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TECHNICAL REPORT FOR THE QUEBEC WESDOME PROJECT (according to National Instrument 43-101 and Form 43-101F1)

Project Location

Latitude 48°08' North and Longitude 77°54' West
Province of Quebec, Canada

Prepared for

Wesdome Gold Mines Limited
8 King St. East, Suite 1305
Toronto, Ontario M5C 1B5
Canada

Prepared by:

Bruno Turcotte, P.Geo.
Denis Gourde, Eng.
Pierre-Luc Richard, P.Geo.
InnovExplo Inc.

Effective Date: December 16, 2015
Signature Date: December 16, 2015

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDIX

SIGNATURE PAGE – INNOVEXPLO

TECHNICAL REPORT FOR THE QUEBEC WESDOME PROJECT
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Prepared for:
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8 King St. East, Suite 1305
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Canada

(Original signed and sealed)
Bruno Turcotte
InnovExplo Inc.
560, 3e Avenue, Val-d'Or,
Québec, Canada, J9P 1S4

Signed at Val-d'Or on December 16, 2015

(Original signed and sealed)
Denis Gourde
InnovExplo Inc.
560, 3e Avenue, Val-d'Or,
Québec, Canada, J9P 1S4

Signed at Val-d'Or on December 16, 2015

(Original signed and sealed)
Pierre-Luc Richard
InnovExplo Inc.
560, 3e Avenue, Val-d'Or,
Québec, Canada, J9P 1S4

Signed at Val-d'Or on December 16, 2015

CERTIFICATE OF AUTHOR - BRUNO TURCOTTE

I, Bruno Turcotte, P.Geo. (APGO licence No. 2136, OGQ licence No. 453), do hereby certify that:

1. I am employed as a geologist by and carried out this assignment for InnovExplo Inc. – Consulting Firm in Mines and Exploration, 560, 3e Avenue, Val-d'Or, Québec, Canada, J9P 1S4.
2. I graduated with a Bachelor of Geology degree from Université Laval in the city of Québec in 1995. In addition, I obtained a Master's degree in Earth Sciences from Université Laval in the city of Québec in 1999.
3. I am a member of the Ordre des Géologues du Québec (OGQ licence No. 453) and of the Association of Professional Geoscientists of Ontario (APGO licence No. 2136).
4. I have worked as a geologist for a total of 21 years since graduating from university. I acquired my exploration expertise with Noranda Exploration Inc., Breakwater Resources Ltd, South-Malartic Exploration Inc. and Richmont Mines Inc. I acquired my mining expertise on the Croinor Preproduction Project and at the Beaufor mine. I have been a geological consultant for InnovExplo Inc. since March 2007.
5. I have read the definition of "qualified person" set out in Regulation 43-101 / 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 fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. I am responsible for sections 1 to 3, 4.1 to 4.4, 6 to 12, 14.1, 14.2.1, 14.3., and 15 to 27 of the technical report entitled "TECHNICAL REPORT FOR THE QUEBEC WESDOME PROJECT (according to National Instrument 43-101 and Form 43-101F1)", effective date of December 16, 2015, and signature date of December 16, 2015.
7. I have not had any prior involvement with the project that is the subject of the Technical Report. I visited the Quebec Wesdome Project sometime between March and July 2015.
8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission of which would make the Technical Report misleading.
9. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101.
10. I have read NI 43-101 Respecting Standards of Disclosure for Mineral projects and Form 43-101F1, and the Technical Report has been prepared in accordance with that instrument and form.

Signed on this 16th day of December, 2015

(Original signed and sealed)

Bruno Turcotte, PGeo, MSc
InnovExplo Inc
bruno.turcotte@innovexplo.com

CERTIFICATE OF AUTHOR – DENIS GOURDE

I, Denis Gourde, Eng (OIQ no.43860; PEO no.100156918) do hereby certify that:

1. I am a Consulting Engineer of: InnovExplo, 560, 3e Avenue, Val-d'Or, Québec, Canada, J9P 1S4.
2. I graduated with a B. Sc. degree in 1987 from the École Polytechnique of Montreal in 1987.
3. I am a member of the Ordre des Ingénieurs du Québec (OIQ, no. 43860).
4. I have worked as a mining engineer for a total of 27 years since obtaining my B.Sc. degree. My relevant experience for the purpose of the Technical Report is mainly:
    - VP Engineering & Sustaining Development, InnovExplo (2013–Present)
    - Corporate Director Community Affairs, Agnico Eagle (2011–2013)
    - General Manager, Agnico Eagle Meadowbank Mine (2007–2011)
    - General Manager, Cambior IAMGOLD (1998–2007)
5. I have read the definition of "qualified person" set out in Regulation 43-101 / 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 fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. I am responsible for sections 4.5 to 4.13, 5, and 13 of the technical report entitled "TECHNICAL REPORT FOR THE QUEBEC WESDOME PROJECT (according to National Instrument 43-101 and Form 43-101F1)", effective date of December 16, 2015, and signature date of December 16, 2015.
7. I had prior involvement with the property that is the subject of the Technical Report.
8. I visited the Quebec Wesdome Project in March 2015.
9. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
10. I am independent of the issuer applying all of the tests in Section 1.5 of Regulation 43-101 (National Instrument 43-101).
11. I have read Regulation 43-101 respecting standards of disclosure for mineral projects and Form 43-101F1, and the sections of the Technical Report for which I was responsible have been prepared in accordance with that regulation and form.

Signed on this 16th day of December, 2015

(Original signed and sealed)

Denis Gourde, Eng.
InnovExplo Inc.
denis.gourde@innovexplo.com

CERTIFICATE OF AUTHOR – PIERRE-LUC RICHARD

I, Pierre-Luc Richard, P.Geo., M.Sc., (OGQ licence No. 1119, APGO licence No. 1714), do hereby certify that:

1. I am employed as a geologist by and carried out this assignment for InnovExplo Inc. – Consulting Firm in Mines and Exploration, 560, 3e Avenue, Val-d'Or, Québec, Canada, J9P 1S4.
2. I graduated with a Bachelor's degree in geology from the Université du Québec à Montreal (Montreal, Québec) in 2004. In addition, I obtained an M.Sc. from the Université du Québec à Chicoutimi (Chicoutimi, Québec) in 2012.
3. I am a member in good standing of the Ordre des Géologues du Québec (OGQ licence No. 1119) and of the Association of Professional Geoscientists of Ontario (APGO licence No. 1714).
4. I have worked in the mining industry for more than 10 years. My exploration expertise has been acquired with Richmont Mines Inc., the Ministry of Natural Resources of Québec (Geology Branch), and numerous exploration companies through InnovExplo. My mining expertise was acquired at the Beaufor mine and several other producers through InnovExplo. I managed numerous technical reports, resource estimates and audits. I have been a geological consultant for InnovExplo Inc. since February 2007.
5. I have read the definition of "qualified person" set out in Regulation 43-101 / 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 fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. I am responsible for section 14.2.2 of the technical report entitled "TECHNICAL REPORT FOR THE QUEBEC WESDOME PROJECT (according to National Instrument 43-101 and Form 43-101F1)", effective date of December 16, 2015, and signature date of December 16, 2015.
7. I visited the Quebec Wesdome Project on two occasions between July and September 2015.
8. I have not had any other prior involvement with the project that is the subject of the Technical Report.
9. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Report, the omission of which would make the Technical Report misleading.
10. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101.
11. I have read NI 43-101 Respecting Standards of Disclosure for Mineral projects and Form 43-101F1, and the items for which I am a qualified person in this Technical Report have been prepared in accordance with that regulation and form.

Signed on this 16th day of December, 2015

(Original signed and sealed)

Pierre-Luc Richard, P.Geo., M.Sc.
InnovExplo Inc.
pierreluc.richard@innovexplo.com

1. SUMMARY

1.1 Introduction

In February 2015, InnovExplo Inc. ("InnovExplo") was retained by George Mannard, P.Geo., Vice President Exploration for Wesdome Gold Mines Limited ("Wesdome" or the "issuer") to prepare a technical report (the "report") for the Quebec Wesdome Project (the "Project") in accordance with Canadian Securities Administrators' National Instrument 43-101 Respecting Standards of Disclosure for Mineral Projects ("NI 43-101" or "43-101") and its related form 43-101F1. InnovExplo is an independent mining and exploration consulting firm based in Val-d'Or (Québec).

Wesdome Gold Mines Limited was incorporated under the laws of the Province of British Columbia on October 21, 1980, under the name "Central Crude Ltd" By Articles of Amendment effective January 8, 1991, the original articles of the Company were deleted in their entirety and replaced, and its authorized capital was increased. Effective July 2, 1991, Articles of Continuance were filed in the Province of Ontario such that the Company is presently governed by the *Business Corporations Act* (Ontario). By Articles of Amendment effective July 27, 1994, the Company changed its name to "River Gold Mines Ltd". By Articles of Amendment effective February 1, 2006, the Company changed its name again to "Wesdome Gold Mines Ltd" ("Wesdome").

Wesdome is a mining, exploration and development business in Québec and Ontario. It has been producing gold and generating revenues of over $30 million annually for eighteen (18) years. Wesdome's principal product is gold in the form of doré bars. Wesdome's common shares are listed for trading on the Toronto Stock Exchange (TSX: WDO).

Wesdome is the sole owner of the Quebec Wesdome Project. The Project represents the amalgamation of twenty-one (21) properties and five (5) mining titles that are not specifically attached to any property. The Project comprises three (3) mining concessions, three hundred forty-four (344) staked mining claims, and seventeen (17) map-designated claims. It covers an aggregate area of 7,578.62 ha, and comprises the following infrastructure:

- The Kiena milling facility;
- The Kiena tailings facility;
- Ten (10) shafts and underground developments from past producers and exploration projects.

1.2 Property Description and Location

On July 16, 2015, all mining titles constituting the Quebec Wesdome Project were converted into "designation cells" or "map-designated claims". Consequently, the Quebec Wesdome Project now consists of one contiguous block comprising 195 mining claims (including two isolated mining claims, CDC 2238678 and 2238679) staked by electronic map designation (map-designated claims), and three (3) mining concessions covering an aggregate area of 7,863.41 ha. The map-designated claims and mining concessions are subject to terms under a number of agreements.

In GESTIM, all titles are in good standing and registered 100% to Wesdome Gold Mines Ltd, except for the Siscoe Extension and Maufort properties. The Siscoe Extension property is registered 75% to Wesdome Gold Mines Ltd and 25% to Maurice Fortin. The Maufort property is registered 50% to Wesdome Gold Mines Ltd and 50% to Dynacor Mines Inc. (now Malaga Inc.).

Before the mining title conversion on July 16, 2015, the Quebec Wesdome Project was represented by the amalgamation of twenty-one (21) properties. It consisted of one (1) contiguous block of properties and five (5) mining titles that were not specifically attached to any property. The historical properties and isolated titles consisted of three (3) mining concessions, three hundred forty-four (344) staked mining claims and seventeen (17) map-designated claims, covering an aggregate area of 7,578.62 ha. The staked mining claims, map-designated claims and mining concessions were held, wholly or partially, by Wesdome Gold Mines Ltd.

1.3 Environment

All infrastructure components have the necessary permits and authorizations. The Kiena environmental department is aware of the main legal requirements and continue to perform all required monitoring studies.

1.4 Geological Setting

The Quebec Wesdome Project lies within the Abitibi Subprovince of the Archean Superior craton, eastern Canada. More precisely, it is located in the Val-d'Or mining district, northwestern Quebec. The Quebec Wesdome Project are located in the southern part of the Abitibi Subprovince and the northern part of the Pontiac Subprovince.

The Quebec Wesdome Project straddles the limit between the southern part of the Abitibi Subprovince and the northern part of the Pontiac Subprovince. In this region, the Cadillac Tectonic Zone (CTZ) marks the separation between the two. From south to north, the Project is underlain by the lithologies of the Pontiac Group (PO), the Piché Group (PG), the Héva Formation (HF), the Val-d’Or Formation (VDF), the Jacola Formation (JF) and the La Motte-Vassan Formation (LVF).

The region has several large-scale strike faults and/or shear zones, trending W to WNW and dipping steeply to the north. They are, from south to north: the Cadillac Tectonic Zone (CTZ), the Parfouru Fault (PF), the Marbenite Fault (MF), the Norbenite Fault (NF), the Callahan Fault (CF), the K Shear Zone (KSZ), and the Rivière Héva Fault (RHF). The Quebec Wesdome Project is cut by all of them. These major structures contain dykes or stocks of monzonitic or tonalitic composition with highly variable ages (pre-, syn- or post-tectonic) that are spatially associated with several gold mines (Norlartic, Marban, Kiena, Sullivan, Goldex, Siscoe, Joubi, Sigma and Lamaque). The observed diversity in the styles and ages of gold mineralization related to these large-scale strike faults and/or shear zones demonstrates that several distinct episodes of mineralization occur.

1.5 Deposit Type

Auriferous mineralization observed on the Quebec Wesdome Project can be associated to Archean greenstone-hosted orogenic lode gold deposit type. These deposits are typically distributed along first-order compressional to transpressional crustal-scale fault zones characterized by several strain increments (e.g., Cadillac–Larder Lake Fault Zone) that mark the convergent margins between major lithological boundaries. However, they are seldom located within these first-order structures. Major or first-order faults are interpreted as primary hydrothermal pathways to higher crustal levels; however, only few significant gold deposits are hosted in major faults such as the McWatters mine, Lapa mine and the Orenada deposit, Abitibi Subprovince, Canada.

Significant mineralized quartz veins are commonly hosted in second- and third-order shear zones. Structurally, these shear zones vary from brittle–ductile to ductile, depending on their depth of formation. At depths greater than 10 km, quartz veins are seldom located within shear zones whereas gold mineralization is mostly associated with disseminated sulfides. A widely accepted model for orogenic gold deposit is the continuum model, which involves the migration of hydrothermal fluids from a deep-seated reservoir to mid-crustal level along a crustal-scale fault. This model allows for gold deposits to be formed over a range of crustal depths of more than 15 km. The timing of gold mineralization relative to metamorphism in higher metamorphic grade rocks has been contentious. In the past two decades, complex gold depositional sequences have been documented in several gold deposits that support the concept that gold deposits form by accumulation during several hydrothermal episodes.

The most important feature of the deformation from the perspective of gold mineralization was the development of shear zones. The timing of the shear zones is controversial, but there is general consensus that a significant component of the vertical elongation and thrusting along these fault zones occurred during the Kenoran orogeny. Gold deposits in the Val-d’Or district are hosted or spatially associated with shear zones. The deposits occur in all rock types present in the district, except for the late-tectonic Archean granitic batholiths and the Proterozoic diabase dikes.

At least two major auriferous mineralizing events have been recognized in the Val-d’Or district on the basis of morphological and structural features, ore and alteration mineral assemblages, and crosscutting relationships with intrusive. The older mineralizing event is manifested by veins and breccias (e.g., Norlartic, Marban, Kiena mines, and Main ore zone at Siscoe mine) that are mainly associated with second-order shear zones and commonly folded or boudinaged by D1 deformation. These veins and breccias are cut by diorite and tonalite dikes. The younger auriferous event, which produced the Sigma, Lamaque, Perron-Beaufor, Shawkey, Wesdome and Camflo deposits, as well as the C quartz-tourmaline vein at the Siscoe mine, is represented by veins commonly associated with third-order shear zones. These veins clearly crosscut plutonic rocks and may have formed during the latest stages of D1 deformation.

1.6 Mineralization

At least sixty-three (63) mineralized zones and/or veins have been observed on the Quebec Wesdome Project thus far. In terms of host sequences, the zones and/or veins belonging to the Quebec Wesdome Project are distributed as follows: one (1) in the Pontiac Group, three (3) in the Piché Group, three (3) in the Héva Formation, two (2) in the Val-d’Or Formation, thirty-one (31) in the Jacola Formation and twenty-three (23) in the Dubuisson Formation (including the Siscoe Stock). In terms of host lithologies, they are distributed as follows: twenty-seven (27) in competent basalt, twenty-five (25) in granodiorite, diorite and gabbro intrusive bodies, seven (7) in feldspar porphyry dykes, five (5) in komatiite, four (4) in schist, one (1) in tuff and one (1) in greywacke.

In general, mineralized zones and/or veins on the Quebec Wesdome Project are observed close to a large-scale fault. They are often associated with a subsidiary shear zone that may be proximal, adjacent or hosting the mineralization. Many of the zones and/or veins are also deformed and folded. Alteration is dominantly albitization, carbonatization and pyritization, with lesser chloritization and silicification.

Gold-bearing veins in the region exhibit a great variety of orientations, mineralogy and crosscutting relationships. For the purposes of this report, they are classified into the following three main types:

- Type 1: early quartz-carbonate veins cut by various dykes;
- Type 2: deformed veins within a shear zone; and
- Type 3 relatively weak deformed late quartz±tourmaline veins cutting all intrusive types and previous gold-bearing vein systems.

All three types may occur together.

1.7 Main Exploration Guides Related to Gold Mineralization

The study of sixty-three (63) mineralized zones and/or veins on the Project led to the identification of five exploration guides for gold as follows:

- Gold occurs close to large-scale faults;
- Gold is often associated with a subsidiary shear zone that may be proximal, adjacent or hosting the mineralization;
- Host lithologies are primarily competent basalts and intrusive rocks;
- Many of the auriferous zones and/or veins are deformed and folded; and
- Alteration is dominantly albitization, carbonatization and pyritization, with lesser chloritization and silicification.

The primary environmental control on the formation of mineralized zones was structural: the degree of fracturing. Thus, gold mineralization is mainly hosted in fractured competent units that acted as fluid conduits both during and after deformation. Alteration, notably albitization, likely played a key role in host unit competency. The competency contrast between intrusive bodies or basalts and the talc-chlorite schists may be responsible for strain localization at the rheological boundary, and it induced a secondary permeability that provided greater access to hydrothermal gold-bearing fluids during episodic shear zone movements. The presence in the same area of more than three types of auriferous veins exhibiting a wide range of orientations, mineralogy and crosscutting relationships, and the fact that several generations of dykes and veins are involved, suggests that gold mineralization was the product of multiple mineralizing phases.

The gold occurrences found in shear zone settings on the Project are mainly restricted to competent units, and thus the size and shape of the mineralized zones often depend upon the size, shape and concentration of the competent intrusive or basalt.

In zones of structural dislocation, two settings for gold mineralization have been recognized:

- Shattered intrusive bodies, such as diorite or feldspar porphyry dykes, enclosed in talc-chlorite schist; and
- Zones of fracturing and brecciation in large bodies, such as basalt.

In large bodies of basalt, fracturing was generally restricted to narrow zones, and subsequent mineralization resulted in narrow and often closely spaced mineralized zones. In narrower dykes, the whole body is affected by fracturing, and subsequent mineralization was able to spread throughout the dyke, forming large mineralized zones. Two factors control the size and shape of mineralized zones associated with dykes in shear zone settings:

- The size of individual dykes; and
- The dyke density in swarms.

1.8 Drilling

Wesdome carried out many drilling programs on the Quebec Wesdome Project between 2007 and 2015. Three hundred sixty-one (361) surface diamond drill holes totalling 138,322.50 m were drilled in the Pontiac and Piché groups, and in the Héva, Val-d'Or, Jacola and Dubuisson formations. On several occasions, large-scale fault zones and their subsidiary faults/shear zones were encountered within these holes, as well as mineralized zones consisting of at least three types of veins. The results of these drilling programs were used to calculate new resource estimates, in particular for the Dubuisson, Dubuisson North and Presqu'ile zones.

InnovExplo recommends an exhaustive compilation of all isolated gold results obtained from Wesdome's drilling programs outside the 63 known zones. Isolated gold values that coincide with one or more of the above-mentioned exploration guides can be used to define target areas where additional follow-up drilling should be conducted.

This same approach should be applied to isolated gold values obtained through historical (pre-2007) drilling.

1.9 Quality Control from surface drilling programs

A statistical analysis of all Quality Control data (Blanks, Certified Reference Materials, and Duplicates) from surface drilling programs between 2007 and 2015 provided by Wesdome did not outline any significant analytical issues.

InnovExplo is of the opinion that the sample preparation, analysis, QA/QC and security protocols used for the Quebec Wesdome Project follow generally accepted industry standards and that the data is valid and of sufficient quality to be used for mineral resource estimation.

1.10 Mineral Resources Estimate

Based on economic parameters, InnovExplo established that the Quebec Wesdome Project contains total Measured and Indicated Resources below the proposed 100-m-thick crown pillar of 2,500,600 metric tons grading 5.59 g/t Au, for a total of 449,300 ounces (Table 14.12).

Based on economic parameters, InnovExplo established that the Quebec Wesdome Project contains total Measured and Indicated Resources within the proposed 100-m crown pillar of 134,000 metric tons grading 5.48 g/t Au, for a total of 23,600 ounces (Table 14.13).

Inferred Resources below the proposed 100-m crown pillar amount to 1,563,300 metric tons grading 7.97 g/t Au, for a total of 400,400 ounces (Table 14.14). Inferred Resources within the proposed 100-m crown pillar amount to 747,600 metric tons grading 8.22 g/t Au, for a total of 197,600 ounces (Table 14.14).

Certain resources in the Kiena Mine were declassified to historical resources at this time pending re-interpretation and revision of the block model parameters.

Results of the 2015 In Situ Mineral Resource Estimate (Measured, Indicated and Measured+Indicated Resources) below the proposed crown pillar for the Quebec Wesdome Project (Table 14.12)

	2015 MINERAL RESOURCES ESTIMATE								
	MESURED RESOURCES			INDICATED RSOURCES			MEASURED + INDICATED RESOURCES		
	Tonnes	Grade (g/t)	Ounces	Tonnes	Grade (g/t)	Ounces	Tonnes	Grade (g/t)	Ounces
Martin Zone	63,700	4.06	8,300	197,800	4.78	30,400	261,500	4.60	38,700
Dubuisson Zone				281,500	5.46	49,400	281,500	5.46	49,400
Dubuisson North 1 Zone				193,700	7.67	47,800	192,900	7.71	47,800
Dubuisson North 2 Zone				124,700	5.36	21,500	124,700	5.36	21,500
Northwest Zone				467,400	3.79	57,000	467,400	3.79	57,000
S50 Deep Zone A				173,100	10.87	60,500	173,100	10.87	60,500
S50 Deep Zone AH				68,700	8.53	18,900	68,700	8.53	18,900
S50 Deep Zone B				514,100	3.21	53,100	514,100	3.21	53,100
Presqu'ile 1 Zone				91,800	6.64	19,600	89,700	6.79	19,600
Presqu'ile 2 Zone				51,200	8.67	14,300	51,200	8.67	14,300
Wesdome deposit				275,800	7.73	68,500	275,800	7.73	68,500
TOTAL RESOURCES	63,700	4.06	8,300	2,439,800	5.62	441,000	2,500,600	5.59	449,300

- The independent and qualified person for this resource estimate, as defined by NI 43-101, is Bruno Turcotte, P.Geo., M.Sc., and the effective date of the estimate is December 16, 2015.
- These mineral resources are not mineral reserves and do not have demonstrated economic viability.
- Results are presented in situ and undiluted.
- Measured Resources were evaluated from gold grades extrapolated up to 25 m above and below drifts opened within the mineralized zone. A polygon's gold grade is evaluated from muck samples, chip samples and test holes. Measured Resources are present in the Martin Zone only.
- Indicated Resources were evaluated from drill hole results using a polygonal method on vertical longitudinal sections. No inferred Resource was estimated.
- A cut-off grade of 5 g/t Au was used for Wesdome Deposit Resource Estimate.
- A cut-off grade of 3 g/t Au was used for Kiena Resource Estimate
- The cut-off grade must be re-evaluated in light of changes in prevailing market conditions (gold price, exchange rate and mining costs).
- A fixed density of 2.8 g/cm^3 was used for all zones.
- A minimum horizontal thickness of 2.5 m was applied using the grade of the adjacent material when assayed, or a value of zero when not assayed.
- The high-grade capping value was established at 34.28 g/t Au.
- Ounce (troy) = metric tons x grade / 31.103487. Calculations used metric units (metres, tonnes and g/t).
- The number of metric tons was rounded to the nearest hundred. Any discrepancies in the totals are due to rounding effects. Rounding followed the recommendations in NI 43-101.
- InnovExplo is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political, marketing or other relevant issues that could materially affect the resource estimate

Results of the 2015 In Situ Mineral Resource Estimate (Measured, Indicated and Measured+Indicated Resources) within the proposed crown pillar for the Quebec Wesdome Project (Table 14.13)

	2015 MINERAL RESOURCES ESTIMATE WITHIN CROWN PILLAR								
	MESURED RESOURCES			INDICATED RSOURCES			MEASUTRED + INDICATD RESOURCES		
	Tonnes	Grade (g/t)	Ounces	Tonnes	Grade (g/t)	Ounces	Tonnes	Grade (g/t)	Ounces
Martin Zone									
Dubuisson Zone				33,300	6.44	6,900	33,300	6.44	6,900
Dubuisson North 1 Zone				33,600	3.67	4,000	33,600	3.67	4,000
Dubuisson North 2 Zone				7,000	3.17	700	7,000	3.17	700
Northwest Zone									
S50 Deep Zone A									
S50 Deep Zone AH									
S50 Deep Zone B									
Presqu'ile 1 Zone									
Presqu'ile 2 Zone									
Wesdome deposit				60,100	6.23	12,000	60,100	6,23	12,000
TOTAL RESOURCES				134,000	5.48	23,600	134,000	5.48	23,600

- The independent and qualified person for this resource estimate, as defined by NI 43-101, is Bruno Turcotte, P.Geo., M.Sc., and the effective date of the estimate is December 16, 2015.
- These mineral resources are not mineral reserves and do not have demonstrated economic viability.
- Results are presented in situ and undiluted.
- Measured Resources were evaluated from gold grades extrapolated up to 25 m above and below drifts opened within the mineralized zone. A polygon’s gold grade is evaluated from muck samples, chip samples and test holes. Measured Resources are present in the Martin Zone only.
- Indicated Resources were evaluated from drill hole results using a polygonal method on vertical longitudinal sections. No inferred Resource was estimated.
- A cut-off grade of 5 g/t Au was used for Wesdome Deposit Resource Estimate.
- A cut-off grade of 3 g/t Au was used for Kiena Resource Estimate
- The cut-off grade must be re-evaluated in light of changes in prevailing market conditions (gold price, exchange rate and mining costs).
- A fixed density of 2.8 g/cm^3 was used for all zones.
- A minimum horizontal thickness of 2.5 m was applied using the grade of the adjacent material when assayed, or a value of zero when not assayed.
- The high-grade capping value was established at 34.28 g/t Au.
- Ounce (troy) = metric tons x grade / 31.103487. Calculations used metric units (metres, tonnes and g/t).
- The number of metric tons was rounded to the nearest hundred. Any discrepancies in the totals are due to rounding effects. Rounding followed the recommendations in NI 43-101.
- InnovExplo is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political, marketing or other relevant issues that could materially affect the resource estimate

Results of the 2015 In Situ Mineral Resource Estimate (Inferred Resources) below or within the proposed crown pillar for the Quebec Wesdome Project (Table 14.14)

	2015 MINERAL RESOURCES ESTIMATE					
	INFERRED RESOURCES BELOW CROWN PILLAR			INFERRED RESOURCES WITHIN CROWN PILLAR		
	Tonnes	Grade (g/t)	Ounces	Tonnes	Grade (g/t)	Ounces
Martin Zone						
Dubuisson Zone						
Dubuisson North 1 Zone						
Dubuisson North 2 Zone						
Northwest Zone						
S50 Deep Zone A						
S50 Deep Zone AH						
S50 Deep Zone B						
Presqu'ile 1 Zone						
Presqu'ile 2 Zone						
Wesdome deposit	1,563,300	7.97	400,400	747,600	8.22	197,600
TOTAL RESOURCES	1,563,300	7.97	400,400	747,600	8.22	197,600

- The independent and qualified person for this resource estimate, as defined by NI 43-101, is Bruno Turcotte, P.Geo., M.Sc., and the effective date of the estimate is December 16, 2015.
- These mineral resources are not mineral reserves and do not have demonstrated economic viability.
- Results are presented in situ and undiluted.
- Measured Resources were evaluated from gold grades extrapolated up to 25 m above and below drifts opened within the mineralized zone. A polygon’s gold grade is evaluated from muck samples, chip samples and test holes. Measured Resources are present in the Martin Zone only.
- Indicated Resources were evaluated from drill hole results using a polygonal method on vertical longitudinal sections. No inferred Resource was estimated.
- A cut-off grade of 5 g/t Au was used for Wesdome Deposit Resource Estimate.
- A cut-off grade of 3 g/t Au was used for Kiena Resource Estimate
- The cut-off grade must be re-evaluated in light of changes in prevailing market conditions (gold price, exchange rate and mining costs).
- A fixed density of 2.8 g/cm^3 was used for all zones.
- A minimum horizontal thickness of 2.5 m was applied using the grade of the adjacent material when assayed, or a value of zero when not assayed.
- The high-grade capping value was established at 34.28 g/t Au.
- Ounce (troy) = metric tons x grade / 31.103487. Calculations used metric units (metres, tonnes and g/t).
- The number of metric tons was rounded to the nearest hundred. Any discrepancies in the totals are due to rounding effects. Rounding followed the recommendations in NI 43-101.
- InnovExplo is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political, marketing or other relevant issues that could materially affect the resource estimate

1.11 Interpretation and Conclusions

This is the first time that all 21 properties representing the Quebec Wesdome Project are presented in a single technical report. This study examines the full potential of the entire Project, whereas the previous approach was by individual property. In the past, each of the known mineralized zones was also worked individually, without a global approach.

The Project is huge and located in the middle of a prolific mining camp. It has a number of important large-scale faults and subsidiary shear zones, several types of gold mineralization, and less-explored areas containing lithologies known to host gold deposits elsewhere on the Project. InnovExplo's review of all available data during the preparation of this report led to the identification of five exploration guides for gold.

Most of the recent exploration work on the Project was conducted in the vicinity of the underground workings at the Kiena mine. This study determined that the potential for new discoveries and additional mineral resources on the Project is high, and there are many underexplored areas. Beyond the Kiena mine, diamond drilling tested the same host lithologies to a maximun vertical depth of 250 m. In the Val-d'Or mining camp, mineralized zones typically have greater vertical extension than lateral.

The objective of this mandate was not to carry out an exhaustive compilation of all available information on the Project, but to provide a summary.

A global and systematic approach is recommended going forward in order to integrate all available historical and recent information. This global information will be used to refine the updated geological interpretation and define the best metallogenic model.

Before generating and prioritizing exploration targets, the global exploration model must take into account all historical drill holes, geological and geophysical surveys, structural studies, whole rock geochemistry data and mineral resource.

1.12 Exploration Potential for New Mineral Resources

1.12.1 Potential of mineralized zones related to historical resources

In 2007 and 2008, Wesdome added more holes on the historical Shawkey No. 22 Zone, yielding many good gold intersections. In 1990, Placer Dome carried out a mineral inventory on the No. 22 Zone and calculated a total of 883,132 metric tons with an average grade of 4.04 g/t Au. This zone should be investigated further to determine what work would be required to prepare a 43-101 compliant Mineral Resource Estimate. *(These "resources" are historical in nature and should not be relied upon. It is unlikely they conform to current NI 43-101 criteria or to CIM Standards and Definitions, and they have not been verified to determine their relevance or reliability. They are included in this section for illustrative purposes only and should not be disclosed out of context.)*

In addition, a new 43-101 compliant mineral resource estimate should be prepared for any zones representing the remnants of historical mining at the Kiena mine that could not be included in the current estimate due to a lack of information on the data and parameters used in previous estimates. These zones were estimated using 3D block models, but the validation process showed a lack of information and/or discrepancies in reproducing the numbers (see section 14.2.2). Additional information is needed to evaluate the remaining resources around the Kiena mine.

1.12.2 Potential of the studied mineralized zones

Mineral resource estimates could be prepared for some of the 63 mineralized zones studied by InnovExplo, without additional drilling. These zones have been subject to multiple drilling programs since 2006, however no 43-101 compliant resources have been reported. These zones should be investigated further to determine the work that would be required to prepare a 43-101 compliant Mineral Resource Estimate.

1.13 Potential of Mineralized Zones on Adjacent Properties

According to available geological information for adjacent properties, some of the mineralized zones on these properties may extend onto the Quebec Wesdome Project. This is primarily of interest for the Goldex GEZ, E and Deep zones, and the Callahan No. 4 Zone.

1.14 Risks and Opportunities

The Quebec Wesdome Project is subject to a number of known and unknown risks, uncertainties and other factors, as presented in Table 25.1. The opportunities associated with the Project are presented in Table 25.2

Risks associated with the Quebec Wesdome Project (Table 25.1)

Risk	Explanation/Potential Impact	Possible Risk Mitigation
Social	The rising number of mining projects in the Abitibi-Témiscamingue administrative region has heightened citizen awareness and made them more interested in staying informed and consulted. In Québec, there is currently no legal obligation to consult with stakeholders other than First Nations about mining activities, however regulations soon to come into force will legally impose stakeholder consultation, and companies are advised to assess the impact of such regulation and their responsibilities. The implementation of a Monitoring Committee is recommended as an amendment to the *Mining Act*; this article (101.0.3) is not yet in effect.	Develop a site-specific communication mechanism to provide basic information as a good neighbour.
Environmental	Analyses for characterization of the tailings state that tailings may be leachable.The rehabilitation and restoration plan is accepted since September 2015. Wesdome submits an addendum whose purpose is to maintain monitoring and restoration plan for non-leachable tailings; Wesdome argues that no non-compliance was identified with the final effluent behavior.	The addendum is currently under review.
	Some recommendations of the 2013 Report on Tailings Dyke Inspections have not yet been implemented.	Implement the recommendations.
Permitting	To maintain the tenure of a mining concession, the lessee must commence mining operations within five years after December 10, 2013 (article 118 of the *Mining Act*), however the current status of the Kiena mine is “care and maintenance”. In addition, each year, the holder of a mining concession must carry out one or more of the types of work described in article 69 of the *Regulation respecting mineral substances other than petroleum, natural gas and brine*.	Mining operations should restart before December 2018 in order to maintain the validity of the mining concession.
Infrastructure	Possibility of water infiltration in the underground workings	Perform a monitoring of the actual crown pillar

Opportunities associated with the Quebec Wesdome Project (Table 25.2)

Opportunity	Explanation/Potential Impact	Potential benefit
Mineral Resources	It is possible to increase the resources for all known mineralized zones (63) described in this report without additional drilling	Add more inferred resources to the Project.
	It is possible to upgrade inferred resources in the Wesdome deposit to indicated through additional diamond drilling.	Add more indicated resources to the Project.
	Some of the known mineralized zones are still open along their extensions. These extensions can be tested by additional diamond drilling.	Add more inferred and indicated resources to the Project.
	Many zones near existing mining infrastructure that contributed to the resources reported in the 2014 Annual Information Form were excluded from the current resource estimate due to a lack of information and/or discrepancies observed during the resource validation process (see 14.2.2). Additional compilation work could render some of these resources 43-101 compliant.	Add inferred, indicated, and measured resources to the project.
Exploration Guides	A 3D-GIS geological compilation for the Quebec Wesdome Project would identify gold targets that correspond to one or more of the five exploration guides.	Define targets for future diamond drilling programs and potentially discover new mineralized zones on the Project.
	A new detailed helicopter-borne magnetic survey performed by the MERN covers the entire Quebec Wesdome Project.	Improve the geological interpretation, including the exploration guides, at the project scale.
Adjacent properties	The granodiorite hosting mineralized zones (GEZ, M, E, P and Deep) in the Goldex mine dips at depth toward the Quebec Wesdome Project.	Potential to discover granodiorite-hosted mineralized zones on the Project similar to those of the Goldex mine.
	The Callahan Shear Zone and the dyke hosting the Callahan No. 4 Zone extend onto the Quebec Wesdome Project.	Potential to discover dyke-hosted mineralized zones on the Project similar to those of the Callahan No. 4 Zone.
Infrastructure	Wesdome owns the Kiena milling and tailings facilities	Ore from a future mining operation can be processed on the Project.
	Presence of an exploration drift on the 330-m level	Excellent access for future underground drilling programs.

1.15 Recommendations

Based on the results of the 2015 Mineral Resource Estimate and the project-specific exploration guides for gold, InnovExplo recommends advancing the Quebec Wesdome Project to the next phase.

1.15.1 3D-GIS geological model

The issuer should complete a 3D-GIS compilation of all historical openings using data from geological surveys as well as historical and recent drill holes on the Project. This information, combined with the new detailed helicopter-borne magnetic survey performed by the MERN, will improve the geological interpretation at the project scale.

The purpose of the compilation is to identify exploration targets that correspond to one or more of the five (5) exploration guides defined for the Project, whether or not they are known to contain any gold. In addition, all mineralized zones containing 43-101 resources could also be integrated into the 3D-GIS compilation to visualize the relationship between these zones and the five exploration guides within a 3D model.

It is also recommended to compile all public information for both the Goldex mine and the Callahan No. 4 Zone in order to better understand the geological context. The issuer should investigate the hypothesis that mineralized zones may extend at depth onto the Project.

1.15.2 Mineral resource upgrade

InnovExplo recommends updating the mineral resource estimate for the Wesdome deposit using a minimum true thickness of 2.0 m (long hole mining scenario).

A new 43-101 compliant mineral resource estimate should be prepared for the zones in the vicinity of underground workings at the Kiena mine (block models; see 14.2.2) that could not be included in the current estimate due to a lack of information, discrepancies in the validation process or unsupported parameters.

InnovExplo also recommends determining the work that would be required to prepare a 43-101 compliant Mineral Resource Estimate for the historical Shawkey No. 22 Zone.

The same should be done for the work required to prepare a 43-101 compliant Mineral Resource Estimate for some of the 63 mineralized zones studied by InnovExplo, without additional drilling.

1.15.3 Drilling

Drilling should be conducted along the extensions of mineralized zones related to the 2015 Mineral Resource Estimate. Moreover, additional drilling should be carried out to upgrade the Wesdome deposit Inferred Resources to Indicated Resources.

1.15.4 Environment

A recent study (Gagnon and Allard, 2013) states that the samples from Kiena can be considered "leachable tailings"; Wesdome argues that no non-compliance was identified with the final effluent. Wesdome submits an addendum for modifications of the Rehabilitation and restoration plan (Rood and Godbout, 2014) and should ensure that ministries statue on case.

To ensure the long-term viability of tailings management at Kiena, engineering studies on the development of new tailings ponds should continue since the capacity of the North pond is nearly exceeded.

Finally, InnovExplo has identified knowledge gaps in legal requirements relevant to environmental performance. Thus, the issuer's legal requirements should be reviewed and updated to ensure the monitoring programs in place are adequate.

1.15.5 Recommended work program

In summary, InnovExplo recommends a two-phase work program as shown in Table 26.1. The cost estimate has been prepared to serve as a guideline for the Project. Expenditures for Phase 1 are estimated at C$1,092,500 (incl. 15% for contingencies). Expenditures for Phase 2 are estimated at C$1,897,500 (incl. 15% for contingencies). The grand total is C$2,990,000 (incl. 15% for contingencies). Phase 2 is contingent upon the success of Phase 1.

Estimated costs for the recommended work program (Table 26.1)

Phase 1A - Work Program	C$ Estimated Cost
3D Compilation of all historical openings and historical underground drill holes	$ 100,000.00
3D-GIS property-scale compilation and target generation	$ 200,000.00
Mineral Resource Estimate update	$ 150,000.00
Contingencies (15%)	$ 67,500.00
Phase 1A subtotal	**$ 517,500.00**
Phase 1B - Work Program	**C$ Estimated Cost**
Surface drilling 5000m @ 100$/m on targets defined from Phase 1A	$ 500,000.00
Contingencies (15%)	$ 75,000.00
Phase 1B subtotal	**$ 575,000.00**
TOTAL PHASE 1A and PHASE 1B	**$ 1,092,500.00**
Phase 2A - Work Program	**C$ Estimated Cost**
Mineral Resource Estimate update from new drilling	$ 150,000.00
Preliminary Economic Assessment Study	$ 500,000.00
Contingencies (15%)	$ 97,500.00
Phase 2A subtotal	**$ 747,500.00**
Phase 2B - Work Program	**C$ Estimated Cost**
Surface drilling 10000m @ 100$/m (follow-up of mineral resources)	$ 1,000,000.00
Contingencies (15%)	$ 150,000.00
Phase 2B subtotal	**$ 1,150,000.00**
TOTAL PHASE 2A and PHASE 2B	**$ 1,897,500.00**
TOTAL PHASE 1 and PHASE 2	**$ 2,990,000.00**

2. INTRODUCTION

In February 2015, InnovExplo Inc. ("InnovExplo") was retained by George Mannard, P.Geo., Vice President Exploration for Wesdome Gold Mines Limited ("Wesdome" or the "issuer") to prepare a technical report (the "report") for the Quebec Wesdome Project (the "Project") in accordance with Canadian Securities Administrators' National Instrument 43-101 Respecting Standards of Disclosure for Mineral Projects ("NI 43-101" or "43-101") and its related form 43-101F1. InnovExplo is an independent mining and exploration consulting firm based in Val-d'Or (Québec).

2.1 The Issuer

The issuer, Wesdome Gold Mines Limited, was incorporated under the laws of the Province of British Columbia on October 21, 1980, under the name "Central Crude Ltd". By Articles of Amendment effective January 8, 1991, the original articles of the Company were deleted in their entirety and replaced, and its authorized capital was increased. Effective July 2, 1991, Articles of Continuance were filed in the Province of Ontario such that the Company is presently governed by the *Business Corporations Act* (Ontario). By Articles of Amendment effective July 27, 1994, the Company changed its name to "River Gold Mines Ltd". By Articles of Amendment effective February 1, 2006, the Company changed its name again to "Wesdome Gold Mines Ltd".

Wesdome is a mining, exploration and development business in Québec and Ontario. It has been producing gold and generating revenues of over $30 million annually for eighteen (18) years. Wesdome's principal product is gold in the form of doré bars. Wesdome's common shares are listed for trading on the Toronto Stock Exchange (TSX: WDO).

Wesdome is the sole owner of the Quebec Wesdome Project. The Project represents the amalgamation of twenty-one (21) properties and five (5) mining titles that are not specifically attached to any property. The Project comprises three (3) mining concessions, three hundred forty-four (344) staked mining claims, and seventeen (17) map-designated claims. It covers an aggregate area of 7,578.62 ha, and comprises the following infrastructure:

- The Kiena milling facility;
- The Kiena tailings facility;
- Ten (10) shafts and underground developments from past producers and exploration projects.

2.2 Terms of Reference and Scope of Work

This technical report was prepared by InnovExplo to provide a technical summary of Wesdome's mineral assets constituting the primary mining and exploration assets around the Kiena mine in Val-d'Or, Quebec. InnovExplo validated the most recent mineral resource estimate published by Wesdome. InnovExplo also evaluated the exploration potential of the Quebec Wesdome Project by identifying the main exploration guides for gold deposits in the area.

2.3 Qualified Persons

InnovExplo is responsible for this Technical Report.

Bruno Turcotte, P.Geo., Pierre-Luc Richard, P.Geo., and Denis Gourde, Eng., are the co-authors and InnovExplo's qualified and independent persons ("QP") for the report, as defined by NI 43-101.

2.4 Principal Sources of Information

The QPs' review of the Quebec Wesdome Project was based on the data, professional opinions and unpublished material submitted by the issuer and/or by its agents, as well as information gathered from published material, such as technical reports, annual information forms, annual reports, management's discussion and analysis reports, and press releases filed by Wesdome and other companies on the SEDAR website. The QPs also consulted GESTIM, the Québec government's online claim management system, and the SIGEOM online warehouse for assessment work, both of which are available via the website of the provincial Ministry of Energy and Natural Resources ("MERN"[1]).

The QPs conducted a review and appraisal of the available information used to prepare all items in this report, and to formulate its conclusions and recommendations. The authors believe such information is valid and appropriate considering the status of the project, and the purpose for which the report is prepared. The QPs have fully researched and documented the conclusions and recommendations herein.

2.5 Effective Date

The effective date of the Technical Report is December 15, 2015.

2.6 Units and Currencies

All currency amounts are stated in Canadian Dollars ($, C$, CAD) or US dollars (US$, USD). Quantities are stated in metric units, as per standard Canadian and international practice, including metric tons (tonnes, t) and kilograms (kg) for weight, kilometres (km) or metres (m) for distance, hectares (ha) for area, and grams (g) or grams per metric ton (g/t) for gold grades. Contained gold is stated in troy ounces (oz). Wherever applicable, imperial units have been converted to the International System of Units (SI units) for consistency. The list of abbreviations used in this report is provided in Appendix I.

[1] MERN: *Ministère de l'Énergie et des Ressources Naturelles*

3. TARGET DEFINITIONS

The authors, qualified and independent persons as defined by NI 43-101, were contracted by the issuer to study technical documentation relevant to the report, to perform a NI 43-101 technical report, and to recommend a work program if warranted. The authors have reviewed the mining titles and their status, as well as any agreements and technical data supplied by the issuer (or its agents), and any available public sources of relevant technical information.

Some of the geological and/or technical reports for projects in the vicinity of the Quebec Wesdome Project were prepared before the implementation of NI 43-101. The authors of such reports appear to have been qualified, and the information prepared according to standards that were acceptable to the exploration community at the time. In some cases, however, the data are incomplete and do not fully meet the current requirements of NI 43-101. The authors have no known reason to believe that any of the information used to prepare this report is invalid or contains misrepresentations.

The authors relied on reports and opinions as follows for information that is not within the authors' fields of expertise:

- The issuer supplied information about the mining titles, option agreements, royalty agreements, environmental liabilities and permits. InnovExplo is not qualified to express any legal opinion with respect to the property titles or current ownership and possible litigation.
- Venetia Bodycomb, M.Sc., of Vee Geoservices, provided the linguistic editing of a draft version of this report.

The authors believe 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 is prepared.

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

4. PROPERTY DESCRIPTION AND LOCATION

4.1 Location

The Quebec Wesdome Project is located in the province of Québec (Fig. 4.1), Canada, within the boundaries of the municipality of Val-d'Or and 100 km east of Rouyn-Noranda. It is located on NTS map sheet 32 D/01 and 32 C/04, in the townships of Dubuisson and Vassan. The approximate centre of the project is at Latitude 48°08′ N and Longitude 77°54′ W, and the approximate UTM coordinates are 284105E and 5335715N, NAD 83, Zone 18.

4.2 Mining Rights in the Province of Québec

A brief overview of the most common mining rights in the Province of Québec for mineral substances within the domain of the State is provided in Appendix II.

4.3 Current Property Description

On July 16, 2015, all mining titles constituting the Quebec Wesdome Project were converted into "designation cells" or "map-designated claims". Consequently, the Quebec Wesdome Project now consists of one contiguous block comprising 195 mining claims (including two isolated mining claims (CDC 2238678 and 2238679)) staked by electronic map designation (map-designated claims), and three (3) mining concessions covering an aggregate area of 7,863.41 ha (Figs. 4.2 and 4.3). The map-designated claims and mining concessions are subject to terms under a number of agreements (see section 4.4).

In GESTIM, all titles are in good standing and registered 100% to Wesdome Gold Mines Ltd, except for the Siscoe Extension and Maufort properties. The Siscoe Extension property (see section 4.3.6) is registered 75% to Wesdome Gold Mines Ltd and 25% to Maurice Fortin. The Maufort property (see section 4.4.8) is registered 50% to Wesdome Gold Mines Ltd and 50% to Dynacor Mines Inc. (now Malaga Inc.). A detailed list of current mining titles, ownership and expiry dates is provided in Appendix III.

4.4 Historical Property Description

Before July 16, 2015, the Quebec Wesdome Project (Fig. 4.4) was represented by the amalgamation of twenty-one (21) properties, and consisted of one (1) contiguous block of properties and five (5) mining titles that were not specifically attached to any property. The historical properties and isolated titles consisted of three (3) mining concessions, three hundred forty-four (344) staked mining claims and seventeen (17) map-designated claims, covering an aggregate area of 7,578.62 ha (Figs. 4.4 and 4.5). The staked mining claims, map-designated claims and mining concessions were held, wholly or partially, by Wesdome. The staked mining claims, map-designated claims and mining concessions were and continue to be subject to terms under a number of agreements. A detailed list of historical mining titles, ownership, royalties and expiration dates is provided in Appendix IV.

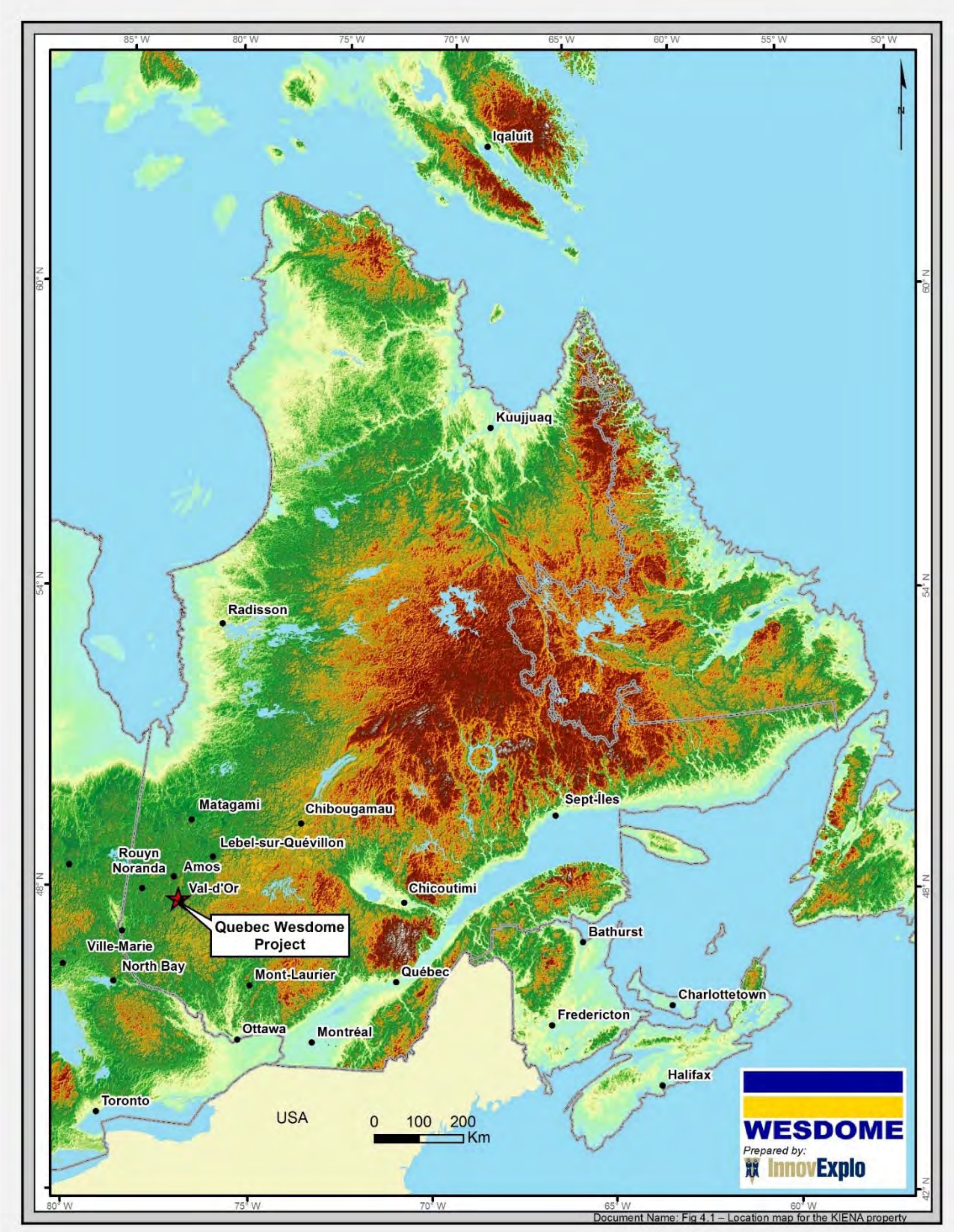

Figure 4.1 – Location of the Quebec Wesdome Project in the province of Quebec

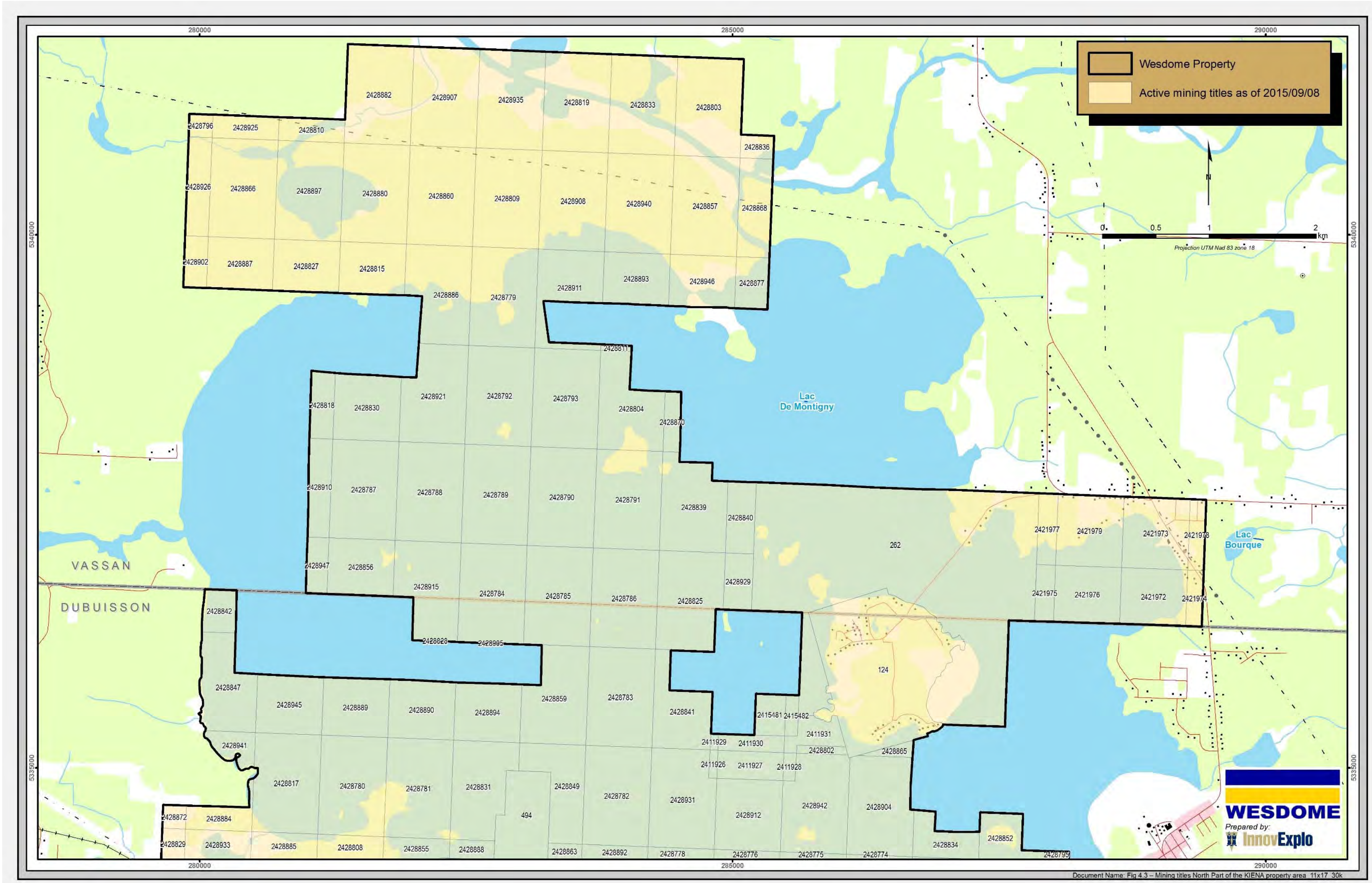

Figure 4.2 – Map of mining titles constituting the Quebec Wesdome Project (northern part)

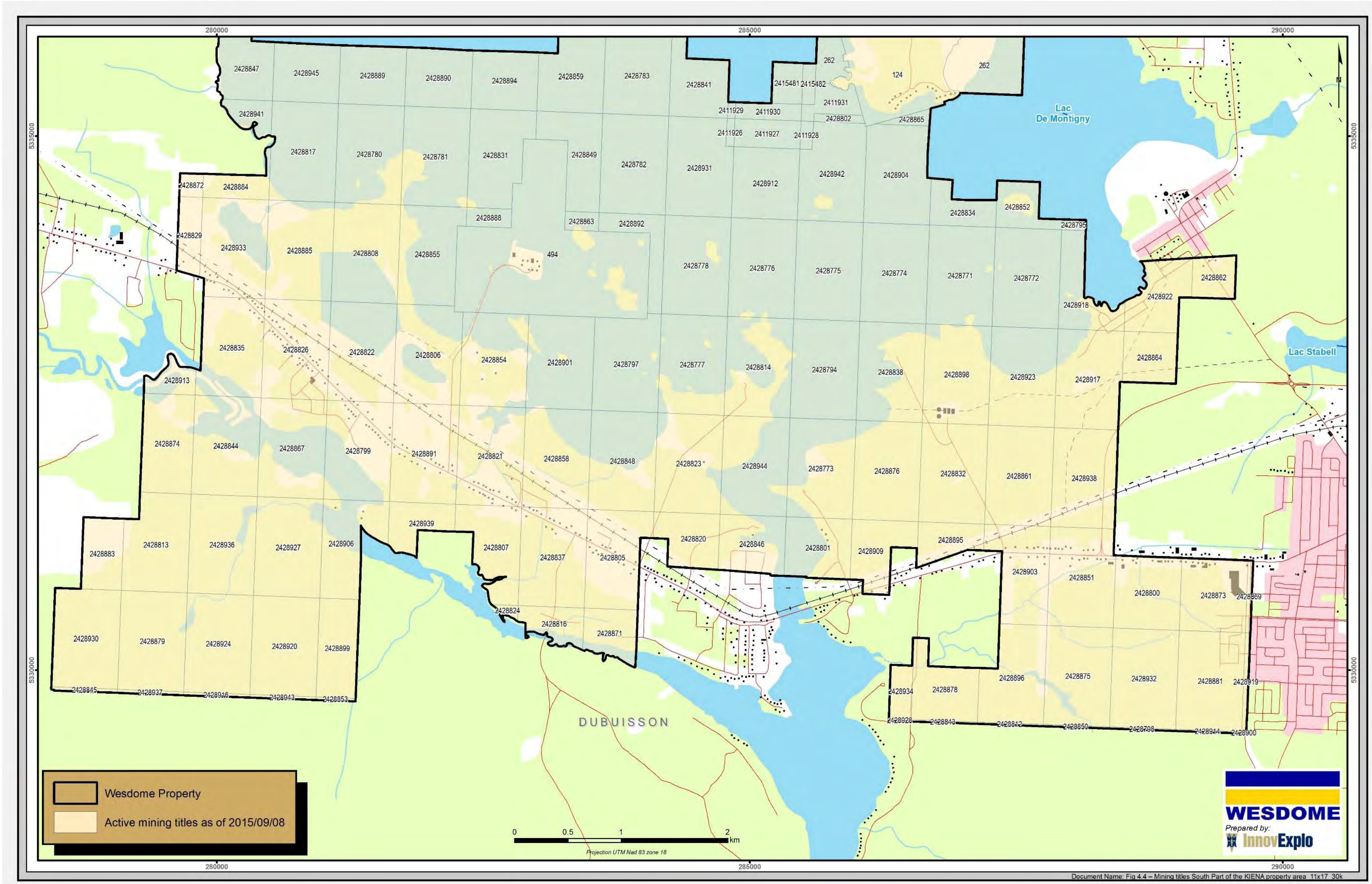

Figure 4.3 – Map of mining titles constituting the Quebec Wesdome Project (southern part)

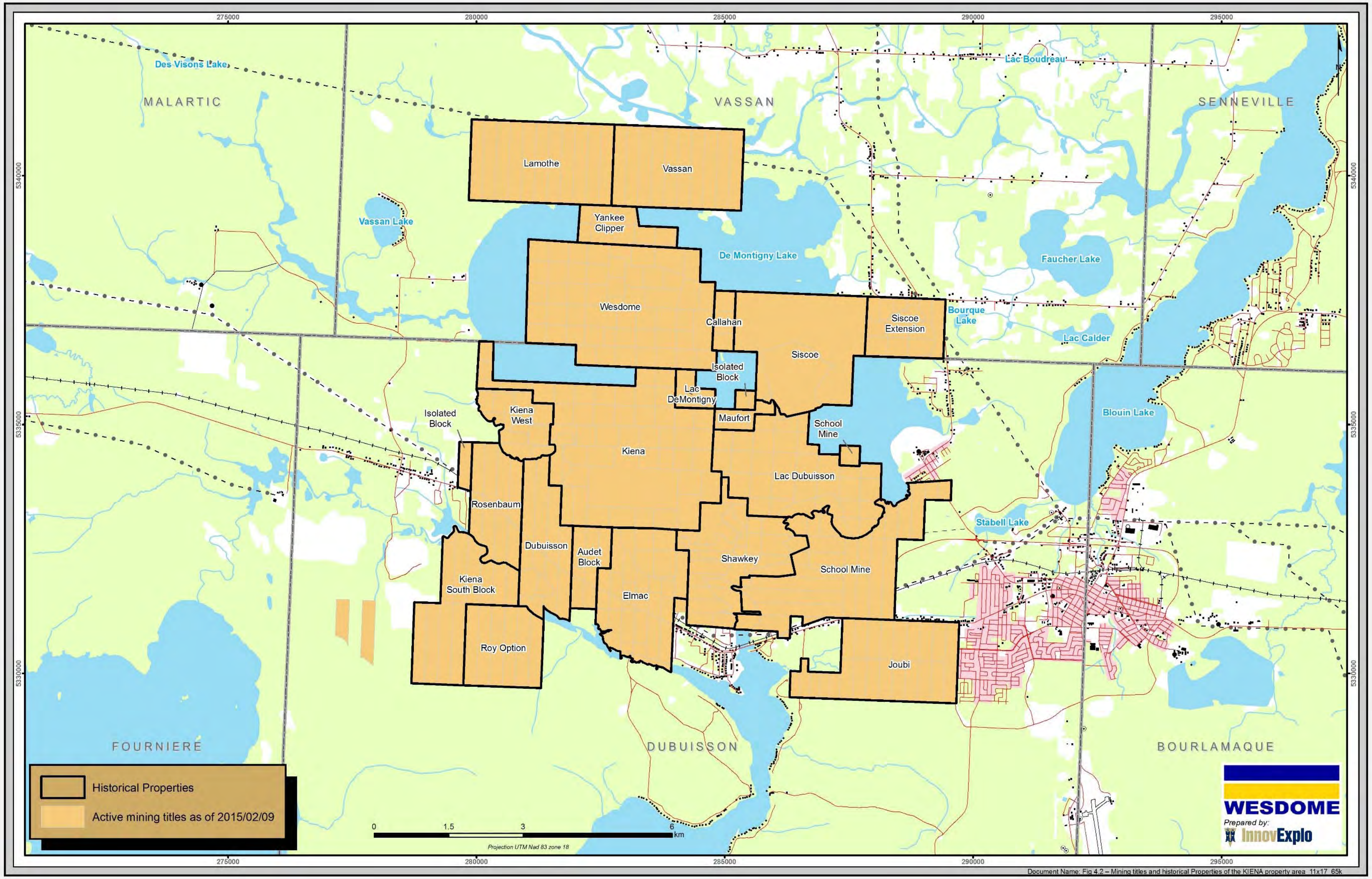

Figure 4.4 – The twenty-one (21) historical properties that were amalgamated to create the Quebec Wesdome Project

4.4.1 Lamothe property

Western Québec Mines Inc. acquired the Lamothe property from Robert Lamothe and Alphonse Beaudoin on January 15, 1998. The claims are subject to a 1% net smelter return (NSR) royalty in favour of Robert Lamothe.

The property comprises eleven (11) contiguous staked claims totalling 468.20 ha.

4.4.2 Vassan property

Western Quebec Inc. staked three (3) claims (formerly the Lamothe-Extension property) adjacent to the Lamothe property. On April 4, 2006, Wesdome staked seven (7) claims. These were added to the Vassan property (Fig. 4.4). The Vassan property has no underlying royalty (Fig. 4.5).

The Vassan property comprises ten (10) contiguous staked claims totalling 427.71 ha.

4.4.3 Yankee Clipper property

Western Quebec Mines Inc. acquired the Yankee Clipper property from Goldhunter Explorations Inc. on October 27, 1992. The property comprises ten (10) contiguous staked claims totalling 124.84 ha (Fig. 4.4).

As stipulated in an agreement dated February 25, 1981, between Yankee Clipper Gold Mine Inc. and Jacques Duval and Kenneth Alexander Wheeler, a royalty of 2% net proceeds return for gold, silver and other minerals and products recovered from material mined from eight (8) of the ten (10) claims (Fig. 4.5) is payable to Jacques Duval and Kenneth Alexander Wheeler.

4.4.4 Wesdome property

Wesdome Resources Ltd was created as a joint venture in 1976 for the purpose of exploring and developing the Wesdome property (Fig. 4.4) in Val-d'Or. Wesdome derived its name from the joint venture between Western Quebec Mines Inc. and Dome Mines Ltd. From 1977 to 1997, Western Québec Mines and Placer Dome Ltd (formerly Dome Mines Ltd) owned approximately 30% and 70%, respectively, of the 51-claim Wesdome property. On November 21, 1997, Western Quebec Mines bought out Dome Mines' interest with a payment of US$725,590 and a 1% NSR royalty (Fig. 4.5) on any mineral substances from the Wesdome property, and other good and valuable consideration.

The Wesdome property represents fifty-one (51) contiguous staked claims and covers an area of 866.32 ha.

4.4.5 Callahan property

Western Quebec Mines Inc. acquired the Callahan property (Fig. 4.4) from Placer Dome (CLA) Limited on December 1, 1997. The property comprises three (3) contiguous staked claims totalling 50.84 ha. The claims are subject to a 1% NSR royalty (Fig. 4.5) in favour of Placer Dome (CLA) Limited.

4.4.6 Siscoe and Siscoe-Extension properties

On November 9, 1999, as part of its Reorganization Agreement, Dynacor Mines Inc. transferred to Wesdome Gold Mines Inc. all its interests in the Siscoe (100%) and Siscoe-Extension (75%) properties (Fig. 4.4) in consideration of the issuance of 2,017,352 common shares, at a price of $1 per share, and a 3% NSR royalty (Fig. 4.5) of which 1% can be bought back for an amount of C$500,000. The Siscoe and Siscoe-Extension properties are also subject to a 0.5% NSR royalty in favour of Demontigny Resources Inc., which can be purchased for C$500,000.

The Siscoe property (Fig. 4.4) comprises two (2) contiguous mining concessions (CM-262 and CM-124) totalling 532.59 ha.

The Siscoe-Extension property (Fig. 4.4) comprises thirteen (13) staked mining claims totalling 188.07 ha. The property is registered 75% to Wesdome Gold Mines Ltd and 25% to Maurice Fortin. Maurice Fortin is the former president of Demontigny Resources Inc.

4.4.7 Lac de Montigny property

The Lac de Montigny property (Fig. 4.4) comprises three (3) contiguous staked claims totalling 46.83 ha.

Wesdome's 100% interest originated when Western Quebec Mines Inc. purchased the Kiena land package from McWatters Mining Inc. ("McWatters") and subsequently transferred the property to Wesdome Gold Mines Inc., thereby completing and consolidating Wesdome's land package around Lac De Montigny.

The Lac de Montigny property has no underlying royalty.

4.4.8 Maufort property

The Maufort property (Fig. 4.4) comprises six (6) contiguous map-designated claims totalling 44.87 ha. The property is registered 50% to Wesdome Gold Mines Ltd and 50% to Dynacor Mines Inc. (now Malaga Inc.).

Wesdome's 50% interest originated when Western Quebec Mines Inc. purchased the Kiena land package from McWatters and subsequently transferred the property to Wesdome Gold Mines Inc., thereby completing and consolidating Wesdome's land package around Lac De Montigny.

The Maufort property is subject to a 10% net proceeds return (NPR) royalty (Fig. 4.5) in favour of Charlim Exploration Inc.

4.4.9 Lac Dubuisson property

The Lac Dubuisson property (Fig. 4.4) comprises thirty-three (33) contiguous staked mining claims totalling 522.25 ha.

Wesdome's 100% interest originated when Western Quebec Mines Inc. purchased the Kiena land package from McWatters and subsequently transferred the property to

Wesdome Gold Mines Inc., thereby completing and consolidating Wesdome's land package around Lac De Montigny.

The Lac Dubuisson property has no underlying royalty.

4.4.10 Kiena property

The Kiena property (Fig. 4.4) comprises forty-seven (47) contiguous mining titles representing forty-six (46) staked mining claims and one (1) mining concession, for a total of 960.40 ha.

Wesdome's 100% interest originated when Western Quebec Mines Inc. purchased the Kiena land package from McWatters and subsequently transferred the property to Wesdome Gold Mines Inc., thereby completing and consolidating Wesdome's land package around Lac De Montigny.

As part of the Kiena property purchase, McWatters retained a 2–4% NSR royalty from any future Kiena production, and a C$1.00 to C$1.50 per tonne royalty on future ore milled at the Kiena Mill from any source. Subsequent to year-end 2003, Wesdome Gold Mines Inc. entered into agreements with McWatters to purchase these royalties for C$2.2 million. Consequently, the Kiena property now has no underlying royalty.

4.4.11 Kiena West property

The Kiena West property (Fig. 4.4) comprises twelve (12) staked mining claims and one (1) isolated staked mining claim for a total of 183.45 ha.

Wesdome's 100% interest originated when Western Quebec Mines Inc. purchased the Kiena land package from McWatters and subsequently transferred the property to Wesdome Gold Mines Inc., thereby completing and consolidating Wesdome's land package around Lac De Montigny.

The Kiena West property is subject to a royalty of 1% NSR (Fig. 4.6) in favour of Jack Stoch.

4.4.12 Rosenbaum property

The Rosenbaum property comprises twelve (12) staked mining claims and one (1) isolated staked mining claims totalling 183.45 ha.

Wesdome's 100% interest originated when Western Quebec Mines Inc. purchased the Kiena land package from McWatters and subsequently transferred the property to Wesdome Gold Mines Inc., thereby completing and consolidating Wesdome's land package around Lac De Montigny.

The Rosenbaum property is subject to a 2% NSR royalty in favour to Pierre-André Bigué, 1% of which can be purchased for an amount of C$1 million.

4.4.13 Dubuisson property

The Dubuisson property comprises nine (9) staked mining claims totalling 252.31 ha.

Wesdome's 100% interest originated when Western Quebec Mines Inc. purchased the Kiena land package from McWatters and subsequently transferred the property to Wesdome Gold Mines Inc., thereby completing and consolidating Wesdome's land package around Lac De Montigny.

The Dubuisson property has no underlying royalty.

4.4.14 Audet Block property

The Audet Block property comprises six (6) staked mining claims totalling 414.34 ha.

Wesdome's 100% interest originated when Western Quebec Mines Inc. purchased the Kiena land package from McWatters and subsequently transferred the property to Wesdome Gold Mines Inc., thereby completing and consolidating Wesdome's land package around Lac De Montigny.

The Audet Block property is subject to a 2% NSR royalty in favour of Huguette Audet.

4.4.15 Elmac property

The Elmac property comprises thirty-two (32) staked mining claims totalling 108.41 ha.

Wesdome's 100% interest originated when Western Quebec Mines Inc. purchased the Kiena land package from McWatters and subsequently transferred the property to Wesdome Gold Mines Inc., thereby completing and consolidating Wesdome's land package around Lac De Montigny.

The Elmac Block property is subject to a royalty of 2% NOP (net operating profits) in favour of Albert Audet and Daniel Audet.

4.4.16 Kiena South Block property

The South Block Kiena property (Fig. 4.4) comprises ten (10) staked mining claims totalling 346.23 ha.

Wesdome's 100% interest originated when Western Quebec Mines Inc. purchased the Kiena land package from McWatters and subsequently transferred the property to Wesdome Gold Mines Inc., thereby completing and consolidating Wesdome's land package around Lac De Montigny.

The Kiena South Block property has no underlying royalty.

4.4.17 Roy Option property

The Roy Option property (Fig. 4.4) comprises eight (8) staked mining claims totalling 276.01 ha.

Wesdome's 100% interest originated when Western Quebec Mines Inc. purchased the Kiena land package from McWatters and subsequently transferred the property to Wesdome Gold Mines Inc., thereby completing and consolidating Wesdome's land package around Lac De Montigny.

Six (6) of the eight (8) staked claims are subject to a royalty (Fig. 4.6) corresponding to an amount of C$0.25 per metric ton of ore milled from the property in favour of Marie-Louis Roy.

The staked mining claims CL-3874831 and CL-3874832 from the original agreement between Marie-Louis Roy and Sigma Mines (Québec) Limited expired on January 5, 2005. They were staked again by Wesdome Gold Mines Inc. on May 30, 2006. The numbers of these new staked mining claims are CL-5272563 and CL-5272564 and they have no underlying royalty.

4.4.18 Shawkey property

The Shawkey property (Fig. 4.4) represents the amalgamation of the former Shawkey property, previously owned by Placer Dome and Valmag Inc., and the former Shawkey South property, previously owned by Valmag Inc.

The Shawkey property consists of twenty-five (25) staked mining claims totalling 358.56 ha. The property was under joint venture with Placer Dome (CLA) Limited until November 1997. Placer Dome was the operator and held a 65% interest. Western Quebec Mines Inc. acquired the 65% interest from Placer Dome in November 1997 for a cash payment of C$490,875.

The Shawkey South property consists of three mining claims (CL-4246421 to CL-4246423) totalling 48.64 ha. The Shawkey South property, along with Western Quebec Mines' original 35% interest in the Shawkey property, was acquired in 1988 and 1989 from Valmag Inc. The Shawkey South property is subject to a 1% NSR royalty (Fig. 4.6) payable to Léo Audet.

4.4.19 School Mine property

In 1988, Western Quebec Mines Inc. acquired many mining claims in Québec from Valmag Inc. in consideration of 1,500,000 common shares of the Company at a value of $2.1 million of which $2 million was allocated to the School Mine ("Mine École") property (Fig. 4.4). The claims were subject to a 2% NSR royalty payable to Valmag Inc. Following the acquisition of Valmag Inc. in 1998 by Western Quebec Inc., the School Mine property has no underlying royalty.

The property comprises thirty-five (35) contiguous staked claims totalling 615.26 ha

4.4.20 Joubi property

On November 13, 1984, Western Quebec Mines Inc. agreed to purchase a 40% interest in the Joubi property (Fig. 4.4) from Valmag Inc. The property comprised 15 mining claims. In 1993, Western Quebec Mines completed the acquisition of the 100% interest of the Joubi property. The claims are subject to a 3% NSR (Fig. 4.6), 2% of which is payable to Viateur Audet and the remaining 1% to Les Mines Messeguay Inc. (now Melkior Resources Inc.).

On July 2, 1996, Western Quebec Mines acquired the Dubuisson West property from Republic Goldfields Inc. This property was composed of seven (7) mining claims and was merged with the Joubi property. The Dubuisson West property is subject to a 2% NSR royalty in favour of Minefinders Corporation Ltd (Pan American Silver bought

Minefinders Corporation in 2012). Moreover, there is an obligation for Western Quebec Mines to pay Republic Goldfields a royalty of CA1$.00 per tonne mined in the future, to a maximum of 1 million tonnes. No royalty has been received by Republic Goldfields in respect of production from the Dubuisson West property since 1996.

The Joubi property comprises twenty-two (22) contiguous staked claims totalling 440.57 ha.

4.4.21 Other mining titles

Four (4) mining titles are not attached to any specific property. These mining titles cover an area of 83.94 ha.

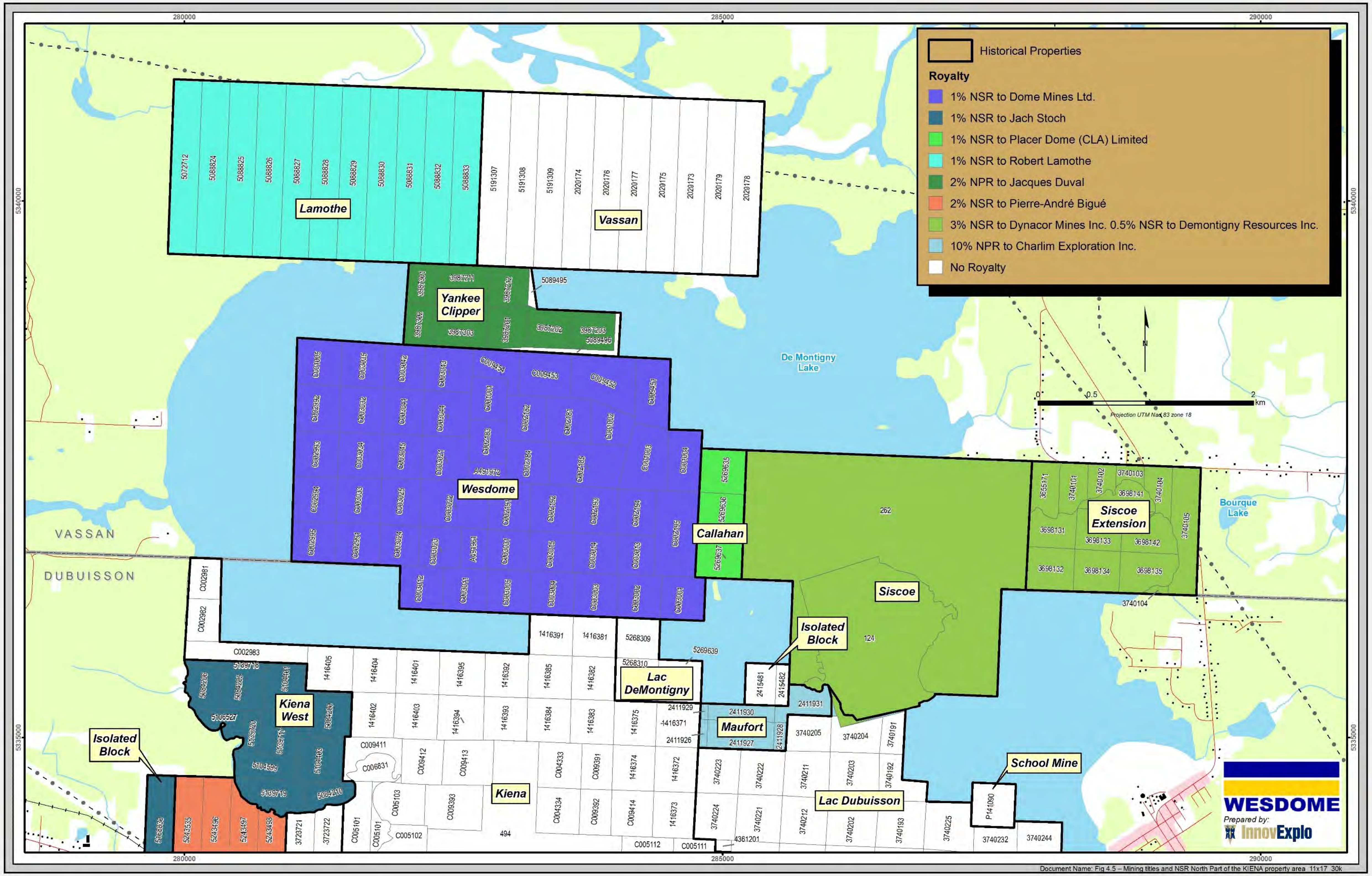

Figure 4.5 – Map of historical mining titles constituting the Quebec Wesdome Project (North Part) and royalties relating to the Quebec Wesdome Project

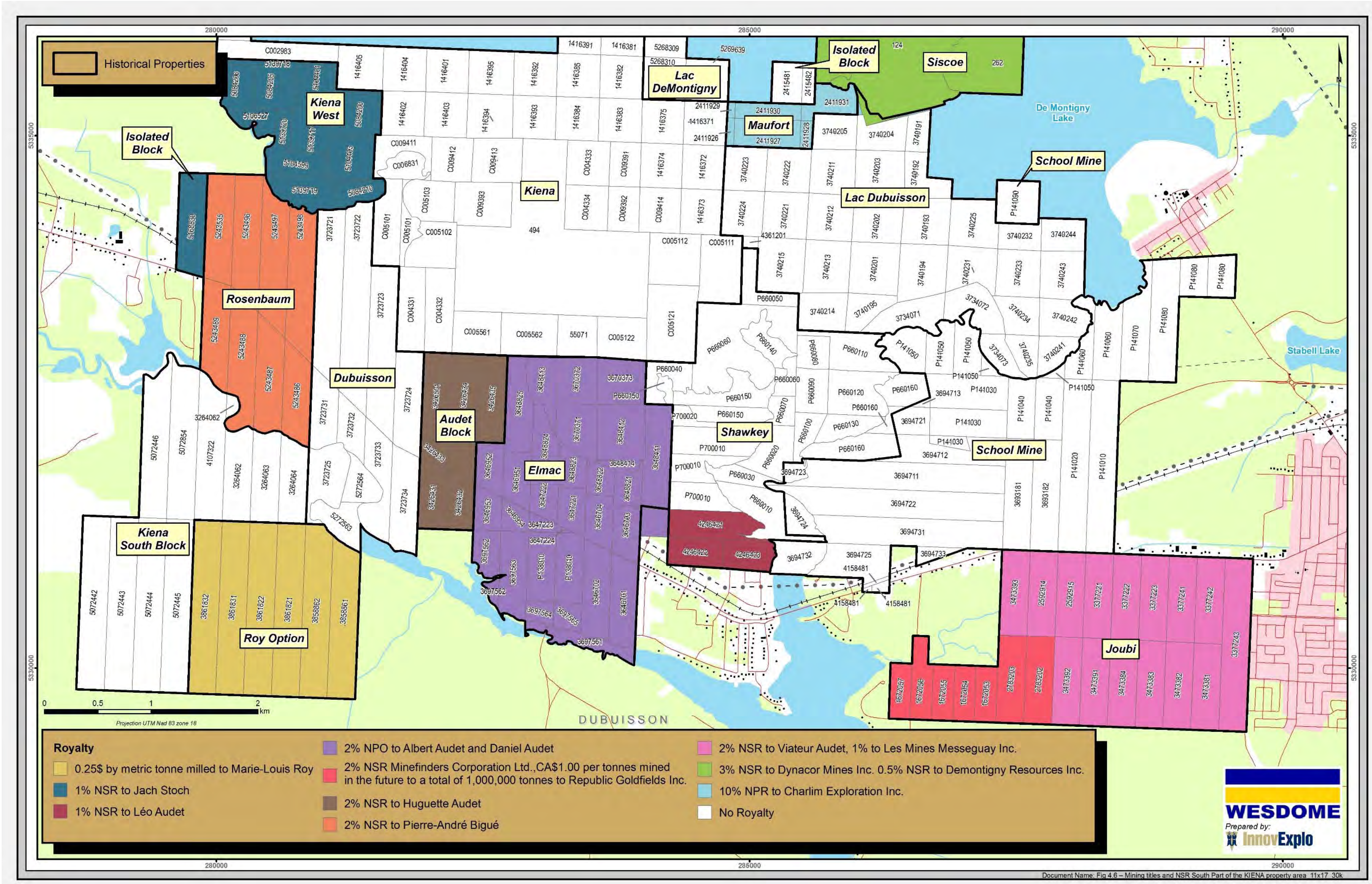

Figure 4.6 – Map of historical mining titles constituting the Quebec Wesdome Project (South Part) and royalties relating to the Quebec Wesdome Project

4.5 Environmental Studies

No formal environmental baseline study is available for the entire area covered by the Quebec Wesdome Project.

Studies for some parts of the Project are available, and the information below is taken from these reports.

Figure 4.7 is the reference for Chapter 4.5.

4.5.1 Study area

The majority of the study area is covered by Lac De Montigny, and the only active mine site is situated on Parker Island. Some mining operations have taken place in the past on Island No. 3 and Siscoe Island. Lac De Montigny is a large lake that is very important for Val-d'Or's recreational tourism industry (nautical activities and fishing). The eastern part of Lac De Montigny is also a "villégiature" (recreational/resort) development area according to the land use and development plan (*Schéma de Développement et d'Aménagement*) for the La Vallée-de-l'Or regional county municipality, which established the zoning for the municipality's territory. Effluent from Val-d'Or's major municipal wastewater treatment plant is discharged into Lac De Montigny.

4.5.2 Fauna

Suspected species for the Dubuisson Zone area were listed in a report by Jobin and Rouleau (2009), which was based on a review of existing literature.

4.5.3 Water and Sediments

4.5.3.1 Hydrological regime

The Quebec Wesdome Project lies within the southern drainage area of Rivière Milky, and surface water drains into Lac De Montigny. Lac De Montigny is a major lake fed by Lac Lemoine and Lac Mourier in the south, via Rivière Thompson[2].

4.5.3.2 Groundwater quality and levels

No drinking water network is available for neighbouring homes.

A hydrogeological study (LEQ, 1999) provided general information about local groundwater flow. A piezometer network covering the tailings ponds is used to test and monitor physico-chemical groundwater quality. The tailings ponds overlie a natural deposit with very low permeability, and the fine sediments that have been settling out over the years have increased their impermeability. Bedrock crops out under the South Pond, which may cause its water to seep into the aquifer. Piezometric lines and chemical analyses of groundwater samples confirm that the groundwater flow is directed outward from the tailings areas; indeed, the tailings ponds were

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[2] Source (consulted on 2015-04-28): http://obvaj.org/sites/obvaj/files/telechargement/2013-03-07%20OBVAJ%20-%20Activites%20economiques%20dans%20le%20bassin%20versant%20de%20l%27Harricana.pdf.

established over high points in the natural topography. As for the bedrock aquifer, there is a hydraulic connection with the ponds. The flow direction is mostly to the northeast, towards Petit Lac, but there is still a possibility that wells to the southwest of the Kiena mine complex could become contaminated, although no evidence of this has been detected through groundwater monitoring (see section 4.6.4.2.).

4.5.4 Background noise and vibrations

A study of ambient background noise was conducted for the area around the former Martin mine site (Payant and Deshaies, 2010).

4.5.5 Vegetation and wetlands

Most of the Quebec Wesdome Project is covered by Lac De Montigny. Parker Island is entirely occupied by mining infrastructure (9.5ha).

4.5.6 Soils

An environmental site investigation (a Phase I ESA by Godbout and Magnan, 2014) provides an understanding of the present and historical risks related to the Kiena mine area. It prioritizes and targets sites to be sampled for a Phase II study.

4.5.7 Archeology

No field verification of the archeological potential of the site affected by the Project has been done. A review of the literature reveals a high archeological potential for the shores of the lake (Archeo08, 2010).

4.6 Impact and Site Monitoring

No impact and monitoring systems are required or have been installed in others places in the Quebec Wesdome Project. Figure 4.7 is the reference for Chapter 4.6.This section deals with Kiena mine area.

4.6.1 Noise

A soundproof wall was built in 2007 to minimize the noise for surrounding citizens. This wall stands near the ore processing plant in order to minimize the noise of the ventilation system. When the Kiena mine is in operation, Wesdome uses an independent firm to conduct annual compliance tests.

4.6.2 Final effluent

All water in contact with mining materials is collected and treated prior to release. The only effluent is from the Kiena mine area. The final effluent is discharged in Lac De Montigny via a 200-metre ditch passing through a parshall canal to measuring the flow rate.

Even though the Kiena mine experienced a temporary reduction of its activities since 2013, Wesdome still maintains environmental monitoring on its effluent to assess its compliance (see also 4.6.4.1) with the *Metal Mining Effluent Regulations* (MMER) of the federal Ministry of the Environment, in accordance with the *Fisheries Act*, and with Directive 019 of the provincial Ministry of the Environment (Ministry of Sustainable

Development, Environment and the Fight against Climate Change: “MDDELCC”[3]). Effluent from Kiena mine site has never recorded a non conformance between 2008 and 2010.

4.6.3 Landscape

The riparian buffer strip around the North Pond of the Kiena site is generally about 100 m wide, except in the northwestern part where it is about 55 m wide. A study of shoreline stability around the tailings ponds (Roche, 1983) examined the effects of erosion by wind and water, concluding that the shorelines in the northern part have retreated about 19 inches, and about 30 inches in the eastern area. Regular measurements were taken twice a year at benchmarks, over a five-year period, to determine the most sensitive points to erosion. Erosion is caused by gusts of wind, which scour the slope toe. In 1997, a rockfill embankment 280 m long by 5 m wide was erected to protect the shoreline on a permanent basis.

4.6.4 Surface and groundwater

4.6.4.1 Surface water

A surface water measuring station (#08010004 of the MDDELCC’s Réseau-Rivières program) was installed on Rivière Harricana, downstream from the mine site.

The Kiena mine site is subject to the MMER, and Wesdome must conduct studies to monitor the effects of the effluent on the aquatic environment, especially on fish, fish habitats and halieutic resources. The results and the interpretation report from the field sampling program are submitted to Environment Canada annually. An Investigation of Cause Study (Saison and Gagnon, 2014) is the most recent report. The federal Environmental Effects Monitoring (EEM) program consists of analyzing samples of surface water and sediments. Wesdome has undergone three standard cycles. In 2014, the Cycle 4 report (Saison and Gagnon, 2014) focused on detecting and confirming the effects on fish in the exposure area. Generally, the quality of the surface water in the exposure area is similar to that in the reference area, thereby confirming that some contaminants are naturally present. Effects on the fish and fish habitats are considered non-prioritized toxic effects.

4.6.4.2 Groundwater

Groundwater monitoring for citizens has been taking place since 1992 whenever the mine was in production (Bérubé and al., 1998). The drinking water intakes for citizens who live near the site are analyzed for some parameters (heavy metals for example). Wesdome’s environmental coordinator forwards the results to the citizens with a short written explanation.

Since 2007, groundwater samples have been analyzed about twice a year at fourteen (14) wells installed around the tailings ponds (Saison and Gagnon, 2014). The criteria for drinking water and for seepage into surface water or infiltration into sewers, as stipulated in Appendix II of the MDDELCC’s Soil Protection and Contaminated Sites Rehabilitation Policy, have been exceeded, mostly from 2008 to 2009. Since 2013,

[3] MDDELCC: *Ministre du Développement durable, de l’Environnement et de la Lutte contre les changements climatiques.*

only the results for manganese exceeded these criteria, and it could be a natural attribute of this area.

An environmental characterization was conducted for the potential Dubuisson mine project (Allard and al., 2010), but no contamination was noted for the area.

4.7 Waste Rock Management

Figure 4.7 is the reference for Chapter 4.7.

4.7.1 Kiena mine site

Analyses have been conducted since 2007 to determine the acid generating potential of the waste rock. Results confirm that the waste rock is non-acid generating (Saison and Gagnon, 2014).

Waste rock remains underground for backfilling, and only a small amount has been used for road construction, among other things. The waste rock storage area is defined and authorized; its storage capacity is about 258,000 metric tons, covering roughly 2.25 ha on the peninsula and marginally used until now.

Figure 4.7 – Kiena mine site showing surface infrastructure, tailings deposition, and polishing pond.

4.7.2 Other sites

A summary of the waste rock present at other sites is described below in Table 4.1. The information was taken from the website of the MERN (SIGEOM [4])). A field visit by the authors in June 2015 confirmed the descriptions.

Table 4.1 – Other waste rock piles

Site name	Area (ha)	Nature of residue	Restoration	Under government responsibility
Joubi	0.45	Alkaline	Yes	No
Shawkey		Neutral	Yes	No
Wesdome	0.96	Undetermined	No	No
School Mine	0.18	Neutral	No	Yes

4.8 Tailings Management

Figure 4.7 is the reference for Chapter 4.8.

4.8.1 Tailings deposition in the Kiena mine area

Tailings are products of the ore concentration process. Tailings are transported as water slurry by surface pipes to the peninsula, where the tailings ponds are operated. Two eight-inch (8-in) diameter pipelines are functional. The pump flow rate is monitored using a calibrated electronic flowmeter to monitor variations in the flow and prevent leakage. A pressure gauge is installed along each section of the pipes.

A containment dike divides the tailings pond into two cells, commonly referred to as the North and South ponds (respectively 41 and 61 ha). Tailings from the concentrating process are discharged into the same cell for one year; the discharge point is periodically relocated to homogeneously distribute the tailings (Gagnon and Fournier, 2012). Since 2013, following the suspension of operations, only dewatering water is discharged into the tailings pond. The final effluent runs off the polishing area (6 ha); there is no water treatment plant.

4.8.2 Tailings sites

Others tailings areas on the Quebec Wesdome Project are no longer used by their former owners.

Due to the insolvency of the former owner of the Siscoe Island tailings ponds, the MERN has decided to take action and rehabilitate this site. The site includes two ponds totalling approximately 30 ha. Following an environmental characterization

[4] Source (consulted on 2015-03-16): http://sigeom.mrn.gouv.qc.ca/signet/classes/I1102_indexAccueil?l=a.

study conducted in the fall of 2011, rehabilitation work began in the summer of 2014. The plan involves covering and revegetating the tailings ponds to reduce the amount of water seepage, and to put an end to the erosion of mine tailings into Lac De Montigny[5].

A summary of other tailings sites on the Quebec Wesdome Project is described in Table 4.2. The information was taken from the website of the MERN, SIGEOM[6].

Table 4.2 – Other tailings areas

Site name	Type	Name	Area (ha)	Nature of residue	Restoration	Under government responsibility
Joubi	Mine water basin	Bassin d'eau de mine no1	0.15	Neutral	Yes	No
Joubi	Mine water basin	Bassin d'eau de mine no2	0.13	Neutral	Yes	No
Joubi	Ore stockpile		0.6	Neutral	Yes	No

During a field visit in June 2015, the authors observed a non-recorded spill of an unknown substance on the School Mine site near the remaining mining infrastructure. Wesdome has advised the MERN.

Figure 4.8 – Spill on the School Mine site

[5] https://www.mern.gouv.qc.ca/english/publications/mines/publications/publication-2013-chapter7.pdf

[6] Source (consulted on 2015-03-16): http://sigeom.mrn.gouv.qc.ca/signet/classes/I1102_indexAccueil?l=a.

4.8.3 Characterization of the tailings at Kiena mine area

An Environmental Site Characterization (Gagnon and Fournier, 2012) compared samples from the mine tailings sites and polishing area to the criteria in the schedules of the *Land Protection and Rehabilitation Regulation* (2003; Q-2, r.37). Tailings from the ponds are contaminated and exceed the level B criteria as set forth in the MDDELCC's *Soil Protection and Contaminated Sites Rehabilitation Policy*, whereas sediments from the polishing area exceed the level C criteria.

A complementary Environmental Site Characterization (Gagnon and Allard, 2013) analyzed samples of tailings generated by the concentrating process. The report concluded that the samples from Kiena could be considered as "leachable tailings" (the definition and methodology for tailings classification is described in Appendix II of Directive 019). The report also concluded that a sampling program using static tests, possibly even kinetic tests, will likely be required.

However, it is notable that the final effluent always complies with Directive 019 of the MDDELCC from 2008 to 2010 (Rood and Godbout, 2014) and with the MMER of the federal Ministry of the Environment from 2009 to 2013 (Saison and Gagnon, 2014).

4.8.4 Design details

The tailings ponds now cover a surface area of about 102.5 ha. The boundaries of the initial tailings ponds were expanded in 1992. The tailings are impounded in two independent cells known as the North and South ponds. The tailings management facility also includes a polishing pond that is located southeast of the tailings ponds (Figure 4.7). The treatment of mine tailings is accomplished through the natural degradation and elimination of cyanides by UV and heat exposure.

In 1992, the expansion of the tailings area was authorized by constructing the North Pond. The dikes of the North Pond were raised in 2005, and the dikes of the South Pond in 1995 and 2010, under the authorization of the provincial Ministry of the Environment.

The limits of the tailings ponds are marked by the railway on the south side, and by the shores of Lac De Montigny on the north side.

4.8.5 Topographic profile of the tailing management facility (TMF)

Based on the latest information received from Wesdome, a field-based topographical survey conducted in June 2011 determined that the residual or unused storage capacities of the North and South ponds are about 459,000 and 1,520,000 m^3, respectively. Discharge operations remained in place until 2013, and the North Pond has nearly reached its full capacity. Therefore, Wesdome is considering the possibility of converting the current polishing pond into a tailings pond (a third cell). A fourth cell could be created further east that would encompass the current waste rock pile. To complete the system, a new polishing pond would be established, and it would be operated using water treatment technology and equipment that would degrade the cyanide. Detailed engineering and costing will be further defined on the basis of specific needs.

4.8.6 Geotechnical investigation

The raising of the tailings pond dikes required the following studies on soil identification, physical and mechanical properties, groundwater depth and shear capacity: LEQ (2001, 2004, 2005, 2005b) and Roche (2010).
The inspections performed for the TMF are as follows:

- Daily and general inspections of the pipelines and tailings dikes by security officers;
- Bi-weekly detailed inspections of the tailings dikes by the mine's environmental department; and
- Annual inspections by a geo-technician who specializes in tailings dikes.

Security guards make daily inspections on the tailings ponds, the polishing pond and the pipelines using a fact sheet to record inspection events; no particular anomalies have been recorded. Wesdome entrusts the annual statutory inspections of the dikes to an independent firm; annual reports are available.

In 2014, a report by Carrier (2014) indicated that some recommendations of a preceding inspection report (Carrier, 2013) had yet to be implemented. According to the report, the following recommendations must be implemented to prevent deterioration:

- Ensure that runoff enters and flows in the ditches by cleaning culverts and removing vegetation;
- Remove vegetation from the dikes;
- Preserve the inner surface of the South Pond's dikes from erosion and seal any cracks;
- Improve the bearing capacity of the South Pond's surface layer;
- Control wildlife.

Also, the lack of new slurry input has caused the upper parts of the ponds to partially dry out, possibly leading to windblown dust.

4.9 Ore stockpile at Kiena mine Area

Three potential sites have been planned on Parker Island, to be used if necessary. The largest one in the southeastern part of the island is designed for a capacity of 2000 tons.

4.10 Water Management

4.10.1 Water management concepts for Kiena mine area

While the mine was operating, water balance reports were produced monthly. The 2011 water budget ensured maximum recirculation of water, thereby keeping the discharge to the environment to a minimum. Fresh water was pumped from Lac De Montigny when rainfall and mine water were insufficient.

4.10.1.1 Ore processing plant

The ore processing plant used water derived from mine dewatering as process water.

4.10.1.2 North and South ponds

Since 2013, following the temporary closure, water entering the tailings ponds is primarily the product of dewatering of underground mine workings. Settled water from the tailings ponds is collected in peripheral ditches and siphoned to the polishing pond.

4.10.1.3 Polishing area

Water from the tailings ponds is drained by siphoning to the polishing pond. The polishing area is discharged twice a year: once in the spring before the snow melts, and again in the autumn before the first snow falls. The quality of the effluent must comply with Directive 019 requirements before proceeding. There is no water treatment plant.

4.10.1.4 Final effluent

Process effluents that are discharged to the environment are a combination of decanted effluent from both the tailings pond and the polishing pond, which is situated downstream from the tailings pond.

