

***HPQ SILICON RESOURCES INC.***

**National Instrument 43-101-Compliant**

***TECHNICAL EVALUATION REPORT***

***ON THE***

***GOLD POTENTIAL***

***OF THE***

***BEAUCE GOLD PROJECT***

**SOUTHERN QUEBEC REGION,**

**QUÉBEC**

**By**

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**December 15, 2016**

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## 1.0 Summary

In early October, 2016, Mr. Patrick Levasseur, President and C.O.O. of HPQ Silicon Resources Inc. (formerly Uragold Bay Resources Inc.) mandated the author to prepare an evaluation report for its Beauce Gold Project (BGP) host to the Gilbert River gold deposit. Discovered in the 1830s, this deposit has produced over the last 170 years, significant gold from alluvial and elluvial sediments sources. HPQ Silicon Resources Inc. (“HPQ Silicon”) is a publicly trading mineral exploration company active in the Province of Quebec. HPQ Silicon Management’s current objective is to vend the claims that are the object of this report to its private subsidiary Beauce Gold Fields Inc., to obtain a listing of this company’s common shares on the Canadian Securities Exchange (CSE) and seek proper financing to carry-on with the exploration and development of the BGP both for placer gold and the underlying bedrock.

This report describes the gold potential of the Beauce Gold Project of HPQ Silicon. The project area hosts at least two unconsolidated gold bearing sedimentary units (a lower saprolite and an upper brown diamictite), buried under a variable thickness of younger sediments mostly tills and marine clays. This thickness varies from a few metres to several tens of metres of overburden.

The area first attracted attention with the discovery in 1846 of a 3 ounce gold nugget. From then onward gold was mined intermittently in various tributaries of the Chaudière River (into which the Gilbert River flows).

Much of the data presented is historical having been obtained from past assessment exploration reports and various historical documents. Additional work conducted by Uragold Bay Resources Inc, (“UBR” now HPQ Silicon Resources Inc.) between 2011 and 2014, provides further information and consisted of: two drilling campaigns of 16 boreholes (12 into the sediment package; and 4 into the underlying Basement rocks); and a small-scale testing/sampling program conducted on the already washed gravels from the former 1960’s placer gold dredging operation on the Rang Chaussegros.

The Property is located southeast of Beauceville around and northeast of the town of Saint-Simon-les-Mines, in the Gilbert River Valley (in the Appalachians of southern Québec). The Beauce property was originally composed of 5 claims ( $\pm 106$  ha) with the addition of the claims acquired from Fancamp Exploration Ltd. and through map staking it now comprises some 52 claims covering 1,656.14 hectares in two blocks of prospective ground.

The first recorded drilling in the Beauce region was in 1957, when the Beauce Placer Company drilled the area to estimate the volumes and gold contents of the buried paleo-placers of the Gilbert River valley. Subsequently, the area was partially mined with a mechanized dragline and dredging operations from 1959 to about 1964. This mining was conducted across the central part of the actual Beauce Gold Project area. Despite a significant

production of 56 000 oz. gold, the operations ceased somewhere in 1963/4 because of technical problems with the dredge.

Interest was renewed in the mid-nineteen-eighties, with Coniagas Mines Ltd. ("Coniagas") and Macamic Resources Inc. ("Macamic") investigating the Chaudière Valley and area with RC-drilling, seismic and other geophysical surveys.

In early 2011, Uragold used sonic drilling to core the unconsolidated sedimentary units. These included: (1) an upper grey silty diamict; (2) laminated silt to fine sand rhythmites; (3) a brown clayey diamict; and (4) a brown saprolite resulting from deep weathering of bedrock. Unit 3 corresponds to an older till produced by the incorporation of the deep alteration profile (unit 4). Both units 3 and 4 constitute the gold bearing units of the buried placer known on the Property. The sonic drilling also allowed the coring of fresh bedrock including pyritic shale, slate and felsic volcanoclastics layers of the Beauceville Formation.

Treatment of 22 samples (20-40 kg) from the lower brown diamict/ saprolite returned 17 gold grains of medium to coarse size (0.2 to 2 mm). Scanning electron microscopy of these grains revealed: 1) a complex and fragile shape; 2) pitted surfaces made of pure gold and more regular surfaces with up to 30% silver; and 3) inclusion of quartz, clay and iron oxide with the gold.

Lines of evidence suggest that the gold was released from Magog Group rocks (quartz veins, sulphidic host minerals, etc.) through deep pre-Quaternary weathering and that the gold was both glacially transported southward and eastward over a very short distance to its present position. Most (if not all of the gold) originates from within the Gilbert River basin.

Analysis of the bedrock underlying the mineralized diamicts intersected by the sonic coring returned a low anomalous gold value (107 ppb Au) in grey mudstone of the Beauceville Formation. Based on the possibility of a nearby bedrock source, a second drilling campaign was undertaken in late 2011, to test the local bedrock using diamond drilling. This program successfully intersected sedimentary and volcanic units of the Beauceville Formation and revealed intense alteration (silicification, epidotisation, etc.) and quartz carbonated sulphide containing vein networks suggest an orogenic gold type environment. Sampling of veined and mineralized intersections returned slightly anomalous values from 10 to 75 ppb Au in one borehole (RG11-01), where subsequent re-analysis of intervening unaltered/ un-mineralized core returned only undetectable gold values (< 5ppb). The likelihood of a hard-rock source for the gold remains probable.

Several previous Historical Estimates of the Beauce Exploration property have been made. Notably these included the following reports:-

- 1) **Coniagas Mines Ltd.** (see report GM42988, 1986, page 62) and Section 6.8 of this report; and by
- 2) **Macamic Resources Inc.** (1987) which completed a further round of drilling (after Coniagas) and redefined a considerable length of the Beauce paleo-channel adding-in several new drill sections (again see Section 6.8 of this report).

Note: The reader is cautioned that all discussions on the historical resources and reserves estimate on the Beauce Project area are largely based on historical data in the terms of current NI 43-101 regulation and that the qualified person has not classified the historical estimates as current mineral resources or mineral reserves; and that HPQ Silicon Resources Inc. does not consider the historical estimates as current mineral resources or reserves.

A new historical resource estimate of the Gilbert River alluvial deposit was undertaken by Stuart-Williams (2015). It is presented in Section 6.8 of this report. The deposit would contain some 1,892,503 gr Au (60,844 ounces) within 2,157,171 m<sup>3</sup> of saprolite and brown tillite and under some 9,248,334 m<sup>3</sup> of overburden; giving a conservative stripping ratio of 1:4,3 and an average grade of the brown tillite and/ or the saprolite material of around 0,80 g/ m<sup>3</sup>.

Stuart-Williams believes that the gold volume contained in the deposit will be larger than indicated by the drilling, but until a representative bulk sample is completed, there are no means to quantify the pervasive nugget effect of the deposit. However, a useful guide may be to look at the historical information and to use this as a guideline.

Looking at the section previously drilled by The Beauce Placer Company and their unpublished gold production data for the dredging and drag-line operation of the same area at the time:

<b>Historical Drilling Estimate vs. Gold Dredged (assay values)</b>			
Historical Drilled Estimate		Gold Dredged	
Volume Estimate	1,050,000 m <sup>3</sup>	Volume processed	1,050,000 m <sup>3</sup>
Estimated gold contained	294,000 g/ Au 9,440 oz./ Au	Gold Dredged	1,768,000 g/ Au 56,800 oz./ Au
Estimated Gold	0.279 g Au/ m <sup>3</sup>	Gold grade	1.677 g Au/ m <sup>3</sup> g

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grade			
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It can be seen that the nugget effect within the Beauce Gold Project is such that the final gold dredging recovery was about 6 times the drilling estimate of the gold content.

Making the assumption that recovered gold could be up to six times (x6) the results obtained through drilling this might suggest that the gold potential for the entire deposit now controlled by Beauce Gold Fields could **range** between **61,000** ounces (2,200,000 m<sup>3</sup> @ 0.87 g Au/m<sup>3</sup>) and **366,000** ounces (2,200,000 m<sup>3</sup> @ 5.22 g Au/m<sup>3</sup>) using the x6 multiplier.

In February 2013, the “Ministère du Développement durable, de l’Environnement et des Parcs” (MDDEP) issued the Certificate of Authorization (“CA”) allowing the start of trial mining activities on the Rang Chaussegros of the Beauce Placer Gold project. With this CA, HPQ Silicon has the right to excavate an initial 209 000 m<sup>3</sup> of overburden and extract up to 9 000 m<sup>3</sup> of auriferous basal till and saprolite for processing and gold recovery.

In his report dated January 8, 2015, geologist Stuart-Williams concludes that the exploration program completed over the recent years by Uragold Bay (now HPQ Silicon) on the Beauce Placer Project area, tend to confirm historical results but has also brought new insight on the Gilbert River Placer deposit, particularly regarding the possibility of a local bedrock source for the gold mineralization.

Highlights are as follows:

- The Sonic Drilling program completed in 2011 revealed that the gold bearing units corresponded to a basal brown saprolitic clay, overlain by a brown diamict that is at least partly of glacial origin (till). It would appear that the saprolite is generally the host of most of the native gold found in the deposit, rather than the overlying alluvial gravel. These units are generally resting above weathered and fresh bedrock and frequently gradational;
- The estimated historical geological resources calculated with the polygonal method outlined 1,892,500 grams of gold (60,844 oz Au) contained in some 2,157,171 m<sup>3</sup> of till material under some 9,248,334 m<sup>3</sup> of loose overburden (or a stripping ratio of 1: 4.3) with an average combined grade of 0.877 g/ m<sup>3</sup> Au for the brown diamictite and the saprolite;
- Historical drilling and the Beauce Placer Mining Company production records suggest that with the strong historical “nugget effect” characteristic of the deposit it should be expected that the mining

recovery could be as much as 6 folds higher than in the resource estimate;

- Petrological studies of the gold grains recovered from the basal saprolite unit suggest a close proximity to a bedrock source;
- The limited diamond drilling program completed in the fall of 2011 outlined both meta-sediment and volcanic rocks part of the Beauceville Formation under and immediately up ice from the known placer mineralization;
- Core descriptions revealed intense quartz-carbonate veining, local sulphide mineralization and significant silicification, epidotisation, and brecciation are typical of hydrothermal alteration associated with orogenic type gold deposits. DDH RG11-01 drilled below the known placer returned slightly anomalous values from 10 to 75 ppb Au. Subsequent re-sampling of intervening segments from this hole returned gold values below detection limits;
- He concludes that in addition to the residual-alluvial mining potential for which the property is already permitted, the Beauce Gold Project is a property of merit with a significant potential for the discovery of primary gold mineralization related to the source of the alluvial-residual deposits of the Gilbert River drainage. In the past, because of the relative ease to recover the gold in this environment and the inexperience of the successive owners and operators with hard rock mining, this potential has been neglected. Further exploration is recommended and should be carried-out by HPQ Silicon Inc.

To carry-on with the exploration and development of the Beauce Gold Project, the following recommendations should be implemented by HPQ Silicon:

- A general prospecting program for primary hard rock gold deposits should be implemented on the entire Beauce Gold Project property. This program should include prospecting for gold, geological mapping, sampling of outcrops, trenching, geochemical and geophysical surveying. The cost of the proposed program to cover the entire Project area would in the order of \$170,500 as presented in the following budget proposal;
- The company should carry-on with the planning and eventual completion of the proposed bulk sampling program for which the project has already been permitted. The excavation, extraction and processing of 9,000 m<sup>3</sup> of the mineralized residual-alluvial deposit would provide valuable data on the statistical distribution model and eventual realistic

mining grade for the Gilbert River alluvial zone, which contains a high ratio of coarse gold particles. This aspect requires further evaluation.

- Concurrently, additional sonic drilling should be completed on the original Gilbert River block to assist in verifying the historical data and to provide a systematic drilling grid to support a better statistical database required for the development of a robust geological and resource model.
- Upon the completion of the bulk sampling program, the project will be updated to a Feasibility Study to validate the economic potential of the alluvial mining conditions under NI 43-101 disclosure standards.
- The pilot-scale program should be followed by additional drilling and trenching of the bedrock exposed during the excavation and bulk sampling activities. This program is budgeted at \$2,724,700, Assuming that the results of the first phase of the program are positive, the second phase of the program would also call for core drilling to test the outlined targets at a cost of \$764,500 and for a total budget of C\$3,489,200.

## **2.0 INTRODUCTION**

### **2.1 Background, Authorization and Purpose**

In early October, 2016, Mr. Patrick Levasseur, President and C.O.O. of HPQ Silicon Resources Inc. (formerly Uragold Bay Resources Inc.) mandated the author to prepare an evaluation report for its Beauce Gold Project (BGP) host to the Gilbert River gold deposit. Discovered in the 1830s, this deposit has produced over the last 170 years, significant gold from alluvial and elluvial sediments sources. HPQ Silicon Resources Inc. (“HPQ Silicon”) is a publicly trading mineral exploration company active in the Province of Quebec. HPQ is mainly involved in the acquisition, exploration, development and transformation of high purity Quartz Silica. HPQ Silicon Management’s current objective is to vend the claims that are the object of this report to its private subsidiary Beauce Gold Fields Inc. Afterwards Beauce Gold Fields, will seek to obtain a listing of the company’s common shares on the Canadian Securities Exchange (CSE) and to secure the proper financing to carry on with the exploration and development of the BGP both for placer gold and the underlying bedrock which has remained elusive to date.

Since 1979, the author has acquired pertinent experience in the evaluation, exploration and development of several types of ore deposits including placer and hard rock gold mineralization. For the purpose of this report he has undertaken an independent technical review of the project area and its economic mineral potential in compliance with the Canadian NI 43-101 disclosure standards for mineral projects. The author considers that the Beauce Gold Project qualifies as a property of merit to support the listing of the Beauce Gold Fields Inc. shares on the CSE.

This report describes the materially significant aspects of the property and recommends an exploration program. The author has reviewed the information available as listed under “References” and presents the summary of the information he deems material to this technical report including all pertinent files available on various websites and the websites of the Ministère de l’Énergie et des Ressources naturelles (MERN) of the Province of Québec.

The author has verified the land tenure by reliance on copies of the official government records presented in the GESTIM website of the MERN of the Province of Quebec. Some of the technical data presented in this report is derived from historical reports, maps and various studies found on the website of the MERN and companies involved in the business of mineral resources exploration and development. While the author has made every effort to accurately transcribe and convey the content of these documents, he cannot guarantee their accuracy, validity or completeness. The authors of these files and documents were not necessarily qualified persons within the context of NI 43-101 at the time the files were produced.

The author has visited the BGP area on November 2<sup>nd</sup> 2016, during which he reviewed various field aspects for the conduct of exploration activities over the project area.

## 2.2 Units

The unit prices for various contractors, laboratory charges, professional fees, etc. as presented in the proposed budget (Section 26) have been researched and are within the going rates for companies active in the various mining areas of the Province of Quebec. The currency unit used is the Canadian Dollar (\$). The Metric System or International System (SI) of units is the primary system of measure and length used in this report.

The geographical coordinates used in this report to locate the claims are those provided on official maps of the Province of Quebec and distributed by the government.

## 2.3 Qualifications of the Author

Mr Benoît M. Violette, P.Geo is a graduate from the University of Ottawa with the degree B.Sc. (Honours) Geology in 1979. Over the last 38 years, he has acquired valuable experience exploring and developing resources for several types of mineral commodities and in all phases of mineral exploration and development in Canada, the USA and in several African countries.

Mr Violette is a member (# 678) of the “Ordre des Géologues du Québec”, which is an official government regulated professional association in the Province of Quebec, Canada.

## 3.0 RELIANCE ON OTHER EXPERTS

Land tenure information was obtained from the records available on the GESTIM website which provides the official transcripts from the office of the MERN mining registry (See Appendix 1). In addition, the existence and validity of any undisclosed agreements between any third parties and HPQ are not reflected in our review. The consultant has relied on representations from the company’s management claiming it has clear and full ownership of the mineral property hereafter described.

On January 8th, 2015, South African geologist and a Qualified Person under NI 43-101, Vivian Le Quesne Stuart-Williams completed on behalf of Uragold Bay Resources Inc. (now HPQ Silicon Resources Inc.), a Ni 43-101 compliant report titled “Updated Technical Report on the Beauce Placer Property, South-Eastern Québec, Canada”. In most sections of his report the author covers quite extensively certain subjects pertinent to the Beauce Gold Project. Considering that no additional technical information has been added to the project since the publication and filing of Stuart-Williams’ report, the author of the present report has relied extensively on the content of Taylor-Williams’ report to provide pertinent data and information to the reader particularly for Section 6.0, Section 13, Section 14 and Section 25.

***The author of this Technical Report is not responsible for any omissions in, and does not guarantee, and makes no warranty as to the accuracy of all information received from outside sources. The author has made all reasonable efforts to***

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**outline any land tenure or environmental issues relating to the Property and will disclaim all responsibility for missing or inaccurate Property information.**

## **4.0 PROPERTY LOCATION AND DESCRIPTION**

### **4.1 Location**

The Beauce Gold Project is located in the Beauce Region of the Province of Québec (see Figure 1 and Figure 2) some 320 km north-east of Montreal and 92 km south-east from Quebec City. Some of the claims are located on crown land and others underlie properties with surface right holders. The Project permits can be found on NTS map sheets 21L/02 and L07 (1:50,000 scale).

### **4.2 Tenure Rights**

The Beauce Gold Project is made-up of two claim blocks. The west block consists of 46 map designated claim covering 1,355.27 ha in the southern half of St-François township. The much smaller East Block covers six contiguous map designated claims (CDC) covering a total of 300,87 ha. It is located approximately 6 km to the east of west block. The original five CDC claims that covered a portion of the Gilbert River gold deposit acquired by Uragold Bay in 2011, are part of the west and block were the subject of the NI 43-101 report dated April 2014 by V.Q. Stuart-Williams. The other 47 claims were later covered in the January 8, 2015, NI 43-101-compliant Updated Report referred to in this document. The property map is presented in the following Figure 3A and 3B and the titles are listed in appendix 1.

Subsequently Uragold acquired an additional 33 claims (31 from Fancamp Exploration and two from Mr. Rodolphe Mainville) – forming together with the BGP a block covering some 6 km of the Gilbert River paleo-valley. During the same period Uragold acquired an additional 14 claims through map designation. Details of these agreements are provided on HPQ Silicon website and on SEDAR.

At the date of this report, all the claims part of the BGP were in good standing and are registered under Uragold Bay Resources Inc. or HPQ Silicon Resources Inc (following a name change).

### **4.3 Royalties and related information**

HPQ Silicon has financial obligations towards Fancamp Exploration Ltd. regarding the payment of royalties on the marketing of any commodities eventually mined from the Beauce Gold Project.

They are as follows:

Upon start of production a sum of \$500,000 is payable to Fancamp; and

A Gross Metal Royalty Agreement calls for the payment of an aggregate royalty (the "**Royalty**") calculated at the rate of three point five percent (3.5%) of any and all Minerals mined and processed from the Property, which value shall be established based upon the London Bullion Market (for gold or silver) or any other mutually agreed upon price fix. No fees, taxes, deductions, encumbrances or costs, whether direct or indirect, of any kind whatsoever shall be included or deducted from the calculation of the Royalty.

In the Province of Quebec there are various duties, royalties and taxes that could be payable by private parties holding mining titles. The provincial mining code provides for all taxes, charges, royalties and other fees owed to the Treasury to be paid by a mining title owner in respect to his mining activities, to the exclusion of any other form of taxation.

This principle does not, however, prevent the tax agencies from claiming additional taxes. When applicable, the tax provisions of the Mining Code provide a certain guaranty of stability in the event that the Mining Code is amended.

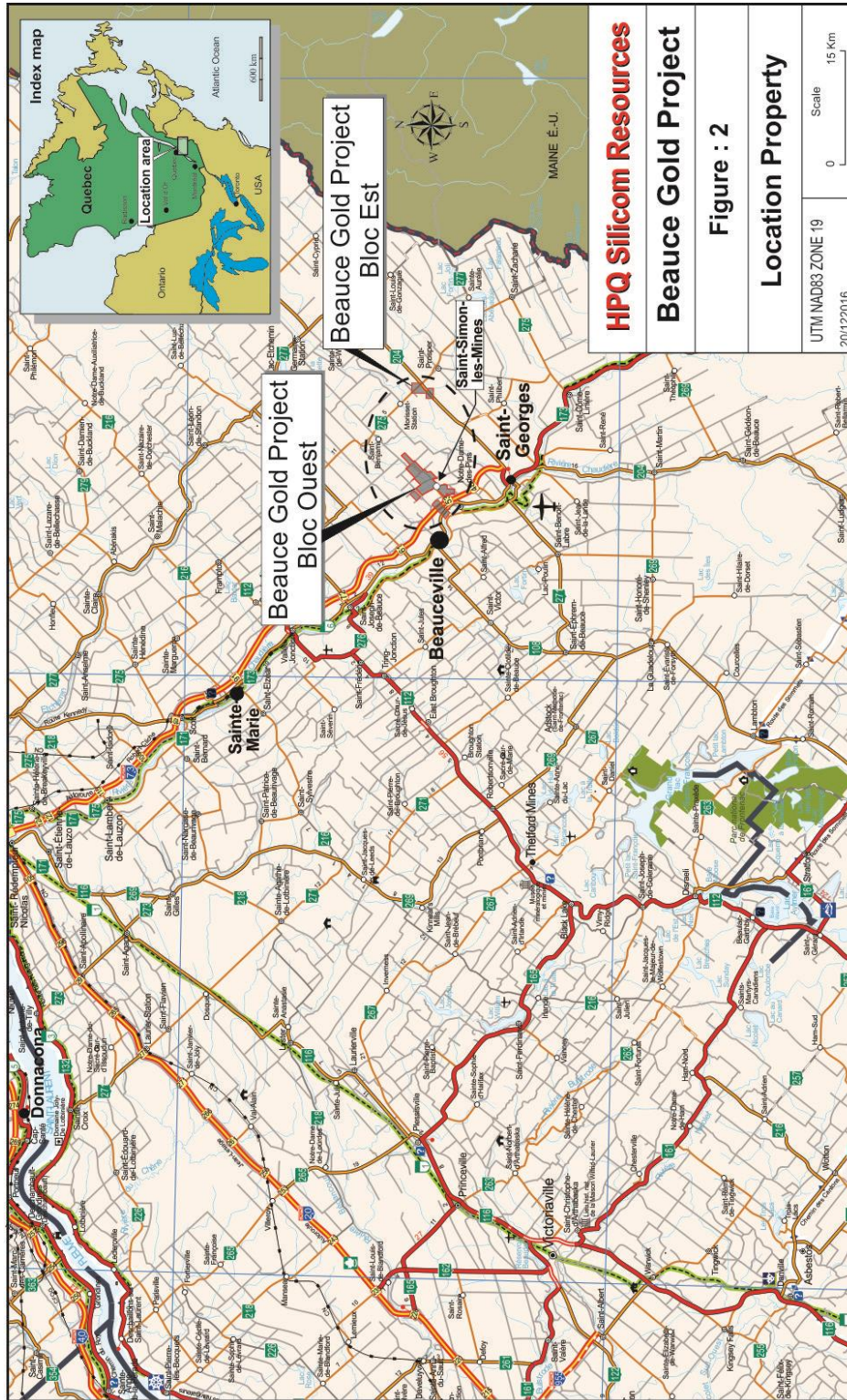
#### **4.4 Environmental Liabilities**

There are no known environmental liabilities currently affecting the Beauce Gold Project.

#### **4.5 Other Relevant Factors**

The author is not aware of any significant factors or risks affecting access, titles or the right or ability to perform exploration work on the project area.





## **5.0 PHYSIOGRAPHY, ACCESS, CLIMATE, INFRASTRUCTURE AND LOCAL RESOURCES.**

### **5.1 Physiography**

The Beauce Gold Project lies in gently rolling Appalachian terrain. The topography is made-up of hills, mountains, plateaus and broad valleys oriented NE-SW. On the property the relief is relatively gentle with some steep-sided hills with altitudes ranging from 225 to 325 m above sea level east of the village of St-Simon les Mines. The creeks and rivers of the area are part of the north-flowing Chaudière River basin that flows into the St-Lawrence River west of Quebec City.

### **5.2 Access**

The project area is readily accessible from a well-developed network of public roads. From Quebec City travelling southeast for about 85 km to Beauceville via provincial highway 73 and from there to St-Simon les Mines for about 20 km along highway 173. Locally farm and bush roads developed along range lines give access to all parts of the property (See Figure 4).

