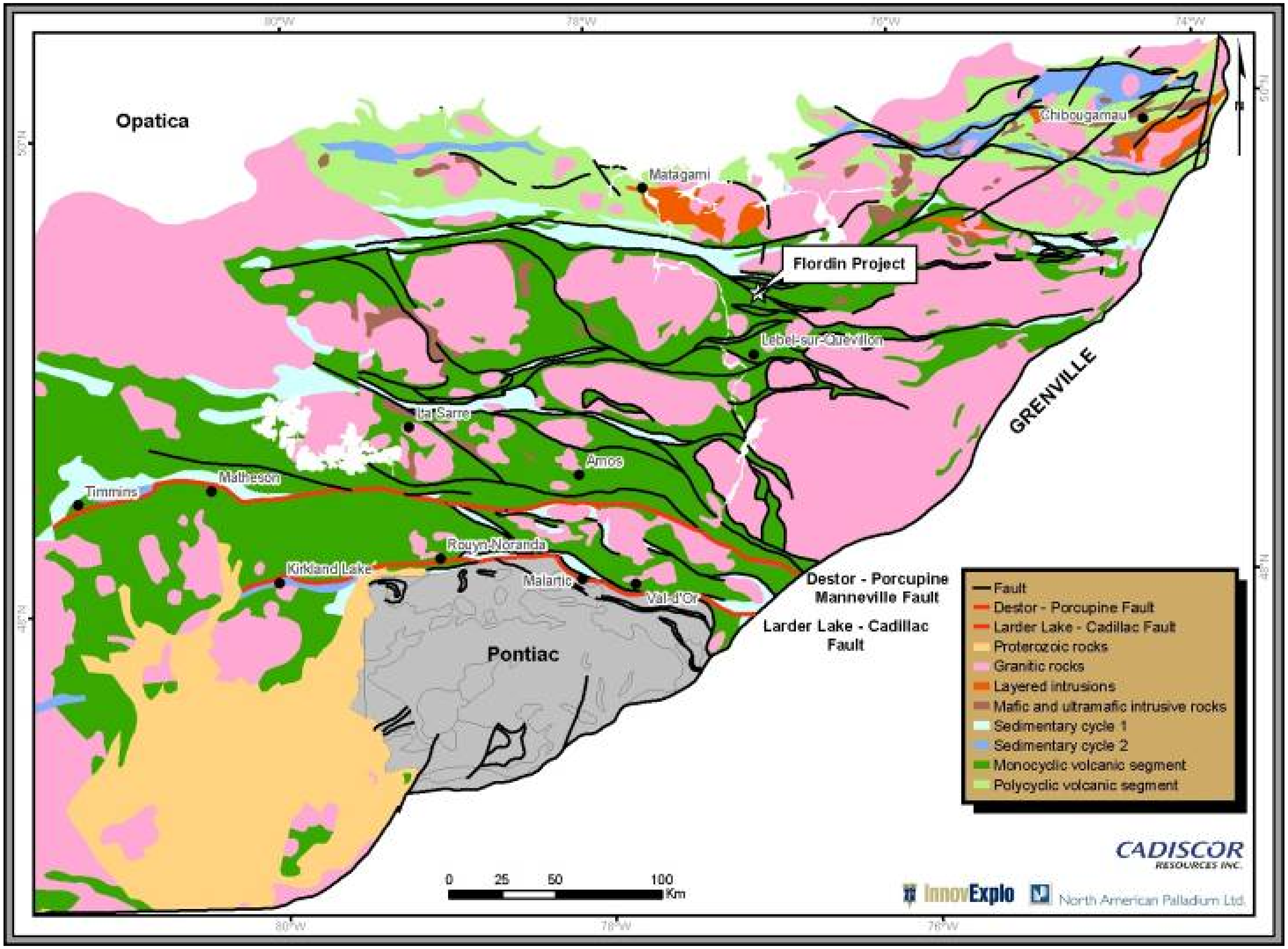

Figure 7.2 – Major divisions in the Abitibi Subprovince: the Northern Volcanic Zone (NVZ) and the Southern Volcanic Zone (SVZ). The limit between the NVZ and SVZ corresponds to the Destor-Porcupine-Manneville Fault Zone, whereas the limit between the SVZ and Pontiac Subprovince is along the Cadillac-Larder Lake Fault Zone. (Adapted and modified from Daigneault et al., 2002; Scott et al., 2002; Chown et al., 1992).

local resedimented conglomerate and oxide-facies iron formation. They are interpreted as submarine fan and channel deposits in arc-related basins dominated by volcanic debris (Dimroth et al., 1982; Mueller, 1991; Mueller and Donalson, 1992). Studies of old detrital zircons suggest that sources as young as 2682 Ma and as old as 3000 Ma contributed detritus to these units (Card an Poulsen, 1998). Mueller and Donalson (1992) concluded that deposition of these sediments, which may be related to the accretion of the lithotectonic assemblages making up the belt, occurred between 2730 and 2720 Ma in the northern part of the Abitibi Belt and between 2700 Ma and 2687 Ma in the southern part.

Plutonism that accompanied and outlasted volcanism in the Abitibi Subprovince ranges from about 2750 to 2650 Ma (Card and Poulsen, 1998). The intrusions have been subdivided into several synvolcanic and pre- to post-tectonic suites based on their structural relationships and geochemical attributes (Rive et al., 1990; Feng and Kerrich, 1992). In general, plutonic rocks of the Abitibi Subprovince comprise early (in part synvolcanic), pre- to syntectonic, generally sodic suites, including tonalitic gneiss, quartz diorite, trondhjemite, tonalite and granodiorite, and younger, syn- to post-tectonic, generally potassic suites including monzogranite, monzonite, and syenite (Card and Poulsen, 1998). The sodic suites are mainly older than 2700 Ma, but geological and geochronological data indicate that none represent basement to the supracrustal sequences; contacts are either intrusive or tectonic (Card and Poulsen, 1998).

Within the Abitibi Subprovince, where regional metamorphic grades are generally greenschist facies to lower amphibolite facies, the Abitibi Greenstone Belt is notable for large areas of subgreenschist, prehnite-pumpellyite facies assemblages (Joly, 1978). These low-grade assemblages are overprinted by greenschist assemblages along major structural zones and by amphibolite facies assemblages in contact aureoles of some granitoid intrusions (Ayres, 1978; Hodgson and Hamilton, 1989). Metamorphic pressures are uniformly low, in the 2 to 3 kbar range. Several different types and ages of alteration are present, at least locally, including early seafloor alteration, localized hydrothermal metasomatism related to the formation of volcanogenic massive sulphide deposits, and late metasomatic carbonatization, sericitization and silicification associated with the formation of lode gold deposits.

7.3 Geology of the Flordin Property

The Flordin property lies within the volcano-sedimentary band (Fig. 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. 7.3). This shear zone is at least 80 kilometres long and reaches up to 5 kilometres 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 kilometres.

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 in fact be of sedimentary origin, but their spatial proximity to volcanic units caused them to be mapped and logged as volcaniclastics.

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 7.3 – 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)

8.0 DEPOSIT TYPES *(Item 10)*

Lode gold deposits (gold from bedrock sources: Fig. 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).

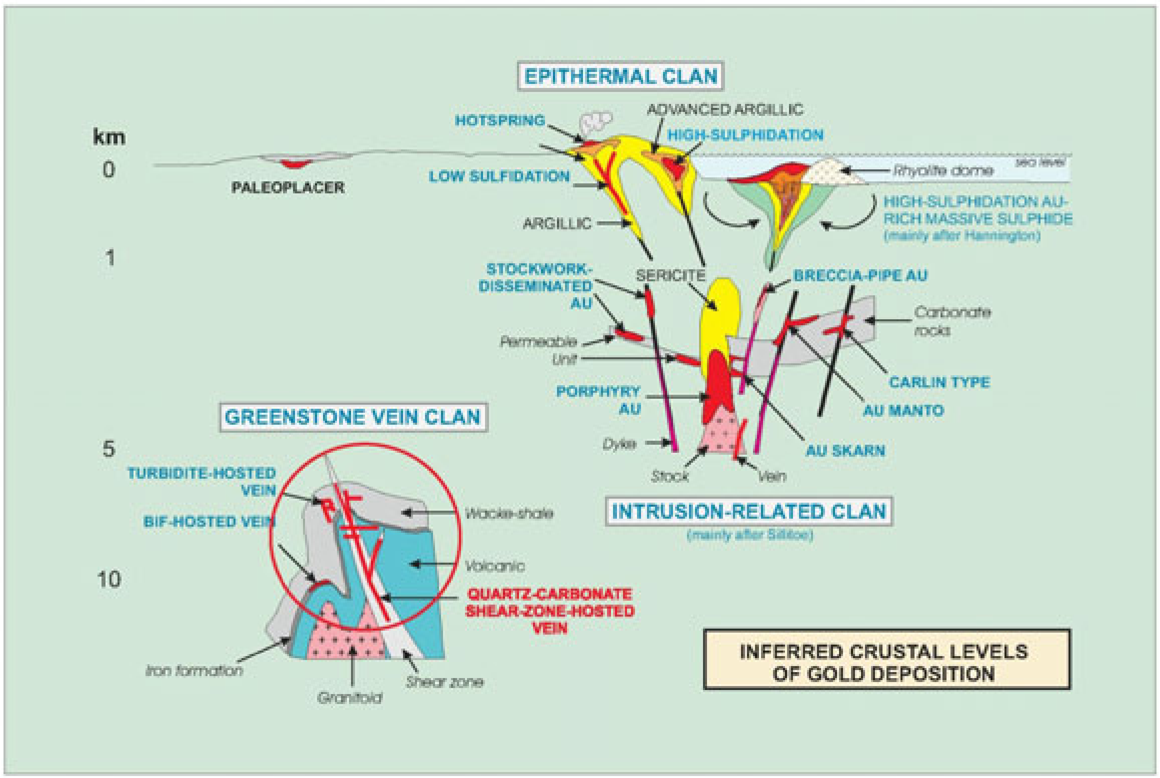

Figure 8.1 – Inferred crustal levels of gold deposition showing the different types of lode gold deposits and the inferred deposit clan (from Dubé et al., 2001; Poulsen et al., 2000).

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 (Fig. 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 (Fig. 8.2).

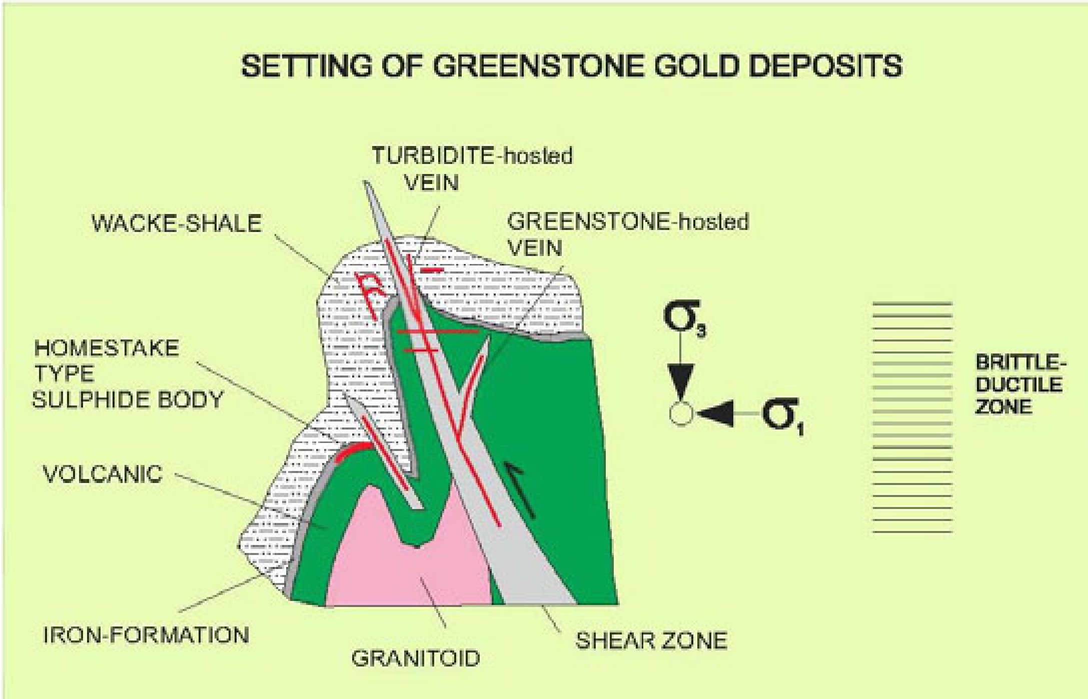

Figure 8.2 – Schematic diagram illustrating the setting of greenstone-hosted quartz-carbonate vein deposits (from Poulsen et al., 2000)

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, a major NW-SE structural discontinuity. Figure 8.3 shows the deposits associated with the Cameron Deformation Zone: Douay, Vezza, Discovery, Flordin, Carthwright and Langlois (Dussault, 1990; Lacroix, 1993; Labbé et al., 1995; Roy et al., 1997).

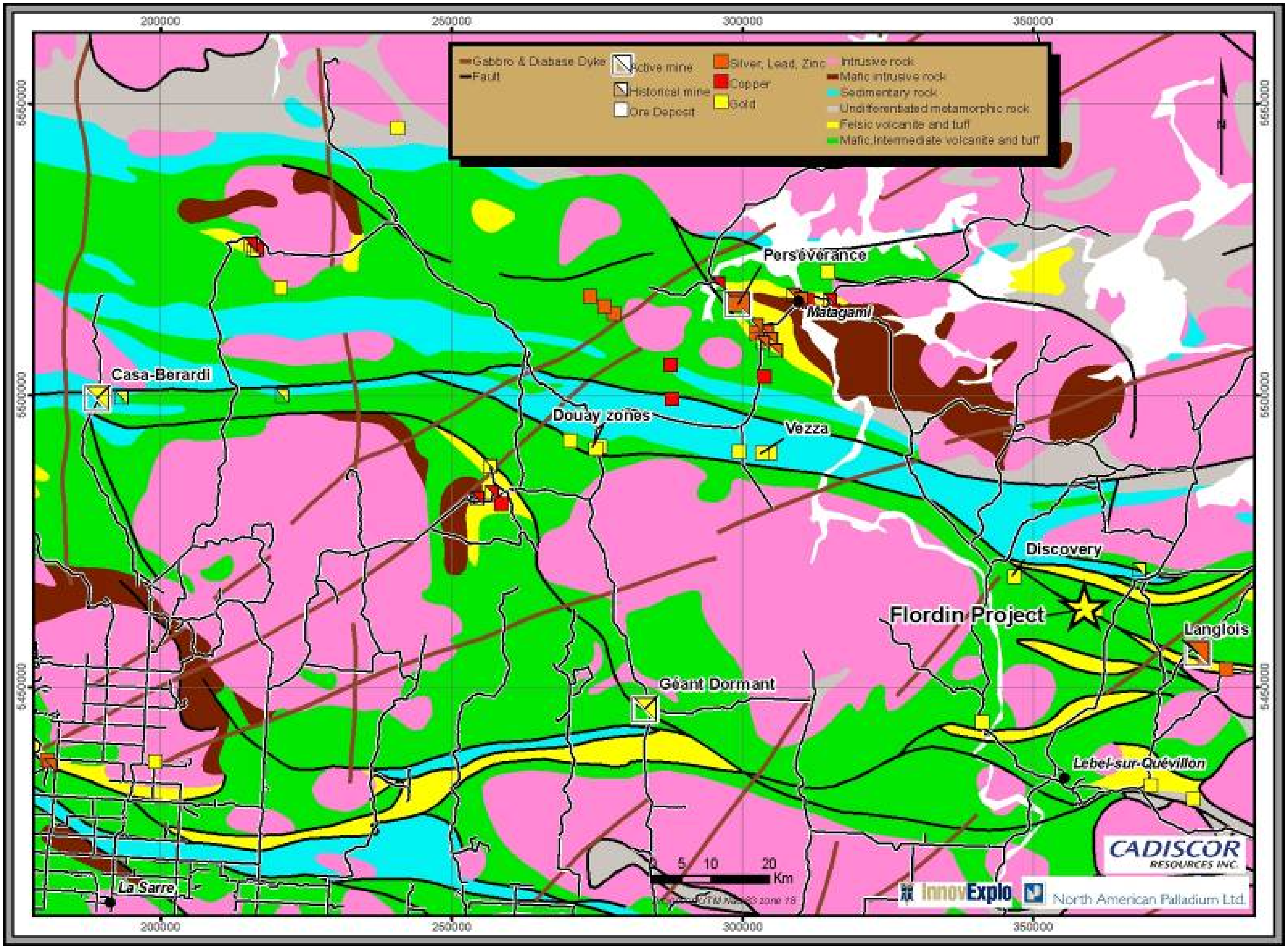

Figure 8.3 – Location of main gold and base metal deposits in the northerm part of the Abitibi greenstone belt.

