

**TECHNICAL REPORT AND  
MINERAL RESOURCE ESTIMATE UPDATE FOR THE  
UPPER BEAVER PROPERTY, ONTARIO  
FOR  
QUEENSTON MINING INC.**

prepared by

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## **1. SUMMARY**

### **Introduction and Terms of Reference**

In 1977, Queenston Gold Mines Limited ("**QGM**") acquired certain assets of Upper Canada Resources Limited, including the Upper Canada Mine and the Upper Beaver Mine located in Gauthier Township, and other mineral claims in Lebel and Teck Townships. In 1990, QGM merged with HSK Minerals Limited to form Queenston Mining Inc ("**Queenston**"). From 1995 to 2007, various joint ventures were formed - Queenston currently owns 100% interest in a large land package in the Kirkland Lake area, including the Upper Beaver Property (the "Property").

In 2008, exploration work focused on the Upper Beaver Property where drilling in 2006-07 outlined a large gold-copper system in preparation of industry compliant Mineral Resource estimate. Watts, Griffis and McOuat Limited ("**WGM**") was retained by Queenston to complete an initial Mineral Resource estimate for the Property and document the study in an independent technical report prepared in compliance with the standards of the Canadian Securities Administrators' National Instrument 43-101 ("NI 43-101") and the definitions of the Council of the Canadian Institute of Mining, Metallurgy and Petroleum ("**CIM**") standards. The 2008 estimate identified 1.37 million tonnes of Indicated resources at a capped Au grade of 8.5 g/t (375,000 oz) and 0.43% Cu, and 1.06 million tonnes of Inferred resources at a capped Au grade of 7.7 g/t (262,500 oz) and 0.39% Cu.

Follow up drilling from 2009 onward has focused on extending the deposit at depth, and at filling in gaps closer to the surface. In April 2011, WGM was once again retained by Queenston to provide an update to the 2008 estimate, which is the subject of this report.

Much of the material used to prepare this report was taken from the 2008 WGM report, with additional material provided by Queenston in the form of reports and digital drillhole data. Mr. Kurt Breede, P.Eng., Resource Engineer and WGM Vice-President, Marketing visited the Property on March 30, 2011 to review logging and sampling procedures, review core from numerous drillholes and collect independent samples and other pertinent data from site personnel.

### **Property Description and Location**

The Upper Beaver Property is located in northeastern Gauthier Township and northwestern McVittie Township in the Larder Lake Mining Division in northeastern Ontario. The claim group lies 8 km northwest of the village of Larder Lake and is approximately 25 km from Kirkland Lake. The Property consists of 35 patented claims covering 572.556 ha and 3 leased

claims (one lease) covering 53.584 ha with surface and mining rights and 9 unpatented mining claims (49 claim units – 784 ha) for a total 1,410.14 ha. The Property is owned 100% by Queenston with certain claims subject to royalties and interests to other parties.

Three shafts are located on the Property. The #3 Shaft on the west shore of York Lake was the main production shaft for the previous underground operation. It extends to a depth of 605 ft (184 m), with an internal winze from the 500 to the 1250-ft level. Levels are established at 80, 200, 350 and 500 ft, and, at 125-foot intervals from the 500 level to 1,250 ft (381 m). The shaft is capped. WGM understands that there are no environmental or First Nation issues on the Property.

### **Access, Climate, Local Resources and Infrastructure**

The Property is accessible from Highway 66. Beaverhouse Road (a gravel road) crosses Highway 66, 11 km west of the village of Larder Lake. Numerous old drill roads and recently constructed logging roads provide excellent access to the Property. The climate is northern temperate with warm summers and cold winters. Temperatures vary from +30° Celsius in the summer to –40° Celsius in the winter. The ground is usually snow covered between mid-November and mid-April. Vegetation is mixed bush with spruce, fir, larch, jack pine, poplar, birch, ash and alders. The topography is hummocky and relief is in the order of 50 m from lakes, rivers and alder swamps at waterway margins, to higher outcrop knobs with local jack pine. Overburden depths range up to 30 m of clay till.

Kirkland Lake is the main commercial centre for the north part of the Timiskaming District and there is a skilled and capable workforce with experience in mining and mineral exploration in the immediate area.

### **History**

Gold was discovered west of Beaverhouse Lake in 1912 and exploration, development and production was completed on the Property sporadically since then. The main periods of production on the Property were 1912 to 1919, 1919 to 1928 and 1965 to 1971. Minor production also occurred from 1928 through 1944. In 1985, when Queenston first became involved in the Property, magnetometer surveys, detailed surface mapping, rock geochemical survey and limited stripping was conducted. Various joint ventures were formed over the years, and in 2000, Queenston re-acquired 100% interest in the Property and has been advancing it ever since.

A historic "inferred resource" of 200,000 tons (181,437 t) grading 7.89 g Au/t and 1.2% copper was estimated by Cunningham in 1974 on behalf of Upper Canada Resources Ltd. The estimate includes 68,039 t outlined at the time of closure in 1971, and 113,398 t of

an inferred potential resource based on a minimum of 40 drill intersections accessible from the mine workings.

### **Regional, Property Geology and Mineralization**

The Property is located in the Abitibi greenstone belt in the Superior Province of the Canadian Shield. The Upper Beaver area is underlain by a succession of Archean assemblages of volcanic and volcanoclastic rocks of the Tisdale and Blake River assemblages. The dominant regional structural feature is the east-west trending Cadillac-Larder Lake Deformation Zone ("CLLDZ"). This deformation zone includes a number of component faults or breaks which are main controls for gold mineralization. The northeast-trending Upper Canada Break is one such component and likely is a splay fault off the CLLDZ. The Upper Canada Break, and its parallel Upper Canada Break South Branch, flank the shafts on the Property and control to some extent syenite intrusions on the Property. The Victoria Creek Deformation Zone lies along the contact between the Tisdale and Blake River assemblages in the Property area and also likely represents a component of movement related to the CLLDZ.

The Tisdale assemblage is conformably overlain by the Lower Blake River assemblage. This contact is located immediately south of the Upper Beaver mine shafts. The Victoria Creek Deformation Zone is in part spatially coincident with this contact between the older Tisdale and younger Lower Blake River assemblages. The majority of the north part of the Property is underlain by the Lower Blake River assemblage. These rocks consist of an alternating sequence of strongly magnetic iron and magnesium-rich tholeiitic basalts. The southern part of the Property is underlain by Timiskaming volcanics, volcanoclastics and sediments, however, the age of these sediments is currently being debated. This sequence is in fault contact with Upper Tisdale assemblage rocks.

Syenite complexes of Timiskaming age intrude each of the Tisdale, Blake River and Timiskaming assemblages. A prominent plug of syenite and mafic syenite, 600 m in diameter, occurs 250 m north of the #3 Shaft. A feldspar porphyry intrusion lies adjacent to its margin. Matachewan diabase dykes cut all other rock units. A diabase dyke, 30 to 40 m thick follows the north-trending Misema Fault. The mafic volcanics east, west and north of the syenite plug strike east-west and dip 70-80° to the north. Three sets of faults have been mapped; northwest-trending and steeply dipping northeast, northeast-trending and steeply dipping northwest, and east-west striking faults, dipping steeply north through the syenite plug and mafic volcanics.

The Upper Beaver deposit is atypical for the Kirkland Lake camp because of the copper-gold association at Upper Beaver with the widespread and pervasive development of magnetite-feldspar-actinolite-epidote and carbonate-sericite. Mineralization at Upper Beaver occurs



both in flat and steeply dipping zones; is of replacement-type with rare vein-type mineralization is associated with minor to pervasive alteration which includes feldspar, epidote, carbonate, sericite, silica and magnetite with trace hematite; and has an element association of Cu, Au, or Au-Cu with associated molybdenum. The three main groups of mineralization (from south to north) are the South Contact Zones; Beaver North Zones; and North Basalt Zones.

The controlling structure for these zones vary. For the North Basalt Zones, the controlling structures are probably a combination of the Upper Canada Break, folded primary volcanic stratigraphy and intrusion of the syenite complex. For the South Contact Zones, multistage deformation along the contact between the Lower Blake River and Upper Tisdale assemblages is important. This deformation likely includes the Victoria Creek Deformation Zone, the feldspar Porphyry and progressive deformation prior to, during and postdating the feldspar porphyry. For the Beaver North Zones, these same controls seem likely, plus the central syenite plug and continual deformation postdating intrusion of the central syenite plug are probably important. Mineralization also is zoned both with depth and laterally towards the central parts of individual zones.

### **Exploration and Drilling**

Queenston exploration programs since reacquisition of the Property in 2000 have consisted mostly of diamond drilling and some geophysical surveying. In early-2005, Queenston re-established a north-south cutline grid over the north-central part of the Property with lines spaced at 100 m intervals and completed a frequency domain Induced Polarization ("IP") survey over the grid. A number of IP and magnetic anomalies were tested in Phase I, May 2005, by drilling 15 holes into these anomalies and to follow-up anomalous gold-copper zones intersected in the 1989-1995 Pamorex/Beaverhouse/Queenston joint venture drill programs. The Phase II program completed August 27, 2005, which consisted of five holes, was conducted to follow-up the results of the first phase. The exploration programs in 2006 consisted mostly of drilling during Phase III (from September 2005 to November 2006) and consisted of 54 drillholes.

Preceding 2007 drilling, a helicopter-borne geophysical survey over the Property was completed to determine the geophysical signature or "footprint" of the Upper Beaver gold-copper deposit and identify other potential targets on the properties. The most significant electromagnetic responses are located in the southern portion of the survey area within a magnetic-low feature that outlines the Upper Tisdale metavolcanic felsic pyroclastic assemblage. In late-2007, a four-line Titan24 DCIP and MT survey was run over the Property to determine the geophysical characteristics of the new gold-copper mineralization discovered and to identify other, deeper targets on the Property that display similar characteristics.

Queenston completed exploratory drill holes testing a variety of targets, with the most significant result intersecting a mineralized zone approximately 300 m vertically below the previous drilling (assayed 2.7 g Au/t with 0.75% Cu over a core length of 4.8 m - 3.5 m true width). This intersection beneath the current Mineral Resources confirms the continuity of the mineralized corridor to depth and adds potential for additional resources at Upper Beaver. The drilling in 2006 encountered several areas of high grade mineralization over wide intervals and after completing a preliminary in-house resource estimation, it was decided to carry out an infill definition drilling program in preparation for a "NI 43-101" Mineral Resource estimate.

The Phase IV infill drilling program started January 3, 2007 and was completed March 19, 2008. The purpose of this work was to drill off the Upper Porphyry gold-copper zone at 50-m spacing between the 400-700 m levels. The drilling also tested the Syenite, North Contact, Lower Porphyry, Lower Gauthier and Syenite Breccia zones which occur in a broad alteration corridor above and below the main Upper Porphyry Zone. The Phase I to Phase IV programs aggregated 100,672 m. All drilling was nominally NQ and carried out by Benoit Diamond Drilling Ltd. from Val d'Or, Quebec.

During the period of April 2009 to February 2011 exploration and definition drilling continued to explore the mineralized Au and Cu zones on the Upper Beaver Property. A total of 43,566 m in 83 holes was completed during this period and primarily focused upon further exploring and expanding the Porphyry Zones at depth, below the limits of the 2008 resource estimate. Drill holes were designed to target the down-dip/down-plunge extension of the Porphyry Zones based on an interpreted attitude of the vein system striking 50-60° and dipping 60-70° to the northwest. Drilling to-date has defined a plunge of the core of the vein system to be approximately 50° to the northeast.

From June 2009 to January 2010 an in-fill drilling program was undertaken in order to upgrade the resource block outlined in the 2008 resource estimate from the inferred to the indicated categories. Drilling was focused primarily on the East and West Porphyry Zones which accounted for approximately 82% of the resource. Pierce point locations were developed from 3-D modelling of the zones and longitudinal sections in order to achieve approximately 25 m spacing relative to previous drilling within the resource block. Sixteen (16) holes were completed in the in-fill program, 8 from surface and 8 wedge cuts, totalling 8,950 m. All but two of the holes, which intersected post mineralization dykes, successfully intersected the mineralized zones.

### **Sampling and Quality Assurance / Quality Control**

Core displaying obvious mineralization and alteration is sampled and depending on the lithology, alteration and mineralization, sample widths vary from 0.30 m to 1.4 m, averaging 1.0 m. The core samples are cut in half for assaying using a diamond core saw. Samples with visible gold are flagged and the core cutter is advised to take special care to clean the saw blade after cutting the potentially high grade sample in order to avoid contamination of the next sample. The assay lab is also advised of visible gold samples to avoid batch contamination. The bagged samples are placed in rice bags and delivered to Swastika Laboratories Ltd. ("**Swastika**") by Queenston's technicians. Secondary laboratories for external check assaying were used for the 2008 to 2011 programs. For Queenston's programs prior to 2006, there were no field-inserted Standards and/or Blanks. For its 2006 to 2011 programs, field-inserted Certified Reference Standards and Blanks supplemented Swastika's internal Quality Assurance / Quality Control ("QA/QC") programs on Blanks and Standards.