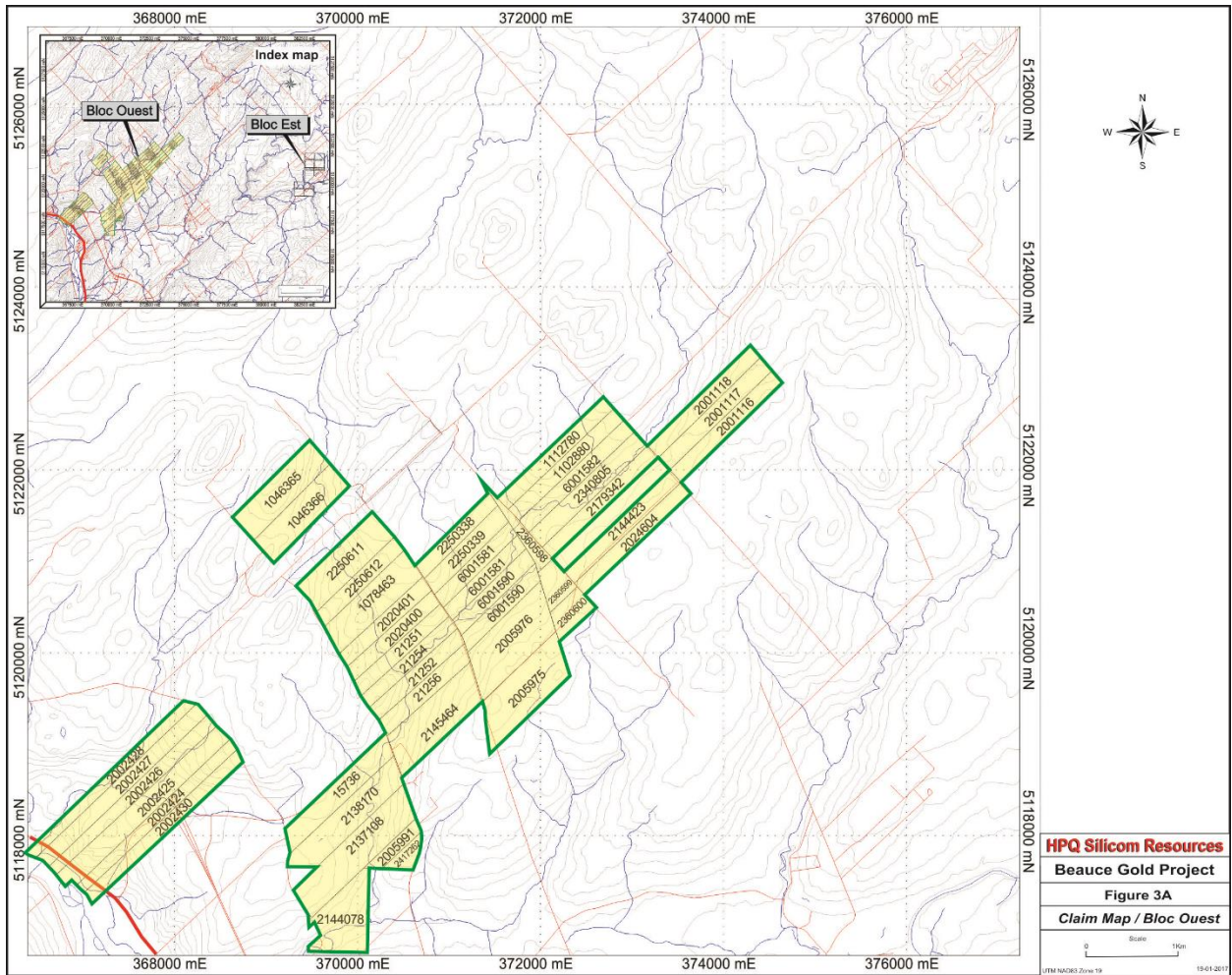
### **5.3 Climate and Vegetation**

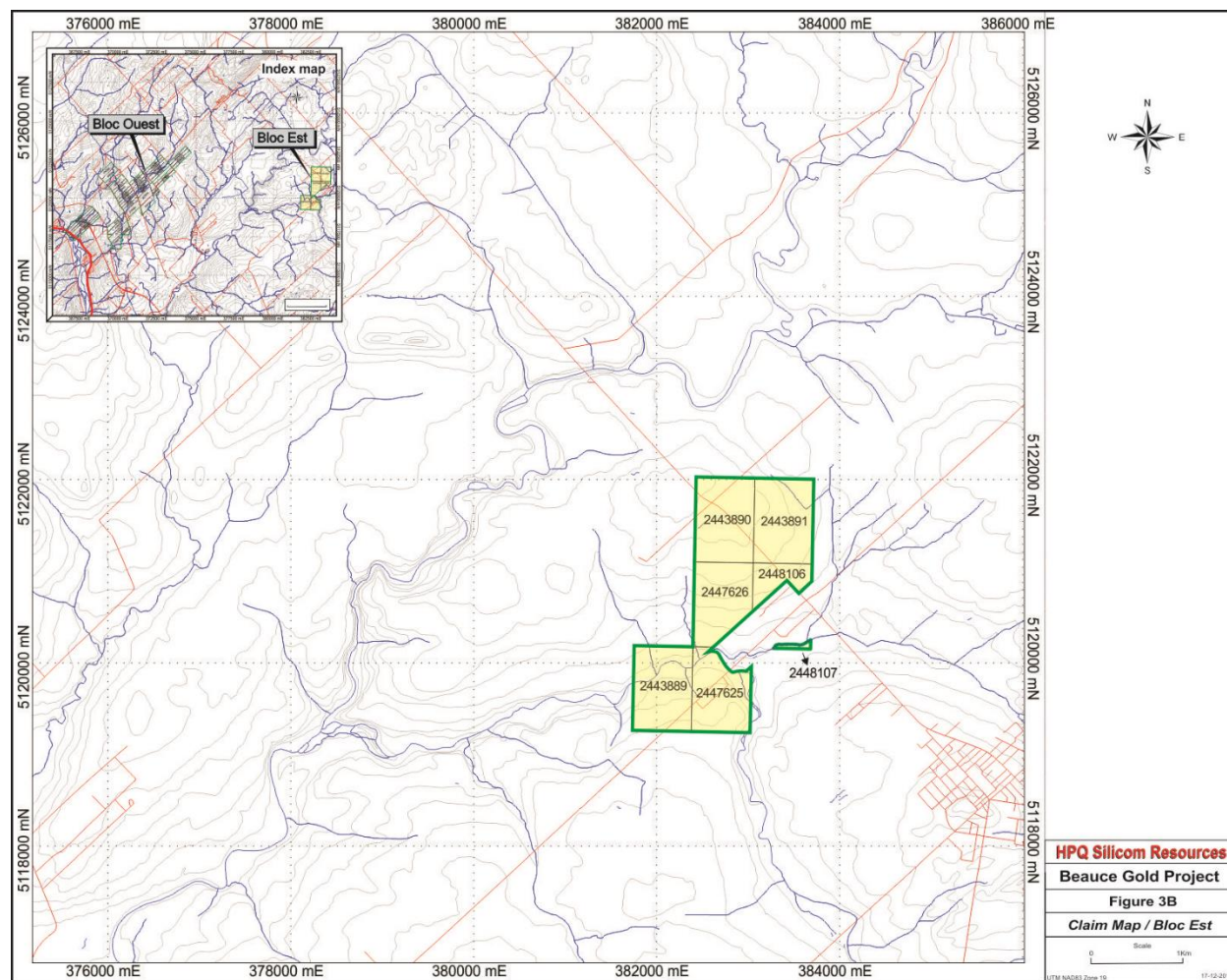
The region surrounding the project area experiences a cool humid continental climate with warm summers and cold winters with July average highs in the 22.7°C range and January highs in the -10°C range. Precipitations are abundant with yearly average in the order of 1 030 mm. The ground is usually covered with snow from late November to mid-April.

The property is largely covered with mixed hardwood forests composed of birch, maple, some poplar and conifers such as white pine spruce and cedar. Locally, there are areas of second- and third-generation growth populated with alders and shrubs. Part of the Chaudière River basin, general drainage is towards the northwest to the St-Lawrence River near Quebec City.

### **5.4 Infrastructure and Local Resources**

There are very good infrastructures in the area. Several towns and villages such as Beauceville, St-Georges and St-Joseph located within 50 km of the project area offer modern amenities such as airport, railways, hospitals, lodging and skilled manpower. A Quebec Hydro high voltage power line is available in the vicinity of the property. The active population lives of manufacturing, farming, forestry, tourism and public services.





## 6.0 HISTORY/PREVIOUS WORK

### 6.1 History and Historical Estimates

Note: The information presented in this section has been extracted from V.Q. Stuart-Williams, 2015, NI 43-101-compliant report and reviewed by the author. The author believes that it represents an accurate account of the property's history since the first discovery of gold in the 1840s to the last drilling campaign completed by Uragold Bay Resources Inc. in 2014.

At the beginning of this section, in his report, V.Q. Stuart-Williams states the following: «the reader is reminded that all discussions on historical estimates or the exploration target on the Beauce Project area are largely based on historical data in the terms of the current NI 43-101 conventions; and that the qualified person has not done sufficient work to classify the historical estimates as current mineral resources or mineral reserves; and

that the issuer is not treating the historical estimates as current mineral resources or reserves».

The Gilbert River basin has been extensively explored and mined for gold since the 1840s. Exploration has included surface prospecting, trenching and pitting, sluicing, the development of adits and inclines and underground mining. In addition, there have been numerous geophysical methods utilised including seismic, resistivity, EM and IP.

This section presents a summarised history of the Beauce Placer Project Area.

## **6.2 Introduction**

It is important to understand the history of the Gilbert River and its environs as the history of gold in this region, over the past 170 years, has been long and illustrious. This early history is well documented by Obalski, 1898, and more recently by Drouin, (1974?). During this period the region has undergone recurrent sequences of gold exploration, as recorded by various documents and assessment reports, which are detailed in the References. Gold was mined intermittently in the early years, from 1846 to 1885, in various tributaries of the Chaudière River, over an area of 32 km by 20 km. To the Consultant's knowledge no significant bedrock source for this gold has been identified in or adjacent to the project area although gold has been recovered from quartz veins.

Placer gold was initially recovered by hand panning and sluicing and locally, shafts and tunnels were constructed (Obalski 1898, Cirkel 1911). Systematic mining operations were undertaken at Ruisseau des Meules near 1910 using mainly pressurized water from a higher lake level (Cirkel 1911). In 1957, the Beauce Placer Company drilled the area to estimate the volumes and gold contents of the placers within the Gilbert River (a north bank tributary of the Chaudière River). This company started commercial exploitation in 1958 by the use of a drag line and added the operation of a Yuba Dredge in 1960. The Beauce Placer Company ceased their operations in 1964 due to several problems (dominantly low recovery of gold, inadequate treatment plant, and politics (the Quebec Sovereignty Movement)).

Interest in the Gilbert River placer was renewed in the mid-nineteen eighties, with Coniagas Mines Ltd investigating the whole Chaudière area with RC-Drilling. They focused on the Gilbert River where they performed more detailed RC Drilling to refine the estimation of volumes and gold contents. In parallel with prospecting the placer deposit, they also prospected for any bedrock gold occurrences and several occurrences of lode gold were discovered in the region (Charbonneau 1993 and 2005).

## 6.3 Early History (1834 – mid 1963)

### 6.3.1 1834 - 1910

Gold was found in numerous localities of the Chaudière-Appalaches region, including at the Ruisseau des Meules, the Rivière des Plantes, the Rivière du Loup and tributaries, the Famine River, Pozer, and St. Victor. In 1897 Dr. Chalmers of the Geological Survey of Canada reported that alluvial gold had been found throughout a 15,000 square mile sector of the Beauce townships.

The **Gilbert River** was described by Obalski, 1898, as “la plus importante” (the most important) deposit within the Beauce Region. He reported that the Gilbert River bed produced more than 1.5 million dollars’ worth of gold during the period 1860 to the late 1870s. Using an average gold price of US\$30/ ounce (see Figure 5), this equates to slightly more than 50,000 ounces or about 1.6 short tons. This is a substantial amount for a small river tributary of the Chaudière River (that flows into the St. Lawrence River). The Gilbert River is only some 10-12 km long and it runs northeast from Notre-Dame-des-Pins on the Chaudière River, with one minor tributary flowing northward called “La Branche”. Most of the gold recovered came from the zone between the confluence of the Gilbert and Chaudière Rivers upstream the Gilbert River to a point somewhere above Saint-Simon-les-Mines.



**Figure 5.** This graph shows the gold price from 1800 through to 2013. Although there was a price spike during the 1860s through the 1870s the controlled price generally was about US\$21/ troy ounce.

The history of exploration is generally one of luck and that was the case on the Gilbert River. In this instance the first gold was found in the Beauce region in 1834 by Mme Olivier Morin at the mouth of the Gilbert River, where she recovered a pigeon-egg size gold nugget. Unfortunately, this nugget wasn't recognised as such until 1846. It is also reported that in 1835 a Lieutenant Braddeley of the Royal Engineers noted traces of gold in the Gilbert River.

On the 18<sup>th</sup> September 1846, the Léry family obtained the exclusive rights to exploit gold on the Seigneurie Rigaud-Vaudreuil, Beauce. Mr. Charles Léry and Dr. James Douglas of Quebec City started surface washing of ore on Lot 75, on the 1<sup>st</sup> Rang northeast of the

Chaudière River confirming the presence of gold and recovering several nuggets said to be worth some US\$300 (this would be about 12 to 15 ounces of gold).

The Seigneurie Rigaud-Vaudreuil was established on 23<sup>rd</sup> September 1736 under French law and the right to mine gold was granted the 18<sup>th</sup> September 1846. This right was recognised by judgement of the Superior Court of Quebec in June 1883, and again under appeal in 1884. This Seigneurie covers 71,000 acres across the Gilbert and both banks of the Chaudière Rivers. The right to lease mineral rights was clearly granted.

The first serious exploration of the Gilbert River was undertaken in 1847 and again in 1850 by Mr. J.P. Cunningham again on Lot 75 of the 1<sup>st</sup> Rang (just north or down-river) of the Gilbert River confluence with the Chaudière. He is said to have made US\$1,100 in three months' work. The largest piece is quoted as 25 pennyweights (about 1.2 ounces). Further work on the same area by another party of miners in 1865 produced a 6-ounce nugget!

Other workers in the same area had limited success.

On 16<sup>th</sup> April 1850 Dr. James Douglas granted mining rights for 7 years, signed by the Seigneurie, to the Chaudière Mining Co. Rights were for the Gilbert River and the bed of the Rivière des Plantes and a 25% royalty was charged by the Seigneurie. This was subsequently extended for another 7 years; thus, it was due to terminate in 1864.

During this interval, Dr. Douglas, late in 1863 ceded his rights on the Gilbert River to Hans Hagens (and others), who subsequently ceded them to a Truman Coman of New York. On 9<sup>th</sup> September 1864, he obtained a new agreement from the Seigneurie ratified for 15 years. He then formed the de Léry Gold Mining Co. and in July 1865 was granted a 30-year extension valid until 1894 with a further 30-year extension on request. This company attempted to mine gold from the Rapide du Diable (Devil's Rapids) further down the Chaudière River. These rapids are downstream from the Gilbert and Chaudière Rivers confluence. Mining was unsuccessful due to legal and logistical problems.

In 1851-52 the "Canada Mining Co." started working the gravels of the Rivière-du-Loup at St. Georges, finding considerable amounts of gold. The Rivière-du-Loup is just south-east of the Gilbert River. This operation continued until 1863, using several employees, primitive equipment and mining the river beds.

At the same time, there was a large influx of miners who operated principally in the Gilbert River bed on Lots 16-21 of the Léry concession. They are said to have achieved exceptional gold recoveries using basic equipment.

In 1865 the "Reciprocity Mining Co." leased mining rights from the de Léry Mining Co for the Gilbert River. Unfortunately, they were unable to obtain a trained work force and were forced to utilize artisanal workers. Even with very primitive equipment they still had some remarkable gold recoveries.

In 1867 Mr. W.P. Lockwood acquired a half-acre claim on the Gilbert River and from that date commenced the first systematic investigation of the Gilbert River placers. He progressively acquired 18,000 acres on a section of the Gilbert River and its tributaries; and areas within the St. Georges, St. Gustave and St. Gaspard regions. In 1867/8 he started the “Canadian and North West Land and Mining Co. Ltd.” incorporated in England. This company was voluntarily liquidated in 1871 after the accidental death of one of the directors.

Subsequently he formed the “Gilbert and Chaudière Gold Field Co. of Canada” which in-turn became the “Chaudière Gold Field Co. of Canada.” Between the years 1867-1873 Lockwood completed a number of works including a systematic pitting programme of the Gilbert River alluvial deposits on lot 15 of the de Léry concession, and Lots 74 and 75 of the 1<sup>st</sup> Range Northeast. He was the first person to broadly establish the extent and grade of the Gilbert River gold placer. At the commencement of mining operations early in 1877 a fire destroyed much of the plant and infrastructure delaying mining operations significantly.

As the company failed “to perform” the government awarded numerous small claims to independent miners, some of whom made spectacular discoveries.

In 1878-9, Lockwood formed a new “Canada Gold Co.” to mine gold on Lot 12 of the Gilbert River.

In 1880 the Provincial Government passed a Mining Act essentially declaring that only the state had the right to issue mining authority and thus declaring the Seigneurial rights of the de Léry Company null and void. On the 22<sup>nd</sup> June 1883, the Superior Court rejected this decision and declared all Seigneurial mineral rights to be re-instated. This was upheld under appeal in 1884. However, this caused significant disruption to mining on the Gilbert River.

Having said that, it must also be known that this period saw the most vibrant and flourishing stage of gold mining on the Gilbert River and the quantity of gold recovered was very considerable. It is known that the following companies were operating over that period as tabled below.

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**Table 1. Details of Companies and Mineral Rights Held on the Gilbert River (1879 – mid 1880s)**

<b>Company</b>	<b>Lot</b>
Victoria Co.	18
Sand and Spaulding	17
East Branch Co.	16
North Star Co.	15
Beauce Mining and Milling Co.	13
Canada Gold Co.	8 (St. Charles)

Several other companies were working adjoining areas. Many of these companies had rights from the Provincial Government but not from the Seigneurie and did not pay the Seigneurie royalties, preferring to pay the much smaller 2.5% demanded by the government.

This led to confusion and anger and many properties rich in gold were occupied without the permission of the rightful owners, in many cases the company L ry, represented by the Canada Gold Co.

On June 22, 1883, the Superior Court of Quebec, recognized the validity of the Mining Act. This judgment was confirmed on appeal in 1884 but could only be applied to Crown land. This judgement regulated the working conditions and maintained the 2.5% royalty fee on the gross weight of gold and silver recovered.

Unfortunately, on gold rich properties the operating and newer companies continued working without the authorisation of the de L ry Company arguing that these were "Crown Property".

Since the court recognised the de L ry agreement with the Seigneurie, only Lockwood had the legal right to mine after 1884. This progressively led to the abandonment of all companies except those operated by Lockwood. His activities were mostly on Lot 13 until cessation of mining.

The end of exploration came in parallel with the 1898 Klondike gold rush which is said to have lured most of the miners away from the Eastern Townships. Nothing much is reported until the activities of 1910.

### **6.3.2 Champ D'Or (1910-1912)**

From 1910 to 1912 the Champs d'Or Company under the direction of Fritz Cirkel, M. E., is reported to have outlined some 7,300,000 cubic yards in the area of the lower Gilbert River (area not defined). The block was said to be 2 x 3/4 miles in dimension. No details

of this programme have been seen by the Consultant. It is not clear that any mining actually occurred.

Of interest is that Seeber (see Section 6.2.4.1) commented that the attributed values of gold were too low as they made no consideration for fine gold – too small to be determined during panning and only recoverable by amalgamation. He noted that as much as 25% of the gold in the deposit was extremely fine-grained.

### **6.3.3 Early 20<sup>th</sup> Century (1912-1945)**

Very little is reported during this time period.

### **6.3.4 Beauce Placer Mining Co. Ltd. (1945-1963)**

In 1945, Mr. Séraphin Bolduc, a retired lumberman of Beauceville, purchased the mining rights over the Gilbert River and adjacent areas and it is from him that the Gilbert River was optioned in 1957 by the Beauce Placer Mining Co.

The Beauce Placer Mining Company Ltd. was incorporated in February 1958. The chairman and majority shareholder was Mathew James Boylen (1907 – 1970). Prospector, entrepreneur and financier, he was responsible for bringing into production at least eight mines, the most notable of which were the mines of the Brunswick Mining and Smelting Corp. Sometimes referred to as “the King of the Minemakers”, in 1992 Mr Boylen was inducted in the Canadian Mining Hall of Fame.

It would appear that an initial investigation of the Beauce placer was conducted by O.A. Seeber (a Mining Engineer acting as Chief Geologist) and Hedley Rose (also a Mining Engineer acting as Geologist). Their reports led to the purchase of a Yuba Dredge that was transported to, and assembled at the Beauce placer.

### **6.3.5 Seeber Report (June, 1959–GM08786)**

Hedley Rose and O.A. Seeber presented their reports simultaneously to the Beauce Placer Mining Co. Ltd., in 1959. Rose looked at the geology and drilling while Seeber reported on the project economics.

On June 11, 1959, O. A. Seeber, B. A., presented his report to the Beauce Placer Mining Co. Ltd. His introduction stated that: - *“Between 1847 and 1897 over two million dollars’ worth of gold was produced from the rivers and streams that are now largely contained within the property of your company. The best gold values were found in the valleys of pre-glacial riverbeds that are now buried under as much as 200 feet of essentially low grade overburden. Previous operators did not have the means of tracing these hidden riverbeds as can now be done with geophysics. Modern placer dredging techniques have also now been improved to such a degree as not only to permit profitable recovery of the low gold values in the overlying glacial debris but also allows the mining of the underlying*

*high-grade auriferous gravels of the older erosion surface to a depth of 150 feet. It is believed that this type of operation is particularly well suited to the Beauce area and that extremely low operating costs can be had in such a long-settled area."*

Seeber's report continued by stating that "probably" the only accurate source of information on work prior to 1900 was in the comprehensive reports in the unpublished records of Lockwood stored at Quebec City.

On the basis of the data he had gathered he proposed a program to:

- Develop a geophysical method for tracing the deeply buried pre-glacial valleys;
- To confirm the presence of the high grade alluvial material indicated in the old reports; and
- To confirm the presence of a deeply buried channel in the Gilbert River valley downstream from the old Lockwood workings.

After an expenditure of US\$100k the following was summarised:-

- Resistivity as an exploration method was rejected due to the presence of thick marine clays. Two other methods were tested (?) of which seismic prospecting was the method of choice. It was felt that a seismic survey could locate the old glacial channels with sufficient accuracy to establish the location.
- To check the old gold values a program was started of test pits and auger holes at 100 foot intervals. Unfortunately this was largely confined to the Meule River. These pits went through the till and intersected the basal gravels and first few feet of the bedrock. His results determined gold values comparable with those of the earlier work; and
- On two profiles on the Gilbert River immediately upstream from the Caron Creek a series of churn drill holes\* at 100 foot centres was completed. These successfully located the paleochannel under the recent till. This suggested an average channel width of 250 feet (77 metres) and an average depth from surface to bedrock of 90 feet (27.7 metres). It was stated that the average grade of this material was US\$3/ cubic yard (or about US\$3.924 per cubic metre). At US\$21 ounce this suggests an average grade of 8.15g/ cubic metre for the basal mineralized gravels. It was said that some 10,000,000 cubic yards of this material was present.

O.A. Seeber stated that the deposits prospected were suitable for dredging. The valleys were broad, water was adequate, bedrock gradients were gentle and no boulders large enough to hamper the operations had been encountered. He indicated that very low operating costs were possible. He did not comment on the thickness of sediments in some areas that were beyond the capacity of a dredge.

Towards the end of his report he commented that the ore grades "may" seem high and added that "*It should however be borne in mind that the erosion period in which the gold*

*was concentrated in the alluvium amounted to a much longer period than for any other Canadian placer gold occurrence.”*

### **6.3.6 Hedley Rose Report (June, 1959 – GM08785)**

To summarize the work completed by Hedley Rose:

- Work was concentrated in the Gilbert River area to determine whether a dredging operation was viable;
- At the stage of writing (1959) some 13,432.4 feet of drilling (4 094 metres) had been completed with the drilling of some 199 holes. Of this some 12,227.2 feet (3 726.8 metres) were drilled in the Gilbert River valley with the drilling of 173 holes. The economics of the project were calculated based on this drilling. Unfortunately this data has not been located by the author;
- Of the 173 drill holes completed in the Gilbert River a considerable number were used to locate the pre-glacial channel. Those outside the channel were barren;
- Of the 173 holes drilled in the Gilbert River some 81 had measurable quantities of gold. The gold was fairly coarse and several nuggets of over 300 milligrams were recovered;
- Values had been found over an area of 22000 feet in length (6700 metres) giving a potential yardage of 16 million cubic yards (12.223 million cubic metres) on ranges 2, 3 and 4 of “historical estimate” (**historical figures** – not currently confirmed). On Ranges 2, 3 and 4 a value of US\$3,548,000 was attached suggesting an estimated 168,952 ounces of contained gold were present (or approximately 5.4 million grams – 5.4 metric tons);
- He believed that more drilling was required in some areas outside the exploration target where the overburden was deep.

