

**TECHNICAL REPORT  
&  
MINERAL RESOURCE ESTIMATE:**

**East Cadillac Gold Project,  
Val-d'Or, Québec  
NTS 32-C/03, 31N/14**

Prepared for:



**MRB & Associates**  
1100-1740 chemin Sullivan  
Val-d'Or, Qc, J9P 7H1

John Langton P.Geo.  
Abderrazak Ladidi P.Geo.  
February 12, 2017

**TABLE OF CONTENTS**

1.0	SUMMARY .....	5
1.1	Introduction .....	5
1.2	Property Description and Ownership .....	5
1.3	Geology and Mineralization .....	5
1.4	Resource Estimate .....	6
1.5	Conclusions.....	6
1.6	Recommendations.....	6
2.0	INTRODUCTION AND TERMS OF REFERENCE .....	8
2.1	Sources of Information .....	8
2.2	Site Visit.....	8
2.3	Units of Reference.....	9
3.0	RELIANCE ON OTHER EXPERTS.....	12
4.0	PROPERTY DESCRIPTION AND LOCATION.....	13
4.1	Location .....	13
4.2	Mineral Claim Tenure and Disposition.....	13
4.3	Royalties and Related Information .....	16
4.4	Environmental Liabilities .....	16
4.5	Permits .....	16
4.6	Other Relevant Factors .....	17
4.7	Property Summary .....	17
5.0	ACCESSIBILITY, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY.....	18
6.0	HISTORY .....	19
6.1	The Nordeau Project Claim Blocks (Nordeau East, Nordeau West, Bateman and Pershing Denain blocks).....	19
6.1.1	Nordeau East and Nordeau West claim blocks .....	19
6.1.1.1	Historic work .....	19
6.1.1.2	Recent work .....	24
6.1.2	Bateman claim block .....	30
6.1.2.1	Historic work .....	30
6.1.2.2	Recent work .....	31
6.1.3	Pershing-Denain claim block.....	33
6.2	The Chimo Project Claims (Lac Simon, Nova and Villebon blocks).....	34
6.2.1	Lac Simon & Nova claim blocks .....	34
6.2.2	Villebon claim block .....	37
7.0	GEOLOGICAL SETTING.....	38
7.1	Regional Geology .....	38
7.2	Local Geology.....	40
7.3	Property Geology .....	41
7.4	Geology of Nordeau West Deposit .....	44
7.5	Mineralization.....	44
8.0	DEPOSIT TYPES .....	49
9.0	EXPLORATION.....	50
10.0	DRILLING.....	50
11.0	SAMPLE PREPARATION, ANALYSES AND SECURITY .....	51
12.0	DATA VERIFICATION .....	52
13.0	MINERAL PROCESSING AND METALLURGICAL TESTING .....	53
14.0	MINERAL RESOURCE & MINERAL RESERVE ESTIMATES.....	54
14.1	Introduction .....	55
14.2	Drill-hole Data Validation .....	55
14.3	Assay Geostatistics .....	58

14.4	Geology & Mineralized zone Interpretation & Modelling .....	62
14.5	Mineralized Zone Assays & Compositing .....	67
14.6	Assay Composite Grade x Thickness Contouring .....	71
14.7	Variography .....	72
14.8	Block Modelling & Grade Estimation Parameters .....	75
14.9	Specific Gravity & Volumetrics .....	79
14.10	Dilution & Recovery .....	79
14.11	Metallurgical Considerations .....	79
14.12	Environmental Considerations .....	79
14.13	Cut-off Grade .....	80
14.14	Resource Estimate .....	81
14.15	Summary of Categorized Resources .....	85
14.16	Conclusions .....	86
15.0	ADJACENT PROPERTIES .....	89
16.0	OTHER RELEVANT DATA AND INFORMATION .....	90
17.0	INTERPRETATION AND CONCLUSIONS .....	91
18.0	RECOMMENDATIONS .....	93
19.0	REFERENCES .....	95
	CERTIFICATE OF QUALIFICATION .....	103

**LIST OF FIGURES**

Figure 2.1	Simplified geological map of Abitibi Greenstone Belt in Quebec .....	10
Figure 2.2	Regional base map showing location of the East Cadillac Gold Property .....	11
Figure 4.1	Base-map of East Cadillac Gold Property showing claim groups staked and optioned by Chalice .....	14
Figure 4.2	East Cadillac Gold Property showing formerly distinct claim groupings owned by various exploration companies .....	15
Figure 6.1	East Cadillac Gold Property showing distribution of informal claim blocks from previous exploration work .....	20
Figure 6.2	Best results (highlighted) from 1988 drilling by Monicor (GM48430) .....	22
Figure 6.3	Best results (highlighted) from 1988 drilling by Monicor (GM48507) .....	23
Figure 7.1	Regional geology map of Abitibi Greenstone Belt showing location of East Cadillac Gold Property .....	39
Figure 7.2	Simplified geological map of southeastern part of Abitibi Greenstone belt .....	42
Figure 7.3	Geology underlying the East Cadillac Property .....	43
Figure 7.4	Simplified stratigraphic column for the area of the East Cadillac Gold Property .....	45
Figure 14.1	Plan map of former Nordeau West property limits & drill-holes used to calculate the MRE .....	57
Figure 14.2	Log-Normal Probability Plot – All Au Assays (uncut) .....	59
Figure 14.3	Histogram Plot – All Assay Sample Interval Lengths .....	61
Figure 14.4	3-D Isometric Top/Down-dip View – Geology Solids & Surfaces Model .....	64
Figure 14.5	3-D Isometric N-S Cross Section View – Geology Solids & Surfaces Model .....	65
Figure 14.6	2-D E-W Longitudinal Section View – Geology Solids & Surfaces Model .....	66
Figure 14.7	Histogram Plot – Mineralized zone Sample Interval Lengths .....	68
Figure 14.8	Log-Normal Probability Plot – Mineralized zone 1.5 m Composites (Au cut) .....	70
Figure 14.9	2-D E-W Longitudinal Section View – Composite Grade x Thickness Contouring .....	71
Figure 14.10	Linear Down-Hole Semi-variogram – 1.5 m Composites (Au cut) .....	72
Figure 14.11	3-D Omni Directional Semi-variogram – 1.5 m Composites (Au cut) .....	73
Figure 14.12	3-D Directional Semi-variogram – 1.5 m Composites (Au cut) Az 090 Dip -30 .....	74
Figure 14.13	3-D Directional Semi-variogram – 1.5 m Composites (Au cut) Az 270 Dip -60 .....	74

Figure 14.14 2-D E-W Longitudinal Section View – Mineralized zone Block Model .....	76
Figure 14.15 Graph Gold price (US\$/oz Au) – 6 Monthly Daily and 30 Day Moving Averages .....	80
Figure 14.16 2-D E-W Long Section View – Indicated Resource Blocks & DDH Intersections .....	83
Figure 14.17 2-D South-facing longitudinal section – Mineralized zone Block Model.....	85
Figure 14.18 2-D South-facing longitudinal section – Mineralized zone Block Model.....	86
Figure 14.19 2-D South-facing longitudinal section – Mineralized zone Block Model.....	87
Figure 15.1 Former Chimo Gold Mine (July 2006).....	89

**LIST OF TABLES**

Table 1.1: Summary of Mineral Resource Estimate - East Cadillac Gold Property .....	6
Table 1.2: Preliminary Budget for Recommended Work on East Cadillac Gold Project .....	7
Table 4.1: Claim information for Globex Mining’s Bateman and Nordeau properties .....	15
Table 6.1: Nordeau West Historical “Reserves” Estimate from Tremblay (1990).....	21
Table 6.2: Nordeau West Historical “Reserves” Estimate from Jean (1990; GM49867).....	24
Table 6.3: Summary of 2006-2007 Nordeau Project Drilling Campaign (Plato Gold) .....	26
Table 6.4: Summary of 2008 Nordeau West Drilling Campaign (Plato Gold) .....	26
Table 6.5: Mineral Resource Estimate - Nordeau West (from Langton and Horvath, 2009) .....	27
Table 6.6: Summary of 2009 Drill-Holes: Nordeau East Claim Block.....	27
Table 6.7: Selected Best Results of 2009 Diamond-Drill Hole Campaign-Nordeau East .....	28
Table 6.8: Summary of 2010 Drill-Holes: Nordeau East Property .....	28
Table 6.9: Summary of 2011 Nordeau East Drill-Holes .....	29
Table 6.10: Best results of Globex Re-sampling Programme .....	30
Table 6.11: Selected Best Results From 1988 and 1990 Bateman Drilling Programs .....	31
Table 6.12: Summary of 2009 Drill-Holes: Bateman Claim Block .....	32
Table 6.13: Summary of 2011 Drill-Holes on the Bateman claim block .....	32
Table 6.14: Summary of Selected 2011 Best Drilling Results: Bateman East Property.....	33
Table 6.15: Best Results From 1983 Louvem Drilling, Simon West Occurrence .....	35
Table 14.1: Summary of DDH's in Nordeau West Database .....	56
Table 14.2: Univariate Histogram Statistics – All Au Assays (uncut).....	58
Table 14.3: Univariate Histogram Statistics – "Historic" Au Assays (uncut) .....	60
Table 14.4: Univariate Histogram Statistics – "Recent" Au Assays (uncut) .....	60
Table 14.5 Univariate Histogram Statistics – All Assay Sample Interval Lengths .....	61
Table 14.6: Univariate Histogram Statistics – Mineralized Zone Au Assays (uncut).....	67
Table 14.7: Univariate Histogram Statistics – Mineralized Zone Sample Lengths.....	67
Table 14.8: Mineralized Zone Composites .....	69
Table 14.9: Univariate Histogram Statistics – Mineralized Zone 1.5 m Composites (Au cut).....	69
Table 14.10: Bank of Canada Monthly Average US\$ Currency Exchange Rates .....	80
Table 14.11 Cut-off Grade Calculations - Nordeau West Resource.....	81
Table 14.12 Indicated Resources at Incremental Cut-off Grades.....	82
Table 14.13 Estimates of Additional Inferred Resources at Various Cut-off Grades .....	84
Table 14.14 Summary of Categorized Resources at 2.75 gpt Au Cut-off Grade .....	85
Table 17.1 Summary of categorized resources at 2.75gpt Au cut-off grade: Nordeau West Project - East Cadillac Gold Property.....	92
Table 18.1 Preliminary Budget for Recommended Work on East Cadillac Gold Project.....	94

**LIST OF APPENDICES**

APPENDIX I - List of Claims

---

## 1.0 SUMMARY

### 1.1 Introduction

Chalice Gold Mines Limited (“Chalice” or, the “Company”), the parent company to Chalice Gold Mines (Quebec) Inc., is a publicly traded junior mining company listed on the Australian Stock Exchange (ASX: CHN) and Toronto Stock Exchange (TSX: CXN).

This Report was prepared by John Langton (M.Sc., P.Geo.) and Vincent Jourdain (Ph.D., P.Eng.), (the “Authors”), of MRB & Associates, in accordance with Ministère des Ressources naturelles et de la Faune du Québec standards of disclosure for mineral projects. Misters Langton and Jourdain are Qualified Persons according to National Instrument 43-101, and are of the opinion that the recommended exploration programme is appropriate, consistent with those of other junior mineral exploration companies currently operating in the area, and necessary in order to help determine the mineral potential of the Property.

### 1.2 Property Description and Ownership

On October 12<sup>th</sup>, 2016, Chalice announced (\*see [www.chalicegold.com /Investor /ASX Announcements](http://www.chalicegold.com/Investor/ASX/Announcements) for Chalice press announcements), that it had signed a binding letter of intent with Globex Mining Enterprises Inc. (“Globex”) to acquire its interest in the 1,454 hectare Nordeau Project, consisting of 37 claims owned 100% by Globex and 17 claims in which Globex maintains a 60% interest. On November 23<sup>rd</sup>, 2016, Chalice further announced that it had entered into a binding option to acquire a 70% interest in 73 claims comprising the Chimo Gold Project from Richmond Mines Inc. (“Richmont”). The Chimo Gold claims, which are contiguous with the Nordeau Project claims, cover 2,593 hectares.

To further consolidate its land position Chalice staked 23 additional claims, totalling 1,325 hectares, in the immediate vicinity of the Nordeau and Chimo project claims, in September and November of 2016.

Chalice’s consolidated land holdings, herein referred to as the East Cadillac Gold Project (the “Property” or the “Project”), are in western Quebec (NTS Map 32C/03 and 31N/14), covering parts of Vauquelin, Villebon, Pershing and Denain townships, some 50 kilometres east-southeast of the City of Val-d’Or, and comprise a significant contiguous land position along the easternmost part of the Larder Lake-Cadillac fault zone, a prolific regional structural break that hosts numerous historic and active gold mines.

### 1.3 Geology and Mineralization

The Property is within the Abitibi Greenstone Belt, overlying a highly sheared sequence of altered greywacke, iron formation and mafic volcanic rocks along nearly 15 kilometres of strike. Gold mineralization on the Property is found associated with quartz veins containing disseminated to semi-massive sulphides, typically within sedimentary rocks in close association with magnetite iron formations, or in sheared and altered mafic volcanic rocks.

The immediate vicinity of the East Cadillac Gold Property has been the focus of exploration activity since the mid-1940’s when gold-bearing lenses were found near the present day Chimo Gold Mine (now closed), which operated for nearly 15 years and produced in excess of 349,000 gold ounces until its closure in late 1996. The East Cadillac Gold Property hosts numerous catalogued gold occurrences, several with historic resources.

### 1.4 Resource Estimate

The Nordeau West deposit, 1,500 m east of the closed Chimo Mine, hosts a NI 43-101 Mineral Resource, the only current resource on the East Cadillac Gold Project.

The 2017 Mineral Resource Estimate of Nordeau West, summarized in **Table 1.1**, is based on 121 drill-holes. Gold grades were determined using an inverse distanced-squared algorithm into a 3-D (Gemcom) block model with X-Y-Z (i.e., east-west, north-south, vertical) block dimensions of 5.0 m x 2.5 m x 5.0 m. A cut-off grade of 2.75 gpt Au (\$145/tonne production cost) was used in the calculations. An assumed gold price of US\$1250/oz at an exchange rate of \$CAD 1.31/\$US 1.00 was selected for cut-off grade calculations.

**Table 1.1: Summary of Mineral Resource Estimate - East Cadillac Gold Property**

Resource (Category)	Zone	Tonnes	Au Grade (gpt)	In-Situ Au (oz)
<b>Measured Indicated</b>	No Measured Resources			
	Main	223,382	4.18	30,019
	B	1,960	3.07	193
	<b>Total</b>	<b>225,342</b>	<b>4.17</b>	<b>30,212</b>
<b>Measured + Indicated</b>	<b>Total</b>	<b>225,342</b>	<b>4.17</b>	<b>30,212</b>
<b>Inferred</b>	Main	1,097,749	4.1	144,635
	B	14,572	3.59	1,680
<b>Total Inferred</b>	<b>Total</b>	<b>1,112,321</b>	<b>4.09</b>	<b>146,315</b>

### 1.5 Conclusions

The East Cadillac Gold Project overlies a tectonostratigraphic corridor characterized by anastomosing high-strain zones (“shear-zones”), ranging in thickness and intensity, that divide the host sedimentary and mafic volcanic rock into hectometric to kilometric “lozenges” of relatively undeformed rock. This “corridor” is interpreted to represent the eastern extension of the renowned Larder Lake-Cadillac Break (Cadillac Tectonic Zone) - a 300 km long, first-order tectonic “break” that defines the Pontiac-Abitibi subprovince boundary in the region, and is host to numerous syn-deformational, epigenetic quartz-vein/disseminated gold-ore systems. The shear-zones and the secondary fracturing and brecciation that have affected the rocks underlying the Property are of primary importance to mineralization, as they are interpreted to have acted as the principle passage ways for sulphide- and gold-bearing solutions. The East Cadillac Gold Property covers approximately 15 km of prospective ground along this corridor, which hosts a NI 43-101 mineral resource, the Chimo Gold Mine (closed), and numerous catalogued gold-mineralization occurrences. The authors conclude that the East Cadillac Gold Property merits further exploration for additional gold resources.

### 1.6 Recommendations

Future exploration work on the East Cadillac Gold Property is warranted. The work programs should include diamond-drilling focused on further delineating the resource at Nordeau West, which were largely developed from the success of recent drilling campaigns (2006-2011), the success of which were attributed to the re-analysis of historic drilling data using modern 3D geological modelling, grade contouring and experimental block modelling for targeting exploration drilling.

The tectonostratigraphic sequence that hosts the Nordeau West resources continues to the east, and has been intersected by numerous historic and recent drill-holes, but few holes have targeted the sequence below 250 depth. To the west, beyond the limits of Cartier Resources' Chimo Mine property the sequence is similarly recognized and has been tested along the Simon West - Blue Grass corridor, but not rigorously.

The authors recommend that the same exploration strategies and techniques that were successfully applied at Nordeau West be applied to the other occurrences on the Property that host historic resources, and/or known concentrated gold mineralization.

A resource-database of the historic geological and drilling data, similar to that which was compiled for the Nordeau West block, is recommended for the remainder of the East Cadillac Gold Property. The study should provide for an aggressive drilling programme to test deeper parts of the known mineralization along indicated trends identified from this and previous studies.

It is recommended that future exploration by Chalice should include the following work:

Phase 1

- surface mapping accompanied by rock, soil, core and spectral analyses;
- airborne EM survey;
- data integration including verifying and merging existing drill hole databases, adding relevant historical data, and generating a 3D model of the consolidated property;
- LiDAR survey for 3D modeling surface control;
- surface stripping, mapping and sampling on priority targets;
- diamond-drilling down-dip of known mineralized occurrences.

Contingent on positive Phase I results, the Phase II exploration program should comprise:

Phase 2

- diamond-drilling on a range of targets generated by Phase 1 studies and exploration work;

A preliminary budget for the recommended work is summarized in **Table 1.2**.

**Table 1.2: Preliminary Budget for Recommended Work on East Cadillac Gold Project**

Phase 1	Drilling (metres)	Cost / metre	Budget
Surface sampling - rock, soil, core and spectral sampling			\$200,000
Airborne AEM survey			\$85,000
Data compilation and integration, generation of 3D model			\$50,000
LiDAR survey			\$50,000
Surface stripping, mapping and sampling on priority targets			\$100,000
Drilling to expand existing mineralized zones	1,600	\$250	\$400,000
Contingency 15%			\$132,750
<b>Subtotal Phase 1</b>			<b>\$1,017,750</b>
Phase 2	Drilling (metres)	Cost / metre	Budget
Drilling of targets generated by Phase 1 work	4,000	\$250	\$1,000,000
Contingency 15%			\$150,000
<b>Subtotal Phase 2</b>			<b>\$1,150,000</b>
<b>Overall Total</b>			<b>\$2,167,750</b>

## 2.0 INTRODUCTION AND TERMS OF REFERENCE

This Technical Report on the East Cadillac Gold Project (the “Property”) was co-authored by John Langton and Aberrazak Ladidi (the “Authors”) of MRB & Associates (“MRB”) at the request of Patrick Lengvel, Exploration Manager (Canada) of Chalice Gold Mines Limited (“Chalice”). The East Cadillac Gold Project is located in western Quebec, Canada, some 50 kilometres east of the Municipality of Val-d’Or, in the geological setting known as the Abitibi Greenstone Belt (**Figure 2.1**).

The purpose of this report is to support the public disclosure of gold resources on the Property. The Authors’ review and preparation of this report were carried out in compliance with the standards of the Canadian Securities Administrators’ National Instrument 43-101 (NI 43-101) policy. Chalice is a public company headquartered in Australia trading under the symbol “CHN” on the Australian Stock Exchange (ASX) and “CXN” on the Toronto Stock Exchange (TSX), with Canadian corporate offices located at: 1 Yonge Street, Suite 1801, Toronto, Ontario.

In October of 2016, the Company retained MRB, a Val-d’Or-based geological consulting firm to author a National Instrument 43-101 (NI 43-101) Technical Report on the Nordeau Project claims. This mandate was expanded in November 2016 to include all of the consolidated East Cadillac Gold Project holdings (**Figure 2.2**). The effective date of this Report is December 31, 2016.

The purpose of this document is to provide Chalice’s Board of Directors with an independent Technical Report on the East Cadillac Gold Project that will include an updated Mineral Resource Estimate (MRE) on the Nordeau West gold deposit, and to provide recommendations for further exploration.

It is understood that this Technical Report (the “Report”) will be used to support the subsequent public disclosure of the mineral resource underlying the East Cadillac Gold Project by filing on SEDAR\* ([www.sedar.com](http://www.sedar.com)), as required by NI 43-101. \**System for Electronic Document Analysis and Retrieval: the principal filing system of the Canadian Securities Commission.*

### 2.1 Sources of Information

The bulk of the historical geological information sourced for this Report was distilled from the on-line SIGEOM database ([http://sigeom.mines.gouv.qc.ca/signet/classes/I1102\\_indexAccueil?l=a](http://sigeom.mines.gouv.qc.ca/signet/classes/I1102_indexAccueil?l=a)) of the Ministère des Ressources naturelles et de la Faune du Québec (MRNFQ). The Authors also made use of publicly available Assessment Reports, on-line resources, publications of the Geological Survey of Canada, scientific papers from various earth science Journals. A list of the principal material reviewed and used in the preparation of this document is included in the References section of this document.

This Report draws heavily from previous reports by Kramo and Langton (2010; GM65127), Langton and Horvath (2009; GM64504) and Bourgoin and Castonguay (2007; GM64272).

### 2.2 Site Visit

John Langton, conducted site visits to the East Cadillac Gold Project on October 17<sup>th</sup> and November 13<sup>th</sup> of 2016. During these forays, Mr. Langton checked the access to the Property, located historic drill-collars and checked for bedrock exposures. The main access trails are all open to pick-up trucks, thanks in part to the local hunters who have cleared the trails of fallen trees to allow access to their hunting sites. Most of the secondary trails are also readily accessible by ATV. The area of the Property is mainly covered by glacio-fluvial deposits; however, the few outcrops that were seen corresponded to the mapped geological units.



---

The drill sites and drill roads from the recent drilling programmes by Plato Gold Corporation (2006-2011) are easily recognizable as such. Numerous drill collars from these campaigns were located, all of which had intact metal identification flags, and were correctly identified. The recorded UTM coordinates of all the located holes were corroborated in the field by a hand-held GPS. The recorded dip and bearing direction of the collar was also corroborated on-site. There are no recent drill-holes on the Property. Core from the previous drilling programs by Plato Gold is stored at Globex's facilities in Rouyn-Noranda (QC).

There has been no significant new data generated on the Project since Mr. Langton's site visits. This report is considered current as of December 31<sup>st</sup>, 2016.

### **2.3 Units of Reference**

Currency amounts (\$) are reported in Canadian Dollars (\$ or CAD\$) or "American" dollars (US\$).

Grid coordinates on maps and figures are based on the UTM NAD 83 Zone 18 projection.

Quantities are stated in metric units, as per standard Canadian and international practice, including metric tons (tonnes, t) and kilograms (kg) for mass, kilometres (km) or metres (m) for distance, hectares (ha) for area, and grams (g) or grams per metric ton (gpt) for gold grades. Where applicable, imperial units have been converted to the International System of Units (SI units) for consistency.

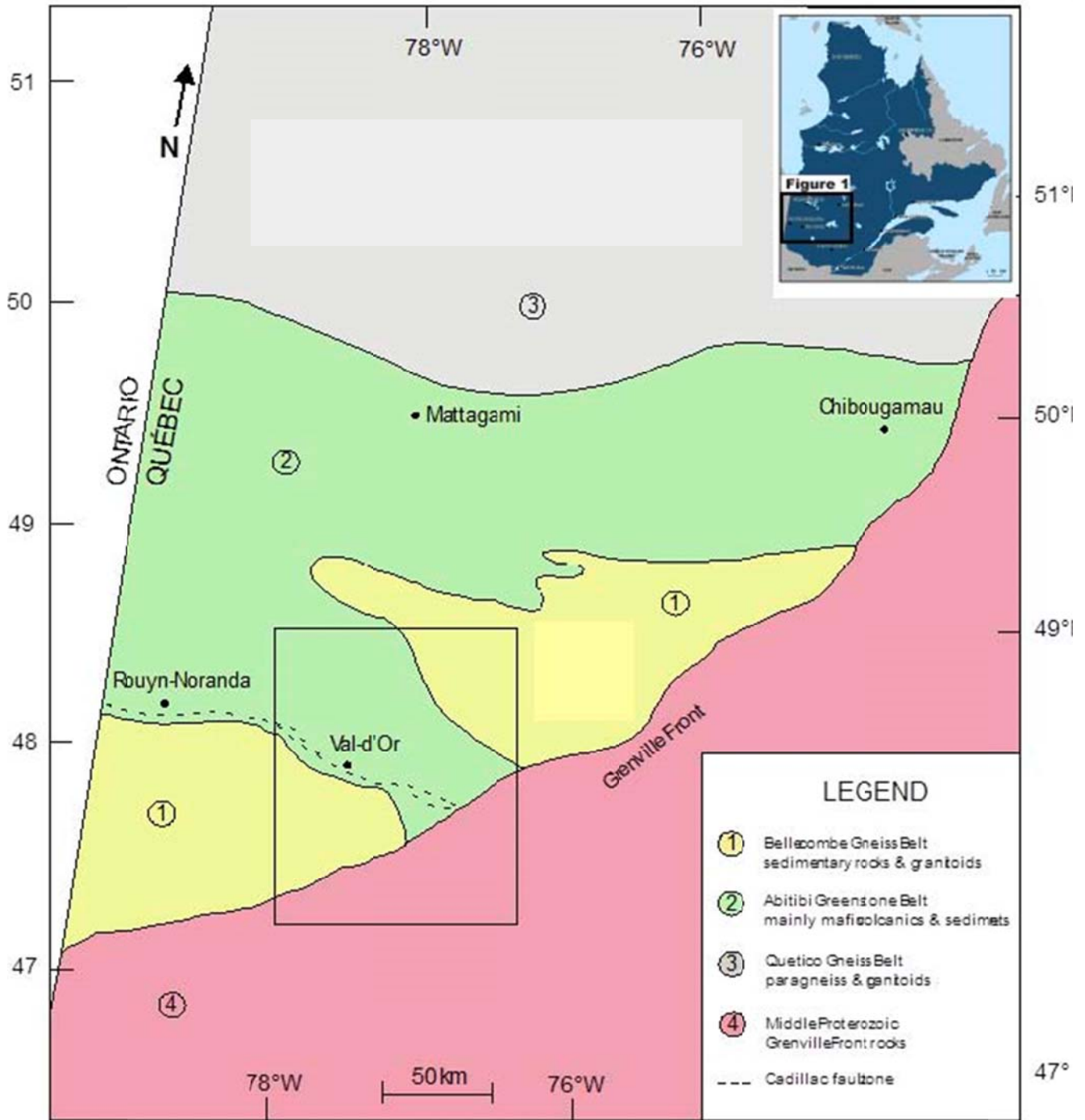


Figure 2.1: Simplified geological map of Abitibi Greenstone Belt in Quebec

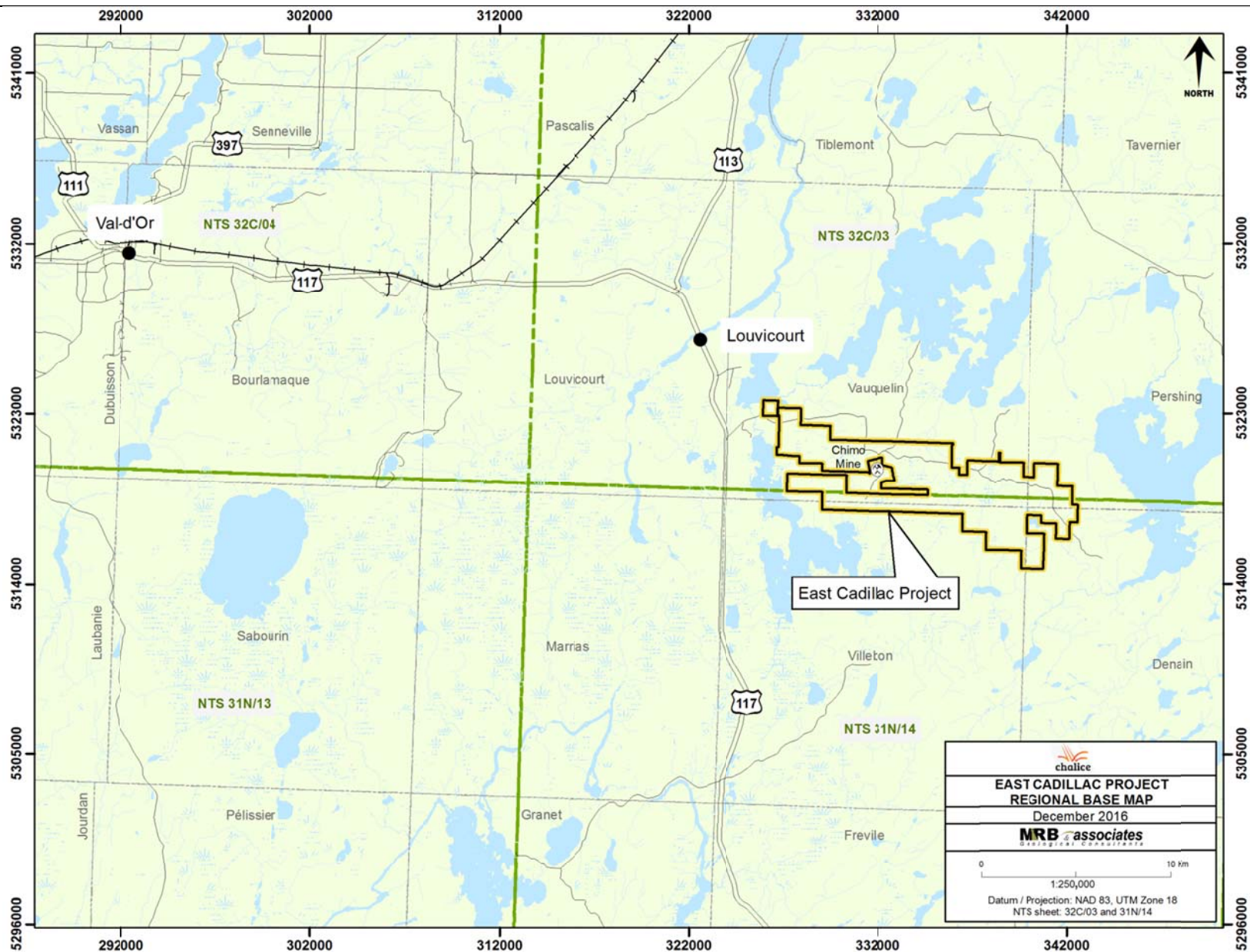


Figure 2.2: Regional base map showing location of the East Cadillac Gold Property

### 3.0 RELIANCE ON OTHER EXPERTS

Chalice provided professional discussion and opinions regarding effective future exploration methods, and provided information regarding the property agreements and all geological data pertaining to the Project in its possession

The results of known past activities in the immediate vicinity of the Cadillac East Project have been summarized in this report. Some of this historical work (i.e., geological and technical reports), used to compile information on the Project area, were prepared before the 2001 implementation of National Instrument 43-101 and the 2005 Regulations of 43-101. It is the Authors' opinion that these reports appear to have been completed by "qualified professional geological personnel" under the definition of NI 43-101, and that the information was prepared according to standards acceptable to the exploration community at the time.

This report, which has been prepared in accordance to Regulation NI 43-101, is based on data, reports and other information made available to MRB & Associates by the management of Chalice. The information received appears to be complete and, to the best knowledge of the authors, is not misleading. The opinions stated herein are given in good faith.

MRB & Associates has not verified the legal titles to the Property or any underlying agreement(s) that may exist concerning the licenses or other agreement(s) between third parties; however, MRB understands that Chalice is responsible to have conducted the proper legal due diligence.

The statements and opinions expressed in this document are given in good faith implementing generally accepted scientific judgement, principles and practices, based on information provided at the time of writing, and with the belief that such statements and opinions are not false and misleading at the date of this Report. Because of the inherent uncertainty in this process, no guarantee of conclusion is intended or can be given. MRB accepts no responsibility for damages, if any, suffered by any other party as a result of decisions made or actions based on this report.

This Report was prepared in full accordance with NI 43-101 standards; however, as the scope of the services performed may not be appropriate to satisfy the needs of other parties, it is understood that any use that another party makes of this report, or any reliance or decisions made based upon it, except for the purposes legislated under provincial securities laws, are the sole responsibility of the other party.

The Authors believe that the information used to prepare this Report, and to formulate its conclusions and recommendations, is valid and appropriate considering the status of the Project and the purpose for which the Report has been prepared.

## 4.0 PROPERTY DESCRIPTION AND LOCATION

### 4.1 Location

The East Cadillac Gold Property, comprises a number of formerly distinct claim groupings owned by various exploration companies, referred to herein as the Nordeau West, Nordeau East, Bateman, Pershing, Villebon, Nova and Lac Simon claim blocks (**Figure 4.1** and **Figure 4.2**), all of which are closely related with respect to their physical location, underlying rock types, mineralization style and exploration targets. The consolidated East Cadillac Gold Property comprises 150 claims covering 5,372.4 hectares mainly in the southeast part of Vauquelin Township, at the eastern end of the Val-d'Or gold mining camp, some 50 km east of the town of Val-d'Or, Quebec, on NTS Map Sheet 32C/03 (see **Figure 2.2**).

The approximate centre of the Project has Universal Transverse Mercator (UTM) coordinates 333300 East, 5320200 North, in Zone 18 of the 1983 North American Datum (NAD83) geoid; equivalent to 48° 00' 48" Latitude, 77° 14' 07" Longitude.

The property boundaries have not been legally surveyed. The claim boundary outline were obtained from the MRNFQ website [www.mrnfp.gouv.qc.ca/mines/index.jsp](http://www.mrnfp.gouv.qc.ca/mines/index.jsp), and the GESTIM on-line claim management system (<https://gestim.mines.gouv.qc.ca/>).

### 4.2 Mineral Claim Tenure and Disposition

All claims comprising the Property are currently in good standing. The renewal dates, as of December 20, 2016, and the rental fees, required minimum work and excess credits are shown in **Appendix I**. Details on claims renewals, work credits, claim access rights, allowable exploration, development, mining works, and site rehabilitation are summarized in the Mining Act of Quebec available at [www2.publicationsduquebec.gouv.qc.ca](http://www2.publicationsduquebec.gouv.qc.ca).

The rental fees required for the renewal of all of the claims upon their next anniversary date amount to \$7,259.22; whereas the total assessment work credits required for the renewal of the claims comprising the entire property upon their anniversary dates amounts to \$146,607.60.

There are a total of \$3,649,011.04 in accumulated work credits from work completed by previous exploration companies on the formerly separate properties that comprise the East Cadillac Gold claims; however, these credits cannot necessarily be distributed across the Property. Disposition of the accumulated work credits is subject to the conditions outlined in Section 76\* of the Quebec Mining Act (<http://legisquebec.gouv.qc.ca/en/ShowDoc/cs/M-13.1>).

*\*The holder of adjoining claims may, not later than the date of the expiry of the claim to be renewed, apply all or part of the amounts spent to perform, in respect of a claim, any work in excess of the prescribed requirements to a claim the renewal of which is applied for, up to the amount necessary for its renewal, provided the land that is the subject of the application for renewal is included within a 4.5 kilometre radius circle measured from the geometrical centre of the parcel of land subject to the claim in respect of which work was performed in excess of the prescribed requirements.*

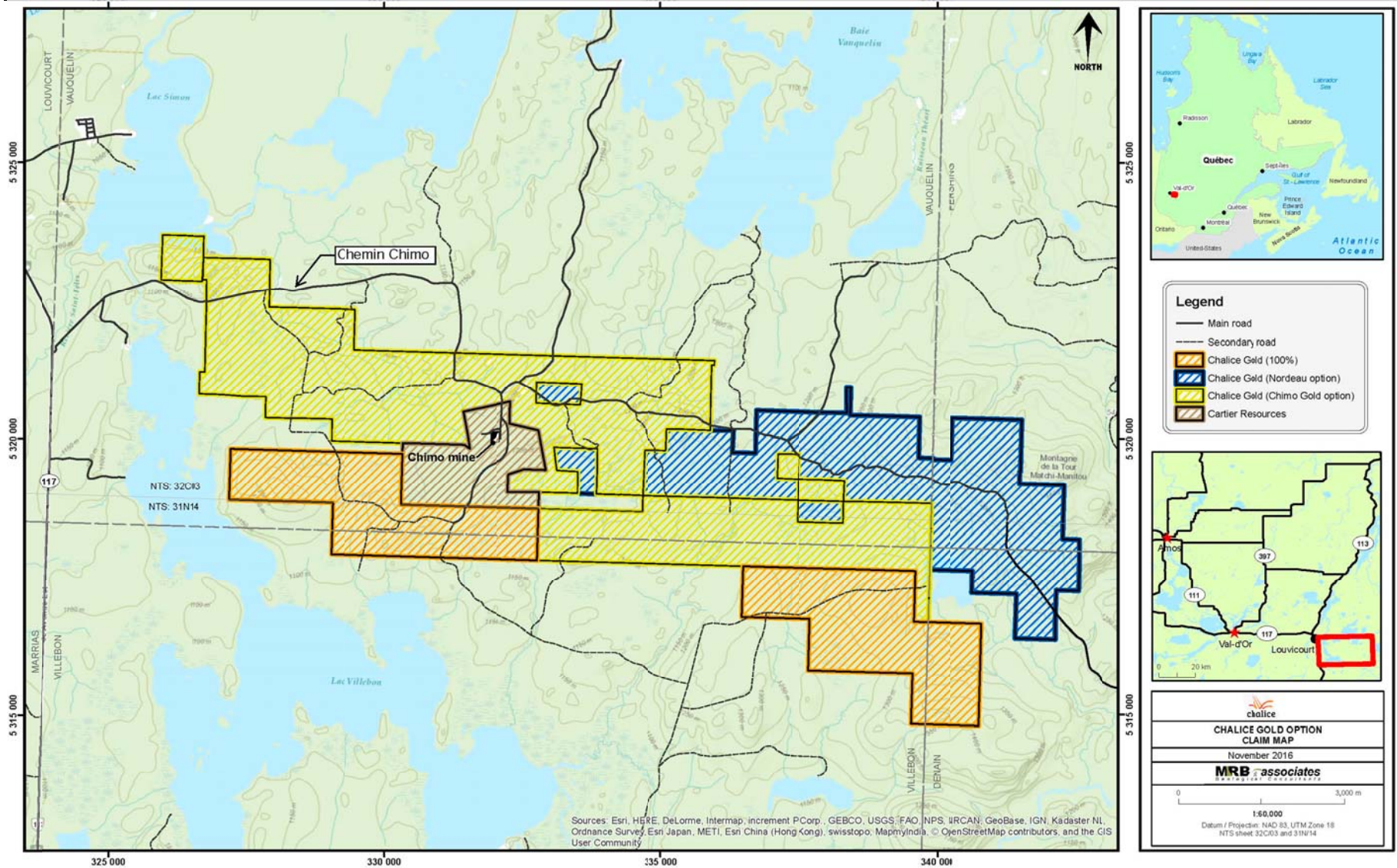
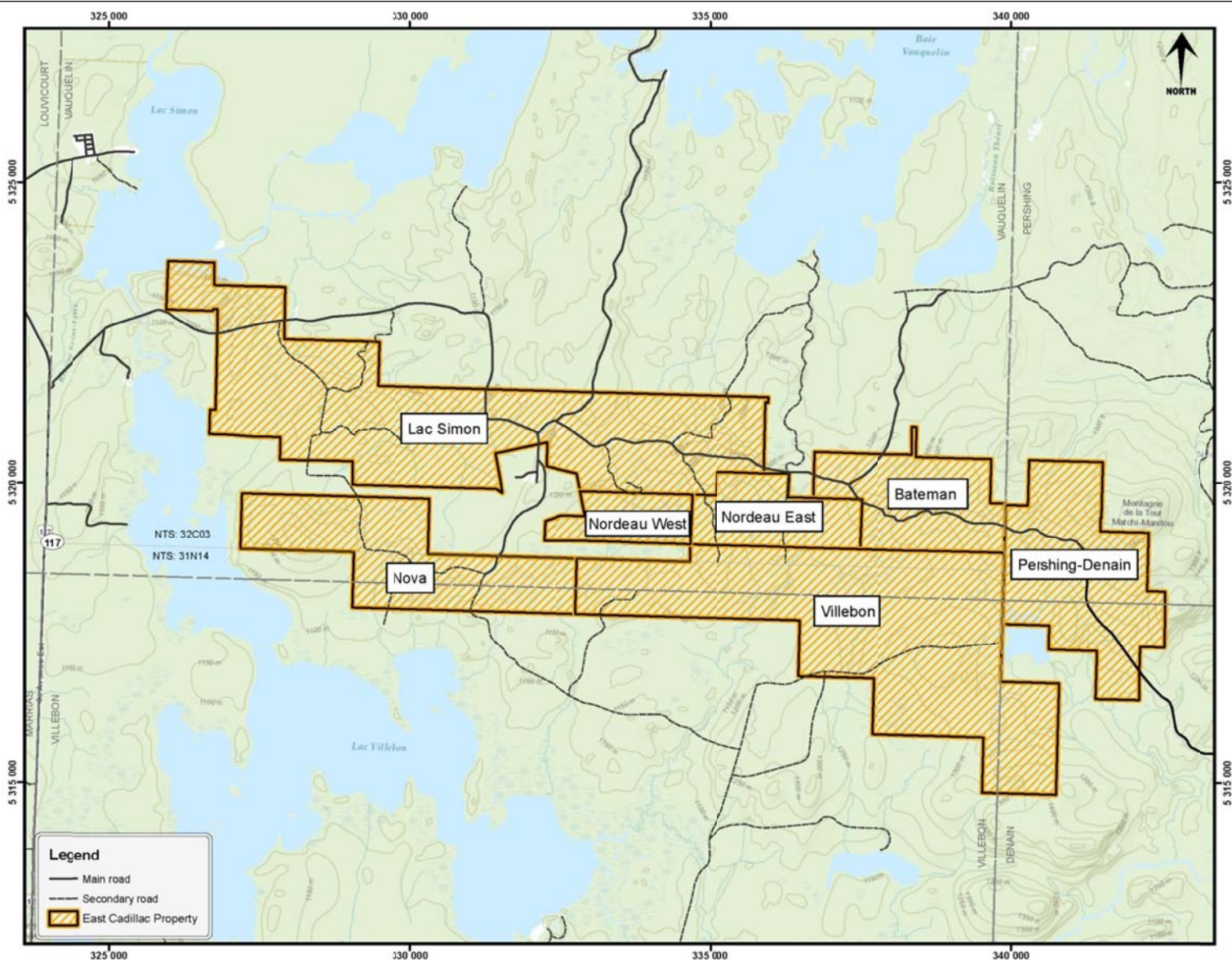


Figure 4.1: Base-map of East Cadillac Gold Property showing claim groups staked and optioned by Chalice



**Figure 4.2: East Cadillac Gold Property showing formerly distinct claim groupings owned by various exploration companies**

### 4.3 Royalties and Related Information

On October 12<sup>th</sup>, 2016, Chalice announced that it had signed a binding letter of intent with Globex Mining Enterprises Inc. (“Globex”) to acquire interest in Globex’s 1,453.6 hectare Nordeau Project, consisting of 37 claims owned 100% by Globex and 17 claims in which Globex maintains a 60% interest. Chalice may acquire its interest in the Nordeau Project claims by making annual option payments totalling CAD\$590,000 over four years to Globex (including an initial payment of CAD\$120,000 in the first year) and undertaking exploration expenditures of CAD\$2.5 million, also over a four year period. Upon exercising its option Chalice will grant a 3% Gross Metal Royalty to Globex (there are no existing royalties in relation to the Nordeau Project claims). Chalice has the right to withdraw from the agreement, foregoing any interest in the Nordeau Project claims, at any time.