At Swastika, all samples were assayed for gold by fire assay using a 1 assay ton charge and for copper using Atomic Absorption spectroscopy ("AAS"). Routine sample preparation includes sample drying, crushing to 6 to 10 mesh, and splitting out a 400 g sub-sample using a Jones Riffler. The 400 g sub-sample is pulverized using a ring and puck pulverizer to 90-95% passing 100 mesh. For gold analysis by fire assay, the finish is routinely by AAS. For copper assay, digest is by aqua regia (nitric and hydrochloric acids) in a hot water bath until the pulp is all dissolved. Samples that on initial assay return results greater than 1 g Au/t are re-assayed and these assays are then finished gravimetrically. Samples that on initial assay return greater than 1% Cu are re-assayed using a smaller charge of sample.

During the period of 2005 to 2009, the Gold-Final assay is the metallic screen assay where such assays were completed. Where gravimetric gold fire assays and AAS finished assays were both completed on a sample, Gold-Final was the average of both AAS and gravimetric finish assays. Where two AAS finished gold assays were completed on the same pulp, the average result of the two assays is Gold-Final. A total of 1,220 samples from the 2005-2006 drill programs, in addition to routine assaying, were re-assayed by the screened pulp metallic method. Metallic screen assaying was discontinued after the 2006 program.

From 2009 onward, the practice of averaging gold assays was abandoned and the first gold value reported was Gold-Final, whether it was AAS or gravimetric finish. Beginning in 2011 if there was a gold value reported for both AAS and gravimetric finish, the Gold-Finals was the gravimetric finished value.

Starting with the infill definition drilling program in January 2007, Queenston initiated insertion of Certified Reference Standards and Blanks into the sample stream at frequencies of

one control sample every 25<sup>th</sup> regular/routine sample. Blank samples were drill core of un-mineralized basalt and interflow sediments from a previous Queenston drill program. Blanks were also inserted following samples containing coarse visible gold for the purpose of determining if there was any contamination between samples. No re-assaying was done by Queenston on the basis of the results for field-inserted Blanks and Standards. Up to and including 2008, Queenston used Polymet and Expert for check assaying and in 2009-2011 Expert and SGS were used for check assaying on a selection of samples originally assayed by Swastika Laboratories Ltd. Queenston's aim was to complete check assaying on 5% of rejects and 5% of pulps from the gold-copper mineralized zones.

WGM observed that logging and sampling procedures were meticulous and "general housekeeping" at the site, core shack and field office was very good. While at the site, WGM reviewed numerous intersections of drillholes completed by Queenston throughout the various newer phases of drilling (2009 and onward). Drill core was examined and compared with drill log descriptions and representations on drill cross sections. Twelve independent samples of mineralized split drill core (the remaining half) were taken for check assaying at SGS Mineral Services Inc. ("SGS") ISO 9001:2000 accredited laboratory in Toronto. The WGM samples were taken as characterization samples to confirm that gold and copper was present and the general nature/tenure of the mineralization. WGM's sampling results generally corroborated those obtained by Queenston. The variance in assays from one half of the core to the other is typical of gold mineralization and, in particular Upper Beaver-style deposit mineralization, where there may be coarse gold particles present.

### **Mineral Processing and Metallurgy**

Samples of Upper Beaver ore are thought to have been first tested by American Cyanimid Co. in 1939. The next documented series of tests was performed in 1963. Jigging was attempted, but the laboratory equipment was said to be inadequate and the test results unsatisfactory. Using a procedure involving flotation and cyanidation of the flotation tailings, 94 and 95.5% of the copper was recovered from two composite samples with 86.6 and 89.6% Au flotation recovery, which increased to 96.2 and 96.9% after cyanidation of the flotation tailings. Direct cyanidation was also attempted but the presence of 1% Cu resulted in significant solution fouling problems unless extreme cyanide levels were employed.

Faraday Mines undertook three tests of Upper Beaver ore in 1964 and were able to recover 95.5-97.2% of the copper in a Cu-Au concentrate, together with 84.5-87% of the gold, which could be increased to 96.8% by cyanidation of the flotation tailings. These tests were performed at a fineness of grind of 56% passing 200 mesh and the ore proved to be free-milling. In 1964, Upper Canada recommended putting the Upper Beaver deposit into production by retro-fitting of the Upper Canada mill with a separate milling circuit to include

jigging and flotation. A 150 tpd flowsheet was developed and constructed, but had no jigging stage. The flotation circuit comprised seven Denver No. 24 cells – four roughing, two scavenging and a single cleaner cell. The flotation tailing was thickened and introduced to an agitator at the tail end of the Upper Canada cyanidation circuit. Early production figures from Feb. to Nov. 1965 showed 37,277 tons milled at 12.3 g Au/t and 0.64% Cu, with recoveries of 90% for copper and 93.6% for gold. First shipments of concentrate to the Horne Smelter in Rouyn-Noranda, Quebec, assayed 189 g Au/t and 23.3% Cu.

In July 2008, Queenston authorized a limited bench scale testing program at SGS–Lakefield with the primary objective of confirming metallurgical performance of earlier testwork and mine production as part of the 2008 Upper Beaver Property NI 43-101 Mineral Resource assessment. Two samples were provided; the master composite sample was selected from copper-rich gold-bearing intersections, while the secondary sample was prepared from copper-poor intersections. A Bond ball mill work index test was also completed on the high copper sample. Two gravity concentration tests have been performed on the high copper sample using a Knelson concentrator at varying finenesses of grind. To-date, a total of six flotation tests have been undertaken. Copper recoveries in the roughing stage have varied from 96.5 to 98.3%, with the best of the two cleaning tests giving a cleaner concentrate of 19.9% Cu at a recovery of 96.3%. Flotation recovery of gold in the roughing stage has ranged from 83.1 to 88.7%. Combined gold recovery from gravity and flotation in one test was 92.5%, and 94.2% in another test at a 14.2% Cu grade, versus the range of 84.5 to 89.6% reported in earlier flotation testwork.

As part of Queenston's 2011 SGS-Lakefield testwork program, a composite high grade sample from the deep Upper Beaver Porphyry Zone was investigated in order to compare metallurgical performance with respect to the 2008 test on Upper Beaver samples. A Bond ball mill work index determination was completed. A gravity concentration test using the Knelson concentrator and upgrading with the Mozley table and a single flotation test was conducted on the sample. The 2011 test program results on the deep Upper Beaver Porphyry Zone composite generally corroborated those of the 2008 testwork which also returned combined gold extractions of 99%.

### **Mineral Resource Estimate**

WGM prepared an updated Mineral Resource estimate for the Upper Beaver Property. The procedure included verification of 3-D wireframe models for the mineralized zones which Queenston developed. These were generated in areas of the deposit that had sufficient data to allow for continuity of geology and grades and the generation of a block model for each defined zone and categorizing the Mineral Resource estimate results according to NI 43-101 and CIM definitions. Vertical sections were generated to mimic those defined by Queenston staff for its cross sectional interpretation and the drilling for zone definition was conducted on sections that had a spacing that varied from 25 m to 50 m, with most drilling conducted on 25 m spaced sections. In total, 37 west-looking cross sections at 25 m spacing were defined. A minimum horizontal width of 2 m and a nominal 1.0 g Au/t cutoff was used to determine the zone outlines for continuity purposes. The final interpretation was discussed with Queenston technical personnel before proceeding to the Mineral Resource estimation stage.

In order to carry out the Mineral Resource grade interpolation, a set of equal length composites of 1.0 m was generated from the raw drillhole intervals. The statistical distributions of both Au and Cu show good lognormal distributions. WGM studied various capping levels for both Au and Cu and determined that an upper value of 50 g Au/t for all the defined mineralized zones was appropriate. An Inverse Distance Cubed ("ID<sup>3</sup>") method for Au and ID<sup>2</sup> for Cu was used for grade interpolation. The net result of Au capping for the Mineral Resource estimate at a 2.5 g Au/t cutoff grade was to reduce the Indicated Resource Au grade and contained metal by 21%, and to reduce the Inferred Resource Au grade and contained metal by 13%.

Queenston determined specific gravity ("SG") measurements on half core, as well as on rejects of assayed samples by pycnometer method. In general, SG increases with both copper and gold grade, but the rate of increase is small. A constant SG of 2.9 was used for the Mineral Resource estimate. The block model was created using the GEMS software package to create a grid of regular blocks to estimate tonnes and grades. The block sizes used were 5 m (strike) x 2 m x 5 m (height).

To categorize the Mineral Resources, WGM generated a distance model (distance from actual data point to the block centroid) and reported the estimated resources by distances which represented the category or classification. WGM chose to use the blocks that had a distance of 25 m or less to be Indicated category and +25 m to be Inferred category. For the Mineral Resource estimate, a 2.5 g Au/t cutoff was determined to be appropriate at this stage of the project and based on the relative increase in metal prices since the 2008 estimate (see table below). These parameters were chosen based on a preliminary review of the parameters that would likely determine the economic viability of an underground mining operation and



comparison to similar projects in the area that are currently being mined or are at an advanced stage of study / development.

### **Conclusions and Recommendations**

Based on our review of the available information for the Upper Beaver Property and the results of our Mineral Resource estimate, WGM concludes the following:

- The Upper Beaver deposit is an Archean gold lode deposit with structurally controlled mineralized zones consisting of brittle to ductile discontinuous, anatomising structures. Such deposit types are common along the CLLDZ in the Kirkland Lake area, however, the Cu-Au association at Upper Beaver is not typical in this camp. The Upper Beaver deposits are consistent with an alkali porphyry copper-gold model and the mineralization occurs both in flat and steeply dipping zones; is of replacement-type with rare vein-type mineralization; is associated with minor to pervasive alteration which includes feldspar, epidote, carbonate, sericite, silica and magnetite with trace hematite; and has an element association of Cu, Au, or Au-Cu with associated molybdenum;
- The Upper Beaver Property has three main types of mineralization, or groups of zones; the South Contact Zones, Beaver North Zones, and North Basalt Zones. The North Basalt Zones currently do not have Mineral Resources estimated. The Indicated and Inferred Mineral Resources are summarized below:

**Summary of Upper Beaver Property Updated Mineral Resource Estimate  
(Cutoff of 2.5 g Au/t)**

Category	Tonnes	Cu (%)	Au (g/t) (uncapped)	Ounces (uncapped)	Au (g/t) (capped)	Ounces (capped)
Indicated	3,074,000	0.54	8.84	874,000	6.98	690,000
Inferred	3,093,000	0.41	7.15	711,000	6.19	616,000

Note: Au is capped at 50 g/t.

- Plans and cross sections through the current block model display a reasonable distribution of gold grades based on drillhole intersections;
- Queenston's current sampling, assaying and QA/QC protocols represent good industry practice and are appropriate for this type of deposit. Analytical results for prepared Standards inserted by Queenston and Check assaying completed at Secondary labs indicates Primary assay laboratory results are, in general, accurate and precise. The current sample and assay database is inadequate for the Project as sample and assay information is not readily accessible for review, validation and auditing;

- The follow-up phases of Queenston's drilling programs had a favourable impact on zone interpretations and Mineral Resources, indicating that the main zones of mineralization are fairly continuous and predictable along both strike and dip; and
- The Upper Beaver Property shows excellent potential for additional Mineral Resources being defined, either as extensions of known zones, or as further delineation of known gold mineralization with more drilling. Some of these areas may be better drilled from underground due to the length of the holes from surface or old workings making drilling from surface less than optimal or even impossible.

WGM offers the following recommendations for the Upper Beaver Project:

- WGM notes that Swastika's lab protocols call only for blowing out the crushers and pulverizers between samples, not using a wash sample between high grade samples. If Queenston is providing notice to the lab that particular samples are high grade, it is WGM's opinion that the lab should be using a wash after high grade samples;
- WGM recommends that Queenston strive to improve its sampling and assaying database for future drilling programs and should compile all of its assay records. A relational database system is ideal for this purpose. The databases should include all assays, not just the Finals computed from component assays. The database also should include results for all QA/QC materials both for Queenston inserted materials and also laboratory inserted materials;
- Queenston should also strive to avoid repeating sample numbers, as sample number repeats complicate tracing assays to certificates and archived core. Towards building a relational database for all assay records historic sample identifiers should probably be supplemented with prefixes to make sample IDs unique. Where historic samples have no Sample ID, unique Sample IDs should be created;
- Some historic drillholes were only surveyed with a magnetic system and some drillholes have not been surveyed with the gyro system because they were unsuitable. WGM recommends that Queenston try to complete collar surveys on all drillholes not already surveyed through significant mineralization; and
- WGM recommends that future Mineral Resource estimates, after more drilling is conducted, continue evaluating multiple capping strategies for individual zones.



### **Upper Beaver Proposed Work Program and Budget**

In general, the work in progress and planned for the Upper Beaver Property includes further exploration and Mineral Resource definition drilling, metallurgical testwork (employing gravity and floatation methods), environmental baseline studies, and a Preliminary Assessment ("PA") to evaluate the economics of the project. Approximately 20,000 m of diamond drilling is proposed for the Upper Beaver Project in 2011. This work is estimated to cost approximately \$3.87 million and upon completion, Queenston will make a decision on whether to advance the project to the pre-feasibility stage.