*He also commented “it was on Range 2 and the lower half of 3 that the bulk of gold was produced in the past. This figure has variously been reported to be between US\$1.0 to \$2,0 million at the old price of \$20.67/ per ounce. No regular records of production were kept. Most of the gold was coarse with numerous large nuggets of up to 50 oz. being found, so that it is likely that production might have been higher than reported due to the frailties of human nature and high-grading among the miners.”*

And that:

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As a general rule, areas which have been hand-mined by drifting and later dredged, usually produce as much, or more, by the latter method. In drift mining, high costs and physical conditions, such as excessive water, quicksand, clay, etc., limit that part which can be profitably mined, so that only a comparatively small bedrock area is covered. Dredging includes the entire pay area and all the gold is recovered, as well as any which might be left in the previously mined section. Values are profitably dug which would be ignored by drift miners.

This was followed by the comment that:

As noted, gold obtained in the drill samples has been coarse and in a number of holes small nuggets were found. In estimating volumes and values these nuggets have been included. When the gold is coarse it usually follows that actual dredging recoveries are higher than drill estimates. The greater the yardage per drill hole the more the over-run in production.

His final comment was that two dredges had been short-listed as suitable for the area. Remember that this was 1959.

### **6.3.7 O.A. Seeber Report (March 13, 1961 - GM11010)**

O.A. Seeber reported that the Beauce Placer Mining Co. Property held some 380.7 acres within a much larger block of the Seigneurie Rigaud-Vaudreuil, Beauce County specifically for dredging, and overburden and tailings disposal.

He noted that the "historical estimate" indicated 16,976,153 cubic yards (12,978,710 m<sup>3</sup>) of material grading US\$0.2224 per yard as the dredging resource. This equates to 0.329 grams/ cubic yard (or 0.431 g/m<sup>3</sup>) using US\$21/ ounce. Calculations were developed on some 14 drill section lines and a historical estimate made (this is discussed in the relevant section). It is assumed by the Consultant that the volume included overburden. It should be noted that these figures are very dependant on the gold price assumed. At US\$35/ ounce (the gold price in 1960) the figure revises to a grade of 0.197 g/ yd<sup>3</sup> (or 0.258 g/ m<sup>3</sup>). This value of 0.258g/ m<sup>3</sup> will be used as the base-case in further discussions.

Interestingly Seeber noted that "*During the drilling, not infrequent gold "colours" had been obtained in the upper portions of the holes, all such values have been discounted on the grounds that their occurrence was too erratic to be relied upon.*" This is interesting because it suggests that some gold has been incorporated into the overlying tills.

The mining method proposed was a 6.0 cubic feet Yuba dredge. In his conclusions he proposed that mining should commence as early as possible.

### **6.3.8 Dredge Transport and Commissioning (1959?-1961)**

It should be noted that Uragold (now HPQ Silicon) has documents acquired from Lithium One (during purchase of the Beauce property real estate lots) that include sets of production figures apparently for the Beauce Placer Mining Co. Ltd., from 1959 to 1961. Nowhere else in the documentation viewed has the Consultant seen any indication that Beauce Placer was mining before the construction of the Yuba dredge, commissioned in August 1961 and not fully operational until 1962. This earlier mining was not mentioned by either Seeber or Rose in their 1959 reports nor in their subsequent reports. These Beauce Place Mining Company production figures are presented in Appendix 1.

It seems possible that Beauce Placer Mining Company Ltd (through an agreement with the New York Alaska Mines Ltd (“NYA”) may therefore have operated a small placer gold mining operation on the central and south-western part of the property from 1959 to 1961 prior to assembly of the Yuba dredge.

It appears that operations began with the use of a dragline in 1959 for an initial pond production. Production figures for 1959 – 1961 are presented (Appendix 1). Very little is documented about this mining. During that period, NYA had an agreement with Beauce Placer for the “exclusive management, direction and control of all the company’s prospecting, developing and mining operations.” As a consideration, NYA was granted stock options of the Beauce Placer Mining Company and 10% of net production.

The Yuba dredge was purchased, stripped and railed/ferried from Idaho to the railway station at Beauceville. The dredge purchase price was \$150,000 plus \$40,000 for dismantling and \$85,000 for shipping and handling. A special 30 kV 4 mile long electric line was strung for the dredge. The component parts were moved to a specially dug pond near St. Simon-Les-Mines where the dredge was re-assembled in 1961 and floated in a dredge pit near the Gilber river on the St-Gustave road.

Photographs of the Yuba dredge are presented as Photographs 1 and 2.



**Photograph 1.** An early view of the Séraphin Bolduc dredge prior to the dredge boom being added. The scale of the dredge is immediately obvious!

**Photograph 2.** This photograph shows the completed dredge around the time of commissioning sitting in the prepared pond at Saint-Simon-Les-Mines. It can immediately be seen that the boom is short and would not allow very deep mining of the placer deposits.

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The Yuba dredge started operations in 1961/ 1962, on the Saint-Gustave Range, 4 miles upstream of the Chaudière River, on the Northeast Branch of the Gilbert in Lot 791, and ceased production around 1964. At the time of commencement, the dredge could dig 50 feet deep below pond level. The total production is said to have been 56 000 ounces of gold over these three years (Appendix 1) and ceased due to various technical problems (see GM44862 in References).

Saint-Simon-Les-Mines citizens verbally reported that the main problem with the dredging was gold recovery. This was because the dredge always started working upstream and would then mine downstream. This manner of working meant that the dredge was always working in silt laden water because the slurry was being moved downstream due to the flow of the Gilbert River. The dense and dirty water caused by the presence of large amount of clay minerals in the lower units made it harder to recover the gold in the treatment plant.

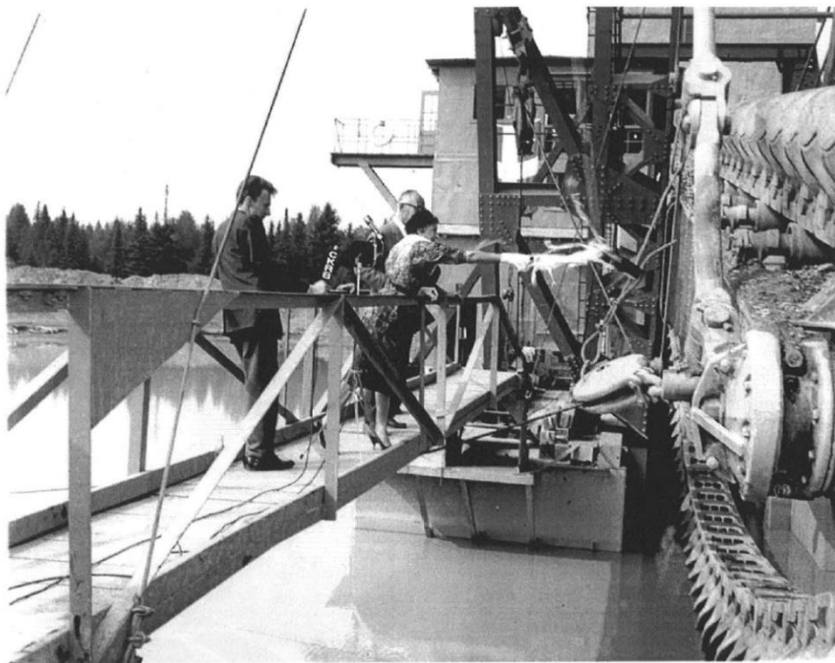
It seems that although the dredge was commissioned in 1961 technical issues delayed the actual gold production until the middle of 1962. This is clarified in the Chairman's minutes below (minutes supplied by Lithium One at the time of UBR purchasing the real estate lots):

**The Chairman then declared the meeting open for general discussion and answered questions from the floor. He stated that the Company would officially be in production as of about August 15, 1962. There had been some difficulty in getting down to bedrock which was about 90' deep, the dredge capacity being 50'. The operation had met with considerable clay and quicksand. Bedrock was reached a few days prior to the meeting. The gold recovered, generally speaking, is coarse. The Chairman tabled a box of samples of course gold recovered within the last few days. He stated that gold recovery is expected to be over the estimates made from drilling results and that the pay area will be spread over greater widths than expected.**

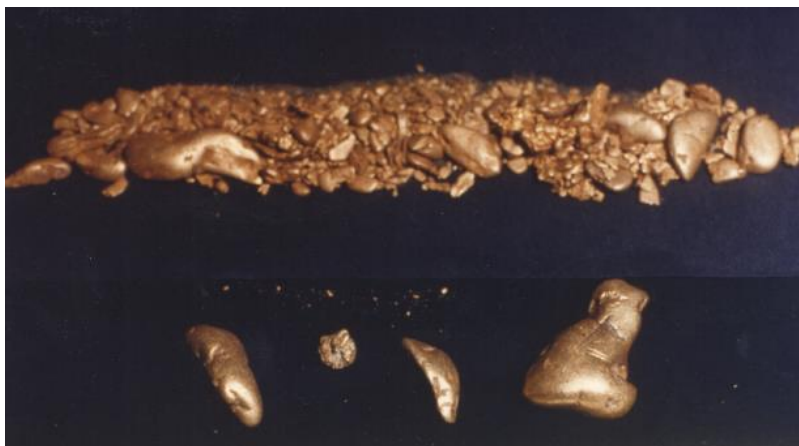
It is clear from these records that the company expected the Yuba dredge to officially be in production by August, 1962, and that they had significant difficulties during commissioning in getting down to bedrock (where the bulk of the gold is accumulated) as it was around 90 feet (27 m) depth. This was partly (although never completely) resolved by extending the boom.

Further encountered issues were: running sand (quicksand) and thick marine clay in the over-burden that was very resistant to dredging. It is also known that very low winter temperatures caused freezing of the ponds and problems with the discharge conveyors due to freezing water accumulating on the dredge.

It appears that bedrock was eventually reached and at a board meeting (mid 1962 Minutes of a meeting) the Chairman had tabled a box of coarse gold recovered by the dredge and indicated that the dredge was running again. This is shown in Photograph 4.



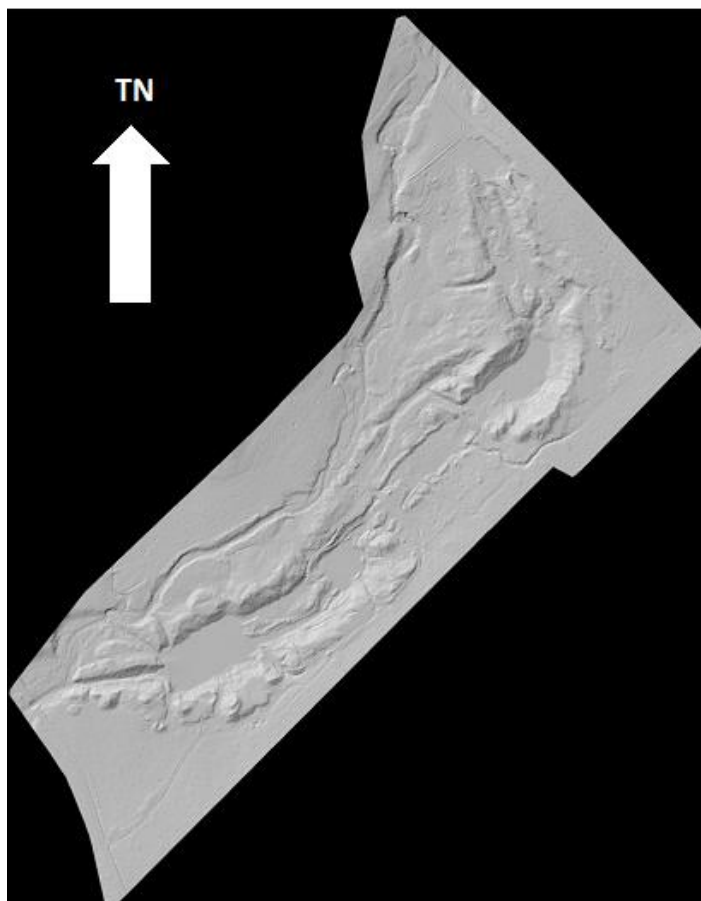
**Photograph 3.** This photograph, copied from the publication by Drouin (Drouin, 1974) shows Mrs. Bolduc inaugurating the Séraphin Bolduc at the commissioning ceremony in August 1961.



**Photograph 4.** A typical example of Beauce gold, recovered by the Beauce Placer Mining Co. during their mining operation with their Yuba dredge. Unfortunately the scale of the photograph is unknown.

### 6.3.9 Dragline and dredge operation

It is documented that the Yuba dredge operated from 1961 until somewhere in 1964 when the company was closed and the dredge left to rot in the middle dam (red circle in photograph 5). However, there is very little documentation available of the work completed during that period.



**Image 1.** This LIDAR image (a portmanteau of light and radar) covers the area of the central part of the Beauce Project. A LIDAR image is essentially a three dimensional image of the topography (using synthetic shadowing) of an area, created using a laser light beam. On this particular image the ponds dug; the channels developed; the spoil heaps created; and the position of the modern riverbed (to the west) can be clearly seen. Knowing that in this area the sediments are very thick, it is unclear whether mining was attempted, or whether a channel was simply excavated to allow the dredge to pass through the area.

At the time of closure the Beauce Placer Mining Co. announced that problem issues included poor ground conditions (the soil was described as “trop friable” (too loose/ soft/ friable)) for heavy machinery; the presence of huge boulders in the till (that could not be

handled by the dredge); sticky marine clays interbedded between the till units; zones that were too deep for the boom to reach; and ongoing sabotage due to the “Free Quebec” movement (Mouvement Souverainiste du Québec) that was active at that time.

In April 2012, UBR obtained unpublished gold production data (derived from the Beauce Placer Company); for the dredging and drag line operation from 1959 to the early 1960s suggested that the company mined some 56,000 oz. gold from the processing of 8.6 million cubic yards of material for an average gold content of 0.2 g Au / cubic yard.

It should be commented that using a dredge does not allow for selective mining so overall grade includes the processing and re-processing of substantial volumes of overburden and waste.

## **6.4 Coniagas Mines, 1985 (Laval University – Report GM42308)**

### **6.4.1 Introduction**

In 1985 the “*Groupe de Recherche en Géologie de l’Ingénieur Université Laval*” produced a report on behalf of Coniagas Mines Ltd., entitled “*Etudes sur les Placers d’Or de la Region de Beauceville, Quebec*”.

This report included a summary of the findings of previous workers in the area; and what appear to be some student reports or degree mapping projects? Included within this report are sections covering:

- A compilation of the gold occurrences in the region of Beauceville;
- A synthesis of the geology of the Region of Beauceville;
- A synthesis and maps of the Quaternary cover deposits (tills, clays, etc.) in the Region of Beauceville. The French term used was “*dépôts meubles*”;
- A description of the morphology of the Quaternary cover deposits between St. Josephs de Beauce and St. Georges; and
- A geological Investigation of the Beauce Placer Property with an emphasis on Quaternary Deposits, Beauceville.

Their summary of the gold occurrences contained the following relevant information:

- A description of the gold placer as defined from the old mining data. They concluded that the placer (which they called – “*Les graviers aurifères pré-glaciaires*”) is yellow coloured, that the material is well oxidised and that all the grains are well cemented;
- That most of the gold was at least 100 feet deep (30 metres); that it was within 1,000 feet (300 metres) of the channel centre (presumably the original buried channel); and that the recent river gravels have a much lower gold tenure than the buried gravels;

- That the gold is present throughout the basal oxidised gravel but that it is generally higher grade at the base against weathered or fractured bedrock;
- That quartz veins are present in the bedrock containing pyrite, arsenopyrite, blende and occasional native gold grains. The quartz veins are generally milky white, and stained with iron oxides. These quartz veins were believed to be the source of the gold, native gold having been reported to have been found within the veins;
- They noted the presence of black heavy mineral sands within the auriferous gravels (that contain magnetite, specularite, haematite, chromite, ilmenite, pyrite, red and green garnet, rutile, corundum and the gold). It was suggested that this mineral assemblage doesn't indicate the presence of gold but suggests the presence of crystalline rocks within the area;
- They described the general succession from top to bottom as modern sand and gravels, followed by blocky till, a yellow oxidised rounded gravel zone, followed by bedrock (very frequently oxidised for several feet); and
- Finally, they produced a compilation at 1:20000 of the Gilbert River data (both historical and dated 1986).

One of the conclusions reached was the following (translated from the French and summarized):

*“The principal source of the gold placer is the quartz veins in the Beauceville Formation and the disaggregation of a large volume of rock that liberated the ore by both mechanical and chemical means.*

*The veins of quartz are reputed to be more concentrated at the upper contact of the Beauceville with the St. Victor Formation.*

*The disaggregation of a large volume of rock and the formation of an oxy-soil have both aided in the formation of the placer. The Beauceville Formation rocks contain maybe 5-10% pyrite, some of which in certain fractures is massive. Also, it is likely that the (adjacent) ophiolitic complex has concentrated certain minerals.*

*The large nuggets recovered are probably the result of gold solutions nucleating in the oxy-soil under tropical conditions prior to the deposition of the first tills.”*

The authors stated that they believed the gold in the Gilbert River was dominantly associated with schistose sedimentary rocks in the vicinity of serpentinites and dioritic intrusive bodies. This model was proposed after discussion with Russian geologists working in the Ural Mountains at Altai. The question that should be asked is whether the authors had seen serpentinitic and dioritic rocks on the Gilbert River or were they simply postulating their presence?

## 6.4. Coniagas Mines Drilling, 1985 (GM42988)

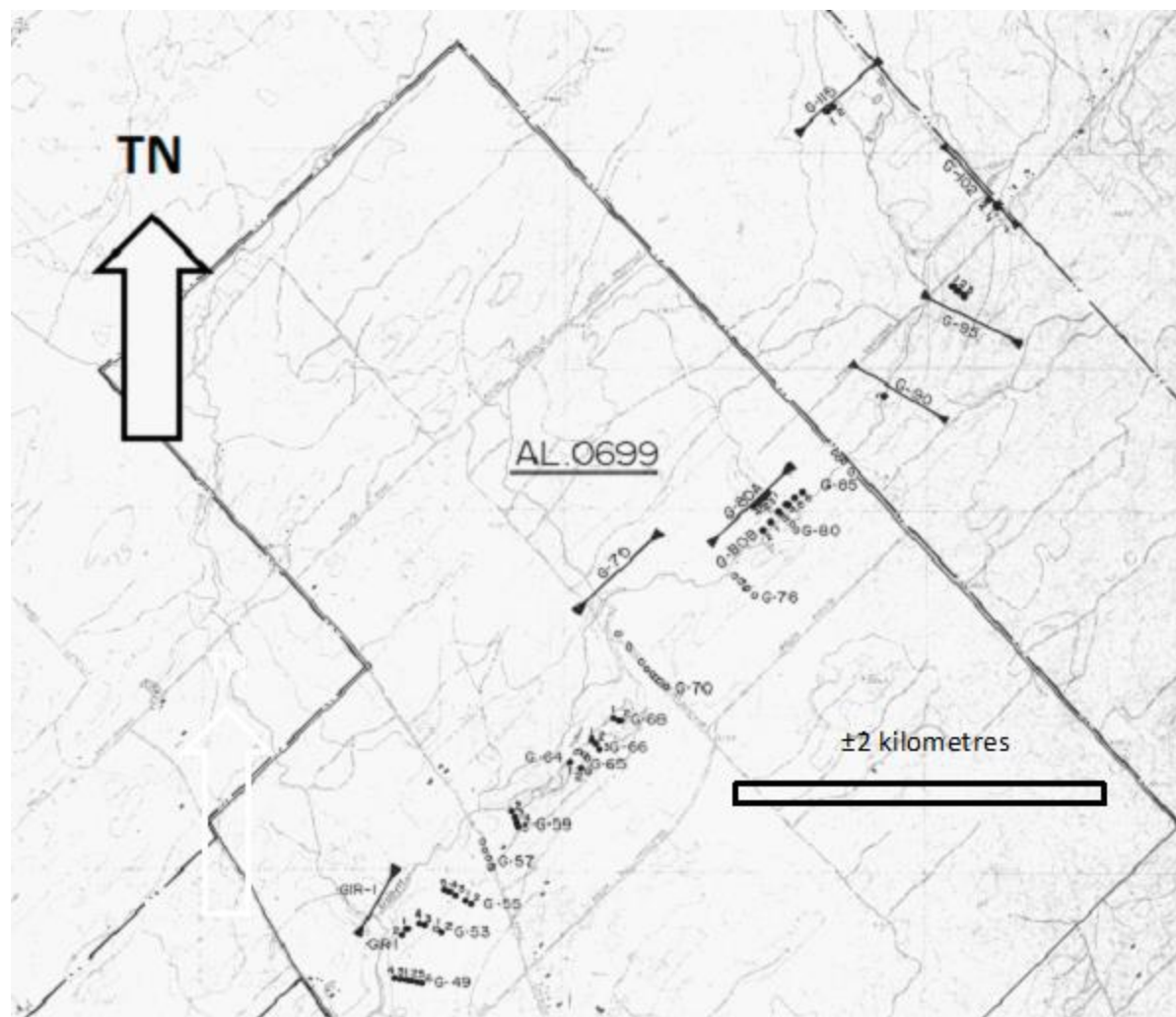
### 6.4.1 Introduction

The properties held by Coniagas Mines were AL 0676 and AL 0682 covering some 500 km<sup>2</sup> on the Seigneurie de St. Francois giving them the mineral rights to explore and prospect alluvial deposits; and exploration permit numbers P00850 and P00940 that granted permission for exploration of the Alluvial *and* hard rock deposits.

It would appear that Coniagas Mines did some seismic profiles across various areas including the Gilbert River. The approximate position of these lines is shown in Figure 6. This is discussed in more detail in the Geophysical Section of this report.

Coniagas Mines continued their exploration of the Gilbert River by drilling some 40 RC drill holes (1288 metres). The contractor appears to have been Roche, and Report GM 42988 contains both drill logs and analyses of these boreholes. There seems to be some differences between some assay positions and logged details.

The drilling diameter was either 5 $\frac{1}{8}$ " or 5" (approx. 12 cm). Samples were collected on 3 m intervals and were described and treated to allow recovery of coarse gold particles. The heavy mineral fraction was collected and analysed for gold, using an amalgamation process at the Mineral Research Centre of the Ministry of Energy and Resources. Several significant gold values were obtained from these analyses. This is discussed in the next section.



**Figure 6.** The Coniagas Mines holdings. The Uragold holdings include all these boreholes and Section lines. The seismic sections completed are the dark lines with triangles at the ends.

#### 6.4.2 Historical Estimate Calculation

*Note: The reader is reminded that all discussions on the historical estimates or the exploration target on the Beauce Project area are largely based on historical data in terms of current NI 43-101 conventions; and that the qualified person has not done sufficient work to classify the historical estimates as current mineral resources or mineral reserves; and that the issuer is not treating the historical estimates as current mineral resources or reserves.*

In the Coniagas Mines Report (GM42988, 1986, page 62) an **historical estimate** was made based on the drilling and assaying completed by Coniagas (see Table 3).

The qualified person cannot verify the data included. However, knowing that the figures were generated using a polygonal approach the qualified person was able to determine that volume figures presented are certainly of the correct order for a narrow-mineralised zone.

**Table 2: Drill Section Results from Coniagas Mines.**

Section	Trou	Teneur gr/m <sup>3</sup>	EL (m)	W (m)	L (m)	Volume (m <sup>3</sup> )	Or total (gr)
G-22	1	.150	2.7	50	500	67,500	10,125
	2	.011	3.0	50	500	75,000	825
	3	.004	6.1	75	500	152,500	610
	5	.032	14.0	100	500	700,000	22,400
	6	.023	14.0	100	500	700,000	16,100
G-30	5	NIL					
	6	NIL					
	8	1.482	11.0	50	500	275,000	407,550
G-50	1	.112	15.0	100	500	750,000	84,000
G-57	1	.023	15.0	50	650	485,500	11,213
	2	1.148	12.2	50	650	396,500	455,182
	3	.335	18.0	50	650	585,000	195,975
	4	.003	10.0	50	650	325,000	975
G-65	1	NIL					
	2½	.041	3.0	40	650	78,000	3,198
	3	.123	3.0	35	650	68,250	8,395
	4	.016	3.1	50	650	100,750	1,612
G-70	1	.013	11.0	50	650	357,400	4,698
	2	.041	6.1	70	650	277,550	11,380
	2½	.390	3.0	30	650	58,500	22,815
	3	.195	5.0	35	650	113,750	22,181
	4	NIL					
	5	.022	3.0	150	650	292,500	6,435
	7	NIL					
	9	.070	5.8	150	650	565,500	39,585
	G-76	1	tr				
2		.162	8.0	40	600	192,000	31,104
3		.068	8.0	50	600	240,000	16,320
4		.276½	6.1	50	600	183,000	50,508
G-80	1	.737	14.0	50	420	294,000	216,678
	2	.381	6.5	35	420	95,550	36,405
G-85	1	NIL					
	2	NIL					
	2½	.479	10.0	25	420	105,000	50,190
	3	.679	6.1	20	420	51,240	34,792
4	NIL						

E: hauteur dans le trou.  
W: largeur effective du trou entre les trous adjacents.  
L: longueur effective du trou entre deux sections.  
½: seulement une pépite.