9.0 MINERALIZATION *(Item 11)*

9.1 Gold mineralization

Gold mineralization occurs in ten (10) major zones in the Flordin deposit. From north to south, they are:

1- “F” Zone
2- “F2” Zone
3- “E” Zone
4- “E2” Zone
5- “D” Zone
6- “C” Zone
7- “B” Zone
8- “A” Zone
9- South-1 Zone
10- South-2 Zone

Several zones of mineralization have been described in historical reports for the Flordin deposit. The South-1 and “B” zones were the best known by these earlier geologists because they were accessed by drifts, raises and stopes. Some features of other zones are known only through diamond drilling.

9.1.1 “B” Zone

The “B” Zone consists of a mylonitized quartz vein (Fig. 9.1) that contains fragments of metasomatized and mylonitized relict host rocks with variable amounts of sulphides. A mafic volcanic intersertal texture is still discernible in some fragments.

The lenses of the “B” Zone quartz vein are arranged so that where one vein pinches out, another vein reopens 2 to 10 metres further. Most of the gold mineralization is restricted to veins, and more specifically impregnated on their walls where abundant sulphides are present. The remainder of the gold is present in sheared and altered wall rock. Several generations of quartz are present, described in the literature as large strained crystals, as a mosaic of recrystallized grains, or simply as recrystallized grains.

The gold-bearing veins are composed mainly of quartz (85%), generally milky white but sometimes smoky grey. Calcite is the second mineral of importance, accounting for approximately 8% of the rock by volume, varying from 5% to 10%. Calcite generally occurs as elongated accumulations about 0.5 cm to 4.0 cm wide near the vein margins, and also occurs in dessiminated form. Near the contacts with the host rock, tourmaline occurs as isolated crystals or in bands, accompanied by pyrite, chalcopyrite, some carbonate minerals, sericite and albite. The auriferous veins also contain approximately 3% chlorite as millimetric bands. Throughout the “B” Zone area, calcite is also present as abundant but small secondary veinlets of no economic significance.

Pyrite is the main sulphide mineral, constituting anywhere from 1% to 20% of the veins, but averaging 3% overall. Pyrite forms small aggregates along the vein margins and in the chloritic bands within the veins. It was also observed along planar fractures in the veins and in pervasively altered inclusions. Altered wall rocks may average more than 5% pyrite. Pillow basalts, the dominant host rock to the veins, contain an average of 3% pyrite in disseminated form and along fractures.

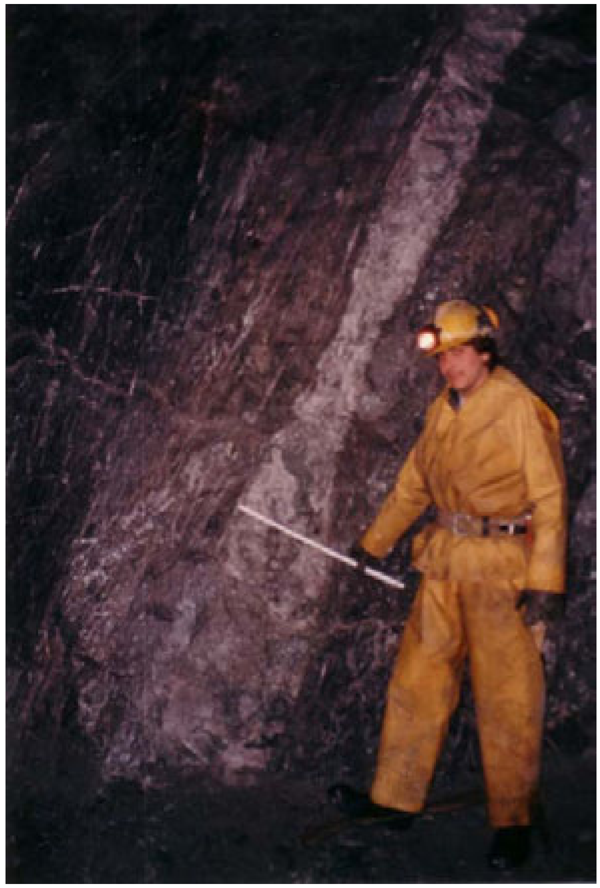

Figure 9.1 – Mylonitized quartz vein ("B" Zone)

Visible gold is rare, and where present occurs in association with a metallic mineral thought to be a telluride. Numerous isolated gold grains were observed microscopically in the matrix and enclosed in pyrite, or along pyrite margins. A few grains of pyrrhotite were also observed enclosed in pyrite. Hematite is widespread (up to 6-7%).

9.1.2 South-1 Zone

The South-1 Zone is an area of intense mylonitization and hydrothermal alteration similar to the "B" Zone. The South-1 Zone is marked by a shattered appearance, characterized by pervasive alteration and injections of minute quartz stringers (metasomatism). Carbonate-rich quartz veinlets are intercalated with bands of volcanic material. Late quartz-carbonate-albite veinlets were also observed. Ductile deformation of this zone likely took place without rupture of the deformed rock. Instead, permeability was probably the result of fabrics propagating through the rock. Fluid flow was focused along the fabrics and therefore generated widespread disseminated alteration and mineralization.

Both deformed and unstrained pyrite account for 3-4% of the rock by volume. Pyrite hosts inclusions of chalcopyrite, pyrrhotite and numerous grains of a silver-coloured (possibly telluride) mineral. Hematite (6-7%) and isolated chalcopyrite crystals are also present. Several gold grains occur at the interface between pyrite grains and/or chalcopyrite grains.

9.1.3 Other zones

The mineralization and alteration features of other mineralized zones in the Flordin deposit are similar to those of the South-1 Zone. These other zones were delineated by diamond drilling only, and their geological features are thus less well known than those of the “B” and South-1 zones. They occur as boudinaged, slightly folded lenses in carbonate-sericite schist within shear zones. The lateral and vertical extents range from 20 metres to more than 200 metres in places, and their widths vary from a few centimetres to 2 metres.

9.2 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 “B” Zone is a zone of intensely altered and mylonitized host volcanics. Very strong hydrothermal alteration (Fig. 9.2) caused silicification, sericitization, pyritization (5-20%; often as deformed grains), and local carbonate alteration. 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-1 Zone. 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 “B” Zone.

9.3 Structure

Deformation is quite significant and to such a degree that veins are fractured, folded in places, and pervasively boudinaged (Fig. 9.3). In the “B” Zone, the average dip of the shear envelope is approximately 70° to the north and varies from 36° to 78°. The dip changes very 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 “B” Zone swings 42° over only 3 metres, 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 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), the “B” Zone is hosted in an E-W extension shear fracture (Riedel), whereas the South-1 Zone is locked in a W-NW ductile shear zone (“C” fabric) that evolved simultaneously. This explains the occurrence of a relatively wide quartz vein in the “B” Zone, compared to the minute injections characterizing the South-1 Zone. He also concluded that folding of the “B” zone originated during shearing and nucleated at irregularities in the planar shear zone.

Figure 9.2 – Very strong hydrothermal alteration (silicification, sericitization and pyritization) associated with the "B" Zone quartz vein

Figure 9.3 – Pervasively boudinaged quartz vein within a strongly altered zone ("B" Zone)

According to Buro (1989), three folded zones with a westerly plunge of 40° were delineated above the 01-B drift within the "B" Zone. In the 7+65 W stope ("B" Zone), a complex fold was observed over 60 metres. A clearly identifiable fold in the 7+00 W stope ("B" Zone) 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 "B" Zone, the South-1 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. In contrast to the "B" Zone, however, the South-1 Zone displays a very constant dip of 80° and only minor folds are present with amplitudes of 15-30 centimetres. This suggested to Buro that the two zones were coeval but formed under different stress conditions.

10.0 EXPLORATION *(Item 12)*

Cadiscor performed a surface diamond drilling exploration program in 2007-2008. This program is described in the drilling section (Item 13). Earlier exploration activities are described in the History section (Item 8).

11.0 DRILLING *(Item 13)*

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 was performed 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 metres were drilled. All holes were drilled from north to south (Table 11.1). The location of each hole was established using the old local grid established by previous companies. All recovered core was NQ diameter. The casing for each hole was behind, and the tops were not cemented. The casings were surveyed in the field by a surveyor from the firm of Jean-Luc Corriveau Arpenteur-Géomètre in Val-d'Or, Quebec.

The 2007-2008 drilling program investigated the ten (10) known mineralized zones described in the current Mineral Resource Estimate. The diamond drill holes intersected the envelope of these mineralized zones. Many occurrences of gold mineralization were observed during drilling. The best results from each hole are shown in Table 11.1. Additional details of mineralized zone intersections are available in the report by Pelletier and Jourdain (2008a).

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 metres. The holes were drilled from south to north (Table 11.1), and the casings left behind. The overall objective of the 2008 program was to follow up on the Boundary Zone that had been intersected by two earlier underground diamond drill holes: Su-16 and Su-29. The best results are shown in Table 11.1. Details of the Boundary Zone mineralized intervals are available in the report by Pelletier and Jourdain (2008a).

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

Table 11.1 – Diamond drill holes carried out by Cadiscor Resources

HOLE NUMBER	UTM NAD 83 ZONE 18		AZIMUTH (DEGREE)	DIP (DEGREE)	LENGTH (metres)	BEST RESULTS
	EASTING mE	NORTHING mN				
FD07-01	358530.57	5463960.93	185.5	-70	15	No result
FD07-01A	358530.57	5463960.93	180	-70	348	4.18 g/t Au over 2.05 m ("E" Zone)
FD07-02	358530.56	5463960.63	180.4	-57	290	14.51 g/t Au over 1.15 m ("B" Zone)
FD08-03	358926.38	5464001.97	180	-65	396	4.64 g/t Au over 1.30 m ("B" Zone)
FD08-04	358939.19	5464138.55	180	-65	492	3.58 g/t Au over 0.75 m ("B" Zone)
FD08-05	358717.10	5463669.20	353	-50	150	1.59 g/t Au over 4.30 m (Boundary Zone)
FD08-06	358717.10	5463669.40	355	-60	201	3.27 g/t Au over 1.90 m (Boundary Zone)

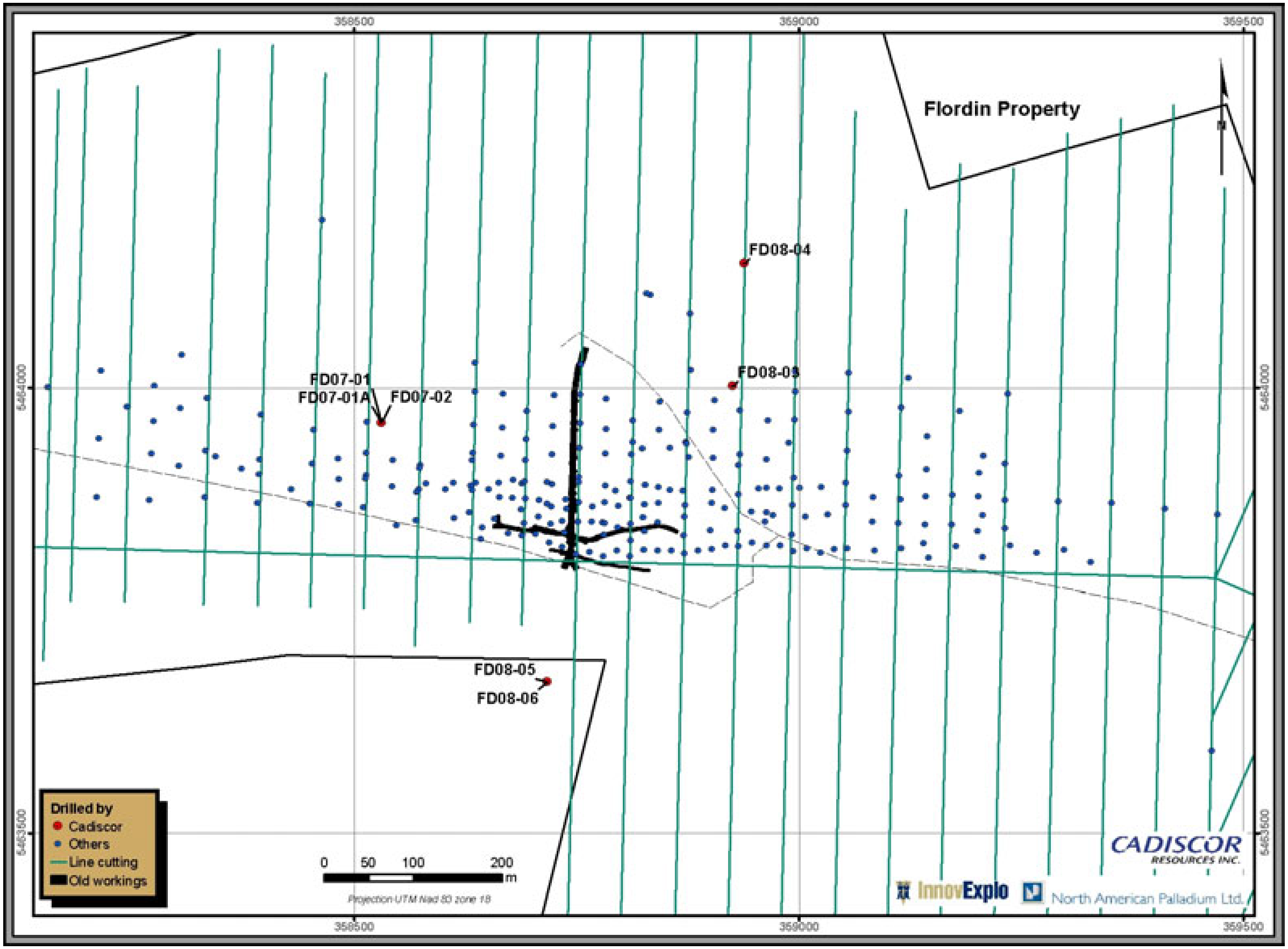

Figure 11.1 – Location of Cadiscor diamond drill holes completed in 2007-2008

12.0 SAMPLING METHOD AND APPROACH *(Item 14)*

No review is available for the sampling methods and approaches used during historical assessment work. It is assumed that any historical sampling methods and approaches for the Flordin Project prior to National Instrument 43-101 and Regulation 43-101 were suitable and valid, although the authors of this report have no way of verifying the data.

The protocol for drill core was established by Cadiscor and InnovExplo, and verified by Vincent Jourdain, ing., Ph.D., of Cadiscor. InnovExplo was responsible for the 2007-2008 surface drilling program. InnovExplo found no indication that anything in the drilling, core handling and sampling procedures, or in the sampling methods and approach, could have had a negative impact on the reliability of the reported assay results.

The core from diamond drill holes FD-07-01 to FD08-04 was examined and described (logged) by two geologists from InnovExplo (Nazaire Yapi and Bruno Turcotte), whereas the core from diamond drill holes FD08-05 and FD08-06 was examined and described (logged) by a consulting geologist, Denis Raymond. After logging, the core was sampled by Valmont Beaulieu, a technician from InnovExplo, at Lebel-sur-Quévillon (Quebec) according to an established protocol. The selection of drill core for sampling and assaying was based on the presence of alteration, sulphide mineralization, and/or quartz veins. Both walls of the selected zones of interest were also sampled.

First, the core of the selected section was cut in half with a rock saw, with one half put aside for eventual shipment to the laboratory. The second half of the core was then put back in its place in the core box, and a tag bearing the same number was placed at the beginning of sawed core halves forming the selected sampled length. The rock saw was cleaned thoroughly, as was the working table, before proceeding to the next sample. Each bag, after being closed and tied, was then placed with other samples into a larger bag for shipment. Each of these larger bags typically contained twenty-five (25) samples. All samples were shipped to the ALS Chemex laboratory in Val-d’Or. Sample lengths ranged from 0.50 to 1.50 m.

13.0 SAMPLE PREPARATION, ANALYSES AND SECURITY *(Item15)*

It is assumed that historical assays performed prior to National Instrument 43-101 and Regulation 43-101 for the Flordin property 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 at the time.

A QA/QC control program was present for the Cadiscor 2007-2008 diamond drilling program.

The objectives of Cadiscor's QA/QC program are to monitor and document the quality and integrity of the sampling, preparation and assaying of samples for the Flordin project. Using a series of quality control samples, Cadiscor's 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 field blank results and sample shipment procedures;
- Possible contamination during the sample preparation or the assaying process by monitoring the results of field blank standards 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.

13.1 Batch Size & Sample Types

The adopted protocol is based on a fusible batch size of eighty-one (81) samples. The following is a breakdown of the protocols used regarding the number, type and distribution of QC samples in each batch of samples shipped from the field and fused in furnaces at the selected laboratory. The number of QC samples has been co-ordinated to fit within the maximum furnace batch size.

Each sub-batch of twenty-five (25) samples comprises:

- 22 regular samples
- 1 field duplicate sample selected at random
- 1 field blank
- 1 certified reference material (CRM)

Three (3) sub-batches are combined to create a single large batch of seventy-five samples (3x25=75) to be shipped to the laboratory.