The above description of the work program and estimated cost breakdown for the next phases for the Upper Beaver Property is summarized below:

#### **Upper Beaver Work Program and Budget (2011-2012)**

Main Task	Units	Unit Cost (C\$)	Cost (C\$)
Exploration and Resource Drilling	20,000	\$150	C\$3,000,000
Desktop Studies and early Preliminary Economic Assessment work			200,000
Baseline Environmental Studies			450,000
Contingency (6%)			<u>219,000</u>
<b>TOTAL</b>			<b><u>C\$3,869,000</u></b>

## 2. INTRODUCTION AND TERMS OF REFERENCE

### 2.1 GENERAL

Queenston Gold Mines Limited ("**QGM**") was incorporated in 1941 in Ontario and held properties in Gauthier Township, including the current Anoki and McBean gold deposits. In 1977, QGM acquired certain assets of Upper Canada Resources Limited, including the Upper Canada Mine and Upper Beaver Mine located in Gauthier Township, as well as other mineral claims in Lebel and Teck Townships. From 1978 to 1995, QGM formed a joint venture with Inco Limited to explore and develop certain properties in Gauthier Township, including the development and production from the McBean open pit mine and underground development of the Anoki deposit. In 1990, QGM merged with HSK Minerals Limited to form Queenston Mining Inc. ("**Queenston**"). From 1995 to 2001, Queenston formed a joint venture with Franco-Nevada Mining Corporation Limited ("**Franco-Nevada**") to explore joint properties in the Kirkland Lake area.

In 2002, Queenston purchased the joint venture assets of Franco-Nevada from Newmont Mining Corporation to hold a 100% interest in a large land package in the Kirkland Lake area. In 2004-2007, Queenston and KL Gold formed three joint ventures in Teck Township to explore properties adjacent to the Macassa gold mine, and in early 2010 Queenston completed its merger with Vault Minerals Inc., which added 234 claims to Queenston's holding in the camp. The majority of the properties acquired were adjacent to Queenston's key deposit and significantly added to Queenston's assets. Two key assets acquired in the merger are the Lebel property which hosts the past-producing Bidgood mine, and the Gauthier property which adjoins the Upper Beaver Property. Further land acquisition in Gauthier Township increased Queenston's holdings in the camp to approximately 1,400 claims units representing 226 km<sup>2</sup>, the largest holding in the district.

The focus of Queenston's program in the eastern portion of the Kirkland Lake camp is to advance five 100% owned gold deposits (Upper Beaver, Upper Canada, McBean, Anoki, and Bidgood) to conceptually form a central mine complex centred on the old Upper Canada Mine site. In 2008, exploration work was focused on the Upper Beaver Property (the "Property") where drilling in 2006-07 outlined a large gold-copper system that was being prepared for a Mineral Resource estimate. From 2009 and onward, additional drilling has focused on extending the deposit at depth, and on filling in gaps closer to surface.

## **2.2 TERMS OF REFERENCE**

Watts, Griffis and McOuat Limited ("WGM") was retained by Queenston to complete an updated Mineral Resource estimate for the Property and document the study in a new independent technical report prepared in compliance with the standards of the Canadian Securities Administrators' National Instrument 43-101 ("NI 43-101") and the definitions of the Council of the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") standards.

This NI 43-101 Technical Report is copyright protected, the copyright is vested in WGM, and this report or any part thereof may not be reproduced in any form or by any means whatsoever without the written permission of WGM. Notwithstanding the foregoing, WGM hereby permits Queenston to file this report with securities regulators to support public disclosure of the Mineral Resource estimate and for filing on SEDAR. Furthermore, WGM permits the report to be used for a basis for project financings and in the preparation of a Pre-Feasibility Study, should one be undertaken, and that part or all of the report may be produced by Queenston in any subsequent reports, with prior consent of WGM.

WGM was originally authorized to complete the Mineral Resource estimate and NI 43-101 Technical Report by Mr. Bill McGuinty, Vice President, Exploration, Queenston Mining Inc., on March 28, 2011.

## **2.3 SOURCES OF INFORMATION**

Much of the material used to prepare this report was taken from the 2008 WGM report, in addition to newer material provided by Queenston. This included a previous NI 43-101 report concerning all of Queenston's property holdings by Dale R. Alexander for Queenston titled: *"Technical Report for the Mineral Properties of Queenston Mining Inc. in the Kirkland Lake Gold Camp"* dated November 15, 2007 and available on SEDAR. Also provided were the reports: *"Drill Report 2005 Drill Program Upper Beaver Property"* prepared by Wayne R. Benham, April 3, 2006 and *"Drill Report 2007-2008 Drill Program Upper Beaver Property"* prepared by Benham, April 9, 2008. WGM has also referenced Queenston's 2010 Annual information Form ("AIF"). WGM was also provided with additional written (in the form of reports and memos) and verbal data by Queenston, as well as drillhole, geology and assay data in digital format.

Mr. Kurt Breede, P.Eng., Senior Resource Engineer and WGM Vice-President, Marketing, visited the Property on March 30, 2011 to review logging and sampling procedures, review core from numerous drillholes from the newer drill campaigns (i.e. 2009 and onward), and

collect independent samples and other pertinent data from site personnel. Mr. Michael W. Kociumbas, P.Geo., Senior Geologist and WGM Vice-President had previously visited the Property on June 18 and 19, 2008 to conduct a similar review on pre-2009 drilling data and procedures.

A complete list of the material reviewed is appended to this report.

## **2.4 UNITS AND CURRENCY**

Throughout this report, measurements are in metric units, unless the historic context dictates the use of Imperial units is appropriate. Tonnages are shown as tonnes ("t") (1,000 kg), linear measurements are metres ("m"), or kilometres ("km") and precious metal values are grams per tonne ("g Au/t") or troy ounces per ton ("T") ("oz Au/T" or "opt"). Grams are converted to ounces based on 31.104 g = 1 troy ounce and 34.29 g/t = 1 oz/T. Copper assays are generally reported in %. There are also instances where copper is reported in parts per million ("ppm"), where 1% = 10,000 ppm.

Currency amounts are generally quoted in Canadian dollars ("\$\$") and in some cases, United States dollars ("US\$").

### **3. RELIANCE ON OTHER EXPERTS**

WGM prepared this study using the resource materials, reports and documents as noted in the text and "References" at the end of this report.

WGM has relied on the metallurgical analysis and recommendations of Peter W. Godbehere, B.Sc., an independent consultant based in Rouyn-Noranda, Quebec. His comments are reflected in Section 16 of this report. Mr. Godbehere worked for Noranda Inc. and Falconbridge Ltd. from 1969-2004 (almost) continuously, holding various positions as mill metallurgist, mill superintendent, manager Chadbourne mining division, manager, metallurgy and superintendent of business development, primarily at the Horne Smelter, Quebec. Presently, Mr. Godbehere is a consultant in metallurgy, mineral dressing, metal accounting and small mine development for junior exploration, major mining and metallurgical and mine contracting companies. Mr. Godbehere is not a QP by definition for this report, but Rene Jackman, P. Eng. of Lakefield Research has supervised and reviewed the underlying metallurgical testing and reporting that is contained in this Technical Report on which Mr. Godbehere bases his comments.

WGM has not independently verified legal title to the Property. We are relying on public documents and information provided by Queenston for our descriptions of title and status of the Property agreements.

Drill core was collected and submitted by Queenston to Swastika. Although WGM has reviewed the assay results generated by Swastika, and secondary labs, Polymet, Expert and SGS and believes they are generally accurate, WGM is relying on the aforementioned labs as independent experts.

We have not carried out any independent geological surveys of the Property, but did complete an initial site visit in July 2007, a second site visit in June, 2008, and a follow up visit on March 30, 2011 to review drill core and results and to collect data pertinent to the project. We have relied for our geological descriptions and program results solely on the basis of reports, notes and communications completed by or with Queenston.

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

### **4.1 PROPERTY LOCATION**

The Property is located in northeastern Gauthier Township and northwestern McVittie Township in the Larder Lake Mining Division in northeastern Ontario (Figure 1). The claim group lies 8 km northwest of the village of Larder Lake and is approximately 25 km from Kirkland Lake.

### **4.2 PROPERTY DESCRIPTION AND OWNERSHIP**

The Property consists of 35 patented claims covering 572.556 ha and 3 leased claims (one lease) covering 53.584 ha with surface and mining rights and 9 unpatented mining claims (49 claim units – 784 ha) for a total 1,410.14 ha as listed in Table 1 and shown on Figure 2.

Each patented claim would have had a legal land survey when it was registered, however, WGM has not seen these surveys. The Ontario Mining Act requires that unpatented claims must be surveyed by a licensed Ontario surveyor before a lease can be granted. All survey documents for the Upper Beaver Property leased and patented claims are registered and filed at the Ontario Land Registry Office located in Haileybury, Ontario.

The unpatented mining claims have not had a legal land survey.

The Property is owned 100% by Queenston with certain claims subject to royalties and interests to other parties (see Property Agreements).

Queenston pays a land tax to maintain the patented claims in good standing. The 21-year Lease, 106884, covering three claims requires annual rental payments. To maintain unpatented claims in good standing, approved exploration work of required dollar value must be completed and filed with the Ministry of Northern Development and Mines. As prescribed by the Ontario Mining Act and Regulations, work to a value of \$400 per year is required per claim except for the first year, when no assessment work is required. Assessment work must be performed and applied to each of the mining claims until the holder applies for a Mining Lease. The earliest due date for Queenston's mining claims is August 1, 2013 (see Table 1). WGM understands that Queenston has abundant excess credits from its exploration programs to renew the claims when they become due.

**TABLE 1.**  
**UPPER BEAVER PROPERTY CLAIMS AND LEASES**

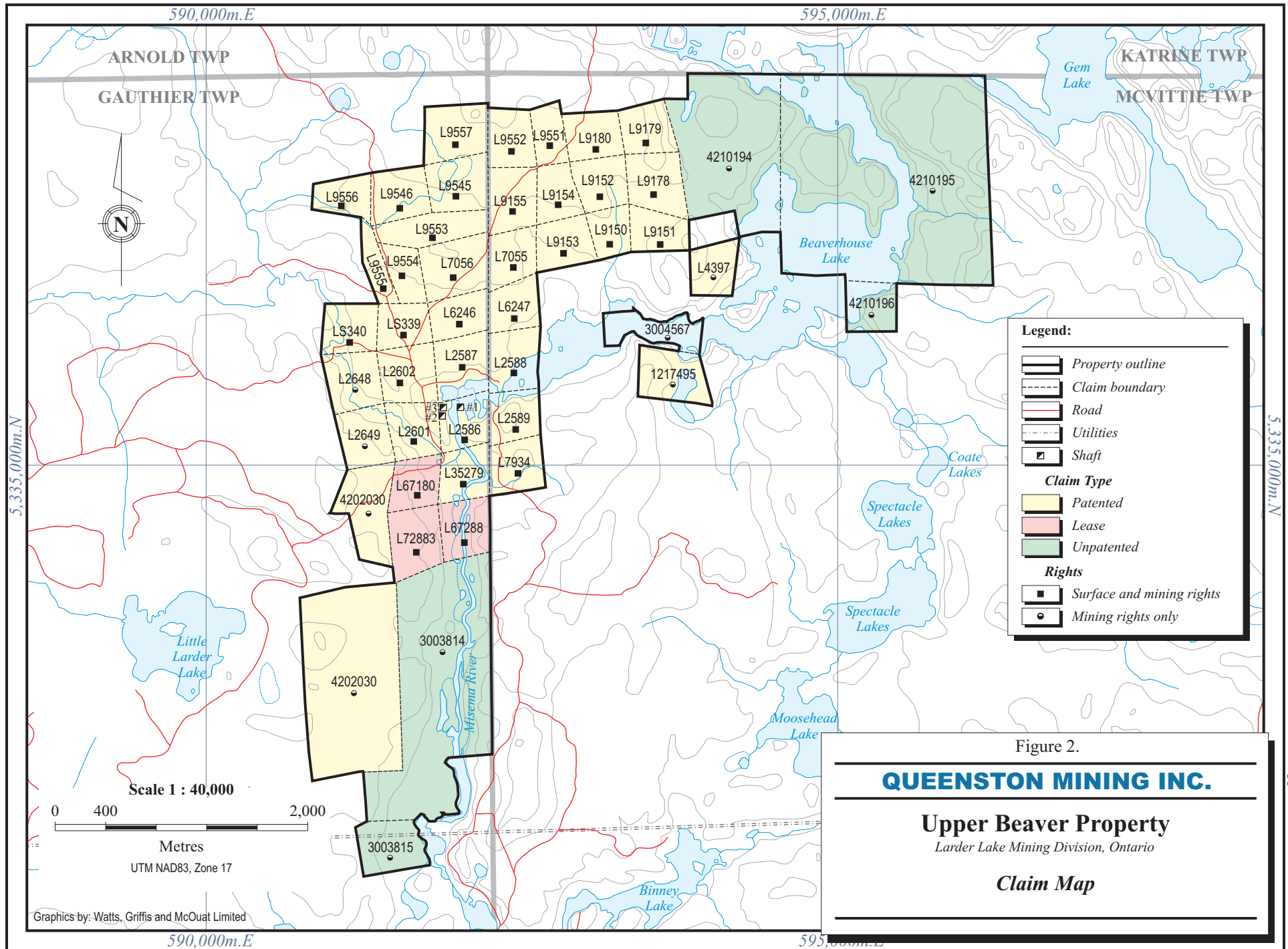
Township	Claim Number	Claim Type	Due Date	Rights	Units	Area (ha)	Royalty
McVittie	L9551	patented	Annual tax	M&SR	1	10.927	
McVittie	L9552	patented	Annual tax	M&SR	1	17.159	
Gauthier	L9553	patented	Annual tax	M&SR	1	19.83	
Gauthier	L9554	patented	Annual tax	M&SR	1	12.141	
Gauthier	L9555	patented	Annual tax	M&SR	1	8.903	
Gauthier	L9556	patented	Annual tax	M&SR	1	14.204	
Gauthier	L9557	patented	Annual tax	M&SR	1	20.639	
McVittie	L9150	patented	Annual tax	M&SR	1	11.938	
McVittie	L9151	patented	Annual tax	M&SR	1	14.366	
McVittie	L9152	patented	Annual tax	M&SR	1	16.106	
McVittie	L9153	patented	Annual tax	M&SR	1	16.187	
McVittie	L9154	patented	Annual tax	M&SR	1	13.152	
McVittie	L9155	patented	Annual tax	M&SR	1	18.616	
McVittie	L9178	patented	Annual tax	M&SR	1	21.448	
McVittie	L9179	patented	Annual tax	M&SR	1	15.985	
McVittie	L9180	patented	Annual tax	M&SR	1	15.783	
Gauthier	L9545	patented	Annual tax	M&SR	1	19.587	
Gauthier	L9546	patented	Annual tax	M&SR	1	17.887	
Gauthier	L2601	patented	Annual tax	M&SR	1	17.604	
Gauthier	L2602	patented	Annual tax	M&SR	1	19.668	
Gauthier	LS339	patented	Annual tax	M&SR	1	14.569	
Gauthier	LS340	patented	Annual tax	M&SR	1	16.187	
Gauthier	L2648	patented	Annual tax	MRO	1	16	2% NSR
Gauthier	L2649	patented	Annual tax	MRO	1	16	2% NSR
McVittie	L7934	patented	Annual tax	M&SR	1	16.39	
McVittie	L7055	patented	Annual tax	M&SR	1	15.257	
Gauthier	L7056	patented	Annual tax	M&SR	1	23.229	
Gauthier	L35279	patented	Annual tax	M&SR	1	16.066	
Gauthier	L2586	patented	Annual tax	M&SR	1	16.835	
Gauthier	L2587	patented	Annual tax	M&SR	1	21.1	
McVittie	L2588	patented	Annual tax	M&SR	1	18.575	
McVittie	L2589	patented	Annual tax	M&SR	1	15.216	
Gauthier	L6246	patented	Annual tax	M&SR	1	15.095	
McVittie	L6247	patented	Annual tax	M&SR	1	14.65	
McVittie	L4397	patented	Annual tax	MRO	1	15.257	
Gauthier	L106884 (67180)	lease	08/01/2013	M&SR	3	53.584	
Gauthier	L106884 (72883)						
Gauthier	L106884 (67288)						
McVittie	1217495	unpatented	27/05/2016	MRO	1	16	
Gauthier	1226891	unpatented	report pending	MRO	8	128	
Gauthier	4202030	unpatented	report pending	MRO	2	32	
Gauthier	3003814	unpatented	28/06/2016	MRO	10	160	
Gauthier	3003815	unpatented	28/06/2016	MRO	2	32	
McVittie	3004567	unpatented	30/10/2016	MRO	1	16	
McVittie	4210194	unpatented	24/03/2016	MRO	8	128	
McVittie	4210195	unpatented	24/03/2016	MRO	16	256	
McVittie	4210196	unpatented	24/03/2016	MRO	<u>1</u>	<u>16</u>	
				<b>Total</b>	<b>87</b>	<b>1,410</b>	