**Table 2.** This table shows the gold values attributed by Coniagas Mines in report GM42988 to Drilling Sections completed along the Gilbert River. Results are presented in g/m<sup>3</sup> and it is important to note that these results were post all of the Beauce Placer Mining Company Ltd., dredging. All these sections lie within the Uragold claims.

This equates to an historically estimate of 1,676,269 grams (or about 53,900 ounces of gold).

In report GM 42988 prepared by Coniagas Mines it is stated that the **historical estimate** was calculated using a polygonal method and gold values derived from the drill holes along the various section lines. It is assumed (but not confirmed) that the polygon boundaries were the channel boundary (as defined by the drilling AND the geophysical data (including seismic).

The reader should be reminded that these values were created post the dredging of the property and that **no mining** has occurred since these figures were generated. It is assumed that the gold estimated is still present in the ground.

### 6.5. Coniagas Mines Drilling, (1987- GM44862)

In 1987 the “Groupe de Recherche en Géologie de l’Ingénieur, Université Laval” presented their third report to Coniagas Mines. This report was in relation to the Mineral Rights area AL0699 (the Gilbert River area).

It is interesting that although they had defined a historical estimate of some 45,000 oz. for the Gilbert River (Gilbert 1988 – the reason for the disparity in numbers is unclear), there appears to have been no suggestion that they should turn this resource to account?

This third report essentially summarized much of the work contained in the two previous reports but then included work done in 1986. This work included:

- Geochemical studies;
- A study of the gold ore nuggets;
- The origin of the alluvial ore;
- The gold distribution within the auriferous gravels;
- Details of the Trenching work completed;
- Results for the Seismic surveying completed;
- Microscopic examination of gold nuggets; and
- A comparison of the grades obtained in 1958 and 1985.

#### 6.5.1 Geochemical Studies

Coniagas Mines collected a significant number of soil samples during late 1985 the analyses for which were available early 1986. Soil sampling was conducted because several soil gold anomalies were located during the 1985 sampling campaign. It was believed that these anomalies should be investigated to check their Au grades and to locate their potential sources. The gold tenor was found to vary between zero and 180 ppb in soil samples and no significant Au sources were detected.

*Other elements:* Various other elements were investigated. Results included an average value of 32.4 ppm for uranium, 21.0 ppm molybdenum, cobalt 260 ppm and 14.0 ppm for iron. It is unclear whether Coniagas Mines tried to determine the cause of these anomalies.

**Table 3: Soil Sample Summary Analyses completed by Coniagas Mines.**

Eléments	Unité	Moyen	Mode	Kurtosis	MAX	Coupure	
						à 94%	98%
Na	PCT	1.19	1.10	0.83	2.08	1.60	1.70
Cr	PPM	120	110	22	800	220	270
Fe	PPM	3.1	3.0	20	14.0	4.7	5.5
Co	PPM	8	3	286	260	15	18
Ni	PPM	27	10	196	730	62	89
Zn	PPM	73	50	186	1400	150	200
As	PPM	11.9	10.0	208	310	23.0	29.0
Se	PPM	2.5	2.5	524	9.0	-	-
Mo	PPM	1.5	0.5	416	71.0	3.0	5.0
Ag	PPM	1	1	16	6	2	3
Cd	PPM	1	1	29	6	1	2
Sb	PPM	0.4	0.3	352	15.7	0.8	1.2
Ba	PPM	541	490	1.95	1100	720	780
La	PPM	34	34	4	71	44	48
Hf	PPM	14	13	2.5	35	19	22
Ta	PPM	0.9	0.9	572	12	1.1	1.1
W	PPM	0.7	0.5	7.0	4	1.0	1.0
Ir	PPB	25	25	420	25	-	-
Au	PPB	2.4	1.0	170	80	5	10
Th	PPM	6.4	5.6	9.7	20	8.7	9.5
U	PPM	2.1	1.9	282	32.4	3.1	3.8

**Table 3:** These are the summary results of soil sample analyses completed by Coniagas Mines.

### **6.5.2 Study of the Gold Nuggets**

The main conclusion reached on the basis of the relative percentages of silver (7-8%); and gold (85-90%); and the inclusion of certain minerals within the nuggets, was that the gold nuggets are detrital in origin; that they have undergone some considerable weathering; and that they have undergone only minor transport.

### **6.5.3 Origin of the Alluvial Ore**

The report states that “L’Origine de cet or reste un mystère jusqu’à présent”. (*The origin of “the gold” currently remains a mystery.*) The report continues to comment that there are really only two possibilities: detrital and chemically derived gold. The former being weathered out of the rock as gold chunks; and the latter first requiring that the gold go into solution and is then subsequently precipitated as ever growing nuggets.

The report further commented that it is difficult to explain how a single detrital source could form an auriferous gravel of more than 10 km length in several adjacent drainages. The inference being that the gold is fairly widespread as a low-grade gold deposit in the bedrock, and is being up-graded through solution, transport and re-precipitation.

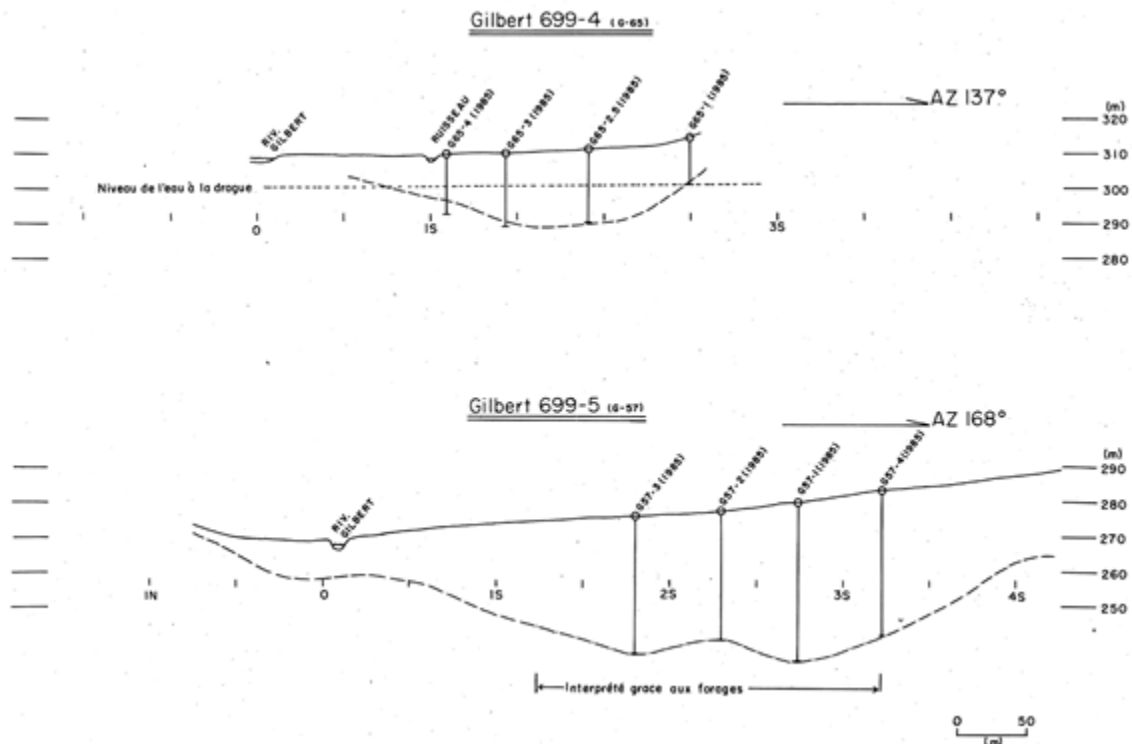
There is also a discussion on the possibility of the gold having transported and subsequently being reworked from the till. Included in this discussion are several borehole sections showing the gold distribution. It is known that gold is present in the tills (notably the brown basal till) but the author has concerns about this model; the most fundamental being that the gold is in many cases below the basal till in an oxy-soil. This clearly suggests that the gold predates the first till which strongly argues that the gold is locally derived. This will be reconsidered in the geological section.

### **6.5.4 Trenching**

Trenching and sluicing (a Denver rig is mentioned) appears to have been completed at several locations on the Gilbert River. This will be discussed further towards the end of this Section.

### **6.5.5 Seismic Surveying**

Five lines (699-1 to 699-5) were surveyed using optical survey equipment. From this a base-line for a seismic reflection survey was generated. Then using a 12 channel Geometrics model ES 1225 a seismograph survey was completed. The results from this survey were presented in various figures in the Coniagas Mines report (see Figure 8 as an example).



**Figure 7.** Diagram showing the results for the two seismic lines completed in the Gilbert River area. These lines were completed on Section lines G57 and G65. Line G57 was at the south-eastern boundary of the original Uragold property while G65 was in the centre of that area. The overall shape of the paleo-valley is clearly shown. The location of these sections is shown in Figure 6.

### 6.5.6 Petrographic Study of the Gold

Observation of small gold nuggets extracted from the 1985 drilling using a binocular microscope was undertaken. From this it was observed that many of the smaller nuggets were angular while the larger ones were more rounded. Inclusions of quartz were common. A table was produced in the Coniagas Mines report showing this in more detail.

### 6.5.7 Grade Comparison between 1958 and 1985

Coniagas Mines reported that “We tried to compare the contents of the auriferous gravels obtained in 1958 and 1985”.

*“The most important differences are significant due to the fact that the incorporation of a large nugget greatly influenced the total weight of gold obtained (a 180 mg nugget was found in the 1985 drilling). If this was removed then the gold content in these gravels was not erratic and can easily be repeated”.*

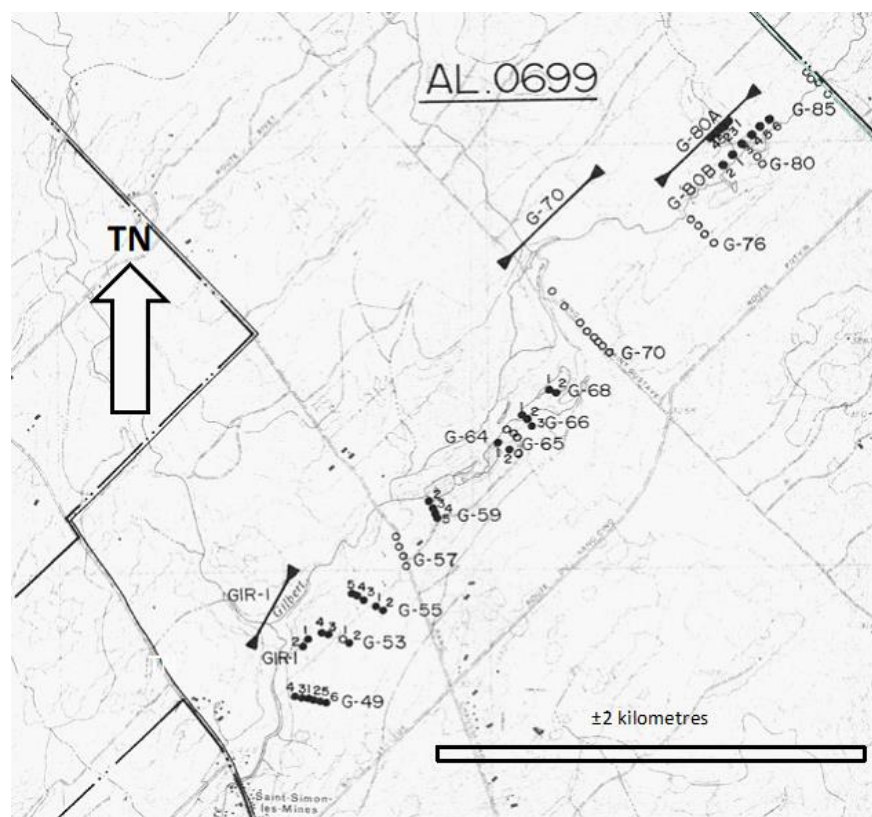
Several tables were presented to demonstrate this. These have not been included.

## 6.6 Macamic Resources Inc., 1987 (GM46544)

The Macamic Resources report covered AL 0699 and some 22 km<sup>2</sup> of the Gilbert River basin in the Seigneurie St. François, Beauce. The report was presented in March 1988. The relationship between Coniagas Mines and Macamic Resources is unclear.

A seismic refraction survey was done over the area in 1987 in order to detect paleo-channels under the overburden. Several of these seismic lines covered the UBR project area.

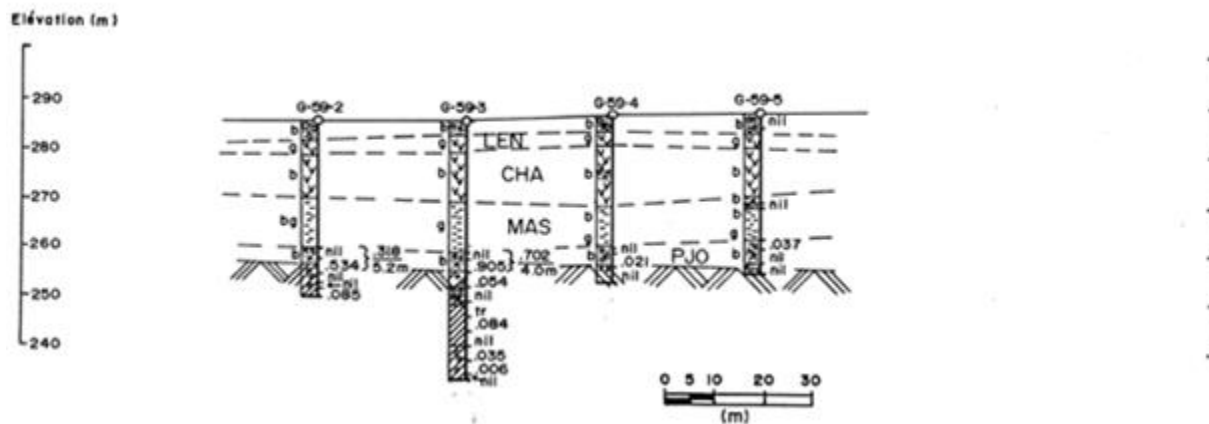
Having defined the paleo-channel it was then targeted for a drilling program. A Reverse Circulation (RC) drilling program was completed that including 38 holes, for a total of 920 m. Each hole was completed down to the bedrock to allow bedrock sampling. Geohydrotek of St. Nicholas completed the drilling.



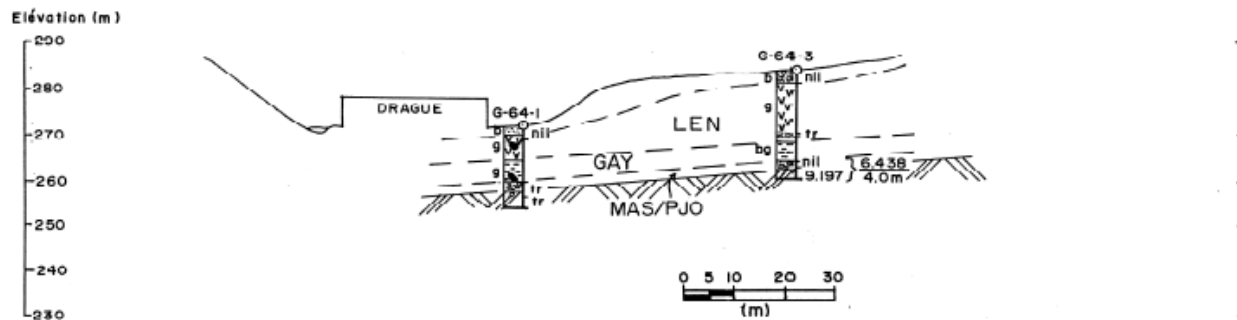
**Figure 8.** This figure is extracted from the Macamic Resources report and shows the distribution of the 38 boreholes drilled (black dots; earlier drilled holes are shown as open circles).

The results of the drilling were used to calculate a volume of gold bearing material of 668 000 cubic metres at 1.374 g Au/m<sup>3</sup>. Of that volume, "interesting" material was estimated at 491 850 cubic metres at a grade of 1.76 g Au/ m<sup>3</sup> (Gilbert 1988).

*This is a pre-NI 43-101 regulation estimate made by Gilbert in 1988 and represents an exploration property where potential quantity and grade are conceptual in nature. Exploration is insufficient at this point to define a mineral resource and it is uncertain if further exploration will result in the target being delineated as a mineral resource in the future.*



**Figure 9: Section G59.** The location of these sections is shown in Figure 9. This section clearly shows the higher gold grades close to the bedrock.



**Figure 10: Section G64.** This figure shows the drilling completed by Coniagas Mines and Macamic Resources. It also shows the river and dredge ponds.



Section	trou	E (m)	1 W (m)	L (m)	Volume (m3)	Teneur (gr/m3)	Total gr	or oz
G-49	5	3,4	30	300	30 600	1,582	48 409	1 557 *
	6	1,5	30	300	13 500	5,827	78 665	2 529 *
G-53	2	4,5	30	270	36 450	3,317	120 905	3 888 *
G-55	1	7,6	50	215	81 700	0,902	73 693	2 370 *
	3	6,7	50	215	72 025	0,277	19 951	642
G-57	2	12,2	50	200	122 000	1,148	140 056	4 503 *
	3	12,2	50	200	122 000	0,487	59 414	1 910 *
G-59	3	4,0	30	300	36 000	0,702	25 272	813 *
	2	5,2	30	300	46 800	0,318	14 882	479
G-64	3	4,0	50	248	49 600	6,438	319 325	10 268 *
G-66	1	4,5	45	150	30 375	0,246	7 472	240
G-68	1	4,0	30	225	27 000	0,355	9 585	308
<b>Total:</b>					<b>668 050</b>	<b>1,374</b>	<b>917 629</b>	<b>29 506</b>
<b>*réserves exploitables :</b>					<b>491 850</b>	<b>1,760</b>	<b>865 739</b>	<b>27 837</b>

E: Epaisseur de l'intersection  
1W: largeur (demi distance entre les trous adjacents sur une section).  
L: Longueur (demi distance entre des sections adjacentes).

**Table 4: Macamic Historical Estimate for Part of the Gilbert River Basin.**

The Macamic historical estimate concluded that their drilling had approximately halved the exploration target size but more than doubled the grade. Again the reader is reminded that these are historical estimate figures. They recommended the drilling of additional boreholes at various locations.

## 6.7 Geological Survey Canada Sonic Drilling (Shilts and Smith 1986 and 1988)

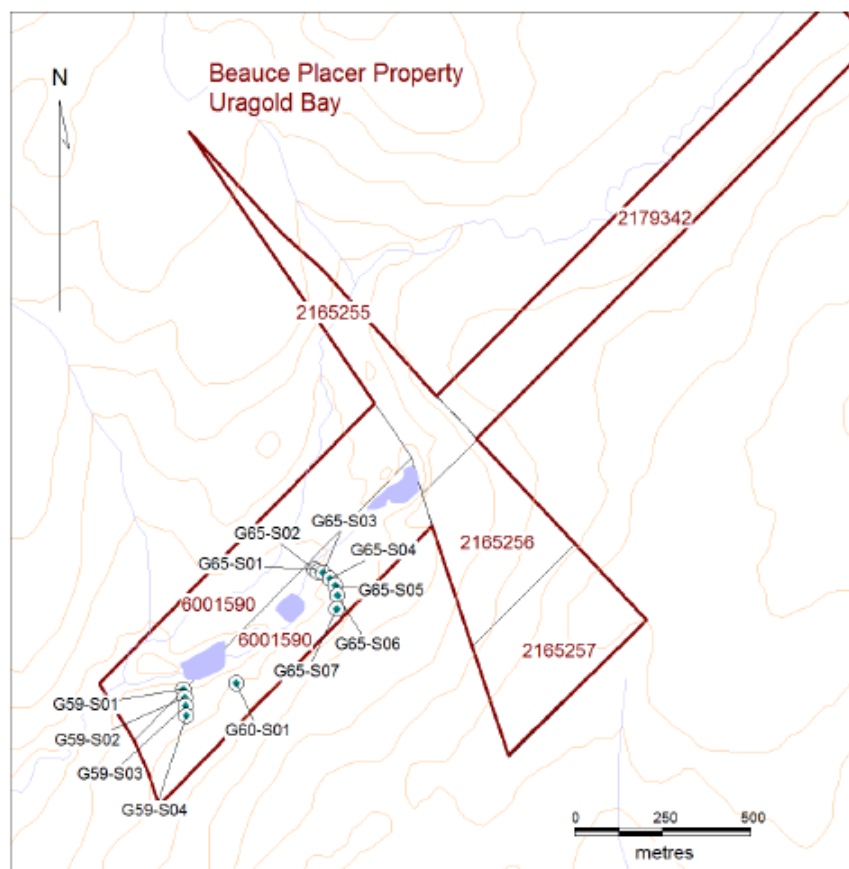
In 1985, the Geological Survey of Canada performed rota-sonic drilling in the Chaudière River area. Six of these holes were drilled in the Gilbert River Valley where highly oxidized basal units appear to be older than any other sediments encounter in other valleys (Shilts and Smith 1986). These authors described the clay rich basal units and invoked a gold rich unit made of alluvial gravel cut into it. In a later publication Shilts and Smith (1988) presented partial results for visible gold processing of some of the Gilbert River's boreholes. Gold counts up to 7.0 grains (0.45 grams) are reported from the clay rich basal units. In this publication, the lower brownish clayey diamict is interpreted as a pre-glacial colluvium instead of a glacial deposit, despite anomalous but low Ni content of distant derivation.

## 6.8 Uragold Bay Resources Inc. Drilling - 2010-2014

Two exploration campaigns were carried out by Uragold Bay over the original claim area: (1) A Sonic drilling campaign carried out in February 2011 to resample the historically known gold bearing unit and (2) a Diamond Drill Campaign in October 2011 to test the underlying bedrock.

### 6.8.1 Sonic Drilling

Using Sonic drilling allowed coring of the sedimentary units and the recovery of visible gold from the buried gold placer at the Beauce Placer Project of Uragold Bay Resources Inc. The campaign was carried out from February 22th to March 4<sup>th</sup>, 2011. Drilling was contracted to Boart Longyear under the supervision of Inlandsis Consultants and the assistance of SL Exploration of Acton Vale, Québec. The campaign involved twelve holes with a very good recovery of 10 cm cores of the various unconsolidated units. Details of the boreholes locations are given in Table 6 and Figure 13.



**Figure 13.** This figure shows the positions of the 12 sonic drill holes located and drilled on the property. The property outline is from the original 5 claims held by Uragold.

From top to bottom, the stratigraphy included: (1) an upper grey silty diamict; (2) laminated silt to fine sand rhythmite; (3) a brown clayey diamict; and (4) a brown clayey diamict resulting from deep in situ alteration of the local bedrock. Unit 3 correspond to an older till produced by the incorporation of the deep alteration profile (unit 4). Both 3) and 4) constitute the gold bearing units of the buried placer known on the Property. It is also known from additional work that gold “colours” are randomly found at higher levels in the tills where residue parts of the basal oxy-soil have been reworked during glaciation.

The cores were cleaned and logged by Inlandis Consultants according to their sedimentological characteristics. Descriptive logs were prepared reporting every intersected unit in detail by the use of drill log forms (Appendix 3: summary data is presented in Figure 26). The auriferous units, namely the lower brownish diamict and the underlying saprolite were sampled for gold recovery. A two third split of the core was sampled in plastic bags for treatment while the remaining third was kept for reference.

Sonic drilling was used as it allowed the coring of fresh bedrock so samples including pyritic shale, slate and felsic volcanoclastic layers of the Beauceville Formation were collected. Twelve sonic drill holes were completed between February 22nd and March 4<sup>th</sup>, 2011 for a total of 342 m of relatively undisturbed core, including 40 m in fresh or fractured bedrocks. The holes drilled were located relative to previous mapping of the buried gold placer (Gilbert 1988) and positioned in the field by the use of handheld GPS.

During drilling, the 10 cm diameter cores were wrapped in plastic bags and placed in wooden boxes containing two 1.5 m sections. A considerable stretching, up to 20% increase in core length, accompanied by an equivalent factor in diameter reduction, may occur due to vibration during extrusion from the drill rods. Also, some dragging of unconsolidated material occurs at the contact of the drilling rod so that the first millimetres at the core surface is made of reworked material entrained downward by the penetrating rod.

The sonic drilling technique allows recovery of a large quantity of material while permitting the studying of stratigraphy since the cores are mostly undisturbed by drilling. Recovery of a high volume is necessary because of the nugget effect present in a coarse gold prospect. A gold nugget of considerable size heavily affects the gold content of the sample from which it is taken. In such condition, a higher volume of sampled material is necessary to obtain a better representation of the real gold content. It is also noted that free gold could sink to the bottom of a RC drill hole and that phenomenon could explain the high gold concentration in bottom samples that were found in past results.

A hole was considered completed after a run of 1 to 3 metres into fractured but relatively unaltered bedrock was completed. The latter was then sampled for identification and laboratory assay. The boxes were then grouped nearby each hole and covered to prevent outside contamination and snow infiltration. After loading the core into the box, a wooden

plate is nailed on the boxes for long term protection. In view of future hydrogeological characterization, three piezometers were installed.