On November 23<sup>rd</sup>, 2016, Chalice further announced that it had entered into a binding option to acquire a 70% interest in 73 claims comprising the Chimo Gold Project from Richmond Mines Inc. (“Richmont”). The Chimo Project claims, which are contiguous with Globex’s Nordeau Project claims, cover 2,593.4 hectares. Chalice can earn a 70% interest in the Chimo Project by making total option payments of CAD\$200,000 to Richmond and funding exploration expenditures of CAD\$3.1 million over a period of four years.

Upon meeting these requirements and exercising the option, Chalice shall then grant a 1% Net Smelter Royalty (NSR) to Richmond on claims with no pre-existing royalties. Chalice has the right to withdraw from the agreement at any time, waiving its interest in the Chimo Project claims.

Upon completing all obligations under the term sheet and forming a joint venture, the agreement is subject to usual joint venture dilution terms including reverting to a 1.5% NSR (0.5% NSR on certain claims with pre-existing royalties), with a right to buy back 0.5% of the royalty for CAD\$1.0M, upon either party diluting its Project interest to less than 10%.

To further consolidate its land position Chalice staked 23 additional claims, totalling 1,325.4 hectares, in the immediate vicinity of the Nordeau and Chimo project claims, in September and November of 2016.

### 4.4 Environmental Liabilities

No environmental permits are currently assigned to the Property for exploitation purposes. Environmental permit(s) may be required at a later date to fulfil environmental requirements with the goal of returning the land to a use whose value is at least equal to its previous value and to ensure the long term ecological and environmental stability of the land and its watershed; however, no environmental liabilities were inherited with any of the claims on the Property, and there are no environmental requirements to maintain any of the claims in good standing at this time.

### 4.5 Permits

Permits are required for some of the recommended exploration programmes (e.g., diamond-drilling), and potentially for their associated environment-alteration undertakings (e.g., watercourse alteration, water-crossing, clear-cutting) as well. The appropriate Permit Applications for these activities should be submitted by Chalice Gold to the appropriate government departments in a timely fashion, allowing for a four to six week processing period.



#### 4.6 Other Relevant Factors

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

#### 4.7 Property Summary

The East Cadillac Gold Property is strategically located in the south-eastern part of the prolific Archean Abitibi Greenstone Belt of the Superior Province, at the eastern extreme of the Val-d'Or gold mining camp. The East Cadillac Gold Properties are underlain by rocks belonging to the Trivio litho-tectonic Domain (Rocheleau et al., 1997), and are transected by a large deformation corridor interpreted as the eastern extension of the Cadillac Tectonic Zone. The volcano-sedimentary Trivio Domain is made up of a series of lenticular sedimentary units, including banded iron formations, and volcanic assemblages in sheared contact.

Gold mineralization on the properties is found as either one of two styles of occurrences: (1) within sedimentary rocks in close association with magnetite iron formations; (2) in sheared and altered mafic volcanic rocks. The gold mineralization is associated with quartz veins containing disseminated to locally semi-massive sulphides. Gold is usually found in the form of free gold within quartz veins or associated with sulphide mineralization. The sulphide minerals associated with gold mineralization include arsenopyrite, pyrite, pyrrhotite and minor chalcopyrite.

The East Cadillac Gold Property and surrounding area have been the focus of exploration activity since the mid-1940's when gold bearing lenses were found near the area that later hosted the Chimo gold mine, which operated for nearly 15 years and produced in excess of 349,000 ounces until its closure in late 1996.

Numerous exploration programs on the Property over the years have led to the delineation of gold bearing zones at a number of occurrences, for which the following historical "reserve" estimates\* were calculated by previous operators:

	"Probable Reserves"	"Possible Reserves"
Nordeau East (Tremblay 1988-89)	162,200 tonnes @ 6.7 gpt Au	183,700 tonnes @ 6.0 gpt Au;
Nordeau West (Tremblay 1988-89)	126,800 tonnes @ 6.2 gpt Au	242,600 tonnes @ 6.3 gpt Au;
Nordeau West (Explomine-1990)	100,700 tonnes @ 5.3 gpt Au	180,000 tonnes @ 5.5 gpt Au;
Simon West: uncategorized "Reserves"	of 67,000 t grading 6.30 gpt for lens A and 34,000 t at 6.90 gpt Au for lens B.	

**\*These estimates are strictly historical in nature and they should not be relied on since they pre-date the application of Regulation 43-101 and make use of categories different to the ones set out in sections 1.2 and 1.3 of the Regulation. Furthermore, it has been determined that the statistical methods used to determine the average assay grades were, in some instances, incorrectly applied. They are, however, indicative of the potential of the Property to host a economically viable gold resource.**

---

## 5.0 ACCESSIBILITY, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Property is accessible from paved Highway 117, the main route between Val-d'Or and Mont-Laurier, QC. Approximately 6 km south of the village of Louvicourt, an all season gravel road ("Chemin Chimo") leads east to the former Chimo Mine and the Lac Michimanitou sport fishing area. At kilometre 3.5 (from Hwy 117), Chemin Chimo passes through the western part of the Property for 1 km. Chemin Chimo re-enters the Property at kilometre 9.0, just north of the entrance to the closed Chimo Mine, and remains within the Property until kilometre 22.5. Secondary seasonal roads and trails off the arterial Chemin Chimo allow direct access to most parts of the Property (see **Figure 4.1**).

Val-d'Or, 50 km west of the Property, is a comprehensive mining centre supplying personnel, contractors, equipment and supplies to mining and exploration operations in the area. Electricity is relatively inexpensive and is maintained by Hydro-Quebec. A high-voltage power line that served the past producing Chimo Mine is still in place. There is ample local supply of water, both potable and for use in ore-processing, if required.

Val-d'Or Airport ([IATA](#): YVO, [ICAO](#): CYVO), serves as a point of call for air carriers offering scheduled passenger service, and services both private and commercial fixed-wing aircraft and helicopter operators, located on site. The airport is classified in the Regional/Local category according to the National Airports Policy. Local air services connect to Trudeau International Airport in Montreal (QC), and to surrounding communities. Vehicle rentals are available on-site.

The physiography of the Property area is fairly flat-lying with gently rolling topography and large areas of muskeg and bog. The area has very few exposures of bedrock, being underlain mainly by thick glacial sand and gravel deposits. Vegetation is boreal, consisting mostly of black spruce, jack pine, poplar and birch trees, and various shrubs, mosses and lichen.

The area has a typical continental boreal climate. Snow stays on the ground from mid-November and the ice leaves the lakes about early-mid May. Winters can be bitterly cold with temperature averaging  $-15^{\circ}\text{C}$  in January and February. The ground is frost free from May to October. Summers are warm and relatively dry with a mean temperature of  $22^{\circ}\text{C}$ . Precipitation is moderate, ranging from 200 to 500 millimetres annually, with half of it arriving as snow. Exploration operations can be carried out year round, though the wetland areas are better accessed during the winter months when the ground is frozen.

There is sufficient space, and access to surface rights, for exploration work and for any eventual mining operations, tailings storage, waste disposal, and processing plants.

## 6.0 HISTORY

NOTE: The GESTIM and SIGEOM systems are the principal repository for historical information on the Province's mineral resources and are accessible online at <https://gestim.mines.gouv.qc.ca/> and <http://sigeom.mrnf.gouv.qc.ca/>. The GESTIM and SIGEOM web-sites allow on-line searching of the Province of Quebec's database of Provincial Assessment Reports or "Gestimes Minières" (GM's). A listing of GM's pertinent to the East Cadillac Gold Property is included in the References (**Section 21.0**).

The East Cadillac Gold Property and surrounding area has been the subject of exploration activities since the mid-1940's when gold bearing lenses were found on the nearby Chimo property. Numerous new gold-bearing structures were discovered during the 1950's and 1960's, by companies investigating the potential for iron ore in the sedimentary iron formations. The following summary of historical work completed on the Project is divided on the basis of geographical distribution into the Nordeau Project claim blocks and the Chimo Project claim blocks (**Figure 6.1**). All coordinates are UTM, NAD83 Zone 18.

***It should be noted that unless otherwise stated, all drill-intervals represent down-hole lengths and not true widths.***

### 6.1 The Nordeau Project Claim Blocks (Nordeau East, Nordeau West, Bateman and Pershing-Denain blocks)

#### 6.1.1 Nordeau East and Nordeau West claim blocks

##### 6.1.1.1 Historic work

1946-47: Oneonta Pershing Mines Ltd. completed geological and geophysical (Mag) surveys. Eight (8) holes were subsequently drilled on Nordeau West, under option at that time to Inspiration Mining and Development Co., and encountered the first gold indications in the immediate area.

1948-49: Oneonta Pershing drilled 27 holes, totalling 3,400 m, on Nordeau West.

1957-58: Nordeau Mining Co. Ltd. completed a 24-hole programme, totalling 4,530 m, that led to the discovery of gold bearing lenses No.1, 2 and 3 on the Nordeau East claim block (GM04860).

1962: Vauquelin Iron Mines Ltd. (Mines de Fer Vauquelin Ltée.) was incorporated, acquired the Nordeau claims (contiguous at the time), and drilled 14 holes (1,150 m) designed to test the potential for iron ore in the sedimentary iron formations (GM12839).

1963-65: Vauquelin Iron Mines Ltd. did some sporadic work including a geophysical EM survey (GM16371) and drilled 5 holes (700 m) (GM16372; GM17080).

1974: A summary report with drill-hole sections was compiled for the Nordeau West and Nordeau East blocks by Vauquelin Iron Mines Ltd. (GM30500; GM30501).

1979-83: SOQUEM (Société Québécoise d'exploration minière) optioned the properties and carried out magnetic (Mag) and electromagnetic (EM) geophysical surveys (GM37355; GM38857; GM35513; GM36435; GM37356; GM39354; GM39907; GM40274), along with geochemical surveys (GM37729), followed by diamond-drilling on the Nordeau West and Nordeau East claim blocks (GM36462; GM37746; GM39230). A total of 41 holes (6,640 m) was completed. By this time, the information gathered on the gold zones delineated on the properties was such that a first "reserve" estimation was produced on the Nordeau West and Nordeau East occurrences (Gagnon and Gagnon, 1982).

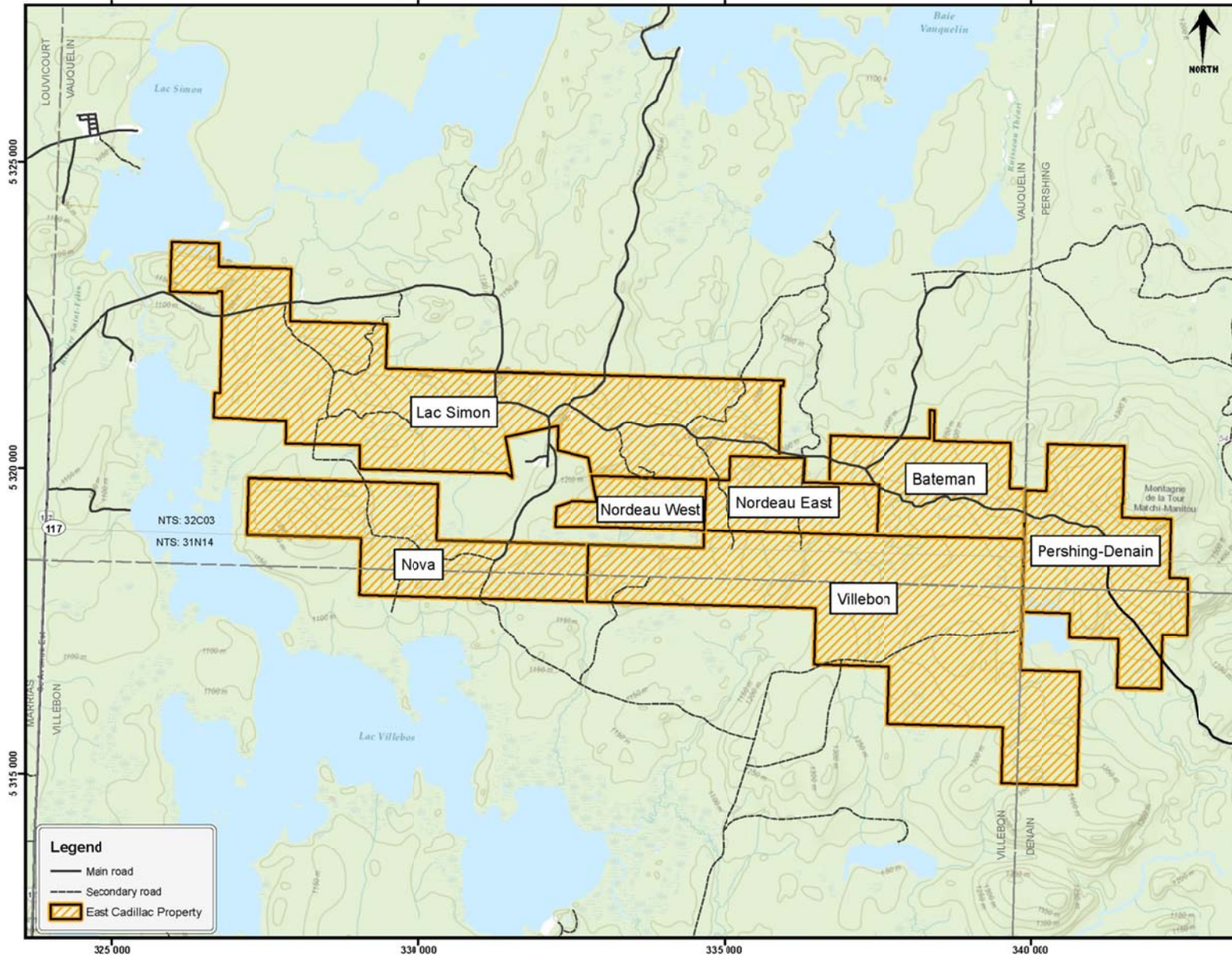


Figure 6.1: East Cadillac Gold Property showing distribution of informal claim blocks from previous exploration work.

1983: The property option was transferred to Société minière Louvem Inc., who completed an induced polarization (IP) geophysical survey prior to drilling 12 holes totalling 2,608 m (GM41828) and updating the “reserve” estimate on the Nordeau West gold zones.

1984: Louvem completed 21 holes totalling 4,867 m on the Nordeau East claim block.

1987: Cambior flew a regional VLF-EM and mag survey that covered the area in the vicinity of the Cadillac Fault Zone from east of Val-d’Or to lake Machi-Manitou (approximately 40 km) and outlined numerous anomalies including strong magnetic trends along the length of the current East Cadillac Gold Property (GM45687).

1987-90: Mines Vauquelin Ltd. regained the property in 1987 and, following recommendations by Roche Ltd., Consulting Group (“Roche”), completed 24 holes for 4,721 m on Nordeau West and 30 holes for 5,889 m on Nordeau East (GM47403). This drill campaign led to the estimation of historical “mineral reserves” by Roche (Tremblay, 1988a and 1989)(GM48424) on both the Nordeau West and Nordeau East claim blocks (**Table 6.1**). Estimation method and basic parameters used at the time were as follows:

- polygonal area of influence around drill-hole intersections on a vertical longitudinal section;
- Specific gravity: 2.9 g/cm<sup>3</sup>;
- minimum horizontal width: 1.5 m;
- cut-off grade: 2.74 gpt Au;
- high assays cut to: 52 gpt Au;
- no dilution factor considered;
- no crown pillar excluded
- “probable reserves” computed within a 15 m radius from qualifying intersections on the longitudinal section; “possible reserves” obtained from the 15-30 m radius from qualifying intersections.

**Table 6.1: Historical Reserve Estimates for Nordeau West & Nordeau East (from Tremblay, 1988).**

Zones :	NORDEAU WEST		NORDEAU EAST	
Historical Classification	Tonnes	Au Grade (gpt)	Tonnes	Au Grade (gpt)
“Probable Reserves”	126,800	6.16	162,200	6.70
“Possible Reserves”	242,600	6.35	183,700	6.01
<b>TOTAL 1988 Historical “Reserves”</b>	<b>369,400</b>	<b>6.28</b>	<b>345,900</b>	<b>6.33</b>

*These estimates were prepared in accordance with standards, terms and policies generally accepted at the time, using all available drilling and sampling information. Although the method used for the estimation would still be appropriate, the terms used and some of the parameters are no longer valid today. The above estimates pre-date the application of Regulation NI 43-101 and make use of categories different to the ones set out in sections 1.2 and 1.3 of the Regulation. The use of the term “reserve” in the 1988 estimates is no longer appropriate and should not be relied on. MRB therefore considers the above estimates to be strictly historical in nature and cautions the reader to make use of these estimates in accordance with the provisions of Part 2 of Regulation 43-101 (Requirements Applicable to All Disclosure).*

In their 1988 report on Nordeau East, Roche recommended an underground programme with the objective of upgrading the “reserves” and defining the characteristics of the body. The proposal was to drive a decline to access the zones and extract a bulk sample for testing.

1988: (GM48430) In January and February, Monicor Exploration drilled 6 holes totalling 1,194 metres in the area between the Nordeau West and Nordeau East occurrences, intersecting auriferous zones within sequences of mafic volcanics, epiclastic sediments, and iron formation. The iron formations occur immediately north of the mafic volcanics, whereas the southern contact zone of the mafic rocks is characterized by shearing and folded deformation zones comparable to the Nordeau West deposit sequence. Best results are shown in **Figure 6.2**.

LIGNE	SONDAGE	TENEUR g/T d'or		INTERSECTION mètre	LONGUEUR mètre	TYPE
L-24+00E	81-29	1.00		108.50-110.00	1.50	QZ-PO-AS
		1.70		116.00-117.00	1.00	V6 altérée
		1.10		181.00-182.30	1.30	MI (C-T)
L-24+50E	88-01	1.00		80.35-81.35	1.00	F3
		1.33		100.80-104.30	3.50	QZ-AS-PO
		3.20	*	110.85-111.25	0.40	QZ gris foncé
		1.30		147.00-147.50	0.50	QZ-AS
L-25+00-E	82-52	3.72		119.02-121.52	2.50	QZ-AS-PO
L-26+00-E	82-56	4.90	*	95.32-95.82	0.50	QZ-AS-PO
L-27+00E	82-57	4.63	*	79.20-79.43	0.23	PY-PO
L-27+40E	88-06	2.35		65.50-66.60	1.10	QZ blanc
L-28+00E	82-53	2.70		187.81-189.36	1.55	S3-QZ
	84-92	1.20		100.13-101.70	1.57	QZ-PY
		1.47		158.06-159.10	1.04	QZ-TO-PY
L-29 +00E	88-02	1.20		165.60-166.10	0.50	V9-GR
		1.20		237.85-238.15	0.30	AS-PO
29+75E	88-05	22.50	*	45.20-45.50	0.30	QZ-AS
		2.45		53.80-54.80	1.00	AS-GR
		4.80		70.55-71.15	0.60	AS-PO
		1.30		90.10-90.40	0.30	PO
		2.50		107.30-107.60	0.30	QZ-PO
		2.20		108.80-109.10	0.30	QZ-AS-PO
		2.10		109.70-110.00	0.30	QZ-PO-AS
		6.50		110.30-110.60	0.30	QZ-PO-AS
		1.30		110.60-110.90	0.30	QZ-AS-PO
		2.10		110.90-111.20	0.30	QZ-AS-PO
		1.90		111.20-111.95	0.75	QZ-PO-AS
L-30+00E	88-03	1.50		58.90-59.58	0.68	QZ blanc PO
	84-08	aucune				
	84-90	aucune				
	84-85	aucune				

NOTE: \*or visible  
Les journeaux de sondages et les résultats d'analyse ne sont pas disponible pour les sondages U1 à U8, seule la localisation approximative apparaît sur la figure 5 et la carte 1 en pochette.  
QZ= quartz, PO= pyrrhotine, AS= arsenopyrite, PY= pyrite, TO= tourmaline, GF= grenat, V6= andésite, V9= tuf, F3= formation de fer, MI= schiste, C= chlorite, T= talc, S3= grauwacke

**Figure 6.2: Best results (highlighted) from 1988 drilling by Monicor (GM48430)**

1988: (GM48507) In February, Monicor Exploration drilled 4 holes totalling 724 m in the immediate vicinity of the Nordeau East occurrence. This drilling intersected mineralized grey quartz veins and veinlets (up to 5% arsenopyrite and pyrrhotite) and some veinlets of massive arsenopyrite. Best results are shown in **Figure 6.3**.

1988: Mines Vauquelin Ltd. drilled 4 holes for 1,279 m on Nordeau West in an attempt to test the structure below the “reserve” blocks. No significant results were reported (Champagne, 1985).

LIGNE	SONDAGE	TENEUR g/T d'or	INTERSECTION (mètre)	LONGUEUR (mètre)	TYPE
43+00W	81-01	aucune			
40+00W	B-16	1.71 0.50	124.97-125.87 129.54-131.06	0.91 1.52	PY-CB PY
37+28W	B-2	aucune			
36+50W	81-20	aucune			
36+50W	88-01	1.20 0.50	65.20-66.20 70.20-71.20	1.00 1.00	QZ gris-PY PY
35+25W	88-02	1.00	60.40-61.80	1.40	PY
33+60W	B-7	aucune			
33+02W	B-8	2.06 2.06	82.97-83.58 87.48-88.39	0.60 0.91	QZ QZ
32+50W	88-04	0.91 0.80 0.90 0.60 1.00 1.80	147.90-148.90 148.90-149.40 149.40-149.90 172.00-173.00 175.00-176.00 186.20-187.20	1.00 0.50 0.50 1.00 1.00 1.00	QZ gris QZ gris-PY QZ gris QZ gris-PY PY QZ gris PY
31+00W	88-03	1.80 3.90 3.10 2.50 3.30 0.70	23.40-23.90 86.65-86.95 88.25-88.55 88.55-88.25 90.80-92.30 221.65-222.20	0.50 0.30 0.30 0.30 1.50 0.55	QZ-PO-AS QZ gris QZ-AS- or visible V9 altéré V9 altéré QZ-CB-PY

**Figure 6.3: Best results (highlighted) from 1988 drilling by Monicor (GM48507)**

1990: Mines Vauquelin Ltd. resumed drilling to test the Nordeau West structure at depth, below any existing intersection. Of the 7 holes drilled (3,471 m), 5 intersected the targeted gold bearing structure. Hole W-90-06 returned 5.4 gpt Au over 17.8 m and hole W-90-07 carried 3.6 gpt Au over 6.6 m, at ±490 m and ±675 m deep respectively.

After reviewing the Nordeau West database for Gestion Minière Explomine Ltd. (“Explomine”), Jean (1990; GM49867) came to the conclusion that the erstwhile “reserve” estimate was based on erroneous assumptions, particularly in connecting laterally and vertically selected assays, or groups of assays. The “ore-grade intersections” were determined to be randomly distributed within a sheared and altered mineralized structure, possibly greater than 20 m thick. The longitudinal section produced in 1988 should therefore have been considered a composite longitudinal section. Furthermore, it was determined that the statistical methods used to determine the average assay grades were, in some instances, incorrectly applied.

Subsequently, Explomine proposed a new geological “reserve” estimate for the Nordeau West zones that was modelled on the concept of a mineralized shear-zone hosting a number of “en echelon”, gold-bearing lenses. The entire width of the mineralized shear was included and qualifying intersections respected the following parameters:

- specific gravity: 2.9 tonnes/m<sup>3</sup>;
- minimum horizontal width: 2.0 m;
- cut-off grade: 2.7 gpt Au;
- high assays cut to: 34.3 gpt Au;
- no dilution taken into account;
- 30 m crown pillar excluded

“Probable reserves” were computed from a rectangular area of influence extending 12.5 m laterally and 20 m vertically from qualifying intersections on the longitudinal section; “possible reserves” were obtained from the next 10 m laterally (12.5 to 22.5 m) and 15 m vertically (20 to 35 m) from qualifying intersections.

The 1990 Explomine historical “Reserve” Estimates are tabulated in **Table 6.2**.

**Table 6.2: Nordeau West Historical “Reserves” Estimate (Jean, 1990: GM49867)**

Zone	NORDEAU WEST	
Historical Classification	Tonnes	Au Grade (gpt)
“Probable Geological Reserves”	100,700	5.3
“Possible Geological Reserves”	180,000	5.5
<b>TOTAL 1990 Historical “Reserves”</b>	<b>280,700</b>	<b>5.4</b>

*These 1990 “reserve” figures, pre-date the application of Regulation NI 43-101 and make use of categories different to the ones set out in sections 1.2 and 1.3 of the Regulation. The use of the term “reserve” is no longer appropriate for what is being reported and should not be relied upon. A complete re-evaluation of the resource estimate is required to fulfil the requirements of the Regulation and to respect Mineral Resource categories, as set out in the CIM Definition Standards for Mineral Resources and Mineral Reserves. MRB therefore considers the above estimates to be strictly historical in nature and warns the reader to make use of these figures appropriately.*

1990: Mines Vauquelin Ltd. and Louvem completed their last reported exploration programme on Nordeau West. Their work involved surveying some of the previous holes and drilling 4 holes (totalling 1,942 metres) near the intersections of W-90-06/-07 (2 were wedged from existing holes). The targeted mineralized structure was intersected by all four holes; however, assay results were reported to be disappointing (GM50373).

1994: Mines Vauquelin Ltd. completed a ground Mag-EM geophysical survey on part of the Nordeau East block (GM52637). Six individual iron formations and three distinct shear zones were identified. The zones were tested by 6 drill-holes (619.1 m) in February of 1994 (GM52638). Auriferous horizons were intersected that yielded grades of: 1.48 gpt over 1.52 m (hole 94-2, 30.73 m - 32.25 m) and 4.85 gpt over 1.34 m (hole 94-5, 59.79 m - 61.13 m). These intervals were encountered in contact with iron formation and associated with quartz veins and silicified zones mineralized with massive and semi-massive sulphides (pyrrhotite, pyrite and arsenopyrite).

1994: Mines Vauquelin Ltd. completed a 6 short-hole drilling campaign totalling 619 m on an eastern claim of the Nordeau East group with the best intersection of 4.85 gpt Au over 1.3 m reported from hole N94-5 (GM52638).

#### **6.1.1.2 Recent work**

2006: On May 24<sup>th</sup> 2006, Plato Gold Corporation (“Plato”) optioned the property from Globex Mining Enterprises. Plato completed a 7,363 metre surface diamond-drilling campaign between October 2006 and March 2007 (**Table 6.3**). The objective of this initial drilling programme was to do a first pass drilling over the recently optioned Nordeau East, West and Bateman mineral properties and determine the best targets for future exploration. The programme was carried out under the supervision of M. Peter Karelse, P.Eng. and MRB. Detailed results of the programme are provided in Bourgoin and Castonguay (2007). Positive results prompted Plato to acquire additional ground in the area and begin a concerted effort to expand the known gold resources in the immediate vicinity. Although all four mineral properties yielded encouraging gold values, the Nordeau West property was prioritised for future exploratory work.



2007: In December 2007, Plato commissioned MRB to complete a detailed digital compilation of all historic exploration results on the Nordeau West Project, and to provide recommendations for further exploration. All historical diamond-drilling work was subsequently incorporated into database format by MRB and forwarded to A. S. Horvath Engineering Inc. (“Horvath Engineering”) of Ottawa, Ontario, who used GEMCOM® Resource Modelling software to design and recommend a drill programme.

2008: Between January and September of 2008, following the recommendations of Horvath Engineering, Plato completed a 14 hole, 8,555 metre diamond-drilling programme on the Nordeau West Property (**Table 6.4**), successfully intersecting the main zone to a depth of 700 m and demonstrated good grade and continuity over a strike (east-west) of 550 m. Some of the 2008 programme holes were collared, with permission, off the property. It was interpreted that the down-dip projection of the main zone continued outside the northern boundary of the Nordeau West claim block into ground not held by Plato, at a depth of approximately 1000 m.

Selected “best” results from the 2008 drilling programme included:

- 0.77 gpt Au over 18.95m (hole NW-08-04, 548.45 m – 567.40 m);
- 1.00 gpt Au over 8.05 m (hole NW-08-05, 393.65 m – 401.70 m);
- 5.66 gpt Au over 8.50 m (hole NW-08-06, 553.80m – 562.30 m);
- 4.28 gpt Au over 8.05 m (hole NW-08-07, 567.00 m – 575.05 m);
- 1.90 gpt Au over 5.85 m (hole NW-08-08, 452.05 m – 457.90 m);
- 5.54 gpt Au over 3.00 m (hole NW-08-10, 589.95 m – 592.95 m).

**Table 6.3: Summary of 2006-2007 Nordeau Project Drilling Campaign (Plato Gold)**

Hole ID	Length (m)
PG06-01	549
PG06-02	396
PG06-03	249
PG06-04	198
PG06-04A	501
PG06-05	500
PG06-06	450
PG06-07	600
PG06-08	434
PG06-09	501
PG06-10	231
PG06-11	200
PG06-12	150
PG06-13	200
PG06-14	200
PG06-15	201
PG06-16	240
PG06-17	240
PG06-18	240
PG06-19	240
PG06-20	240
PG06-21	603
<b>Total</b>	<b>7363</b>

**Table 6.4: Summary of 2008 Nordeau West Drilling Campaign (Plato Gold)**

Hole ID	Length (m)
NW08-01	504
NW08-02	366
NW08-03	654
NW08-04	699
NW08-05	498
NW08-06	648
NW08-07	699
NW08-08	525
NW08-09	549
NW08-10	650
NW08-11	740
NW08-12	576
NW08-13	700
NW08-14	747
<b>Total</b>	<b>8555</b>

2009: Following the completion of the 2008 diamond-drilling programme, an updated NI 43-101 Mineral Resource Estimate (MRE) was published (Langton and Horvath, 2009; GM64504). The 2009 Mineral Resource Estimate of Nordeau West (**Table 6.5**) used an inverse distanced-squared algorithm and block dimensions of 5.0 m x 2.5 m x 5.0 m. A cut-off grade of 2.75 gpt Au (\$85/tonne production cost) was used in the calculations. An assumed gold price of US\$825/oz at an exchange rate of \$CAD 1.162/\$US 1.00 was selected for cut-off grade calculations.

**Table 6.5: Mineral Resource Estimate - Nordeau West (from Langton and Horvath, 2009)**

Resource (Category)	Zone	Tonnes	Au Grade (gpt)	In-Situ Au (oz)
<b>Measured Indicated</b>	No Measured Resources			
	Main	223,382	4.18	30,019
	B	1,960	3.07	193
	<b>Total</b>	<b>225,342</b>	<b>4.17</b>	<b>30,212</b>
<b>Measured + Indicated</b>	<b>Total</b>	<b>225,342</b>	<b>4.17</b>	<b>30,212</b>
<b>Inferred</b>	Main	1,097,749	4.1	144,635
	B	14,572	3.59	1,680
<b>Total Inferred</b>	<b>Total</b>	<b>1,112,321</b>	<b>4.09</b>	<b>146,315</b>

From October 19<sup>th</sup> to December 11<sup>th</sup>, 2009, Plato completed 4,699 m of diamond-drilling on Nordeau East (11 holes), and 834 m in 3 holes on Bateman (see **Section 6.1.2**). The drilling program, summarized in **Table 6.6**, was designed to test the along-strike and down-dip continuation of mineralization zones previously identified on the Nordeau West and Nordeau East claims (**GM65127**). Two mineralized zones were intersected at Nordeau East (**Table 6.7**).

**Table 6.6: Summary of 2009 Drill-Holes: Nordeau East Claim Block**

Hole ID	Length (m)	Azimuth	Dip
NE09-01	354	180°	-70°
NE09-02	600	180°	-70°
NE09-03	402	180°	-70°
NE09-04	600	180°	-70°
NE09-05	403	180°	-70°
NE09-06	600	180°	-70°
NE09-07	324	180°	-70°
NE09-08	402	180°	-70°
NE09-09	351	180°	-70°
NE09-10	231	180°	-50°
NE09-11	432	180°	-70°
<b>Total</b>	<b>4,699</b>		

**Table 6.7: Selected Best Results of 2009 Diamond-Drill Hole Campaign-Nordeau East**

Hole ID	From (m)	To (m)	Interval (m)	Au <sup>1</sup> (gpt)	Au <sup>2</sup> (gpt)	MS <sup>3</sup> (gpt)	Au Final <sup>4</sup> (gpt)
NE09-01	294.00	295.50	1.50	1.10	3.15		2.13
	295.50	296.40	0.90	57.10		74.70*	74.70
	296.40	297.00	0.60	0.08	0.06		0.07
	297.00	298.00	1.00	6.30	6.72		6.51
	298.00	299.50	1.50	1.23	1.37		1.30
<b>TOTAL</b>			<b>5.50</b>				<b>14.35</b>
NE09-02	223.30	224.40	1.10	0.76	0.59		0.68
	224.40	225.40	1.00	43.10		34.40*	34.40
	225.40	226.40	1.00	18.65		14.95	14.95
	226.40	227.40	1.00	0.62	0.40		0.51
	227.40	228.90	1.50	0.39	0.58		0.49
	228.90	230.00	1.10	2.01	2.18		2.10
<b>TOTAL</b>			<b>6.70</b>				<b>8.01</b>

<sup>1</sup>Initial fire assay; <sup>2</sup>Check fire assay; <sup>3</sup>Total metallic sieve fire assay of coarse crush reject; <sup>4</sup>Au Final is the average of the two fire assays or the metallic sieve result, when available. \*Visible gold noted within sample interval during drill core logging

2010: The 2010 drilling campaign by Plato (**GM66369**) began May 27<sup>th</sup>, 2010 and was completed on June 2<sup>nd</sup>, 2010. It comprised 3 drill-holes on Nordeau East, totalling 836 metres (**Table 6.8**).

**Table 6.8: Summary of 2010 Drill-Holes: Nordeau East Property**

Hole ID	Length (m)	Azimuth	Dip	Easting (UTM-X)	Northing (UTM-Y)
NE10-01	309	180°	-60°	334801.05	5319598.03
NE10-02	210	180°	-65°	334950.94	5319550.26
NE10-03	317	180°	-60°	334950.16	5319599.67
<b>TOTAL:</b>	<b>836</b>				

2011: A diamond-drilling campaign by Plato (**GM66369**) was carried out on the Nordeau East and Bateman claim blocks between January 25<sup>th</sup>, 2011 and May 15<sup>th</sup>, 2011. It comprised 27 drill-holes, totalling 11,966 metres. Seventeen (17) holes aggregating 8,758 metres were completed on the Nordeau East block (**Table 6.9**). The remaining holes were drilled on the Bateman claims.

**Table 6.9: Summary of 2011 Nordeau East Drill-Holes**

Hole ID	Length (m)	Azimuth	Dip	Easting (UTM-X)	Northing (UTM-Y)
NE-11-01	357	180°	-70°	334724.92	5319598.68
NE-11-02	513	180°	-60°	334726.70	5319747.06
NE-11-03	597	221°	-75°	334725.96	5319748.70
NE-11-04	501	180°	-60°	334797.89	5319744.29
NE-11-05	648	180°	-75°	334797.89	5319744.29
NE-11-06	600	181°	-62°	334956.03	5319748.92
NE-11-07	501	195°	-68°	335051.30	5319696.76
NE-11-08	456	180°	-60°	335149.30	5319497.53
NE-11-09	599	180°	-70°	335150.84	5319644.88
NE-11-10	600	180°	-70°	335298.48	5319651.00
NE-11-11	585	180°	-70°	335452.03	5319649.41
NE-11-12	600	177°	-67°	335600.42	5319648.42
NE-11-13	402	180°	-60°	335750.53	5319446.77
NE-11-14	501	180°	-70°	335750.46	5319498.38
NE-11-15	500	180°	-70°	335824.64	5319446.24
NE-11-16	399	180°	-60°	335899.65	5319449.76
NE-11-17	399	180°	-50°	336100.68	5319347.11
<b>TOTAL:</b>	<b>8,758</b>				

The best intervals from the 2011 campaign on Nordeau East were:

- 1.57 gpt Au over 4.80 m and 1.36 gpt Au over 3.05 m (hole NE-11-01);
- 3.01 gpt Au over 1.50 m (hole NE-11-02);
- 1.89 gpt Au over 3.00 m (hole NE-11-06);
- 6.15 gpt Au over 1.00 m (hole NE-11-09);
- 4.47 gpt Au over 1.00 m (hole NE-11-10);
- 6.04 gpt Au over 0.60 m (hole NE-11-11);
- 5.39 gpt Au over 1.00 m (hole NE-11-15);
- 4.53 gpt Au over 3.00 m and 5.23 gpt Au over 1.80 m (hole NE-11-17).

2014: On April 26, 2013, Globex Mining Enterprises Inc. recovered 100% of the rights to the Nordeau Group of claims that had been optioned to Plato Gold Corp. In June 2014, Globex carried out a sampling campaign on drill-core from work completed by Plato Gold between 2006 and 2011. The purpose of this sampling was to test previously un-sampled potential mineralized areas and to verify the feasibility of tracing mineralization zones across non-sampled areas near auriferous zones (GM68593). Most of the sampling was concentrated in the Nordeau West block where 1,198 samples (1,482.85 m) from 22 drill-holes were collected and re-analysed. Three drill-holes from the Nordeau East block were sampled for a total of 45 samples (52.6 m). An additional 27 samples (33.3 m) were collected from three drill-holes from the Bateman block. Best results of the re-sampling programme are presented in **Table 6.10**.

**Table 6.10: Best results of Globex Re-sampling Programme**

Hole ID	From (m)	To (m)	Interval (m)	Au (gpt)
PG-06-06	271.60	272.85	1.25	3.45
PG-06-08	169.50	171.00	1.50	2.23
PG-06-08	234.00	235.50	1.50	3.33
PG-06-09	294.80	296.00	1.20	3.57
PG-06-09	297.00	298.00	1.00	8.13
PG-06-21	351.20	363.00	11.80	1.50
PG-06-21	376.00	385.00	9.00	1.13

## 6.1.2 Bateman claim block

### 6.1.2.1 Historic work

*1946-47:* Mining Corp. of Canada covered the southeastern part of the property with a ground magnetic survey (GM06675A) and geological mapping (GM06677). Strong southeast-trending magnetic anomalies were noted and subsequently tested with four drill-holes totalling 3,176 ft (1,500 m). Locations of the drill-holes are shown but no logs are included in the report. None of the holes were drilled on the Bateman claim block.