Note: 2% NSR = NSR royalty to Timmins Forest products Ltd.









### **4.3 PROPERTY AGREEMENTS**

Contact Diamond Mines Corp., formerly Sudbury Contact Mines Limited, holds 100% of the diamond rights only on the 35 leased and patented claims.

On claims L2648 and L2649, Timmins Forest Products holds a 2% Net Smelter Return ("NSR") royalty (see Table 1). Queenston has the right to purchase 50% of the royalty, at any time, for C\$1,000,000 and retains a First Right of Refusal on any third party offer to purchase the royalty.

### **4.4 ENVIRONMENTAL ISSUES**

WGM understands that there are no environmental issues on the Property. There may be some mill tailings from the 1920s era stamp mills, but their location is unknown due to re-vegetation of the mine site. The last production (1965-1972) from the Property was trucked to the Upper Canada mill located 7 km to the southwest.

Three shafts are located on the Property. The #3 Shaft on the west shore of York Lake was the main production shaft for the previous underground operation. It extends to a depth of 605 ft (184 m), with an internal winze from the 500 to the 1,250-ft level. Levels are established at 80, 200, 350 and 500 ft, and, at 125-foot intervals from the 500 level to 1,250 ft (381 m). The shaft is capped. A waste pile from the early 1919-1935 underground development is located east of the #3 Shaft at the edge of Beaverhouse Lake. This waste material is non-acid generating and about 60% was used in 2003 to build roads.

The #1 Shaft is located further east, on the east shore of York Lake. It is 102 ft (31 m) deep and water filled. Its perimeter is fenced. Less is known about the #2 Shaft, but historic plans show it to be 68 m SSW of the #3 Shaft at the northern end of the 'g' Vein. The shaft (estimated at 15 m deep) is now incorporated into the g Vein open cut, which is backfilled with waste rock.

In addition to the three shafts, two adits dating to 1912-1919 on the H and K veins are present. Both are backfilled. As noted above, an open cut on the 'g' Vein was backfilled with mine rock, along with capping of various raises, and refurbishment of the fencing and timber at the remaining hazards between 2001 and 2004.

No permits were required to conduct the drilling programs.

#### **4.5 FIRST NATION ISSUES**

Queenston is not aware of any First Nation issues pertaining to the Property. At a very early stage in the project development, Queenston intends to consult and seek input from the First Nation communities that may be affected.

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

### **5.1 ACCESSIBILITY**

The Property is accessible from Highway 66. Beaverhouse Road crosses Highway 66, 11 km west of the village of Larder Lake. Beaverhouse Road is a gravel road that extends from the village of Dobie to Beaverhouse Lake, a distance of 7 km. Numerous old drill roads and recently constructed logging roads provide excellent access to the Property (see Figure 1).

### **5.2 CLIMATE**

The climate is northern temperate with warm summers and cold winters. Temperatures vary from +30° Celsius in the summer to -40° Celsius in the winter. The ground is usually snow covered between mid-November and mid-April.

Vegetation is mixed bush with spruce, fir, larch, jack pine, poplar, birch, ash and alders. The patented claims were recently logged. Soil conditions and drainage tend to dictate the type of vegetation from open wet swamps to bare outcrop scarps.

### **5.3 LOCAL RESOURCES AND INFRASTRUCTURE**

The Property is located approximately 25 km east of the town of Kirkland Lake, Ontario. Kirkland Lake is the main commercial centre for the north part of the Timiskaming District and there is a skilled and capable workforce with experience in mining and mineral exploration in the immediate area.

There is no power into the Property. The closest power line from which adequate power for mine operations is available is located 7 km to the south-southwest near the Upper Canada mine site at Dobie, Ontario.

### **5.4 PHYSIOGRAPHY**

The topography is hummocky. Relief is in the order of 50 m from lakes, rivers and alder swamps at waterway margins, to higher outcrop knobs with local jack pine. Overburden depths range up to 30 m of clay till. Outcrop exposure averages 10-15% from low-lying exposures to more prominent knobs.

## 6. HISTORY

### 6.1 GENERAL

Gold was discovered west of Beaverhouse Lake in 1912 by Alfred Beauregard. A summary of previous work on the property follows:

- |           |  |
|-----------|--|
| 1912-1919 | La Mine d'Or Huronia: shaft sinking, Nos. 1 and 3 shafts, development and production. No. 1 shaft 102 ft deep located on the east shore of York Lake. No. 3 Shaft, 500 ft deep and winze, from 500 ft to 1,250 ft on the west shore of York Lake. Ten levels of mine developed. 15 ton stamp mill constructed; |
| 1919-1928 | Argonaut Gold Mines Limited leased the property, constructed a 200 tpd mill and continued production. Mine was closed in 1928 when lower levels failed to develop sufficient ore. Production from 1912 to 1928, 131,000 tons at 0.20 opt Au (6.9 g Au/t and 0.60% Cu);   |
| 1935      | Beaverhouse Lake Mines acquired property and carries out surface exploration program, which resulted in the discovery of new veins;  |
| 1937-1939 | Toburn Mines (" <b>Toburn</b> ") options the property. Underground development and mining to 350-level resumed;  |
| 1939      | Ventures Ltd. dewatered the mine to the 500-level, 800 ft of new development;  |
| 1951      | Toburn initiates surface drilling and geological mapping program;  |
| 1961      | Augustus Exploration Ltd. acquires the property. De-waters the mine, completes surface and underground drilling;   |
| 1964      | Upper Canada Mines Ltd. (" <b>Upper Canada</b> ") becomes manager of the property, conducts AEM ("airborne electromagnetic") survey and geological mapping program;  |
| 1965      | Upper Canada dewatered mine and carries out underground development. Mine put into production at 100 tpd. Mining rate then increased to 750 tpd, ore trucked to Upper Canada mill at Dobie;  |
| 1966      | Upper Canada/Canico conducts geophysical test surveys, magnetometer, self potential and VLEM ("vertical loop electromagnetic") surveys completed over known veins;   |

- 1967 Upper Canada conducts Turam EM survey and surface drill program to test three AEM anomalies from the 1964 survey. Discovery of pyrite-pyrrhotite-graphite mineralization in Gauthier felsic volcanics;
- 1968 Upper Canada geophysical test surveys were conducted over the known veins to the west of No. 3 Shaft, (IP ("induced polarization"), HLEM ("horizontal loop electromagnetic"), VLEM and magnetometer surveys;
- 1970 Upper Canada geological report by G.E. Parsons. Surface and underground mapping by R.G. Roberts and J.H. Morris. Geochemical mercury survey completed. Surface drillholes 71-1 to 71-4 completed;
- 1971 Mine closes after producing 106,750 ounces of gold Au (427,000 tons grading 0.25 opt Au (8.6 g Au t) and 1.28% Cu;
- 1974 Upper Canada surface diamond drilling, two holes (74-1, 74-2), aggregating 1,588 ft. Eighty-five line miles of magnetometer survey, HLEM, and VLF-EM survey over claims in McVittie Twp. M.Sc. thesis concerning property completed by J.H. Morris;
- 1974 Upper Canada study of property completed by L.J. Cunningham, consultant. Inferred mineral resource estimate completed totalling 200,000 tons grading 0.23 opt Au, 1.23% Cu; mainly as a salvage operation;
- 1985 Queenston Gold Mines Ltd. conducts magnetometer surveys, detailed surface mapping, rock geochemical survey and limited stripping;
- 1989-1990 Pamorex Minerals Inc. - Queenston Mining Inc. JV formed. Program of detailed geological mapping and sampling, overburden stripping and trenching, geophysical surveys; HLEM (Horizontal Loop Electromagnetic) and magnetometer. Diamond drilling of 12 holes and 2 wedges aggregating 20,844 ft;
- 1991 Beaverhouse Resources Ltd., a subsidiary of Royal Oak Mines Ltd. ("**Royal Oak**") - Queenston Mining Inc. ("**Beaverhouse-Queenston**") JV formed. Diamond drilling of 17 holes aggregating 24,693 ft;
- 1995 Beaverhouse-Queenston continues exploration with diamond drilling of 10 holes aggregating 12,833 ft. IP and down-hole EM survey completed in drillhole 91-9;
- 2000 Queenston re-acquires 100% interest in the Property from Royal Oak receiver. Completes diamond drilling of one hole to 596 m;
- 2005 Queenston continues surface exploration with linecutting and IP survey;

2005	Queenston diamond drilling of 20 holes aggregating 8,334 m;
2006	Queenston extends drill program. Fifty-four holes aggregating 40,720 m completed;
2007	Queenston mandates Aeroquest International Limited (" <b>Aeroquest</b> ") to complete a helicopter AeroTEM electromagnetic and magnetic survey of the Property;
2007	Quantec Geoscience Inc. (" <b>Quantec</b> ") Titan-24 Array-DCIP & magnetotelluric survey completed for Queenston; and
2007-Q1/2008	Queenston completes diamond drilling of 60 holes, including wedge cuts, aggregating 49,060 m.
2008 Q3	134 drill holes (totalling 97,065 m) defining three zones of gold and copper mineralization located adjacent to and below the mine workings.
2008 Q4	Release of initial NI 43-101 compliant Mineral Resource estimate.
2009	Total of 18 drill holes and 23 wedge cuts drilled to improve resource quality and extend limits of the 2008 resource envelope to below 800 m from surface.
2010	Additional drilling of 35 drill holes focused on developing Mineral Resources to the Indicated category.

## **6.2 HISTORIC PRODUCTION**

The main periods of production from the Property were 1912 to 1919, 1919 to 1928 and 1965 to 1971. Minor sporadic production also occurred from 1928 through 1944. Table 2 summarizes production after Lovell, 1979.