All samples shipped from the field are identified by individual sample number, including batch and sub-batch identification.

The laboratory inserts one (1) coarse crush duplicate sample split, selected at random, into each 25-sample sub-batch, for a total of seventy-eight (78) samples per large batch (3x26=78).

To this batch of seventy-eight (78) samples, the laboratory adds three (3) more samples for a total fusible batch of eighty-one (81) samples. The samples comprise:

- 1 laboratory internal analytical blank standard, inserted at random
- 2 laboratory internal CRMs, inserted at random

13.2 Regular Samples

Regular samples consist of a one-half split of the original (whole) NQ core. The remaining half-split is kept in the core box as witness. The minimum sample length is 0.5 metre and the maximum length 1.5 metre. Regular samples are also provided from channel sampling. Channel samples are sent whole to the laboratory.

13.3 Standards (Certified Reference Material)

Blind CRMs – Three (3) certified reference standards (CRMs) with different grades are included in each batch of seventy-five (75) samples shipped by the on-site geologist. The recommended CRMs are from Rocklabs of New Zealand.

The goal of the low-grade CRM is to monitor the accuracy of assaying at grades that are considered significant, albeit below the cut-off grade level for the project. This is done to ensure that mineralized zones are not being missed due to poor assaying at grade levels that are indicators of significant nearby ore. The mid-grade CRM will monitor the accuracy of assaying at both the cut-off and average grade levels of the deposit. The high-grade CRM will monitor the accuracy of the very significant and frequently occurring high-grade samples.

Laboratory Internal CRMs – In addition to the blind CRMs included by the geologist in each field batch, the laboratory also randomly inserts two (2) of its own internal CRMs into each total (fusible) batch of eighty-one (81) fused samples.

13.4 Blanks

Field Blank Standard – One (1) field blank standard is prepared using “barren” rock from the project site, or other potentially “barren” material, and inserted into each field sub-batch, for a total of three (3) in each shipped batch of seventy-five (75) samples. A field blank standard should be selectively placed after potentially high-grade samples (submitted as regular samples, blind to the laboratory) to monitor potential contamination during the preparation process. Because it is sometimes difficult to find and prepare a field blank, InnovExplo recommends the use of a blank prepared using crushed rock from a quarry.

Analytical Blank Standard – As is in the case of the CRMs, the laboratory is instructed to insert one (1) of its own internal analytical blank standards into each total batch of eighty-one (81) fused samples for quality control purposes.

13.5 Duplicates

A series of duplicate samples taken at each stage of the sampling and sample preparation process enables the precision to be monitored incrementally. The number of duplicate types depends on the number of process steps, but typically includes three (3) types, namely the field duplicate sample, a coarse crush duplicate sample, and a pulp duplicate sample. In cases with more complex sample preparation flow sheets, the protocol may require additional duplicates, such as in the case of a multi-stage crushing process.

<u>Field Duplicate Sample</u> – A field duplicate sample should be prepared for one (1) sample selected at random from each field sub-batch (with some bias to ensure results are included from all grade ranges) and included as a regular sample, blind to the laboratory. A total of three (3) field duplicates should thus be included in each total (fusible) batch of eighty-one (81) samples.

Field duplicate results can be used to determine total precision (i.e., reproducibility) of the sample analysis from sampling to sample preparation. When used in conjunction with other sample preparation duplicates, the incremental loss of precision can be determined for each of the various stages of the sampling, preparation and assaying process. For the field duplicate sample increment, this can indicate whether loss of precision is attributable to initial sample size.

The samples to be analyzed are provided from half of the half-split drill core; that is, from a ¼-split of the original whole core. The ability to directly compare results for half-core samples from previous sampling programs with quarter-core results from more recent programs depends on whether each sample is adequate in size in relation to gold grain size and distribution, and which sampling methods/intervals were used.

<u>Coarse Crush Duplicate Sample</u> – The laboratory will be instructed to prepare a coarse crush duplicate for one (1) sample selected at random from each field sub-batch. A total of three (3) coarse crushed duplicate samples should thus be included in each total (fusible) batch of eighty-one (81) samples, and these would be subject to the same sample preparation and assaying procedures as the regular samples. The coarse duplicate sample (1,000 g) will be taken after the primary crushing stage, before proceeding with the other regular samples.

By measuring the precision of the coarse duplicate samples, a similar incremental loss of precision can be determined for the coarse crush stage of the process and provide indications of whether the sub-sample size of 1,000 grams taken after primary crushing is adequate to ensure a representative sub-split.

<u>Pulp Duplicate Sample</u> – The laboratory will be instructed to prepare a pulp duplicate assay for one (1) sample selected at random from each sub-batch of samples. A total of three (3) pulp duplicate assays would thus be performed for each total (fusible) batch of eighty-one (81) samples, providing a final total of eighty-four (84) analytical results.

By measuring the precision of the pulp duplicate samples, a similar incremental loss of precision can be determined for the pulp pulverizing stage of the process and provide indications of whether the pulp size of 50 g taken after pulverization of the crushed particle size is adequate to ensure representative fusing and analysis.

13.6 Other Considerations

<u>Visible Gold & High-Sulphide Samples</u> – Each field sample containing visible gold or a large amount of sulphides will be systematically assayed using a metallic screen analysis.

<u>Analytical Finish Re-assaying</u> – The recommended protocols for initial analytical determination is AAS. Since the precision of AAS analytical gold determinations from 3.0 to 5.0 g/t Au is considered poor, all samples with initial results above 3.0 g/t Au will be immediately re-assayed using a gravimetric finish with both results reported by the laboratory.

13.7 QA/QC results from 2007-2008 drilling program

Prior to 2007, deviation test surveys had not been performed in diamond drill holes on the Flordin property. Starting in 2007, Cadiscor conducted deviation tests in their holes using a Flex-it survey instrument (Pelletier and Jourdain, 2008a). The Flexit system records the positions and paths of diamond drill holes using the single-shot and multi-shot techniques. The single shot survey records the dip and orientation angles at regular down-hole depth intervals during drilling. After the hole is drilled, the multi-shot survey tracks the path of the hole by taking measurements at any number of points in a single run down the hole. A multi-shot survey was performed for each of Cadiscor's diamond drill holes, with dip and direction measurements taken every 3 metres. However, the presence of magnetite in the volcanic rocks (high magnetic field) caused some problems for the Flexit system. Cadiscor decided to use a gyroscope survey, a system that works well in all downhole environments, whether magnetic or not. A gyroscope survey was performed in holes FD07-01A, FD07-02 and FD08-03, with dip and direction measurements taken every 5 metres.

Table 13.1 shows the difference between the calculated positions at the end of each diamond drill hole according to survey type: Gyro Descending, Gyro Ascending, or Flexit. The final position of each hole was established by taking the average of the descending and ascending gyroscope surveys, and the values in Table 13.1 are presented as deviations from this average.

The differences in elevation are negligible regardless of survey type (about 1 metre maximum), whereas the differences for Northing are up to 2 metres, and the differences for Easting were truly significant: up to 5 or 6 metres for the gyroscope surveys and up to 14 metres for the Flexit survey. Since the distance between cross-sections is only 15 to 30 metres, this exercise clearly demonstrates that gyroscope surveys should be used for future drilling programs to ensure more precise positioning of mineralized zones, which will result in a greater accuracy for any future mineral resource estimates.

Table 13.1 – Difference of end positions for Cadiscor diamond drill holes

DDH	Easting(m)		
	Gyro Descending	Gyro Ascending	Flex-It
FD07-1A	3.3	-3.3	9.5
FD07-2	-1.0	1.0	-14.0
FD07-3	5.7	-5.8	-1.2
	Northing (m)		
	Gyro Descending	**Gyro Ascending**	**Flex-It**
FD07-1A	-0.9	1.0	-1.1
FD07-2	0.2	-0.3	-1.1
FD07-3	0.3	0.0	2.2
	Elevation (m)		
	Gyro Descending	**Gyro Ascending**	**Flex-It**
FD07-1A	0.0	0.1	-0.5
FD07-2	0.0	0.1	-1.3
FD07-3	0.0	0.1	-0.5

Three (3) certified reference standards (CRMs) with different grades were included in each batch of seventy-five (75) samples shipped by the on-site geologist. The recommended CRMs were from Rocklabs of New Zealand. Table 13.2 presents the relevant information for the standards used in the 2007-2008 drilling program.

Table 13.2 – Description of standards used by Cadiscor Resources

Standard	Grade (Au g/t)	Standard deviation (Au g/t)	Sulphides in the matrix (%)
SH35	1.323	± 0.044	3.0
SJ32	2645	± 0.068	3.0
SK33	4.041	± 0.103	3.2
SL34	5.893	± 0.140	3.3

Figure 13.1 presents the results of fifty (50) samples of standards sent to the ALS Chemex laboratory in Val-d'Or. The accuracies for standards SH35 (1.323 g/t), SJ32 (2.645 g/t) and SK33 (4.041 g/t) varied from + 5% to -10%, whereas the accuracy for standard SL34 (5.893 g/t) varied from +5% to -15% (Pelletier and Jourdain, 2008a). Assay methods used by the ALS Chemex laboratory were Fire Assay-Atomic (Au-AA26) and Fire Assay-Gravimetric (Au-GRA22).

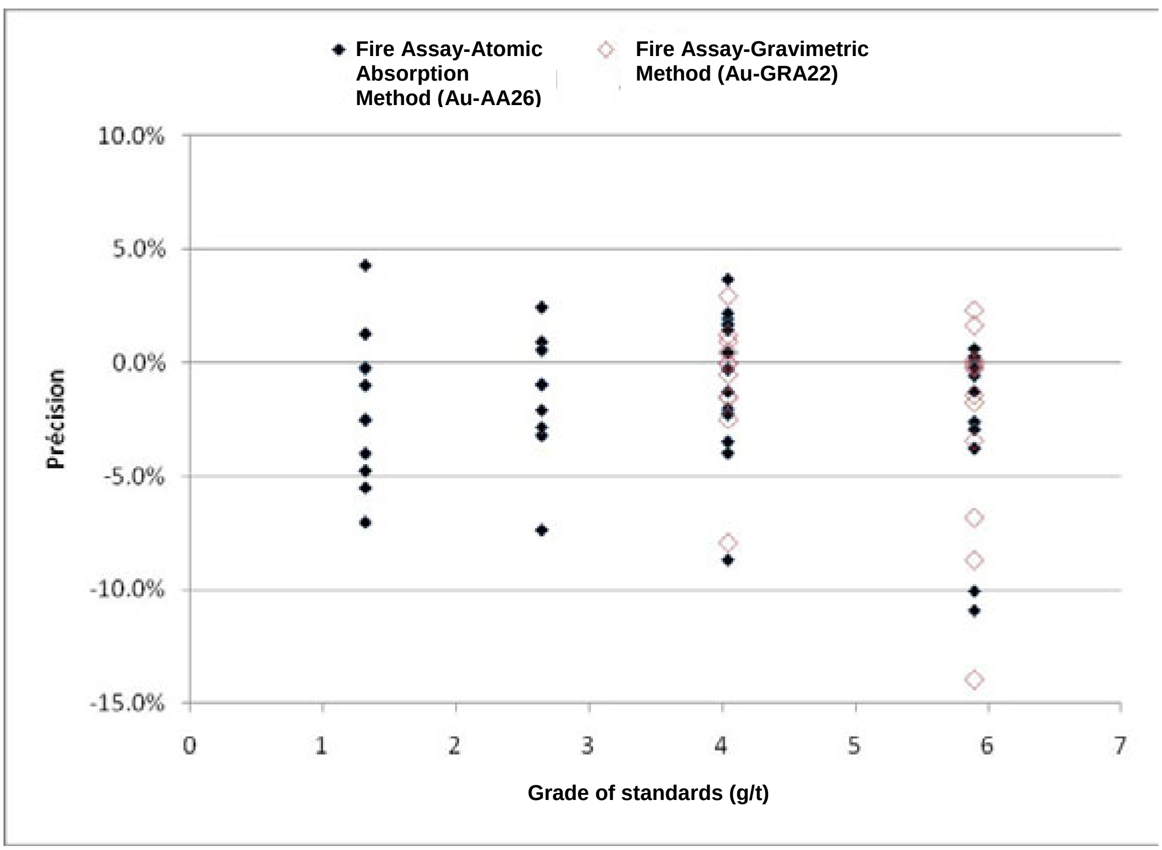

Figure 13.1 – Results of standards sent by Cadiscor Resources

These results conclusively prove that the majority of assays are accurate to better than ±5%, which was considered satisfactory by Pelletier and Jourdain (2008a). The authors also noted that the laboratory slightly underestimated gold grades because the differences were often negative. Moreover, it was observed that the accuracy of the Fire Assay-Absorption method was better than the Fire Assay-Gravimetric method.

A total of fifty (50) field blank standards were sent to the ALS Chemex laboratory in Val-d'Or. Field blank standards consisted of crushed barren rocks from a quarry (Pelletier and Jourdain, 2008a). Forty-one (41) samples had grades of less than 0.01 g/t Au, seven (7) samples had grades of 0.01 g/t Au, and two (2) had grades of 0.02 g/t Au. These results demonstrate that no contamination could be detected during the preparation process.

Figure 13.2 shows the assay results for forty-eight (48) field duplicate samples (from a ¼-split of the original whole core) and forty-nine (49) coarse crush duplicate samples, all sent to the ALS CHEMEX laboratory in Val-d'Or (Pelletier and Jourdain, 2008a). It was noted that 90% of coarse crush duplicate samples show an accuracy better than 33%. These results were considered satisfactory. On the other hand, it was observed that only 65% of field duplicate samples show an accuracy better than 33%. This observation probably indicates that a nugget effect is present within the core. This is common for orogenic gold mineralization in longitudinal shear zones (greenstone-hosted quartz-carbonate vein deposits).

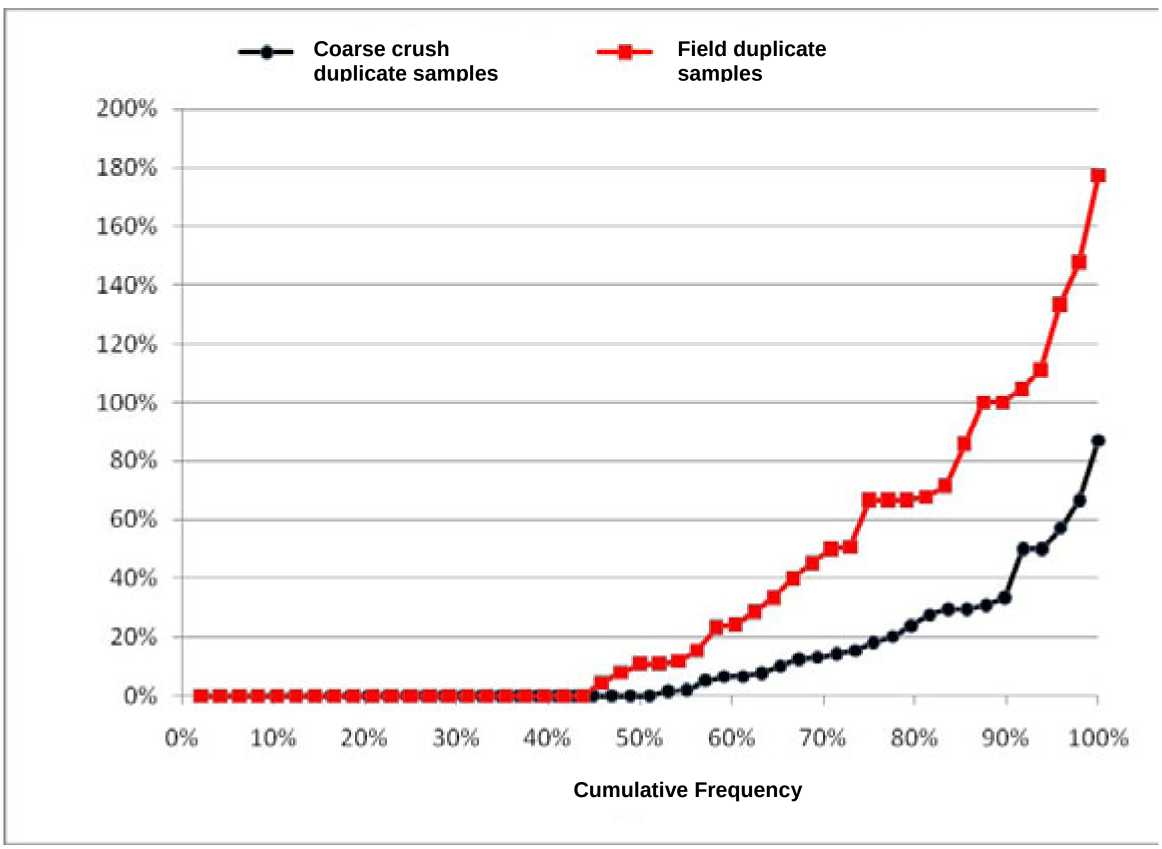

Figure 13.2 – Results for field duplicate samples and coarse crush duplicate samples sent by Cadiscor Resources

14.0 DATA VERIFICATION *(Item 16)*

Bruno Turcotte (P. Geo.) of InnovExplo previously examined and described some of the core from the Flordin property as part of Cadiscor's 2007-2008 drilling program. In December 2007, InnovExplo was contracted by Cadiscor Resources Inc to supervise the drilling program on the Flordin property. Bruno Turcotte also supervised core logging done by another InnovExplo geologist during the 2007-2008 program. Only the core from Cadiscor's drilling program is available for verification.