*1949:* Oneonta Pershing Mines Ltd. intersected a graphitic sulphide-rich horizon in one hole drilled on the south-east part of the property.

*1954:* Malartic Gold Fields Ltd. completed an airborne survey covering the Machi-Manitou Lake area, which included parts of the Bateman claim block (GM38618; GM39325). As a follow up, geochemical and electromagnetic surveys were done on the east part of the property (GM03669; GM39327). During the same year, the east part of the property was covered by magnetic and induced polarization surveys run for Newkirk Mining Corp. Ltd. (GM03439)

*1970:* Umex completed geophysical magnetic and electromagnetic surveys over the southeastern part of the property.

*1979-82:* SOQUEM (Société Québécoise d'exploration minière) optioned the properties and carried out magnetic (Mag) and electromagnetic (EM) geophysical surveys (GM37355; GM38857; GM35513; GM36435) that covered much of the Bateman block.

*1981-82:* Wescap Energy Corp. Ltd. covered the Bateman block with magnetic and electromagnetic surveys (GM37291; GM38554).

*1983-85:* Bateman Bay Mining Co. carried out a magnetic/electromagnetic survey over the east part of the block revealing several southeast-trending anomalies (GM40036). A humus geochemical survey done by Bateman Bay Mining Co. over part of the block (GM43286) returned anomalous values of gold and arsenic.

*1988:* Bateman Bay Mining Co. completed a magnetic survey (total field and vertical gradient) and an induced polarization (IP) survey on two parts of the property and outlined several anomalous axes.

*1989-90:* Mines Vauquelin Ltd. expanded the area of geophysical coverage begun in 1988 by Bateman Bay Mining Co., and defined additional east- to southeast-trending exploration target anomalies (GM47922; GM49666). There followed an Induced Polarization geophysical survey and

a 15-hole, 1,557.22 m diamond-drilling programme to test a number of the geophysical anomalies (GM48410). The drilling programme encountered significant gold bearing sections in hole BA-88-14 on the Bateman claim block: 3.9 gpt Au (high assay cut to 34.3 gpt) over 5.05 m (66.25 m - 71.30 m), with some visible gold - including 9.11 gpt Au over 0.55 m (hole BA-88-14, 66.25 m - 66.8 m); 7.83 gpt Au over 2.00 m (hole BA-88-14, 69.3 m - 71.3 m); and 2.06 gpt Au over 0.40 m (hole BA-88-14, 76.05 m - 76.45 m).

1990: Exploration Monicor Inc. employed Geokemex Inc. to carry out a geochemical humus sampling survey over the property, revealing a few anomalous areas (GM50036).

1990: Mines Vauquelin Ltd. drilled 23 holes totalling 3,095 m to test the lateral extension of the interval encountered in hole BA-88-14 (GM48410), and various other geophysical targets (GM49659). This drilling defined two parallel mineralized gold zones (some 10 m apart) that were traced for more than 100 m laterally and to a depth of 50 m. Selected “best” results reported from the 1988 and 1990 drilling campaigns are summarized in **Table 6.11**.

**Table 6.11: Selected Best Results From 1988 and 1990 Bateman Drilling Programs**

Hole ID	Grade (Au gpt)	Interval (m)	From - To (m)
BA90-08	2.2	0.50	143.00 - 143.50
	8.0	0.30	156.98 - 157.28
BA90-09	(5.7) 9.6 *	4.50 **	29.65 - 34.15
	8.0	2.50 **	45.75 - 47.80
	1.6	0.25	52.15 - 52.40
BA90-10	1.4	0.30	52.95 - 53.25
	2.0	0.90	143.30 - 144.20
	3.9	1.25	150.15 - 151.40
BA90-11	1.0	1.80 **	46.85 - 48.65
	2.3	4.90 **	56.20 - 61.10
BA90-12	1.3	0.50	40.75 - 41.25
	3.1	2.45 **	45.50 - 47.95
	(9.7) 10.0	1.90 **	61.90 - 63.80
BA90-13	7.4	2.50	53.80 - 56.30
	2.9	0.50	62.95 - 63.45
BA90-15	1.2	1.00	70.90 - 71.90
	1.0	0.35	86.55 - 86.90
BA90-16	1.1	1.2	13.00 - 14.20
	3.4	2.7 **	112.20 - 114.90
BA90-21	1.0	1.5	76.53 - 78.03
BA88-14	(3.9) 12.8	5.05	66.25 - 71.30
	2.1	0.40	76.05 - 76.45

\* = Cut to Au 34.3 gpt ; \*\* = well-defined mineralized zone

### 6.1.2.2 Recent work

2009: In late 2009, Plato completed 2 holes totalling 802 m on the Bateman claim block. A third hole was abandoned after 31 m and not completed (**Table 6.12**). Hole BE09-03 intersected a weakly auriferous zone (1.19 gpt Au over 2.8 m) in quartz stringers mineralized with pyrite (1%) and arsenopyrite (2%), within sheared graphitic shale at 194.4 m down-hole (GM65127).

**Table 6.12: Summary of 2009 Drill-Holes: Bateman Claim Block**

Hole ID	Length (m)	Azimuth	Dip
BE09-02	31 (abandoned)	180°	-70°
BE09-03	402	180°	-70°
BE09-04	402	180°	-70°
<b>Total</b>	<b>834</b>		

2011: A diamond-drilling campaign by Plato was carried between January 25<sup>th</sup>, 2011 and May 15<sup>th</sup>, 2011 (GM66369). A total of 3,208 m in ten (10) holes were completed on the Bateman claim block (**Table 6.13**). The programme was designed to investigate the historic Bateman mineralized zones and to evaluate previously untested zones believed to have potential for gold-mineralization.

**Table 6.13: Summary of 2011 Drill-Holes on the Bateman claim block**

Hole ID	Length (m)	Azimuth	Dip	Easting (UTM-X)	Northing (UTM-Y)
<b>BE-11-01</b>	351	180°	-70°	338480.97	5319516.68
<b>BE-11-02</b>	402	180°	-70°	338100.14	5319660.02
<b>BE-11-03</b>	351	180°	-70°	337975.74	5319620.46
<b>BE-11-04</b>	402	180°	-70°	337802.20	5319703.29
<b>BE-11-05</b>	403	180°	-50°	337601.93	5319793.05
<b>BE-11-06</b>	252	180°	-50°	338449.77	5319152.90
<b>BE-11-07</b>	252	180°	-50°	338617.16	5319090.34
<b>BE-11-08</b>	300	180°	-70°	338701.23	5319047.39
<b>BE-11-09</b>	246	190°	-49°	338798.65	5319052.36
<b>BE-11-10</b>	249	180°	-50°	338897.29	5319048.41
<b>TOTAL:</b>	<b>3,208</b>				

Holes BE-11-01, BE-11-02, BE-11-05 and BE-11-08 intersected auriferous mineralization. The best results (4.82 gpt Au over 1.5 m) were obtained from 126.5 m to 128.0 m in Hole BE-11-03 (**Table 6.14**).

The 2011 drill-holes outlined two (2) sub-parallel, stratiform, iron formation (IF) horizons, with associated auriferous mineralization similar to those discovered on the Nordeau East Property. The more southerly IF hosts the historical Bateman East resource (Map 3). The previously unknown northerly IF was intersected by Holes BE09-02, BE09-03 and, BE09-04 and Holes BE11-01 through BE11-05. A new auriferous zone associated with the northerly IF is now defined over 1,650 m along strike and between 10 m and 215 m vertical depth.



**Table 6.14: Summary of Selected 2011 Best Drilling Results: Bateman East Property**

Hole ID	From (m)	To (m)	Interval (m)	Au (gpt)
BE-09-02	223.30	230.00	6.70	8.01
BE-11-01	145.90	146.80	0.90	0.20
BE-11-02	208.30	209.00	0.70	1.62
	209.00	210.20	1.20	0.68
	210.20	210.75	0.55	3.05
BE-11-03	119.70	120.00	0.30	0.54
	121.00	122.00	1.00	1.80
	122.00	123.00	1.00	2.29
	126.50	128.00	1.50	4.82
	286.00	287.00	1.00	0.36

### 6.1.3 Pershing-Denain claim block

1946-47: Mining Corp. of Canada covered the southwestern part of the property with a ground magnetic survey (GM06675A) and geological mapping (GM06677). Strong southeast-trending magnetic anomalies were noted and subsequently tested with four drill-holes totalling 3,176 ft (1,500 m). Locations of the drill-holes are shown but no logs are included in the report. One hole was drilled on the Pershing-Denain claim block.

1954: Malartic Gold Fields Ltd. completed an airborne survey covering the Machi-Manitou Lake area (GM38618; GM39325). As a follow up, geological, geochemical and electromagnetic surveys were done on the area of the Pershing-Denain Bateman claim block (GM03603; GM39327). During the same year, the south part of the property was covered by magnetic and induced polarization surveys run for Newkirk Mining Corp. Ltd.

1958: The eastern part of the property was covered with a magnetic survey done by Monor Mining Co. Ltd. (GM06346) and an electromagnetic survey run by Continental Mining Exploration Ltd. (GM06528).

1979-82: SOQUEM (Société Québécoise d'exploration minière) optioned the properties and carried out magnetic (Mag) and electromagnetic (EM) geophysical surveys (GM37355; GM38857; GM37356) that covered much of the Pershing-Denain block. Geological and lithochemical surveys followed (GM37729).

1981: A VLF-EM survey by Lynx Canada-Americ-Sparton that covered the southern part of the Pershing-Denain block (GM38329) outlined several anomalies coincident with mapped occurrences of magnetic iron formation.

1986-88: A geochemical (humus) survey was carried out over the Pershing-Denain block by P. Dumont Consulting. Several weakly anomalous assay results were obtained (GM44027; GM46287). This work was followed-up with a ground geophysics (magnetic) survey (GM47285).

---

## 6.2 The Chimo Project Claims (Lac Simon, Nova and Villebon blocks)

### 6.2.1 Lac Simon & Nova claim blocks

*1966:* Raymond Tiblemont Gold Mines Ltd. drilled 7 holes totalling 3,000 ft (915 m) on the central part of the Lac Simon block to test for a western extension of the Chimo Mine mineralization. No economically notable intervals were encountered (GM17257).

*1969:* Kerr Addison Mines carried out a mag-EM survey over the western part of the Lac Simon block and drilled 4 holes aggregating 1,329 ft (405 m) to test a number of conductive anomalies. Graphite-rich slates with disseminated and locally massive sulphides accounted for the anomalies. Up to 20% pyrite, 10% pyrrhotite and trace chalcopyrite were intersected (GM38605).

*1972:* SOQUEM drilled 3 holes totalling 1,422 ft (433 m) to test EM and gravity anomalies and assayed for copper, zinc, lead and silver (GM35544). Only minor grades were encountered.

*1975:* Spanex Resources completed a ground geophysical mag' survey over an area with previous drilling, north of the Chimo Mine (GM31231). Further drilling was recommended to test the east-west extension of a defined magnetic response anomaly.

*1975-76:* Moss Lake Development Co. acquired a block of claims on Lac Simon claim block, west of, and contiguous with, the Chimo Mine property. GM31325 comprises a compilation of previous work done on the area at the time, and includes drill-logs, drill-sections, and plan maps. A 4-hole, 1,655.3 ft (505 m) follow-up diamond-drilling programme intersected 0.32 oz/t over 1 ft (~11.0 gpt Au over 0.30 m) in hole MV-1 (GM32291).

*1979-83:* SOQUEM (Société Québécoise d'exploration minière) carried out magnetic and electromagnetic geophysical surveys (GM37355; GM34757; GM38857; GM35513; GM37356; GM40058) that covered much of the Lac Simon block. Work included a geological compilation of previous work and location of posited mineralized zones (GM35007; GM35513), including the eastern part of the Nova block. Geological and litho-geochemical surveys followed (GM37729).

*1981:* Following a structural mapping campaign completed in the summer of 1981 and a compilation of statutory work citing very good gold values from earlier drilling and native gold reported in a few trenches, SOQUEM carried out a 9-hole diamond-drill campaign totalling 1,311 metres (GM39364) in the western part of the Lac Simon claim block, near the Blue Grass occurrence. Minor sulphide mineralization was encountered, but no gold value of economic interest were noted.

*1983-84:* SOQUEM acquired 108 additional claims (Nova claim block) contiguous with the southwestern part of the Lac Simon block and carried out geological mapping, geochemical (humus) and geophysical surveys (mag', EM, IP), and diamond-drilling work (5 holes - 739 m) on the new claims (GM40142; GM41000).

*1983:* During December of 1983, Louvem Mines Inc. drill 12 holes totalling 2,969 m in the vicinity of the Simon West occurrence, approximately 1 km west of the Chimo Mine (GM41830). Numerous auriferous intervals were encountered. Best result are shown in **Table 6.15**.

**Table 6.15: Best Results From 1983 Louvem Drilling, Simon West Occurrence**

Hole ID	From (m)	To (m)	Interval (m)	Au (gpt)
07-83-01	193.30	193.90	0.60	11.48
07-83-01	199.44	200.18	0.74	3.80
07-83-02	199.82	200.62	0.80	3.65
07-83-03	176.62	177.54	0.92	3.12
07-83-03	221.34	222.15	0.81	2.78
07-83-04	87.30	89.43	2.13	5.56
07-83-04	94.95	96.50	1.55	3.43
07-83-04	117.68	118.22	0.54	3.36
07-83-04	140.20	141.50	1.30	3.91
07-83-04	252.56	253.58	1.02	4.90
07-83-04	257.03	258.13	1.10	3.02
07-83-04	252.56	254.55	1.99	3.85
07-83-04	256.29	259.69	3.40	1.78
07-83-08	128.47	129.68	1.21	6.40
07-83-09	88.53	93.28	4.75	7.13
07-83-12	164.63	167.69	3.06	2.64
07-83-12	401.39	403.68	2.29	3.32

1984: Work by SOQUEM in 1984 on the Nova claim block (GM41804) comprises 332 m of diamond-drilling in 3 holes, the purpose of which was to evaluate a small auriferous porphyritic intrusion known to host sulphide-bearing (Py-Asp-Po-Au) quartz-tourmaline veins. An associated porphyry dyke is transected by faults anomalous in arsenic, and hosts the Marilynne gold showing.

The observed veins and mineralization in drill-core were noted to be similar to those already observed on the surface and in earlier drill-holes. A total of sixty-three (63) core samples were collected and analysed. Best results were 0.72 gpt Au over 15 cm (hole 958-84-6; 8.60 m - 8.75 m) and 0.62 gpt Au over 0.50 m (hole 958-84-8; 74.95 m - 75.45 m).

1984-85: Golden Pond Resources acquired ground north of the Chimo Mine and Nordeau West claim block (eastern part of Lac Simon block), and drilled 14 holes totalling 27,619 ft (8,418 m), to test various magnetic and conductive anomalies outlined by previous exploration (GM42328). Geophysical (VLF-EM) surveys and geological mapping were also carried out (GM42504).

1986: In January and February, Chabela Minerals Inc. drilled 3,380 ft (1,030 m) in 7 diamond-drill holes in the vicinity of the Chabela-Vauquelin occurrence (GM43495; GM43684). Only trace amounts of gold were noted from their assayed core samples.

1987: In January, Chabela Minerals Inc. drilled 5816 ft (1,773 m) in 10 diamond-drill holes in the vicinity of the Chabela-Vauquelin occurrence (GM45332; GM45943). No mineralized intervals of note were intersected.

1987: In the summer of 1987, Louvem undertook the construction of an access ramp on the Simon Project, approximately 1 km west of the Chimo Mine (MB88-14). This east-dipping ramp, excavated along the contact between the Chimo volcanic band and the central band sedimentary rocks, was designed to intersect mineralized zones 4 and 3 west at the 125 level of the Chimo Mine, located approximately 1 km to the east. No further information on this venture was found in the available literature.

*1988:* In the first quarter of the year, Barexor Minerals Inc. drilled 6,585 ft (2,007 m) in 10 diamond-drill holes in the extreme northwestern part of the current East Cadillac Gold property, north of the Chabela-Vauquelin occurrence (GM48022). Only trace amounts of gold were noted from their assayed core samples.

*1988:* Cambior Inc. acquired a group of claims comprising most of the Lac Simon, Nova and Villebon claim blocks. Cambior carried out a comprehensive overburden reverse-circulation (RC) drilling and heavy mineral geochemical sampling programme (GM46939). The author of the report states that the results of the drilling programme indicate that the property is underlain by the turbidite-dominated Pontiac Group rocks, not by the Trivio Group, as was popularly believed. This interpretation dictated that the Cadillac Fault Zone, a regional structure that separates the Pontiac and Trivio groups, must pass through the northern part of the East Cadillac Gold Property, not to the south as some workers had previously suggested.

*1989:* Cambior Inc. reported results from a 16-hole diamond-drilling programme aggregating 5,457.5 metres in 1987-88 (GM49340). These drill-holes were concentrated in three areas of the current Lac Simon and Nova claim blocks and targeted anomalous gold concentrations in glacial overburden determined from an earlier basal till sampling programme. A total of 1,359 core samples with a total interval length of 1,959 metres were collected and analysed for gold-content.

Sulphide mineralization (trace to 5%), comprising mainly pyrite, arsenopyrite, pyrrhotite and chalcopyrite, was found in association with quartz and carbonate veins and veinlets in the drill-holes southwest of the Chimo deposit (Lac Simon claim block). No significant results were obtained from the holes drilled on the Nova claim block. Gold flecks and arsenopyrite were observed in 2 quartz and carbonate veinlets associated with a fault crossing Chimo horizon volcanic rocks. Best results from the diamond-drilling programme were from obtained from holes NOV87-06: 6.1 gpt Au over 0.6m (84.9 m - 87.5 m); 1.3 gpt Au over 4.3 m (91.0 m - 95.3 m); and from hole NOV87-08: 1.6 gpt Au over 3.7 m (74.8 m - 78.5 m); 1.8 gpt Au over 2.7 m (151.9 m - 154.6 m); 3.5 gpt Au over 3.2 m (301.5 m - 304.7 m).

*1989-90:* Mines Vauquelin Ltd. expanded the area of geophysical coverage begun in 1988 by Bateman Bay Mining Co., and defined additional east- to southeast-trending exploration target anomalies on the eastern part of the Lac Simon block, north of the Nordeau West claims (GM47922; GM49666). There followed an Induced Polarization geophysical survey and a 15-hole, 1,557.22 m diamond-drilling programme to test a number of the geophysical anomalies (GM48410). No significant mineralized intervals were encountered from holes drilled on this part of the project.

*2003:* Mirabel Resources Inc. acquired a small group of claims in the western part of the Lac Simon block and completed ten (10) shallow diamond-drill holes totalling 431.2 m (GM61314). The holes intercepted the targeted mineralized zone; however, with the exception of one interval of 3.26 gpt Au over 0.65 m in hole FV-03-03 (26.75 m - 27.4 m), the gold assay values were not noteworthy.

---

### 6.2.2 Villebon claim block

*1946-47:* Mining Corp. of Canada covered the eastern part of the property with a ground magnetic survey (GM06675A) and geological mapping (GM06677). Strong southeast-trending magnetic anomalies were noted and subsequently tested with four drill-holes totalling 3,176 ft (1,500 m). Locations of the drill-holes are shown but no logs are included in the report. Three of the holes were drilled on the Villebon claim block.

*1954:* Malartic Gold Fields Ltd. completed an airborne survey covering the Machi-Manitou Lake area, which included parts of the Villebon claim block (GM38618; GM39325; GM39327). During the same year, the east part of the property was covered by magnetic and induced polarization surveys run for Newkirk Mining Corp. Ltd. (GM03439)

*1958:* The eastern part of the property was covered with a magnetic survey done by Monor Mining Co. Ltd. (GM06346). Three diamond-drill holes totalling 1,353 ft (412.4 m) were subsequently drilled on the mag' anomalies (GM06400; GM08657). Another electromagnetic survey was carried out by Continental Mining Exploration Ltd. (GM06528).

*1962-65:* Monor Mining Co. Ltd. carried out a geophysical magnetic (mag) survey over the eastern part of the block. Three strong anomalies were noted (GM11980). A subsequent mag survey was completed in 1963 (GM13117), and an EM survey followed in 1965 (GM16375).

*1965:* Black River Mining Ltd. carried out a ground geophysical Mag-EM survey on the Villebon block outlining a strong conductor that was tested by diamond-drilling and determined to be due to uneconomic sulphide mineralization (GM16835).

*1979-83:* SOQUEM (Société Québécoise d'exploration minière) carried out magnetic (Mag) and electromagnetic (EM) geophysical surveys (GM37355; GM34757; GM35513; GM36435; GM37356; GM40058) that covered most of the Villebon block. Work included a geological compilation of previous work and location of posited mineralized zones (GM35007; GM35513). Geological and lithogeochemical surveys followed (GM37729).

*1981-82:* Wescap Energy Corp. Ltd. covered the eastern part of the Villebon block with a magnetic and electromagnetic survey (GM37291; GM38554).

*1983:* Bateman Bay Mining Co. carried out a magnetic/electromagnetic survey that covered the eastern part of the Villebon block (GM40036). The survey outlined several southeast-trending anomalies.

*1989-90:* Mines Vauquelin Ltd. expanded the area of geophysical coverage begun in 1988 by Bateman Bay Mining Co., and defined additional east- to southeast-trending exploration target anomalies on the eastern part of the Villebon block (GM47922; GM49666). There followed an Induced Polarization geophysical survey and a 15-hole, 1,557.22 m diamond-drilling programme to test a number of the geophysical anomalies (GM48410). No significant mineralized intervals were encountered from holes drilled on this part of the project.

---

## 7.0 GEOLOGICAL SETTING

The East Cadillac Gold Property is located a few kilometres northwest of the Grenville tectonic front, in the south-eastern part of the prolific Archean Abitibi Greenstone Belt of the Superior Orogenic Province (**Figure 7.1**).

The Abitibi Greenstone Belt (AGB) comprises repeated komatiitic to calc-alkalic cycles of lavas and volcanoclastic rocks with coeval clastic and exhalative sedimentary rocks, porphyries, layered mafic-ultramafic sills, and plutons of potassium-poor dioritic to tonalitic composition. These rocks have been complexly deformed, metamorphosed to the sub-greenschist to greenschist facies and intruded by late kinematic granodiorite and monzonite plutons. The southern part of the AGB is in contact with the Pontiac Domain (Bellevue Gneiss Belt of Dimroth et al., 1982), which comprises a monotonous succession of highly deformed, upper greenschist to amphibolite grade turbidites with minor intercalated volcanic and intrusive rocks. Although all of the rocks underlying the Property have been metamorphosed, the “meta” prefix has generally been omitted for simplicity from the following rock descriptions.

### 7.1 Regional Geology

Geological units in the Val-d’Or area are subdivided into two lithostratigraphic assemblages: the Abitibi Supergroup and the Pontiac Supergroup to the south. The Abitibi Supergroup comprises, from oldest to youngest, volcanic rocks of the Kinojevis Group, sedimentary rocks of the Garden Island Group, and mainly volcanic rocks of the Malartic Group. This sequence has an overall younging direction towards the south. The Pontiac Supergroup consists of the volcano-sedimentary Trivio Group, ultramafic and mafic volcanic Villebon Group and sedimentary Pontiac Group. Age relationships between the units of the Pontiac Supergroup are contentious. These two supergroups are in contact along a major, regional tectonostratigraphic break, the Cadillac Tectonic Zone (CTZ).

The categorization of the rocks underlying the area into a straightforward lithostratigraphic succession, was re-examined by Gaudreau et al. (1986) and Rocheleau et al. (1990), who introduced the concept of partitioning the various sedimentary and volcanic rock formations east of Val-d’Or into lithotectonic domains. The high-strain domains form narrow, elongated belts of highly strained and faulted multi-lithologic assemblages that are coincident with major crustal discontinuities (i.e. Garden Island Tectonic Zone and Trivio Structural Complex). By contrast the low-strain domains, which are juxtaposed with the high strain domains, form large areas of weakly deformed volcanic and sedimentary rock successions.

Rocheleau et al. (1997), subdivided the rocks east of Val-d’Or into five lithotectonic domains; the Assup, Garden Island, Val-d’Or, Trivio and Villebon. The Trivio Domain (or “Trivio Structural Complex”), a zone of highly deformed and anastomosing blocks of sedimentary and volcanic rocks of mixed origin, was interpreted as the extension of the Cadillac Tectonic Zone by Marquis (1983) and Rocheleau et al. (1990).

Rock units of the Abitibi Supergroup are affected by Greenschist facies to lower Amphibolite facies metamorphism, whereas Pontiac Supergroup rocks are characterized by their higher grade of metamorphism, ranging from the contact near the CTZ, southward from upper greenschist facies to the sillimanite-kyanite zones of the amphibolite facies.

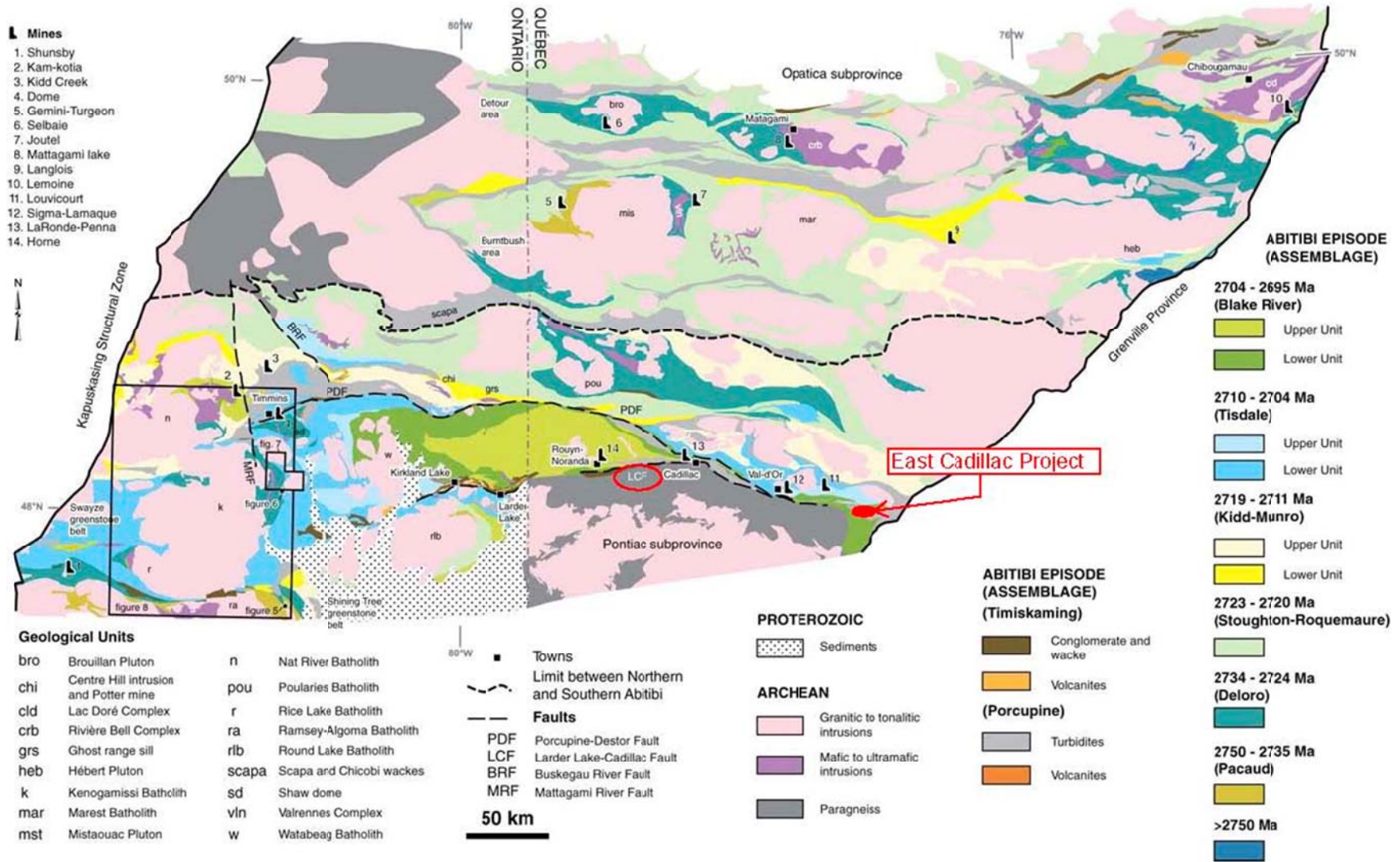


Figure 7.1: Regional Geology Map of Abitibi Greenstone Belt showing location of East Cadillac Gold Property

## 7.2 Local Geology

The volcano-sedimentary units underlying the area around the East Cadillac Gold Property occupy the south limb of a regional the east-west trending antiform; the LaMotte-Vassan Anticline (Imreh, 1984).

The Abitibi Supergroup succession youngs southward, and comprises predominantly komatiitic to tholeiitic volcanic rocks of the La Motte-Vassan and Dubuisson Formations (Lower Malartic Group) and predominantly tholeiitic volcanic rocks of the Jacola, Val d'Or and Heva Formations (Upper Malartic Group) that are in contact, to the south, with the Trivio, Villebon and Pontiac groups, which underlie the immediate area of the Property and are described as follows:

### Trivio Group

The Trivio Group comprises a structurally complex sedimentary-volcanic rock assemblage composed of coarse clastic sediments, turbidites, tholeiitic and calc-alkaline volcanic flows and pyroclastic rocks. The sedimentary rocks consist of clast-supported polymictic conglomerate, greywacke, mudstone and iron formation, whereas volcanic and pyroclastic rocks consist of massive to pillowed, tholeiitic and andesitic basalts and andesites, graphitic andesitic crystal and lapilli tuff, respectively. Rocheleau et al. (1990) renamed the Trivio Group of Sharpe (1968), the "Trivio Structural Complex", which they characterized as a lithotectonic block based on complex fault contact relations between the various mixed-origin sedimentary and volcanic rocks.

### Villebon Group

The Villebon Group lies south of the "Trivio Structural Complex"; however, stratigraphic relations between the Villebon Group and the "Trivio Structural Complex" are obscured by their faulted contact (Rocheleau et al., 1990). The Villebon Group comprise mainly massive, pillowed and brecciated volcanic flows ranging from serpentinized komatiites, to Mg-rich (picritic) basalts, to tholeiitic basalts and andesites (Gaudreau et al., 1986). Rocheleau et al. (1990) classified the Villebon Group as the "Villebon Lithotectonic Domain", and infer it to lie stratigraphically below the Pontiac Group (Gaudreau et al., 1986).

### Pontiac Group

The mainly metasedimentary Pontiac Group consists of a sequence of turbiditic greywacke and argillite, with minor monomictic and polymictic conglomerate, iron formation and graphitic schist (Dimroth et al., 1982; Mortensen and Card, 1993). Thin ultramafic to mafic volcanic flows (chemically similar to those of the Dubuisson Formation) are present at or near the inferred base of the sequence (Imreh, 1976b); Rocheleau et al. 1990). Pontiac Group sediments are characterized by their higher grade of metamorphism than adjacent Abitibi Greenstone Belt rocks, increasing in grade southward from the biotite zone of the greenschist facies, through to garnet, hornblende, staurolite and sillimanite-kyanite zones of the amphibolite facies (Jolly, 1978). Various studies suggest that Pontiac sediments were derived mainly from erosion of Abitibi Greenstone Belt supracrustal rocks and older volcano-plutonic rocks (Mortensen and Card, 1993).

Imreh (1984) believed that the Trivio and Pontiac groups constituted a single sedimentary succession that stratigraphically overlay the Abitibi assemblage. He also correlated the Villebon Group with the Dubuisson Formation, as both comprise a sequence of mafic to ultramafic volcanic rocks. These conclusions are a point of contention, as other workers suggest that the units comprising the Pontiac Supergroup are unrelated to the Abitibi Supergroup formations.

Kalliokoski (1987) for one, considers that the Pontiac Supergroup Group forms a distinct lithological and structural block separate from Abitibi strata, with the suture zone corresponding to the Cadillac Fault. Such a scenario suggests the Pontiac deposits are older than rocks of the Abitibi Belt, and were metamorphosed prior to deposition of the Abitibi Belt. The Villebon Group, which is



south of the Cadillac Fault and enclosed by Pontiac Group rocks should then be included as part of the Pontiac domain and not correlated with the Dubuisson Formation of the Abitibi Belt.

The geologic disparities in the literature are the reason that the position of the CTZ has not been accurately delineated in eastern Louvicourt and Vauquelin Townships. It is interpreted by some studies (Gaudreau et al., 1986; Sauve et al., 1987; MacNeil and Averill, 1988) to pass just north of the Chimo Mine; however, Quebec government compilation maps (SOQUEM, 1978) indicate the fault lies much farther south.

One of the main criteria used to determine the position of the CTZ is the metamorphic grade observed in the rocks underlying the East Cadillac Gold Property. Sharpe (1968) supposed that Trivio Group rocks were deposited rocks on top of the Abitibi Belt volcanic pile and in apparent conformity with it, whereas the more southerly Pontiac Domain rocks are "much more metamorphosed than the inter-volcanic sedimentary rocks, and their primary textures are obscured by recrystallization and the imprint of a regional foliation". Sharpe (1968) also remarked that, based on lithological, metamorphic and structural information, a major tectonic or stratigraphic discontinuity occurs along the north edge of the Pontiac Domain. Sharpe's map area included the area now covered by the East Cadillac Gold Property, and drilling by Cambior (GM46939) corroborated Sharpe's observations (MacNeil and Averill, 1988) but also showed that Sharpe included in his Trivio Group some Pontiac Group metasediments that were retrograded from amphibolite to greenschist facies.

The type and age of rock present on the property is largely irrelevant as all gold mineralization in the area is structurally controlled, occurring mainly in association with shear zones. The Authors contend that: 1) the Trivio and Villebon groups are part of the Pontiac Supergroup and lie south of the Abitibi Pontiac contact (i.e., the Cadillac Fault); 2) the Trivio Structural Complex, which is restricted to Trivio Group rocks in the vicinity of the Property, is part of a wide deformation corridor associated to the Cadillac Fault, which is the major control on mineralization; and, 3) the so-called Chimo horizon, which passes transects the East Cadillac Gold Property, is a major structural discontinuity associated with the Cadillac Fault Zone, that was a conduit for the precipitation of minerals from auriferous, sulphide-rich hydrothermal fluids.

### 7.3 Property Geology

Most of the East Cadillac Gold Property is underlain by rocks of the Trivio Structural Complex (TSC), a kilometres-wide deformation corridor interpreted as the eastern extension of the Cadillac Tectonic Zone (**Figure 7.2**). The TSC is characterized by anastomosing deformation corridors, ranging in thickness and intensity, commonly referred to as "shear-zones", that divide the host rock into hectometric to kilometric "lozenges" of relatively undeformed rock. The shear-zones and the secondary fracturing and brecciation that have affected the host rocks are of primary importance to the mineralization as they are interpreted to have acted as the principle passage ways for sulphide- and gold-bearing solutions.

The sedimentary rocks of the Trivio Group that underlie the Property range from 200 to 800 m in apparent thickness, and comprise a rhythmic sequence of proximal turbidites made up of: 1) fine grained quartzo-feldspathic sandstone and siltstone; 2) a magnetite-rich banded iron formation; 3) coarse-grained feldspathic sandstone and; 4) local interbeds of polygenetic conglomerate. Two narrow, lenticular bands of massive and pillowed basaltic lavas, with an apparent thickness of almost 1 km, are interbedded with the sedimentary units showing that volcanism was active during the sedimentation process (**Figure 7.3**). According to Rocheleau et al. (1988), the northern volcanic band is composed of basalt and magnesian basalt, whereas the southern band is mainly composed of andesitic basalt and interstratified andesite with lenticular zones of crystalline ash tuff, lapilli tuff and felsic blocks and graphitic schists. A gradual increase in pyroclastic facies is observed in the Trivio Group from west to east.

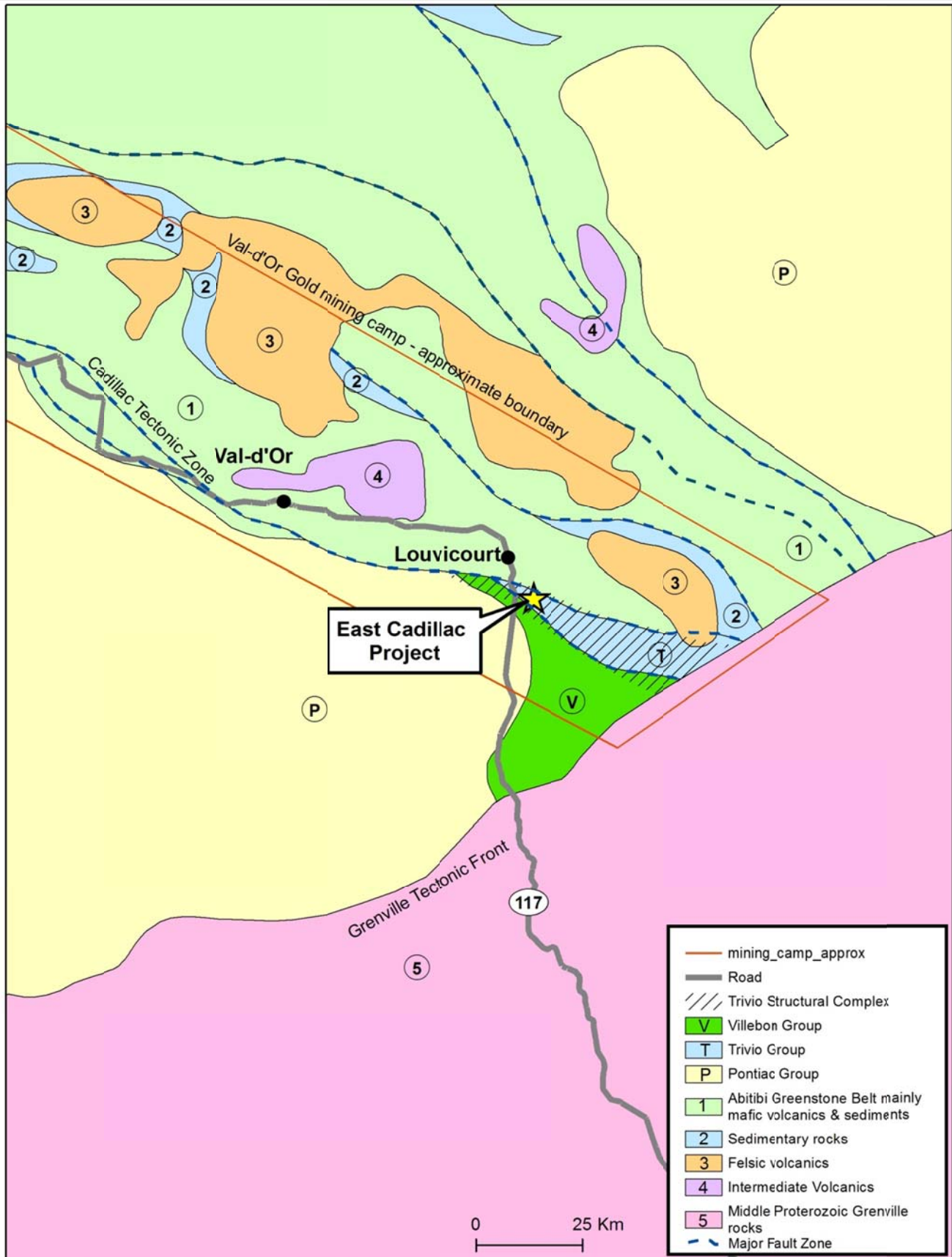


Figure 7.2: Simplified geological map of southeastern part of Abitibi Greenstone belt

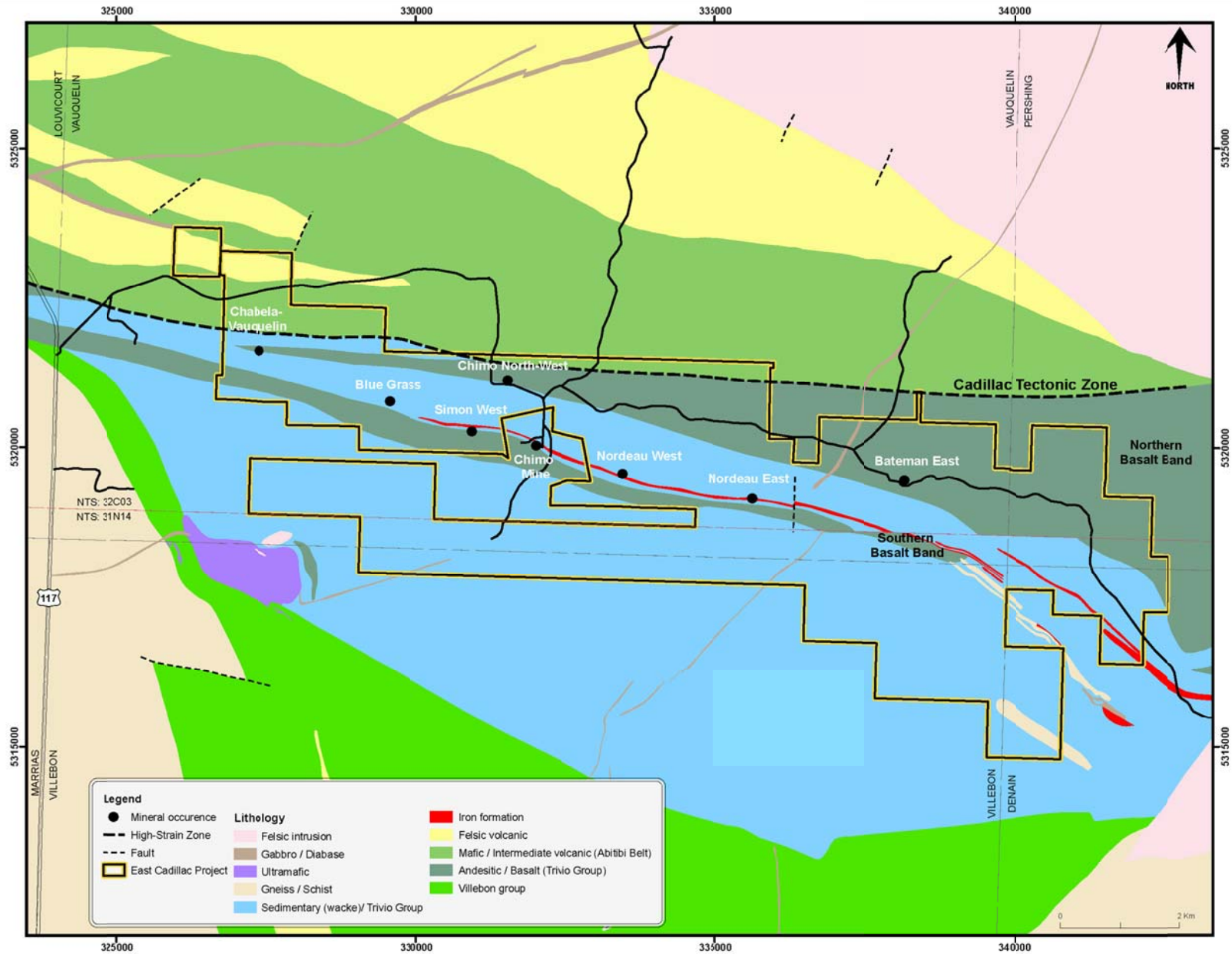


Figure 7.3: Geology underlying the East Cadillac Gold Property.