**TABLE 2.**  
**SUMMARY OF HISTORIC MINE PRODUCTION**

Period	Source	Production
1912-1944	La Mine d'Or Huronia, Argonaut Gold Mines Limited and Toburn Mines	38,347 ounces of gold and 1,030,783 pounds of copper from 119,372 t grading 9.99 g Au/t and 0.39% Cu.
1965-1971	Upper Canada/Upper Beaver Mines	102,362 ounces gold and 10,924,529 pounds of copper from 407,306 t grading 7.82 g Au/t and 1.22% Cu.
<b>Total</b>		<b>140,709 ounces gold and 11,955,312 pounds of copper from 526,678 t grading 8.31 g Au/t and 1.03% Cu.</b>

### **6.3 HISTORIC MINERAL RESOURCE/RESERVE ESTIMATES**

A historic "inferred resource" of 200,000 tons (181,437 t) grading 7.89 g Au/t and 1.2% copper was estimated by Cunningham in 1974 on behalf of Upper Canada Resources Ltd. The estimate includes 68,039 t outlined at the time of closure in 1971, and 113,398 t of an inferred potential resource based on a minimum of 40 drill intersections accessible from the mine workings.

Cunningham (1977) stated that: "the bulk of the resources occur in veins U, X, XW and Y, which lie at the extreme north-western end of the mine workings". WGM understands that a list of the individual blocks that constitute the "resource" are no longer available with the 1974 report. The threads of the calculations are available, but the method and supportive data are missing. Thus, this historic "resource" estimate cannot currently be validated and should not be relied on.



## 7. GEOLOGICAL SETTING

### 7.1 REGIONAL GEOLOGY

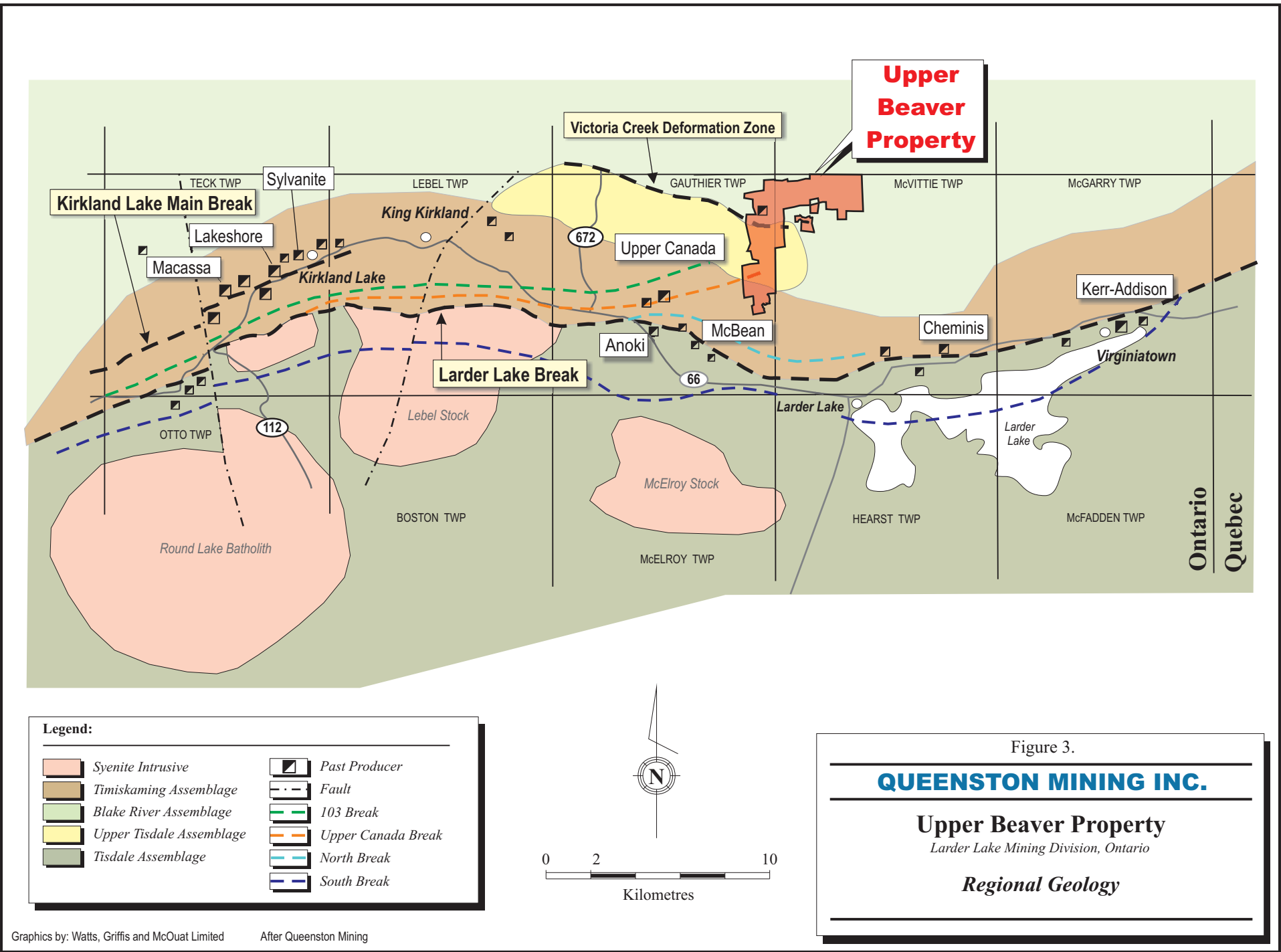
The Upper Beaver Property is located in the Abitibi greenstone belt in the Superior Province of the Canadian Shield (Figure 3). Past gold production in the Kirkland Lake area has exceeded 75 million ounces.

The Upper Beaver area is underlain by a succession of Archean assemblages:

Timiskaming	2676-2670 Ma. Clastic sedimentary rocks and some intercalated alkaline volcanic rocks. Syenite intrusions.
	<b>Unconformity</b>
	Upper Blake River: 2701- 2696 Ma; calc-alkaline basalt and andesite with some areas underlain by bimodal tholeiitic basalt and rhyolite.
Blake River	Lower Blake River: 2704-2701 Ma, Tholeiitic mafic volcanics with lesser amounts felsic volcanic rocks and turbiditic sedimentary rocks.
	<b>Victoria Creek Deformation Zone</b>
Tisdale	Upper Tisdale: 2704-2706 Ma Gauthier Group; Mainly calc-alkaline felsic to intermediate volcanic rocks with volcanoclastic sedimentary units.
	Lower Tisdale: 2707-2710 MA, Larder Lake Group, mainly tholeiitic mafic volcanic rocks with some komatiite, intermediate to felsic cal-alkaline volcanic rocks and iron formation

The Upper Beaver area is underlain by volcanic and volcanoclastic rocks of the Tisdale and Blake River assemblages. The dominant regional structural feature is the east-west trending Cadillac-Larder Lake Deformation Zone ("CLLDZ").

The locus of the CLLDZ is approximately 8 km south of the Upper Beaver mine. This deformation zone includes a number of component faults or breaks which are main controls for gold mineralization. The northeast-trending Upper Canada Break is one such component and likely is a splay fault off the CLLDZ. The projection of the Upper Canada Break, and its parallel Upper Canada Break South Branch, flank the shafts on the Property and appear to control, to some extent, syenite intrusions on the Property. The Victoria Creek Deformation Zone lies along the contact between the Tisdale and Blake River assemblages in the Property area and also likely represents a component of movement related to the CLLDZ.



## **7.2 PROPERTY GEOLOGY**

### **7.2.1 GENERAL**

The central part of the Property is underlain by felsic and intermediate volcanoclastics of the Upper Tisdale assemblage (Figure 4). These rocks are interpreted to occur in the core of an east to east-southeast-trending, southeasterly plunging anticline – the Spectacle Lake anticline. The uppermost unit of the felsic volcanic sequence is a chert-pyritic tuff-carbonaceous sedimentary horizon. The Tisdale assemblage is conformably overlain by the Lower Blake River assemblage. This contact is located immediately south of the Upper Beaver mine shafts. The Victoria Creek Deformation Zone is in part spatially coincident with this contact between the older Tisdale and younger Lower Blake River assemblages.

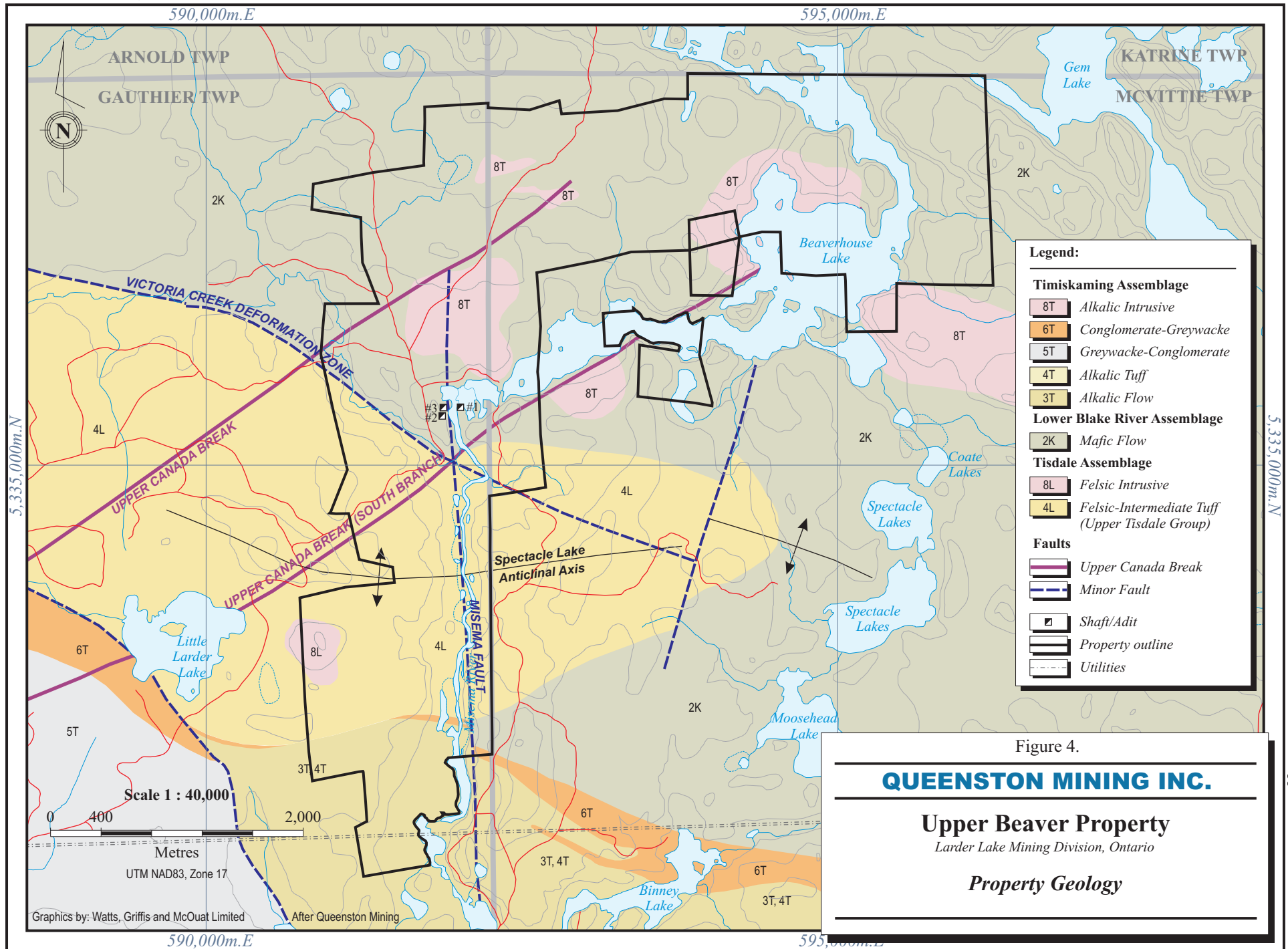
The majority of the north part of the Property is underlain by the Lower Blake assemblage. These rocks, (previously known as the Kinojevis) consist of an alternating sequence of strongly magnetic iron and magnesium-rich tholeiitic basalts. The southern part of the Property is underlain by Timiskaming volcanics, volcanoclastics and sediments, however, the age of these sediments is currently being debated. This sequence is in fault contact with Tisdale assemblage rocks.

Syenite complexes of Timiskaming age intrude both the Tisdale, Blake River and Timiskaming assemblages. Various intrusive phases are present. The two main syenite phases are a dark grey mafic syenite and a red-brown to dark grey feldspar phyric syenite with an aphanitic matrix. Feldspar porphyry phases are also present. A prominent plug of syenite and mafic syenite, 600 m in diameter, occurs 250 m north of the #3 Shaft. A feldspar porphyry intrusion lies adjacent to its margin.

Matachewan diabase dykes cut all other rock units. The north-trending Misema Fault follows the Misema River. A diabase dyke, 30 to 40 m thick follows this structure.

The mafic volcanics east, west and north of the syenite plug strike east-west and dip 70-80° to the north. Three sets of faults have been mapped as follows:

- northwest-trending and steeply dipping northeast;
- northeast-trending and steeply dipping northwest; and
- east-west striking faults, dipping steeply north through the syenite plug and mafic volcanics.