The final effluent is discharged into Lac De Montigny via a 200-metre ditch passing through a parshall canal to measuring the flow rate. The final effluent is discharged intermittently; the average monthly runoff of the final effluent from 2011 to 2013 varied between 82,073 and 124,461 m^3 per year for 95 to 120 days per year. No deleterious substance[7] limits were exceeded at any time during the entire period under review.

4.10.1.5 Indoor water and sewage

At the Kiena site, Lac De Montigny is the source of water for domestic uses (shower, bathrooms). No drinking water network is available in this sector; potable water is supplied as bottled water shipped to the site. When the mine is in operation, water is collected on the 17th level to provide drinking water for the underground workers. Wastewater is treated in a septic field.

4.11 Permitting (Existing Environmental Regulations and Permitting)

4.11.1 Environmental assessment

Before being placed on care and maintenance mode, the Kiena mine had authorization to operate at a production rate above 2,000 tonnes per day. Thus, when production restarts, neither Environment Canada nor the MDDELCC will require a new environmental assessment.

4.11.2 Permit status for Kiena mine Area

4.11.2.1 Environmental permitting

Environmental permits are already in place. In 2004, the provincial Ministry of the Environment granted Wesdome the transfer of some authorizations and certificates of authorization (CA). A few were not transferred because they only related to an installation (e.g., the installation of a septic tank).

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[7] As, Cu, Ni, Pb, Zn, CN tot, TDS, Ra^{226} and pH.

The ore production capacity authorized by the CA for the Kiena mine is 2,040 tonnes per day; thus, reactivating mining operations would not trigger a new environmental impact assessment since “care and maintenance” status is not equivalent to a reopening procedure.

The process to obtain Effluent Discharge Objectives (EDO) from the MDDELCC was put on hold once the Kiena mine site was placed on care and maintenance mode.

It was impossible to establish a complete list of obligations from permits and certificates due in part to the historical context in which different owners have operated the mine since it opened. It is likely that Wesdome is not fully aware of all its obligations. For example, some reports (Vachon, 1996; Roche, 1983) indicate that shoreline monitoring was part of the CA for the construction of the North Pond; the MDDELCC has confirmed that it is a part of CA #7610-08-01-70065-28, which also stipulates that five (5) drinking water wells around the TSF must be analyzed once per year. InnovExplo attempted to confirm Wesdome’s obligations in this matter by requesting documents from the MDDELCC under the *Access to Information Act,* but this effort was terminated due to the magnitude of the documentation that would have to be obtained. The information is probably in one of the documents from the CA modification of October 28, 2005. Table 4.3 presents a summary of the known CA situation, but the reader is cautioned that it may not be exhaustive.

4.11.2.2 Infrastructure

A permit is needed for all infrastructure to be installed on the Project, from mining to processing. Permits must also be granted by the municipal or provincial authorities for use of the lands for mining-related activities. A mining concession or a mining lease does not include the tailings ponds or piles; it only concerns the mining infrastructure.

The Kiena mine area is divided into several surface rights. The mining concession covers Parker Island and half the road access (Chemin Kienawisik). It authorizes the infrastructure under the *Mining Act*. The southern part of the road is authorized by leasing agreement # 2007-009 from the CEHQ[8], which was renewed in 2007 for a 25-year period. The land under the tailings ponds and the polishing area belongs to Wesdome; no leasing agreement from the MERN is necessary.

[8] *Centre d’expertise hydrique du Québec*

Table 4.3 – Summary of the certificates of authorization (CA) from the provincial Ministry of the Environment

# CofA	Title	Type	Date
7610-08-01-70065-**23**	Certificate of authorization for the reopening of "Les mines d'or Kiena ltée".	Certificate of authorization	1981-07-29
		Transfer of Certificate of authorization from "Les mines d'or Kiena ltée" to " Mc Watters".	1997-09-12
		Modification	2001-02-23
		Transfer of Certificate of authorization from " Mc Watters" to "Wesdome inc.".	2004-05-25
	Waste Rockpile Expansion	Modification	2004-12-20
7610-08-01-70065-**24**	Start of operation of the ore mill at Kiena	Certificate of authorization	2 aout 1984
	Modification of Certificate of authorization of the 2nd of August, 1984 , for the construction of the tailing pond.	Modification	1987-07-27
	Modification of the standards for the effluent	Modification	1989-04-04
	Start of operation of the ore mill at Kiena	Modification	1996-11-27
		Transfer of Certificate of authorization from "Les mines d'or Kiena ltée" to " Mc Watters".	1997-09-12
		Modification	2001-03-19
		Transfer of Certificate of authorization from " Mc Watters" to "Wesdome inc.".	2004-05-25
7610-08-01-70065-**28**	Tailing pond expansion	Certificate of authorization	1992-05-19
		Transfer of Certificate of authorization from "Les mines d'or Kiena ltée" to " Mc Watters".	1997-09-12
		Transfer of Certificate of authorization from " Mc Watters" to "Wesdome inc.".	2004-05-25
		Modification	2005-10-28
7610-08-01-70065-**29**	Operation of a silt borrow pit	Certificate of authorization	26 aout 1994
		Transfer of Certificate of authorization from "Les mines d'or Kiena ltée" to " Mc Watters".	1997-09-12
		Transfer of Certificate of authorization from " Mc Watters" to "Wesdome inc.".	2004-06-04
7610-08-01-70065-**33**	Operation of a clay deposit	Certificate of authorization	1999-05-21
		Transfer of Certificate of authorization from " Mc Watters" to "Wesdome inc.".	2004-06-04
7610-08-01-70065-00	Installation of a septic tank	Certificate of authorization	1981-02-10

4.12 Social and Community Impact

4.12.1 Communication and consultation

Individual meetings are planned with people who have a particular interest in environmental or social matters relating to the Quebec Wesdome Project. The municipal authorities are kept informed about any mining operations or activities; for example, when a drilling program will be performed.

4.12.2 Main Concerns related to the project

Groundwater is the primary source of potable water for nearby individual dwellings. Wesdome monitors the water quality of these wells.

In 2007, the provincial Ministry of the Environment sent a notice of violation to Wesdome for exceeding the noise threshold value following complaint procedures from citizens; the ministry carried a noise study and confirmed that noise threshold has been exceeded in the night time. After this event, Wesdome carried out a noise study (Decibel, 2007 and Decibel, 2008), which showed that noise measurements are below the regulatory limit values in this area. Wesdome erected in 2007 a soundproof wall as a corrective strategy, to be pro-active. No infraction is registred since 2008.

4.13 Closure and Reclamation Planning and Costs

4.13.1 Closure plan

The Rehabilitation and restoration plan (Rood and Godbout, 2014) is accepted in September 2015. These second revision (previous in 2008) complies with the requirements laid out in the document titled Guidelines for preparing a mining site rehabilitation plan and general mining site rehabilitation requirements9 (the "Guide"). Previous version (Vachon, 2008) did not include decommissioning costs; this explains the increase of the total cost of restoration. This plan namely describes the type of restoration work to be performed and the amount that must be paid in financial guarantee. Costs for decommissioning and post-closure management are presented; the total cost for restoration works is about 7.2 millions of dollars. Since August 22, 2013, the amount of the required financial guarantee corresponds to 100% of the cost of restoration work for the entire mine site. This guarantee is paid in three instalments (50% - 25% - 25%) over a period of two years10.

A rehabilitation and restoration plan was also prepared in 1999 for the Island No. 3 site (Vachon, 1999).

4.13.2 Closure costs

The Rehabilitation and restoration plan (Rood and Godbout, 2014) provides the evaluation of the costs for the implementation of the closure plan. The summary is presented in Table 4.4.

[9] MRN, 1997. http://www.mern.gouv.qc.ca/english/publications/mines/environment/guianmin.pdf

[10] https://www.mern.gouv.qc.ca/english/publications/mines/publications/publication-2013-chapter7.pdf

Table 4.4. – Rehabilitation and restoration costs

Description	Quantité	Unité	Coût unitaire	Total
Enlèvement des bâtiments et infrastructures (incluant ingénierie et contingences)	--	--	--	5 457 500 $
Sécurisation (puits, monteries)	4	--	20 000 $	80 000 $
Aires des infrastructures et chemins • Scarification • Mise en végétation	 100 000 100 000	 m^2 m^2	 0,10 $ 0,80 $	 10 000 $ 80 000 $
Halde des stériles • Recouvrement de 30 cm de dépôts meubles • Mise en végétation	 12 900 43 000	 m^3 m^2	 8,00 $ 0,80 $	 103 200 $ 34 400 $
Halde de minerai • Recouvrement de 30 cm de dépôts meubles • Mise en végétation	 90 300	 m^3 m^2	 8,00 $ 0,80 $	 720 $ 240 $
Parc à résidus • Ouvrage de contrôle des eaux • Mise en végétation	 Forfait 1 250 000	 -- m^2	 -- 0,80 $	 140 000 $ 820 000 $
Bassin de polissage • Ouvrage de contrôle des eaux • Échantillonnage et analyse des boues	 Forfait 5	 -- Échantillon	 -- 200 $	 22 100 $ 1 000 $
Suivi environnemental et entretien (5 ans) • Visite des lieux • Qualité de l'effluent final • Qualité des eaux souterraines • Rapport annuel	 30 30 150 5	 Visite Échantillon Échantillon Rapport	 1 000 $ 150 $ 200 $ 2 000 $	 30 000 $ 4 500 $ 30 000 $ 10 000 $
Total				6 823 700 $
Conception et ingénierie (excluant bâtiments) (10%)				136 600 $
Contingences (excluant bâtiments) (15%)				204 900 $
GRAND TOTAL				7 165 200 $

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

The Quebec Wesdome Project (Fig. 5.1) covers approximately 76.2 km^2 to the northwest of the city of Val-d’Or. The project is located at latitude 48°08′ N and longitude 77°54′ W. Most of the project is covered by Lac De Montigny, its shores and its islands. The project includes eleven (11) specific areas to be investigated, which are referred to by the following names in this report: Kiena Mine, Wisik Shaft, Shawkey Mine Shaft No. 1 (Martin Shaft), Shawkey Mine Shaft No. 2 (Zone 10), Elmac Shaft, School Mine Shaft, Joubi Mine, Dorval-Siscoe Shaft (Wesdome Deposit), Island #3, Siscoe Mine and Siscoe Extension.

5.1 Climate and vegetation

The project is located in the southern part of the boreal bioclimatic domain. The dominant vegetation is fir and white spruce forest, with occurrences of white birch, black spruce, jack pine, larch and aspen, according to the provincial Ministry of Forests, Wildlife and Parks. This domain is characterized by a relatively cold and humid continental climate. Two meteorological stations in Val-d’Or (#71725 and #71941), located at 48°03'12" N and 77°46'58" W, and at elevations of 338.90 m and 337.40 m respectively, measured an average winter temperature of -13.03 °C and an average summer temperature of 16.86 °C, based on the past five years. The average annual snow accumulation is 256.56 cm, and the average annual rain precipitation is 839.38 mm. Figure 5.2 illustrates the monthly maximum, minimum and average temperatures during the year, along with monthly precipitation totals.

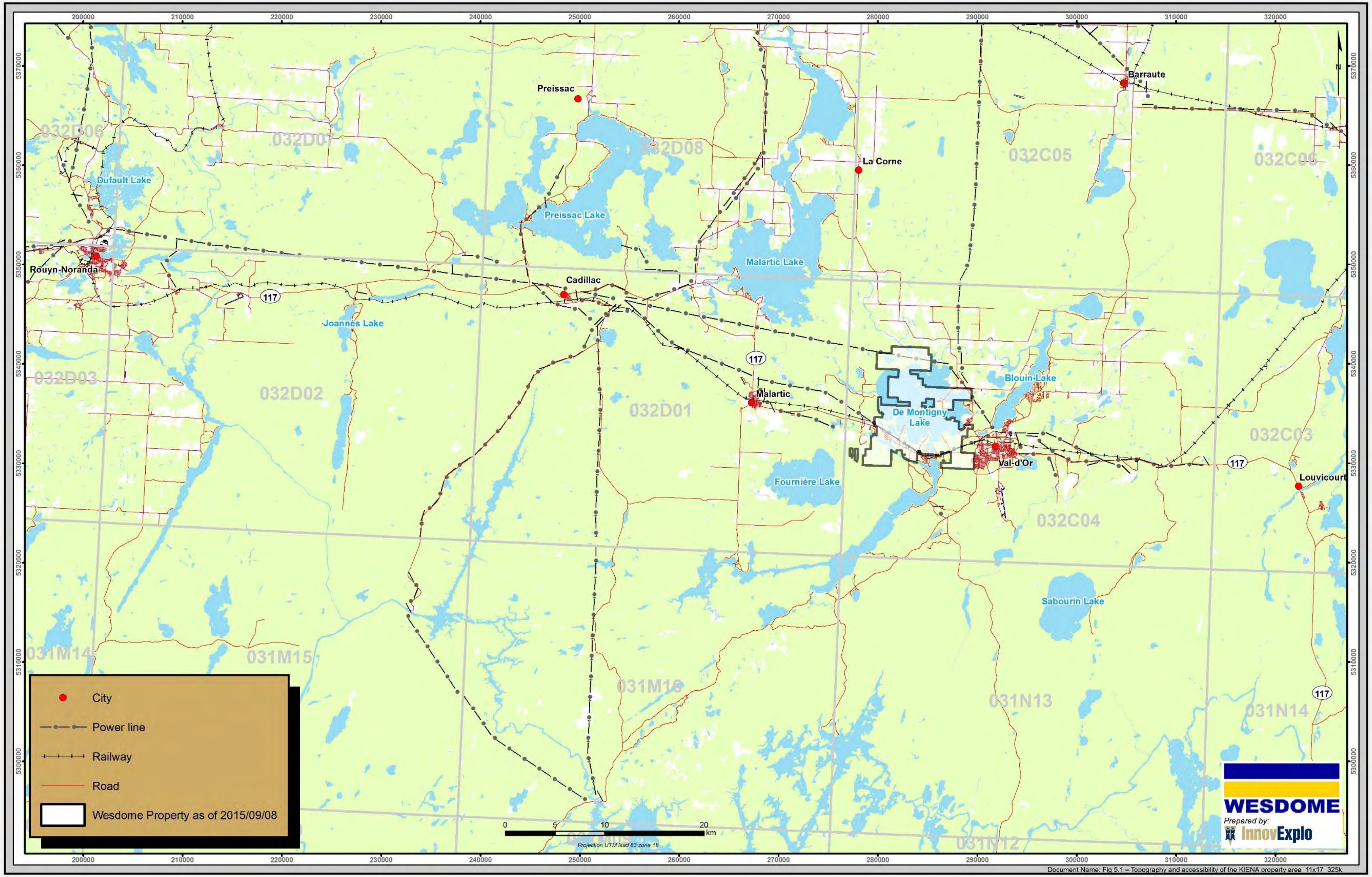

Figure 5.1 – Access and waterways of the Quebec Wesdome Project and surrounding region

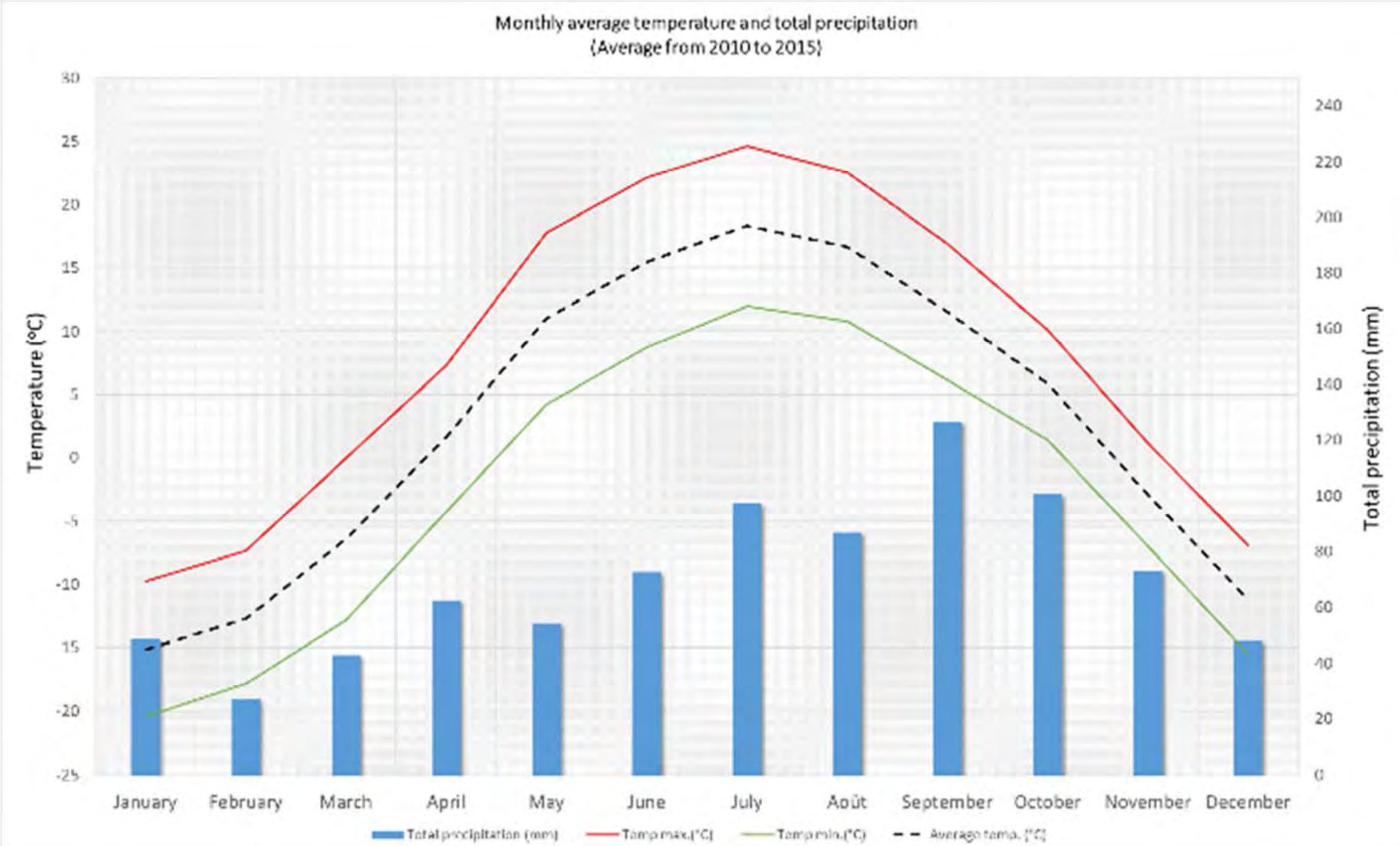

Figure 5.2 – Climograph for the Quebec Wesdome Project

The operating season is year-round since the majority of the work is underground. The parts of the project located on islands are accessible by boat during the summer season and by ice bridges during the winter season.

5.2 Accessibility

Access to the southern part of the Quebec Wesdome Project (the areas known as Kiena Mine, Shawkey Mine Shaft No. 1 (Martin Shaft), Shawkey Mine Shaft No. 2 (Zone 10), Elmac Shaft, School Mine Shaft and Joubi Mine) is from highway 117. The areas known as Wisik Shaft, Île #3 and Dorval-Siscoe Shaft (Wesdome Deposit) are located on islands and are only accessible by boat during summer and ice bridge in winter. The Siscoe and Siscoe Extension Area are accessible via Highway111.

The nearest airport with scheduled flights to and from Montreal is at Val-d'Or.

5.3 Local Resources

The project area is well serviced by mining and milling industries, with several mining projects nearby. The city of Val-d'Or, with a working-age population of 22,000, is the closest service community, located 10 km from the project. Val-d'Or has quality manpower and is a place where firms can hire reliable, qualified and experienced staff. The second largest population center is the city of Rouyn-Noranda, located 105 km northwest of Val-d'Or, where the same quality of manpower is found among the working-age population of 28,000.

5.4 Physiography

The Quebec Wesdome Project is located in the Abitibi Subprovince of the Canadian Shield. The topography of the area is characterized by low ridges and hills flanked by generally flat areas of glacial outwash, swamps and numerous lakes and bogs. The average elevation varies from 300 to 320 masl with some areas in the southern part of the project rising to 360 masl. Overburden varies between 0 and 15 m, and consists of stratified clays as well as glacial and glaciofluvial Pleistocene deposits (MDDELCC). Most of the project is covered by Lac De Montigny, which includes several islands.

5.5 Kiena Mine Site

5.5.1 Surface infrastructure

The Kiena mining complex occupies Parker Island (Figs. 4.7, and 5.3 and 5.4) and the peninsula to the west on the south shore of Lac De Montigny (Fig. 4.7). The following surface infrastructure is located on Parker Island:

In the southern part of the island:

- The security booth granting access to the site;
- The administrative buildings; and
- A parking lot.

At the eastern end of the island:

- The shaft and headframe;
- A dry facility;
- A septic tank and related leach field;
- A laboratory;
- A core shack;
- A hoisting room;
- The main electric substation (4 transformers);
- A secondary electrical substation (25kv) near the access road; and
- Fuel reservoirs (one 2,270l gas tank and 2 diesel tanks of 22,500l and 2,270l).

In the centre of the island lies the ore processing plant, including a crusher, three ore silos, workshops and warehouses, tanks (bulk lime 100t, NaCN 55,000L max, hydrochloric acid 35t, nitric acid 10x77kg max, and bulk caustic soda 50% 30t), an electrical substation, backfill plant and related warehouse, a 75 feet diameter waste-thickener and a 65-ft diameter process thickener.

At the east of the plant is found an event-retention pond in case of tank leakage in the plant. Three conveyors link the different parts of the plant. Two waste rock piles are located on the west side of the plant as a soundproof wall.

At the south shore of the island is a reagent warehouse with a stock of activated carbon (25t max), flocculent (3t max) and lead nitrate (20t max). Near the warehouse is the used-oil tank with a capacity of 13,638L.

The pumping station is located in northwest sector. A pumping system was installed to bring water to the surface at the pumping facilities, near the No. 1 shaft.

The following four pieces of mobile equipment are still present on the site: a lift crane 770, a locomotive 781, a wagon 771 and a wagon flat car 772.

Figure 5.3 – Enlargement of the infrastructure on Parker Island

The accumulation areas are located on the peninsula. They comprise a waste rock pile and a tailings storage facility with two cells (North: 41 ha, and South: 61ha) leading to a polishing pond of 6 ha. A core shack is located near the waste dump, and an obsolete truck scale and a security booth are found near the access road.

Figure 5.4 – View of Parker Island

5.5.2 Availability and sources of water

Two sources of water were used at the Kiena Complex: surface water from Lac De Montigny, and an underground source from level 17 at a depth of 170 m below the surface.

Surface water was used for emergency means, in case of fire. Two large pumps are located in a building behind the plant.

Underground water flows naturally on level 17. A pumping system was installed to bring water to the surface at the pumping facilities, near the No. 1 shaft. This water is used as clean water for toilets and showers. A small storage tank (with water from level 17) is also located at level 38 for industrial use underground.

5.5.3 Availability and sources of power

Electricity is available from provincial distributor Hydro-Québec through an above-ground power line. This source of power was used to heat the surface buildings and run the plant. A generator is also available in case of a power outage to run the emergency lighting, the underground pumps and the silo truck at the surface. A 10,000L capacity diesel tank is located near the generator, linked to a tank with a capacity of 1,135L.

Four diesel tanks are located underground at levels 27, 33, 48 and 64 of the mine. These tanks have a capacity of 4,500L.

5.5.4 Underground infrastructure

5.5.4.1 Drifts and stopes

Access to underground work is through the No.1 shaft to a depth of 930 m. It gives access from level 12 (120 m below surface) to level 94 (930 m below surface).Levels 94 to 100 are accessible by a ramp that extends from 930 to 1,000 m below surface. A total of 49 levels were excavated for approximately 200,000 m of drifts. A northwest exploration drift of 947 m is present on level 12. A second exploration drift of about 3,500 m extends to the east on level 33.

The length of underground excavations, such as drifts, raises and cross-cuts, are based on data provided by the client.

Figures 5.5 and 5.6 illustrate the underground work in plan and vertical views.

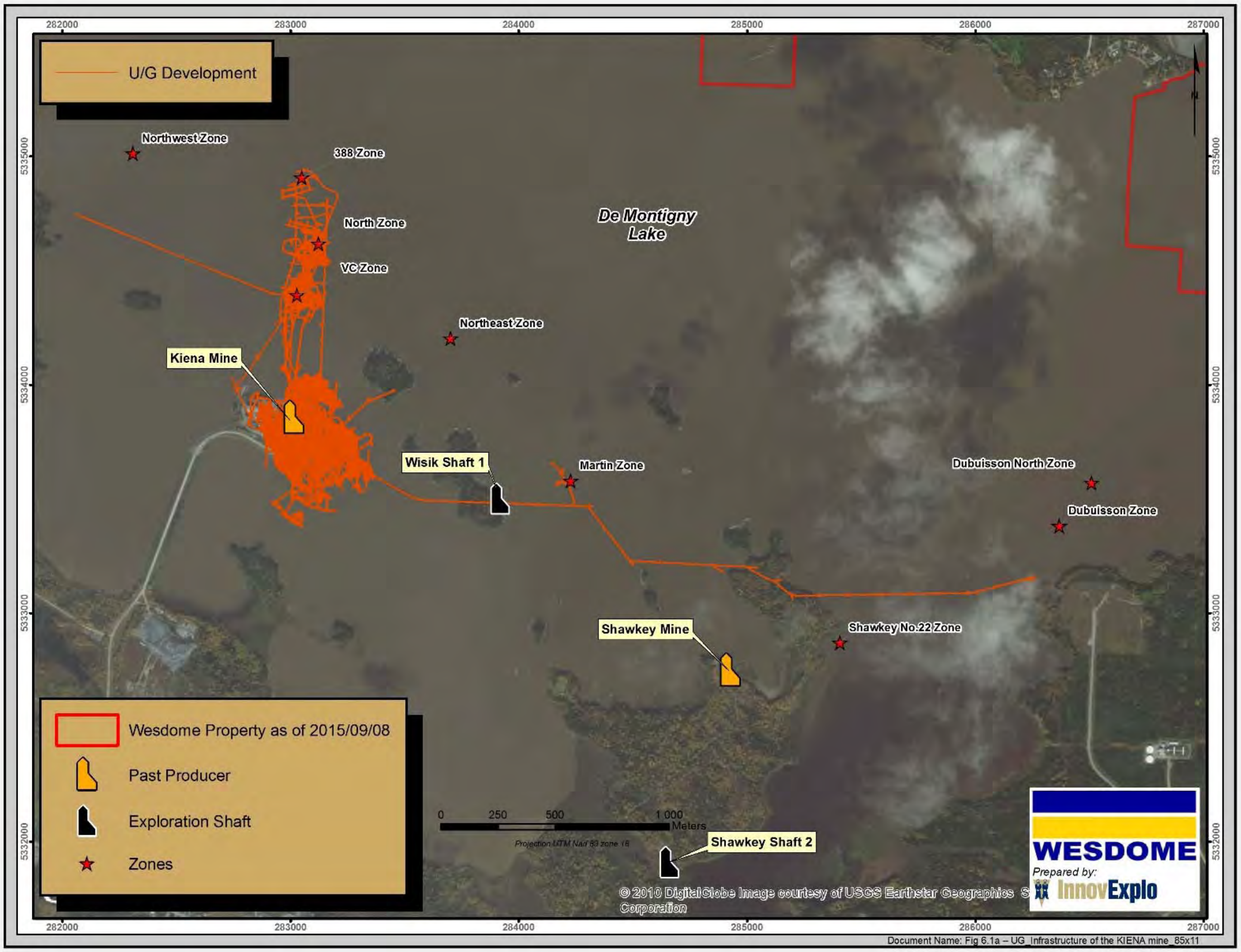

Figure 5.5 – Plan view of underground infrastructure of the Kiena mine

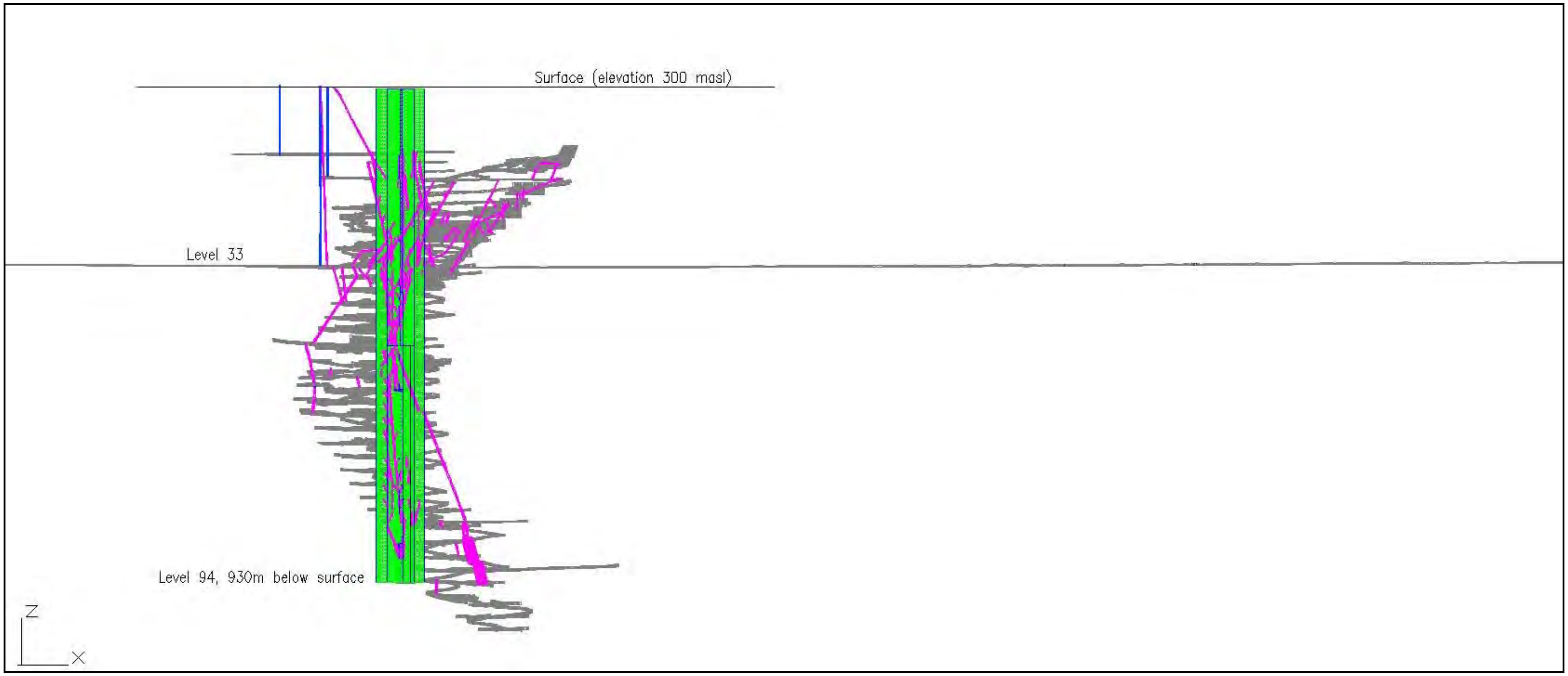

Figure 5.6 – Vertical view of the underground infrastructure of the Kiena mine

5.5.4.2 Crown pillar

A crown pillar approximately 100 m thick was left in place throughout the Kiena Complex. The crown pillar is located beneath Parker Island (Zone S-50) and the lake. The first drift to be mined was level 12 (120 m below the surface). The Zone S-50 was mined from the level 17 to 100. The northern part called the North Zone of the Kiena Complex was mined from level 23 to level 52, leaving a large un-backfilled opening equivalent to 700,000 t of ore. The presence of this large un-backfilled opening below the pillar, coupled with minor movement in the roof of the excavations of the S-50 North Stopes 17-24 and 17-34, raised some questions about the potential loss of stability of the crown pillar. Two problematic zones were identified: the roof of stopes 17-24 and 17-34 at level 17, 170 m below the surface, and the North Zone roof of level 12 at 120 m below the surface.

In 2010, Itasca performed a preliminary empirical analysis on the stability of the surface pillar for the North Zone. This analysis evaluated two scenarios. The first case was based on the assumption that the pillar is made of schist, as the second scenario considers a pillar made of ore. In the first case, the pillar showed significant potential for instability. The second case showed a situation of near-instability.

Three recommendations were made to monitor the signs of failure in the pillar. One of the three would be sufficient as an adequate monitoring protocol.

- Instrumentation:
    - Manual probe to access any rock disentanglement (weekly readings) or;
    - Multi-point borehole extensometers installed toward the surface, from level 12 (weekly readings or datalogger).
- Hydrostatic barricades;
- Back-filling of open stopes:
    - Backfill the majority of the void. In the advent of a pillar collapse, the loose material from the pillar would not have a chance to expand and fill the rest of the opening.

Level 12 was equipped with two (2) extensometers at the North Zone Area. During mining operations, a monthly inspection was made of level 12 and measurements taken, and level 17 at the North S-50 Area was visually inspected every 6 months: once after the spring thaw and the other time in fall.

Since the suspension of mining operation in June 2013, documentation does not demonstrate systematic inspections as required by the report of Itasca Consultation Canada Inc. (Andrieux, 2010).

5.6 Wisik Shaft Area

5.6.1 Surface infrastructure

No noticeable infrastructure is present in the Wisik Shaft Area. An old foundation wall and a concrete slab were identified during the site visit (Fig. 5.5).

Figure 5.7 – Remains of surface infrastructure in the Wisik Shaft Area

5.6.2 Availability and sources of water

The only source of water is Lac De Montigny.

5.6.3 Availability and sources of power

No source of power is available for this area of the project.

5.6.4 Underground infrastructure

Drifts and stopes

Access to drifts on two levels (200 ft (61 m) and 300 ft (91 m) below surface) is facilitated by a three-compartment shaft 91 m deep. Only the plan for the 300-ft level is available (Fig. 5.6). The drifts amount to approximately 640 m. The east exploration drift from the Kiena Complex is located 270 m below the surface at the site of the Wisik shaft.

The lengths of underground excavations such as drifts, raises and cross-cuts, are based on data provided by the client and the plans stored in the database of the Ministère de l'Énergie et des Ressources Naturelles (MERN).

The tonnage and grade of past production are not available for this area.

Figure 5.8 – Underground infrastructure at Wisik

5.7 Shawkey Mine Shaft No. 1 Area (Martin Shaft)

5.7.1 Surface infrastructure

No noticeable infrastructure is present in this area. An old foundation wall and concrete slab were identified during the site visit (Fig. 5.7).

Figure 5.9 – Remains of surface infrastructure in the Shawkey Mine Shaft No. 1 Area

5.7.2 Availability and sources of water

The only source of water is Lac De Montigny.

5.7.3 Availability and sources of power

No source of power is available for this area of the project.

5.7.4 Underground infrastructure

A shaft is connected to seven levels of underground drifts and raises at levels 125 ft (38 m), 225 ft (69 m), 325 ft (99 m), 450 ft (137 m), 575 ft (175 m), 625 ft (191 m) and 725 ft (221 m) below surface. The drifts amount to approximately 1,125 ft (343 m).

The lengths of underground excavations, such as drifts, raises and cross-cuts, are based on data provided by the client and the plans stored in the database of the MERN.

Figure 5.10 shows the underground work in plan view for the first five levels. Plans for the remaining levels were not found.

Total production was 25,414 ounces of gold from 125,174 metric tons of processed ore at an average grade of 6.31 g/t Au.

Figure 5.10 – Underground infrastructure related to Shawkey mine shaft No. 1 (Martin shaft)

5.8 Shawkey Mine Shaft No. 2 Area (Zone 10)

5.8.1 Surface infrastructure

In addition to old foundation walls and concrete slabs, two core racks are also present near the junction of Highway 117 and the road to the site (Fig. 5.9).

Figure 5.11 – Surface infrastructure in the Shawkey Mine Shaft No. 2 Area

5.8.2 Availability and sources of water

The only source of water is Lac De Montigny.

5.8.3 Availability and sources of power

No source of power is available in this area of the project.

5.8.4 Underground infrastructure

A 743 ft (227 m) shaft provides access to four levels of drifting at 250 ft (76 m), 400 ft (122 m), 550 ft (168 m), and 700 ft (213 m) below the surface (Fig. 5.12). Drifting and cross-cutting amounted to approximately 927 ft (283 m). Figure 5.12 shows the underground work in plan view for three levels (250 ft, 550 ft and 700 ft). The plan for the 550-ft level was not found.

The lengths of underground excavations, such as drifts, raises and cross-cuts, are based on data provided by the client.

Total underground lateral development in the form of drives, crosscuts and drifts amounted to 2,337 ft (712.3 m). One drive on the 4th level was extended 926 ft southeast.

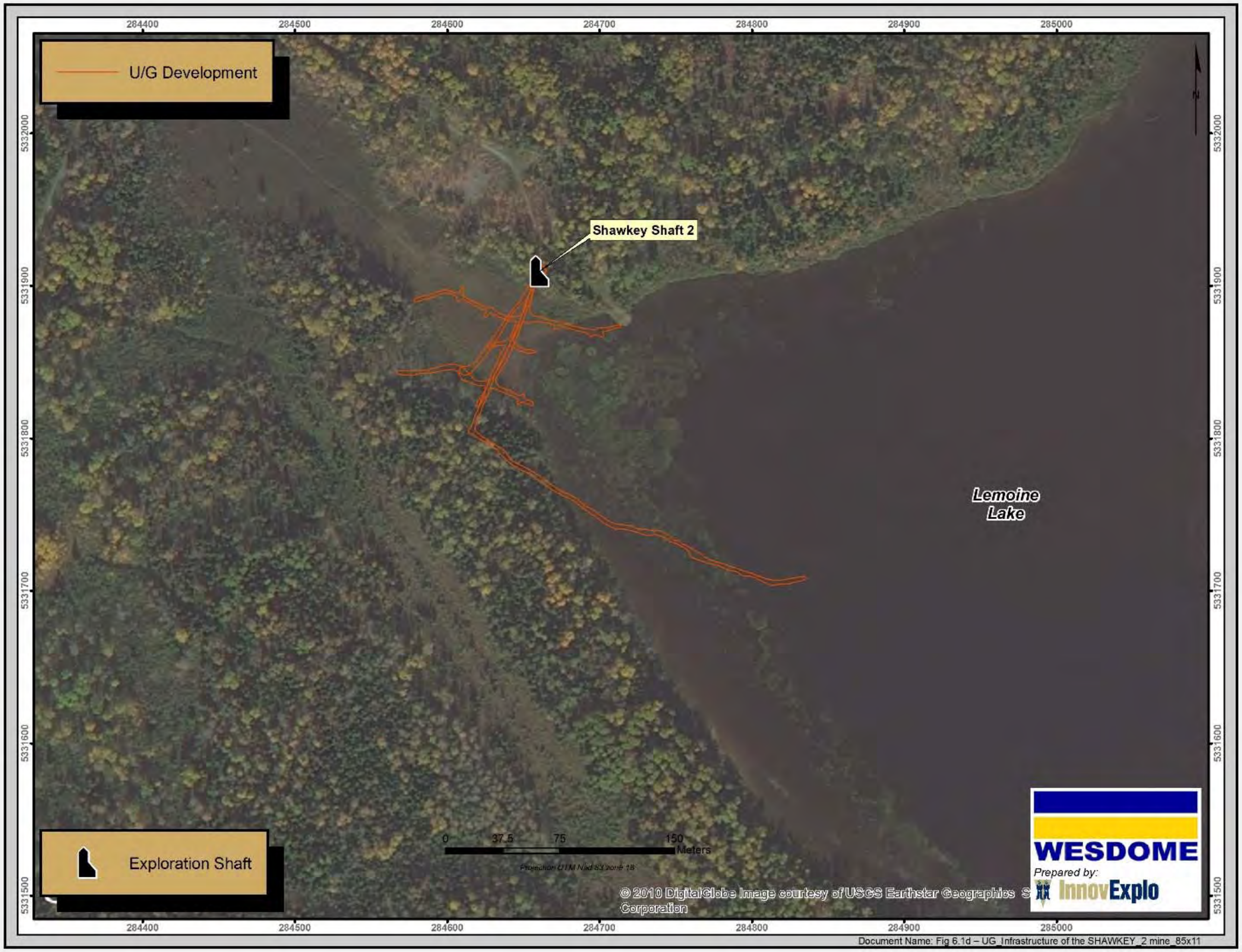

Figure 5.12 – Underground infrastructure related to Shawkey mine shaft No. 2 (Zone 10)

5.9 Elmac Shaft Area

5.9.1 Surface infrastructure

No noticeable infrastructure is present in this Area. Old foundation walls and concrete slabs were identified during the site visit (Fig. 5.13).

Figure 5.13 – Remains of surface infrastructure in the Elmac Shaft Area

5.9.2 Availability and sources of water

No source of water is available in this area of the project.

5.9.3 Availability and sources of power

No source of power is available in this area of the project.

5.9.4 Underground infrastructure

A 100 ft (30 m) shaft provides access to one level of drifting. The drifting and cross-cutting amount to approximately 460 ft (140 m). Figure 5.14 shows the underground work in plan view.

The lengths of underground excavations, such as drifts, raises and cross-cuts, are based on data provided by the client and the plans stored in the database of the MERN. The tonnage and grade of past production are not available for this area.

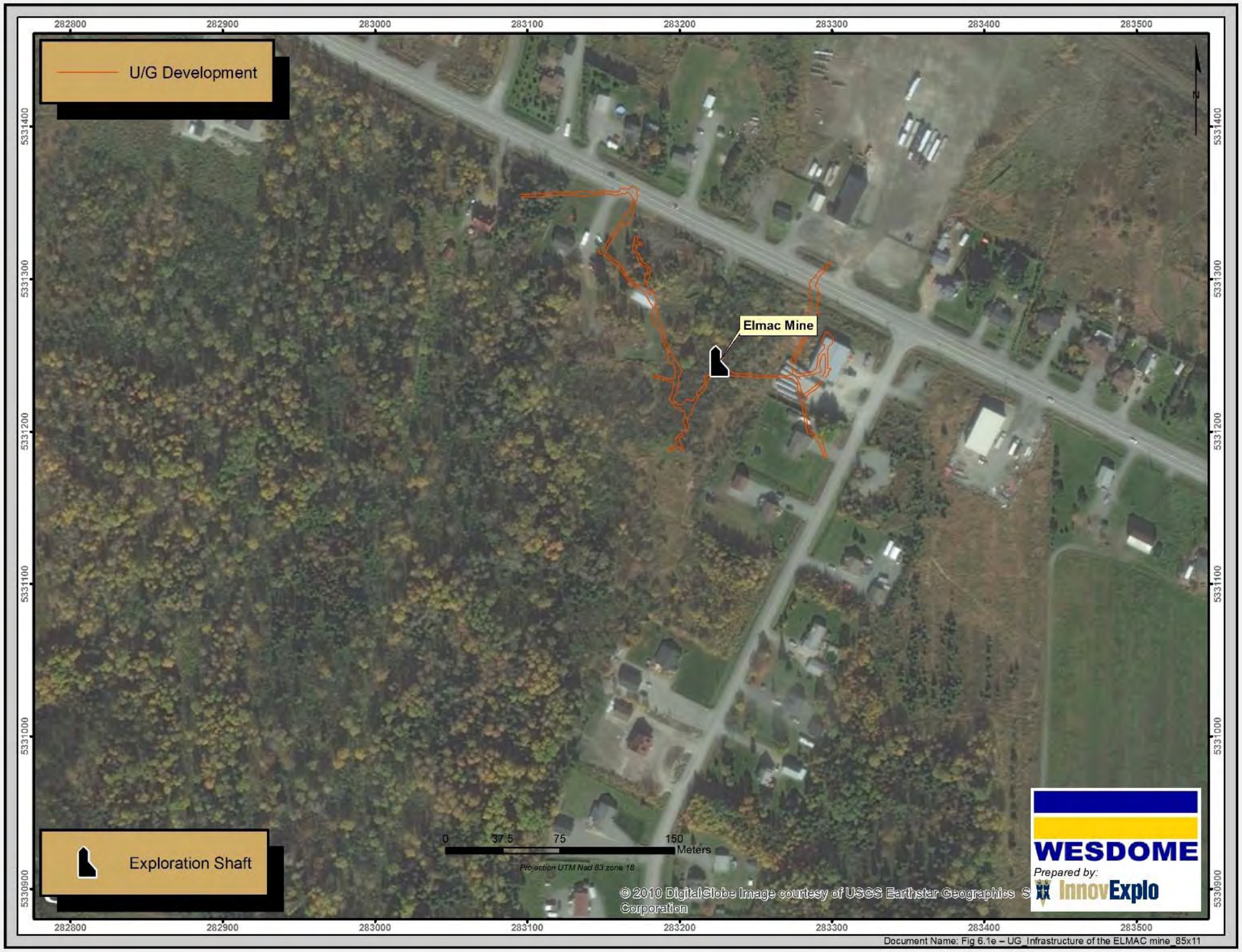

Figure 5.14 – Underground infrastructure in the Elmac Shaft Area

5.10 School Mine Mine Shaft Area

5.10.1 Surface infrastructure

Only old foundation walls and concrete slabs are present on site. An important leachate pond is drained into a nearby steam. Please refer to section 4.8.2 for more details.

5.10.2 Availability and sources of water

No source of water is available in this area of the project.

5.10.3 Availability and sources of power

No source of power is available in this area of the project.

5.10.4 Underground infrastructure

A 510 ft (156 m) shaft gives access to four levels below surface at 125 ft (38 m), 250 ft (76 m), 375 ft (114 m) and 500 ft (152 m). The development work amounts to 7,190 ft (2,192 m) of drifting, 6,605 ft (2,013 m) of cross-cutting, 551 ft (168 m) of raises. Figure 5.15 shows the underground work in plan view.

The lengths of underground excavations, such as drifts, raises and cross-cuts, are based on data provided by the client and the plans stored in the database of the MERN.

A total of 1,918 metric tons of ore and 556 ounces of gold were recovered from the School mine.

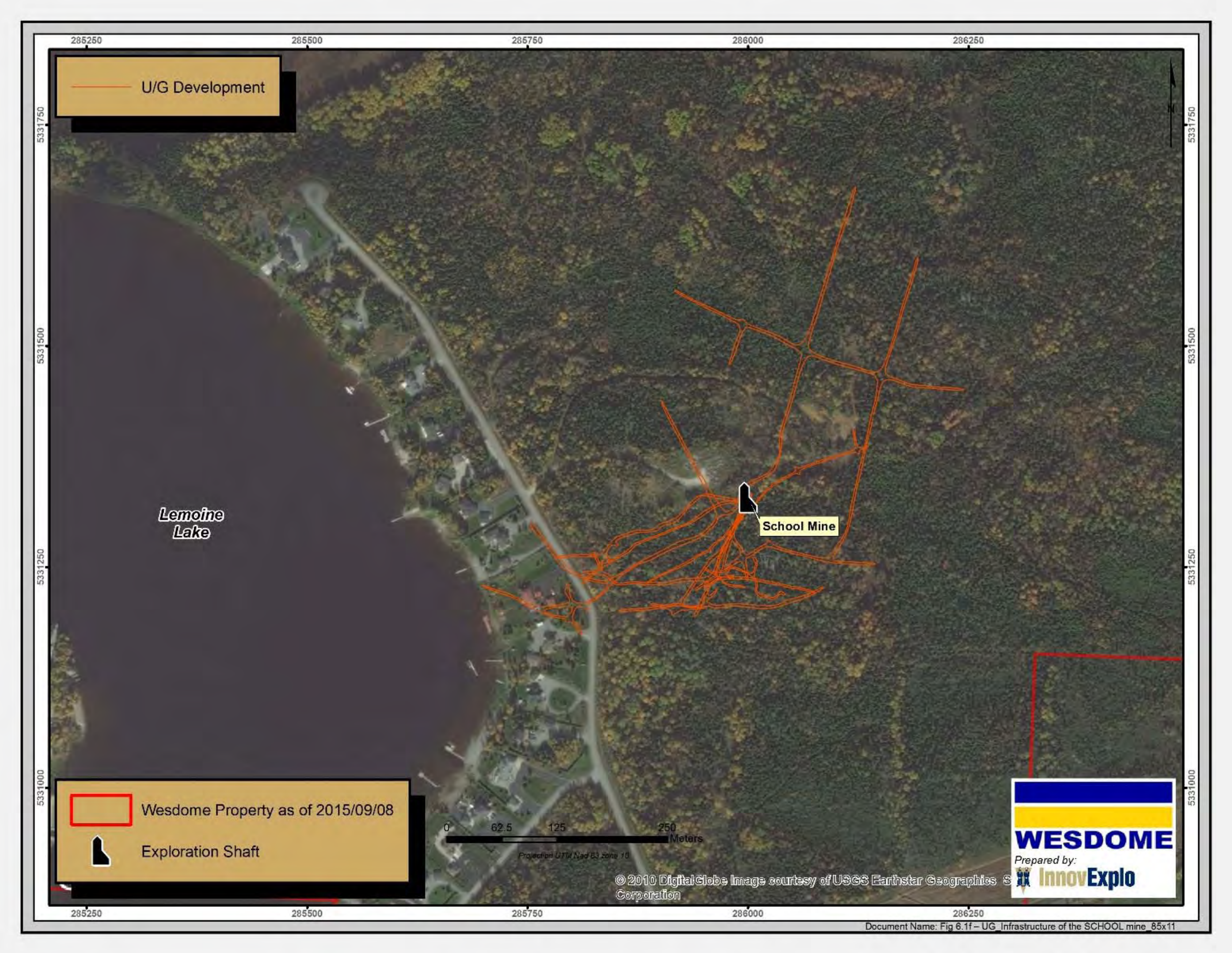

Figure 5.15 – Underground infrastructure in the School Mine Shaft Area

5.11 Joubi Mine Area

5.11.1 Surface infrastructure

The Joubi Mine Area covers the former Joubi and Dubuisson East properties and the past-producing Joubi mine. Access to the Joubi mine site is restricted and locked. In addition to old foundation walls and concrete slabs, other remaining infrastructure includes three core racks (9 rows), three former buildings (one office and two garages), four containers and two former lunch room trailers (Fig. 5.16).

No prominent infrastructure was observed on the former Dubuisson East property. Old foundation walls and concrete slabs were noted during the site visit. Exploration work is still underway at the site.

Figure 5.16 – Some of the remaining surface infrastructure in the Joubi Mine Area

5.11.2 Availability and sources of water

No source of water is available in this area of the project.

5.11.3 Availability and sources of power

Hydro-Québec power lines are present on site, providing electricity to the buildings.

5.11.4 Underground infrastructure

A 524 m shaft provides access to six levels below surface at 70 m, 120 m, 220 m, 280 m, 360 m and 440 m. The development work amounts to about 6,000 m of drifts and cross-cuts, including 1 km of drifts at level 120 m to access the Dubuisson East zone. Figure 5.17 shows the underground work in plan view. The plan for level 360 m was not found.

The lengths of underground excavations, such as drifts, raises and cross-cuts, are based on data provided by the client and the plans stored in the database of the MERN.

Total production amounted to 62,283 ounces from 327,561 metric tons of mined ore.

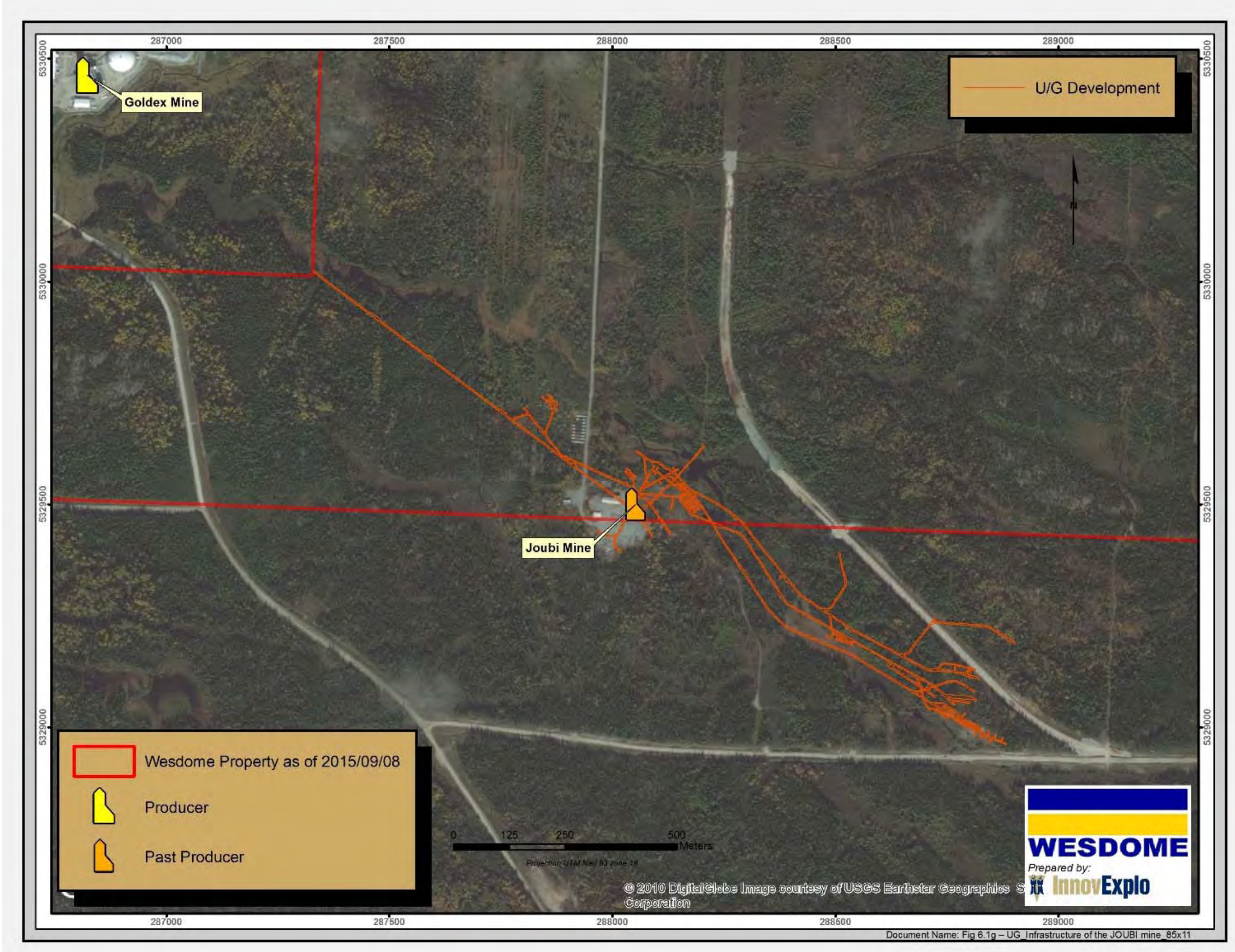

Figure 5.17 – Underground infrastructure in the Joubi mine

5.12 Island No. 3

5.12.1 Surface infrastructure

The Island No. 3 is accessible by boat (Fig. 5.20). The shaft was collared in 1999 at a depth of 23 m, the 10 foot hoist and surface buildings were installed in 2000-2001 in order to access the mineralized zone of the Wesdome Deposit and permitting undertaken to partially start. Acquisition of Kiena in 2013 provided a potential alternative access and work was suspended.

Figure 5.18 – Hoist on the Island No. 3

5.12.2 Availability and sources of water

The only source of water is Lac De Montigny.

5.12.3 Availability and sources of power

No source of power is available in this area of the project.

5.12.4 Underground infrastructure

No underground infrastructure, only 23 m of shaft collar.

5.13 Dorval-Siscoe Shaft Area

5.13.1 Surface infrastructure

The Dorval-Siscoe Shaft is located on the Island #6 which is east of Island No. 3. The Dorval-Siscoe Shaft Area is characterized by a shaft that was built to access part of the Wesdome deposit. Now, all that appear to remain of the surface infrastructure are old foundation walls, concrete slabs and pieces of broken equipment (Fig. 5.20).

Figure 5.19 - Remains of surface infrastructure of Dorval-Siscoe Area

5.13.2 Availability and sources of water

The only source of water is Lac De Montigny.

5.13.3 Availability and sources of power

No source of power is available in this area of the project.

5.13.4 Underground infrastructure

A historical three-compartment shaft of 343 ft (105 m) provided access to level 300 ft (91 m), where there are 850 m of drifts and cross-cuts. Figure 5.20 shows the underground work in plan view.

The lengths of underground excavations, such as drifts, raises and cross-cuts, are based on data provided by the client and the plans stored in the database of the MERN. The tonnage and grade of past production are not available for this area.

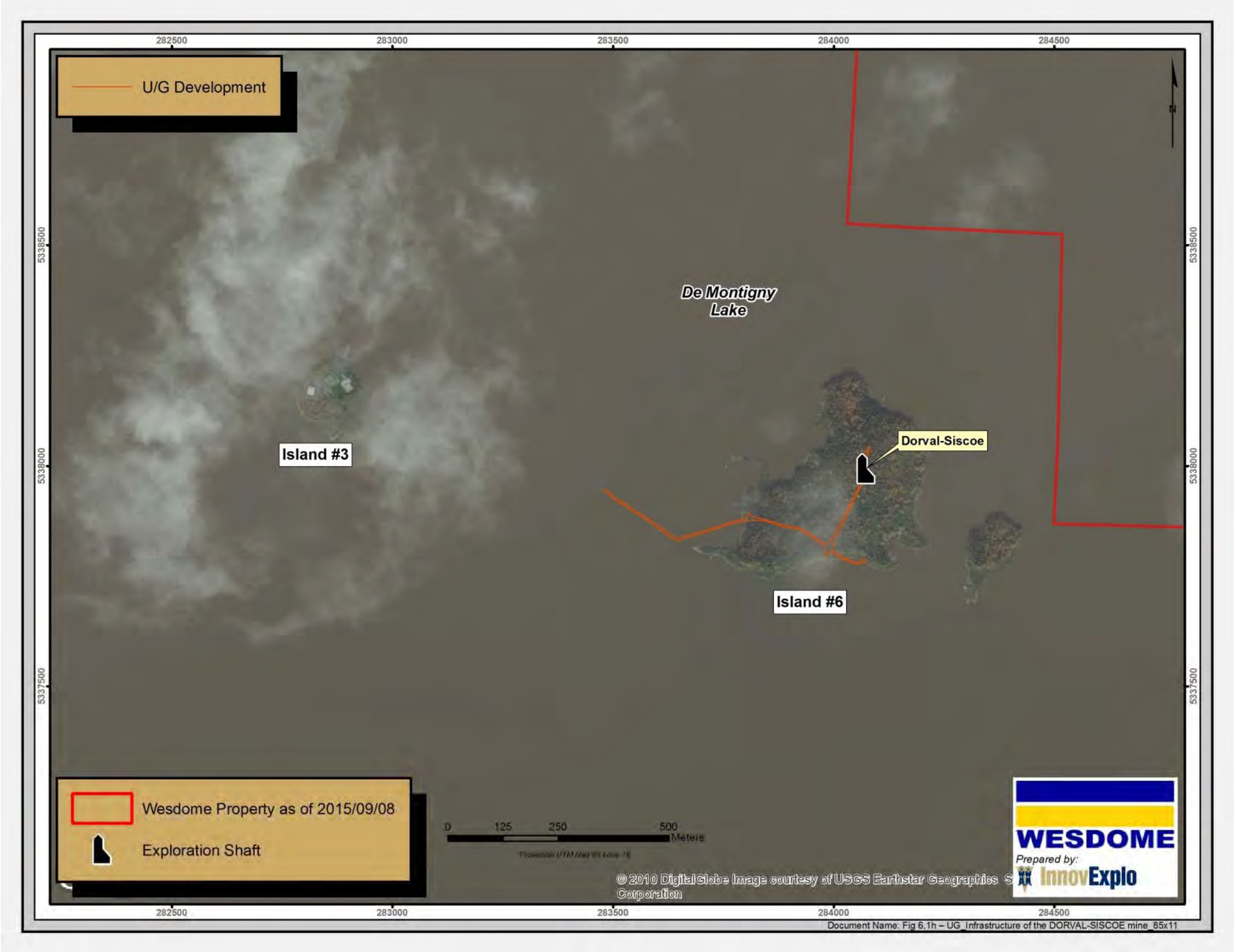

Figure 5.20 – Historical underground infrastructure in the Dorval-Siscoe Shaft Area

5.14 Siscoe Mine Area

5.14.1 Surface infrastructure

In addition to old foundation walls and concrete slabs, there are two shovels on the site. A partly rehabilitated waste dump, a water treatment plant and administrative offices are also found on the site. Several flooded sink holes were noted from the collapse of near-surface underground excavations (Fig. 5.21). These areas are protected by fences.

Figure 5.21 – Flooded sink holes at the Siscoe mine site

5.14.2 Availability and sources of water

The only source of water is Lac De Montigny.

5.14.3 Availability and sources of power

Hydro-Québec power lines are present on site, providing electricity to the water treatment plant and administrative buildings.

5.14.4 Underground infrastructure

A shaft of 2,475 ft (754 m) provides access to 19 levels below surface from 150 ft (46 m) to 2,475 ft (754 m). The development work amounts to more than 15,000 m of drifts and cross-cuts. Figure 5.22 shows the underground work in plan view.

The lengths of underground excavations, such as drifts, raises and cross-cuts, are based on data provided by the client and the plans stored in the database of the MERN.

The Siscoe mine produced a total of 802,303 ounces of gold and 306,070 ounces of silver from 2,975,785 metric tons of ore, at an average grade of 9.22 g/t Au and 3.20 g/t Ag.

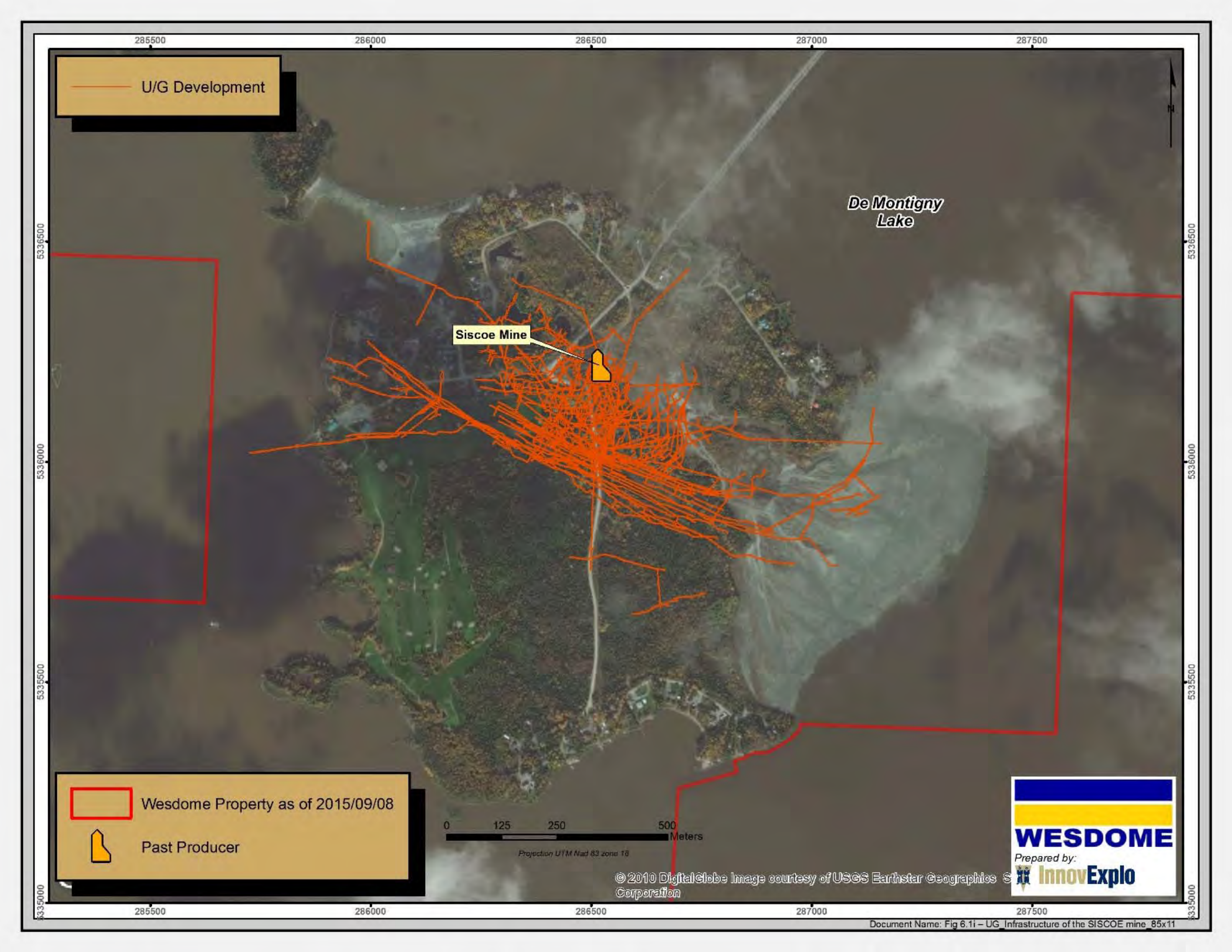

Figure 5.22 – Underground infrastructure of the Siscoe mine

5.15 Siscoe Extension Area

5.15.1 Surface infrastructure

This area of the project was not inspected during the site visit. Since Wesdome only holds the mining rights and not the surface rights, the area is restricted and blocked by a fence and a camera security system.

5.15.2 Availability and sources of water

The only source of water is Lac De Montigny.

5.15.3 Availability and sources of power

It was not possible to check for power lines during the site visit.

5.15.4 Underground infrastructure

A three-compartment shaft of 725 ft (221 m) provides access to two levels below surface at 350 ft (107 m) and 725 ft (221 m). The development work amounts to about 2,000 m of drifts and cross-cuts. Figure 5.23 shows the underground work in plan view.

The lengths of underground excavations, such as drifts, raises and cross-cuts, are based on data provided by the client and the plans stored in the database of the MERN.

The tonnage and grade of past production are not available for this area.

Figure 5.23 – Underground infrastructure in the Siscoe Extension Area

6. HISTORY

This section provides a history of Wesdome's involvement in the Quebec Wesdome Project. A detailed chronological summary of the historical work carried out on the Quebec Wesdome Project is provided in Appendix V.

1945: The origin of the Company's business can be traced back to Western Quebec Mines Inc., incorporated in 1945. Western Quebec Mines began developing the Dorval-Siscoe property and carried out various exploration work on the property until 1975.

1976: Wesdome Resources Limited ("Wesdome Resources") was created as a joint venture in 1976 for the purpose of exploring and developing the Wesdome property (formerly the Dorval-Siscoe property). The word "Wesdome" is a combination of the names Western Quebec Mines and Dome Exploration Ltd. Wesdome Resources was held 30% by Western Quebec Mines and 70% by Dome Exploration.

1984: On November 13, 1984, Western Quebec Mines agreed to purchase a 40% interest in the Joubi property from Valmag Inc.

1988-1989: The School Mine property, the Shawkey South property and a 35% interest in the Shawkey property were acquired in 1988 and 1989 by Western Quebec Mines from Valmag Inc.

1990: Production started at the Joubi mine in 1990.

1992: On October 27, 1992, Western Quebec Mines acquired the Yankee Clipper property from Goldhunter Explorations Inc.

1993: Western Quebec Mines completed its acquisition of the 100% interest in the Joubi property.

1996: Western Quebec Mines acquired the Dubuisson West property from Republic Goldfields Inc. This property was merged with the Joubi property.

1997: On November 21, 1997, Western Quebec Mines acquired the 525,000 common shares of Wesdome Resources that were held by Dome Exploration. The result was that Wesdome Resources became wholly-owned by Western Quebec Mines.

In November 1997, Western Quebec Mines also acquired the 65% interest of the Shawkey property from Placer Dome. This property hosts the past-producing Shawkey mine. The Shawkey and Shawkey South properties were merged. During the period between 1936 and 1964, the Shawkey mine produced a total of 25,637 ounces of gold from 127,737 metric tons of ore grading an average 6.24 g/t Au.

On December 1, 1997, Western Quebec Mines acquired the Callahan property from Placer Dome.

1998: Western Quebec Mines staked 3 claims (the Lamothe-Extension property) adjacent to the Lamothe property. On January 15, 1998, the Lamothe property was acquired by Western Quebec Mines from Robert Lamothe and Alphonse Beaudoin.

On November 3, 1998, Western Quebec transferred to Wesdome Resources all its interests in the Lamothe, Lamothe-Extension (now Vassan), Yankee Clipper and Callahan properties.

1999: In October 1999, Dynacor Mines Inc. and Western Quebec Mines signed an agreement whereby ownership of the contiguous Siscoe and Siscoe-Extension (Dynacor Mines) and Wesdome, Lamothe, Lamothe-Extension, Yankee Clipper and Callahan (Wesdome Resources) properties were to be pooled into a new company in order to develop them jointly. The new company, Wesdome Gold Mines Inc., was created by Dynacor Mines, and the latter transferred its 100% interest in the Siscoe property and its 75% interest in the Siscoe-Extension property. Following this, Wesdome Gold Mines Inc. then acquired 100% of the share of Wesdome Resources from Western Québec. During the period between 1929 and 1949, the Siscoe mine produced a total of 802,303 ounces of gold and 306,070 ounces of silver from 2,975,785 metric tons of ore grading an average 9.22 g/t Au and 3.20 g/t Ag.

The Joubi mine was closed in 1999 after a 10-year production history. The historical production amounted to 62,283 ounces from 327,561 metric tons of mined ore.

2003: In December 2003, Western Quebec Mines purchased the Kiena Complex and subsequently placed the property into Wesdome Gold Mines Inc., thereby completing and consolidating Wesdome's land package around Lac De Montigny. As a part of this transaction, Wesdome Gold Mines acquired a 100% interest in the Kiena, Kiena West, Lac Dubuisson, Rosenbaum, Dubuisson, Audet Block, Elmac, South Block Kiena, Option Roy and Lac de Montigny properties, and a 50% interest in the Maufort property.

Before this transaction, the Kiena mine produced a total of 1.56 million ounces of gold from 10.7 Mt of ore grading an average 4.54 g/t Au.

2006: On February 1, 2006, River Gold Mines Ltd and Wesdome Gold Mines Inc. completed a merger to form the current company called Wesdome Gold Mines Ltd ("Wesdome").

On April 4, 2006, Wesdome staked seven (7) claims and added them to the Vassan property.

The Kiena mine was in the pre-production development stage until August 1, 2006, when commercial production commenced.

2007: On July 10, 2007, a merger was completed with parent company Western Quebec Mines on the basis of 1.45 shares of Wesdome for each share of Western Quebec Mines. Wesdome was the surviving operating entity.

2013: Wesdome continuously operated the Kiena mine until its temporary shutdown in June 30, 2013. The mine was placed under a care and maintenance program.
During the period between August 2006 and June 2013, the Kiena mine produced a total of 198,708 ounces of gold from 1.826,500 metric tons of ore averaging 3.38 g/t Au.

7. GEOLOGICAL SETTING AND MINERALIZATION

7.1 The Abitibi Terrane (Abitibi Subprovince)

Previously, the Abitibi Greenstone Belt has been subdivided into northern and southern parts based on stratigraphic and structural criteria (e.g., Dimroth et al., 1982; Ludden et al., 1986; Chown et al., 1992). Many of those studies used an allochthonous model of greenstone belt development that portrayed the belt as a collage of unrelated fragments. Thurston et al. (2008) presented the first geochronologically constrained stratigraphic and/or lithotectonic map (Fig. 7.1) covering the entire breadth of the Abitibi Greenstone Belt, from the Kapuskasing Structural Zone in the west to the Grenville Province in the east. According to Thurston et al. (2008), Superior Province greenstone belts primarily consist of volcanic units unconformably overlain by largely sedimentary Timiskaming-style assemblages, and field and geochronological data indicate that the Abitibi Greenstone Belt developed autochthonously.

The Abitibi Greenstone Belt is composed of east-trending synclines of largely volcanic rocks and intervening domes cored by synvolcanic and/or syntectonic plutonic rocks (gabbro-diorite, tonalite, and granite) alternating with east-trending bands of turbiditic wackes (MERQ-OGS, 1984; Ayer et al., 2002a; Daigneault et al., 2004; Goutier and Melançon, 2007). Most of the volcanic and sedimentary strata dip vertically and are generally separated by abrupt, east-trending faults with variable dip. Some of these faults, such as the Porcupine-Destor Fault, display evidence for overprinting deformation events including early thrusting, later strike-slip and extension events (Goutier, 1997; Benn and Peschler, 2005; Bateman et al., 2008). Two ages of unconformable successor basins occur: early, widely distributed Porcupine-style basins of fine-grained clastic rocks, followed by Timiskaming-style basins of coarser clastic and minor volcanic rocks, which are largely proximal to major strike-slip faults, such as the Porcupine-Destor, Larder Lake–Cadillac and similar faults in the northern Abitibi Greenstone Belt (Ayer et al., 2002a; Goutier and Melançon, 2007). In addition, the Abitibi Greenstone Belt is cut by numerous late-tectonic plutons from syenite and gabbro to granite with lesser dykes of lamprophyre and carbonatite. The metamorphic grade in the greenstone belt displays greenschist to subgreenschist facies (Jolly, 1978; Powell et al., 1993; Dimroth et al., 1983b; Benn et al., 1994) except around plutons where amphibolite grade prevails (Jolly, 1978).

The following more detailed description of the new subdivision of the Abitibi Greenstone Belt is mostly modified and summarized from Thurston et al. (2008) and references therein.

The Abitibi Greenstone Belt is now subdivided into seven discrete volcanic stratigraphic episodes on the basis of groupings of numerous U-Pb zircon ages. New U-Pb zircon ages and recent mapping by the Ontario Geological Survey and Géologie Québec clearly show similarity in timing of volcanic episodes and ages of plutonic activity between the northern and southern Abitibi Greenstone Belt, as indicated in Figure 7.1. These seven volcanic episodes (Fig. 7.1) are listed below from oldest to youngest:

- Pre-2750 Ma volcanic episode;
- Pacaud Assemblage (2750–2735 Ma);
- Deloro Assemblage (2734–2724 Ma);

- Stoughton-Roquemaure Assemblage (2723–2720 Ma);
- Kidd-Munro Assemblage (2719–2711 Ma);
- Tisdale Assemblage (2710¬–2704 Ma);
- Blake River Assemblage (2704–2695 Ma).

Two types of successor basins are present in the Abitibi Greenstone Belt: early turbidite-dominated (Porcupine Assemblage; Ayer et al., 2002a) laterally extensive basins, succeeded by aerially more restricted alluvial-fluvial or Timiskaming-style basins (Thurston and Chivers, 1990).

The geographic limit (Fig. 7.1) between the northern and southern parts of the Abitibi Greenstone Belt has no tectonic significance but is similar to the limits between the internal and external zones of Dimroth et al. (1982) and that between the Central Granite-Gneiss and Southern Volcanic zones of Ludden et al. (1986). The boundary passes south of the wackes of the Chicobi and Scapa groups with a maximum depositional age of 2698.8 ± 2.4 Ma (Ayer et al., 1998, 2002b).

The Abitibi Subprovince is bounded to the south by the Larder Lake–Cadillac Fault Zone, a major crustal structure that separates the Abitibi and Pontiac subprovinces (Chown et al. 1992; Mueller et al. 1996; Daigneault et al. 2002, Thurston et al. 2008).

7.2 Pontiac Subprovince

The following description of the Pontiac Subprovince is mostly modified and summarized from Davis (2002) and references therein.

The Pontiac Subprovince (Fig. 7.1) consists principally of metaturbidites, plutons and thin ultramafic units. It is of medium metamorphic grade near its northern contact with the Abitibi Greenstone Belt and increases to upper amphibolite grade near the Lac Decelles plutonic complex. Geobarometry indicates that the Pontiac Subprovince exposes deeper crustal levels than the low-grade rocks of the southern Abitibi Subprovince (Feng and Kerrich,1990). The subprovince ends abruptly at the Ontario border, where its contact with the southward-extending Abitibi belt is covered by Huronian sedimentary rocks. The southwestern part of the Pontiac Subprovince contains the Baby, Belleterre and Lac des Bois greenstone belts. Both Pontiac and Abitibi metasedimentary rocks were deposited at about 2685 Ma. The broad similarity in age distributions and evidence for coeval deposition of Pontiac and Abitibi metaturbidites suggests that the Pontiac Group was largely derived from rocks that were tectonically related to Abitibi Greenstone Belt volcanics.

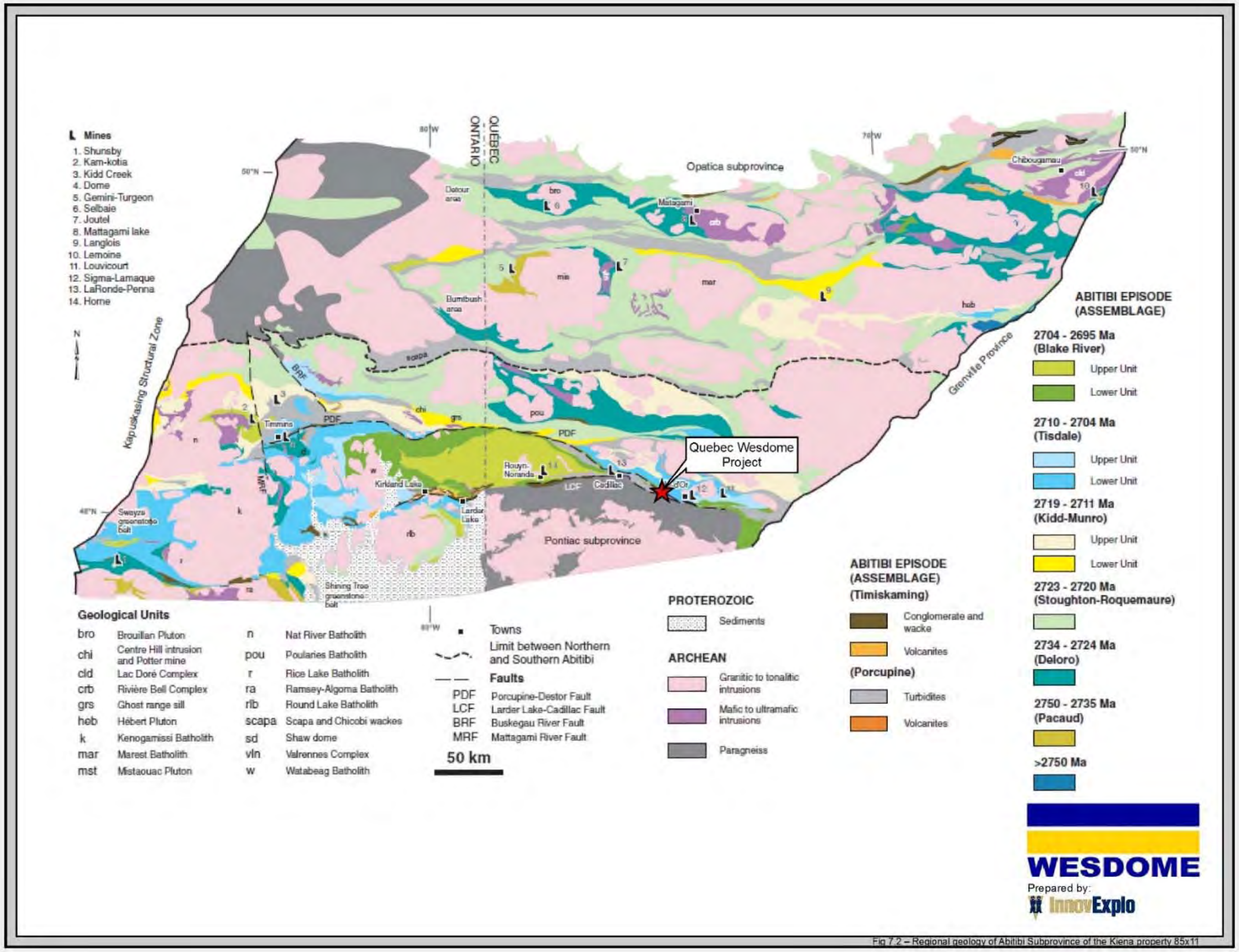

Figure 7.1 – Stratigraphic map of the Abitibi Greenstone Belt. The geology of the southern Abitibi Greenstone Belt is based on Ayer et al. (2005) and the Québec portion on Goutier and Melançon (2007). Figure modified from Thurston et al. (2008).

7.3 Regional geology

The following description of the regional geology of the Quebec Wesdome Project area is mostly modified and summarized from Champagne et al. (2002), Champagne (2004), Scott et al. (2002), Olivo (2002), Scott (2005), Pilote et al. (2014a, 2015a, 2015b, 2015c) and references therein.

Over the past 15 years, and as recently as this year, the MERN has published compilations and revisions of the volcanology and stratigraphy of the region (Pilote et al., 1998a, 1998b, 1999; Champagne et al.; 2002; Scott et al., 2002; Pilote et al., 2014a, 2014b, 2015a, 2015b). These studies covered several earlier interpretations by Imreh (1976, 1984). Pilote et al. (1999) divided the region into two stratigraphic groups based on regional tectonics and volcano-sedimentary stratigraphy: the basal Malartic Group (MG) comprising the La Motte-Vassan (LVF), Dubuisson (DF) and Jacola formations (JF), and the upper Louvicourt Group (LG) comprising the Val-d'Or (VDF) and Héva formations (HF) (Fig. 7.2).

Recent geoscientific compilation maps are available for the region (Pilote, 2013; 2015a, 2015b). The geology of these new maps (scale of 1:20,000) were interpreted using recent field observations and new geochronologic data (Fig. 7.3). In addition, a new detailed heliborne magnetic survey (D'Amours and Intissar, 2012) greatly assisted the geological interpretation of the region. Flight lines were spaced at 100 m, with an altitude of 40 m that followed the topography, except in inhabited regions where the altitude was established at 300 m.

7.3.1 Stratigraphy

The Quebec Wesdome Project straddles the limit between the southern part of the Abitibi Subprovince and the northern part of the Pontiac Subprovince. In this region, the Cadillac Tectonic Zone (CTZ) marks the separation between the two. From south to north, the Project is underlain by the lithologies of the Pontiac Group (PO), the Piché Group (PG), the HF, the VDF, the JF and the LVF.

7.3.1.1 Pontiac Group (PO)

In the Project area, the PO covers the sector to the south of the CTZ. The lithologies are homogeneous and represented by sandstones (60%) and shales (40%). Some small mafic tuff bands are also observed; these tuffs constitute less than 1% of the rock sequence. In outcrop, the rocks of the PO exhibit a pale brown color for the sandstone and darker brown for the mudstone. Tuffs stand out from other lithologies by their greenish color and porous appearance.

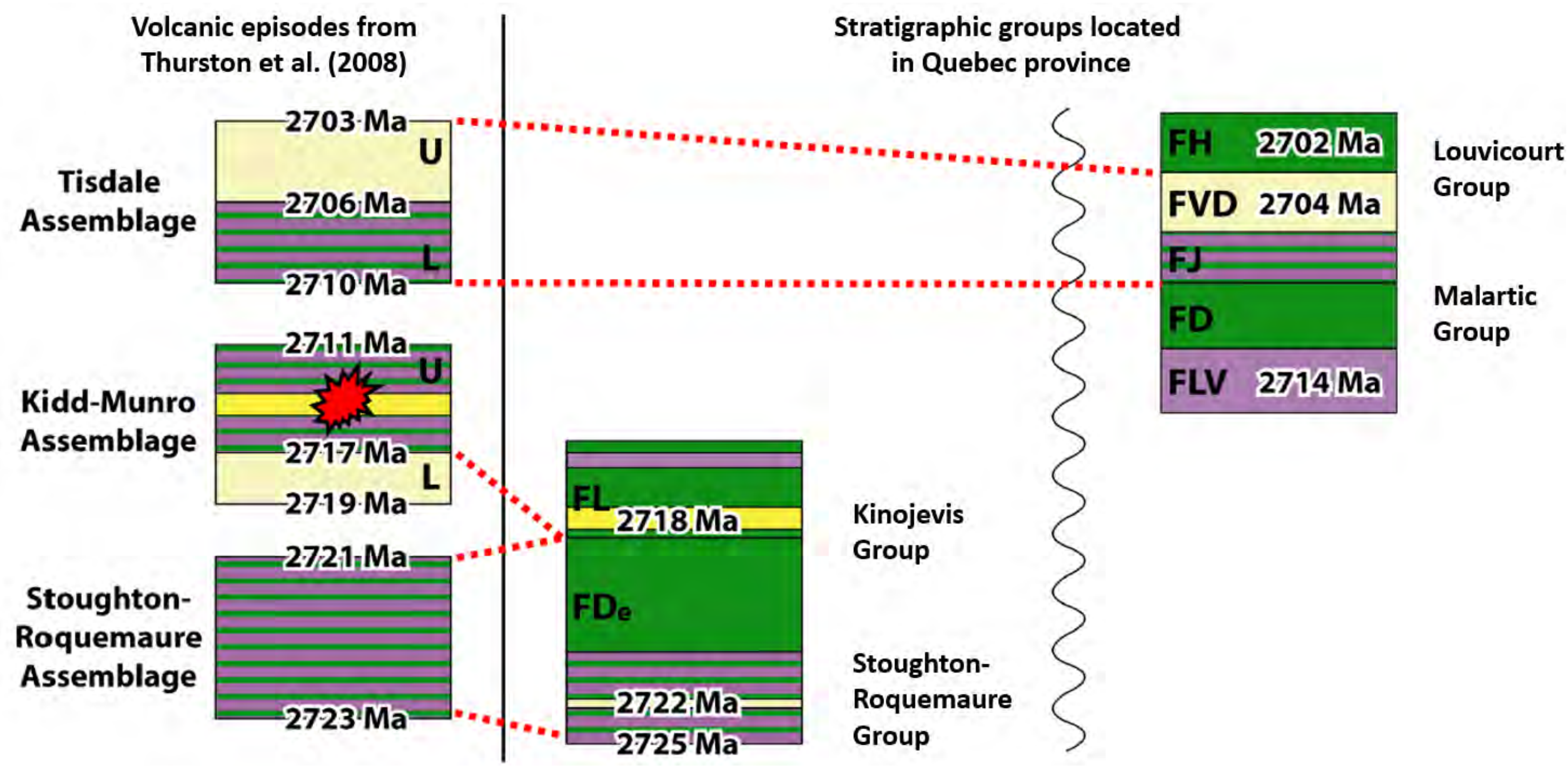

Figure 7.2 – Tisdale and Kidd-Munro assemblages and stratigraphic groups in the province of Quebec (Adapted and modified from Pilote et al., 2014b).

Abbreviations are based on French names and thus different from those used in the text: FH = Héva Formation, FVD = Val-d'Or, Formation, FJ = Jacola Formation, FD = Dubuisson Formation, FLV = La Motte–Vassan Formation, FDe = Deguisier Formation, FL = Lanaudière Formation.

The level of deformation is variable. South of the CTZ, bedding and primary textures are commonly preserved. Elsewhere, in the more deformed sectors, these sedimentary rocks show a tectonic banding that is superimposed on the original stratigraphic layering (S0).

7.3.1.2 Piché Group (PG)

The rocks of the PG (Latulippe, 1976) rarely crop out in the region. The position of the rocks of this group generally coincides with the location of the CTZ, leading many researchers in the past to describe the group as a band of talc-chlorite or talc-chlorite-carbonate schist (e.g., Gunning and Ambrose, 1940). However, it has since been shown that the rocks of the CTZ were not uniformly affected due to heterogeneities in the distribution and intensity of deformation. Primary textures have been preserved in areas where deformation is less intense. These less deformed rocks are typically discontinuous and encompassed by bands of schists. Underground and in drill holes, they are basaltic and komatiitic in composition (Sansfaçon and Hubert, 1990), whereas at surface, they are essentially ultramafic and exhibit cumulate textures. Spinifex textures are locally preserved.

In 2013, an age of 2709.5 ± 2 Ma was obtained for tonalite dyke that cuts the ultramafic units of the Buckshot pit near the Canadian Malartic deposit.

7.3.1.3 Héva Formation (HF)

The HF (2702 ± 2 Ma) is 2–5 km thick. It is located between the CTZ and the VDF. The HF represents a separate volcanic cycle from that of the VDF, comprising volcaniclastic rocks, pyroclastics, and dykes and sills of gabbroic to dacitic composition. Volcaniclastics are characterized by coarse or fine tuff horizons with millimetre-scale laminations, intruded by gabbro and dacite. Disruptions in the volcaniclastic beds and peperite textures indicate that the dykes and sills were injected into unconsolidated sediments. In most cases, the interaction between magma and sediment formed complex structures of pseudo-pillows in the magma rather than true peperite. The volume and styles of the gabbro and dacite intrusions suggest a proximal position relative to the volcanic centre.

7.3.1.4 Val-d'Or Formation (VDF)

The VDF (2704 ± 2 Ma) is 1–3 km thick and comprises submarine volcaniclastic deposits formed by autoclastic and/or pyroclastic mechanisms. These deposits include 1–20 m of brecciated and pillowed andesite flows with feldspar and hornblende porphyries. The flows are intercalated with amalgamated volcaniclastic beds 5–40 m thick. The pillows exhibit a variety of forms, from strongly amoeboid to lobed. Lobed pillows are 1–10 m long and 0.5–1.5 m high, and have a vesicularity index of 5–40%. The volcaniclastic beds are composed of lapilli tuff, lapilli and blocks tuffs, and to a lesser extent, fine to coarse tuffs.

7.3.1.5 Jacola Formation (JF)

The JF (2706 ± 2) is bordered to the south by the VDF. It consists of a cyclic package comprising, from bottom to top, komatiitic flows, basalts and andesitic volcaniclastics. The sequences may be complete or truncated. Komatiitic lavas are observed in the form of massive flows with local spinifex textures. Basaltic flows are massive, pillowed and sometimes in the form of flow breccias. Magnesian basalts are also present in small amounts. They are easily identified by their characteristic pale grey color.

7.3.1.6 Dubuisson Formation (DF)

The DF (2708 ± 2 Ma) consists mainly of pillowed and massive basalt with various interbedded komatiitic flows (Imreh, 1980). Ultramafic and mafic flows are similar to those described in the LVF (see section 7.3.1.7), but in different proportions.

7.3.1.7 La Motte–Vassan Formation (LVF)

The LVF crops out on the north side of the Lac De Montigny and has variable apparent thickness, with a maximum of 6 km. The LVF consists of komatiites, tholeiitic basalts and magnesian basalts. The base of the sequence is mostly represented by komatiites with some minor intercalated basalt. However, a decrease in the proportion of komatiites is observed toward the top of the sequence (Imreh, 1984). Komatiites are mainly found in two morphofacies: 1) classic sheet flow with spinifex textures or tube-shaped flows, and 2) mega-pillows. The basalt flows are usually massive or pillowed; more rarely, they are brecciated (Imreh 1980). The age of the LVF (2714 ± 2 Ma) suggests it may be contemporaneous with the upper part of the Kidd-Munro Assemblage (Fig. 7.2).

7.3.2 Intrusive rocks

The initial volcanic and structural architecture are cut and profoundly disrupted by two enormous intrusions : the synvolcanic Bourlamaque Pluton (2700 Ma) and the late to post-tectonic La Corne Pluton (2680–2642 Ma), as well as several other smaller isolated satellite bodies.

7.3.3 Structural fabrics

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

The oldest regional schistosity is S1. It is systematically subparallel to the bedding, S0.

Within the Malartic Group (MG), the overall S1 trend is NW-SE. Both fabrics, S0 and S1, are coplanar and show a moderate to steep dip to the north. S1 contains the primary stretching lineation L1. In the southwestern part of the region, S0 and S1 are jointly folded into “Z” folds, with an average axial plane of N095°/85° and generally E-W axially planar cleavage (S2). The axes of these folds, F1-F2, are parallel to the plunges shown by the L1 stretching lineation contained in S1.

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

7.3.4 Large-scale fault zones

The region has several large-scale strike faults and/or shear zones, trending W to WNW and dipping steeply to the north. They are, from south to north: the Cadillac Tectonic Zone (CTZ), the Parfouru Fault (PF), the Marbenite Fault (MF), the Norbenite Fault (NF), the Callahan Fault (CF), the K Shear Zone (KSZ), and the Rivière Héva Fault (RHF). The Quebec Wesdome Project is cut by all of them. The descriptions below are presented in the same south to north order.

These major structures contain dykes or stocks of monzonitic or tonalitic composition with highly variable ages (pre-, syn- or post-tectonic) that are spatially associated with several gold mines (Norlartic, Marban, Kiena, Sullivan, Goldex, Siscoe, Joubi, Sigma and Lamaque). The observed diversity in the styles and ages of gold mineralization related to these large-scale strike faults and/or shear zones demonstrates that several distinct episodes of mineralization occur.

7.3.4.1 Cadillac Tectonic Zone (CTZ)

The CTZ (Fig. 7.3) is one of the most prolific structures in terms of gold mineralization. The CTZ is important not only for its metallogenic wealth, but also for its geodynamic models and juxtaposition of varied lithologic assemblages along its subsidiary faults. The E-W and WNW sections of the fault reflect a deep asymmetry in the Abitibi Subprovince, a feature that influenced the styles and episodes of gold mineralization.

The CTZ has long been known to be associated with talc-chlorite-serpentine schists that have now been assigned to the Piché Group (PG). The CTZ is 200–1000 m wide, consisting of a tangle of several converging and diverging faults that isolate distinct lithological wedges displaying variable degrees of deformation.

Numerous intrusions of various shapes, sizes, compositions and ages are also found along the CTZ. Calc-alkaline intrusions were injected between 2690 and 2680 Ma, whereas younger alkaline intrusions were emplaced between 2680 and 2670 Ma. These features reveal the role of the fault as a conduit for both magmas and hydrothermal fluids, and also demonstrate its long-lived deep crustal nature. In the region, the CTZ is generally oriented N100° and dips steeply to the north-northeast.

7.3.4.2 Parfouru Fault (PF)

The PF (Fig. 7.3) is an ESE-WNW shear zone that dips steeply (75°) to the north or northeast (Daigneault, 1996). The shear zone can reach 300 m wide, and has been traced for many kilometres.

7.3.4.3 Marbenite Fault (MF)

The MF (Fig. 7.3) is an ESE-WNW to SE-NW shear zone that dips steeply to the north or northeast (Trudel and Sauvé, 1992; Sauvé et al., 1993; and Beaucamp, 2010). It is parallel to the Norbenite Fault.

7.3.4.4 Norbenite Fault (NF)

The NF (Fig. 7.3) is a strong second-order shear zone that strikes WNW, subparallel to stratigraphy, and dips 40-60° to the northeast (Trudel and Sauvé, 1992; Sauvé et al., 1993). The NF is 15–110 m wide and has been traced for 8 km. It affects mainly the komatiitic units and occasionally the basaltic units of the JF. This shear zone can be divided into two or three branches in some places.

7.3.4.5 Callahan Shear Zone (CSZ)

The CSZ (Fig. 7.3) strikes N090° and dips 60°–80° to the north. The CSZ can reach 200 m wide (Beaudoin et al., 1987).

7.3.4.6 Shear Zone (KSZ)

The KSZ (Fig. 7.3) is a shear zone between 300 and 600 m wide that has been traced for 1.7 km. It strikes N295° and dips 80° toward the northeast, and is composed of talc and chlorite schists, actinolite schists and minor sericite schists, and bodies of pure talc and massive actinolite (Olivo and Williams-Jones, 2002; Olivo et al., 2007).

7.3.4.7 Rivière Héva Fault (RHF)

The RHF (Fig. 7.3) is an ESE-WNW shear zone that dips steeply (80°) to the north or northeast (Daigneault, 1996). The shear zone can reach 300 m wide and has been traced over many kilometres.

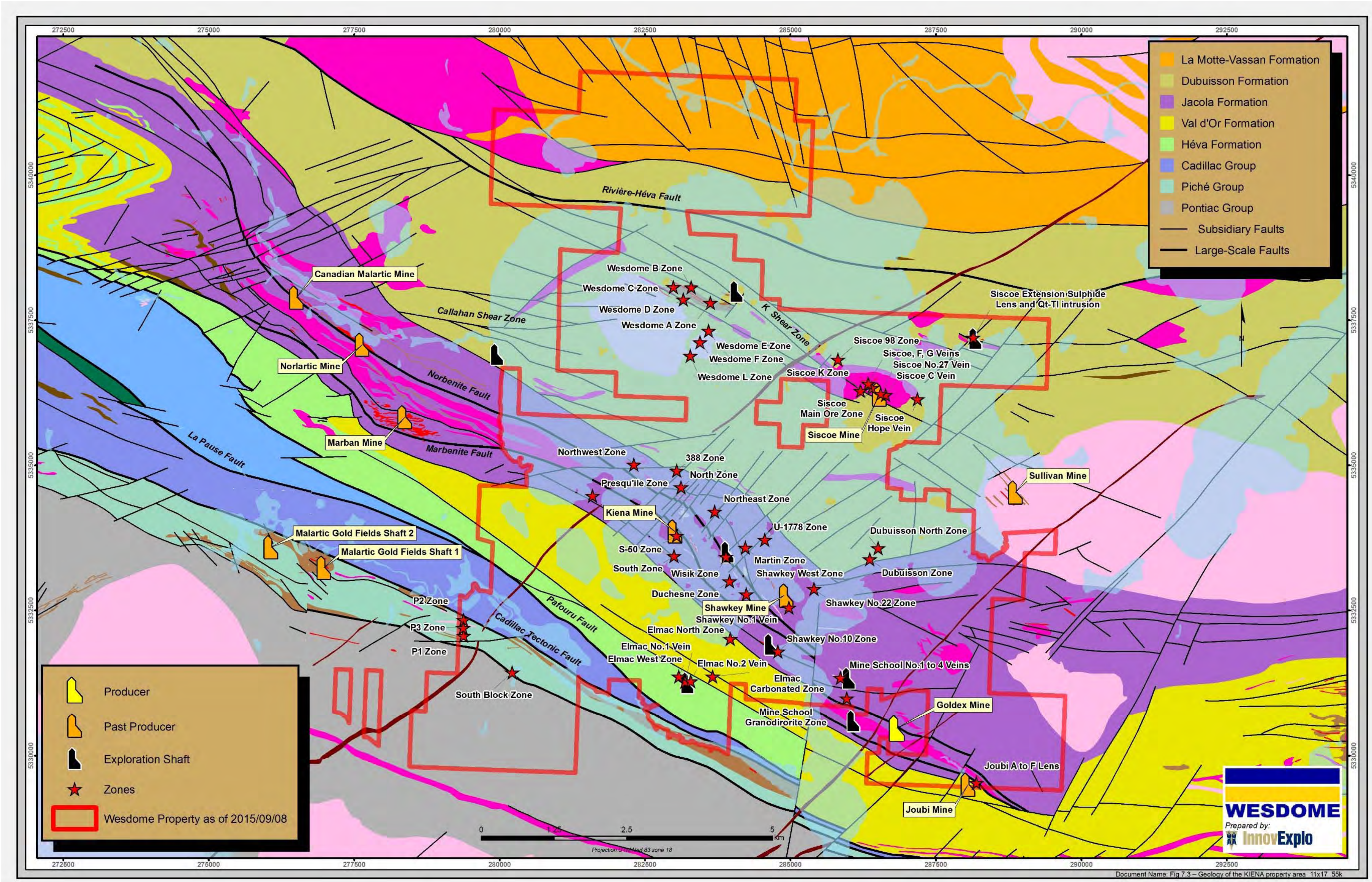

Figure 7.3 – Regional geology of the Lac De Montigny area showing the main faults and auriferous zones (Adapted and modified from Pilote 2013, 2015a, 2015b)

7.4 Local Geologic Setting and Mineralization

Gold mineralization occurs in all rock types except Proterozoic dykes, but is more common in intrusive bodies and basalt that acted as competent rock units that promoted fracturing during deformation. Gold mineralization concentrated where there is a marked competency contrast between these competent units and the adjacent deformed komatiite and/or chlorite-talc schist clearly. According to Couture et al. (1994), there are at least two main gold mineralizing events in the region: young deposits in which the gold mineralization did not experience much deformation after its emplacement; and early mineralization in which ore bodies are commonly affected by D1 asymmetric folds, are highly strained and are locally dismembered. In a few deposits, both generations are present.