The northern sedimentary band (north of the southern basalt band) includes at least three horizons of strongly folded iron formation (IF) that vary from 3 m to 70 m in apparent thickness.

The IF bands consist of beds of intercalated wacke, siltstone, chert and magnetite laminates varying from 0.2 mm to 50.0 mm in thickness, with the amount of magnetite increasing towards the top of the beds. The magnetite-rich banded iron formation is traceable on geophysical magnetic-anomaly maps for more than 15 km from the former Chimo Mine to Lake Machi-Manitou to the east, where it has been intersected by drilling.

The contacts between the volcanic and sedimentary units is generally strongly sheared as indicated by the common occurrence of talc-chlorite-sericite schist along their contacts, especially near the Nordeau West deposit.

A simplified stratigraphic column for the East Cadillac Gold Property is shown in **Figure 7.4**.

#### **7.4 Geology of Nordeau West Deposit**

The stratigraphic succession in the area of the Nordeau West deposit consists of: 1) massive and pillowed basalts and andesites, overlain by; 2) a central sedimentary unit made up of greywacke, siltstone and lesser conglomerate, and "topped" by banded iron formation; 3) a central band of mafic volcanic rocks, up to 400 m thick (the Chimo volcanic unit) overlain by; 4) the south sedimentary unit. Host Trivio Group rocks are intruded by thick (1 m - 30 m), granodioritic to tonalitic, commonly quartz- and feldspar-phyric dykes.

The local stratigraphy is overturned, striking generally east-west (~ 295°), dipping steeply north (average 70°), and younging south. A well-developed regional schistosity ( $S_2$ ) is sub-parallel to bedding and to the later shear zones that are present throughout the immediate vicinity. A few north-south and northeast-southwest faults are reported, at least one of which is occupied by a Proterozoic diabase dike on the Nordeau East claim block.

Most commonly observed alteration types are: epidotization, carbonatization and silicification of the sedimentary rocks, and; chloritization, amphibolitization and silicification/carbonatization of the volcanic rocks. Garnets occur locally, particularly within the iron formations.

#### **7.5 Mineralization**

Gold mineralization in the area from Rouyn to Val d'Or has a strong affinity for areas near the Cadillac Fault or subsidiary structures. This is evident at the Chimo Mine and the Nordeau west deposit where gold occurs with quartz and arsenopyrite in longitudinal shear zones in metamorphosed volcanic rocks and in bands of semi-massive arsenopyrite and pyrrhotite associated with banded magnetite iron formation (Sauve et al., 1987).

A number of gold occurrences, catalogued by MRNF Quebec with description and metadata available on-line ([http://sigeom.mines.gouv.qc.ca/signet/classes/I1102\\_indexAccueil?l=a](http://sigeom.mines.gouv.qc.ca/signet/classes/I1102_indexAccueil?l=a)), underlie the Property. The principal occurrence are summarized as follows:

## Legend

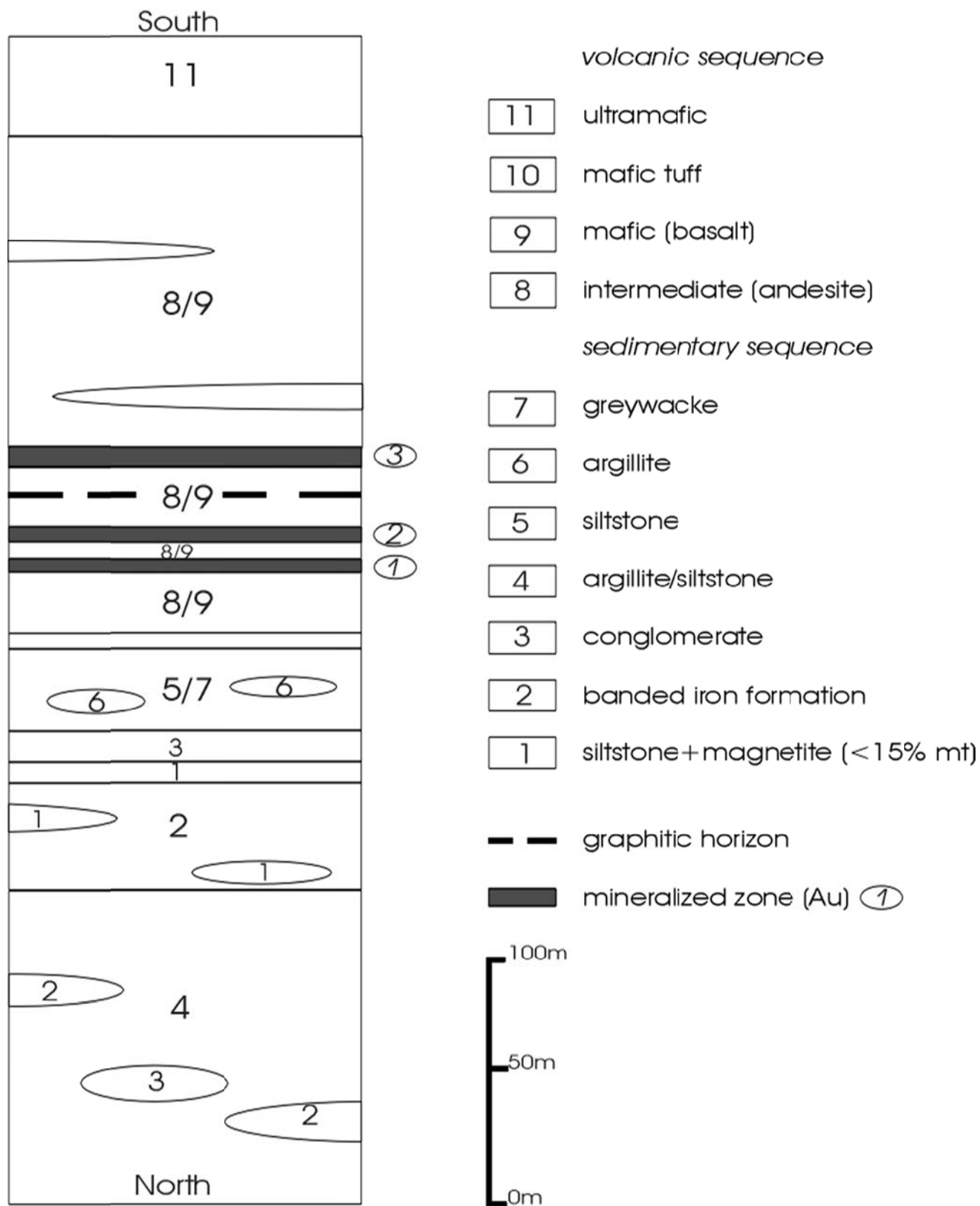


Figure 7.4: Simplified stratigraphic column for the area of the East Cadillac Gold Property.

---

**Nordeau West: Occurrence # 32C/03-0060 (NI 43-101 Mineral Resource)**

Gold mineralization on the Nordeau West block is found in 4 distinct lenses or zones (known from north to south as North, #1, #2, #3) within shear-zones that transect the mafic volcanic rocks of the Trivio Group. Wall rocks are massive to pillowed or brecciated basalts and andesites with sporadic tuffaceous horizons and minor graphitic schists. Common alteration processes of the sheared rocks include silicification, amphibolitization, carbonatization and biotitization.

Gold is found in brecciated zones cemented with grey smoky quartz lodes, veins or veinlets with brown tourmaline, carbonates and sulphides in an “en échelon” pattern within the wider deformation corridors (Jean, 1990). Arsenopyrite is the major sulphide constituent (3-15%) with some amounts of pyrite, pyrrhotite and traces of chalcopyrite. Gold is found as free grains intergrown with arsenopyrite.

All reported structures are more or less imbedded into the regional schistosity striking N280-290° and dipping 55-70° to the north. Zones #1 and #2 (for which historical reserves have been previously estimated), transect the Nordeau West claim group for 600 m along strike and have been intersected at a depth of 600 m locally. As pointed out by Jean (1990), the “en echelon” pattern of the lenses puts into question the geological and assay continuity across strike since “ore grade” intersections may appear to be randomly located within the wider deformation corridors. Nevertheless, it is reported that structures occupied by Zones #1 and #2, separated by 25 m of pyroclastic rocks in the eastern part of the property, merge into a single structure in the western part of the property. For this reason, Zones #1 and #2 are sometimes collectively referred to as the “Main” zone.

The other mineralized zones (#3 and North) are less well understood as they are poorly defined, have irregular continuity, and inconsistent gold mineralization. Zone #3, which is south of #1 and #2, and 30 m south of a graphitic marker horizon, has been defined along two traces of about 100 m each. Sporadic intersections show that the North Zone occupies a position some 30 m north of structures #1 and #2.

Selected best intervals from recent drilling by Plato on the Nordeau West occurrence are included in **Section 6** of this report. For the Mineral Resource Estimate on this deposit, the reader is referred to **Section 14**.

**Nordeau East: Occurrence # 32C/03-0055 (historic resource)**

The most significant mineralization on the Nordeau East claim block is found in 3 structures (#1, #2, #3) related to the upper iron formation of the Trivio Group sedimentary rocks, which consist of interbedded mudstones, siltstones, greywackes and iron formations. The 3 sub-parallel structures are made up of gold-bearing, sulphide-rich quartz veinlets and veins that generally follow stratigraphy and the strong, regional E-W schistosity, dip from 50° to 75° north, and are less than 2 m thick on average.

The mineralization consists in 1-5% disseminated sulphides or semi-massive sulphide veinlets (pyrite, pyrrhotite, arsenopyrite and traces of chalcopyrite) in association with quartz, chlorite, garnet and gold. Gold is found as free grains in quartz or as inclusions in the sulphide minerals (b, 1988). Common alteration of wall rocks include amphibolitization, chloritization, silicification and biotitization.

Structure #1 was traced for 450 m laterally, whereas structure #2, to the south structure #1, continues generally east-west for 220 m. Both extend to a depth of some 200 m. They parallel each other for some 130 m, and are stratigraphically less than 30 m apart. Structure #3, which is further east and possibly in a stratigraphic position similar to #1, has been traced for some 240 m

laterally and to a depth of 150 m. As reported in a previous section, historical mineral “reserves” were estimated from qualifying portions of each of these 3 structures.

A fourth mineralized structure on Nordeau East carrying erratic, low-grade gold values occurs in a shear zone that transects mafic volcanic rocks south of the iron formation, and contains 1-5% disseminated sulphides in carbonatized and chloritized rocks with well-developed garnets.

Selected best intervals from recent drilling by Plato in the western part of the Nordeau East occurrence zone are shown in **Section 6** of this report.

#### **Bateman (East): Occurrence# 32C/03-2005 (historic resource)**

There is only one reported gold occurrence of some significance on the Bateman property. The 1990 drilling campaign on Bateman East delineated 2 gold mineralized lenses in the south central part of the claim group. Both lenses are associated with graphitic shales that are intruded by “smoky” quartz veins containing 2-5% disseminated arsenopyrite and free gold, which occurs as thin inclusions and coatings on the sulphide grains. The two zones are parallel and 10 m apart stratigraphically. They can be traced for about 100 m laterally and to a depth of some 50 m, with thickness ranging from 1.2 to 3.9 m. **Table 6.11** in **Section 6** of this report lists the best historical drill-hole intercepts from the Bateman East property. The best recorded intersection was 3.9 gpt Au across 5.05 m (GM48410; GM49659).

#### **Simon West: Occurrence # 32C/03-0052 (historic resource)**

The Simon West occurrence is located approximately 1 km west of the Chimo Mine and is considered to be the western extension of the Chimo Mine horizons as it hosts similar geological and mineralogical characteristics. Mineralization appears to be related to the upper iron formation of the Trivio Group sedimentary rocks, which consist of interbedded mudstones, siltstones, greywackes and iron formations, and occur as lenses parallel to the stratigraphic units and to the schistosity. Several en echelon style lenses are interpreted over a strike of approximately 1.2 km.

In the summer of 1987, Louvem undertook the construction of an access ramp on the Simon West Project. Located approximately 1 km west of the Chimo Mine (MB88-14). This east-dipping ramp, excavated along the contact between the Chimo volcanic band and the central band sedimentary rocks, was designed to intersect mineralized zones 4 and 3 west at the 125 level of the Chimo Mine, located approximately 1 km to the east. No further information on this venture was found in the available literature.

According to the SIGEOM on-line database, the best recorded assays are as follows:

- GM41830 - 7.13 gpt Au over 3.75 m (hole 83-9); 11.45 gpt Au over 0.61 m (sample 83.8); 11.49 gpt Au over 0.59 m (sample 83-1);
- GM32291 - 11.32 gpt Au over 0.30 m (sample MV1; 38.06 g / t Au over 1.52 m (hole 6, Insmill, 1945).

SIGEOM lists historical “reserves” as 67,000 t grading 6.30 gpt for lens A and 34,000 t at 6.90 gpt Au for lens B.

#### **Bluegrass: Occurrence 32C/03-0050**

This occurrence comprises quartz-veins in a 1.5 m wide shear-zone over a strike of approximately 450 m, flanked to the north and the south by volcanic rocks. Hosted within Trivio Group greywacke, argillite and conglomerate, the mineralization consists of arsenopyrite, pyrite and trace chalcopyrite. Arsenopyrite occurs as fine to coarse disseminations associated with parallel

---

carbonate-altered shear zones injected with quartz. Native gold, is reported in drill-core and a few trenches.

SIGEOM lists the best recorded assay results as:

- GM41830 - 8.90 gpt Au over 1.50 m (hole 1); 11.00 gpt Au over 0.40 m (hole C4); 10.15 gpt Au over 0.30 m (hole 5B); 1.82 gpt Au over 1.55 m (sampling 7-83-11);
- GM 68973 - 19.55 gpt gold (sample 20508), 1.32 gpt gold (sample K482026), 2.55 gpt gold (sample K482031).



---

## 8.0 DEPOSIT TYPES

Gold mineralization on the East Cadillac Gold Property is categorized into two types of epigenetic gold occurrences:

1. gold mineralization in silicified lodes with disseminated to semi-massive sulphides (arsenopyrite, pyrrhotite and pyrite) spatially related to sedimentary banded iron formations. Secondary quartz veining is commonly associated with this type of mineralization.
2. structurally controlled gold mineralization in altered and sheared zones with quartz or quartz and carbonate veins parallel to the schistosity and shear zones (most likely to be found in the volcanic units). Associated disseminated sulphides include arsenopyrite, pyrite and minor chalcopyrite; graphitic horizons are common.

Both types of mineralization occur as free gold associated with sulphide minerals ranging from 1% to 5% when in quartz veins to as much as 20% to 50% when in association with magnetite iron formations.

The best intersections from the various recent and historic drilling campaigns consistently occur at or near the contacts of the iron formation; however, the mineralized zones are not present along the entire IF/country rock contact, but rather appear to cross-cut stratigraphy. It is envisioned that a mineralized hydrothermal “front” cross-cut stratigraphy, depositing gold-bearing sulphides at the iron formation horizons. As it is generally accepted that the fluids that precipitated auriferous, shear-zone associated quartz veins in the Cadillac Tectonic Zone were not locally derived, it is assumed that the close association between iron formation and gold mineralization along the mineralized horizon that transects the East Cadillac Gold Property is the result of a chemical interaction at the iron-rich horizons rather than the existence of primary auriferous iron formation.

---

**9.0 EXPLORATION**

Chalice is compiling all available data from previous exploration work completed on the East Cadillac Gold Property. As at the effective date of this Report, Chalice had begun a soil sampling programme on the Property that was halted prior to its completion, due to snowfall. No other exploration has been carried out on the Property by Chalice.

**10.0 DRILLING**

As at the date of this Report, Chalice had not completed any diamond-drilling on the Property.

## 11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

It is the Authors' opinion that the sample preparation, analytical and security procedures used by operators for reporting assay results prior to the implementation of NI 43-101 were those in common use at the time the various historical programs were carried out. It is also the Authors' opinion that the past exploration programs were supervised by experienced geologist or engineers who employed industry's standards of their time; however, there is no guarantee of the quality of the historically reported data. As such, the Authors recommend that a Data Verification and Validation Programme should be implemented by the incoming party into the project.

For information regarding recent sample preparation analysis and security (i.e., post-implementation of NI 43-101 standards), the reader is referred to the following reports that pertain to exploration programmes carried out since the implementation of NI 43-101:

- GM61314 (Bourgoin, 2004);
- GM64272 (Bourgoin and Castonguay, 2007) ;
- GM64504 (Langton and Horvath, 2009);
- GM65127 (Kramo and Langton, 2010);
- GM66369 (Langton and Pacheco, 2011);
- GM68593 (Manon and Perre, 2014).

With respect to the recent drilling programs by Plato Gold that were used for the resource estimate, the 2006-2007 core-sampling programme was carried out under the direct supervision of Peter Karelse P.Geol on behalf of MRB & Associates, whereas the 2008 drill-core sampling programme was carried out under the direct supervision of Jason Ross B.Sc. and John Langton M.Sc., P.Geol. The programme for quality control during the 2006-07 campaign entailed the insertion of one standard sample into the sample streams every 30 samples and a blank sample inserted into the stream every 40 samples. The programme of quality control for the 2008 drill-core sampling programme entailed the random insertion of one blank, one duplicate (1/4 core), and one of three separate gold standard samples into the sample streams every 15 samples. Samples with visible gold were analyzed by screen/fire AA (atomic absorption) methods, whereas the remaining samples underwent fire assay/AA analysis. Silver content was assayed by aqua regia digestion and AAS (atomic absorption spectrometry).

ALS-Chemex Laboratories Ltd. of Val d'Or, Que., an accredited lab, was the primary assay laboratory. ALS Chemex has attained ISO 9001:2000 registration, which requires evidence of a quality management system covering all aspects of the assaying process. To ensure compliance with this system, regular internal audits are undertaken by staff members specially trained in auditing techniques.

## 12.0 DATA VERIFICATION

Other than the reports published since 2004, none of the assessment or historical work reports used in the preparation of this technical report contain details of the sampling and analytical methods employed. Quality control methods and security procedures were also not discussed. This simply reflects the limited assessment requirements and reporting standards of the time, rather than a lack of diligence from the historical operators.

The GEMS drill-hole database used in the Mineral Resource Estimate was validated using the software's validation programs to check for erroneous data entries. All reported errors were corrected in the database by reconciliation with MRB and the original data sources. Additionally, the drill-hole data was displayed and reviewed in 3D and assorted plan and section views to check for other possible location, deviation or similar related errors. The drill-hole database used for resource estimation is considered to be of acceptable quality with no significant errors.

After verifying that there were no validation errors in the 2009 database, MRB & Associates re-calculated an MRE of the Nordeau West deposit using the same parameters and drill-hole data utilized in Langton & Horvath (2009)(GM64504). The re-calculated MRE arrived at the same resource tonnages and grades as reported in 2009, confirming that the methods used for the 2009 estimate were appropriate.

### **13.0 MINERAL PROCESSING AND METALLURGICAL TESTING**

Other than testing for magnetic concentration of iron rich material from the iron formations in the 1960's, there was no report of mineral processing or mineralogical examination performed on gold samples from the East Cadillac Gold Property. It can be reasonably assumed, however, that any mineralized material extracted from the Property would react similarly to the ore that was treated successfully for nearly 15 years at the nearby former Chimo Mine mill.

#### **14.0 MINERAL RESOURCE & MINERAL RESERVE ESTIMATES**

The historic resources and reserves reported for Chalice's East Cadillac Gold Project are documented in the "History" section of the Technical Report. These early, initial resource and reserve estimates (Tremblay, 1988; Jean, 1990) are considered by the Authors and issuers to be entirely irrelevant, as they pre-date NI 43-101 and do not comply with current NI 43-101 regulations for reporting mineral resources and reserves; however, the 2009 Mineral Resource Estimate (MRE) for the Nordeau West deposit by A. S. Horvath Engineering Incorporated (Langton and Horvath, 2009; GM64504) is considered to be accurate as at the effective date of this Report. No additional exploration work has been carried out on the claims comprising Chalice's East Cadillac Gold Project, that would render the 2009 MRE out-dated or inaccurate.

MRB & Associates used the Nordeau West deposit drill-hole database to calculate the Mineral Resource Estimate presented in this Report. Drill-hole, lithology and assay records in this database were assessed, reviewed and re-validated prior to its use for the 2017 resource estimation. The claims that comprised the Nordeau West property in 2009, are now part of, and completely surrounded by, claims of the East Cadillac Gold Property. The mineralized zones underlying the former Nordeau West property extended beyond its boundaries at the time of the 2009 mineral resource calculation (Langton & Horvath, 2009); however, no such restrictions have been applied to the current MRE.

This Section of the Report, modified from Langton & Horvath (2009), contains an updated Mineral Resource Estimate for the Nordeau West project, which represents the only NI 43-101 Resource within Chalice's East Cadillac Gold Property, as currently defined at the effective date of this Report.

## 14.1 Introduction

A total of 279 drill-holes from the former Nordeau East and Nordeau West claim blocks are recorded in the Nordeau project GEMS<sup>®</sup> database.

Drill-holes on or proximal to the former Nordeau West project were selected for modelling and resource estimation by using a location filter to include only drill-holes between UTM Eastings 333075E and 333850E (NAD83 Zone 18). This allowed the inclusion of some drill-holes that were collared north of the former Nordeau West project boundary and drilled southward, crossing into the Nordeau West claim block at depth.

A total of 121 drill-holes were selected using the above filter to define holes relevant to the Nordeau West project claims, creating a subordinate relational database (the “Database”) that was used for the 2017 Mineral Resource Estimate.

The Database is comprised of a primary header table containing 3-axis (X-Y-Z, or easting-northing-elevation) drill-hole coordinate data in UTM NAD 83 Zone 18 coordinates, with secondary tables including a Down-hole Survey Table, Lithology Table and Assay Table: the Down-hole Survey Table records down-hole drill azimuths and inclinations; the Lithology Table records rock types that were coded by MRB using the Quebec Ministry of Energy & Mines geologic legend for Archean geology. Additional tables in the Database have been constructed to store assorted data manipulations, such as assay composites and drill-hole intersections, with modelled solids.

Digital maps of interpreted surface geology, drill-hole locations and property boundaries were also used to assist interpretation of the drilling results.

Sample assay results in the Database include only final assigned Au (gold) values as determined/entered by MRB from the original data source. Where multiple fire assays are reported for the same sample, the assays were averaged to produce the final assay grade entered in the Database. In the instances where metallic-screen techniques were employed for sample analysis, the resulting assay values were considered to superseded earlier results and were entered as the final Au grade for the sample. For the 2006 and 2008-Phase1 drill campaigns, silver (Ag) analysis was requested for the project, and resulting assays were entered in the GEMS database. For the 2008-Phase 2 drill program, assaying for Ag was discontinued and replaced by arsenic (As) assaying; however, only the gold (Au) values in the Database were used for the MRE.

***It should be noted that unless otherwise stated, all drill-intervals represent down-hole lengths and not true widths.***

## 14.2 Drill-hole Data Validation

**Table 14.1** summarizes the vintage, total number and total metreage of drill-holes present in the Database that were used for the MRE. The table identifies holes that pre-date NI 43-101 compliance versus more recently completed drill-holes completed under NI 43-101 guidelines. Drill-holes that pre-date NI 43-101 are herein termed “historic”, whereas drill-holes that are considered compliant with NI 43-101 are herein termed “recent”.

**Table 14.1: Summary of Drill-holes in Nordeau West Database**

Summary of DDHs in Nordeau West Database						
Series	Vintage	# of Holes	# of meters	Company	Data Source	Assay Certificates
N-9 to 13	1957-58	5	989	Nordeau Mining Co. Ltd.	GM06036	partial
484-81-16, 21, 22, 26 to 29	1981	7	1,181	Soquem	GM37746, GM39230	yes
10-484-82-30 to 43	1982	14	2,594	Soquem	GM39230	yes
8-83-01 to 04, 5A, 5B, 6 to 12	1983	13	2,671	Societe Miniere Louvem	Company Report	partial
8-84-40 to 42, 42a, 43	1984	5	1,003	Societe Miniere Louvem	Company Report	no
0-1	1984	1	194	Golden Pond Resources	GM42328	partial
VE-1 to 7 and 9 to 14	1985	13	7,948	Golden Pond Resources	GM42328	no
W87-01 to 24	1987	24	4,721	Mines Vaquelin Ltee	GM47403	in hardcopy report
W88-01 to 04	1988	4	1,279	Mines Vaquelin Ltee	GM48424	in hardcopy report
W90-01 to 09, 09B	1990	10	5,164	Mines Vaquelin Ltee	GM49867	in hardcopy report
<b>Subtotal pre-43-101 Compliance</b>		<b>96</b>	<b>27,744</b>			
PG-06-01 to 04, 04A, 05 to 09, 21	2006	11	4,981	Plato Gold Ltd.	Company Report	yes
NW08-01 to 14	2008	14	8,551	Plato Gold Ltd.	Company Report	yes
<b>Subtotal 43-101 Compliant</b>		<b>25</b>	<b>13,532</b>			
<b>Totals Nordeau West DDHs</b>		<b>121</b>	<b>41,276</b>			

The tabulation in **Table 14.1** indicates that 96 of the 121 drill-holes (i.e., 79.3%) are “historic”, whereas the remaining 25 drill-holes (i.e., 20.7%) are “recent”.

MRB provided a summary listing of the sources for the historic assay data in the Database, and noted whether original or copies of original assay certificates are available to validate the reported and entered results. The source for all data used in the Database is reported by MRB to be from government assessment files and internal company records. For all but 18 of the 96 historic drill-holes, the source data included copies of some or all assay certificates in support of the reported assay results. MRB’s audit did not necessarily include an accounting of all historic assay certificates.

The supporting documentation for historic drill-hole data and sample assay results appears adequate to justify including all of the drill-holes in the Database that was ultimately used for the Mineral Resource Estimate.

**Figure 14.1** shows a plan view of the 121 drill-holes selected for resource estimation and the former property boundary of the Nordeau West project claims.

The 96 historic drill-holes are shown in black and the 25 recent drill-holes are shown in red. The 25 recent drill-holes are well distributed along the extents of the historic drilling to support and validate historic results.

Prior to any calculations being carried out, the Database was validated using the software’s validation programs to check for erroneous data entries. All reported errors were corrected in the Database by reconciliation with MRB and the original data sources. Additionally, the drill-hole data was displayed and reviewed in 3D, and assorted plan and section views, to check for other possible location, deviation or similar related errors. The Database is considered to be of acceptable quality with no significant errors.



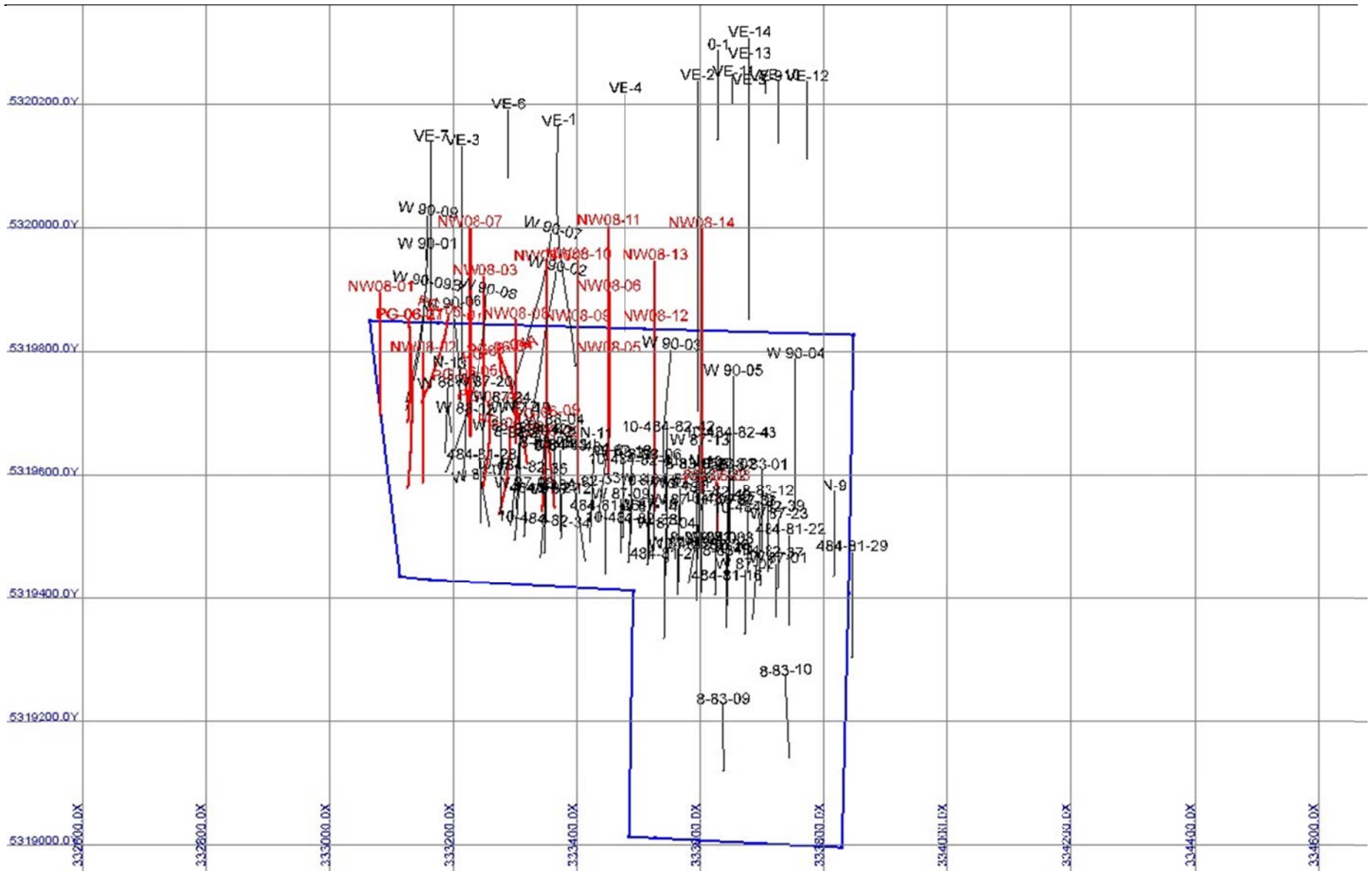


Figure 14.1: Plan map of former Nordeau West property limits & drill-holes used to calculate the MRE

### 14.3 Assay Geostatistics

Geostatistics were completed on the drill-hole sample assay data to determine whether data from the historic drill-holes demonstrates any bias in comparison to data from recent drill-holes. Results are presented herein.

Univariate statistics were completed for all Au assays from the 121 drill-holes at Nordeau West.

Histogram statistics for the 10,067 sample results in the Database indicate that the total sample population contains a significant number of waste samples (n=3,128) with gold-grades of zero or below-detection-limit (**Table 14.2**). This is reflected in the skewed mean-versus-median and population-variance values for the collective samples.

**Table 14.2: Univariate Histogram Statistics – All Au Assays (uncut)**

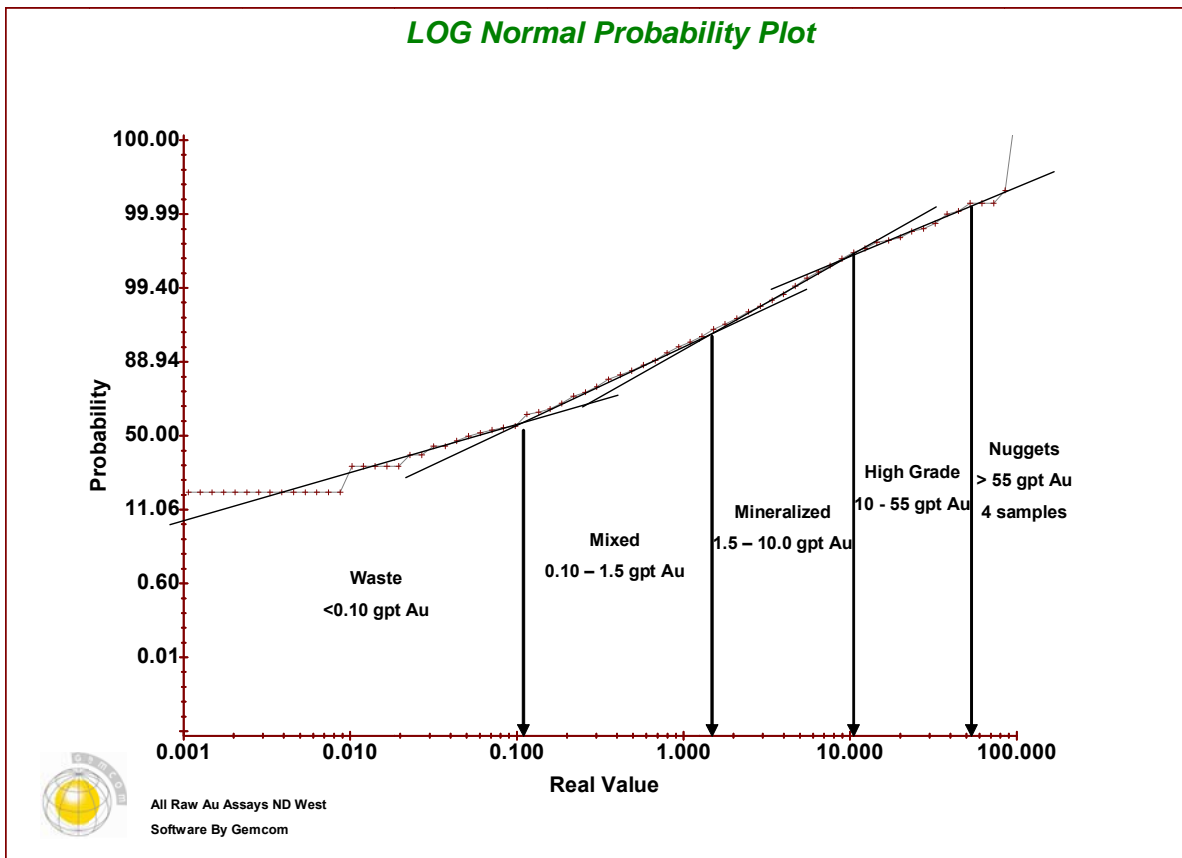
All DDH Raw Au Assays Histogram Statistics		
Nordeau West		
Minimum Cutoff Value		0.00
Maximum Cutoff Value		187.90
Number of Samples <=0		3128
Total Number of Samples Used		10067
Minimum Histogram Value		0.00
Maximum Histogram Value		100.00
Number of Class		100
Class Interval		1.00
Minimum Population Data point		0.00
Maximum Population Data point		187.90
Total Population		10067
	Ungrouped Data	Grouped Data
Mean	0.403649	0.783893
Median	N/A	0.542403
Standard Deviation	2.845252	2.533306
Variance	8.095457	6.417638
Coefficient of Variation	7.048820	3.231699

**Figure 14.2**, a log-normal probability plot of all Au assays, shows that the entire population of Au assays at Nordeau West may be sub-populated, as defined by the change in slope of the linears along the graph and summarized as follows:

Background/Waste Population -	<0.10 gpt Au
Mixed/Threshold Population –	0.10 to 1.5 gpt Au
Mineralized Population –	1.5 to 10.0 gpt Au
High-grade Population –	10.0 to 55 gpt Au
Nugget/Erratic Population -	>55 gpt Au

Four (4) samples grading from 72.5 to 187.9 gpt Au are considered to be nuggets, and therefore require special consideration; the grade for these 4 samples was cut to 60 gpt Au prior to assay compositing and resource estimation.

**All DDH Raw Au Assays  
Nordeau West**



**Figure 14.2: Log-normal probability plot – all Au assays (uncut)**

The Au assay data was sub-populated into historic drill-hole and recent drill-hole sample sub-populations. **Tables 14.3** and **Table 14.4** provide the summary histogram statistics for each of these Au assay sub-populations, respectively.

The histograms of Au sub-populations for the historic drill-holes (**Tables 14.3**) and recent drill-holes (**Table 14.4**) demonstrate distributions that are similar to the total population, with approximately 2/3 of the assays in the historic drill-hole subpopulation and 1/3 in the recent drill-hole subpopulation. The mean grade, median, and variance of the historic drill-hole assay subpopulation are slightly higher than those of the recent drill-hole assay subpopulation. This small disparity is attributable primarily to the 4 extreme Au assays within the historic data subpopulation that are above 55 gpt Au. The highest Au assay in the recent drill-hole subpopulation is 45.9 gpt Au.

The historic drill-hole Au assays show no apparent bias versus the recent drill-hole assays and are considered representative and suitable for inclusion in results used for resource estimation, provided the 4 extreme values in the historic data are cut to a maximum value of 60 gpt Au.

**Table 14.3: Univariate Histogram Statistics for “Historic” Au Assays (uncut)  
Pre-43-101 DDH Raw Au Assays Univariate Statistics**

**Nordeau West**

Minimum Cutoff Value	0.00
Maximum Cutoff Value	187.90
Number of Samples <=0	2448
Total Number of Samples Used	6805

Minimum Histogram Value	0.00
Maximum Histogram Value	100.00
Number of Class	100
Class Interval	1.00

Minimum Population Data point	0.00
Maximum Population Data point	187.90
Total Population	6805

	Ungrouped Data	Grouped Data
Mean	0.425174	0.798009
Median	N/A	0.543878
Standard Deviation	3.232836	2.842145
Variance	10.451231	8.077790
Coefficient of Variation	7.603564	3.561546

**Table 14.4: Univariate Histogram Statistics for “Recent” Au Assays (uncut)  
43-101 DDH Raw Au Assays Univariate Statistics**

**Nordeau West**

Minimum Cutoff Value	0.00
Maximum Cutoff Value	45.90
Number of Samples <=0	680
Total Number of Samples Used	3262

Minimum Histogram Value	0.00
Maximum Histogram Value	100.00
Number of Class	100
Class Interval	1.00

Minimum Population Data point	0.00
Maximum Population Data point	45.90
Total Population	3262

	Ungrouped Data	Grouped Data
Mean	0.358746	0.754445
Median	N/A	0.539352
Standard Deviation	1.782693	1.718441
Variance	3.177993	2.953038
Coefficient of Variation	4.969231	2.277754

Further analysis was completed to investigate potential bias that may be introduced in the data as a result of varying sample lengths. **Table 14.5** provides the summary histogram statistics and **Figure 14.3** the histogram plot of sample interval lengths for all drill-hole assays in the Database.