## **8. DEPOSIT TYPES**

The Upper Beaver deposit has been described as an Archean gold lode deposit where mineralized zones are structurally controlled and consist of brittle to ductile discontinuous, anatomising structures.

Such deposit types are common along the CLLDZ in the Kirkland Lake area where precious metal production has exceeded 40 million ounces. Details for these deposits are, however, highly variable. Common features include regional and local structural control and spatial and temporal relationship with felsic to alkalic intrusives.

Not-typical for the Kirkland Lake camp is the copper-gold association at Upper Beaver with the widespread and pervasive development of magnetite-feldspar-actinolite-epidote and carbonate-sericite. These features are more consistent with some deposits in the Timmins camp (such as the McIntyre Mine) along the Destor-Porcupine Fault Zone. Kontant, Dube and Benham have suggested that the Upper Beaver deposits are consistent with an alkali porphyry copper-gold model.

## 9. MINERALIZATION

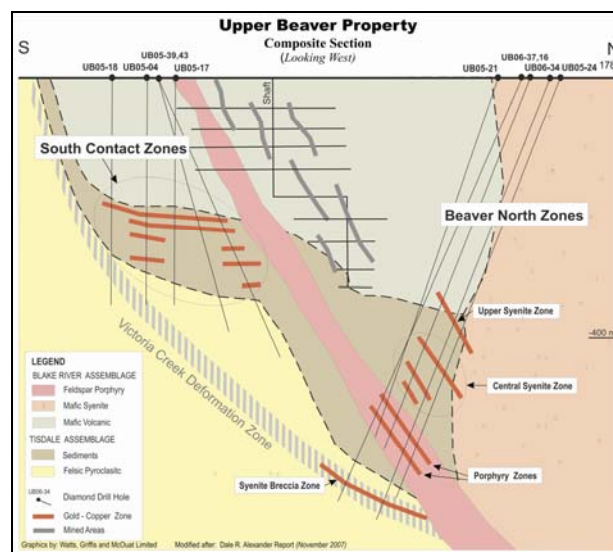
Mineralization at Upper Beaver, as described by Queenston (Kontack, Dube and Benham, unpublished):

- occurs both in flat and steeply dipping zones;
- is of replacement-type with rare vein-type mineralization;
- is associated with minor to pervasive alteration which includes feldspar, epidote, carbonate, sericite, silica and magnetite with trace hematite; and
- has an element association of Cu, Au, or Au-Cu with associated molybdenum.

Queenston classifies the mineralization as three main groups of zones (from south to north):

- South Contact Zones;
- Beaver North Zones; and
- North Basalt Zones.

The vein systems are complex. Sufficient data is often not available to define a true width. As a rule of thumb, the more steeply dipping zones in the Beaver North and North Basalt Zones are estimated to have a true width factor of 70 to 77% of the core length interval, while the more flatly dipping South Contact mineralization ranges from 90 to 100% of the original intersection. The composite cross section from the 2008 NI 43-101 report illustrates schematically the South Contact and Beaver North zones, their orientations / structures and host rocks that contain the mineralization.



### **South Contact Zones**

The South Contact Zones' disseminated mineralization consists of two, relatively flat-lying zones. These occur below and south of the mine workings in the Upper Tisdale contact area, marked by the roll in the stratigraphy from a northwesterly to northeasterly strike. Gold and copper contents increase where steeply dipping quartz-chalcopyrite-quartz veins and stringers intersect the flat-lying disseminated zones. The host is mafic breccia and volcanoclastic conglomerate with variable silica, epidote and calcite alteration, along with magnetite, chalcopyrite, pyrite, pyrrhotite, and visible gold.

### **Beaver North Zones**

The Beaver North Zones include a series of east-northeast striking, north-dipping, fracture, vein and stringer systems containing chalcopyrite, magnetite, pyrite and visible gold. They occur below and north of the mine workings near the south contact of the large (600 m) syenite plug. The fracture systems crosscut a variety of rock types and are tentatively named by their position in the stratigraphy when first identified as: Syenite Zones, North Contact Zone (the basalt / syenite contact area), Porphyry Zones (associated with feldspar porphyry), Syenite Breccia Zones, and Lower Gauthier Zone (in Upper Tisdale assemblage rocks).

### **North Basalt Zones**

The North Basalt Zones are located at the north contact of the 600 m, syenite plug. They are also characterized by a series of fractures and stringers with chalcopyrite and magnetite crosscutting syenite to mafic syenite and basalt. In all, some five zones (lettered A to E) are currently indicated, however, drill information is sparse and no Mineral Resources are yet defined for these zones. The fracture systems strike east-northeasterly and dip steeply north. They are primarily found in altered and brecciated basalt. Although no major faulting is indicated, the North Basalt Zones track close to the proposed trace of the regional Upper Canada Break.

The controlling structure for these zones vary. For the North Basalt Zones, the controlling structures are probably a combination of the Upper Canada Break, folded primary volcanic stratigraphy and intrusion of the syenite complex. For the South Contact Zones, multistage deformation along the contact between the Lower Blake River and Upper Tisdale assemblages is important. This deformation likely includes the Victoria Creek Deformation Zone, the feldspar Porphyry and progressive deformation prior to, during and postdating the feldspar porphyry.

For the Beaver North Zones, these same controls seem likely, plus the central syenite plug and continual deformation postdating intrusion of the central syenite plug are probably important. Mineralization also is zoned both with depth and laterally towards the central parts of

individual zones. Early 1920s-1935 historic production came from gold quartz veins with low copper ratios, however, historic 1965-1972 production was from gold-bearing quartz-chalcopyrite-magnetite veins with high copper ratios. The central portions of the Porphyry Zones are chalcopyrite-magnetite rich. Laterally towards the east and west margins of the zones, pyrite becomes the dominant sulphide while chalcopyrite and magnetite decrease. Near the margins, the zone width is less than 1 m quartz-calcite veins, usually with visible gold. Outside the margins of the mineralized zones there is a chlorite-epidote-carbonate altered fractured to brecciated zones.

Vertically, the width of zones typically increase from an average of less than 1.5 m in the volcanics, to greater than 5 m in the syenite and mafic syenite porphyry rocks most, likely due to the more brittle nature of the intrusive rocks. There is an apparent increase in gold grades with depth from 3 g Au/t at the -400 m level to +10 g Au/t below the -500 m level. The Porphyry Zone are still open at depth, so it is not known if there is a similar quartz-sulphide-magnetite zoning towards the bottom of the zones, as is the case laterally. High gold ratios are not directly related to the chalcopyrite and magnetite content of the mineralized zones.



## 10. EXPLORATION

### **10.1 GENERAL**

Queenston exploration programs since reacquisition of the Property in 2000 have consisted mostly of diamond drilling and some geophysical surveying.

In 2000, Queenston drilled one drillhole. In early-2005, Queenston re-established a north-south cutline grid over the north-central part of the Property with lines spaced at 100 m intervals. Subsequently, Remy Belanger Geophysics from Rouyn-Noranda, Quebec was mandated to conduct a frequency domain Induced Polarization survey over the grid. A number of anomalies were defined that were drilled later in Phase I, 2005. Most anomalies were attributed to flowtop breccias and iron-rich (magnetite-enriched) tholeiitic basalts; some to mineralized zones.

The exploration programs in 2006 consisted mostly of drilling as described under *Drilling*. Preceding 2007 drilling Aeroquest International Limited was contracted to carry out a helicopter-borne geophysical survey over the Property and the adjacent Lac-McVittie JV property. The survey was conducted using an AeroTEM II (Echo) time domain system and a high-sensitivity caesium vapour magnetometer. The total survey coverage was 297.8 line kilometres flown at 100 m line spacing in a 147 degree survey flight direction. The purpose of the survey was to determine the geophysical signature or "footprint" of the Upper Beaver gold-copper deposit and identify other potential targets on the properties.

The magnetometer survey was successful in outlining the geological characteristics of the properties. In the western portion of the survey area, on the Upper Beaver property, the syenite plug that lies north of the mine workings and hosts the gold-copper mineralization at depth is identified by an oval shaped magnetic-low feature. This feature is surrounded by a high magnetic response occurring in the Lower Blake River metavolcanic basalts indicating the presence of magnetite, an important component of the mineralized system that hosts the Upper Beaver deposit. A similar magnetic-high response in the same package of rocks located 4 km to the east has been identified by the survey.

The most significant electromagnetic responses are located in the southern portion of the survey area within a magnetic-low feature that outlines the Upper Tisdale metavolcanic felsic pyroclastic assemblage. Here the survey has located a cluster of AEM anomalies in an area where previous drilling has intersected semi-massive pyrite, minor chalcopyrite, sphalerite and arsenopyrite with trace gold.

In September and October 2007, Quantec Geoscience Ltd. completed a four-line Titan24 DCIP (DC Resistivity and Induced Polarization) and MT (Tensor-Magnetotelluric) survey over the Property. The purpose of the survey was to determine the geophysical characteristics of the new gold-copper mineralization discovered and to identify other, deeper targets on the Property that display similar characteristics.

The Titan 24 inversion results over the Upper Beaver mineralization identified responses (strong chargeability with coincident DC and MT low resistivity) for the South Contact, Beaver North and North Basalt Zones. The survey also identified at least 5 other anomalies that could represent significant sulphide mineralization, alteration and/or structure.

After completion of the 2008 Mineral Resource estimate, Queenston embarked on a program of deep exploration to explore and extend the deposit below a depth of 800 m. A Titan 24 geophysical survey assisted by identifying a deep anomaly within the mineralized corridor below the resource. The first results of this program were reported in December 2008 (see Queenston news release dated December 16, 2008) with the highlight in deep hole UB08-139 that intersected a high grade, wide intersection in the Porphyry Zone assaying 30.3 g Au/t with 1.0% Cu over 20.8 m.

## **11. DRILLING**

### **11.1 PRE-2000 DRILLING**

WGM has not reviewed pre-2000 drilling on the Property except for what is listed in the History of the Property section. No pre-2000 drillholes are used for the current Mineral Resource estimate.

### **11.2 QUEENSTON 2000 TO 2008 DRILLING**

#### **11.2.1 GENERAL**

The magnetite-chalcopyrite-gold mineralization intersected in altered mafic breccias in the Pamorex-Beaverhouse Resources and Queenston drilling was considered to be possibly representing chalcopyrite-magnetite stringer mineralization related to a hydrothermal feeder zone to a nearby blind VMS deposit similar to the Corbet and Ansil VSM deposits which were mined at Rouyn-Noranda. During the winter of 2005, an IP survey was conducted to search for sulphide zones along east-west striking interflow contacts within the mafic volcanics overlying the felsic volcanics to the north and west of the old mine workings. Several IP anomalies of interest were detected.

Drilling to test the IP anomalies was started in May 2005. Phase I consisted of 15 drillholes (UB-05-01 to UB-05-15) totalling 5,913.4 m, was planned to test IP and magnetic anomalies and to follow-up anomalous gold-copper zones intersected in the 1989-1995 Pamorex/Beaverhouse/Queenston joint venture drill programs. A phase II program, which consisted of five holes (UB-05-16 to UB-05-20) totalling 2,420.9 metres was planned to follow-up the results of the first phase. Phase II was completed on August 27, 2005. Phase III extended from September 25, 2005 to November 03, 2006. It consisted of 54 drillholes (UB-05-21 to UB-06-74 totalling 40,720 m.

Drilling in 2006 continued to encounter high grade mineralization over wide intervals. After completing a preliminary in-house resource estimation, it was decided to carry out an infill definition drilling program in preparation for an "NI 43-101" Mineral Resource estimate.

The Phase IV infill drill program started January 3, 2007 and was completed March 19, 2008. The purpose of this work was to drill off the Upper Porphyry gold-copper zone at 50 metre spacing's between the 400-700 metre levels. After intersecting a high grade zone in hole UB07-100 at -810 metre level, the infill drilling was extended to the 800 metre level. The

drilling also tested the Syenite, North Contact, Lower Porphyry, Lower Gauthier and Syenite Breccia zones which occur in a broad alteration corridor above and below the main Upper Porphyry Zone. The program consisted of 60 drillholes, including wedge holes (UB-07-75 to UB-08-128), aggregating 49,060 m.

The Phase I to Phase IV programs aggregated 100,672 m. All drilling was nominally NQ and carried out by Benoit Diamond Drilling Ltd. from Val d'Or, Quebec. The drill programs were planned and supervised by Wayne R. Benham P.Geo., Queenston. The core through the four phases was logged and sampled by W. Benham, F. Ploeger, P.Geo.; D. Alexander, P.Geo.; M. Leblanc, P.Geo., and Eric. von Bloedau (Temp. Geo.,) at Queenston's Upper Canada mine site.

### **11.3 QUEENSTON 2008 TO 2011 DRILLING**

#### **11.3.1 GENERAL**

Since the release of the 2008 NI 43-101 report, three additional phases of diamond drilling have been conducted on the Upper Beaver Property. The following is a brief summary of these drilling programs.

All diamond drilling was conducted by Benoit Diamond Drilling of Val d'Or, Quebec, and Major Diamond Drilling Group of Winnipeg, Manitoba who had acquired Benoit. Drill core was nominal NQ diameter during all phases of the drilling programs. Three HQ diameter drill holes were also completed during the period. The drill core, plus rejects and pulps from the sampling programs, are stored at the Upper Canada mine site.