Gold-bearing veins in the region exhibit a great variety of orientations, mineralogy and crosscutting relationships. For the purposes of this report, they are classified into the following three main types:

- Type 1: early quartz-carbonate veins cut by various dykes;
- Type 2: deformed veins within a shear zone; and
- Type 3 relatively weak deformed late quartz±tourmaline veins cutting all intrusive types and previous gold-bearing vein systems.

All three types may occur together.

At least sixty-three (63) mineralized zones and/or veins have been observed on the Quebec Wesdome Project thus far (see appendices V and VI for detailed descriptions of mineralized veins, zones, areas and historical work). Table 7.1 summarizes the mineralized zones and/or veins in terms of the following features and characteristics: host formation or group, nearest major fault/shear, host rock, associated subsidiary fault/shear zones, type of mineralization, alteration, type of mineralized structure, attitude of mineralized structure, mineralogy of mineralized structure, and timing of mineralization as revealed by crosscutting relationships using dykes and/or structures.

The mineralized zones and/or veins are presented in Table 7.1 from south to north in the same order as the sections on stratigraphy and large-scale fault zones (see sections 7.3.3 and 7.3.4, respectively). The author's classification of the veins into Type 1, 2 or 3 is based on available information. New crosscutting relationships and geochronological data could affect vein classification.

In terms of host sequences, the zones and/or veins are distributed as follows: one (1) in the Pontiac Group, three (3) in the Piché Group, three (3) in the Héva Formation, two (2) in the Val-d'Or Formation, thirty-one (31) in the Jacola Formation and twenty-three (23) in the Dubuisson Formation (including the Siscoe Stock). In terms of host lithologies, they are distributed as follows: twenty-seven (27) in competent basalt, twenty-five (25) in granodiorite, diorite and gabbro intrusive bodies, seven (7) in feldspar porphyry dykes, five (5) in komatiite, four (4) in schist, one (1) in tuff and one (1) in greywacke.

Table 7.1 – Summary of main characteristics of the mineralized zones observed on the Quebec Wesdome Project

ID	Zone or Vein	Formation or Group	Major Fault/Shear	Host Rock	Subsidiary Fault/Shear	Alteration	Mineralization Types	Type of Mineralized Structure	Attitude of the Mineralized Structure	Mineralogy of the Mineralized Structure	Timing of Mineralization
1	South Block Zone	Pontiac Group	500 m south of the Cadillac Tectonic Zone	Greywacke	Presence of a shear zone some metres to the NE	No alteration reported	Early quartz veins (?)	Stockwork	Variable	Qz, Cb, Chl, Py	(?)
2	P1 Zone	Piché Group	300 m SE of the Cadillac Tectonic Zone	Basalt	The zone is located within a weak shear zone	Weak amphibolitization	Deformed veins within a shear zone	Stockwork	Variable	Qz, Cb, Chl, Py, (Au),(Ag)	(?)
3	P2 Zone	Piché Group	150 m SE of the Cadillac Tectonic Zone	Komatiite	The zone is located near a fault zone	Moderate chloritization Weak carbonatization	Deformed veins within a shear zone	Stockwork	Variable	Qz, Cb, Tlc, Py	(?)
4	P3 Zone	Piché Group	100 m SE of the Cadillac Tectonic Zone	Gabbro	Presence of a shear zone some metres to the NE	Moderate chloritization Weak carbonatization	Early quartz veins (?)	Stockwork	Variable	Qz, Cb, Chl, Py, Po	(?)
5	Elmac No.1 Vein	Héva Formation	500 m south of the Parfouru Fault	Diorite	Interpreted fault zone located 200 m to the NE	Moderate pyritization Moderate carbonatization	Late quartz veins (?)	Sinuous vein	N165°, dip 65°	Qz, Tl, Cb, Py, Po, Cp, As, (Au)	(?)
6	Elmac No.2 Vein	Héva Formation	500 m south of the Parfouru Fault	Diorite	Interpreted fault zone located 200 m to the NE	Moderate pyritization Moderate carbonatization	Late quartz veins (?)	Sigmoidal vein	N195°, dip 70°	Qz, Tl, Cb, Py, Po, Cp, (Au)	(?)
7	Elmac West Zone	Héva Formation	600 m south of the Parfouru Fault	Diorite	Interpreted fault zone located 200 m to the NE	Moderate silicification	Late quartz veins (?)	Stockwork	Variable	Qz, Tl, Cb, Py, Po, Cp, As, (Au)	(?)
8	Elmac Carbonated Zone	Val-d'Or Formation	About 15 km NE of the Parfouru Fault	Folded andesite / Tuffs	The zone is located between two interpreted fault zones spaced about 200 m apart	Moderate carbonatization Moderate pyritization	Late quartz veins (?)	Stockwork	Variable	Qz, Tl, Cb, Py, Po, Cp, (Au)	(?)
9	Elmac North Zone	Val-d'Or Formation	About 500 m SW of the Marbenite Fault	Chlorite-sericite-carbonate schist	The zone is located within a moderate to strong shear zone	Moderate sericitization Moderate carbonatization Moderate chloritization	Shear zone	Disseminated pyrite	Subparallel of the hosted-schist	Up to 10% Py	(?)
10	S-50 Zone	Jacola Formation	The zone is adjacent to the Marbenite Fault	Anastomosing albitite dyke swarm Mafic volcanic flows	?	Moderate albitization Moderate pyritization	Early quartz veins	Carbonate-quartz stockwork veins	Variable	Cb, Qz, Py, (Po), ±Ab, Au	Cut by feldspar porphyry dykes and late carbonate-quartz veins

ID	Zone or Vein	Formation or Group	Major Fault/Shear	Host Rock	Subsidiary Fault/Shear	Alteration	Mineralization Types	Type of Mineralized Structure	Attitude of the Mineralized Structure	Mineralogy of the Mineralized Structure	Timing of Mineralization
11	S-50 Zone	Jacola Formation	The zone is adjacent to the Marbenite Fault	Anastomosing albitite dyke swarm Mafic volcanic flows	?	Moderate Ankeritization	Early quartz veins	Carbonate-pyrite-Au replacement veins (Breccia 1 type)	Variable	Cb, Py, Au	Cut by feldspar porphyry dykes and late carbonate-quartz veins
12	S-50 Zone	Jacola Formation	The zone is adjacent to the Marbenite Fault	Anastomosing albitite dyke swarm Mafic volcanic flows	?	Moderate albitization Moderate pyritization	Early quartz veins	Albite stockwork veins and breccias (Breccia 2 type)	Variable	Ab, Py, Cp, Au	Cut by feldspar porphyry dykes and late carbonate-quartz veins, but cuts across Breccia 1 type
13	S-50 Zone	Jacola Formation	The zone is adjacent to the Marbenite Fault	Feldspar Porphyry	?	?	Late quartz veins	Late calcite-quartz-pyrite-Au stockwork veins	Variable	Cc, Qz, Py, Au	Cuts feldspar porphyry dykes
14	North Zone	Jacola Formation	200 m north of Norbenite Fault	Diorite dykes	Presence of chlorite-talc schist, weakly sheared	Moderate albitization Moderate silicification Moderate pyritization Moderate carbonatization	Early quartz veins	Stockwork	Variable	Qz, Cb, Py	Cut by unmineralized granodiorite and feldspar porphyry dykes
15	Northwest Zone	Jacola Formation	About 100 m north of the Norbenite Fault	Diorite dykes	The diorite dyke is enclosed in a chlorite-talc schist, weakly sheared	Moderate albitization Moderate silicification Moderate pyritization Moderate carbonatization	Early quartz veins	Stockwork	Variable	Qz, Cb, Py	Cut by granodiorite dykes
16	Northeast Zone	Jacola Formation	About 250 m NE of the Norbenite Fault	Diorite dykes	Dioritic dyke in contact with talc-chlorite-schist, strongly faulted and sheared	Moderate albitization Strong carbonatization Strong biotitization Weak chloritization	Early quartz veins	Stockwork	Variable	Qz, Cb, Ab, Chl, Py, (Au)	(?)
17	South Zone	Jacola Formation	300 m SW of the Marbenite Fault	Basalt	The zone is generally badly fractured and broken up by a fault zone	Strong chloritization Strong carbonatization Weak silicification	Deformed veins within a shear zone	Stockwork within a strong shear zone	Variable	Qz, Cb, Py	(?)
18	Wisik Zone	Jacola Formation	Adjacent to the Norbenite Fault	Basalt	The zone is located within a moderate shear zone	Moderate silicification	Deformed veins within a shear zone	Shear vein filling (?)	Subparallel of the shear zone (N320°)	Qz, Po, Py	(?)

ID	Zone or Vein	Formation or Group	Major Fault/Shear	Host Rock	Subsidiary Fault/Shear	Alteration	Mineralization Types	Type of Mineralized Structure	Attitude of the Mineralized Structure	Mineralogy of the Mineralized Structure	Timing of Mineralization
19	Martin Zone	Jacola Formation	300 m NE of the Norbenite Fault	Basalt	The zone is associated with the Martin Shear Zone	Moderate silicification Moderate albitization Moderate pyritization	Deformed veins within a shear zone	Breccia	Variable	Qz, Cb, Ab, Py, Cp, (Au)	Cut by granodiorite dykes
20	U-1778 Zone	Jacola Formation	700 m NE of the Norbenite Fault	Basalt	The zone is associated with the No. 22 Deformation Zone	Moderate chloritization	Deformed veins within a shear zone (?)	Stockwork (?)	Variable	Qz, Cb, Su	(?)
21	Duchesne Zone	Jacola Formation	250 m NE of the Marbenite Fault and 250 m SW of the Norbenite Fault	Basalt	The zone is located within a shear zone	Moderate chloritization	Deformed veins within a shear zone (?)	Stockwork (?)	Variable	Qz, Cb, Py, (Au)	(?)
22	VC Zone	Jacola Formation	Adjacent to the Norbenite Fault	Basalt	(?)	Moderate albitization	Early quartz veins (?)	Stockwork	Variable	Qz, Cb, Py, (Au)	(?)
23	388 Zone	Jacola Formation	450 m north of the Norbenite Fault	Basalt	(?)	Moderate albitization	Early quartz veins (?)	Fracture-fill veins	(?)	Qz, Cb, Py	(?)
24	Presqu'ile Zone	Jacola Formation	200 m SW of the Marbenite Fault	Basalt/Komatiite	Mineralization is observed within weak or moderate shear zones.	Moderate carbonatization Moderate chloritization	Deformed veins within a shear zone	Stockwork (?)	(?)	Qz, Cb, Chl, Py, Cp, Sp, Ga, (Au)	(?)
25	Shawkey No.22 Zone	Jacola Formation	750 m NE of the Norbenite Fault	Feldspar Porphyry	The zone is associated with the No. 22 Deformation Zone	Weak silicification Moderate tourmalinization Weak pyritization Weak hematization	Late quartz veins	Extensional veins (?)	Variable	Qz, Tl, Cb, Chl, Py, (Au)	Cuts feldspar porphyry dykes
26	Shawkey No. 1 Vein	Jacola Formation	250 m NE of the Norbenite Fault	Basalt	The zone is associated with the Martin Shear Zone	Moderate albitization Weak pyritization Moderate carbonation	Deformed veins within a shear zone (?)	Fault-fill veins (?)	N140°, dip 80° - 90°	Qz, Cc, Po, Py, (Tl), (Ak)	Cuts feldspar porphyry dykes
27	Shawkey No. 10 Zone	Jacola Formation	250 m SW of the Marbenite Fault	Basalt	The zone is located within a strong shear zone	Moderate albitization Weak pyritization Moderate carbonation Weak tourmalinization	Deformed veins within a shear zone (?)	Fault-fill veins (?)	Strike and dip conformable to the shear (N290°/dip steeply)	Qz, Cc, Py, Tl, Ak	(?)
28	Shawkey No. 10 Zone	Jacola Formation	250 m SW of the Marbenite Fault	Feldspar porphyry	The zone is located within a strong shear zone	(?)	Late quartz veins	Extensional veins (?)	Variable	Qz, Tl, Py	Cuts feldspar porphyry dykes

ID	Zone or Vein	Formation or Group	Major Fault/Shear	Host Rock	Subsidiary Fault/Shear	Alteration	Mineralization Types	Type of Mineralized Structure	Attitude of the Mineralized Structure	Mineralogy of the Mineralized Structure	Timing of Mineralization
29	Shawkey West Zone	Jacola Formation	150 m NE of the Marbenite Fault and 300 m SW of the Norbenite Fault	Basalt/Komatiite	The zone seems associated with a shear	(?)	Deformed veins within a shear zone (?)	Stockwork (?)	(?)	Qz, Cb, Chl, Py	(?)
30	School Mine No.1 and 2 Veins	Jacola Formation	About 350 m NE of the Norbenite Fault	Basalt/Feldspar porphyry dyke contact	Veins occur along fractures or narrow shear zones	(?)	Late quartz veins	Fracture-fill veins	N090°-N110°, dip 60°-75°	Qz, Act, Ep, Chl (Tl)	Cuts feldspar porphyry dyke
31	School Mine No.3 Vein	Jacola Formation	About 350 m NE of the Norbenite Fault	Basalt	The vein occupies a strong well-defined fracture or shear zone	Weak silicification	Late quartz veins	Fault-fill veins	N065°, dip 60°	Qz, Cb, Act, Py, Po	Cuts feldspar porphyry dyke
32	School Mine No.4 Vein	Jacola Formation	About 250 m NE of the Norbenite Fault	Basalt	Vein occupies a fairly well-defined fracture	Moderate silicification	Late quartz veins	Fracture-fill veins	N090°, dip 70°	Qz, Chl, Hb, Ep, Po, Py, Cpy, Mt (Au)	(?)
33	School Mine Granodiorite Zone	Jacola Formation	In the vicinity of the Norbenite Fault	Granodiorite	(?)	(?)	Late quartz veins (?)	Stockwork (?)	(?)	Qz, Chl, Tl (Au)	(?)
34	Joubi A Lens	Jacola Formation	Between the Marbenite and Norbenite faults	Talc/chlorite carbonate Schist	Lens is controlled by the Joubi Shear Zone	(?)	Deformed veins within a shear zone	Dislocated, contorted, folded quartz veins	Variable	Qz, Cb, Chl, Sch,	Cut by porphyry dyke
35	Joubi B and C Lens	Jacola Formation	Between the Marbenite and Norbenite faults	Basalt/ Komatiite	Lens is controlled by the Joubi Shear Zone	(?)	Early quartz veins (?)	Extensional veins	(?)	Qz, Cb, Chl, Py	(?)
36	Joubi D Lens	Jacola Formation	Between the Marbenite and Norbenite faults	Komatiite	Lens is controlled by the Joubi Shear Zone	Moderate carbonatization Weak silicification	Shear zone	Disseminated pyrite	Subparallel to the shear zone	Py	(?)
37	Joubi E Lens	Jacola Formation	Between the Marbenite and Norbenite faults	Basalt	Lens is controlled by the Joubi Shear Zone	Weak to moderate chloritization	Early quartz veins (?)	Stress fracture between two small strike-slip faults associated with Joubi Shear Zone.	NW-SE, dip 65°–70°	Qz, Po, Py, Cp, Sp	(?)
38	Joubi F Lens	Jacola Formation	Between the Marbenite and Norbenite faults	Basalt	Lens is controlled by the Joubi Shear Zone	(?)	Early quartz veins (?)	Veins within stress fractures	N320°, dip 85°	Qz, Py, Au	(?)

ID	Zone or Vein	Formation or Group	Major Fault/Shear	Host Rock	Subsidiary Fault/Shear	Alteration	Mineralization Types	Type of Mineralized Structure	Attitude of the Mineralized Structure	Mineralogy of the Mineralized Structure	Timing of Mineralization
39	Dubuisson Zone	Dubuisson Formation	17 km NE of the Norbenite Fault	Diorite dykes	A shear zone is present near or adjacent to the diorite dykes	Moderate to strong albitization Weak to moderate carbonatization Weak chloritization Weak pyritization	Early quartz veins (?)	Stockwork	Variable	Qz, Ab, Cb,(Tl), Py, Au	(?)
40	Dubuisson Zone	Dubuisson Formation	17 km NE of the Norbenite Fault	Feldspar porphyry dykes	A shear zone is present near or adjacent to the feldspar porphyry dykes	Weak chloritized Weak pyritization	Late quartz veins (?)	Stockwork	Variable	Qz, Tl, Chl, Py, Au	(?)
41	Dubuisson North Zone	Dubuisson Formation	19 km NE of the Norbenite Fault	Diorite dykes	A shear zone is present near or adjacent to the diorite dykes	Moderate to strong albitization Weak to moderate carbonatization Weak chloritization Weak pyritization	Early quartz veins (?)	Stockwork	Variable	Qz, Ab, Cb,(Tl), Py, Au	(?)
42	Dubuisson North Zone	Dubuisson Formation	19 km NE of the Norbenite Fault	Feldspar porphyry dykes	A shear zone is present near or adjacent to the feldspar porphyry dykes	Weak chloritization Weak pyritization	Late quartz veins (?)	Stockwork	Variable	Qz, Tl, Chl, Py, Au	(?)
43	Wesdome A Zone	Dubuisson Formation	300 m southwest of the K Shear Zone	Basalts/diorite dykes	The zone is enclosed in a weak shear zone	Strong silicification Strong carbonatization Weak albitization Weak pyritization	Deformed veins within a shear zone	En-echelon vein systems enclosed in a weak shear zone	Attitude of the shear: N110°–N120°, dip 50°–85°	Qz, Cb, Ab, (Tl), Py	Cuts diorite dykes
44	Wesdome B Zone	Dubuisson Formation	300 m SW of the K Shear Zone	Basalts/diorite dykes	The zone is enclosed in a strong shear zone	(?)	Deformed veins within a shear zone	Numerous veins oriented parallel to the shear zone	Attitude of the shear: N110° , dip 70°–85°	Qz, Tl, Py	Cuts diorite dykes
45	Wesdome C and D Zones	Dubuisson Formation	300 m SW of the K Shear Zone	Basalts/diorite dykes	The zone is enclosed in a weak shear zone	(?)	Deformed veins within a shear zone	Stockwork (?)	Attitude of the shear: N120° , dip 60°–70°	Qz, Cb, Py	Cuts diorite dykes
46	Wesdome E Zone	Dubuisson Formation	800 m SW of the K Shear Zone	Basalts/diorite dykes	The zone is enclosed in a weak shear zone	Weak albitization	Deformed veins within a shear zone	Vein oriented parallel to the shear zone	Attitude of the shear: N120° , dip 50°–80°	Qz, Cb, Py	Cuts diorite dykes

ID	Zone or Vein	Formation or Group	Major Fault/Shear	Host Rock	Subsidiary Fault/Shear	Alteration	Mineralization Types	Type of Mineralized Structure	Attitude of the Mineralized Structure	Mineralogy of the Mineralized Structure	Timing of Mineralization
47	Wesdome F Zone	Dubuisson Formation	1 km SW of the K Shear Zone	Diorite dykes	The zone is enclosed in a weak shear zone	(?)	Deformed veins within a shear zone	Stockwork (?)	Attitude of the shear: N120° , dip 50°–65°	Qz, Cb, (Tl), Cp, Py	Cuts diorite dykes
48	Wesdome L Zone	Dubuisson Formation	1 km SW of the K Shear Zone	Basalts/diorite dykes	The zone is enclosed in a weak shear zone (?)	Strong albitization Moderate silicification	Deformed veins within a shear zone	Stockwork (?)	Attitude of the shear: N120° , dip 50°–65°	Qz, Cb, Py	Cuts diorite dykes
49	Siscoe Main Ore Zone	Dubuisson Formation	75 m north of the K Shear Zone	Siscoe Stock	(?)	Strong chloritization	Early quartz veins	Folded extensional veins	N000°–N035°, dip 60°–70°	Qz, Cb, Chl, Py, Cpy, (Tl)	Cut by mafic and felsic dikes and late quartz-tourmaline veinlets and the C quartz-tourmaline vein
50	Siscoe Vein	Dubuisson Formation	125 m north of the K Shear Zone	Siscoe Stock	(?)	Moderate chloritization Moderate silicification	Early quartz veins	Folded extensional (?) vein	N-S, became E-W close to the K Shear	Qz, Cb, Py, Cpy	Cut by mafic and felsic dikes and late quartz-tourmaline veinlets
51	Siscoe Hope Vein	Dubuisson Formation	275 m north of the K Shear Zone	Siscoe Stock	(?)	Strong silicification Strong albitization	Early quartz veins	Folded veins	N065°, dip 85°	Qz, Cb, Chl	Cut by mafic and felsic dikes and late quartz-tourmaline veinlets
52	Siscoe F and G Veins	Dubuisson Formation	100 m north of the K Shear Zone	Siscoe Stock	(?)	Moderate chloritization Moderate silicification	Early quartz veins	Folded extensional veins	N-S, dip 50°–60°	Qz, Chl, Cb, Su	Cut by mafic and felsic dikes
53	Siscoe K Zone	Dubuisson Formation	Zone confined to the K Shear Zone	Talc-chlorite-carbonate schist	NA	NA	Shear Zone	1- Dismembered quartz veins 2- Disseminated in chlorite and talc schist 3- Veins with massive talc	Attitude of the shear: N065°, dip 80°	1- Qc, Chl Cpy, Py, Po 2- Tlc, Chl 3- Tlc avec Au ribbons	Cut by mafic and felsic dikes and late quartz-tourmaline veinlets
54	Siscoe C Vein	Dubuisson Formation	100 m north of the K Shear Zone	Siscoe Stock	(?)	Strong silicification Strong albitization	Late quartz veins	Shear vein filling reverse fold	N190°–N200°, dip 35°–45°	Tl, Qz, Sch, Cc, Py, Cp	Cuts all intrusive types and all auriferous vein systems
55	Siscoe No. 27 Vein	Dubuisson Formation	125 m north of the K Shear Zone	Siscoe Stock	(?)	Strong silicification Strong albitization	Late quartz veins	Shear vein filling reverse fold	N190°–N200°, dip 35°–45°	Tl, Qz, Cb	Cuts all intrusive types and all auriferous vein systems
56	Siscoe 98 Zone	Dubuisson Formation	100 m north of K Shear Zone	Basalt	(?)	Moderate carbonatization Moderate silicification Weak pyritization	Early quartz veins (?)	Breccia	N-S, dip (?)	Qz, Cb, Tl	(?)
57	Siscoe-Extension Sulphide Lens	Dubuisson Formation	About 1 km south of the Rivière-Héva Fault	Talc-chlorite schist	The zone is confined within a strong shear zone	(?)	Shear zone	Many narrow sulphide lenses	Attitude of the shear: E-W, steep dip	Su	(?)

ID	Zone or Vein	Formation or Group	Major Fault/Shear	Host Rock	Subsidiary Fault/Shear	Alteration	Mineralization Types	Type of Mineralized Structure	Attitude of the Mineralized Structure	Mineralogy of the Mineralized Structure	Timing of Mineralization
58	Siscoe Extension "Qt-Tl intrusion"	Dubuisson Formation	About 1 km south of the Rivière-Héva Fault	Granite porphyry	(?)	(?)	Late quartz veins	(?)	(?)	Qz-Tl	Cuts granite porphyry

Ab = albite, Act = actinolite, Ag = silver, Ak = ankerite, As = arsenopyrite, Au = gold, Cb = carbonate, Cc = calcite, Chl = chlorite, Cp = chalcopyrite, Ep = epidote, Ga = galena, Hb = hornblende, Hm = hematite, Mt = magnetite, Mv = muscovite, Py = pyrite, Po = pyrrhotite, Qz = quartz, Sch = scheelite, Sp = sphalerite, Su = sulphides Tl = tourmaline, Tlc = talc

In general, mineralized zones and/or veins on the Quebec Wesdome Project are observed close to a large-scale fault. They are often associated with a subsidiary shear zone that may be proximal, adjacent or hosting the mineralization. Many of the zones and/or veins are also deformed and folded. Alteration is dominantly albitization, carbonatization and pyritization, with lesser chloritization and silicification.

7.5 Former Gold Producers

Past gold production on the Quebec Wesdome Project came from the Kiena, Siscoe and Shawkey mines. A summary of geological setting and mineralization is presented for each former gold producer.

7.5.1 Kiena mine

The S-50 Zone of the Kiena mine is located on the N-S-trending limb of a local fold and is more or less concordant with the upper contact of a moderately west-dipping tholeiitic flow with a variably altered and schistose basaltic komatiite assigned to the Jacola Formation. The S-50 Zone is adjacent to the Marbenite Fault. The mineralization at the Kiena mine (S-50 zone) is associated with an intermediate to felsic dyke complex composed of a pre-ore albitized diorite (“albitite”) dyke swarm and post-ore granodiorite and feldspar porphyry dykes. The orebody is comprised of three following ore types, from oldest to youngest: 1) carbonate-quartz stockwork veins accompanied by albite-pyrite(pyrrhotite) gold alteration halos, also known as the “Stwk Cb-Qz-Py (Po)±Ab-Au vein” ore type (or “Stwk” herein); 2) carbonate (ankerite)-pyrite-Au replacement veins, also known as the “Breccia 1” ore type; and 3) albite stockwork veins and breccias with disseminated pyrite, chalcopyrite, scheelite and gold, also known as the “Breccia 2” ore type. These three ore types correspond to the early quartz-carbonate veins cut by various dykes (Type 1 veins). Porphyry dykes cut all previous units and were weakly mineralized by calcite-quartz-pyrite-Au stockwork veins. These veins correspond to relatively weak deformed late quartz veins cutting all intrusive types and previous gold-bearing vein systems (Type 3 veins).

7.5.2 Siscoe mine

The Siscoe Stock intruded the tholeiitic basalts with minor intercalations of ultramafic lavas belonging to the Dubuisson Formation. The contact between the Siscoe Stock and the Dubuisson Formation is delineated by a shear zone, referred to as the K Shear Zone. Most of the producing veins are located in the Siscoe Stock (85–90% of the total production), although minor amounts of gold were also extracted from the K Shear Zone and from small veins hosted in the Dubuisson volcanic rocks. At the Siscoe Mine, the three main types of veins were reported in the most productive gold vein systems. The early quartz-carbonate veins cut by various dykes (Type 1 veins) correspond to the Siscoe Main Ore Zone that produced almost half the total production of the Siscoe mine; Type 1 veins also correspond to the Siscoe, Hope, F and G veins. Deformed veins within a shear zone (Type 2 veins) correspond to the dismembered quartz veins of the K Zone. The relatively weakly deformed late quartz±tourmaline veins cutting all intrusive types and earlier gold vein systems (Type 3 veins) are represented by the Siscoe C Vein, the first producer at the Siscoe mine that yielded some 40,000 ounces of gold, and the Siscoe No. 27 Vein.

7.5.3 Shawkey mine

The rocks that underlie the Shawkey mine area belong to the Jacola Formation. The characteristic lithologies found on the Project consist of ultramafic to mafic flows at the base of the sequence, followed by massive and minor pillowed basalts, basaltic flow and pillow breccia, tuff breccia and basaltic tuffs. The Shawkey No. 1 Vein is located about 250 m northeast of the Norbenite Fault and is also hosted by the Martin Shear Zone. This shear zone is filled by a quartz vein (the Main Vein) accompanied by quartz stringers in walls, which represent Type 2 veins (deformed veins within a shear zone). The Main Vein is hosted by altered basalts cut by dioritic dykes.

8. DEPOSIT TYPE

8.1 Archean Greenstone-hosted Orogenic Lode Gold Deposits

The following description of the Archean greenstone-hosted orogenic lode gold deposits is mostly modified and summarized from Simard et al. (2013) and references therein.

Archean greenstone-hosted orogenic lode gold deposits are typically distributed along first-order compressional to transpressional crustal-scale fault zones characterized by several strain increments (e.g., Cadillac–Larder Lake Fault Zone) that mark the convergent margins between major lithological boundaries. However, they are seldom located within these first-order structures. Major or first-order faults are interpreted as primary hydrothermal pathways to higher crustal levels (Eisenlohr et al., 1989; Colvine, 1989; McCuaig and Kerrich, 1998; Kerrich et al., 2000; Neumayr and Hagemann, 2002; Kolb et al., 2004; Dubé and Gosselin, 2007); however, only few significant gold deposits are hosted in major faults such as the McWatters mine, Lapa mine and the Orenada deposit, Abitibi Subprovince, Canada (Morin et al., 1993; Robert, 1989; Neumayr et al., 2000; 2007; Simard et al., 2013).

Significant mineralized quartz veins are commonly hosted in second- and third-order shear zones (Eisenlohr et al., 1989). Structurally, these shear zones vary from brittle–ductile to ductile, depending on their depth of formation (Hodgson, 1993; Robert and Poulsen, 2001). At depths greater than 10 km, quartz veins are seldom located within shear zones whereas gold mineralization is mostly associated with disseminated sulfides (Witt and Vanderhor, 1998).

A widely accepted model for orogenic gold deposit is the continuum model (e.g., Colvine, 1989; Groves, 1993; Gebre-Mariam et al., 1995; Groves et al., 1998, 2003), which involves the migration of hydrothermal fluids from a deep-seated reservoir to mid-crustal level along a crustal-scale fault. This model allows for gold deposits to be formed over a range of crustal depths of more than 15 km, under a variety of P-T conditions ranging from 180 °C at <1 kbar to 700 °C at 5 kbar (Groves 1993).

The timing of gold mineralization relative to metamorphism in higher metamorphic grade rocks has been contentious. A broadly syn-peak metamorphic timing for mineralization has recently been proposed to explain a number of deposits in amphibolite and granulite facies terrains of the Yilgarn Craton (Barnicoat et al., 1991; Witt, 1993, Knight et al., 1993; Neumayr et al., 1993; Smith, 1996; Ridley et al., 2000). Others have interpreted gold deposition as pre- to syn-peak metamorphism at Hemlo, Ontario (Powell and Pattinson, 1997; Powell et al., 1999; Muir, 2002), Campbell–Red Lake, Ontario (Penczak and Mason, 1999; Thompson, 2003), and at Big Bell, Australia (Chown et al., 1984; Phillips and De Nooy, 1988; Phillips and Powell, 2009). The metamorphic devolatization model suggests that gold mineralization forms prior to the peak of metamorphism. In such case, retrograde metamorphism is likely to have caused redistribution of gold and to yield textures that suggest that gold is late (Phillips and Powell, 2009). This timing relationship implies overprinting of early gold mineralization by metamorphism and remobilization of that early gold by subsequent metamorphic events (Tomkins et al. 2004; Tomkins and Mavrogenes, 2001; Phillips and Powell, 2009). In the past two decades, complex gold depositional sequences have been documented in several gold deposits that support the concept that gold deposits form by accumulation during several hydrothermal episodes; examples include Chalice (Bucci et al., 2002, 2004), Kalgoorlie (Kent and McDougall, 1996), Big Bell (Mueller et al., 1996b), Hutti (Kolb et al., 2005) and Lapa (Simard et al., 2013).

8.2 Gold Mineralization in the Val-d'Or District

The following description of the Archean greenstone-hosted orogenic lode gold deposits is mostly modified and summarized from Couture et al., (1994), Olivo and Williams-Jones (2002), Olivo et al., (2007) and references therein.

The most important feature of the deformation from the perspective of gold mineralization was the development of shear zones. The timing of the shear zones is controversial, but there is general consensus that a significant component of the vertical elongation and thrusting along these fault zones occurred during the Kenoran orogeny (Robert, 1990b). Gold deposits in the Val-d'Or district are hosted or spatially associated with shear zones (Robert, 1990a, 1990b, 1994).

Syntheses of the structure, mineralogy, and alteration of the gold deposits of the Val-d'Or district can be found in Robert (1990a, 1990b, 1994) and Sauvé et al. (1993). The deposits occur in all rock types present in the district, except for the late-tectonic Archean granitic batholiths and the Proterozoic diabase dikes. Although the gold deposits are spatially associated with a major first-order shear zone (i.e., the Cadillac tectonic zone), most of them are not hosted in this structure. Rather, they are hosted by second- and third-order shear zones.

At least two major auriferous mineralizing events have been recognized in the Val-d'Or district on the basis of morphological and structural features, ore and alteration mineral assemblages, and crosscutting relationships with intrusive rocks (Robert, 1990a, 1990b, 1994; Sauvé et al., 1993; Couture et al., 1994). The older mineralizing event is manifested by veins and breccias (e.g., Norlartic, Marban, Kiena mines, and Main ore zone at Siscoe mine) that are mainly associated with second-order shear zones and commonly folded or boudinaged by D_1 deformation. These veins and breccias are cut by diorite and tonalite dikes, which have U-Pb zircon ages of 2692 ± 2 (Pilote et al., 1993) and 2686 ± 2 Ma (Morasse et al., 1995). The younger auriferous event, which produced the Sigma, Lamaque, Perron-Beaufor, Shawkey, Wesdome and Camflo deposits, as well as the C quartz-tourmaline vein at the Siscoe mine, is represented by veins commonly associated with third-order shear zones. These veins clearly crosscut plutonic rocks intruded between 2694 ± 2 Ma (Wong et al., 1991) and 2680 ± 6 Ma (Jemielita et al., 1990), and may have formed during the latest stages of D_1 deformation.

9. EXPLORATION

This section presents the exploration work performed by Wesdome on the Quebec Wesdome Project since 2007.

9.1 Exploration Drift (eastern area)

In 2007, Wesdome completed six (6) drill holes on the No. 22 Zone from surface. This provided information in advance of an exploration drift (Fig. 9.1) on the 330-metre level. In 2009, positive results on the Dubuisson Zone prompted Wesdome to initiate an underground exploration and development program on the new zone. Since 2007, about 2 km were drifted eastward in order to reach the Dubuisson Zone. Only 150 to 200 m were missing to reach the zone. A series of drilling bays was also excavated in the exploration drift. Drilling bays are spaced 150 m apart and provide excellent access for exploration drilling. In addition, geological mapping was performed on the back of the drift, yielding a lot of geological and structural information.

9.2 Geophysical Compilation

In 2006, Wesdome compiled the ground magnetic data from all the surveys performed by Placer Dome (Kiena Gold Mines Ltd, Falconbridge Mines Ltd, Geola Inc., and Val-d'Or Geophysics Inc.). The available digital data (Fig. 9.2) covers all the Quebec Wesdome Project, as well as adjacent properties. The digital data was obtained from Abitibi Geophysics, who combined all previous surveys into a single database. The final product was processed using GeoSoft software.

9.3 Ground Magnetic Survey of 2009

In 2009, Harold Ferderber carried out a 140-km ground magnetic survey in the area Dubuisson and Dubuisson North areas. The survey (Fig. 9.3) covered 6.9 km2. The lines were oriented N030° and spaced 50 m apart. Meegwich Consultants Inc. provided the processed magnetic data and contour maps to generate magnetic total field and magnetic gradient maps. The purpose of the survey was to elaborate the geological interpretation of the Dubuisson Zone. The survey revealed the presence of folds and fault zones.

Two magnetically interpreted folds with ENE-trending axial fold traces are believed to occupy in the northern half of the survey area. A series of magnetic lineaments trending N080° to N085° Az, which extend beyond the survey area (as observed in the previous property-wide compiled magnetic map), are interpreted to represent E-W regional D2(?) deformation “shear structures” crossing the survey area. These lineaments are characterized by the juxtaposition of truncated magnetic highs and could also be host to some diorite intrusions belonging to the same trend. A second series of parallel lineaments trending about N345° Az is characterized by the curvature and/or termination of “mag highs” and “lows”, possibly representing deformation corridors for which the relative timing remains to be determined. A third series of lineaments trending about N025° to N035° Az are characterized by multiple offsets of “mag highs” and “lows”, and are interpreted to represent late NE-trending faults.

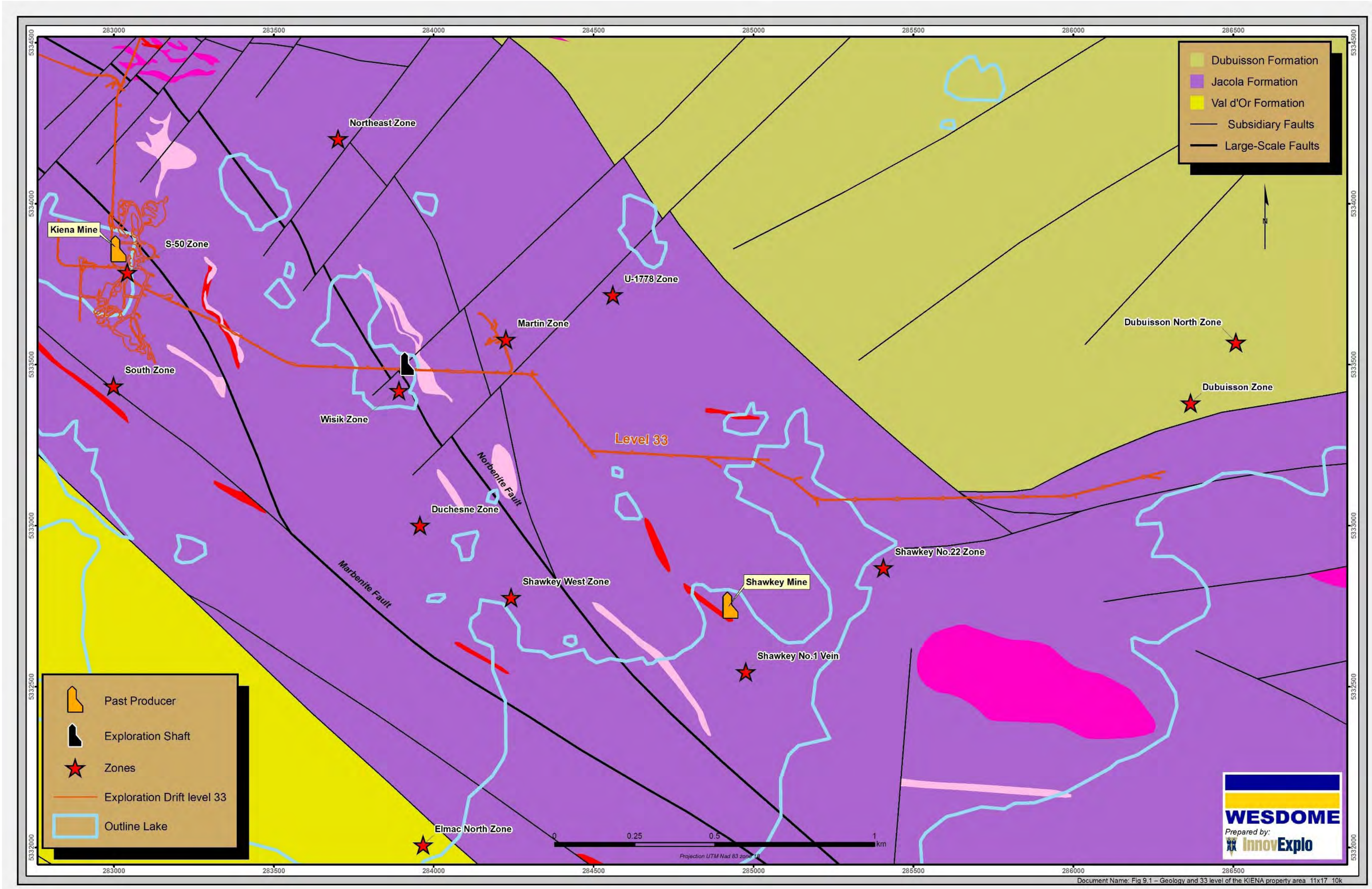

Figure 9.1 – Location map showing the location of exploration drift on the 330-metre level (Level 33)

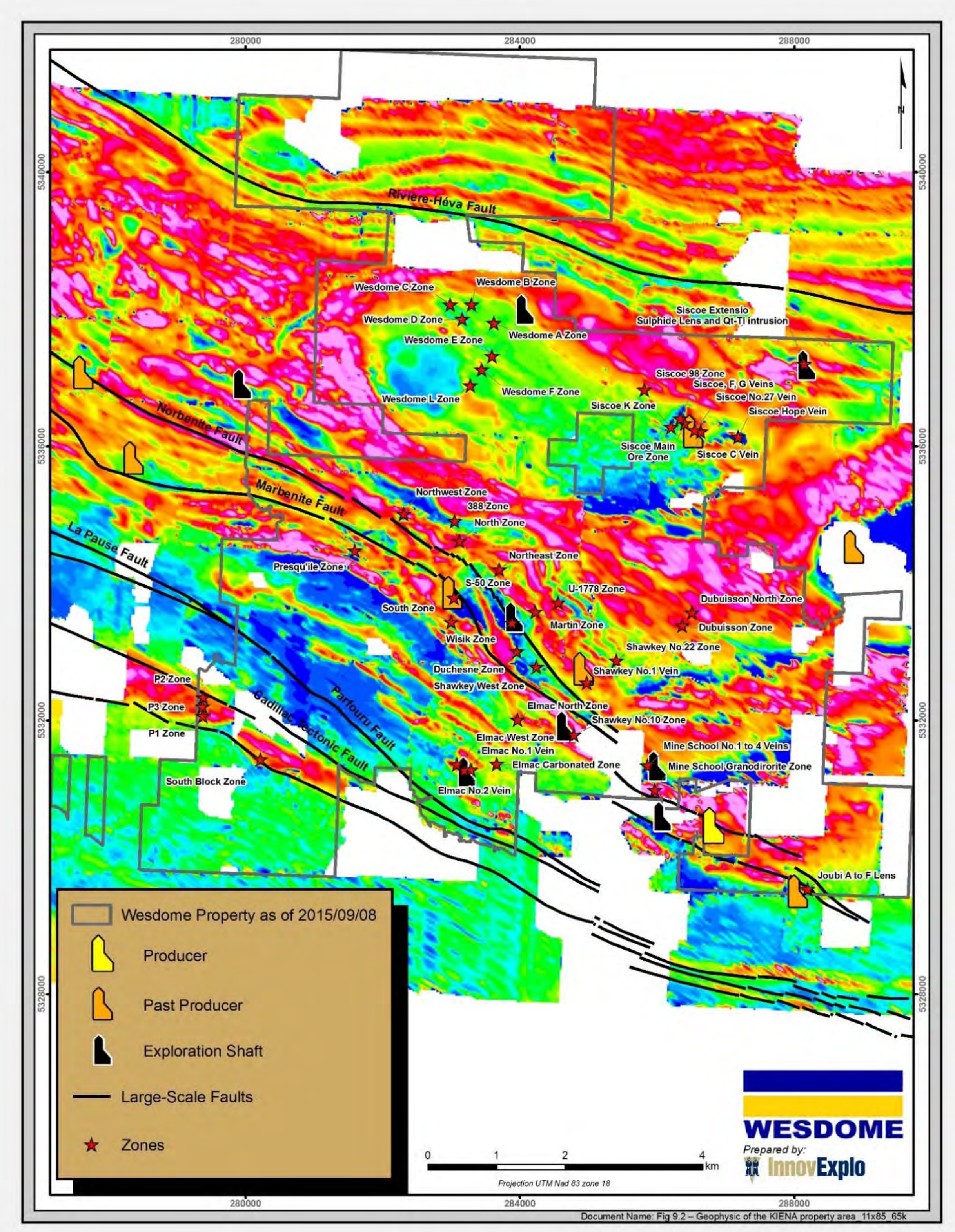

Figure 9.2 – Compilation of ground magnetic data from all historical surveys covering the Quebec Wesdome Project

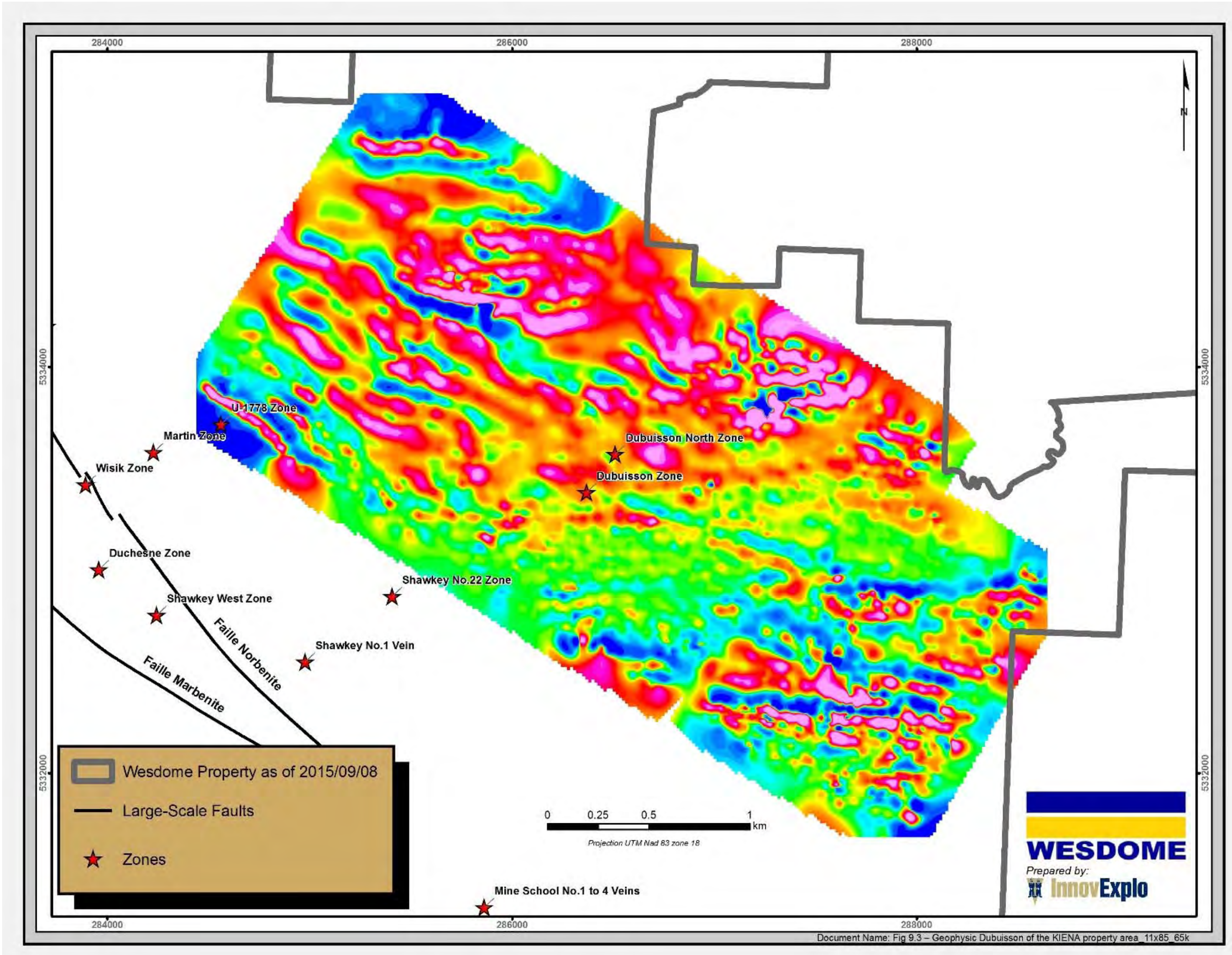

Figure 9.3 – 2009 ground magnetic survey in the area Dubuisson and Dubuisson North areas.

10. DRILLING

In this section, drilling work is present by area, from south to north, in the same order as the sections on stratigraphy (7.3.3), large-scale fault zones (7.3.4) and the local geological setting and mineralization (7.5). Table 10.1 summarizes the drilling programs carried out by Wesdome Gold Mines Ltd ("Wesdome") between 2007 and 2015, and Figure 10.1 shows the locations of the drill holes.

10.1 Drill Hole Survey

Drill hole collars were surveyed and marked using foresights and backsights by Wesdome personnel. A handheld Garmin GPSMAP 76CSx with a Universal Transverse Mercator (UTM) 1983 North American Datum (NAD83) system was used to record position data. Compass and chain methods were employed to locate the foresight and backsight pickets.

Once the drill rig was positioned at the planned location, the azimuth and inclination of the hole were confirmed at a downhole depth of 9 m in solid rock. After the hole was completed and the rig moved off the drill site, the casing was covered with a steel cap inscribed with the identification of the hole collar. In winter, when drilling took place from the ice surface of Lac De Montigny, an ice road was constructed from late December to late January. To accommodate the drill rigs, the road was made of at least 48 in of solid ice for Major Drilling Group standard drill rigs (2009 drill program), or 30 in of solid ice for G4 Drilling Group small drill rigs (2015 drill program). The planned positions of the collar and the foresights and backsights were marked using the same handheld Garmin GPSMAP 76CSx and using the same UTM 1983 NAD83 positioning system with standard wooden pickets supported by packed snow. In summer, drilling from the lake used a barge-mounted drill. The barge drill was positioned using one buoy for the collar and three buoys for the foresights, all positioned using the same handheld Garmin GPSMAP 76CSx and using the same UTM 1983 NAD83 positioning system.

Downhole surveying was recorded at 50-m intervals by the drill contractor using a Reflex EZ-Shot, which recorded azimuths and inclinations. Although magnetic minerals did affect the Reflex instrument, it was for the most part adequate in determining the deviation of the drill hole while drilling was underway. In the event of too much deviation in the holes, an 18 inch long shell combined with a hexagonal core barrel was used, which produced little to no deviation.

Surveyor Jean-Luc Corriveau (2008–2009) and later a Kiena technician (2010-2015) returned to the sites to survey casing locations and elevations using a differential Leica Viva GPS system radio linked to a Leica R500 base procedure for holes on the lake.

The technical parameters of the 2007–2015 surface drill holes are presented in Appendix VII.

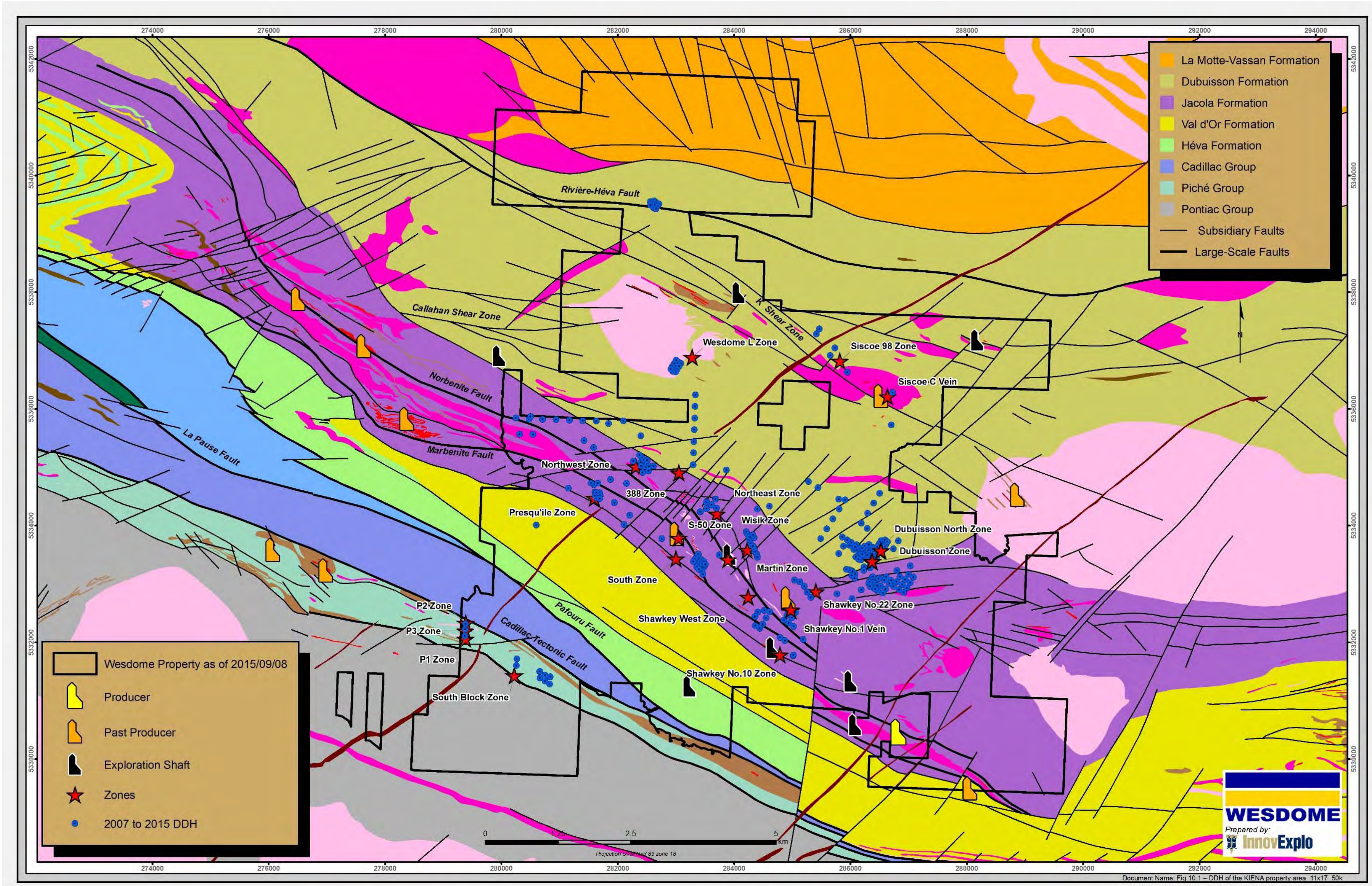

Figure 10.1 – Location map of Wesdome's surface drill holes drilled between 2007 and 2015

Table 10.1 – Summary of surface drilling programs carried out between 2007 and 2015 by Wesdome

Year	Zone or area	DDH ID	Start Date	End Date	Number of DDH	Number of metres	Purpose of the drilling program	Best results (core lengths in metres)
2007	Shawkey No. 22 Zone	141-146 to 141-151	2007-10-16	2007-11-28	6	3 085.64	Establish the continuity of the No. 22 Zone and assess its potential for gold mineralization	18.06 g/t Au over 7.0 m (hole 141-147) 6.11 g/t Au over 9.5 m (hole 141-150)
2008	"98" Zone	S488	2008-02-01	2008-02-08	1	498.00	Test lateral continuities of the 98 Zone discovered by Dynacor in 1998	0.97 g/t Au over 1.0 m (hole S488)
2008	South Zone (West Extension)	S489	2008-02-08	2008-02-13	1	500.00	Test the gold potential of the shear zone hosting the South Zone	0.36 g/t Au over 1.0 m (hole S489)
2008	South Zone (West Extension)	S490, S492 to S493A and S496	2008-06-02	2008-06-20	5	2 026.40	Test the gold potential of the shear zone hosting the South Zone	7.99 g/t Au over 1.0 m (hole S492)
2008	Wisik Zone Extension	S491 and S499	2008-06-13	2008-07-01	2	1 193.50	Explore the lateral northwest potential of the stratigraphic basalt horizon hosting the Wisik Zone	5.23 g/t Au over 2.5 m (hole S491)
2008	Northwest Zone (Mag anomaly)	S494 to S495	2008-07-02	2008-07-14	2	1 111.30	Investigate the signature of a Mag anomaly having a flexure interpreted as the limb of a large fold facing NNW	1.03 g/t Au over 1.0 m (S494)
2008	Kiena West	S497 to S498, S500 to S502, S504, S506, S512, S515, S518, S520 and S525	2008-06-26	2008-09-20	12	6 392.90	Determine the geological context of the Jacola Formation	4.07 g/t Au over 5.0 m and 84.7 g/t Au over 1.0 m (hole S520) 0.99 g/t Au over 37.5 m (hole S501)
2008	Northeast Zone	S503	2008-07-14	2008-07-21	1	590.00	Test the NNE extension of the Northeast Zone	8.96 g/t Au over 1.0 m (hole S503)
2008	Dubuisson Zone	S505, S507, S509, S509A and S510	2008-07-22	2008-08-12	5	2 150.50	Test a contact between ultramafic rock and basalt units and verify the lateral extension of gold zones intersected by three previous holes (134-5, 134-6 and 134-16)	4.45 g/t Au over 5.1 m (hole S510) Discovery of Dubuisson Zone
2008	Target S196	S508 and S511	2008-07-31	2008-08-12	2	1 194.20	Explore the lateral and depth continuities of the gold mineralization observed in drill hole S196	7.56 g/t Au over 2.1 m (hole S511) 6.24 g/t Au over 1.0 m (hole S508)
2008	Shawkey No. 22 Zone	S513 to S514 and S517	2008-08-12	2008-08-28	4	1 732.60	Establish the continuity of the No. 22 Zone toward the SE	9.61 g/t Au over 1.5 m (hole S513A) 73.61 g/t Au over 1.0 m (hole S514)
2008	Northwest Zone	S516	2008-08-26	2008-09-03	1	697.70	Establish the lateral and depth continuity of the Northwest Zone	0.11 g/t Au over 5.2 m (hole S516)
2008	Shawkey No. 10 Zone	S519, S521 and S521A	2008-08-28	2008-09-09	3	1 134.00	Assess the potential of the No.10 Zone laterally toward the E	2.81 g/t Au over 11.8 m, including 242.54 g/t Au over 0.5 m (hole S519)
2008	Dubuisson Zone	S522 to S524, S526, and S527 to S534	2008-09-10	2008-11-15	12	5 869.36	Test the extensions of the Dubuisson Zone	3.91 g/t Au over 1.6 m (hole S523) 6.82 g/t Au over 7.7 m (hole S524)

Year	Zone or area	DDH ID	Start Date	End Date	Number of DDH	Number of metres	Purpose of the drilling program	Best results (core lengths in metres)
2008	Wesdome (geotechnical Holes)	WDH-01 to WDH-11	2008-11-12	2009-02-19	11	1 656.00	Complete a geotechnical study	No significant values
2009	Shawkey West Zone	141-152 to 141-168	2009-02-24	2009-09-15	17	3 863.00	Establish the continuity and gold mineralization potential of the Shawkey West Zone in the first 200 m below surface	6.33 g/t Au over 8.3 m (hole 141-163) 4.10 g/t Au over 3.3 m (hole 141-161) 2.77 g/t Au over 3.0 m (hole 141-156)
2009	Dubuisson Zone	S535 to S587 and S589 to S595	2009-03-23	2009-11-30	63	30 320.30	Establish the continuity of mineralization within the Dubuisson Zone	10.51 g/t Au over 9.9 m (hole S557) 7.00 g/t Au over 8.0 m (hole S560)
2009	Siscoe 98 Zone	S588	2009-10-30	2009-11-04	1	502.50	Test the lateral continuities of the 98 Zone	5.78 over 1.0 m (hole S588)
2009-2010	Dubuisson Zone	S596 to S599	2009-12-16	2010-02-02	4	2 900.70	Establish the continuity of mineralization within the Dubuisson Zone	40.46 g/t Au over 0.5 m (hole S596) 23.57 g/t Au over 0.6 m (hole S598)
2010	Dubuisson Zone	S600 to S612	2010-01-03	2010-08-03	13	3 174.00	Acquire more geotechnical information	No significant values
2010	Cadillac Tectonic Zone area	S613	2010-11-02	2010-11-16	1	333.00	Explore a previously underexplored 4.5-km stretch of the Cadillac Tectonic Zone area for potential gold mineralization	Discovery of a new gold zone within the greywacke of the Pontiac Group (South Block Zone). 10.93 g/t Au over 1.5 m (hole S613)
2010	Dubuisson	S621 to S630	2010-02-02	2010-03-28	11	6 640.00	Establish the continuity of mineralization at depth	654.34 g/t Au over 0.9 m (hole S628) 98.98 g/t Au over 0.6 m (hole S629)
2010	Area between Wesdome M and 388 zones	S631 to S637	2010-06-01	2010-07-13	7	3 577.20	Drill a fence test between the M and 388 zones	4.40 g/t Au over 0.5 m (hole S635) 1.14 g/t Au over 4.0 m (hole S631)
2010	Wesdome L Zone	S638 to S649	2010-06-01	2010-08-08	12	5 164.00	Test the L Zone	9.29 g/t Au over 4.9 m (hole S645) 6.86 g/t Au over 2.6 m (hole S641)
2010	Dubuisson Zone	S650 to S654	2010-07-21	2010-08-23	5	2 536.00	Explore the potential of gold mineralization to the N and W of the Dubuisson Zone	No significant values
2010	Northeast Zone	S655 to S664	2010-08-23	2010-10-04	10	3 504.30	Establish the lateral and depth potential of the Northeast Zone	61.19 g/t Au over 0.5 m (hole S661) 4.98 g/t Au over 1.0 m (hole S660)
2010	Dubuisson Zone	S665 to S668	2010-10-05	2010-10-26	4	1 854.50	Explore the potential of gold mineralization to the N of the Dubuisson Zone	No significant values
2010	Siscoe 98 Zone	S669 and S670	2010-10-27	2010-11-06	2	1 032.00	Test the lateral continuity of the 98 Zone close to a T-shear	18.31 g/t Au over 1.5 m (hole S669) 3.52 g/t Au over 2.0 m (hole S670)
2010-2011	Dubuisson Zone	S614 to S620	2010-11-18	2011-05-08	7	2 047.80	Acquire more geotechnical information and explore the peninsula near the Dubuisson Zone	4.14 g/t Au over 0.5 m (S620)

Year	Zone or area	DDH ID	Start Date	End Date	Number of DDH	Number of metres	Purpose of the drilling program	Best results (core lengths in metres)
2011	Cadillac Break	S671 to S682	2011-03-12	2011-05-03	12	3 597.60	Explore a previously underexplored 4.5-km stretch of the Cadillac Tectonic Zone for gold mineralization	29.38 g/t Au over 0.9 m (hole S681) corresponding to the P1 Zone101.03 g/t Au over 1.0 m (hole S682) corresponding to the P2 Zone 2.16 g/t Au over 2.5 m (hole S682) corresponding to the P3 Zone
2011	Dubuisson Zone	S683 to S690	2011-06-08	2011-11-22	8	2 402.50	Acquire more geotechnical information and explore the peninsula near the Dubuisson Zone	5.38 g/t Au over 0.5 m hole (S685)
2011	Martin Zone	S691 to S714	2011-06-15	2011-09-15	27	8 184.30	Establish the continuity of the Martin Zone: 1) in its central part and on the NW side, with drilling from surface down to the underground information issued from previous drilling programs and mine workings; and 2) toward the SE, with drilling from surface down to the portion at depth with known information	207.86 g/t Au over 0.6 m (hole S691) 11.72 g/t Au over 5.8 m (hole S696) 5.00 g/t Au over 9.6 m (hole S703) 50.38 g/t au over 1.5 m (hole S692)
2011	Siscoe 98 Zone	S715	2011-09-15	2011-09-22	1	519.00	Test the depth potential of significant values intercepted in 2009 in hole S588	1599.19 g/t Au over 0.5 m (hole S715)
2011	Northwest Zone	S716 to S730	2011-09-22	2011-11-19	15	5 373.90	Define the internal geometry of the Northwest Zone	26.16 g/t Au over 3.3 m (hole S716) 2.94 g/t Au over 8.1 m (hole S720)
2011	Dubuisson Zone	S731 to S731A	2011-11-23	2011-12-15	2	330.50	Acquire more geotechnical information and explore the peninsula near the Dubuisson Zone	No significant values
2012	Gabbro sill	S732	2012-01-25	2012-02-13	1	300.20	Test a Mag anomaly within a gabbro sill belonging to the Val-d'Or Formation	0.34 g/t Au over 0.5 m (hole S732)
2012-2013	Presqu'ile Zone	S733 to S754	2012-02-14	2013-06-18	22	6 823.00	Explore the “Norbenite-Marbenite Break”	5.04 g/t Au over 6.8 m (hole S739) 71.03 g/t Au over 2.9 m (hole S748) 11.30 g/t Au over 1.5 m (hole S744)
2012	Siscoe A Vein area	SIS12-01	2012-11-07	2012-11-12	1	300.00	Test a cross-cut between two shear zones oriented E-W and NW-SE	1.08 g/t Au over 3.2 m (hole SIS12-01)
2014	Dubuisson North Zone	S755 to S767	2014-06-23	2014-09-07	14	5 634.30	Improve the geometry and dimension parameters in anticipation of a resource estimate exercise	45.05 g/t Au over 5.0 m (hole S755) 8.56 g/t Au over 4.0 m (hole S755) 4.59 g/t Au over 4.8 m (hole S763)
2014	S-50 Zone	S768 and S769	2014-09-08	2014-09-16	2	679.00	Test possible SE extension of the S-50 Zone	2.92 g/t Au over 10.4 m (hole S768) 3.39 g/t au over 25.9 m (hole S770)
2014	Siscoe C Vein area	SIS14-01	2014-11-24	2014-12-02	1	300.00	Test possible N extension of the C Vein	21.03 g/t Au over 1.0 m (hole SIS14-01)

Year	Zone or area	DDH ID	Start Date	End Date	Number of DDH	Number of metres	Purpose of the drilling program	Best results (core lengths in metres)
2015	S-50 Zone	S770 to S779	2015-01-19	2015-02-20	10	2 359.50	Define the continuity and the lateral and depth extensions of the gold mineralization observed in hole S769	2.22 g/t Au over 39.4 m (hole S771) 3.66 g/t Au over 19.0 m (hole S775) 2.31 g/t Au over 22.0 m (hole S776)
2015	Presqu'ile Zone	S780 to S786	2015-01-23	2015-02-12	7	1 968.00	Explore the "Norbenite-Marbenite Break"	26.85 g/t Au over 5.9 m (hole S780)
2015	S-50 Zone	S787 to S799	2015-02-13	2015-03-07	13	2 769.30	Define the continuity and lateral and depth extensions of the gold mineralization observed in hole S769	6.71 g/t Au over 0.7 m (hole S791) 2.79 g/t Au over 0.5 m (hole S792)
				TOTAL	**361**	**138 822.50**		

10.2 Core Recovery

Core recovery was calculated by measuring the percentage of intact drill core (lengths of 10 cm or more) for each 3-m run. The core recovery percent for each run was recorded in the log spreadsheet in GeoticLog software. Core recovery was generally very good.

10.3 Surface Drilling Programs from 2007 to 2015

The following description of Wesdome's drilling programs performed between 2007 and 2015 by Wesdome is summarized and modified from Ducharme (2009a; 2009b; 2010a; 2010b; 2011; 2012; 2013a; 2013b; 2014; 2015), press releases issued by Wesdome, and Wesdome's diamond drill logs.

10.3.1 Pontiac Group

A drill program consisting of thirteen (13) NQ-size holes (S613, S671 to S682) for a total of 3,930.0 m was initiated in early November 2010 in the Cadillac Tectonic Zone area, and later resumed from March to May 2011. The purpose of this "first pass" surface drilling program was to assess the previously underexplored 4.5-km long of the Cadillac Tectonic Zone area for potential gold mineralization in the southwest portion of the Quebec Wesdome Project.

Hole S613 cut through a large sequence of greywacke belonging to the Pontiac Group from 141.1 to 333.0 m. The greywacke contained some pyritic quartz-carbonate-chlorite veinlets. Many shear zones were observed in the greywacke of this hole. The best result obtained in the greywacke was 10.93 g/t Au over 1.5 m; the intercept was named the South Block Zone (Table 10.1). This zone is located about 15 m south of the contact between the Piché and Pontiac groups. A moderately sheared zone was observed in the greywacke several metres northeast of the mineralized zone. No alteration was reported for the zone in the drill log.

Encouraging results from hole S613 prompted follow-up exploration towards the southeast sector, which is only accessible during the winter months. Hole S679 was drilled below hole S613. Holes S671 to S673, S675, S679, S680 and S682 cut the greywacke of the Pontiac Group. Many anomalous gold values were obtained in the greywacke from these holes near the contact between the Piché and Pontiac groups. The best result was 0.64 g/t Au over 2.10 m in hole S672.

10.3.2 Piché Group

The investigation of the Piché Group was performed at the same time as the drilling program described in section 10.3.1 (Pontiac Group). Diamond drilling in 2010–2011 intersected a sequence of Piché Group komatiites accompanied by basalt and gabbroic dykes in contact to the south with a greywacke sequence belonging to the Pontiac Group (see section 10.3.1). Three mineralized zones (Table 10.1) were observed within the Piché Group, about 100 to 300 m southeast of the Cadillac Tectonic Zone.

The P1 Zone is represented by basalt containing 25% quartz-carbonate-chlorite veins with pyrite (±native gold ±native silver) (Table 10.1). The P1 Zone (Fig. 7.3) occurs in a weak shear zone. Weak amphibolitization is also associated with this zone. Hole S681 yielded a gold grade of 29.38 g/t Au over 0.9 m in the zone.

The P2 Zone is represented by partially sheared komatiite containing 10% auriferous quartz-carbonate-talc veinlets with pyrite (Table 10.1). The P2 Zone (Fig. 7.3) is located near a fault zone. Moderate chloritization and weak carbonation are associated with this zone. Hole S682 returned 101.03 g/t Au over 1.0 m in the zone.

The P3 Zone corresponds to gabbro containing 3% auriferous quartz-carbonate-chlorite veinlets with pyrite and pyrrhotite (Table 10.1). The P3 Zone (Fig. 7.3) is located several metres southwest of a weak shear zone. Moderate chloritization is associated with this zone. Hole S682 returned 2.16 g/t Au over 2.5 m in the zone.

10.3.3 Héva Formation

Wesdome did not drill the Héva Formation.

10.3.4 Val-d'Or Formation

Three holes (S492, S496 and S732) cut through lithologic units belonging to the Val-d'Or Formation.

10.3.4.1 Holes S492 and S496

Holes S492 and S496 were drilled to test the shear zone hosting the South Zone. The shear zone marks the contact between the Jacola and Val-d'Or formations (see section 10.3.5.4). The Marbenite Fault is located about 350 m northeast of the contact between the Jacola and Val-d'Or formations.

Anomalous values were obtained from broad intervals in weakly sheared undifferentiated tuffs belonging to the Val-d'Or Formation. Mineralization is associated with pyritic quartz-carbonate veins and also with disseminated pyrite in the weakly sheared zone.

Hole S492 returned an average grade of 0.49 g/t Au over 6.0 m. This mineralized zone was observed near the contact between the Jacola and Val-d'Or formations. Hole S496 assayed 0.41 g/t Au over 8.3 m. The zone is located about 100 m from the contact between the Jacola and Val-d'Or formations.

10.3.4.2 Hole S732

In winter 2012, NQ-size hole S732 tested a magnetic anomaly within a gabbro sill (Table 10.1). The anomaly was detected about 1 km northeast of the Parfouru Fault.

The hole, with a length of 320.20 m, cut a large sequence of felsic tuff belonging to the Val-d'Or Formation. No gabbro sill was encountered. Only one (1) anomalous gold value was obtained (0.34 g/t Au over 0.5 m) from an interval of pyritic quartz-carbonate-chlorite veinlets hosted in weakly hematized felsic tuffs close to a sheared and faulted zone.

10.3.5 Jacola Formation

This section presents the drilling programs on parts of the Jacola Formation.

10.3.5.1 S-50 Zone (southeast extension)

In September 2014, two (2) NQ-size holes were drilled for a total of 679.00 m to test the possible southeast extension of S-50 Zone.

Holes S768 and S769 (Table 10.1) were collared from the same set-up near the Marbenite Fault, 300 m east of the Kiena mine workings. Both holes intersected broad intervals of typical S-50 zone stockwork and breccia-style mineralization, hosted in albitized basalt and a diorite dyke along a key komatiite contact defined by magnetic surveys at shallow depths. The best results were 2.92 g/t Au over 10.4 m in hole S768, and 3.39 g/t Au over 25.9 m in hole S769.

These encouraging results led to another program on the southeast extension in winter 2015, consisting of twenty-three (23) NQ-size holes (S770 to S779 and S787 to S799) for a total of 5,128.80 m. The purpose of this drilling program was to define the continuity of the gold mineralization observed in hole S769 and tests its lateral and depth extensions. The best results were 2.22 g/t Au over 39.4 m in hole S771, 3.66 g/t Au over 19.0 m in hole S775, and 2.31 g/t Au over 22.0 m in hole S776.

10.3.5.2 Northwest Zone area

One (1) NQ-size hole (S516) was drilled in 2008 on the Northwest Zone, and fifteen (15) NQ-size holes (S716 to S730) were added in 2011 for a combined total of 6,071.60 m.

The 2008 drill hole was drilled approximately 350 m north of the Northwest Zone to assess its lateral and depth continuity. Hole S516 was collared about 600 m north-northeast of the Norbenite Fault. Only one weakly auriferous interval (0.11 g/t Au over 5.2 m) was identified, related to quartz-carbonate-chlorite veinlets with disseminated fine pyrite that were sampled across a komatiite–feldspar porphyry contact. This mineralized zone is close to a shear zone.

A major drilling program was initiated on the Northwest Zone in 2011. The objective was to define the internal geometry of the Northwest Zone. Fifteen (15) holes (S716 to S730) for a total of 5,373.90 m were drilled in an area about 200 m north-northeast of the Norbenite Fault. Results confirmed the geometry and the confidence in the continuity of the Northwest Zone, and highlighted several significant broad gold intercepts: 26.16 g/t Au over 3.3 m (S716), 7.70 g/t Au over 2.9 m (S717), 3.23 g/t Au over 4.7 m (S718) and 2.94 g/t Au over 8.1 m (S720). The Norbenite Fault was also observed in some drill holes.

A new horizon (the NW3 Zone), interpreted as a gold zone subparallel to the Northwest Zone, was identified during the 2011 drilling program at shallow depth before reaching the intended target. Several significant gold-bearing intervals were intercepted in this new horizon, notably 14.34 g/t Au over 5.4 m (S717) and 3.04 g/t Au over 6.5 m (S720). Gold-bearing mineralization in this new subparallel zone is represented by pyritic quartz-carbonate-tourmaline veins, hosted in albitized diorite in contact with talc-chlorite schist. A shear zone is observed close to the mineralized zone.

10.3.5.3 Northeast Zone area

In summer 2008, three (3) NQ-size holes (S494, S495 and S503) were drilled on the Northeast Zone, and ten (10) others (S655 to S664) were added in 2010, for a combined total of 5,205.60 m.

Two holes (S494 and S495) were drilled at an azimuth of N260° to investigate the folded pattern visible on magnetic data, specifically a flexure that had been interpreted as the limb of a large fold facing north-northwest. This folding pattern was observed approximately 600 m east-northeast of the Northeast Zone. The holes were collared about 800 m from the Norbenite Fault. One gold value was intercepted in S494 (1.03 g/t Au over 1.0 m). Mineralization consisted of pyritic quartz-carbonate-tourmaline veining in granodiorite. A highly fractured zone was reported near the end of hole S494, whereas a strongly sheared zone was observed at the beginning of hole S495. These fractured and sheared zones may represent the possible extension of the No. 22 Deformation Zone, which had been observed in the U-1778 Zone just 500 m southeast of holes S494 and S495.

One hole (S503) was drilled 600 m to the north-northeast of the Northeast Zone to test its continuity at depth. The hole was collared 800 m northeast of the Norbenite Fault. No gold mineralization was intercepted at depth in the favourable horizon associated with the Northeast Zone.

Nonetheless, one significant gold value (8.96 g/t Au over 1.0 m) was obtained and constituted a new gold horizon. Mineralization consisted of quartz-carbonate veins with pyrite and visible gold, hosted in feldspar porphyry. A fault zone with breccia was observed close to the contact between the feldspar porphyry and komatiite.

A major exploration drilling program was conducted to assess the lateral and depth potential of the Northeast Zone to the northeast. Ten (10) holes were drilled (S655 to S664) for a total of 3,504.30 m. Drilling took place about 200 m northeast of the Norbenite Fault. The program yielded two significant gold values with sulphide mineralization (S661: 61.19 g/t Au over 0.5 m; and S660: 4.98 g/t Au over 1.0 m), represented by quartz-carbonate-albite-chlorite veins with pyrite and visible gold. Gold values were generally encountered within an albitized dioritic dyke in contact with strongly faulted and sheared talc-chlorite-schist, but some values were hosted in the talc-chlorite schist. In many drill holes, several low-grade gold values, ranging from 0.2 to 2.0 g/t Au, were encountered in albitized diorite containing quartz-carbonate-albite veins with pyrite.

10.3.5.4 South Zone (west extension)

Six (6) widely spaced NQ-size holes (S489, S490, S492, S493, S493A and S496), totalling 2,526.40 m, were drilled over a 2-km trend starting 200 m west of the Kiena mine shaft and moving northwestward along the shear zone hosting the South Zone (Table 10.1). Hole S489 was drilled in February 2008 and the others in June 2008.

The main target was the shear zone hosting the South Zone, the latter occurring 350 m southwest of the Marbenite Fault. The shear zone may be a subsidiary fault. It is located at the contact between the Jacola and Val-d'Or formations.

The shear zone was cut by holes S489, S492, S493 and S493A. Hole S490 intersected the Marbenite Fault. A strong shear encountered in the first metres of hole S496 could be the same shear zone reported in the first four holes.

Hole S492 returned significant gold values (7.99 g/t Au over 1.0 m) in an interval containing quartz-carbonate veinlets and disseminated pyrite, hosted in komatiite near a faulted/sheared zone. This deformed zone is probably the same shear zone that hosts the South Zone.

10.3.5.5 Target S196

In summer 2008, two (2) NQ-size holes (S508 and S511) were drilled for a total of 1,194.20 m to explore for lateral and depth continuities of the gold-bearing mineralization reported in hole S196, which was drilled about 3 km northwest of the Kiena mine (Table 10.1). A significant gold intercept from drill hole S196, corresponding to 2.99 g/t Au over 6.6 m, was reported within basalts. This gold zone is adjacent to the Marbenite Fault.

Gold intervals obtained from these 2008 drill holes, corresponding to the lateral and depth continuity of the Target S196 horizon, were low grade (S508: 0.92 g/t Au over 1.5 m; and S511: 2.55 g/t Au over 1.2 m). The zones were encountered in fractured komatiite or basalts, and consist of quartz-carbonate veinlets.

Nonetheless, both holes returned some gold mineralization within albitized dykes in the form of narrow quartz-carbonate-chlorite veins with pyrite (S511: 7.56 g/t Au over 2.1 m; and S508: 6.24 g/t Au over 1.0 m), constituting a new gold horizon. This new gold horizon was encountered south of Norbenite Fault, between or within two strongly sheared/brittle intervals.

10.3.5.6 Presqu’ile Zone

The Presqu’ile Zone is the most recent discovery of a new gold occurrence near the Kiena mine. A land-based surface exploration drilling program in the Presqu’ile area, located 1.4 km northwest of the Kiena mine, was initiated in February 2012 to drill a topographic depression near a gold-bearing boulder regionally could be interpreted as a projection of the Marbenite Fault system. Between February 2012 and June 2013, twenty-two (22) NQ-size holes (S733 to S754) were drilled on the Presqu’ile Zone for a total of 6,823.00 m.

The zone was discovered in hole S739 (5.04 g/t Au over 6.8 m). Mineralization in the Presqu’ile area consists of a series of steeply dipping (60° NE) subparallel quartz-carbonate-chlorite veins with pyrite, chalcopyrite, minor sphalerite, galena and visible native gold, hosted in porphyritic or massive basalts along their contact with komatiite. Generally, the mineralization is observed within weak or moderate shear zones.

Some holes (S735, S736, S743, S746, and S753) passed through the shear zone hosting the South Zone (see section 10.3.5.4). Mineralization is accompanied by a moderate degree of carbonate and chlorite alteration.

In winter 2015, seven (7) NQ-size holes (S780 to S786) were added to the program, for an additional 1,968 m. The holes were drilled to the northwest of the discovery to test the lateral continuity. The best result was 26.85 g/t Au over 5.9 m in hole S780.

10.3.5.7 Kiena West area

The Kiena West drilling program was carried out between June 26 and September 20, 2008. A total of 6,392.90 m of NQ-size core was drilled, with twelve (12) holes completed (S497, S498, S500 to S502, S506, S512, S515, S518, S520 and S525).

The purpose of this drilling program was to determine the geological context and explore the potential for gold mineralization over a large area of the Jacola Formation in an area 2 km northwest of the Kiena mine. The drill holes were collared on both sides of the Norbenite Fault. Some holes also tested the Marbenite Fault area. The holes were oriented at 210° Az and spaced 200 m apart, perpendicular to the regional geological trend of the volcanic units striking 300° Az. The drilling program covered a trend 2 km long.

Part of the program confirmed the presence of a large mineralized system of pyritic quartz-carbonate-chlorite (±tourmaline) veins and/or veinlets, usually yielding low gold values. The hosted rocks are generally basalts and/or albitized diorites, but also granodiorite or feldspar porphyry dykes.

Results from several holes drilled from the western portion of the area covered by the program indicate that the mineralized system covers a distance of more than 600 m along strike in a northwest direction. A mineralized trend near the Norbenite Fault returned some high gold grades with native gold (S525: 30.75 g/t Au over 0.9 m), and lower grades as well (S497: 0.77 g/t Au over 26.2 m; and S501: 0.99 g/t Au over 37.5 m).

Another mineralized trend, further south and close to the Marbenite Fault, displayed the same orientation and included significant gold results (S520: 4.07 g/t Au over 5.0 m, and 84.70 g/t Au over 1.0 m; and S498: 4.50 g/t Au over 1.0 m). Hole S518 also returned an isolated significant gold grade (4.56 g/t Au over 1.0 m) from a section of quartz-carbonate-chlorite veins in basalt.

10.3.5.8 Wisik Zone Extension

In summer 2008, two (2) NQ-size holes (S491 and S499) were drilled for a total of 1,193.50 m to explore the lateral (northwest) potential of the stratigraphic basalt horizon hosting the Wisik Zone. This area lies to the south of the Northeast Zone and 150 m to the north-northeast of the Norbenite Fault. Hole S491 returned a significant gold value (5.23 g/t Au over 2.5 m) from a narrow quartz-carbonate vein with pyrite, chalcopyrite and gold, within a strong shear zone in basalt. In hole S499, anomalous gold values were reported in the same shear zone. It is not known if this mineralized zone corresponds to the same stratigraphic horizon hosting the Wisik Zone.

10.3.5.9 Martin Zone

Between June and September 2011, twenty-seven (27) NQ-size holes (S691 to S714) were drilled for a total of 8,184.30 m on the Martin Zone to assess its continuity in the central part and at its northwest end, from surface down to underground openings, and at the southeast end, from surface down to the portion at depth with known drilling data (Table 10.1). The Martin Zone is located 300 m northeast of the Norbenite Fault.

Drill holes averaging 300 m in length were oriented perpendicular to the Martin Zone, which strikes northwest and has a subvertical dip. The zone is tabular and consists of albitized and pyritized brecciated basalts. Gold mineralization was observed in quartz-carbonate (±albite) veins carrying pyrite and chalcopyrite (±native gold). Gold mineralization was observed close to intensely faulted and sheared komatiite (talc-chlorite schist) and brecciated basalts, all related to the Martin Shear Zone.

The best results from the drilling program were: 207.86 g/t Au over 0.6 m (hole S691); 50.38 g/t Au over 1.5 m (hole S692) and 11.72 g/t Au over 5.8 m (hole S696); 5.00 g/t Au over 9.6 m including 11.25 g/t Au over 3.4 m (hole S703) and 3.36 g/t Au over 9.0 m including 11.26 g/t Au over 2.5 m (hole S705).

10.3.5.10 Shawkey No. 22 Zone

The Shawkey No. 22 Zone drilling program commenced on October 16, 2007 and ended on November 28. A total of 3,085.64 m of NQ-size core was drilled, with six (6) holes completed (141-146 to 141-151).

The purpose of the program was to assess the continuity of the Shawkey No. 22 Zone and its gold potential. Five of the drill holes (141-146 to 141-150) in this area were oriented N030° azimuth, relatively perpendicular to the local strike (generally N300° Az) of both the feldspar porphyry hosting the gold-bearing mineralization and the surrounding volcanic units. Hole (141-151) was oriented at N093° Az to test the continuity of the Shawkey 22 Zone to the southeast. The zone is located 750 m northeast of the Norbenite Fault, and is related to the No. 22 Deformation Zone (see section 7.4.5.2.1).

Holes were drilled at a steep inclination of -75° to assess the frequency of flat-lying, sulphide-bearing quartz-tourmaline tension veins. This part of the program confirmed some gold values in several stacked, narrow quartz-carbonate (±tourmaline) tension veins and/or veinlets with pyrite and native gold, sometimes sheared and brecciated, found within feldspar porphyry in contact with basalt or komatiite. The feldspar porphyry is generally weakly pyritized, tourmalinized, hematized, and moderately silicified. The holes also intersected the No. 22 Deformation Zone.

The best gold assay results obtained during this program were:

- Hole 141-147: 18.06 g/t Au over 7.0 m;
- Hole 141-149: 39.19 g/t Au over 2.5 m;
- Hole 141-150: 6.11 g/t Au over 9.5 m;
- Hole 141-151: 3.31 g/t Au over 14.0 m.

From August 12 to August 28, 2008, another drilling program was carried out to the southeast of the No. 22 Zone for a total of 1,732.60 m of NQ-size core. Four (4) holes were completed (S513, S513A, S514, and S517). Holes S513 and S513A were collared up to 700 m east of the No. 22 Deformation Zone.

The purpose of the drilling program was to assess the continuity of the No. 22 Zone to the east. Drill holes in this area were oriented towards N180° Az, generally perpendicular to the local orientation of volcanic units striking N270° Az. This part of the program confirmed some gold mineralization in narrow, brecciated quartz-carbonate (±tourmaline) veins and/or veinlets with pyrite and native gold, hosted in feldspar porphyry in contact with basalt and komatiite. The geological setting of this area is similar to that observed in the 2007 drilling program. Moreover, a large strong shear zone was also observed, which may be related to the No. 22 Deformation Zone.

The best gold assay results obtained during this program were:

- Hole S513A: 9.61 g/t Au over 1.5 m;
- Hole S514: 1.56 g/t Au over 20.0 m, including 14.61 g/t Au over 1.0 m, 7.49 g/t Au over 1.0 m, and 73.61 g/t Au over 1.0 m.

10.3.5.11 Shawkey No. 10 Zone

In summer 2008, three (3) NQ-size holes (S519, S521 and S521A) were drilled for a total of 1,134.00 m to assess the lateral potential of the Shawkey No.10 Zone to the east. The drill holes have an azimuth of N210° and were perpendicular to the inferred trend of the Shawkey No. 10 Zone. This zone is located 250 m southwest of the Marbenite Fault.

Hole S521 was abandoned. The favourable horizon for the Shawkey No. 10 Zone was intersected in holes S519 and S521A, but hole S519 did not entirely pass through the favourable horizon. None of the holes returned any significant gold values in the favourable horizon. A strong shear zone was reported in hole S519, and may represent the Marbenite Fault. Hole S521A also cut the strong shear zone hosting the No. 10 Zone (see section 7.4.5.2.3).

Hole S519 returned an average grade of 2.81 g/t Au over 11.8 m, including 242.54 g/t Au over 0.5 m. The gold values were associated with pyritic quartz-carbonate stockwork veining in basalt. This zone is located about 100 m southwest of the Marbenite Fault and about 100 m NE of the No.10 Zone. Hole S521A did not intersect this zone due to the position of its collar.

10.3.5.12 Shawkey West Zone

In 2009, seventeen (17) NQ-size holes (141-152 to 141-168) were drilled for a total of 3,863.0 m to the east of the Shawkey West Zone. The objective was to assess its continuity and potential for gold mineralization over the first 200 m below surface. The Shawkey West Zone is located 150 m northeast of the Marbenite Fault, and 300 m southwest of the Norbenite Fault.

Drill holes were spaced at 100 m intervals and oriented N210°, generally perpendicular to the local trend of volcanic units striking N300°. Significant gold-bearing intervals were characterized by quartz-carbonate (±chlorite) veins carrying pyrite (±native gold) in carbonatized basalt. The best results were 6.33 g/t Au over 8.3 m in hole 141-163, 4.10 g/t Au over 3.3 m in hole 141-161, and 2.77 g/t Au over 3.0 m in hole 141-156. Hole 141-165 seems to have intersected the Marbenite Fault.

10.3.6 Dubuisson Formation

This section presents the drilling programs in the Dubuisson Formation.

10.3.6.1 Dubuisson Zone

In summer and fall 2008, a total of seventeen (17) NQ-size holes were drilled in the area of the Dubuisson Zone for a total of 8,019.86 m. The holes were oriented N210°, relatively perpendicular to the orientation of regional volcanic units (N300°) in order to explore for gold mineralization over a large area in the southeast portion of the Dubuisson Formation. This zone is located 1.7 km northeast of the Norbenite Fault.

Three (3) planned holes were spaced 200 m apart along a contact between ultramafic rock and basalt units to verify the lateral extension of a gold zone intersected by three previous holes (134-5, 134-6 and 134-16). Averaged grades included 5.14 g/t Au over 0.5 m in hole 134-5, and 30.05 g/t Au over 0.3 m in hole 134-6.

Hole S505 cut gold mineralization for which an assayed interval yielded 1.99 g/t Au over 4.0 m in a feldspar porphyry carrying quartz-tourmaline-pyrite veinlets. This gold zone occurs close to a strong shear zone (mylonite).

Hole S507 returned averaged grades of 21.22 g/t Au over 0.6 m in a mineralized albitized dyke (disseminated pyrite), and 12.61 g/t Au over 0.6 m in a feldspar porphyry dyke (quartz-tourmaline veinlets). Both gold zones were spatially associated with a wide strong shear zone (Hole S507 from 322.5 to 354.0 m).

Two (2) other holes were drilled to assess the gold potential of a possibly folded contact between ultramafic rocks and basalt. The magnetic signature of the ultramafic and mafic units traces a flexure characterized by a change in orientation from northwest-southeast to east-west.

Hole S509 cut anomalous gold values in feldspar porphyry dykes accompanied by quartz-tourmaline-pyrite veinlets in close proximity to a strong shear zone (mylonite) – a geological setting similar to that observed in holes S505 and S507.

Hole S510 cut gold mineralization from 450.0 to 455.1 m in an albititic dyke and feldspar porphyry injected by quartz-tourmaline-pyrite veinlets. Both dykes were observed in talc-chlorite schist characterized by strong schistosity. This interval returned an average grade of 4.45 g/t Au over 5.1 m. Hole S510 was considered to be the discovery hole of the Dubuisson Zone.

Following the discovery of the Dubuisson Zone, another program was initiated in fall 2008 consisting of twelve (12) NQ-size holes. These holes were drilled in the vicinity of hole S510 to generate six (6) cross sections with two (2) holes on each. Cross sections were spaced 100 m apart. The program confirmed the geologic setting observed in previous holes. Gold mineralization is represented by pyritic quartz-carbonate-albite (±tourmaline ±chlorite) veins and veinlets (±native gold), hosted in albitized and feldspar porphyry dykes and basalts. These gold-bearing intervals are often found close to chlorite-talc schist (a shear zone). The best results were 6.82 g/t Au over 7.7 m (S524), 6.92 g/t Au over 8.0 m (S529) and 4.25 g/t Au over 17.0 m (S531).

From March 2009 to February 2010, a program of sixty-three (67) NQ-size holes (S535 to S587 and S589 to S599) was carried out in the vicinity of the Dubuisson Zone for a total of 33,221 m of core. The purpose of the drilling program was to establish the continuity of the mineralization in the new gold discovery, which had been identified by the aforementioned widely spaced holes drilled in the fall of 2008, and to provide step-out drilling to trace the extent of the mineralization. Following this drilling program, reasonable continuity was interpreted for three of the six (Dubuisson A to F) subparallel and subvertical zones.

One of these zones, the Dubuisson A Zone, showed strong grades over at least 100 m along strike, but up to that point, it had only been identified at shallow depths. The second, the Dubuisson E Zone, was traced to depths of up to 300 m and demonstrated attractive grades and widths over at least 100 m of strike length. The third, the Dubuisson F Zone, was identified at depths greater than 300 m, but the internal geometry and continuity could not be confirmed by the drilling program. Drilling also identified widespread alteration and other mineralization, although it could not establish the continuity of potentially economic grades and widths in these cases.

Among the best gold results obtained during this program were the following:

- Hole S557: 10.51 g/t Au over 9.9 m;
- Hole S557A: 7.37 g/t Au over 10.0 m;
- Hole S558: 5.00 g/t Au over 10.5 m ;
- Hole S559: 4.42 g/t Au over 12.5 m;
- Hole S560: 7.00 g/t Au over 8.0 m.

In winter 2010, a drilling program was initiated on the Dubuisson Zone. A total of 6,640.0 m of NQ-size core was drilled, with twenty-four (24) holes completed (S621 to S630). The purpose of the drilling program was to establish the continuity of the mineralization at depth. The best results were 654.34 g/t Au over 0.9 m in hole S628, and 98.98 g/t Au over 0.6 m in hole S629.

In summer 2010, a total of five (5) NQ-size holes (S650 to S654) for a total of 2,536 m were drilled to the north of the Dubuisson Zone. Four of the five holes (S650 to S653) were collared on the same section and spaced 200 m apart. Hole S654 was collared about 500 m west of the Dubuisson Zone. All drill holes were oriented N210°, relatively perpendicular to the orientation of regional volcanic units (N300°). The objective was to explore the potential of the gold mineralization to the north and to the west of the Dubuisson Zone. The holes passed through a sequence of komatiite and talc-carbonate schist containing feldspar porphyry and dioritic dykes. Some shear zones were reported in drill logs. No significant results were obtained from gold assays.

In fall 2010, a total of four (4) NQ-size holes (S665 to S668) were drilled for a total of 1,854 m, north of the Dubuisson Zone. These holes were collared on the same section of hole S654 and spaced 200 m apart. The drill holes were oriented N210°, relatively perpendicular to the orientation of regional volcanic units (N300°), in order to explore the potential of gold mineralization north of the Dubuisson Zone. The holes passed through a sequence of komatiite and talc-carbonate schist containing feldspar porphyry and dioritic dykes, relatively similar to the sequence observed in the holes from the 2010 summer drilling program. Some shear and fault zones were reported in drill logs. No significant results were obtained from gold assays.

In 2010, a series of geotechnical holes were drilled on the peninsula near the Dubuisson Zone. A total of thirteen (13) NQ-size holes (S600 to S612) were collared (total of 3,174 m drilled) to acquire more geotechnical information in this area.

Between November 2010 and May 2011, seven (7) NQ-size holes (S614 to S620) for a total of 2,047.80 m were added to the same area, some with an exploration objective. The best result was 4.14 g/t Au over 0.5 m in hole S620. Between June and December 2011, another ten (10) NQ-size holes (S683 to S690, S731 and S731A) were drilled in the same area. The best result was 5.38 g/t Au over 0.5 m in hole S685.

10.3.6.2 Dubuisson North Zone

The Dubuisson North Zone was discovered in 2012 by underground drilling from the 33-14 drift (level 330 m), located about 200 m south of the Dubuisson Zone. Two flat holes were drilled northeast of the Dubuisson Zone.

The Dubuisson North Zone is located 1.9 km from the Norbenite Fault. Mineralization consists of a series of subparallel stockwork quartz-tourmaline veins carrying pyrite and native gold, hosted in feldspar porphyry and diorite dykes enclosed within komatiites and talc-chlorite schist. Gold mineralization often occurs near talc-chlorite schist (shear zone). In some cases, the mineralization is hosted in talc-chlorite schist adjacent to the feldspar porphyry dykes.

Underground drilling encountered broad mineralized zones, including separate intervals of 16.75 g/t Au over 12.5 m and 10.68 g/t Au over 4.3 m in hole U-5941. Hole U-5947 encountered correlating intervals grading 2.22 g/t Au over 8.5 m and 7.26 g/t Au over 3.2 m.

Between June and September 2014, a total of fourteen (14) NQ-size holes (S755 to S767) were drilled for a total of 7,634.30 m on the Dubuisson North Zone. The purpose of the drilling program was to improve the geometry and size parameters in anticipation of a resource estimate exercise. Drill holes, averaging 400 m each, were oriented perpendicular to the Dubuisson North Zone.

The best results from the Dubuisson North Zone were: 45.05 g/t Au over 5.0 m (hole S755), 8.56 g/t Au over 4.0 m (hole S755) and 4.59 g/t Au over 4.8m (hole S763).

10.3.6.3 Wesdome deposit area

In summer 2010, Wesdome drilled nineteen (19) NQ-size holes for a total of 8,741.2 m. The holes were divided into a 12-hole (S638 to S649) surface exploration drill program on Lac De Montigny targeting the Wesdome L Zone, and a 7-hole fence (S631 to S637) to test the area between the 388 and M zones.

The holes making up the fence between the Wesdome M Zone and the 388 Zone passed through a large sequence of basalt and dioritic dykes, occasionally accompanied by feldspar porphyry, tuff, aplite, monzonite, talc-carbonate schist and mylonite. Some shear and fault zones were reported in drill logs. The best results from these holes were 1.14 g/t Au over 4.0 m in hole S631 (Zone M), and 4.40 g/t Au over 0.5 m in hole S635. The first interval contained 1% pyrite as disseminations or stringers within basalt. The second interval was encountered in komatiite containing traces of disseminated pyrite and quartz-carbonate veinlets. No shear or fault zones were reported near these intervals.

In the Wesdome L Zone area, the holes cut a quartz diorite, occasionally accompanied by tuff, aplite, dacite, felsic intrusive, basalt, quartz-feldspar porphyry, mylonite, gabbro and komatiite. Some shear and fault zones were reported in drill logs. The best results for the Wesdome L Zone were 9.29 g/t Au over 4.9 m in hole S645, 6.86 g/t Au over 2.4 m in hole S641, and 6.72 g/t Au over 1.5 m in hole S649. The Wesdome L Zone occurs within albitized quartzitic diorite injected by pyritic quartz veins (±carbonate ±tourmaline ±albite) (±chalcopyrite ±galena ±native gold).

10.3.6.4 Siscoe 98 Zone

In February 2008, one (1) NQ-size hole (S488) was drilled for a total of 498.0 m. This hole was positioned 200 m southeast of the Siscoe 98 Zone to test its lateral continuity. Hole S488 cut the K Shear Zone, but no significant gold values were obtained north of it. The only anomalous gold values were encountered in pyritic quartz-carbonate-chlorite (±tourmaline) veins (up to 0.97 g/t Au over 1.0 m) hosted in andesite to the south of the K Shear.