**Table 14.5: Univariate Histogram Statistics – All Assay Sample Interval Lengths**

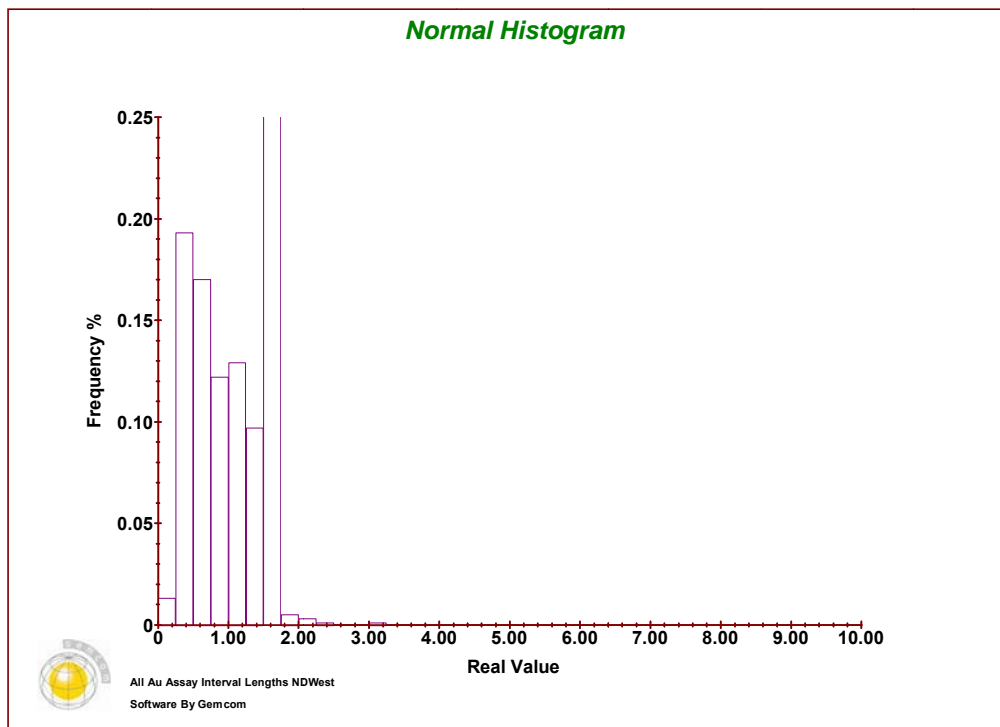
**All DDH Au Assay Sampe Interval Lengths**

**Nordeau West**

Minimum Histogram Value	0.00
Maximum Histogram Value	10.00
Number of Class	40
Class Interval	0.25
Minimum Population Data point	0.030
Maximum Population Data point	8.000000
Total Population	10067

	Ungrouped Data	Grouped Data
Mean	0.968260	1.019954
Median	N/A	1.005092
Standard Deviation	0.481309	0.498810
Variance	0.231658	0.248812
Coefficient of Variation	0.497086	0.489052

The statistics (**Table 14.5**) show the mean and median sample interval length to be 1 m, with a range from <10 cm to 8 m. The histogram plot (**Figure 14.3**) reveals the majority of sample intervals are 1.5 m, and nearly 99% of sample intervals range from 0.25 m to 1.5 m. A compositing interval of 1.5 m is suggested in order to normalize results and essentially eliminate any potential bias in the sample grade that could result from varying sample lengths.



**Figure 14.3: Histogram plot – all assay sample interval lengths**

#### 14.4 Geology & Mineralized zone Interpretation & Modelling

Within the total sample population, approximately 1/3 have grades below detection limits. A majority of these samples likely occur in barren rock outside the limits of defined mineralized zone(s). A mineralized zone model was interpreted and constructed to allow selection of samples only within the defined zones of mineralization, and is reviewed herein.

NOTE: Although all of the rocks described in this section of the Report have been metamorphosed, the “meta” prefix has been omitted for simplicity from the rock descriptions.

A series of 21 north-south oriented cross-sections, spaced at 25 m intervals, were devised between UTM Eastings 333075 and 333850. Occasional 50 m, and one 75 m, section spacings were used in areas with fewer drill-holes. The “end” sections (i.e., Section 333075 and Section 333850) are approximately coincident with the western and eastern property boundaries of the former Nordeau West project claims, respectively. Each section’s width is defined by the boundaries at half the distance to the adjacent sections excepting the end sections, which were restricted to respect the property boundaries.

In addition, a series of 21 plan views, spaced at 50 m intervals from surface (0 m) to a depth of 1000 m, were created, and a single longitudinal section, perpendicular to the indicated strike of geology (i.e., oriented approximately east-west) was generated along UTM Northing 5319500.

Drill-hole profiles were established to display the drill-hole traces, lithology and assay results on the established plans and sections, and in 3D models.

The drill-hole collar coordinates and elevations were used to create a 3D TIN (triangular interpolation net) surface of topography. The topographic surface was expanded to cover the limits of the former Nordeau West project claims. Similarly, the drill-hole overburden-bedrock intersection points were used to create a 3D bedrock topography surface that was similarly expanded to cover the limits of the former property.

Several lithological units and geological features are consistently identified in the drill-hole lithology data and demonstrate obvious continuity across all sections, and correlation with the interpreted surface geology.

A major structural contact between sedimentary and volcanic rocks (the so-called S-V Fault), dips -65° towards 020° across the immediate area. This contact is interpreted to be a splay fault from the main Cadillac Tectonic Zone, located approximately 1 km north. A polyline was digitized along the S-V Fault drill-hole intersection points on each of the vertical cross sections, tied in plan-view and wire-framed to generate a 3D surface TIN of the S-V Fault contact. The upper limit of the S-V Fault contact surface was clipped against the bedrock topography surface.

Two distinct horizons of strongly magnetic, oxide iron formation (IF) occur in the hanging wall sedimentary rocks from a few metres to 50<sup>+</sup> m stratigraphically below, but structurally above the volcanic contact. The IF horizons vary from a few metres to 20<sup>+</sup> m thick, with approximately 10 m of intervening sediments. The units appear to parallel the S-V Fault across the Nordeau West project claims, and down-dip to depths over 1000 m.

Polygons were digitized on each of the 21 cross sections using the drill-hole intersection points at the upper and lowermost contacts of the IF horizons, respectively. The IF section polygons from each section were tied and wire-framed to produce a 3D solid TIN of the IF and intervening sediments. The upper limit of the IF solid was clipped against the bedrock topography surface.

A sequence of mafic to intermediate tuffs and flows occupy a fault-bounded block south of the S-V Fault contact. The sequence is approximately 400 m thick near surface, but narrows at depth as the southern fault dips more shallowly northward converging with the northern fault, as interpreted from drilling.

The volcanic units south of the S-V Fault contact are difficult to correlate over significant distances. Correlation of certain volcanic units is locally possible, especially between drill-holes of the same vintage, as drill-log entries and rock descriptions are typically more consistent. Interpretation of the spatial distribution of these “southern” volcanic units is complicated by numerous fault offsets, which support the suggestion that the entire 400 m volcanic succession within the fault bounded southern block is within a high-deformation corridor.

Approximately 100 m structurally below the S-V Fault contact, narrow (<2 m wide) intervals of talc-chlorite and/or graphite schist have been regularly intersected in drilling. These units are interpreted to represent a fault zone (the so-called Lower Fault) that approximately parallels the S-V Fault. Additional similar intervals are logged further south and are also interpreted to be parallel, diverging and/or conjugate fault structures.

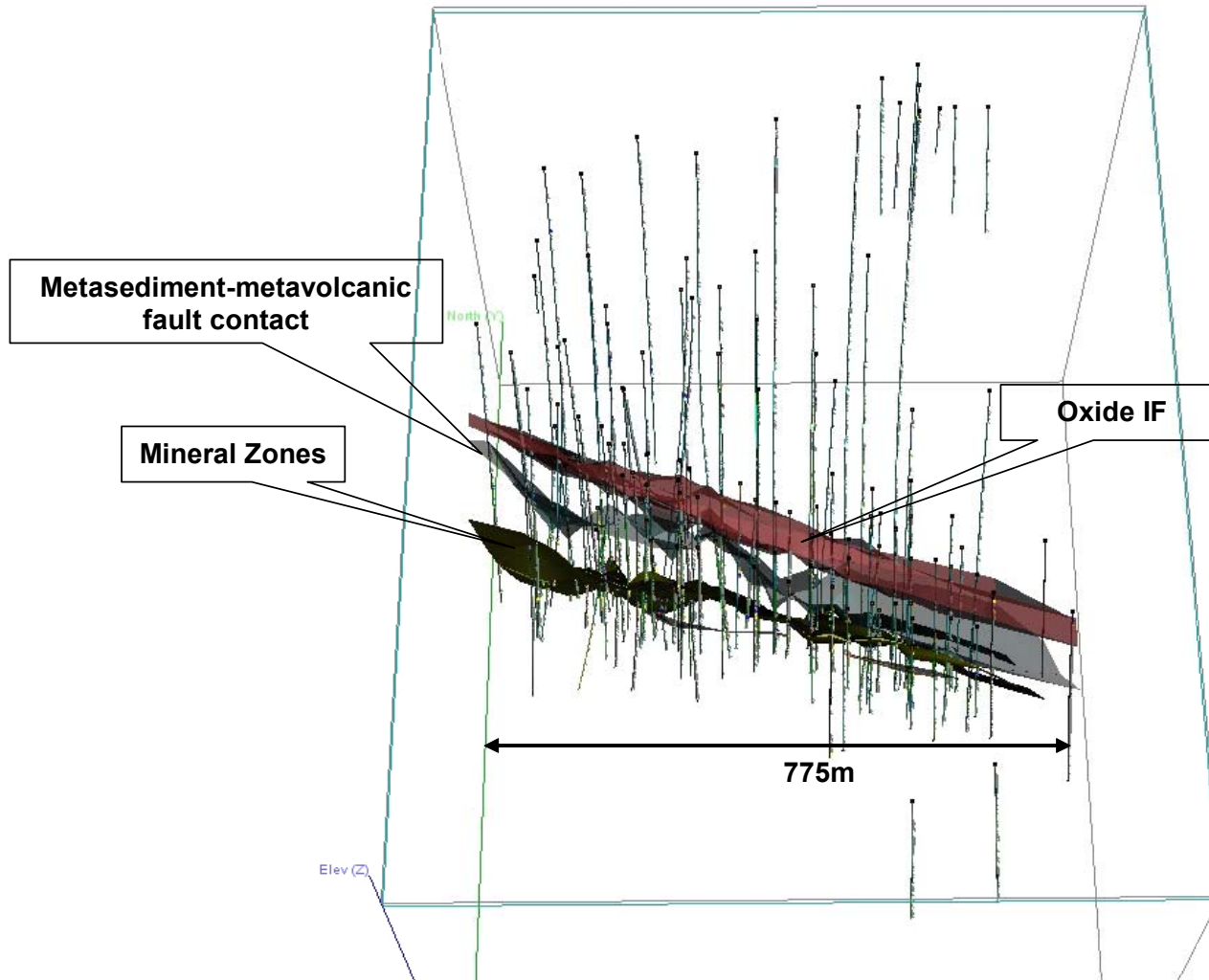
All mineralized zones identified for resource estimation lie within a 100 m wide corridor between the S-V Fault and the sub-parallel Lower Fault, located 100 m south. No sub-units were modelled within the volcanic stratigraphy except the mineralized zone(s).

Drill-hole assays were displayed and composited using various methods (i.e. varied equal lengths and cut-off grades) to evaluate and interpret zones of gold mineralization. The mineralized zones were modelled using an approximate 0.50 gpt Au cut-off to identify and digitize the limits to zones of apparent continuous mineralization. During section digitizing, the assays were visually inspected along drill-holes to optimize boundaries of the mineralized zone to grades >1-2 gpt Au when possible.

Mineralization appears to be largely confined to a single relatively narrow zone that strikes and dips nearly parallel with the major structures, and is characterized by the presence of strong shearing, alteration, variable quartz veining with up to 10-15% sulphides (pyrite, pyrrhotite and arsenopyrite), and rare visible gold. Locally, secondary sub-parallel conjugate faults within the deformation corridor cross the mineralized zones, disrupting the mineralization into boudinaged or en-echelon zones or lenses; however, the mineralized envelope is remarkably consistent along strike and down-dip. The mineralized zone limits were further refined to account for disruption/termination caused by the interpreted cross-cutting shear zones and conformity to the geological model contacts.

**Figure 14.4** and **Figure 14.5** show the surface and solids geological models with drill-holes in 3D isometric plan (top/down-dip) and cross section view, respectively.

**3D Isometric Top / Down-Dip View**  
**3D Geology and Mineral Zone Solids Model**  
**Nordeau West**



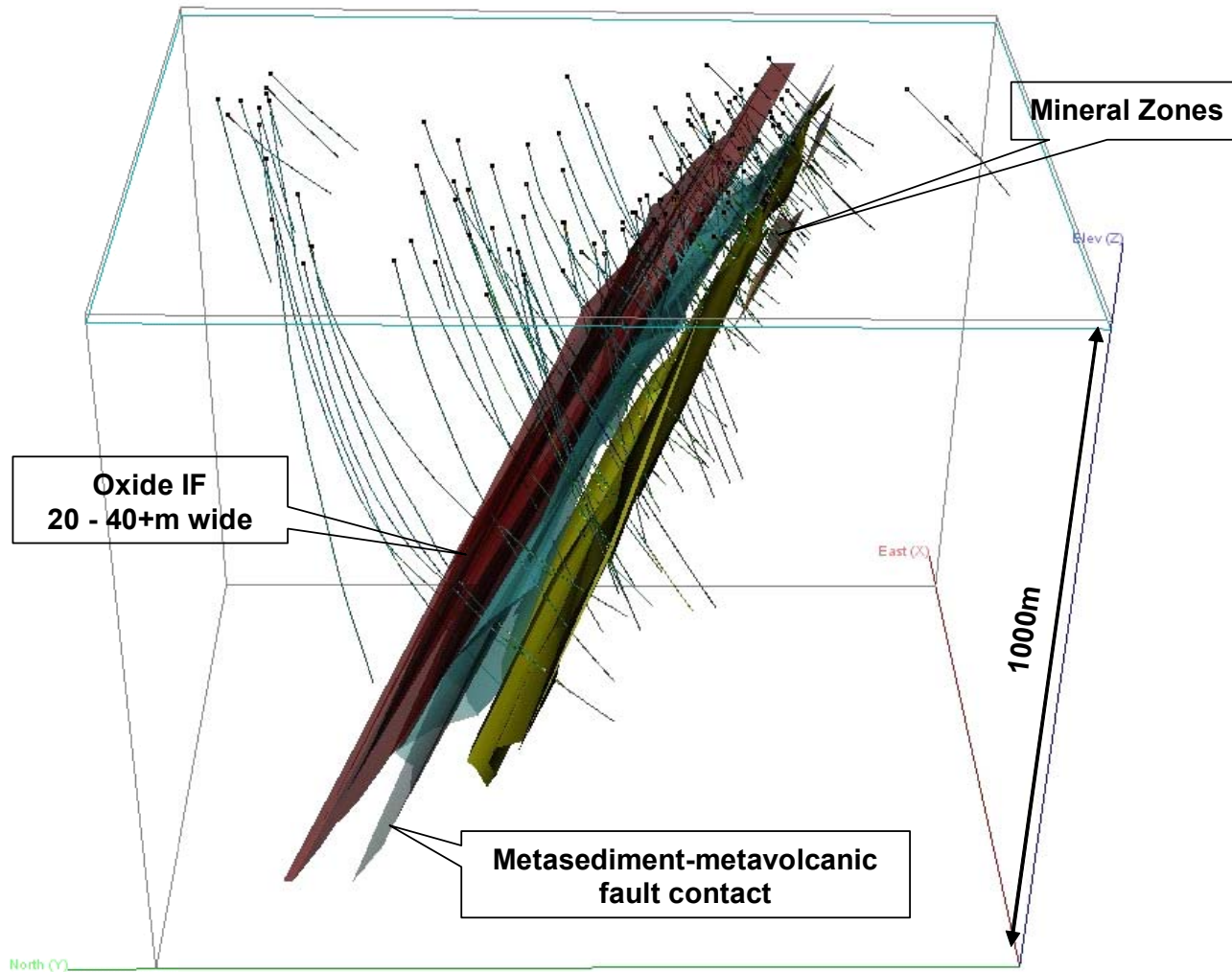
*Figure 14.4: 3D isometric top/down-dip view – geology solids & surfaces model*



**3D Isometric Cross Section View (Facing East)**

**3D Geology and Mineral Zone Solids Model**

**Nordeau West**



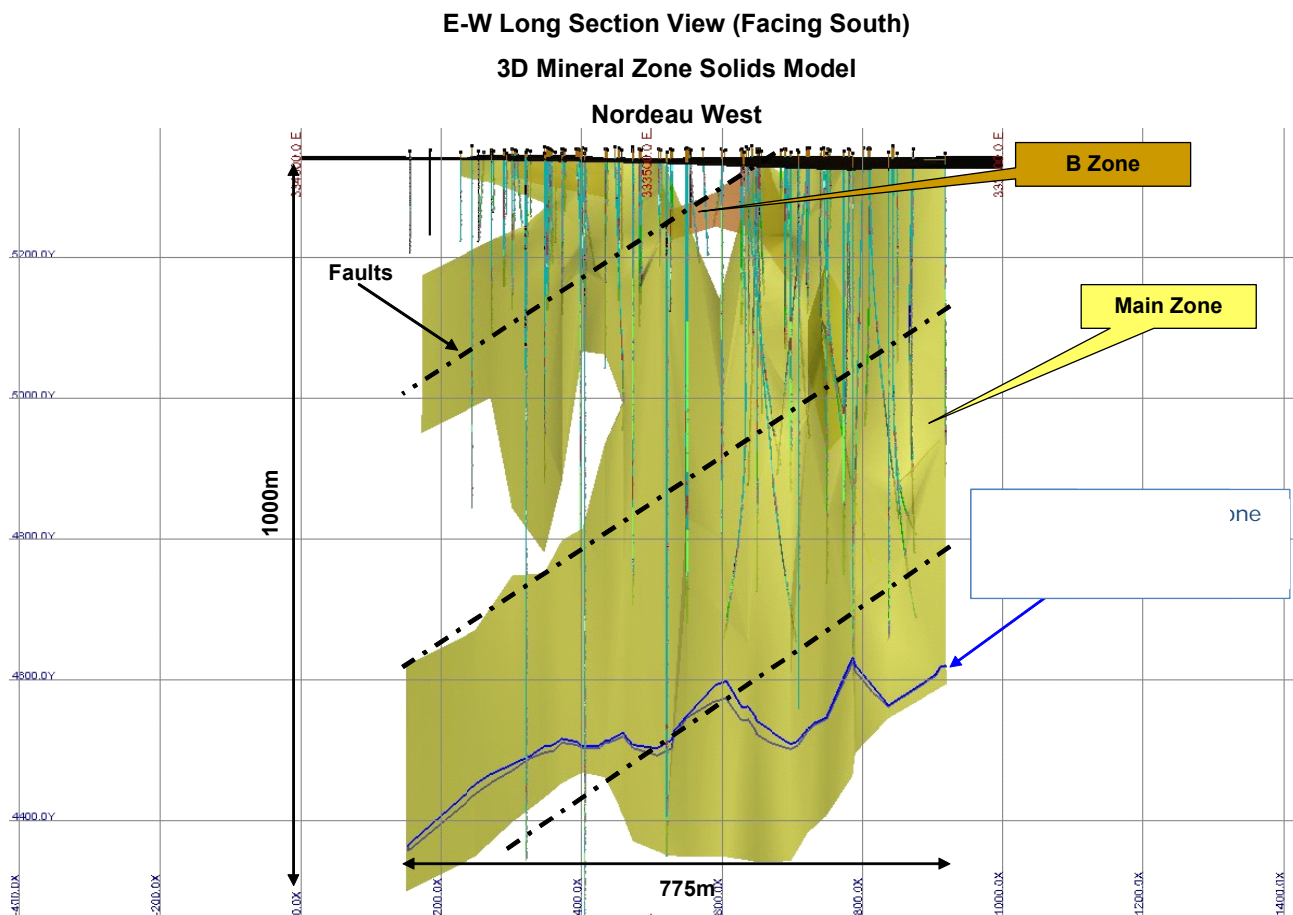
*Figure 14.5: 3D isometric N-S cross section view – geology solids & surfaces model*

**Figure 14.6** displays the mineralized zone solids and drill-holes in 2D east-west longitudinal section view, facing south.

Near surface (i.e. < 250 m deep), the zones of mineralization are demonstrably more severely disrupted by crossing faults and related shearing into smaller boudinaged/en-echelon lenses. The so-called B Zone comprises a series of weakly mineralized, parallel, en-echelon lenses that occur approximately 10 m south of the so-called Main Zone, but which are only definable in the upper 250 m of drilling, suggesting that the B Zone lenses could be shear-displaced parts of the Main Zone, or be offset from the Main Zone by crosscutting faults.

The mineralized zones dip approximately 65° to the north and exit the north boundary of the former Nordeau West project claims at depth (**Figure 14.6**); however, the mineralized zone solid was not clipped at the north boundary for the 2017 MRE, as it was for the 2009 MRE, so as to include the deeper down-dip drill-hole intersection points in the grade interpolation process.

The Main Zone solid volume is calculated at 3.15 million cubic metres, whereas the B zone solid is calculated to have a volume of 36,000 cubic metres.



**Figure 14.6: 2D E-W longitudinal section view – geology solids & surfaces model**

## 14.5 Mineralized Zone Assays & Compositing

The mineralized zone wire-frame solid was used to select only drill-hole assays within the greater mineralized zone. The summary histogram univariate statistics for Au assays within the limits of the defined mineralized zone (**Table 14.6**) show that a total of 919 (i.e., less than 10%) of all assays occur within the defined mineralized zone.

**Table 14.6: Univariate Histogram Statistics – Mineralized Zone Au Assays (uncut)**

Minimum Cutoff Value	0.00	
Maximum Cutoff Value	60.00	
Number of Samples <=0	19	
Total Number of Samples Used	919	
Minimum Histogram Value	0.00	
Maximum Histogram Value	60.00	
Number of Class	60	
Class Interval	1.00	
Minimum Population Data point	0.00	
Maximum Population Data point	60.00	
Total Population	919	
	Ungrouped Data	Grouped Data
Mean	2.312345	2.417301
Median	N/A	1.029570
Standard Deviation	5.017249	4.967766
Variance	25.172789	24.678698
Coefficient of Variation	2.169767	2.055087

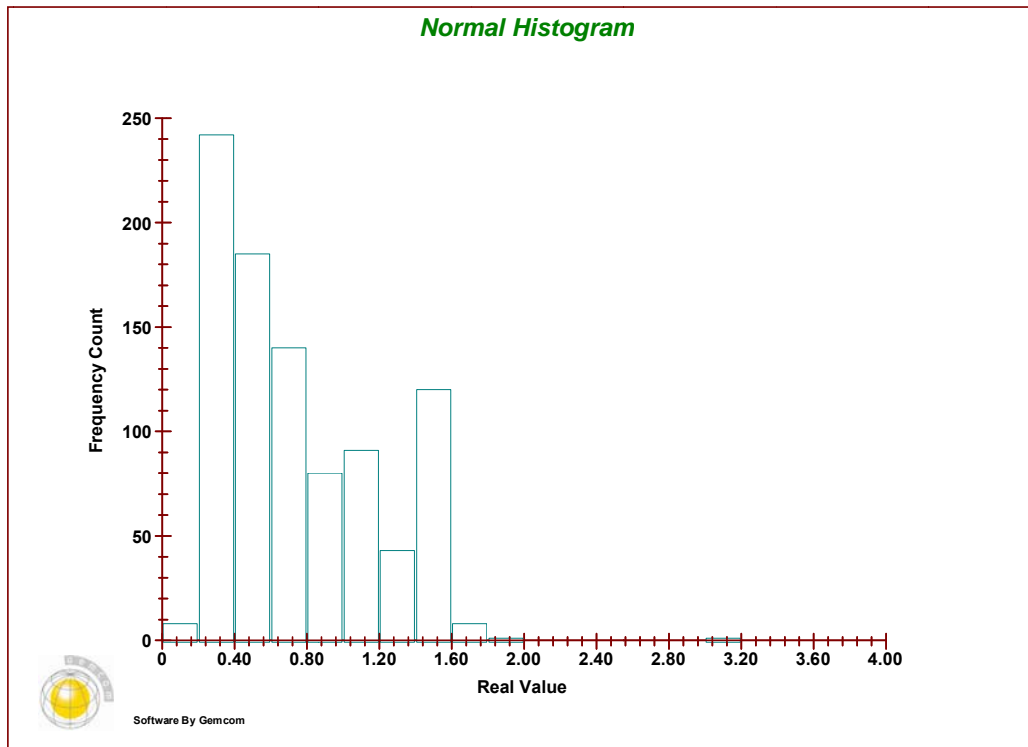
The mean grade of the mineralized zone assay population is 2.42 gpt Au, significantly higher than the total sample population grade. The variance and coefficient of variations are also notably high. The results may be biased as a result of varied sample lengths.

**Table 14.7** provides summary histogram univariate statistics for sample assay interval lengths within the limits of the defined mineralized zones.

**Table 14.7: Univariate Histogram Statistics – Mineralized Zone Sample Lengths**

Minimum Histogram Value	0.000000	
Maximum Histogram Value	4.000000	
Number of Class	20	
Class Interval	0.200000	
Minimum Population Data point	0.090000	
Maximum Population Data point	3.050000	
Total Population	919	
	Ungrouped Data	Grouped Data
Mean	0.739978	0.751360
Median	N/A	0.635000
Standard Deviation	0.428549	0.432388
Variance	0.183654	0.186960
Coefficient of Variation	0.579137	0.575474

**Figure 14.7** is a normal histogram of the sample assay interval lengths within the limits of the defined mineralized zone.



**Figure 14.7: Histogram plot – mineralized zone sample interval lengths**

The histogram statistics shown in **Table 14.7** indicate that samples within the mineralized zone are generally shorter, with a mean length of 0.75 m, but are highly variable in length, ranging from <10 cm to 3 m. **Figure 14.7** further reveals that 99% of the sample intervals are <1.6 m. A composite interval of 1.5 m was selected to eliminate any possible bias introduced by the highly variable sample lengths.

Prior to compositing the assays within the wire frame on 1.5 m equal lengths, the composite grade and length of each drill-hole intersection was calculated and reviewed. **Table 14.8** provides a list of the 99 drill-hole intersections and the calculated composite grades and lengths within the wireframe solid. Composites were calculated using the Au assays cut to a 60 gpt maximum.

There are 88 composites from the Main Zone and 11 from the B Zone of mineralization. The average intersection length of the Main Zone mineral solid is 8.3 m and near “true thickness” with an average grade of 1.78 gpt Au. The B Zone is considerably narrower with an average thickness of 2.4 m and average grade of 2.22 gpt Au.

Assays were composited on 1.5 m equal sample lengths within the defined limits of the mineralized zone solid (i.e., within the intervals shown in **Table 14.8**). The Au assays cut to 60 gpt Au were used for the composite calculations. **Table 14.9** provides summary univariate histogram statistics for the 1.5 m equal-length composites (n=517), that were generated. Compositing started at the upper contact of the intersections and the last, usually odd, interval length (<1.5 m) at the lower contact of the intersection was retained as a composite point.

**Table 14.8: Mineralized Zone Composites**

Main Zone DDH Intersections				Main Zone DDH Intersections				B Zone DDH Intersections			
Hole	Zone	Interval	Au gpt	Hole	Zone	Interval	Au gpt	Hole	Zone	Interval	Au gpt
10-484-82-30	Main	1.48	17.67	PG-06-04A	Main	13.05	1.09	10-484-82-33	B	1.41	1.85
10-484-82-31	Main	5.73	5.15	PG-06-05	Main	15.50	1.25	10-484-82-34	B	3.37	1.49
10-484-82-32	Main	3.54	2.24	PG-06-06	Main	18.30	1.67	10-484-82-38	B	0.07	1.54
10-484-82-35	Main	4.86	0.64	PG-06-06	Main	10.50	1.62	484-81-16	B	4.76	2.45
10-484-82-36	Main	12.04	5.61	PG-06-07	Main	17.40	5.08	484-81-27	B	2.05	2.99
10-484-82-38	Main	11.12	0.80	PG-06-08	Main	7.15	0.74	8-84-40	B	0.93	1.47
10-484-82-40	Main	7.24	0.54	PG-06-09	Main	11.50	0.45	W 87-02	B	1.50	1.19
10-484-82-41	Main	10.74	0.72	PG-06-21	Main	6.00	2.25	W 87-05	B	4.10	1.28
10-484-82-42	Main	3.10	2.04	VE-1	Main	12.99	1.25	W 87-09	B	3.30	4.15
10-484-82-43	Main	4.67	0.79	VE-3	Main	3.35	0.46	<b>Average</b>	<b>B</b>	<b>2.39</b>	<b>2.22</b>
484-81-21	Main	4.50	7.45	VE-4	Main	4.27	2.26				
484-81-27	Main	4.50	1.00	VE-7	Main	4.09	1.87				
484-81-28	Main	4.71	1.10	W 87-01	Main	1.00	2.68				
8-83-01	Main	7.84	1.56	W 87-02	Main	0.90	4.60				
8-83-02	Main	3.53	0.72	W 87-03	Main	4.50	1.35				
8-83-03	Main	3.22	1.99	W 87-04	Main	7.00	1.21				
8-83-04	Main	7.73	0.85	W 87-05	Main	3.60	0.61				
8-83-05B	Main	7.05	1.54	W 87-06	Main	7.10	0.32				
8-83-06	Main	1.84	0.90	W 87-07	Main	2.50	1.35				
8-83-07	Main	5.31	0.74	W 87-08	Main	1.60	1.73				
8-83-08	Main	28.14	1.62	W 87-10	Main	2.50	1.09				
8-83-11	Main	5.99	0.48	W 87-11	Main	3.00	0.99				
8-83-12	Main	5.43	0.94	W 87-13	Main	0.80	4.52				
8-84-40	Main	7.25	0.90	W 87-14	Main	3.42	3.94				
8-84-41	Main	46.09	0.73	W 87-15	Main	1.80	0.83				
8-84-42	Main	17.68	1.16	W 87-17	Main	3.10	1.71				
8-84-43	Main	7.46	0.64	W 87-19	Main	18.00	2.14				
N-12	Main	3.10	2.47	W 87-20	Main	11.70	6.24				
NW08-01	Main	8.00	1.73	W 87-20	Main	11.91	1.63				
NW08-02	Main	2.95	2.25	W 87-21	Main	2.10	2.31				
NW08-03	Main	4.26	3.71	W 87-22	Main	4.60	3.08				
NW08-04	Main	18.95	0.77	W 87-23	Main	2.00	2.09				
NW08-05	Main	6.30	1.18	W 87-24	Main	10.30	1.43				
NW08-06	Main	8.64	5.57	W 88-01	Main	7.80	0.64				
NW08-07	Main	8.05	4.36	W 88-02	Main	17.60	0.81				
NW08-08	Main	7.40	1.68	W 88-03	Main	8.24	1.54				
NW08-09	Main	2.20	0.92	W 88-04	Main	7.15	0.44				
NW08-10	Main	10.15	2.92	W 90-02	Main	3.08	1.88				
NW08-11	Main	2.55	0.89	W 90-05	Main	10.30	0.94				
NW08-12	Main	5.70	0.59	W 90-06	Main	17.80	5.56				
NW08-13	Main	7.05	2.77	W 90-07	Main	6.90	3.57				
PG-06-01	Main	14.12	1.49	W 90-08	Main	11.21	1.91				
PG-06-02	Main	11.62	1.81	W 90-09	Main	1.50	2.44				
PG-06-03	Main	10.50	1.61	W 90-09B	Main	3.49	4.95				
<b>Average</b>	<b>Main</b>	<b>8.28</b>	<b>1.78</b>								

**Table 14.9: Univariate Histogram Statistics – Mineralized Zone 1.5 m Composites (Au cut)**

Minimum Cutoff Value	0.00	
Maximum Cutoff Value	60.00	
Number of Samples <=0	17	
Total Number of Samples Used	517	
Minimum Histogram Value	0.00	
Maximum Histogram Value	60.00	
Number of Class	60	
Class Interval	1.00	
Minimum Population Data point	0.00	
Maximum Population Data point	60.00	
Total Population	517	
	Ungrouped Data	Grouped Data
Mean	2.064848	2.105416
Median	N/A	1.037500
Standard Deviation	4.003911	3.972709
Variance	16.031304	15.782413
Coefficient of Variation	1.939083	1.886900

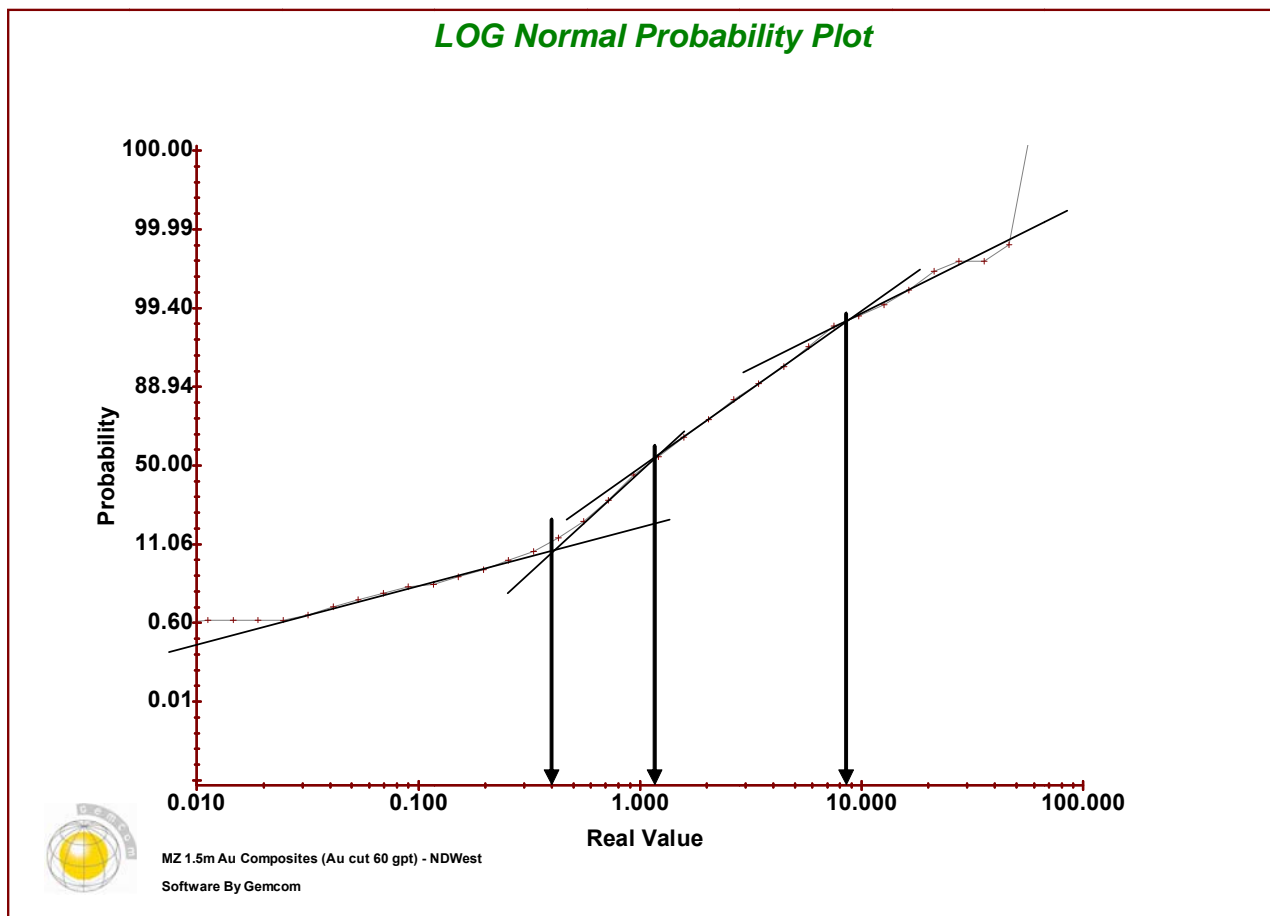
The statistics shown in **Table 14.9** demonstrate a reduced mean grade of 2.11 gpt Au for the 1.5 m composites within the mineralized zone solids compared to the individual assays; however, the variance and coefficient of variation are also significantly reduced. The reduced variance of the sample population provides for better correlation of samples during grade interpolation.

**Figure 14.8** is a log-normal probability plot of the 1.5 m composites.

The log-normal probability plot of the 1.5 m composites indicates subpopulations within the data set that can be characterized as follows:

Internal Waste Population -	<0.4 gpt Au
Mixed Internal Waste/Low-grade Population -	0.4 – 1.0 gpt Au
Mineralized Population -	1.0 – 8.5 gpt Au
High-grade Population -	>8.5 gpt Au

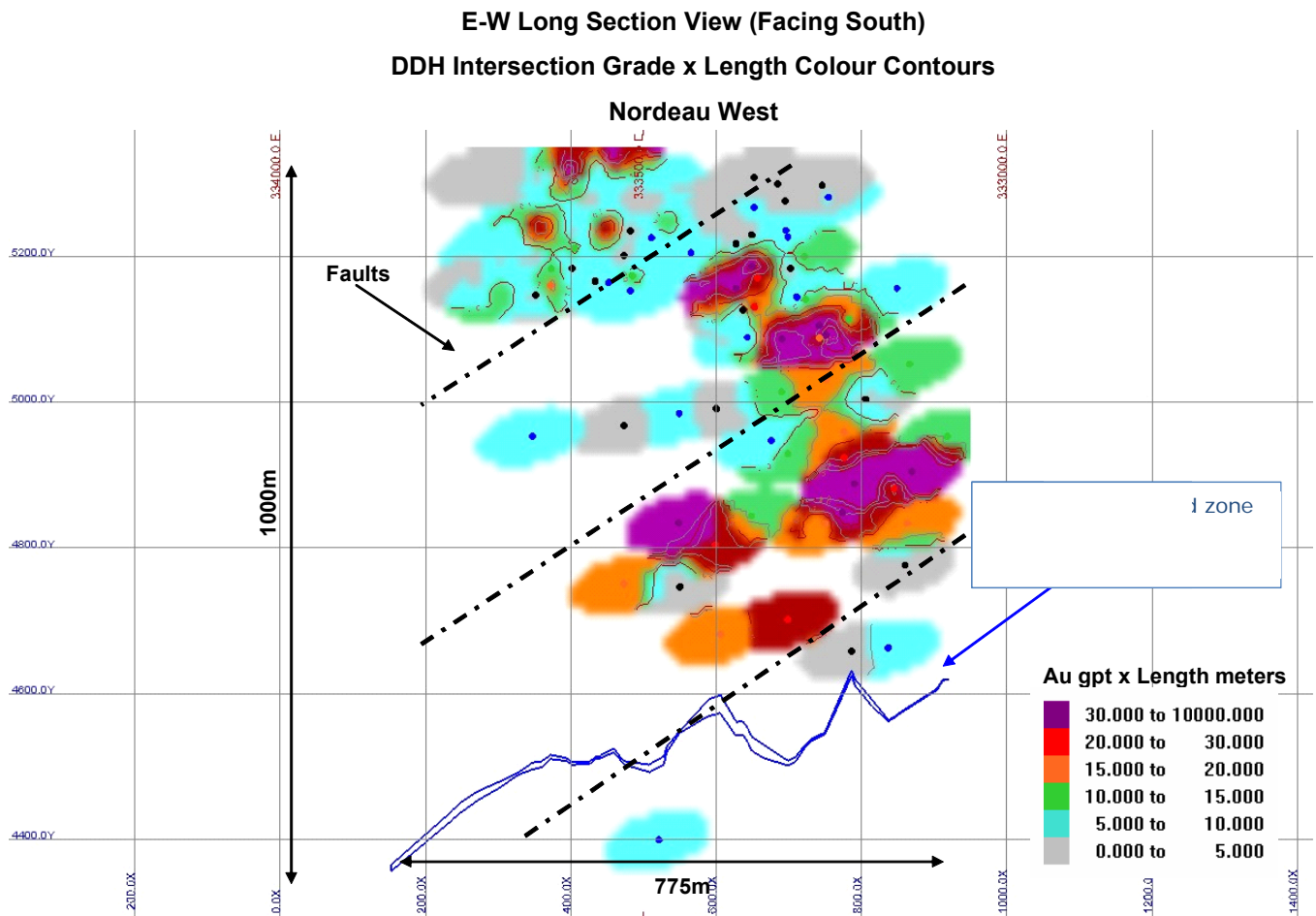
The composite geostatistics indicate the presence of a high-grade population of samples above 8.5 gpt Au that are unique to the bulk of the mineralized sub-population. The results suggest that grade interpolation ranges should be restricted during resource estimation for the high-grade sub-population of samples.