Swastika Laboratories, of Swastika, Ontario was the primary lab used for assaying of samples for geochemical gold in ppb (Fire assay-one assay ton) and for copper in ppm. Samples with >1,000 ppb gold (1 g Au/t) were checked by fire assay using a gravimetric finish. Copper assays returning >10,000 ppm (1% Cu) were re-assayed for percent copper.

All drill hole collar locations were spotted by Northland Technical Surveys, Kirkland Lake, Ontario using a Total Station, NAD 83 UTM co-ordinates and geodetic elevation system. During drilling, down-hole attitude surveying was conducted using a Reflex instrument. Upon completion the holes were re-surveyed by Halliburton Sperry Drilling Services, North Bay, Ontario, using a north-seeking gyroscopic system. A small percentage of holes which experienced technical difficulties such as broken rod-strings, or which were otherwise abandoned before reaching targeted areas were subsequently not surveyed by gyro. Drill hole

casings are left in place, capped and marked with 2x2 posts with aluminum tags or with metal flag casing caps identified with metal tags.

Since the 2008 resource estimation (up to and including drillhole UB08\_128), a total of 60,228 m of drilling in 102 holes, has been done on the Upper Beaver Project, including 48 holes from surface and 53 wedge cuts. The programs are subdivided below into the 2008-2009 drilling, infill drilling program, and 2009-2011 deep exploration and definition drilling.

The current resource estimate uses drill holes up to and including drill hole UB10\_170W2.

### 11.3.2 2008 TO 2009 DRILL PROGRAM

During the period of March 19, 2008 to April 2009 a total of 16,572.5 m of drilling was completed in 19 holes on the Upper Beaver Project, including 12 holes from surface, 6 wedge cuts and one extension to existing hole UB06-63. Table 3 summarises the drill hole locations while detailed lithological descriptions and results are available in the drill logs for holes UB08\_129 to UB08\_139, UB09\_135W1-W3, and UB09\_63E, 63W1, 63W2.

Drill hole targets for the 2008-2009 drill campaign were two-fold; drill holes 129, 130, 131, 132, 132W, 133, 134 and 134A were designed to test Titan-24 anomalies outlined in the north end of the property, north of the North Basalt Zone, and in the area south of the old mine workings, beneath and along the south shore of Beaver House Lake. No significant auriferous zones were outlined during this exploratory drilling.

The remainder of the drilling from the period (drill holes 135, 135W1, 135W2, 136, 137, 138, 139, 63E, 63W1 and 63W2) focused on exploring for the deep, down-dip extension of the East and West Porphyry Zones below the -800 metre elevation. Results of this drilling are tabulated in Table 3. Figure 5 is a surface plan showing drill hole locations for all surface drilling to-date on the Upper Beaver Property which were incorporated into the updated resource estimate. It also shows the location of cross sections as discussed in Section 17 of this report.

### 11.3.3 2009 TO 2010 IN-FILL DRILLING PROGRAM

From June 2009 to January 2010 a second in-fill drilling program was undertaken, in order to upgrade the current resource block between the -400 to -800 metre elevations outlined in the 2008 NI 43-101 report, from the inferred to the indicated categories. Drilling was focused primarily on the East and West Porphyry Zones which accounted for approximately 82% of the resource outlined by WGM. Pierce point locations were developed from 3-D modelling of

the zones and longitudinal sections, in order to achieve approximately 25 metre spacing relative to previous drilling within the resource block. Pierce point locations were outlined by Manuel Ng Lai, P. Eng., Queenston Mining staff. It was determined that the most efficient way of ensuring accurate intersection of outlined pierce point locations was primarily from wedging from pre-existing holes. In about half of the cases, new holes were required to be drilled from surface, using controlled drilling techniques necessary to hit the tight target areas outlined. Sixteen holes were completed in the in-fill program, 8 from surface and 8 wedge cuts, totalling 8,950.3 m. All but two of the holes, which intersected post-mineralization dykes, successfully intersected the mineralized zones and the results are tabulated in Table 3.

#### 11.3.4 2009 TO 2011 DEEP EXPLORATION & DEFINITION DRILL PROGRAM

During the period of April 2009 to February 2011 (UB09\_140 to UB11\_171) exploration and definition drilling continued to explore the mineralized Au±Cu zones on the Upper Beaver Property. A total of 43,566 m in 83 holes (including 8,950.3 metres for in-fill program, surface holes and wedge cuts) was completed during this period and are outlined in Table 3. Diamond drilling is still on-going, further delineating the Porphyry Zones.

Drilling has primarily focused upon further exploring and expanding the Porphyry Zones at depth, below the -800 metre elevation and the limits of the current resource, with the goal of further expanding the resource within these zones.

Drill holes are designed to target the down-dip/down-plunge extension of the Porphyry Zones based on an interpreted attitude of the vein system striking 50 to 60° and dipping 60 to 70° to the northwest. Drilling to-date has defined a plunge of the core of the vein system to be approximately 50° to the northeast.

Historically, within the old mine workings from surface to the -385 metre elevation, at least six distinct types of vein morphologies were recognized;

1. Chalcopyrite-magnetite±quartz-calcite-pyrite.
2. Quartz-Calcite-Chalcopyrite±VG-molybdenite-specularite-pyrite.
3. Quartz+Molybdenite veins.
4. Calcite±Chalcopyrite-pyrite-specularite-molybdenite-VG.
5. Quartz-feldspar stringers in basalt.
6. Quartz±Chalcopyrite stringers in syenite.

**TABLE 3.**  
**SUMMARY OF DRILLHOLES**

Hole ID	Location X	Location Y	Location Z	Azimuth	Dip	Length
<b>2000</b>						
UB00_1	592030	5336775	320	180	-70	596
<b>2005</b>						
UB05_01	591733.51	5335410.28	285.65	228	-75	255
UB05_02	591733.73	5335410.43	285.49	228	-55	266.8
UB05_03	591908.79	5335275	288.26	235	-70	266.8
UB05_04	591908.79	5335275	288.26	235	-83	408
UB05_05	591465	5335786	308.15	235	-70	185.8
UB05_06	591738.69	5336051.1	303.77	180	-55	656.8
UB05_07	591441.4	5336173.7	302.44	180	-55	595.4
UB05_08	592334	5336059	300	180	-50	711
UB05_09	592525	5336319	298.3	180	-60	558
UB05_10	592227.98	5336654.56	316.21	180	-55	360
UB05_11	592027	5336951	320	180	-55	206.9
UB05_12	592130	5337164	320	190	-50	165.7
UB05_13	591928.09	5336726.36	317.33	180	-55	492.3
UB05_14	591641	5336718	316.49	180	-65	402
UB05_15	591335	5336840	310	180	-60	382.9
UB05_16	591838.59	5335974.41	302.93	180	-65	681
UB05_17	591914.9	5335340.54	284.71	235	-85	371.4
UB05_18	591945.29	5335226.57	287.07	235	-85	435
UB05_19	591933.42	5335289.97	287.03	235	-85	332
UB05_20	591916.93	5335341.89	284.65	50	-69	601.5
UB05_21	591839.45	5335891.19	303.91	180	-65	820.9
UB05_22	591836.95	5336072.64	302.74	142.34	-65.5	956.9
UB05_23	591938.42	5336003.97	303.06	180	-64.7	960.3
UB05_24	591672.99	5335959.27	304.57	135.81	-65.8	976.4
UB05_25	591747.81	5335466.78	286.53	145	-60	426.4
UB05_26	591747.81	5335466.78	286.53	145	-72	419
UB05_27	591747.81	5335466.78	286.53	145	-83	412
UB05_28	591634.64	5335923.91	305.47	139.92	-67.1	1051
UB05_29	591746.92	5335465.84	286.12	55	-62	537
UB05_30	591502.04	5335843.45	304.75	140	-65	84
UB05_30A	591502.04	5335843.45	304.75	140	-65	813.5
UB05_31	591746.92	5335465.84	286.12	55	-72	441
UB05_32	591744.43	5335464.03	286.08	235	-45	414
<b>Subtotal</b>	<b>33</b>	<b>Holes</b>				<b>16,646.7</b>
<b>2006</b>						
UB06_33	591743.64	5335463.42	286	235	-62	321
UB06_34	591720.22	5335929.73	304.36	142.17	-66.1	962.5
UB06_35	591779.64	5335531.4	284.2	122	-75	426
UB06_36	591779.64	5335531.4	284.2	122	-88	393
UB06_37	591708.75	5335866.17	305.31	136.18	-65.9	924.5
UB06_38	591755.07	5335531.35	284.56	126	-74	307
UB06_39	591911.76	5335330.06	285.53	325	-70	336
UB06_40	591911.76	5335330.06	285.53	325	-58	165
UB06_41	591919.93	5335329.24	285.21	55	-45	462
UB06_42	591635.71	5335874.89	305.59	140	-65	144.4
UB06_42A	591635.71	5335874.89	305.59	133.22	-65.1	921
UB06_43	591911.76	5335330.06	285.53	344	-60	519

**TABLE 3.**  
**SUMMARY OF DRILLHOLES (continued)**

Hole ID	Location X	Location Y	Location Z	Azimuth	Dip	Length
UB06_44	591991.04	5335749.79	302.12	140	-57.3	659.9
UB06_45	591627.12	5335808.33	303.64	140	-66.8	999.2
UB06_46	591804.39	5335992.37	303.09	140	-65.9	960
UB06_47	591653.34	5335941.97	305.1	140	-64.4	981
UB06_48	591764.4	5336044.09	302.9	140	-66	924
UB06_49	591897.46	5336055.56	302.27	140	-65	867.5
UB06_50	591872.39	5336097.63	301.92	140	-65	1014
UB06_51	592038.51	5336463.62	307.16	318.46	-63.8	761.2
UB06_52	591939.74	5335986.96	303.3	140	-65	903
UB06_53	591798.61	5336809.79	315.41	147.4	-67.3	792.3
UB06_54	591835.08	5336929.75	314.87	144.2	-66	922
UB06_55	591976.72	5336115.81	298.93	140	-68	1020
UB06_56	591834.9	5336929.68	315.04	140.48	-61.5	898
UB06_57	592149.86	5336052.77	300.94	140	-68	925
UB06_58	591768.31	5336985.86	314.1	135	-67	974.7
UB06_59	592322.41	5335982.39	305.19	143	-65	990.2
UB06_60	591712	5336764.98	314.85	142.08	-67.1	869.8
UB06_61	592454	5335962	301	140	-67	828
UB06_62	591628	5336707	320	136	-67	681
UB06_63	591565.86	5336615.92	306.11	140	-67	782
UB06_64	591853.6	5336028.46	303.21	135.96	-63.2	823.4
UB06_65	591839.29	5336749.14	316.1	138	-66	726
UB06_66	591926.48	5336979.58	316.79	138	-67	978
UB06_67	591876.17	5335912.12	303.64	138.97	-65.4	759.5
UB06_68	591952.89	5335811.51	304.37	137.86	-65.3	654
UB06_69	592201.74	5336767.47	315.41	138	-66	672.3
UB06_70	591455.77	5336080.27	302.66	133.4	-70.6	1152
UB06_71	591865.09	5336714.94	316.74	140	-66	566.4
UB06_72	591741.82	5336801.81	314	140.02	-69.8	684
UB06_73	591497.4	5336709.8	311.27	145	-67	603
UB06_74	591623.45	5336272.97	302.07	137	-69	1157
<b>Subtotal</b>	<b>43</b>	<b>Holes</b>				<b>32,409.8</b>
<b>2007</b>						
UB07_75	591784.04	5336018.72	303.25	140	65	902
UB07_76	591629.1	5335839.18	304.68	139.5	66	879.4
UB07_77	591753	5335977	304.6	140.87	66.8	911
UB07_78	591639.4	5335906.65	305.45	144.15	65.1	908.9
UB07_79	591753.93	5335976.07	304.16	135	63	366.5
UB07_80	591851.42	5335926.38	303.42	141.05	66.8	840
UB07_80W	591851.42	5335926.38	303.42	141.05	66.8	232
UB07_81	591616.11	5335940.87	305.21	139.99	66.1	1010.9
UB07_82	591826.18	5335961.86	303.4	138.68	65.2	832.5
UB07_83	591732.71	5336002.82	304.49	134.75	65.1	898.5
UB07_84	591578.58	5335906.44	304.81	140.1	64.9	726.2
UB07_85	591733.21	5336002.44	304.4	135	60	632
UB07_86	591710.4	5335894.42	305.7	137.7	66	888.2
UB07_87	591836.33	5336063.86	302.95	135.2	62.9	936
UB07_87W	591836.33	5336063.86	302.95	135.2	62.9	406
UB07_88	591810.26	5336097.53	302.4	136.87	64	924
UB07_88W	591810.26	5336097.53	302.4	136.87	64	280.3
UB07_89	591683.39	5335933.41	305.28	139.34	65.1	937.7