In fall 2009, one (1) NQ-size hole (S588) was drilled for a total of 502.5 m. This hole was positioned 240 m northwest of the Siscoe 98 Zone to test its lateral continuity. One (1) significant gold value and several anomalous values were obtained from intervals of pyritic quartz-carbonate-chlorite (±tourmaline) veins (3.36 g/t Au over 2.0 m including 5.78 g/t Au over 1.0 m) hosted in massive carbonatized basalt. This gold zone lies to the north of the K Shear. Another significant interval (1.53 g/t Au over 0.5 m) was identified at depth, consisting of a quartz-chlorite-pyrite vein in weakly schistose dacite. Hole S588 also cut the K Shear Zone.

In fall 2010, two (2) NQ-size holes (S669 and S670) were drilled for a total of 1,032.0 m. The holes were positioned 600 m northwest of the Siscoe 98 Zone to test its lateral continuity close to a T-shear. The best gold values were encountered in intervals of quartz-carbonate-chlorite veins carrying pyrite-pyrrhotite (±chalcopyrite), hosted in lava flows (basalt to andesite). Hole S669 yielded an average grade of 18.31 g/t Au over 1.5 m, 4.41 g/t Au over 0.7 m, and 1.60 g/t Au over 5.0 m (including 3.52 g/t Au over 2.0 m). Hole S670 yielded an average grade of 1.90 g/t Au over 4.0 m. The K Shear Zone was not cut by both holes, but the T-shear was observed.

In fall 2011, one (1) hole (S715) was drilled for 519 m, below hole S588, to test the depth potential of the significant values that had been intercepted in 2009 (5.78 g/t Au over 1.0 m). Drill hole S715 did not cut the targeted zone at depth, but it did encounter a gold-bearing horizon close to the T-shear structure. The best gold value (1,599.19 g/t Au over 0.5 m) corresponded to a quartz-carbonate-chlorite vein with pyrite and visible gold, hosted in a diorite dyke. This horizon, in close proximity to a T-shear, could be considered a favourable horizon for future exploration.

10.3.6.5 Siscoe A Vein area

In fall 2012, one (1) NQ-size hole (SIS12-01) was drilled for a total of 300.00 m to test an intersection between two shear zones oriented E-W and NW-SE, respectively, located 200 m southeast of the Siscoe A Vein. The hole was collared 200 m southwest of the K Shear Zone.

A strong shear zone was identified by drilling and corresponded to an interval of talc-carbonate-schist and sheared and faulted komatiite. Hole SIS12-01 returned one significant gold-bearing interval (1.08 g/t Au over 3.2 m, including 2.89 g/t Au over 1.0 m) in pyritic quartz-carbonate-albite veins, hosted in carbonatized and weakly sheared tholeiitic basalts.

10.3.6.6 Siscoe C Vein area

In fall 2014, one (1) NQ-size hole (SIS14-01) was drilled for a total of 300.00 m to test the possible north extension of the Siscoe C Vein. The hole was collared in the Siscoe stock, 200 m northeast of the K Shear Zone.

Drill hole SIS14-01 returned some significant gold grades: 21.03 g/t Au over 0.5 m, 3.85 g/t Au over 1.0 m and 1.45 g/t Au over 5.0 m. All these values were obtained from quartz-tourmaline veins with pyrite and native gold, hosted in carbonatized and epidotized diorite.

Although these gold grades cannot be related to the Siscoe C vein, it is possible that the holes passed through the extension of the Siscoe 27 Vein, as well as other veins.

10.3.6.7 Drilling program for geotechnical studies (Wesdome Project)

Eleven (11) BQ-size holes (WDH-01 to WDH-11), totalling 1,656 m, were completed between November 2008 and February 2009 on the north shore of Lac De Montigny to complete the geotechnical study related to a possible new decline ramp for the Wesdome Project. Holes were positioned near the interpreted location of the Rivière Héva Fault by Pilote et al. (2015c), but the major fault could not be clearly identified in the holes. No gold mineralization was reported.

10.3.7 La Motte-Vassan Formation

No drilling was carried out in the La Motte-Vassan Formation on the Quebec Wesdome Project.

10.4 Highlights of the 2007–2015 Surface Drilling Programs

10.4.1 New mineral resources added

Surface drilling programs led to the discovery of three major mineralized zones (Dubuisson, Dubuisson North and Presqu'ile) that were the subject of a mineral resource estimate. Moreover, surface drilling added new gold resources to the Northwest and Martin zones.

The Dubuisson and Dubuisson North zones, discovered in 2008 and 2012, respectively, occur in the Dubuisson Formation within a similar geological setting. The zones are located less than 2 km northeast of the Norbenite Fault. The Dubuisson and Dubuisson North zones are known to contain at least three lenses of gold mineralization oriented east-west. Gold is hosted in brittley fractured, albitized, carbonatized and chloritized diorite and chloritized feldspar porphyry dykes within a broadly deformed ultramafic sequence. Sheared talc-chlorite schist occurs near or adjacent to the dykes hosting the gold mineralization. Mineralization consists of quartz-albite (±tourmaline-pyrite) stockwork veinlets commonly carrying free gold in diorite dykes, and quartz-tourmaline-chlorite-pyrite stockwork veinlets commonly carrying free gold in feldspar porphyry dykes. The type of veins observed within the

Dubuisson Zone are the early quartz-carbonate veins cut by various dykes (Type 1), and the relatively weakly deformed late quartz (±tourmaline) veins cutting all intrusive types and previous gold vein systems (Type 3). Type 2 veins (deformed veins within a shear zone) have not yet been confirmed, but it is possible they are present within the zone.

The Presqu'ile Zone is situated 200 m southwest of the Marbenite Fault. Mineralization consists of a series of steeply dipping, subparallel smokey quartz-carbonate-chlorite veins mineralized with pyrite, chalcopyrite, minor sphalerite, galena and visible native gold, hosted in mafic volcanic tuffs and flows along a sheared contact with komatiite flows belonging to Jacola Formation. The Presqu'ile Zone comprises two subparallel mineralized shears. The veins observed within the Presqu'ile Zone are deformed veins within a shear zone (Type 2).

The Northwest Zone occurs in the Jacola Formation and is located 100 m north of the Norbenite Fault. Mineralization is represented by pyritic quartz-carbonate (±tourmaline) veins hosted in albitized diorite in contact with talc-chlorite schist. A shear zone is observed close to the mineralized zone. A new horizon (NW3 Zone), interpreted as a subparallel gold zone to the Northwest Zone, was identified during the 2011 drilling program. The type of veins observed within the Northwest Zone are the early quartz-carbonate veins cut by various dykes (Type 1).

The Martin Zone is located 300 m northeast of the Norbenite Fault. The Martin Zone is a tabular zone consisting of albitized, pyritized brecciated basalts belonging to the Jacola Formation. Mineralization was observed as quartz-carbonate±albite veins with pyrite and chalcopyrite (±native gold). Gold occurs near intensely faulted and sheared komatiite (talc-chlorite schist) and brecciated basalts, all related to the Martin Shear Zone. The veins observed in the Martin Zone are Type 2 (deformed veins within a shear zone).

10.4.2 Shawkey No. 22 Zone

Ten (10) holes were added on the historical Shawkey No. 22 Zone in 2007 and 2008. Many good gold intersections were reported. In 1990, Placer Dome carried out a mineral inventory on the zone, estimating a total of 883,132 metric tons with an average grade of 4.04 g/t Au. The mineral inventory was contained within six lenses known by the letters A to F. The study was based on 369 holes totalling 105,252 m, and it employed the polygonal method and a specific gravity of 2.7 g/cm3.

These "resources" are historical in nature and should not be relied upon. It is unlikely they conform to current NI 43-101 criteria or to CIM Standards and Definitions, and they have not been verified to determine their relevance or reliability. They are included in this section for illustrative purposes only and should not be disclosed out of context.

The eastern extensions of the Shawkey No. 22 Zone were tested by drilling. It was determined that the geological setting in the east is similar to the setting of the area covered by the 1990 mineral inventory. A wide strong shear zone was also observed, which may be related to the No. 22 Deformation Zone. Among the results from the zone's eastern extensions, hole S514 assayed 1.56 g/t Au over 20.0 m, including 14.61 g/t Au over 1.0 m, 7.49 g/t Au over 1.0 m and 73.61 g/t Au over 1.0 m. These results demonstrated the possibility of conducting a resource estimate on the basis of a lower grade but higher tonnage scenario

The Shawkey No. 22 Zone is located 750 m northeast of the Norbenite Fault. The zone consists of quartz-tourmaline veinlets in weakly pyritized porphyry dykes. The feldspar porphyries were emplaced in a sheared komatiitic unit, constituting the No. 22 Deformation Zone hosted in the Jacola Formation. Gold mineralization consists of several narrow stacked tension veins and/or veinlets, sometimes sheared and brecciated, containing quartz-carbonate (±tourmaline) with pyrite and native gold, hosted in feldspar porphyry in contact with basalt or komatiite. The type of veins observed within the Shawkey No. 22 Zone are weakly deformed late quartz (±tourmaline) veins cutting all intrusive types and earlier gold vein systems (Type 3). Type 2 veins (deformed veins within a shear zone) have not yet been confirmed, but it is possible they are present within the zone.

10.4.3 Kiena West area

The purpose of this drilling program was to determine the geological context and explore for gold mineralization over a large area of the Jacola Formation at a distance of 2 km northwest of the Kiena mine. Part of the program confirmed the presence of a large mineralized system of pyritic quartz-carbonate-chlorite (±tourmaline) veins and/or veinlets with typically low gold grades. The host rocks are generally basalts and/or albitized diorites, but also granodiorite and feldspar porphyry dykes. The Kiena West area straddles both the Marbenite and Norbenite faults.

The type of veins observed within the Kiena West area are probably early quartz-carbonate veins cut by various dykes (Type 1) and weakly deformed late quartz (±tourmaline) veins cutting all intrusive types and earlier gold-bearing vein systems (Type 3). Type 2 veins (deformed veins within a shear zone) have not yet been confirmed, but it is possible that they are present within the zone. More drilling is needed to confirm with certainty the types of veins present within this area.

11. SAMPLE PREPARATION, ANALYSES, AND SECURITY

The following paragraphs describe Wesdome's sample preparation, analysis and security procedures for its diamond drilling programs between 2007 and 2015.

11.1 Laboratories Accreditation and Certification

The International Organization for Standardization (IOS) and the International Electrotechnical Commission (IEC) form the specialized system for worldwide standardization. ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories sets out the criteria for laboratories wishing to demonstrate that they are technically competent, operating an effective quality system, and able to generate technically valid calibration and test results. The standard forms the basis for the accreditation of competence of laboratories by accreditation bodies. ISO 9001 applies to management support, procedures, internal audits and corrective actions. It provides a framework for existing quality functions and procedures.

The sample preparation facility belonging to the Kiena Laboratory on the Kiena mine site was used for all drilling programs until mining operation was suspended at the end of June 2013. During this time, the samples were assayed in this laboratory. The Kiena Laboratory was neither certified nor accredited.

After June 2013, the sample preparation facility belonging to Actlabs Laboratory in Val-d'Or (Québec) was used for subsequent drilling programs. The prepared samples were then sent to the Actlabs Laboratory in Sainte-Germaine-Boulé (Québec) for assaying. The Ste-Germaine-Boulé facility received ISO/IEC 17025 accreditation through the SCC. Actlabs is a commercial laboratory independent of Wesdome and has no interest in the Quebec Wesdome Project.

11.2 Sample Preparation

The drill core is boxed, covered and sealed at the drill rigs, and transported by the drillers to the logging facility at the Kiena mine, where Wesdome personnel take over the core handling. The core is logged and sampled by Wesdome geologists. Core sample length varies from 0.5 to 1.5 m. Within mineralized zones, core samples generally do not exceed 1 m. Each core sample is tagged with a unique number.

All quality control samples are prepared and bagged ahead of time by Wesdome personnel at the Kiena mine. The Wesdome employee in the cut shack places one half of the ticket from the core box into a bag with the sample, and staples the other half in the box. One half of each quality control sample ticket is placed in the appropriate type of control sample bag, which were prepared beforehand. Five (5) to seven (7) samples are placed in a rice bag and the contents identified on the outside of the bag. The samples are shipped to the Actlabs sample preparation facility in Val-d'Or in batches of variable sizes. Regardless of the number of samples per shipment to the laboratory, the sample preparation facility prepares a 20-sample batch composed of 18 regular samples plus one (1) analytical blank and one (1) certified material reference (CRM) standard provided by Wesdome.

At the request of Wesdome personnel, the Kiena Laboratory assayed one (1) pulp replicate every twenty (20) samples. No field or coarse duplicates are assayed.

Again at the request of Wesdome personnel, the Actlabs Laboratory also assayed one (1) pulp replicate every twenty (20) samples. No field or coarse duplicates are assayed.

For the fusion process, Actlabs adds four (4) additional QA/QC samples to every 20 samples (1 blank, 2 standards and 1 pulp duplicate) for Actlabs' internal QA/QC, bringing the fusible batch to a total of twenty-four (24). Using the maximum furnace charge of 24 samples ensures that Wesdome samples are not mixed with samples from other clients.

11.2.1 Fire assay sample preparation at the Wesdome Laboratory

Once the samples are received at the Kiena facility, they are sorted, bar-coded and logged. They are then placed in the sample drying room and dried. Any samples received in a damaged state (i.e., punctured sample bag, loose core) are documented and Wesdome personnel are informed with photographs.

Samples are crushed to 85% passing 8 mesh, and split using a Jones riffle splitter. A 250-g split is pulverized to 90% passing 200 mesh. Samples are then sent for fire assay.

A 30-g pulp sample is used for the fire assay method at the Kiena Laboratory.

The Kiena Laboratory generally reruns all AA results over 3 g/t by gravimetry to ensure accurate values. However, at the request of Wesdome, any sample assaying >10 g/t Au was rerun with metallic sieve methods.

11.2.2 Fire assay sample preparation at the Actlabs Laboratory

Once the samples are received at the Actlabs facility in Val-d'Or, they are sorted, bar-coded and logged into the Actlabs LIMS program. They are then placed in the sample drying room and dried at 60 °C. Any samples received in a damaged state (i.e., punctured sample bag, loose core) are documented and Wesdome personnel are informed with photographs.

Samples are crushed to +80% passing 10 mesh, and split using a Jones riffle splitter. A 250- to 300-g split is pulverized to +80% passing 200 mesh. A pulp replicate is collected from every 20 samples of each work order during sample preparation. These are reported on the QA/QC portion of the report. Sieve tests are performed on the crusher at the beginning of each day and on the pulp of the selected sample. If there is a failure, the samples are re-milled to ensure that they pass. Pulp samples are then sent for fire assay.

The basic procedure for fire assay involves mixing an aliquot of a 30-g powdered sample with soda ash (sodium carbonate), borax (sodium borate), litharge (PbO), flour (baking flour used to add carbon as a reductant), silica, and possible nitre (potassium nitrate). To this mixture, Ag as a collector can be added in solution or as a foil. The well mixed material is fired at temperatures ranging from 1100 °C to 1200 °C. As the lead and silver in the melt settle to the bottom of the crucible, they scavenge the gold from the melt. The lead button is cupelled at 950 °C in a magnesia cupel. A tiny silver bead containing gold can be dissolved and analyzed by atomic absorption

At the request of Wesdome, any sample assaying >3 g/t Au was rerun with gravimetric finish, and any sample assaying >10 g/t Au was rerun with the metallic sieve method.

11.3 Gravimetric Finish (Actlabs)

The lead buttons from the fusion process contain all the gold from the samples as well as the silver that was added. The buttons are placed in a cupelling furnace at 950 °C where all the lead is either volatilized or absorbed by the cupels. This generates a prill or doré bead for each sample consisting of the silver plus any gold present.

Once the cupels have cooled sufficiently, the bead from each is placed in a porcelain crucible and the silver is dissolved with dilute nitric acid at around 70 °C. The remaining gold is washed, removing the silver solution from the crucible. The residual wash material is aspirated using a vacuum pump, then dried on a hot plate. The resulting gold flakes are annealed into a gold bead and weighed using a microbalance. A simple weight comparison is used to mathematically calculate the amount of gold in the sample.

11.4 Metallic Sieve (Actlabs)

A 250- to 300-g split of crushed material (+80% passing 10 mesh) is pulverized using a ring and puck mill to ensure approximately 80–85% passing 140 mesh. The material on top of the screen is referred to as the “plus” (+) fraction, and the material passing through the screen is the “minus” (-) fraction. The weights of both fractions are recorded.

The entire “plus” fraction is sent for fire assay determination, whereas two 30-g replicates of the “minus” fraction are taken for fire assay determination. The finish is gravimetric, AA or ICP-OES.

“Plus” and “minus” gold assay fractions, their weights, and the calculated “total gold” of the sample are included in every report. Upon request, individual gold assays may be reported for every fraction.

The calculation for “total gold” is as follows:

$$\text{Total gold (g/t)} = \frac{(\text{Au (“average minus”) g/t x Wt. “Minus” x } 10^{-6}\text{ t/g}) + (\text{Au (“plus”) g/t x Wt. “Plus” x } 10^{-6}\text{t/g}))}{(\text{Wt. (“minus”)g + Wt. (“plus”)g x } 10^{-6}\text{ t/g}}$$

11.5 Results of Quality Control from Surface Drilling Programs

11.5.1 Blanks

The field blank used for the drilling programs performed between 2007 and 2012 was a crushed sample of gold-barren marble. One (1) field blank was inserted for every twenty (20) field samples.

Wesdome's quality control protocol stipulates that if any blank yields a gold value above 0.3 g/t Au, all samples from the batch of 20 samples should be re-analyzed.

A total of 2,783 blanks were assayed at the Kiena Laboratory during the period between October 2007 and June 2013. Only one (1) blank did not pass the quality control procedure of Wesdome, which represents less than 0.04%.

A total of 252 blanks were assayed at the Actlabs Laboratory during the period between June 2014 and March 2015. Only two blanks did not pass the quality control procedure of Wesdome, which represents less than 0.8%.

InnovExplo is of the opinion that results obtained for blanks from the October 2007 to March 2015 drilling programs are reliable and valid.

11.5.2 Certified reference materials (standards)

For the drilling programs performed between 2007 and 2012, one (1) certified reference material (CRM) standard was inserted for every twenty (20) samples.

The assigned grades for the nine (9) different CRM standards used for the drilling program ranged from 0.597 g/t Au to 8,595 g/t Au.

Table 11.1 and 11.2 presents details on the CRMs used by Wesdome drilling programs between October 2007 and March 2015.

The accuracy of the result (as a percentage) is measured as the difference between the average of the standard's assays and the value assigned for the standard (excluding the gross outlier values). For a laboratory, good accuracy constitutes the ability to give results as near as possible to the expected value. The precision of the result (as a percentage) is represented by the dispersion of the standard's assay results versus their average. For a laboratory, good precision constitutes the ability to repeat results with the smallest standard deviation possible. The difference between accuracy and precision is illustrated by Figure 11.1.

Table 11.1 – Results from standards used by Wesdome during the October 2007 to June 2013 drilling programs

Standard (CRM)	Standard supplier	Certified gold value (g/t)	Standard deviation	Laboratory	Analytical method	Amount of results	Average of results	Accuracy (%)	Precision (%)	Lower process limit (-3 X standard deviation)	Upper process limit (+3 X standard deviation)	Outliers	Gross Outliers	(%) passing quality control
SE29	Rocklabs Ltd	0,597	0,016	Kiena Laboratory	FA/AA	139	0,5846	-2,1%	3,8%	0,549	0,645	1	3	**97,12%**
SE44	Rocklabs Ltd	0,606	0,017	Kiena Laboratory	FA/AA	137	0,6101	0,7%	3,4%	0,555	0,657	1	0	**99,27%**
SE58	Rocklabs Ltd	0,607	0,019	Kiena Laboratory	FA/AA	16	0,5931	-2,3%	3,7%	0,550	0,664	0	0	**100,00%**
SF30	Rocklabs Ltd	0,832	0,021	Kiena Laboratory	FA/AA	76	0,8161	-1,9%	3,4%	0,769	0,895	6	1	**90,79%**
SF57	Rocklabs Ltd	0,848	0,030	Kiena Laboratory	FA/AA	106	0,8367	-1,3%	3,6%	0,758	0,938	0	0	**100,00%**
SF67	Rocklabs Ltd	0,835	0,021	Kiena Laboratory	FA/AA	35	0,8329	-0,3%	2,4%	0,772	0,898	0	0	**100,00%**
SG31	Rocklabs Ltd	0,996	0,028	Kiena Laboratory	FA/AA	82	0,9824	-1,4%	3,0%	0,912	1,080	2	0	**97,56%**
SG40	Rocklabs Ltd	0,976	0,022	Kiena Laboratory	FA/AA	30	0,9603	-1,6%	3,8%	0,910	1,042	1	1	**93,33%**
SG66	Rocklabs Ltd	1,086	0,032	Kiena Laboratory	FA/AA	36	1,0703	-1,4%	2,4%	0,990	1,182	0	0	**100,00%**
SH35	Rocklabs Ltd	1,323	0,044	Kiena Laboratory	FA/AA	420	1,3007	-1,7%	2,9%	1,191	1,455	1	2	**99,29%**
SH41	Rocklabs Ltd	1,344	0,041	Kiena Laboratory	FA/AA	187	1,3299	-1,0%	3,3%	1,221	1,467	3	0	**98,40%**
SH55	Rocklabs Ltd	1,375	0,045	Kiena Laboratory	FA/AA	117	1,3415	-2,4%	2,3%	1,240	1,510	0	0	**100,00%**
SI42	Rocklabs Ltd	1,761	0,054	Kiena Laboratory	FA/AA	37	1,7376	-1,3%	2,7%	1,599	1,923	0	0	**100,00%**
SI54	Rocklabs Ltd	1,780	0,034	Kiena Laboratory	FA/AA	167	1,7333	-2,6%	2,8%	1,678	1,882	2	1	**98,20%**
SJ39	Rocklabs Ltd	2,641	0,083	Kiena Laboratory	FA/AA	382	2,5639	-2,9%	2,2%	2,392	2,890	0	3	**99,21%**
SJ53	Rocklabs Ltd	2,637	0,048	Kiena Laboratory	FA/AA	102	2,5975	-1,5%	2,0%	2,493	2,781	0	0	**100,00%**
SK33	Rocklabs Ltd	4,041	0,103	Kiena Laboratory	FA/AA	22	3,9307	-2,7%	2,0%	3,732	4,350	0	8	**63,64%**
SK52	Rocklabs Ltd	4,107	0,088	Kiena Laboratory	FA/AA	101	4,0122	-2,3%	2,1%	3,843	4,371	0	0	**100,00%**
SK62	Rocklabs Ltd	4,075	0,140	Kiena Laboratory	FA/AA	124	4,0121	-1,5%	2,3%	3,655	4,495	0	0	**100,00%**
SL46	Rocklabs Ltd	5,867	0,170	Kiena Laboratory	FA/AA	207	5,7546	-1,9%	2,2%	5,357	6,377	0	7	**96,62%**
SL51	Rocklabs Ltd	5,909	0,136	Kiena Laboratory	FA/AA	38	5,7688	-1,9%	2,4%	5,501	6,317	1	4	**86,84%**
SL61	Rocklabs Ltd	5,931	0,177	Kiena Laboratory	FA/AA	83	5,8707	-1,0%	2,1%	5,400	6,462	0	0	**100,00%**
SN50	Rocklabs Ltd	8,685	0,180	Kiena Laboratory	FA/AA	10	8,7860	1,2%	1,3%	8,145	9,225	0	0	**100,00%**
SN60	Rocklabs Ltd	8,595	0,223	Kiena Laboratory	FA/AA	101	8,4800	-1,3%	4,0%	7,926	9,264	7	2	**91,09%**
TOTAL						**2755**						**25**	**32**	**97,93%**

Table 11.2 – Results from standards used by Wesdome during the June 2014 to March 2015 drilling programs

Standard (CRM)	Standard supplier	Certified gold value (g/t)	Standard deviation	Laboratory	Analytical method	Amount of results	Average of results	Accuracy (%)	Precision (%)	Lower process limit (-3 X standard deviation)	Upper process limit (+3 X standard deviation)	Outliers	Gross Outliers	(%) passing quality control
SF67	Rocklabs Ltd	0,835	0,021	Actlabs Laboratory	FA/AA	64	0,8384	0,4%	6,0%	0,772	0,898	2	0	**96,88%**
SG66	Rocklabs Ltd	1,086	0,032	Actlabs Laboratory	FA/AA	62	1,0614	-2,3%	4,1%	0,990	1,182	1	0	**98,39%**
SJ53	Rocklabs Ltd	2,637	0,048	Actlabs Laboratory	FA/AA	1	NA	NA	NA	2,493	2,781	0	0	**100,00%**
SJ63	Rocklabs Ltd	2,632	0,055	Actlabs Laboratory	FA/AA	36	2,5936	-1,5%	3,8%	2,467	2,797	0	0	**100,00%**
SK62	Rocklabs Ltd	4,075	0,140	Actlabs Laboratory	FA/AA	54	3,9606	-2,8%	2,8%	3,655	4,495	1	0	**98,15%**
SL61	Rocklabs Ltd	5,931	0,177	Actlabs Laboratory	FA/AA	34	5,8311	-1,7%	2,8%	5,400	6,462	0	0	**100,00%**
TOTAL						**251**						**4**	**0**	**98,41%**

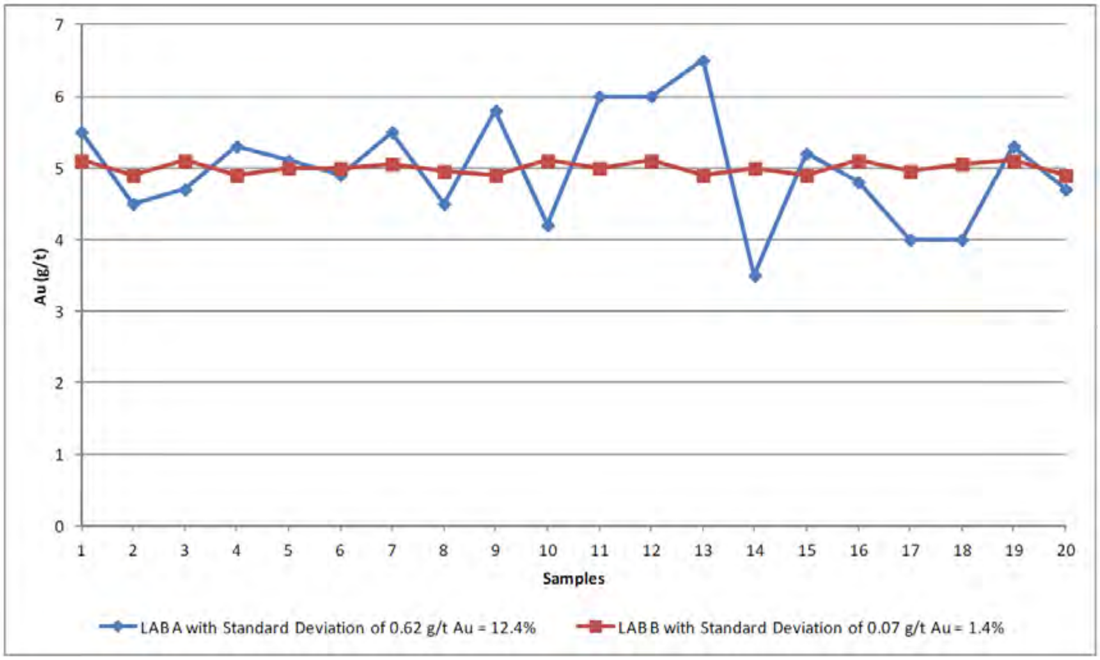

Figure 11.1 – Two laboratories (Lab A and Lab B) have analyzed the same standard grading 5.0 g/t Au using the same number of samples (n=20) to produce the same final average (5.0 g/t Au). Accuracy is perfect (0%) for both, but the precision of Lab B is better (1.4%) than the precision of Lab A (12.4%).

Wesdome's quality control protocol stipulates that if any standard yields a gold value below or above three standard deviations (Tables 11.1 and 11.2), the standard failed. Only samples included with mineralized zone material should be re-analyzed. If there is no significant gold result within the batch of 20 samples, no re-assay is ordered.

A total of 2,755 standards were assayed at the Kiena Laboratory during the period between October 2007 and June 2013. Fifty-seven (57) standards did not pass the quality control procedure of Wesdome, which represents about 2%.

A total of 251 standards were assayed at the Actlabs Laboratory during the period between June 2014 and March 2015. Four (4) standards did not pass the quality control procedure of Wesdome, which represents about 1.6%.

InnovExplo is of the opinion that results obtained for standards from the October 2007 to March 2015 drilling programs are reliable and valid.

11.5.3 Pulp duplicate

At the request of Wesdome personnel, the laboratory assayed one (1) pulp duplicate every twenty (20) samples. The precision of pulp duplicates can be used to determine the incremental loss of precision for the pulp pulverizing stage of the process, thereby establishing whether a given pulp size taken after pulverization is adequate enough to ensure representative fusing and analysis.

At first, 2,737 pulp duplicate pairs were assayed at the Kiena Laboratory between October 2007 and June 2013. Of these, none of the results were considered gross outliers. Figure 11.2 plots the duplicate gold analyses for these samples. The green lines represent a field of relative difference of about ±20%. On the graph, only some results are considered as outliers, but they are located near the green lines. The Wesdome laboratory produced generally similar gold results with relatively small scatter (low random error), as indicated by the abundance (majority) of points falling between the two green lines. The linear regression slope corresponds to 0.9471, with a correlation coefficient of 98.60%. The correlation coefficient (%) is given by square root of R^2 and represents the degree scatter of data around the linear regression slope. The results indicate an excellent reproducibility of gold values.

For the drilling programs between June 2014 and March 2015, no result among the 244 pulp duplicate results was considered a gross outlier. On the graph (Fig. 11.3), only some results are identified as outliers, but they are located near the green lines. The Actlabs Laboratory produced generally similar gold results with relatively small scatter (low random error), as indicated by the abundance (majority) of points falling between the two green lines. The linear regression slope corresponds to 1.1034, with a correlation coefficient of 97.70%. The results indicate an excellent reproducibility of gold values.

InnovExplo is of the opinion that results obtained for pulp duplicates from the October 2007 to March 2015 drilling programs are reliable and valid.

11.5.4 Conclusions

A statistical analysis of the QA/QC data provided by Wesdome did not identify any significant analytical issues. InnovExplo is of the opinion that the sample preparation, analysis, QA/QC and security protocols used for the Quebec Wesdome Project follow generally accepted industry standards, and that the data is valid and of sufficient quality to be used for mineral resource estimation.

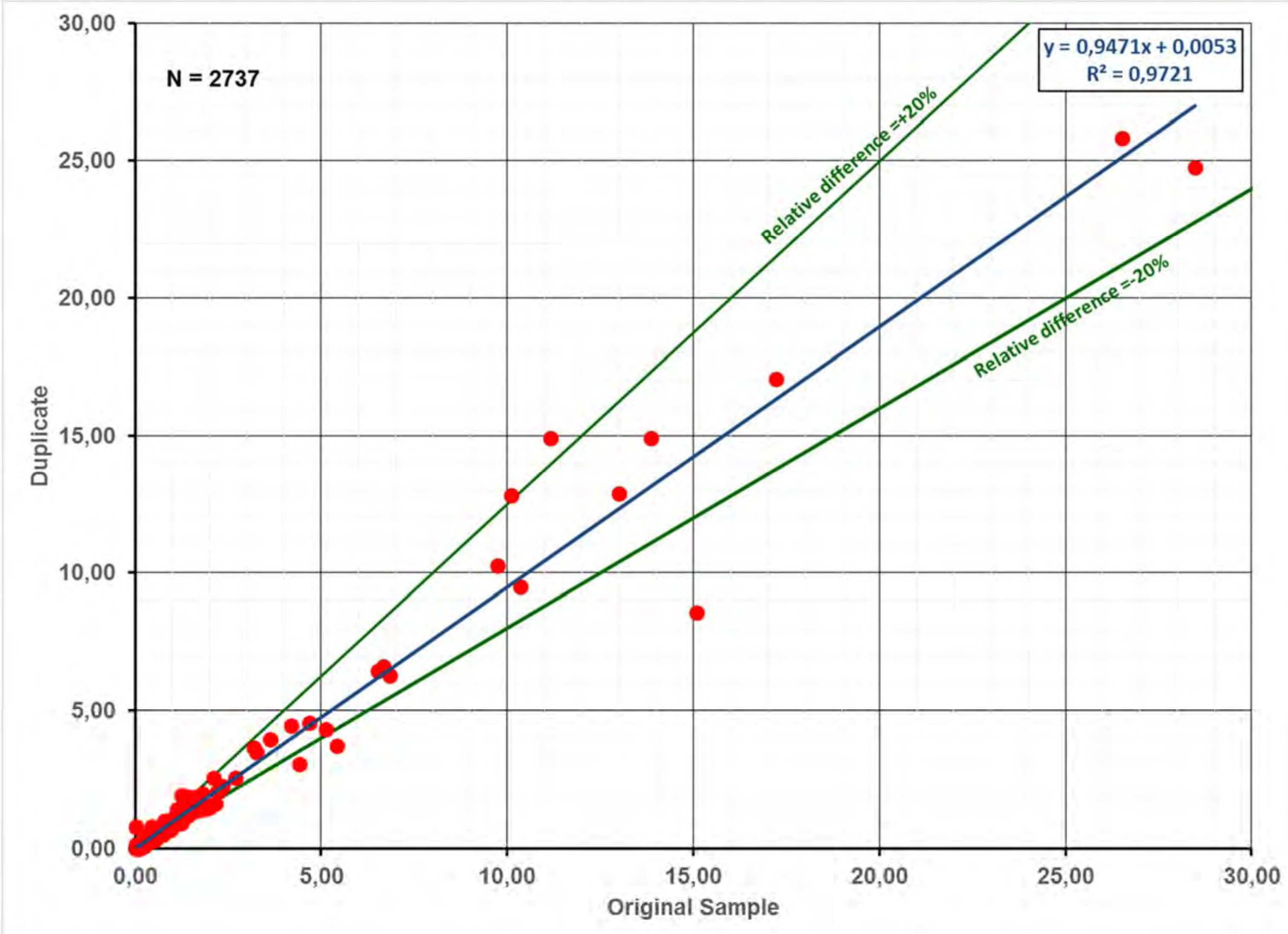

Figure 11.2 – Plot of pulp duplicate analyses from the Wesdome Laboratory. Green lines represent a field of relative difference of about ±20%.

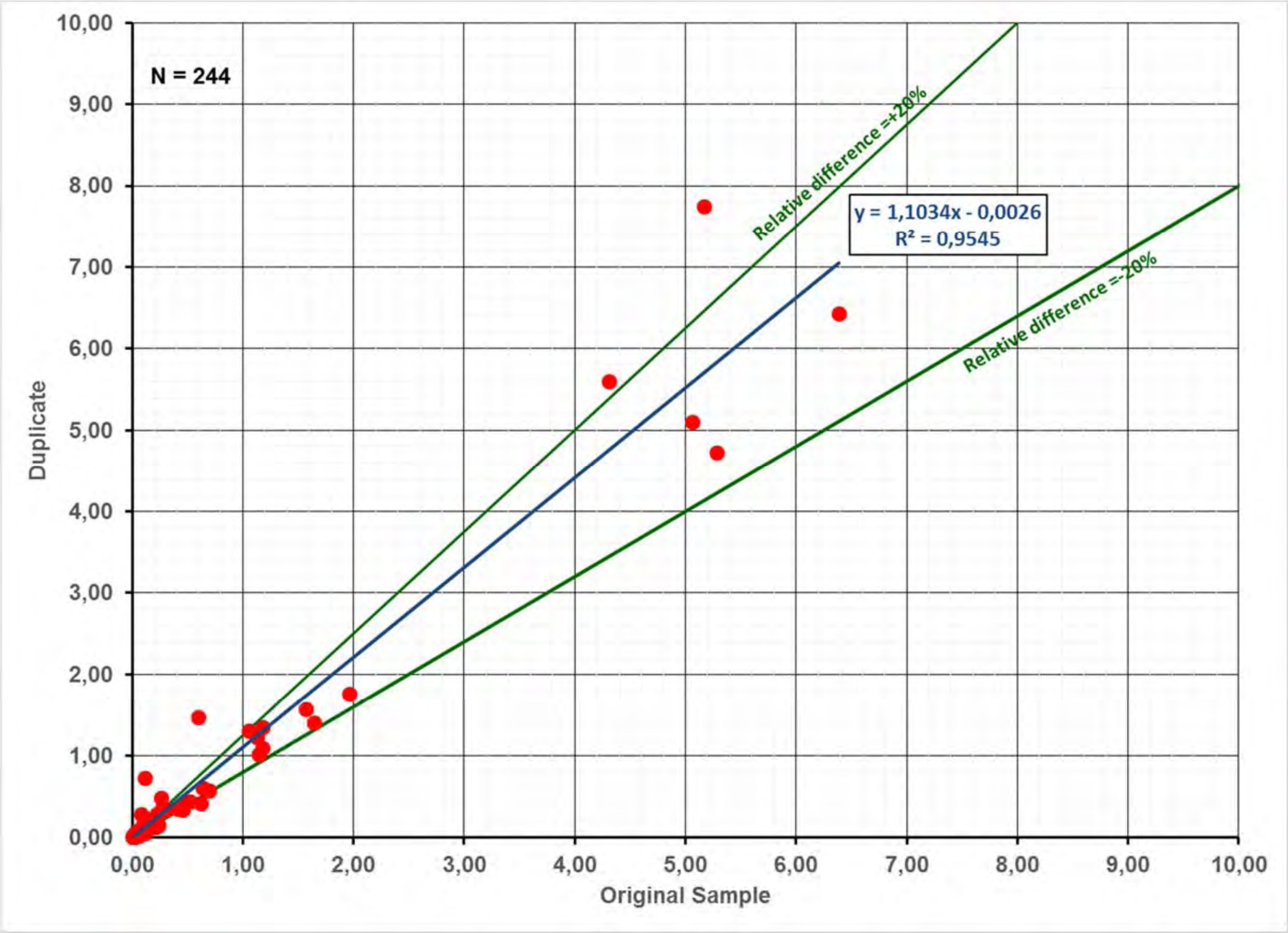

Figure 11.3 – Plot of pulp duplicate analyses from the Actlabs Laboratory. Green lines represent a field of relative difference of about ±20%.

12. DATA VERIFICATION

12.1 Drill hole database

Geological logging was completed using standard logging codes (geological legend) amenable to management in a computer database. The standard logging codes apply rock names to rock types observed during logging. Detailed codes for alteration, structural elements and mineralization are defined in the geological legend in the software GeoticLog. The logging methodology employed coded lithological and mineralogical descriptors and brief descriptive columns. The data supplied by Wesdome for the Quebec Wesdome Project were in the form of a GeoticLog software database.

Surveyor Jean-Luc Corriveau (2008–2009) and later a Kiena technician (2010-2015) surveyed casing locations and elevations using a differential Leica Viva GPS system radio linked to a Leica R500 base procedure for holes on the lake. The locations of old casings corresponding to the holes used in the 2015 Mineral Resource Estimate were not validated in the field by InnovExplo because most of diamond drill holes were collared on Lac De Montigny.

Wesdome suspended the mining operation at the Kiena mine on June 30, 2013. Before this date, all drill hole samples were assayed at the Kiena Laboratory. No assay certificate was issued by the laboratory. The laboratory transferred all gold results directly within the GeoticLog database. Consequently, there were no original assay certificates to verify against the database.

InnovExplo's review of the cross sections provided by Wesdome did not identify any significant database issues. InnovExplo is of the opinion that the geological logging, casing locations, drill hole deviations and gold assay protocols for the Quebec Wesdome Project follow generally accepted industry standards, and that the data is valid and of sufficient quality to be used for mineral resource estimation.

12.2 Site visit

InnovExplo's data verification included several visits to the Kiena mine site. It also included a review of historical reports, plans and sections, selected core intervals, the QA/QC program, and the descriptions of lithologies, alterations and structures on the most recent cross sections. These site visits were completed by Bruno Turcotte and Pierre-Luc Richard between March 17 and September 9, 2015.

A site visit covering the entire project was also carried out in order to verify the historical exploration shaft areas on the Quebec Wesdome Project and visit the infrastructure of the Kiena mine. This site visit was performed by Patricia Boutin, environmental coordinator, and Laurent Roy, Eng., senior mining engineer from InnovExplo, accompanied by Frank Gagnon, environmental coordinator from Wesdome. Details of this site visit are described in section 5.

12.3 Historical Work

The historical information used in this report was taken mainly from reports produced before the implementation of NI 43-101. In some cases, little information is available about sample preparation, analytical or security procedures for the historical work in the reviewed documents. However, InnovExplo assumes that the exploration activities conducted by earlier companies were in accordance with prevailing industry standards at the time.

12.4 Review of mineralized core

InnovExplo reviewed some sections of mineralized core present in the core storage facilities (Fig. 12.1). All core boxes were labelled and properly stored outside. Sample tags were still present in the boxes and it was possible to validate sample numbers and confirm the presence of mineralization in witness half-core samples from the mineralized zones. A partial validation of analytical results was performed by comparing assays to drill core intercepts. InnovExplo is of the opinion that the protocols in place are adequate.

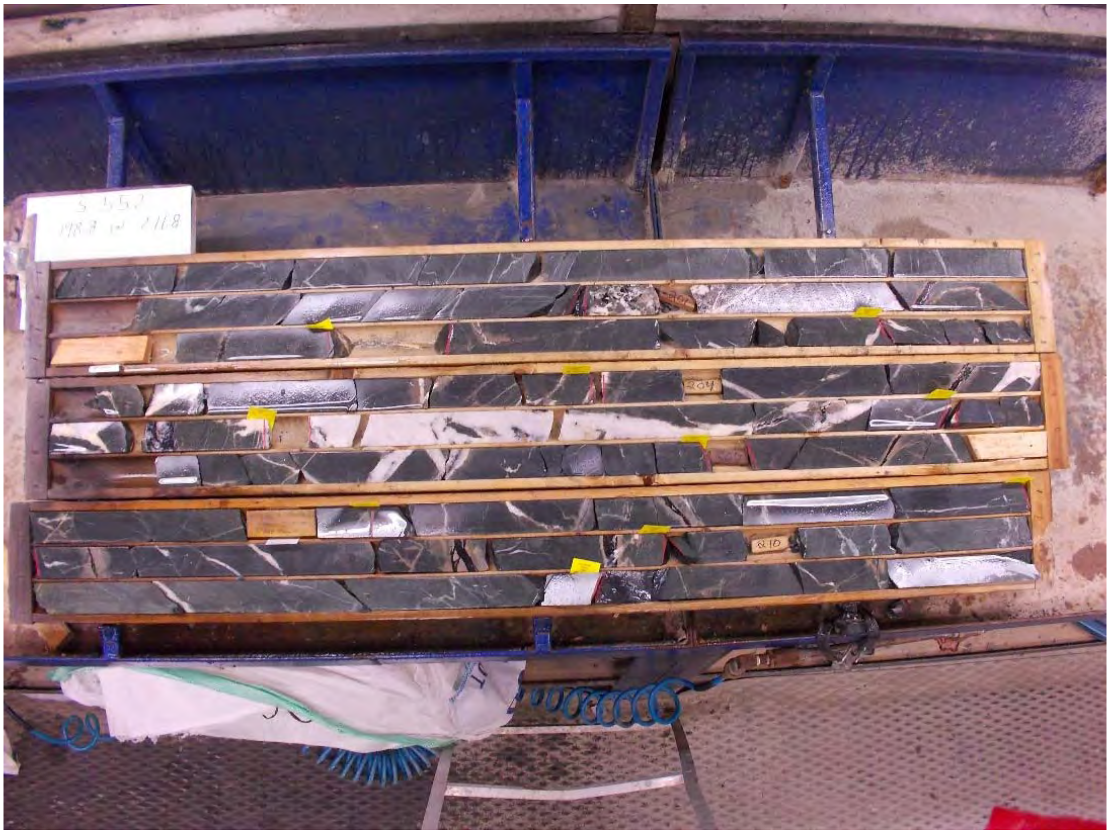

Figure 12.1 – Core from the Dubuisson Zone (hole S557) examined by InnovExplo at the core shack of the Kiena mine before the resampling of half-core samples

12.5 Independent Repeat Analyses

InnovExplo selected 58 samples of reference half-core samples encompassing a wide range of assay values (from low through medium to high) and re-numbered them in a different sequence before submitting them to the ALS-Chemex laboratory in Val-d'Or for duplicate analysis using the fire assay method with atomic absorption finish. The samples came from the Martin, Dubuisson and Presqu'ile zones.

Figure 12.2 plots the gold values of the field duplicate pairs (quarter-split samples) for these samples. Figure 12.3 is a close-up of the graph on Figure 12.2 for grades between 0 and 15 g/t Au. The green lines represent a field of relative difference of about ±20%. On the graph, the red circles correspond to original samples assayed by fire assay with absorption atomic finish, whereas the blue squares correspond to original samples assayed by the metallic sieve method.

The linear regression slope corresponds to 0.8334, with a correlation coefficient of 88.71%. The correlation coefficient (%) is given by square root of R^2 and represents the degree scatter of data around the linear regression slope. The results indicate a good reproducibility of gold values.

Many of the red circle results (atomic absorption) fall above or below the green lines on the graph (Figs. 12.2 and 12.3). Given that these samples were analyzed by the same method, these results suggest the presence of a nugget effect in some of the samples from the Quebec Wesdome Project. More re-assaying using the metallic sieve method could eliminate some of these outliers.

12.6 Conclusion

Overall, InnovExplo is in the opinion that the data verification process demonstrated the validity of the data and protocols for the Quebec Wesdome Project. InnovExplo considers the Wesdome database valid and of sufficient quality to be used for the 2015 resource estimation herein.

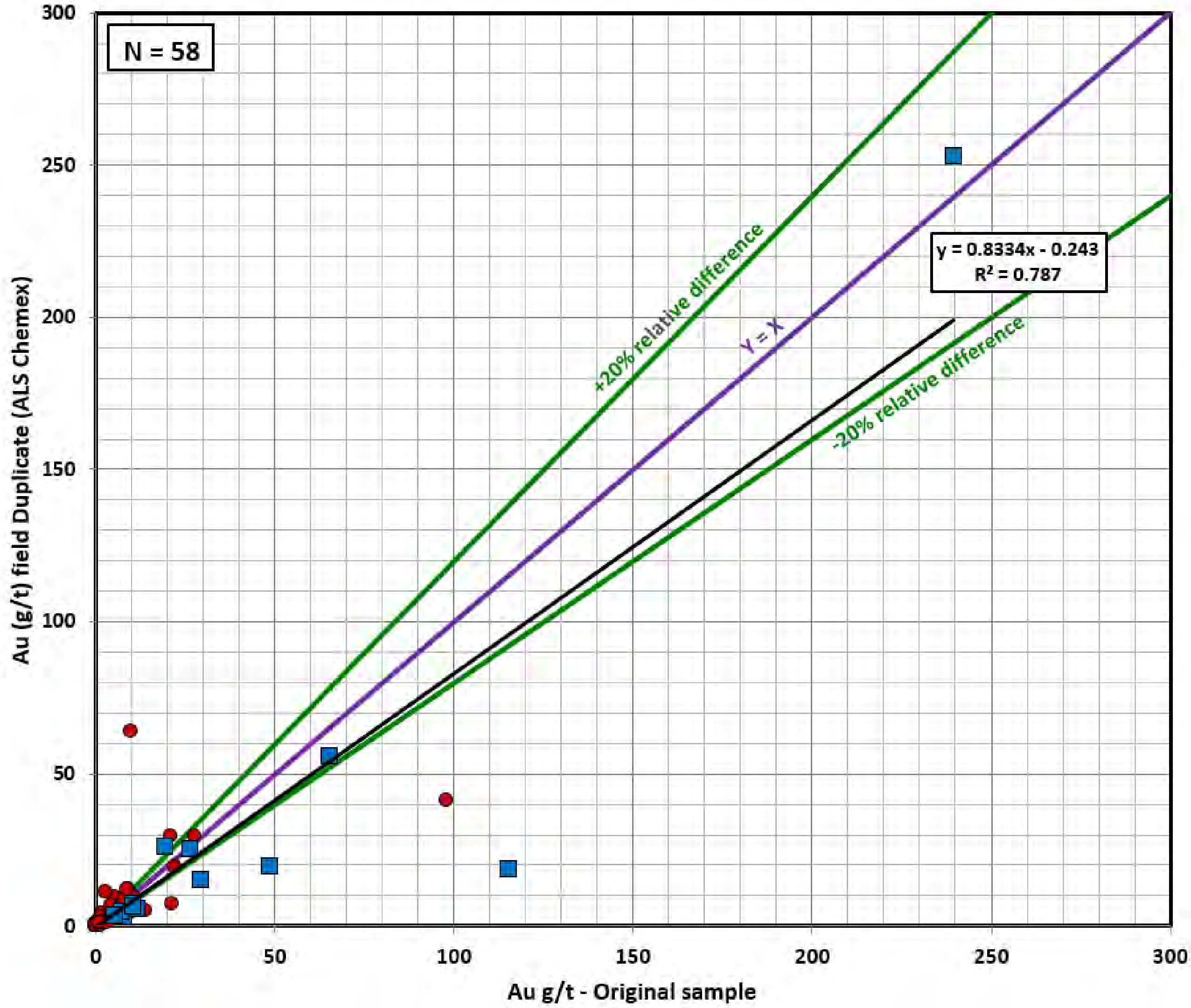

Figure 12.2 – Plot of field duplicate analyses from the ALS Chemex laboratory in Val-d'Or. Green lines represent a field of relative difference of about ±20%. The red circles correspond to original samples assayed by fire assay with absorption atomic finish, whereas the blue squares correspond to original samples assayed by the metallic sieve method.

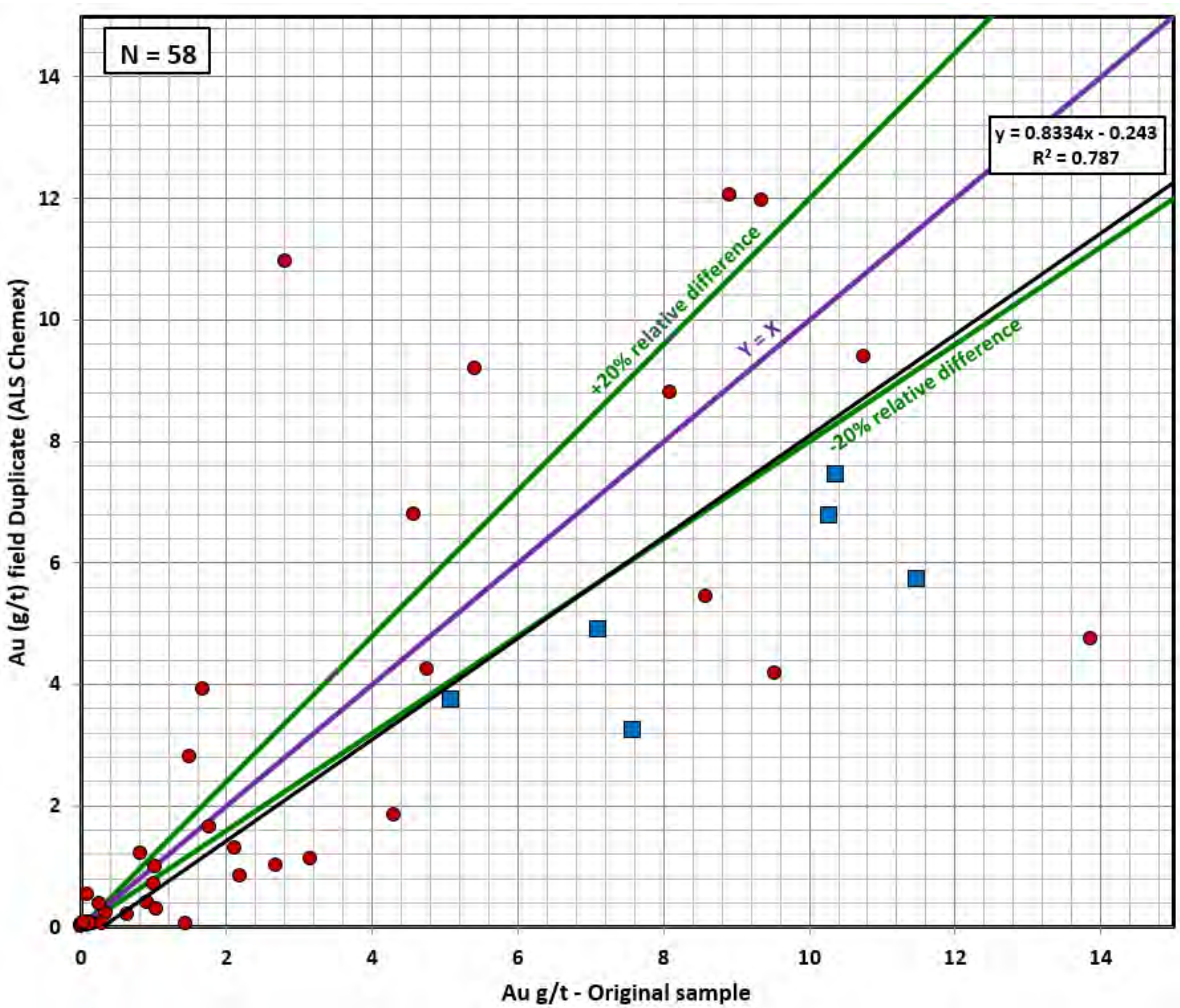

Figure 12.3 – Plot of field duplicate analyses from ALS Chemex laboratory in Val-d'Or, between 0 and 15 g/t Au. Green lines represent a field of relative difference of about ±20%. The red circles correspond to original samples assayed by fire assay with absorption atomic finish, whereas the blue squares correspond to original samples assayed by the metallic sieve method.

13. MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Process Description

The Kiena mine processing plant became operational in September 1984. A conventional gold recovery process was used. It involved cyanidation and carbon-in-pulp (C.I.P.). The principal process steps included: crushing, grinding, leaching by cyanidation, gold adsorption and desorption, electrolysis, melting and casting of doré bars. Figure 13.1 shows the process flow sheet of the Kiena plant.

13.1.1 Crushing circuit

The crushing circuit starts underground with a Birdsboro Buchanan jaw-crusher, reducing the maximum grain size of rock to 6 inches. The ore entering the plant has therefore a maximum grain size of 6 inches. The ore-receiving facilities start with a 35-tonne capacity hopper equipped with a 30 inch x 10 feet vibrating feeder and a 30 inch belt conveyor, which transfers the ore onto the existing No. 1 belt conveyor. Conveyor No. 1 will transport the ore into two coarse ore silos, both with a capacity of 600 tonnes.

The ore discharge from the silos is conveyed, screened and crushed to approximately 1¼" (32 mm). The crushing unit is a standard cone crusher operating in an open circuit. The crushed and screened ore are then stored in a 1,800-tonne silo. The ore is then forwarded by vibrating feeders to the grinding circuit by a belt conveyor

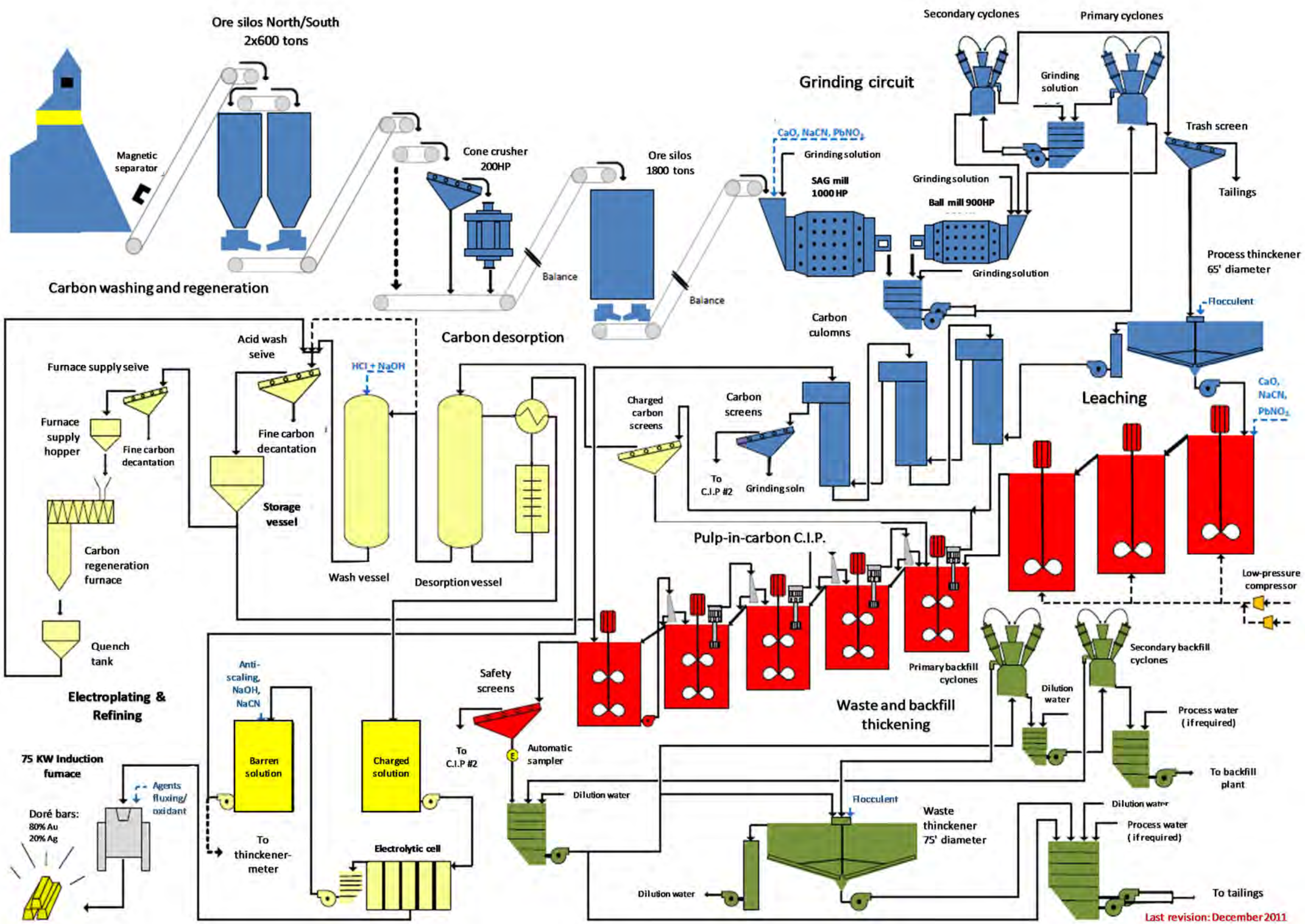

Figure 13.1 – Ore processing plan at the Kiena mine

13.1.2 Grinding circuit

The ore will be ground in a 1,000 hp semi-autogenous (SAG) mill (11'6'' x 18'8'') operating in an open circuit, followed by a 900 hp ball mill (10'6'' x 13') operating in closed circuit and two stages of cyclones for classification. Cyanide is added at the SAG mill (Fig. 13.2) and ball mill, as grinding solution. Quicklime is also added to the SAG mill to control pH.

Figure 13.2 – SAG mill at the Kiena Complex

The underflow of the cyclones will be redirected to the ball mill for further grinding. The ground mineral will then be pumped to a vibrating 20 mesh screen to remove the foreign particles (wood chips, plastic, particles etc.) The screen underflow will be directed to a 65feet diameter process thickener to increase the density of the pulp.

13.1.3 Cyanidation

The pulp will be forwarded to a series of three leach columns where the cyanidation will take place. The gold is leached from the ore with a cyanide solution (NaCN) injected into the columns. Oxygen and quicklime are also injected to optimize the gold dissolution and control the pH. The cyanidation reaction is the following:

$$4Au + 8NaCN + 0_2 + 2H_20 \leftrightarrow 4\ NaAu(CN)_{2\ (aq)} + 4\ NaOH$$

Retention time in the columns is about 25 hours. The cyanide is then recycled into the grinding circuit.

13.1.4 Carbon-in-pulp (C.I.P.) process

Following the cyanidation, the C.I.P. process takes place. In a series of five (5) carbon-in-pulp reservoirs (Fig. 13.3), the free molecules of NaAu(CN)2- in solution in the cyanide are fixed to the activated carbon by adsorption.

Figure 13.3 – Carbon-in-pulp reservoirs at the Kiena Complex

At the exit of the carbon-in-pulp reservoirs, the cyanide solution is separated from the mineral pulp. The latter is filtered by the 28-mesh security screens to recover any carbon grains escaping from the reservoirs. The pulp can be treated to produce backfill or sent to tailings. In the first case, the pulp is sent to primary and secondary backfill cyclones. The underflow of the cyclones (coarse particles) is sent to the backfill plant.

The overflow with fine particles is directed to the 75 feet diameter waste-thickener. From the waste-thickener, the fine pulp is sent to the tailings. The dilution water is recycled toward the grinding circuit.

The charged carbon is directed to the desorption vessel, where the gold desorption takes place using the Zadra process at a temperature of 140 °C and a pressure of 80 psi. The charged solution obtained is pumped through an electrolytic cell where gold is recovered by plating on steel wool cathodes. The cathodes are washed under pressurized water and the dried concentrate is then melted in an induction furnace to produce 80% Au and 20% Ag doré bars.

13.1.5 Acid wash and carbon regeneration

Once desorption is completed, the carbon is transferred in the wash vessel where it is washed with hydrochloric acid. It is then forwarded to the regeneration furnace where it is heated up to a temperature of 1,050 °C. Finally, the carbon is screened to the desired grain size in order to be reused in the process.

13.2 Mill recovery statistics

The Kiena process plant started its operation in 1984. From 1984 to 2002, the milling rate gradually increased from 1,092 to 2,150 tpd, with an average of 1,520 tpd. The ore grade gradually decreased from 5.94 g/t to 2.72 g/t, with an average of 4.67 g/t.

Mining operations were suspended from 2003 to 2006.

From 2006 to 2013, the milling rate was constant at about 543 tpd. The ore grade gradually decreased from 5.28 g/t to 2.24 g/t, with an average of 3.36 g/t, with a peak in 2008.

The mine was closed in June 2013. Since the cessation of mining operations, the concentrator has been on stand-by maintenance and will be available for the processing of new ore in the future.

Figure 13.4 shows the variation of the milling rate and the mine grade, and the constant recovery rate of gold at the Kiena plant.

The performance of the plant was fairly constant, even with the variations in mine grade and milling rate. Gold recoveries varied little from 1984 to 2013 (Fig. 13.4), ranging from 92.2% to 98.8%, with an average of 96.3% and a standard deviation of 1.5%. The data from year 2002 was discarded, and since a 100% recovery value seems unlikely, 74% of the recovery data fall within the one standard-variation interval around the average.

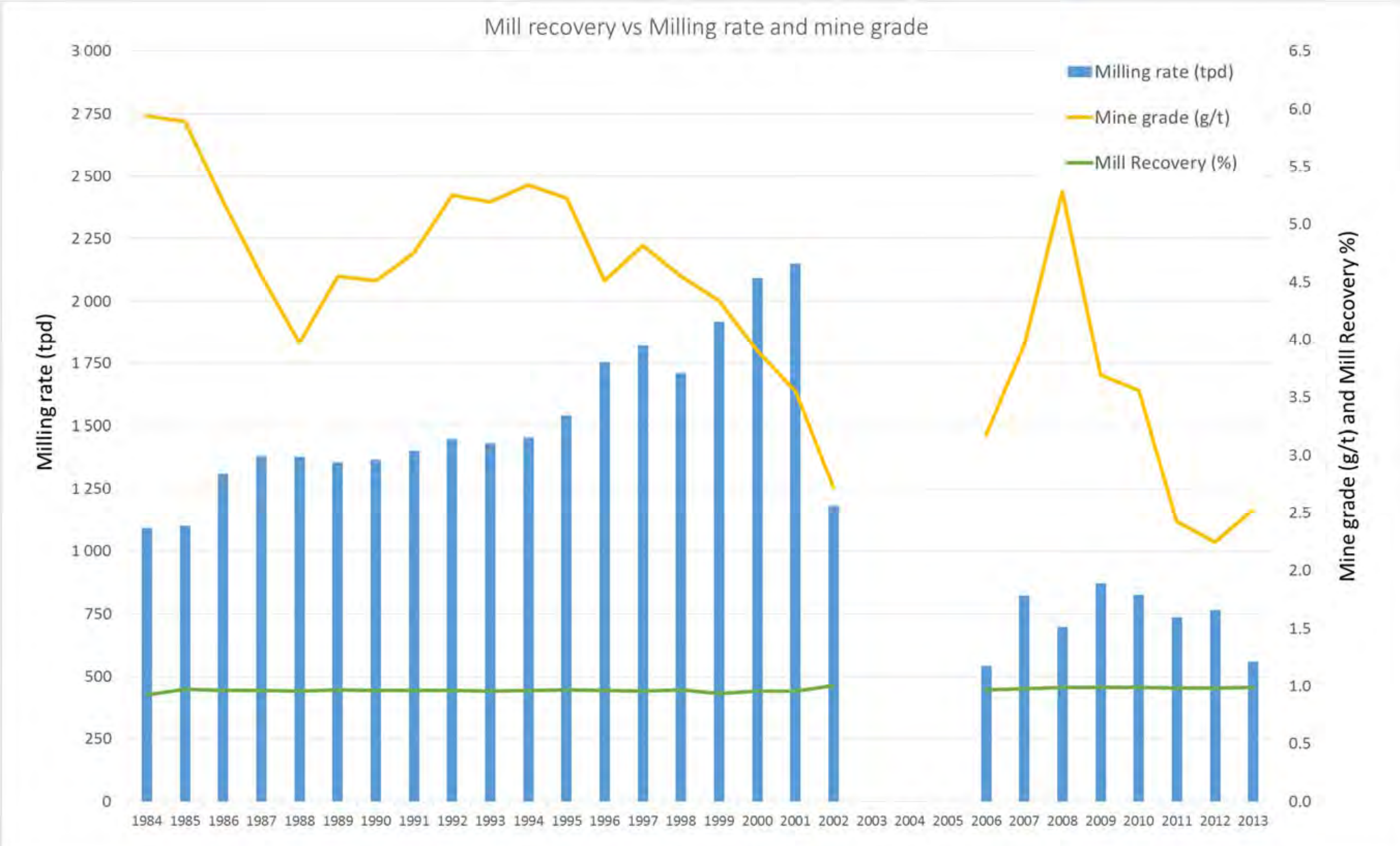

Figure 13.4 – Mine recovery, milling rate and mine grade from the Kiena process plant from 1984 to 2013

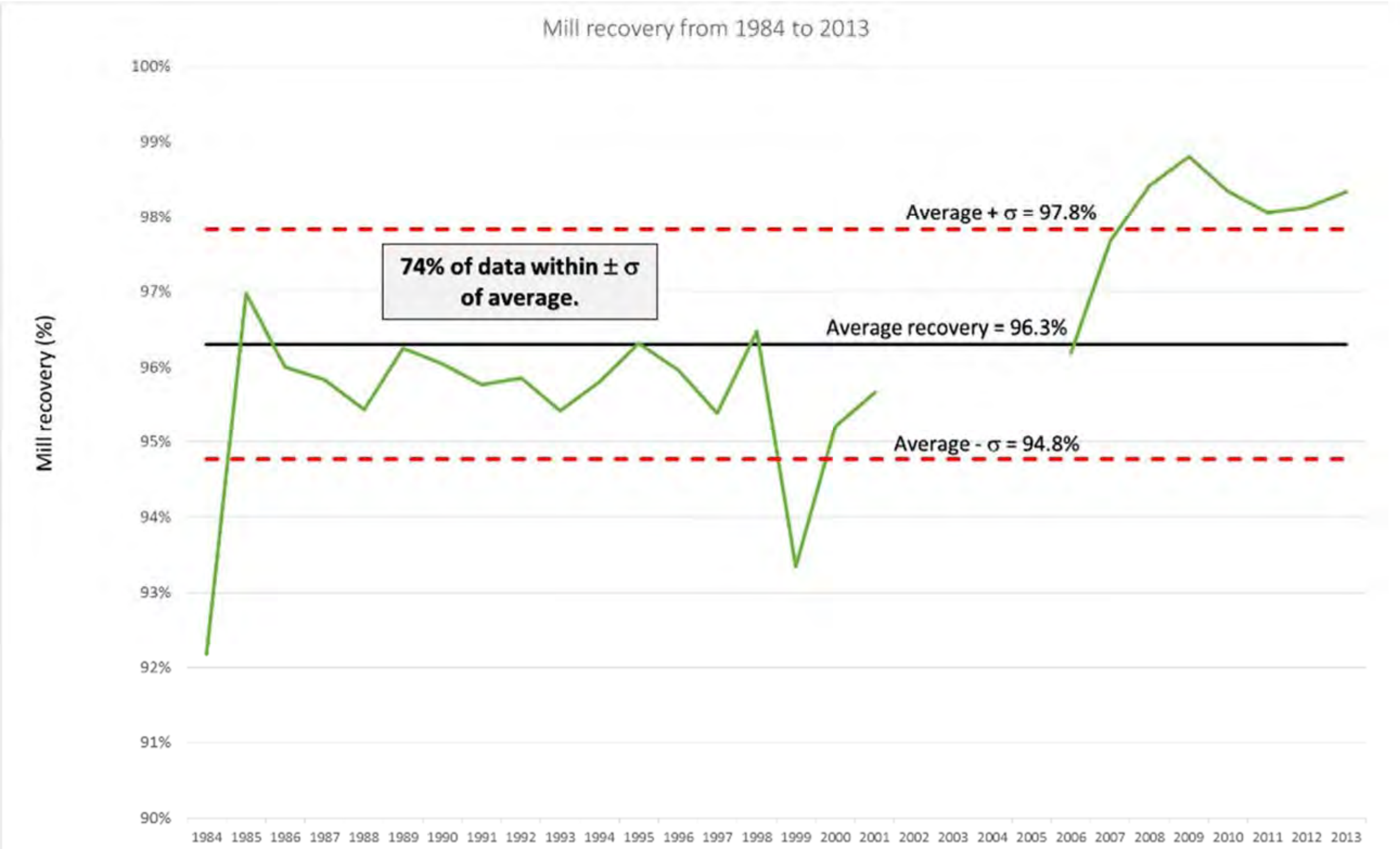

Figure 13.5 – Variation of the mill recovery, from 1984 to 2013

14. MINERAL RESOURCE ESTIMATES

InnovExplo was mandated by Wesdome Gold Mines Ltd to validate the 2014 Kiena and 2009 Wesdome Deposit resource estimates on the Quebec Wesdome Project, and to provide independent NI 43-101 compliant resource estimates. The validation includes a review of the geological model and continuity for each zone, as well as the methodology and parameters used for the estimate, such as cut-off grade, capping, specific gravity, etc.

Approximately 90% of the 2014 Kiena resources were estimated using the polygonal method, with the remaining 10% determined by the block model method. The 2014 Wesdome estimate used the polygonal method only.

14.1 Validation of the 2009 Wesdome Deposit Resource Estimate

The last NI 43-101 technical report on the Wesdome deposit was prepared by InnovExplo and dated December 8, 2009. The resource estimate presented in that report was prepared by Bruno Turcotte, M.Sc., P.Geo., under the supervision of Carl Pelletier, B.Sc., P.Geo., using all available results (Turcotte and Pelletier, 2009). The main objective was to confirm the presence of sufficient resources within the historical Wesdome property (see Fig. 4.4 and section 4.4.4) to determine whether further exploration work by Wesdome was warranted. The resource estimate was compiled for the area between cross sections 1880E and 3600E, and between 0 and 500 m deep.

In 2009, InnovExplo estimated that the Wesdome deposit contained Indicated Resources of 335,900 metric tons grading 7.46 g/t Au, for a total of 80,564 ounces (Turcotte and Pelletier, 2009). Total Inferred Resources were estimated at 2,310,900 metric tons grading 8.05 g/t Au, for a total of 598,017 ounces. The resources were calculated at a cut-off grade of 5.0 g/t Au. A proposed 100-m-thick crown pillar was included in the estimate.

Since the publication of the 2009 estimate, twelve (12) holes were drilled in the Wesdome L Zone (see section 10.3.6.3), which is part of the Wesdome deposit. Although some significant gold values were obtained, these results do not significantly affect the resource statement published in 2009.

14.1.1 Validation of methodology

The 2009 resource estimate for the Wesdome deposit was calculated using the polygonal method on longitudinal sections. The steps taken to review and validate the 2009 estimation methodology are outlined below.

14.1.1.1 Cross sections

The first step was to regenerate the same cross sections that had been used as the basis for the 2009 estimate. InnovExplo used Gemcom software and the database supplied by Wesdome. The new set comprises 117 sections spaced 20 m apart, and covers a total of 2,500 m east-west and 2,000 m north-south. As was done in 2009, the cross sections were generated facing N300° Az.

14.1.1.2 Geological interpretation

The second step was to re-assess the 2009 geological interpretation, which was based on grades and descriptions obtained from drilling.

The 2009 resource model comprised twenty-one (21) mineralized zones that displayed continuity from one cross section to the next, even though the spacing between holes was fairly large. The minimum true thickness of 1.5 m was based on the minimum width required for shrinkage mining methods.

InnovExplo's review of the geological interpretation confirms the 2009 conclusion, assuming a shrinkage method will be adopted. The minimum true thickness of 1.5 m is considered valid and can be used for the 2015 resource estimation.

14.1.1.3 Capping

The third step in the validation process was the capping of high-grade assay values. In 2009, a total of 2,940 samples (value ≥ 0) were identified within the boundaries of the twenty-one (21) mineralized zones, corresponding to 813 drill hole intercepts. The raw assay histogram plot from 2009 (Fig. 14.1) indicated that values greater than 67 g/t Au were likely erratics or nuggets.

InnovExplo believes that the high-grade capping value (67 g/t Au) used for the 2009 Wesdome Deposit Resource Estimate remains valid and can be used for the 2015 estimation.

14.1.1.4 Intercept definition

The fourth step was to identify the number of drill hole intercepts with a minimum true thickness of 1.5 m. True thicknesses were measured on cross sections. The capped intercept grade was calculated as the weighted average of capped DDH gold values. All drill hole intercepts were calculated using the capped grade of the adjacent material when assayed, or a value of zero when not assayed.

Where a mineralized zone is wider than minimum true thickness but has higher grades in only a portion of the zone, the grade was calculated over the full width of the zone, including the low-grade areas. The limits of composites were defined by assays only. This method avoids the possibility of estimating high-grade values for a zone that may not be reproducible by any mining method in the future.

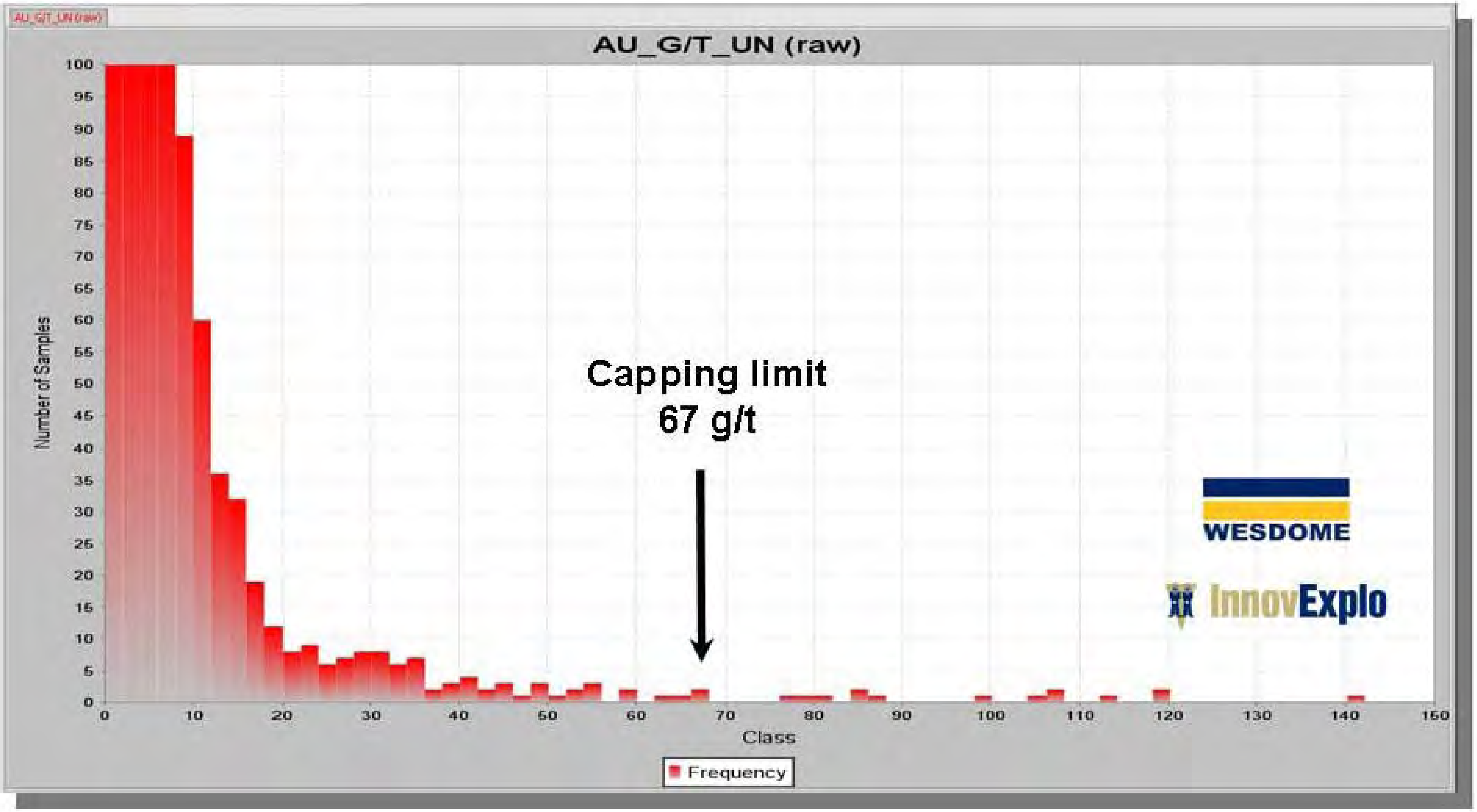

Figure 14.1 – Raw assay histogram used in 2009 to determine the capping limit and identify erratic and/or nugget values in the Wesdome deposit

14.1.1.5 Polygons on inclined longitudinal sections

The fifth step was to review the data plotted on the inclined longitudinal sections generated in 2009. The inclined sections were defined along an azimuth of N120°. All diamond drill holes intersecting gold-bearing zones were identified on the sections. Each polygon was assigned a unique name. Polygon limits were defined by the mid-distance between two drill hole intercepts, or the maximum distance from the pierce point, defined as 40 m.

14.1.1.6 Polygon tonnage and specific gravity

The sixth step was to validate the tonnage estimate. Tonnage was calculated for each polygon using the area of the polygon on the inclined longitudinal section multiplied by the true thickness of each intercept and the specific gravity.

When InnovExplo prepared the 2009 resource estimate, there were no specific gravity measurements for rocks from the historical Wesdome property. InnovExplo used a value of 2.8 t/m^3, which was the value used in the past by Wesdome when operating the Kiena mine.

InnovExplo believes that the specific gravity value of 2.8 t/m^3 remains valid and can be used for the 2015 resource estimation. However, this value should be re-calculated in the future using core samples from the various lithologies encountered within the mineralized zones of the Wesdome deposit.

14.1.1.7 Estimation of cut-off grade

The seventh step was to review the cut-off grade.

For the 2009 resource estimate, InnovExplo used a cut-off grade of 5.0 g/t Au. At the time the estimate was being prepared, the average gold price was roughly US$973.00, and the average exchange rate was about 1 USD = 1.14 CAD, resulting in an average price in Canadian dollars of $1,109.22.

For the 2015 estimation, InnovExplo used a gold price of US$1,100.00 and an exchange rate of 1 USD = 1.30 CAD, corresponding to a gold price in Canadian dollars of $1,430.00. Table 14.1 provides the estimated operating costs per metric ton (C$/t) that were used to determine the 2015 cut-off grade (COG), assuming a shrinkage mining method. The result is a total cost per metric ton of C$225.00.

Processing and general administration costs are based on the operating costs of 2012, the last full year of production at the Kiena mine. These costs were indexed at 2% over 3 years. The global mining cost was established by InnovExplo.

The metallurgical recovery corresponds to the value obtained during the last full year of mining in 2012.

Based on these new parameters, InnovExplo determined the cut-off grade would remain unchanged at 5.0 g/t Au for the 2015 Wesdome Deposit Resource Estimate.

Table 14.1 – Parameters used to estimate the cut-off grade (COG) for the 2015 Wesdome Deposit Resource Estimate, assuming a shrinkage mining method.

	Exchange Rate 1 $USD = X $CAD		1.30
	Gold Price (USD)	U$/oz	1,100.00 $
GP	Gold Price (CAD)	C$/oz	1,430.00 $
Pc	Processing Cost	C$/t	17.00 $
r	Metallurgical recovery	%	98.2%
GA	General and Administration	C$/t	8.00 $
GMc	Global mining cost	C$/t	200.00 $
	Total Cost by metric tonne	C$/t	225.00 $
	Resources Cut-off grade	g/t	5.0

14.1.1.8 Mineral resource classification

The final step in the validation process was the classification of mineral resources. For the 2015 resource estimation, InnovExplo kept the same classification as for the 2009 estimate (Turcotte and Pelletier, 2009).

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

The **Inferred Mineral Resource** represents polygons with a maximum radius of 40 m from drill hole intercepts. This resource is based on isolated drill hole intercepts. This radius was based on the maximum size of mineralized lenses observed in historical underground mine workings in the Val-d'Or district. InnovExplo calculated sizes using the dimensions of lenses mapped in drifts and the dimensions of historical stopes, as recorded in historical documents.

A proposed 100-m-thick crown pillar was included in the Wesdome deposit resource estimate.

14.1.2 Results of the 2015 Wesdome Deposit Resource Estimate

InnovExplo is of the opinion that the 2015 Wesdome Deposit Resource Estimate can be classified as Indicated and Inferred based on geological information and the distribution of diamond drill holes within the mineralized zones.

InnovExplo estimates that the Wesdome deposit contains Indicated Resources of 335,900 metric tons grading 7.46 g/t Au, for a total of 80,564 ounces. Total Inferred

Resources are estimated at 2,310,900 metric tons grading 8.05 g/t Au, for a total of 598,017 ounces. These resources were calculated at a cut-off grade of 5.0 g/t Au. A proposed 100-m-thick crown pillar was included in the estimate. A breakdown of the results is provided in Tables 14.2 and 14.3.

Table 14.2 – Results of the 2015 Wesdome Deposit Resource Estimate (Indicated Resource) for all 21 gold zones at a cut-off grade of 5.0 g/t Au

	Indicated Resource Below Crown Pillar			Indicated Resource Within Crown Pillar			Indicated Resource (Total)		
Zone	Metric Tonne (t)	Grade (g/t)	Ounces	Metric Tonne (t)	Grade (g/t)	Ounces	Metric Ton (t)	Grade (g/t)	Ounces
A	107,200	7.78	26,800	35,200	6.76	7,700	142,400	7.53	34,500
AF	15,900	8.89	4,600				15,900	8.89	4,600
AH	17,800	11.21	6,400	900	13.90	400	18,700	11.33	6,800
AH1									
AH2									
AH3									
A1	6,100	6.20	1,200				6,100	6.20	1,200
B	32,600	7.24	7,600				32,600	7.24	7,600
C									
D									
E	49,800	6.29	10,000				49,800	6.29	10,000
E0	5,400	10.50	1,800				5,400	10.50	1,800
E1	11,700	6.79	2,600				11,700	6.79	2,600
E3	20,100	6.61	4,300	3,900	6.10	800	24,000	6.52	5,100
E4									
F									
F1									
F2	3,000	12.80	1,200				3,000	12.80	1,200
F4	6,100	9.93	2,000				6,100	9.93	2,000
F6									
L				20,000	5.00	3,200	20,000	5.00	3,200
TOTAL	275,700	7.73	68,500	60,000	6.23	12,100	335,700	7.46	80,600

- The independent and qualified person for this resource estimate, as defined by NI 43-101, is Bruno Turcotte, P.Geo., M.Sc., and the effective date of the estimate is December 16, 2015.
- These mineral resources are not mineral reserves and do not have demonstrated economic viability.
- Results are presented in situ and undiluted.
- Indicated and Inferred resources were evaluated from drill hole results using a polygonal method on inclined longitudinal sections.
- A cut-off grade of 5 g/t Au was used for all mineralized zones.
- The cut-off grade must be re-evaluated in light of changes in prevailing market conditions (gold price, exchange rate and mining costs).
- A fixed density of 2.8 g/cm3 was used for all zones.
- A minimum true thickness of 1.5 m was applied using the grade of the adjacent material when assayed, or a value of zero when not assayed.
- The high-grade capping value was established at 67 g/t Au.
- Ounce (troy) = metric tons x grade / 31.103487. Calculations used metric units (metres, tonnes and g/t).
- The number of metric tons was rounded to the nearest hundred. Any discrepancies in the totals are due to rounding effects. Rounding followed the recommendations in NI 43-101.
- InnovExplo is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political, marketing or other relevant issues that could materially affect the mineral resource estimate.

Table 14.2 – Results of the 2015 Wesdome Deposit Resource Estimate (Inferred Resource) for all 21 gold zones at a cut-off grade of 5.0 g/t Au

	Inferred Resource Below Crown Pillar			Inferred Resource Within Crown Pillar			Infered Resource (Total)		
Zone	Metric Ton (t)	Grade (g/t)	Ounces	Metric Ton (t)	Grade (g/t)	Ounces	Metric Ton (t)	Grade (g/t)	Ounces
A	511,200	7.15	117,500	39,700	8.19	10,500	550,900	7.22	128,000
AF	36,900	13.09	15,500				36,900	13.09	15,500
AH	7,100	10.00	2,300	21,500	8.48	5,900	28,600	8.86	8,200
AH1	38,800	10.05	12,500				38,800	10.05	12,500
AH2	29,000	11.48	10,700	15,300	5.40	2,600	44,300	9.38	13,300
AH3	5,200	13.70	2,300	39,800	8.67	11,100	45,000	9.25	13,400
A1	27,700	15.34	13,700	44,600	6.35	9,100	72,300	9.80	22,800
B	57,300	8.48	15,600	50,400	6.71	10,900	107,700	7.65	26,500
C	7,300	13.20	3,100	6,400	13.20	2,700	13,700	13.20	5,800
D									
E	355,000	7.39	84,400	70,600	6.84	15,500	425,600	7.30	99,900
E0	202,700	6.52	42,500				202,700	6.52	42,500
E1	64,200	6.94	14,300	33,100	10.79	11,500	97,300	8.25	25,800
E3	32,200	8.77	9,100	52,600	5.20	8,800	84,800	6.55	17,900
E4	89,900	9.38	27,100	49,400	8.68	13,800	139,300	9.13	40,900
F	62,900	9.19	18,600	57,500	6.33	11,700	120,400	7.82	30,300
F1				43,000	10.48	14,500	43,000	10.48	14,500
F2	21,300	10.07	6,900	41,400	11.20	14,900	62,700	10.82	21,800
F4	14,600	9.28	4,300	52,300	9.99	16,800	66,900	9.84	21,100
F6				50,500	6.53	10,600	50,500	6.53	10,600
L				79,500	10.47	26,800	79,500	10.47	26,800
TOTAL	1,563,300	7.97	400,400	747,600	8.22	197,700	2,310,900	8.05	598,100

- The independent and qualified person for this resource estimate, as defined by NI 43-101, is Bruno Turcotte, P.Geo., M.Sc., and the effective date of the estimate is December 16, 2015.
- These mineral resources are not mineral reserves and do not have demonstrated economic viability.
- Results are presented in situ and undiluted.
- Indicated and Inferred resources were evaluated from drill hole results using a polygonal method on inclined longitudinal sections.
- A cut-off grade of 5 g/t Au was used for all mineralized zones.
- The cut-off grade must be re-evaluated in light of changes in prevailing market conditions (gold price, exchange rate and mining costs).
- A fixed density of 2.8 g/cm3 was used for all zones.
- A minimum true thickness of 1.5 m was applied using the grade of the adjacent material when assayed, or a value of zero when not assayed.
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- Ounce (troy) = metric tons x grade / 31.103487. Calculations used metric units (metres, tonnes and g/t).
- The number of metric tons was rounded to the nearest hundred. Any discrepancies in the totals are due to rounding effects. Rounding followed the recommendations in NI 43-101.

14.2 Validation of the 2014 Kiena Resource Estimate

The last published 43-101 technical report on the Kiena resources was prepared by Geologica Groupe Conseil and dated November 28, 2005 (Beauregard and Gaudreault, 2005). The report presents the results for the VC, 388 and Martin zones.

In early 2013, Wesdome decided that mining operations at Kiena would be suspended by June 30, 2013. A review of the five-year mine plan did not offer enough encouragement to justify the potential risk of staying in operation. Accordingly, Wesdome reclassified the mineral reserves as mineral resources.

The Wesdome 2014 Annual Information Form states that, as at December 31, 2014, Kiena resources were estimated at 639,000 metric tons grading 3.3 g/t Au in the Measured category, and 3,674,000 metric tons grading 3.8 g/t Au in the Indicated category. The estimate was compiled and verified by Marc Ducharme, P.Geo., of Wesdome, a qualified person as per NI 43-101. Wesdome did not publish an accompanying 43-101 compliant technical report to support the internal resource statement. Marc Ducharme provided InnovExplo with a breakdown of the resource estimates for each zone, as presented in Table 14.4.

Table 14.4 – Breakdown of the Kiena Resource Estimate published by Wesdome as at December 31, 2014.

	ZONE	RESOURCES (PREVIOUSLY 2012 RESERVES)				RESOURCES			
		MESURED		INDICATED		MESURED		INDICATED	
		Tonnes	Grade (g/t)	Tonnes	Grade (g/t)	Tonnes	Grade (g/t)	Tonnes	Grade (g/t)
BLOCK MODEL METHOD	Intermediary Zone C					27,000	3.37		
	Lower Zone C					47,000	3.15		
	Zone 25			11,100	3.99	7,200	4.29		
	Zone 17-30W							6,400	3.46
	Zone Raise					6,200	9.42		
	Zone HW					4,200	5.71		
	Zone 19-26					41,300	3.52		
	Zone 17-26					14,600	3.29		
	Zone North F							45,400	2.43
	Zone 01							318,500	1.63
	Zone South	44,055	3.06	10,810	3.76			66,000	3.6
	S50 (Level 106)	177,884	2.69	43,820	2.63				
	Zone J					4,700	4.86		
	Zone VC1	28,114	3.07						
	Zone R							64,600	2.37
	Zone VC99	4,650	11.36						
	Zone 388	149,240	3.26					43,500	1.56
	SUBTOTAL BLOCK MODEL	403,943	3.07	65,730	3.06	152,200	3.74	544,400	2.00
POLYGONAL METHOD	Zone Martin	38,258	3.44	166,511	3.70	45,009	3.36	177,379	2.91
	Dubuisson			427428	4.44				
	Dubuisson North 1							261,901	5.96
	Dubuisson North 2							164,616	4.19
	Zone Northwest			662,740	2.84				
	S50 Deep Zone A							216,389	8.70
	S50 Deep Zone AH							131,146	5.96
	S50 Deep Zone B							571,803	2.56
	Presqu'ile 1							112311	5.43
	Presqu'ile 2							171,488	3.92
	SUBTOTAL POLYGONAL	38,258	3.44	1,256,679	3.50	45,009	3.36	1,807,033	4.52
	TOTAL RESOURCES	442,201	3.10	1,322,409	3.48	197,209	3.65	2,351,433	3.95

Total Measured Resources	639,410	3.27
Total Indicated Resources	3,673,842	3.78

No Inferred resources were estimated. A gold price of C$1,650 per ounce was used for the estimate, but no specific cut-off grade was mentioned. All resources incorporated dilution factors of 10% to 25%. The 2014 Kiena Mineral Resource Estimate has no demonstrated economic viability.

Since the publication of the 2014 Kiena Resource Estimate, seven (7) holes have been drilled in the Presqu'ile Zone (see section 10.3.5.6), which was part of the 2014 resource area (see Table 14.4: Presqu'ile 1 and 2). Although some significant gold values were obtained, these results would not significantly affect the resource statement published in 2014.

14.2.1 Validation of the polygonal methodology

Approximately 80% of the 2014 Kiena mineral resource was estimated using the polygonal method on vertical longitudinal sections. A set of cross sections was generated for each zone by Wesdome personnel.

14.2.1.1 Available information

In order to validate the 2014 Kiena Resource Estimate, Marc Ducharme (Wesdome) supplied InnovExplo with all sets of cross sections and vertical longitudinal sections for each zone. The vertical longitudinal sections show the following:

- polygon shapes
- the centre points of each intercept
- the horizontal thickness value
- the capped gold grade of the intercept
- InnovExplo was also provided with tables derived from Excel files for each zone. The tables contained the details for each polygon on the vertical longitudinal sections, notably the following:
- the diamond drill holes associated with each polygon
- the horizontal thickness on each cross section
- the capped gold grade of each intercept (capping value of 34.28 g/t Au)
- the uncapped gold grade of each intercept
- the area of each polygon on the vertical longitudinal section
- the volume of each polygon
- the tonnage of each polygon
- the contained gold

14.2.1.2 Geological interpretation

Wesdome's geological interpretation on cross sections was based on descriptions of the mineralized zones from diamond drill hole logs and on uncapped gold grades. InnovExplo thoroughly reviewed the geological interpretation of each mineralized zone using Wesdome's set of cross sections. The zones generally display good geological continuity from one cross section to the next despite some structural deformation (shear zones and folds) on some sections. It is important to note that any new geological information from new diamond drill holes could change the geological interpretation of these mineralized zones.

A minimum horizontal width of 2.5 m was used on the cross sections. This minimum horizontal width was determined by Wesdome personnel to correspond to the minimum width required, before dilution, for long hole mining methods.

InnovExplo's review of the geological interpretation confirms the 2014 conclusion, assuming a long hole method will be adopted. The minimum horizontal thickness of 2.5 m remains valid and can be used for the 2015 resource estimation.

14.2.1.3 High-grade assay capping value

Wesdome personnel established a value of 34.28 g/t Au as a high-grade assay capping value for all mineralized zones. This value was used in the past by Wesdome when operating the Kiena mine.

InnovExplo believes that the 2014 high-grade capping value of 34.28 g/t Au is valid and can be used for the 2015 resource estimation.

14.2.1.4 Intercepts

All drill hole intercepts were calculated on cross sections using the capped grade of the adjacent material when assayed, or a value of zero when not assayed. Once calculated, horizontal thicknesses were then measured on the cross sections.

14.2.1.5 Polygons on vertical longitudinal sections

Wesdome personnel constructed polygons on vertical longitudinal sections. Each longitudinal section shows the position of drill hole intercepts, their horizontal thicknesses and their capped grades. Each polygon was assigned a unique name. The limit for each polygon represents the mid-distance between two drill hole intercepts, or the maximum distance from the pierce point, defined as about 30 m.

14.2.1.6 Polygon tonnage and specific gravity

The tonnage was determined for each polygon using the area of the polygon on vertical longitudinal section multiplied by the horizontal thickness of each intercept and the specific gravity.

A specific gravity value of 2.8 t/m^3 was used for the 2014 Kiena Resource Estimate. This was the same value used by Wesdome when operating the Kiena mine.

InnovExplo believes that the specific gravity value of 2.8 t/m^3 remains valid and can be used for the 2015 resource estimation.

14.2.1.7 Estimation of cut-off grade

No specific cut-off grade was mentioned for the 2014 Kiena Resource Estimate.

For the 2015 estimation, InnovExplo used a gold price of US$1,100.00 and an exchange rate of 1 USD = 1.30 CAD, corresponding to a gold price in Canadian dollars of $1,430.00. Table 14.5 provides the estimated operating costs per metric ton (C$/t) that were used to determine the 2015 cut-off grade (COG), assuming a long hole mining method. The result is a total cost per metric ton of C$135.00.

The 2015 cut-off grade is based on the operating costs of 2012, the last full year of production at the Kiena mine. These costs were indexed at 2% over 3 years. In 2012, a total of 265,872 metric tons was milled at the Kiena Mill, with a recovery grade of 2.2 g/t Au and a metallurgical recovery of 98.2%. This metallurgical recovery was used to estimate the cut-off grade.

InnovExplo established a cut-off grade of 3.0 g/t Au for the 2015 Kiena Resource Estimate.

Table 14.5 – Parameters used to estimate the cut-off grade (COG) for the 2015 Kiena Resource Estimate, assuming a long hole mining method.

	Exchange Rate 1 $USD = X $CAD		**1.30**
	Gold Price (USD)	**U$/oz**	**1,100.00 $**
GP	**Gold Price (CAD)**	**C$/oz**	**1,430.00 $**
Pc	**Processing Cost**	**C$/t**	**17.00 $**
r	**Metallurgical recovery**	**%**	**98.2%**
GA	**General and Administration**	**C$/t**	**8.00 $**
GMc	**Global mining cost**	**C$/t**	**110.00 $**
	Total Cost by metric tonne	**C$/t**	**135.00 $**
	Resources Cut-off grade	**g/t**	**3.0**

*Resource COG formula = 31.103487 * (Pc + GA +GMc) / (r * GP)*

14.2.1.8 Mineral Resource Classification (2015)

For the 2015 Kiena Resource Estimate, InnovExplo used the longitudinal sections and tables provided by Wesdome.

On the vertical longitudinal sections, InnovExplo removed all polygons with a gold grade below the established cut-off of 3 g/t Au. Some of these polygons were kept to preserve geological continuity. All isolated polygons with a gold grade above the cut-off grade were also removed without re-calculating alternative weighted average gold intersection over narrower widths.

A proposed 100-m-thick crown pillar was included in this mineral resource estimate.

The Measured Mineral Resource represents polygons where the gold grade is extrapolated up to 25 m above and below the drift opened within the mineralized zone. Each polygon's gold grade is evaluated from muck samples, chip samples and test holes. Measured Resources are only present in the Martin Zone.

The Indicated Mineral Resource represents polygons with a maximum radius of 30 m from drill hole intercepts. This resource is defined in areas where drill hole spacing is less than 30 m and drill holes form a cluster of similar results. The radius was based on the average size of mineralized lenses in historical underground openings in the Kiena mine.

14.2.1.9 Results of the 2015 Kiena Resource Estimate

InnovExplo is of the opinion that the 2015 Kiena Resource Estimate can be classified as Measured, Indicated and Inferred resources based on the geological information and distribution of diamond drill holes within the mineralized zones.

Below the proposed 100-m-thick crown pillar, InnovExplo estimates Measured Resources of 63,700 metric tons grading 4.06 g/t Au, for a total of 8,300 ounces. Total Indicated Resources are estimated at 2,164,000 metric tons grading 5.35 g/t Au, for a total of 372,500 ounces.

Within the proposed 100-m crown pillar, InnovExplo estimates Indicated Resources of 73,900 metric tons grading 4.88 g/t Au, for a total of 11,600 ounces.

No Inferred Resource was estimated.

The mineral resources were estimated using a cut-off grade of 3.0 g/t Au. A proposed 100-m crown pillar was included in the estimate.