**Figure 14.8: Log-normal probability plot – mineralized zone 1.5 m composites (Au cut)**

### 14.6 Assay Composite Grade x Thickness Contouring

The mineralized zone intersection composite grades and thickness calculated and tabulated in **Table 14.8** were contoured on a vertical grid established along an east-west longitudinal section. A 10 m x 10 m grid cell dimension was used to cover the extents of the modelled mineralized zone, as shown in **Figure 14.6**. An inverse distance algorithm was used to interpolate grade into the cells for contouring based on a 75 m radius 2D spherical search. The spherical search was selected to allow the data to generate any possible trends naturally from the data. **Figure 14.9** shows the results for the Au composite grade x thickness intersection point contouring of the mineralized zone.



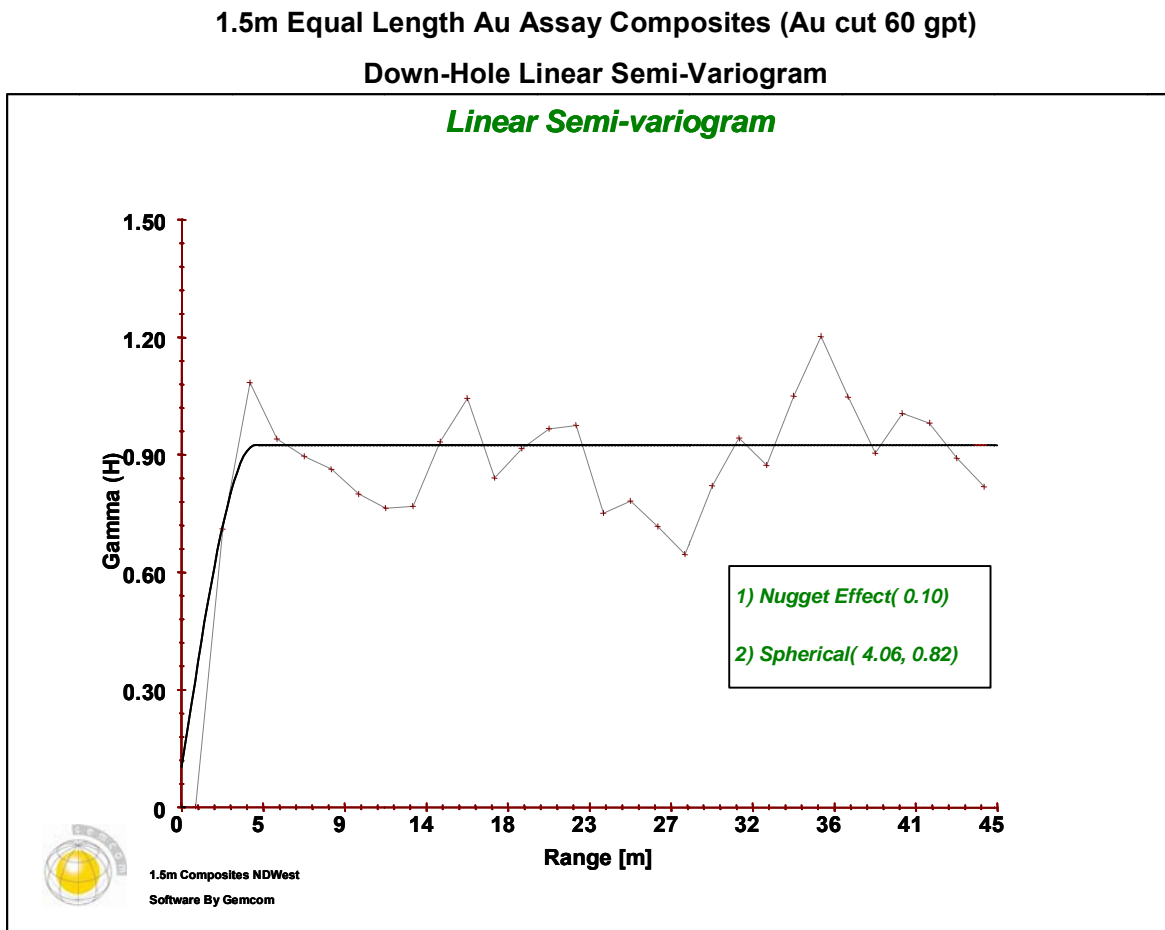
**Figure 14.9: 2D E-W longitudinal section view – composite grade x thickness contouring**

The mineralized zone composite grade thickness contours demonstrate trends that appear to correlate with geological features. The grade x thickness contouring indicates two prominent trends in the data: 1) a shallow trend that dips approximately  $-30^\circ$  towards the east, sub-parallel with the interpreted fault structures, and; 2) a steep trend that dips approximately  $-60^\circ$  towards the northwest.

### 14.7 Variography

Variography is an analysis of sample variance (semi-variance) as a function of distance between samples. The down-hole linear semi-variogram measures variance for the closest spaced samples in a drill-hole database and provides the best indication of the nugget value (variance at the same sample location), and the down-hole range of influence for samples.

**Figure 14.10** shows the results of down-hole linear variography completed on 1.5 m equal length composites of the Au assays cut to 60 gpt maximum, and normalized to the population variance.



**Figure 14.10: Linear Down-Hole Semi-variogram – 1.5 m Composites (Au cut)**

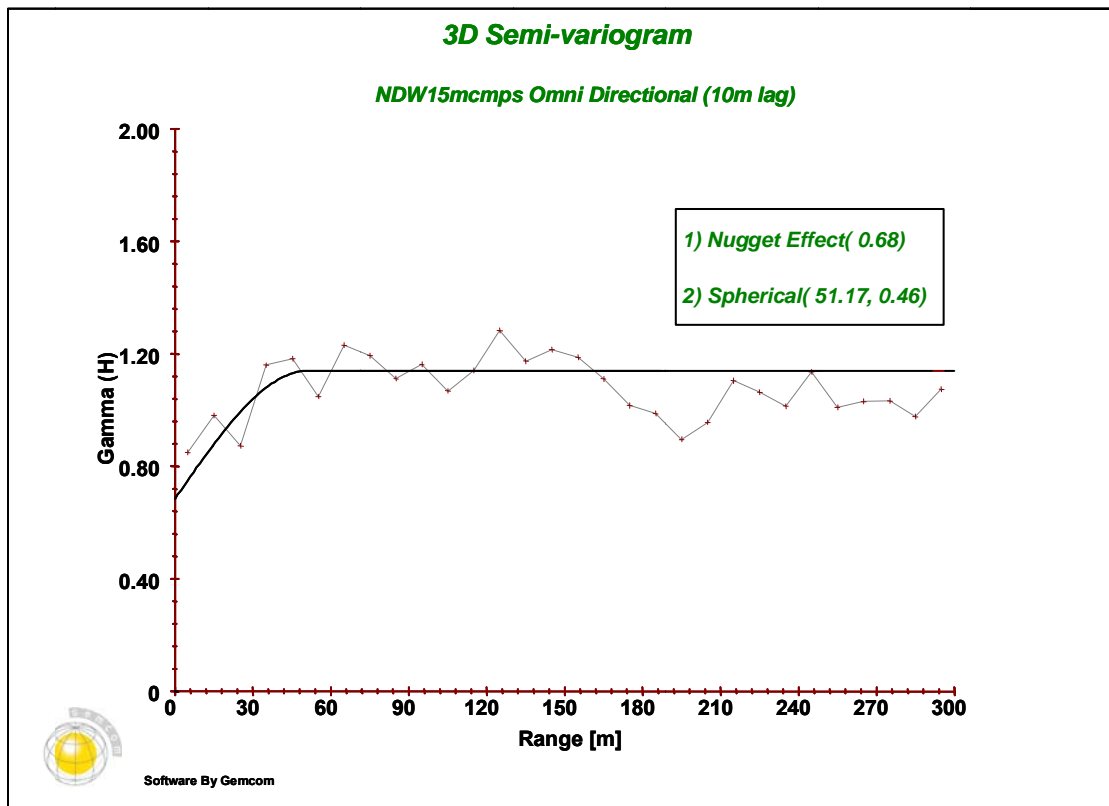
The modelled variogram in **Figure 14.10** indicates a relatively low nugget influence (variance at same sample point) of 0.10 gpt Au. The range of influence down-hole is indicated to be near 4 m, an effectively true width across the strike and dip of mineralization. The 4 m range of influence (radius) corresponds well with the average mineralized zone intersection length of 8.3 m, indicated in **Table 14.8**.

A 3D omni-directional semi-variogram was generated using the 1.5 m composites in an attempt to identify a global range of influence in the data. **Figure 14.11** shows results of the omni-directional modelling and indicates a range of influence of up to 50 m.



**1.5m Equal Length Au Assay Composites (Au cut 60 gpt)**

**Omni Directional Semi-Variogram**



**Figure 14.11: 3D Omni-directional semi-variogram – 1.5 m composites (Au cut)**

3D directional specific variograms were generated in 10° increments of azimuth and dip to identify directions of specific influence on grade. Two specific directions were found to generate variograms that could be well fitted with models, and that were indicative of greater ranges of influence. **Figure 14.12** and **Figure 14.13** display results of the modelled 3D directional variograms along azimuth (Az) 090° dipping -30°, and Az 270° dipping -60°, respectively.

Each of the two directions identified demonstrate ranges from 70 m to near 80 m. The Az 090° - 30° dip direction corresponds with the shallow easterly plunge of one of the higher grade mineralized trends identified from the contouring and geological modelling (see **Figure 14.9**). Similarly, the azimuth 270° -60° dip direction corresponds with the north-westerly plunge of the other higher-grade mineralized trend.

Results from the variography indicate a global correlation of gold values for distances up to 50 m between samples along strike and down-dip, as indicated by the omni-directional variogram. The indicate range across the mineralized zones from the down-hole linear variogram is only 4 m and indicative of the average 8 m width of the Main zone. Correlations for distances up to 75 m are indicated for two specific directions identified from the 3D directional specific variography: 1) Az 090° dip -30°, and; 2) Az 270° dip -60°. The two directions are near normal to one another and would suggest a spherical ellipse could be used; however, variography did not support a 75 m radius in all directions. Two similarly oriented search ellipses each with long axis along the indicated azimuth with range of 75 m and intermediate axis with the global range of 50 m is preferred.

1.5m Equal Length Au Assay Composites (Au cut 60 gpt)

Az 090 Dip -30 (Shallow NE Plunge)

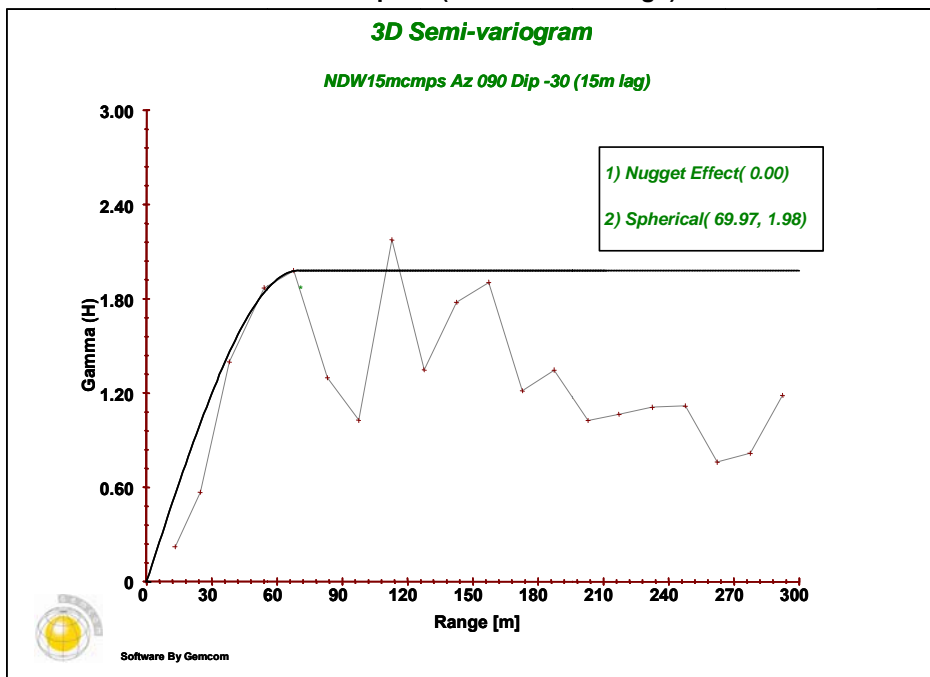


Figure 14.12: 3D directional semi-variogram – 1.5 m composites (Au cut)  
Az 090° Dip -30°

1.5m Equal Length Au Assay Composites (Au cut 60 gpt)

Az 270 Dip -60 (Steep NW Plunge)

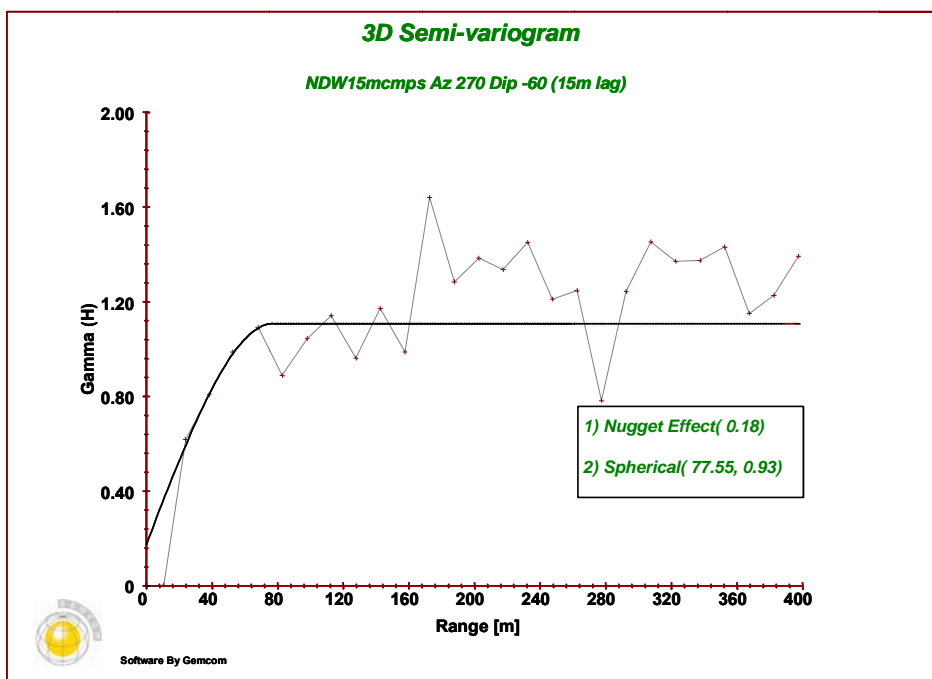


Figure 14.13: 3D directional semi-variogram – 1.5 m composites (Au cut)  
Az 270° Dip -60°

The two ellipses are defined by a single orientation and reversing the ranges of the long and intermediate axis as follows:

Orientation by Z-X-Z Rotation of Axis

1<sup>st</sup> Rotation about Z axis -10° (orient x-axis at strike Az 100°)

1<sup>st</sup> Rotation about X axis -65° (orient y-axis down dip)

2<sup>nd</sup> Rotation about Z axis 30° (orient x-axis rake to Az 090° Dip-30° and y-axis rake to Az 270° Dip-60°)

Search Ellipse 1 - Principal Axis	Az 090° Dip -30° Range 75m
Intermediate Axis	Az 270° Dip -60° Range 50m
Tertiary Axis	Az 190° Dip -25° Range 4m
Search Ellipse 2 - Principal Axis	Az 270° Dip -60° Range 75m
Intermediate Axis	Az 090° Dip -30° Range 50m
Tertiary Axis	Az 190° Dip -25° Range 4m

#### 14.8 Block Modelling & Grade Estimation Parameters

A block model project was established in the GEMS software system to cover the extents of the Nordeau West project area.

The block model geometry is summarized as follows:

Block model origin – UTM x=333050 (Easting), y=5319400 (Northing), z=5400 (Elevation)

No Block Model Rotation (i.e. x=E, y=N, z=El)

Block cell dimensions – 5 m (E), 2.5 m (N) , 5 m (El)

No. of Columns – 160 (E)

No. of Rows – 320 (N)

No. of Levels – 210 (El)

Within the block model project a series of block models were established to store various data.

##### Rock (Mineralized zone) Block Model

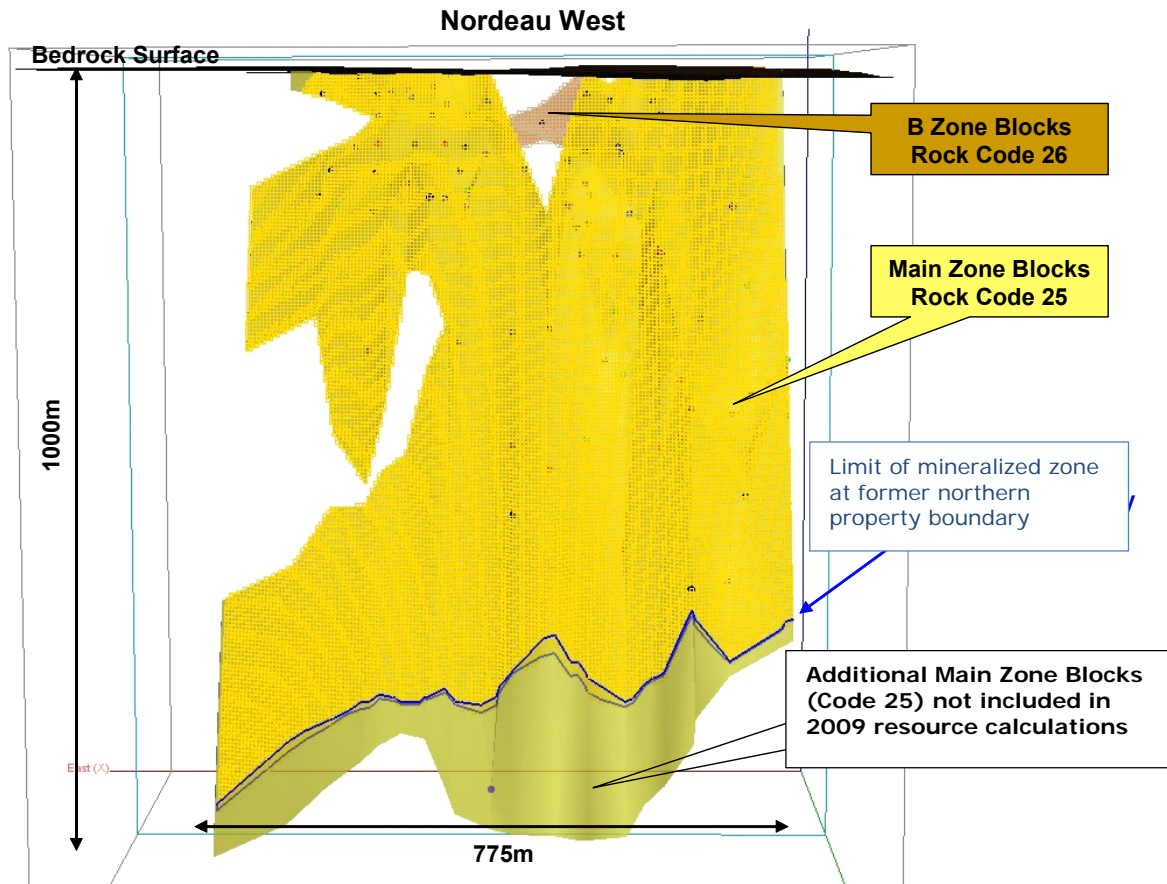
The Main Zone and B Zone solids were used to select and assign unique integer rock codes to blocks that occurred within the respective mineralized zones. A rock code of 25 was assigned to blocks within the Main Zone and 26 to blocks within the B Zone.

The mineralized zones solids were clipped against the bedrock topographic surface so no further treatment was required. No additional rock coding was required for the rock block model as only the mineralized zones blocks require grade estimation. **Figure 14.14** displays the mineralized zone coded Rock block model. A total of 110,969 blocks were assigned to the Main Zone (rock code 25), and 2,203 blocks were assigned to the B Zone (rock code 26). The aggregated 113,172 blocks represent the maximum number of blocks that could be grade estimated.

##### Percent Block Model

A Percent block model was established and populated with the calculated percentages for blocks within the mineralized zones solids. The Percent block model was used to weight blocks for volumetric and resource reporting.

**DDH Intersection Grade x Length Colour Contours & Rock Block Model**



**Figure 14.14: 3D E-W Longitudinal Section View – Mineralized zone Block Model**

Grade Block Model

A grade block model was established to store calculated grades using predefined sample search and grade interpolation profiles detailing the criteria and parameters for grade interpolation.

Grade Estimation Parameters

A search/interpolation profile was established with the following parameters to estimate grade.

Points Used for Estimate - 1.5 m assay composites within defined limits of mineralized zones solid  
 Au cut to 60 gpt max before compositing  
 Stored with respective mineralized zone integer rock codes

Blocks Estimated - Blocks with Rock Code 25 estimated by Points with Rock Code 25 only  
 Blocks with Rock Code 26 estimated by Points with Rock Code 26 only

Search Type – Octant sub-divided Ellipsoid

Minimum No. of Samples - 1 for Inferred Estimates, 6 for Indicated Estimates (i.e., 2 holes)  
 Maximum No. of Samples - 24  
 Maximum No. of Samples per Hole – 4  
 Maximum No. of Samples per Octant – 6

Search & Interpolation Ellipse Orientation & Ranges

In order to most accurately estimate resources as indicated by variography results and supported by the geological interpretation, two similarly oriented ellipsoids were used to select and interpolate grades along the indicated trends of mineralization using longer ranges for the primary axis of each ellipse.

The two preferred trends are normal to one another with nearly the same indicated ranges from variography. Each of the two search ellipses used for search interpolation are defined with the same Z-X-Z axis of rotation to orient the ellipse in the 100° azimuth and -65° dip of the mineralized zone. The first ellipse is defined with the X-axis as the primary axis with longer range along the 090° azimuth -30° trend (i.e., northeast plunging). The second ellipse is defined with the Y-axis as the primary axis with longer range of influence along the 270° azimuth -60° trend (i.e., northwest plunging). For both ellipsoids, the intermediate axis is defined along the other trend direction and specified with the shorter range as indicated from the omni-directional variogram.

The Z-X-Z Rotation for both ellipses is defined as follows:

- 1<sup>st</sup> Rotation about Z axis -10°
- 1<sup>st</sup> Rotation about X axis -65°
- 2<sup>nd</sup> Rotation about Z axis 30°

In order to more accurately estimate and categorize resources, it was determined that two separate grade interpolations were required using search-interpolation ellipses with varying ranges. In general, 66% of the indicated ranges from variography were used to define the x-axis and y-axis ranges of the ellipses used to estimate Indicated Resources. As only composite points within the mineralized zone were used for estimation, a longer tertiary Z-axis range was used to ensure samples were included from along strike and down-dip, despite minor local variations.

The log-normal probability plot of the 1.5 m mineralized zone composites indicates a high-grade subpopulation of samples >8.5 gpt Au. The range of influence was reduced 50% for the high-grade subpopulation of samples. The z-axis range for high-grade samples >8.5 gpt Au was restricted to 3.0 m to prevent spreading of narrow high-grade intersections across the mineralized zone.

Search-Interpolation Ranges Used for Indicated Resource Estimates

- ~66% of indicated range for x and y axis
- 50% of x and y axis range for samples >8.5 gpt Au
- z-axis increased to 15 m to allow for variations in strike/dip
- z-axis for high-grade samples >8.5 gpt Au restricted to 3.0m

Ellipse 1

Principal X-Axis along Az 090° Dip -30°  
 Range X – 50m  
 Range Y – 35m  
 Range Z – 15m

High-grade >8.5 gpt Au Ranges  
 Range X – 25m  
 Range Y – 17.5m  
 Range Z – 3m

Ellipse 2

Principal Y-Axis along Az 270° Dip -60°  
Range X – 35m  
Range Y – 50m  
Range Z – 15m

High-grade >8.5 gpt Au Ranges  
Range X – 17.5m  
Range Y – 25m  
Range Z – 3m

Search-Interpolation Ranges Used for Inferred Resource Estimates

133% of indicated range for x and y axis  
100% of x and y axis range for samples >8.5 gpt Au  
z-axis increased to 20 m to allow for variations in strike/dip  
z-axis restricted to 6 m for high-grade samples >8.5 gpt Au

Ellipse 1

Principal X-Axis along Az 090° Dip -30°  
Range X – 100m  
Range Y – 70m  
Range Z – 20m

High-grade >8.5 gpt Au Ranges  
Range X – 50m  
Range Y – 35m  
Range Z – 6m

Ellipse 2

Principal Y-Axis along Az 270° Dip -60°  
Range X – 70m  
Range Y – 100m  
Range Z – 20m

High-grade >8.5 gpt Au Ranges  
Range X – 35m  
Range Y – 50m  
Range Z – 6m

Special Block Models

Two special block models, in addition to the Au-grade block model, were established to store values calculated during the grade interpolation process. The distance to the nearest sample point for each block estimated was stored in a block model. Similarly, the total number of points used to estimate blocks was stored in a block model. These special models were used to assist the categorization of estimated resources. Blocks estimated with 6 or more points were flagged as Indicated Resource blocks. Since a maximum of 4 samples per hole was established in the interpolation profile criteria, blocks calculated with 5 or more samples include a minimum of 2 drill-holes.

Grade Interpolation

An inverse distance squared algorithm was used to calculate the grades stored in the grade block model. Initial grade interpolation was completed using all parameters defined above for estimating Indicated Resources

Grade interpolation was first completed using the ellipse ranges defined for estimating Indicated Resources. Ellipse 1, oriented on the shallow easterly plunge, was used for the first interpolation, populating a total of 14,924 blocks with grade. A second interpolation, using Ellipse 2 oriented on the steep northwest plunge, up-dated only blocks with zero-grade, and populated an additional 2,900 blocks with grade.

A comparison was completed reversing interpolations with Ellipse 2 first and then up-dating the unestimated blocks with the Ellipse 1 interpolation. The resulting number of blocks was similar; however, significantly fewer blocks were estimated initially by Ellipse 2 versus Ellipse 1, suggesting that Ellipse 1 may be oriented along the principal plunge of higher-grade zones or shoots.

As a result, final Indicated Resource grade estimates were calculated applying Ellipse 1 first, followed by a second interpolation using Ellipse 2, and up-dating only previously unestimated blocks.

Subsequent to interpolation of grades using the indicated resource estimate parameters, a second series of interpolations were completed, in order to estimate grades using the Inferred Resource estimation parameters.

Search ellipse 1 with the longer inferred ranges was used to interpolate grade in unestimated blocks and estimated grade for an additional 48,061 blocks. Subsequently, search ellipse 2 with the longer inferred ranges was used to interpolate grade into unestimated blocks and estimated grade in an additional 4,355 blocks.

A total of 17,824 grade blocks are categorized as Indicated Resources, whereas an additional 52,416 grade blocks are categorized as Inferred Resources. The total resource occurs within a total of 70,240 estimated grade blocks.

#### **14.9 Specific Gravity & Volumetrics**

The only recorded data for specific gravity (SG) measurements of mineralized samples at Nordeau West are from 6 samples of core from historic hole 10-484-82-30. The average of the 6 recorded SG measurements is 2.90 g/cm<sup>3</sup> with a marginally higher sample length weighted average of 2.92 g/cm<sup>3</sup>. The historic resource and reserve estimates (see **Section 6**), although not compliant by current NI 43-101 regulations, used an SG of 2.90 for calculations. Considering further that the mineralized zones are frequently logged with up to 10%-15% sulphides supports justification for using a specific gravity of 2.90 to calculate resource tonnage.

The Main Zone and B Zone rock codes were assigned specific gravities of 2.90 g/cm<sup>3</sup> for calculating tonnages. In addition, the percent model was used to weight the estimated blocks by the percent of the block within the mineralized zone for the reported resources.

#### **14.10 Dilution & Recovery**

No considerations were made for dilution or recovery, and no crown pillar was subtracted from the estimated resources.

#### **14.11 Metallurgical Considerations**

The Authors are not aware of any metallurgical studies from the Nordeau West area; however, the mineralization is documented to contain up to 10%-15% sulphides with arsenopyrite. No considerations have been made for potential refractory components to the mineralization or any other possible metallurgical issues.

#### **14.12 Environmental Considerations**

No considerations have been made for any possible environmental issues. The mineralization is noted to contain up to 10%-15% sulphides with arsenopyrite. Any potential mining and milling operations will need to evaluate the impact of mine waste rock and mill tailings disposal in consideration of potential acid drainage and contained levels of arsenic.

**14.13 Cut-off Grade**

**Figure 14.15** is a graph of the US\$ daily average gold price showing 100 day and 200 day moving averages for a 10 month period to Jan 31, 2017. An approximate mid-point of US\$1250/oz Au was selected for cut-off grade calculations.



**Figure 14.15: Gold price (US\$/oz Au) – daily, 100- and 200-day moving averages**

**Table 14.10** provides the Bank of Canada monthly average US\$ exchange rates for approximately the same period (April 1, 2016 - January 31, 2017). The mean of the monthly average exchange rates for the last 10 months is calculated at 1 \$US = 1.31 \$CAD and is the value used to convert the US\$ gold price to CDN\$ for cut-off grade calculations.

**Table 14.10: Bank of Canada Monthly Average US\$ Currency Exchange Rates**

Month (2016)	USD to CAD	CAD to USD
April	1.3226	0.7561
May	1.2819	0.7801
June	1.2942	0.7727
June	1.2896	0.7754
July	1.305	0.7663
August	1.2994	0.7696
September	1.3109	0.7628
October	1.3251	0.7547
November	1.3438	0.7442
December	1.3329	0.7502
January (2017)	1.3191	0.7581
<b>Average</b>	<b>1.3105</b>	<b>0.7631</b>



Potential exploitation of the estimated resources at Nordeau West will likely require underground mining methods, most probably accessed by a vertical shaft due to the depth of the indicated zones of mineralization. The Main Zone is modestly wide, with an average near-true thickness >8 m, and is locally indicated to be consistent along strike (110°) and dip (-65°) dip. Lower cost long hole stoping methods might be used for potential mining. Mining costs for underground bulk mining methods are estimated at \$70-\$100/tonne depending on the amount of development work required. Milling & processing costs are estimated at an additional \$50-\$70/tonne to recover gold.

Mineralization at Nordeau West has been characterized as similar to the historic Chimo Mine, located 2 km to the west, and would likely require similar metallurgical processing, namely flotation concentration followed by cyanide leaching, to recover gold.

Total production costs are estimated to range from \$120-\$170/tonne and hence, the mid-point \$145/tonne was used for the cut-off grade calculation (**Table 14.11**). The formula for cut-off grade determination is as follows:

$$\frac{\$Production}{145\$/tonne} / \left( \frac{\$1250}{\$US} \times 1.31 \right) / 31.1 = 2.75 \text{ gpt}$$

**Table 14.11: Cut-off Grade Calculations - Nordeau West Resource**

<b>Production Cost Estimates (\$)</b>					
	low	high	avg		
Mining Costs	100.00	130.00	115.00		
Processing Costs	20.00	40.00	30.00		
<b>Total Costs (\$)</b>	<b>120.00</b>	<b>170.00</b>	<b>145.00</b>		
<b>Cut-off Grade Parameters &amp; Calculation</b>					
<b>\$US/oz Au</b>	<b>\$Cdn/\$US</b>	<b>\$CDN/oz /Au</b>	<b>gm/oz Au</b>	<b>Costs \$/t</b>	<b>Cut-Off g/t</b>
				120.00	2.28
1250.00	1.31	1637.50	52.65	145.00	2.75
				170.00	3.23

For the determined range of estimated production costs (i.e., \$120 - \$170), the cut-off grades range respectively between 2.28 gpt Au to 3.23 gpt Au (**Table 14.11**). Thus, for each \$10 incremental change in estimated production costs, there is a resulting 0.19 gpt change in the calculated cut-off grade. This demonstrates the high degree of sensitivity of the estimated production cost variable in the cut-off equation. In addition, the price of gold and the foreign currency exchange rate variables, may also significantly influence the cut-off grade.

#### 14.14 Resource Estimate

Results of the resource estimate are presented herein. The estimated resource is reported at 0.25 gpt Au incremental cut-off grades ranging from 2.0 gpt Au to 3.5 gpt Au. The estimated grades of between 2.25 gpt Au and 3.25 gpt Au are considered the most representative for the range of estimated production costs. The estimates that are reported and highlighted at the 2.75 gpt Au cut-off represent the mid-point, and were applied to the final reported Mineral Resource Estimate.

Estimated resources were also calculated using cut-off grades of 1.0 gpt Au and 1.5 gpt Au in order to demonstrate the wider general extent and trend of the mineralization, and for targeting future drilling of potentially higher-grade resources.

Measured Resources

The mineralized zone model was constructed from interpretation of relatively widely spaced exploration drill-hole data, and suggests that the Main Zone is relatively continuous along strike and down-dip. Numerous faults and narrow shears documented in the drill-logs are interpreted to cross-cut the mineralized zone, locally shearing and/or disrupting the continuity of mineralization. The current interpretation is supported by the geological evidence; however, considerable variations to the interpretation are possible. The result is a low to moderate confidence level for the interpretation and model. The nature of the mineralization, geological environment and low to moderate confidence level in the interpretation precludes categorizing any of the resources as Measured Resources. No Measured Resources are reported for the Nordeau West deposit.

Indicated Resources

The low to moderate confidence level of the interpretation and mineralized zone model is supported by good statistical correlation of assay results from the variography. The variography indicates correlation of grades along specific trends for ranges (distances) up to maximum distances, beyond which correlation is lost. The confidence level at the maximum distance (i.e. variance) is low, but increases as the distance and variance is reduced. At 66% of the indicated maximum ranges, the confidence level of correlation is considered sufficient to categorize the estimated resources as Indicated Resources, provided a minimum of 2 drill-hole intersections (5 composite points) were included in the estimation.

**Table 14.12** provides results for each of the mineralized zones and for the total Indicated Resource estimates, at various cut-off grades.

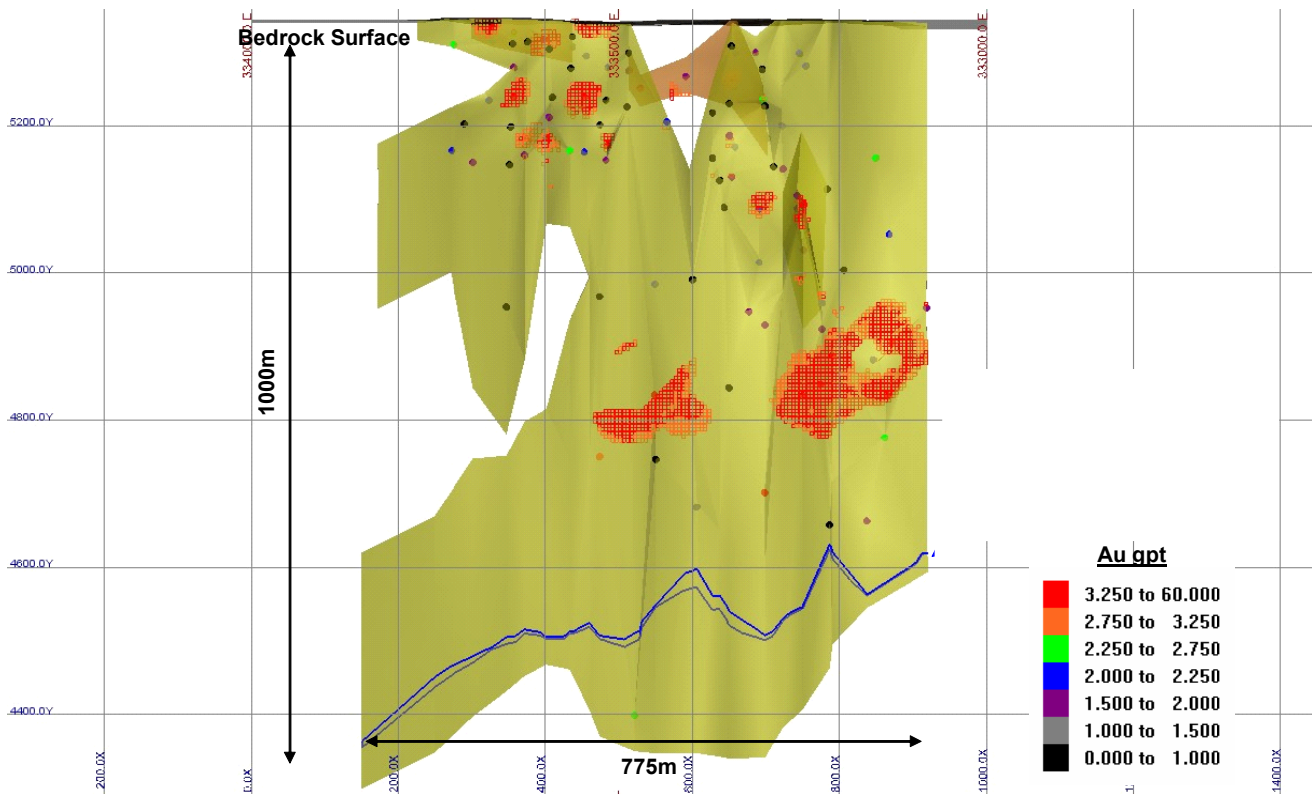
**Table 14.12: Indicated Resources at Incremental Cut-off Grades**

Zone	Cut-off Grade gpt Au	Volume m3	Density T / m3	Tonnage T	Grade gpt Au	In-Situ Au Au oz
<b>Main</b>	1.00	387,194	2.90	1,122,861	2.12	76,590
	1.50	233,816	2.90	678,066	2.72	59,261
	2.00	145,858	2.90	422,987	3.30	44,852
	2.25	115,373	2.90	334,582	3.61	38,847
	2.50	92,293	2.90	267,649	3.92	33,755
	<b>2.75</b>	<b>77,028</b>	<b>2.90</b>	<b>223,382</b>	<b>4.18</b>	<b>30,019</b>
	3.00	65,055	2.90	188,660	4.42	26,806
	3.25	55,168	2.90	159,988	4.65	23,928
	3.50	44,213	2.90	128,219	4.97	20,476
<b>B</b>	1.00	10,228	2.90	29,660	2.06	1,965
	1.50	9,124	2.90	26,459	2.14	1,822
	2.00	5,894	2.90	17,094	2.34	1,285
	2.25	2,683	2.90	7,779	2.62	655
	2.50	1,532	2.90	4,443	2.81	402
	<b>2.75</b>	<b>676</b>	<b>2.90</b>	<b>1,960</b>	<b>3.07</b>	<b>193</b>
	3.00	134	2.90	389	3.74	47
	3.25	90	2.90	260	4.10	34
	3.50	86	2.90	249	4.13	33
<b>Total</b>	1.00	397,421	2.90	1,152,522	2.12	78,556
	1.50	242,940	2.90	704,525	2.70	61,083
	2.00	151,752	2.90	440,081	3.26	46,137
	2.25	118,056	2.90	342,361	3.59	39,503
	2.50	93,825	2.90	272,092	3.90	34,157
	<b>2.75</b>	<b>77,704</b>	<b>2.90</b>	<b>225,342</b>	<b>4.17</b>	<b>30,212</b>
	3.00	65,189	2.90	189,049	4.42	26,853
	3.25	55,258	2.90	160,248	4.65	23,963
	3.50	44,299	2.90	128,468	4.96	20,509

The Total Indicated Resource for the Nordeau West property is estimated at 225,212 tonnes grading 4.17 gpt Au at the calculated cut-off grade of 2.75 gpt Au.

The Indicated Resource contains 30,212 oz of Au, almost all of which is within the Main Zone; the B Zone contains only 1,960 tonnes at an estimated grade of 3.07 gpt Au. For the low and high ranges of probable cut-off grade, the Indicated Resources vary from 342,000 tonnes grading 3.59 gpt Au to 160,000 tonnes grading 4.65 gpt Au.

**Figure 14.16** displays the Indicated Resource grade estimated blocks above the reported 2.75 gpt Au cut-off.



**Figure 14.16: East-west section view looking south showing Indicated Resource blocks & drill-hole intersections**

Of the 97 drill-hole intersections, 68 (i.e., >70%) are within 300 m of surface. Distribution of the holes and intersection points is relatively uniformly spaced - approximately 25 m - 50 m apart, with some larger gaps. The Indicated Resources in this part of the mineralized envelope occur in small discontinuous lenses or “shoots” with <50 m block-dimensions.

From 300 m - 700 m below surface, there are 28 drill-hole intersections, the spacing of which increases greatly, from approximately 50 m to >100 m, with significantly larger gaps between the hole traces, especially in the eastern half of the property. Below 700 m depth there is only 1 drill-hole intersection (see **Figure 14.16**).

The most significant part of the Indicate Resource lies at depths between 400 m and 600 m. At this depth, the current drill-hole spacing is too wide for some intersections to contribute to the Indicated Resources with the minimum 2 hole requirement and specified distance.

Inferred Resources

Inferred Resources were estimated using the more relaxed parameters and longer ranges as detailed earlier in the report. **Table 14.13** provides estimates for the additional Total Inferred Resources, subdivided for the 2 mineralized zones at various cut-off grades.