**Table 5: Location of Installed Piezometers.**

Identification	Hole Number	Depth (m)	Sedimentary Unit
PZ-1	G65-SO2	21.3	Base of the clayey till and fractured bedrock
PZ-2	G65-SO4	15.5	Silt/ clay rhythmites
PZ-3	G60-SO1	18.3	Fractured bedrock.

Gold grains were recovered using a Scanning Electron Microscope (SEM).

Unfortunately, no analyses were completed on the sonic core recovered. Although gold volumes were estimated (see Table 8) these cannot be considered to be “analyses” and so can only be used for resource estimation in a limited manner. This method was chosen as it best fitted the likely recovery process that will involve washing and gravity concentration of free gold. The individual grains were not “destructively tested” hence the resource estimate is described as being “limited”.

### Laboratory assay

Fresh and altered rock and dense concentrates samples were shipped to ALS-Chemex laboratory of Val-d’Or for chemical analysis. These were submitted to pulverisation and gold determination by fire assay Au-AA23 on 30 grams aliquots and multi element ICP analysis ME-MS61 including 48 additional element as follow : Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, Hf, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn, Zr. Rock samples were also submitted to whole rock analysis by XRF methods. Photographs of parts of the sonic cores and gold grains are shown in Figures 15 and 16.

### Visible gold results

Treatment of the clayey basal till (unit 3) and underlying saprolite (unit 4) led to the recovery of 23 mineral grains, mostly gold, to be further analysed by SEM. No coarse gold was observed in the >2 mm sieve. The recovered gold grains show complex fragile shapes with some hammering forming more compact shapes (Figure 16). Grain sizes varied from 100 of microns to 1-2 millimetres, which constitute coarse gold grains.

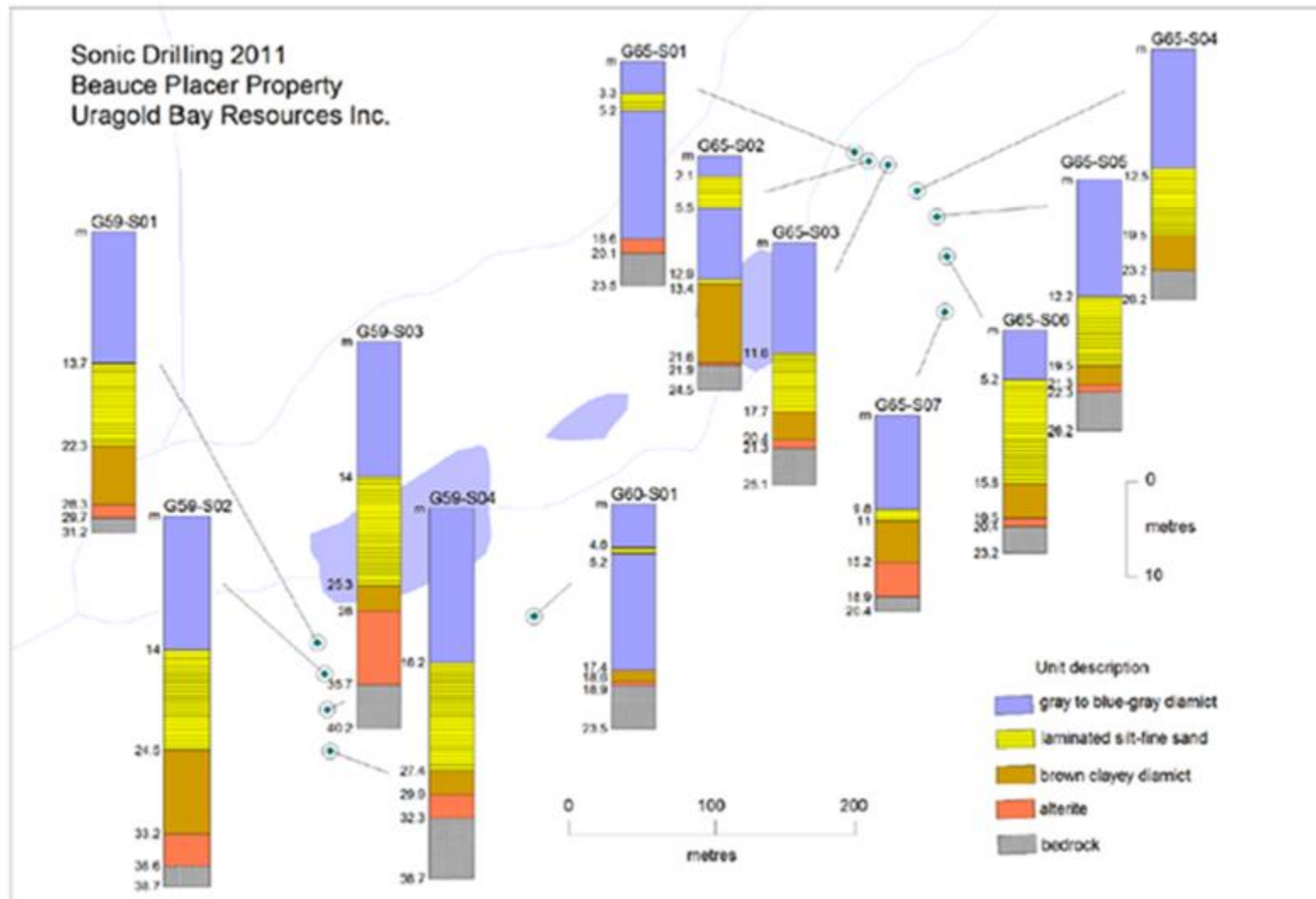


Figure14 .Stratigraphic sections shown by sonic drilling in 2011. The gold bearing unit correspond to the brow clayey unit

## **Scanning electron microscopy (SEM) analysis.**

Electron microscopy imagery and analysis confirm the recovery of 17 gold grains (Table 9). This technique allowed detailed examination of morphology, dimension, composition and mineral association of gold. In addition to the complexity of shapes observed visually and under the binocular microscope, SEM reveal a porous surface coupled with pure gold on most grain surface. A few occurrences of flattened surface (as opposed to pitted surface) reveal a silver content up to 30%. Detailed measurements allow the calculation of grain volume which was used to estimate the total weight in milligrams (mg) for each sonic hole, as reported in Table 7. Finally, the gold was found in mineral association mostly with iron oxides or limonite, clay minerals and minor quartz, as revealed by analysis of the inclusion observed on grain surface

Mr. Réal Lapointe was the qualified technician who used the SEM. The SEM allowed the visualization of the morphology, the dimension and the composition of the nuggets. The morphology of the nuggets is evaluated from the overall look of the grains. We wanted to distinguish pristine versus transformed gold grains to evaluate their transport from source. The dimensions are directly given by a scale on the screen and pictures. It is to note that the thickness of a grain is harder to evaluate since we don't have a perpendicular view of the thickness. However, it is possible to make a good estimation of it. The composition of a grain is given with a tool that analyse the different electron response from their interaction with a mineral. Software then estimates the best correspondence between the electron response and the usual response of the natural elements. We looked for the silver content of the nuggets to determine the alteration they went through. Finally, any association between gold and any other mineral assemblage on the gold grain was noted. A nugget would take about 10 minutes of SEM observation. Digital pictures were then taken and put online for further downloads and analysis.

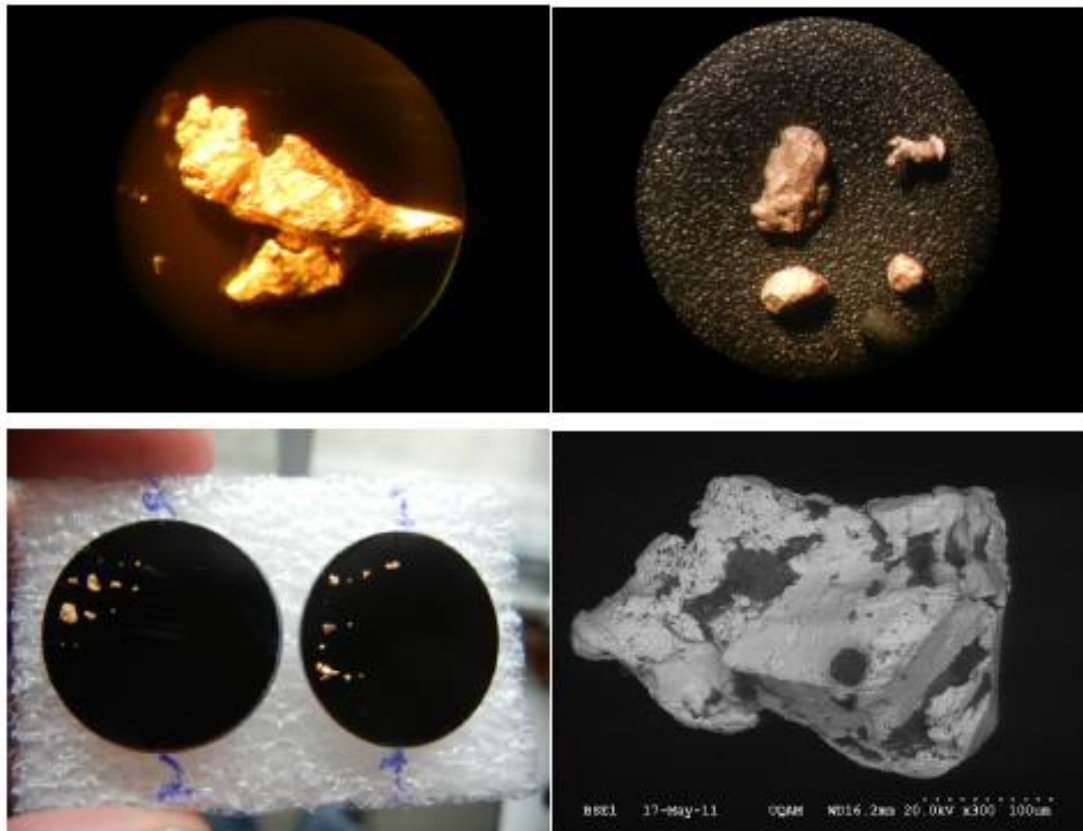
## **Dense fraction assay results**

Analysis of dense mineral concentrate revealed no significant gold content except in sample G65-S04-01 with 590 ppb Au and sample G59-S01-01 with 109 ppb Au. These two sonic holes also returned abundant visible gold.

Some of the concentrate showed very high chromium content (>1000 ppm Cr) for the basal diamict unit which is consistent with the presence of serpentinite in clast lithology. Both tracers are likely derived from the ophiolite belt of the Québec Appalachians which occur at about 10 km north of *Rivière Gilbert*. Gold in the basal diamict is geochemically associated with its pathfinders including up to 580 ppm W, 135 ppm As, 48 ppm Bi and 8 ppm Sb, suggesting a local derivation.



**Figure 15.** Pictures of sedimentary units. From top left to lower right: Detail of the grey silty diamict (Unit 1); finely laminated silt and fine sand (Unit 2); cores and details of the brown clayey diamict (Unit 3); and brownish beige alterite (Unit 4) and its underlying bedrock.



**Figure 16.** Image of gold grains recovered from the Beauce drilling. From top left to lower right. Top left: - coarse grain of fragile shape gold; top right: - four grains from complex to compact shape with hammering of one extremity of the top right grain; Bottom left: - mounting of 23 candidate grains for SEM examination and Bottom right; - SEM view of a gold grain with dark inclusions of lighter minerals.

**Table 6: Sonic Borehole Location Data.**

Hole number	Easting (m)	Northing (m)	Altitude (m)	Depth (m)
G59-S01	371278	5120335	276	31.2
G59-S02	371282	5120313	276	38.7
G59-S03	371283	5120288	275	40.2
G59-S04	371285	5120260	277	38.7
G60-S01	371430	5120350	288	23.5
G65-S01	371660	5120668	276	23.5
G65-S02	371670	5120661	278	24.5
G65-S03	371684	5120659	278	25.1
G65-S04	371703	5120640	274	26.2
G65-S05	371718	5120622	279	26.2
G65-S06	371724	5120594	281	23.2
G65-S07	371722	5120556	285	20.4

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\*coordinates are Universal Transverse Mercator, zone 19, North American Datum 1983.

**Table 7: Visible gold results.** A total of 17 gold grains were confirmed by SEM.

Hole number	No. of gold grains	Remark	Weight (mg)	Grade* (g/m3)
G59-S01	3		12.62	0.84
G59-S02	1	small	0.06	0.00
G59-S03	1	in alterite	0.68	0.05
G59-S04	2		17.2	1.15
G65-S03	2		0.35	0.02
G65-S04	7		21.62	1.44
G65-S05	1		0.02	0.00

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\*Corresponding gold grade considering a constant volume of 15 litres per samples.

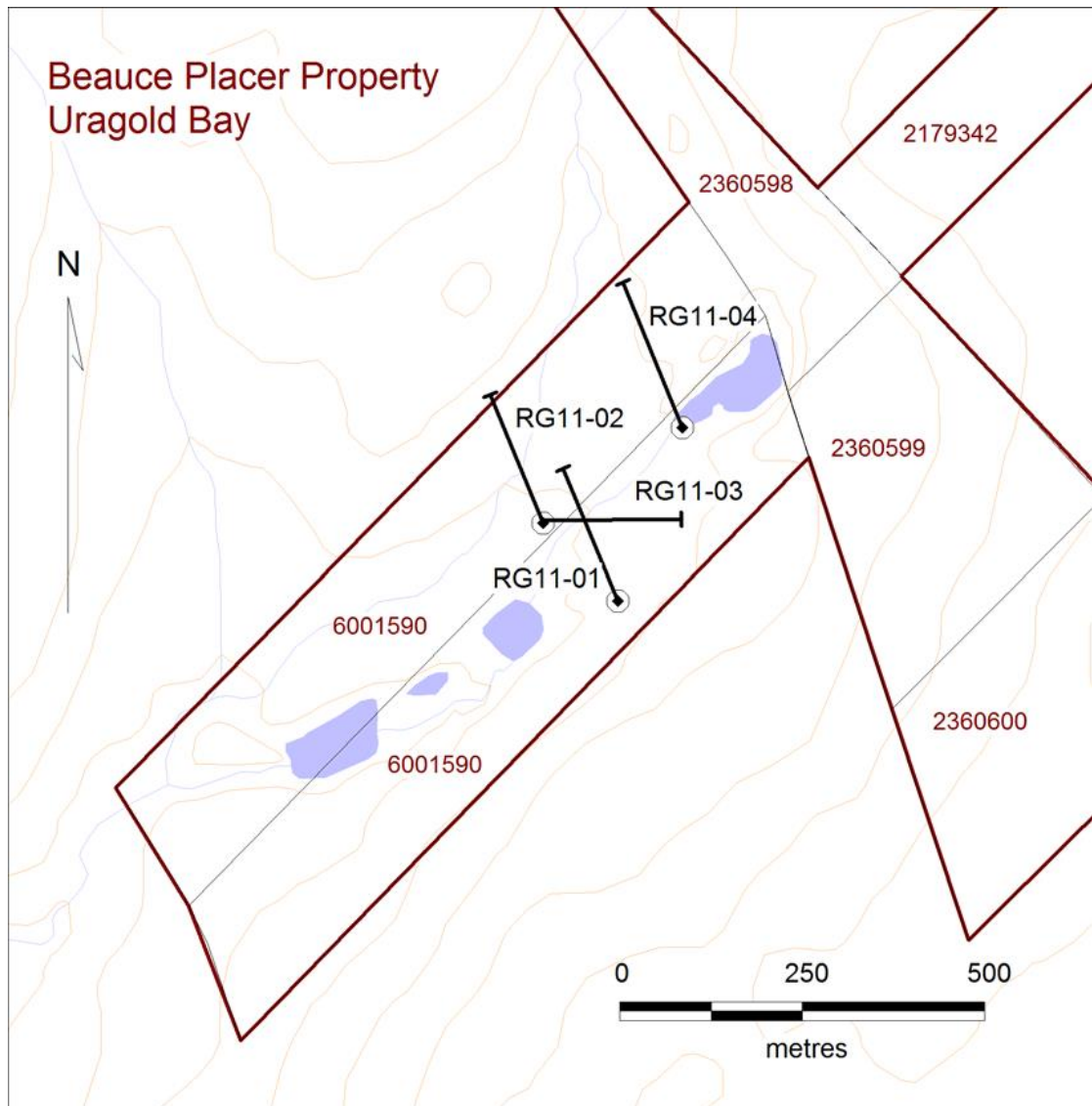
**Table 8: Details of the Gold Nuggets Recovered and Examined.**

Hole	Photo #	Description / interpretation	Segment 1			Segment 2			Segment 3			Volume (um3)	Volume (cm3) [/ $1 \times 10^{12}$ ]	Weight (g) gold = 19,30 g/cm3
			A axis (um)	B axis (um)	C axis (um)	A axis (um)	B axis (um)	C axis (um)	A axis (um)	B axis (um)	C axis (um)			
G59-S01-01	14	Gold nugget	1235.96	612.24	255.10	255.10	255.10	255.10	255.10	255.10	255.10	2262370	0.000654	0.0126
	15	Gold nugget (+silver)	760.00	460.00	120.00	260.00	260.00	120.00	320.00	180.00	120.00	09		
	16	Altered plagioclase										5697600		
	17	Gold nugget	738.00	625.00	312.50	852.00	852.00	312.50				0		
												<b>6541986</b>		<b>26</b>
												<b>34</b>	20	
G59-S01-05	18	Biotite												
G59-S02-03	19	Garnet											0.000003	0.0000
	20	Gold nugget	248.00	238.10	32.00	200.00	152.00	32.00	144.00	112.00	32.00	<b>3378458</b>	38	<b>65</b>
G59-S03-01	21	Gold nugget	578.95	407.89	150.00							<b>3542218</b>	0.000035	<b>84</b>
												7	42	
G59-S04-02	22	Gold nugget (+silver)	1785.71	714.29	357.14	1250.00	714.29	267.86	1000.00	419.64	357.14	8445697	0.000893	0.0172
	23	Gold nugget	669.29	593.75	122.95							33		
	25	quartz et oxides de fer										4885921		
												<b>8934289</b>	43	<b>43</b>
												<b>49</b>		

G65-S03-02	1	Organic matter												
	2	Gold nugget	232.56	174.42	56.82							2304796		
	3	Gold nugget	446.43	312.50	111.61	97.46	52.97	42.37				15789375		
												<b>Total</b>	<b>18094171</b>	0.00001809
G65-S04-01	4	Gold nugget	585.94	468.75	119.05	349.21	198.41	119.05	317.46	198.41	119.05	48445418		
	6	Gold nugget	1801.80	983.61	267.86							474719840		
	7	Gold nugget	714.29	436.51	198.41	436.51	238.10	198.41				82484545		
	8	Gold nugget	631.58	526.32	98.68							32802533		
												<b>Total</b>	<b>638452335</b>	0.00063845
G65-S04-01b	9	Gold nugget	2136.36	1454.55	136.36							423730851		
	10	Gold nugget	1031.75	456.35	119.05							56053396		
	11	Gold nugget (+silver)	120.00	107.00	66.67	266.67	66.67	13.33	106.67	106.67	90.91	2127454		
												<b>Total</b>	<b>481911701</b>	0.00048191
G65-S05-01	12	Gold nugget	210.53	121.62	26.67	133.33	133.33	26.67				<b>1156986</b>	0.00000116	<b>0.000022</b>
	13	Biotite												

### 6.8.2 Diamond Drilling

In November 2011, four NQ diameter diamond drill holes were sunk on the south-western part of the Beauce Placer Property for a total length of 1,038 metres, including approximately 950 metres in bedrock (see Figure 17). This short campaign tested various targets including: (1) the immediate up ice area of the gold-bearing buried brown diamict of glacial origin; (2) two magnetic lows; and (3) an EM conductor axis. Both (2) and (3) were known from a historical airborne geophysical survey (D'Amours, 2008).



**Figure 17.** This figure shows the collar positions and the direction of the four diamond drill holes located on the Beauce property. Note that these boreholes

were drilled within the original property so this diagram shows only the original property boundary.

A quick descriptive log of the cores was performed in the field showing that the holes intersected pyritic black slate and volcanoclastic beds of the Beauceville Formation with frequent quartz veining. Bedding variation along core and abundant quartz veins (up to 50%) suggested that a fold hinge was intersected in hole RG11-02 which corresponds to the magnetic low target. The volcanoclastic beds which represent a favourable unit for gold are present in holes RG11-01 to RG11-03 and remained to be confirmed in hole RG11-04. These are grey to light grey coloured rocks of heterogeneous granulometry. Visual examination revealed local pyrite, pyrrhotite or chalcopyrite mineralization within the volcanic beds. Visible alterations include silicification, epidotization, quartz veining, lixiviation, cavitation and brecciation (Charbonneau, 2012).

**Table 9: Diamond Drill Hole Properties.**

UTM NAD 83 Zone 19T					
Hole Number	Easting (m)	Northing (m)	Azimuth	Dip	Length (m)
RG11-01	371 733	5 120 596	340°	-50	255
RG11-02	371 633	5120 704	340°	-50	249
RG11-03	371 633	5120 704	90°	-50	244
RG11-04	371 827	5 120 830	340°	-50	285

Gold analysis for selected samples along drill-hole RG11-01 returned slightly anomalous values, ranging from 10 to 75 ppb Au, sparsely distributed along core length from 20 m to 130 m of depth.

In contrast, the three other holes only returned undetected gold values. This anomaly occurs in pyritic volcanic and sedimentary units of the Beauceville Formation with minor quartz carbonate veining. Additional splitting and sampling was applied to intervening length to better define this anomaly fails to reveals any detectable gold values, which suggest that the gold anomaly is restricted to mineralized and veined intersections. Nevertheless, this anomaly represents an alteration envelope associated with a potentially gold bearing hydrothermal system below or very near the buried placer, which requires additional drilling in the future.

### 6.8.3 Historical Resource Estimation

Several historical resource estimates have been determined for the Gilbert River placer deposit:

- 3) Previous estimates by Coniagas Mines Ltd. (see report GM42988, 1986, page 62) and this report p. 41. The area covered by the estimate equates to the current Uragold claim block and was said to contain a historically estimated resource of 1,676,269 grams (or about 53,900 ounces of gold).

In report GM 42988 prepared by Coniagas it is stated that the historical estimate was calculated using a polygonal method and gold values derived from the drill holes along the various line sections. It is assumed that the polygon boundaries were the channel boundary/ edge (as defined by the drilling and the geophysical data including the seismic survey).

The reader should be reminded that these gold values were drilled long after the dredging of the property had ceased and that no mining has occurred since these figures were generated. It is assumed that the gold values used in these calculations are still present in the ground.

- 4) Macamic Resources (1987) completed a further round of drilling including another 38 drill holes (920 metres). This redefined a considerable length of the Beauce paleo-channel adding in several new drill sections.

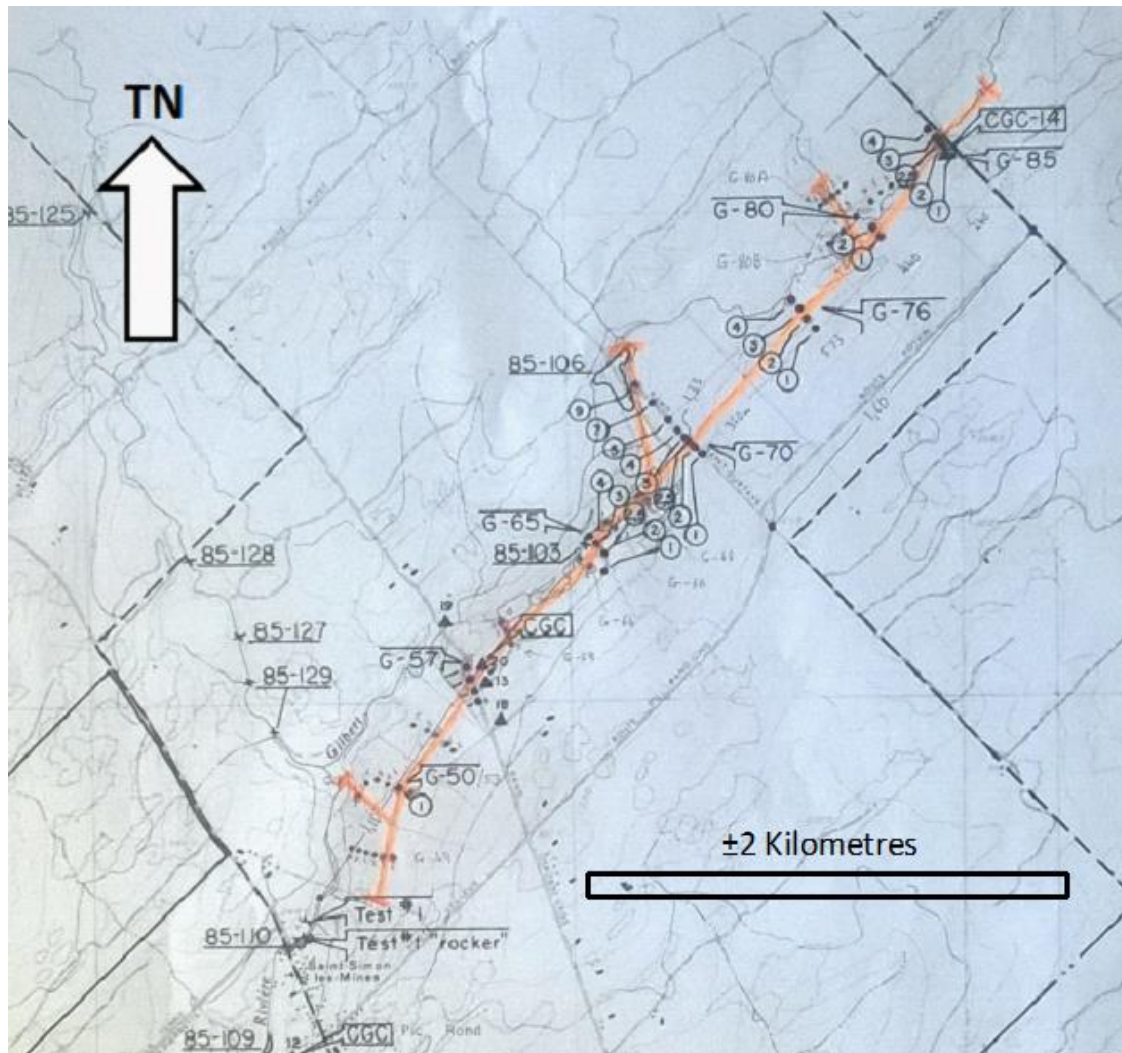
On the basis of this new drilling another historical estimate was calculated by Macamic for the area of the Gilbert River basin drilled. This was only Sections G49 to G68 (see page 51).