A breakdown of the results is provided in Tables 14.6 and 14.7. Details of the estimate, as well as the vertical longitudinal sections for each zone, are provided in Appendix VIII.

Table 14.6 – Results of the 2015 Kiena Polygonal In Situ Mineral Resource Estimate (Measured, Indicated and Measured+Indicated resources) below the proposed crown pillar at a cut-off grade of 3 g/t Au

	2015 MINERAL RESOURCES ESTIMATE								
	MESURED RESOURCES			INDICATED RSOURCES			MEASURED + INDICATED RESOURCES		
	Tonnes	Grade (g/t)	Ounces	Tonnes	Grade (g/t)	Ounces	Tonnes	Grade (g/t)	Ounces
Martin Zone	63,700	4.06	8,300	197,800	4.78	30,400	261,500	4.60	38,700
Dubuisson Zone				281,500	5.46	49,400	281,500	5.46	49,400
Dubuisson North 1 Zone				193,700	7.67	47,800	192,900	7.71	47,800
Dubuisson North 2 Zone				124,700	5.36	21,500	124,700	5.36	21,500
Northwest Zone				467,400	3.79	57,000	467,400	3.79	57,000
S50 Deep Zone A				173,100	10.87	60,500	173,100	10.87	60,500
S50 Deep Zone AH				68,700	8.53	18,900	68,700	8.53	18,900
S50 Deep Zone B				514,100	3.21	53,100	514,100	3.21	53,100
Presqu'ile 1 Zone				91,800	6.64	19,600	89,700	6.79	19,600
Presqu'ile 2 Zone				51,200	8.67	14,300	51,200	8.67	14,300
TOTAL RESOURCES	63,700	4.06	8,300	2,164,000	5.35	372,500	2,224,800	5.32	380,800

- The independent and qualified person for this resource estimate, as defined by NI 43-101, is Bruno Turcotte, P.Geo., M.Sc., and the effective date of the estimate is December 16, 2015.
- These mineral resources are not mineral reserves and do not have demonstrated economic viability.
- Results are presented in situ and undiluted.
- Measured Resources were evaluated from gold grades extrapolated up to 25 m above and below drifts opened within the mineralized zone. A polygon's gold grade is evaluated from muck samples, chip samples and test holes. Measured Resources are present in the Martin Zone only.
- Indicated Resources were evaluated from drill hole results using a polygonal method on vertical longitudinal sections. No inferred Resource was estimated.
- A cut-off grade of 3 g/t Au was used for all mineralized zones.
- The cut-off grade must be re-evaluated in light of changes in prevailing market conditions (gold price, exchange rate and mining costs).
- A fixed density of 2.8 g/cm^3 was used for all zones.
- A minimum horizontal thickness of 2.5 m was applied using the grade of the adjacent material when assayed, or a value of zero when not assayed.
- The high-grade capping value was established at 34.28 g/t Au.
- Ounce (troy) = metric tons x grade / 31.103487. Calculations used metric units (metres, tonnes and g/t).
- The number of metric tons was rounded to the nearest hundred. Any discrepancies in the totals are due to rounding effects. Rounding followed the recommendations in NI 43-101.
- InnovExplo is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political, marketing or other relevant issues that could materially affect the resource estimate

Table 14.7 – Results of the Kiena 2015 Polygonal In Situ Mineral Resource Estimate (Measured, Indicated and Measured+Indicated resources) within the proposed crown pillar at 3 g/t Au cut-off

	2015 MINERAL RESOURCES ESTIMATE WITHIN CROWN PILLAR								
	MESURED RESOURCES			INDICATED RSOURCES			MEASUTRED + INDICATD RESOURCES		
	Tonnes	Grade (g/t)	Ounces	Tonnes	Grade (g/t)	Ounces	Tonnes	Grade (g/t)	Ounces
Martin Zone									
Dubuisson Zone				33,300	6.44	6,900	33,300	6.44	6,900
Dubuisson North 1 Zone				33,600	3.67	4,000	33,600	3.67	4,000
Dubuisson North 2 Zone				7,000	3.17	700	7,000	3.17	700
Northwest Zone									
S50 Deep Zone A									
S50 Deep Zone AH									
S50 Deep Zone B									
Presqu'ile 1 Zone									
Presqu'ile 2 Zone									
TOTAL RESOURCES				73,900	4.88	11,600	73,900	4.88	11,600

- The independent and qualified person for this resource estimate, as defined by NI 43-101, is Bruno Turcotte, P.Geo., M.Sc., and the effective date of the estimate is December 16, 2015.
- These mineral resources are not mineral reserves and do not have demonstrated economic viability.
- Results are presented in situ and undiluted.
- Measured Resources were evaluated from gold grades extrapolated up to 25 m above and below drifts opened within the mineralized zone. A polygon's gold grade is evaluated from muck samples, chip samples and test holes. Measured Resources are present in the Martin Zone only.
- Indicated Resources were evaluated from drill hole results using a polygonal method on vertical longitudinal sections. No inferred Resource was estimated.
- A cut-off grade of 3 g/t Au was used for all mineralized zones.
- The cut-off grade must be re-evaluated in light of changes in prevailing market conditions (gold price, exchange rate and mining costs).
- A fixed density of 2.8 g/cm^3 was used for all zones.
- A minimum horizontal thickness of 2.5 m was applied using the grade of the adjacent material when assayed, or a value of zero when not assayed.
- The high-grade capping value was established at 34.28 g/t Au.
- Ounce (troy) = metric tons x grade / 31.103487. Calculations used metric units (metres, tonnes and g/t).
- The number of metric tons was rounded to the nearest hundred. Any discrepancies in the totals are due to rounding effects. Rounding followed the recommendations in NI 43-101.
- InnovExplo is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political, marketing or other relevant issues that could materially affect the resource estimate

14.2.2 Validation of the block model methodology

InnovExplo attempted to validate the resources derived from block models, which were included in the resource statement published in Wesdome's 2014 Annual Information Form (Table 14.8). The block model portion of the resources represents 25% of the tonnage and 17% of the ounces of the combined Measured and Indicated categories.

Table 14.8 – Block model resources published in the 2014 Wesdome Annual Information Form

ZONE	2014 RESOURCES AS PUBLISHED BY WESDOME IN 2014 ANNUAL FORM								
	MESURED			INDICATED			INFERRED		
	Tonnes	Grade (g/t)	Ounces	Tonnes	Grade (g/t)	Ounces	Tonnes	Grade (g/t)	Ounces
Intermediary Zone C	27,000	3.37	2,925						
Lower Zone C	47,000	3.15	4,760						
Zone 25	7,200	4.29	993	11,100	3.99	1,424			
Zone 17-30W				6,400	3.46	712			
Zone Raise	6,200	9.42	1,878						
Zone HW	4,200	5.71	771						
Zone 19-26	41,300	3.52	4,674						
Zone 17-26	14,600	3.29	1,544						
Zone North F				45,400	2.43	3,547			
Zone 01				318,500	1.63	16,691			
Zone South	44,055	3.06	4,334	76,810	3.62	8,946			
S50 (Level 106)	177,884	2.69	15,384	43,820	2.63	3,705			
Zone J	4,700	4.86	734						
Zone VC1	28,114	3.07	2,775						
Zone R				64,600	2.37	4,922			
Zone VC99	4,650	11.36	1,698						
Zone 388	149,240	3.26	15,642	43,500	1.56	2,182			
TOTAL	**556,143**	**3.25**	**58,114**	**610,130**	**2.15**	**42,129**			

Of the 17 zones for which block model resources were reported (Table 14.8), Wesdome was unable to recover block models for the nine (9) zones shown in Table 14.9.

Table 14.9 – Block model resources published in the 2014 Wesdome Annual Information Form, for which block models could not be recovered by Wesdome personnel

ZONE	2014 RESOURCES AS PUBLISHED BY WESDOME IN 2014 ANNUAL FORM								
	MESURED			INDICATED			INFERRED		
	Tonnes	Grade (g/t)	Ounces	Tonnes	Grade (g/t)	Ounces	Tonnes	Grade (g/t)	Ounces
Intermediary Zone C	27,000	3.37	2,925						
Zone 17-30W				6,400	3.46	712			
Zone HW	4,200	5.71	771						
Zone 19-26	41,300	3.52	4,674						
Zone 17-26	14,600	3.29	1,544						
Zone 01				318,500	1.63	16,691			
Zone J	4,700	4.86	734						
Zone VC1	28,114	3.07	2,775						
Zone R				64,600	2.37	4,922			
TOTAL	**119,914**	**3.48**	**13,424**	**389,500**	**1.78**	**22,326**			

Wesdome was able to provide InnovExplo with block models for the remaining eight (8) zones. These are shown in Table 14.10.

Table 14.10 – Block model resources published in the 2014 Wesdome Annual Information Form, for which block models were recovered by Wesdome personnel

ZONE	2014 RESOURCES AS PUBLISHED BY WESDOME IN 2014 ANNUAL FORM								
	MESURED			INDICATED			INFERRED		
	Tonnes	Grade (g/t)	Ounces	Tonnes	Grade (g/t)	Ounces	Tonnes	Grade (g/t)	Ounces
Lower Zone C	47,000	3.15	4,760						
Zone 25	7,200	4.29	993	11,100	3.99	1,424			
Zone Raise	6,200	9.42	1,878						
Zone North F				45,400	2.43	3,547			
Zone South	44,055	3.06	4,334	76,810	3.62	8,946			
S50 (Level 106)	177,884	2.69	15,384	43,820	2.63	3,705			
Zone VC99	4,650	11.36	1,698						
Zone 388	149,240	3.26	15,642	43,500	1.56	2,182			
TOTAL	436,229	3.19	44,690	220,630	2.79	19,804			

InnovExplo initiated a standard validation process on the zones for which block models were provided. This validation included:

- Wireframe validation;
- Interpolation parameter validation;
- Block model result validation;
- Depletion inventory.

InnovExplo reviewed two zones representing 48% of the total ounces derived from block models for which InnovExplo received information. InnovExplo could not repeat the numbers reported for these two zones, and significant discrepancies were observed with regards to the following:

Interpretation

The interpretation had been produced on cross sections (Zone 388) and on plan views (Zone South) without snapping to drill holes. Even though this can be a perfectly acceptable practice in block modeling, allowing a wireframe to adequately model a zone regardless of drill hole location issues; it is imperative that intercepts be manually compiled when such a methodology is chosen. It was reported to the author that the intercepts for the modelling had been automatically created by the Datamine software using an un-snapped interpretation. This caused intercepts to be shifted along drill holes, thereby producing an erroneous database that was used from that point forward in the block modelling process.

Block Modelling

The inverse distance squared (ID2) method, using a sphere with a radius of 30 m, was reportedly used for all the block models. Intercepts were composited to 1-m equal lengths using assays capped at 34.28 g/t Au. A fixed density of 2.80 g/cm^3 was used for all rocks. InnovExplo was not provided with a study supporting these parameters.

When InnovExplo attempted to re-interpolate the 388 and South zones using the same parameters, grades were systematically lower than the block models provided by Wesdome.

In some cases (for example the North Branch of Zone 388), the entire physically available tonnage of a zone (that is, the maximum possible volume of available rock) is significantly lower than the reported tonnage, raising significant doubts about the methodology used to create these block models.

Depletion

The methodology used at the Kiena mine to account for depletion is to subtract trucked material from planned resources. This methodology brought significant issues to the reported resources because many of the planned stopes provided more than twice the expected tonnage due to unexpected dilution, hence artificially depleting the resource.

InnovExplo was provided with some CMS solids (3D representations of mined-out stopes), and in some of these cases, a CMS appeared where no depletion was accounted for. Similarly, some longitudinal views showed mined-out representations where no depletion was accounted for.

Cut-off Grade

According to Tables 14.4 and 14.8, it appears that no cut-off grade was applied, or that cut-off grades were well below a plausible prospect of economic extraction.

Table 14.11 provides the results of InnovExplo's validation process. The reader should note that the numbers under "This Study" were obtained from either the block model (Zone South) or the longitudinal representation (Zone 388) provided by Wesdome. The numbers presented in Table 14.11 did not involve any block model re-runs or wireframe modifications.

Table 14.11 – Results of the validation process for the 388 and South zones using a 3.00 g/t Au cut-off grade.

Wesdome's 2014 Annual Form			
Zone	**Tonnes**	**Grade**	**Ounces**
Zone 388	149,240	3.26	15,642
Zone South	120,865	3.42	13,280
This Study*			
Zone	**Tonnes**	**Grade**	**Ounces**
Zone 388	35,018	5.77	6,498
Zone South	73,881	4.11	9,762

**These numbers include many assumptions that could not be entirely verified with regards to wireframes, interpolation parameters, block model parameters and depletion. Therefore, all numbers reported in this table, including those under "This Study", are not compliant with NI 43-101 and should not be relied upon.*

Given that the validation process could only be performed on a limited number of zones, and the fact that this limited validation process yielded significant discrepancies with the resources reported in the 2014 Annual Information Form, the author is of the opinion that the block model resources must be reviewed and brought to NI 43-101 standards before any of it can be reported as NI 43-101 compliant. For this reason, none of the resources reported in Table 14.4 under “BLOCK MODEL METHOD” and in Tables 14.8 to 14.11 should be relied upon. It is prudent to declassify these resources at the time this Report is being written.

14.3 Combined Results of the 2015 Mineral Resource Estimates

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

Measured Mineral Resource

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

Indicated Mineral Resource

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

Inferred Mineral Resource

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

Due to the uncertainty that may be attached to Inferred Mineral Resources, it cannot be assumed that all or any part of an Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. Confidence in the estimate is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure. Inferred Mineral Resources must be excluded from estimates forming the basis of feasibility or other economic studies

Based on economic parameters, InnovExplo established that the Quebec Wesdome Project contains total Measured and Indicated Resources below the proposed 100-m-thick crown pillar of 2,500,600 metric tons grading 5.59 g/t Au, for a total of 449,300 ounces (Table 14.12).

Based on economic parameters, InnovExplo established that the Quebec Wesdome Project contains total Measured and Indicated Resources within the proposed 100-m-thick crown pillar of 134,000 metric tons grading 5.48 g/t Au, for a total of 23,600 ounces (Table 14.13).

Inferred Resources below the proposed 100-m-thick crown pillar amount to 1,563,300 metric tons grading 7.97 g/t Au, for a total of 400,400 ounces (Table 14.14). Inferred Resources within the proposed 100-m-thick crown pillar amount to 747,600 metric tons grading 8.22 g/t Au, for a total of 197,600 ounces (Table 14.14).

Table 14.12 – Results of the 2015 In Situ Mineral Resource Estimate (Measured, Indicated and Measured+Indicated resources) below the proposed crown pillar for the Quebec Wesdome Project)

	2015 MINERAL RESOURCES ESTIMATE								
	MESURED RESOURCES			INDICATED RSOURCES			MEASURED + INDICATED RESOURCES		
	Tonnes	Grade (g/t)	Ounces	Tonnes	Grade (g/t)	Ounces	Tonnes	Grade (g/t)	Ounces
Martin Zone	63,700	4.06	8,300	197,800	4.78	30,400	261,500	4.60	38,700
Dubuisson Zone				281,500	5.46	49,400	281,500	5.46	49,400
Dubuisson North 1 Zone				193,700	7.67	47,800	192,900	7.71	47,800
Dubuisson North 2 Zone				124,700	5.36	21,500	124,700	5.36	21,500
Northwest Zone				467,400	3.79	57,000	467,400	3.79	57,000
S50 Deep Zone A				173,100	10.87	60,500	173,100	10.87	60,500
S50 Deep Zone AH				68,700	8.53	18,900	68,700	8.53	18,900
S50 Deep Zone B				514,100	3.21	53,100	514,100	3.21	53,100
Presqu'ile 1 Zone				91,800	6.64	19,600	89,700	6.79	19,600
Presqu'ile 2 Zone				51,200	8.67	14,300	51,200	8.67	14,300
Wesdome deposit				275,800	7.73	68,500	275,800	7.73	68,500
TOTAL RESOURCES	63,700	4.06	8,300	2,439,800	5.62	441,000	2,500,600	5.59	449,300

- The independent and qualified person for this resource estimate, as defined by NI 43-101, is Bruno Turcotte, P.Geo., M.Sc., and the effective date of the estimate is December 16, 2015.
- These mineral resources are not mineral reserves and do not have demonstrated economic viability.
- Results are presented in situ and undiluted.
- Measured Resources were evaluated from gold grades extrapolated up to 25 m above and below drifts opened within the mineralized zone. A polygon's gold grade is evaluated from muck samples, chip samples and test holes. Measured Resources are present in the Martin Zone only.
- Indicated Resources were evaluated from drill hole results using a polygonal method on vertical longitudinal sections. No inferred Resource was estimated.
- A cut-off grade of 5 g/t Au was used for Wesdome Deposit Resource Estimate.
- A cut-off grade of 3 g/t Au was used for Kiena Resource Estimate
- The cut-off grade must be re-evaluated in light of changes in prevailing market conditions (gold price, exchange rate and mining costs).
- A fixed density of 2.8 g/cm^3 was used for all zones.
- A minimum horizontal thickness of 2.5 m was applied using the grade of the adjacent material when assayed, or a value of zero when not assayed.
- The high-grade capping value was established at 34.28 g/t Au.
- Ounce (troy) = metric tons x grade / 31.103487. Calculations used metric units (metres, tonnes and g/t).
- The number of metric tons was rounded to the nearest hundred. Any discrepancies in the totals are due to rounding effects. Rounding followed the recommendations in NI 43-101.
- InnovExplo is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political, marketing or other relevant issues that could materially affect the resource estimate

Table 14.13 – Results of the 2015 In Situ Mineral Resource Estimate (Measured, Indicated and Measured+Indicated resources) within the proposed crown pillar for the Quebec Wesdome Project

	2015 MINERAL RESOURCES ESTIMATE WITHIN CROWN PILLAR								
	MESURED RESOURCES			INDICATED RSOURCES			MEASUTRED + INDICATD RESOURCES		
	Tonnes	Grade (g/t)	Ounces	Tonnes	Grade (g/t)	Ounces	Tonnes	Grade (g/t)	Ounces
Martin Zone									
Dubuisson Zone				33,300	6.44	6,900	33,300	6.44	6,900
Dubuisson North 1 Zone				33,600	3.67	4,000	33,600	3.67	4,000
Dubuisson North 2 Zone				7,000	3.17	700	7,000	3.17	700
Northwest Zone									
S50 Deep Zone A									
S50 Deep Zone AH									
S50 Deep Zone B									
Presqu'ile 1 Zone									
Presqu'ile 2 Zone									
Wesdome deposit				60,100	6.23	12,000	60,100	6,23	12,000
TOTAL RESOURCES				134,000	5.48	23,600	134,000	5.48	23,600

- The independent and qualified person for this resource estimate, as defined by NI 43-101, is Bruno Turcotte, P.Geo., M.Sc., and the effective date of the estimate is December 16, 2015.
- These mineral resources are not mineral reserves and do not have demonstrated economic viability.
- Results are presented in situ and undiluted.
- Measured Resources were evaluated from gold grades extrapolated up to 25 m above and below drifts opened within the mineralized zone. A polygon's gold grade is evaluated from muck samples, chip samples and test holes. Measured Resources are present in the Martin Zone only.
- Indicated Resources were evaluated from drill hole results using a polygonal method on vertical longitudinal sections. No inferred Resource was estimated.
- A cut-off grade of 5 g/t Au was used for Wesdome Deposit Resource Estimate.
- A cut-off grade of 3 g/t Au was used for Kiena Resource Estimate
- The cut-off grade must be re-evaluated in light of changes in prevailing market conditions (gold price, exchange rate and mining costs).
- A fixed density of 2.8 g/cm^3 was used for all zones.
- A minimum horizontal thickness of 2.5 m was applied using the grade of the adjacent material when assayed, or a value of zero when not assayed.
- The high-grade capping value was established at 34.28 g/t Au.
- Ounce (troy) = metric tons x grade / 31.103487. Calculations used metric units (metres, tonnes and g/t).
- The number of metric tons was rounded to the nearest hundred. Any discrepancies in the totals are due to rounding effects. Rounding followed the recommendations in NI 43-101.
- InnovExplo is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political, marketing or other relevant issues that could materially affect the resource estimate

Table 14.14 – Results of the 2015 In Situ Mineral Resource Estimate (Inferred resources) below or within the proposed crown pillar for the Quebec Wesdome Project

	2015 MINERAL RESOURCES ESTIMATE					
	INFERRED RESOURCES BELOW CROWN PILLAR			INFERRED RESOURCES WITHIN CROWN PILLAR		
	Tonnes	Grade (g/t)	Ounces	Tonnes	Grade (g/t)	Ounces
Martin Zone						
Dubuisson Zone						
Dubuisson North 1 Zone						
Dubuisson North 2 Zone						
Northwest Zone						
S50 Deep Zone A						
S50 Deep Zone AH						
S50 Deep Zone B						
Presqu'ile 1 Zone						
Presqu'ile 2 Zone						
Wesdome deposit	1,563,300	7.97	400,400	747,600	8.22	197,600
TOTAL RESOURCES	1,563,300	7.97	400,400	747,600	8.22	197,600

- The independent and qualified person for this resource estimate, as defined by NI 43-101, is Bruno Turcotte, P.Geo., M.Sc., and the effective date of the estimate is December 16, 2015.
- These mineral resources are not mineral reserves and do not have demonstrated economic viability.
- Results are presented in situ and undiluted.
- Measured Resources were evaluated from gold grades extrapolated up to 25 m above and below drifts opened within the mineralized zone. A polygon's gold grade is evaluated from muck samples, chip samples and test holes. Measured Resources are present in the Martin Zone only.
- Indicated Resources were evaluated from drill hole results using a polygonal method on vertical longitudinal sections. No inferred Resource was estimated.
- A cut-off grade of 5 g/t Au was used for Wesdome Deposit Resource Estimate.
- A cut-off grade of 3 g/t Au was used for Kiena Resource Estimate
- The cut-off grade must be re-evaluated in light of changes in prevailing market conditions (gold price, exchange rate and mining costs).
- A fixed density of 2.8 g/cm^3 was used for all zones.
- A minimum horizontal thickness of 2.5 m was applied using the grade of the adjacent material when assayed, or a value of zero when not assayed.
- The high-grade capping value was established at 34.28 g/t Au.
- Ounce (troy) = metric tons x grade / 31.103487. Calculations used metric units (metres, tonnes and g/t).
- The number of metric tons was rounded to the nearest hundred. Any discrepancies in the totals are due to rounding effects. Rounding followed the recommendations in NI 43-101.
- InnovExplo is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political, marketing or other relevant issues that could materially affect the resource estimate

15. MINERAL RESERVE ESTIMATES

Wesdome has not published any NI 43-101 compliant mineral reserves for the Quebec Wesdome Project.

16. MINING METHODS

Wesdome has not evaluated mining methods for the Quebec Wesdome Project.

17. RECOVERY METHODS

Wesdome has not carried out any NI 43-101 compliant recovery tests on Quebec Wesdome Project samples.

18. PROJECT INFRASTRUCTURE

Wesdome has not evaluated project infrastructure needs for the Quebec Wesdome Project.

19. MARKET STUDIES AND CONTRACTS

Market studies have not been carried out for the Quebec Wesdome Project, and no contracts have been issued.

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

Environmental studies have not been carried out on the Quebec Wesdome Project. Social and community impacts have not been evaluated.

21. CAPITAL AND OPERATING COSTS

Capital and operating costs have not been calculated for the Quebec Wesdome Project.

22. ECONOMIC ANALYSIS

An economic analysis has not been prepared for the Quebec Wesdome Project.

23. ADJACENT PROPERTIES

In this section, the adjacent properties are described, from south to north, in the same order as for the sections on stratigraphy, large-scale fault zones, and the local geologic setting and mineralization (sections 7.3.3, 7.3.4 and 7.5, respectively). Table 23.1 summarizes the main characteristics of each deposit or zone that has been reported on adjacent properties.

23.1 Pontiac Group

There is no significant gold mineralization reported within the Pontiac Group on the adjacent properties.

23.2 Piché Group

Only one significant occurrence of gold mineralization is reported within the Piché Group on the adjacent properties. It is the Malartic Goldfields deposit (Fig. 23.1). During the period between 1941 and 1965, the Malartic Goldfields mine produced a total of 1,702,500 ounces of gold from 8,960,000 metric tons of ore from the No.1 and No. 2 Zones, with an average grade of 5.91 g/t Au.

The following description of the Malartic Goldfields deposit is mostly modified and summarized from Halet (1949) Dresser and Denis (1949), Eakins (1962), Sansfaçon et Trudel (1988), Trudel and Sauvé (1992) and references therein.

This past producer is located within band of Piché Group rocks 800 to 1,000 m wide. The band itself consists of many rock types of different competence, ranging from very weak talc schist through relatively strong massive komatiites to very strong diorite and porphyry intrusives, and each type has reacted differently under stress.

The Malartic Goldfields deposit is a good example of the association of ore deposits with the Cadillac Tectonic Zone. The mineralized zones consist of orebodies contained in diorite dykes located along irregular subsidiary shears of the Cadillac Tectonic Zone, which lies only 200 m to the north. The subsidiary shears are made up of talc-chlorite schist with broad bands and islands of “soft massive” komatiite.

Diorite and porphyry dykes have invaded the schist mainly along the contact between the schist and the massive komatiite, or off the ends of islands or projections of massive komatiite. The diorite dykes are long, narrow, lenticular bodies usually having considerable vertical extent. Diorite dykes of all sizes, up to several hundred metres long and up to 30 m wide, conformable with the attitudes of the enclosing schist. The average strike is N110° and the average dip is 75° north, although there are considerable local variations from these averages. Several of the dykes appear to have occupied parts of drag folds.

The lenticular orebodies are of all sizes; like the dykes, they are up to several hundred metres long and up to 30 m wide. Orebodies are restricted to the diorite dykes and occur where the quartz stringers were sufficiently numerous to bring the whole mass of rock to commercial grade. The vertical range of the orebodies is variable, but it is generally much greater than their length. Some lenses were definitely pipe-like, with lengths of less than 30 m and depths of more than 150 m.

The orebodies were stockworks of quartz stringers and veins occupying parallel and subparallel fractures that cross the diorite dykes at various angles. Some are normal to the walls of the dykes, others are parallel, and all intermediate angles are represented. The fractures dip from horizontal to vertical; the majority, however, dip about 45°. The fissures are strong and persistent in the diorite but split up and disappear within a few centimetres when they pass into schist, and consequently, for practical purposes, the walls of the dykes are the limits of the ore. In the schist, the wallrock along fractures appears to be unaffected by recrystallization, and there is generally little or no pyrite in the walls of fractures. Sampling shows that gold values are entirely in the diorite dykes, the adjoining schist usually being barren.

The diorite is heavily pyritized and recrystallized along the fractures. Most of the gold is in the wallrock and not in the quartz, which carries only sparse amounts of pyrite and other sulphides. A flotation concentrate of pyrite collected 95% of the gold from pyritized diorite dykes, indicating that the presence of gold is closely related to pyrite.

Porphyry dykes lie alongside the diorite dykes hosting the orebodies. Porphyry dykes are younger than the diorite dykes and are seen cutting the latter in many places. Orebodies are rarely found in porphyry, even where the rock is fractured and strongly altered by mineralizing solutions. The development of the pyrite in the porphyry dykes is much weaker than the adjoining diorite dykes and gold values are consistently lower, even where porphyry dykes cut across high grade values in diorite orebodies. Porphyry dyke rarely made ore, and if so, it was usually of marginal grade.

The material filling the fissures is blue or white quartz, with considerable tourmaline, sparingly mineralized with pyrite, arsenopyrite and chalcopyrite, and in places galena and visible gold. The diorite that forms the walls of the fissures is altered and well mineralized with pyrite and minor quantities of arsenopyrite for a distance of several centimetres from the fissure; where the fissures are spaced closely the diorite is entirely altered and mineralized. Gold is rarely visible and most of it is apparently associated with pyrite.

The mineralized zones are affected by moderate carbonatization and biotitization, as well as weak chloritization, tourmalinization and albitization.

23.3 Héva Formation

There is no significant gold mineralization reported within the Héva Formation on the adjacent properties.

23.4 Val-d'Or Formation

There is no significant gold mineralization reported within the Val-d'Or Formation on the adjacent properties.

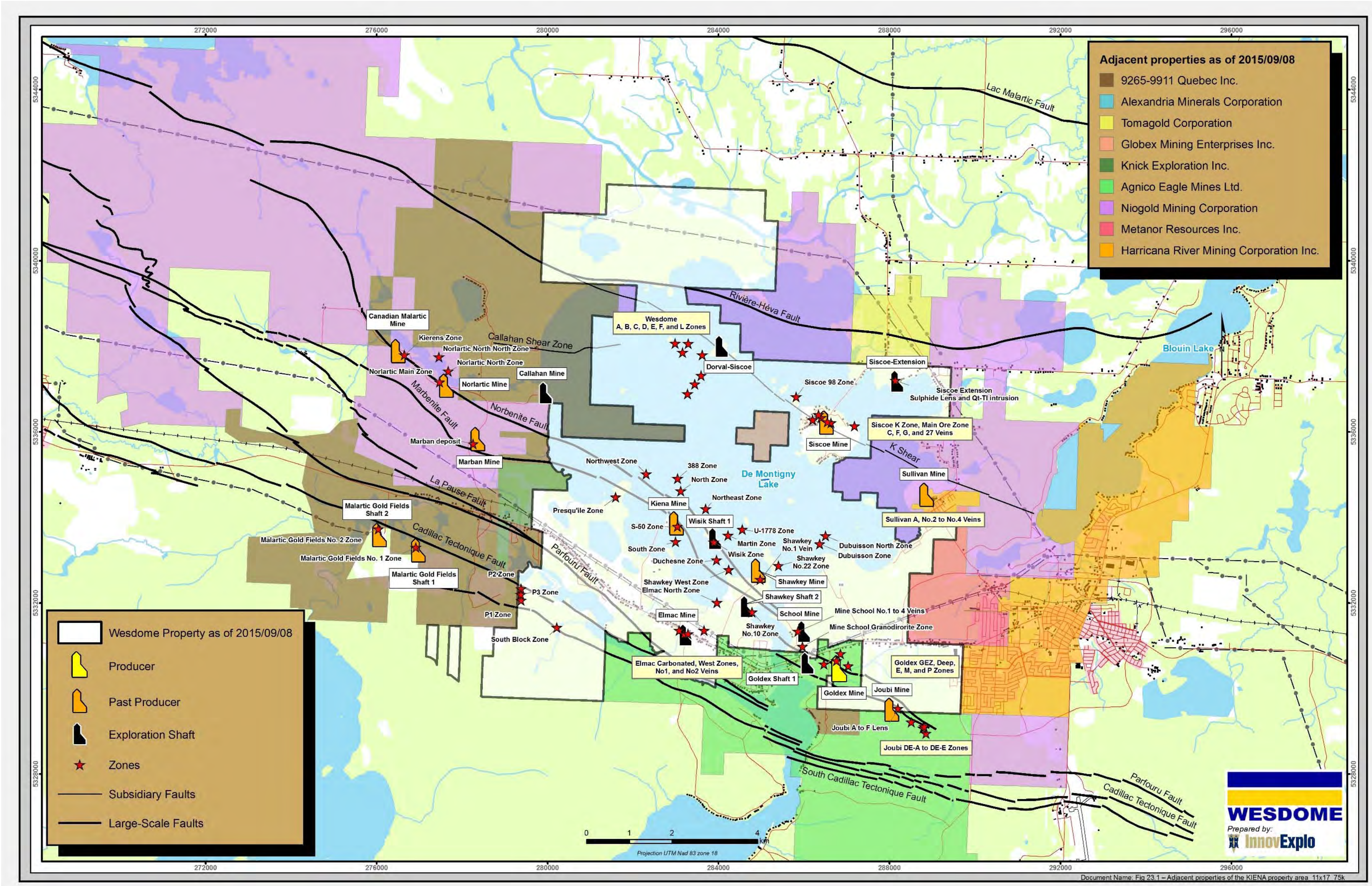

Figure 23.1 – Quebec Wesdome Project and adjacent properties

Table 23.1 – Summary of main characteristics of the mineralized zones observed on the adjacent properties

ID	Zone or Vein	Formation or Group	Major Fault/Shear	Host Rock	Subsidiary Fault/Shear	Alteration related to Mineralization	Mineralization Types	Type of Mineralized Structure	Attitude of the Mineralized Structure	Mineralogy of the Mineralized Structure	Timing of Mineralization
A	Malartic Gold Fields No. 1 and No. 2 zones	Piché Group	200 m south of the Cadillac Tectonic Zone	Diorite dykes	The mineralized zones are located along irregular subsidiary shears of the Cadillac Tectonic Zone	Moderate to strong pyritization Moderate carbonatization and biotitization Weak chloritization, tourmalinization and albitization	Early quartz veins	Stockwork	Variable	Qz, Tl, Cb, Py, (As)	Cut by porphyry dykes
B	Kierens Zone	Jacola Formation	The zone is hosted by the Norbenite Fault	Komatiites, chlorite-talc schists, basalts and felsic to intermediary dykes or sills.	n/a	1- Strong chloritization 2- Strong silicification and weak pyritization 3- Moderation carbonatization, moderate silicification and weak pyritization	Deformed veins within a shear zone	1- High-grade single-vein structures 2- Sill stockworks 3- Laminated veins in recrystallized mafic-volcanic rocks.	1- Veins transect their host lithologies at an oblique angle 2- Variable 3- Parallel and concordant to mafic volcanic rocks	1- Qz, Chl, Au 2- Qz, Py, Au 3- Qz, Cb, Au	Cuts all dykes and sills
C	Norlartic Main Zone	Jacola Formation	The zone is hosted by the Norbenite Fault	Felsic sill or dyke	n/a	Strong silicification Strong pyritization	Deformed veins within a shear zone	Stockwork	Variable	Qz, Cc, Py	Cuts felsic dyke
D	Norlartic Actinolite Zone	Jacola Formation	The zone is hosted by the Norbenite Fault	Mafic or ultramafic volcanic rocks	n/a	Actinolite alteration	Shear Zone	Disseminated pyrite and gold	Subparallel of the shear zone	Py, Au	(?)
E	Norlartic North Zone	Jacola Formation	250 m NE of the Norbenite Fault	Basalt	The zone is hosted by the North Shear Zone	Moderate pyritization, carbonatization and albitization	Deformed veins within a shear zone	Dismembered and deformed stringers or veins	Subparallel of the shear zone	Qz, Cb, Py	(?)
F	Norlartic North-North Zone	Jacola Formation	500 m NE of the Norbenite Fault	Granodiorite sill	Proximity of sheared mafic dykes	Weak pyritization, silicification, albitization and carbonatization	Late quartz veins (?)	Stockwork	Variable	Qz, Tl, Cb	(?)
G	Marban deposit	Jacola Formation	The zones are hosted by the Marbenite Fault	Basalt	n/a	Moderate carbonatization, silicification and pyritization	Deformed veins within a shear zone and disseminated pyrite-pyrrhotite	Stockwork	Variable	Qz, Cb, Py, Po	Cuts the S_1 schistosity

ID	Zone or Vein	Formation or Group	Major Fault/Shear	Host Rock	Subsidiary Fault/Shear	Alteration related to Mineralization	Mineralization Types	Type of Mineralized Structure	Attitude of the Mineralized Structure	Mineralogy of the Mineralized Structure	Timing of Mineralization
H	Goldex GEZ, M, E, P and Deep zones	Jacola Formation	Between the Marbenite and Norbenite faults	Quartz diorite sill	The mineralized zones are associated with the Goldex mylonite	Strong albitization and sericitization	Late quartz veins (?)	Extensional shear veins	N100°, dip 30°	Qz, Tl, Py	(?)
I	Joubi DE-A to DE-E zones	Jacola Formation	Between the Marbenite and Norbenite faults	Basalt and chlorite schist	Zones are controlled by the Joubi Shear Zone	Moderate pyritization, carbonatization, albitization, chloritization and silicification	Shear Zone	1- Stockwork 2- Disseminated pyrite in sheared basalt or chlorite schist	Variable	1- Qz, Cb, Py, Po 2- Py	(?)
J	Callahan No. 1 Zone	Dubuisson Zone	The zone is located 1.2 km south of the Callahan Shear Zone	Trondhjemitic dyke	The zone is hosted by a subsidiary shear zone	Moderate pyritization, carbonatization and albitization	Deformed veins within a shear zone	Sigmoidal veins	N225°, dip 75°–80°	Qz, Cb, (Tl), (Chl), (Au)	(?)
K	Callahan No. 4 Zone	Dubuisson Zone	The zone is hosted by the Callahan Shear Zone	Quartz diorite dyke	n/a	Moderate pyritization, carbonatization and albitization	Deformed veins within a shear zone	Sigmoidal veins	(?)	Qz, Cb, (Tl), (Chl), (Au)	(?)
L	Sullivan A Vein	Bourlamaque Batholith	400 m SW of the K Shear Zone	Quartz diorite	The vein occurs in the A Shear Zone	Moderate carbonatization, albitization and pyritization	Deformed veins within a shear zone	Shear vein filling fractures	N320°, dip 47°–52°	Qz, Tl, Cb, Py	Cut by K Shear (?)
M	Sullivan No.2 and No. 3 veins	Bourlamaque Batholith	350 m SW of the K Shear Zone	Mafic dyke	The veins occur in the No.2 and No.3 shear zones	Moderate carbonatization, albitization and pyritization	Deformed veins within a shear zone	Shear vein filling fractures	N320°, dip 23°–39°	Qz, Tl, Cb, Py	Cut by K Shear (?)
N	Sullivan No. 4 Vein	Bourlamaque Batholith	300 m SW of the K Shear Zone	Mafic dyke	The vein is along or adjacent to the No. 4 Shear Zone	Moderate carbonatization, albitization and pyritization	Deformed veins within a shear zone	Shear vein filling fractures	N320°, dip 40°–50°	QZ, Cb, Chl, (Tl), Py	Cut by K Shear (?)

23.5 Jacola Formation

Seven (7) significant gold deposits or gold zones have been reported within the Jacola Formation on adjacent properties: the First Canadian deposit, the Norlartic deposit, the Norlartic North Zone, the Norlartic North-North Zone, the Marban deposit, the Goldex deposit and the Joubi Dubuisson-East Zone.

23.5.1 First Canadian deposit area

The following description of the First Canadian deposit (Fig. 23.1) area is mostly modified and summarized from Trudel and Sauvé (1992), Gustin and Ronning (2013) and references therein.

During the periods between 1965 and 1966 and between 1988 and 1992, the First Canadian mine produced a total of 52,000 ounces of gold from 251,000 metric tons of ore from the Kierens Zone with an average grade of 6.30 g/t Au.

This past producer is hosted by the major Norbenite Fault. The orebodies of the Kierens Zone are enclosed within komatiites, chlorite-talc schists, basalts and felsic to intermediary dykes belonging to the Jacola Formation.

Three styles of epigenetic gold mineralization were identified within the Kierens Zone by Aur Resources geologists: (1) high-grade single-vein structures; (2) sill stockworks; and (3) laminated veins in recrystallized mafic volcanic rocks.

The high-grade single-vein structures are subvertical white quartz veins varying from 15 cm to 0.9 m in width. They contain numerous chlorite inclusions and occurrences of native gold. The wall rocks are commonly strongly chloritized and contain quartz stringers up to 10 cm wide. The veins are generally tabular, locally boudinaged and obliquely transect their host lithologies.

Sill stockworks are characterized by a white quartz-vein stockwork system that includes 10% to 30% of the diorite sill host rocks. These sills display strong fracture-controlled silicification and carry 1% to 5% disseminated pyrite and locally coarse native gold.

The laminated veins in recrystallized mafic-volcanic rocks are characterized by a system of parallel, concordant, subvertical quartz-carbonate veins and dislocated lenses. The veins are blue-grey to white in color, comprise up to 30% of the rock and average 1 cm wide. The carbonatized volcanic host rocks contain 1% to 5% disseminated, medium- to coarse-grained euhedral pyrite cubes. Localized zones of strong patchy silicification commonly return high-grade assays. Free gold has been observed to occur erratically within the quartz veins.

Mineralogical associations within the gold zones include leafy native gold, molybdenite, chalcopyrite, pyrite, pyrrhotite, sphalerite, platy ilmenite, axinite, quartz, calcite and chlorite. Molybdenite and/or chalcopyrite are found intimately associated with coarse clusters of native gold within the high-grade single-vein structures.

A mineral resource estimate for the Kierens Zone was prepared by Mine Development Associates (Gustin and Ronning, 2013) on behalf of NioGold Mining Corporation. The estimate, as at June 1, 2013, established an indicated resource of 1.437 Mt grading 2.19 g/t Au for a total of 101,000 ounces of gold, and an inferred resource of 1.178 Mt grading 1.73 g/t Au.

InnovExplo did not review the database, key assumptions, parameters or methods used by Mine Development Associates for the 2013 mineral resource estimate for the Kierens Zone.

23.5.2 Norlartic deposit area

The following description of the Norlartic deposit area (Fig. 23.1) is mostly modified and summarized from Sauvé et al. (1993), Gustin and Ronning (2013) and references therein.

During the periods between 1959 and 1966 and between 1990 and 1992, the Norlartic mine produced a total of 188,000 ounces of gold from 1.435 Mt of ore at an average of 4.07 g/t Au.

The Norlartic mineralization is primarily concentrated in the Main Zone. Additional mineralization has been defined below and to the east of the old workings. The Main Zone consists of a 1-m-wide felsic sill or dyke that occurs within a large sheared envelope of mafic volcanic rocks in the core of the Norbenite Fault. The Norbenite Fault is comprised of highly altered and deformed units of mafic volcanic to talc-chlorite schists and felsic dykes. These units tend to be discontinuous due to the effects of superimposed shearing and drag folding. The shear zone ranges from 45 to 90 m wide and is approximately conformable with the enclosing hanging wall and footwall ultramafic units.

Above the 500 level of the Norlartic mine, the main sill seems to change into a swarm of smaller “horse tail” dykes. Gold is usually directly associated with these intrusion(s). The intermediate intrusive and mafic volcanic rocks in the Main Zone have been strongly silicified and pyritized, and have undergone intense brittle fracturing and quartz-carbonate-pyrite vein injection. Economic gold concentrations in the Main Zone are found in quartz-calcite-pyrite vein stockworks that occur in closely spaced lenticular diorite intrusions.

The Actinolite Zone was discovered in the late 1980s. This zone lies in the hanging wall of the Main Zone. In contrast to the Main Zone, the Actinolite Zone is not lithologically controlled, but instead disseminated gold occurs within an actinolite-bearing alteration zone that overlaps various units of mafic or ultramafic volcanic rocks. A swarm of felsic dykes appears to be related to the zone and a large felsic dike caps the zone in the hanging wall. Up to 5% fine pyrite can be observed.

A mineral resource estimate for the Kierens Zone was prepared by Mine Development Associates (Gustin and Ronning, 2013) on behalf of NioGold Mining Corporation. The estimate, as at June 1, 2013, established an indicated resource of 5.417 Mt grading 1.82 g/t Au for a total of 316,000 ounces of gold, and an inferred mineral resource of 3.199 Mt grading 1.44 g/t Au.

InnovExplo did not review the database, key assumptions, parameters or methods used by Mine Development Associates for the 2013 mineral resources estimation for the Norlartic deposit.

23.5.3 Norlartic North Zone area

The following description of the Norlartic North Zone (Fig. 23.1) area is mostly modified and summarized from Sauvé et al. (1993), Gustin and Ronning (2013) and references therein.

During the period between 1965 and 1966, the Norlartic North Zone produced a total of 11,000 ounces of gold from 81,000 Mt of ore grading an average 4.35 g/t Au.

The Norlartic North Zone mineralization is located within the North Shear Zone, which is located 250 m northeast of the Norbenite Fault and strikes northwesterly. Three sub-parallel gold zones dipping 60º to the northeast are recognized within the North Shear Zone (the A, B and Footwall zones; the Footwall Zone is also called the C Zone). They are confined to zones of quartz-carbonate veining with albite and pyrite alteration within strongly chloritized and carbonated sheared basalt.

High grades are erratic in the A Zone, probably due to the presence of coarse gold. The highest grades occur where the A and B zones appear to converge near the surface. The A and B zones are structurally controlled and appear to plunge at shallow angles toward the east. The A and B zones were mined above the 500 foot level, while the Footwall Zone was drifted on two levels but was considered to be too discontinuous to mine.

The zones typically occur as clusters of foliation-parallel, milky white to blue-grey quartz veins, each less than 30 cm wide. The zones range between 0.6 m and 3.0 m wide, and quartz veins may comprise up to 50% of the strongly sheared, albitized and carbonatized mafic volcanic rock. Both the host rocks and quartz veins carry up to 5% pyrite, which occurs as fine to medium-grained disseminations or as fine-grained wisps and streaks oriented parallel to schistosity.

23.5.4 Norlartic North-North Zone area

The following description of the Norlartic North-North Zone area (Fig. 23.1) is mostly modified and summarized from Sauvé et al. (1993), Gustin and Ronning (2013) and references therein.

The North-North Zone is located 500 m northeast of the Norbenite Fault. It is a near-surface intrusive-hosted deposit with mineralized quartz-tourmaline stockwork.

Gold mineralization is confined to a conformable quartz-albite-carbonate-pyrite alteration envelope with quartz-tourmaline-carbonate vein stockwork localized in the central to lower portions of a 60-m-wide granodiorite sill. The sill was emplaced within a sequence of deformed ultramafic and mafic volcanic rocks. The sill and alteration envelope strike northwesterly and dip 40º to 55º to the northeast. Based on very limited drilling below 200 m, the dip of the granodiorite apparently steepens abruptly at depth, and the alteration envelope becomes thinner and less developed. The zone is somewhat irregular, with an average thickness of 4.5 to 6 m. It can be followed on strike for about 800 m and to a depth of about 150 m, with deeper exceptions.

The best grades and thicknesses of the North-North Zone occur in a near-surface (45 to 105 m deep) northeast-dipping zone of gold-bearing quartz-tourmaline stockwork hosted within the North-North granodiorite sill. This mineralized zone dips 40°–55º northeast, plunges shallowly in a westerly direction, is up to 15 m wide, and shows continuity in both strike and dip. All recorded kinematic indicators confirm a reverse movement on the controlling shears, which is consistent with the shallow plunge of the zone.

Sulphide mineralization, mainly pyrite with minor chalcopyrite and pyrrhotite, occurs as disseminations and coarse clusters. Gold typically occurs as isolated particles averaging 2 mm in diameter in both the quartz-tourmaline veins and their altered wall rocks. Although gold may occur throughout the altered zone, it appears to be most abundant in areas of highest pyrite content and quartz-tourmaline veining. Visible native gold is locally observed in the veins. There is a strong correlation between quartz-tourmaline veins and the occurrence of gold, whereas quartz-chlorite veins are seldom gold bearing. Proximity of sheared and carbonatized mafic dykes may also characterize the North-North Zone, although they have not always been sampled, even though some are gold bearing. The presence of coarse gold creates a nugget effect, complicating the collection of representative assays.

23.5.5 Marban deposit area

The following description of the Marban deposit area (Fig. 23.1) is mostly modified and summarized from Sauvé et al. (1993), Gustin and Ronning (2013) and references therein.

During the period between 1961 and 1974, the Marban mine produced a total of 330,000 ounces of gold from 1,983,000 Mt of ore grading an average 5.27 g/t Au.

The Marban deposit lies within the Marbenite Fault. Gold mineralization is hosted primarily in the Mine Sequence basalts within east-west shear zones that dip 45° to 70° to the north and are from 10 m to over 70 m wide. The deposit is tightly folded, but the shear zones and lithologies are affected differently. The plunge of folds defined by the shear zones is approximately subhorizontal, while the folds defined by lithologic contacts plunge westerly in the eastern part of the deposit, and easterly in the western part of the deposit. The changes in the plunge of the fold axes defined by the lithologies create a dome and basin, or egg-carton-like, configuration. The lithologic contacts are oblique to the mineralized zones.

The Mine Sequence basaltic flows within the Marbenite Shear host gold associated with quartz-carbonate veins accompanied by pyrite and pyrrhotite. The mineralization also consists of gold-bearing pyrite and pyrrhotite, with free gold occurring locally. The pyrite and pyrrhotite occur as fine-grained euhedral clusters elongated along shear planes, but pyrite can also be coarse and disseminated in the host rocks. Gold may also be disseminated within the mafic volcanic rocks. Although free gold is commonly observed in diamond drill core, the gold generally occurs as inclusions or fillings in cracks in pyrite. Locally, gold mineralization is also hosted in the granodiorite and ultramafic flows relatively close to their contacts with the Mine Sequence basalts. The mineralization exhibits a pinch and swell pattern, with great variation in both width and grade.

The alteration related to the gold mineralization is represented by carbonatization, silicification and pyritization that obliterate the original texture of the host rocks.

According to Sauvé et al. (1993), the timing of the mineralization seems late with respect to deformation because it cuts the S1 schistosity.

A mineral resource estimate for the Marban deposit was prepared by Mine Development Associates (Gustin and Ronning, 2013) on behalf of NioGold Mining Corporation. The estimate, as at June 1, 2013, established a measured resource of 6.56 Mt grading 1.40 g/t Au, an indicated resource of 18.713 Mt grading 1.36 g/t Au, for a combined total of 1,114,000 ounces of gold. Inferred mineral resources were estimated at 11.499 Mt grading 0.95 g/t Au.

InnovExplo did not review the database, key assumptions, parameters or methods used by Mine Development Associates for the 2013 mineral resource estimation for the Marban deposit.

23.5.6 Goldex deposit

The following description of the Goldex deposit area (Fig. 23.1) is mostly modified and summarized from Pelletier (2005), Genest et al. (2011; 2012), the 2014 Annual Information Form of Agnico Eagle, and references therein.

The Goldex deposit is hosted within a quartz diorite sill (“Goldex intrusion”, also known as the “Goldex granodiorite”) emplaced in a package of mafic to ultramafic volcanic rocks of the Jacola Formation. The Marbenite and Norbenite shear zones are located on either side of the Goldex intrusion (Fig. 23.2).

The geologic setting corresponds to 65% basalts, 30% intermediate volcanic rocks and less than 5% ultramafic volcanic rocks with interdigitated volcaniclastic rocks. The volcanic sequence is subvertical and the stratigraphic tops are always towards the south. Because the geology is generally oriented N280º with dips of 75° to 85º to the north, the rock layers are overturned at the scale of the Goldex property.

Also at the property-scale, the Goldex intrusion is the main geological feature in that it hosts most of the gold-bearing structures on the property. The Goldex intrusion is usually referred to as a granodiorite but really corresponds to a quartz diorite in its mineralogical composition. The width of the quartz diorite sill ranges from 90 to 250 m. The intrusion dips steeply towards the north, is open at depth and extends in a northwest-southeast direction across the property.

Penetrative foliation affects both intrusive and volcanic rocks. The foliation generally trends and dips subparallel to stratigraphy. A strong and persistent discrete shear zone up to 5 m thick, known as the “Goldex Mylonite”, is subparallel to the foliation at 280°–305°/65–75°N.

The several zones of gold mineralization at Goldex, except the South Zone, are hosted within the Goldex quartz diorite intrusion. The zones that have been evaluated in the past include the West Zone, the GEZ (Goldex Extension Zone), the E Zone just east of the GEZ, the S Zone (Upper GEZ), the Deep Zone (below the GEZ Zone) and the M Zone (Main Zone). The mineralization of the South Zone occurs in the volcanic rocks of the Jacola Formation, a few hundred metres to the south of the Goldex Granodiorite unit.

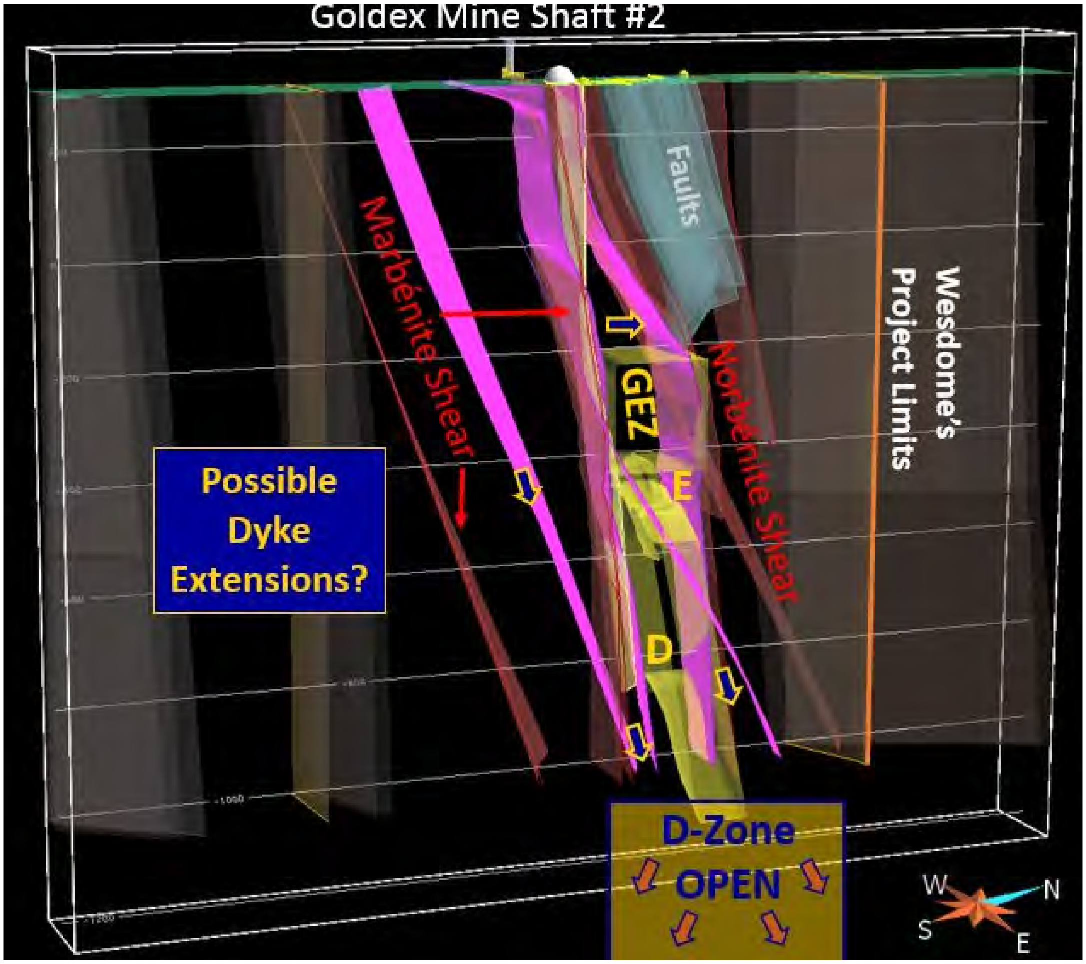

Figure 23.2 – Simplified 3D schematic geological model related to the Goldex GEZ, E and D zones. The figure shows the possible continuation of the granodiorite dyke towards the Wesdome Quebec Project. North-South cross section.

Gold mineralization at Goldex corresponds to a quartz-tourmaline vein-type deposit. The Goldex gold-bearing quartz-tourmaline-pyrite veins and veinlets have strong structural control. The most significant structure directly related to mineralization is the Goldex Mylonite, which occurs within the Goldex intrusions, just south of the GEZ and north of the M Zone. A couple of vein sets exist within the GEZ, M, E, P and Deep zones, of which the main set consists of extensional shear veins oriented N100° and dipping approximately 30°–35° to the south. The vein sets and associated alteration halos combine to form stacked envelopes up to 30 m thick.

Moderate to strong albite-sericite alteration of the quartz diorite host rock surrounds the quartz-tourmaline-pyrite veins and covers almost 80% of the mineralized zone; outside the envelopes, earlier chlorite alteration affects the quartz diorite and gives it a darker grey-green colour. Occasionally, enclaves of relatively unaltered medium grey-green quartz diorite (with no veining or gold) are found within the GEZ and the M and E zones; they are removed with the rest of the stope's ore to allow for the smooth stope shape required for mining purposes. Most of the gold occurs as microscopic particles that are almost always associated with pyrite, generally adjacent to grains and crystals, but 20% are included within the pyrite. Gold-bearing pyrite occurs in the quartz-tourmaline veins and in narrow fractures in the albite-carbonate-altered quartz diorite (generally immediately adjacent to the veins).

The proven and probable mineral reserves at the Goldex mine as at December 31, 2014 were approximately 0.3 Moz of gold in 7.1 Mt of ore grading 1.49 g/t Au, all in the M and E zones. Underground measured and indicated mineral resources were 33.8 Mt grading 1.93 g/t Au, and underground inferred mineral resources were 29.2 Mt grading 1.64 g/t Au.

InnovExplo did not review the database, key assumptions, parameters or methods used by Agnico Eagle for the 2014 mineral resource and reserve estimation at the Goldex mine.

23.5.7 Joubi deposit (Dubuisson East sector)

The following description of the Joubi deposit area (Dubuisson East sector) is mostly modified and summarized from Gauthier and Castonguay (1997) and references therein.

In the Dubuisson East sector, gold zones occur in an area where northeast-trending structures appear to have generated porosity that promoted the circulation of gold-bearing fluids. The mineralized zones show an enrichment of carbonate, albite, silica, chlorite and pyrite, and locally actinolite and biotite.

The mineralized zones DE-A, DE-E and DE-C are located in the same alignment near a shear zone (Joubi Shear Zone). This fault dips steeply (70°–80°) to the northwest. The DE-B zone is located a little further south and is separated from the other zones by quartz-feldspar porphyry. Mineralization occurs as a pyritized (2%–3%) and silicified zone with highly chloritized wall rocks. Locally, the ore from the DE-C Zone is also partially albitized and contains trace of biotite.

At a depth of 440 m, the DE-B structure contains a mineralized and carbonatized economic zone containing quartz veins and veinlets. There are two types of mineralization in the DE-F and DE-P zones. The DE-F Zone occurs as an alignment of quartz veins and veinlets at the contact between schist and chloritized massive andesite. According to drilling data, the DE-P Zone consists of a carbonatized zone (10%–40%) containing a variable amount of quartz veins and veinlets.

23.6 Dubuisson Formation

Only one significant gold occurrence is reported within the Dubuisson Formation on the adjacent properties. It is the Callahan deposit.

The following description of the Callahan deposit area is mostly modified and summarized from Beaudoin et al. (1987), Castonguay and Salmon (1987), Jenkins et al. (1989), Sauvé et al. (1993) and references therein.

The geology of the Callahan deposit area is dominantly pillowed basalts and peridotitic komatiites of the Dubuisson Formation that form alternating bands oriented N110° and dipping 80° to the north. The mineralization is only hosted within dioritic or trondhjemitic dykes that cut across the volcanic rocks of the Dubuisson Formation. The Callahan deposit is located in the vicinity of the Callahan Shear Zone.

About thirteen mineralized zones (the Callahan No.1 to No. 13 zones) were known, but the No. 1 and No. 4 zones were the most thoroughly investigated. Some shear zones were also identified in the vicinity of the Callahan No. 1 to No. 4 zones (Fig. 23.1). These shear zones strike N090° to N110° and dip 60°–80° to the north. The Callahan No.4 Zone is hosted by the Callahan Shear Zone, whereas as the No.1 Zone is hosted by a subsidiary shear.

The Callahan No.1 and No. 4 zones (Fig. 23.1) are located within a small, deformed, sigmoidal lens-shaped trondhjemitic or dioritic mass hosting a series of as yet subeconomic auriferous zones. The intrusion contains xenoliths of komatiitic rock and is considered pre-tectonic to syntectonic relative to the regional deformation. As for hydrothermal alteration and mineralization, these events are also presumed coeval and may have overlapped and certainly surpassed the final stages of regional metamorphism and deformation.

The mineralized veins consist of quartz (95%), carbonate (4%), tourmaline (<1%) and pyrite (<1%). The veins are generally 5 to 15 cm wide and are only observed within the intrusion. The sigmoidal veins of the Callahan No. 4 Zone strike N225° and are subvertical. Quartz-carbonate-tourmaline veinlet stockworks and vein arrays were associated with broad beige alteration haloes (chlorite destructive alteration) and hosted by quartz diorite to quartz monzonite sills. This mineralization/alteration style is also typical of the Norlartic North Zone and Goldex deposit.

Gold, found principally in the medium to most altered facies, is most commonly observed as free grains in gangue. It may also be associated with pyrite and, to a much lesser extent, with tellurides. The entire intrusion is enriched in gold, and the degree of mineralization is proportional to the degree of alteration. As the intensity of alteration increases, the amount of albite, carbonate and pyrite also increase. Historically, visible gold gains were commun and bulk grade were difficult to assess in this deposit type.

In 1987, a resource estimate by Falconbridge established that the Callahan No. 4 Zone contained 2.245 Mt grading 1.7 g/t Au (uncut) (Fig. 23.3).

These "resources" are historical in nature and should not be relied upon. It is unlikely they conform to current NI 43-101 criteria or to CIM Standards and Definitions, and they have not been verified to determine their relevance or reliability. They are included in this section for illustrative purposes only and should not be disclosed out of context. InnovExplo did not review the database, key assumptions, parameters or methods used by Falconbridge for the mineral resource estimation at the Callahan No.4 Zone.

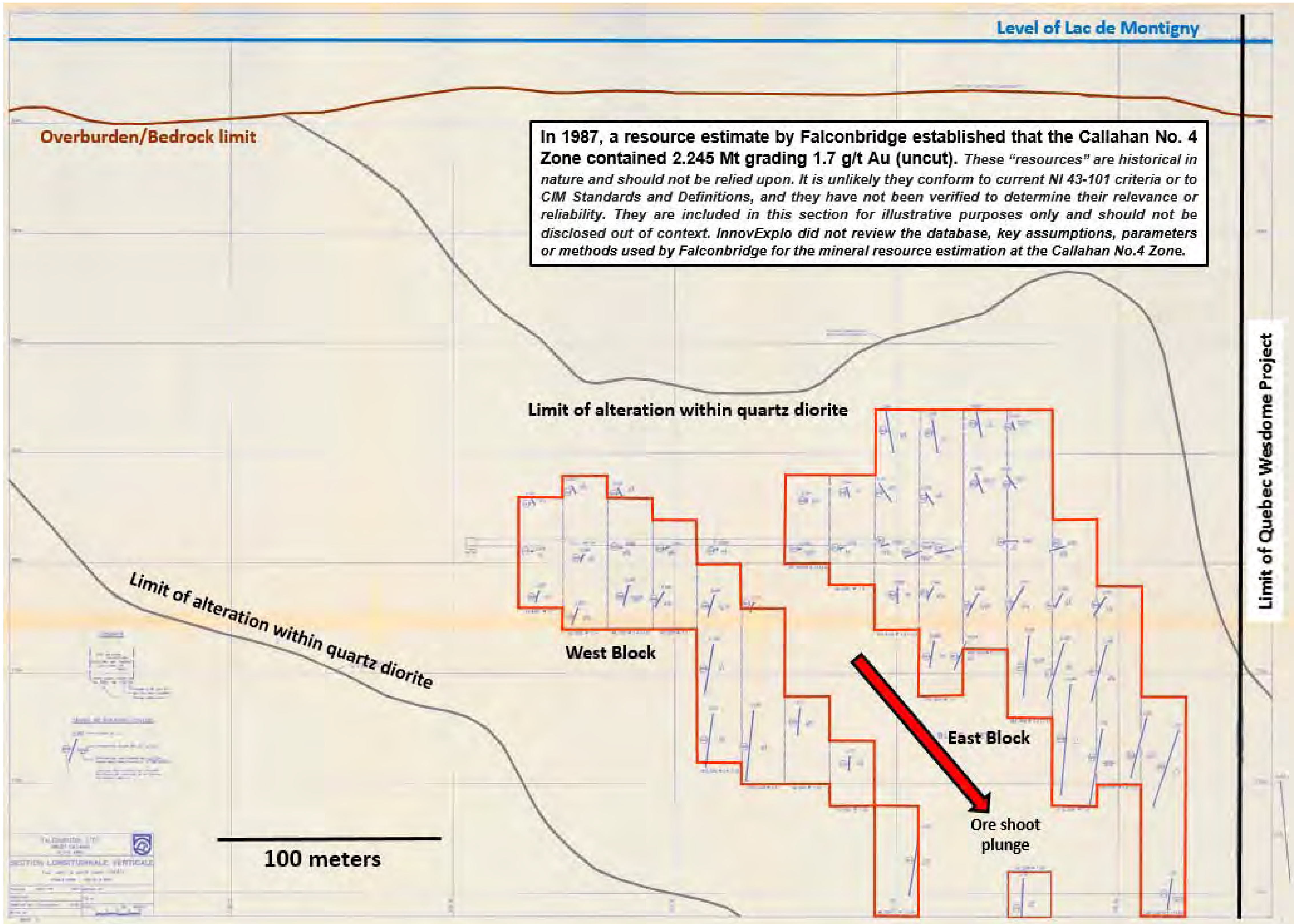

Figure 23.3 – Vertical longitudinal section looking N322° showing the historical resource estimate done by Falconbridge in 1987 on the Callahan No. 4 Zone (Adapted and modified from Castonguay and Salmon, 1987)

23.7 Bourlamaque Batholith

The following description of the Sullivan deposit area (Fig. 23.1) is mostly modified and summarized from Dresser and Denis (1949), Sauvé et al. (1993) and references therein.

During the period between 1934 and 1968, the Sullivan mine produced a total of 1,134,342 ounces of gold and 293,857 ounces of silver from 4,613,500 Mt of ore grading an average 7.65 g/t Au and 1.98 Ag.

The veins mined at the Sullivan mine are within the narrow west end of the Bourlamaque granodiorite batholith. The granodiorite is considerably altered, but chemically it is quite similar to the quartz-albite facies in the Siscoe stock. The veins are located 300 to 400 m southwest of the K Shear Zone.

The dykes cutting the granodiorite are of various types, and many of the veins are structurally closely related. With very few exceptions, they are quite narrow. The oldest are the granodiorite porphyries or albite porphyries up to 7.6 m (25 ft) wide that crop out a short distance northeast of the No. 1 shaft. Next in age are the fine-grained diorite, diorite porphyry dykes and mafic dykes. They are generally narrow and much altered. A number of these dykes in the southwestern section of the mine strike east-west to slightly northeast and dip from vertical to 45° north or south. In the most productive section of the mine, similar dykes strike northwest and dip 40°–45° degrees northeast. These dykes are similar in character and in their association with the quartz veins as the diorite dykes in the Sigma mine, 6.5 km to the southeast.

The No. 4 shear zone lies, for the most part, within a band some 60 m (200 ft) northeast of the No. 2 shaft. It is up to 1.5 m (5 ft) wide, and strikes a few degrees more northerly than the schistosity of the greenstone, with an average dip of 45° to the northeast. Strong mud seams indicate that there has been late movement of the rocks along the zone. The Sullivan No. 4 Vein is in the mafic dyke along or adjacent to the No. 4 shear zone, and is roughly parallel in strike and dip.

Some 180 m (600 ft) to the southwest is another important shear zone, designated the A Shear Zone, with similar trend and dip. The Sullivan A Vein occurs in this shear zone, closely associated with an altered diorite dyke but passing into the adjacent granodiorite. Production has been mainly from the Sullivan No. 4 and A veins that have been developed and mined on various mine levels over lengths of as much as 1,400 ft (427 m). Stoping widths have been generally greater along the Sullivan No. 4 Vein than the Sullivan A Vein. A number of other gold-bearing veins have been encountered in the ground between the two principal veins. The Sullivan No. 2 and No. 3 veins are partly enclosed within or adjacent to mafic dykes, and are associated with shear zones. All veins at the Sullivan mine strike N320° and dip 25°–50° northeast.

Wallrock alteration is usually pronounced and consists chiefly of albite, carbonate and pyrite. Carbonate (5%) is also present in some of the veins. Tourmaline (±5%) is a common but not abundant constituent of the veins, often occurring as thin seams cutting the quartz. Sulphide mineralization is chiefly pyrite, with or without minor amounts of chalcopyrite, sphalerite and galena. Gold tellurides have been reported, but practically all the gold occurs in the free state along fractures in quartz. There appears to be no relationship between gold content in the veins and the amount of tourmaline or sulphides.

The K Shear Zone, as observed in the vicinity of the Sullivan mine, strikes N280° and dips 85° northeast. According to Sauvé et al. (1993), the K Shear Zone cuts the veins mined at Sullivan. The K Shear Zone may have predated these veins and then been reactivated after they formed.

23.8 Gold Potential from Adjacent Properties

InnovExplo not verified the above information about mineralization on adjacent properties around the Quebec Wesdome Project. The presence of significant mineralization on these properties is not necessarily indicative of similar mineralization on the Quebec Wesdome Project.

24. OTHER RELEVANT DATA AND INFORMATION

All relevant data and information regarding the Quebec Wesdome Project have been disclosed under the relevant sections of this report.

25. INTERPRETATION AND CONCLUSIONS

This is the first time that all 21 properties representing the Quebec Wesdome Project are presented in a single technical report. This study examines the full potential of the entire Project, whereas the previous approach was by individual property. In the past, each of the known mineralized zones was also worked individually, without a global approach.

The Project is huge and located in the middle of a prolific mining camp. It has a number of important large-scale faults and subsidiary shear zones, several types of gold mineralization, and less-explored areas containing lithologies known to host gold deposits elsewhere on the Project. InnovExplo’s review of all available data during the preparation of this report led to the identification of five exploration guides for gold.

Most of the recent exploration work on the Project was conducted in the vicinity of the underground workings at the Kiena mine. This study determined that the potential for new discoveries and additional mineral resources on the Project is high, and there are many underexplored areas. Beyond the Kiena mine, diamond drilling tested the same host lithologies to a maximun vertical depth of 250 m. In the Val-d’Or mining camp, mineralized zones typically have greater vertical extension than lateral.

The objective of this mandate was not to carry out an exhaustive compilation of all available information on the Project, but to provide a summary.

A global and systematic approach is recommended going forward in order to integrate all available historical and recent information. This global information will be used to refine the updated geological interpretation and define the best metallogenic model.

Before generating and prioritizing exploration targets, the global exploration model must take into account all historical drill holes, geological and geophysical surveys, structural studies, whole rock geochemistry data and mineral resources.

25.1 Geological Setting and Mineralization

The Quebec Wesdome Project is situated within the Abitibi Subprovince of the Archean Superior craton, eastern Canada. More precisely, it is located in the Val-d'Or mining district, northwestern Quebec. The Quebec Wesdome Project straddles the limit between the southern part of the Abitibi Subprovince and the northern part of the Pontiac Subprovince. In this region, the Cadillac Tectonic Zone (CTZ) marks the separation between the two. From south to north, the Project is underlain by the lithologies of the Pontiac Group (PO), the Piché Group (PG), the Héva Formation (HF), the Val-d’Or Formation (VDF), the Jacola Formation (JF) and the La Motte-Vassan Formation (LVF). The regional geology of the region was interpreted using recent field observations, new geochronologic data and a new detailed heliborne magnetic survey. The data from these studies should be integrated to improve the geological interpretation at the project scale.

The region has several large-scale strike faults and/or shear zones, trending W to WNW and dipping steeply to the north. They are, from south to north: the Cadillac Tectonic Zone (CTZ), the Parfouru Fault (PF), the Marbenite Fault (MF), the Norbenite Fault (NF), the Callahan Fault (CF), the K Shear Zone (KSZ) and the Rivière Héva

Fault (RHF). They all occur in the area covered by the Quebec Wesdome Project. These major structures contain dykes or stocks of monzonitic or tonalitic composition with highly variable ages (pre-, syn- or post-tectonic) that are spatially associated with several gold mines (Norlartic, Marban, Kiena, Sullivan, Goldex, Siscoe, Joubi, Sigma and Lamaque). The observed diversity in the styles and ages of gold mineralization related to these large-scale strike faults and/or shear zones demonstrates that several distinct episodes of mineralization have occurred.

The temporal-metallogenic model in the Val-d'Or Mining Camp assumes that the succession of geological events recorded in the region is linked to a tectonic event involving the collision of the Abitibi and Pontiac subprovinces. The model is subdivided into pre- and post-accretion phases. The pre-accretion phase (ca. 2705-2700 Ma) is characterized by calc-alkaline volcanism and the formation of syngenetic massive sulphide deposits, whereas the post-accretion phase is characterized by episodes of intermediate and felsic plutonism associated with gold mineralization formation across the Val-d'Or plutonic belt (ca. 2694-2677 Ma), followed by penetrative deformation, greenschist facies metamorphism and shear zone development during the terminal stages of the Abitibi-Pontiac collision (ca. 2677-2660 Ma).

The structural evolution in the area of the Quebec Wesdome Project occurred in three main phases: a regional pre-ore faulting phase affiliated with the development of a fault lineament during the overturning of volcanic strata, which assisted the emplacement of dioritic and granodioritic, high-level intrusions (ca. 2694-2680 Ma); a local phase of mineralization controlled by fracture-induced permeability related to magmatic hydrothermal activity corresponding to stockwork veins and breccias (Early quartz veins; ca. 2694 2686 Ma); and a regional post-mineralization deformation phase (D1, F1, S1) that modified the shape and orientation of pre-existing mineralization structures (ca. 2677-2645 Ma) and formed new gold mineralization (Deformed veins within shear zones and late quartz±tourmaline veins).

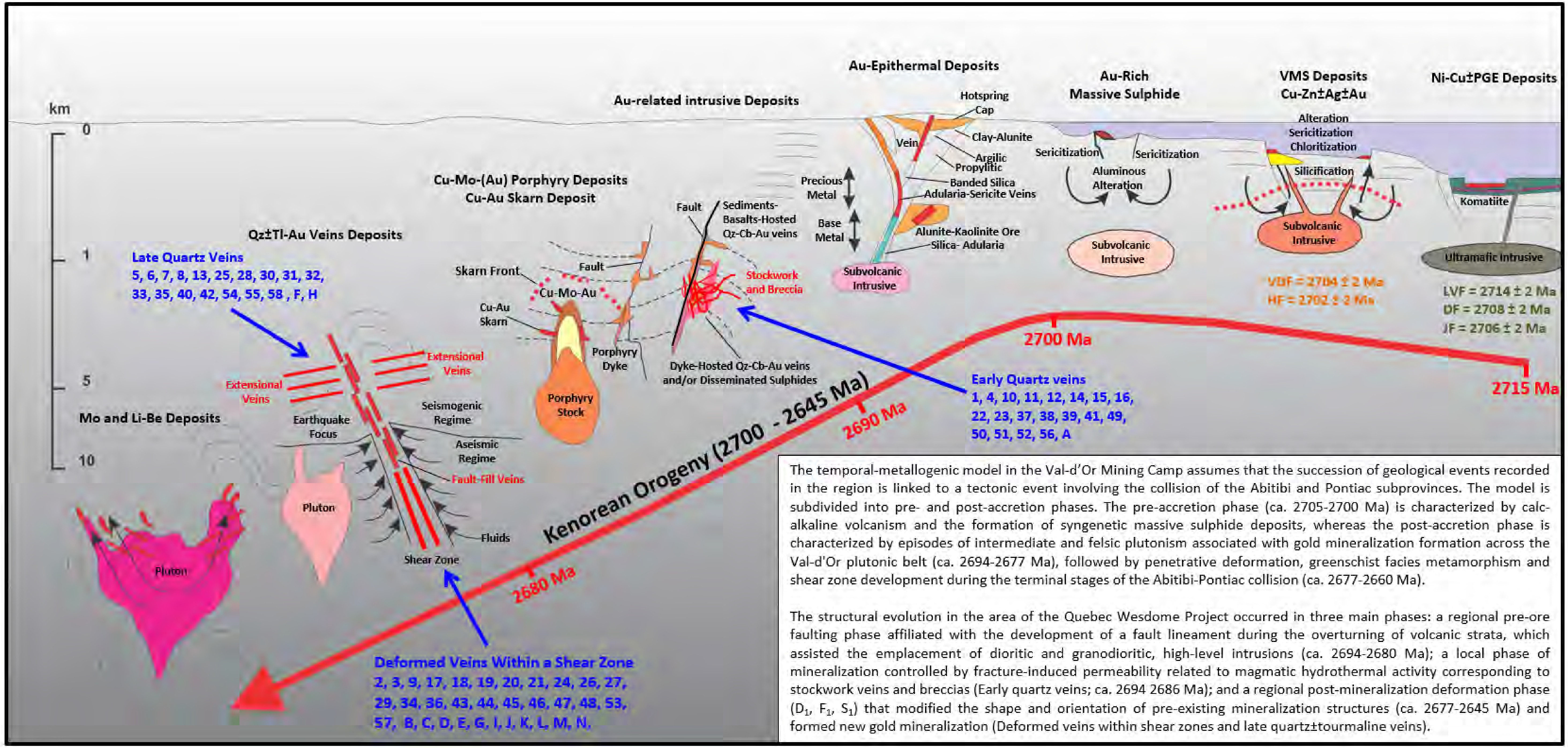

Figure 25.1 – The temporal-genetic model for gold mineralization in the area of the Quebec Wesdome Project. Adapted and modified from Couture et al. (1994), Poulsen (1996) and Morasse (1998). LVF = La Motte-Vassan Formation, DF = Dubuisson Formation, JF = Jacola Formation, VDF = Val-d'Or Formation, HF = Héva Formation. Numbers and letters in blue represent the identification of the mineralized zones and/or veins as presented in Table 7.1 (see section 7.4) and Table 23.1 (see section 23).

More than sixty (60) mineralized zones and/or veins have been observed on the Quebec Wesdome Project thus far. The gold-bearing veins exhibit a wide range of orientations, mineralogy and crosscutting relationships. For the purposes of this report, they are classified into the following three main types:

- Type 1: early quartz-carbonate veins cut by various dykes;
- Type 2: deformed veins within a shear zone; and

Type 3 relatively weak deformed late quartz±tourmaline veins cutting all intrusive types and earlier gold-bearing vein systems.

All three types may occur together.

Ten (10) shafts and underground developments from past producers and exploration projects are present on the Wesdome Quebec Project. A total of 2,154,225 ounces of gold were produced from these underground workings.

25.2 Main Exploration Guides Related to Gold Mineralization

The study of sixty-three (63) mineralized zones and/or veins on the Project led to the identification of five exploration guides for gold as follows:

- Gold occurs close to large-scale faults;
- Gold is often associated with a subsidiary shear zone that may be proximal, adjacent or hosting the mineralization;
- Host lithologies are primarily competent basalts and intrusive rocks;
- Many of the auriferous zones and/or veins are deformed and folded; and
- Alteration is dominantly albitization, carbonatization and pyritization, with lesser chloritization and silicification.

The primary environmental control on the formation of mineralized zones was structural: the degree of fracturing. Thus, gold mineralization is mainly hosted in fractured competent units that acted as fluid conduits both during and after deformation. Alteration, notably albitization, likely played a key role in host unit competency. The competency contrast between intrusive bodies or basalts and the talc-chlorite schists may be responsible for strain localization at the rheological boundary, and it induced a secondary permeability that provided greater access to hydrothermal gold-bearing fluids during episodic shear zone movements. The presence in the same area of more than three types of auriferous veins exhibiting a wide range of orientations, mineralogy and crosscutting relationships, and the fact that several generations of dykes and veins are involved, suggests that gold mineralization was the product of multiple mineralizing phases.

The gold occurrences found in shear zone settings on the Project are mainly restricted to competent units, and thus the size and shape of the mineralized zones often depend upon the size, shape and concentration of the competent intrusive or basalt.

In zones of structural dislocation, two settings for gold mineralization have been recognized:

- Shattered intrusive bodies, such as diorite or feldspar porphyry dykes, enclosed in talc-chlorite schist; and
- Zones of fracturing and brecciation in large bodies, such as basalt.

In large bodies of basalt, fracturing was generally restricted to narrow zones, and subsequent mineralization resulted in narrow and often closely spaced mineralized zones. In narrower dykes, the whole body is affected by fracturing, and subsequent mineralization was able to spread throughout the dyke, forming large mineralized zones. Two factors control the size and shape of mineralized zones associated with dykes in shear zone settings:

- The size of individual dykes; and
- The dyke density in swarms.

25.3 Mineral Resource Estimate

Based on economic parameters, InnovExplo established that the Quebec Wesdome Project contains total Measured and Indicated Resources below the proposed 100-m-thick crown pillar of 2,500,600 metric tons grading 5.59 g/t Au, for a total of 449,300 ounces.

Based on economic parameters, InnovExplo established that the Quebec Wesdome Project contains total Measured and Indicated Resources within the proposed 100-m crown pillar of 134,000 metric tons grading 5.48 g/t Au, for a total of 23,600 ounces.

Inferred Resources below the proposed 100-m crown pillar amount to 1,563,300 metric tons grading 7.97 g/t Au, for a total of 400,400 ounces. Inferred Resources within the proposed 100-m crown pillar amount to 747,600 metric tons grading 8.22 g/t Au, for a total of 197,600 ounces.

After completing a detailed review of all pertinent information and preparing a new mineral resource estimate, InnovExplo concludes that some mineralized zones on the Quebec Wesdome Project remain open at depth. Thus, there is good potential to add new Inferred Resources along the extensions of known zones through additional diamond drilling. Moreover, at the Wesdome deposit, it may also be possible to upgrade Inferred Resources to the Indicated category with additional drilling.

25.4 Drilling

Wesdome carried out many drilling programs on the Quebec Wesdome Project between 2007 and 2015. Three hundred sixty-one (361) surface diamond drill holes totalling 138,322.50 m were drilled in the Pontiac and Piché groups, and in the Héva, Val-d’Or, Jacola and Dubuisson formations. On several occasions, large-scale fault zones and their subsidiary faults/shear zones were encountered within these holes, as well as mineralized zones consisting of at least three types of veins. The results of these drilling programs were used to calculate new resource estimates, in particular for the Dubuisson, Dubuisson North and Presqu’ile zones.

InnovExplo recommends an exhaustive compilation of all isolated gold results obtained from Wesdome's drilling programs outside the 63 known zones. Isolated gold values that coincide with one or more of the above-mentioned exploration guides can be used to define target areas where additional follow-up drilling should be conducted.

This same approach should be applied to isolated gold values obtained through historical (pre-2007) drilling.

25.5 Exploration Potential for New Mineral Resources

25.5.1 Potential of mineralized zones related to historical resources

In 2007 and 2008, Wesdome added more holes on the historical Shawkey No. 22 Zone, yielding many good gold intersections. It would be necessary to determine required work to confirm and establish Mineral Resource Estimate compliant with NI 43-101. In 1990, Placer Dome carried out a mineral inventory on the No. 22 Zone and evaluated a total of 883,132 metric tons with an average grade of 4.04 g/t Au. This zone should be investigated to determine required work to confirm and establish Mineral Resource Estimate compliant with NI 43-101. *(These "resources" are historical in nature and should not be relied upon. It is unlikely they conform to current NI 43-101 criteria or to CIM Standards and Definitions, and they have not been verified to determine their relevance or reliability. They are included in this section for illustrative purposes only and should not be disclosed out of context.)*

In addition, a new 43-101 compliant mineral resource estimate should be prepared for any zones representing the remnants of historical mining at the Kiena mine that could not be included in the current estimate due to a lack of information on the data and parameters used in previous estimates. These zones were estimated using 3D block models, but the validation process showed a lack of information and/or discrepancies in reproducing the numbers (see section 14.2.2). Additional information is needed to evaluate the remaining resources around the Kiena mine.

25.5.2 Potential of the studied mineralized zones

Mineral resource estimates could be prepared for some of the 63 mineralized zones studied by InnovExplo without additional drilling. These zones have been subject to multiple drilling programs since 2006, although no 43-101 compliant resources have been reported. It should be determined what work would be required to prepare a 43-101 compliant Mineral Resource Estimate.

25.6 Potential of Mineralized Zones on Adjacent Properties

According to available geological information for adjacent properties, some of the mineralized zones on these properties may continue onto the Quebec Wesdome Project. This is primarily of interest for the Goldex GEZ, E and Deep zones, and the Callahan No. 4 Zone.

25.7 Environment

All infrastructure components have the necessary permits and authorizations. The Kiena environmental department is aware of the main legal requirements, and continues to perform all required monitoring studies.

25.8 Risks and Opportunities

The Quebec Wesdome Project is subject to a number of known and unknown risks, uncertainties and other factors, as presented in Table 25.1. The opportunities associated with the Project are presented in Table 25.2

Table 25.1 – Risks associated with the Quebec Wesdome Project

Risk	Explanation/Potential Impact	Possible Risk Mitigation
Social	The rising number of mining projects in the Abitibi-Témiscamingue administrative region has heightened citizen awareness and made them more interested in staying informed and consulted. In Québec, there is currently no legal obligation to consult with stakeholders other than First Nations about mining activities, however regulations soon to come into force will legally impose stakeholder consultation, and companies are advised to assess the impact of such regulation and their responsibilities. The implementation of a Monitoring Committee is recommended as an amendment to the *Mining Act*; this article (101.0.3) is not yet in effect.	Develop a site-specific communication mechanism to provide basic information as a good neighbour.
Environmental	Analyses for characterization of the tailings state that tailings may be leachable. The rehabilitation and restoration plan is accepted since September 2015. Wesdome submits an addendum in October 2015 whose purpose is to maintain monitoring and restoration plan for non-leachable tailings; Wesdome argues that no non-compliance was identified with the final effluent.	A sampling program with static, if not kinetic, tests will probably be required since the Kiena mining operation never had to deal with acid mine drainage in the past. The addendum is currently under review.
	Some recommendations of the 2013 Report on Tailings Dyke Inspections have not yet been implemented.	Implement the recommendations.
Permitting	To maintain the tenure of a mining concession, the lessee must commence mining operations within five years after December 10, 2013 (article 118 of the *Mining Act*), however the current status of the Kiena mine is “care and maintenance”. In addition, each year, the holder of a mining concession must carry out one or more of the types of work described in article 69 of the *Regulation respecting mineral substances other than petroleum, natural gas and brine*.	Mining operations should restart before December 2018 in order to maintain the validity of the mining concession.
Infrastructure	Possibility of water infiltration in the underground workings	Perform a monitoring of the actual crown pillar

Table 25.2 – Opportunities associated with the Quebec Wesdome Project

Opportunity	Explanation/Potential Impact	Potential benefit
Mineral Resources	It is possible to increase resources for all known mineralized zones (63) described in this report without additional drilling	Add more inferred resources to the Project.
	It is possible to upgrade inferred resources in the Wesdome deposit to indicated through additional diamond drilling.	Add more indicated resources to the Project.
	Some of the known mineralized zones are still open along their extensions. These extensions can be tested by additional diamond drilling.	Add more inferred and indicated resources to the Project.
	Many zones near existing mining infrastructure that contributed to the resources reported in the 2014 Annual Information Form were excluded from the current resource estimate due to lack of information and/or discrepancies observed during the resource validation process (see 14.2.2). Additional compilation work could render some of these resources NI 43-101 compliant.	Add inferred, indicated, and measured resources to the project.
Exploration Guides	A 3D-GIS geological compilation for the Quebec Wesdome Project would identify gold targets that correspond to one or more of the five exploration guides.	Define targets for future diamond drilling programs and potentially discover new mineralized zones on the Project.
	A new detailed helicopter-borne magnetic survey performed by the MERN covers the entire Quebec Wesdome Project.	Improve the geological interpretation, including the exploration guides, at the project scale.
Adjacent properties	The granodiorite hosting mineralized zones (GEZ, M, E, P and Deep) in the Goldex mine dip at depth toward the Quebec Wesdome Project.	Potential to discover granodiorite-hosted mineralized zones on the Project similar to those of the Goldex mine.
	The Callahan Shear Zone and the dyke hosting the Callahan No. 4 Zone extend onto the Quebec Wesdome Project.	Potential to discover dyke-hosted mineralized zones on the Project similar to those of the Callahan No. 4 Zone.
Infrastructure	Wesdome owns the Kiena milling and tailings facilities	Ore from a future mining operation can be processed on the Project.
	Presence of an exploration drift on the 330-m level	Excellent access for future underground drilling programs.

26. RECOMMENDATIONS

Based on the results of the 2015 Mineral Resource Estimate and the project-specific exploration guides for gold, InnovExplo recommends advancing the Quebec Wesdome Project to the next phase.

26.1 D-GIS geological model

The issuer should complete a 3D-GIS compilation of all historical openings using data from geological surveys as well as historical and recent drill holes on the Project. This information, combined with the new detailed helicopter-borne magnetic survey performed by the MERN, will improve the geological interpretation at the project scale.

The purpose of the compilation is to identify exploration targets that correspond to one or more of the five (5) exploration guides defined for the Project, whether or not they are known to contain any gold. In addition, all mineralized zones containing 43-101 resources could also be integrated into the 3D-GIS compilation to visualize the relationship between these zones and the five exploration guides within a 3D model.

It is also recommended to compile all public information for both the Goldex mine and the Callahan No. 4 Zone in order to better understand the geological context. The issuer should investigate the hypothesis that mineralized zones may extend at depth onto the Project.

26.2 Mineral Resource Upgrade

InnovExplo recommends updating the mineral resource estimate for the Wesdome deposit using a minimum true thickness of 2.0 m (long hole mining scenario).

A new 43-101 compliant mineral resource estimate should be prepared for any zones in the vicinity of underground workings at the Kiena mine (block models; see 14.2.2) that could not be included in the current estimate due to a lack of information, discrepancies in the validation process or unsupported parameters.

InnovExplo recommends determining what work would be required to prepare a 43-101 compliant Mineral Resource Estimate on the historical Shawkey No. 22 Zone.

It should also be determined what work would be required to prepare a 43-101 compliant Mineral Resource Estimate for some of the 63 mineralized zones studied by InnovExplo, without additional drilling.

26.3 Drilling

Drilling should be conducted along the extensions of mineralized zones related to the 2015 Mineral Resource Estimate. Moreover, additional drilling should be carried out to upgrade the Inferred Resources of the Wesdome deposit to Indicated Resources.

26.4 Environment

A recent study (Gagnon and Allard, 2013) states that the samples from Kiena can be considered “leachable tailings”; Wesdome argues that no non-compliance was identified with the final effluent. Wesdome submits an addendum for modifications of the Rehabilitation and restoration plan (Rood and Godbout, 2014) and should ensure that ministries statue on case.

To ensure the long-term viability of tailings management at Kiena, engineering studies on the development of new tailings ponds should continue since the capacity of the North pond nearly reaches its maximum capacity.

Finally, InnovExplo has identified knowledge gaps in legal requirements relevant to environmental performance. Thus, the issuer’s legal requirements should be reviewed and updated to ensure the monitoring programs in place are adequate.

26.5 Recommended work program

In summary, InnovExplo recommends a two-phase work program as shown in Table 26.1. The cost estimate has been prepared to serve as a guideline for the Project. Expenditures for Phase 1 are estimated at C$1,092,500 (incl. 15% for contingencies). Expenditures for Phase 2 are estimated at C$1,897,500 (incl. 15% for contingencies). The grand total is C$2,990,000 (incl. 15% for contingencies). Phase 2 is contingent upon the success of Phase 1.

Table 26.1 – Estimated costs for the recommended work program

Phase 1A - Work Program	C$ Estimated Cost
3D Compilation of all historical openings and historical underground drill holes	$ 100,000.00
3D-GIS property-scale compilation and target generation	$ 200,000.00
Mineral Resource Estimate update	$ 150,000.00
Contingencies (15%)	$ 67,500.00
Phase 1A subtotal	**$ 517,500.00**
Phase 1B - Work Program	**C$ Estimated Cost**
Surface drilling 5000m @ 100$/m on targets defined from Phase 1A	$ 500,000.00
Contingencies (15%)	$ 75,000.00
Phase 1B subtotal	**$ 575,000.00**
TOTAL PHASE 1A and PHASE 1B	**$ 1,092,500.00**
Phase 2A - Work Program	**C$ Estimated Cost**
Mineral Resource Estimate update from new drilling	$ 150,000.00
Preliminary Economic Assessment Study	$ 500,000.00
Contingencies (15%)	$ 97,500.00
Phase 2A subtotal	**$ 747,500.00**
Phase 2B - Work Program	**C$ Estimated Cost**
Surface drilling 10000m @ 100$/m (follow-up of mineral resources)	$ 1,000,000.00
Contingencies (15%)	$ 150,000.00
Phase 2B subtotal	**$ 1,150,000.00**
TOTAL PHASE 2A and PHASE 2B	**$ 1,897,500.00**
TOTAL PHASE 1 and PHASE 2	**$ 2,990,000.00**

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APPENDIX I – UNITS, CONVERSION FACTORS, ABBREVIATIONS

Units

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

Abbreviations

°C	degrees Celsius	oz, Moz	troy ounces, million troy ounces
ha	hectares	avdp	avoirdupois pound
g	grams	st	short ton
kg	kilograms	oz/t	ounces per short ton
mm	millimetres	t	metric ton (tonne)
cm	centimetres	Mt	million metric tons
m	metres	g/t	grams per metric ton
km	kilometres	tpd	metric tons per day
masl	metres above sea level	ppb	parts per billion
' or ft	feet	ppm	parts per million
cfm	cubic feet per minute	cps	counts per second
m^3/min	cubic metres per minute	hp	horsepower
Mbs	megabytes per second	Btu	British thermal units
$ or C$ or CAD	Canadian dollars	kV/kVA	kilovolts/kilovolt-amps
US$ or USD	American dollars	MPa	mega pascals

Conversion factors for measurements

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

APPENDIX II – MINING RIGHTS IN THE PROVINCE OF QUÉBEC

II.1 Mining Rights in the Province of Québec

The following discussion on the mining rights in the province of Québec was largely taken from Guzon (2012) and Gagné and Masson (2013), and from the Act to Amend the Mining Act ("Bill 70") assented on December 10, 2013 (National Assembly, 2013).

In the Province of Québec, mining is principally regulated by the provincial government. The Ministry of Energy and Natural Resources ("MERN": *Ministère de l'Énergie et des Ressources naturelles du Québec*) is the provincial agency entrusted with the management of mineral substances in Québec. The ownership and granting of mining titles for mineral substances are primarily governed by the *Mining Act* (the "Act") and related regulations. In Québec, land surface rights are distinct property from mining rights. Rights in or over mineral substances in Québec form part of the domain of the State (the public domain), subject to limited exceptions for privately owned mineral substances. Mining titles for mineral substances within the public domain are granted and managed by the MERN. The granting of mining rights in privately owned mineral substances is a matter of private negotiations, although certain aspects of the exploration for and mining of such mineral substances are governed by the Act. This section provides a brief overview of the most common mining rights for mineral substances within the domain of the State.

II.1.1 The Claim

A claim is the only exploration title for mineral substances (other than surface mineral substances, or petroleum, natural gas and brine) currently issued in Québec. A claim gives its holder the exclusive right to explore for such mineral substances on the land subject to the claim, but does not entitle its holder to extract mineral substances, except for sampling and in limited quantities. In order to mine mineral substances, the holder of a claim must obtain a mining lease. The electronic map designation is the most common method of acquiring new claims from the MERN whereby an applicant makes an online selection of available pre-mapped claims. In a few areas defined by the government, claims can be obtained by staking.

A claim has a term of two years, which is renewable for additional two-year periods, subject to performance of minimum exploration work on the claim and compliance with other requirements set forth by the Act. In certain circumstances, if the work carried out in respect of a claim is insufficient, or if no work has been carried out at all, it is possible for the claim holder to comply with the minimum work obligations by using work credits for exploration work conducted on adjacent parcels, or by making a payment in lieu of the required work.

Additionally, since May 6, 2015, claim holder must submit to the MERN, on each claim registration anniversary date, a report of the work performed on the claim in the previous year. Moreover, the amount to be paid to renew a claim at the end of its term when the minimum prescribed work has not been carried out now corresponds to twice the amount of the work required. Any excess amount spent on work during the term of a claim can only be applied to the six subsequent renewal periods (12 years in total). Holders of a mining lease or a mining concession are no longer able to apply work carried out in respect of a mining lease or mining concession to renew claims.

II.1.2 The Mining Lease

Mining leases and mining concessions are extraction (production) mining titles which give their holder the exclusive right to mine mineral substances (other than surface mineral substances, or petroleum, natural gas and brine). A mining lease is granted to the holder of one or several claims upon proof of indications that a workable deposit could be present on the area covered by such claims, and that the holder has complied with other requirements prescribed by the Act. A mining lease has an initial term of 20 years, but may be renewed for three additional periods of 10 years each. Under certain conditions, a mining lease may be renewed beyond the three statutory renewal periods.

The Act (as amended by Bill 70) states that an application for a mining lease must be accompanied by a project feasibility study, as well as a scoping and market study as regards to processing in Québec. Holders of mining leases must then produce such a scoping and market study every 20 years. Bill 70 adds, as an additional condition for granting a mining lease, the issuance of a certificate of authorization (CA) under the *Environment Quality Act*. The Minister may nevertheless grant a mining lease if the time required to obtain the CA is unreasonable. A rehabilitation and restoration plan must be approved by the Minister before any mining lease can be granted. In the case of an open-pit mine, the plan must contain a backfill feasibility study. This last requirement does not apply to mines in operation as of December 10, 2013. Bill 70 sets forth that the financial guarantee to be provided by a holder of a mining lease be for an amount that corresponds to the anticipated total cost of completing the work required under the rehabilitation and restoration plan.

II.1.3 The Mining Concession

Mining concessions were issued prior to January 1, 1966. After that date, grants of mining concessions were replaced by grants of mining leases. Although similar in certain respects to mining leases, mining concessions granted broader surface and mining rights, and they are not limited in time.

A grantee must commence mining operations within five years from December 10, 2013. As is the case for a holder of a mining lease, a grantee may be required by the government, on reasonable grounds, to maximize the economic spinoffs within Québec of mining the mineral resources authorized under the concession. It must also, within three years of commencing mining operations and every 20 years thereafter, send the Minister a scoping and market study as regards to processing in Québec.

II.1.4 Other Information

The claims, mining leases, mining concessions, exclusive leases for surface mineral substances, and the licences and leases for petroleum, natural gas and underground reservoirs obtained from the MERN may be sold, transferred, hypothecated or otherwise encumbered without the MERN's consent. However, a release from the MERN is required for a vendor or a transferee to be released from its obligations and liabilities owing to the MERN related to the mine rehabilitation and restoration plan associated with the alienated lease or mining concession. Such release can be obtained when a third party purchaser assumes those obligations as part of a property transfer. The transfers of mining titles, and the grants of hypothecs and other encumbrances in mining rights, must be recorded in the register of real and immovable mining rights maintained by the MERN and other applicable registers.

Under Bill 70, a lessee or grantee of a mining lease or a mining concession, on each anniversary date of such lease or concession, must send the Minister a report showing the quantity and value of ore extracted during the previous year, the duties paid under the *Mining Tax Act* and the overall contributions paid during same period, as well as any other information as determined by regulation.