**Table 14.13: Estimates of Additional Inferred Resources at Various Cut-off Grades.**

Zone	Cut-off Grade gpt Au	Volume m3	Density T / m3	Tonnage T	Grade gpt Au	In-Situ Au Au oz
Main	1.00	1,263,375	2.90	3,663,788	2.41	284,312
	1.50	852,095	2.90	2,471,076	2.97	235,665
	2.00	636,689	2.90	1,846,397	3.38	200,423
	2.25	543,433	2.90	1,575,955	3.59	181,850
	2.50	417,118	2.90	1,209,642	3.96	153,994
	<b>2.75</b>	<b>378,534</b>	<b>2.90</b>	<b>1,097,749</b>	<b>4.10</b>	<b>144,635</b>
	3.00	328,777	2.90	953,452	4.27	131,061
	3.25	275,399	2.90	798,657	4.50	115,671
	3.50	247,691	2.90	718,305	4.63	106,993
	B	1.00	24,986	2.90	72,461	2.24
1.50		19,485	2.90	56,507	2.47	4,487
2.00		12,662	2.90	36,719	2.85	3,365
2.25		10,005	2.90	29,016	3.05	2,841
2.50		7,610	2.90	22,070	3.25	2,310
<b>2.75</b>		<b>5,025</b>	<b>2.90</b>	<b>14,572</b>	<b>3.59</b>	<b>1,680</b>
3.00		4,320	2.90	12,527	3.70	1,492
3.25		2,677	2.90	7,764	4.11	1,027
3.50		2,463	2.90	7,142	4.17	959
Total		1.00	1,288,362	2.90	3,736,249	2.41
	1.50	871,580	2.90	2,527,583	2.95	240,152
	2.00	649,350	2.90	1,883,116	3.37	203,789
	2.25	553,438	2.90	1,604,970	3.58	184,691
	2.50	424,728	2.90	1,231,712	3.95	156,304
	<b>2.75</b>	<b>383,559</b>	<b>2.90</b>	<b>1,112,321</b>	<b>4.09</b>	<b>146,315</b>
	3.00	333,096	2.90	965,979	4.27	132,553
	3.25	278,076	2.90	806,422	4.50	116,697
	3.50	250,154	2.90	725,447	4.63	107,952

For the low and high ranges of probable cut-off grade, the Inferred Resources vary from 1.60 million tonnes grading 3.58 gpt Au to 0.81 million tonnes grading 4.50 gpt Au. The Indicated Resource is almost entirely within the Main Zone, with the B Zone containing only 14,572 tonnes at an estimated grade of 3.59 gpt Au.

**The Total Inferred Resource for the Nordeau West property is estimated at 1.11 million tonnes grading 4.09 gpt Au at the calculated cut-off grade of 2.75 gpt Au. The Inferred Resource contains an estimated 146,000 oz of Au.**

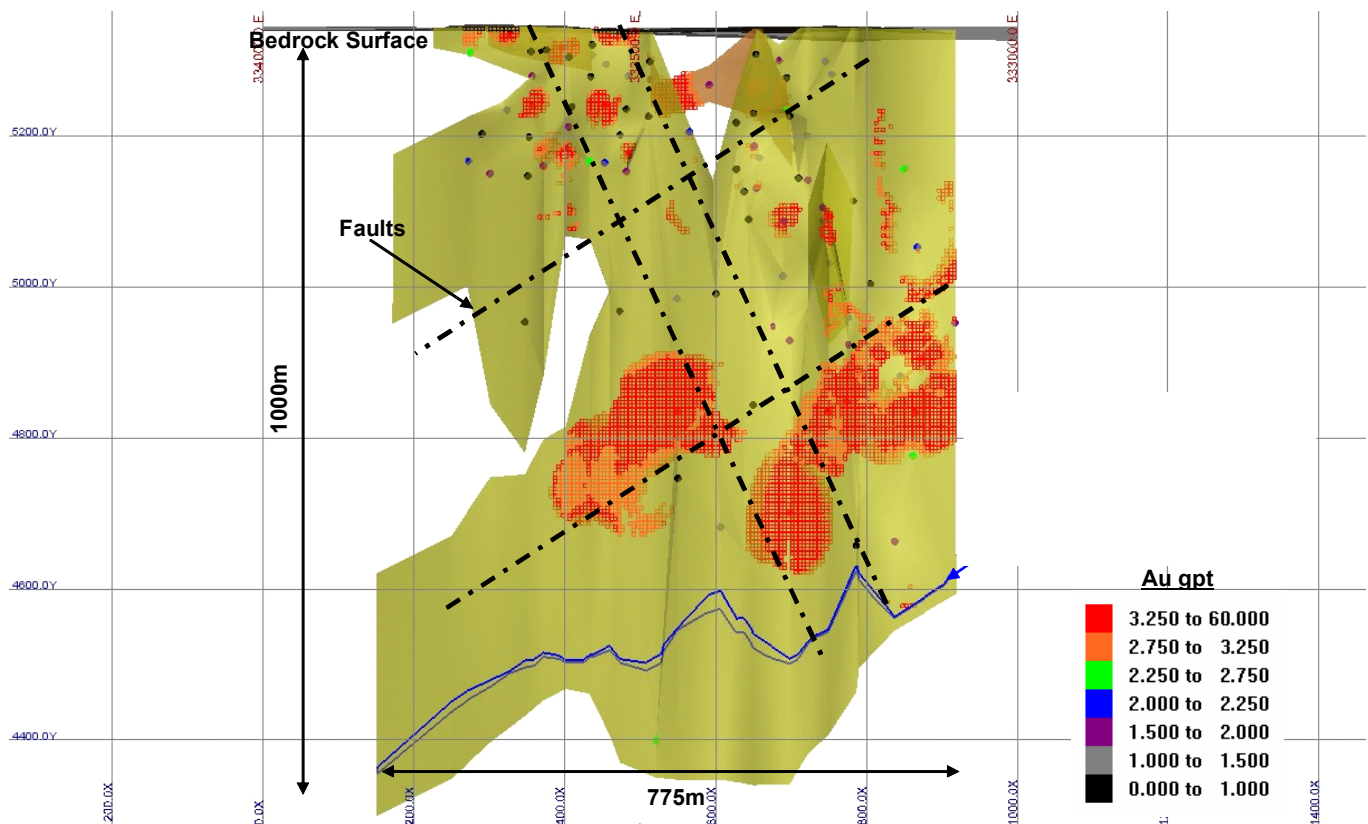
### 14.15 Summary of Categorized Resources

Table 14.14 provides a summary of the categorized resources estimated at the calculated cut-off grade of 2.75 gpt Au for the Nordeau West deposit.

**Table 14.14: Summary of Categorized Resources at 2.75 gpt Au Cut-off Grade**

Resource (Category)	Zone	Tonnes	Au Grade (gpt)	In-Situ Au (oz)
<b>Measured Indicated</b>	No Measured Resources			
	Main	223,382	4.18	30,019
	B	1,960	3.07	193
	<b>Total</b>	<b>225,342</b>	<b>4.17</b>	<b>30,212</b>
<b>Measured + Indicated</b>	<b>Total</b>	<b>225,342</b>	<b>4.17</b>	<b>30,212</b>
<b>Inferred</b>	Main	1,097,749	4.1	144,635
	B	14,572	3.59	1,680
<b>Total Inferred</b>	<b>Total</b>	<b>1,112,321</b>	<b>4.09</b>	<b>146,315</b>

Figure 14.17 is an east-west, south-facing longitudinal section displaying the total estimated resource blocks at the reported cut-off grade of 2.75 gpt Au.



**Figure 14.17: 2-D south-facing longitudinal section – mineralized zone block model**

### 14.16 Conclusions

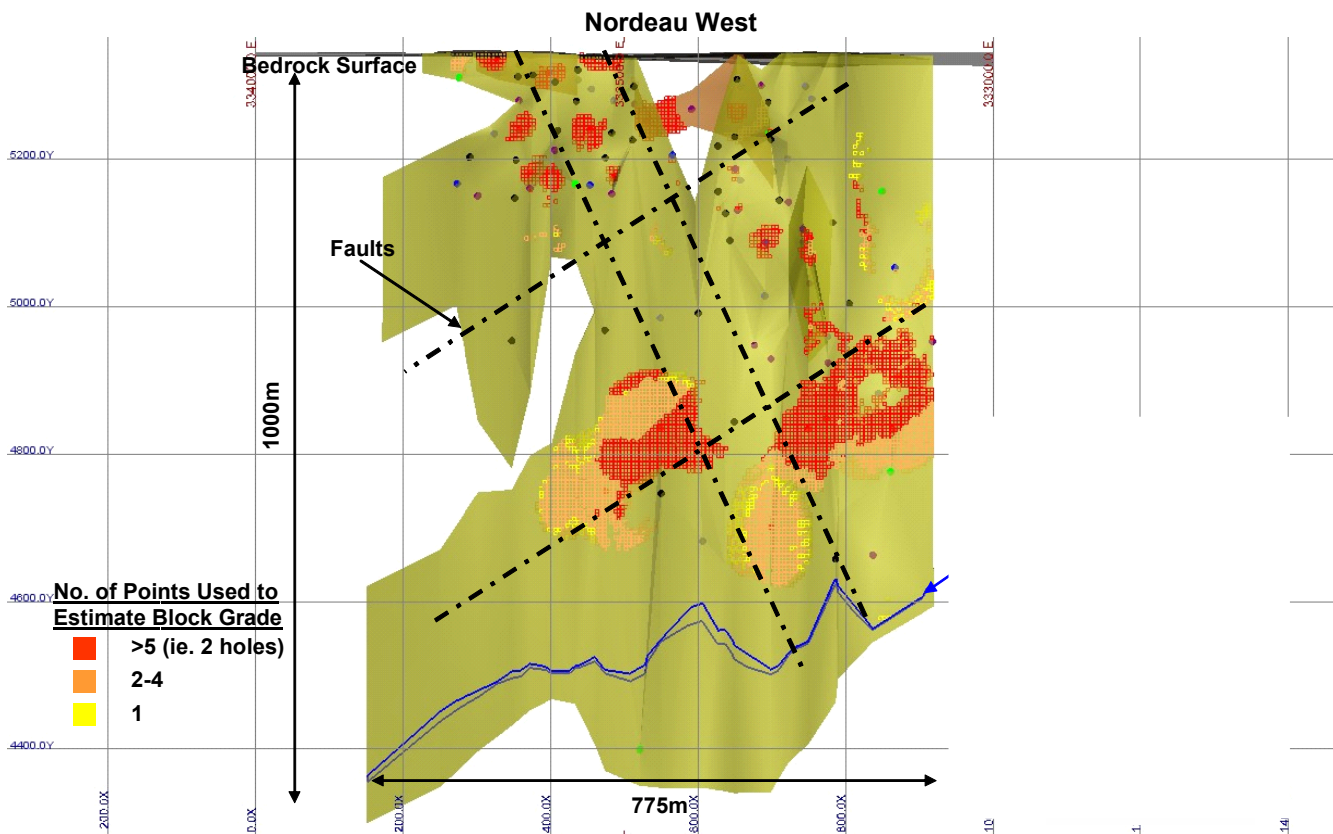
The total Mineral Resource Estimate can be seen to occur primarily within 2 or 3 lenses located at depths from 400 m to 750 m (**Figure 14.17** and **Figure 14.18**). The zones are elongated along a shallow easterly plunge, and are likely crosscut and offset, as shown, by interpreted faults.

No drilling has been completed further eastward along the continued shallow easterly plunge at the required vertical depths between 700 m to 1000 m to intersect the mineralization.

The results further demonstrate that the resources identified in the upper (shallow) part of the deposit have clearly been affected by strong shearing, as the zones are truncated into small lenses (see **Figure 14.17** and **Figure 14.18**). Due to their smaller dimensions, these zones may require significant additional higher cost mining to exploit; however, the resources are shallow and would be accessible via a ramp, at a relatively low cost compared to a shaft.

**Figure 14.18** is an east-west longitudinal section (facing south) and displays the number of points that were used for estimating the total resource blocks grading above 2.75 gpt Au.

**Number of Sample Points Used to Estimate Total Resource Blocks >2.25 gpt Au & DDH Intersections**

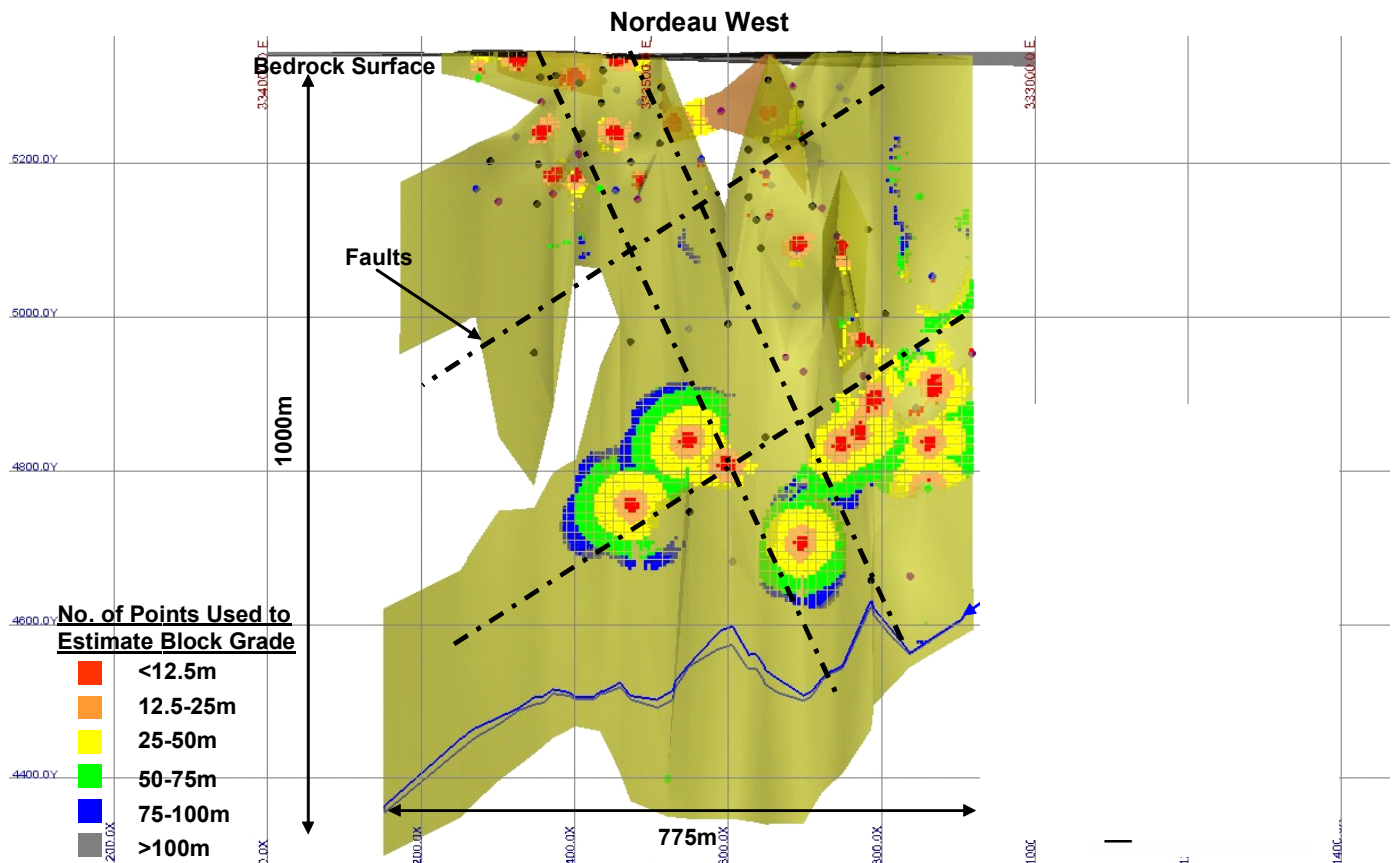


**Figure 14.18: 2-D south-facing section – points used to estimate block-grades**

**Figure 14.19** portrays the same south-facing longitudinal section as **Figure 14.18**, but shows the distance to the nearest sample point that was used for estimating the total resource blocks grading above 2.75 gpt Au.

**2D E-W Long Section View (Facing South)**

**Distance to Nearest Sample Used to Estimate Total Resource Blocks >2.25 gpt Au & DDH Intersections**



**Figure 14.19: 2-D south-facing longitudinal section – mineralized zone block model**

It can be seen in **Figure 14.18** that in the mineralized zones identified at depths between 400 m - 625 m, a large part of the resource has been estimated with results from 2 or more drill-holes (i.e., blocks with >5 sample points used for estimate); however, **Figure 14.19** shows that it is primarily the distance between the drill-holes at this depth that prevented many of these blocks from reporting as Indicated Resources, as the maximum distance allowable between sample points (i.e., drill-holes) for the Indicated Resource category, was exceeded.

The mineralization in the upper eastern part of the deposit can be seen to have been interpolated primarily by a minimum of 2 holes (i.e., >5 sample points) and within the maximum 50 m allowable search distance that defines Indicated Resources. The maximum extents of these smaller lenses or “shoots” at <50 m is defined by the density of drill data, and not by a lack of drilling.

The results from the 3 models presented can be used to target further exploration with apparent opportunity to increase and enhance the existing resources.

The density of drilling in the upper part of the deposit has delineated several smaller lenses of mineralization; however, there is little opportunity to increase or enhance these zones by further drilling.

The significant part of the identified resource occurs in the newly developed zones from the more recent drilling at depths between 400 m and 625 m. The models demonstrate primarily that:

1. in-fill drilling could, if successful, convert much of the Inferred Resources in these zones to Indicated Resources, as it is only the >50 m drill-hole spacing that precluded blocks estimated from 2 or more drill-holes (i.e., minimum 5 samples) not to be categorized as Indicated Resources;
2. the blocks shown with >75 m distance between sample points tend to be clustered on the down-plunge or up- and down-dip side of the zones and indicate the directions in which the resource might be expanded. Eastward from the centre of the property, drilling is absent at depths between 650 m and 1000 m along the indicated shallow easterly plunge of the zones.



## 15.0 ADJACENT PROPERTIES

Of significance to this project is the adjacent property of Cartier Resources Inc., located near the centre of the East Cadillac Gold Property, (see **Figure 4.1**), that hosts the former Chimo Mine.

The mine was first operated by Chimo Gold Mines Ltd in 1966-67. Production resumed in 1984 with Louvem as operator for 5 years before management was handed out to Cambior who operated until the end of 1996. The infrastructure on the mine site (**Figure 15.1**) were dismantled in 2007 and there are no longer any structures on the site.



**Figure 15.1: Former Chimo Gold Mine (July 2006).**

The Chimo Mine produced in excess of 379,000 ounces from approximately 2.4 million tonnes of ore yielding an average grade of 4.9 gpt Au, in three distinct production phases. Production came from 6 different ore shoots extending from near surface to a depth of some 870 m, the first two to the north in close association with sedimentary banded iron formations and the others as gold bearing quartz lenses in sheared and altered mafic volcanics (DV97-01, GM48430, GM60091, MB87-05, MB88-14)...

The deposit is similar in mineralogy and structure to the Nordeau West deposit, which lies less than 2 km on-strike to the east. As at the Nordeau West deposit, two different styles of gold mineralization are recognized at Chimo: (1) gold-quartz lenses in longitudinal shear zones in metamorphosed volcanic rocks and (2) bands of semi-massive arsenopyrite and pyrrhotite associated with banded magnetite iron formation.

A major fault splay extending southeast off the Cadillac Tectonic Zone may extend to the Chimo mine, and an important fault could separate the sedimentary and volcanic rocks.

## **16.0 OTHER RELEVANT DATA AND INFORMATION**

The authors are not aware of any additional technical data that might lead an accredited investor to a conclusion contrary to that set forth in this report.

## 17.0 INTERPRETATION AND CONCLUSIONS

Chalice is in the process of exploring its mineral concessions in the eastern Abitibi Greenstone Belt of western Quebec (the East Cadillac Gold Property) to evaluate them for high-quality gold mineralization targets. Detailed exploration and drilling is proposed for several areas on the Property in order to validate historical work, increase the defined mineral resources, and potentially delineate new resources.

The East Cadillac Gold Project overlies a tectonostratigraphic corridor characterized by anastomosing high-strain zones (“shear-zones”), ranging in thickness and intensity, that divide the host sedimentary and mafic volcanic rock into hectometric to kilometric “lozenges” of relatively undeformed rock. This “corridor” is interpreted to represent the eastern extension of the renowned Larder Lake-Cadillac Break (Cadillac Tectonic Zone) - a 300 km long, first-order tectonic “break” that defines the Pontiac-Abitibi subprovince boundary in the region, and is host to numerous syn-deformational, epigenetic quartz-vein/disseminated gold-ore systems. The shear-zones and the secondary fracturing and brecciation that have affected the rocks underlying the Property are of primary importance to mineralization, as they are interpreted to have acted as the principle passage ways for sulphide- and gold-bearing solutions.

Gold mineralization underlying the East Cadillac Gold Property is epigenetic in origin and present in two settings:

1. gold mineralization occurs in silicified lodes with disseminated to semi-massive sulphides (arsenopyrite, pyrrhotite and pyrite) spatially related to sedimentary banded iron formations. Secondary quartz veining is commonly associated with this type of mineralization.
2. structurally controlled gold mineralization occurring in altered high-strain (sheared) zones associated with quartz or quartz and carbonate veins that parallel the schistosity and shear zones (typically in the volcanic rock units). Associated disseminated sulphides include arsenopyrite, pyrite and minor chalcopyrite; graphitic horizons are common.

Both types of mineralization occur as free gold associated with sulphide minerals that range from 1% to 5% when in quartz veins, and up to 20% to 50% when associated with magnetite iron formations.

The economic potential for gold mineralization underlying the Project area was recognized over sixty years ago; however, most of the ground covered by the current Property has remained relatively inactive from the early 1990’s until recently. After acquiring the better part of the eastern half of the current Property in 2006, Plato Gold Corp. completed a 6 year exploration programme that successfully defined a gold resource at their Nordeau West project, which is now part of Chalice’s East Cadillac Gold Project.

This report includes an updated NI 43-101 Mineral Resources Estimate for the East Cadillac Gold Property defined at the Nordeau West project (Catalogued Occurrence 32C/03-0060). A summary of the categorized resources estimated at the calculated cut-off grade of 2.75 gpt Au for the Nordeau West deposit is shown in **Table 17.1**. The mineralized envelope dips steeply to the north-northeast and extends to a depth of at least 700 m. It remains open down-dip and along strike.

The authors conclude that the East Cadillac Gold Property is one of merit and should be the subject of continued exploration.

**Table 17.1: Summary of Categorized Resources at 2.75 gpt Au Cut-off Grade: Nordeau West project - East Cadillac Gold Property**

Resource (Category)	Zone	Tonnes	Au Grade (gpt)	In-Situ Au (oz)
<b>Measured Indicated</b>	No Measured Resources			
	Main	223,382	4.18	30,019
	B	1,960	3.07	193
	<b>Total</b>	<b>225,342</b>	<b>4.17</b>	<b>30,212</b>
<b>Measured + Indicated</b>	<b>Total</b>	<b>225,342</b>	<b>4.17</b>	<b>30,212</b>
<b>Inferred</b>	Main	1,097,749	4.1	144,635
	B	14,572	3.59	1,680
<b>Total Inferred</b>	<b>Total</b>	<b>1,112,321</b>	<b>4.09</b>	<b>146,315</b>

## 18.0 RECOMMENDATIONS

The Nordeau West resources were largely developed from the success of recent drilling campaigns (2006-2011). The success is attributed to the re-analysis of historic drilling data using modern 3D geological modelling, grade contouring and experimental block modelling for targeting exploration drilling.

Future exploration work on the East Cadillac Gold Property is warranted. The work programs should include diamond-drilling focused on further delineating the mineralized horizons present at Nordeau West by expanding the Main Zone and B Zone at depth and along the indicated plunge of the higher grade "shoots". The tectonostratigraphic sequence that hosts the Nordeau West resources continues to the east, and has been intersected by numerous historic and recent drill-holes, but few holes have targeted the sequence below 250 depth. To the west, beyond the limits of Cartier Resources' Chimo Mine property the sequence is similarly recognized and been tested along the Simon West - Blue Grass corridor, but not rigorously.

A resource-database of the historic geological and drilling data, similar to that which was compiled for the Nordeau West block, is recommended for the remainder of the East Cadillac Gold Property. The study should provide for an aggressive drilling programme to test deeper parts of the known mineralization along indicated trends identified from this and previous studies.

It is recommended that future exploration by Chalice should include the following work:

### Phase 1

- surface mapping accompanied by rock, soil, core and spectral analyses;
- airborne EM survey;
- data integration including verifying and merging existing drill hole databases, adding relevant historical data, and generating a 3D model of the consolidated property;
- LiDAR survey for 3D modeling surface control;
- surface stripping, mapping and sampling on priority targets;
- diamond-drilling down-dip of known mineralized occurrences.

Contingent on positive Phase I results, the Phase II exploration program should comprise:

### Phase 2

- diamond-drilling on a range of targets generated by Phase 1 studies and exploration work;

A preliminary budget for the recommended work is summarized in **Table 18.1**.

The authors recommend the same exploration strategies and techniques that were successfully applied at Nordeau West be applied to the other occurrences on the Property that host historic resources, and/or known concentrated gold mineralization.

Compilation and analysis of historic shallow exploration drilling data and 3D geological modelling for target identification and drilling should be applied in attempts to identify additional resources proximal to existing resources, which will increase the viability of potential future exploitation.

**Table 18.1: Preliminary Budget for Recommended Work on East Cadillac Gold Project**

<b>Phase 1</b>	<b>Drilling (metres)</b>	<b>Cost / metre</b>	<b>Budget</b>
Surface sampling - rock, soil, core and spectral sampling			\$200,000
Airborne AEM survey			\$85,000
Data compilation and integration, generation of 3D model			\$50,000
LiDAR survey			\$50,000
Surface stripping, mapping and sampling on priority targets			\$100,000
Drilling to expand existing mineralized zones	1,600	\$250	\$400,000
Contingency 15%			\$132,750
<b>Subtotal Phase 1</b>			<b>\$1,017,750</b>
<b>Phase 2</b>	<b>Drilling (metres)</b>	<b>Cost / metre</b>	<b>Budget</b>
Drilling of targets generated by Phase 1 work	4,000	\$250	\$1,000,000
Contingency 15%			\$150,000
<b>Subtotal Phase 2</b>			<b>\$1,150,000</b>
<b>Overall Total</b>			<b>\$2,167,750</b>

---

**19.0 REFERENCES**

- Bourgoin, M.R. and Castonguay, J., 2007 (GM64272)** – Technical Report – Nordeau Gold Mineral Properties, Val-d'Or Quebec, 2007, Plato Gold Corp., by MRB & Associates.
- Champagne, M.J. , 1985** – Projet Vauquelin - Campagne de Sondage 1984, Louvem Mines Co. Inc., internal report.
- Dimroth, E., Imreh, L., Rocheleau, M. and Goulet, N., 1982** – Evolution of the South-Central part of the Abitibi Belt, Quebec. Part I: Stratigraphy and Paleogeographic Model. Canadian Journal of Earth Sciences, v. 19.
- Gagnon, P. and Gagnon, G., 1982** – Estimation des Réserves Nordeau Ouest, SOQUEM, internal report.
- Gaudreault, D., 2001** - Rapport sur les Propriété Nordeau (Ressources Minérales), Explorations Malartic-Sud Inc., rapport interne par Géologica Consulting Inc.
- Gaudreau, R., Lacoste, P and Rocheleau, M., 1986 (MB86-67)**. Geologie et gitologie du secteur de Louvicourt-Vauquelin, Abitibi. Ministère de l'Énergie et des Ressources du Quebec, Report MB86-67.
- Gaudreau, R., Lacoste, P., Rocheleau, M., 1987 (DP87-01)** - Geologie des Cantons de Vauquelin, Pershing, Haig - Abitibi-Est. Ministère de l'Énergie et des Ressources Quebec, Report DP87-01.
- Germain, M., 1972 (DP-108)** - Geologie du Canton Vauquelin (Comte d'Abitibi-Est). Ministère de l'Énergie et des Ressources Quebec, Report DP-108.
- Imreh, L., 1976 (DP-349)** - Nouvelle lithostratigraphie a l'ouest de Val-d'Or et son incidence gitologique. Ministère de l'Énergie et des Ressources Quebec, Report DP-349.
- Imreh, L., 1984 (MM82-04)** - Sillon de la Motte-Vassan et son avant-pays meridional: Synthèse volcanologique, lithostratigraphique et gitologique. Ministère des Richesses Naturelles Quebec, Report MM 82-04.
- Jean, A., 1990 (GM49867)** - Campagne de Sondages, Propriete Bloc-Ouest, Mines Vauquelin Ltd., par Gestion minière Explomine Ltd.
- Jolly, W.T., 1978** - Metamorphic history of the Archean Abitibi belt, *in* Fraser, J.A. and Heywood, W.W., *eds.*, Metamorphism in the Canadian Shield, Geological Survey of Canada, Paper 78-10.
- Kalliokoski, J., 1987** - The Pontiac problem, Quebec-Ontario, in light of gravity data: Canadian Journal of Earth Sciences, v. 24.
- Lacroix, S, Doyon, M, Perreault, S, Nantel, S, Gaudreau, R, Dussault, C, Morin, R., 1997 (DV97-01)** - Rapport des Geologues Residents sur l'Activite Miniere Regionale en 1996. Ministère des Richesses Naturelles Quebec, DV97-01.
- Marquis, R., 1983** - Etude tectono-stratigraphique a l'est de Val-d'Or: essai de correlation structurale entre les roches metasedimentaires des Groupes de Trivio et de Garden Island et application a l'exploration aurifere: Unpub. M.Sc. thesis, Montreal, Quebec, Université du Quebec a Montreal, 173 p.

**Mortensen, J. K., and Card, K D., 1993** - U-Pb age constraints for the magmatic and tectonic evolution of the Pontiac Subprovince, Quebec: Canadian Journal of Earth Sciences, v. 30.

**Rocheleau, M., Hebert, M., St-Julien, R., Racine, P., Gaudreau, R., and Lacoste, P., 1990** - La ceinture de l'Abitibi a l'est de Val-d'Or: un secteur economiquement meconnu, affecte par la tectonique et le metamorphisme Grenvillien, *in* Rive, M., Verpaelst, P., Gagnon, Y., Lulin, J.-M., Riverin, G., and Simard, A., eds., The Northwestern Quebec Polymetallic Belt: A summary of 60 years of mining exploration: Rouyn-Noranda, Canadian Institute of Mining and Metallurgy Special Volume 43.

**Rocheleau, M, Hebert, R, Lacoste, P, Racine, M, Gaudreau, R, St-Julien, P., 1997 (MB97-11)** - Synthese Stratigraphique, Paleogeographique et Geologique: Cantons Vauquelin, Pershing, Haig et Parties des Cantons Louvicourt, Pascalis et Denain, Ministere des Richesses Naturelles Quebec, Report MB 97-11.

**Rocheleau, M, Hebert, R, St-Julien, P, Gaudreau, R, Perrier, B, Lacoste, P., 1987 (MB87-52)** - Synthese Stratigraphique, Paleogeographique et Geologique du Secteur de Vauquelin, Pershing et de Haig - Rapport Interiminaire. Ministere des Richesses Naturelles Quebec, Report MB87-52.

**Rocheleau, M, Gaudreau, R, Sauve, P, Perrier, B., 1988 (MB88-14)** - Geologie des Gisements Auriferes de Chimo et de Nordeau - Region de Val-d'Or. Ministère de l'Énergie et des Ressources Quebec, Report MB88-14.

**Sauve, P, Blanchet, P, Blouin, J Y, Champagne, M, Leclerc, A., 1987 (MB87-05)** - Geologie de la mine d'Or Chimo - Region de Val-d'Or. Ministere des Richesses Naturelles Quebec, Report MB 87-05.

**Sauve, P, Imreh, L, Trudel, P., 1993 (MM91-03)** - Descriptions des Gites d'Or de la Region de Val-d'Or. Ministere des Richesses Naturelles Quebec, Report MM 91-03.

**Sharpe, J.I., 1968** - Canton de Louvicourt, comte d'Abitibi-est. Ministere des Richesses Naturelles du Quebec. Report RG-135.

**Tremblay, A., 1988a** – Bloc Ouest – Rapport sur la Campagne d'Exploration 1987, Mines Vauquelin Ltd., rapport interne par Roche Groupe-conseil, 26 pages.

**Tremblay, A., 1988b** – Rapport sur le Bloc Nordeau - Campagne d'Exploration 1987, Mines Vauquelin Ltd., rapport interne par Roche Groupe-conseil, 34 pages.

**Tremblay, A., 1989** – Propriété Bloc Ouest, Mines Vauquelin Ltd., rapport interne par Roche Groupe-conseil, 24 pages.



**List of Statutory Work Reports:** Ministère des Ressources naturelles et de la Faune du Québec  
([http://sigeom.mines.gouv.qc.ca/signet/classes/I1102\\_indexAccueil?l=a](http://sigeom.mines.gouv.qc.ca/signet/classes/I1102_indexAccueil?l=a))

**DP-108**, Germain, M., 1972. Geologie du Canton Vauquelin (Comte d'Abitibi-Est). Ministère de l'Énergie et des Ressources Québec.

**DP87-01**, Gaudreau, R., Lacoste, P., Rocheleau, M., 1987. Geologie des cantons Vauquelin, Pershing et de Haig, Abitibi-Est. Ministère de l'Énergie et des Ressources Québec.

**DP-349**, Imreh, L., 1976. Nouvelle lithostratigraphie a l'ouest de Val-d'Or et son incidence géologique. Ministère de l'Énergie et des Ressources Québec.

**DP200803**, 2008. Cartes géophysiques couleurs MegaTEM, NTS 31N/14. Ministère des Ressources naturelles et de la Faune Québec Report DP-200803/Geological Survey of Canada Open File 5942.

**DP200804**, 2008. Cartes géophysiques couleurs MegaTEM, NTS 32C/03. Ministère des Ressources naturelles et de la Faune Québec Report DP-200804/Geological Survey of Canada Open File 5943.

**DV97-01**, Lacroix, S, Doyon, M, Perreault, S, Nantel, S, Gaudreau, R, Dussault, C, Morin, R., 1997. Rapport des Géologues Residents sur l'Activité Minière Régionale en 1996. Ministère des Richesses Naturelles Québec.

**GM03439**, Graham, R.B., 1955 - Report on Magnetometer and Self-Potential Survey on Property of Newkirk Mining Corp. Ltd., Vauquelin Twp., Abitibi County Québec.

**GM04860**, Leclerc, A., 1957 - Report on Nordeau Mining Co. Ltd., Vauquelin Twp., Northwestern Québec.

**GM03603**, Wilton, C.K., 1955 - Report on Harrison-Cere Option Pershing Township, Malartic Gold Fields Limited.

**GM03669**, Wilton, C.K., 1955 - Report on Claims in Vauquelin Township, Malartic Gold Fields Limited.

**GM06346**, Dumont, P.E., 1958 - Report on Monor Mining Company Limited N.P.L. Gold-Iron Claims Located in Vauquelin, Pershing, Denain and Villebon Townships, Abitibi East, Que.

**GM06400**, 1958 - Drill Logs. Monor Mining Company Limited N.P.L. Gold-Iron Claims Located in Vauquelin, Pershing, Denain and Villebon Townships, Abitibi East, Que.

**GM06528**, Szetu, S.S., 1958 - Report on Electro-Magnetic Survey on Property of Continental Mining Exploration Ltd., Vauquelin Township, Abitibi County, Québec.

**GM06675A**, Britton, J.W., 1946 - Geophysical Work on the S.E. Vauquelin Group, Mining Corp. of Canada, Limited.

**GM06677**, MacDonald, R.D., 1947 - Geological Report on S.E. Vauquelin Township Claim Group, Mining Corp. of Canada, Limited.

**GM08657**, Dumont, P.E., 1959 - Report on Diamond Drilling, Monor Mining Company Limited Vauquelin Township, Abitibi County, Québec.

- GM11980**, Dumont, P.E., 1962 - Report on Monor Mining Company Limited Vauquelin Township, Quebec.
- GM12839**, Langevin, E., 1962 - Rapport Preliminaire sur les Gisements de Fer Vauquelin.
- GM13117**, Dumont, P.E., 1963 - Report on Monor Mining Company Limited Vauquelin and Villebon Townships, Abitibi County, Quebec.
- GM16371**, Dumont, P.E., 1965 - Report on Electromagnetic Survey on Vauquelin Iron Mines Villebon Townships, Abitibi County, Quebec.
- GM16372**, Drill Logs, Vauquelin Iron Mines Limited.
- GM16375**, Dumont, P.E., 1965 - Report on Electromagnetic Survey on Monor Mining Ltd.
- GM16835**, Bergmann, H.J., 1965 - Report on Geophysical Surveys on the Property of Black River Mining Ltd., Vauquelin Township, Quebec.
- GM17080**, 1965 - Drill Logs, Vauquelin Iron Mines Limited.
- GM17257**, Booth, J.R., 1964 - Summary Report of Diamond Drilling Campaign July-August 1964 on Raymond Tiblemont Gold Mines Limited, Vauquelin Township Property.
- GM30500**, Dumont, D.H., 1974 - Report on the Properties of Vauquelin Iron Mines Limited, Vauquelin Township.
- GM30501**, Langevin, E., 1974 - Rapport sur la Mise en l'ans des Journeaux de Forages aux Diamants de la Zone D'Or Principale de Les Mines de Fer Vauquelin.
- GM31231**, Gledhill, T., 1975 - Spanex Resources Ltd, Supplementary Report Magnetometer Survey, Vauquelin Twp, Abitibi-East County.
- GM31325**, Gledhill, T., 1975 - Moss Lake Development Inc., Vauquelin Twp, Abitibi-East County, Quebec.
- GM32291**, Gledhill, T., 1976 - Moss Lake Development Inc., Vauquelin Twp, Quebec, Chimo Gold Area.
- GM34757**, Lebel, A., 1979 - Rapport Geophysique 10-497 Chimo. Leve Magnetiques et Electromagnetiques (VLF).
- GM35007**, Lebel, A., 1979 - Rapport Geophysique 10-497 Chimo. Tests de PP et de Pulse EM.
- GM35513**, Lebel, A., 1979 - Rapport Geophysique Projet Chimo 10-497. Leve Magnetiques et Electromagnetiques (VLF).
- GM35544**, Lambert, R., 1972 - Rapport de Sondage, Projet Vauquelin 11-736. SOQUEM.
- GM36435**, Amboise, P., Glass, F. and Lebel, A., 1980 - Rapport Geophysique. Leves Magnetiques et VLF, Villebon 10-484.
- GM36462**, Savard, M. and Leonard, M-A., 1980 - Campagne de Forage. Projet Villebon 10-484.

- GM37291**, Bergmann, H.J., 1981 - Report on VLF Electromagnetic Survey on Property of Wescap Energy Corp. Ltd., Vauquelin Twp, Que.
- GM37355**, Laverdure, G., 1981 - Leves Magnetiques et Electromagnetique VLF, Projet Simon (10-903), Cantons Vauquelin, Villebon, Denain. SOQUEM.
- GM37356**, Glass, F., 1981 - Memo Geophysique TBF et Mag., Projet Simon 10-903. SOQUEM.
- GM37729**, Blanchet, P. and Gagnon, G., 1981 - Campagne de Travaux 1980-81, Projet Simon 10-903. SOQUEM.
- GM37746**, Blanchet, P. and Gagnon, G., 1981 - Campagne D'Exploration 1980-81, Projet Villebon 10-484. SOQUEM.
- GM38329**, Larouche, C., 1982 - Report on the exploration carried out in 1981 over part of the Lynx-Americ-Sparton property Denain-Pershing townships.
- GM38554**, Bergmann, H.J., 1982 - Report on Magnetometer Survey on Property of Wescap Energy Corp. Ltd., Vauquelin Twp, Que.
- GM38605**, Hendrick, D.H., 1969 - Drill Logs, Plan-Sections and Geophysical Profiles, Corcoran Vauquelin Option, Vauquelin Twp., Quebec. Kerr Addison Mines Ltd.
- GM38618**, 1955 - Malartic Gold Fields Limited Airborne Geophysical Survey, Pershing-Vauquelin Townships. handle
- GM38857**, St-Hilaire, C., 1982 - Projet Simon (Bloc Bell) -10-903, Projet Leonard - 10-938, Rapport Geophysique, Leves Magnetiques et Electromagnetique TBF. SOQUEM.
- GM39230**, Blanchet, P., 1982 - Campagne de Sondage 1981-1982, Villebon 10-484. SOQUEM.
- GM39325**, Parkinson, R.N., 1955 - Report on the Conduct of a Geophysical Survey in the Province of Quebec. For Malartic Gold Fields Ltd.
- GM39327**, 1955 - Malartic Gold Fields Limited Harrison-Cere-Option, Electromagnetic Survey Plan, Pershing-Vauquelin Townships.
- GM39354**, St-Hilaire, C., 1982 - Projet Chimo (10-497), Bloc 1C, Rapport sur un Levé Magnetiques et Electromagnetique TBF sur des Traverses Orientées Est-Ouest. SOQUEM.
- GM39364**, Blanchet, P., 1982 - Rapport de la Campagne de Sondage, Simon 10-903. SOQUEM.
- GM39907**, St-Hilaire, C., 1983 - Projet Villebon 10-484, Tests de Polarisation Provoquée. SOQUEM.
- GM40036**, Bergmann, H.J., 1983 - Report on Geophysical Surveys on the Property of Bateman Bay Mining Company Inc., Vauquelin Twp., Quebec.
- GM40058**, St-Hilaire, C., 1983 - Projet Chimo 10-497, Tests de Polarisation Provoquée. SOQUEM.
- GM40142**, Britt, C., 1983 - Resultats des Travaux D'Exploration 1982, Leves Geologique, Biochimique et Forage, Projet Nova 10-958, SOQUEM.
- GM40274**, Gagnon, P., 1983 - Campagne de Tarrain 1982, Projet Villebon 10-484, SOQUEM.