They estimated a contained 29,506 ounces of gold on this limited portion of the deposit.

### 6.8.3 Uragold Resource Estimation (October 2014)

*Note: The reader should note that all discussions on the historical estimates or the exploration target on the Beauce Project area are largely based on historical data in terms of current NI 43-101 conventions; and that the qualified person has not done sufficient work to classify the historical estimates as current mineral resources or mineral reserves; and that the issuer is not treating the historical estimates as current mineral resources or reserves.*

The substantial increase in the area of Mineral Rights held by Uragold meant not only that the length of gold bearing paleo-channel was increased between three and four fold; but more importantly meant that considerably more data was available for re-interpretation.



**Figure 18.** This figure shows the general zone of the gold mineralization. The orange zone from bottom left to top right is about 4,275 metres long and shows the main axis of the paleo-valley as defined by the 1985-87 drilling programmes. This mineralised zone almost certainly continues downstream (bottom left) but there is only very limited drill data and much of this zone lies under the urban area of the town of Saint-Simon-les-Mines. It should be noted that the drilling suggests that all of the Gilbert River's northern tributaries are also gold bearing. There are no drilled southern tributaries.

The following points need to be mentioned:

- The paleo-river channel is relatively narrow (probably 50 to 80 metres width maximum);
- The drilling suggests that all three of the northern tributaries of the Gilbert River are probably also carrying some gold mineralisation;
- It is very likely that grade within the paleo-channel will be extremely variable (see the next section on grade variability); and
- The depth of cover varies substantially. In hole G-80A-5 it is 9.1 metres, while in G-70-3 it is 39 metres at the paleo-channel centre.

*Comment: The unknown width of the deposit; high variability of the grade; unknown data quality (only limited verification is possible); poorly distributed data points; and several other factors provide a low reliability for any grade/ tonnage estimate generated.*

*In this instance the resource has been calculated on a simple polygonal basis with no form of data manipulation (such as data value capping) and using the historical data available. This means that any borehole (such as G64-3) that has a high grade associated, a considerable thickness; and a large area will have an undue weighting in the value of the total calculated resource.*

The basic approach used was:

- Only gold values of over a cut-off of 0.1g/m<sup>3</sup> have been used;
- Around each significant borehole was constructed a polygon (that went halfway to adjacent boreholes in all direction) or to an assumed channel margin if no adjacent borehole was present;
- The product of grade/ thickness/ and polygon area was then used to calculate a grade/ volume. All boreholes with no gold or gold values below the cut-off were treated as barren; and
- In a similar manner the volume of overlying waste was calculated (thickness x area).

Calculated in this manner the following was determined:-

- a resource of 1,892,503 grams (60,844 ounces);
- contained within 2,157,171 m<sup>3</sup> of ore an estimated 9,248,334 m<sup>3</sup> of overburden;
- giving a conservative stripping ratio of 1: 4,3; and
- An average grade of the brown tillite and/ or the saprolite material of around 0,877 g/ m<sup>3</sup>.

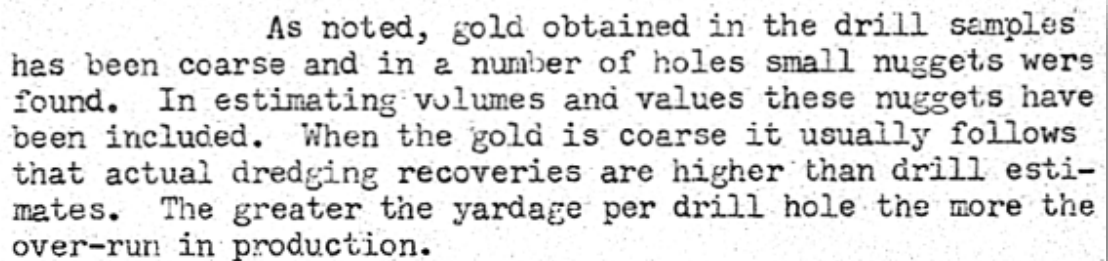
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Note that this resource is based on “historical data” and that the stripping ratio will increase as mining will have to accommodate slope stability (ignored in this calculation).

### **6.8.5 Grade Variability**

Any grade/ tonnage calculation at the Beauce Project will be fraught with difficulty. Key amongst the problems with the Beauce (and many other gold projects) is ore grade variability. The grade can and will change from almost nothing to a value of several grams a cubic metre within a very short distance. This is clearly seen between borehole G64-3 (discussed above) and the adjacent borehole G65-S07 drilled by UBR that had no recorded gold.

This point was emphasised by Seeber (1959) who in relation to the proposed dredging stated:-



As noted, gold obtained in the drill samples has been coarse and in a number of holes small nuggets were found. In estimating volumes and values these nuggets have been included. When the gold is coarse it usually follows that actual dredging recoveries are higher than drill estimates. The greater the yardage per drill hole the more the over-run in production.

The Consultant accepts that the estimated resource figures will be at variance to any mined values (as discussed above). However, accepting the above paragraph the Consultant believes that gold grades and volumes contained in the deposit will be under-estimated by the drilling.

### **6.8.6 Range of likely historical estimates or the Gold Upgrading Factor.**

Following on from the comments by Seeber (1959 – see the earlier section), Uragold realized that it may be possible to estimate the range of gold upgrade between any exploration target drilling and any future exploration target mining by comparing the historical drilling results and the amount actually dredged during historical mining by the Beauce Placer Mining Company.

This point was emphasised by Seeber (1959) who in relation to the proposed dredging stated:-

*“...gold obtained in the drill samples has been coarse and in a number of holes small nuggets were found. In estimating volumes and values these*

*nuggets have been included. When the gold is coarse it usually follows that actual dredging recoveries are higher than the drill estimates.”*

The author believes that gold volumes contained in the deposit will be larger than indicated by the drilling, but until the completion of a bulk sampling program, there is no way to quantify the nugget effect. However, a useful guide maybe to look at the historical information and to use this as a guideline.

Looking at the section previously drilled by The Beauce Placer Company and their unpublished gold production data for the dredging and drag-line operation of the same area then:

Historical Drilled Resource vs. Gold Dredged (assay values)			
Drilled Resource		Gold Dredged	
Resource volume	1,050,000 m <sup>3</sup>	Volume processed	1,050,000 m <sup>3</sup>
Gold contained	294,000 g/ Au 9,440 oz./ Au	Gold Dredged	1,768,000 g/ Au 56,800 oz./ Au
Gold grade	0.279 g Au/ m <sup>3</sup>	Gold grade	1.677 g Au/ m <sup>3</sup> g

Unfortunately, none of this drilling information (except summary data) has been recovered. It is clear that mining reworked the same material multiple times to achieve adequate gold recovery and this must demonstrate inefficiency during the mining. However, it can be seen that the nugget effect of the project is such that the final gold recovery was about six times the drilling estimate of the gold volume.

Making the assumption that recovered gold could be up to six times (x6) the historical polygonal resource figure (as per the data derived from the historical mining figures) suggests that the gold potential for the entire deposit now controlled by Uragold could range between 61,000 ounces (2,200,000 m<sup>3</sup> @ 0.87 g Au/m<sup>3</sup>) and 366,000 ounces\* (2,200,000 m<sup>3</sup> @ 5.22 g Au/m<sup>3</sup>) using the x6 factor multiplier.

*Note: The reader is reminded that all discussions on the historical estimates or the exploration target on the Beauce Project area are largely based on historical data in terms of current NI 43-101 conventions; and that the qualified person has not done sufficient work to classify the historical estimates as current mineral resources or mineral reserves; and that the issuer is not treating the historical estimates as current mineral resources or reserves.*

## 6.9 Sampling Program by Explolab

A programme to carry-out a preliminary metallurgical test by Explolab was completed between the 22th of July and the 2nd of August, 2013. The crew was composed of Robert Gagnon, P.Geo. and Christian Letendre, senior technician.

### 6.9.1 Objectives

The objectives of Uragold Bay Resources were multiple. Firstly, UBR wanted to evaluate the gold content of “already washed” gravel on the property (material presumed to have been processed by the previous dredging programme). The test sampling program was to determine the potential of gold occurrences in this material and to evaluate the aggregate (gravel) content. UBR wanted to evaluate the possibility of producing aggregate as a commercial by-product from the Beauce Placer property (see Figure 30).

The washing treatment was performed using a mobile washing facility owned and operated by Explolab. This unit works as a portable wash plant with a capacity of approximately 15 tons per hour.



**Figure 19.** A view of the mobile washing plant being loaded by a small excavator.

The unit is composed of three distinctive steps: the grizzly, the trommel and the sluice. The grizzly allows a first granulometric selection (size screening) and the wash of the complete raw material. The screen of the grizzly lets material smaller than 15 cm goes into the trommel and rejects bigger material. The rejected blocks are completely washed during the operation and checked by the crew to verify possible gold occurrences.

The trommel unit is 10 feet long and the screen lets material smaller than 1/4 inch pass through onto the sluice. The rejected coarse fractions are completely washed by an 8 feet water pulverisation pipe during the rotation. The reject of the trommel is the correct size for aggregate to be used as construction material.

Rejects from the trammel are controlled by a member of the Explolab crew who has the responsibility of checking for possible visible gold occurrences.

The final gold recovery is performed by a sluice of 10 feet long by 18 inch width. The sluice is fed by the trommel which provides the water flow as well. Water is fed to the plant by a portable petrol-pump. The facility is autonomous due to the petrol-motor.

At the commencement of the sampling operation the Explolab crew conducted a preliminary survey of the property. Explolab geologists did a quick prospect and completed a trial sampling exercise with a pan. Despite the lack of gold occurrences in this sampling the crew identified two spots named Beauce 1 and Beauce 2 which were selected for their capability to provide a sufficient and easy reachable quantity of material.

The feed of the washing plant was provided by a mobile mechanical excavator hired by Uragold. The excavator loaded approximately 10-15 tons per hour. The capacity of the plant is to wash 50-70 tons per day.

The sampling operation was conducted on two types of material. 80% of the volume of treated material was excavated from the dredge rejects. Around 20% of the total volume was excavated from the till and from the stripping material. No gold grain was found in the upper till and the stripped material.

Most of the volume treated was washed material from the previous dredging programme. This material was mostly composed of coarse grained sand and rounded to angular gravel. The sand is medium to fine with a large percentage of black sand (mostly magnetite and chromite).

It seems likely that the sand was probably the dredge final stage reject while the gravel was probably reject of the sieving stage. Explolab suggested that in the future there should be some form of mapping of this material. They also suggested that a complete granulometric study should be conducted to confirm the economic potential of the Beauce placer aggregate.

Gold grains collected in the wash plant were concentrated in the ExploLab facilities in Val d'Or. All of the material was passed over a gold wheel to extract

free gold grains. Gold grains were then observed using a binocular microscope.

A total quantity of 0.3 grams of gold was collected from Beauce 1 and Beauce 2. The size of the grains ranged between 100 µm and 2 mm. The best gold grain was 1.5 mm diameter and weighed 0.2 g. Shape varied between round and linear but the majority (75%) of the grains had a rounded shape.

Two kinds of grain were identified:

- 90% were made up of native gold; while the other 10% was;
- A mix of gold and silver.

Various amounts (0-10%) of non-metallic impurities were associated with the gold grains, mostly iron oxides.

### **6.9.2 Explolab Conclusion and Discussion**

In conclusion, Explolab demonstrated that the already washed gravel does contain residual native gold concentration. The biggest nugget of the campaign was found in the Beauce 2 site. The delicate shape of the gold grain (25%) suggests the presence of a proximal bedrock source for the native gold. Explolab suggested an MEB study for the gold nuggets. This kind of analysis can help to determine if the silver colour is silver or another element like PGE.

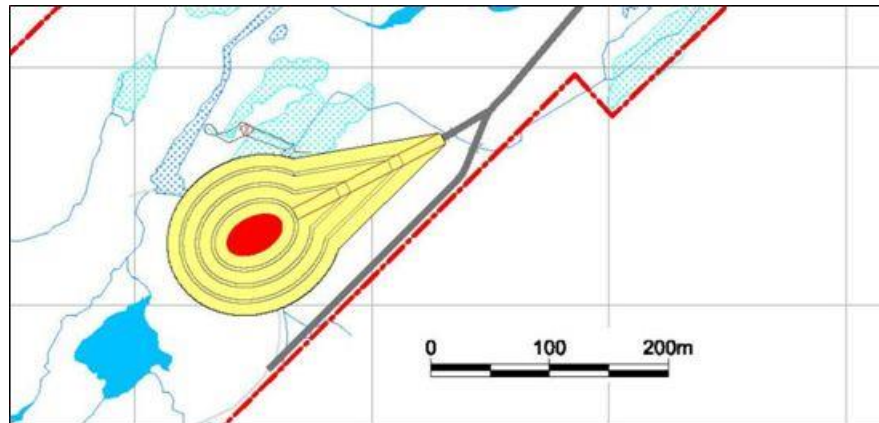
Finally, Uragold was able to test the local interest for the aggregate (washed gravel) that was generated during the testing to provide an indication of any possible commercial value. It was found that there is a market in the Beauce region for gravels sorted to sizes 20 to 40 mm and up to 200 mm or more.

Results of these discussions were promising and the Corporation is looking into maximizing its production credit through the sale of aggregate.

## 6.10 Genivar (now WSP) Pilot-Scale Mining Program.

UBR contracted Genivar (now WSP Global Inc.) to complete a detailed internal economic assessment (scoping) study regarding the feasibility of mining detrital gold on Uragold original 5 claims block. The Study was prepared and compiled by GENIVAR (now WSP) in a collaborative effort between GENIVAR and Uragold and other specialized consultants. The primary objective was to provide a technical review regarding potential mining activities on Uragold original 5 claims block.

From this study were extracted the plans and budgets for an overburden stripping operation (209,000m<sup>3</sup>) and the processing of auriferous basal till and saprolite (9,000 m<sup>3</sup>) through a pilot-scale mining program already permitted (Phase 1) for the Beauce paleo-placer deposit.



**Figure 20.** Preliminary diagram produced by Genivar showing the proposed pit and access ramp. The pit is located on one of the historical Macamic boreholes that had indicated higher gold grades.

While the work did include an internal economic assessment study (“Evaluation économique du projet Beauce Placer”) for a dry open pit placer operation, this is beyond the scope of this report, other than the fact that the in-pit simulation of mining made by Genivar gives an estimate of the operating costs (including G&A) at about CAD\$16/ M<sup>3</sup> of material processed and an estimated capital investment around CAD\$11/ M<sup>3</sup> of material processed. The report also stated that that these cost estimate have accuracies between + or -50 %,

## 6.11 Geophysical Surveys

This section of the Beauce Report describes the results of an electrical resistivity survey (ER); an induced polarization (IP) survey using the

tomographic imaging method (ERT) and a parallel survey using electrical conductivity EM (Frequency Domain Electro-Magnetic (FDEM)).

The survey was conducted on the Beauce Placer property of Uragold Bay Resources. The ERT survey was completed during the winter of 2013 and comprised 12 lines of 600 metres length. The lines were arranged to bisect the Beauce gold placer as sections so that the sub-surface structure could be determined. The ERT survey was carried out using a version of the Terrameter-LS system (manufactured by ABEM of Sweden). The survey was carried out in gradient mode using a cable system deploying 400m roll-out cables. The filter, the data inversion and tomographic imaging were performed using ZondRes2D and Res2dinv software. The conductivity survey was completed using a hand-held GEM2 FDEM from Geophex, USA. This survey was completed to produce maps of electrical conductivity and magnetic susceptibility of the property. See Figure 23.

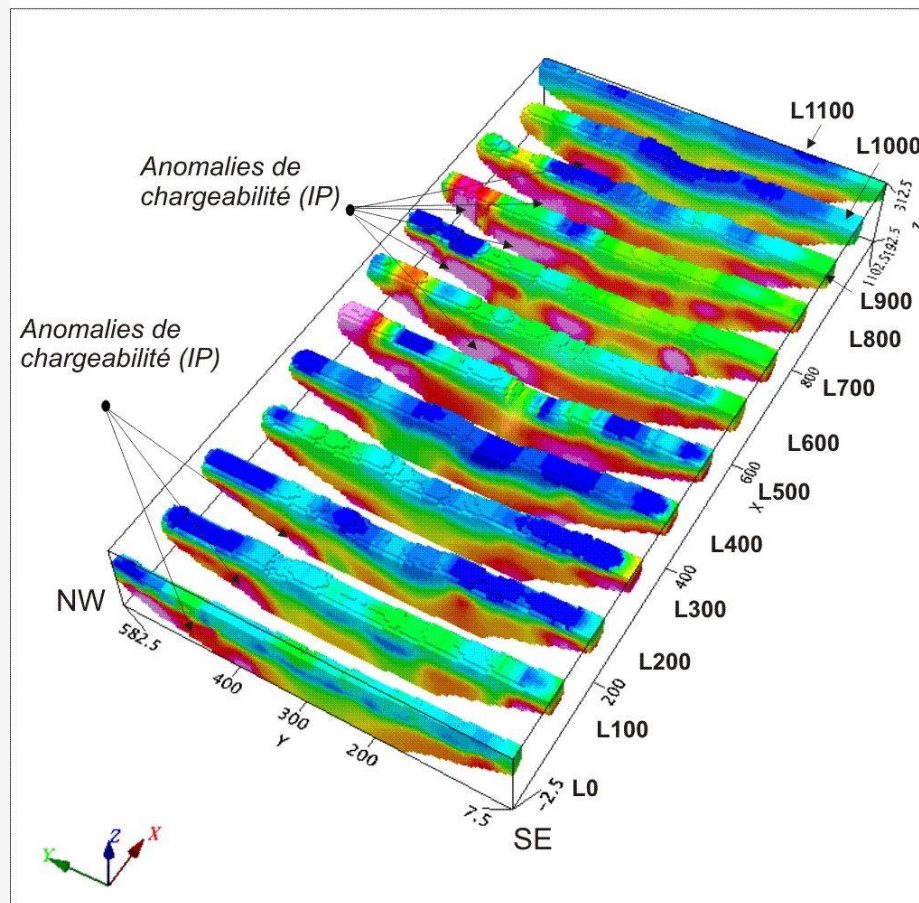
The tomographic imaging obtained (following the inversion of resistivity and induced polarization data), provides sections and plans that show the geometry of the quaternary units and estimate the variability of the thickness of the quaternary deposits within the paleoplacer valley of the Gilbert River. It is noteworthy that the electrical resistivity at shallow depths (a few metres) correlates well with the topography. Thus the topographic highs are characterized by more resistive rock formations reflecting the presence of grey diamictite (till with block) resting directly on shallow bedrock, while towards the centre of the valley, the values become less resistive due to the thickening of the Quaternary deposits and the presence of a deeper unit of laminated lake sediments. From previous surveys conducted by Uragold Bay Resources and others, these deeper sectors are most likely to contain the placer gold. See Figure 22.

At greater depths (50 to 70 m) the electrical resistivity data indicates alternating shales and volcanoclastic rocks of the Beauceville Formation.

Numerous electrical chargeability anomalies were present in the rocks of the Beauceville Formation both North and South of the perimeter surveyed. These anomalies are characterized by high magnetic susceptibility values suggesting the presence of disseminated pyrrhotite (iron sulphide).

Surveys of electrical resistivity, induced polarization and electrical conductivity made in 2013 on the Place Beauce property of Uragold Bay Resources were used to clarify the sub-surface geometry of the Ordovician and Quaternary sedimentary units in the paleo-valley of the Gilbert River. This valley, partially mined by the Beauce Placer Mining Company in the late 1950s to mid-1960s, still has a strong gold potential.

The Terrameter LS directed gradient mode survey, showed strong heterogeneities in the Quaternary units of the Appalachian bedrocks. In the Quaternary units anisotropy was sub-horizontal while in the bedrock it was sub-vertical (or steeply dipping). This dominant anisotropy clearly demonstrated the abrupt nature of the lithological contacts between units of volcanoclastic rocks and shales within the bedrocks. Contrasting electrical resistivity observed in the bedrock suggested alternating low resistivity shales and volcanoclastic and possibly more resistive sandstone.

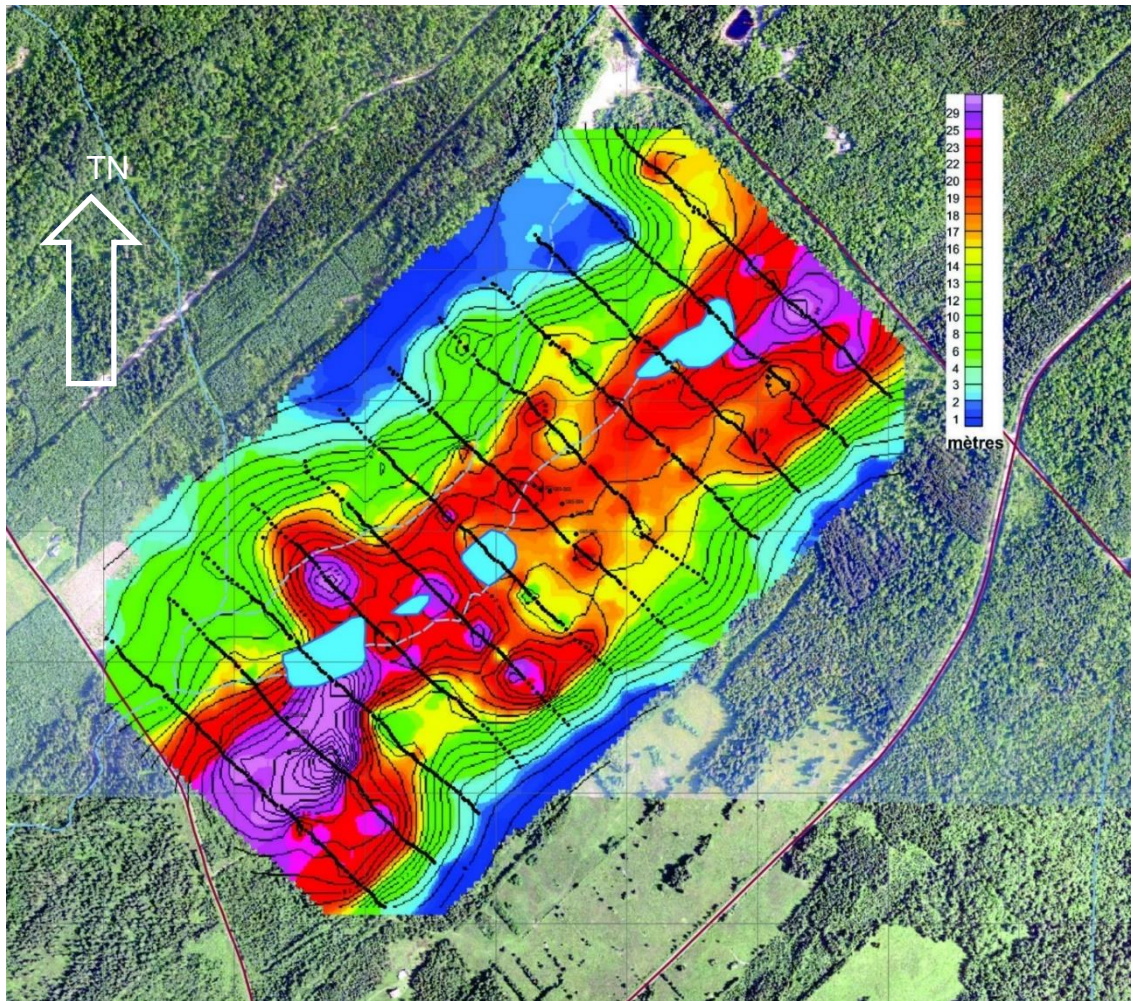


Levé de tomographie géoélectrique (ABEM) Terrameter LS  
(Uragold Bay, Placer Beauce, février 2013)

- 12 lignes de 600m
- Espacement des lignes: 100m
- Électrodes au 5m
- Protocole: Gradient plus
- Épaisseur de neige: 1-1,5m)
- Mesures de résistivité et de polarisation induite

**Figure 21. This diagram shows the 12 lines of IP completed across the Beauce paleo-channel. It is hoped that this data can be combined into a Beauce geological model that is currently in production.**

Induced Polarization data has been used to clarify the depth of the contact between the Quaternary sediments and the bedrock Appalachian sediments and volcanics. Overall, the greatest thicknesses of quaternary materials are observed in the southwest part of the project area and more specifically to the southwest of the first pond. Up the valley to the northeast, the thickness of the sequence of Quaternary deposits decreased to thicknesses of the order of 15 to 18m. The north end of the perimeter shows the presence of a second accumulation of Quaternary sediment area (pit) which seems to extend to the east of the road rang St-Gustave.