APPENDIX III – DETAILED LIST OF MINING TITLES

Type of Mining Titles	Title Number	NTS sheet	Status	Area (ha)	Registration Date	Expiration Date	Holder
CDC	2238678	32C04	Active	20,55	June 23, 2010	June 22, 2016	Wesdome Gold Mines Ltd. (100%)
CDC	2238679	32C04	Active	31,48	June 23, 2010	June 22, 2016	Wesdome Gold Mines Ltd. (100%)
CDC	2411926	32C04	Active	1,98	October 14, 2014	June 15, 2017	Wesdome Gold Mines Ltd. (50%); Dynacor Mines Inc. (50%)
CDC	2411927	32C04	Active	16,28	October 14, 2014	June 15, 2017	Wesdome Gold Mines Ltd. (50%); Dynacor Mines Inc. (50%)
CDC	2411928	32C04	Active	3,02	October 14, 2014	June 15, 2017	Wesdome Gold Mines Ltd. (50%); Dynacor Mines Inc. (50%)
CDC	2411929	32C04	Active	1,09	October 14, 2014	June 15, 2017	Wesdome Gold Mines Ltd. (50%); Dynacor Mines Inc. (50%)
CDC	2411930	32C04	Active	9,60	October 14, 2014	June 15, 2017	Wesdome Gold Mines Ltd. (50%); Dynacor Mines Inc. (50%)
CDC	2411931	32C04	Active	12,90	October 14, 2014	June 15, 2017	Wesdome Gold Mines Ltd. (50%); Dynacor Mines Inc. (50%)
CDC	2415481	32C04	Active	11,06	November 26, 2014	June 22, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2415482	32C04	Active	4,66	November 26, 2014	June 22, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2421972	32C04	Active	32,63	March 13, 2015	April 24, 2017	Wesdome Gold Mines Ltd. (75%); Maurice Fortin (25%)
CDC	2421973	32C04	Active	41,29	March 13, 2015	April 24, 2017	Wesdome Gold Mines Ltd. (75%); Maurice Fortin (25%)
CDC	2421974	32C04	Active	7,95	March 13, 2015	April 24, 2017	Wesdome Gold Mines Ltd. (75%); Maurice Fortin (25%)
CDC	2421975	32C04	Active	9,55	March 13, 2015	April 24, 2017	Wesdome Gold Mines Ltd. (75%); Maurice Fortin (25%)
CDC	2421976	32C04	Active	32,84	March 13, 2015	April 24, 2017	Wesdome Gold Mines Ltd. (75%); Maurice Fortin (25%)
CDC	2421977	32C04	Active	11,93	March 13, 2015	April 24, 2017	Wesdome Gold Mines Ltd. (75%); Maurice Fortin (25%)
CDC	2421978	32C04	Active	9,99	March 13, 2015	April 24, 2017	Wesdome Gold Mines Ltd. (75%); Maurice Fortin (25%)

Type of Mining Titles	Title Number	NTS sheet	Status	Area (ha)	Registration Date	Expiration Date	Holder
CDC	2421979	32C04	Active	41,38	March 13, 2015	April 24, 2017	Wesdome Gold Mines Ltd. (75%); Maurice Fortin (25%)
CDC	2428771	32C04	Active	57,51	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428772	32C04	Active	57,51	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428773	32C04	Active	57,53	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428774	32C04	Active	57,51	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428775	32C04	Active	57,51	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428776	32C04	Active	57,51	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428777	32C04	Active	57,52	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428778	32C04	Active	57,51	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428779	32C04	Active	57,45	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428780	32C04	Active	57,50	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428781	32C04	Active	57,50	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428782	32C04	Active	57,50	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428783	32C04	Active	57,49	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428784	32C04	Active	57,48	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428785	32C04	Active	57,48	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428786	32C04	Active	57,48	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428787	32C04	Active	57,47	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428788	32C04	Active	57,47	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428789	32C04	Active	57,47	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428790	32C04	Active	57,47	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428791	32C04	Active	57,47	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428792	32C04	Active	57,46	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428793	32C04	Active	57,46	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428794	32C04	Active	57,52	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428795	32C04	Active	2,26	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428796	32C04	Active	4,81	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428797	32C04	Active	54,90	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428798	32C04	Active	1,04	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428799	32C04	Active	57,53	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428800	32C04	Active	42,16	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)

Type of Mining Titles	Title Number	NTS sheet	Status	Area (ha)	Registration Date	Expiration Date	Holder
CDC	2428801	32C04	Active	34,88	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428802	32C04	Active	3,54	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428803	32C04	Active	57,43	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428804	32C04	Active	45,47	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428805	32C04	Active	49,58	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428806	32C04	Active	57,08	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428807	32C04	Active	40,82	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428808	32C04	Active	57,51	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428809	32C04	Active	57,45	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428810	32C04	Active	13,50	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428811	32C04	Active	1,58	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428812	32C04	Active	1,11	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428813	32C04	Active	53,96	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428814	32C04	Active	57,52	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428815	32C04	Active	29,94	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428816	32C04	Active	18,37	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428817	32C04	Active	57,22	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428818	32C04	Active	13,96	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428819	32C04	Active	57,44	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428820	32C04	Active	28,11	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428821	32C04	Active	57,53	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428822	32C04	Active	57,52	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428823	32C04	Active	57,53	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428824	32C04	Active	2,23	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428825	32C04	Active	54,70	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428826	32C04	Active	57,52	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428827	32C04	Active	29,97	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428828	32C04	Active	0,14	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428829	32C04	Active	15,78	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428830	32C04	Active	38,02	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428831	32C04	Active	47,79	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428832	32C04	Active	57,53	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)

Type of Mining Titles	Title Number	NTS sheet	Status	Area (ha)	Registration Date	Expiration Date	Holder
CDC	2428833	32C04	Active	57,43	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428834	32C04	Active	19,17	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428835	32C04	Active	54,60	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428836	32C04	Active	6,78	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428837	32C04	Active	57,54	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428838	32C04	Active	57,52	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428839	32C04	Active	50,83	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428840	32C04	Active	17,81	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428841	32C04	Active	35,74	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428842	32C04	Active	12,49	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428843	32C04	Active	1,15	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428844	32C04	Active	57,53	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428845	32C04	Active	2,12	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428846	32C04	Active	33,25	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428847	32C04	Active	40,48	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428848	32C04	Active	57,53	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428849	32C04	Active	37,40	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428850	32C04	Active	1,07	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428851	32C04	Active	57,02	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428852	32C04	Active	19,78	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428853	32C04	Active	1,05	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428854	32C04	Active	54,33	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428855	32C04	Active	51,35	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428856	32C04	Active	32,68	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428857	32C04	Active	57,44	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428858	32C04	Active	57,53	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428859	32C04	Active	50,94	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428860	32C04	Active	57,45	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428861	32C04	Active	57,53	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428862	32C04	Active	15,86	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428863	32C04	Active	5,59	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428864	32C04	Active	23,96	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)

Type of Mining Titles	Title Number	NTS sheet	Status	Area (ha)	Registration Date	Expiration Date	Holder
CDC	2428865	32C04	Active	4,17	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428866	32C04	Active	57,45	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428867	32C04	Active	57,53	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428868	32C04	Active	28,72	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428869	32C04	Active	3,25	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428870	32C04	Active	8,79	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428871	32C04	Active	22,64	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428872	32C04	Active	4,81	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428873	32C04	Active	42,14	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428874	32C04	Active	44,62	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428875	32C04	Active	57,54	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428876	32C04	Active	57,53	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428877	32C04	Active	14,98	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428878	32C04	Active	34,96	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428879	32C04	Active	57,55	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428880	32C04	Active	57,45	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428881	32C04	Active	57,54	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428882	32C04	Active	57,44	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428883	32C04	Active	25,48	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428884	32C04	Active	14,89	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428885	32C04	Active	57,51	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428886	32C04	Active	50,43	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428887	32C04	Active	29,97	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428888	32C04	Active	7,43	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428889	32C04	Active	33,96	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428890	32C04	Active	33,99	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428891	32C04	Active	57,53	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428892	32C04	Active	20,91	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428893	32C04	Active	29,99	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428894	32C04	Active	33,94	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428895	32C04	Active	19,73	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428896	32C04	Active	50,17	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)

Type of Mining Titles	Title Number	NTS sheet	Status	Area (ha)	Registration Date	Expiration Date	Holder
CDC	2428897	32C04	Active	57,45	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428898	32C04	Active	57,52	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428899	32C04	Active	34,56	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428900	32C04	Active	0,06	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428901	32C04	Active	54,26	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428902	32C04	Active	10,55	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428903	32C04	Active	45,71	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428904	32C04	Active	55,51	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428905	32C04	Active	0,22	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428906	32C04	Active	43,02	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428907	32C04	Active	57,44	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428908	32C04	Active	57,44	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428909	32C04	Active	30,61	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428910	32C04	Active	19,55	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428911	32C04	Active	37,40	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428912	32C04	Active	41,22	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428913	32C04	Active	11,53	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428914	32C04	Active	1,00	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428915	32C04	Active	49,74	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428916	32C04	Active	1,98	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428917	32C04	Active	56,54	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428918	32C04	Active	31,08	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428919	32C04	Active	4,17	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428920	32C04	Active	57,55	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428921	32C04	Active	52,79	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428922	32C04	Active	32,74	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428923	32C04	Active	57,52	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428924	32C04	Active	57,55	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428925	32C04	Active	13,47	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428926	32C04	Active	20,41	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428927	32C04	Active	57,54	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428928	32C04	Active	0,40	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)

Type of Mining Titles	Title Number	NTS sheet	Status	Area (ha)	Registration Date	Expiration Date	Holder
CDC	2428929	32C04	Active	14,11	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428930	32C04	Active	57,55	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428931	32C04	Active	55,52	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428932	32C04	Active	57,54	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428933	32C04	Active	56,77	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428934	32C04	Active	10,82	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428935	32C04	Active	57,44	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428936	32C04	Active	57,54	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428937	32C04	Active	2,08	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428938	32C04	Active	55,56	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428939	32C04	Active	21,87	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428940	32C04	Active	57,44	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428941	32C04	Active	11,86	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428942	32C04	Active	54,43	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428943	32C04	Active	1,85	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428944	32C04	Active	57,53	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428945	32C04	Active	33,98	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428946	32C04	Active	30,07	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CDC	2428947	32C04	Active	10,60	July 16, 2015	March 5, 2017	Wesdome Gold Mines Ltd. (100%)
CM	124	32C04	Active	147,58	May 19, 1919	NA	Wesdome Gold Mines Ltd. (100%)
CM	262	32C04	Active	385,01	August 12, 1932	NA	Wesdome Gold Mines Ltd. (100%)
CM	494	32C04	Active	184,35	November 30, 1962	NA	Wesdome Gold Mines Ltd. (100%)
			TOTAL	**7863,41**			

APPENDIX IV – DETAILED LIST OF HISTORICAL MINING TITLES

Property	Type of Mining Title	Title Number	NTS sheet	Township	Status	Area (ha)	Registration Date	Expiry Date	Holder	Royalty
Audet Block	CL	3426431	32C04	DUBUISSON	Active	15.84	March 26, 1974	March 5, 2017	Wesdome Gold Mines Ltd (100%)	2% NSR to Huguette Audet
Audet Block	CL	3426432	32C04	DUBUISSON	Active	12.82	March 26, 1974	March 5, 2017	Wesdome Gold Mines Ltd (100%)	2% NSR to Huguette Audet
Audet Block	CL	3426433	32C04	DUBUISSON	Active	5.91	March 26, 1974	March 5, 2017	Wesdome Gold Mines Ltd (100%)	2% NSR to Huguette Audet
Audet Block	CL	3426434	32C04	DUBUISSON	Active	30.59	March 26, 1974	March 5, 2017	Wesdome Gold Mines Ltd (100%)	2% NSR to Huguette Audet
Audet Block	CL	3426435	32C04	DUBUISSON	Active	21.58	March 26, 1974	March 5, 2017	Wesdome Gold Mines Ltd (100%)	2% NSR to Huguette Audet
Audet Block	CL	3426501	32C04	DUBUISSON	Active	21.67	November 25, 1974	November 6, 2016	Wesdome Gold Mines Ltd (100%)	2% NSR to Huguette Audet
Callahan	CL	5269635	32C04	VASSAN	Active	17.19	June 20, 2005	June 19, 2015	Wesdome Gold Mines Ltd (100%)	1% NSR to Placer Dome (CLA) Limited
Callahan	CL	5269636	32C04	VASSAN	Active	18.40	June 20, 2005	June 19, 2015	Wesdome Gold Mines Ltd (100%)	1% NSR to Placer Dome (CLA) Limited
Callahan	CL	5269637	32C04	VASSAN	Active	15.25	June 20, 2005	June 19, 2015	Wesdome Gold Mines Ltd (100%)	1% NSR to Placer Dome (CLA) Limited
Dubuisson	CL	3723721	32C04	DUBUISSON	Active	41.28	May 25, 1978	May 4, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Dubuisson	CL	3723722	32C04	DUBUISSON	Active	49.21	May 25, 1978	May 4, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Dubuisson	CL	3723723	32C04	DUBUISSON	Active	40.21	May 25, 1978	May 4, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Dubuisson	CL	3723724	32C04	DUBUISSON	Active	24.40	May 25, 1978	May 4, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Dubuisson	CL	3723725	32C04	DUBUISSON	Active	20.94	May 25, 1978	May 4, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Dubuisson	CL	3723731	32C04	DUBUISSON	Active	17.07	May 25, 1978	May 4, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Dubuisson	CL	3723732	32C04	DUBUISSON	Active	11.99	May 25, 1978	May 4, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Dubuisson	CL	3723733	32C04	DUBUISSON	Active	22.51	May 25, 1978	May 4, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Dubuisson	CL	3723734	32C04	DUBUISSON	Active	24.70	May 25, 1978	May 4, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Elmac	CLD	P138010	32C04	DUBUISSON	Active	17.09	June 7, 1978	June 6, 2015	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CLD	P138010	32C04	DUBUISSON	Active	17.18	June 7, 1978	June 6, 2015	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3697562	32C04	DUBUISSON	Active	2.49	May 24, 1978	May 5, 2017	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3697562	32C04	DUBUISSON	Active	10.49	May 24, 1978	May 5, 2017	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3697563	32C04	DUBUISSON	Active	20.98	May 24, 1978	May 5, 2017	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3697564	32C04	DUBUISSON	Active	5.37	May 24, 1978	May 5, 2017	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3697565	32C04	DUBUISSON	Active	6.68	May 24, 1978	May 5, 2017	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3697561	32C04	DUBUISSON	Active	12.20	February 20, 1978	February 1, 2017	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3670371	32C04	DUBUISSON	Active	17.48	April 4, 1977	March 16, 2017	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3670372	32C04	DUBUISSON	Active	16.64	April 4, 1977	March 16, 2017	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3670373	32C04	DUBUISSON	Active	19.19	April 4, 1977	March 16, 2017	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3646702	32C04	DUBUISSON	Active	22.82	November 23, 1976	November 4, 2016	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3646703	32C04	DUBUISSON	Active	12.95	November 23, 1976	November 4, 2016	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3646704	32C04	DUBUISSON	Active	12.18	November 23, 1976	November 4, 2016	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3646951	32C04	DUBUISSON	Active	12.89	December 1, 1976	November 14, 2016	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3646952	32C04	DUBUISSON	Active	11.88	December 1, 1976	November 14, 2016	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3646953	32C04	DUBUISSON	Active	9.72	December 1, 1976	November 14, 2016	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3646954	32C04	DUBUISSON	Active	6.55	December 1, 1976	November 14, 2016	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3647221	32C04	DUBUISSON	Active	10.48	December 29, 1976	December 10, 2016	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3647222	32C04	DUBUISSON	Active	10.96	December 29, 1976	December 10, 2016	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3647223	32C04	DUBUISSON	Active	3.44	December 29, 1976	December 10, 2016	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3647224	32C04	DUBUISSON	Active	0.60	December 29, 1976	December 10, 2016	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3648411	32C04	DUBUISSON	Active	31.78	February 23, 1977	February 6, 2017	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3648412	32C04	DUBUISSON	Active	23.88	February 23, 1977	February 6, 2017	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3648413	32C04	DUBUISSON	Active	13.86	February 23, 1977	February 6, 2017	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3648414	32C04	DUBUISSON	Active	2.74	March 10, 1977	February 6, 2017	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3648821	32C04	DUBUISSON	Active	9.22	March 10, 1977	February 21, 2017	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet

Property	Type of Mining Title	Title Number	NTS sheet	Township	Status	Area (ha)	Registration Date	Expiry Date	Holder	Royalty
Elmac	CL	3648822	32C04	DUBUISSON	Active	7.70	March 10, 1977	February 21, 2017	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3648823	32C04	DUBUISSON	Active	8.97	March 10, 1977	February 21, 2017	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3648824	32C04	DUBUISSON	Active	13.52	March 10, 1977	February 21, 2017	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3648825	32C04	DUBUISSON	Active	20.96	March 10, 1977	February 21, 2017	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Elmac	CL	3646701	32C04	DUBUISSON	Active	21.45	November 23, 1976	November 4, 2016	Wesdome Gold Mines Ltd (100%)	2% NPO to Albert Audet and Daniel Audet
Kiena	CM	494	32C04	DUBUISSON	Active	184.07	November 30, 1962	NA	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C009391	32C04	DUBUISSON	Active	12.11	February 16, 1934	December 4, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C009392	32C04	DUBUISSON	Active	12.35	February 16, 1934	December 4, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C009393	32C04	DUBUISSON	Active	22.02	February 16, 1934	December 4, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C009411	32C04	DUBUISSON	Active	12.92	June 6, 1933	May 19, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C009412	32C04	DUBUISSON	Active	15.88	June 6, 1933	May 19, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C009413	32C04	DUBUISSON	Active	19.37	June 6, 1933	May 19, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C009414	32C04	DUBUISSON	Active	16.42	June 13, 1933	May 19, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C006831	32C04	DUBUISSON	Active	9.07	October 14, 1930	September 14, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C005561	32C04	DUBUISSON	Active	18.01	August 17, 1934	July 30, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C005562	32C04	DUBUISSON	Active	21.34	August 17, 1934	July 30, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C005101	32C04	DUBUISSON	Active	19.67	August 16, 1933	July 31, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C005101	32C04	DUBUISSON	Active	6.62	August 16, 1933	July 31, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C005102	32C04	DUBUISSON	Active	18.09	August 16, 1933	July 31, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C005103	32C04	DUBUISSON	Active	17.13	August 16, 1933	July 31, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C005111	32C04	DUBUISSON	Active	25.07	September 3, 1932	July 31, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C005112	32C04	DUBUISSON	Active	23.31	September 3, 1932	July 31, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C005121	32C04	DUBUISSON	Active	33.74	September 3, 1932	July 31, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C005122	32C04	DUBUISSON	Active	18.32	September 3, 1932	July 31, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C004331	32C04	DUBUISSON	Active	20.41	June 6, 1933	May 19, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C004332	32C04	DUBUISSON	Active	21.34	June 6, 1933	May 19, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C004333	32C04	DUBUISSON	Active	16.88	June 6, 1933	May 19, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C004334	32C04	DUBUISSON	Active	16.89	June 6, 1933	May 19, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C002981	32C04	DUBUISSON	Active	11.81	April 25, 1936	April 4, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C002982	32C04	DUBUISSON	Active	12.45	April 25, 1936	April 4, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	C002983	32C04	DUBUISSON	Active	19.50	April 25, 1936	April 4, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	55071	32C04	DUBUISSON	Active	14.67	April 14, 1943	February 5, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	1416371	32C04	DUBUISSON	Active	16.63	June 21, 1958	June 2, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	1416372	32C04	DUBUISSON	Active	16.37	June 21, 1958	June 2, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	1416373	32C04	DUBUISSON	Active	16.40	June 21, 1958	June 2, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	1416374	32C04	DUBUISSON	Active	16.28	June 21, 1958	June 2, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	1416375	32C04	DUBUISSON	Active	16.22	June 21, 1958	June 2, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	1416381	32C04	DUBUISSON	Active	15.17	June 21, 1958	June 2, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	1416382	32C04	DUBUISSON	Active	16.23	June 21, 1958	June 2, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	1416383	32C04	DUBUISSON	Active	16.50	June 21, 1958	June 2, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	1416384	32C04	DUBUISSON	Active	16.39	June 21, 1958	June 2, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	1416385	32C04	DUBUISSON	Active	16.37	June 21, 1958	June 2, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	1416391	32C04	DUBUISSON	Active	15.17	June 21, 1958	June 2, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	1416392	32C04	DUBUISSON	Active	16.51	June 21, 1958	June 2, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	1416393	32C04	DUBUISSON	Active	16.30	June 21, 1958	June 2, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty

Property	Type of Mining Title	Title Number	NTS sheet	Township	Status	Area (ha)	Registration Date	Expiry Date	Holder	Royalty
Kiena	CL	1416394	32C04	DUBUISSON	Active	17.73	June 21, 1958	June 2, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	1416395	32C04	DUBUISSON	Active	17.26	June 21, 1958	June 2, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	1416401	32C04	DUBUISSON	Active	16.28	June 21, 1958	June 2, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	1416402	32C04	DUBUISSON	Active	16.79	June 21, 1958	June 2, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	1416403	32C04	DUBUISSON	Active	16.85	June 21, 1958	June 2, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	1416404	32C04	DUBUISSON	Active	16.75	June 21, 1958	June 2, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena	CL	1416405	32C04	DUBUISSON	Active	17.74	June 21, 1958	June 2, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Kiena West	CL	5168830	32C04	DUBUISSON	Active	24.71	October 5, 1996	October 4, 2016	Wesdome Gold Mines Ltd (100%)	1% NSR to Jack Stoch
Kiena West	CL	5139717	32C04	DUBUISSON	Active	15.12	August 13, 1996	August 12, 2016	Wesdome Gold Mines Ltd (100%)	1% NSR to Jack Stoch
Kiena West	CL	5139718	32C04	DUBUISSON	Active	12.44	August 13, 1996	August 12, 2016	Wesdome Gold Mines Ltd (100%)	1% NSR to Jack Stoch
Kiena West	CL	5139719	32C04	DUBUISSON	Active	18.35	August 13, 1996	August 12, 2016	Wesdome Gold Mines Ltd (100%)	1% NSR to Jack Stoch
Kiena West	CL	5139720	32C04	DUBUISSON	Active	5.21	August 13, 1996	August 12, 2016	Wesdome Gold Mines Ltd (100%)	1% NSR to Jack Stoch
Kiena West	CL	5104401	32C04	DUBUISSON	Active	14.33	October 24, 1995	October 23, 2015	Wesdome Gold Mines Ltd (100%)	1% NSR to Jack Stoch
Kiena West	CL	5104403	32C04	DUBUISSON	Active	16.51	October 24, 1995	October 23, 2015	Wesdome Gold Mines Ltd (100%)	1% NSR to Jack Stoch
Kiena West	CL	5104599	32C04	DUBUISSON	Active	14.07	October 24, 1995	October 23, 2015	Wesdome Gold Mines Ltd (100%)	1% NSR to Jack Stoch
Kiena West	CL	5106527	32C04	DUBUISSON	Active	8.59	October 24, 1995	October 23, 2015	Wesdome Gold Mines Ltd (100%)	1% NSR to Jack Stoch
Kiena West	CL	5084200	32C04	DUBUISSON	Active	15.08	October 24, 1995	October 23, 2015	Wesdome Gold Mines Ltd (100%)	1% NSR to Jack Stoch
Kiena West	CL	5084205	32C04	DUBUISSON	Active	16.03	October 24, 1995	October 23, 2015	Wesdome Gold Mines Ltd (100%)	1% NSR to Jack Stoch
Kiena West	CL	5084206	32C04	DUBUISSON	Active	13.20	October 24, 1995	October 23, 2015	Wesdome Gold Mines Ltd (100%)	1% NSR to Jack Stoch
Kiena West	CL	5084210	32C04	DUBUISSON	Active	9.81	October 24, 1995	October 23, 2015	Wesdome Gold Mines Ltd (100%)	1% NSR to Jack Stoch
Lac de Montigny	CL	5268309	32C04	DUBUISSON	Active	15.02	June 23, 2005	June 22, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac de Montigny	CL	5268310	32C04	DUBUISSON	Active	15.81	June 23, 2005	June 22, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac de Montigny	CL	5269639	32C04	DUBUISSON	Active	16.00	June 23, 2005	June 22, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	4361201	32C04	DUBUISSON	Active	1.66	December 23, 1985	November 19, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740191	32C04	DUBUISSON	Active	7.68	August 22, 1978	August 3, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740192	32C04	DUBUISSON	Active	13.58	August 22, 1978	August 3, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740193	32C04	DUBUISSON	Active	19.29	August 22, 1978	August 3, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740194	32C04	DUBUISSON	Active	22.52	August 22, 1978	August 3, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740195	32C04	DUBUISSON	Active	11.44	August 22, 1978	August 3, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740201	32C04	DUBUISSON	Active	22.44	August 22, 1978	August 3, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740202	32C04	DUBUISSON	Active	20.08	August 22, 1978	August 3, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740203	32C04	DUBUISSON	Active	20.06	August 22, 1978	August 3, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740204	32C04	DUBUISSON	Active	13.44	August 22, 1978	August 3, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740205	32C04	DUBUISSON	Active	13.73	August 22, 1978	August 3, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty

Property	Type of Mining Title	Title Number	NTS sheet	Township	Status	Area (ha)	Registration Date	Expiry Date	Holder	Royalty
Lac Dubuisson	CL	3740211	32C04	DUBUISSON	Active	17.74	August 22, 1978	August 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740212	32C04	DUBUISSON	Active	18.66	August 22, 1978	August 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740213	32C04	DUBUISSON	Active	21.05	August 22, 1978	August 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740214	32C04	DUBUISSON	Active	16.30	August 22, 1978	August 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740215	32C04	DUBUISSON	Active	22.64	August 22, 1978	August 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740221	32C04	DUBUISSON	Active	18.05	August 22, 1978	August 3, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740222	32C04	DUBUISSON	Active	17.08	August 22, 1978	August 3, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740223	32C04	DUBUISSON	Active	16.38	August 22, 1978	August 3, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740224	32C04	DUBUISSON	Active	16.56	August 22, 1978	August 3, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740225	32C04	DUBUISSON	Active	19.87	August 22, 1978	August 3, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740231	32C04	DUBUISSON	Active	17.93	August 22, 1978	August 3, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740232	32C04	DUBUISSON	Active	10.11	August 22, 1978	August 3, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740233	32C04	DUBUISSON	Active	18.15	August 22, 1978	August 3, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740234	32C04	DUBUISSON	Active	13.05	August 22, 1978	August 3, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740235	32C04	DUBUISSON	Active	9.29	August 22, 1978	August 3, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740241	32C04	DUBUISSON	Active	10.35	August 22, 1978	August 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740242	32C04	DUBUISSON	Active	15.09	August 22, 1978	August 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740243	32C04	DUBUISSON	Active	18.46	August 22, 1978	August 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3740244	32C04	DUBUISSON	Active	12.64	August 22, 1978	August 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3734071	32C04	DUBUISSON	Active	18.66	November 27, 1978	November 8, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3734072	32C04	DUBUISSON	Active	18.15	November 27, 1978	November 8, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Lac Dubuisson	CL	3734073	32C04	DUBUISSON	Active	10.12	November 27, 1978	November 8, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Lamothe	CL	5088824	32C04	VASSAN	Active	42.53	March 3, 1992	March 2, 2016	Wesdome Gold Mines Ltd (100%)	1% NSR to Robert Lamothe
Lamothe	CL	5088825	32C04	VASSAN	Active	42.56	March 3, 1992	March 2, 2016	Wesdome Gold Mines Ltd (100%)	1% NSR to Robert Lamothe
Lamothe	CL	5088826	32C04	VASSAN	Active	42.57	March 3, 1992	March 2, 2016	Wesdome Gold Mines Ltd (100%)	1% NSR to Robert Lamothe
Lamothe	CL	5088827	32C04	VASSAN	Active	42.58	March 3, 1992	March 2, 2016	Wesdome Gold Mines Ltd (100%)	1% NSR to Robert Lamothe
Lamothe	CL	5088828	32C04	VASSAN	Active	42.66	March 3, 1992	March 2, 2016	Wesdome Gold Mines Ltd (100%)	1% NSR to Robert Lamothe
Lamothe	CL	5088829	32C04	VASSAN	Active	42.46	March 3, 1992	March 2, 2016	Wesdome Gold Mines Ltd (100%)	1% NSR to Robert Lamothe

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Lamothe	CL	5088830	32C04	VASSAN	Active	42.92	March 3, 1992	March 2, 2016	Wesdome Gold Mines Ltd (100%)	1% NSR to Robert Lamothe
Lamothe	CL	5088831	32C04	VASSAN	Active	42.00	March 3, 1992	March 2, 2016	Wesdome Gold Mines Ltd (100%)	1% NSR to Robert Lamothe
Lamothe	CL	5088832	32C04	VASSAN	Active	42.84	March 3, 1992	March 2, 2016	Wesdome Gold Mines Ltd (100%)	1% NSR to Robert Lamothe
Lamothe	CL	5088833	32C04	VASSAN	Active	42.49	March 3, 1992	March 2, 2016	Wesdome Gold Mines Ltd (100%)	1% NSR to Robert Lamothe
Lamothe	CL	5072712	32C04	VASSAN	Active	42.59	March 3, 1992	March 2, 2016	Wesdome Gold Mines Ltd (100%)	1% NSR to Robert Lamothe
Maufort	CDC	2411930	32C04	DUBUISSON	Active	9.60	October 14, 2014	June 15, 2015	Wesdome Gold Mines Ltd (50%); Dynacor Mines Inc. (50%)	10% NPR to Charlim Exploration Inc.
Maufort	CDC	2411927	32C04	DUBUISSON	Active	16.28	October 14, 2014	June 15, 2015	Wesdome Gold Mines Ltd (50%); Dynacor Mines Inc. (50%)	10% NPR to Charlim Exploration Inc.
Maufort	CDC	2411929	32C04	DUBUISSON	Active	1.09	October 14, 2014	June 15, 2015	Wesdome Gold Mines Ltd (50%); Dynacor Mines Inc. (50%)	10% NPR to Charlim Exploration Inc.
Maufort	CDC	2411926	32C04	DUBUISSON	Active	1.98	October 14, 2014	June 15, 2015	Wesdome Gold Mines Ltd (50%); Dynacor Mines Inc. (50%)	10% NPR to Charlim Exploration Inc.
Maufort	CDC	2411931	32C04	DUBUISSON	Active	12.90	October 14, 2014	June 15, 2015	Wesdome Gold Mines Ltd (50%); Dynacor Mines Inc. (50%)	10% NPR to Charlim Exploration Inc.
Maufort	CDC	2411928	32C04	DUBUISSON	Active	3.02	October 14, 2014	June 15, 2015	Wesdome Gold Mines Ltd (50%); Dynacor Mines Inc. (50%)	10% NPR to Charlim Exploration Inc.
Option Roy	CL	5272563	32C04	DUBUISSON	Active	14.09	May 30, 2006	May 29, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Option Roy	CL	5272564	32C04	DUBUISSON	Active	11.25	May 30, 2006	May 29, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Option Roy	CL	3861822	32C04	DUBUISSON	Active	42.55	January 18, 1980	December 28, 2016	Wesdome Gold Mines Ltd (100%)	$0.25 per metric ton milled to Marie-Louis Roy
Option Roy	CL	3861831	32C04	DUBUISSON	Active	42.65	January 18, 1980	December 28, 2016	Wesdome Gold Mines Ltd (100%)	$0.25 per metric ton milled to Marie-Louis Roy
Option Roy	CL	3861832	32C04	DUBUISSON	Active	42.63	January 18, 1980	December 28, 2016	Wesdome Gold Mines Ltd (100%)	$0.25 per metric ton milled to Marie-Louis Roy
Option Roy	CL	3858861	32C04	DUBUISSON	Active	38.16	January 18, 1980	December 28, 2016	Wesdome Gold Mines Ltd (100%)	$0.25 per metric ton milled to Marie-Louis Roy
Option Roy	CL	3858862	32C04	DUBUISSON	Active	42.07	January 18, 1980	December 28, 2016	Wesdome Gold Mines Ltd (100%)	$0.25 per metric ton milled to Marie-Louis Roy
Option Roy	CL	3861821	32C04	DUBUISSON	Active	42.61	January 18, 1980	December 28, 2016	Wesdome Gold Mines Ltd (100%)	$0.25 per metric ton milled to Marie-Louis Roy
Rosenbaum	CL	5243486	32C04	DUBUISSON	Active	21.99	May 8, 2000	May 7, 2016	Wesdome Gold Mines Ltd (100%)	2% NSR to Pierre-André Bigué
Rosenbaum	CL	5243487	32C04	DUBUISSON	Active	26.28	May 8, 2000	May 7, 2016	Wesdome Gold Mines Ltd (100%)	2% NSR to Pierre-André Bigué
Rosenbaum	CL	5243488	32C04	DUBUISSON	Active	29.83	May 8, 2000	May 7, 2016	Wesdome Gold Mines Ltd (100%)	2% NSR to Pierre-André Bigué
Rosenbaum	CL	5243489	32C04	DUBUISSON	Active	24.76	May 8, 2000	May 7, 2016	Wesdome Gold Mines Ltd (100%)	2% NSR to Pierre-André Bigué
Rosenbaum	CL	5243496	32C04	DUBUISSON	Active	30.57	May 8, 2000	May 7, 2016	Wesdome Gold Mines Ltd (100%)	2% NSR to Pierre-André Bigué
Rosenbaum	CL	5243497	32C04	DUBUISSON	Active	32.37	May 8, 2000	May 7, 2016	Wesdome Gold Mines Ltd (100%)	2% NSR to Pierre-André Bigué
Rosenbaum	CL	5243498	32C04	DUBUISSON	Active	34.85	May 8, 2000	May 7, 2016	Wesdome Gold Mines Ltd (100%)	2% NSR to Pierre-André Bigué
Rosenbaum	CL	5243535	32C04	DUBUISSON	Active	26.52	April 26, 2000	April 25, 2016	Wesdome Gold Mines Ltd (100%)	2% NSR to Pierre-André Bigué
Shawkey	CLD	P660010	32C04	DUBUISSON	Active	22.46	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P660020	32C04	DUBUISSON	Active	17.25	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P660030	32C04	DUBUISSON	Active	8.49	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P660040	32C04	DUBUISSON	Active	12.30	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P660050	32C04	DUBUISSON	Active	12.62	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P660060	32C04	DUBUISSON	Active	56.92	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P660060	32C04	DUBUISSON	Active	5.48	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P660070	32C04	DUBUISSON	Active	6.74	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P660080	32C04	DUBUISSON	Active	9.42	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P660090	32C04	DUBUISSON	Active	12.61	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P660100	32C04	DUBUISSON	Active	8.66	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P660110	32C04	DUBUISSON	Active	20.61	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P660120	32C04	DUBUISSON	Active	22.38	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty

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Shawkey	CLD	P660130	32C04	DUBUISSON	Active	11.43	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P660140	32C04	DUBUISSON	Active	11.08	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P660150	32C04	DUBUISSON	Active	2.88	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P660150	32C04	DUBUISSON	Active	11.10	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P660150	32C04	DUBUISSON	Active	18.39	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P660160	32C04	DUBUISSON	Active	12.12	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P660160	32C04	DUBUISSON	Active	3.38	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P660160	32C04	DUBUISSON	Active	18.07	February 11, 1972	February 10, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P700010	32C04	DUBUISSON	Active	14.04	May 8, 1972	May 8, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P700010	32C04	DUBUISSON	Active	12.53	May 8, 1972	May 8, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P700010	32C04	DUBUISSON	Active	20.94	May 8, 1972	May 8, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CLD	P700020	32C04	DUBUISSON	Active	6.66	May 8, 1972	May 8, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
Shawkey	CL	4246421	32C04	DUBUISSON	Active	21.35	December 18, 1984	November 16, 2016	Wesdome Gold Mines Ltd (100%)	1% NSR to Léo Audet
Shawkey	CL	4246422	32C04	DUBUISSON	Active	13.88	December 18, 1984	November 16, 2016	Wesdome Gold Mines Ltd (100%)	1% NSR to Léo Audet
Shawkey	CL	4246423	32C04	DUBUISSON	Active	13.41	December 18, 1984	November 16, 2016	Wesdome Gold Mines Ltd (100%)	1% NSR to Léo Audet
Siscoe	CM	124	32C04	DUBUISSON	Active	147.58	May 19, 1919	NA	Wesdome Gold Mines Ltd (100%)	3% NSR to Dynacor Mines Inc. 0.5% NSR to Demontigny Resources Inc.
Siscoe	CM	262	32C04	VASSAN	Active	385.01	August 12, 1932	NA	Wesdome Gold Mines Ltd (100%)	3% NSR to Dynacor Mines Inc. 0.5% NSR to Demontigny Resources Inc.
Siscoe-Extension	CL	3740101	32C04	VASSAN	Active	11.39	August 11, 1978	July 25, 2015	Wesdome Gold Mines Ltd (75%); Maurice Fortin (25%)	3% NSR to Dynacor Mines Inc. 0.5% NSR to Demontigny Resources Inc.
Siscoe-Extension	CL	3740102	32C04	VASSAN	Active	7.55	August 11, 1978	July 25, 2015	Wesdome Gold Mines Ltd (75%); Maurice Fortin (25%)	3% NSR to Dynacor Mines Inc. 0.5% NSR to Demontigny Resources Inc.
Siscoe-Extension	CL	3740103	32C04	VASSAN	Active	4.23	August 11, 1978	July 25, 2015	Wesdome Gold Mines Ltd (75%); Maurice Fortin (25%)	3% NSR to Dynacor Mines Inc. 0.5% NSR to Demontigny Resources Inc.
Siscoe-Extension	CL	3740104	32C04	VASSAN	Active	11.52	August 11, 1978	July 25, 2015	Wesdome Gold Mines Ltd (75%); Maurice Fortin (25%)	3% NSR to Dynacor Mines Inc. 0.5% NSR to Demontigny Resources Inc.
Siscoe-Extension	CL	3740105	32C04	VASSAN	Active	27.98	August 11, 1978	July 25, 2015	Wesdome Gold Mines Ltd (75%); Maurice Fortin (25%)	3% NSR to Dynacor Mines Inc. 0.5% NSR to Demontigny Resources Inc.
Siscoe-Extension	CL	3698131	32C04	VASSAN	Active	13.98	February 28, 1978	February 10, 2017	Wesdome Gold Mines Ltd (75%); Maurice Fortin (25%)	3% NSR to Dynacor Mines Inc. 0.5% NSR to Demontigny Resources Inc.
Siscoe-Extension	CL	3698132	32C04	VASSAN	Active	17.40	February 28, 1978	February 10, 2017	Wesdome Gold Mines Ltd (75%); Maurice Fortin (25%)	3% NSR to Dynacor Mines Inc. 0.5% NSR to Demontigny Resources Inc.
Siscoe-Extension	CL	3698133	32C04	VASSAN	Active	16.17	February 28, 1978	February 10, 2017	Wesdome Gold Mines Ltd (75%); Maurice Fortin (25%)	3% NSR to Dynacor Mines Inc. 0.5% NSR to Demontigny Resources Inc.
Siscoe-Extension	CL	3698134	32C04	VASSAN	Active	16.57	February 28, 1978	February 10, 2017	Wesdome Gold Mines Ltd (75%); Maurice Fortin (25%)	3% NSR to Dynacor Mines Inc. 0.5% NSR to Demontigny Resources Inc.
Siscoe-Extension	CL	3698135	32C04	VASSAN	Active	17.80	February 28, 1978	February 10, 2017	Wesdome Gold Mines Ltd (75%); Maurice Fortin (25%)	3% NSR to Dynacor Mines Inc. 0.5% NSR to Demontigny Resources Inc.
Siscoe-Extension	CL	3698141	32C04	VASSAN	Active	12.75	February 28, 1978	February 10, 2017	Wesdome Gold Mines Ltd (75%); Maurice Fortin (25%)	3% NSR to Dynacor Mines Inc. 0.5% NSR to Demontigny Resources Inc.
Siscoe-Extension	CL	3698142	32C04	VASSAN	Active	18.07	February 28, 1978	February 10, 2017	Wesdome Gold Mines Ltd (75%); Maurice Fortin (25%)	3% NSR to Dynacor Mines Inc. 0.5% NSR to Demontigny Resources Inc.
Siscoe-Extension	CL	3655171	32C04	VASSAN	Active	12.66	June 12, 1978	June 11, 2015	Wesdome Gold Mines Ltd (75%); Maurice Fortin (25%)	3% NSR to Dynacor Mines Inc. 0.5% NSR to Demontigny Resources Inc.

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South Block Kiena	CL	5072442	32C04	DUBUISSON	Active	42.64	February 28, 1991	February 27, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
South Block Kiena	CL	5072443	32C04	DUBUISSON	Active	42.61	February 28, 1991	February 27, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
South Block Kiena	CL	5072444	32C04	DUBUISSON	Active	42.64	February 28, 1991	February 27, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
South Block Kiena	CL	5072445	32C04	DUBUISSON	Active	42.64	February 28, 1991	February 27, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
South Block Kiena	CL	5072446	32C04	DUBUISSON	Active	36.42	July 25, 1991	July 24, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
South Block Kiena	CL	5072854	32C04	DUBUISSON	Active	37.91	July 25, 1991	July 24, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
South Block Kiena	CL	4107322	32C04	DUBUISSON	Active	33.89	February 21, 1983	February 1, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
South Block Kiena	CL	3264062	32C04	DUBUISSON	Active	24.84	September 21, 1972	September 1, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
South Block Kiena	CL	3264063	32C04	DUBUISSON	Active	22.32	September 21, 1972	September 1, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
South Block Kiena	CL	3264064	32C04	DUBUISSON	Active	20.32	September 21, 1972	September 1, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Vassan	CL	5191307	32C04	VASSAN	Active	42.71	March 13, 1998	March 12, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Vassan	CL	5191308	32C04	VASSAN	Active	42.60	March 13, 1998	March 12, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Vassan	CL	5191309	32C04	VASSAN	Active	42.57	March 13, 1998	March 12, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Vassan	CDC	2020173	32C04	VASSAN	Active	42.69	July 6, 2006	July 5, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Vassan	CDC	2020174	32C04	VASSAN	Active	42.61	July 6, 2006	July 5, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Vassan	CDC	2020175	32C04	VASSAN	Active	42.60	July 6, 2006	July 5, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Vassan	CDC	2020176	32C04	VASSAN	Active	42.55	July 6, 2006	July 5, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Vassan	CDC	2020177	32C04	VASSAN	Active	42.55	July 6, 2006	July 5, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Vassan	CDC	2020178	32C04	VASSAN	Active	42.52	July 6, 2006	July 5, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Vassan	CDC	2020179	32C04	VASSAN	Active	42.31	July 6, 2006	July 5, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Wesdome	CL	C009451	32C04	VASSAN	Active	20.49	September 8, 1932	August 14, 2015	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C009452	32C04	VASSAN	Active	27.42	September 8, 1932	August 14, 2015	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C009453	32C04	VASSAN	Active	19.67	September 8, 1932	August 14, 2015	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C009454	32C04	VASSAN	Active	12.93	September 8, 1932	August 14, 2015	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003002	32C04	DUBUISSON	Active	16.29	April 3, 1935	March 16, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003003	32C04	DUBUISSON	Active	16.34	April 3, 1935	March 16, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003004	32C04	DUBUISSON	Active	16.33	April 3, 1935	March 16, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003005	32C04	DUBUISSON	Active	16.32	April 3, 1935	March 16, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003011	32C04	DUBUISSON	Active	16.34	April 3, 1935	March 16, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003012	32C04	DUBUISSON	Active	16.34	April 3, 1935	March 16, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003013	32C04	VASSAN	Active	12.85	April 3, 1935	March 16, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003014	32C04	VASSAN	Active	15.19	April 3, 1935	March 16, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003015	32C04	VASSAN	Active	15.16	April 3, 1935	March 16, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003021	32C04	VASSAN	Active	17.68	April 3, 1935	March 15, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003022	32C04	VASSAN	Active	28.18	April 3, 1935	March 15, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003023	32C04	VASSAN	Active	14.60	April 3, 1935	March 15, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003024	32C04	VASSAN	Active	13.74	April 3, 1935	March 15, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd

Property	Type of Mining Title	Title Number	NTS sheet	Township	Status	Area (ha)	Registration Date	Expiry Date	Holder	Royalty
Wesdome	CL	C003025	32C04	VASSAN	Active	16.00	April 3, 1935	March 15, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003031	32C04	VASSAN	Active	14.55	April 3, 1935	March 15, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003032	32C04	VASSAN	Active	17.30	April 3, 1935	March 15, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003033	32C04	VASSAN	Active	17.48	April 3, 1935	March 15, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003034	32C04	VASSAN	Active	16.90	April 3, 1935	March 15, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003035	32C04	VASSAN	Active	16.69	April 3, 1935	March 15, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003041	32C04	VASSAN	Active	15.74	April 3, 1935	March 15, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003042	32C04	VASSAN	Active	15.49	April 3, 1935	March 15, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003043	32C04	VASSAN	Active	18.16	April 3, 1935	March 15, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003044	32C04	VASSAN	Active	18.13	April 3, 1935	March 15, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003045	32C04	VASSAN	Active	15.05	April 3, 1935	March 15, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C002991	32C04	VASSAN	Active	15.74	April 3, 1935	March 16, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C002992	32C04	VASSAN	Active	18.08	April 3, 1935	March 16, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C002993	32C04	VASSAN	Active	17.21	April 3, 1935	March 16, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C002994	32C04	VASSAN	Active	16.99	April 3, 1935	March 16, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C002995	32C04	VASSAN	Active	15.15	April 3, 1935	March 16, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C003001	32C04	DUBUISSON	Active	16.35	April 3, 1935	March 16, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C002181	32C04	VASSAN	Active	17.60	March 10, 1933	February 3, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C002182	32C04	VASSAN	Active	15.60	March 10, 1933	February 3, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C002183	32C04	VASSAN	Active	13.80	March 10, 1933	February 3, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C002184	32C04	VASSAN	Active	16.03	March 10, 1933	February 3, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C002185	32C04	VASSAN	Active	27.33	March 10, 1933	February 3, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C002191	32C04	VASSAN	Active	17.15	March 10, 1933	February 3, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C002192	32C04	VASSAN	Active	18.04	March 10, 1933	February 3, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C002193	32C04	VASSAN	Active	17.61	March 10, 1933	February 3, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C002194	32C04	VASSAN	Active	14.91	March 10, 1933	February 3, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C002195	32C04	VASSAN	Active	31.40	March 10, 1933	February 3, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	A491961	32C04	VASSAN	Active	9.06	February 16, 1934	August 14, 2015	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	A491972	32C04	VASSAN	Active	6.11	February 16, 1934	August 14, 2015	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C001001	32C04	VASSAN	Active	13.28	October 9, 1929	March 1, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C001002	32C04	VASSAN	Active	13.08	October 9, 1929	March 1, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C001003	32C04	VASSAN	Active	23.40	October 9, 1929	March 1, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C001004	32C04	VASSAN	Active	17.59	October 9, 1929	March 1, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Wesdome	CL	C001005	32C04	VASSAN	Active	17.45	October 9, 1929	March 1, 2017	Wesdome Gold Mines Ltd (100%)	1% NSR to Dome Mines Ltd
Yankee Clipper	CL	5089495	32C04	VASSAN	Active	1.85	September 8, 1992	September 7, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Yankee Clipper	CL	5089496	32C04	VASSAN	Active	6.64	September 8, 1992	September 7, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Yankee Clipper	CL	3987201	32C04	VASSAN	Active	14.25	January 6, 1981	November 19, 2016	Wesdome Gold Mines Ltd (100%)	2% NPR to Jacques Duval
Yankee Clipper	CL	3987202	32C04	VASSAN	Active	14.90	January 6, 1981	November 19, 2016	Wesdome Gold Mines Ltd (100%)	2% NPR to Jacques Duval
Yankee Clipper	CL	3987203	32C04	VASSAN	Active	14.48	January 6, 1981	November 19, 2016	Wesdome Gold Mines Ltd (100%)	2% NPR to Jacques Duval
Yankee Clipper	CL	3987211	32C04	VASSAN	Active	19.65	January 6, 1981	November 19, 2016	Wesdome Gold Mines Ltd (100%)	2% NPR to Jacques Duval

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Yankee Clipper	CL	3987212	32C04	VASSAN	Active	13.51	January 6, 1981	November 19, 2016	Wesdome Gold Mines Ltd (100%)	2% NPR to Jacques Duval
Yankee Clipper	CL	3987301	32C04	VASSAN	Active	9.76	January 6, 1981	November 19, 2016	Wesdome Gold Mines Ltd (100%)	2% NPR to Jacques Duval
Yankee Clipper	CL	3987302	32C04	VASSAN	Active	10.38	January 6, 1981	November 19, 2016	Wesdome Gold Mines Ltd (100%)	2% NPR to Jacques Duval
Yankee Clipper	CL	3987303	32C04	VASSAN	Active	19.42	January 6, 1981	November 19, 2016	Wesdome Gold Mines Ltd (100%)	2% NPR to Jacques Duval
Isolated Siscoe	CDC	2415481	32C04	VASSAN	Active	11.06	November 26, 2014	June 22, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Isolated Siscoe	CDC	2415482	32C04	VASSAN	Active	4.66	November 26, 2014	June 22, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CLD	P141010	32C04	DUBUISSON	Active	42.55	July 5, 1978	July 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CLD	P141020	32C04	DUBUISSON	Active	42.58	July 5, 1978	July 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CLD	P141030	32C04	DUBUISSON	Active	23.81	July 5, 1978	July 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CLD	P141030	32C04	DUBUISSON	Active	18.96	July 5, 1978	July 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CLD	P141030	32C04	DUBUISSON	Active	3.76	July 5, 1978	July 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CLD	P141040	32C04	DUBUISSON	Active	14.62	July 5, 1978	July 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CLD	P141040	32C04	DUBUISSON	Active	15.15	July 5, 1978	July 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CLD	P141050	32C04	DUBUISSON	Active	15.14	July 5, 1978	July 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CLD	P141050	32C04	DUBUISSON	Active	11.64	July 5, 1978	July 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CLD	P141050	32C04	DUBUISSON	Active	12.75	July 5, 1978	July 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CLD	P141050	32C04	DUBUISSON	Active	2.17	July 5, 1978	July 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CLD	P141050	32C04	DUBUISSON	Active	1.70	July 5, 1978	July 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CLD	P141060	32C04	DUBUISSON	Active	11.96	July 5, 1978	July 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CLD	P141060	32C04	DUBUISSON	Active	18.49	July 5, 1978	July 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CLD	P141070	32C04	DUBUISSON	Active	23.51	July 5, 1978	July 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CLD	P141080	32C04	DUBUISSON	Active	30.41	July 5, 1978	July 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CLD	P141080	32C04	DUBUISSON	Active	9.66	July 5, 1978	July 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CLD	P141080	32C04	DUBUISSON	Active	10.39	July 5, 1978	July 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CLD	P141090	32C04	DUBUISSON	Active	16.19	July 5, 1978	July 4, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CL	4158481	32C04	DUBUISSON	Active	0.88	May 19, 1983	May 1, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CL	4158481	32C04	DUBUISSON	Active	0.41	May 19, 1983	May 1, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CL	4158481	32C04	DUBUISSON	Active	1.58	May 19, 1983	May 1, 2017	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CL	3694711	32C04	DUBUISSON	Active	50.43	January 5, 1978	December 8, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CL	3694712	32C04	DUBUISSON	Active	23.52	January 5, 1978	December 8, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CL	3694713	32C04	DUBUISSON	Active	0.98	January 5, 1978	December 8, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CL	3694721	32C04	DUBUISSON	Active	8.43	January 5, 1978	December 9, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CL	3694722	32C04	DUBUISSON	Active	51.70	January 5, 1978	December 9, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CL	3694723	32C04	DUBUISSON	Active	3.65	January 5, 1978	December 9, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CL	3694724	32C04	DUBUISSON	Active	8.85	January 5, 1978	December 9, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CL	3694725	32C04	DUBUISSON	Active	21.32	January 5, 1978	December 9, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CL	3694731	32C04	DUBUISSON	Active	45.18	January 5, 1978	December 10, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CL	3694732	32C04	DUBUISSON	Active	14.08	January 5, 1978	December 10, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CL	3694733	32C04	DUBUISSON	Active	4.45	January 5, 1978	December 10, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
School Mine	CL	3693181	32C04	DUBUISSON	Active	26.97	January 5, 1978	December 14, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty

Property	Type of Mining Title	Title Number	NTS sheet	Township	Status	Area (ha)	Registration Date	Expiry Date	Holder	Royalty
School Mine	CL	3693182	32C04	DUBUISSON	Active	27.39	January 5, 1978	December 14, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Joubi	CL	3473381	32C04	DUBUISSON	Active	21.41	July 23, 1974	July 4, 2015	Wesdome Gold Mines Ltd (100%)	2% NSR to Viateur Audet, 1% to Les Mines Messeguay Inc.
Joubi	CL	3473382	32C04	DUBUISSON	Active	21.48	July 23, 1974	July 4, 2015	Wesdome Gold Mines Ltd (100%)	2% NSR to Viateur Audet, 1% to Les Mines Messeguay Inc.
Joubi	CL	3473383	32C04	DUBUISSON	Active	21.54	July 23, 1974	July 4, 2015	Wesdome Gold Mines Ltd (100%)	2% NSR to Viateur Audet, 1% to Les Mines Messeguay Inc.
Joubi	CL	3473384	32C04	DUBUISSON	Active	21.61	July 23, 1974	July 4, 2015	Wesdome Gold Mines Ltd (100%)	2% NSR to Viateur Audet, 1% to Les Mines Messeguay Inc.
Joubi	CL	3473391	32C04	DUBUISSON	Active	21.67	July 23, 1974	July 23, 2016	Wesdome Gold Mines Ltd (100%)	2% NSR to Viateur Audet, 1% to Les Mines Messeguay Inc.
Joubi	CL	3473392	32C04	DUBUISSON	Active	21.70	July 23, 1974	July 23, 2016	Wesdome Gold Mines Ltd (100%)	2% NSR to Viateur Audet, 1% to Les Mines Messeguay Inc.
Joubi	CL	3473393	32C04	DUBUISSON	Active	21.23	July 23, 1974	July 5, 2015	Wesdome Gold Mines Ltd (100%)	2% NSR to Viateur Audet, 1% to Les Mines Messeguay Inc.
Joubi	CL	3377221	32C04	DUBUISSON	Active	20.92	June 15, 1973	May 24, 2017	Wesdome Gold Mines Ltd (100%)	2% NSR to Viateur Audet, 1% to Les Mines Messeguay Inc.
Joubi	CL	3377222	32C04	DUBUISSON	Active	20.99	June 15, 1973	May 24, 2017	Wesdome Gold Mines Ltd (100%)	2% NSR to Viateur Audet, 1% to Les Mines Messeguay Inc.
Joubi	CL	3377223	32C04	DUBUISSON	Active	21.06	June 15, 1973	May 24, 2017	Wesdome Gold Mines Ltd (100%)	2% NSR to Viateur Audet, 1% to Les Mines Messeguay Inc.
Joubi	CL	3377241	32C04	DUBUISSON	Active	21.13	June 15, 1973	May 29, 2017	Wesdome Gold Mines Ltd (100%)	2% NSR to Viateur Audet, 1% to Les Mines Messeguay Inc.
Joubi	CL	3377242	32C04	DUBUISSON	Active	21.20	June 15, 1973	May 29, 2017	Wesdome Gold Mines Ltd (100%)	2% NSR to Viateur Audet, 1% to Les Mines Messeguay Inc.
Joubi	CL	3377243	32C04	DUBUISSON	Active	42.70	June 15, 1973	May 29, 2017	Wesdome Gold Mines Ltd (100%)	2% NSR to Viateur Audet, 1% to Les Mines Messeguay Inc.
Joubi	CL	2592914	32C04	DUBUISSON	Active	20.90	December 15, 1967	November 23, 2016	Wesdome Gold Mines Ltd (100%)	2% NSR to Viateur Audet, 1% to Les Mines Messeguay Inc.
Joubi	CL	2592915	32C04	DUBUISSON	Active	20.87	December 15, 1967	November 23, 2016	Wesdome Gold Mines Ltd (100%)	2% NSR to Viateur Audet, 1% to Les Mines Messeguay Inc.
Joubi	CL	2783202	32C04	DUBUISSON	Active	21.66	October 29, 1968	October 11, 2015	Wesdome Gold Mines Ltd (100%)	2% NSR Minefinders Corporation Ltd, C$1.00 per tonne mined in the future to a maximum of 1,000,000 tonnes to Republic Goldfields Inc.
Joubi	CL	2783203	32C04	DUBUISSON	Active	21.62	October 29, 1968	October 11, 2015	Wesdome Gold Mines Ltd (100%)	2% NSR Minefinders Corporation Ltd, C$1.00 per tonne mined in the future to a maximum of 1,000,000 tonnes to Republic Goldfields Inc.
Joubi	CL	1672053	32C04	DUBUISSON	Active	10.70	August 22, 1959	August 2, 2015	Wesdome Gold Mines Ltd (100%)	2% NSR Minefinders Corporation Ltd, C$1.00 per tonne mined in the future to a maximum of 1,000,000 tonnes to Republic Goldfields Inc.
Joubi	CL	1672054	32C04	DUBUISSON	Active	10.55	August 22, 1959	August 2, 2015	Wesdome Gold Mines Ltd (100%)	2% NSR Minefinders Corporation Ltd, C$1.00 per tonne mined in the future to a maximum of 1,000,000 tonnes to Republic Goldfields Inc.
Joubi	CL	1672055	32C04	DUBUISSON	Active	10.64	August 22, 1959	August 2, 2015	Wesdome Gold Mines Ltd (100%)	2% NSR Minefinders Corporation Ltd, C$1.00 per tonne mined in the future to a maximum of 1,000,000 tonnes to Republic Goldfields Inc.
Joubi	CL	1672056	32C04	DUBUISSON	Active	14.51	August 22, 1959	August 2, 2015	Wesdome Gold Mines Ltd (100%)	2% NSR Minefinders Corporation Ltd, C$1.00 per tonne mined in the future to a maximum of 1,000,000 tonnes to Republic Goldfields Inc.

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Joubi	CL	1672057	32C04	DUBUISSON	Active	10.48	August 22, 1959	August 2, 2015	Wesdome Gold Mines Ltd (100%)	2% NSR Minefinders Corporation Ltd, C$1.00 per tonne mined in the future to a maximum of 1,000,000 tonnes to Republic Goldfields Inc.
Isolated claims (Siscoe)	CDC	2415481	32C04	VASSAN	Active	11.06	November 26, 2014	June 22, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Isolated claims (Siscoe)	CDC	2415482	32C04	VASSAN	Active	4.66	November 26, 2014	June 22, 2015	Wesdome Gold Mines Ltd (100%)	No Royalty
Isolated claims (West)	CDC	2238678	32C04	DUBUISSON	Active	20.55	June 23, 2010	June 22, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty
Isolated claims (West)	CDC	2238679	32C04	DUBUISSON	Active	31.48	June 23, 2010	June 22, 2016	Wesdome Gold Mines Ltd (100%)	No Royalty

APPENDIX V – CHRONOLOGICAL SUMMARY OF HISTORICAL WORK ON THE QUEBEC WESDOME PROJECT

HISTORY

This appendix presents historical work according to the project area names defined in Item 5 of the accompanying report: Kiena Mine, Wisik Shaft, Shawkey Mine, Elmac Shaft, School Mine Shaft, Joubi Mine, Dorval-Siscoe Shaft (Wesdome Deposit), Siscoe Mine and Siscoe Extension.

Kiena Mine Area

The following description of historical work in the Kiena Mine Area is mostly modified and summarized from Mailhiot (1920), Cooke et al. (1931), Hawley (1931), Bell (1935; 1936;1937), Auger (1947), Dresser and Denis (1949), Claveau et al. (1951), Salt (1960), Robinson (1961a; 1961b; 1962), Cormier (1986a; 1986b), Sauvé et al. (1993), Morasse (1998), Beauregard and Gaudreault (2005) and the annual reports of Wesdome Gold Mines Inc. and Wesdome Gold Mines Ltd (2003–2013).

1911–1914: The first record of exploration along the shores of what was known then as Lac Kienawisik (later Lac De Montigny) dates back to 1911–1914 when prospector Barney Parker reported the discovery of native gold-bearing quartz veins in a shear zone at the northwestern end of the island on which Kiena's mill was later built.

1922–1927: Martin Gold Mines and Parker Island Gold Mines did some follow-up work on the discovery outcrop between 1922 and 1927, and tested five quartz veins with trenches and drill holes. Soon afterward, gold was also discovered in the "Wisik vein" on the eastern shore of Moccasin Island, the largest of two nearby islands to the east of Parker Island.

1936–1940: A very important moment in the history of the Kiena deposit occurred in 1936 when Kiena Gold Mines Ltd was created. Under the control of Ventures Ltd, Kiena Gold Mines immediately initiated a major surface and exploration program on the property, which resulted in the sinking of the Parker shaft at the western end of the island. Shaft-sinking to a depth of 455 ft (-138 m) was followed by the development of exploration drifts at the 130-, 230-, 330-, and 430-ft levels in an effort to test the surface showing, but the discovery veins were found to be of limited extent. During an extensive stratigraphic drilling program from lake ice in 1937–1938, the S-21 Zone (later called the North Zone) was discovered 2,300 ft (701 m) north of the island. A cross-cut was excavated toward the S-21 Zone, intersecting four mineralized veins. Unfortunately, mining operations ceased in 1940 due to limited ore reserves and wartime difficulties, and exploration activities were suspended for 20 years.

1948: Ventures drilled two diamond drill holes totalling 1,313 ft (400.2 m).

1961–1965: Ventures, which controlled the 1958 joint venture between Kiena Gold Mines and Wisik Gold Mines Ltd, carried out a magnetometer and geological mapping survey on their combined claim block. A 13-hole diamond drilling program was proposed on the basis of favourable recommendations from these surveys, but R.W. Robinson cut this proposal down to only three holes. In 1961, the third and last drill hole (S-50) of this exploration program, targeting the "nose of a fold" and a "magnetic low that could represent a siliceous intrusive", intersected 0.22 oz/t Au (7.54 g/t Au) over 50 ft (15.2 m) of core, at approximately 800 ft (243.8 m) below the lake's surface.

Following the discovery of the S-50 Zone, Falconbridge acquired Ventures in 1962, took over the management of Kiena Gold Mines and its Kiena-Wisik property, and financed the subsequent underground exploration. Based on 79,000 ft (24,079.2 m) of drilling from the surface, original reserves of the S-50 Zone were estimated at 5 million short tons (4.53 Mt) averaging 0.185 oz/t Au (6.34 g/t Au).

In 1963, the No. 1 shaft was collared approximately 800 ft (243.8 m) east of the Parker shaft and sunk to a depth of 1,324 ft (403.55 m). Extensive underground exploration and a definition diamond drill program outlined reserves of 1.5 million short tons (1.36 Mt) grading 0.265 oz/t Au (9.09 g/t Au) above the 27th level (270 m below surface).

These "reserves" are historical in nature and should not be relied upon. It is unlikely they conform to current NI 43-101 criteria or to CIM Standards and Definitions, and they have not been verified to determine their relevance or reliability. They are included in this section for illustrative purposes only and should not be disclosed out of context.

But due to adverse ground conditions found in a test stope conditions much related to the structural geology of the deposit, it was concluded that no large openings could be left unfilled and low-cost mining could not be expected. In 1965, a feasibility study on the S-50 orebody showed that mining operations would be marginal at best, with gold selling for US $35.00/oz at that time. The property was placed under a care and maintenance program, leaving the S-50 orebody dormant for the next 14 years.

1979–1984: In 1979, Falconbridge re-evaluated the property and recommended to bring it into production. The transition from an advanced exploration project to a mine operation was successful, and mining officially started in October of 1981. Trackless and cut-and-fill methods were employed. Custom milling at Teck's nearby Lamaque Mill was used for the first three years of production until September 1984 when Kiena's own new CIP (carbon-in-pulp) mill was operational.

1986–1994: Campbell Red Lake Mines Ltd became Kiena's major shareholder on January 25, 1986, when Falconbridge sold 56.7% of its interest in Kiena Gold Mines. Following the amalgamation in 1987 of Placer Development Ltd, Dome Mines Ltd and Campbell Red Lake Mines Ltd, Placer Dome Inc. of Vancouver, became the owner and operator of the Kiena mine. On January 1, 1994, Placer Dome Inc. changed its name to Placer Dome Canada Ltd.

1997–2003: Placer Dome Canada sold the mine (along with the neighbouring Sigma mine) to McWatters Mining Inc., who officially became the new owner and operator of Kiena on September 12, 1997. McWatters continuously operated the Kiena mine until its closure in September 2002.

During the period between October 1981 and September 2002, the Kiena mine produced a total of 1.56 Moz of gold from 10.7 Mt of ore grading an average 4.54 g/t Au (Table 6.1).

An exploration program commenced in 2002 to further investigate five previously identified gold targets. McWatters carried out a 5,012-m underground drill exploration program, the first phase of the exploration program at the Kiena Complex to test the hanging wall mineralization of the S-50 ore body. A follow-up drill program began on January 20, 2003 and was completed in March 2003. The objective of this second phase of the exploration program, corresponding to approximately 8,200 m of surface drilling program, was to extend the hanging wall mineralization, and add to or otherwise improve the resources of the Kiena Complex.

The Kiena mine complex was acquired by Wesdome Gold Mines Inc. in December 2003.

When mining operations were suspended in 2003, measured and indicated resources stood at 3,010,000 metric tons grading 4.25 g/t Au or 410,000 ounces of contained gold.
These "resources" are historical in nature and should not be relied upon. It is unlikely they conform to current NI 43-101 criteria or to CIM Standards and Definitions, and they have not been verified to determine their relevance or reliability. They are included in this section for illustrative purposes only and should not be disclosed out of context.

Table 6.1 ─ Kiena mine production from 1981 to 2002

Year	Metric Tonnes Milled	Recovery Grade Au g/t	Ounces of Gold
1981	101,231	4.61	15,018
1982	287,916	6.81	63,038
1983	307,661	6.19	61,193
1984	378,014	5.48	66,658
1985	381,376	5.71	70,035
1986	453,793	4.98	72,694
1987	478,752	4.36	67,113
1988	477,947	3.79	58,219
1989	470,705	4.38	66,235
1990	473,602	4.33	65,953
1991	486,217	4.55	71,112
1992	501,827	5.03	81,195
1993	496,401	4.95	79,034
1994	504,873	5.12	83,044
1995	534,330	5.03	86,375
1996	608,701	4.32	84,609
1997	631,606	4.59	93,169
1998	594,000	4.39	83,807
1999	647,933	4.16	86,602
2000	719,363	3.74	86,610
2001	745,391	3.41	81,631
2002	415,400	2.82	37,626
TOTAL	10,697,039	4.54	1,560,970

2004: Wesdome Gold Mines developed and explored its properties from underground via the Kiena shaft and underground workings. Wesdome Gold Mines drove a drift 4.5 km to the north to explore the Wesdome property on the 520m level, and a second drift 2.0 km to the east on the 330m level to explore the 22 Zone on the Shawkey property. Definition drilling and development work proceeded on known zones of gold mineralization on the Kiena property with the intent of preparing these for commercial production as soon as possible. Late in 2004, access was established to the VC Zone, located 500 m north of the shaft, and fan drilling of the zone commenced from the 520m level.

2005: Wesdome Gold Mines continued the underground development at the Kiena Mine Complex. The North Drift (at 520 m) was used to conduct a major exploration program on the VC Zone approximately 500 m north of the shaft. Further work was completed on the North Zone and the 388 Zone from the 330-m level. Progress was also made on the East Drift (at 330 m). Development crews also drifted into the Martin Zone (from which Shawkey produced ore in the 1930s).

During the same year, Geologica Groupe-Conseil estimated that the four zones (North, VC, 388 and Martin) contained measured resources of 574,023 metric tons at 4.45 g/t Au, and indicated resources of 750,137 metric tons at 4.52 g/t Au. Wesdome Gold Mines also completed a new resource estimate for the VC1 to VC3 zones, calculating a total of 737,900 metric tons at 5.05 g/t Au.

These "resources" are historical in nature and should not be relied upon. It is unlikely they conform to current NI 43-101 criteria or to CIM Standards and Definitions, and they have not been verified to determine their relevance or reliability. They are included in this section for illustrative purposes only and should not be disclosed out of context.

2006–2013: The Kiena mine was in pre-production development stage until August 1, 2006, when commercial production commenced. Wesdome continuously operated the Kiena mine until its temporary shutdown in June 30, 2013. The mine was placed under a care and maintenance program.

During the period between August 2006 and June 2013, the Kiena mine produced a total of 198,708 ounces of gold from 1.826,500 metric tons of ore at an average grade of 3.38 g/t Au (Table 6.2).

Table 6.2 – Kiena mine production from 2006 to 2013

Year	Metric Tonnes Milled	Recovery Grade Au g/t	Ounces of Gold
2006	94,200	3.07	9,300
2007	284,757	3.87	35,404
2008	241,641	5.19	40,344
2009	302,034	3.65	35,398
2010	285,527	3.50	32,162
2011	255,311	2.38	19,516
2012	265,872	2.20	18,814
2013	97,158	2.49	7,770
TOTAL	1,826,500	3.38	198,708

Wisik Shaft Area

The following description of historical work in the Wisik Shaft Area is mostly modified and summarized from Bell (1936), Taschereau (1936), Bell (1935; 1937), Denis (1937a), Auger (1947), Dresser and Denis (1949), and the diamond drill logs of Wisik Gold Mines Ltd.

1934–1937: The property around the Wisik deposit was owned by H. Klee who founded Wisik Gold Mines. The property was held under option in 1935 by Teck Hughes interests, who carried out some diamond drilling. The only visible mineralized showing of substantial size was a quartz vein, exposed for only a few feet on the eastern shore of the largest Moccasin Island. In addition to the diamond drilling in the vicinity of the vein, some holes were also put down along the water stretch between the island and Shawkey Peninsula. The option was subsequently allowed to lapse.

In 1936, the overburden was removed by Wisik Gold Mines for the purpose of sinking a shaft on Moccasin Island. A three-compartment shaft was sunk below 300 ft (91.4 m). Drifts were excavated along the principal vein or shear on the 200- and 300-ft levels, totalling 2,100 ft (640.1 m). In 1937, metallurgical testwork was performed at the Ottawa facilities of the Department of Mines and Resources of Canada on two samples of gold ore: one from the Wisik North drift (237 lbs, 107.5 kg), and the other from Wisik South (200 lbs or 90.7 kg). The North Drift sample assayed 0.125 oz/t Au (4.29 g/t Au) and 0.19 oz/t Ag (6.51 g/t Ag), whereas the South Drift sample returned 0.675 oz/t Au (23.14 g/t Au) and 0.09 oz/t Ag (3.09 g/t Ag). In September 1937, work was suspended and the mine flooded.

1958–1959: In July 1958, Ventures Ltd, who controlled the 1958 joint venture between Kiena Gold Mines and Wisik Gold Mines, drilled one hole (W-1) totalling 350 ft (106.7 m) on Moccasin Island, northwest of the Wisik shaft. In January 1959, another hole (W-2), totalling 750 ft (228.6 m), was drilled to the north of hole W-1 to test the eastern extension of the No. 1 Zone located on the Kiena mine property.

Later, Kiena Gold Mines took over management of the Wisik property and eventually formed the Kiena-Wisik property (see Kiena mine history 1961–1965).

Shawkey Mine Area

The following description of historical work in the Shawkey Mine Area is mostly modified and summarized from Mailhiot (1920), Cooke et al. (1931), Hawley (1931), Bell (1935; 1936; 1937), Dresser and Denis (1949), Ingham (1950), Claveau et al. (1951), Ingham (1953), Bourret et al. (1956), Sauvé (1985), Chevalier (1989b), Sauvé et al. (1993), Beauregard and Gaudreault (2005), and the annual information forms of Western Quebec Mines Inc., Wesdome Gold Mines Inc. and Wesdome Gold Mines Ltd (1997–2013).

1911: Fred La Palme discovered a gold-bearing vein (No. 1 Vein) on the south shore of Lac Montigny.

1917–1919: The Martin Gold Mining Company Ltd was incorporated to develop the new gold showing, and in 1917, underground work commenced as well as the erection of a small mill which was completed the following year. A two-compartment vertical shaft was sunk 125 ft (38.1 m) on the shore of Lac De Montigny, and a small amount of drifting and cross-cutting was done. About 600 pounds of rock were milled during the summer of 1918, but the extracted gold was not disposed of. Work was suspended in 1919.

1921–1923: Two years later, the property was sold to John Dalton. In 1922, an option was secured by J.J. Godfrey and underground work resumed. The shaft was deepened to 325 ft (99.1 m), and about 700 ft (213.4 m) of drifts and cross-cuts were excavated. A total of 4,500 ft (1,371.6 m) of diamond drilling was also carried out. The option lapsed in 1923.

1934–1938: The mine was purchased by Shawkey Gold Mines Ltd who became operator. During 1935, drifting and raising on the 125', 225' and 325' levels revealed continuous lengths of ore. A raise was completed to the surface, north of the shaft. Shrinkage stopes were prepared above the first and second levels.

The shaft was deepened to 725 ft (221.0 m) and new levels were established at the 450', 575' and 625' horizons. A new mill was erected and started production in 1936. Several gold-bearing veins were discovered over the course of the exploration, but all the production came from the discovery vein. The vein was developed for a maximum length of 1,000 ft (304.8 m). By 1938, this had been mined out, and operations were suspended.

A total of 3,915 ft (1,193.3 m) of surface drilling, 45,885 ft (13,985.7 m) of underground drilling, and 1,125 ft (342.9 m) of drifting and crosscutting had been carried out.

Total production was 25,414 ounces of gold from 137,978 short tons (125,174 metric tons) of processed ore, for a recovery of 0.184 oz/t Au (6.31 g/t Au).

1945–1951: In 1945, Shawkey Mines Ltd took over the abandoned workings and began an extensive diamond drill program. From 1945 to 1947, the company completed about 37,000 ft (11,277.6 m) of surface drilling, 28,500 ft (8,686.8 m) of which was used to explore the No. 10 Vein. Another 9,000 ft (2,743.2 m) of drilling was used in cross-sectional exploration on the east side of the Thompson River and south of the No. 10 Zone. Underground drilling from old workings amounted to 20,000 ft, used in lateral and depth tests from the 4th and 6th levels. Total underground lateral development in the form of drives, crosscuts and drifts amounted to 2,337 ft (712.3 m). Over 7,000 ft^3 (198.2 m^3) of rock was slashed. One drive on the 4th level was extended 926 ft southeast, under the Thompson River, to reach a body of diorite containing auriferous quartz veins. The No. 10 Zone was explored for 2,300 ft (701.0 m) by drilling. Underground drilling and drifting led to the discovery of new auriferous zones (the No. 9, No. 11 and No. 12 zones).

The No. 2 shaft was collared in July 1950, adjacent to the north side of the No. 10 Zone, approximately 900 m south of the No. 1 shaft. Shaft-sinking to a depth of 743 ft (226.5 m) was completed in April 1951. Four level stations were established at 250 ft (76.2 m), 400 ft (121.9 m), 550 ft (167.6 m) and 700 ft (213.4 m). After carrying out 927 ft (282.5 m) of drifting and cross-cutting on the 700' level and 605 ft (184.4 m) on the 550' level, as well as 2,265 ft (690.4 m) of underground drilling, the mine was closed again in September 1951. A total of 1,735 short tons (1,574 metric tons) of ore grading 0.09 oz/t (3.09 g/t Au) was mined from various drifts and slashes.

1962–1964: The project came under the control of Con-Shawkey Gold Mines Ltd. The No. 2 shaft (No. 10 Zone) was reopened, and more exploration was completed. A bulk sample of 51.3 short tons (46.5 metric tons) was sent to the Ministry of Natural Resources pilot plant, and an average grade of 0.23 oz/t (7.89 g/t Au) was obtained from 53 samples. Another bulk sample of 1,039 short tons (942.6 metric tons) was sent to the Malartic Goldfields Mill where an average grade of 0.053 oz/t Au (1.82 g/t Au) was obtained. In addition, 14,000 ft (4,267.2 m) of surface drilling, 1,600 ft (487.7 m) of underground drilling, 1,400 ft (426.7 m) of underground development, and Mag and EM surveys were also carried out on the project.

1964–1966: Noranda carried out 3,710 ft (1,130.8 m) of diamond drilling that concentrated on the No. 10 Zone. Mag and EM surveys were also performed on the project.

1972–1976: Umex acquired an interest in the project and drilled six drill holes for a total of 2,240 ft (682.8 m). Mag and EM surveys were conducted on the project.

1979–1989: Les Mines Sigma (Québec) Ltée started work to acquire a 65% interest in the Shawkey property from Valmag Inc. During three years, 45 km of Mag surveys and more than 11,500 m of diamond drilling were completed on the 22 Zone. From June to March 1984, another 24 km of Mag surveying was completed over Lac De Montigny.

Twenty-three (23) holes were drilled for a total of more than 6,000 m. From June to August 1988, nine (9) more holes were drilled for an additional 2,224 m.

The Shawkey South property and the 35% interest in the Shawkey property were acquired by Western Quebec Mines Inc. in 1988 and 1989 from Valmag Inc.

In 1988, Placer Dome Inc. acquired Les Mines Sigma (Québec) and carried out a drilling program comprising seven (7) drill holes for a total of 1,897.5 m, Drilling concentrated on two target areas: the West Zone and the 22 Zone. The Shawkey Property consists of four mining concessions in Dubuisson Township.

1990–1997: The Shawkey property was under a joint venture with Placer Dome Inc. until November 1997. In 1990, Placer Dome Inc. estimated the mineral inventory of the Shawkey property to be 883,132 metric tons in the "possible" category, with an average grade of 4.04 g/t Au. The mineral inventory was contained in six lenses designated by the letters A to F. The mineral inventory was performed using the polygonal method and a specific gravity of 2.7 g/cm^3.

These "resources" are historical in nature and should not be relied upon. It is unlikely they conform to current NI 43-101 criteria or to CIM Standards and Definitions, and they have not been verified to determine their relevance or reliability. They are included in this section for illustrative purposes only and should not be disclosed out of context.

1997: Western Quebec Mines purchased from Placer Dome 70% of the outstanding shares of Wesdome Resources Ltd (which it would later own 100%), and a 65% interest in the Shawkey property (which is would later own 100%).

2002–2003: In 2002, Western Quebec Mines drilled 11 holes totalling 1,248 m to test the No. 22 Zone. In 2003, the company added ten (10) more holes for another 1,657 m.

During the period between 1936 and 1964, the Shawkey mine produced a total of 25,637 ounces of gold from 127,737 metric tons of ore with an average grade of 6.24 g/t Au (Table 6.3).

Table 6.3 – Shawkey mine production from 1936 to 1964

Year	Metric Tonnes Milled	Recovery Grade Au g/t	Ounces of Gold
1936-1938	125,174	6.31	25,414
1945-1951	1,574	3.08	156
1962-1964	989	2.11	67
TOTAL	127,737	6.24	25,637

Elmac Shaft Area

The following description of historical work in the Elmac Shaft Area is mostly modified and summarized from Mailhiot (1920), Cooke et al. (1931), Hawley (1931), Bell (1935; 1936), Koulomzine and Brossard (1946), Dresser and Denis (1949), Chevalier (1989a) Beauregard and Gaudreault (2005), and the annual information forms of Western Quebec Mines Inc., Wesdome Gold Mines Inc. and Wesdome Gold Mines Ltd (1997–2013).

1919–1935: The property was originally known as Fosie-Kengrow, these being the names of the men who staked the claims in 1919. From 1919 to 1935, the property was successively controlled by Union Mining Corporation, Unison Gold Mines Ltd, Lorette Mines Ltd, Minorand Co-operative Company Ltd, Minrand Gold Ltd, and finally by Crossroads Gold Mines Ltd.

The deposit was discovered in 1919. The discovery vein, which was exposed over a distance of roughly 200 ft (61.0 m), displayed a contorted pattern with numerous offshoots and stringers.

Some diamond drilling was done in 1922, establishing sufficient ore for mining purposes, as long as ore grades were high enough. Mining machinery was installed, and in 1925, a shaft a shaft was sunk to a depth of 100 ft (30.5 m) where some underground work was carried out.

The mine was again operated in 1932–33, and there has been sporadic development work since that time, including a small amount of underground work and diamond drilling, as well as the assembling of a small mill. In 1935, the mine workings were flooded.

1940–1946: Elmac Malartic Mines Ltd carried out work around the shaft and in underground workings. A new mineralized zone was discovered (the “Carbonated Zone”). All known zones were resampled. A drilling program was also conducted in the northern part of the property (Claims Potter-Kee). A Mag survey was carried out over the entire property in 1945.

1963–1965: Elmac Malartic Mines conducted an 18-hole drilling program for a total of 8,800 ft (2,682.2 m). Seven (7) holes were drilled in the northern part of the property (Potter-Kee Claims) on Lac De Montigny. Nine (9) holes were drilled in the centre of the property, in the shaft and Carbonated Zone areas. The drilling program cut the Carbonated Zone, which assayed 23.78 g/t Au over 2.74 m. Two holes were drilled near the Piché River in the southern part of the property. In 1965, another drilling program (1531.0 m) was conducted on Lac De Montigny, resulting to the discovery of a new mineralized zone associated with feldspar porphyries. The new zone assayed 4.14 g/t Au over 6.24 m.

1978–1983: Les Mines Sigma (Québec) Ltée optioned the property. A total of seven (7) holes were drilled on the Carbonated Zone totalling 1,905 m. Between 1981 and 1983, the company carried out 22.3 km of Mag surveying and 3.6 km of IP surveying. In addition, a total of 53,823 ft were also drilled on the property.

1989: Les Mines Sigma (Québec) conducted an 8-hole drilling program in the northern half of the property during the winter of 1989 for a total of 2,117.75 m.

1997–2002: Placer Dome Canada Ltd sold the Elmac property to McWatters Mining Inc., who officially became the new owner and operator of the property until 2003.

2003: In December of 2003, Western Quebec Mines purchased the Kiena Complex, including the Elmac property.

School Mine Shaft Area

The following description of historical work in the School Mine Shaft Area ("École Mine" in French) is mostly modified and summarized from Mailhiot (1920), Cooke et al. (1931), Hawley (1931), Bell (1935; 1936; 1937), Lavery (1983b), Castonguay (1995), and the annual information forms of Western Quebec Mines Inc. (1996–2006).

1919: Before 1919, prospecting work had been carried out on the Saint-Germain–Glae claims by means of surface trenches and bedrock excavations. Three principal veins were discovered.

1930: Before 1930, some trenching on the west side of the original discovery was performed by Lorette Mines Ltd, but the work disclosed only small quartz veins.

1932: Under the direction of Northern Aerial Minerals Exploration Ltd, a diamond drilling program was carried out in addition to further trenching and test-pitting.

1934–1937: Gale Gold Mines Ltd was incorporated in 1934 and acquired the claims. The No. 4 Vein was discovered and opened-up to some extent during the 1935 field season. The company began the shaft-sinking operation in 1935. The company also installed a mining plant, and was prepared to commence underground operations in the fall of 1935. Underground development commenced in early 1936. A shaft, on the east side of the inlet to Lac De Montigny, was sunk to a depth of 275 ft (83.8 m), with 3,800 ft (1,158.2 m) of lateral workings on the 125' and 250' levels. The Company went bankrupt in late 1937.

1937–1942: The property was purchased by the provincial government in late 1937, and since that time has been operated as a mining school to serve as a training facility for miners.

The School Mine mine was operated from 1938 to 1942. The shaft was deepened by 260 ft (79.2 m) to a depth of 510 ft (155.5 m), and two new levels (375' and 450') were added. During this period, development work totalled 7,190 ft (2,191.5 m) of drifting, 6,605 ft (2,013.2 m) of cross-cutting, 551 ft (167.9 m) of raising, and 10,906 ft (3,324.2 m) of drilling from surface and underground. A total of 67,740 short tons (61,454 t) of waste and 2,114 short tons (1,918 t) of ore were hoisted, and 556 ounces of gold were recovered at the cyanidation plant erected on the property in 1940.

1963: Cusco Mines Ltd undertook a drilling program (63 holes) at the southern limit of the property between the School Mine property and Agnico Eagle's Goldex property. Some of these holes were drilled partially or totally within the School Mine property.

1964: Hollinger (Québec) Exploration Co. Ltd carried out an 18-hole drilling program in the northern and southern parts of the property. Ten (10) holes were located outside the property limits.

1970: UMEX Ltd completed geophysical surveys over the area. It is not known whether UMEX drilled any holes on the property.

1975: The provincial government drilled one (1) short hole along the southern boundary of the property, to the south of the shaft.

1978–1981: The joint venture between Valmag Inc. and U.F. Venture Associates completed VLF, EM and Mag surveys over the property. During 1980 and early in 1981, the JV subsequently completed 9,963 ft (3,036.7 m) of diamond drilling in fifteen (15) holes on both their School Mine and Special Permit 141 properties. All drilling focused on a granodiorite plug.

1983: Incursus Ltd carried out an integrated exploration program of line-cutting (32 km), geophysical surveying (28.3 km of VLF EM and 32.0 km of Mag) and diamond drilling (17 holes for 3,295.3 m) on the joint School Mine–Special Permit 141 property from May to September 1983.

1994: Western Quebec Mines completed six (6) drill holes for a total of 2,958 m in the southwestern part of the School Mine property, along the northwest extension of the Goldex zones. Several scattered auriferous quartz veins and veinlets were intersected in the granodiorite, which also hosts the Goldex zones. Erratic values reached 77 g/t Au.

1996–1997: During 1996, a second exploration program took place to follow up on the 1994 program. It followed the potential granodiorite body at depth toward the northwest, and intersected a few gold-bearing veins/veinlets. In 1997, two deep exploration drill holes were completed to test the down-dip extension of the granodiorite sill, which hosts large gold deposits on the neighbouring Goldex Extension property of Agnico Eagle Mines Ltd.

1998: In 1998, six (6) holes were drilled to test targets believed to be projections of known structures, on the neighbouring Shawkey properties, which are regionally related to the Kiena mine. The drilling intersected a shear structure with low-grade mineralization.

2002: In 2002, surface prospecting and trenching exposed a shear zone containing quartz veins in the eastern portion of the property. Gold values were found to be erratic.

2006: In December 2006, Western Quebec Mines completed a 13-hole (3,700 m) drilling program designed to test new targets in the unexplored northern portion of the property. Although favourable geology, structures and alteration were encountered, no economic gold values were obtained.

Joubi Mine Area

The following description of historical work in the Joubi Mine Area is mostly modified and summarized from Mailhiot (1920), Bell (1935), Ingham (1944b), Hinse (1975), Lavery (1983a), Laforest (1987) Castonguay (1995), and the annual information forms of Western Quebec Mines Inc. (1996–2006).

1919: Before 1919, prospecting work on the Clowse claim led to the discovery of a narrow gold-bearing vein. The vein was traced at surface over a length of 100 ft (30.5 m). A 27-ft-deep (8.2-m) exploration shaft was sunk on the vein.

1934: During spring and summer 1934, Amity Gold Mines Ltd carried out surface trenching, surface sampling and diamond drilling, chiefly in the vicinity of the old shaft sunk by Clowse Claim. Four (4) holes were reportedly drilled to test this old occurrence.

1941–1942: A diamond drilling program was started in July 1941 by Seventh Malartic Mines Ltd, and it continued until April 1942, when 28 holes had been completed for a total of 13,550 ft. Only four (4) holes were located on the Joubi property, one (1) of which constituted the first indication of the presence of the Range Line Zone.

1943–1944: In 1943, Perron Gold Mines optioned the property, and diamond drilling was resumed in the spring of 1944. Eighteen (18) holes were drilled during the program.

1960: Iso-Newlund Mines covered part of the property with a Mag survey, followed by five (5) drill holes.

1964: One (1) hole was drilled by Amerel Mining Company, followed by a Mag survey.

1973: The Joubi Mining Corporation acquired the property in 1973, and drilled 24 holes on the Range Line Zone.

1979: Massey-Gauthier Ltd drilled six (6) holes on the Range Line Zone.

1981: A joint venture was made up of U. F. Venture Associates (70% participating interest) and Messeguay Mines Inc. (30% participating interest). The Joubi JV continued the assessment of the Range Line Zone with 1,341.4 m of core drilling in eleven (11) holes during 1981, bringing the total drilling in the zone to 6,838 m in 46 holes.

1982: The participation in the JV was modified in 1982. The result was a 51.11% participating interest for U. F. Venture Associates, a 30% participating interest for Messeguay Mines, and a 18.89% non-participating interest for V. Audet.

In 1982, based on all drilling results to date, W. N. Ingham estimated that the Range Line Zone contained 167,545 metric tons grading 7.34 g/t Au in three separate shoots.

These "resources" are historical in nature and should not be relied upon. It is unlikely they conform to current NI 43-101 criteria or to CIM Standards and Definitions, and they have not been verified to determine their relevance or reliability. They are included in this section for illustrative purposes only and should not be disclosed out of context.

Between 1982 and 1983, twelve (12) holes totalling 2,402.7 m were added on the Range Line Zone. In late 1982, detailed total field magnetic, vertical gradient magnetic and VLF surveys had been completed by the Joubi JV.

1984–1986: Western Quebec Mines carried out an exploration program including different geophysical methods, followed by some 3,178 m of diamond drilling distributed in 11 holes.

1987–1989: Western Quebec Mines agreed to grant Messeguay Mines and Oasis Resources Inc. working rights and an option to acquire a 49% interest in the Joubi property. Western Quebec Mines had Minexpert Inc. complete an evaluation review, which recommended an underground exploration program to define the essential parameters required for a better understanding of the nature of the gold mineralization. Surface installations were constructed, a three-compartment shaft was sunk to a depth of 253 m with four shaft stations, 2,780 m of crosscuts and drifts were developed, 1,094 m of raises were completed, and a diamond drilling program totalling 47,812 m was carried out. During this period, Western Quebec Mines developed the zones defined by the previous underground exploration program, conducted detailed drilling of the zones (3,645 m) and began mining operations.

1990: In 1990, Western Quebec Mines completed development work and mining of the zones defined in 1988–89, conducted a drilling program of 15,084 m (zone definition, surface exploration, and exploration below the last level). In 1991, exploration work discovered the F Zone at the border of the Dubuisson West property. Western Quebec Mines drilled 12,614 m of core on the Joubi property. Since the mineable reserves on the Joubi property were almost exhausted, Western Quebec Mines decided to deepen the shaft by 71 m to reach the lower A Zone.

1992: In early 1992, Western Quebec Mines was granted an option from Republic Goldfields Inc on the Dubuisson East property. Western Quebec Mines also purchased the Dubuisson West property from Republic Goldfields Inc. Both properties were adjacent to the Joubi property.

In spite of the shaft deepening, reserves were insufficient to maintain the operations. One kilometre (1 km) of drifts was developed at the 2nd level to access the Dubuisson East zone. Western Quebec Mines drilled 268 m of core on the Dubuisson West property, 3,610 m on the Dubuisson East property (exploration and definition), and 2,409 m on the Joubi property. By the end of the year, the reserves from the known economic zones on the Joubi property had been exhausted.

1993: The Dubuisson East zones were developed and mined from the 2nd level to the surface. Since reserves were rapidly running out, it was decided that the drift on the 5th level would be extended under the Dubuisson East workings to access additional reserves. Definition drilling (3,633 m of core) was completed on the Dubuisson East property. Mining of the Dubuisson East zones was slowed by wall instabilities, which resulted in an excessive dilution problem.

1994: Western Quebec Mines continued to mine the Dubuisson East upper zones and to develop the lower zone. The company also extracted a few pockets of ore on the Joubi property. Also carried out were definition drilling and exploration on the Dubuisson East property (3,171 m), and drilling of the A Zone below the 5th level (659 m) on the Joubi property.

1995: Western Quebec Mines commenced a two-year underground exploration and development program on the Joubi property. The first phase of this program involved 200 m of shaft sinking to a depth of 524 m, upgrading of production infrastructure, development of a loading system, and establishment of levels 360 and 440. Due to the shaft sinking program, production was interrupted for more than six months. Almost all production came from the Dubuisson East property where the bulk of the reserves were located.

1996: The emphasis continued to be on exploration following the shaft-deepening program and the establishment of new drifts at a depth of 440 m. Western Quebec Mines completed a total of 15,000 m in 110 drill holes along the 1.1-km strike length of the Joubi shear zone. This drilling identified a small, high-grade zone (DE-F) above the 440m level. In addition, preliminary drilling on the 440m level identified the down-dip extension of zones DE-B/C over a strike length of 80 m, which remained open to the east and at depth.

1997–1998: In 1997, 90 holes were drilled for a total of 8,600 m, resulting in the discovery of the DE-F zone below the 440m level. In 1998, the company conducted an extensive underground exploration effort involving 480 m of drifting and 14,200 m of drilling in 81 holes. The goal of the program was to test the depth and strike potential of the Joubi shear zone in an effort to identify significant new reserve blocks. Results were insufficiently encouraging to justify further development.

1999: The Joubi mine was closed in 1999 after a 10-year production history. Total production amounted to 62,283 ounces from 327,561 metric tons of mined ore (see Table 6.4). Ore was custom-milled at facilities in the Val-d'Or area when excess capacity was available, with gold recoveries of 98%.

The headframe was dismantled and the shaft sealed. The three-compartment shaft reached a depth of 524 m with levels developed at 70, 120, 220, 280, 360 and 440 m. Ore chutes were installed at levels 120m, 220m, 280m and 440m.

Table 6.4 – Joubi mine production from 1990 to 1999

Year	Metric Tonnes Milled	Recovery Grade Au g/t	Ounces of Gold
1990	30,146	10.94	10,601
1991	36,998	6.99	8,319
1992	36,572	7.64	8,983
1993	28,419	4.49	4,104
1994	57,115	4.55	8,351
1995	20,166	5.37	3,484
1996	35,270	4.73	5,364
1997	39,191	4.72	5,947
1998	27,470	4.17	3,679
1999	16,214	6.62	3,451
TOTAL	327,561	5.91	62,283

Dorval-Siscoe (and Wesdome Deposit) Area

The following description of historical work in the Dorval-Siscoe Area is mostly modified and summarized from Beckman et al. (1933), Bell (1937), Ross et al. (1938), Ross and Asbury (1939), Koulomzine (1941; 1942; 1943), Ingham (1944a; 1947), D'Aragon (1947), Auger (1947), Dresser and Denis (1949), Young (1955), Salamis (1970), Prud'homme (1970), Audet (1975a; 1975b), Matheson (1976), Audet (1979), Gardiner (1987a; 1988), Sauvé et al. (1993), Beauregard and Gaudreault (1999; 2005), Turcotte and Pelletier (2009), and the annual information forms of Western Quebec Mines Inc., Wesdome Gold Mines Inc. and Wesdome Gold Mines Ltd (1996–2013).

1933–1937: Dorval-Siscoe Gold Mines drilled 37 diamond drill holes for a total of 7,050 m, and established the presence of a wide and intensely sheared zone (Dorval-Siscoe Main Break). Snowshoe Mines Ltd drilled five (5) holes totalling 844 m on the Snowshoe intrusion. A diamond drill hole cut the Dorval Siscoe Main Break. The material in the zone consisted of schistose and talcose granodiorite with laminated quartz-carbonate stringers up to 10 in (25 cm) wide, and a feldspar porphyry dyke about 10 ft (3 m) in section width that was injected and replaced by vein quartz. The mineralization consists of pyrite, chalcopyrite, galena and tourmaline.

Good results obtained by Dorval-Siscoe Mines prompted the company to sink a three-compartment shaft on Island No. 6 in 1937 and 1938, to a depth of 343 ft (104.5 m). Other work included the development of about 850 m of drifts and crosscuts on the 300' level, and a drilling program of fourteen (14) underground diamond drill holes totalling 686 m. A strong vein was exposed for a length of 780 ft (237.7 m) in a drift on the 300' level.

Particular emphasis was placed on extending the K Zone in the Siscoe gold mine onto the Dorval-Siscoe property. At the time, the K Zone was considered spatially related to most of the mineralization on the Dorval-Siscoe property. The primary focus of the work was to outline a broad zone of weak to moderate mineralization, as described in the report by Koulomzine (1941).

1941–1943: Camp Bird Gold Mines Ltd took an option on the project held by Dorval-Siscoe Gold Mines. A dip needle magnetic survey was carried out over 590 ha on the project, outlining many magnetic anomalies. Twenty-four (24) holes totalling 5,400 m were drilled from the surface, and sixteen (16) holes totalling 1,467 m were drilled underground from the earlier Dorval-Siscoe workings.

1945–1948: Another dip needle magnetic survey was conducted by Snowshoe Gold Mines Ltd over an additional 191 ha. In addition, fourteen (14) surface diamond drill holes totalling 2,671 m were drilled on the periphery of a large circular magnetic depression (granodiorite plug) located in the centre of the property. In 1946 and 1947, Western Quebec Mines (incorporated in 1945) began developing the property held by Camp Bird Mines Ltd. Twelve (12) surface diamond drill holes totalling 3,394 m were drilled on magnetic anomalies, providing encouraging results.

1955: Snowshoe Gold Mines Ltd carried out an EM survey over the western part of the Snowshoe intrusion.

1963–1965: Western Quebec Mines drilled four (4) holes (holes 87 to 90) totalling 1,559 m on the A Zone, and in 1964, completed a Mag survey over the western and southwestern part of the property.

1965–1970: Kerr Addison Mines and Western Quebec Mines conducted a geophysical survey over the project, including 209 km of Mag and 12.9 km of EM surveys, and drilled four (4) holes totalling 1,613 m (65-1 to 65-4). In 1970, Western Quebec Mines initiated other geophysical surveys on the western part of the project, including 132.9 km of Mag, and 182 km of Max-Min (EM) and induced polarization (IP). The goal of these surveys was to delineate massive sulphides associated with peridotites. In addition, nine (9) holes (W70-1 to W70-9) were drilled, totalling 1,373 m.

1975–1983: Wesdome Resources Ltd, a company owned by Dome Exploration Co. Ltd and Western Quebec Mines, drilled 136 holes totalling 37,999 m. This phase can be split into four major periods:

- **1975–1976:** A 78-km VLF survey was carried out on the project, and 38 holes (82-1 to 82-38) were drilled for a total of 10,584 m. The goal of this program was to evaluate the general potential of the project.

- **Winter 1979:** Four (4) holes (82-39 to 82-42) were drilled for a total of 1,273 m. The goal was to complete a transverse section north of the A and B zones (Audet, 1979a).

- **1980–1981:** A drilling program was carried out to delineate the mineralization and evaluate gold reserves in the A and B zones and associated "flat" quartz veins. In total, 19,740 m (67 holes) were drilled.

- **Winter 1983:** Drilling was conducted to extend the A Zone mineralization eastwards. A first reconnaissance field program was carried out to identify mineralization in an altered (albitized) monzodiorite on the western periphery of the property, adjacent to a project held by Falconbridge Nickel Ltd. A total of 26 holes (82-105 to 82-130) were drilled for a total of 6,348 m (Duhaime, 1983).

1984: Wesdome Resources established a grid of 116.5 km on the project, and a total field and gradient Mag survey was undertaken. During the same year, 51 holes totalling 18,656 m were drilled on the project, mainly in two sectors: 21 holes in the intrusive dyke complex (the Falconbridge Zone) for a total of 10,935 m; and 30 holes in the A and E zone extensions for an additional 7,721 m. During this program, a new zone, the F Zone, returned encouraging results.