Geological logging was completed using codes reflecting lithology (i.e., a geological legend) combined with qualifiers (descriptors) for mineralogy, alteration, structural elements and mineralization. A brief description was also included. The logging codes are amenable to management in a computer database, and in this case, Cadiscor supplied the Flordin data as a GeoticLog database. Many of the original paper logs and/or copies of the original paper logs are stored at the North American Palladium office. Paper logs for all surface and underground diamond drill holes from 1935 to 2008 were available for consultation by InnovExplo personnel. Geotechnical logging was not performed; consequently, none of the diamond drill hole logs record fracture frequency or RQD (Rock Quality Designation).

InnovExplo verified the data (as much as the availability of the supporting information would allow) for the purpose of producing a Mineral Resource Estimate in compliance with National Instrument (NI) 43-101. The authors chose three (3) cross-sections (6280E, 6295E, and 6310E) to work with, and the geological information for the twenty-eight (28) drill holes on these cross-sections was verified using the original paper logs. The assays presented on the sections could only be checked against assays recorded on the paper logs because assay certificates are no longer available for holes drilled before 2007. No discrepancies between the paper logs and cross-sections were uncovered, so the authors considered it reasonable to assume the positive verification results for these twenty-eight (28) holes are representative of the 260 diamond drill holes used for the Mineral Resource Estimate, despite representing only 10.8% of the total. InnovExplo also verified all diamond drill hole locations on the Flordin property. Positions were established using data surveys stored in paper format at the North American Palladium office. It was discovered that the positions for some of the diamond drill holes drilled from 1933 to 1935 (the H-series) were inaccurate. Holes in the H-series were not surveyed; instead, their positions were established using picketed claims or picketed lines. Consequently, some of the geological results (intersections) from these drill holes do not match the results from more recent diamond holes.

The GeoticLog database provided by Cadiscor contained data for all diamond drill holes carried out on the Flordin property. InnovExplo transferred the GeoticLog data into a Gemcom database and validated and corrected the data. All surface and underground diamond drill holes were retained. The resulting database consists of 335 diamond drill holes totalling 38,517 metres.

15.0 ADJACENT PROPERTIES *(Item 17)*

There are four (4) mining properties adjacent to the Flordin property (Fig. 15.1): Discovery, Cameron Shear, Florence, and a mining property owned by Centurion Resources LLC.

15.1 Discovery Property

Cadiscor Resources Inc (now North American Palladium) is 100% owner of the Discovery property (Figure 15.1). Located approximately 35 kilometres northwest of the town of Lebel-sur-Quévillon, Quebec, the property is accessible via a well-maintained logging road off Highway 113, as well as an operating CN rail line.
The Discovery gold deposit lies within the Cameron Deformation Zone, a major NW-SE structural discontinuity. A 2007 Mineral Resource Estimate, which was calculated by InnovExplo using the results of 327 diamond drill holes (122,360 metres) drilled by Cadiscor and other companies, established Measured Resources of 3,109 metric tons grading 8.95 g/t Au for a total of 895 ounces, and Indicated Resources of 1,160,077 metric tons grading 5.52 g/t Au for a total of 205,729 ounces. Total Inferred Resources are estimated at 966,864 metric tons grading 6.06 g/t Au for a total of 188,510 ounces, at a cut-off grade of 3.0 g/t Au (Cadiscor press release of May 24, 2007). The InnovExplo Mineral Resource Estimate was completed in accordance with the CIM Standards and Guidelines for Reporting Mineral Resources and Reserves and in compliance with Regulation 43-101 and Form 43-101F1.

InnovExplo also prepared a Scoping Study, which concluded that the project could generate a positive cash flow given certain assumptions (Cadiscor press release of September 29, 2009). The total income generated by the Discovery Project before taxes would be $17.2 million with an NPV of $11.5 million at a discount rate of 5% and an internal rate of return (IRR) of 27%. InnovExplo considered that an IRR of 27% was sufficient to move forward with the project, considering that only a small part of the resources was used in the study and that these resources were established with cut-off grades reflecting a gold price at US $650/oz. The InnovExplo Scoping Study was completed in compliance with Regulation 43-101 and Form 43-101F1.

15.2 Cameron Shear Property

The Cameron Shear property, which lies between the eastern limit of Cadiscor's Discovery property and the western end of the Flordin property, covers 8 kilometres of the Cameron Deformation Zone between the Discovery and Flordin gold deposits. The property is relatively unexplored.

In December 2006, Cadiscor announced the signing of a Letter of Agreement with Canadian Royalties Inc for their Cameron Shear property (Cadiscor press release of December 20, 2006). According to the agreement, Cadiscor may acquire a 50% undivided interest in the property and exercise its option by funding $1,000,000 in exploration and making cash payments totalling $50,000 over five (5) years. Cadiscor is the project operator and will also have the additional option to increase its interest in the property from 50% to 60%, once it has exercised its option, by financing the entire cost of a bankable feasibility study for the property.

In 2007, Cadiscor commissioned an airborne magnetic and electromagnetic survey of the Cameron Shear property (Cadiscor press release of October 15, 2007). The survey was completed in February and the results interpreted in light of the knowledge acquired for the adjacent Discovery property. Cadiscor completed geological compilation work and performed a geochemical field survey, confirming the strong potential of the exploration targets. In 2008, another geochemical field survey was done and six (6) diamond drill holes totalling 1,087 metres were drilled (Pelletier and Jourdain, 2008b). No significant results were obtained during this drilling program. There is no mineral resource estimate for the Cameron Shear property.

15.3 Florence Property

Cadiscor Resources Inc is 100% owner of the Florence property (Figure 15.1). The Florence property covers the northern extension of exploration on the Cameron Shear property. Following exploration work in 2007, Cadiscor decided to stake this new property (Cadiscor press release of October 15, 2007). Cadiscor did not perform any recent exploration work on this property, and there is no mineral resource estimate.

15.4 Property of Centurion Resources

No recent exploration work has been done on the property owned by Centurion Resources, (Figure 15.1). The property likely corresponds to the old mining Diomines property optioned by GeoNova Exploration Inc in 1994. In 1994-1995, GeoNova carried out line cutting, geological mapping, trenching, geophysical survey and drilling (Bossé, 1995). The property hosts the Cameron Deformation Zone. Many gold showings were reported on the property. More details were available in the report by Bossé (1995). There is no mineral resource estimate for this property.

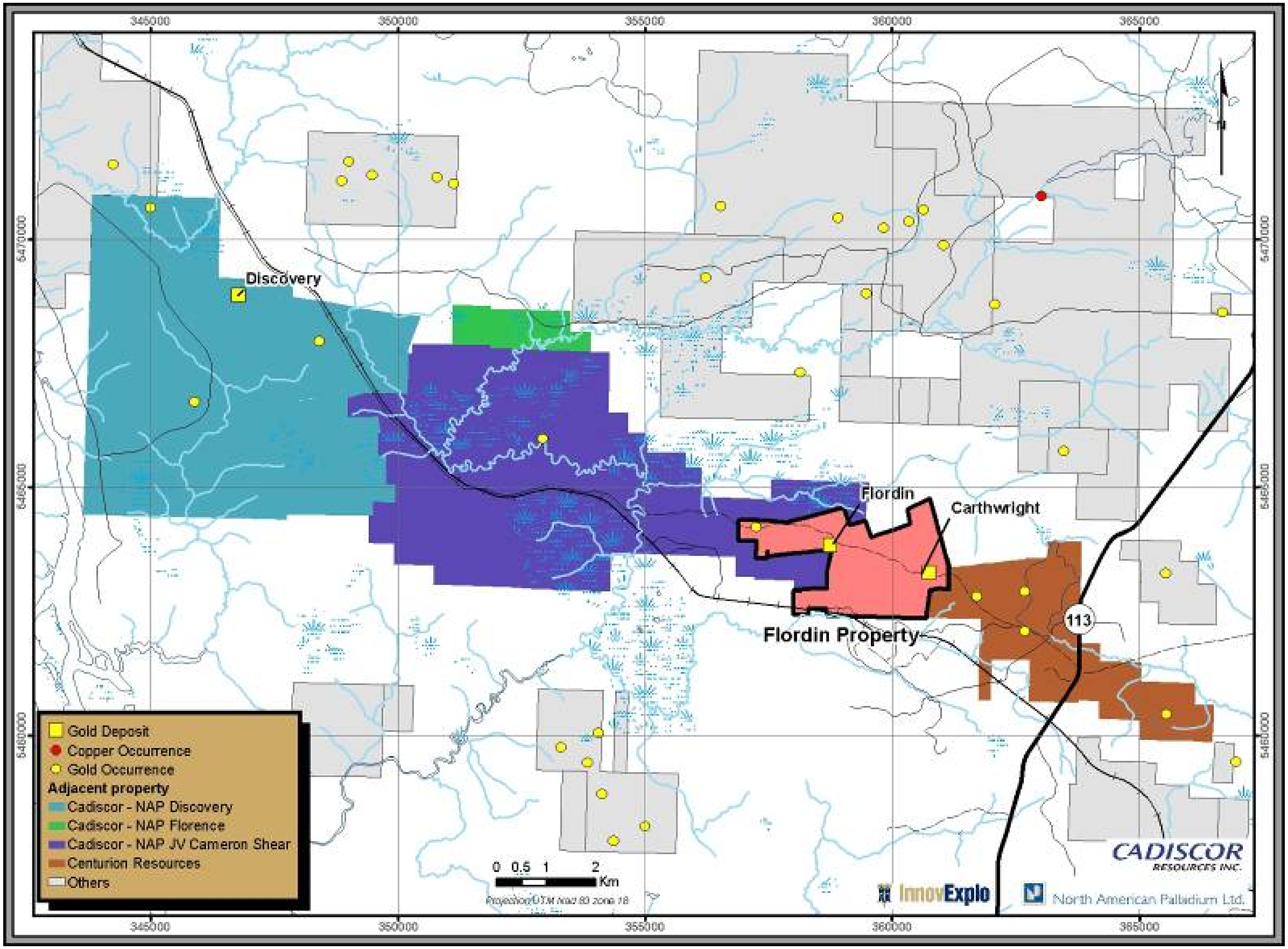

Figure 15.1 – Adjacent properties surrounding the Flordin property

16.0 MINERAL PROCESSING AND METALLURGICAL TESTING *(Item 18)*

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 16.1). The tests were done on ore crushed to a grind of 70% at minus 200 mesh.

Table 16.1 – 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 24 48	0.08	86.8 90.2 91.0
3	5.53	48	0.286	94.8
4	5.62	12 24 48	0.338	79.4 92.9 94.0
5	5.27	48	0.27	94.9
6	4.76	12 24 48	0.300	86.7 92.7 93.8

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 372.048 ounces was sold to the Royal Canadian Mint and 10.513 ounces were kept in the mill inventories (Tardif, 1987). Results are presented in Table 16.2.

Table 16.2 – Results from mineral processing carried out in 1987

	Amount of material (metric tons)	Grade (g/t Au)	Ounces gold
Total processed muck	5173.95	2.571	
Head	5173.95	2.507	419.071
Reject	5050.207	0.213	34.51
Solid in inventory	123.74		
Final Inventory			17.586
Gold sold to Ottawa			372.048
Initial inventory			(7.073)
TOTAL (Head)			**417.071**

17.0 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES *(Item 19)*

The 2010 Mineral Resource Estimate was performed by Bruno Turcotte, M.Sc., P.Geo., under the supervision of Carl Pelletier, B.Sc., P.Geo., using all available results. The primary objective of InnovExplo's work was to confirm the presence of sufficient mineral resources within the Flordin property to justify further exploration work by North American Palladium Ltd (formerly Cadiscor Resources Inc). The Resource Estimate was calculated for the area between sections 5680E and 7000E from 3950N to 4150N, and from surface (0 m) to a depth of 425 metres. InnovExplo did not calculate a Mineral Resource Estimate for the Carthwright Zone.

The Mineral Resource Estimate herein is not influenced by any penalizing factor. Mineral Resources are not Mineral Reserves since they have no demonstrable economic viability. The result of InnovExplo's work is a single Mineral Resource Estimate for the Flordin property with Measured, Indicated, and Inferred categories.

17.1 Methodology and Estimation Parameters

The method used for the current resource estimate to interpolate gold grades in the block model is the squared inverse distance. InnovExplo is of the opinion that this method is best suited to the structural geometry of the mineralized zones and would provide the best evaluation of the volumes of the steeply dipping zones.

17.1.1 Cut-off Grades

A minimum cut-off grade of 1.0 g/t Au was used for the Mineral Resource Estimate. Resource estimates are also presented for other cut-off grades (2.0, 3.0, 4.0, 5.0, 6.0, and 7.0 g/t Au).

17.1.2 Minimum True Thickness

All drill hole intercepts were calculated for a minimum true thickness of 2.0 metres using the grade of the adjacent material when assayed, or a value of zero when not assayed. The authors established 2.0 metres as the minimum true thickness because it corresponds to the minimum width necessary for an open-pit or underground bulk mining operation. If a mineralized zone is wider than the minimum true thickness but has grades above the cut-off in only a portion of the zone, an average grade was calculated over the full width of the zone, including the low-grade areas. The limits of composites were based only on assays. This method avoids the possibility of estimating high-grade values for a zone that may not be reproducible by any mining method in the future. InnovExplo believes that this approach provides a reliable estimate for a given intersection when calculating a Mineral Resource.

17.1.3 Specific Gravity

A specific gravity value of 2.8 t/m^3 was established for the Flordin deposit when the Bachelor Lake Gold Mines mill processed 5,174 tonnes of material in 1987 (Tardif, 1987). The Mineral Resource Estimate performed by InnovExplo used this value with the caveat that it will be necessary to redetermine, at a later date, specific gravity values for each lithology observed on the Flordin Project using diamond drill core samples from mineralized zones.

17.1.4 High-Grade Assay Cutting Values

For the current Mineral Resource Estimate, a total of 2,009 drill hole samples (value ≥ 0) were identified within the boundaries of the ten (10) mineralized zones, corresponding to 993 intercepts in 260 diamond drill holes.

A total of 1,172 channel samples (value ≥ 0) were identified within the boundaries of the ten (10) mineralized zones, corresponding to 784 intercepts in 348 channels.

The raw assay histogram plots (Fig. 17.1 and 17.2) indicate that values greater than approximately 32 g/t Au may represent erratics or the nugget effect in diamond drill hole and channel assays. The authors believe that 32 g/t Au represents a conservative capping limit, and that values above 32 g/t Au should therefore be restricted and/or treated (cut) for resource estimation purposes.

Only seven (7) assays were cut at 32 g/t Au for diamond drill core samples (Table 17.1) and only eight (8) for channel samples (Table 17.2).