**Figure 22.** This diagram clearly shows the paleo-channel crossing the property. Maximum till thicknesses are close to 30 metres in the southern part of the project area.

Electrical chargeability anomalies (IP) are very numerous within the perimeter of the Beauce Placer property. These anomalies are mainly observed in the sedimentary or volcanoclastic bedrocks. Calculated depths (taken from the one

meter tomographic plan) show the presence of two very shallow electrically polarizable areas (high chargeability) called IV-a and IV-b. These are located north and south of the valley sides and have something like 1 metre of cover. They should be investigated using trenches. It is suggested that deeper portions of these anomalies (which continue in places to 50m), could, if the trenches are interesting, be drilled.

Another area of high chargeability values is present on the northwest side of the project perimeter (south of farmland used for planting trees). This area is well defined on maps at the 50m and 70m depths. It is interesting to note that this is the same area where the presence of sulphides was identified during drilling of artesian wells at the residence of Mr. Poulain. This area could contain gold mineralization within base metals (polymetallic) and should be checked.

The electrical conductivity data measured using the GEM2 probe (Geophex, USA) coupled to a sub-metric Trimble DGPS position indicator was used to map the area. From this data two maps were produced. The first was the electrical conductivity maps for different induction frequencies. These maps allow the difference between primary and undisturbed areas to be distinguished so that areas mined by the Beauce Placer Mining Company can be identified. In addition, these maps allow the delineation of areas with very low thickness of Quaternary deposits and therefore a low probability of a potential gold placer.

Another survey using the GEM2 probe collected data allowing the calculation of magnetic susceptibility values of the underlying rocks. Combining the electrical chargeability anomalies and magnetic susceptibility anomalies indicates the presence of pyrrhotite (magnetic iron sulphides). The chargeability anomalies IV-a and IV-b show high values of magnetic susceptibility and likely contain pyrrhotite.

This study has demonstrated the usefulness of geo-electrical tomography to study the geometry of buried Quaternary Units. This has proven useful in helping to indicate the position of the Beauce placer gold deposit. The geometry of the device used in the field and the mode of data acquisition were optimized to penetrate the entire Quaternary cover and rock to a total depth of about 80m. The data presented in this report are therefore dependent on this constraint. It would be suggested that the acquisition of higher resolution data using a shorter inter-electrode spacing (such as 2 or 3 m) would improve the discrimination of the Quaternary units and possibly highlight the spatial distribution of regolith gold.

To study the possible potential for gold in the bedrock, a survey using much high power should be considered that would penetrate the rock to several

hundred metres. Ideally this should be tomographic imaging using sections of electrical resistivity and chargeability to give a high resolution. Given the frequent presence of graphite in the rocks of the Beauceville Formation, it would be advantageous to use the complex method of resistivity (or spectral) to optimize discrimination of anomalies related to sulphides and graphite.

Using geophysics shows the presence of a thin layer of Quaternary deposits which in many places makes it possible to obtain relevant data on the geology of the rock in-situ. Given the likely short distance of transport of particulate gold, new exploration should be conducted to locate the source/s of the placer gold.

Variability of the geo-electric data in the bedrock suggests a more complex geology than anticipated. Obtaining audio-magneto-telluric high-resolution data, that can reach over 1500m depth, could determine if a fault masked by Quaternary cover is responsible for the establishment of gold in the valley.

## **7.0 GEOLOGICAL SETTING AND MINERALIZATION**

### **7.1 Regional Geology**

The Beauce Gold Project is located within the Appalachian Structural Province, a continental scale fold belt that extends from Newfoundland to the State of Alabama in South-eastern USA. The Appalachian orogen was formed by three sequential tectonic phases that occurred during Palaeozoic time. The effect of the Carboniferous-Permian Alleghanian orogeny were mainly restricted to the Southern Appalachians in the USA. The Northern Appalachians are the product of two main orogenic events: The Middle-Late Ordovician age Taconian Orogeny and the Late Silurian-Middle Devonian Acadian Orogeny. (Tremblay et al, 1999).

From west to east, the southern Quebec Appalachians consist of:

- 1- the autochthonous platform and flysch sequences of the St. Lawrence Lowlands;
- 2- the slope and rise deposits of the Humber Zone;
- 3- the oceanic, magmatic and sedimentary rocks of the Dunnage Zone, and;
- 4- The successor basin deposits of the Connecticut Valley- Gaspé trough (Gaspé Belt).

The Humber and Dunnage zones are two of five tectonic zones forming the Canadian Appalachian Orogeny, the three others being the Gander, Avalon to the north-east in Newfoundland and the Meguma Zone confined to Nova-Scotia to the south-east.

The Humber Zone rocks sequence forms a succession of parautochthonous and allochthonous carbonate, siliciclastics and volcanic rock units that were deformed and metamorphosed during the Middle to Late Ordovician Taconian Orogeny. Rifting began between 600 and 550 Ma.

The Dunnage Zone lies to the Southeast of the Humber Zone and is composed of the Oxford-Chagnon ophiolitic Complex, the Ascot Complex and sedimentary units of the St-Daniel Mélange and Magog Group which have been accreted to the Humber zone during the Taconian orogeny. The Orford-Chagnon ophiolitic Complex is made-up of assemblages of ultramafic, mafic and felsic volcanic and intrusive rocks, overlain by a thin layer of sedimentary rocks. The Ascot Complex is divided into three lithotectonic domains (Sherbrooke, Eustis and Stoke domains), which has been interpreted as the oceanic juxtaposition of volcano-plutonic and volcano-sedimentary assemblages with pelitic sediments. Separating the Orford ophiolitic Complex from the Ascot Complex are the St-Daniel Mélange and Magog Group. The Saint-Daniel is an Ordovician (Llarvirn) lithostratigraphic unit that represents the lowermost series of the western part of a forearc basin that lies on a partly eroded ophiolitic basement represented by the Magog Group.

The Magog Group overlies the Saint-Daniel Mélange. It is made-up of four units: (1) lithic sandstones and black shales of the Frontière Formation; overlain by (2) purple to red shales, green siliceous siltstones and fine grain volcanoclastic rocks of the Etchemin Formation; overlain by (3) pyritous black shales and volcanoclastic rocks of the Beauceville Formation; and overlain by (4) sandstones, siltstones and shales with minor occurrences of tuff and conglomerate of the Saint-Victor Formation, which makes-up 70% of the thickness of the Magog Group.

The Ascot Complex has been interpreted as the remnant of volcanic arc sequences. It is made-up of various metavolcanics rock series, in fault contact with laminated and pebbly phyllites that have been correlated with the Saint-Daniel Mélange.

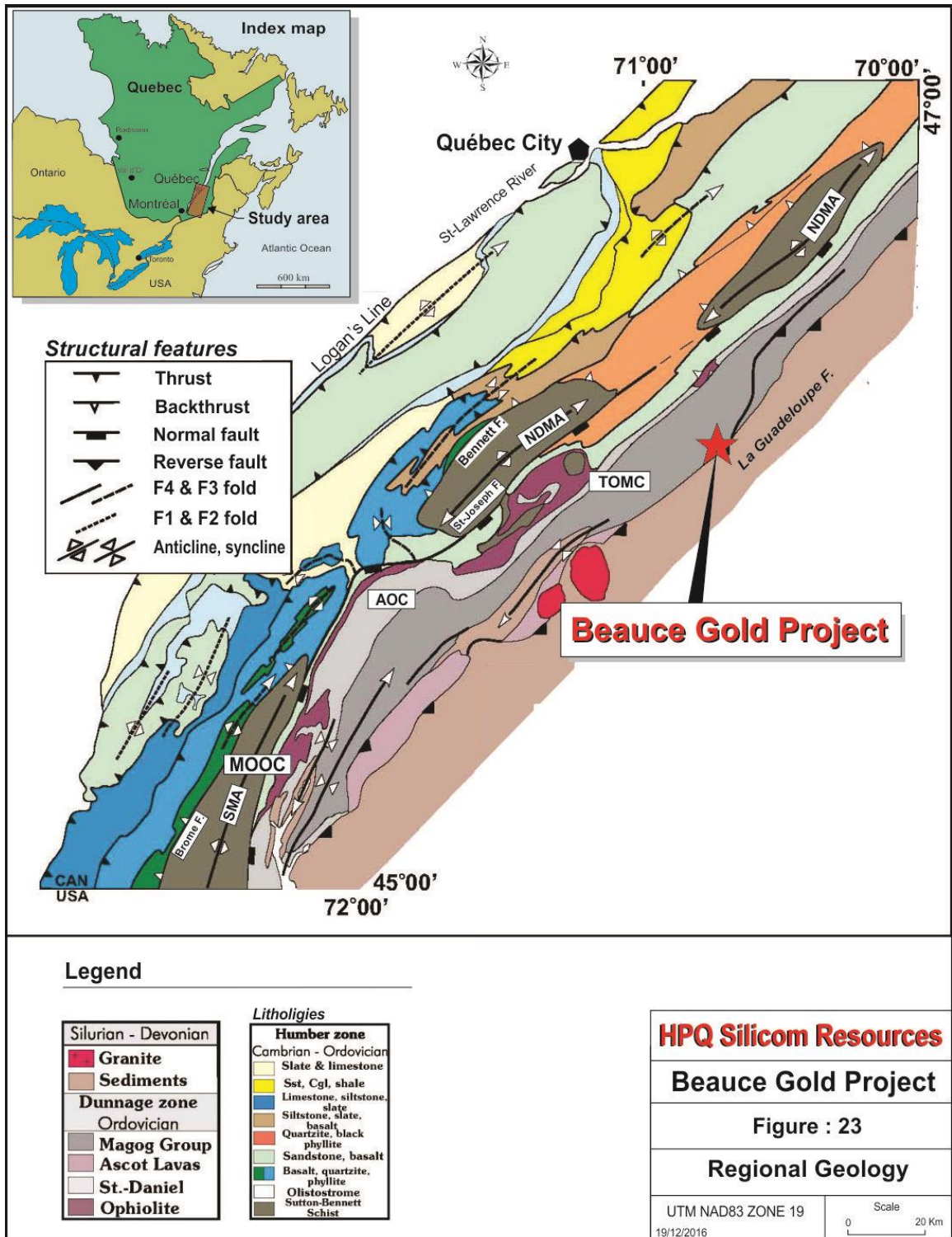
In the Dunnage Zone of Southern Quebec, regional deformation and metamorphism are related to the Middle Devonian Acadian Orogeny. Peak metamorphism varies from greenschist grade in the south to prehnite-pumpellyite grade in the Chaudière River area. (see Figure 23).

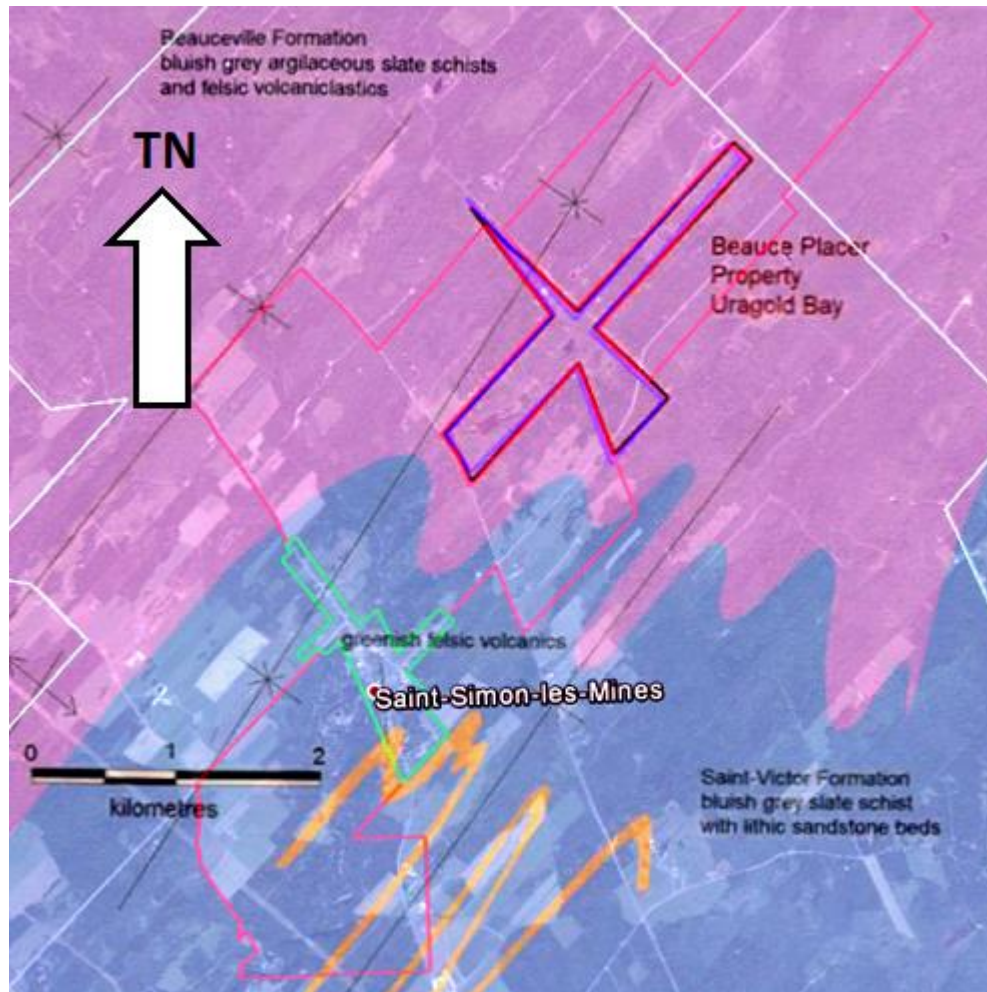
## **7.2 Geology of the Project Area**

The Beauce Gold Fields project area covers a portion of St-Victor Synclorium and exhibit tightly folded sequences of the Beauceville

Formation made of bluish grey slates and schists with felsic volcanics overlaid by the turbiditic rocks (lithic wacke and argillite) of the St-Victor Formation. Furthermore the diamond drill holes completed by Uragold Bay in 2011 intersected pyritic black slate and volcanoclastic beds of the Beauceville Formation with frequent quartz veining. Bedding variation along core and abundant quartz veins (up to 50%) suggested that a fold hinge was intersected in hole RG11-02. The volcanoclastic beds which represent a favourable unit to host gold are present in hole RG11-01 to RG11-03. These are grey to light grey coloured rocks of heterogeneous granulometry. Visual examination revealed local pyrite, pyrrhotite or chalcopyrite mineralization within the volcanic beds. Visible alterations include silicification, epidotization, quartz veining, lixiviation and brecciation.

The area of interest has been subjected to varying degrees of deformation and Isoclinal folding is known in the region. An anticlinal fold is suspected to cross the property with a NE-SW axis since the presence of synclinal folding on both side of the property has been observed. Deformations are characterized by tight regional folds generally overturned to the NW. Folds plunge to the NE and SW.(see Figure 24)





**Figure 24.** Simplified geology covering the Beauce Gold Project (data taken from the SIGEOM database). The lavender colour is the Beauceville Formation while the blue is the Saint Victor Formation. Although somewhat difficult to see the thin red lines are the new claim area, the thin blue lines define the old claim block and the green lines around Saint Simon-les-Mines are the urban area around the town. The intense anticlinal folding is well shown in the thin yellow units just south of Saint Simon-les-Mines and at the contact of the two Formational units.

### 7.3 Glacial Geology and Mineralization

The Quaternary stratigraphic sequence in the Gilbert River area is complex (LaSalle 1984 and Lamothe 1989) and has been established from RC drilling (McDonald and Shilts 1971) and cores from sonic drilling (Shilts and Smith 1986, 1988).

Three glaciations periods, possibly four, are present on the Gilbert River section and three inter-glaciation periods are found.

**Table 10: Highlights of the Quaternary Stratigraphy of Southeastern Québec (after McDonald and Shilts 1971, LaSalle 1984, Shilts and Smith 1986, 1988).**

Sedimentary unit	Stratigraphic assignment
Blue-grey, compact diamict, 30% clasts, dominantly silt matrix.	Lennoxville Till
Laminated fine grained silt to fine sand.	Gayhurst Sediments (interstade)
Brownish grey and compact diamict with clasts content ranging from 20 to 30% and a dominantly silt matrix.	Chaudière Till
Fluvial and lacustrine sediments. Usually gravel with abundant pebbles with a rusty-brown colour due to intense oxidation. Varved brown clay. This unit is not observed on Beauce Placer Property.	Massawipi Sediments (interstade)
Brown diamict with high clay content. This diamict contains about 30-40 % clasts and is usually very compact. The clasts are mainly shale rocks but also contain ultramafics.	Johnville Till
Grey to blue grey laminated silt and sand, described at Rivière Gilbert from sonic core by Shilts and Smith (1986, 1988)	Pre-Johnville glacio lacustrine sediment
Orange to brown clayey diamict about 40% clasts. Described at Rivière Gilbert from sonic core by Shilts and Smith (1986, 1988)	Pre-Johnville Till

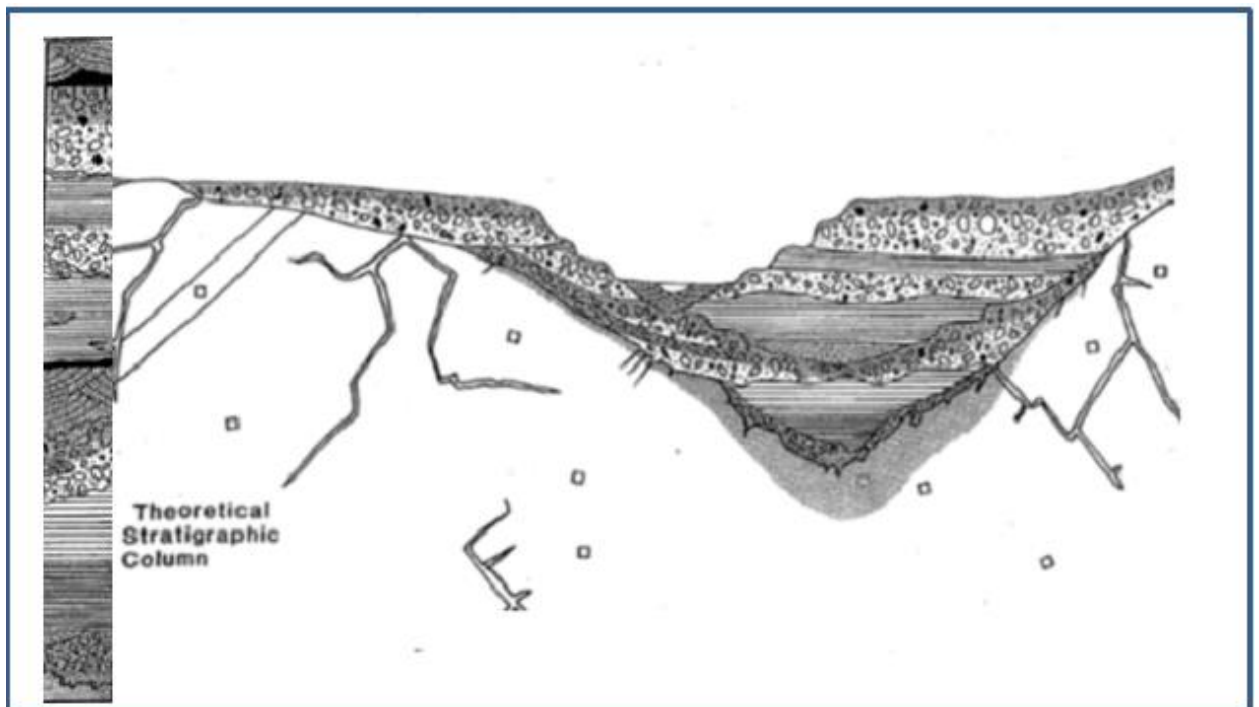
Before the Quaternary glaciations, the region had undergone a long period of warm, humid conditions causing deep weathering of bedrock with the development of laterite-like soil forming processes with deep saprolite profiles. The term “saprolite” in the Beauce Project Area was first used by P. La Salle in 1977 and 1979. In the Uragold sonic drill cores, the saprolite unit is underlain by a transitional zone of fractured and oxidized shale. Fresh shale is present a few metres under the saprolite and fractured and oxidised shales. It seems likely that in many cases this saprolite is mixed or transported with/ by till material.

The warm humid conditions lasted for some considerable time, allowing deep weathering and substantial erosion over the area, largely through chemical processes. This would have released gold from veins and bedrock

sources and allowed for removal of at least some of the silver (through leaching solution) and development of gold nuggets through partial solution and re-precipitation of gold. According to Shilts and Smith (1988) gravitational slumping of this weathered, clay rich, surficial material led to the formation of a thick colluvial mantle over the valley sides and bottom. This material was then partly reworked by fluvial transport, sedimentation and gravity processes.

The advance of the Johnville glaciation was likely the first major erosional event over the region, although some pre-Johnville fluvial gravels of the Rivière de la Grande Coulée contain Precambrian erratic pieces indicative of an earlier glacial event (Shilts and Smith 1988). This glaciation both preserved the saprolite in valley bottoms and created mixed till and saprolite horizons in the lowest units.

Overlying the pre-Johnville till is a thick sediment sequence that is mainly a clay unit. The clay is sometimes overlain by a silt unit and a sand unit. The clay unit is grey and uniform except for an discontinuous 30.0 cm thick, red basal unit. The contact between the sediments and the Pre-Johnville diamict is clear.

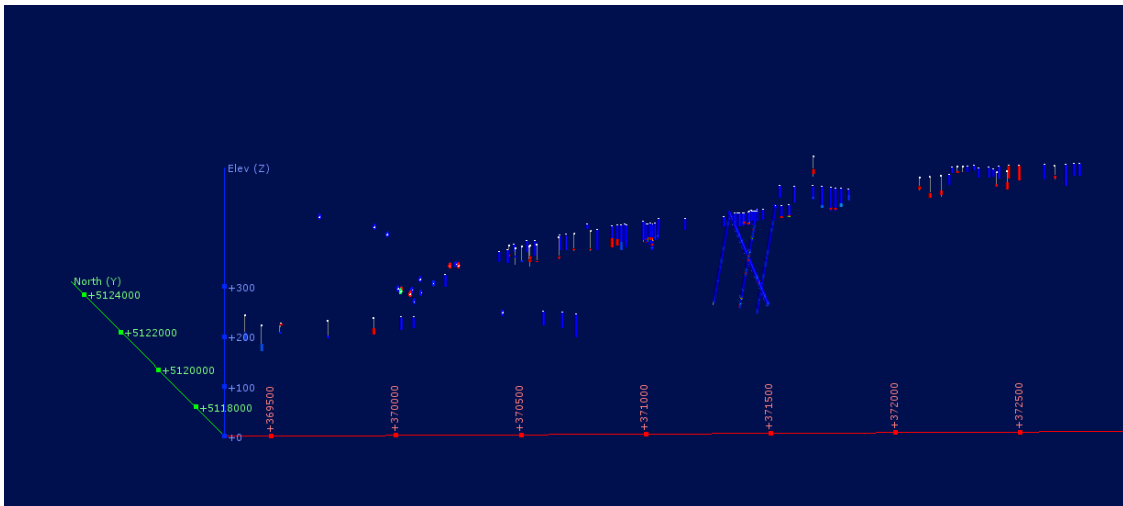


**Figure 25: Stratigraphic Column with in the Centre of the Gilbert River Valley.** This diagram is a composite prepared from Shilts and Smith, 1988.