1987: Wesdome Resources completed a geophysical survey (seismic refraction) followed by a 30-hole drilling program (holes 82-177 to 206) for a total of 12,180 m.

1988: Another geophysical program consisting of seismic refraction, IP, Mag, EM and bathymetry was carried out by Sigma Mines Ltd. After that, Wesdome Resources completed a 13-hole winter drilling program (holes 82-207 to 219) for a total of 5,318 m, followed by another 13-hole drilling program in the fall of 1988 (82-220 to 82-232) for an additional 4,524 m.

During the 1980s, geologists of Placer Dome Inc. and subsidiary Les Mines Sigma (Québec) Ltée separately estimated the total contained mineralization for the A, B, C, D, E and E3 zones as 2.7 Mt grading 4.6 g/t Au (using various cut-off grades).

These "resources" are historical in nature and should not be relied upon. It is unlikely they conform to current NI 43-101 criteria or to CIM Standards and Definitions, and they have not been verified to determine their

relevance or reliability. They are included in this section for illustrative purposes only and should not be disclosed out of context.

1998–1999: Wesdome Gold Mines built a 5.5-km access road on the northern peninsula, and completed rock mechanic tests and seismic surveys for overburden and rock quality on the former site of the decline portal. Results revealed the presence of a deep trough (over 60 m) over an east-west striking, multi-metre wide, sheared and altered ultramafic unit. These results indicated a ramp project would not be feasible. One hundred (100) holes (37,278 m) were drilled, including six (6) holes on the Yankee Clipper property to the north. Three distinct zones of the Wesdome property were tested: the sector north of the K Zone, the E3 and E zones, and the A and B zones. Wesdome Gold Mines was planning to sink an exploration shaft on Island No. 3. A 600-m pilot hole was completed on the island for rock mechanic purposes prior to shaft sinking, with positive results. Preparation work, which consisted of levelling the site (Island No. 3), was conducted during the winter of 1998–99. In 1999, permitting and engineering work continued, and limited mining equipment was purchased.

2000–2001: During 2000, work concentrated on the construction of the surface infrastructure required to commence shaft sinking and underground development. The shaft was collared at a depth of 23 m, the hoist and surface buildings were installed, the wharf-barge access system was made fully functional, and was made using a specialty submarine electrical cable. In addition, two exploration holes were drilled to test the western limits of the A zone.

Siscoe Mine Area

The following description of historical work in the Siscoe Mine Area is mostly modified and summarized from Mailhiot (1920), Cooke et al. (1931), Hawley (1931), Bell (1937), Auger (1940), Auger (1947), James (1949), Dresser and Denis (1949), Gill (1981), Timmins and Wing, (1981), Trudel (1985), Allard (1988) and Sauvé et al. (1993).

1912–1919: Siscoe Island was staked in 1912 by Siscoe Mining Syndicate. Gold was discovered on the northernmost part of the property during the initial prospecting in 1911 and 1912, but gold showings on Siscoe Island were not reported until three or four years later. The first gold discovery was made in 1913.

Between 1913 and 1919, exploration work was conducted on four principal veins: A, B, C, and D. A 45-ft exploration vertical shaft was sunk on the A Vein. The vein was exposed over a length of 90 ft (27.4 m). The vertical exploration shaft of the B Vein was 32 ft (9.8 m) deep. On the C Vein, an exploration shaft was sunk to a depth of 100 ft (30.5 m), inclined at an angle of 35°, following the dip of the vein. The zone of the D Vein comprised a number of scattered veins and quartz lenses measuring several feet in length. Several quartz veins contained nests or pockets rich in native gold, in which wonderful specimens were sometimes found. An exploration shaft 88 ft (26.8 m) deep was sunk on the vein.

1923–1927: The property was bought by British Mineral Corporation, and in 1923, Siscoe Gold Mines Ltd was created. In June 1926, the underground workings included a shaft sunk to a vertical depth of 105 ft (32 m) on the D Vein, and about 1,500 ft (457.2 m) of drifting and crosscutting. Most of this work has been of an exploratory nature, directed to finding single veins large enough to mine. The long crosscut that runs southwest from the shaft to the granodiorite-basalt boundary cut a vein known as the K Vein, which seemed to follow that boundary. In 1927, active development on the C shaft and C Vein was recommenced. Since renewing operations, the shaft was continued to a depth of 500 ft (152.4 m), and much lateral work was completed on the 170', 300', 400' and 500' levels.

1929–1930: Milling equipment was installed, and in January 1929, the mine came into production. Later in 1929, following the discovery of a vein nearly parallel to the cross-cut driven south of the D shaft, an extensive diamond drilling program was carried out that proved the continuity of the vein, which became known as the New Vein. A new three-compartment shaft (the Central shaft) was completed in spring 1930 to a depth of 472 ft (143.9 m). From this, cross-cuts were driven northwest on the 300' and 450' levels at distances of 50 (15.2 m) and 100 ft (30.5 m) beyond the New Vein. From the Central shaft, the workings on the 300' level were driven east to connect with the 5th level of the inclined C shaft by an 85-ft raise from the latter. At the 450' level, a cross-cut was driven east to intersect the C Vein on this level.

1930–1946: By the end of 1936, the mine had been developed on levels to a vertical depth of 1,350 ft (411.5 m). For the first 600 ft (182.9 m), levels are at intervals of 150 ft (45.7 m); below this they were spaced at 125-ft intervals. The Central shaft serviced the entire mine. It was deepened to 1,900 ft (579.1 m) to permit the opening of the newly opened 11th and 12th levels. By the end of 1939, the Central shaft had reached the 19th level at a depth of 2475 ft (754.4). At this time, the mine had been continuously in production since 1929.

1946–1951: Starting in 1940, and despite an intense exploration program, no new ore sources were found. In 1949, the mine was closed and all reserves were mined out. In 1951, the mill and all equipment were sold. Exploration activities were suspended until 1981.

1981: Canzona Mineral Inc. carried out an EM (VLF) survey covering all of Siscoe Island. In the spring, a 19-hole diamond drilling program was completed on Siscoe Island. Due to the significant mineralized zones intersected, Phase #2 of the drilling program was completed in June, consisting of four (4) diamond drill holes drilled northward into a VLF EM conductor associated with the K Zone.

1984–1990: From 1984 to 1990, Maufort Resources Inc. completed exploration and underground work in joint venture partnership with Teck Corporation (1984–1987) and Cambior Inc. (1987–1989). A total of 20,693 m of diamond drilling was carried out and the mine pumped dry.

1993–1997: In 1993, Maufort Resources Inc. changed its name to Dynacor Mines Inc. Dynacor Mines completed mapping, outcrop stripping, diamond drilling and sampling. In 1997, nine (9) diamond drill holes were sunk on the property for a total of 3,170 m.

1999: As part of its Reorganization Agreement, Dynacor Mines transferred all its interests in the Siscoe property (100%) to Wesdome Gold Mines on November 9, 1999.
During the period between 1929 and 1949, the Siscoe mine had produced a total of 802,303 ounces of gold and 306,070 ounces of silver from 2,975,785 metric tons of ore grading an average of 9.22 g/t Au and 3.20 g/t Ag (Table 6.5).

Table 6.5 — Siscoe mine production from 1929 to 1949

Year	Metric Tonnes Milled	Recovery Grade Au g/t	Ounces of Gold	Recovery Grade Ag/t	Ounces of Silver
1929	27,067	17.07	14,853	1.38	1,200
1930	30,613	18.02	17,740	1.44	1,420
1931	50,508	22.10	35,883	0.99	1,614
1932	58,059	26.06	48,651	2.04	3,810
1933	87,407	19.48	54,729	3.14	8,826
1934	112,630	16.93	61,291	2.83	10,247
1935	135,236	14.82	64,446	3.70	16,089
1936	164,364	13.08	69,138	3.23	17,090
1937	181,895	12.89	75,383	3.61	21,095
1938	170,342	12.19	66,783	3.63	19,906
1939	171,965	9.76	53,982	3.76	20,765
1940	176,251	8.15	46,159	3.17	17,973
1941	208,710	6.63	44,461	3.79	25,457
1942	288,668	5.13	47,630	4.20	38,961
1943	290,407	4.35	40,656	3.51	32,808
1944	294,366	4.16	39,384	3.30	31,196
1945	241,466	4.33	33,610	2.30	17,864
1946	143,148	4.95	22,799	2.24	10,304
1947	64,649	10.37	21,556	2.33	4,847
1948	60,984	8.27	16,212	2.15	4,206
1949	17,049	12.69	6,957	0.72	392
TOTAL	2,975,785	9.22	882,303	3.20	306,070

Siscoe Extension Area

The following description of historical work in the Siscoe Extension Area is mostly modified and summarized from Hawley (1931), Bell (1937), Denis (1937), Ross et al. (1938), Auger (1940), Auger (1947), Dresser and Denis (1949), Sullivan Consolidated Mines Ltd (1957) and Dussault (1988).

1929–1937: During the winter of 1929–1930, some 10,000 ft (3,048 m) of diamond drilling was undertaken by Siscoe Extension Gold Mines Ltd on the property. Drilling was undertaken in the hope of picking up the eastern extension of the Siscoe granodiorite and possible veins. Following the drilling program, a three-compartment shaft was sunk on the lake's shore, and underground work was carried out on the 350' level. In 1936, diamond drilling was carried out from both underground and surface (from ice on Lac De Montigny). The latter was chiefly concerned with exploration for the presumed continuation onto the property of the northeastern branch or split of the K Zone of the Siscoe mine. But the drilling program was unsuccessful in locating the Siscoe K Zone beneath the lake. The overburden was penetrated to depths of up to 202 ft (61.6 m), but bedrock was not definitively reached. In 1937, the shaft reached a depth of 750 ft and the 750' level was established. Drifting was carried out on the 750' level.

1938: Operations were suspended in the fall of 1938, and the mine was flooded.

1946: Siscoe Gold Mines optioned the property and dewatered the underground workings. Geological surveying and re-sampling were carried out underground. Following this work, the option lapsed and the underground workings were flooded again.

1957: Sullivan Consolidated Mines Ltd optioned the property and carried out an EM survey on the property. Surface diamond drilling was done from the ice south of the main underground workings.

1986: Maufort Resources Inc. acquired the property from Extension Holdings Inc. A total of twelve (12) holes were drilled on the property for a total of 10,400 ft (3,169 m).

1987: Maufort Resources carried out a 56-hole drilling program on the property for a total of 81,361 ft (24,798.8 m). IP, Mag and seismic surveys were also carried out. The underground workings were dewatered.

1993: Maufort Resources Inc. changed its name to Dynacor Mines Inc.

1999: As part of its Reorganization Agreement, Dynacor Mines transferred all its interests in the Siscoe-Extension property (75%) to Wesdome Gold Mines Inc. on November 9, 1999.

APPENDIX VI – DETAILS OF MINERALIZED ZONES AND VEINS OBSERVED ON THE QUEBEC WESDOME PROJECT

V.1 Pontiac Group

A large sequence of greywacke belonging to the Pontiac Group was intersected by diamond drilling in 2010–2011 (see section 10). The greywacke was cut by auriferous and pyritiferous quartz-carbonate-chlorite veinlets related to the South Block Zone (see Table 7.1). The South Block Zone (see Fig. 7.3) is about 500 m southwest of the Cadillac Tectonic Zone. A shear zone was observed in the greywacke several metres northeast of the mineralized zone. No alteration was reported for this zone.

V.2 Piché Group

A sequence of komatiites belonging to the Piché Group was intersected by diamond drilling in 2010–2011 (see section 10). The komatiites were accompanied by basalt and gabbroic dykes in contact to the south with a sequence of greywacke belonging to the Pontiac Group. Three mineralized zones (see Table 7.1) were observed in the Piché Group, located about 100–300 m southeast of the Cadillac Tectonic Zone.

V.2.1 P1 Zone

The P1 Zone (see Fig. 7.3) is represented by basalt carrying 25% quartz-carbonate-chlorite-pyrite±native gold±native silver veinlets (see Table 7.1). It occurs in a weak shear zone. Weak amphibolitization is associated with this zone.

V.2.2 P2 Zone

The P2 Zone (see Fig. 7.3) corresponds to a komatiite, partially sheared and containing 10% auriferous and pyritiferous quartz-carbonate-talc veinlets (see Table 7.1). The P2 Zone is located near a fault zone. Moderate chloritization and weak carbonation are associated with this zone.

V.2.3 P3 Zone

The P3 Zone (see Fig. 7.3) is represented by gabbro carrying 3% auriferous quartz-carbonate-chlorite veinlets with pyrite and pyrrhotite (see Table 7.1). It lies several metres southwest of a weak shear zone. Moderate chloritization is associated with this zone.

V.3 Héva Formation

The sections below discuss the known mineralized zones in the Héva Formation.

V.3.1 Elmac Shaft Area

The following description of the Elmac shaft area is mostly modified and summarized from Darling (1946), Audet (1978), Khobzi (1982) and Laplante (2000b), and references therein.

Near the Elmac shaft, the rocks are mainly represented by gabbroic sills that intrude the felsic to mafic volcaniclastic rocks of the Héva Formation. They strike about N300° and dip 30°–45° north.

V.3.1.1 Elmac No. 1 and No. 2 Veins

The Elmac No. 1 and No. 2 Veins (see Fig. 7.3) constitute what was formerly known as the Shaft Zone. The E-W distance between both veins is about 90 m (300 ft). These veins occur within a dioritic intrusion, and are located about 500 m northeast of the Parfouru Fault.

The Elmac No. 1 Vein is convoluted and strikes N165° and dips 65° west. This vein was developed on the first level (from Elmac Shaft) over a length of about 150 m (500 ft), and varies in width from

5 cm (2 in) to 4.5 m (15 ft). No shear zone has been reported in the vicinity of the vein, but Pilote et al. (2015b) interpreted a fault zone about 200 m northeast of the Elmac No. 1 and No. 2 veins. This fault zone marks the limit between the Héva and Val-d'Or formations.

The Elmac No. 2 Vein has a sigmoidal form and was developed on the 2nd level over a length of 68 m (225 ft). This vein strikes N195° and dips 70° west. No shear zone has been reported in the vicinity of the vein.

Both veins consist of white to blue-black quartz-tourmaline veins with carbonates (see Table 7.1). These veins and the carbonated wallrock in the vicinity are characterized by abundant and fairly fine pyrite, chalcopyrite and pyrrhotite. Arsenopyrite was only observed in the Elmac No. 1 Vein and increases in amount toward the north. Visible gold was noted in both veins.

V.3.1.2 Elmac West Zone

The Elmac West Zone (see Fig. 7.3) is located about 100 m (330 ft) west of the Elmac No. 1 Vein. This zone is located in diorite and about 600 m northeast of the Parfouru Fault. The zone consists of a silicified and highly fractured area with numerous veins and stringers of quartz and quartz-tourmaline (see Table 7.1). These veins and the silicified wall rock in the irregular fractured area are heavily mineralized by arsenopyrite, pyrite, pyrrhotite and chalcopyrite. Visible gold was noted both in surface and underground holes. The zone plunges to the north, similar to the Elmac No. 1 and No. 2 veins. No shear zone has been reported in the vicinity of the vein, but Pilote et al. (2015b) interpreted a fault zone about 200 m northeast of the Elmac No. 1 and No. 2 veins. This fault zone marks the limit between the Héva and Val-d'Or formations.

V.4 Val-d'Or Formation

This section presents the mineralized zones found in the Val-d'Or Formation.

V.4.1 Elmac North Zone

The following description of the Elmac North Zone is mostly modified and summarized from Darling (1946), Audet (1978), Khobzi (1982) and Laplante (2000b), and references therein.

In this area of the Elmac North Zone, the Val-d'Or Formation is represented by pillowed basalts, andesites and volcaniclastic rocks. The rocks strike N330° and dip steeply 65°–75° northeast.

V.4.1.1 Elmac Carbonated Zone

The Elmac Carbonated Zone (see Fig. 7.3) was discovered in 1946 and is located 1.5 km northeast of the Parfouru Fault. The zone is hosted by deformed and altered andesites and/or mafic tuffs. The Elmac Carbonated Zone is located between two interpreted fault zones (Pilote et al., 2015b) spaced about 200 m apart. The andesites strike N310° and dip vertically. The Elmac Carbonated Zone is folded and consists of many white to blue-black quartz-tourmaline veins up to 3.7 m long (12 ft). These veins and the carbonated wallrock in the vicinity are characterized by abundant and fairly fine-grained pyrite, chalcopyrite and pyrrhotite (see Table 7.1). Visible gold was noted in the veins. Generally, in diamond drill holes, the Elmac Carbonated Zone is represented by only one vein, but in some cases up to three were observed.

V.4.1.2 Elmac North Zone

The Elmac North Zone (formerly Main Zone) is located about 1.1 km east-northeast of the Elmac Shaft, and is located 500 m southwest of the Marbenite Fault (see Fig. 7.3).

Mineralization (see Table 7.1) consists of disseminated pyrite (up to 10%) observed in schist at intervals of 1 to 8 m. The schist is composed of chlorite, sericite and carbonate, and is strongly sheared in some places. The mineralization is subparallel to the host schist. The zone strikes N300° and dips steeply (70°–85°) to the north. The zone is observed over a length of about 400 m.

V.5 Jacola Formation

This section presents the mineralized zones located within the Jacola Formation.

V.5.1 Kiena Mine Area

The following description of the Kiena mine area is mostly modified and summarized from Morasse et al. (1995) and Morasse (1998), and references therein.

The Kiena Mine property occupies the southwestern corner of Lac De Montigny and, apart from the presence of several small islands, is mostly covered by the waters of this lake. The geology of the property is known from surface mapping of islands and peninsulas, numerous drilling surveys and several ground magnetic surveys (performed from the iced-over lake surface), as well as from underground mapping and drilling at the Kiena mine.

The Jacola Formation, which hosts the Kiena orebody, consists of peridotitic/basaltic komatiites alternating with iron and magnesian tholeiites, with rare intercalated thin layers of tuffaceous rocks of intermediate composition (Sauvé, 1988). Strongly magnetic peridotitic and basaltic komatiites form massive to schistose rocks composed mainly of serpentine and talc with lesser tremolite-actinolite, carbonate, chlorite, fine-grained magnetite and ±biotite.

Magnesian basalts are microporphyritic rocks composed of chlorite, carbonate, clinozoisite and albite replacing primary olivine and calcic plagioclase microphenocrysts, in a rock matrix composed of albite microlites, actinolite and quartz. Volcanic rocks of the Jacola Formation have been cut by fine-grained gabbroic sills that are not easily distinguished from the coarse-grained tholeiitic basalts. Gabbroic sills have been cut by numerous granodiorite to tonalite porphyries and "dioritic" dykes (albitite dykes?). Granodioritic to tonalitic dykes vary in texture from medium-grained equigranular to microporphyritic to schistose.

The contact between the Jacola and the lower Val-d'Or formations is outlined by a sharp magnetic contrast delineating the contact between the southernmost ultramafic komatiitic flow of the Jacola Formation and a calc-alkaline pyroclastic flow unit of the Val-d'Or Formation.

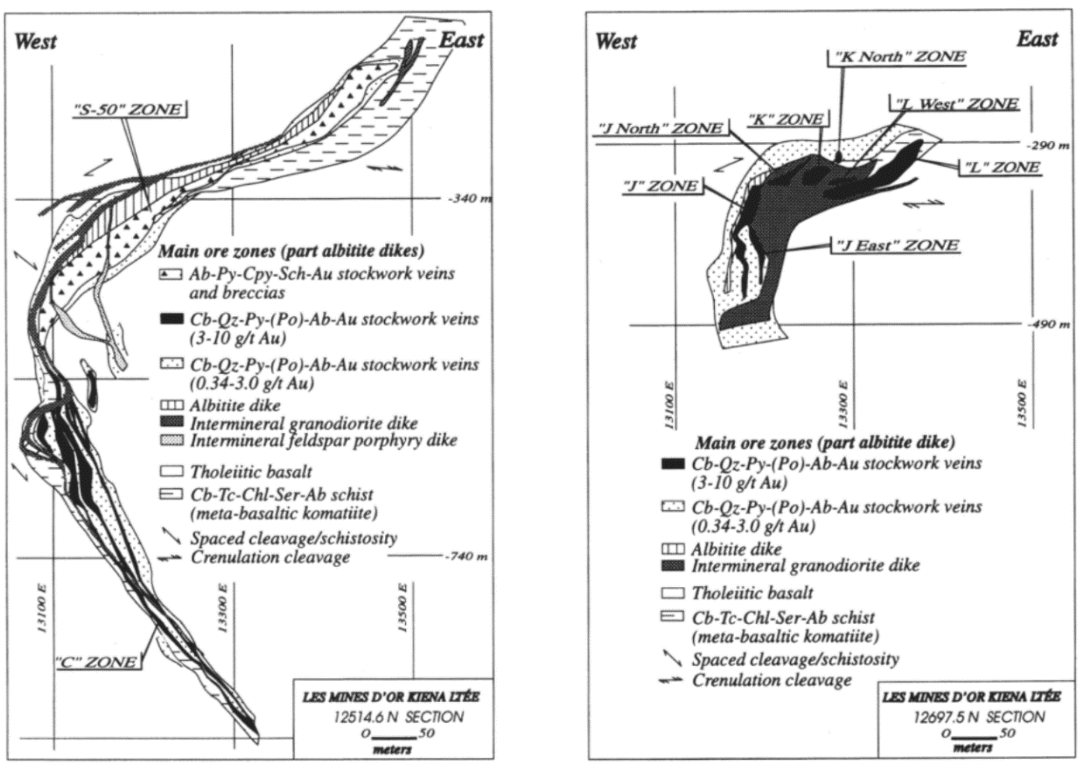
The main orebody of the Kiena mine and its volcanic wallrocks strike north-south (N190°), are overturned to the west, and dip moderately to the west. Volcanic rocks of the Kiena mine property show only weak penetrative strain but local high-strain zones, marked by a penetrative schistosity defined by talc, chlorite, and biotite. These narrow deformation zones occur around the various gold showings and deposits, as well as around the contacts of granodiorite, tonalite and "dioritic" dykes. The overturned volcanic strata, the altered and sheared gold orebodies, and the felsic dykes have all been subsequently cut by a subvertical NE-trending Proterozoic diabase dyke.

V.5.1.1 S-50 Zone

The Kiena orebody (S-50 Zone) is a multistage carbonate-albite-pyrite stockwork, breccia and replacement vein system. The S-50 Zone (see Fig. 7.3) is adjacent to the Marbenite Fault.

For the purpose of mining, Kiena geologists had subdivided the S-50 orebody into seven individual ore zones based on the attitude of the ore, its composition and the presence of a granodiorite dyke. These ore zones can be regrouped into a high-grade core consisting of the “A”, “B” and “D” zones and the lower part of the “C” zone, and a lower-grade ore shell comprised of the “J”, “K” and “L” zones and the upper part of the "C” zone (Fig. V.1)

The Kiena deposit forms a thin and continuous orebody subparallel to bedding. It varies between 225 and 600 m in length, between 10 and 50 m in width, and has a vertical extent between 250 and 1,000 m. The main host rock of the Kiena deposit consists of an anastomosing albitite dyke swarm. The iron tholeiite forms a secondary and minor ore host. The orebody is associated with an intermediate to felsic dyke complex composed of pre-mineral albitite dykes and intermineral granodiorite and feldspar porphyry dykes. Cross-cutting relationships indicate that the feldspar porphyry dyke is the youngest intrusion at the Kiena mine. The intermineral granodiorite dyke is xenolithic and contains large fragments of gold ore and mineralized albitite dykes.



A. B.

Figure V.1 – Geologic cross sections of the Kiena gold deposit (from Morasse et al., 1995).
A. Section across the high-grade core showing intermineral dykes crosscutting the vertically zoned orebody. Contacts of mineralized albitite dykes are easily mapped in the lower part of the orebody but are largely obliterated by intense brecciation and hydrothermal alteration in the upper part of the orebody. B. Section north of the high-grade core showing ore xenoliths in the intermineral granodiorite dyke. Ab = albite, Au = gold, Cb = carbonate, Chi = chlorite, Cpy = chalcopyrite, Po = pyrrhotite, Py = pyrite, Qz = quartz, Sch = scheelite, Ser = sericite, Tc = talc.

The orebody is comprised of three following ore types, from oldest to youngest (see Table 7.1):

1. Carbonate-quartz stockwork veins accompanied by albite-pyrite(pyrrhotite)-gold alteration halos, also known as the “Stwk Cb-Qz-Py (Po)±Ab-Au vein” ore type (or “Stwk” herein);
2. Carbonate (ankerite)-pyrite-Au replacement veins, also known as the “Breccia 1” ore type; and
3. Albite stockwork veins and breccias with disseminated pyrite, chalcopyrite, scheelite and gold, also known as the “Breccia 2” ore type.

The orebody shows a clear upward and outward zonation pattern consisting of a high-grade core that is enclosed in the upper mine levels by a lower-grade ore shell. The high-grade core (5 to 25 g/t Au) is defined by a narrow “root zone” (lower “C” ore zone) consisting of albitite dykes essentially mineralized by the Stwk ore type, progressing upward into a broader “apical zone” (“A”, “D” and “B” ore zones) consisting of albitite dykes and contiguous mafic volcanic flows almost entirely obliterated by the Breccia 1 and Breccia 2 ore types. The lower-grade ore shell (3 to 5 g/t Au) consists of mafic volcanic flows predominantly mineralized by the Stwk ore type (“J”, “K”, “L” and upper “C” ore zones), and grades into the deposit's outer gold alteration halo (0.34 to 3 g/t Au) with a progressive decrease in carbonate-quartz stockwork veins away from the ore. Pyrrhotite is the predominant sulphide at depth, whereas pyrite is the main sulphide at upper mine levels.

Kiena's alteration-mineralization sequence was subsequently interrupted by the intrusion of intermineral granodiorite and quartz-monzonite porphyry dykes, dismembering part of the orebody into gold-ore xenoliths. Concordant U-Pb ages of 2686 ±2 Ma for prismatic euhedral zircons from the intermineral granodiorite porphyry assign a minimum age to gold mineralization of the S-50 Zone. Porphyry dykes were then fractured and weakly mineralized by calcite-quartz-pyrite-Au stockwork veins.

Gold ore formation at Kiena is bracketed between ca. 2694 Ma, the age of the oldest pre-ore dykes emplaced after the tilting of volcanic strata in the region, and 2686 Ma, the crystallization age of the deposit's intermineral granodiorite dyke.

Kiena's orebody and dykes were initially deformed by an asymmetric Z-shaped fold during regional D_1 deformation (ca. 2677-2645 Ma), and refolded later into a broad open fold plunging 30°–40° north-northwest. The Z-fold is associated with a moderately N-dipping axial planar schistosity. The ore-dyke complex and the main schistosity are deformed by the NNW-plunging fold and overprinted by the deposit's E-dipping crenulation cleavage (S_2).

V.5.1.2 North Zone

The following description of the North Zone is mostly modified and summarized from Robinson (1962), Donovan (1994), Laplante (2000a), and Beauregard and Daigneault (2005).

The North Zone (formerly No. 1 Zone) was encountered by surface drilling (hole S-21) in 1938. The North Zone is 700 m north of the S-50 Zone (see Fig. 7.3). The North Zone is located 200 m north of the Norbenite Fault.

Chlorite-talc schist trends northward, and near the North Zone, the schist swings westerly and dips north. Gold values terminated to the east in the nose of the folded diorite, and became scattered and erratic to the west.
In the North Zone (Fig. V.2), the stratigraphically underlying komatiitic basalt unit is very continuous and approximately 75 m thick, and increases to 150 m thick in the vicinity of the dilation structure. The komatiites trend NW and dip 75° northeast.

The main structural control for the gold mineralization is a sodium-rich diorite intrusion in basalt host rock. Mineralization occurs as a quartz-carbonate-sulphide matrix-filling (see Table 7.1) in brecciated and albite-altered diorite, and as quartz-carbonate-pyrite veins and veinlets in basalt wall rock. These veins and veinlets are predominantly (preferentially) developed in a steeply dipping orientation that is suggestive of a sheeted or ribbon-vein system. There are subsidiary veinlets at oblique and sub-random orientations, which may be described as a pseudo-stockwork. Well-developed albitized–disseminated pyrite alteration envelopes occur with quartz-carbonate veins, and it is common to observe 5%–10% disseminated pyrite where intense and closely spaced veining is developed. The mineralized zone is cut by unmineralized dykes of granodiorite and porphyry.

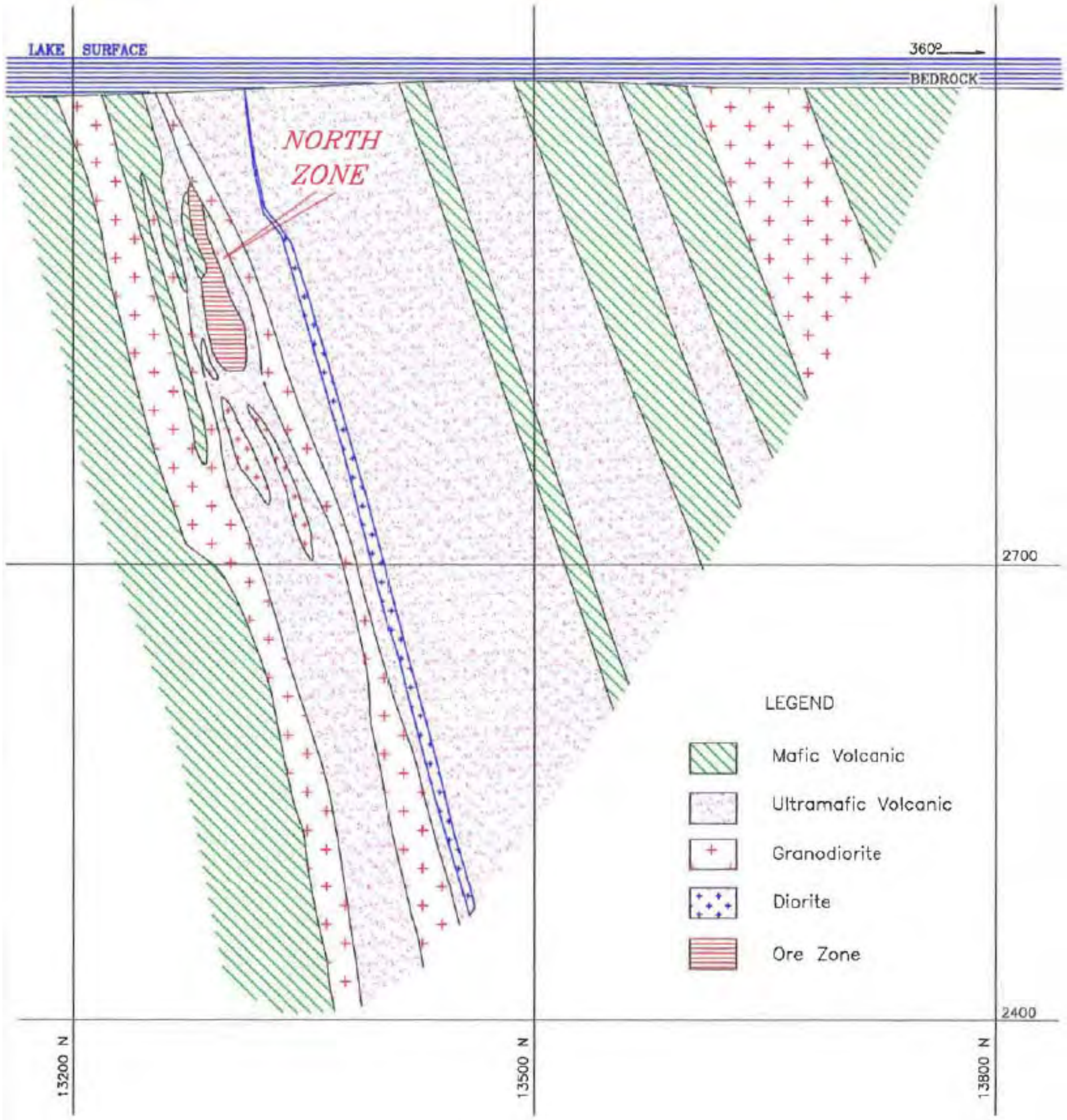


Figure V.2 – Simplified geology cross section of the North Zone (from Donovan, 1994)

V.5.1.3 Northwest Zone

The following description of the Northwest Zone is mostly modified and summarized from Robinson (1962), Lebel (1989) and Donovan (1994).

Diamond drill hole No. 2 of Martin Gold Mines Ltd intersected a wide zone of quartz stringer schist to the northwest of Parker Island. The Northwest Zone (see Figs. 7.3 and V.3) lies 750 m northwest of the North Zone, and is located about 100 m north of the Norbenite Fault.

The local geology is represented by moderately to strongly altered mafic to ultramafic volcanic flows intruded by diorite to granodiorite dykes. It appears that the most significant gold mineralizing event is directly associated with a highly altered (silicified, pyritized, carbonated and albitized) diorite dyke. The thickness of the gold-bearing diorite ranges from 7 to 70 m. The diorite dyke is enclosed in weakly sheared chlorite-talc schist.

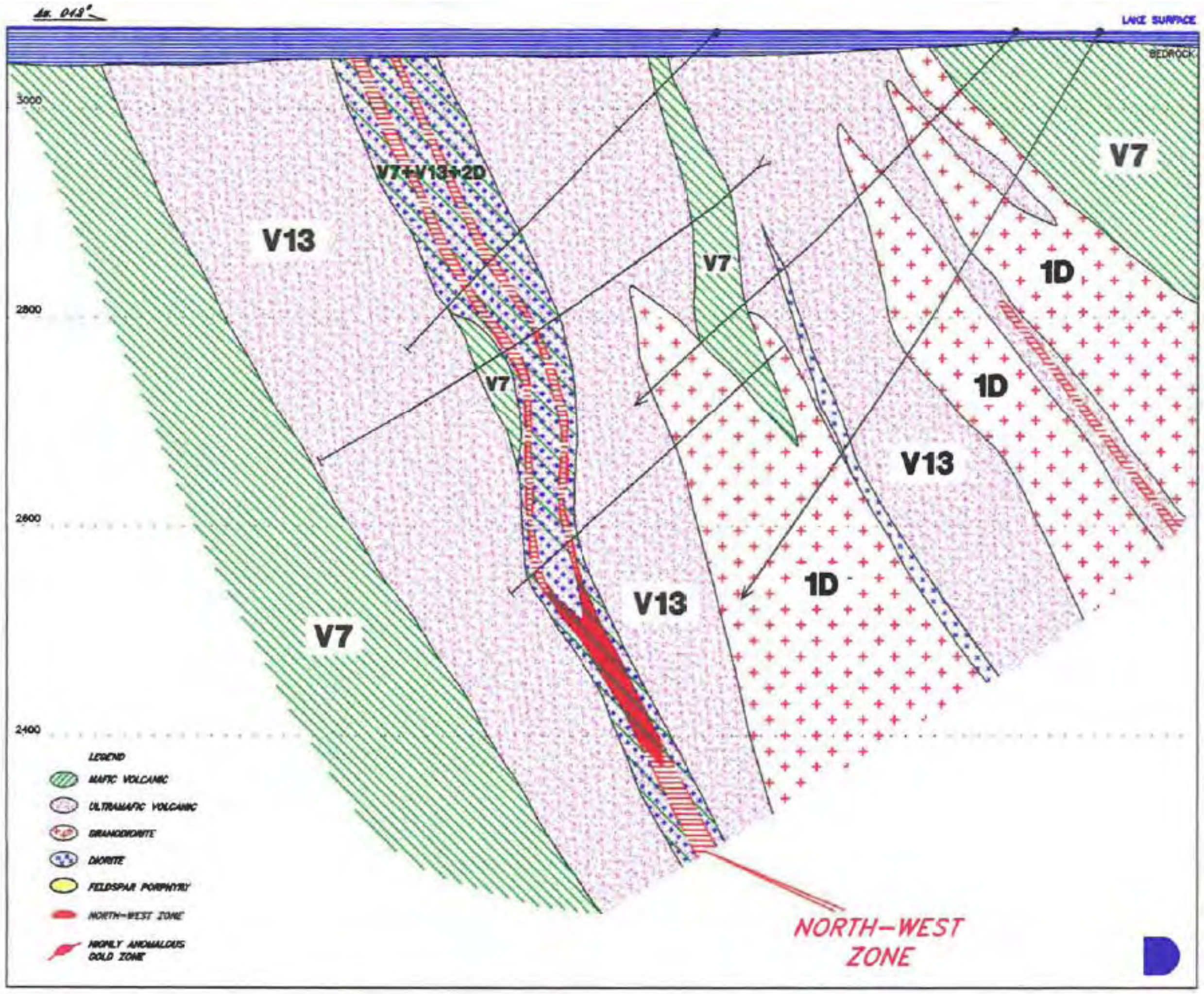


Figure V.3 – Simplified geology cross section of the Northwest Zone (from Donovan, 1994)

The mineralized zone strikes N320° and dips 60°–90° northeast. The mineralized zone is associated with 5% quartz-carbonate veinlets (see Table 7.1), accompanied by pyrite.

V.5.1.4 Northeast Zone

The following description of the Northeast Zone is summarized from the logs of holes drilled in 2010.

The Northeast Zone (see Fig. 7.3) is located 500 m northeast of the S-50 Zone, and about 250 m northeast of the Norbenite Fault.The zone strikes N300° and dips steeply to the northeast. Gold mineralization is generally observed within albitized, carbonated, biotized and chloritized dioritic dykes in contact with strongly faulted and sheared talc-chlorite-schist. Mineralization is represented by quartz-carbonate-albite-chlorite veins carrying pyrite and visible gold (Table 7.1). Gold mineralization is sometimes hosted by the talc-chlorite schist.

V.5.1.5 South Zone

The following description of the South Zone is mostly modified and summarized from Cloutier (1981), Lebel (1989) and Donovan (1994).

This zone lies immediately south of the S-50 Zone, roughly 300 m southwest of the Marbenite Fault (see Fig. 7.3). The zone is contained within or adjacent to a strong shear zone. The South Zone appears to predate this shear zone. Discovered in 1981 (hole S-129), the South Zone includes the Hanging Wall and Footwall lenses, which are 18 m (60 ft) apart. They are parallel and conformable with the enclosing volcanic rocks. The host rocks for this zone are predominately basalts with minor diorite dykes and komatiitic ultramafic flows (Fig. V.4). The basalts are strongly chloritized and carbonatized with local silicification and brecciation (quartz-carbonate veining) accompanied by low concentrations of pyrite (5%). The zone is generally badly fractured and broken up by the fault zone, making the correlation from section to section difficult to impossible. The South Zone strikes west-northwest and dips 63° northeast.

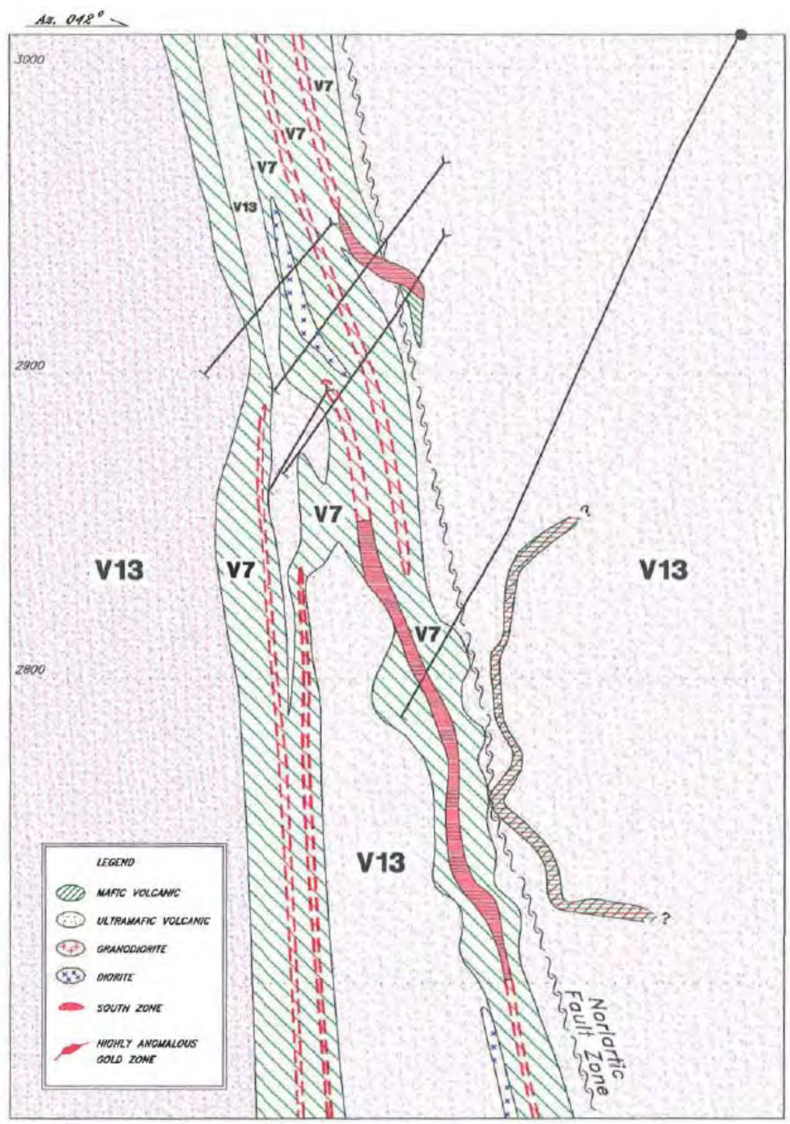


Figure V.4 – Simplified geology cross section of the South Zone (from Donovan, 1994)

V.5.1.6 Wisik Zone

The following description of the Wisik Zone is mostly modified and summarized from Auger (1947), Robinson (1962), Lebel (1992) and Donovan (1994).

The Wisik Zone lies 600 m east of the S-50 Zone and is adjacent to the Norbenite Fault (see Fig. 7.3). The principal surface gold showing consists of two small quartz veins (see Table 7.1) accompanied by pyrrhotite and pyrite, within a shear zone extending southeast of the island, beneath the bed of the lake. This silicified zone strikes N320° and is vertical. The gold-bearing zone was traced in basalt by surface diamond drilling. The zone was located on the 200-ft level at a point 17 m (55 ft) northeast of the shaft. The vein was traced for a short distance by drifting, and a section 15 m (50 ft) long was reported to contain an average grade of 9.94 g/t Au across the drift-width.

On the 300-ft level, the mineralized zone was traced for a length of 213 m (700 ft). The strike varies from place to place, but the general trend of the zone is northwesterly. Many faults interrupt its continuity. At the eastern end, the zone is characterized by a series of irregular quartz lenses that seem to have random attitudes. The section of the zone that displays this character is about 85 m (280 ft) long. At the eastern extremity of the workings, a cross-cut was driven to the southwest, and it is believed that the veined zone it intersected is the continuation of the main vein. At the western extremity on this level, several dykes of porphyry and granodiorite intrude the volcanic rock, and the volcanic rock includes a lot of breccia.

The zone is made up of at least two horizons referred to as the “Petit Wisik” and “Grande Wisik” zones (Fig. V.5). These zones are parallel and spaced about 10–15 m apart; they strike NW with a dip of 70°–75° northeast.

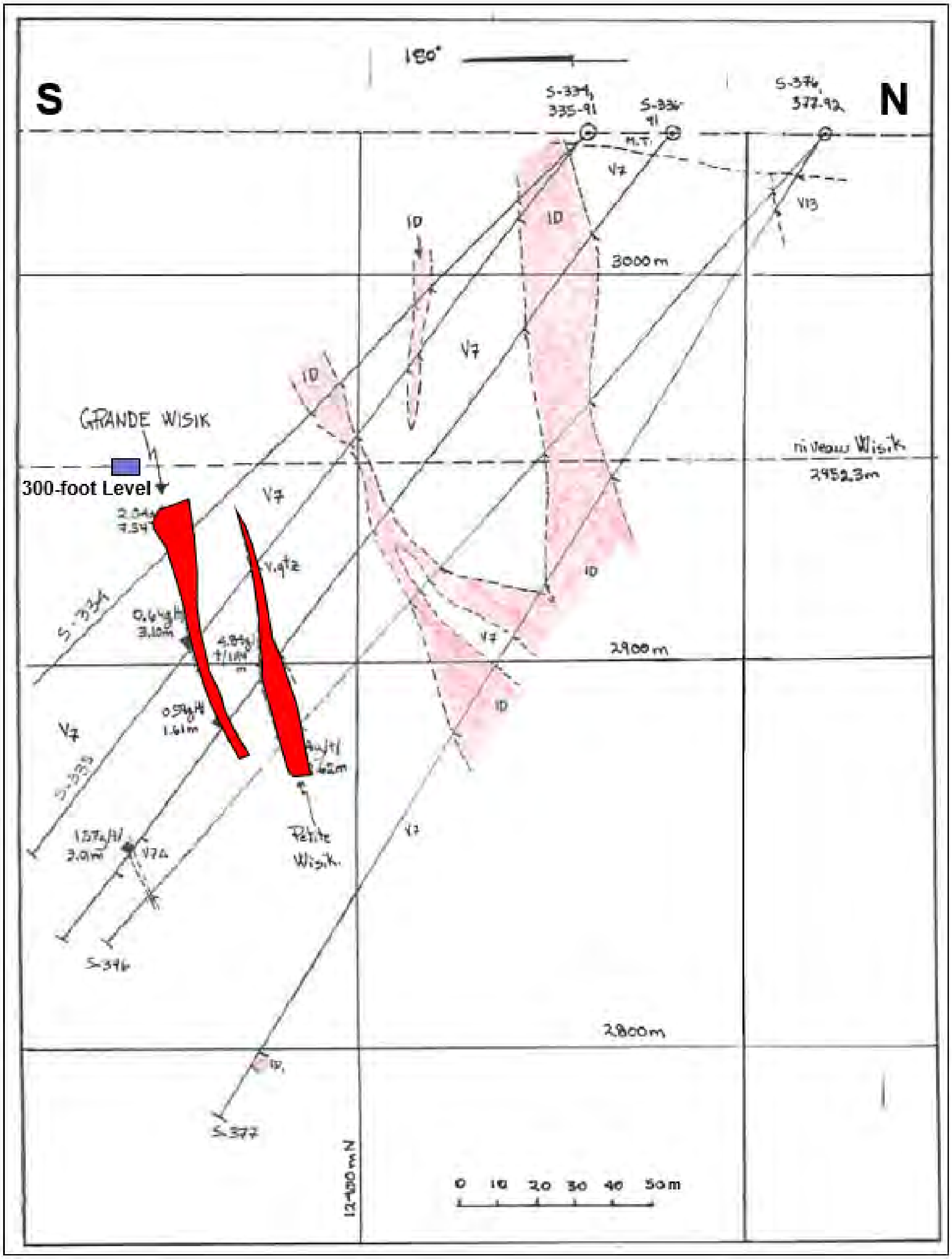


Figure V.5 – Simplified geology cross section of the Wisik Zone (from Lebel, 1992)

V.5.1.7 Martin Zone

The following description of the Martin Zone is mostly modified and summarized from Lebel (1991), Lebel (1992) and Donovan (1994).

The Martin Zone lies 300 m northeast of the Norbenite Fault and is approximately 900 m to the east of the S-50 Zone (see Fig. 7.3). The zone strikes approximately N340°. This zone is hosted by silicified, brecciated, pyritized and albitized basalts. The basalt is cut by numerous quartz veins and granodiorite dykes (see Fig. V.6). The zone is observed close to a major faulted/sheared komatiite (talc-chlorite schist) and brecciated basalts related to the Martin Shear Zone. This shear strikes northwest and dips steeply to the southwest. Gold mineralization is present as quartz-carbonate±albite veins with pyrite-chalcopyrite±native gold (see Table 7.1).

V.5.1.8 U-1778 Zone

The following description of the U-1778 Zone is mostly modified and summarized from Lebel (1990; 1991, 1992a), Lebel and Lafleur (1991) and Donovan (1994).

The U-1778 Zone was discovered in 1989 by underground drilling (hole U-1778). This zone is located 1.5 km east of the S-50 Zone (see Fig. 7.3) and 700 m northeast of the Norbenite Fault. The zone comprises a quartz-carbonate vein system (see Table 7.1) in chloritized basalt (Fig. V.6). The zone strikes NW and dips 75° northeast, and is associated with the No. 22 Deformation Zone (see section V.2.2.1 for more details).

Three types of gold mineralization were encountered:

1- Quartz veins and veinlets hosted by talc and deformed volcanic rocks;
2- Disseminated pyrrhotite and pyrite with traces of chalcopyrite in weak deformed basalt, with minor quartz veins; and
3- Injected quartz-carbonate veinlets with traces of sulphides in basalt.

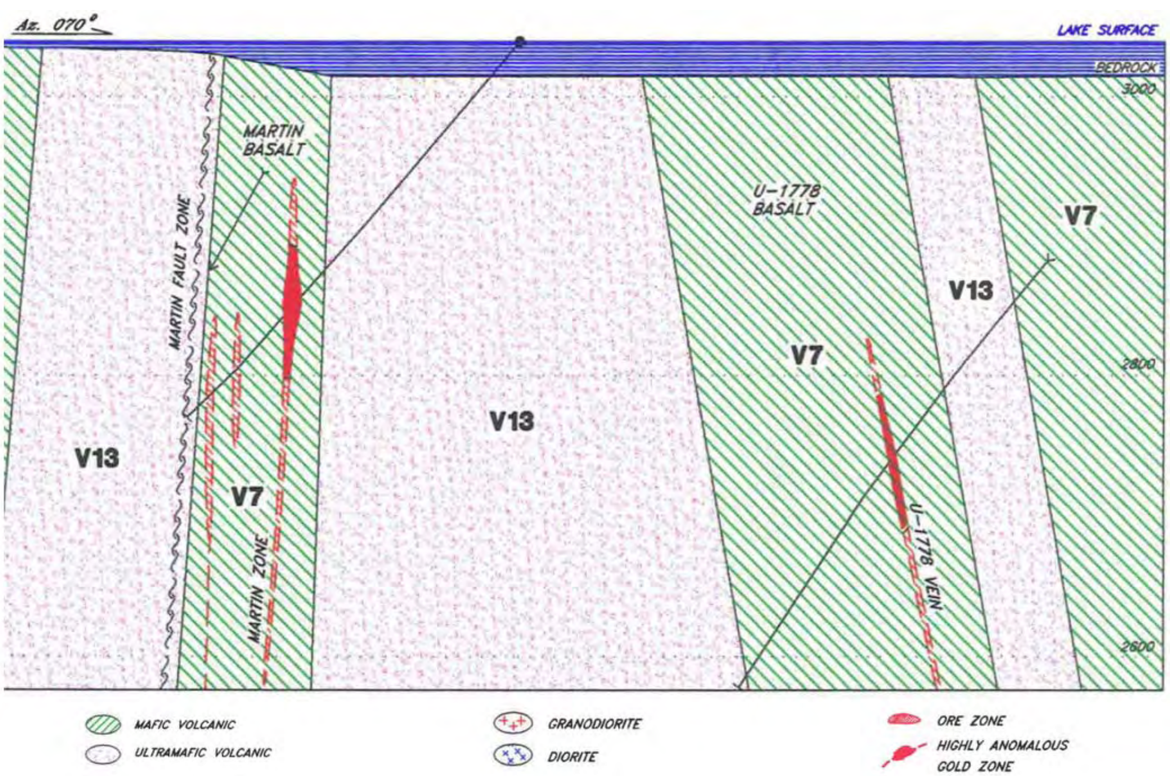


Figure V.6 – Simplified geology cross section of the Martin and U-1778 zones (from Donovan, 1994)

V.5.1.9 Duchesne Zone

The following description of the Duchesne Zone is mostly modified and summarized from Lebel (1991; 1992) and Donovan (1994).

The Duchesne Zone lies 800 m southeast of the S-50 Zone (see Fig. 7.3). This zone is located 250 m northeast of the Marbenite Fault and 250 m southwest of the Norbenite Fault.

The zone is hosted in a slightly schistose chloritized basaltic unit similar to the one hosting the Wisik Zone (Fig. V.7). The zone was discovered in 1991 and consists of quartz-carbonate veining containing trace to 5% pyrite, with consistent visible gold in the core (see Table 7.1).

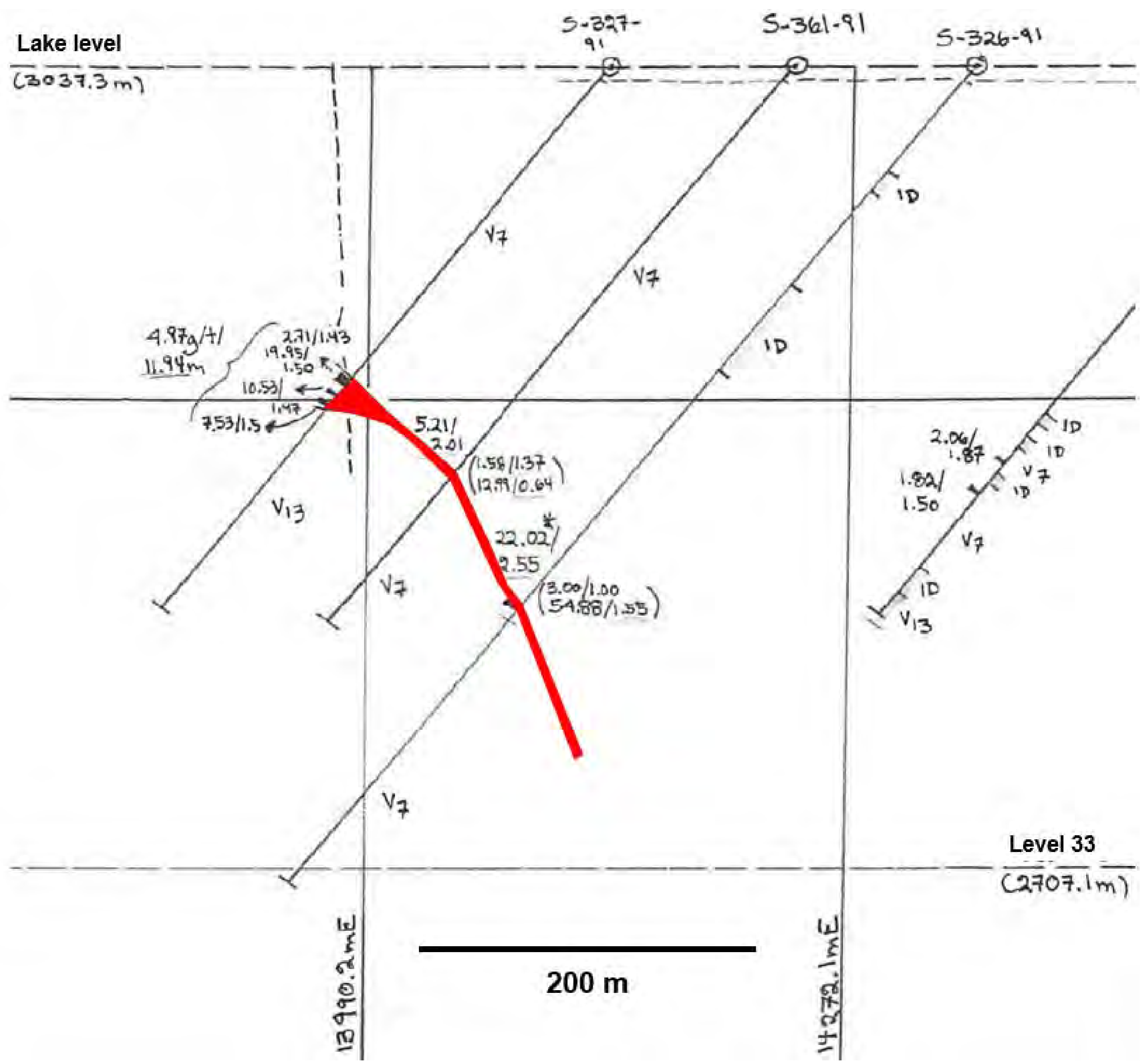


Figure V.7 – Simplified geology cross section of the Duchesne Zone (from Lebel, 1991)

V.5.1.10 VC Zone

The following description of the VC Zone is mostly modified and summarized from Beauregard and Daigneault (2005).

The VC Zone is 750 m north of the S-50 Zone (see Fig. 7.3) and is adjacent to the Norbenite Fault.

The zone characteristically occurs as four E-W pinch-and-swell lenses of mineralization (VC-1, VC-2, VC-3 and VC-4) in locally brecciated albitized basalt. In cross section, the four lenses occur in a pseudo *en echelon* pattern within a steep, S-plunging corridor 100 m wide. In plan view, the individual lenses are 100 to 180 m long and average 8 to 10 m wide, with a maximum width of 30 m. Gold mineralization is associated with quartz veins and carbonate-quartz-pyrite veins (see Table 7.1), presenting a similar mode of occurrence as seen in the S-50 Zone, although the VC Zone lacks dioritic dykes.

V.5.1.11 388 Zone

The following description of the 388 Zone is mostly modified and summarized from Laplante (2000a).

The 388 Zone has been defined as a small deposit 300 m north of the North Zone (see Fig. 7.3). The zone is located about 450 m north of the Norbenite Fault.

Gold mineralization is associated primarily with a single major quartz vein 2 m wide that developed in albitized basalt alongside a diorite dyke. The vein is rather erratic and structurally meanders within an irregular zone of altered basalt measuring 3 to 6 m wide. Small scattered quartz-carbonate veinlets with minor pyrite occur in the wall rock.

V.5.1.12 Presqu'ile Zone

The following description of the Presqu'ile Zone is mostly modified and summarized from Ducharme (2013b).

Discovered in 2012, the Presqu'ile Zone is the most recent discovery of a new gold occurrence located 1.4 km northwest of the Kiena mine (see Fig. 7.3). It lies approximately 800 m southwest of the Northwest Zone, and 200 m southwest of the Marbenite Fault.

Mineralization in the Presqu'ile area consists of a series of steeply dipping, subparallel, smokey quartz-carbonate-chlorite veins mineralized with pyrite, chalcopyrite, minor sphalerite, galena and visible native gold (see Table 7.1). The veins are hosted in mafic volcanic tuffs and flows, along a sheared contact with komatiite flows. Mineralization is associated with a moderate carbonation and chloritization.

The Presqu'ile Zone comprises two subparallel mineralized shears. This new gold mineralized system spans approximately 200 m in length and continues to at least 300 m below surface. The mineralized shears are generally oriented at N300° with a dip of 55°–60° northeast.

V.5.2 Sharkey mine area

The following description of the Sharkey mine area is mostly modified and summarized from Chevalier (1989b) and references therein.

The thickness of the overburden varies from several metres to more than 60 m in the vicinity of the Thompson River. Several outcrops were found on several of the small islands in Lac De Montigny, as well as along the shoreline and in several isolated areas in the central part of the mine area.

The rocks that underlie the Shawkey mine area belong to the Jacola Formation. The characteristic lithologies found on the property consist of ultramafic to mafic flows at the base of the sequence, followed by massive and minor pillowed basalts, basaltic flow and pillow breccia, tuff breccia and basaltic tuffs. Tops determinations from the pillowed flows observed in outcrop at several locations indicate a top direction to the south. In general, it is the ultramafic (basaltic and peridotitic komatiites) to mafic (tholeiitic) volcanics that form the predominant rock types on the property. The ultramafic rocks vary in colour and composition between basaltic and peridotitic komatiites. The peridotitic komatiites are rich in serpentine, magnetite and talc-chlorite. They are easily recognized by their magnetism and their dark gray to black colour. The basaltic komatiites tend to be dark green to gray with dark “spots” of chlorite and serpentinite. All varieties are intensely carbonatized, have well-developed schistosity and are locally intensely sheared.

The tholeiitic basalts are usually dark green, fine grained, strongly chloritized, epidotized and massive to locally pillowed. Porphyritic varieties with small phenocrysts of plagioclase feldspar are relatively common.

Numerous subvolcanic dioritic to gabbroic dykes and sills have been injected into the volcanic rocks and locally host auriferous quartz-tourmaline veins (Shawkey No. 10 and No. 22 zones). Porphyritic varieties with 5%–15% plagioclase-feldspar phenocrysts are common. The intrusions are generally oriented parallel to the main foliation direction and the axial planar cleavage developed by regional folding, or they may follow cross-cutting fracture patterns.

The lithologies strike N290° to the south of the Shawkey mine, and N320° to the north. The dips are generally subvertical, usually to the north but they have also been observed dipping slightly to the south. In the north, both magnetic and vertical gradient maps clearly demonstrate the nearly isoclinal folding parallel to the principal foliation direction. These folds have subsequently been weakly refolded along the secondary deformation direction of N030°. Several faults have also been interpreted along this secondary deformation direction.

In the Shawkey West Zone area, two major networks of fractures were observed in outcrop: one network oriented along the principal foliation direction of N300° with dips of 80° to the south and north, and a second fracture pattern observed following the secondary deformation direction of N030° with dips of 80° to the east. Many of the veins and stringers observed tend to follow both these directions.

V.5.2.1 Shawkey No. 22 Zone

The following description of the Shawkey No. 22 Zone is mostly modified and summarized from Lebel and Lafleur (1991) and Ducharme (2009a; 2013b), and references therein.

Discovered in 1980 (hole 141-22), the Shawkey No. 22 Zone (see Fig. 7.3) is located 750 m northeast of the Norbenite Fault. The Shawkey No. 22 Zone consists of quartz-tourmaline veinlets in weakly pyritized porphyry dykes.

The feldspar porphyry is emplaced in a sheared komatiitic unit: the No. 22 Deformation Zone. Both the porphyry and the komatiitic unit trend NW-SE and have a subvertical dip. In some areas, two narrow dykes were separated by a few metres by komatiite. They are termed the North and

South dykes, and are anomalous in gold. The feldspar porphyry is generally weakly pyritized, tourmalinized, hematized and moderately silicified. The No. 22 Deformation Zone is interpreted to extend up to the U-1778 Zone, which lies about 800 m to the northwest. This shear is locally crosscut by discordant late faults. Significant gold grades are present near late faults.

Gold mineralization consists of several stacked, narrow tension veins and/or veinlets of quartz-carbonate±tourmaline with pyrite and native gold; these are sometimes sheared and brecciated. The veins and veinlets occur in feldspar porphyry in contact with basalts or komatiites (see Table 7.1).

V.5.2.2 Shawkey No. 1 Vein

The following description of the Shawkey No. 1 Vein is mostly modified and summarized from Dresser and Denis (1949), St-Croix (1991), Lebel and Lafleur (1991) and Sauvé et al. (1993), and references therein.

The Shawkey No. 1 Vein (Fig 7.3), in production from 1936 to 1938, is similar to the Martin Zone (see section 7.5.5.1.7 for more details). This vein is located about 250 m northeast of the Norbenite Fault. The Shawkey No. 1 Vein and the Martin Zone are interpreted to be in the same stratigraphic unit (basalt), and probably in the same shear zone (Martin Shear Zone). In the Shawkey mine area, the shear is subconcordant to stratigraphy.

The Martin Shear Zone is filled by a quartz vein (Main Vein) accompanied by quartz stringers in the walls (see Table 7.1). The Main Vein is hosted by altered basalt cut by dioritic dykes. The Main Vein is a central vein measuring 15 cm (6 in) to 0.6 m (2 ft) wide, paralleled by other quartz stringers over a total width of 0.3 to 4.3 m (1–14 ft). Both the Main Vein and the quartz stringers within it show a pronounced tendency to pinch and swell. The wall rock has been altered by the development of albite, carbonate and pyrite. Pyrrhotite and chalcopyrite are sparingly present in the veins. Gold is evidently later than the sulphides. The Main Vein strikes N315° and dips steeply.

At least in two places, the Main Vein narrowed and stopped against a feldspar porphyry dyke (Bell, 1936); only some quartz veinlets cut the feldspar porphyry and these disappear rapidly. The Main Vein is then interpreted to postdate the feldspar porphyry dyke.

V.5.2.3 Shawkey No. 10 Zone

The following description of the Shawkey No. 10 Zone is mostly modified and summarized from Valence (1947), Lebel and Lafleur (1991) and Sauvé et al. (1993), and references therein.

The Shawkey No. 10 Zone (see Fig. 7.3) is located 250 m southwest of the Marbenite Fault. This zone was discovered by Shawkey Gold Mines Ltd in 1946. Vallance (1947) described the geological environment of the Shawkey No.10 Zone. It was developed by the No. 2 Shaft and is located in a strong shear zone. This shear zone, which measures 3 to 30 m wide (10–100 ft), is cut by swarms of porphyritic intrusives. The intrusives were emplaced in a basaltic unit having an approximate width of 180 m, bordered on the north and south by broad bands of komatiitic lava and/or basalts. The porphyries appear to parallel the shear, striking about N290° and dipping steeply north. Porphyries are considered to form the central core of the vein area.

Gold occurs in two settings (see Table 7.1): in quartz-tourmaline veins in basalt, or in veins and irregular stringers of quartz-tourmaline in mineralized porphyry. The basalt-hosted veins appear to have a strike and dip that are conformable to the shear and the enclosing schistosity. Widths range from a few centimeters to more than 3 metres. Veins may be single or form a series of closely packed stringers. Gold occurs only in the free state, associated with pyrite and chalcopyrite.

Three vein structures in basalt have been identified, and were traced for appreciable distances. North of the main porphyry zone, two veins apparently continue for a length of 350 m. Irwin (1951) reported that 15 m below the 4th level, a gold-bearing quartz-tourmaline vein dipping at a moderate angle enters the shaft area from the south.

V.5.2.4 Shawkey West Zone

The following description of the Shawkey No. 10 Zone is mostly modified and summarized from Chevalier (1989b) and Lebel and Lafleur (1991), and references therein.

The Shawkey West Zone (see Fig. 7.3) is located 150 m northeast of the Marbenite Fault, and 300 m southwest of the Norbenite Fault. The Shawkey West Zone was intersected in hole 62-3, which was drilled by Con-Shawkey Mines Ltd in November 1962.

This zone comprises numerous gold intersections associated with quartz-carbonate veins and veinlets (see Table 7.1) within a wide basaltic unit and also komatiite. Visible gold is also observed in quartz veins. Many individual veins have been outlined in the past: veins 1, 2, 3, 4 and others. Discordant late faults appear to be present in the vicinity of the mineralization.

One gold-bearing structure (the Main Vein) may be traced via 5 holes. A diagnostic criterion is the distance from a porphyritic intrusive, which varies from 15 to 40 m south of the vein. The vein is not a single type. It comprises stringers and veinlets, possibly correlated to a single fracture or shear zone.

7.4.5.3 School Mine Shaft Area

The following description of the School Mine Shaft area is mostly modified and summarized from Bell (1936), Dresser and Denis (1949), Castonguay (1995) and Western Québec's annual information form, and references therein.

Most of the School Mine Shaft area is underlain by intermediate to ultramafic volcanic rocks of the Jacola Formation, which strike roughly E-W and dip steeply to vertically to the south. Several indications observed in drill core suggest that lithological tops face south.

The northern part of the area is occupied mainly by mafic to intermediate lavas and tuffs, while the northeast corner is underlain by a possible pod of the Bourlamaque Batholith. The central-north portion of the area is underlain by alternating ultramafic and mafic (intermediate) flows. Intermediate to felsic (likely concordant) porphyritic dykes are also present. The central-south part of the area is underlain mainly by mafic to intermediate lava flows with frequent intermediate to felsic dykes. The southeastern part of the area is occupied by a granodioritic plug partly surrounded by ultramafic lavas and intrusives. The southernmost portion of the area is underlain by volcanic breccia, with ultramafic rocks to the south, followed by basalt, and by a WNW-striking granodiorite sill that hosts the Goldex deposit.

7.4.5.3.1 School Mine No. 1 and No. 2 Veins

The first discovered gold-bearing veins occur along fractures or narrow shear zones in the volcanic rocks, and many of them are in close proximity to one or other of the porphyry dykes. Two vein zones, School Mine No. 1 and No. 2 (Fig. V.8), follow the porphyry dyke-volcanic rock contact. These veins are located about 350 m northeast of the Norbenite Fault.

The evidence indicates that the fractures in which the veins occur are post-porphyry in age, and that the gold and other mineralization is genetically related to the porphyry intrusions. Along the principal fractures or shears, the vein filling rarely exceeds a width of 60 cm (2 ft) or a length of 61 m (200 ft). Individually, the veins are narrow, and many of them mere stringers that lack appreciable length. The quartz is white or bluish grey. Variable amounts of actinolite, epidote and chlorite are present, at least partly in fractures in the quartz, and there is a small amount of tourmaline in some of the veins (see Table 7.1). Sulphides include pyrite, pyrrhotite and chalcopyrite, and more rarely sphalerite. Gold may be seen here and there in many of the veins and stringers.

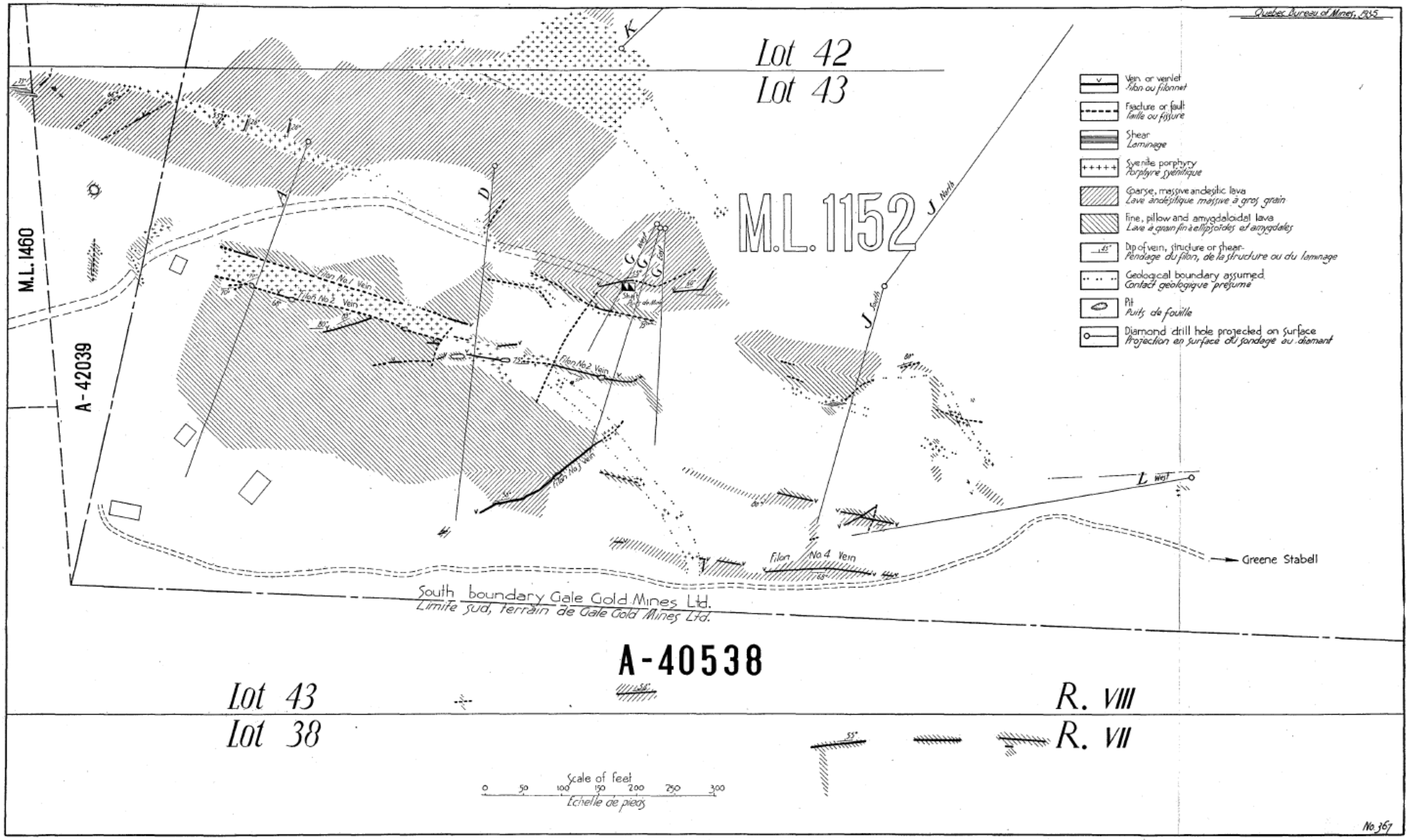


Fig.V.8 – Plan showing detailed surface geology in the vicinity of School Mine shaft (Bell, 1936). The plan also shows the No. 1 to No. 4 veins in the vicinity of the shaft.

V.5.3.2 School Mine No.3 Vein

The School Mine No. 3 Vein (Fig. V.8) is located about 350 m northeast of the Norbenite Fault. This vein is the principal representative of the veins occupying the second set of fractures; i.e., those with an average strike of N065°. It occupies a strong well-defined fracture or shear-zone that attains a width of 1.5 m (5 ft) in places and for the most part traverses massive basalt. Vein filling, although fairly consistent for at least 175 ft (53.3 m), rarely exceeds a width of 60 cm (2 ft). The fracture strikes N060° and dips 60° northwest. To the northeast, it intersects and slightly offsets the porphyry dyke with which veins No. 1 and No. 2 are associated. Vein filling consists chiefly of bluish-grey, somewhat granular, quartz which, together with some carbonate, has engulfed brecciated fragments of the wall rocks (see Table 7.1). Plentifully associated with the mineralized inclusions and to some extent with the quartz is a radiated green mineral identified as actinolite. Mineralization consists largely of pyrite, mainly disseminated through the silicified inclusions, but also present in the vein filling. A little pyrrhotite and bornite were noted.

V.5.3.3 School Mine No.4 Vein

The School Mine No. 4 Vein (Fig. V.8) lies 122 m (400 ft) southeast of the School Mine shaft, and about 250 m northeast of the Norbenite Fault. The vein was discovered and opened up to some extent during the 1935 field season. It occupies a fairly well-defined fracture, 75 cm (2.5 ft) wide in places, that cuts through massive andesitic lava. The strike is roughly E-W but somewhat variable, and the dip is 68° south. The vein proper has been traced for more than 60 m (200 ft), but appreciable vein matter, consisting of several lenses occurring at intervals and averaging half a metre or less in width, are confined to an aggregate length of about 23 m (75 ft). In addition, several narrow lenses or stringers, with some related silicification, follow the vein fracture. Vein filling is white, glassy quartz with considerable amounts of associated chlorite, hornblende and epidote, each of which, in part at least, is later than the quartz since they are seen occupying fractures in the latter (see Table 7.1). Although on the whole rather sparsely mineralized, locally there is rather abundant pyrrhotite and pyrite, with some chalcopyrite and a little magnetite. Coarse visible gold occupying fractures in the vein matter is not uncommon.

V.5.3.4 Other Sectors in the Vicinity of the School Mine Shaft

A granodioritic intrusive body, almost circular, with a diameter of some 500 m in the southeast corner of the area was investigated with some 60 holes, relatively shallow, some of which did intersect narrow gold veins.

The 1994 and 1996 drilling programs intersected the northwest extension of a gold-bearing granodiorite body (Granodiorite Zone) at the elevation of the lower levels of the Goldex deposit where auriferous quartz-chlorite-tourmaline veins and veinlets are found. New areas with interesting potential have also been identified in the rocks hosting the granodiorite: in one hole, a number of auriferous veinlets were found in a chloritized porphyry north of the granodiorite. In another hole, a section with disseminated sulphides north of the granodiorite returned gold values.

V.5.4 Joubi Mine Shaft Area

The following description of the geological setting in the Joubi mine shaft area is mostly modified and summarized from Lavery and Castonguay (1989), Gauthier and Castonguay (1997), and the 1998 Annual Information Form of Western Québec, and references therein.

The Joubi mine area (Fig. 7.3) is underlain by a sequence of ultramafic to mafic effusive rocks (komatiitic to tholeiitic affinity), tuffs and breccias belonging to the Jacola Formation. The flows generally strike NW-SE, and in most locations dip steeply to the north. Numerous dykes and sills of diorite, granodiorite and porphyritic rocks of various attitude and size intrude the volcanic pile. Several shear structures, faults and/or strike faults transect and displace the previously described rock pile. Striking in a general NW-SE direction, the most prominent of these structures is the so-called Joubi Shear Zone, which contains the Range Line Zone.

The geology of the Range Line Zone consists of an irregularly shaped granodiorite body to the north, a central area of ultramafic to mafic flows and a southern area of flows, tuffs and breccias mapped as andesites at the Joubi mine site. All these rocks have been intruded by lamprophyre dykes and felsic to porphyritic dykes and/or sills often striking subparallel to foliation.

The main feature which generally contains the gold mineralization is a wide zone of shearing extending parallel and north of a prominent NW-SE steeply dipping fault in the central area. This structure is referred to on the property as the Joubi Shear Zone. The rocks are also cut by other shear and fault planes that have variable orientations (some striking E-W and dipping roughly 30°–40° north), and apparently cause only minor displacements.

Intense folding affects the foliated rocks within the shear zone showing folds and crenulations to be S-type with a general 35°–40° plunge to the west-northwest. These folds are more than likely indicative of at least one of the movements along the fault, the movement being the south block moving downward and eastward. On a broader scale, the main fault and shear structure switches direction across the property, thus creating gashes and tension fractures that were later filled by auriferous solutions.

All the rocks of the Range Line Zone have been altered to some degree. Alteration usually consists of chlorite and/or talc, carbonate and quartz, with serpentine, epidote and sericite alteration occurring to a lesser degree. Some of the drill-indicated (or mapped) contacts within the zone of shearing are thought to be alteration or shear contacts within altered ultramafic flows. They often consist of irregular and gradual changes in colour and magnetite content, locally creating confusion when trying to correlate rock units.

The mineralized lenses are located between the Marbenite and Norbenite faults. These lenses were exploited at the Joubi mine, and consist essentially of auriferous quartz veins, or silicified, carbonatized and pyritized gold-bearing zones, the emplacement of which was clearly controlled by the Joubi Shear Zone. Other structural controls limiting the extent of the zones along the shear itself are not so well understood; among other things, they seem to include changes in direction or dip of NE-trending fractures or faults.

V.5.4.1 Joubi A Lens

The Joubi A lens extends about 170 m from surface down to some 270 m along a steep eastward to vertical plunge, with a dip of 75°–80° south. To the north, the zone closely parallels the main fault (generally 5 m away or less), with strongly sheared and contorted wall rocks consisting of talc/chlorite carbonate schists (sheared ultramafics/mafics). West-plunging S-type features are abundant and, at the drift-scale, may abruptly displace the ore over one metre or less. At least one foliated porphyritic dyke is parallel to (or may locally cut across) the mineralized structure.

Gold is essentially associated with quartz pods containing minor amounts of chlorite, carbonate and probably scheelite. The quartz pods constitute narrow (a few cm to less than 1 m), dislocated and contorted boudins parallel to the strong foliation. The sulphide content (essentially pyrite) in the veins and in the mostly barren host rocks is rather low, but may locally reach 2%–4%.

V.5.4.2 Joubi B Lens

The Joubi B lens extends vertically about 60 m from surface down to about 40 m. It may be a slightly displaced western extension of the Joubi A lens, but it differs from the later in that it is generally farther away from the fault (5–15 m) and enclosed within more massive mafic to ultramafic rocks (probably filling a tension gash). The zone is bounded to the east by a steeply dipping NE-trending fault that was mapped in a drift where a drastic change in shearing intensity had been noted.

The gold-bearing vein itself is made up of greenish gray quartz with minor chlorite, very little disseminated sulphides (<1%) and very fine free-milling gold grains. The vein pinches and swells from nothing to more than 1 m in a more linear pattern than in the Joubi A lens. Host rocks are poorly foliated slightly fractured and altered mafic or ultramafic volcanics that locally carry disseminated pyrite with irregular subeconomic to economic gold values, widening the zone to a few metres in some places.

V.5.4.3 Joubi C Lens

The C lens extends for 30 m, from 40 to 90 m below surface, with steep dips to the north, thereby moving the bottom of the lens away from the S-dipping fault. It was probably deposited in a tension gash and is very similar in character to the Joubi B lens. The greenish gray quartz vein carries very little disseminated sulphides and fine-grained gold; it goes from nothing to less than 2 m in thickness with subeconomic to economic values in the wall rocks, locally widening the zone. The drilling suggests that the vein dies to the west in a broader silicified zone of green rocks in which erratic gold values are found.

V.5.4.4 Joubi D Lens

The Joubi D lens consists of fractured, altered and mineralized mostly ultramafic rocks found to extend subparallel to the fault, more than likely *en echelon*, over a strike length of more than 60 m on a different horizon than the previously described zones. The alteration consists essentially of carbonatization (silicification), and mineralization is mostly disseminated pyrite carrying economic gold values.

V.5.4.5 Joubi E Lens

The Joubi E Lens is quite particular. It occupies a stress fracture in basalt between two small strike-slip faults associated with the Joubi Shear Zone. These small structures are located to the south of and outside the alteration envelope related to the Joubi Shear Zone. They are approximately 1 m wide and are associated with a low to medium degree of chlorite alteration and a weak schistosity. They are the same orientation and dip as the Joubi Shear Zone. Mineralization is a gray quartz vein 10–20 cm thick with a dip of 65°–70° north. The vein contains 15% pyrrhotite, 3%–4% pyrite, and traces of chalcopyrite and sphalerite. It has been traced for more than 15 m along strike, and extends upward from the 220 m level for some 30 m.

V.5.4.6 Joubi F Lens

Joubi F Lens corresponds to a white to grayish quartz vein containing about 2% pyrite with a high proportion of visible gold, hosted in basalt. The vein is oriented N320° and dips 85° south. It occurs in a stress fracture and was affected by subsequent deformation. There is an angle of about 10° between the vein and the host schist (130°/85° S). The vein is cut by schistosity and is slightly boudinaged, but continuity was observed.

V.6 Dubuisson Formation

This section presents the mineralized zones found within the Dubuisson Formation.

V.6.1 Dubuisson and Dubuisson North Zones

The section of the Dubuisson Formation encountered to date consists of a sequence of massive or foliated to schistose komatiites with intercalations of talc-chlorite schist, basalt, albitized diorite dykes, and feldspar porphyry dykes.

V.6.1.1 Dubuisson Zone

Discovered in 2008, the Dubuisson Zone is located approximately 3500 m east of the Kiena shaft and its central infrastructure, and about 1,000 m east of the end of development heading 3314 on the 33rd level. It lies 1.7 km northeast of the Norbenite Fault.

The Dubuisson Zone is known to contain at least three lenses of gold mineralization oriented E-W. Gold is hosted by brittle, fractured, albitized, carbonated and chloritized diorite and chloritized feldspar porphyry dykes within a broad section of the deformed ultramafic sequence. Sheared talc-chlorite schist is located near or adjacent to the dykes hosting the gold mineralization.

Mineralization consists of a stockwork of quartz-albite±tourmaline-pyrite veinlets commonly carrying free gold within diorite dykes, and a stockwork of quartz-tourmaline-chlorite-pyrite veinlets commonly carrying free gold within feldspar porphyry dykes. In some cases, the mineralization is also in the talc-chlorite schist adjacent to the feldspar porphyry or diorite dykes. The host rocks display alteration containing disseminated pyrite.

V.6.1.2 Dubuisson North Zone

The Dubuisson Zone was discovered in 2012 by underground drilling from drift 33-14 (level 330 m) about 200 m to the south of the Dubuisson Zone. The Dubuisson North Zone lies 1.9 km northeast of the Norbenite Fault. At least two steeply-dipping E-W lenses have been partially delineated and defined above a depth of 300 m.

The geological setting and mineralization of the zone is very similar to the Dubuisson Zone. Mineralization consists of stockwork quartz-carbonate±albite±chlorite±tourmaline veining carrying pyrite and native gold hosted by feldspar porphyry and/or albitized diorite dykes encased in komatiites and talc-chlorite schist. Gold mineralization is often close to a shear zone (talc-chlorite schist). In some cases, mineralization is also present in the talc-chlorite schist adjacent to the feldspar porphyry or diorite dykes.

V.6.2 Dorval-Siscoe Shaft and Wesdome Deposit Area

The following description of the Dorval-Siscoe Shaft and Wesdome Deposit area is mostly modified and summarized from Ingham (1947), Sauvé (1987), Gardiner (1987b), Gardner (1988), Sauvé et al. (1993), and Turcotte and Pelletier (2009), and references therein.

The area lies in the northwest extension of the K Zone of the Siscoe mine. Virtually all of the property geology is known from diamond drill holes. The geologic units that crop out on the Wesdome property are as follows: (1) dominant tholeiitic basalts and andesites with intercalations of ultramafic lavas belonging to the Dubuisson Formation; (2) intrusive rocks, referred to as the Snowshoe Batholith; and (3) dyke swarms commonly observed throughout of the property, but particularly abundant in basaltic rocks in the area east of the Snowshoe Batholith.

Volcanic rocks are split into two major groups: ultramafics and basaltic rocks. The ultramafic rocks are dark green to black in colour and very soft, often talcose, in nature. These rocks are heavily altered and rich in serpentinite and magnetite. Local concentrations of biotite, actinolite and quartz are commonly observed in thin sections. The ultramafic flows are readily identifiable on magnetic maps, and typically generate topographic depressions filled with overburden material where found in the project area. A wide variety of basaltic rocks occur throughout the property, including pillowed and massive flows (tabular types), and minor porphyritic and variolitic flows. The basaltic rocks range in colour from dark green to jet black, and are typically fine grained. These rocks retain little of their original texture, having been recrystallized. Textures range from massive to locally schistose.

All of the volcanic flows strike WNW and dip vertically to steeply northwards. Tops indicators in pillowed flows indicate the rocks are younger to the south. The rocks can be divided into two major domains: those to the south and southeast of the Snowshoe Batholith, and those to the north and northeast of the plug. The former domain is characterized by flows that curve southwards along the margin of the plug, and strike at N120° in the southeast portion of the area. The latter domain is characterized by the mirror image, or flows that curve northwards along the northwest periphery of the plug to emerge on the northwest edge trending N300°. This pattern is particularly evident on gradiometer aeromagnetic maps of the region, which clearly show a large sausage-like area of low magnetic contrast enclosed by an envelope of highly magnetic ultramafic rocks. The Snowshoe Batholith forms the western limits of the structure, while Siscoe Island (the Siscoe mine) forms the eastern end of the “sausage”.

The K Shear Zone of the Siscoe mine crosscuts the northeast corner of the area. Several drill holes intersected the zone but failed to return significant gold values. Ingham (1947) reported significant gold values in actinolite schist, interpreted as an extension of the K Shear Zone in this sector.

The Snowshoe Batholith is a circular intrusive mass in the centre of the property that slightly exceeds 1 km in diameter. The limits of the stock are fairly well defined from drilling and a magnetic survey, but are poorly understood in the northwest corner of the property. Rocks of the Snowshoe Batholith are light grey to white in colour and equigranular. The composition is variable, locally ranging from granodiorite to quartz-diorite and monzodiorite.

Dyke swarms are common throughout the project, but are particularly abundant in basaltic rocks in the area east of the stock. The absence of dykes in the plug suggests that the dykes predate plug emplacement. Locally, dyke rocks may account for up to 50% of the volcanics. The dykes range in thickness from 1 to 200 m, with an average of less than 10 m. The orientation of these dykes is poorly understood, but exposures on several islands indicate that most of them strike E-W and dip subvertically. Many of the shear zones on the project host dyke-like material. Typically, the dykes are mottled grey-green and often display a porphyritic texture. The dykes are easily distinguished from the main intrusive plug by an increase in mafic minerals.

The most widespread mineralization is found in volcanic rocks intruded by subvolcanic porphyritic quartz diorite dykes to the northeast and east of the Snowshoe Batholith. But, gold intersections in diamond drill holes have been also observed within the Snowshoe Batholith. This may reflect a lack of drilling in this area. Up to now, the best mineralization on the Wesdome deposit occurs in basaltic rocks that have been heavily intruded by porphyritic quartz diorite dykes. The structures hosting mineralization (quartz veins and shear zones) generally strike at N120° and dip 45°–75° southwest. Locally, the dip can be less than 45°. The veins cut the basaltic rocks and felsic dykes.

Mineralization can be split into three distinct types: (1) pyritiferous quartz veins; (2) albite alteration zones; and (3) pyritiferous shear zones. A large number of zones are found on the Wesdome deposit. The zones are named using letters; the most northerly is the "A" Zone, and the others were assigned sequential letters moving southward.

V.6.2.1 Wesdome A Zone

The Wesdome A Zone is located 300 m southwest of the K Shear Zone (see Figs. 7.3 and V.9). It strikes N120° and dips 50° south. The zone has been traced for 900 m in strike length and extends more than 500 m in known depth. Typically, the zone is between 1–2 m thick and consists of quartz ribbons 15–80 cm thick, enclosed in heavily silicified and carbonatized basalt and/or dioritic dyke. Minerals commonly include 1% to 5% pyrite, minor tourmaline and rare breccia zones. The ore shoots are aligned downdip. These areas are typified by an increase in the amount of pyrite and a corresponding increase in intensity of alteration (albitization) in wall rocks. An old drift 600 m southwest of the Dorval-Siscoe shaft explored the zone for 200 m. Drift mapping has demonstrated the ribbon-like nature of the veins, and the lenticular nature of the gold mineralization. The Wesdome A Zone therefore consists of a number of *en echelon* vein systems enclosed in a weak shear zone that dips south at 50°. The Wesdome A Zone is split into two distinct zones in one sector.

V.5.6.2 Wesdome B Zone

The Wesdome B Zone is located 300 m southwest of the K Shear Zone (see Fig. 7.3). The Wesdome B Zone consists of a strong shear zone oriented N110° and dipping subvertically (70°–85°) to the south. It is approximately 10 m thick (Fig. V.9). Mineralization is discontinuous, and consists of numerous quartz-tourmaline-pyrite veins oriented parallel to the contacts of the shear zone. Continuation eastwards from the Wesdome B Zone coincides with a shear zone explored by underground drifting roughly 200 m south of the Dorval-Siscoe shaft.

According to Gardiner (1988), this shear zone could be the equivalent of the Siscoe K Shear Zone as it continues onto the Wesdome deposit area; however, InnovExplo believes this premise must be tested with more drilling, especially since it is not supported by the recent interpretation by Pilote et al. (2015c).

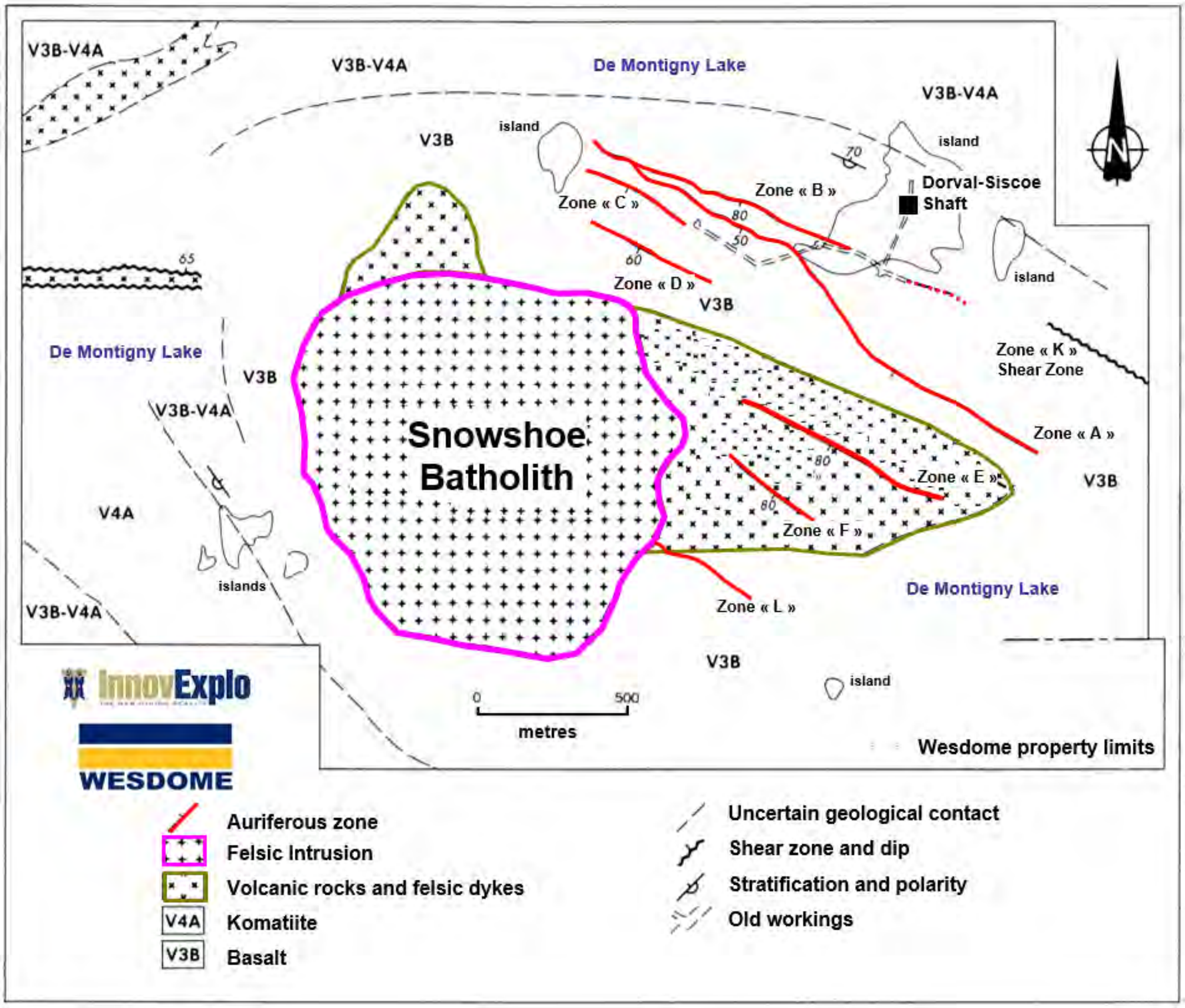


Figure V.9 – Distribution of main mineralized zones on the Wesdome property (Adapted and modified from Gardiner, 1988; Sauvé at al., 1993; Turcotte and Pelletier, 2009)

V.6.2.3 Wesdome C and D Zones

The Wesdome C and D Zones are located 400 m southwest of the K Shear Zone (see Figs. 7.3 and V.9). They consist of weak shear zones striking N120° and dipping about 60°–70° south. The zones are hosted by basalt. Mineralization consists of quartz-carbonate veins and veinlets, accompanied by pyrite and other minor sulphide minerals. These zones were weakly sheared and/or schistose.

V.6.2.4 Wesdome E Zone

The Wesdome E Zone is located 800 m southwest of the K Shear Zone (see Figs. 7.3 and 7.12). This zone is a large quartz-carbonate vein ranging in thickness from 0.7 to 8.0 m, confined within a large shear zone striking N120° and dipping about 50°–80° south. The E Zone contains abundant wall rock fragments (up to 15%).

V.6.2.5 Wesdome F Zone

The Wesdome F Zone is located 1 km southwest of the K Shear Zone (see Figs. 7.3 and 7.12). The Wesdome F Zone is a complex series of small pyritiferous quartz-carbonate veins and alteration zones. The zone is confined within a weak shear zone striking N120° and dipping approximately 55°–65° south. The thickness is typically 2–3 m. The zone is complexly splayed.

V.6.2.6 Wesdome L Zone

The Wesdome L Zone is located 1.3 km southwest of the K Shear Zone (see Figs. 7.3 and 7.12). The Wesdome L Zone constitutes an albitized quartzitic diorite injected by a mineral assemblage of quartz±carbonate±tourmaline±albite accompanied by pyrite±chalcopyrite±galena±native gold. A weak shear zone is associated with the zone.

V.6.3 Siscoe Mine Area

The following description of the Siscoe mine area is mostly modified and summarized from Olivo and Williams-Jones (2002), Olivo et al., (2007) and Dynacor's annual reports, and references therein.

The geologic units that crop out on the Siscoe property are as follows: (1) tholeiitic basalts with minor intercalations of ultramafic lavas exposed in the southern zone (Fig. V.10), which, according to Sauvé et al. (1993), belong to the Dubuisson Formation of the Malartic Group; (2) intrusive rocks, referred to as the Siscoe Stock (Moss, 1939); and (3) four generations of dykes: early microdiorite, feldspar porphyry, aplite and late diorite or microdiorite. The Siscoe Stock intruded the Dubuisson volcanic rocks, and, because it is also tholeiitic, is considered to be a synvolcanic equivalent of the Dubuisson Formation (Tessier et al., 1990). The stock comprises two main types of intrusive rocks (Olivo and Williams-Jones, 2002). The first type (Type 1), which crops out in the northwest sector of Siscoe Island and hosts the Main ore zone, is a fine-grained rock composed mainly of chlorite (up to 90 modal%), carbonate (mainly calcite), quartz, plagioclase and rutile. The second intrusive type (Type 2), which hosts the quartz-tourmaline C Vein, is more common in the central and northeast part of the island, and is medium grained and composed of variable proportions of large plagioclase phenocrysts, chlorite, quartz, calcite, rutile and ilmenite. Both intrusive rock types are weakly to moderately foliated. The south contact between the Siscoe Stock and the Dubuisson Formation is delineated by a shear zone referred to as the K Shear Zone (see Fig. 7.13).

The major structural features of the Siscoe area are: (1) the regional foliation, which strikes N285° and dips 80° toward NE, and is attributed to the D_1 deformation event; (2) the K Shear Zone, which is orientated N295° and dips 80° toward NE; and (3) faults and fractures that are commonly filled by quartz-carbonate or quartz-tourmaline veins (Olivo and Williams-Jones, 2002).

Most of the producing veins are located in the Siscoe Stock (85%–90% of the total gold production of the Siscoe mine), although minor amounts of gold were also extracted from the K Shear Zone and from small veins hosted in the Dubuisson volcanic rocks. The auriferous veins have a wide range of attitudes, mineralogy and crosscutting relationships, and comprise three main types: (1) early quartz-carbonate veins; (2) K Shear Zone ore; and (3) late quartz-tourmaline veins (Olivo and Williams-Jones, 2002). The characteristics of the most productive vein systems are summarized in Table V.1, based on Moss (1939), Auger (1947), Dresser and Dennis (1949), Trudel (1985), and Olivo and Williams-Jones (2002). The quartz-tourmaline C Vein was the first to be mined in the Siscoe deposit, and was responsible for the total gold production of the mine between 1929 and 1931 (Trudel, 1985). The grades from the vein were among the highest in the

Val-d'Or camp, containing an average of 45 g/t Au and locally up to 221 g/t Au.

In the autumn of 1998, Dynacor discovered a mineralized zone (Siscoe 98 Zone) immediately west of the Siscoe Stock. This new gold mineralization was discovered very close to the surface in basalt. Hole 98-03 intersected a mineralized zone extending from a depth of 26.5 to 48.5 m, with an average gold grade of 1.7 g/t over 22 m. This included a 3-metre segment from 26.5 to 29.5 m with a much higher gold grade of 7.1 g/t Au. The mineralization was associated with disseminated pyrite in a carbonatized and silicified breccia. There were also many quartz veinlets rich in carbonate and tourmaline. Following this discovery, a second hole (98-05) was drilled 36 m away from hole 98-03, and it confirmed the presence of a mineralized surface zone. The assay results obtained from 60.0 m to 63.8 m in hole 98-05 yielded an average grade of 8.8 g/t Au. The Siscoe 98 Zone is located about 100 m north of the K Shear Zone near the Siscoe mine.