- GM41000**, Boudreault, A.P., 1984 - Rapport de la Campagne D'Exploration 1983, Projet Nova 10-958, SOQUEM.
- GM41546**, Campbell, R.A., 1984 - Report on the Geophysical Surveys Golden Pond Resources Ltd., East Claim Group, Vauquelin Twp., Quebec.
- GM41804**, Boudreault, A.P., 1984 - Projet Nova (11-958), Campagne de Sondages. SOQUEM.
- GM41828**, Blanchet, P., 1983 - Drill Logs, Vauquelin Project, Louvem Mining Company Inc.
- GM41830**, 1983 - Drill Logs, Vauquelin Project, Louvem Mining Company Inc.
- GM42328**, Campbell, R.A., 1985 - Report on the 1984 Drilling Program for Golden Pond Resources Ltd., Vauquelin East and Etang D'Or Properties, Vauquelin Twp., Quebec.
- GM42504**, Scodnick, J., 1985 - Report on the Geophysical and Geological Program of the Golden Pond Resources Ltd., Chimo North Property, Vauquelin Twp., Quebec.
- GM43286**, Marchand, J., 1986 - Bateman Bay Mining Co. Ltd., Pedogeochemical Report on Vauquelin Property, Quebec.
- GM43495**, Reukl, R., 1986 - Drill Logs, Vauquelin Project, Chabela Minerals Inc.
- GM43684**, Reukl, R., 1986 - Drill Logs, Vauquelin Project, Chabela Minerals Inc.
- GM44027**, Dumont, P.E., 1986 - Geochemical Survey on a Group of 21 Claims in Pershing Township, Val-d'Or area, Quebec. (Includes magnetometer survey results).
- GM45332**, D'Silva, B., 1987 - Drill Logs, Vauquelin Project, Chabela Minerals Inc.
- GM45687**, Podolsky, G., 1987 - Report on Combined Helicopter-Borne Magnetic, Electromagnetic and VLF Survey, Val-d'Or Area Properties, for Cambior Inc.
- GM45943**, D'Silva, B., 1987 - Drill Logs, Vauquelin Project, Chabela Minerals Inc.
- GM46287**, Dumont, P.E., 1988 - Geochemical Survey on a Group of 21 Claims in Pershing Township, Val-d'Or area, Quebec. (Includes magnetometer survey results).
- GM46939**, MacNeil, K. and Averill, S.A., 1988 - Cambior Inc., Nova Property, Villebon and Vauquelin Townships, Quebec. Reverse Circulation Overburden Drilling and Heavy Mineral Sampling.
- GM47285**, Dumont, P.E., 1988 - Magnetometer Survey on a Group of 21 Claims in Pershing Township, Val-d'Or area, Quebec.
- GM47403**, Beullac, R. and Slivitzky, A., 1987 - Drill Logs and Geology Maps, Nordeau East Project. Vauquelin Minies Ltd.
- GM47922**, Lambert, G. and Turcotte, R., 1988 - Leves Geophysique (PP), Propriete de Mines Vauquelin Ltd., Projet Bateman, Cantons Vauquelin, Quebec.
- GM48022**, Whitfield, T. and Simoneau, P., 1986 - Drill Logs, Vauquelin Project, Barexor Inc.

- GM48410**, Perron, L., 1988 - Rapport de Travaux D'Exploration (1988), Propriete Bateman, Region Abitibi-Est, Quebec.
- GM48424**, Perron, L., 1988 - Addenda Resultats du Programme Sondage 1988, Propriete Bloc Ouest, Region D'Abitibi-Est, Roche Consulting Group Ltd. Mines Vauquelin Ltd.
- GM48430**, Landry, J., 1988 - Campagne de Forage, Propriete Chimo Centre, Canton de Vauquelin, Abitibi, Quebec. Monicor Exploration Inc.
- GM49340**, Lortie, P., 1989 - Campagne de Sondage Hiver 87-88, Projet Nova. Cambior Inc.
- GM48507**, Landry, J., 1988 - Campagne de Forage, Propriete Simon Est, Canton de Vauquelin, Abitibi, Quebec. Monicor Exploration Inc.
- GM49659**, Boulianne, D., 1990 - Campagne D'Exploration 1989-1990, Projet Bateman, Canton de Vauquelin, Abitibi, Quebec. Mines Vauquelin Ltd.
- GM49666**, Lambert, G. and Turcotte, R., 1990 - Leves Geophysique, Propriete de Mines Vauquelin Ltd., Projet Bateman, Cantons Vauquelin, Quebec.
- GM49867**, Jean, A., 1990 - Campagne de Sondages 1990, Propriete Bloc-Ouest, Mines Vauquelin Ltd., by Gestion miniere Explomine Ltd.
- GM50036**, Geokemex Inc., 1990 - Leves Geochimique des Humus, Propriete Vauquelin, Canton Vauquelin, Abitibi, Quebec. Monicor Exploration Inc.
- GM50373**, Boulianne, D., 1991 - Campagne D'Exploration Ete-Automne 1990, Propriete Bloc-Ouest, Canton de Vauquelin, Abitibi, Quebec. Mines Vauquelin Ltd. and Louvem Mines Inc.
- GM52637**, Deragon, R., 1994 - Leves Magnetometrique et Electromagnetique au Sol, Propriete Bloc-Ouest/Nordeau, Cantons Vauquelin, Quebec. Mines Vauquelin Ltd.
- GM52638**, Blanchet, P., 1994 - Campagne D'Exploration 1994, Propriete Nordeau, Canton Vauquelin, Abitibi, Quebec. Mines Vauquelin Ltd.
- GM61314**, Bourgoin, M.R., 2004 - Rapport de Travaux, Propriete Minerale Vauquelin. Mirabel Resources.
- GM64272**, Bourgoin, M.R. and Castonguay, J., 2006 - Technical Report, Nordeau Gold Mineral Properties, Val-d'Or, Quebec, for Plato Gold Corp.
- GM64504**, Langton, J. and Horvath, A.S., 2009 - 43-101 Technical Report, Nordeau Gold Mineral Properties, Val-d'Or, Quebec, for Plato Gold Corp.
- GM65127**, Kromo, B. and Langton J., 2010 - Assessment Work Report, Nordeau East and Bateman East Properties, Val-d'Or, Quebec, for Plato Gold Corp.
- GM66369**, Langton, J. and Pacheco, N., 2011 - Assessment Work Report, Nordeau East and Bateman East Properties, Val-d'Or, Quebec, for Plato Gold Corp.
- GM68593**, Manon, G. and Pierre, R., 2014 - Campagne D'Echantillonnage de Forages Historiques, Nordeau East & West, Canton Vauquelin/Pershing. Globex Mining Inc.

- 
- MB86-67**, Gaudreau, R., Lacoste, P and Rocheleau, M., 1986. Geologie et gitologie du secteur de Louvicourt-Vauquelin, Abitibi. Ministère de l'Énergie et des Ressources du Quebec.
- MB87-05**, Sauve, P, Blanchet, P, Blouin, J.Y., Champagne, M, Leclerc, A., 1987. Geologie de la mine d'Or Chimo - Region de Val-d'Or. Ministère des Richesses Naturelles Quebec.
- MB87-52**, Rocheleau, M, Hebert, R, St-Julien, P, Gaudreau, R, Perrier, B, Lacoste, P., 1987. Synthese Stratigraphique, Paleogeographique et Gitologique du Secteur de Vauquelin, Pershing et de Haig - Rapport Interimaire. Ministère des Richesses Naturelles Quebec.
- MB97-11**, Rocheleau, M, Hebert, R, Lacoste, P, Racine, M, Gaudreau, R, St-Julien, P., 1997. Synthese Stratigraphique, Paleogeographique et Gitologique: Cantons Vauquelin, Pershing, Haig et Parties des Cantons Louvicourt, Pascalis et Denain, Ministère des Richesses Naturelles Quebec.
- MM82-04**, Imreh, L., 1984. Sillon de la Motte-Vassan et son avant-pays meridional: Synthese volcanologique, lithostratigraphique et gitologique. Ministère des Richesses Naturelles Quebec.
- MB88-14**, Rocheleau, M, Gaudreau, R, Sauve, P, Perrier, B., 1988. Geologie des Gisements Auriferes de Chimo et de Nordeau - Region de Val-d'Or. Ministère de l'Énergie et des Ressources Quebec.
- MM91-03**, Sauve, P, Imreh, L, Trudel, P., 1993. Descriptions des Gites d'Or de la Region de Val-d'Or. Ministère des Richesses Naturelles Quebec.

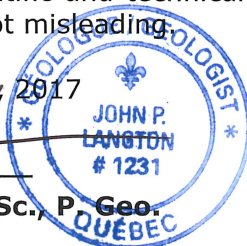
**CERTIFICATE OF QUALIFICATION  
JOHN LANGTON**

I, **John Langton, M.Sc., P. Geo.**, of 1740 Sullivan Rd, Val-d'Or, Québec do hereby certify that:

1. This Certificate applies to "*Technical Report and Mineral Resource Estimate, East Cadillac Gold Project, Val-d'Or, Québec NTS 32-C/03, 31N/14*" dated February 12<sup>th</sup>, 2017;
2. I graduated from the University of New Brunswick in 1985 with a B.Sc. in Geology and from Queen's University, Kingston in 1993 with a M.Sc. in Geology, and I have practised my profession continuously since that time;
3. I am currently working and living in Quebec and I am a Professional Geologist currently licensed by the *Ordre des géologues du Québec* (License 1231); the Association of Professional Engineers and Geoscientists of New Brunswick (Licence M5467); and a Temporary Member of the Association of Professional Geoscientists of Ontario (Licence 1716);
4. I am a part owner of a geological consulting firm (MRB & Associates), based in Val-d'Or Quebec, CANADA. I am also on the Board of Directors of Cartier Iron Corp. and Hinterland Metals Inc., and I am a minority share-holder of Cartier Iron Corp.;
5. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of NI 43-101;
6. I have worked as an exploration and field geologist since 1985. I have knowledge and experience with regard to a various mineral deposit types, including the procedures involved in exploring for gold and base-metals, and with the preparation of reports relating to them;
7. I have been retained by Chalice Gold Mines Limited, a body corporate having a registered office at 1 Yonge Street, Suite 1801, Toronto, Ontario (M5E 1W7), as a contract/consulting geologist, and not as an employee;
8. I have no prior involvement with Chalice Gold Mines Limited (other than as a QP). I am familiar with the mineral resource that is the subject of this Report, as well as with the Property, having co-authored the previous NI 43-101 Report on the Nordeau West deposit;
9. I have prepared and take responsibility for Sections 1.0 through 13.0, and Sections 15.0 through 20.0 of this Report entitled "*Technical Report and Mineral Resource Estimate, East Cadillac Gold Project, Val-d'Or, Québec NTS 32-C/03, 31N/14*" dated February 12<sup>th</sup>, 2017;
10. I visited the East Cadillac Gold Property on October 17<sup>th</sup> and November 13<sup>th</sup> of 2016;
11. I have no personal knowledge, as of the date of this certificate, of any material fact or change, which is not reflected in this report;
12. I am "independent" of Chalice Gold Mines Limited, and of the Vendors of the Property, with respect to the conditions described in Section 1.5 of NI 43-101;
13. Neither I, nor any affiliated entity of mine, is at present under an agreement, arrangement or understanding, nor expects to become an insider, associate, affiliated entity or employee of Chalice Gold Mines Limited, nor any of its associated or affiliated entities;
14. Neither I, nor any affiliated entity of mine, have earned the majority of our income during the preceding three years from Chalice Gold Mines Limited, nor any of its associates or affiliates;
15. I have read NI 43-101 and Form 43-101F1 and have prepared the technical report in compliance with them and in conformity with generally accepted Canadian mining industry practice. As of the date of the certificate, to the best of my knowledge, information and belief, this report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

DATED this 12<sup>th</sup> Day of February, 2017

  
(Signed) **John P. Langton, M.Sc., P. Geo.**

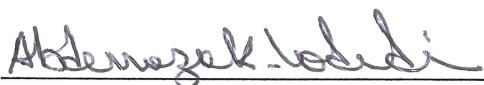


**CERTIFICATE OF QUALIFICATION**  
**Abderrazak Ladidi**

I, **Abderrazak Ladidi, P. Geo.** of 105 rue des Sapins, Val-d'Or (Québec) J9P 4R4 do hereby certify that:

1. This Certificate applies to "*Technical Report and Mineral Resource Estimate, East Cadillac Gold Project, Val-d'Or, Québec NTS 32-C/03, 31N/14*" dated February 12<sup>th</sup>, 2017;
2. I graduated from the University of Morocco in 1999 with a B.Sc. in Geology and from Abtibi Témiscamingue's University, Rouyn Noranda in 2011 with a Masters Degree in Engineering, and I have practised my profession continuously since that time;
3. I am currently working and living in Quebec and I am a Professional Geologist currently licensed by the *Ordre des géologues du Québec* (License 1265);
4. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of NI 43-101;
5. I have worked as an exploration and field geologist since 2006. I have knowledge and experience with regard to a number of mineral deposit types including the procedures involved in resource calculation for shear-zone related gold deposits, and with the preparation of reports relating to them;
6. I have been retained by Chalice Gold Mines Limited (a body corporate having a registered office at 1 Yonge Street, Suite 1801, Toronto, Ontario M5E 1W7), as a contract/consulting geologist, and not as an employee;
7. I have no prior involvement with Chalice Gold Mines Limited other than as a QP, nor with the Property, or resources therein, that are the subject of this Report;
8. I have prepared and take responsibility for Section 14.0 of this Report entitled "*Technical Report and Mineral Resource Estimate, East Cadillac Gold Project, Val-d'Or, Québec NTS 32-C/03, 31N/14*" dated February 12<sup>th</sup>, 2017;
9. I have not visited the East Cadillac Gold Property;
10. I have no personal knowledge, as of the date of this certificate, of any material fact or change, which is not reflected in this report;
11. I am "independent" of Chalice Gold Mines Limited, and of the Vendors of the Property, with respect to the conditions described in Section 1.5 of NI 43-101;
12. Neither I, nor any affiliated entity of mine, is at present under an agreement, arrangement or understanding, nor expects to become an insider, associate, affiliated entity or employee of Chalice Gold Mines Limited, nor any of its associated or affiliated entities;
13. Neither I, nor any affiliated entity of mine, have earned the majority of our income during the preceding three years from Chalice Gold Mines Limited, nor any of its associates or affiliates;
14. I have read NI 43-101 and Form 43-101F1 and have prepared the technical report in compliance with them and in conformity with generally accepted Canadian mining industry practice. As of the date of the certificate, to the best of my knowledge, information and belief, this report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

DATED this 12<sup>th</sup> Day of February, 2017



(signed) **Abderrazak Ladidi M.Eng., P. Geo.**





**APPENDIX I**

**List of Claims comprising the East Cadillac Gold Property**

(Source : Ministère des Ressources naturelles, Québec

<https://gestim.mines.gouv.qc.ca/>)

Claim No	NTS	Expiry Date	Renewal Date	Area (Ha)	Excess Work	Required Work	Required Fees	Titleholder(s) (Name, Number and Percentage)
2437791	32C03	27-Jun-2017	27-Apr-2017	57.6	\$0.00	\$1,520.01	\$59.67	Globex Mining Enterprises Inc. (702) 100 %
2437792	32C03	27-Jun-2017	27-Apr-2017	57.6	\$0.00	\$1,520.01	\$59.67	Globex Mining Enterprises Inc. (702) 100 %
2437793	32C03	27-Jun-2017	27-Apr-2017	57.6	\$0.00	\$1,520.27	\$59.67	Globex Mining Enterprises Inc. (702) 100 %
2437794	31N14	27-Jun-2017	27-Apr-2017	57.6	\$0.00	\$1,520.53	\$59.67	Globex Mining Enterprises Inc. (702) 100 %
2437795	31N14	27-Jun-2017	27-Apr-2017	57.6	\$0.00	\$1,520.53	\$59.67	Globex Mining Enterprises Inc. (702) 100 %
2437796	31N14	27-Jun-2017	27-Apr-2017	57.6	\$0.00	\$1,520.79	\$59.67	Globex Mining Enterprises Inc. (702) 100 %
2437797	31N14	27-Jun-2017	27-Apr-2017	23.6	\$0.00	\$622.25	\$30.51	Globex Mining Enterprises Inc. (702) 100 %
2437798	31N14	27-Jun-2017	27-Apr-2017	6.9	\$0.00	\$183.14	\$30.51	Globex Mining Enterprises Inc. (702) 100 %
2437799	32C03	27-Jun-2017	27-Apr-2017	43.0	\$0.00	\$1,135.52	\$59.67	Globex Mining Enterprises Inc. (702) 100 %
2437800	32C03	27-Jun-2017	27-Apr-2017	57.4	\$0.00	\$1,513.41	\$59.67	Globex Mining Enterprises Inc. (702) 100 %
2437801	32C03	27-Jun-2017	27-Apr-2017	6.2	\$0.00	\$164.40	\$30.51	Globex Mining Enterprises Inc. (702) 100 %
2437802	31N14	27-Jun-2017	27-Apr-2017	32.7	\$0.00	\$863.97	\$59.67	Globex Mining Enterprises Inc. (702) 100 %
2437803	31N14	27-Jun-2017	27-Apr-2017	0.3	\$0.00	\$7.91	\$30.51	Globex Mining Enterprises Inc. (702) 100 %
2437804	31N14	27-Jun-2017	27-Apr-2017	18.3	\$0.00	\$483.44	\$30.51	Globex Mining Enterprises Inc. (702) 100 %
2437805	31N14	27-Jun-2017	27-Apr-2017	56.3	\$0.00	\$1,484.90	\$59.67	Globex Mining Enterprises Inc. (702) 100 %
2437806	32C03	27-Jun-2017	27-Apr-2017	4.4	\$0.00	\$116.90	\$30.51	Globex Mining Enterprises Inc. (702) 100 %
2437807	32C03	27-Jun-2017	27-Apr-2017	43.4	\$0.00	\$1,145.01	\$59.67	Globex Mining Enterprises Inc. (702) 100 %
2437808	31N14	27-Jun-2017	27-Apr-2017	15.0	\$0.00	\$395.30	\$30.51	Globex Mining Enterprises Inc. (702) 100 %
2437809	31N14	27-Jun-2017	27-Apr-2017	35.2	\$0.00	\$929.15	\$59.67	Globex Mining Enterprises Inc. (702) 100 %
2437810	32C03	27-Jun-2017	27-Apr-2017	11.6	\$0.00	\$305.32	\$30.51	Globex Mining Enterprises Inc. (702) 100 %
2437811	31N14	27-Jun-2017	27-Apr-2017	2.0	\$0.00	\$52.25	\$30.51	Globex Mining Enterprises Inc. (702) 100 %
2437912	32C03	1-Jun-2018	1-Apr-2018	7.2	\$233,443.30	\$508.64	\$30.51	Globex Mining Enterprises Inc. (702) 100 %
2437913	32C03	1-Jun-2018	1-Apr-2018	8.1	\$264,416.91	\$576.12	\$30.51	Globex Mining Enterprises Inc. (702) 100 %
2437914	32C03	1-Jun-2018	1-Apr-2018	23.2	\$757,060.50	\$1,649.51	\$30.51	Globex Mining Enterprises Inc. (702) 100 %
2437915	32C03	1-Jun-2018	1-Apr-2018	7.3	\$236,703.67	\$515.74	\$30.51	Globex Mining Enterprises Inc. (702) 100 %
2437862	32C03	18-Jun-2018	18-Apr-2018	38.2	\$200,989.76	\$1,591.15	\$59.67	Globex Mining Enterprises Inc. (702) 100 %
2437863	32C03	18-Jun-2018	18-Apr-2018	39.4	\$207,515.75	\$1,642.81	\$59.67	Globex Mining Enterprises Inc. (702) 100 %
2437864	32C03	18-Jun-2018	18-Apr-2018	15.9	\$83,469.43	\$660.79	\$30.51	Globex Mining Enterprises Inc. (702) 100 %
2437865	31N14	18-Jun-2018	18-Apr-2018	3.1	\$16,262.33	\$128.75	\$30.51	Globex Mining Enterprises Inc. (702) 100 %
2437866	32C03	18-Jun-2018	18-Apr-2018	20.0	\$105,310.43	\$833.70	\$30.51	Globex Mining Enterprises Inc. (702) 100 %
2437867	32C03	18-Jun-2018	18-Apr-2018	36.3	\$190,832.38	\$1,510.74	\$59.67	Globex Mining Enterprises Inc. (702) 100 %
2437868	32C03	18-Jun-2018	18-Apr-2018	21.3	\$112,099.55	\$887.44	\$30.51	Globex Mining Enterprises Inc. (702) 100 %
2437869	32C03	18-Jun-2018	18-Apr-2018	11.3	\$59,365.40	\$469.96	\$30.51	Globex Mining Enterprises Inc. (702) 100 %
2437870	32C03	18-Jun-2018	18-Apr-2018	26.8	\$140,887.56	\$1,115.34	\$59.67	Globex Mining Enterprises Inc. (702) 100 %
2437871	31N14	18-Jun-2018	18-Apr-2018	5.7	\$30,208.99	\$239.15	\$30.51	Globex Mining Enterprises Inc. (702) 100 %

Claim No	NTS	Expiry Date	Renewal Date	Area (Ha)	Excess Work	Required Work	Required Fees	Titleholder(s) (Name, Number and Percentage)
2437872	32C03	18-Jun-2018	18-Apr-2018	39.0	\$205,252.70	\$1,624.89	\$59.67	Globex Mining Enterprises Inc. (702) 100 %
2437873	32C03	18-Jun-2018	18-Apr-2018	39.5	\$207,831.52	\$1,645.30	\$59.67	Globex Mining Enterprises Inc. (702) 100 %
2438798	32C03	14-Aug-2018	14-Jun-2018	57.6	\$70,836.02	\$1,781.73	\$59.67	Bateman Bay Mining Company Inc. (427) 40 % Globex Mining Enterprises Inc. (702) 60 %
2438799	32C03	14-Aug-2018	14-Jun-2018	57.6	\$70,836.01	\$1,781.73	\$59.67	Bateman Bay Mining Company Inc. (427) 40 % Globex Mining Enterprises Inc. (702) 60 %
2438800	32C03	14-Aug-2018	14-Jun-2018	57.6	\$70,836.01	\$1,781.73	\$59.67	Bateman Bay Mining Company Inc. (427) 40 % Globex Mining Enterprises Inc. (702) 60 %
2438801	32C03	14-Aug-2018	14-Jun-2018	50.8	\$62,473.43	\$1,571.39	\$59.67	Bateman Bay Mining Company Inc. (427) 40 % Globex Mining Enterprises Inc. (702) 60 %
2438802	32C03	14-Aug-2018	14-Jun-2018	18.5	\$22,763.45	\$572.57	\$30.51	Bateman Bay Mining Company Inc. (427) 40 % Globex Mining Enterprises Inc. (702) 60 %
2438803	32C03	14-Aug-2018	14-Jun-2018	2.2	\$2,742.44	\$68.98	\$30.51	Bateman Bay Mining Company Inc. (427) 40 % Globex Mining Enterprises Inc. (702) 60 %
2438804	32C03	14-Aug-2018	14-Jun-2018	39.4	\$48,404.61	\$1,217.52	\$59.67	Bateman Bay Mining Company Inc. (427) 40 % Globex Mining Enterprises Inc. (702) 60 %
2438805	32C03	14-Aug-2018	14-Jun-2018	7.2	\$8,793.01	\$221.17	\$30.51	Bateman Bay Mining Company Inc. (427) 40 % Globex Mining Enterprises Inc. (702) 60 %
2438806	32C03	14-Aug-2018	14-Jun-2018	5.0	\$6,185.85	\$155.59	\$30.51	Bateman Bay Mining Company Inc. (427) 40 % Globex Mining Enterprises Inc. (702) 60 %
2438807	32C03	14-Aug-2018	14-Jun-2018	34.6	\$42,599.99	\$1,071.51	\$59.67	Bateman Bay Mining Company Inc. (427) 40 % Globex Mining Enterprises Inc. (702) 60 %
2438808	32C03	14-Aug-2018	14-Jun-2018	5.6	\$6,899.13	\$173.53	\$30.51	Bateman Bay Mining Company Inc. (427) 40 % Globex Mining Enterprises Inc. (702) 60 %
2438809	32C03	14-Aug-2018	14-Jun-2018	6.9	\$8,522.46	\$214.36	\$30.51	Bateman Bay Mining Company Inc. (427) 40 % Globex Mining Enterprises Inc. (702) 60 %
2438810	32C03	14-Aug-2018	14-Jun-2018	1.8	\$2,164.43	\$54.44	\$30.51	Bateman Bay Mining Company Inc. (427) 40 % Globex Mining Enterprises Inc. (702) 60 %
2438811	32C03	14-Aug-2018	14-Jun-2018	33.4	\$41,099.65	\$1,033.77	\$59.67	Bateman Bay Mining Company Inc. (427) 40 % Globex Mining Enterprises Inc. (702) 60 %
2438935	32C03	12-Dec-2018	12-Oct-2018	3.2	\$0.00	\$135.27	\$30.51	Bateman Bay Mining Company Inc. (427) 40 % Globex Mining Enterprises Inc. (702) 60 %
2438936	32C03	12-Dec-2018	12-Oct-2018	24.1	\$0.00	\$1,004.01	\$30.51	Bateman Bay Mining Company Inc. (427) 40 % Globex Mining Enterprises Inc. (702) 60 %

Claim No	NTS	Expiry Date	Renewal Date	Area (Ha)	Excess Work	Required Work	Required Fees	Titleholder(s) (Name, Number and Percentage)
2438937	32C03	12-Dec-2018	12-Oct-2018	3.9	\$0.00	\$160.73	\$30.51	Bateman Bay Mining Company Inc. (427) 40 % Globex Mining Enterprises Inc. (702) 60 %
2461488	31N14	7-Sep-2018	8-Jul-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2461489	31N14	7-Sep-2018	8-Jul-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2461490	31N14	7-Sep-2018	8-Jul-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2461491	32C03	7-Sep-2018	8-Jul-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2461492	32C03	7-Sep-2018	8-Jul-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2461493	32C03	7-Sep-2018	8-Jul-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2461494	32C03	7-Sep-2018	8-Jul-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2461495	32C03	7-Sep-2018	8-Jul-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2468029	31N14	6-Nov-2018	6-Sep-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2468030	31N14	6-Nov-2018	6-Sep-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2468031	31N14	6-Nov-2018	6-Sep-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2468032	31N14	6-Nov-2018	6-Sep-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2468033	31N14	6-Nov-2018	6-Sep-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2468034	31N14	6-Nov-2018	6-Sep-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2468035	31N14	6-Nov-2018	6-Sep-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2468036	31N14	6-Nov-2018	6-Sep-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2468037	31N14	6-Nov-2018	6-Sep-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2468038	31N14	6-Nov-2018	6-Sep-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2468039	31N14	6-Nov-2018	6-Sep-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2468040	31N14	6-Nov-2018	6-Sep-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2468041	31N14	6-Nov-2018	6-Sep-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2468042	31N14	6-Nov-2018	6-Sep-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2468043	31N14	6-Nov-2018	6-Sep-2018	57.6	\$0.00	\$780.00	\$59.67	Chalice Gold Mines (Quebec ) Inc. (95690) 100 %
2385084	31N14	12-May-2017	12-Mar-2017	23.7	\$0.00	\$325.00	\$30.51	Richmont Mines Inc. (2165) 100 %
2438140	32C03	1-Aug-2017	1-Jun-2017	57.6	\$3,046.19	\$1,871.38	\$59.67	Richmont Mines Inc. (2165) 100 %
2438141	32C03	1-Aug-2017	1-Jun-2017	57.6	\$3,045.66	\$1,871.05	\$59.67	Richmont Mines Inc. (2165) 100 %
2438142	32C03	1-Aug-2017	1-Jun-2017	57.6	\$3,045.66	\$1,871.05	\$59.67	Richmont Mines Inc. (2165) 100 %
2438143	32C03	1-Aug-2017	1-Jun-2017	57.6	\$3,045.66	\$1,871.05	\$59.67	Richmont Mines Inc. (2165) 100 %
2438144	32C03	1-Aug-2017	1-Jun-2017	57.6	\$3,045.66	\$1,871.05	\$59.67	Richmont Mines Inc. (2165) 100 %
2438145	32C03	1-Aug-2017	1-Jun-2017	57.6	\$3,046.19	\$1,871.38	\$59.67	Richmont Mines Inc. (2165) 100 %
2438146	32C03	1-Aug-2017	1-Jun-2017	57.6	\$3,045.65	\$1,871.05	\$59.67	Richmont Mines Inc. (2165) 100 %
2438147	32C03	1-Aug-2017	1-Jun-2017	57.6	\$3,045.65	\$1,871.05	\$59.67	Richmont Mines Inc. (2165) 100 %
2438148	32C03	1-Aug-2017	1-Jun-2017	57.6	\$3,045.65	\$1,871.05	\$59.67	Richmont Mines Inc. (2165) 100 %

Claim No	NTS	Expiry Date	Renewal Date	Area (Ha)	Excess Work	Required Work	Required Fees	Titleholder(s) (Name, Number and Percentage)
2438149	31N14	1-Aug-2017	1-Jun-2017	57.6	\$3,047.24	\$1,872.03	\$59.67	Richmont Mines Inc. (2165) 100 %
2438150	31N14	1-Aug-2017	1-Jun-2017	57.6	\$3,047.24	\$1,872.03	\$59.67	Richmont Mines Inc. (2165) 100 %
2438151	31N14	1-Aug-2017	1-Jun-2017	57.6	\$3,047.24	\$1,872.03	\$59.67	Richmont Mines Inc. (2165) 100 %
2438152	31N14	1-Aug-2017	1-Jun-2017	57.6	\$3,047.24	\$1,872.03	\$59.67	Richmont Mines Inc. (2165) 100 %
2438153	31N14	1-Aug-2017	1-Jun-2017	57.6	\$3,047.24	\$1,872.03	\$59.67	Richmont Mines Inc. (2165) 100 %
2438154	32C03	1-Aug-2017	1-Jun-2017	23.1	\$1,221.65	\$750.50	\$30.51	Richmont Mines Inc. (2165) 100 %
2438155	31N14	1-Aug-2017	1-Jun-2017	57.6	\$2,601.42	\$1,598.14	\$59.67	Richmont Mines Inc. (2165) 100 %
2438156	32C03	1-Aug-2017	1-Jun-2017	47.4	\$2,505.17	\$1,539.01	\$59.67	Richmont Mines Inc. (2165) 100 %
2438157	32C03	1-Aug-2017	1-Jun-2017	23.2	\$1,229.05	\$755.05	\$30.51	Richmont Mines Inc. (2165) 100 %
2438158	32C03	1-Aug-2017	1-Jun-2017	18.3	\$965.15	\$592.93	\$30.51	Richmont Mines Inc. (2165) 100 %
2438159	32C03	1-Aug-2017	1-Jun-2017	2.7	\$140.67	\$86.42	\$30.51	Richmont Mines Inc. (2165) 100 %
2438160	32C03	1-Aug-2017	1-Jun-2017	6.8	\$359.62	\$220.93	\$30.51	Richmont Mines Inc. (2165) 100 %
2438161	32C03	1-Aug-2017	1-Jun-2017	8.5	\$448.99	\$275.83	\$30.51	Richmont Mines Inc. (2165) 100 %
2438162	32C03	1-Aug-2017	1-Jun-2017	57.5	\$3,039.31	\$1,867.15	\$59.67	Richmont Mines Inc. (2165) 100 %
2438163	32C03	1-Aug-2017	1-Jun-2017	30.4	\$1,608.24	\$987.99	\$59.67	Richmont Mines Inc. (2165) 100 %
2438164	31N14	1-Aug-2017	1-Jun-2017	57.6	\$237.98	\$146.20	\$59.67	Richmont Mines Inc. (2165) 100 %
2438165	32C03	1-Aug-2017	1-Jun-2017	13.3	\$701.26	\$430.81	\$30.51	Richmont Mines Inc. (2165) 100 %
2438166	32C03	1-Aug-2017	1-Jun-2017	1.7	\$92.02	\$56.54	\$30.51	Richmont Mines Inc. (2165) 100 %
2438167	31N14	1-Aug-2017	1-Jun-2017	57.6	\$3,045.65	\$1,871.05	\$59.67	Richmont Mines Inc. (2165) 100 %
2438168	32C03	1-Aug-2017	1-Jun-2017	29.8	\$1,577.56	\$969.15	\$59.67	Richmont Mines Inc. (2165) 100 %
2438169	32C03	1-Aug-2017	1-Jun-2017	54.4	\$2,874.31	\$1,765.78	\$59.67	Richmont Mines Inc. (2165) 100 %
2438170	32C03	1-Aug-2017	1-Jun-2017	18.1	\$955.63	\$587.08	\$30.51	Richmont Mines Inc. (2165) 100 %
2438171	32C03	1-Aug-2017	1-Jun-2017	56.0	\$2,962.63	\$1,820.04	\$59.67	Richmont Mines Inc. (2165) 100 %
2438172	32C03	1-Aug-2017	1-Jun-2017	22.4	\$1,182.51	\$726.46	\$30.51	Richmont Mines Inc. (2165) 100 %
2438173	32C03	1-Aug-2017	1-Jun-2017	7.6	\$404.04	\$248.22	\$30.51	Richmont Mines Inc. (2165) 100 %
2438174	32C03	1-Aug-2017	1-Jun-2017	0.6	\$31.20	\$19.18	\$30.51	Richmont Mines Inc. (2165) 100 %
2438175	31N14	1-Aug-2017	1-Jun-2017	23.7	\$1,255.49	\$771.30	\$30.51	Richmont Mines Inc. (2165) 100 %
2438176	32C03	1-Aug-2017	1-Jun-2017	45.2	\$2,389.35	\$1,467.86	\$59.67	Richmont Mines Inc. (2165) 100 %
2438177	32C03	1-Aug-2017	1-Jun-2017	1.1	\$55.53	\$34.11	\$30.51	Richmont Mines Inc. (2165) 100 %
2438178	32C03	1-Aug-2017	1-Jun-2017	39.2	\$2,073.63	\$1,273.90	\$59.67	Richmont Mines Inc. (2165) 100 %
2438179	32C03	1-Aug-2017	1-Jun-2017	18.1	\$958.28	\$588.70	\$30.51	Richmont Mines Inc. (2165) 100 %
2438180	32C03	1-Aug-2017	1-Jun-2017	29.2	\$1,542.66	\$947.70	\$59.67	Richmont Mines Inc. (2165) 100 %
2438181	32C03	1-Aug-2017	1-Jun-2017	1.4	\$73.51	\$45.16	\$30.51	Richmont Mines Inc. (2165) 100 %
2438182	32C03	1-Aug-2017	1-Jun-2017	23.5	\$1,244.92	\$764.79	\$30.51	Richmont Mines Inc. (2165) 100 %
2438183	32C03	1-Aug-2017	1-Jun-2017	48.6	\$2,570.75	\$1,579.29	\$59.67	Richmont Mines Inc. (2165) 100 %

Claim No	NTS	Expiry Date	Renewal Date	Area (Ha)	Excess Work	Required Work	Required Fees	Titleholder(s) (Name, Number and Percentage)
2438184	31N14	1-Aug-2017	1-Jun-2017	57.6	\$2,606.18	\$1,601.06	\$59.67	Richmont Mines Inc. (2165) 100 %
2438185	32C03	1-Aug-2017	1-Jun-2017	18.2	\$961.45	\$590.65	\$30.51	Richmont Mines Inc. (2165) 100 %
2438186	32C03	1-Aug-2017	1-Jun-2017	45.3	\$2,397.81	\$1,473.05	\$59.67	Richmont Mines Inc. (2165) 100 %
2438187	32C03	1-Aug-2017	1-Jun-2017	49.5	\$2,618.34	\$1,608.53	\$59.67	Richmont Mines Inc. (2165) 100 %
2438188	32C03	1-Aug-2017	1-Jun-2017	45.3	\$2,393.58	\$1,470.45	\$59.67	Richmont Mines Inc. (2165) 100 %
2438189	32C03	1-Aug-2017	1-Jun-2017	21.6	\$1,144.43	\$703.06	\$30.51	Richmont Mines Inc. (2165) 100 %
2438190	32C03	1-Aug-2017	1-Jun-2017	49.5	\$2,617.29	\$1,607.88	\$59.67	Richmont Mines Inc. (2165) 100 %
2438191	32C03	1-Aug-2017	1-Jun-2017	40.8	\$2,157.71	\$1,325.55	\$59.67	Richmont Mines Inc. (2165) 100 %
2438192	32C03	1-Aug-2017	1-Jun-2017	18.5	\$979.96	\$602.02	\$30.51	Richmont Mines Inc. (2165) 100 %
2438193	32C03	1-Aug-2017	1-Jun-2017	45.4	\$2,401.51	\$1,475.32	\$59.67	Richmont Mines Inc. (2165) 100 %
2438194	32C03	1-Aug-2017	1-Jun-2017	56.9	\$3,009.69	\$1,848.95	\$59.67	Richmont Mines Inc. (2165) 100 %
2438195	31N14	1-Aug-2017	1-Jun-2017	51.9	\$2,743.68	\$1,685.53	\$59.67	Richmont Mines Inc. (2165) 100 %
2438196	32C03	1-Aug-2017	1-Jun-2017	18.5	\$979.96	\$602.02	\$30.51	Richmont Mines Inc. (2165) 100 %
2438197	32C03	1-Aug-2017	1-Jun-2017	43.0	\$2,275.12	\$1,397.68	\$59.67	Richmont Mines Inc. (2165) 100 %
2438198	32C03	1-Aug-2017	1-Jun-2017	3.1	\$165.53	\$101.69	\$30.51	Richmont Mines Inc. (2165) 100 %
2438199	32C03	1-Aug-2017	1-Jun-2017	37.5	\$1,984.78	\$1,219.31	\$59.67	Richmont Mines Inc. (2165) 100 %
2438200	32C03	1-Aug-2017	1-Jun-2017	38.6	\$2,039.25	\$1,252.78	\$59.67	Richmont Mines Inc. (2165) 100 %
2438201	32C03	1-Aug-2017	1-Jun-2017	1.8	\$96.25	\$59.12	\$30.51	Richmont Mines Inc. (2165) 100 %
2438202	32C03	1-Aug-2017	1-Jun-2017	53.4	\$2,823.54	\$1,734.59	\$59.67	Richmont Mines Inc. (2165) 100 %
2438203	32C03	1-Aug-2017	1-Jun-2017	53.7	\$2,841.52	\$1,745.63	\$59.67	Richmont Mines Inc. (2165) 100 %
2438204	32C03	1-Aug-2017	1-Jun-2017	19.9	\$1,054.53	\$647.83	\$30.51	Richmont Mines Inc. (2165) 100 %
2438205	32C03	1-Aug-2017	1-Jun-2017	1.4	\$71.39	\$43.86	\$30.51	Richmont Mines Inc. (2165) 100 %
2438206	32C03	1-Aug-2017	1-Jun-2017	45.4	\$2,399.40	\$1,474.02	\$59.67	Richmont Mines Inc. (2165) 100 %
2438207	32C03	1-Aug-2017	1-Jun-2017	0.3	\$15.87	\$9.74	\$30.51	Richmont Mines Inc. (2165) 100 %
2438208	32C03	1-Aug-2017	1-Jun-2017	37.6	\$1,988.48	\$1,221.58	\$59.67	Richmont Mines Inc. (2165) 100 %
2438209	32C03	1-Aug-2017	1-Jun-2017	7.3	\$383.42	\$235.54	\$30.51	Richmont Mines Inc. (2165) 100 %
2438210	32C03	1-Aug-2017	1-Jun-2017	22.2	\$1,173.52	\$720.93	\$30.51	Richmont Mines Inc. (2165) 100 %
2438211	31N14	1-Aug-2017	1-Jun-2017	54.5	\$2,883.83	\$1,771.63	\$59.67	Richmont Mines Inc. (2165) 100 %
				<b>5372.4</b>	<b>\$3,649,011.04</b>	<b>\$146,607.60</b>	<b>\$7,259.22</b>	