Table 17.1 – High-grade assay cutting values for diamond drill hole samples

HOLE-ID	Au g/t (Uncut)	From	To	Au g/t (Cut)	ROCKCODE	BLOCKCODE
H-63	122.75	22.2	22.25	32	ZONE_A	101
H-19	65.83	6.05	6.86	32	ZONE_B	103
Su-19	48.96	64.31	64.92	32	ZONE_E	106
H-78	45.6	27.15	27.53	32	ZONE_E	106
S-18	44.57	16.09	17.22	32	ZONE_C	104
H-21	35.66	6.93	7.72	32	ZONE_A	101
S-125	33.94	7.3	8	32	ZONE_E	106

Table 17.2 – High-grade assay cutting values for channel samples

CHANNEL-ID	Au g/t (Uncut)	Au g/t (Cut)	BLOCKCODE
M01-B710-010	59.83	32	103
CH-BW-019	40.32	32	103
CH-BW-037	37.92	32	103
CH-BE-012	36.31	32	103
Z765W-LIFT02-005B	34.29	32	103
Z765W-LIFT04-006B	34.29	32	103
Z765W-LIFT05-004	34.29	32	103
Z765W-LIFT05-004	34.24	32	103

Raw Assays Histogram From Channels Assays

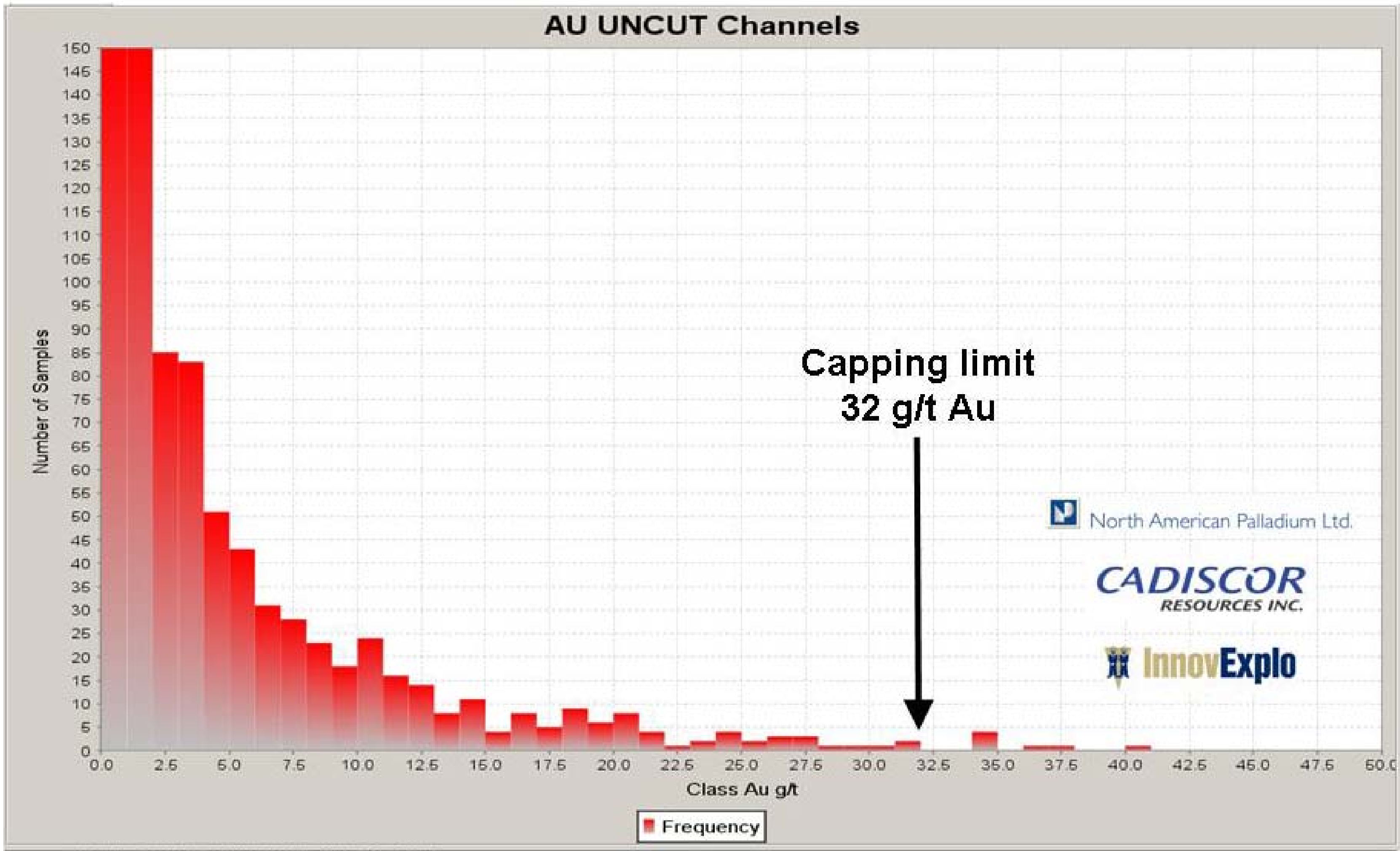

Figure 17.1 – Raw assay histogram of channel assays used to determine the capping limit for identifying erratic and/or nugget values

Figure 17.2 – Raw assay histogram of DDH assays used to determine the capping limit for identifying erratic and/or nugget values

17.1.5 Resource Classification

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".

Measured Mineral Resource: that part of a Mineral Resource for which quantity, grade or quality, densities, shape, 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.

17.2 Methodology

The envelopes of each mineralized zone have a minimum width of 2.0 metres. This minimum width, established by the authors, corresponds to the minimum width necessary for an open-pit or underground bulk mining operation. The geological interpretation of the mineralized zones was entirely redone by Bruno Turcotte, P.Geo., using a set of sections for the Flordin property looking to azimuth N270°. The set contains fifty-two (52) sections spaced thirty (30) metres apart, or fifteen (15) metres apart in the area of historical workings. The current resource model was made for ten (10) identified mineralized zones within the Flordin deposit. The envelopes (Fig. 17.3) were geologically interpreted using information available from diamond drill holes. This was supplemented by geological mapping in drifts and raises, which allowed for a more detailed geological interpretation. Historical interpretations by earlier geologists were also considered. The authors used the same names appearing in earlier reports to identify the mineralized zones. The authors were able to observe the geological continuity of each envelope from one section to another. Sections were generated using Gemcom software version 6.2.1. Each envelope was linked in three dimensions to form 3-D solids.

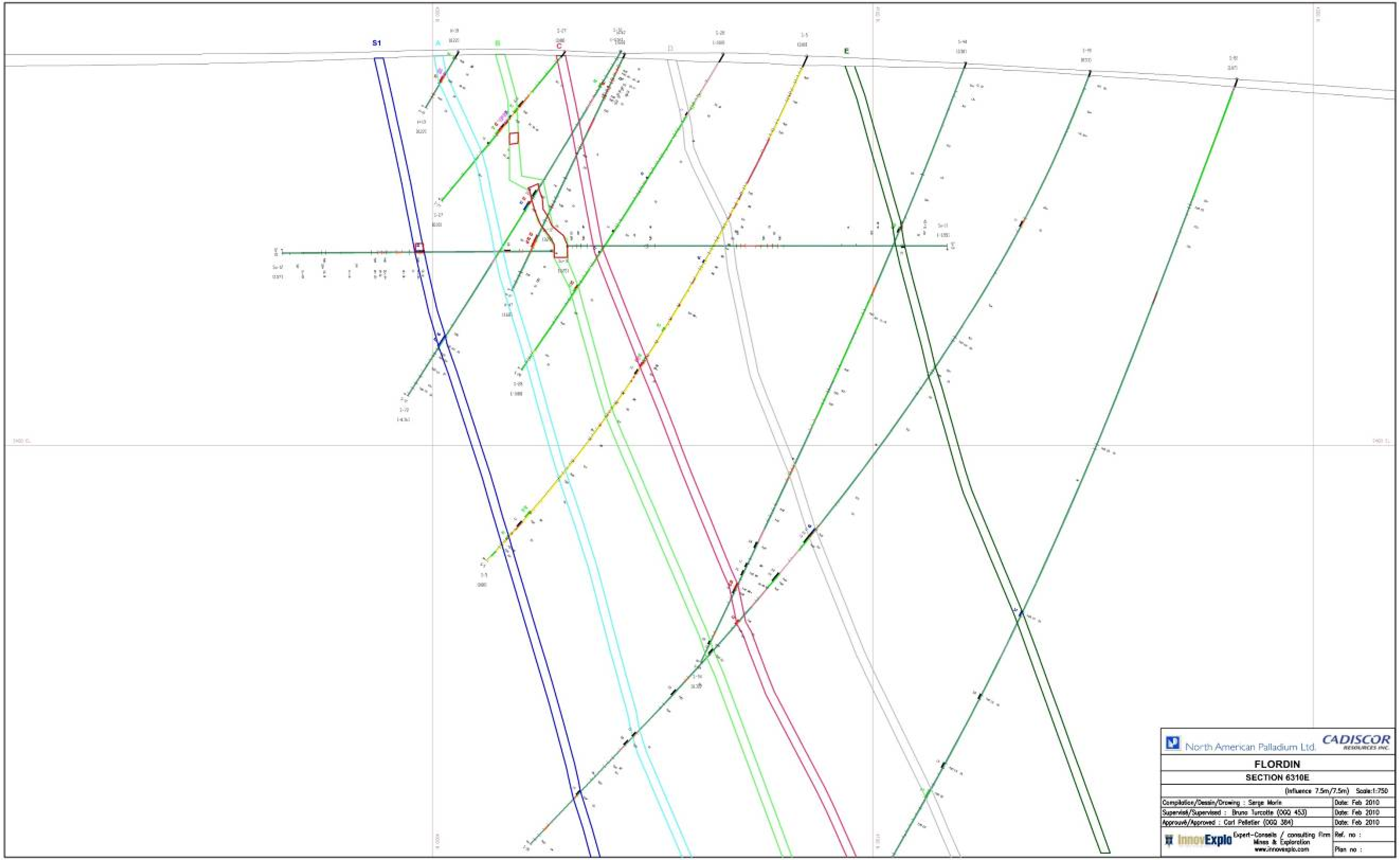

Figure 17.3 – Section 6310E showing the envelope of mineralized zones derived from InnovExplo's geological interpretation

The lengths of diamond drill hole assay intervals ranged from 0.05 to 2.87 metres. The lengths of channel assay intervals ranged from 0.06 to 4 metres. Samples predominantly cut across the trend of the wireframed envelopes of mineralized zones. Samples were composited on 1-metre equal intervals within the wireframed solids defining the limits of mineralization. Each composite was coded using the limits of the defined mineralization for each envelope. Composites located within the solid of an envelope were coded “ore”. Composites outside the solids of the envelopes were coded “waste”. All composites were retained for the current Mineral Resource Estimate. Different rock codes were assigned to each envelope. High gold values were capped before the composite calculation.

17.3 Interpolation

The block model was built with a cell size of 3x3x3 metres. Using the search ellipsoid, each of the blocks was coded as “ore”. For the block model construction, each zone was calculated individually using the same parameters. The squared inverse distance method (with true distance weighing) was used. The input parameters for the search ellipsoid used anisotropy angles defined by Azimuth of First Direction, Dip of First Direction, and Azimuth of Second Direction, as shown in Table 17.3.

Table 17.3 – Search ellipsoid parameters

Azimuth of first direction:	N270°		
Dip of first direction:	-70°		
Azimuth of second direction:	N180°		
Dip of second direction:	-40°		
Range:	principal axis	secondary axis	third axis
Measured Resources	10 m	10 m	10 m
Indicated Resources	25 m	15 m	10 m
Inferred Resources	75 m	45 m	10 m

All cells coded “ore” were interpolated using the composites within the wireframed solids defining the limits of mineralization, and this for each envelope.

The interpolation process evaluated the gold value for each cell. The gold content of the cells was interpolated using the squared inverse distance method between the composite centre points, and these data were selected inside the research ellipsoid. For a cell to be evaluated, the research ellipsoid located at its centre must contain a minimum of two (2) composites, and only the twelve (12) closest composites were taken into account. Composites from channels and diamond drill holes were used to evaluate the Measured Mineral Resource. Indicated and Inferred resources were evaluated only with composites from diamond drill holes.

The Azimuth of First Direction corresponds to the direction of the mineralized zones (N270) with an average dip of -70°. According to Buro (1989) three folded zones, with a 40° westerly plunge, were then delineated above the drift in the “B” Zone. The author has retained this plunge to define the Dip of Second Direction for the search ellipsoid.

17.4 Measured, Indicated and Inferred Resources

The **Measured Mineral Resource** represents adjacent blocks to the old openings (Fig. 17.4). This resource is defined in areas where the blocks are located to a maximum of 10 metres from old workings. The Measured Mineral Resource has been estimated only for the "B" and South-1 zones where old openings were excavated within these zones. The distance of 10 metres was established using the average size of mineralized lenses in historical underground openings in the Val-d'Or mining district.

The **Indicated Mineral Resource** represents blocks with a maximum radius of 15 metres from drill hole intercepts (Fig. 17.4). This resource is defined in areas where the drill hole spacing is less than 15 metres and drill holes form a cluster of similar results. This radius was based on the average size of mineralized lenses in historical underground openings in the Val-d'Or mining district.

The **Inferred Mineral Resource** represents blocks with a maximum radius of 40 metres from drill hole intercepts (Fig. 17.4). This resource is based on isolated drill hole intercepts. This radius was established using the maximum size of mineralized lenses in historical underground openings in the Val-d'Or mining district.

InnovExplo determined the above-mentioned sizes of mineralized lenses in the Val-d'Or mining district using information in historical documents about the dimensions of lenses mapped in drifts and the dimensions of historical stopes.

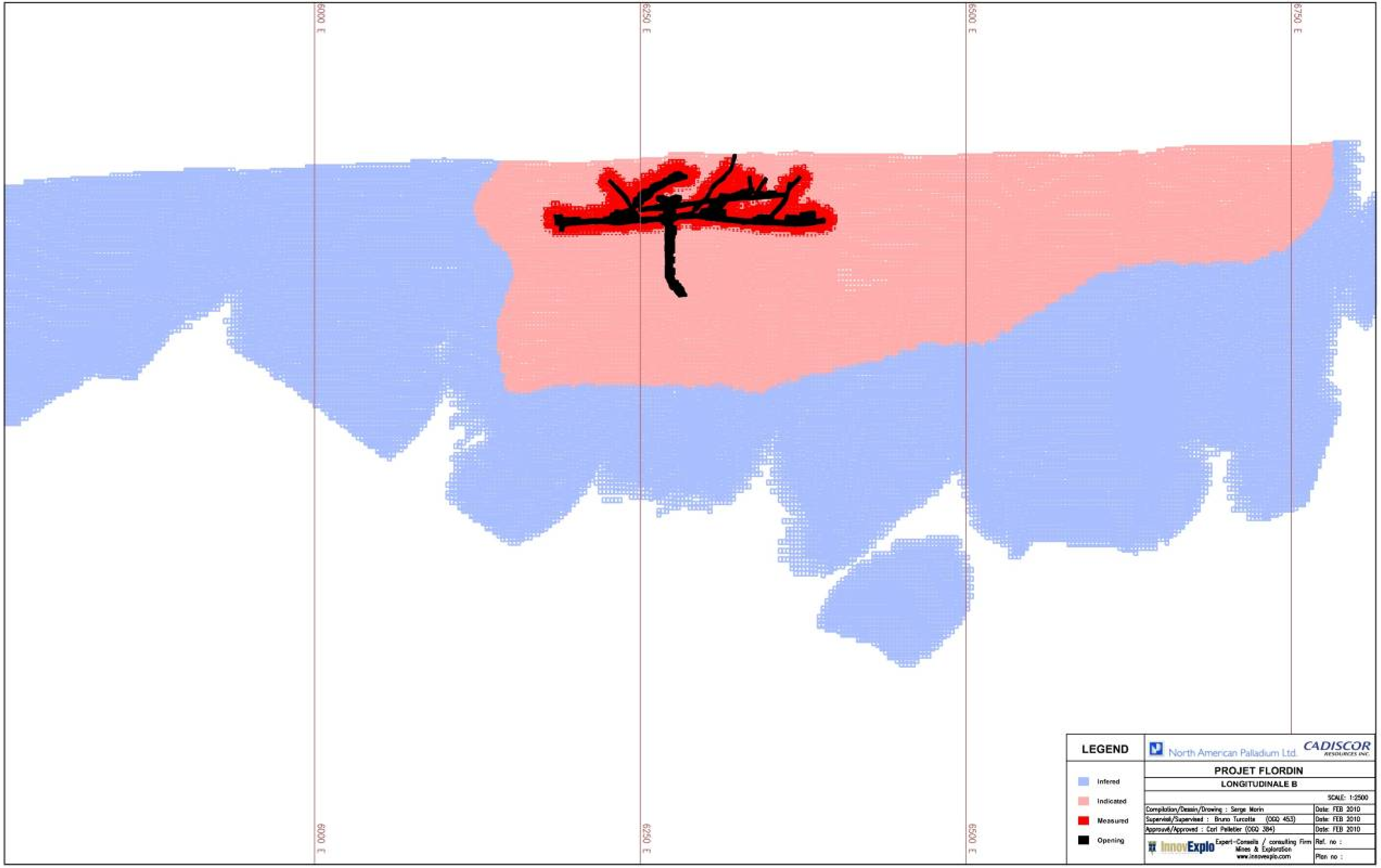

Figure 17.4 – "B" Zone longitudinal section showing the resource classification definitions used in the block model interpolation. Red colour = Measured Mineral Resource Blocks around old openings. Pink colour = Indicated Mineral Resource Blocks. Blue = Inferred Mineral Resource Blocks. Black = old openings.

17.5 Mineral Resource Estimate Results

The current report refers exclusively to the area encompassing the "A" to "F2" zones and the South-1 and South-2 zones, presented on ten (10) longitudinal sections. The authors consider their methodology adequate for the type of orebody present at the Flordin deposit based on their personal experience with narrow vein deposits in the Abitibi, especially in the Val-d'Or mining camp (Sigma, Lamaque, Sleeping Giant and Beaufor mines).

The authors, Carl Pelletier and Bruno Turcotte, are of the opinion that the current Mineral Resource Estimate (Fig 17.5 and 17.6) can be classified as Measured, Indicated, and Inferred resources, and that the Estimate conforms to CIM standards and guidelines for reporting mineral resources and reserves.