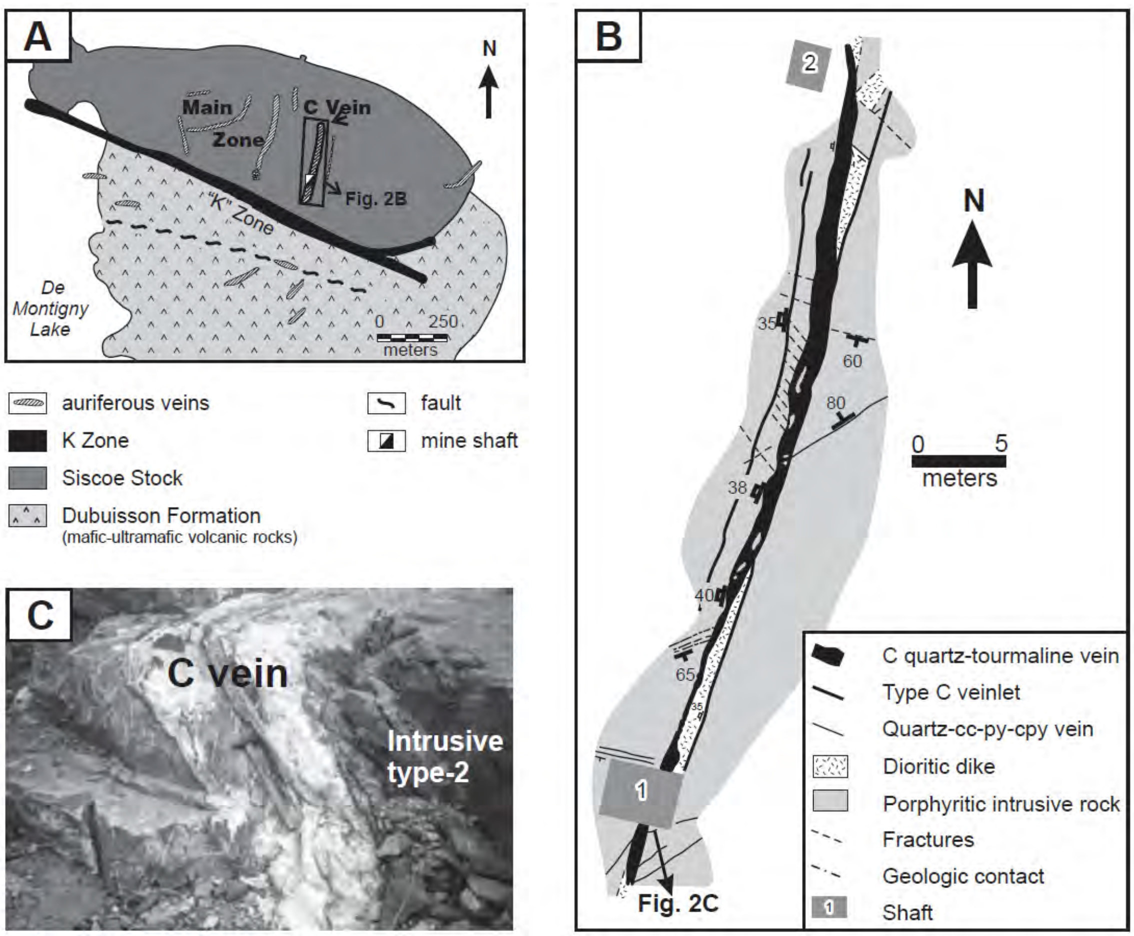


Figure V.10 – A. Simplified geologic map of the Siscoe property, showing the major mineralized zones (modified after Moss, 1939). B. Surface geology of the C quartz-tourmaline vein and surrounding areas in the North Zone. C. View looking south of the quartz-tourmaline C Vein, showing the characteristic layering and the slickenfibers of tourmaline; white arrow indicates the direction of movement in the vein (hammer for scale). Figure from Olivo et al., 2007

Table V.1 – Main auriferous veins at the Siscoe mine. Modified after Moss (1939), Dresser and Dennis (1949), Auger, (1947), Trudel (1985), and Olivo and Williams-Jones (2002).

Vein types	Examples	Structure	Dimensions	Mineralogy	Timing
Early quartz-carbonate veins (hosted mostly by type 1 intrusive rocks from the Siscoe stock)	Main ore zone	Folded extensional veins; attitude: NS-N 35° E/60°–70° E-SE	300 m long, 60–90 m wide, 300 m deep	Quartz, carbonate, chlorite, pyrite, chalcopyrite, minor tourmaline at intersections with late quartz-tourmaline veinlets	Cut by mafic and felsic dikes and late quartz-tourmaline veinlets and the C quartz-tourmaline vein
	Siscoe	Folded extensional (?) vein; attitude NS, became EW close to the K zone	300 m long, 2–4 m wide, 488 m deep	Quartz, carbonate, pyrite, and chalcopyrite	Cut by mafic and felsic dikes and late quartz-tourmaline veinlets
	Hope	Folded N65E/85 SE Slickenfibers in the vein walls	1.2–1.5 m wide	Quartz, carbonate, and chlorite	Cut by mafic and felsic dikes and late quartz-tourmaline veinlets
	Vein F and G	Folded extension veins NS/50°–60° E	0.5–1.5 m wide	Quartz, chlorite, carbonate, and sulfides	Cut by mafic and felsic dikes
K zone ore (shear zone along the contact between the Siscoe stock and the Dubuission Formation)	K-zone	Modes of occurrence: (1) Dismembered quartz veins, (2) disseminated in the talc, chlorite schist, (3) veins with massive talc; attitude of the shear N 65° W/80° NE	150 m long, 0.5–60 m wide, 150–750 m deep	(1) Quartz, chlorite, chalcopyrite, pyrite and pyrrhotite; (2) talc and chlorite (3) talc with gold ribbons	Cut by dikes which are cut by the late quartz-tourmaline veins
Late quartz-tourmaline veins (hosted mostly by type 2 intrusive rocks from the Siscoe stock)	C quartz-tourmaline vein	Shear vein filling reverse fold N 10°–20° E/35°–45° NW	120 m long, 0.254 m wide, 122 m deep	Tourmaline, quartz, scheelite, rutile, calcite, pyrite, chalcopyrite, and tetradymite	Cuts all intrusive types and all auriferous vein systems
	Vein 27	N 10°–20° E/35°–45° NW		Tourmaline, quartz, and carbonate	Cuts all intrusive types and all auriferous vein systems

V.6.4 Siscoe-Extension shaft area

The following description of the Siscoe-Extension shaft area is mostly modified and summarized from Auger (1947) and references therein.

Exposures of bedrock are rare in the area and are almost entirely limited to the area in the vicinity of the Siscoe-Extension shaft. Near the shaft, outcrops belonging to the Dubuisson Formation show a schistose chloritic dioritic dyke about 43 m wide (140 ft) and striking N285°, which can be traced across the outcrops. The diorite dyke is partly massive, partly slightly sheared, and it is characterized by numerous epidote-rich round patches. Feldspar porphyry dykes, roughly 30 cm (1 ft) wide, cut the volcanic rocks. In strike (N075°) and dip (65°), they parallel the S_1 schistosity. On an outcrop 80 m (260 ft) to the northwest of the shaft, a vertical fault was observed with a strike of N034°. On the same outcrop, there is a series of tension fractures striking N050° and dipping 85°to southeast.

A greater diversity of rock types was encountered underground than appears at surface. The predominating types are chloritized and highly serpentinized rocks, presumably derived from ultramafic lavas. These are cut by numerous dykes and small masses of granite porphyry, diorite and diorite porphyry. Cutting relations on the 725-ft level clearly established the fact that the diorite is older than the granite porphyry.

On the 350-ft level, about 260 m (850 ft) southeast of the shaft, a sulphide zone (Siscoe Extension Sulphide Lens) was encountered in a drift. According to Bell (1937), the ore shoots in this zone occur in narrow sulphide lenses in strong steeply-dipping E-W shears in chloritic or talcose schist. The lenses are very narrow. Assays samples taken across widths of 60–90 cm are reported to have ranged from 7.20 to 12.00 g/t Au.

Horizontal drilling from the 350-ft level indicated the presence of a large body of granite porphyry, the core samples from which yielded up to 4.80 g/t Au. Visible gold was also noted in vein material cutting altered granodiorite. Several mineralized zones were mapped by Siscoe Extension Gold Mines Ltd as “quartz-tourmaline intrusions” with granite porphyry in serpentinized volcanic rock. An intersection of these “quartz-tourmaline intrusions” yielded 15.77 g/t Au over 1.7 m.

On the 725-ft level, most of the drifting was done in a general N285° direction in a mass of diorite lying between two lenses of serpentinized volcanic rocks. The downward extension of the sulphide zone encountered on the 350-ft level was not identified, either in the drift or in the diamond drill cores. To the southwest of the shaft, a mass of granite porphyry is cut by numerous stringers of gold-bearing quartz, characterized by a very erratic distribution of gold. The workings to the east of the shaft follow a series of very irregular quartz veins, whose general trend is E-W or slightly south of west. Individually, they are lens-shaped and rarely longer than 30 m (100 ft).

V.7 La Motte–Vassan Formation

Up to now, no gold mineralization has been observed in the La Motte–Vassan Formation on the Québec Wesdome Project.

APPENDIX VII – TECHNICAL PARAMETERS OF SURFACE DIAMOND DRILL HOLES

DDH ID	UTM NAD 83 Zone 18, East	UTM NAD 83 Zone 18, North	UTM NAD 83 Zone 18, Elevation	Azimuth (°)	Dip (°)	Length (m)
141-146	285041.6	5333066.4	300.8	19.4	-75.0	500.0
141-147	285132.7	5333033.6	301.0	29.9	-75.0	501.0
141-148	285207.3	5332958.6	300.0	26.6	-73.0	502.7
141-149	285258.2	5332859.6	298.0	24.6	-75.0	545.6
141-150	285322.7	5332770.3	300.8	27.2	-75.0	501.0
141-151	285318.8	5332768.4	300.6	90.1	-70.0	535.3
141-152	284874.5	5332030.5	301.9	210.0	-50.0	150.0
141-153	284793.3	5332082.3	303.7	209.9	-50.0	150.0
141-154	285025.1	5332268.7	298.7	210.3	-50.0	171.0
141-155	284940.0	5332326.1	299.4	211.1	-50.0	228.0
141-156	284856.5	5332381.1	300.2	211.8	-50.0	252.0
141-157	284999.4	5332420.3	301.0	216.8	-50.0	252.0
141-158	284911.1	5332464.3	299.6	212.7	-50.0	204.0
141-159	285058.9	5332511.4	303.9	211.1	-50.0	276.0
141-160	284965.8	5332552.3	301.2	209.2	-50.0	195.0
141-161	284410.1	5332516.9	301.1	210.7	-50.0	234.0
141-162	284360.4	5332441.6	297.6	206.2	-50.0	200.0
141-163	284521.8	5332543.9	296.9	210.0	-50.0	306.0
141-164	284614.0	5332520.7	296.9	210.0	-50.0	315.0
141-165	284551.3	5332416.8	296.9	210.0	-50.0	228.0
141-166	284493.5	5332308.8	296.9	210.0	-50.0	213.0
141-167	284441.0	5332238.6	296.9	210.0	-50.0	219.0
141-168	284366.6	5332284.2	296.9	210.0	-50.0	270.0
S488	285949.1	5336626.7	294.2	210.0	-50.0	498.0
S489	282757.4	5333773.7	296.8	229.8	-63.1	500.0
S490	282150.6	5334723.4	296.0	220.2	-50.0	510.0
S491	283527.4	5334289.2	296.2	213.8	-50.0	699.0
S492	281941.3	5334394.5	296.0	217.1	-51.0	500.0
S493	282206.2	5334177.2	295.8	209.3	-51.0	319.4
S493A	282108.7	5334016.7	54.2	212.0	-50.6	195.0
S494	284608.5	5334329.7	295.6	256.2	-52.0	601.3
S495	284398.6	5334283.5	295.7	259.1	-50.0	510.0
S496	281150.5	5334642.3	295.6	210.8	-50.0	502.0
S497	280474.3	5335824.2	295.6	209.3	-50.0	500.7
S498	280312.2	5335565.1	295.6	212.5	-51.0	500.0
S499	283527.1	5334288.9	295.3	213.7	-61.0	494.5
S500	280542.6	5335560.8	295.7	206.5	-50.0	500.0
S501	280710.3	5335823.0	295.8	211.0	-50.0	501.0

DDH ID	UTM NAD 83 Zone 18, East	UTM NAD 83 Zone 18, North	UTM NAD 83 Zone 18, Elevation	Azimuth (°)	Dip (°)	Length (m)
S502	280940.9	5335816.2	296.8	209.4	-50.0	504.0
S503	283869.2	5334951.3	295.9	209.6	-53.0	590.0
S504	281170.2	5335806.7	296.2	210.8	-50.0	554.0
S505	285800.9	5334451.8	296.0	217.4	-53.0	503.0
S506	281841.6	5335748.5	296.1	203.1	-50.0	501.0
S507	285282.7	5334753.3	295.9	212.6	-53.0	501.0
S508	281586.4	5335336.2	296.0	212.0	-51.0	601.4
S509	286289.4	5333950.3	295.5	213.3	-50.0	176.0
S509A	286289.4	5333950.3	295.5	213.3	-55.0	475.5
S510	286113.2	5333671.7	295.9	209.6	-54.0	495.0
S511	281423.6	5335455.2	296.0	209.9	-50.0	592.8
S512	281632.6	5335792.0	295.9	209.7	-52.0	500.8
S513	286191.2	5332897.3	296.1	179.9	-50.0	192.0
S513A	286191.1	5332897.2	296.2	179.1	-55.0	532.6
S514	285770.6	5332829.6	295.9	178.1	-53.0	507.0
S515	282098.8	5335794.7	295.8	205.6	-50.0	681.0
S516	282395.1	5335538.8	295.6	211.2	-60.0	697.7
S517	286031.9	5332742.1	296.0	179.8	-51.0	501.0
S518	281397.7	5335799.2	295.5	207.1	-50.0	548.3
S519	285189.7	5332046.9	295.2	209.8	-50.0	507.0
S520	280251.2	5335846.1	295.6	203.9	-50.0	577.1
S521	285017.9	5331769.1	295.1	210.0	-55.0	129.0
S521A	285022.9	5331779.8	295.1	214.0	-55.0	498.0
S522	286059.6	5333590.6	295.4	204.8	-46.0	399.0
S523	285989.4	5333658.1	295.3	215.7	-52.0	410.3
S524	286152.0	5333540.9	295.5	203.0	-50.0	465.0
S525	280504.4	5335866.4	295.4	207.0	-75.0	525.0
S526	285445.1	5334647.2	295.7	207.8	-50.0	433.0
S527	286152.0	5333540.7	295.4	215.3	-61.0	484.7
S528	286019.0	5333709.1	295.5	210.0	-50.0	501.0
S529	286232.1	5333483.4	295.8	210.0	-50.0	466.6
S530	286283.2	5333564.4	295.9	213.3	-52.0	558.0
S531	286377.0	5333529.8	295.8	209.0	-57.0	506.7
S532	286315.8	5333430.5	295.5	206.4	-51.0	522.0
S533	286453.4	5333461.3	295.5	209.3	-50.0	525.0
S534	286401.1	5333374.2	295.4	210.0	-55.0	598.4
S535	286383.1	5333120.0	300.2	30.8	-50.0	570.0
S536	286329.3	5333031.8	301.0	29.1	-49.0	710.0

DDH ID	UTM NAD 83 Zone 18, East	UTM NAD 83 Zone 18, North	UTM NAD 83 Zone 18, Elevation	Azimuth (°)	Dip (°)	Length (m)
S537	287030.2	5333310.7	300.7	34.1	-45.0	683.7
S538	286478.8	5333083.1	301.9	32.2	-52.0	555.0
S539	286803.2	5333227.1	300.3	29.8	-45.0	563.0
S540	286351.0	5333488.3	296.2	214.5	-57.0	528.0
S541	286351.2	5333488.1	296.4	216.0	-53.0	464.9
S542	286410.3	5333586.8	296.0	203.7	-59.0	667.0
S543	286410.5	5333586.8	295.7	203.0	-57.0	778.2
S544	286257.1	5333527.0	295.8	206.0	-54.0	454.0
S545	286181.0	5333412.2	296.3	210.0	-50.0	300.0
S546	286181.0	5333412.2	296.3	210.6	-57.5	369.0
S547	286334.7	5333652.0	296.1	213.8	-54.0	654.5
S548	286335.0	5333652.0	296.0	213.9	-51.5	600.5
S549	286326.7	5333542.0	295.4	214.5	-56.0	479.6
S550	286326.8	5333542.3	295.8	214.9	-60.0	723.0
S551	286274.3	5333460.0	295.9	206.3	-52.0	443.4
S552	286274.1	5333459.8	295.9	205.2	-60.0	543.0
S553	286381.7	5333623.4	295.9	210.0	-60.0	110.5
S553A	286381.3	5333627.2	295.8	210.7	-63.0	684.0
S554	286096.3	5333460.2	295.8	212.2	-50.0	351.0
S555	286097.8	5333460.3	295.9	210.0	-58.0	381.0
S556	286420.7	5333507.4	296.6	200.9	-61.0	630.0
S557	286379.6	5333449.4	295.9	205.0	-60.0	68.0
S557A	286382.3	5333446.0	295.8	199.9	-59.0	591.0
S558	286382.1	5333446.0	296.0	198.3	-56.5	630.0
S558A	286382.2	5333445.8	296.1	199.2	-54.0	533.1
S559	286382.3	5333446.2	295.9	200.3	-65.0	573.0
S560	286205.2	5333506.9	296.0	180.9	-45.0	315.0
S561	285947.4	5333750.8	294.9	207.6	-50.0	512.2
S562	285882.7	5333646.3	295.8	213.1	-50.0	536.3
S563	285800.7	5333518.7	295.9	211.9	-50.0	565.8
S564	285864.3	5333803.7	295.8	211.9	-50.0	561.0
S565	286289.7	5333497.6	295.5	182.6	-50.0	279.0
S566	286190.6	5333523.9	295.8	194.8	-50.0	465.2
S567	286190.8	5333524.1	295.4	198.9	-60.0	528.0
S568	286190.6	5333524.0	295.9	200.0	-55.0	500.5
S569	286144.1	5333420.5	295.6	198.0	-50.0	273.0
S570	286309.3	5333576.1	295.4	185.2	-45.0	399.0
S571	286357.9	5333405.6	295.8	205.5	-55.0	567.0

DDH ID	UTM NAD 83 Zone 18, East	UTM NAD 83 Zone 18, North	UTM NAD 83 Zone 18, Elevation	Azimuth (°)	Dip (°)	Length (m)
S572	286085.4	5333633.3	294.6	208.0	-52.0	408.0
S573	286205.2	5333507.0	295.6	180.8	-57.0	360.0
S574	286309.3	5333576.2	295.4	186.6	-52.0	459.0
S575	286321.4	5333675.2	295.7	178.6	-50.0	556.6
S576	286248.8	5333647.4	296.1	185.1	-46.0	507.0
S577	286248.8	5333647.3	296.0	186.6	-51.0	483.4
S578	286237.5	5333290.9	295.8	0.6	-45.0	186.0
S579	286234.0	5333232.9	295.7	358.7	-46.0	276.0
S580	286339.3	5333335.6	295.8	1.6	-46.0	159.0
S581	286339.1	5333276.0	295.5	358.9	-50.0	264.0
S582	286081.8	5333171.9	295.9	1.4	-45.0	388.5
S583	286078.7	5333096.5	296.2	359.5	-45.0	501.0
S584	286394.5	5333512.0	296.5	180.2	-45.0	324.0
S585	286393.3	5333559.1	295.8	177.2	-45.0	384.0
S586	286033.2	5333222.2	294.3	0.0	-46.0	603.0
S587	286036.4	5333215.4	296.0	0.0	-52.0	632.5
S588	285651.9	5336914.7	293.5	205.3	-50.0	502.5
S589	286027.3	5333143.1	296.0	0.0	-52.0	681.0
S590	285982.2	5333241.1	295.7	0.0	-45.0	451.0
S591	285931.8	5333249.3	295.9	0.0	-45.0	486.0
S592	285982.1	5333241.2	296.0	0.1	-52.0	474.0
S593	285931.6	5333249.5	295.3	4.5	-51.0	532.9
S594	285982.2	5333241.2	295.8	359.8	-58.0	498.0
S595	285931.7	5333249.4	295.6	0.0	-56.0	565.0
S596	286385.3	5333118.6	300.5	0.1	-51.0	637.7
S597	286385.2	5333118.2	300.6	0.1	-60.0	770.0
S598	286385.3	5333118.7	300.4	0.1	-49.5	759.0
S599	286385.4	5333118.4	300.6	3.3	-56.0	734.0
S600	286477.3	5333084.7	302.1	210.0	-50.0	204.0
S601	286425.8	5332997.7	300.3	30.0	-50.0	706.0
S602	286391.4	5332940.8	300.8	30.8	-50.0	249.0
S603	286355.1	5333074.4	301.2	31.0	-50.0	153.0
S604	286312.9	5333006.3	300.9	30.6	-51.0	252.0
S605	286380.0	5333022.8	300.6	30.7	-49.0	150.0
S606	286339.1	5332956.8	300.7	30.7	-49.0	249.0
S607	286519.2	5332963.7	301.6	27.8	-50.0	153.0
S608	286470.0	5332886.2	299.5	31.7	-49.0	251.8
S609	286468.0	5332971.9	300.6	29.1	-51.0	153.0

DDH ID	UTM NAD 83 Zone 18, East	UTM NAD 83 Zone 18, North	UTM NAD 83 Zone 18, Elevation	Azimuth (°)	Dip (°)	Length (m)
S610	286429.3	5332910.6	299.2	31.0	-51.0	255.0
S611	286604.1	5332910.8	299.8	28.4	-49.0	150.0
S612	286561.4	5332842.1	300.0	29.6	-51.0	249.0
S613	280259.3	5331602.1	301.1	178.9	-49.1	333.0
S614	286616.8	5333118.3	300.6	30.0	-50.0	276.0
S615	286584.8	5333065.4	300.9	27.1	-51.7	293.7
S616	286701.1	5333058.9	300.6	29.9	-54.3	293.8
S617	286669.0	5333006.7	300.3	30.0	-50.0	285.0
S618	286739.5	5332956.0	299.8	29.1	-53.8	299.0
S619	286800.5	5333039.5	299.3	30.0	-52.0	300.0
S620	286853.5	5333123.9	299.3	30.0	-50.0	300.0
S621	286334.4	5333032.5	300.9	3.0	-51.0	165.0
S621A	286334.1	5333032.4	300.9	0.0	-50.0	723.0
S622	286334.4	5333032.3	301.0	0.0	-55.5	756.0
S623	286167.3	5333616.5	294.1	186.1	-52.0	489.0
S624	286545.4	5333598.7	294.1	180.0	-47.0	600.0
S625	286167.4	5333616.9	294.1	182.1	-57.0	627.5
S626	286545.4	5333598.7	294.2	182.3	-59.5	832.2
S627	286200.6	5333610.9	294.1	180.3	-57.0	501.0
S628	286398.2	5333603.3	294.1	181.4	-50.0	438.0
S629	286334.6	5333033.2	300.9	0.0	-49.0	610.3
S630	286334.6	5333032.5	301.1	0.0	-60.0	898.0
S631	283337.1	5336242.2	295.9	359.8	-50.0	504.0
S632	283330.2	5336043.5	295.4	1.2	-51.0	514.2
S633	283325.6	5335839.4	294.7	2.5	-50.0	522.7
S634	283318.6	5335644.5	295.5	359.6	-50.0	517.0
S635	283310.8	5335437.1	295.4	2.5	-51.0	513.3
S636	283304.1	5335245.3	294.8	359.8	-51.0	505.0
S637	283295.6	5335040.9	296.3	359.9	-52.0	501.0
S638	283014.8	5336763.0	295.4	27.1	-53.0	399.6
S639	283045.7	5336803.0	295.2	32.7	-53.0	390.0
S640	282974.9	5336696.3	294.8	31.0	-51.0	327.0
S641	282943.4	5336644.0	295.2	35.3	-51.0	351.0
S642	283008.2	5336836.1	296.4	31.6	-51.0	396.0
S643	282973.7	5336782.7	295.7	29.7	-50.0	450.0
S644	282941.6	5336731.2	295.5	25.8	-52.0	495.0
S645	282913.4	5336684.0	294.6	28.1	-51.0	564.0
S646	283089.6	5336781.0	295.8	28.1	-50.0	354.0

DDH ID	UTM NAD 83 Zone 18, East	UTM NAD 83 Zone 18, North	UTM NAD 83 Zone 18, Elevation	Azimuth (°)	Dip (°)	Length (m)
S647	283055.1	5336729.3	295.1	30.0	-50.0	426.4
S648	283020.6	5336678.4	295.1	20.4	-50.0	465.0
S649	282998.1	5336634.1	295.0	25.0	-50.0	546.0
S650	286188.0	5334039.8	295.1	210.9	-51.5	506.0
S651	286296.4	5334211.2	295.2	210.0	-50.0	507.0
S652	286402.1	5334383.6	295.3	210.0	-50.0	519.0
S653	286505.5	5334551.6	295.0	207.8	-50.0	500.0
S654	285491.1	5333776.3	294.9	211.2	-50.0	504.0
S655	283697.4	5334299.7	295.1	212.0	-52.0	330.0
S656	283697.5	5334299.4	294.8	212.6	-60.0	300.0
S657	283613.4	5334355.0	295.1	211.9	-54.0	312.0
S658	283613.3	5334354.8	294.1	211.0	-62.0	330.0
S659	283682.5	5334454.0	295.8	210.0	-53.0	355.0
S660	283681.3	5334452.7	295.9	211.1	-60.0	519.0
S661	283529.5	5334408.3	294.3	212.1	-50.0	327.0
S662	283524.3	5334401.5	293.6	213.1	-59.0	345.0
S663	283419.6	5334234.8	294.8	209.7	-52.0	278.0
S664	283419.8	5334234.7	296.0	210.0	-60.0	408.3
S665	285596.9	5333942.7	296.4	211.2	-50.0	501.0
S666	285701.2	5334113.8	296.6	204.9	-50.0	504.0
S667	285809.3	5334282.8	296.0	210.4	-50.0	319.0
S668	285908.3	5334438.8	296.2	210.0	-50.0	530.5
S669	285415.6	5337286.2	296.9	206.9	-50.0	531.0
S670	285469.2	5337370.4	296.5	209.2	-50.0	501.0
S671	280750.3	5331332.5	298.0	177.7	-50.0	264.0
S672	280752.3	5331436.3	295.7	180.0	-50.0	309.0
S673	280659.9	5331497.9	296.4	180.0	-50.0	267.0
S674	280660.9	5331501.5	296.3	360.0	-53.0	267.0
S675	280838.4	5331398.1	295.3	180.0	-50.0	270.0
S676	280839.1	5331406.4	295.3	360.0	-54.0	252.0
S677	280827.8	5331283.0	307.5	180.0	-50.0	294.0
S678	280661.5	5331389.0	300.9	180.0	-50.0	267.9
S679	280265.3	5331713.0	301.0	180.0	-50.0	473.3
S680	279371.7	5332108.2	302.0	180.0	-50.0	255.4
S681	279376.8	5332218.5	300.6	180.0	-50.0	261.0
S682	279385.4	5332315.1	299.6	180.0	-50.0	417.0
S683	286998.7	5333163.9	299.6	30.0	-50.0	299.5
S684	286943.0	5333071.6	299.2	30.0	-50.0	303.0

DDH ID	UTM NAD 83 Zone 18, East	UTM NAD 83 Zone 18, North	UTM NAD 83 Zone 18, Elevation	Azimuth (°)	Dip (°)	Length (m)
S685	286891.6	5332986.9	299.0	30.0	-50.0	300.0
S686	286837.9	5332902.1	298.6	30.0	-50.0	303.0
S687	286920.2	5332849.8	298.5	30.0	-50.0	300.0
S688	286972.2	5332933.2	298.2	30.0	-50.0	300.0
S689	287026.4	5333016.8	299.1	30.0	-50.0	297.0
S690	287085.3	5333115.3	300.7	30.0	-50.0	300.0
S691	284390.9	5333510.7	294.4	243.5	-51.0	249.0
S692	284391.6	5333512.0	294.4	242.9	-58.0	279.0
S693	284356.4	5333551.0	294.4	243.0	-50.0	90.0
S693A	284356.4	5333551.0	294.4	243.6	-52.0	252.0
S694	284356.7	5333551.1	294.4	243.6	-58.2	294.0
S695	284344.3	5333602.9	296.5	241.8	-50.0	174.0
S695A	284349.5	5333603.8	295.6	243.7	-50.0	252.0
S696	284344.2	5333603.0	296.0	243.7	-58.0	300.0
S697	284328.7	5333647.7	296.0	246.3	-50.0	249.0
S698	284328.7	5333647.7	296.2	245.8	-58.0	321.0
S699	284285.0	5333698.3	295.9	250.0	-50.0	255.4
S700	284285.0	5333698.4	295.3	248.9	-58.0	306.0
S701	284272.5	5333757.1	295.5	243.1	-50.0	243.0
S702	284272.7	5333757.2	295.5	243.5	-56.0	297.0
S703	284343.7	5333792.3	295.7	243.2	-50.0	501.0
S704	284344.1	5333792.5	295.8	243.2	-58.0	547.6
S705	284254.3	5333806.0	295.8	244.0	-50.0	252.0
S706	284254.4	5333805.9	295.7	244.6	-55.0	318.0
S707	284326.1	5333838.0	295.8	243.0	-50.0	492.0
S708	284318.6	5333836.1	295.9	243.0	-55.0	54.0
S708A	284326.2	5333838.1	295.9	243.0	-58.0	591.0
S709	284233.2	5333849.7	295.6	243.0	-50.0	306.0
S710	284233.4	5333849.8	295.6	243.0	-58.0	342.0
S711	284207.8	5333890.4	295.6	243.0	-50.0	294.0
S712	284207.9	5333890.3	295.6	243.0	-58.0	352.3
S713	284402.0	5333458.0	295.5	244.1	-50.9	252.0
S714	284402.4	5333458.1	295.4	244.8	-58.5	321.0
S715	285736.3	5337042.3	295.7	210.6	-50.1	519.0
S716	282397.1	5335086.7	295.7	224.4	-50.4	369.0
S717	282443.7	5335132.1	295.6	224.3	-50.0	421.4
S718	282399.4	5335022.8	296.1	223.8	-50.2	276.0
S719	282507.2	5335124.1	295.7	225.2	-50.2	480.0

DDH ID	UTM NAD 83 Zone 18, East	UTM NAD 83 Zone 18, North	UTM NAD 83 Zone 18, Elevation	Azimuth (°)	Dip (°)	Length (m)
S720	282470.5	5335018.7	295.6	225.2	-50.1	350.5
S721	282506.3	5335050.6	295.7	225.4	-52.1	445.4
S722	282429.1	5334909.5	295.5	225.1	-50.1	276.0
S723	282539.2	5335013.7	295.8	223.2	-50.2	399.0
S724	282539.4	5335014.0	295.8	224.8	-63.0	444.0
S725	282529.7	5334936.4	295.8	225.5	-50.2	351.0
S726	282614.3	5335017.1	295.6	226.7	-50.3	453.0
S727	282412.4	5335171.4	296.0	227.1	-50.1	382.6
S728	282412.5	5335171.5	295.9	227.9	-63.0	450.0
S729	282270.1	5335104.4	296.2	224.8	-50.2	249.0
S730	282379.3	5335209.3	296.2	224.5	-50.1	27.0
S731	286502.2	5333100.3	302.5	276.1	-70.0	30.0
S731A	286483.6	5333088.9	301.9	276.1	-70.0	300.5
S732	280599.4	5334009.3	298.8	178.2	-50.6	300.2
S733	281875.6	5334790.2	301.5	359.0	-51.1	300.0
S734	281660.5	5334727.0	302.6	181.5	-50.1	297.0
S735	281636.1	5334472.1	299.1	177.4	-49.8	300.0
S736	281637.4	5334523.2	298.6	181.6	-50.2	300.0
S737	281635.7	5334564.1	297.9	179.4	-51.4	299.5
S738	281636.0	5334564.4	298.1	360.0	-50.0	300.0
S739	281635.7	5334564.3	298.1	180.0	-80.0	312.0
S740	281635.5	5334563.8	298.0	180.0	-65.0	303.0
S741	281691.7	5334561.3	298.2	180.0	-50.0	303.0
S742	281693.2	5334511.5	297.8	180.0	-50.0	304.0
S743	281692.2	5334464.2	297.5	180.0	-50.0	315.0
S744	281607.9	5334570.6	298.8	180.0	-50.0	306.0
S745	281608.9	5334572.5	298.0	180.0	-67.0	303.0
S746	281608.4	5334511.5	299.5	181.4	-50.6	306.0
S747	281608.4	5334572.6	298.2	216.4	-49.5	300.0
S748	281608.8	5334573.1	298.3	212.6	-69.5	306.0
S749	281608.9	5334573.2	298.4	205.9	-80.7	309.0
S750	281608.4	5334572.8	298.4	236.8	-67.6	306.0
S751	281608.2	5334572.6	298.5	236.0	-60.0	303.0
S752	281609.0	5334573.2	298.2	210.3	-79.7	363.0
S753	281635.1	5334563.2	298.4	204.1	-53.6	345.0
S754	281635.3	5334563.5	298.3	218.7	-80.3	342.0
S755	286551.0	5333679.7	295.8	211.0	-50.7	432.0
S756	286530.9	5333642.3	295.7	209.1	-50.8	359.0

DDH ID	UTM NAD 83 Zone 18, East	UTM NAD 83 Zone 18, North	UTM NAD 83 Zone 18, Elevation	Azimuth (°)	Dip (°)	Length (m)
S757	286510.9	5333608.5	295.5	209.2	-50.1	179.0
S758	286598.7	5333753.3	295.8	208.9	-50.0	616.1
S759	286529.8	5333740.6	295.6	210.3	-50.0	488.0
S760	286507.1	5333701.6	295.7	210.6	-50.6	374.0
S761	286488.4	5333671.4	295.7	209.9	-49.9	242.0
S762	286465.1	5333636.3	295.5	209.9	-49.9	153.0
S763	286615.8	5333683.3	295.5	210.0	-50.1	515.0
S764	286595.5	5333650.6	295.6	209.2	-50.1	410.2
S765	286638.0	5333720.3	295.6	210.2	-50.1	222.0
S765A	286637.8	5333719.9	295.4	210.3	-52.3	641.0
S766	286824.1	5333735.6	295.4	209.0	-50.0	653.0
S767	286742.2	5333601.9	294.9	211.4	-50.1	350.0
S768	283387.0	5333508.4	295.3	200.0	-50.9	527.0
S769	283746.8	5333495.7	295.1	197.5	-60.3	152.0
S770	283393.7	5333440.4	295.1	29.9	-50.9	231.0
S771	283371.5	5333400.1	294.7	28.3	-49.6	249.0
S772	283370.9	5333398.3	294.8	209.7	-49.8	420.0
S773	283344.4	5333358.5	294.9	30.3	-49.7	264.0
S774	283440.1	5333413.9	295.0	30.6	-52.4	183.0
S775	283354.2	5333466.8	295.0	30.4	-50.6	228.0
S776	283328.6	5333425.9	295.0	30.6	-50.0	222.0
S777	283302.5	5333384.9	295.0	30.6	-50.0	261.0
S778	283382.4	5333512.3	295.0	30.3	-50.4	157.5
S779	283481.4	5333387.7	295.0	30.5	-50.2	144.0
S780	281588.8	5334700.1	295.6	208.3	-53.0	291.0
S781	281589.0	5334700.3	295.4	208.2	-73.0	276.0
S782	281589.0	5334700.4	295.5	208.5	-87.0	345.0
S783	281589.7	5334700.0	295.7	194.6	-63.2	285.0
S784	281590.3	5334699.9	295.5	173.2	-73.1	291.0
S785	281544.9	5334725.6	294.9	209.9	-50.2	246.0
S786	281544.7	5334725.9	294.8	196.7	-63.3	234.0
S787	283415.3	5333372.2	294.4	30.0	-50.0	228.0
S788	283388.5	5333328.9	294.9	29.8	-55.4	235.0
S789	283361.8	5333285.3	294.9	29.0	-54.9	222.0
S790	283361.7	5333284.6	294.9	29.4	-80.4	237.8
S791	283401.4	5333261.2	294.8	29.6	-50.3	192.0
S792	283446.0	5333234.0	294.9	29.2	-49.8	210.0
S793	283429.3	5333303.0	294.9	29.8	-50.2	249.0

DDH ID	UTM NAD 83 Zone 18, East	UTM NAD 83 Zone 18, North	UTM NAD 83 Zone 18, Elevation	Azimuth (°)	Dip (°)	Length (m)
S794	283471.3	5333273.7	295.1	29.9	-50.4	231.0
S795	283455.3	5333345.6	295.1	29.5	-50.1	187.5
S796	283498.0	5333316.7	294.9	29.2	-50.3	144.0
S797	283462.8	5333164.6	294.7	29.0	-50.4	261.0
S798	283507.9	5333332.5	294.8	210.8	-50.2	231.0
S799	283394.2	5333249.8	294.9	29.9	-71.0	141.0
SIS06-01	286777.3	5336366.6	305.0	290.0	-45.0	300.0
SIS12-01	286705.3	5335723.0	302.9	210.0	-50.0	300.0
SIS14-01	286724.9	5336280.5	303.6	302.7	-50.2	300.0
WDH-01	282561.0	5339551.0	298.9	210.0	-50.0	150.0
WDH-02	282625.7	5339565.7	298.9	210.0	-50.0	150.0
WDH-03	282596.0	5339528.0	298.9	215.0	-50.0	150.0
WDH-04	282565.0	5339494.0	298.9	210.0	-50.0	150.0
WDH-05	282651.9	5339543.7	298.9	210.0	-50.0	150.0
WDH-06	282638.0	5339498.0	298.9	210.0	-50.0	150.0
WDH-07	282614.0	5339447.0	298.9	210.0	-50.0	150.0
WDH-08	282710.8	5339512.7	298.9	210.0	-50.0	150.0
WDH-09	282684.4	5339470.6	298.9	210.0	-50.0	150.0
WDH-10	282657.9	5339428.3	298.9	210.0	-50.0	156.0
WDH-11	282656.0	5339432.0	298.9	180.0	-50.0	150.0

APPENDIX VIII – DETAILS OF THE 2015 KIENA POLYGONAL RESOURCE ESTIMATE AS WELL AS THE VERTICAL LONGITUDINAL SECTIONS FOR EACH ZONE

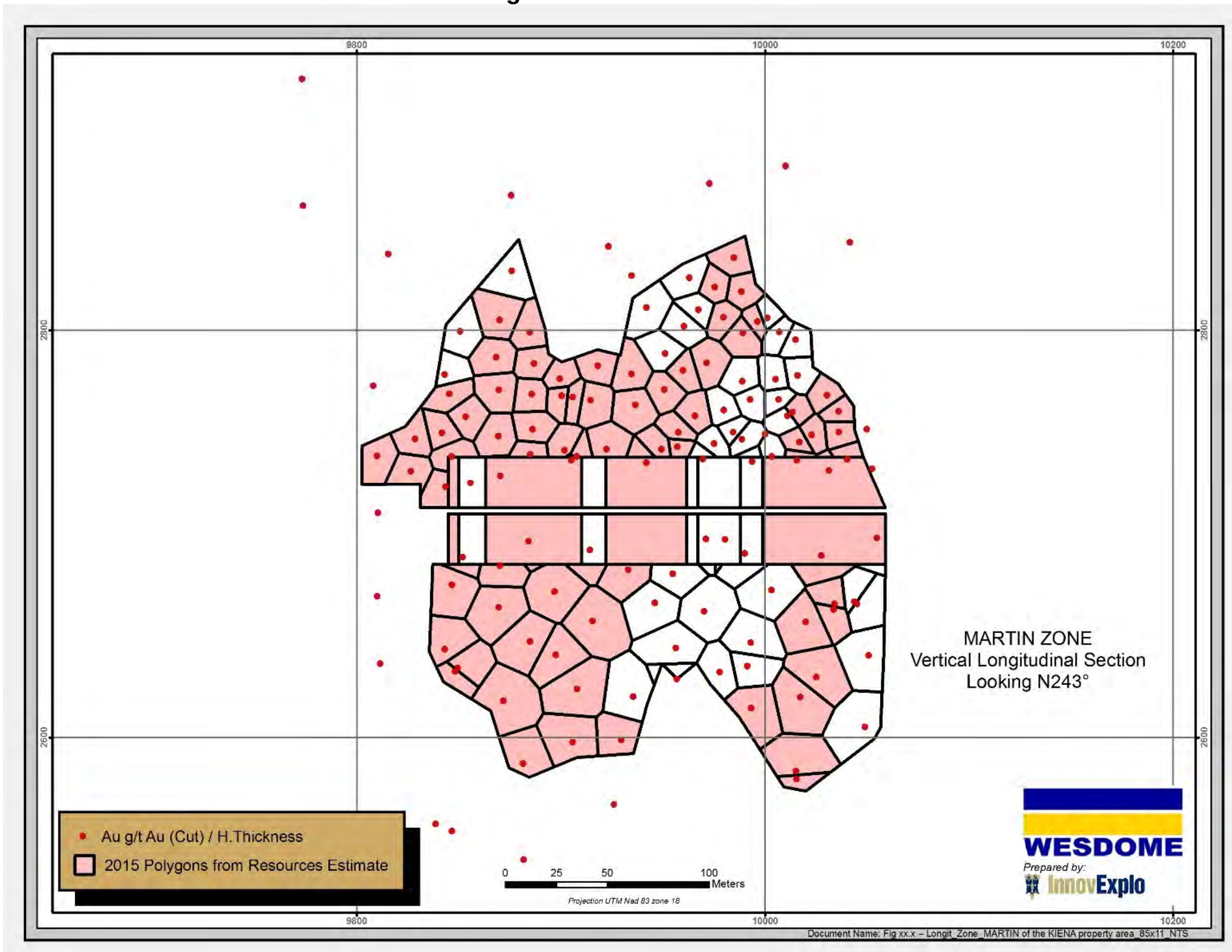
Measured Resources Martin Zone

BLOCK	BLOCK WIDTH	Cut Grade (Cut to 34.28 g/t Au)	Area	Volume	Metric Tonnes	Grams (Cut to 34.28 g/t Au)	Ounces (Cut to 34.28 g/t Au)
A'	3.0	6.53	125.000	375.000	1,050.0	6,859	221
A	3.0	3.71	1,175.241	3,525.722	9,872.0	36,642	1,178
B	3.0	4.67	986.969	2,960.907	8,290.5	38,741	1,246
D	3.0	3.73	1,503.253	4,509.760	12,627.3	47,123	1,515
SUBTOTAL	**3.0**	**4.06**	**3,790.463**	**11,371.389**	**31,839.9**	**129,365**	**4,159**
TOTAL		**4.06**			**63,680**		**8,318**

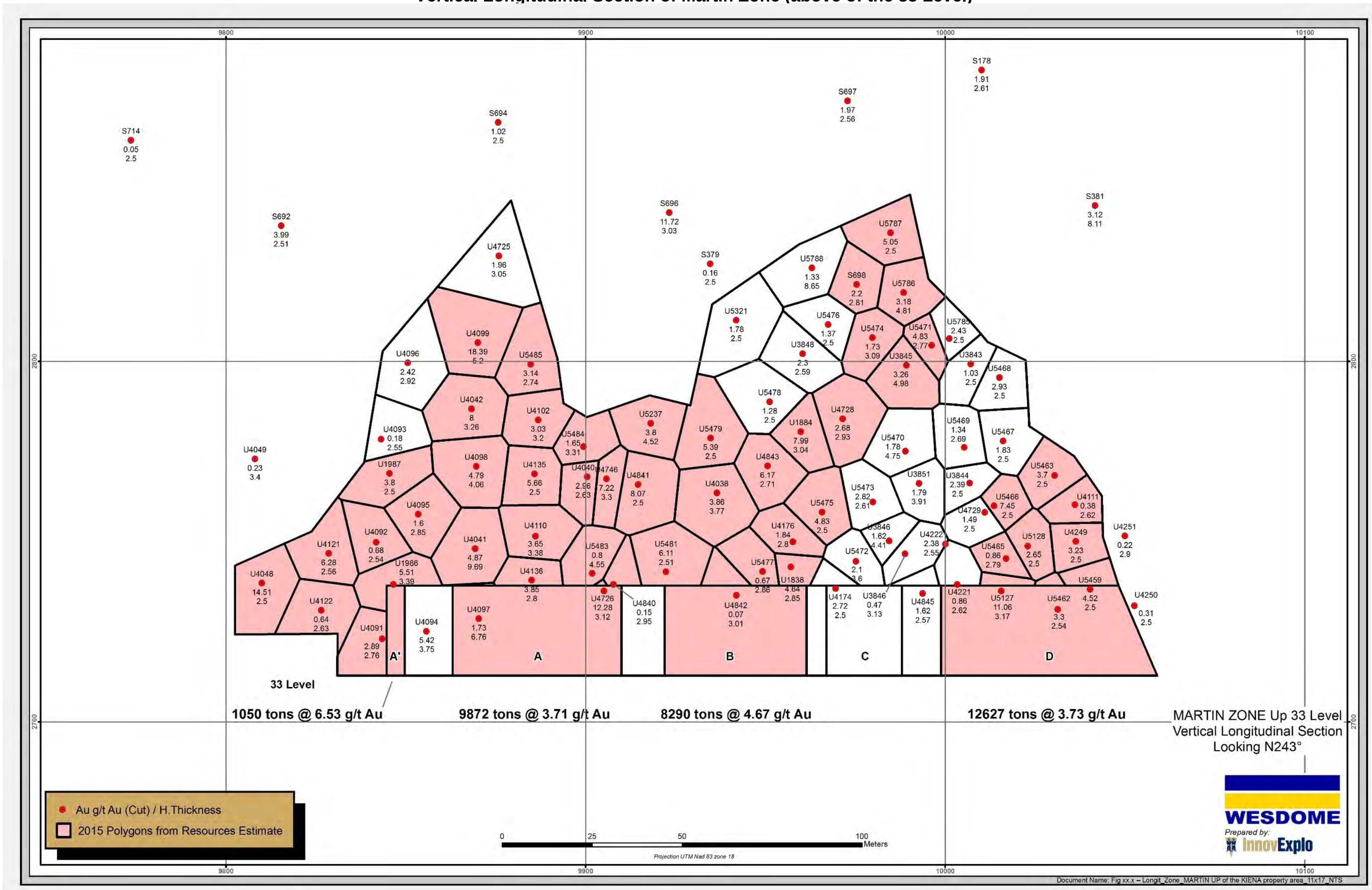
Indicated Resources Martin Zone

Hole ID	True Width	Cut Grade (Cut to 34.28 g/t Au)	Area	Volume	Metric Tonnes	Grams (Cut to 34.28 g/t Au)	Ounces (Cut to 34.28 g/t Au)
S698	2.8	2.20	200.090	562.253	1,574.3	3463.48	111.35
U-1838	2.9	4.64	94.738	270.004	756.0	3507.89	112.78
U-1884	3.0	7.99	210.479	639.855	1,791.6	14314.84	460.23
U-1986	3.4	5.51	204.137	692.024	1,937.7	10676.55	343.26
U-1987	2.5	3.80	265.160	662.901	1,856.1	7053.26	226.77
U-3845	5.0	3.26	261.987	1,304.693	3,653.1	11909.24	382.89
U-4038	3.8	3.86	386.740	1,458.011	4,082.4	15758.19	506.64
U-4040	2.6	2.96	151.938	399.598	1,118.9	3311.87	106.48
U-4041	9.7	4.87	351.932	3,410.220	9,548.6	46501.76	1,495.07
U-4042	3.3	8.00	350.415	1,142.352	3,198.6	25588.68	822.70
U-4048	2.5	14.51	337.661	844.153	2,363.6	34296.24	1,102.65
U-4091	2.8	2.89	214.360	591.632	1,656.6	4787.49	153.92
U-4092	2.5	0.68	233.712	593.629	1,662.2	1130.27	36.34
U-4094	3.8	5.42	0.039	0.147	0.4	2.23	0.07
U-4095	2.9	1.60	277.238	790.128	2,212.4	3539.77	113.81
U-4098	4.1	4.79	349.122	1,417.435	3,968.8	19010.63	611.21
U-4099	5.2	18.39	443.427	2,305.820	6,456.3	118731.28	3,817.30
U-4101	3.4	3.65	282.075	953.414	2,669.6	9743.89	313.27
U-4102	3.2	3.03	248.778	796.091	2,229.1	6754.03	217.15
U-4111	2.6	0.38	156.139	409.083	1,145.4	435.26	13.99
U-4121	2.6	6.28	287.534	736.086	2,061.0	12943.33	416.14
U-4122	2.6	0.64	282.915	744.066	2,083.4	1333.37	42.87
U-4135	2.5	5.66	246.439	616.098	1,725.1	9763.92	313.92
U-4136	2.8	3.85	130.397	365.110	1,022.3	3935.89	126.54
U-4176	2.8	1.84	188.989	529.169	1,481.7	2726.28	87.65
U-4249	2.5	3.23	176.205	440.512	1,233.4	3983.99	128.09
U-4726	3.1	12.28	3.495	10.904	30.5	374.94	12.05
U-4728	2.9	2.68	342.996	1,004.979	2,813.9	7541.37	242.46
U-4746	3.3	7.22	146.882	484.711	1,357.2	9798.91	315.04
U-4840	3.0	0.15	86.991	256.623	718.5	107.78	3.47
U-4841	2.5	8.07	319.026	797.566	2,233.2	18021.80	579.41
U-4842	3.0	0.07	79.118	238.144	666.8	46.68	1.50
U-4843	2.7	6.17	271.228	735.027	2,058.1	12698.33	408.26
U-5127	3.2	11.06	42.269	133.991	375.2	4149.45	133.41
U-5128	2.5	2.65	171.770	429.425	1,202.4	3186.33	102.44
U-5237	4.5	3.80	273.281	1,235.229	3,458.6	13142.84	422.55
U-5459	2.5	4.52	87.322	218.304	611.3	2762.86	88.83
U-5462	2.5	3.30	19.971	50.725	142.0	468.70	15.07
U-5463	2.5	3.70	214.085	535.213	1,498.6	5544.81	178.27
U-5465	2.8	0.86	125.839	351.089	983.1	845.42	27.18
U-5466	2.5	7.44	132.496	331.240	927.5	6900.40	221.85
U-5471	2.8	4.83	116.169	321.788	901.0	4351.86	139.92
U-5474	3.1	1.73	218.347	674.691	1,889.1	3268.20	105.08
U-5475	2.5	4.83	253.595	633.987	1,775.2	8574.03	275.66
U-5477	2.9	0.67	169.089	483.593	1,354.1	907.22	29.17
U-5479	2.5	5.39	350.433	876.083	2,453.0	13221.84	425.09
U-5481	2.5	6.11	311.335	781.450	2,188.1	13369.04	429.82
U-5483	4.6	0.80	210.428	957.445	2,680.8	2144.68	68.95
U-5484	3.3	1.65	197.023	652.146	1,826.0	3012.92	96.87
U-5485	2.7	3.14	306.744	840.477	2,353.3	7389.48	237.58
U-5786	4.8	3.18	232.982	1,120.643	3,137.8	9978.21	320.81
U-5787	2.5	5.05	274.433	686.082	1,921.0	9701.20	311.90
U-1989	4.3	4.87	410.268	1,751.844	4,905.2	23888.14	768.02
U-4073	5.0	6.92	254.812	1,281.702	3,588.8	24834.25	798.44
U-4074	5.0	4.88	614.063	3,088.736	8,648.5	42204.49	1,356.91
U-4075	2.5	9.57	623.860	1,565.889	4,384.5	41959.56	1,349.03
U-4076	2.8	0.95	477.281	1,322.069	3,701.8	3516.70	113.06
U-4077	2.7	4.68	340.212	932.180	2,610.1	12215.29	392.73
U-4103	2.5	1.30	307.287	771.291	2,159.6	2807.50	90.26
U-4104	2.5	0.72	782.344	1,955.861	5,476.4	3943.02	126.77
U-4105	2.5	2.02	578.991	1,447.479	4,052.9	8186.94	263.22
U-4113	2.6	4.65	207.001	544.412	1,524.4	7088.25	227.89
U-4186	2.6	3.22	591.671	1,532.427	4,290.8	13816.36	444.21
U-4191	2.5	9.13	611.008	1,527.520	4,277.1	39049.51	1,255.47
U-5581	2.5	3.16	130.982	327.455	916.9	2897.32	93.15
U-5582	2.5	2.91	637.483	1,593.708	4,462.4	12985.53	417.49
U-5583	2.5	4.76	530.338	1,325.845	3,712.4	17670.87	568.13
U-5584	2.5	6.21	203.263	508.158	1,422.8	8835.85	284.08
U-5588	2.5	4.29	533.839	1,334.597	3,736.9	16031.18	515.41
U-5599	2.5	3.93	379.554	948.884	2,656.9	10441.52	335.70
U-5600	2.5	2.81	122.609	306.522	858.3	2411.71	77.54
U-5601	2.5	8.20	814.530	2,036.326	5,701.7	46754.03	1,503.18
U-5602	2.5	2.98	717.257	1,793.143	5,020.8	14961.98	481.04
U-5606	3.7	7.64	19.630	73.417	205.6	1570.53	50.49
U-5607	2.5	4.18	567.078	1,417.696	3,969.5	16592.71	533.47
U-5608	3.4	3.12	440.182	1,509.823	4,227.5	13189.82	424.06
U-5609	4.5	2.58	68.874	310.622	869.7	2243.93	72.14
U-5610	7.4	4.32	166.148	1,222.849	3,424.0	14791.58	475.56
U-5783	3.3	1.72	213.216	707.876	1,982.1	3409.13	109.61
TOTAL		**4.78**			**197,832**		**30382.80**

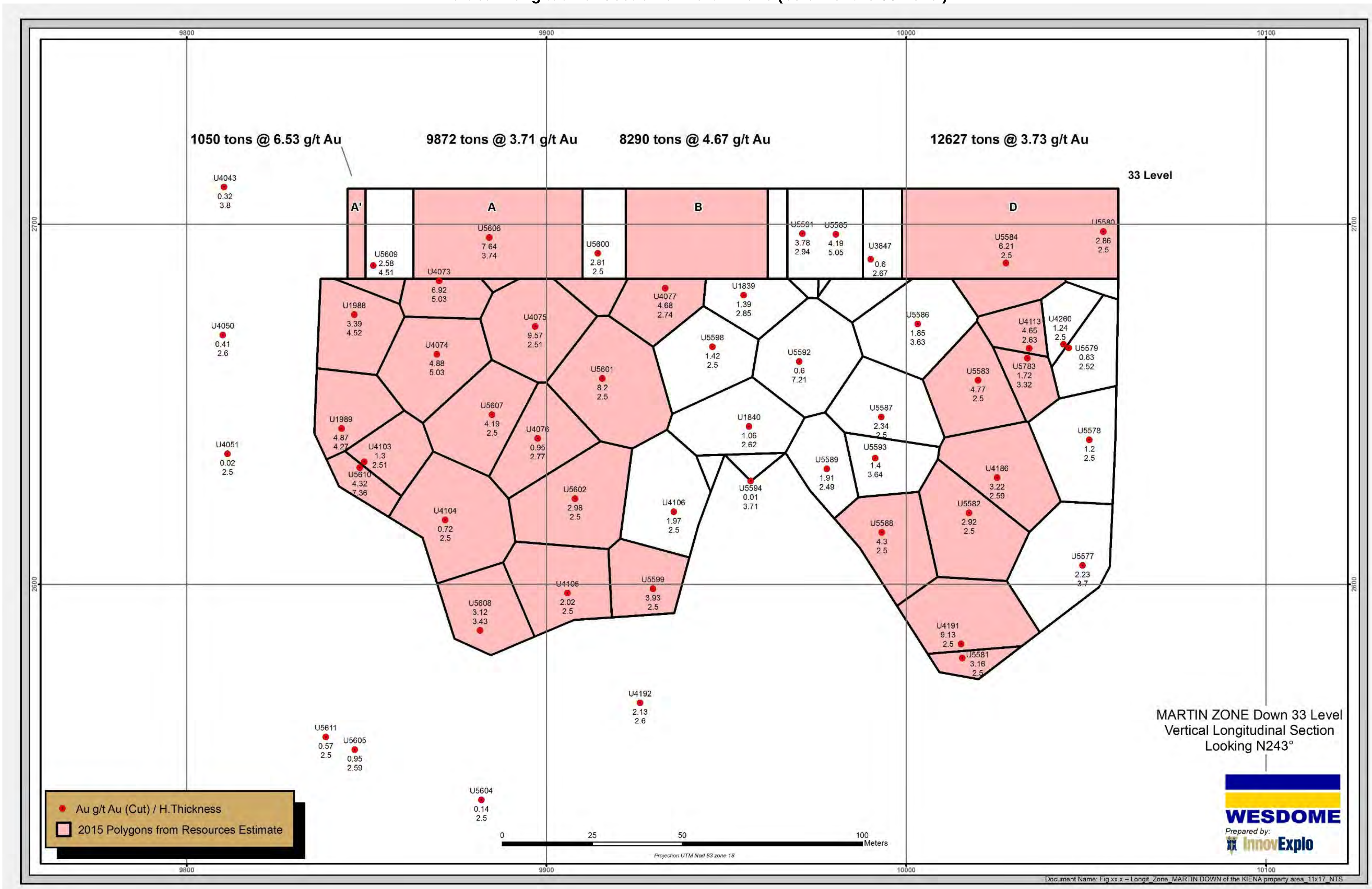
Vertical Longitudinal Section of Martin Zone



Vertical Longitudinal Section of Martin Zone (above of the 33 Level)



Vertical Longitudinal Section of Martin Zone (below of the 33 Level)



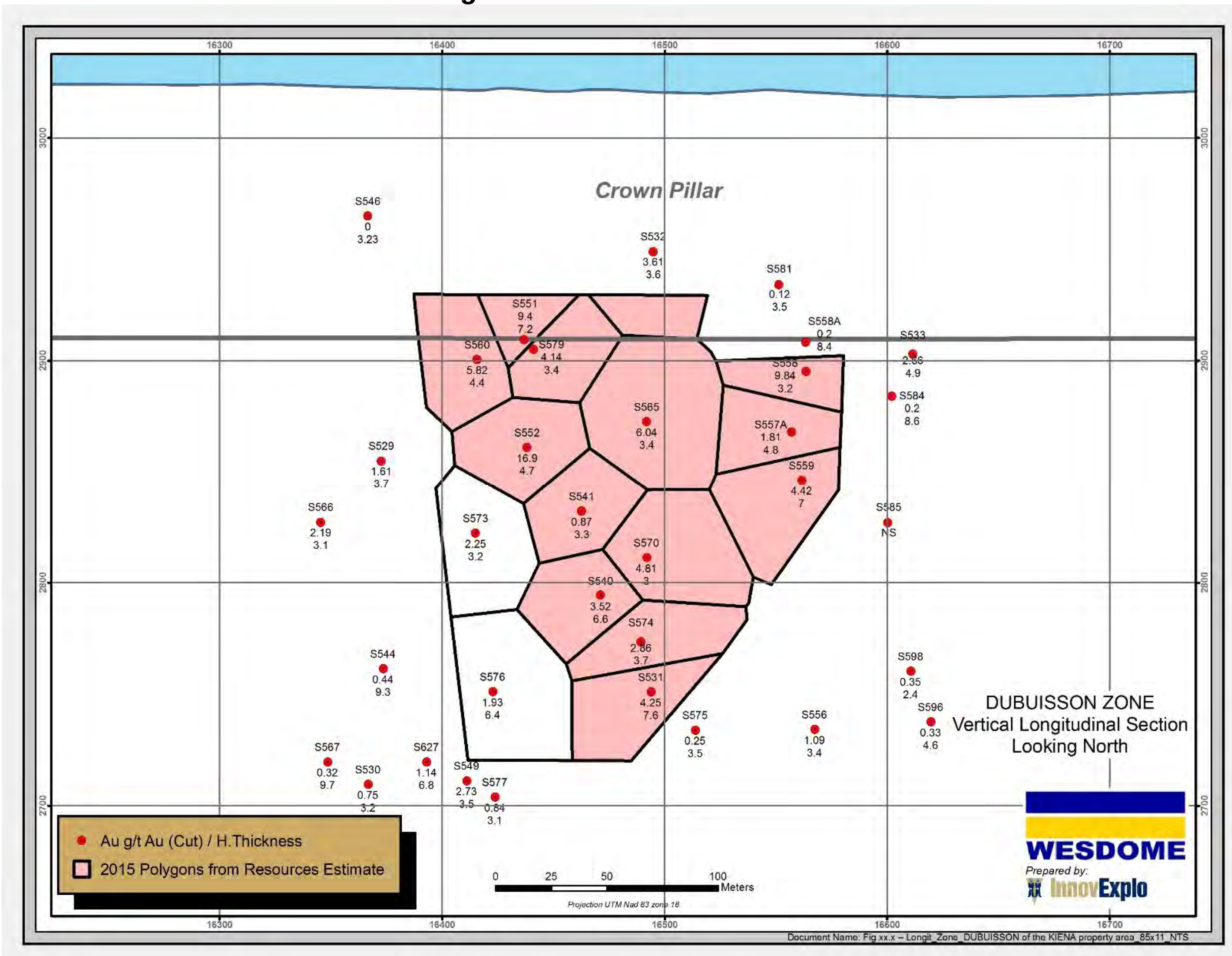
Indicated Resources Dubuisson Zone below the crown pillar

Hole ID	True Width	Cut Grade (Cut to 34.28 g/t Au)	Area	Volume	Metric Tonnes	Grams (Cut to 34.28 g/t Au)	Ounces (Cut to 34.28 g/t Au)
S531	7.6	4.25	2266	17224.4903	48228.57	204971.43	6,589.98
S540	6.6	3.52	1695	11154.1956	31231.75	109935.75	3,534.52
S541	3.3	0.87	1699	5640.44926	15793.26	13740.13	441.76
S551	7.2	9.40	120	858.197132	2402.95	22587.75	726.21
S552	4.7	16.90	2002	9329.66577	26123.06	441479.78	14,193.90
S557A	4.8	1.81	1555	7434.13802	20815.59	37676.21	1,211.32
S558	3.6	9.84	823	2971.47223	8320.12	81870.00	2,632.18
S559	4.9	4.42	2087	10182.8081	28511.86	126022.43	4,051.72
S560	4.4	5.82	1338	5875.78009	16452.18	95751.71	3,078.49
S565	3.4	6.04	3562	12003.5301	33609.88	203003.70	6,526.72
S570	3.0	4.81	2585	7857.49773	22000.99	105824.78	3,402.35
S574	3.7	2.86	1733	6445.86162	18048.41	51618.46	1,659.57
S579	3.4	4.14	1058	3564.97095	9981.92	41325.14	1,328.63
TOTAL		**5.46**			**281,521**	**1,535,807**	**49,377**

Indicated Resources Dubuisson Zone within the crown pillar

Hole ID	True Width	Cut Grade (Cut to 34.28 g/t Au)	Area	Volume	Metric Tonnes	Grams (Cut to 34.28 g/t Au)	Ounces (Cut to 34.28 g/t Au)
S532	3.6	3.61	824	2966.1174	8305.13	29981.51	963.93
S551	7.2	9.40	638	4578.99572	12821.19	120519.17	3,874.78
S560	4.4	5.82	629	2762.76357	7735.74	45022.00	1,447.49
S565	3.4	6.04	27	92.1116405	257.91	1557.79	50.08
S579	3.4	4.14	443	1493.89581	4182.91	17317.24	556.76
TOTAL		**6.44**			**33,303**	**214,398**	**6,893**

Vertical Longitudinal Section of Dubuisson Zone



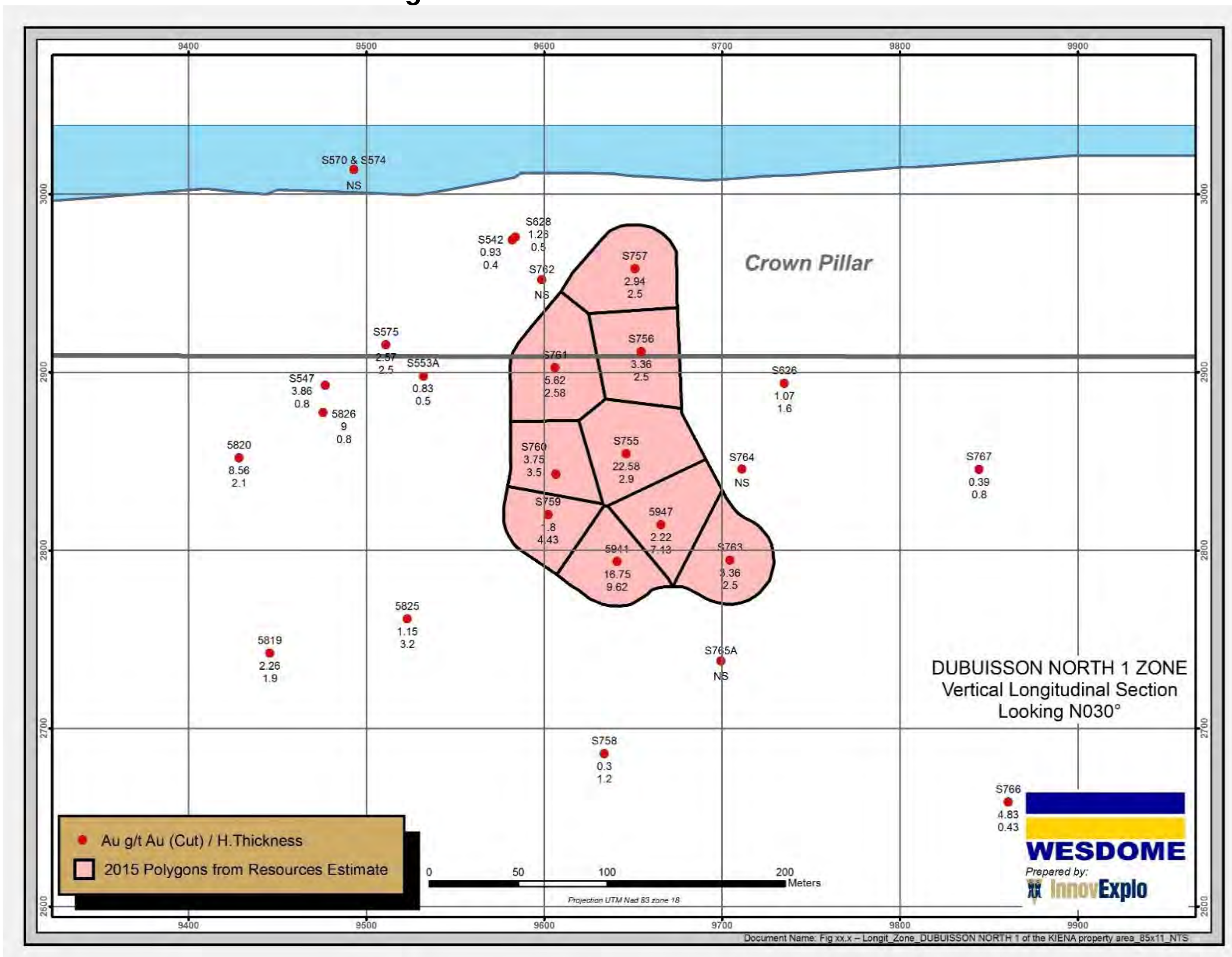
Indicated Resources Dubuisson North 1 Zone below the 1crown pillar

Hole ID	Horizontal Thickness	Cut Grade (Cut to 34.28 g/t Au)	Area	Volume	Metric Tonnes	Grams (Cut to 34.28 g/t Au)	Ounces (Cut to 34.28 g/t Au)
U5941	9.62	11.97	1938.58	18643.4879	52201.77	624855.14	20,089.56
U5947	7.13	2.22	2188.85	15617.25869	43728.32	97076.88	3,121.09
S755	2.90	22.58	2769.69	8020.481623	22457.35	507086.93	16,303.22
S756	2.50	3.36	1188.27	2970.675	8317.89	27948.11	898.55
S759	4.43	1.80	1688.24	7470.457575	20917.28	37651.11	1,210.51
S760	3.50	3.75	1853.24	6479.860303	18143.61	68038.53	2,187.49
S761	2.58	5.62	1805.69	4653.804837	13030.65	73232.27	2,354.47
S763	2.50	3.36	2133.72	5334.30875	14936.06	50185.18	1,613.49
TOTAL		**7.67**			**193,733**		**47,778**

Indicated Resources Dubuisson North 1 Zone within the crown pillar

Hole ID	Horizontal Thickness	Cut Grade (Cut to 34.28 g/t Au)	Area	Volume	Metric Tonnes	Grams (Cut to 34.28 g/t Au)	Ounces (Cut to 34.28 g/t Au)
S756	2.50	3.36	1261.77	3154.425	8832.39	29676.83	954.13
S757	2.50	2.94	2424.97	6062.4145	16974.76	49905.80	1,604.51
S761	2.58	5.62	1083.41	2792.272593	7818.36	43939.20	1,412.68
TOTAL		**3.67**			**33,626**		**3,971**

Vertical Longitudinal Section of Dubuisson North 1 Zone



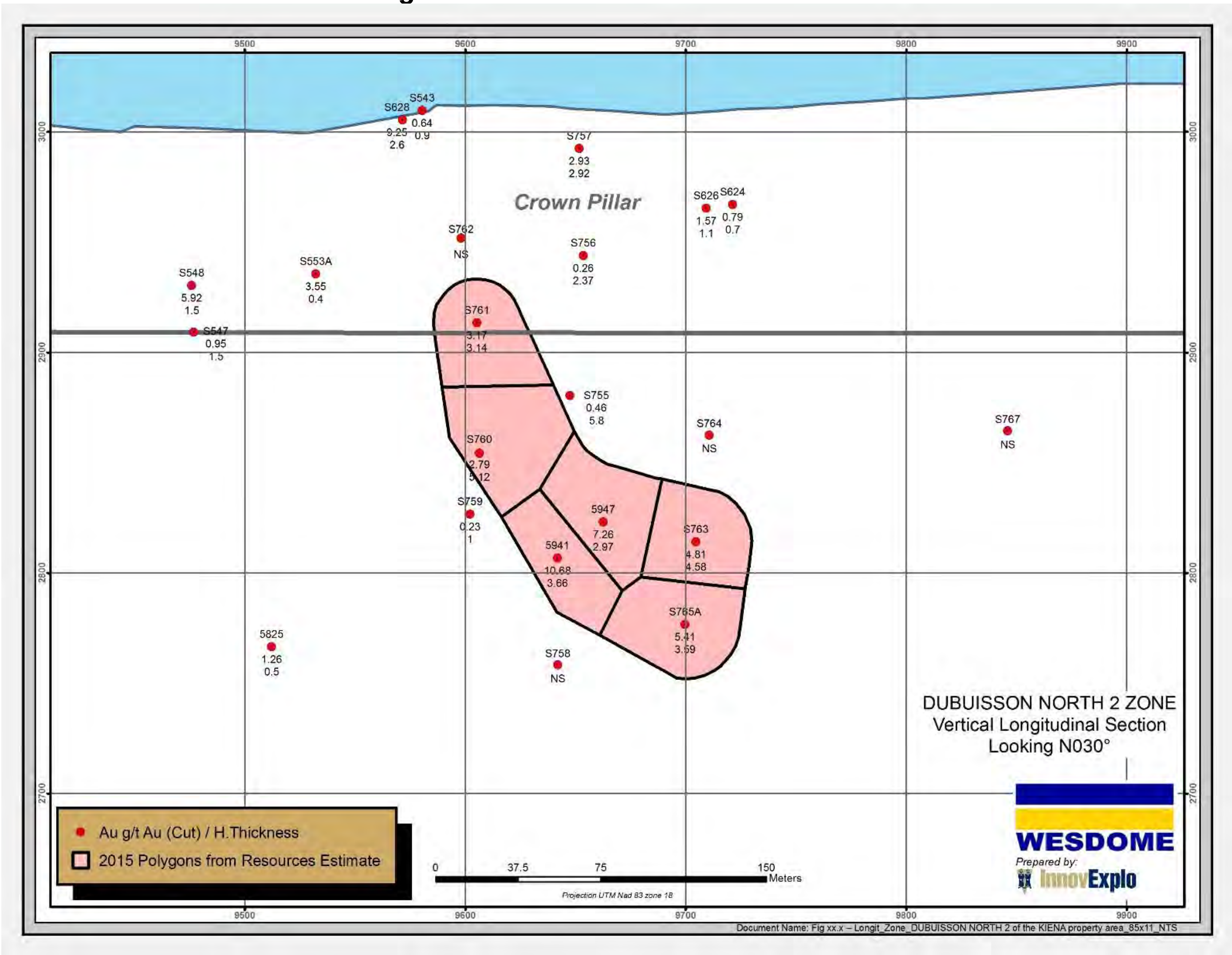
Indicated Resources Dubuisson North 2 Zone below crown pillar

Hole ID	Horizontal Thickness	Cut Grade (Cut to 34.28 g/t Au)	Area	Volume	Metric Tonnes	Grams (Cut to 34.28 g/t Au)	Ounces (Cut to 34.28 g/t Au)
U5941	3.66	10.68	1622.03	5929.970337	16603.92	177329.83	5,701.29
U5947	2.97	7.26	2099.50	6239.717566	17471.21	126840.98	4,078.03
S760	5.12	2.79	2377.32	12160.49028	34049.37	94997.75	3,054.25
S761	3.14	3.17	1138.84	3578.463048	10019.70	31762.44	1,021.19
S763	4.58	4.81	1907.34	8744.374001	24484.25	117769.23	3,786.37
S765A	3.59	5.41	2194.17	7872.885589	22044.08	119258.47	3,834.25
TOTAL		**5.36**			**124,673**		**21,475**

Indicated Resources Dubuisson North 2 Zone within crown pillar

Hole ID	Horizontal Thickness	Cut Grade (Cut to 34.28 g/t Au)	Area	Volume	Metric Tonnes	Grams (Cut to 34.28 g/t Au)	Ounces (Cut to 34.28 g/t Au)
S761	3.14	3.17	797.96	2507.349912	7020.58	22255.24	715.52
TOTAL		**3.17**			**7,021**		**716**

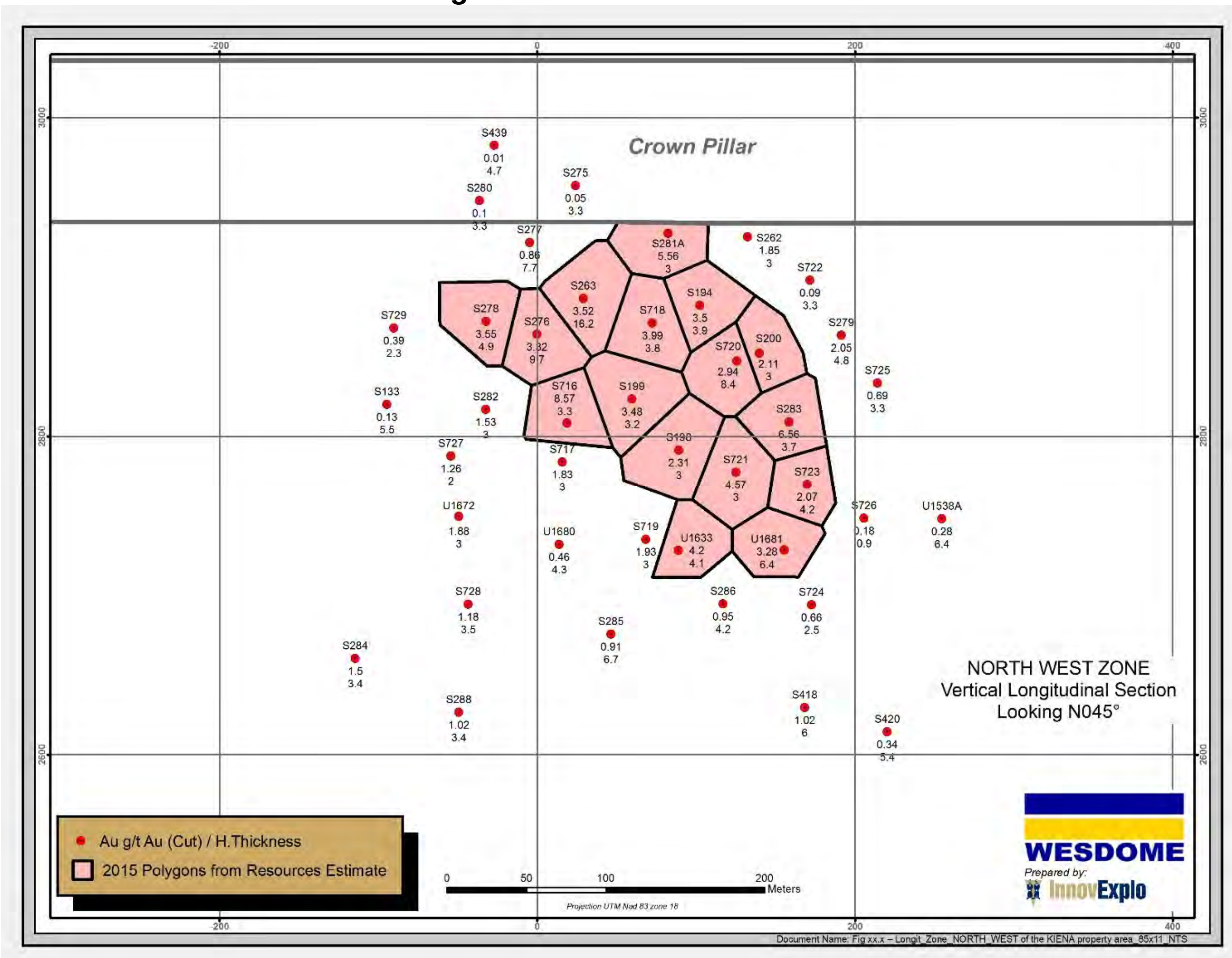
Vertical Longitudinal Section of Dubuisson North 2 Zone



Indicated Resources Northwest Zone

Hole ID	Horizontal Thickness	Cut Grade (Cut to 34.28 g/t Au)	Area	Volume	Metric Tonnes	Grams (Cut to 34.28 g/t Au)	Ounces (Cut to 34.28 g/t Au)
S194	3.90	3.50	1883.48	7345.56069	20567.57	71986.49	2,314.42
S198	3.00	2.31	2628.56	7885.6896	22079.93	51004.64	1,639.84
S199	3.23	3.48	2549.92	8236.24806	23061.49	80254.00	2,580.23
S263	16.24	3.52	2374.57	38563.02005	107976.46	380077.13	12,219.76
S276	9.67	3.32	2080.03	20113.92975	56319.00	186979.09	6,011.52
S278	4.92	3.55	2018.16	9929.36688	27802.23	98697.91	3,173.21
S281A	3.00	5.56	1816.26	5448.7839	15256.59	84826.67	2,727.24
S283	3.74	6.56	1997.11	7469.17457	20913.69	137193.80	4,410.88
S716	3.25	8.57	1906.98	6197.685325	17353.52	148719.66	4,781.45
S718	3.83	3.99	2123.85	8134.35699	22776.20	90877.04	2,921.76
S720	8.37	2.94	1845.69	15448.41442	43255.56	127171.35	4,088.65
S721	3.00	4.57	2288.09	6864.2766	19219.97	87835.28	2,823.97
S723	4.16	2.07	1568.61	6525.412608	18271.16	37821.29	1,215.98
U1633	4.07	4.20	1674.57	6815.508447	19083.42	80150.38	2,576.89
U1681	6.41	3.28	1862.13	11936.26035	33421.53	109622.62	3,524.45
TOTAL		**3.79**			**467,358**		**57,010**

Vertical Longitudinal Section of Northwest Zone



Indicated Resources S50 Deep Zone A

Hole ID	Horizontal Thickness	Cut Grade (Cut to 34.28 g/t Au)	Area	Volume	Metric Tonnes	Grams (Cut to 34.28 g/t Au)	Ounces (Cut to 34.28 g/t Au)
U-4830	6.08	2.35	953	5,795	16,226	38,130	1,225.91
U-4928	9.98	8.42	1,807	18,037	50,502	425,229	13,671.42
U-5965B	6.59	3.71	1,260	8,301	23,242	86,229	2,772.33
U-5966	7.05	21.49	2,481	17,488	48,966	1,052,275	33,831.42
U-5967	5.02	8.20	2,431	12,205	34,175	280,238	9,009.87
TOTAL		**10.87**			**173,111**	**1,882,101**	**60,511**

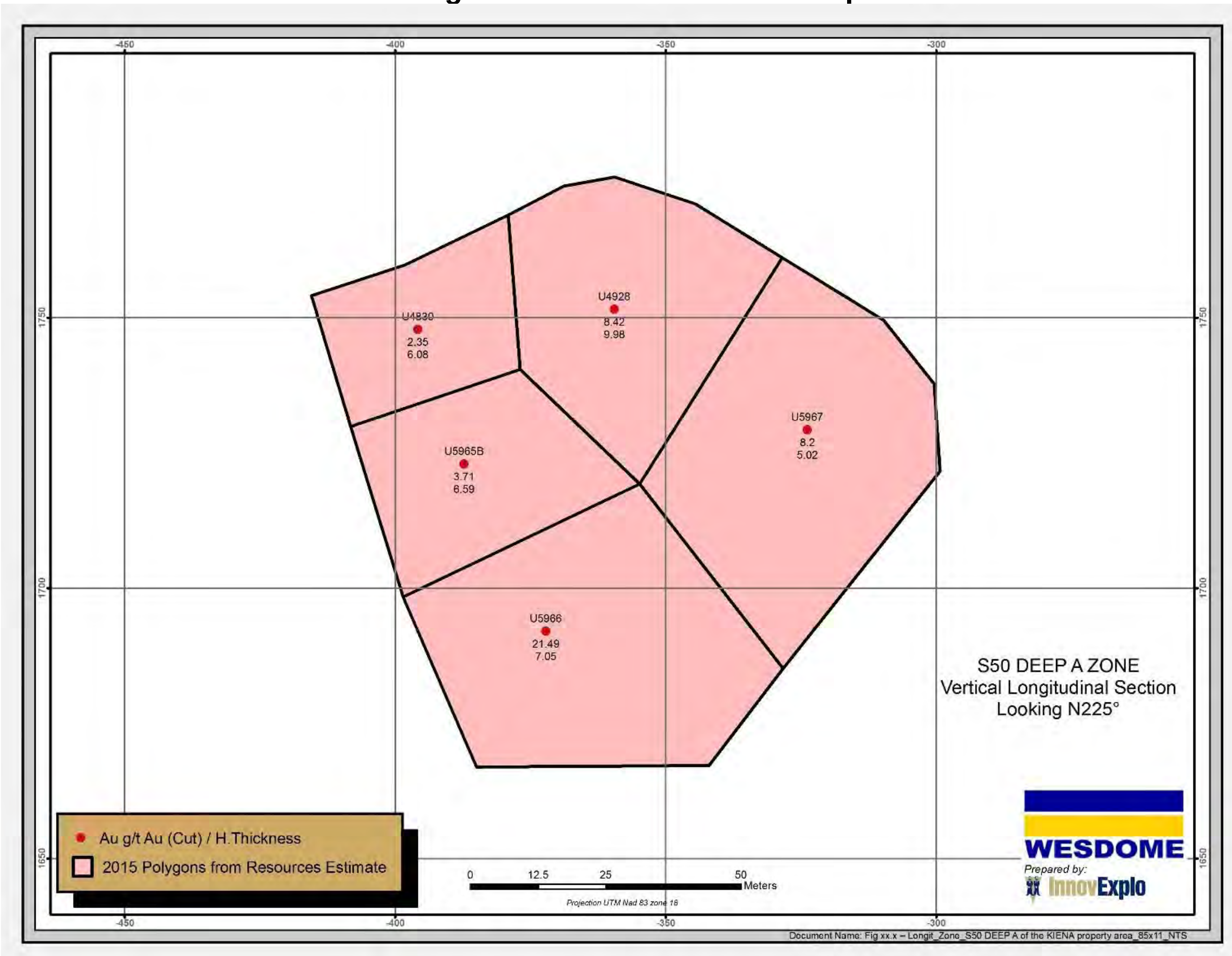
Indicated Resources S50 Deep Zone AH

Hole ID	Horizontal Thickness	Cut Grade (Cut to 34.28 g/t Au)	Area	Volume	Metric Tonnes	Grams (Cut to 34.28 g/t Au)	Ounces (Cut to 34.28 g/t Au)
U-4929	6.67	12.11	1,938.70	12,931.13	36,207	438,469	14,097.10
U-5967	8.80	2.72	762.70	6,711.72	18,793	51,116	1,643.43
U-5974	4.32	7.06	1,134.40	4,900.60	13,722	96,875	3,114.61
TOTAL		**8.53**			**68,722**	**586,460**	**18,855**

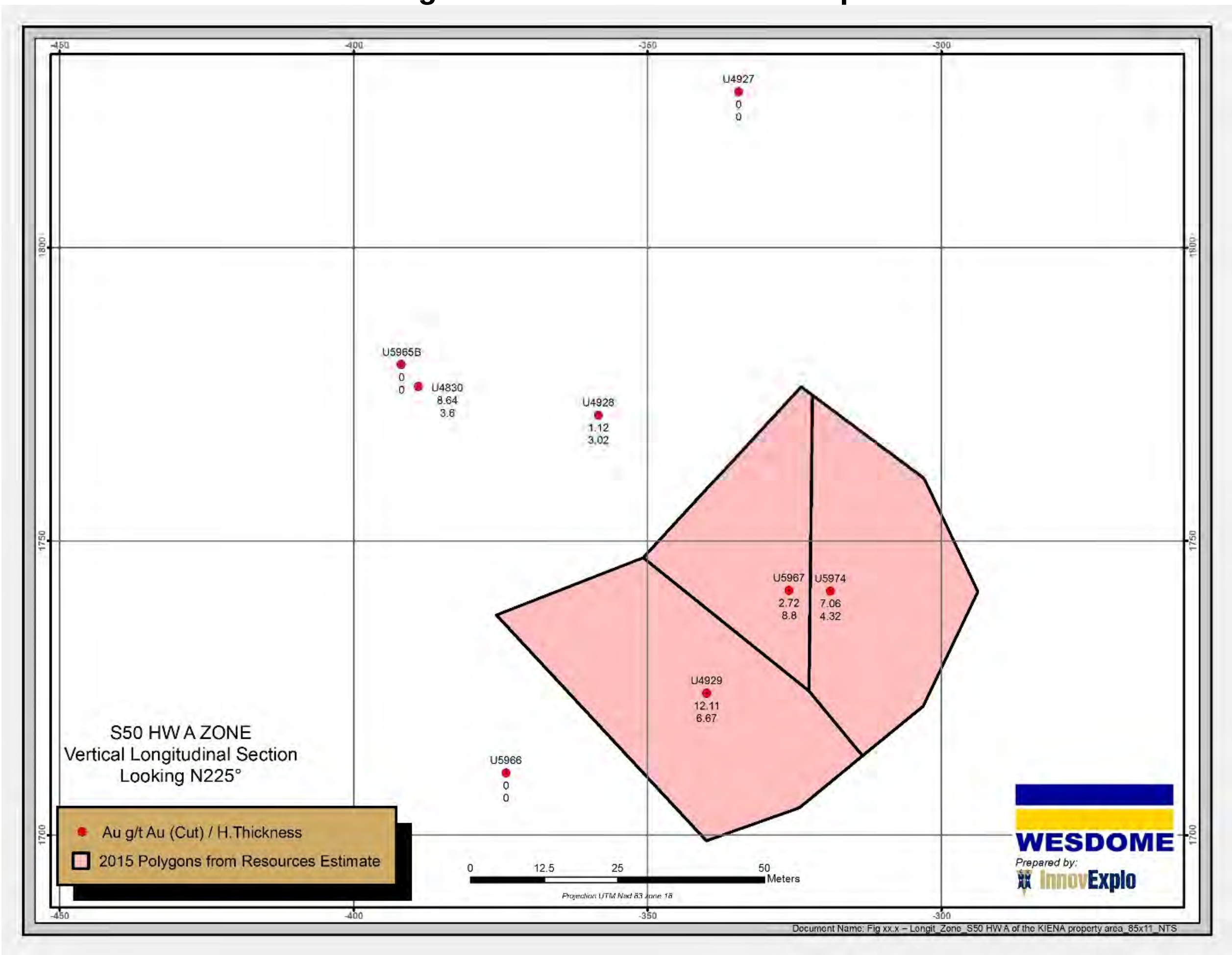
Indicated Resources S50 Deep Zone B Zone

Hole ID	Horizontal Thickness	Cut Grade (Cut to 34.28 g/t Au)	Area	Volume	Metric Tonnes	Grams (Cut to 34.28 g/t Au)	Ounces (Cut to 34.28 g/t Au)
U-4317	8.04	3.92	1,531.50	12,313.26	34,477	135,150	4,345.18
U-5972	11.79	3.09	1,268.70	14,957.97	41,882	129,416	4,160.83
U-4568	7.30	3.20	4,408.40	32,181.32	90,108	288,345	9,270.50
U-5969	8.66	1.41	2,826.10	24,474.03	68,527	96,623	3,106.52
U-5173	4.08	4.00	2,669.90	10,893.19	30,501	122,004	3,922.51
U-4566	14.16	3.74	4,649.10	65,831.26	184,328	689,385	22,164.24
U-3500A	6.34	2.97	3,620.20	22,952.07	64,266	190,869	6,136.59
TOTAL		**3.21**			**514,089**		**53,106**

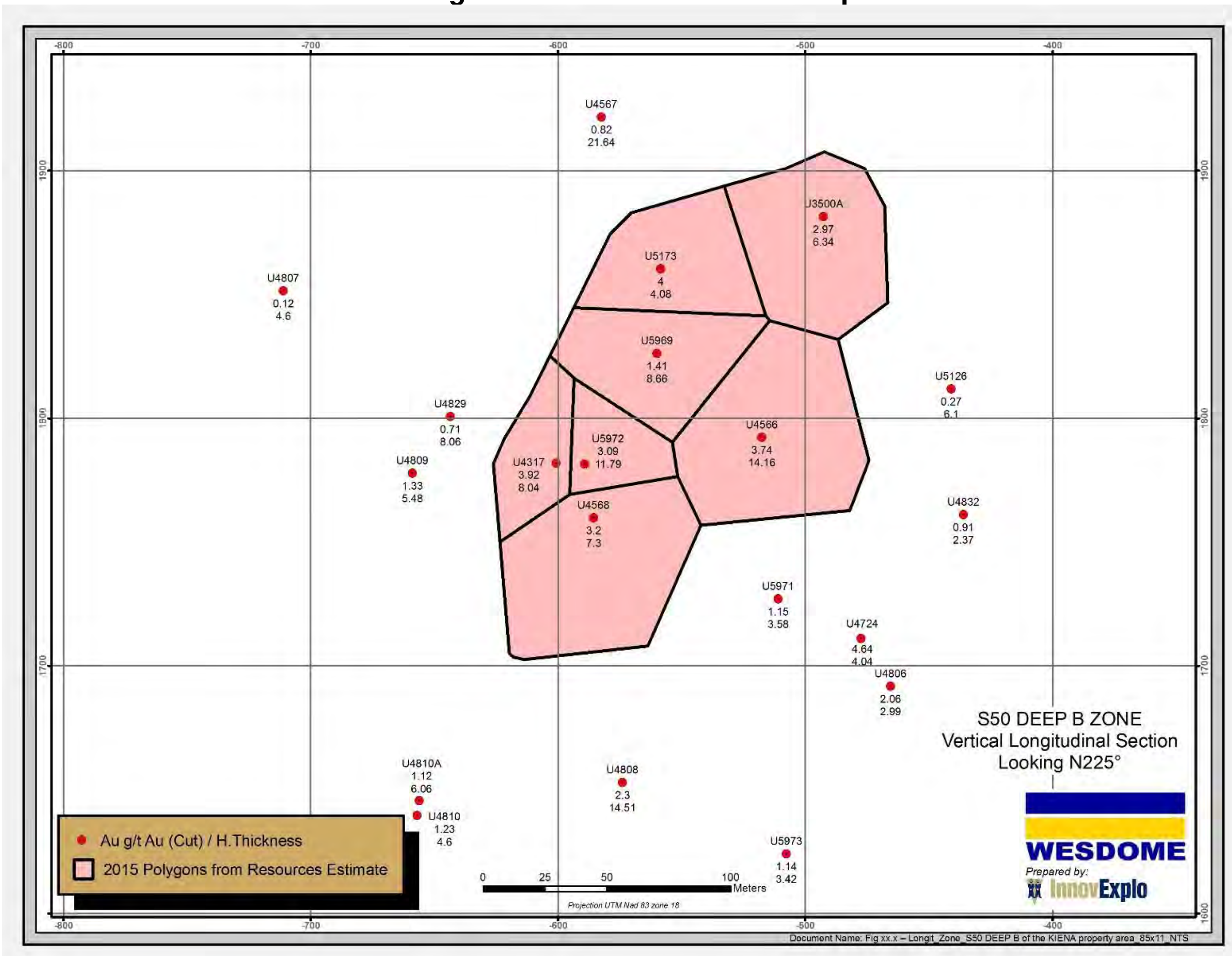
Vertical Longitudinal Section of S50 Deep Zone A



Vertical Longitudinal Section of S50 Deep Zone AH



Vertical Longitudinal Section of S50 Deep Zone B



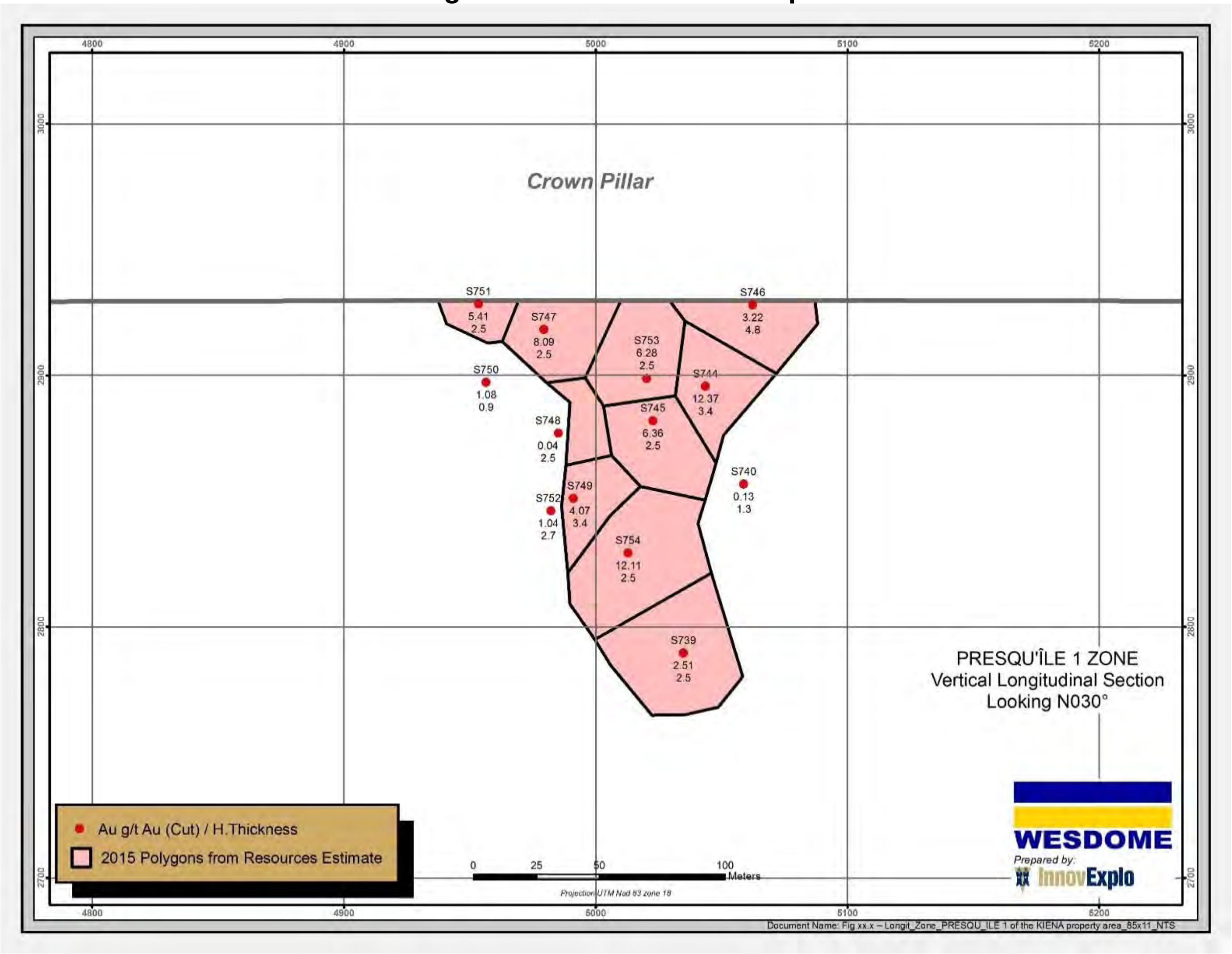
Indicated Resources Presquile 1 Zone

Hole ID	Horizontal Thickness	Cut Grade (Cut to 34.28 g/t Au)	Area	Volume	Metric Tonnes	Grams (Cut to 34.28 g/t Au)	Ounces (Cut to 34.28 g/t Au)
S-739	2.50	2.51	2,019	5,047	14,132	35,471	1,140.41
S-744	3.35	12.37	1,127	3,775	10,569	130,740	4,203.38
S-745	2.50	6.36	1,260	3,151	8,822	56,109	1,803.94
S-746	4.82	3.22	1,022	4,927	13,797	44,426	1,428.32
S-747	2.51	8.09	1,102	2,766	7,744	62,651	2,014.29
S-748	2.50	0.04	481	1,203	3,368	135	4.33
S-749	3.37	4.07	731	2,465	6,902	28,090	903.12
S-751	2.50	5.41	374	936	2,621	14,181	455.94
S-753	2.50	6.28	1,258	3,144	8,804	55,286	1,777.50
S-754	2.50	12.11	2,149	5,373	15,046	182,204	5,857.99
TOTAL		**6.64**			**91,804**	**609,293**	**19,589**

Indicated Resources Presquile 2 Zone

Hole ID	Horizontal Thickness	Cut Grade (Cut to 34.28 g/t Au)	Area	Volume	Metric Tonnes	Grams (Cut to 34.28 g/t Au)	Ounces (Cut to 34.28 g/t Au)
S-748	3.13	23.28	1,444	4,521	12,658	294,688	9,475
S-750	3.80	3.57	1,630	6,195	17,346	61,923	1,991
S-753	6.05	4.11	1,249	7,557	21,161	86,971	2,797
TOTAL		**8.67**			**51,165**		**14,263**

Vertical Longitudinal Section of Presqu'ile 1 Zone



Vertical Longitudinal Section of Presqu'ile 1 Zone