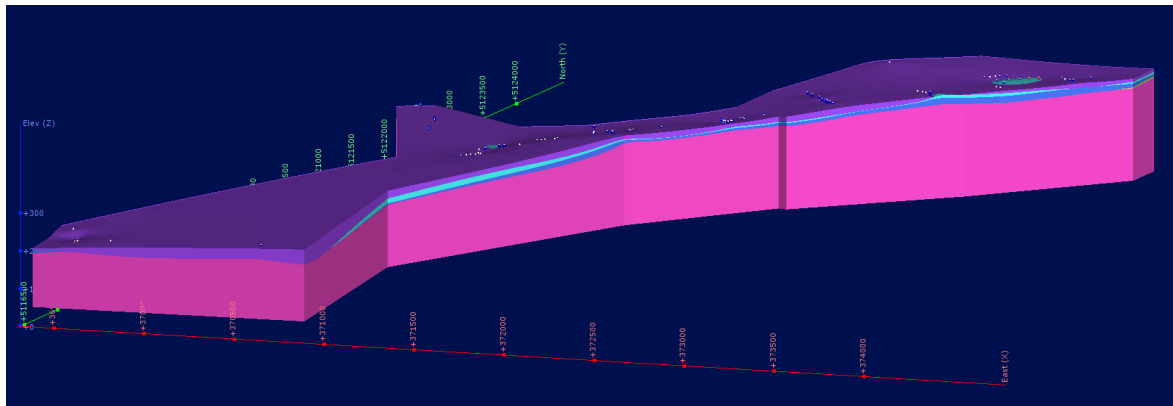
The floor of the unit is the original bedrock with occasional quartz veins (and presumably some gold). In the base of the valley are preserved weathered zones (grey shading) and saprolitic units (darker grey with boulders) described as the Pre-Johnville Till in the stratigraphic column. Above this are found the laminated clays, probably caused by damming as glaciation moved up the main Chaudiere Valley. Above this unit are found the repeating till layers of the various glacial advances and retreats; interbedded with occasional zones of transported saprolitic material eroded in the immediate proximity; and odd layers of laminated clay caused by further damming during interglacials. The stratigraphy will be further complicated by glacial erosion that will have removed units. It is these zones of saprolite that account for the occasional gold “colours” identified in the tills by Seeber and Rose.

## 7.4 Geological Model

Recently, using the Leapfrog geological modelling program, a geological model of the entire Beauce Project area has been prepared. A brief description of this model will be given in this section.



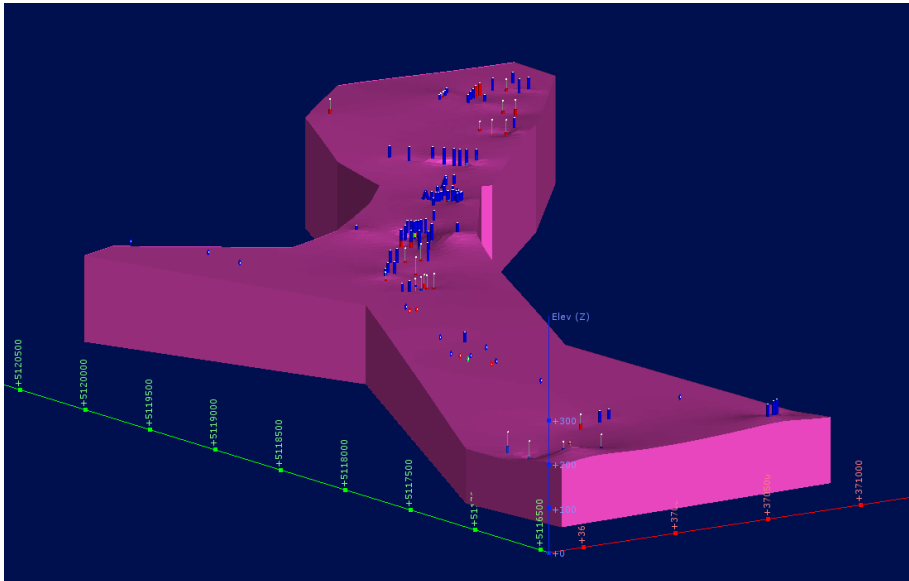
**Figure 26. Distribution of boreholes along the paleo-valley at the Beauce Placer Project:** Although small this image shows the distribution of boreholes along the paleo-valley at the Beauce Project. All holes (with or without gold) are present. The four deep holes are the four Basement drillholes that were drilled by Uragold below the tillite cover. Although not easily seen the colours on the boreholes are grade indicative. The green scale bars (left) are at 2000 metre intervals; the red scale bars (bottom) are 500 metre intervals; and the vertical blue scale is in 100 metre units above sea level.



**Figure 27: Geological Model of the Beauce Project.** This side-on view of the model shows the geology – The upper layer is the Grey diamictite (Lennoxville Diamictite); the light bluey-green is the layered siltstone (Gayhurst Formation); the basal thin blue zone is the Brown Diamictite (Chaudiere Till and Johnville Formation); and the bottom pink layer are the Basement rocks. The saprolitic unit is not visible in this projection.

The model was started by preparing a database of the available drilling information. This included the borehole collar coordinates; number; depth; geology and any ore grades. This information was then processed, errors identified and the database was eventually declared “clean”.

The first real use of the model was to examine the stratigraphy. This is shown in Figure 26. Figure 27 is an up-valley view of the paleo-valley. The boreholes indicate the “gold-bearing zone” as shown by the early seismic surveys.



**Figure 28. Geological Model of the Beauce Placer Project.** This figure shows the paleo-valley at the Beauce Project. The bottom of the pink Basement is horizontal so this figure indicates how the valley climbs away from the observer. The far section is very straight suggesting that at least originally there was a strong basement control on the formation of the valley. It appears that at least three gold bearing tributaries enter the paleo-valley from the north (left). One of these is on the long Basement finger to the left; the second is at the left-hand end of the line of eight boreholes that run left to right; and the third is at the far end of the model where two red coloured holes are close together.

This model will be completed and refined and it should be possible to use it to re-estimate the gold resource. However, it must be again stressed that any numbers generated will be a “historical estimate” and will have the same restrictions as the current “exploration target” generated using the polygonal method.

## 8.0 DEPOSIT TYPE

Intermittently, for the last 170 years the area of the Beauce Gold Project area has been prospected and produced significant quantity of gold mostly from unconsolidated near surface lateritic and overlying alluvial sediments. In its basic form the gold bearing unit present on the Gilbert River belongs to the Buried-Channel Placer Type of Deposit as described by Levson and Giles (1995). They described these deposits as “detrital gold” (with or without other dense minerals) “occurring in buried valleys (typically with at least several metres of overlying barren material, usually till, clay or volcanic rocks), mainly as channel-lag and gravel-bar deposits”. The implication being that alluvial

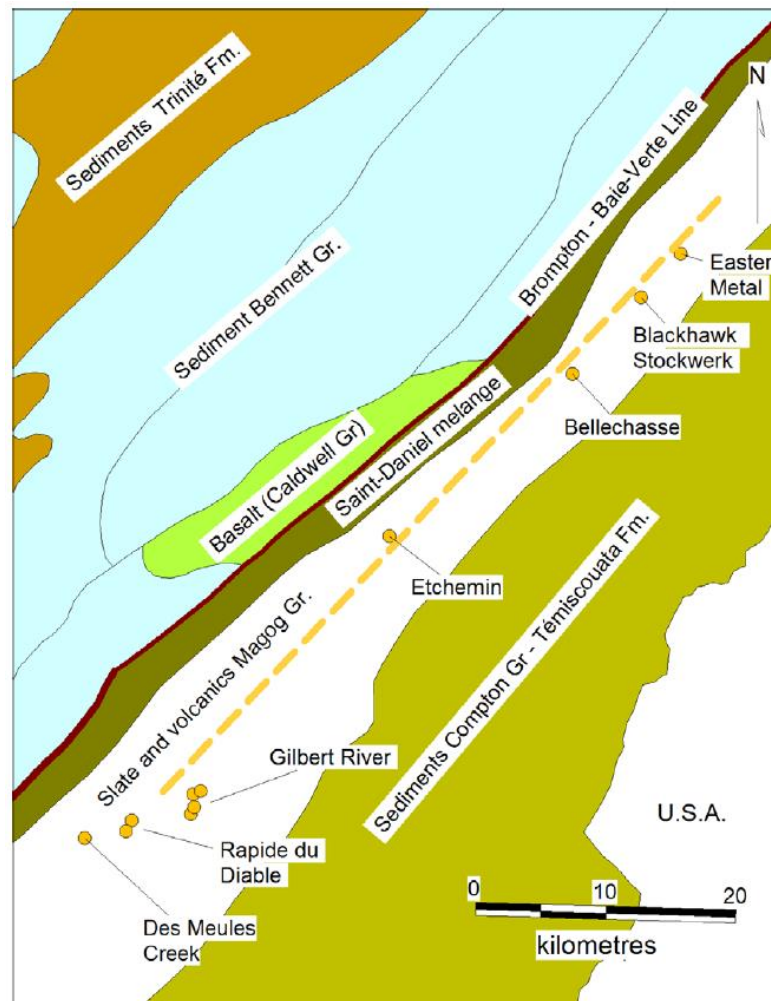
processes are the concentrating mechanism. However, in the case of the Gilbert River the mechanism is at variance, and the context differs significantly from the many analogues reported by these authors, since the gold is contained in a clay rich matrix, instead of gravel. Also, the gold has a skewed above average population of coarse grain in comparison with typical alluvial gold deposits that contains a higher ratio of fine-grain populations. This suggests a crucial difference from the conventional genetic viewpoint where river erosion is the driving mechanism normally needed to remove low density mineral and concentrate heavy minerals, including gold and other valuable commodities of high specific gravity (Charbonneau, 2012, Internal Report) and this erosive process reduces average grain-size. The presence of abundant clay in the sediments clearly suggests a low energy process in contrast to a high energy alluvial environment.

The Eastern-Township- Beauce region is an auriferous province and the geology of the Beauce Gold Project is highly favourable for bedrock gold mineralization. The high ratio of alluvial deposits with respect to primary hard rock sources is caused by a poor understanding of this potential and it is only in recent years that the underlying bedrock of these deposits have attracted explorers as a potential source for economic gold deposits. Since the 1980s, the Appalachian has produced several significant gold discoveries that led to gold production mainly in Newfoundland, but also in the Meguma series of Nova Scotia.

Nevertheless, the widespread nature of the gold, combined with the linear pattern of gold outcrops associated with the Magog Group (see Figure 29), suggest that the gold source is more probably stratigraphically or possibly temporally controlled. The same is probably true of the Coaticook, Moe, Ascot and other similar gold containing drainages in the general area.

Close to the Beauce Gold Project, Golden Hope Mines Ltd. has outlined an indicated resource containing 204,000 oz Au at grade of 1,2 g/t Au and an inferred resource containing 180,000 oz Au at a grade of 0,96 g/t Au (0.30 g/t Au cut-off grade) from its Bellechasse-Timmins gold deposit, located in the Magog Group of the Dunnage Zone less than 40 km to the East along strike from the Beauce Gold Project. The gold is hosted in sill-like diorite and gabbro dykes running parallel to the stratigraphy. The company considers its property "under" explore and states that mineralization is open along strike and down dip (see Bellechasse on Figure 29 and GHM website).

Some 50 km to the Southwest of the Beauce Gold Project, Bowmore Exploration Ltd., exploration drilling has outlined large volume of low grade (0,31 g/t Au) gold mineralization from its Sty-Victor Project, covering a portion of the Humber Zone. The property has a very good potential to host large bulk tonnage low grade gold deposits, (see Bowmore website).



**Figure 29. Gold Occurrences Associated with the Magog Group.** This general map shows that the gold occurrences associated with the Magog Group are in a fairly linear pattern at least sub-parallel to stratigraphy (taken from Charbonneau, 2012, UBR Internal Report).

The fact that gold seems to be low-grade and widespread in this part of the stratigraphy needs not to remove the potential of some significant gold concentrations within the Basement rocks of the Magog Group as witnessed in the nearby Bellechasse-Timmins deposit now being developed by Golden Hope Mines.

## **9.0 EXPLORATION**

The Gilbert River valley has been explored almost continuously since the 1840s with the first discovery of gold in the Gilbert and adjacent river valleys. Initial discoveries were in the lower valleys proximal to the Chaudière River where tills were thin and the gold easily recovered. However, in most instances, mining quickly progressed up the valleys where the gold is contained in a pre-glacial unit buried under a thick sequence of tills and marine clays (up to 40 m or more). This has led to a long and complex sequence of mining and exploration. The historical work is described in Section 6 of this report.

## **10.0 DRILLING**

Two exploration drilling campaigns were carried out by Uragold during 2011. A summary of the program is presented in Section 6 of this report. For more detailed data and results on this campaign, the reader is referred to Stuart-Williams report (2014).

## **11.0 SAMPLING METHOD AND APPROACH**

Not applicable

## **12.0 DATA COMPILATION AND VERIFICATION**

Not applicable

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

The Beauce Gold Project is at an exploration and pre-evaluation stage and has not been subjected to limited metallurgical testing (see section 6.9 of this report).

## **14.0 MINERAL RESOURCE ESTIMATE**

The bulk of the data used by HPQ Silicon in their assessment of the Beauce Gold Project must be treated as “historical” as the majority of the data used is pre-2000 and cannot for the most part be verified.

For this reason, the alluvial mineral resource estimate outlined on the Beauce Gold Project is presented as the final Sub-Section 6.8 of this report.

## **16.0 MINING METHODS**

Not applicable.

## **17.0 RECOVERY METHODS**

Not applicable.

## **18.0 PROJECT INFRASTRUCTURE**

There is no mining infrastructure in the area of the Beauce Gold Project.

## **19.0 MARKET STUDIES AND CONTRACTS**

Not applicable.

## **20.0 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT**

Not applicable.

## **21.0 CAPITAL AND OPERATING COSTS**

Not applicable.

## **22.0 ECONOMIC ANALYSIS**

Not applicable.

## **23.0 ADJACENT PROPERTIES**

In addition to claims acquired from Fancamp Exploration Ltd., most of the surrounding claims were also held by this company which carried-out an airborne geophysical survey (D'Amours 2008, Geotech 2011) and diamond drilling activities (Glass and Bernard 2010) in the immediate area of HPQ Silicon project area. Since that time, Fancamp Exploration has dropped most of its mineral assets in the area.

## **24.0 OTHER RELEVANT DATA AND INFORMATION**

No other recent or relevant data or information is reported with respect to the Beauce Gold Project.

## 25.0 INTERPRETATION AND CONCLUSION

In his report dated January 8, 2015, geologist Stuart-Williams concludes that the exploration program completed in recent years by Uragold Bay (now HPQ Silicon) on the Beauce Placer Project area tends to confirm historical results and has also brought new insight on the Gilbert River Placer deposit, particularly regarding the possibility of a local bedrock source for the mineralization.

Highlights are as follows:

- The Sonic Drilling program completed in 2011 revealed that the gold bearing units corresponded to a basal brown saprolitic clay, overlain by a brown diamict that is at least partly of glacial origin (till). It would appear that the saprolite is generally the host of most of the native gold found in the deposit, rather than the overlying alluvial gravel. These units are generally resting above weathered and fresh bedrock and frequently gradational;
- The estimated exploration target calculated with the polygonal method outlined 1,892,500 grams of gold (60,844 oz Au) contained in some 2,157,171 m<sup>3</sup> under some 9,248,334 m<sup>3</sup> of loose overburden (for a stripping ratio of 4.3 to 1) with an average combined grade of about 0.877 g/ m<sup>3</sup> Au for the brown diamictite and the saprolite;
- Historical drilling and the Beauce Placer Mining Company production records suggest that the strong “nugget effect” is characteristic of the deposit and it should be expected that this feature might be present and that the mining recovery could be as much as 6 folds higher than in the resource estimate;
- Petrological studies of the gold grains recovered from the basal saprolite unit suggest a close proximity to a bedrock source;
- The limited diamond drilling program completed in the fall of 2011 outlined both meta-sediment and volcanic rocks part of the Beauceville Formation under, and immediately up ice from the known placer mineralization;
- Core descriptions revealed intense quartz-carbonate veining, local sulphide mineralization and significant silicification, epidotisation, and brecciation typical of hydrothermal alteration associated with orogenic type gold deposits. DDH RG11-01 drilled below the known placer returned slightly anomalous values from 10 to 75 ppb Au. Subsequent re-sampling of intervening segments from this hole returned below detection limit gold values;
- We conclude that in addition to the residual-alluvial mining potential for which the property is already permitted, the Beauce Gold Project is a

property of merit with a significant potential for the discovery of primary gold mineralization related to the source of the alluvial-residual deposits of the Gilbert River drainage. In the past, because of the relative ease of access of the gold in this environment and the inexperience of the successive owners and operators with hard rock mining, this potential had been neglected. Further exploration is recommended and should be carried-out by HPQ Silicon Resources Inc.

## **26. RECOMMENDATIONS**

To carry-on with the exploration and development of the Beauce Gold Project, the following recommendations should be implemented by HPQ Silicon:

- A general prospecting program for primary hard rock gold deposits should be implemented on the entire Beauce region holdings of the company. This program should include prospecting, geological mapping, sampling of outcrops, trenching, geochemical and geophysical surveying, preferably ground magnetic and induced polarisation (IP) surveys;
- The company should carry-on with the planning and eventual conduct of the proposed bulk sampling program for which the project has already been permitted. The excavation, extraction and processing of 9,000 m<sup>3</sup> of mineralized residual-alluvial deposit would provide valuable data on the statistical distribution model and eventual realistic mining grade for the Gilbert River alluvial zone which contains mostly coarse gold particles. This aspect requires further evaluation;
- Concurrently, additional sonic drilling should be completed on the original Gilbert River block to assist in verifying the historical data and to provide a systematic drilling grid to support a robust statistical database required for the development of a better geological and resource model;
- Upon the completion of the bulk sampling program, the project could possibly be updated to a Feasibility Study in order to validate the economic potential of the alluvial mining conditions in compliance with NI 43-101 disclosure standards;
- The pilot-scale program should be followed by additional drilling and trenching of the bedrock exposed during the excavation and bulk sampling activities.

## 26.1 Budget

In 2011, UBR contracted Engineering consultant Genivar (now WSP) to complete a detailed internal economic assessment (scoping) study regarding the start of mining activities on the alluvial resources. From this study were extracted the plans and budgets for the large (209,000 m<sup>3</sup> of overburden and 9,000 m<sup>3</sup> of auriferous basal till and saprolite) pilot-scale mining program for the Beauce paleo-placer.

### Budget Highlights

**Phase 1** The cost of the proposed prospecting program to cover the entire Beauce Gold Project including general prospecting and outcrop sampling, trenching, geochemical sampling and geophysical surveying would in the order of \$179,300 as presented in the following budget proposal.

**Phase 2:** A contingent phase 2 budget is proposed to carry-out and complete the large pilot-scale mining program with a proposed capital investment and operating budget in the order of C\$2,724,700. According that the results of the exploration (first) phase of the program are positive, the second phase of the program would also call for core drilling to test the outlined targets for an amount of \$ 764,500 for an overall proposed budget of C\$3,489,200.

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**HPQ SILICON RESOURCES INC.  
BEAUCE GOLD PROJECT  
BUDGET FOR EXPLORATION PROGRAM 2017- 2018**

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**PHASE 1: PROSPECTING, SAMPLING & SURVEYING**

ACTIVITIES	AMOUNT
<b>MOBILIZATION</b>	
- Topographic map (1:10,000) from remote sensing imagery:	\$ 10 000,00
- Field crew & equipment, mobilization & demobilization, lodging, logistics,	\$ 15 000,00
- Camp supplies, generator & fuel, food & tools for 2 months:	\$ 10 000,00
<b>PROSPECTING, GEOLOGICAL MAPPING AND GEOCHEMICAL SAMPLING</b>	
-2 geologists, 2 field technicians for 2mth @ \$20,000/mth:	\$ 40 000,00
-Field transport: 2 pick-up trucks @ \$4,000/mo for 2 months:	\$ 8 000,00
-Analytical: 400 samples @ \$25/sample (all inclusive)	\$ 10 000,00
<b>GEOPHYSICAL SURVEYING</b>	
-Including magnetometer and induce polarization surveying, Estimated contract with report	\$ 25 000,00

-Project supervision and Management 2 months @ \$15,000/month :	\$ 30 000,00
Report writing & recommendations:1 month @ \$15,000	\$ 15 000,00
<b>Subtotal Phase 1</b>	<b>\$ 163 000,00</b>
Contingency (10%)	\$ 16 300,00
<b>Total Phase 1</b>	<b>\$ 179 300,00</b>

<b>PHASE 2 :BULK SAMPLING PROGRAM &amp; EXPLORATION</b>	
-Access and drainage	\$ 407 250
-Dewatering	\$ 390 000
-Water Retention ponds	\$ 530 150
-Alluvial gold processing plant (rental)	\$ 150 000
-Overburden excavation	\$ 293 600
-Mining infrastructure	\$ 131 000
-Engineering, procurement, and construction management	\$ 100 000
-Construction indirect	\$ 100 000
-Surface right purchase	\$ 225 000
-Reclamation payable warranty	\$ 150 000
<b>Subtotal</b>	<b>\$ 2 477 000</b>
<b>Contingency</b>	<b>\$ 247 700</b>
<b>Total budget: bulk sampling program</b>	<b>\$ 2 724 700</b>
<b>Phase 2: Exploration Budget</b>	
Geotechnical Studies	\$ 160 000
Hydrological Studies	\$ 135 000
Drilling (2,000 m @ \$200/m all inclusive)	\$ 400 000
<b>Sub-total</b>	<b>\$ 695 000</b>
<b>Contingency (10%)</b>	<b>\$ 69 500</b>
<b>Total</b>	<b>\$ 764 500</b>
<b>GRAND TOTAL PHASE 2</b>	<b>\$ 3 489 200</b>

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**28- CERTIFICATE OF QUALIFICATIONS: BENOIT M. VIOLETTE,  
P,GEO.**

I, Benoît M. Violette, do hereby certify that:

I reside at 2-3374 Avenue Lacombe, Montreal, Québec, Canada H3T 1L8.

I graduated with a B.Sc (Honours) in Geology from the University of Ottawa in 1979 and I have practised my profession continuously since then.

I am a member of l'Ordre des Géologues du Québec, member no 678.

I have read the definition of « qualified person » set out in National Instrument 43-101 and certify that by reason of my education, affiliation with a professional association and my past relevant work experience, I fulfil the requirements to be a «qualified person» for the purposes of NI 43-101.

I am the author of the technical report titled: «National Instrument compliant 43-101 **Technical Evaluation Report on the Gold Potential of the Beauce Gold Project, Southern Québec Region, Québec**».

I have visited the project area on November 2<sup>nd</sup> 2016.

I have not had any prior involvement with the mineral property that is the subject of the Technical Report. 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.

I am independent of HPQ Silicon Resources Inc., applying all the tests in section 1.5 of NI 43-101.

Neither I, nor any affiliated entity of mine, is at present under an agreement, arrangement or understanding or expects to become an insider, associate, affiliated entity or employee of Beauce Gold Fields Inc., or any associated or affiliated entities.

Neither I, nor any affiliated entity of mine, own, directly or indirectly, nor expect to receive, any interest in the projects or securities of Beauce Gold Fields Inc. or any associated or affiliated companies.

I have read the NI 43-101 and Form 43-101F1 and have prepared the Technical Report in compliance with this NI 43-101 and Form 43-101F1; and in conformity with generally accepted Canadian mining industry practice.

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

**Signed and sealed this 15<sup>th</sup> of December, 2016.**



Benoît M. Violette, P.Geol.



**APPENDIX 1**  
**Beauce Gold Project**  
**Mining Titles Description**

**HPQ SILICON RESOURCES  
INC.  
BEAUCE GOLD PROJECT  
LIST OF TITLES**

WEST BLOCK		
CLAIM TYPE	CLAIM NUMBER	AREA (Ha)
CDC	15736	37,41
CDC	21251	22,62
CDC	21252	22,18
CDC	21254	20,55
CDC	21256	23,66
CDC	1046365	40,87
CDC	1046366	39,39
CDC	1078463	41,70
CDC	1102880	27,34
CDC	1112780	27,4
CDC	2001116	27,45
CDC	2001117	29,09
CDC	2001118	27,74
CDC	2002424	28,76
CDC	2002425	52,11
CDC	2002426	33,57
CDC	2002427	40,59
CDC	2002428	30,86
CDC	2002430	33,56
CDC	2005975	53,77
CDC	2005976	56,32
CDC	2005991	9,95
CDC	2020400	21,46
CDC	2020401	21,17
CDC	2024604	25,44
CDC	2137108	59,31
CDC	2138170	46,04
CDC	2144078	40,53
CDC	2144423	28,95
CDC	2145464	52,81

WEST BLOCK		
CLAIM TYPE	CLAIM NUMBER	AREA (Ha)
CDC	2179342	27,16
CDC	2250338	19,52
CDC	2250339	23,22
CDC	2250611	42,66
CDC	2250612	21,52
CDC	2340805	34,11
CDC	2360598	11,41
CDC	2360599	12,90
CDC	2360600	14,44
CDC	2417262	7,67
CDC	2448107	1,99
CDC	6001581	19,15
CDC	6001581 (sec)	19,31
CDC	6001582	26,88
CDC	6001590	20,72
CDC	6001590 (sec)	20,01
	<b>TOTAL</b>	<b>1235,18</b>
EAST BLOCK		
CDC	2443889	59,53
CDC	2443890	59,51
CDC	2443891	59,51
CDC	2447625	50,99
CDC	2447626	51,17
CDC	2448106	20,16
	<b>TOTAL</b>	<b>300,87</b>