At a cut-off grade of 2.0 g/t Au, InnovExplo estimates the Flordin deposit has **Measured Resources of 29,700 metric tons grading 4.60 g/t Au for a total of 4,394 ounces, and Indicated Resources of 649,200 metric tons grading 4.24 g/t Au for a total of 88,420 ounces (Table 17.4). Total Inferred Resources are estimated at 1,451,400 metric tons grading 3.63 g/t Au for a total of 169,261 ounces (Table 17.5)**. Figures 17.6 and 17.7 present the variations in metric tons, ounces and grades for different cut-off grades for the Indicated Resources, excluding the crown pillar. Table 17.6 shows all results for the ten (10) gold-bearing zones at a cut-off grade of 2.0 g/t Au.

Table 17.4 – Mineral Resource Estimate results (Measured + Indicated Resources) at different cut-off grades (g/t Au)

	Measured Resources			Indicated Resources			TOTAL (Measured + Indicated)		
Cut-Off (g/t)	Metric tonne (t)	Grade (g/t)	Ounces	Metric tonne (t)	Grade (g/t)	Ounces	Metric tonne (t)	Grade (g/t)	Ounces
1.0	46 700	3.46	5 193	1 024 400	3.31	108 853	1 071 100	3.31	114 046
2.0	29 700	4.60	4 394	649 200	4.24	88 420	678 900	4.25	92 814
3.0	20 700	5.51	3 670	409 500	5.27	69 324	430 200	5.28	72 994
4.0	14 800	6.33	3 012	256 100	6.35	52 301	270 900	6.35	55 313
5.0	9 100	6.97	2 039	158 100	7.55	38 398	167 200	7.52	40 436
6.0	5 500	7.96	1 408	102 100	8.69	28 530	107 600	8.65	29 938
7.0	3 400	8.89	971	66 300	9.88	21 070	69 700	9.84	22 042

* The Independent and Qualified Persons for the Mineral Resource Estimate, as defined by Regulation 43-101, are Carl Pelletier, B.Sc., P.Geo. and Bruno Turcotte, M.Sc., P.Geo. (InnovExplo inc), and the effective date of the estimate is February 23, 2010.
* Mineral Resources are not Mineral Reserves, having no demonstrable economic viability.
* Results are presented undiluted and in situ. The estimate includes 10 gold-bearing zones and covers the Flordin Project area over 1,320 metres E-W, 200 metres N-S, and from an elevation of 0 to -425 m.
* Resources were compiled using a cut-off grade between 1.0 g/t Au and 7.0 g/t Au.
* Cut-off grades must be re-evaluated in light of prevailing market conditions (gold price, exchange rate and mining cost).
* A fixed density of 2.80 g/cm3 was used.
* A minimum true thickness of 2.0 m was applied, using the grade of the adjacent material when assayed, or a value of zero when not assayed.
* High grade capping was done on the raw data and established at 32.0 g/t Au for diamond drill holes and channels. Drill hole and channel compositing were done.
* Compositing was not done over entire drill hole lengths. Instead, compositing was done on drill hole sections falling within the mineralized zone envelopes (composite = 1 metre for diamond drill holes and channels).
* Resources were evaluated from drill hole and channel results using an interpolation block model method.
* Ounce (troy) = Metric Tons x Grade / 31.10348. Calculations used metric units (metres, tonnes and g/t).
* The number of metric tons was rounded to the nearest hundred. Any discrepancies in the totals are due to rounding effects; rounding followed the recommendations in Regulation 43-101.
* InnovExplo is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political, marketing or other relevant issue that could materially affect the Mineral Resource Estimate.

Table 17.5 – Mineral Resource Estimate results (Inferred Resource) at different cut-off grades (g/t)

	Inferred Resource		
Cut-Off (g/t)	Metric Ton (t)	Grade (g/t)	Ounces
1.0	3 532 800	2.88	327 062
2.0	1 451 400	3.63	169 261
3.0	801 500	4.58	118 134
4.0	393 100	5.74	72 546
5.0	204 600	6.88	45 231
6.0	116 600	7.87	29 497
7.0	75 200	8.64	20 891

* The Independent and Qualified Persons for the Mineral Resource Estimate, as defined by Regulation 43-101, are Carl Pelletier, B.Sc., P.Geo. and Bruno Turcotte, M.Sc., P.Geo. (InnovExplo inc), and the effective date of the estimate is February 23, 2010.
* Mineral Resources are not Mineral Reserves, having no demonstrable economic viability.
* Results are presented undiluted and in situ. The estimate includes 10 gold-bearing zones and covers the Flordin Project area over 1,320 metres E-W, 200 metres N-S, and from an elevation of 0 to -425 m.
* Resources were compiled using a cut-off grade between 1.0 g/t Au and 7.0 g/t Au.
* Cut-off grades must be re-evaluated in light of prevailing market conditions (gold price, exchange rate and mining cost).
* A fixed density of 2.80 g/cm3 was used.
* A minimum true thickness of 2.0 m was applied, using the grade of the adjacent material when assayed, or a value of zero when not assayed.
* High grade capping was done on the raw data and established at 32.0 g/t Au for diamond drill holes and channels. Drill hole and channel compositing were done.
* Compositing was not done over entire drill hole lengths. Instead, compositing was done on drill hole sections falling within the mineralized zone envelopes (composite = 1 metre for diamond drill holes and channels)
* Resources were evaluated from drill hole and channel results using an interpolation block model method.
* Ounce (troy) = Metric Tons x Grade / 31.10348. Calculations used metric units (metres, tonnes and g/t).
* The number of metric tons was rounded to the nearest hundred. Any discrepancies in the totals are due to rounding effects; rounding followed the recommendations in Regulation 43-101.
* InnovExplo is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political, marketing or other relevant issue that could materially affect the Mineral Resource Estimate.

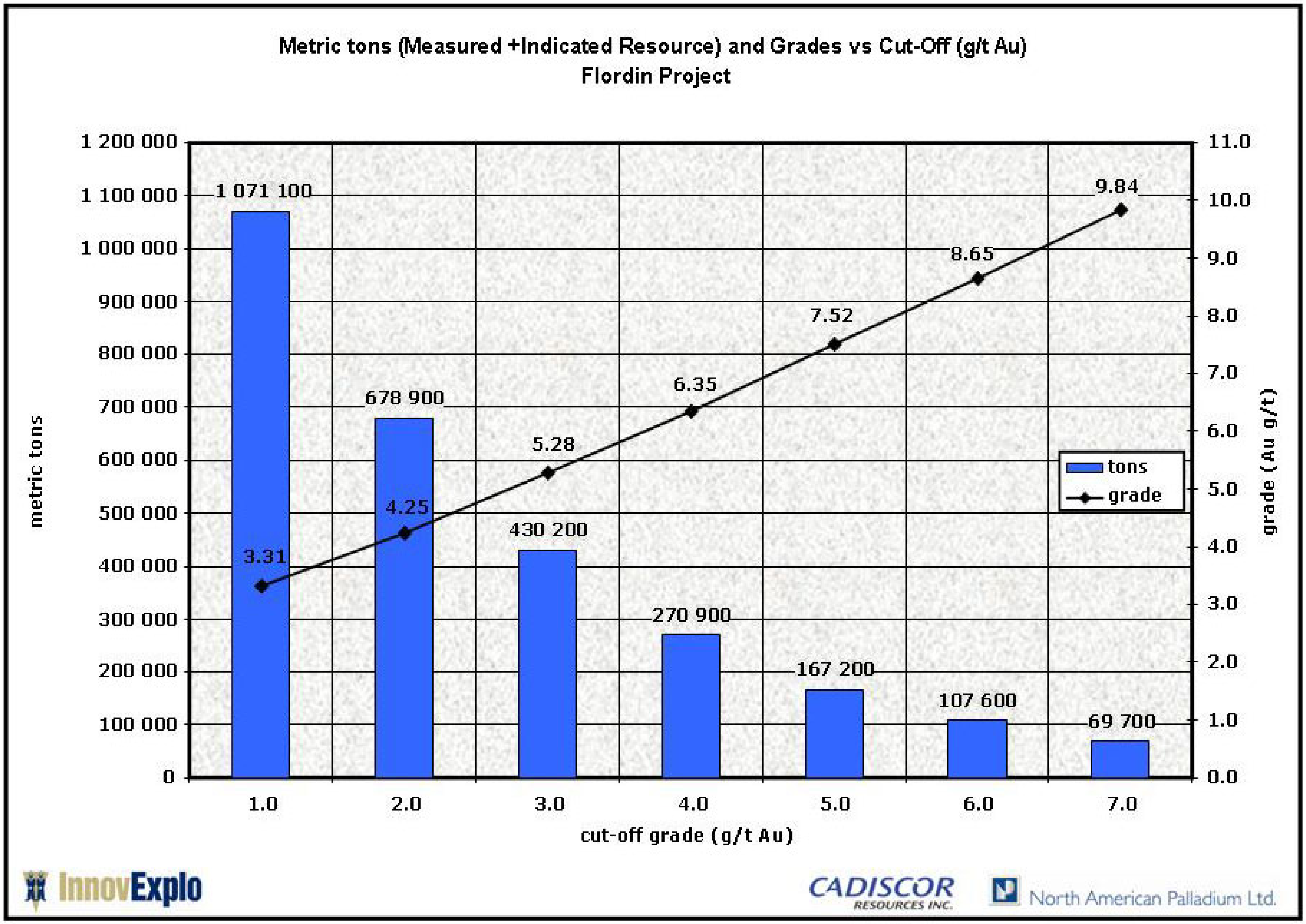

Figure 17.5 – Variation of metric tons and grades for different cut-off grades (Measured and Indicated Resources)

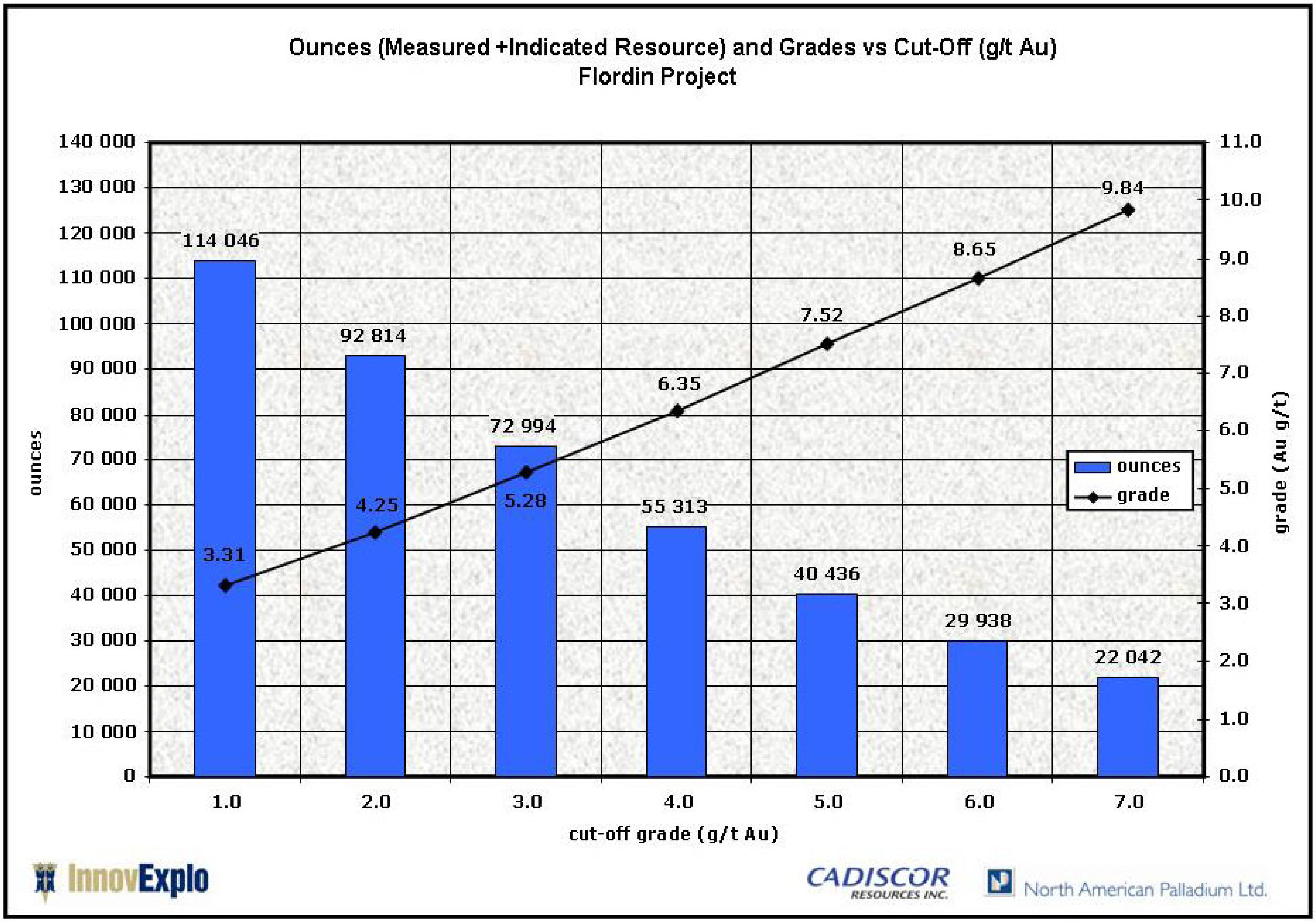

Figure 17.6 – Variation of ounces and grades for different cut-off grades (Measured and Indicated Resources)

Table 17.6 – Mineral Resource Estimate results for 10 gold-bearing zones at 2.0 g/t Au cut-off grade

	Measured Resources		Indicated Resources		TOTAL Measured + Indicated		Inferred Resources	
Zone	tonnes	grade	tonnes	grade	tonnes	grade	tonnes	grade
A			114 400	3.96	114 400	3.96	315 200	3.09
B	28 000	4.48	217 800	4.36	245 800	4.37	359 100	3.67
C			74 100	4.71	74 100	4.71	81 400	3.40
D			64 000	3.96	64 000	3.96	33 700	3.44
E			100 700	4.27	100 700	4.27	99 800	4.67
E2							57 800	3.33
F							45 600	3.40
F2							18 300	2.53
South-1	1 700	6.68	78 200	4.04	79 900	4.09	204 000	3.18
South-2							236 500	4.53
TOTAL	29 700	4.60	649 200	4.24	678 900	4.25	1 451 400	3.63
	4 394	ounces	88 420	ounces	92 814	ounces	169 261	ounces

* The Independent and Qualified Persons for the Mineral Resource Estimate, as defined by Regulation 43-101, are Carl Pelletier, B.Sc., P.Geo. and Bruno Turcotte, M.Sc., P.Geo. (InnovExplo inc), and the effective date of the estimate is February 23, 2010.
* Mineral Resources are not Mineral Reserves, having no demonstrable economic viability.
* Results are presented undiluted and in situ. The estimate includes 10 gold-bearing zones and covers the Flordin Project area over 1,320 metres E-W, 200 metres N-S, and from an elevation of 0 to -425 m.
* Resources were compiled using a cut-off grade between 1.0 g/t Au and 7.0 g/t Au.
* Cut-off grades must be re-evaluated in light of prevailing market conditions (gold price, exchange rate and mining cost).
* A fixed density of 2.80 g/cm3 was used.
* A minimum true thickness of 2.0 m was applied, using the grade of the adjacent material when assayed, or a value of zero when not assayed.
* High grade capping was done on the raw data and established at 32.0 g/t Au for diamond drill holes and channels. A drill hole and channel compositing were done.
* Compositing was not done over entire drill hole lengths. Instead, compositing was done on drill hole sections falling within the mineralized zone envelopes (composite = 1 metre for diamond drill holes and channels)
* Resources were evaluated from drill hole and channel results using an interpolation block model method.
* Ounce (troy) = Metric Tons x Grade / 31.10348. Calculations used metric units (metres, tonnes and g/t).
* The number of metric tons was rounded to the nearest hundred. Any discrepancies in the totals are due to rounding effects; rounding followed the recommendations in Regulation 43-101.
* InnovExplo is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political, marketing or other relevant issue that could materially affect the Mineral Resource Estimate.

17.6 Mineral Reserves

Mineral reserves have not yet been outlined on the Flordin property.

17.7 Exploration Potential

The authors consider the potential for delineating additional mineral resources in the Flordin property area to be excellent. The known length of the “B” Zone, the main zone, is approximately 1,300 metres, and the known depth is about 400 metres. The deposit is still open laterally and at depth. Future exploration work should focus on the lateral extensions of the known mineralized zones, as well as the down-dip and along-strike extensions.

There are still many areas between 0 and 425 metres deep where it may be possible to define or discover additional mineral resources because the drill spacing is too far apart. The optimal drill spacing for outlining Indicated Mineral Resources would be 15 x 15 metres (i.e., a maximum spacing of 15 metres between cross-sections).

The current report refers exclusively to the area encompassing the “A” to “F2” zones and the South-1 and South-2 zones. It does not consider grassroots-stage exploration targets on the Flordin property. The Flordin property covers a large land position in the Cameron Deformation Zone. Very little exploration has been carried out in the southern part of the property where the Boundary and South-2 zones were intersected by diamond drilling, or in the eastern part of the property toward the Carthwright Zone where only a few diamond holes have been drilled.

18.0 OTHER RELEVANT DATA AND INFORMATION *(Item 20)*

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

19.0 INTERPRETATION AND CONCLUSIONS *(Item 21)*

The objective of InnovExplo's assignment was to prepare a Mineral Resource Estimate for the Flordin Project from a depth of 0 to 425 metres, and from sections 5680E to 7000E between 3950N and 4150N. The Mineral Resource Estimate presented herein meets this objective. In addition, observations made while carrying out the assignment led InnovExplo to believe that diamond drilling programs conducted to date do not provide a complete assessment of the Flordin Project's mineral potential.

Results of surface diamond drilling programs led to the recognition and delineation of a series of subparallel mineralized zones over a considerable strike length on the Flordin Project. Despite the number of holes already drilled on this property (335), a lot more drilling is needed to gain a satisfactory understanding of the positions and attitudes of the mineralized zones. Of the ten (10) identified zones, South-1 and "B" are the best known so far. Previous geologists encountered serious difficulties correlating gold-bearing intersections between diamond drill holes. The apparent lack of continuity cited by these workers can be explained by boudinage, minor drag folding, fault displacement and lensoid geometry, and possibly to an *en echelon* arrangement of the ore zones. Moreover, deviation surveys were not carried out in any of the pre-2007 diamond drill holes. This is significant because the results of Cadiscor's deviation surveys, starting in 2007, revealed that the magnetic nature of the rocks caused severe deviations that must have hindered past efforts at geological interpretation in cross-sections. Nevertheless, drift excavation in the South-1 and "B" zones confirmed it is possible to define geological continuity in the mineralized zones, and additional drilling should make it easier to connect these zones. The authors therefore believe that past difficulties in establishing geological continuity at the Flordin Project were, at least in part, due to a lack of geological information.

After conducting a detailed review of all pertinent information and upon completing the Mineral Resource Estimate herein, InnovExplo concludes the following:

- The Flordin Project contains at least ten (10) continuous mineralized zones;
- The envelopes of mineralized zones have dimensions ranging from 300 metres to 1,300 metres;
- Despite the current drill spacing, which is too wide, geological continuity seems steady throughout the mineralized zones;
- The shape and distribution of the lenses and the defined ore shoots (which probably plunge westward at -40^{o}) will be useful for planning future diamond drill programs;
- The potential is high for upgrading the Inferred Resources to Indicated Resources with additional diamond drilling;
- The potential is high for adding new Resources in the extensions of known zones with additional diamond drilling;
- The potential is high for discovering new mineralized zones on the Flordin Project.

InnovExplo considers the present Mineral Resource Estimate to be reliable and thorough, and based on quality data and reasonable hypotheses using parameters compliant with Regulation 43-101 and the CIM's standards with regard to mineral reserve and resource estimates. InnovExplo believes that the Flordin Project is sufficiently advanced to form the basis for a diamond drilling program with the objective of preparing the project for a pre-feasibility study.

20.0 RECOMMENDATIONS *(Item 22)*

The 2010 Mineral Resource Estimate outlined areas where geological and grade continuities are well developed. The ten (10) mineralized zones represent traced areas showing similar dimensions and orientations with resources classified in the Measured, Indicated and Inferred categories. Drill hole intercept spacing was not tight enough to classify all resources as Indicated. Mineralized zones containing Inferred Resources require additional drilling to confirm their shapes and extensions, and to upgrade all or parts of the Inferred Resources to the Indicated category. A diamond drill spacing of 30 metres should be used for the definition drilling program. Isolated drill hole intercepts (i.e., those associated with blocks but with no other drill holes in their vicinity) will also require additional drilling to find mineralized extensions and to increase the Inferred Resources. Moreover, many drill hole intercepts were not considered in the current Mineral Resource Estimate because there is not enough geological information to produce a new envelope that would include these mineralized areas.

Other areas beyond the defined Inferred Resources that have not yet been drilled warrant further exploration to determine the extent of the mineralized zones and to increase the Inferred Resources. The potential for additional resources is especially good at depth and to the south (the South-2 and Boundary zones area), as well as to the west and east. According to the spatial distribution of the known lenses, it is very likely that the lens distribution pattern in the Flordin deposit will repeat, particularly at depth. Additional mineralized lenses may be found in the eastern extension of the Flordin Project in the Carthwright Zone area.

InnovExplo recommends obtaining specific gravity measurements for drill core representing each of the observed lithologies in order to improve the accuracy of specific gravity averages.

InnovExplo recommends obtaining Rock Quality Designation (RQD) measurements for drill core. RQD has considerable value in correlation with in-situ rock mechanical properties. Its main value is as a tool to identify low-RQD zones which deserve further examination. This method of evaluation has often resulted in relocation or reorientation of proposed engineering structures from mines.

InnovExplo recommends the use of gyroscope surveys for future drilling programs to enable more accurate positioning of mineralized zones and thus more accurate mineral resource estimations.

It was discovered that the locations for some of the diamond drill holes from 1933-1935 (the H series) are inaccurate. Holes in the H series were not surveyed; instead, their positions were established using picketed claims or picketed lines. Consequently, some of the geological results (intersections) from these drill holes do not match the results from more recent diamond holes. InnovExplo recommends drilling some additional diamond holes to confirm the location of the mineralized zones observed in the 1933-1935 drilling programs.

InnovExplo recommends a tight spacing (30 m x 30 m) between future diamond drill holes to diminish or eliminate the apparent lack of continuity within the ore zones, which has been attributed to observed boudinaging, minor drag folding, fault displacement and lensoid geometries, or possible “en echelon” arrangements.

To prepare the project for an eventual mine start-up, InnovExplo recommends a work program comprising two (2) phases, with Phase II conditional upon the results of Phase I. Phase I of the program consists of diamond drilling and Mineral Resource Estimate. Phase II would consist of surface bulk sampling and a pre-feasibility study.

Phase I:

a) A **definition and exploration diamond drilling program** is recommended to bring the Flordin Project to the stage of a surface bulk sampling program and eventually to the pre-feasibility stage by improving technical information and reducing the financial risk. A total of one hundred (100) new diamond drill holes totalling 8,500 metres must be drilled between the cross-section 5380E and 6790E. The new diamond drill holes must be tested the mineralized zones up to 80 metres of vertical depth. The main reasons to complete a definition and exploration diamond drilling program are to:

- Confirm the geological and grade continuities of the Mineral Resources;
- Verify the geometry of the envelope of mineralized zones;
- Discover the maximum resources available for future mining;
- Obtaining Rock Quality Designation (RQD) measurements.

b) An **update of Mineral Resource Estimate** on the Fordin Project is recommended after the definition and exploration drilling from the Phase Ia. The main reasons to complete an update of Mineral Estimate are to:

- Adjust the geometry of the envelope of mineralized zones with the new geological information;
- Consider the new specific gravity value ontained by drilling;
- Determine if a new high-grade assay cutting value is necessary.
- Evaluate a maximum resource available for future pre-faisability study.

Phase II

1) **Phase IIa:** A **surface bulk sampling program** is recommended to bring the Flordin project to the pre-feasibility stage by improving the technical information and reducing the financial risk. The main reasons to complete a surface bulk sampling program are to:

   - Confirm the geological and grade continuities of the Mineral Resources;
   - Test the open-pit mining methods;
   - Proceed with a geomechanical study to determine the appropriate bench sizes and minimum mining width, and proceed with sampling of production holes;
   - Determine a realistic dilution factor; and
   - Reduce the financial risk.

2) **Phase IIb:** Based on the results obtained during the bulk sampling program, a decision should be made about proceeding with a **pre-feasibility study** to determine the economic viability of the Mineral Resources and to convert all or part of these Mineral Resources into Mineral Reserves.

The authors have prepared the estimated cost of the recommended program to be used for the project. The major cost for the two phases of the recommended program will be the diamond drilling (Phase Ia). The estimated cost for **Phase I**, which includes the definition and exploration diamond drilling program and an update of Mineral Resource Estimate, is **CAD $1,069,500** (including 15% contingencies). The estimated cost for **Phase II**, which includes surface bulk sampling and a pre-feasibility study, is **CAD $1,422,500**. For a total program of **CAD $2,492,000.** Table 20.1 presents the estimated costs for Phase I and Phase II of the recommended work program.

Table 20.1 – Estimated costs for the recommended work program

PHASE Ia		**Total cost**
Definition and Exploration Diamond Drilling		
One Hundred (100) diamond drill holes	8,500 m	$850,000
Contingency (~15%)		$127,500
Total Phase Ia		**$977,500**
PHASE Ib		**Total cost**
Update of Mineral Resource Estimate		$80,000
Mineral Resource Estimate and New 43-101 report		
Contingency (~15%)		$12,000
Total Phase Ib		$92,000
Total Phase Ia and Ib		**$1,069,500**
PHASE IIa		**Total cost**
Surface bulk sampling program		**$1,250,000**
Contingency (~15%)		$187,500
Total Phase IIa		**$1,437,500**
PHASE Ib		**Total cost**
Pre-feasibility study		$150,000
Contingency (~15%)		$22,500
Total Phase IIb		**$172,500**
Total Phase IIa and IIb		**$1,422,500**
TOTAL Recommended Program		**$2,492,000**

21.0 REFERENCES *(Item 23)*

Ayres, L. D., 1978. Metamorphism in the Superior Province of northwestern Ontario and its relationship to crustal development. *In* Metamorphism in the Canadian Shield. Geological Survey of Canada, Paper 78-10, pp. 25-36.

Bartlett, J. 1936. Report on the Florence River Property, Florence River Gold Mines. Internal Report. 16 pages.

Bossé, J., 1995. Rapport sur la campagne de cartographie, de prospection et de sondages au diamant 1994-1995, Propriétés Diomines et Diomines Extension. GéoNova Exploration Inc. 42 pages. **GM 54431**.

Buchan, K. L., and Ernst, R. E., 2004. Diabase dyke swarms and related units in Canada and adjacent regions (with accompanying notes). Geological Survey of Canada, Map 2022A, 1:5,000,000.

Bugnon, M.-F., 1988. Campagne d'exploration de Surface 1987-1988 Projet Flordin. Internal Report.

Bugnon, M.-F., 1987. Évaluation du Projet Flordin et revision du programme d'exploration de surface de 1987. Internal Report. 16 pages.

Buro, Y., 1989. Undeground Exploration Program carried out in 1988-89 by Western Premium Resource Corp. on the Flordin Property, Desjardins Township, Quebec. Internal Report. 34 pages.

Buro, Y., 1988. A summary of Exploration History, Geology, Reserves of Flordin Property Desjardins Township, Quebec. Internal Report

Card. K. D., and Poulsen, K. H., 1998. Geology and mineral deposits of the Superior Province of the Canadian Shield; Chapter 2. *In* Geology of the Precambrian Superior and Grenville Provinces and Precambrian Fossils in North America, (co-ord.) S. Lucas. Geological Survey of Canada, Geology of Canada, no. 7, pp. 13-194.

Card, K. D., and Ciesielski, A., 1986. Subdivisions of the Superior Province of the Canadian Shield. Geoscience Canada, v. 13, pp. 5-13.

Charteris, S. N., 1988. Estimate of the Reserves of Gold Mineralization on the Flordin Property, Desjardins Township, Quebec. Internal Report. 11 pages.

Chown, E. H., Daigneault, R., Mueller, W., and Mortensen, J., 1992. Tectonic evolution of the Northern Volcanic Zone of Abitibi Belt. Canadian Journal of Earth Sciences, v. 29, pp. 2211-2225.

Corfu, F., Krogh, T. E., Kwork, Y. Y., and Jensen, L. S., 1989. U-Pb zircon geochronology in the southwestern Abitibi greenstone belt, Superior Province. Canadian Journal of Earth Sciences, v.26, pp. 1747-1763.

Daigneault, R., Mueller, W. U., and Chown, E. H., 2002. Oblique Archean subduction: accretion and exhumation of an oceanic arc during destral transpression, Southern Volcanic Zone, Abitibi Subprovince Canada. Precambrian Research, v.115, pp. 261-290.

Daigneault, R., and Archambault, G., 1990. Les grands couloirs de deformation de la Sous-province de l'abitibi. *In* La Ceinture polymétallique du Nord-Ouest, (eds.) M. Rive, P. Verpaelst, Y. Gagnon, J-M. Lulin, G. Riverin, and A. Simard. Canadian Institute of Mining and Metallurgy, Special Volume 43, pages 43-64.

Davis, D. W., 1992. Ages constraints on deposition and provenance of Archean sediments in the southern Abitibi and Pontiac Subprovinces from U-Pb analysis of detrital zircons. Lithoprobe Report 25, UBC, Vancouver, Canada, pp. 147-150.

Dimroth, E, Imrech, L., Rocheleau, M., Goulet, N., 1982. Evolution of the south-central part of the Archean Abitibi Belt, Quebec. Part I: Stratigraphy and paleostratigraphic model. Canadian Journal of Earth Sciences, v.19, pp. 1729-1758.

Dubé, B. and Gosselin, P. 2007, Greenstone-Hosted Quartz-Carbonate Vein Deposits. *In* Mineral Deposits of Canada: A Synthesis of Major Deposit-Types, District Metallogeny, the Evolution of Geological Provinces, and Exploration Methods, (ed.) W. D. Goodfellow. Geological Association of Canada, Mineral Deposits Division, Special Publication No 5, pp. 49-73.

Dubé, B., O'Brien, S., and Dunning, G. R., 2001. Gold deposits in deformed terranes: examples of epithermal and quartz-carbonate shear-zone-related gold systems in the Newfoundland Appalachians and their implications for exploration. *In* North Atlantic Symposium, St-John's, Newfoundland, Canada. Extended abstracts volume, May 27-30, pp. 31-35.

Duhaime, P. J., and Veilleux, C. A., 1987. Report on the Flordin exploration program. Mines Sullivan Inc. / Bachelor Lake Gold Mines Inc. Joint Venture. 53 pages. **GM 45239**.

Dussault, C., 1990. Géologie de la region de Vezza-Le Tardif. Ministère des Ressources Naturelles du Québec. 38 pages. **MB-90-43**.

Feng, R., and Kerrich, R., 1992. Geodynamic evolution of the southern Abitibi and Pontiac terranes evidence from geochemistry of granitoid magma series (2700-2630 Ma). Canadian Journal of Earth Sciences, v.29, pp. 2266-2286.

Gauthier, J., 1983. Rapport des travaux 1981-82, Propriété Flordin, Projet No 220. Groupe Minier Sullivan. 42 pages. **GM 39903**.

Hobbs, L. G. 1978a. Diamond drill record, Flordin Mines Property. Dalhousie Oil Corporation. 7 pages. **GM 34553** and **GM 33911**.

Hobbs, L. G., 1978b. Drill Programme Flordins Mines option. Dalhousie Oil Corp. Internal Report. 3 pages.

Hodgson, C. J., and Hamilton, J. V., 1989. Gold mineralization in the Abitibi Greenstone Belt: end stage result of Archean collisional tectonic? Economic Geology, Monograph 6, pp. 86-100.

Hugon, H., 1989. Gold bearing structures of the Flordin property, Desjardins Township, Quebec. Preliminary Study. Internal Report. 8 pages.

James, W. F., 1948. Siscoe mine. *In* Structural geology of Canadian ore deposits. Canadian Institute of Mining and Metallurgy, Jubilee Volume, pp. 876-882.

Joly, M., 1994. Géologie du Canton de Desjardins (Projet Lebel-sur-Quévillon), phase 2. Ministère des Ressources Naturelles. **DP 93-01**.

Joly, M., and Dussault, C., 1991. Géologie de la bande volcano-sédimentaire de Vezza-Bruneau (Phase 2). Ministère de l'Énergie et des Ressources, Québec. **DP 91-05**.

Joly, W. T., 1978. Metamorphic history of the Archean Abitibi Belt. *In* Metamorphism in the Canadian Shield. Geological Survey of Canada, Paper 78-10, pp. 63-78.

Labbé, J.-Y., Couture, J.-F., and Dion, D.-J., 1995. Potentiel aurifère au nord de Lebel-sur-Quévillon, nouvelles cibles d'exploration. Ministère des Ressources Naturelles, Québec. 29 pages. **PRO 95-07**.

Lacroix, J., 1993. Étude structurale et métallogénique d'un gisement de sulfures massifs dans le canton de Grevet. Ministère de l'Énergie et des Ressources du Québec. 49 pages. **MB-93-21**.

Latulippe, M., 1979. Visite à la mine Flordin Mines. Ministère de l'Énergie et des Ressources du Québec. 2 pages. **GM 35602**.

Laverdière, G., 1982. Levé MAG et VLF (EM-16), Projet Flordin. 15 pages. **GM 38405**.

Lavoie, C., 1982. Levé de polarisation provoquée, Projet Flordin 220. Géola Ltée. 14 pages. **GM 39904**.

Leclair, A., 2005. Géologie du nord-est de la Province du Supérieur. Ministère des Ressources Naturelles du Québec. Map DV 2004-04, 1:750,000.

Longley, W. W., 1940 Examination Report. 4 pages. **GM 08179**.

Longley, W. W., 1939. Examination Report. 2 pages. **GM 08180**.

Manitoba, 1965. Geological map of Manitoba. Manitoba Department of Mines and Natural resources, Map 65-1, 1:1,267,200.

Morasse, S., Wasteneys, H., Cormier, M., Helmstaedt, H., and Mason, R., 1995. A pre-2696 Ma intrusion-related gold deposit at the Kiena Mine, Val-d'Or, Québec, southern Abitibi Subprovince. Economic Geology, v.90 , pp. 131-1321.

Mortensen, J. K., 1993a. U-Pb geochronology of the Eastern Abitibi Subprovince: Part II: Noranda-Kirland Lake area. Canadian Journal of Earth Sciences, v.30, pp. 29-41.

Mortensen, J. K., 1993b. U-Pb geochronology of the Eastern Abitibi Subprovince: Part I: Chibougamau-Matagami-Joutel area. Canadian Journal of Earth Sciences, v.30, pp. 11-28.

Mueller, W., Daigneault, R., Mortensen, J., Chown, E. H., 1996. Archean terrane docking: upper crust collision tectonics, Abitibi Greenstone Belt, Quebec, Canada. Tectonophysics, v. 265, pp. 127-150.

Mueller, W., and Donalson, J. A., 1992. Development of sedimentary basins in the Archean Abitibi Belt, Canada. Canadian Journal of Earth Sciences, v. 29, pp. 2249-2265.

Mueller, W., 1991. Vocanism and related slope to shallow massive volcaniclastic sedimentation: an Archean example, Chibougamau, Quebec, Canada. Precambrian Research, v.49, pp. 1-22.

Ontario, 1992. Bedrock geology of Ontario. Ontario Geological Survey, Maps 2541, 2542 and 2543, 1:1,000,000.

Pelletier, C., and Jourdain, V., 2008a. Sondages Flordin 2007-2008. Ressources Cadiscor Inc. 30 pages. **GM 64061**.

Pelletier, C., and Jourdain, V., 2008b Campagne d'exploration 2008 Projet Cameron Shear. Ressources Cadiscor Inc. 31 pages. **GM 64105**.

Percival, J. A., 2007. Geology and metallogeny of the Superior Province, Canada. *In* Mineral Deposits of Canada: A Synthesis of Major Deposit-Types, District Metallogeny, the Evolution of Geological Provinces, and Exploration Methods, (ed.) W. D. Godfellow. Geological Association of Canada, Mineral Deposits Division, Special Publication No. 5, pp. 903-928.

Percival, J. A., and Card, K. D., 1983. Archean crust as revealed in the Kapuskasing uplift, Superior Province, Canada. Geology, v. 11, pp. 743-753.

Perrier, B., 1988. Campagne d'exploration de surface 1987-1988 Projet Flordin. Cambior Inc. 30 pages. **GM 46856**.

Poulsen, K. H., 1996. Lode Gold. *In* Geology of Canadian Mineral Deposits Types, (eds.) O. R. Eckstrand, W. D. Sinclair, and R. I. Thorpe. Geological Survey of Canada, Geology of Canada, No 8, pp. 323-328.

Poulsen, K. H., Robert, F., and Dubé, B., 2000. Geological classification of Canadian gold deposits. Geological Survey of Canada, Bulletin 540, 106 pages.

Proulx, M., 1991. Géologie de la partie SE du canton de Grevet. Ministère de l'Énergie et des Ressources, Québec. 12 pages. **MB 91-14**.

Proulx, M., 1990. Géologie de la région des lacs Esther et Wedding. Cantons de Currie et de Grevet, projet lac Madeleine. Ministère de l'Énergie et des Ressources, Québec. 48 pages. **MB 89-67**.

Rive, M., Pintson, H., and Ludden, J., 1990. Characteristics of late Archean plutonic rocks from the Abitibi and Pontiac subprovinces, Superior Province, Canada. *In* The Northwestern Quebec Polymetallic Belt. (eds.) M. Rive, P. Verpaelst, Y. Gagnon, J.-M. Lulin, G. Riverin, A. Simard. Canadian Institute of Mining and Metallurgy, Special Volume 43, pp. 63-76.

Roy, P., Beaudoin, G., and Labbé, J-Y., 1997. Les minéralisations aurifères associées au couloir de deformation de Cameron. Ministère des Ressources naturelles, Québec. 29 pages. **ET 97-02**.

Scott, C. R., Mueller, W. U., and Pilote, P., 2002. Physical volcanology, stratigraphy, and lithogeochemistry of an Archean volcanic arc: evolution from plume-related volcanism to arc rifting of SE Abitibi Greenstone Belt, Val-d'Or, Canada. Precambrian Research, v. 115, pp. 223-260.

Tardif, A. N., 1987. Minérai de développement, Lot de 5 700 tonnes courtes, Projet Flordin. Mines Sullivan Inc. Traitement du minerai à l'Usine de Bachelor Lake Gold Mines Inc., Desmaraisville, Québec. Internal Report. 22 pages.

Thériault, R., 2002. Carte géologique du Québec (Édition 2002). Géologie Québec, Ministère des Ressources Naturelles du Québec. 8 pages. 1 map at 1:2,000,000. **DV 2002-06**.

Thurston, P. C., 1994. Archean volcanic patterns. *In* Archean Crustal Evolution: Development in Precambrian Geology 11 (ed.) K. C. Condie. Elsevier, Amsterdam, pp. 45-84.

Veilleux, C. A., 1980. Report on Desjardins Mines Ltd, Desjardins Twp. Internal report. Sullivan Mines Group. 10 pages.

22.0 SIGNATURE PAGE *(Item 24)*

TECHNICAL REPORT AND MINERAL RESOURCE ESTIMATE FOR THE FLORDIN DEPOSIT

(According to Regulation 43-101 and Form 43-101F1)

Prepared for

NORTH AMERICAN PALLADIUM LTD.

2116 -130 Adelaide St. W.
Toronto, Ontario
Canada, M5H 3P5

Bruno Turcotte, M.Sc., P.Geo.
InnovExplo inc.
560-B, 3e Avenue, Val-d'Or,
Québec, Canada, J9P 1S4

Signed at Val-d'Or, on March 31, 2010

Carl Pelletier, B.Sc., P.Geo.
InnovExplo inc.
560-B, 3e Avenue, Val-d'Or,
Québec, Canada, J9P 1S4

Signed at Val-d'Or, on March 31, 2010

23.0 ADDITIONAL REQUIREMENTS FOR TECHNICAL REPORTS ON DEVELOPMENT PROPERTIES AND PRODUCTION PROPERTIES *(Item 25)*

Not applicable.

24.0 CERTIFICATE OF AUTHOR

I, Bruno Turcotte, P.Geo. (OGQ, no. 453) do hereby certify that:

1. I am Consulting Geologist of: InnovExplo Inc, *560-B 3e Avenue*, *Val d'Or, Québec, Canada, J9P 1S4.*

2. I graduated with a Bachelor of Geology degree from Université Laval in Quebec City in 1995. In addition, I have obtained a Master's in Earth Sciences degree from Université Laval in Quebec City in 1999.

3. I am a member of the Ordre des Géologues du Québec (OGQ, no. 453) and of the Canadian Institute of Mines, Harricana Section.

4. I have worked as a geologist for a total of 15 years since my graduation from university. My exploration expertise has been acquired with Noranda Exploration Inc, Breakwater Resources Ltd, South-Malartic Exploration Inc, and Richmont Mines Inc. My mining expertise was acquired on the Croinor pre-production project and at the Beaufor mine. I have been a consulting geologist for InnovExplo inc since March 2007.

5. I have read the definition of "qualified person" set out in Regulation 43-101 (formerly "NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in Regulation 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of Regulation 43-101.

6. I am responsible for the preparation of the technical report titled "Technical Report and Mineral Resource Estimate for the Flordin Deposit (according to Regulation 43-101 and 43-101F1)" dated March 31, 2010 (the "Technical Report"). I previously examined and described a part of the core from the Flordin property as part of a Cadiscor drilling program in 2007.

7. I have had prior involvement with the property that is the subject of the Technical Report. The nature of my prior involvement was to examine and describe some of the core of the 2007 drilling program and to supervise another InnovExplo geologist who also logged core.

8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report and that the omission to disclose would make the Technical Report misleading.

9. I am independent of the issuer applying all of the tests in section 1.4 of Regulation 43-101.

10. I have read Regulation 43-101 respecting standards of disclosure for mineral projects, as well as Form 43-101F1, and the Technical Report has been prepared in accordance with that regulation and form.

11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority, and any publication by them of the Technical Report for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public.[1]

Dated this 31st day of March 2010 at Val-d'Or.

GÉOLOGUE / GEOLOGIST BRUNO TURCOTTE # 453 QUÉBEC

Bruno Turcotte, M.Sc., P.Geo. (OGQ no.453)

[1] If an issuer is using this certificate to accompany a technical report that it will file only with the exchange, then the exchange recommends that this paragraph is included in the certificate.

I, Carl Pelletier, P.Geo. (OGQ, no. 384) do hereby certify that:

1. I am Consulting Geologist of: InnovExplo Inc, *560-B 3^e Avenue*, *Val d'Or, Québec, Canada, J9P 1S4.*

2. I graduated with a Bachelor of Geology degree from Université du Québec à Montréal (Montréal, Québec) in 1992, and I initiated a Master's degree at the same university for which I completed the course program but not the thesis.

3. I am a member of the Ordre des Géologues du Québec (OGQ, no. 384) and of the Canadian Institute of Mines, Harricana Section.

4. I have worked as a geologist for a total of 18 years since my graduation from university. My mining expertise has been acquired in the Silidor, Géant Dormant, Bousquet II, Sigma-Lamaque and Beaufor mines, whereas 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.

5. I have read the definition of "qualified person" set out in Regulation 43-101 and certify that by reason of my education, affiliation with a professional association (as defined in Regulation 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of Regulation 43-101.

6. I am the author of portions of the report titled "Technical Report and Mineral Resource Estimate for the Flordin Deposit (according to Regulation 43-101 and 43-101F1)" dated March 31, 2010 ("the Technical Report").

7. I have had prior involvement with the property that is the subject of the Technical Report. I am the author of the report on assessment work in 2008 titled "SONDAGE FLORDIN 2007-2008 " dated November 18, 2008.

8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, and that the omission to disclose would make the Technical Report misleading.

9. I am independent of the issuer applying all of the tests in section 1.4 of Regulation 43-101.

10. I have read Regulation 43-101 respecting standards of disclosure for mineral projects, as well as Form 43-101F1, and the Technical Report has been prepared in accordance with that regulation and form.

11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority, and any publication by them of the Technical Report for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public.[1]

Dated this 31st day of March 2010 at Val-d'Or.

GÉOLOGUE GEOLOGIST * CARL PELLETIER #384 QUÉBEC

Carl Pelletier, P.Geo., B.Sc.

[1] If an issuer is using this certificate to accompany a technical report that it will file only with the exchange, then the exchange recommends that this paragraph is included in the certificate.

APPENDIX I

UNITS, CONVERSION FACTORS, ABBREVIATIONS

Units

Units in this report are metric unless otherwise specified. Precious metal content is reported in grams of metal per metric ton (g/t Au or Ag), unless otherwise stated. Tonnage figures are dry metric tons ("tonnes") unless otherwise stated. Ounces are troy ounces.

Abbreviations used

°C	degrees Celsius	oz	troy ounces
g	grams	avdp	avoirdupois pound
ha	hectares	oz/t	ounces per short ton
kg	kilograms	g/t	grams per metric ton
km	kilometres	ppb	parts per billion
masl	metres above sea level	ppm	parts per million
mm	millimetres	cps	counts per second
'	feet	st	short ton
$	Canadian dollars	t	metric ton (tonne)

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)	31.10348	g
1 pound (avdp)	0.454	kg
1 ton (short)	0.907	t
1 ounce (troy) / ton (short)	34.2857	g/t

APPENDIX II

DETAILED LIST OF MINING TITLES

NTS	TOWNSHIP	TITLE NUMBER	AREA (ha)	MINING TITLE TYPE	STATUS	DATE OF STAKING	DATE OF REGISTRATION	EXPIRY DATE	OWNERSHIP	ROYALTY
32F/07	DESJARDINS	C002541	17.01	Staked claim	Active	March 25, 1936	May 5, 1936	March 24, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	C002542	12.42	Staked claim	Active	March 25, 1936	May 5, 1936	March 24, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	C002551	16.80	Staked claim	Active	March 21, 1936	May 5, 1936	March 20, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	C006601	15.49	Staked claim	Active	September 6, 1935	September 25, 1935	September 7, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	C006602	16.43	Staked claim	Active	September 6, 1935	September 25, 1935	September 7, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	C006611	14.83	Staked claim	Active	September 9, 1935	September 25, 1935	September 6, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	C006612	14.72	Staked claim	Active	September 9, 1935	September 25, 1935	September 6, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	C006613	13.07	Staked claim	Active	September 9, 1935	September 25, 1935	September 6, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	C006614	16.41	Staked claim	Active	September 9, 1935	September 25, 1935	September 6, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	C006621	12.43	Staked claim	Active	September 7, 1935	September 25, 1935	September 6, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	C006622	10.16	Staked claim	Active	September 7, 1935	September 25, 1935	September 6, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	C006623	14.53	Staked claim	Active	September 7, 1935	September 25, 1935	September 6, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	C006624	12.35	Staked claim	Active	September 7, 1935	September 25, 1935	September 6, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	C006631	12.87	Staked claim	Active	September 5, 1935	September 25, 1935	September 4, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	C006632	20.45	Staked claim	Active	September 5, 1935	September 25, 1935	September 4, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	C006633	17.70	Staked claim	Active	September 5, 1935	September 25, 1935	September 4, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	C006641	7.06	Staked claim	Active	September 4, 1935	September 25, 1935	September 3, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	C006642	10.10	Staked claim	Active	September 4, 1935	September 25, 1935	September 3, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	C006643	17.19	Staked claim	Active	September 4, 1935	September 25, 1935	September 3, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	C006644	17.20	Staked claim	Active	September 4, 1935	September 25, 1935	September 3, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	C006645	20.84	Staked claim	Active	September 4, 1935	September 25, 1935	September 3, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI

NTS	TOWNSHIP	TITLE NUMBER	AREA (ha)	MINING TITLE TYPE	STATUS	DATE OF STAKING	DATE OF REGISTRATION	EXPIRY DATE	OWNERSHIP	ROYALTY
32F/07	DESJARDINS	3980421	14.03	Staked claim	Active	October 21, 1980	November 11, 1980	October 20, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	3980422	14.51	Staked claim	Active	October 21, 1980	November 11, 1980	October 20, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	3980423	15.44	Staked claim	Active	October 21, 1980	November 11, 1980	October 20, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	3980424	8.21	Staked claim	Active	October 21, 1980	November 11, 1980	October 20, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	4067501	14.77	Staked claim	Active	November 11, 1981	March 15, 1982	November 10, 2010	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	4067502	13.17	Staked claim	Active	November 11, 1981	March 15, 1982	November 10, 2010	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	4067503	13.54	Staked claim	Active	November 12, 1981	March 15, 1982	November 10, 2010	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	4067504	7.61	Staked claim	Active	November 12, 1981	March 15, 1982	November 10, 2010	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	4089661	14.36	Staked claim	Active	May 6, 1982	May 27, 1982	May 5, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	4089662	13.29	Staked claim	Active	May 6, 1982	May 27, 1982	May 5, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	4089663	14.42	Staked claim	Active	May 6, 1982	May 27, 1982	May 5, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	4089664	14.89	Staked claim	Active	May 6, 1982	May 27, 1982	May 5, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	4089665	14.40	Staked claim	Active	May 6, 1982	May 27, 1982	May 5, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	4089671	15.70	Staked claim	Active	May 7, 1982	May 27, 1982	May 6, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	4089672	14.10	Staked claim	Active	May 7, 1982	May 27, 1982	May 6, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	4089673	25.76	Staked claim	Active	May 7, 1982	May 27, 1982	May 6, 2011	Cadiscor Resources Inc. 100%	1% NSR; 20% NPI
32F/07	DESJARDINS	5243361	18.20	Staked claim	Active	December 14, 2000	January 18, 2001	January 17, 2011	Cadiscor Resources Inc. 100%	1% NSR
32F/07	DESJARDINS	5243362	16.30	Staked claim	Active	December 15, 2000	January 18, 2001	January 17, 2011	Cadiscor Resources Inc. 100%	1% NSR
32F/07	DESJARDINS	5243363	20.33	Staked claim	Active	December 15, 2000	January 18, 2001	January 17, 2011	Cadiscor Resources Inc. 100%	1% NSR