**TABLE 3.**  
**SUMMARY OF DRILLHOLES (continued)**

Hole ID	Location X	Location Y	Location Z	Azimuth	Dip	Length
UB07_90	591999.74	5336003.19	302.8	141.38	66.8	750
UB07_91	591789.06	5336129.59	301.96	139	66.8	1050
UB07_92	591914	5336125	301.2	144.74	65.5	1122
UB07_93	591645.73	5335985.19	304.71	136.73	66.2	833.4
UB07_94	591895.1	5336066.05	302.18	145.1	66	1019
UB07_95	591758.12	5336087.82	302.46	135	67	823
UB07_96	591697	5336000	304.8	140.4	64.7	908.3
UB07_97	591882	5336000	304.2	145.47	62.2	895
UB07_98	591697.55	5335999.25	304.57	140.17	67.3	986.7
UB07_99	591759.74	5336086.29	302.18	130	63	450.4
UB07_100	591734.12	5336120	302.7	138.71	-68.7	1238
UB07_101	591984.65	5335870.53	303.64	138.98	54.8	708
UB07_102	591712.72	5335959.09	304.45	140.23	64.8	997
UB07_103	591985.2	5335869.91	303.65	142.34	63.4	731
UB07_104	591738.59	5335942.84	304.09	140.32	65.6	927.3
UB07_105	591705.07	5336075.76	304.18	135	67	756.4
UB07_106	591784.59	5335975.25	303.57	135.37	65.4	892
UB07_107	591703.7	5336074.25	304.57	153.19	67.5	1081
UB07_108	591767.12	5335953.23	303.8	134.36	62.1	921
UB07_109	591757.22	5335874.01	304.63	133.2	66.8	848
UB07_110	591674.57	5336030.5	303.77	136.78	68.6	1045.9
UB07_111	591713.03	5335846.86	304.27	145	65	877.5
UB07_112	591675	5336030	303.7	136.1	65.1	862
UB07_113	591799.88	5336114.24	302.2	139.1	66.2	896.3
UB07_114	591654.38	5335888.95	304.32	139.27	64.8	758.1
UB07_115	591799.53	5336114.66	302.12	139.31	70.5	1056
UB07_116	591633.25	5335920.85	305.04	135.22	67	976.2
UB07_116W	591633.25	5335920.85	305.04	135.22	67	323.5
UB07_117	591868.49	5336017.59	303.46	137.62	62.4	843
UB07_118	591773.71	5336069.1	302.2	140	65	485.6
UB07_118W	591773.71	5336069.1	302.2	140	65	25.3
UB07_119	591695.86	5336045.32	303.53	135.44	66.5	1004
UB07_120	591773.71	5336069.1	302.2	135	74	708
UB07_121	591695.86	5336045.32	303.53	135.96	71.5	937
UB07_122	591764.4	5336044.13	302.83	130	68	354.4
UB07_122A	591764.4	5336044.13	302.83	128	72	363
<b>Subtotal</b>	<b>54</b>	<b>Holes</b>				<b>42,965.4</b>
<b>2008</b>						
UB08_63E	591565	5336626	320	140	-67	793
UB08_123	591827.03	5336164.97	302.27	139.77	-71.5	1051
UB08_124	591695.14	5336045.49	303.81	132.08	-68.85	703
UB08_125	591825.65	5336167.35	302.02	147.6	-72.53	855
UB08_124W	591695.14	5336045.49	303.81	132.08	-68.9	513.65
UB08_126	591850.38	5336131.8	302.59	142.2	-70.8	903
UB08_127	591634.76	5336002.41	304.24	139.07	-68	1066.9
UB08_128	591618.44	5336023.22	303.2	123.25	-69.9	1002.4
UB08_129	591966.31	5335098.91	282.95	114.01	-60.17	884.1
UB08_130	591696.7	5336949.9	313.02	139.36	-72.04	1167.9
UB08_131	591727.43	5336917.15	313.45	320	-85	747
UB08_132	592395.7	5335875.05	288.93	142.47	-69.39	1336.8
UB08_132W	592395.7	5335875.05	288.93	142.47	-69.39	475.19

**TABLE 3.**  
**SUMMARY OF DRILLHOLES (continued)**

Hole ID	Location X	Location Y	Location Z	Azimuth	Dip	Length
UB08_133	591348.78	5336848.95	308.33	126.66	-75.35	1323
UB08_134	591208.72	5336174.21	295.83	135	-80	153
UB08_134A	591208.72	5336174.21	295.83	122.2	-81.96	1235.42
UB08_135	591627.37	5336448.96	303.32	130.87	-71.83	1422.4
UB08_136	591938.08	5336535.97	318.03	140.41	-66.84	1466.4
UB08_137	591882.49	5336169.3	300.83	139.07	-78.19	1097.52
UB08_138	591882.49	5336169.3	300.83	140.47	-73.51	1182.08
UB08_139	591882.49	5336169.3	300.83	139.18	-80.88	1253.8
UB08_63W1	591565.86	5336615.92	306.11	140	-67	465.8
<b>Subtotal</b>	<b>22</b>	<b>Holes</b>				<b>21,098.36</b>
<b>2009</b>						
UB09_63W2	591565.86	5336615.92	306.11	140	-67	567.8
UB09_100W1	591734	5336120	302.8	138.71	-68.7	442.2
UB09_110W1	591734.12	5336120	302.7	136.78	68.6	260
UB09_110W2	591734.12	5336120	302.7	136.78	-68.6	132
UB09_110W3	591734.12	5336120	302.7	136.78	-68.6	505
UB09_113W1	591799.88	5336114.24	302.2	139.1	66.2	624.9
UB09_124W2	591695.14	5336045.49	303.81	132.08	-68.9	187
UB09_126W1	591850.38	5336131.8	302.59	142.2	-70.8	151
UB09_128W1	591618.44	5336023.22	303.2	123.25	-69.9	455.8
UB09_135W1	591627.37	5336448.96	303.32	130.87	-71.83	438
UB09_135W2	591627.37	5336448.96	303.32	130.87	-71.83	518.4
UB09_135W3	591627.37	5336448.96	303.32	130.87	-71.83	45
UB09_140	591559.12	5336375.96	302.65	141.23	-71.37	889.37
UB09_140A	591559.12	5336375.96	302.65	141.23	-71.37	103.2
UB09_141	591572.12	5336402.35	302.76	135.26	-75.83	1530
UB09_141W1	591572.12	5336402.35	302.76	135.26	-75.83	574.86
UB09_141W2	591572.12	5336402.35	302.76	135.26	-75.83	181.25
UB09_141W3	591572.12	5336402.35	302.76	135.26	-75.83	461.3
UB09_141W4	591572.12	5336402.35	302.76	135.26	-75.83	65
UB09_141W5	591572.12	5336402.35	302.76	135.26	-75.83	133
UB09_142	591695.46	5336045.3	303.65	136.2	-71.1	84
UB09_142A	591695.46	5336045.3	303.65	140	-68	247.3
UB09_143	591584.18	5336067.7	303.12	140.81	-64.26	422.6
UB09_143W1	591584.18	5336067.7	303.12	140.81	-64.26	650.4
UB09_144	591743.43	5336069.45	303.08	143.58	-66.35	765
UB09_145	591613.04	5335969.34	305.84	140	-63	828.6
UB09_145W1	591613.04	5335969.34	305.84	140	-63	539
UB09_146	591939.85	5335932.27	303.87	146.12	-59.88	468
UB09_147	591901.04	5335917.33	304.45	144.77	-62.51	594
UB09_148	591572.12	5336402.35	302.76	132.79	-67.08	1404
UB09_148W1	591572.12	5336402.35	302.76	132.79	-67.08	325
UB09_148W2	591572.12	5336402.35	302.76	132.79	-67.08	461.5
UB09_149	591945.57	5335851.78	303.57	143.03	-66.81	449
UB09_150	591849.73	5335954.35	303.17	144.8	-69.2	231
UB09_150W1	591849.73	5335954.35	303.17	144.8	-69.2	383
UB09_151	591917.95	5335866.04	303.52	147.65	-68.26	421.9
UB09_152	591850.04	5335953.96	303.07	142.73	-67.29	549
UB09_153	591918.07	5335866.13	303.52	140.28	-69.6	506.4
UB09_154	591744.49	5336068.62	302.92	138	-67	625.5

**TABLE 3.**  
**SUMMARY OF DRILLHOLES (continued)**

Hole ID	Location X	Location Y	Location Z	Azimuth	Dip	Length
UB09_155	591845.97	5335976.91	302.84	140	-66	114
UB09_155A	591845.97	5335976.91	302.84	140	-67	92
UB09_155B	591845.97	5335976.91	302.84	136.3	-66.11	600
UB09_156	591823.18	5336117.67	302.16	142.34	-73.1	883
UB09_157	591243	5336560	302	138	-80	1077
<b>Subtotal</b>	<b>44</b>	<b>Holes</b>				<b>20,986.28</b>
<b>2010</b>						
UB10_113W2	591799.88	5336114.24	302.2	139.1	66.2	472
UB10_139W1	591882.49	5336169.3	300.83	139.18	-80.88	2
UB10_139W2	591882.49	5336169.3	300.83	139.18	-80.88	7
UB10_139W3	591882.49	5336169.3	300.83	139.18	-80.88	733.9
UB10_141W5	591572.12	5336402.35	302.76	135.26	-75.83	207.5
UB10_148W3	591572.12	5336402.35	302.76	132.79	-67.08	410.1
UB10_148W4	591572.12	5336402.35	302.76	132.79	-67.08	492.3
UB10_148W5	591572.12	5336402.35	302.76	132.79	-67.08	592.5
UB10_148W6	591572.12	5336402.35	302.76	132.79	-67.08	699.1
UB10_158	591944.94	5335852.61	303.54	141.32	-49.95	397.8
UB10_159	592025.05	5335792.46	301.54	141.8	-59.96	429.3
UB10_159W1	592025.05	5335792.46	301.54	141.8	-59.96	204
UB10_159W2	592025.05	5335792.46	301.54	141.8	-59.96	190
UB10_160	591534	5336268	302.36	131.83	-70.8	329.6
UB10_161	591534	5336268	302.36	138.87	-67.05	1323
UB10_161W1	591534	5336268	302.36	138.87	-67.05	3.9
UB10_161W2	591534	5336268	302.36	138.87	-67.05	506
UB10_161W3	591534	5336268	302.36	138.87	-67.05	589
UB10_161W4	591534	5336268	302.36	138.87	-67.05	771
UB10_161W5	591534	5336268	302.36	138.87	-67.05	752
UB10_161W6	591534	5336268	302.36	138.87	-67.05	879.5
UB10_161W7	591534	5336268	302.36	138.87	-67.05	574.1
UB10_162	591697.6	5336434	303.7 m	136.64	-66.96	322
UB10_163	591774.8	5336521.7	316.97	135	-68	1642
UB10_163W1	591774.8	5336521.7	316.97	135	-68	600
UB10_163W2	591774.8	5336521.7	316.97	135	-68	551.5
UB10_163W3	591774.8	5336521.7	316.97	135	-68	448.5
UB10_163W4	591774.8	5336521.7	316.97	135	-68	452.5
UB10_163W5	591774.8	5336521.7	316.97	135	-68	600.2
UB10_163W6	591774.8	5336521.7	316.97	135	-68	625
UB10_164	591549.9	5336819.95	312.9	134.4	-65.9	1825
UB10_164W1	591549.9	5336819.95	312.9	134.4	-65.9	150.8
UB10_165	591745.01	5336454.02	306.28	138	-67	1414
UB10_165W1	591745.01	5336454.02	306.28	138	-67	568.35
UB10_165W2	591745.01	5336454.02	306.28	138	-67	607
UB10_166	591534	5336268	302.36	133.5	-61.7	130.5
UB10_167	591534	5336268	302.36	124	-63.7	120
UB10_168	591534	5336268	302.36	123.6	-65.6	30
UB10_169	591534	5336268	302.36	-	-	25.1
UB10_170	591534	5336268	302.36	131.1	-60	1272
UB10_170W1	591534	5336268	302.36	131.1	-60	491.4
UB10_170W2	591534	5336268	302.36	131.1	-60	471
<b>Subtotal</b>	<b>42</b>	<b>Holes</b>				<b>22,912.45</b>

Within the upper levels of the mine the predominant vein set was hosted within mafic volcanic flows of the Blake River Group. These veins had an attitude striking NNE (20°) and dipping steeply to the west (70°). In the middle and lower levels of the mine the predominant vein system encountered strike at 50 to 60° and dip 60 to 70° to the north-west, which is the interpreted attitude of the Porphyry Zone(s) and the hanging wall North Contact Zones. It is postulated that a number of these north-north-easterly striking subsidiary veins occur at depth, but have not been specifically targeted with the recent drilling. Due to their orientation at an acute angle to the drilling direction (145°), intersection and hence correlation of these vein systems is problematic.

During the course of drilling subsidiary vein systems within the hanging wall and footwall of the Porphyry Zone(s) were also intersected, but were not specifically targeted in lieu of any determined plunges or potential attitude variations within these secondary zones. These include the North Basalt Zone, North Contact Zones and the South Breccia Zone located proximal to or within the underlying intermediate pyroclastics of the Upper Tisdale Group. Most of the deep holes done to-date have been taken well into the footwall of the Porphyry Zone in order to define this underlying contact with the Tisdale Group and to further define, if possible, the South Breccia Zone. No further drilling of the South Contact Zone was undertaken during the period.

At depth the mineralized system manifests itself as a sheeted vein array within a broad brittle-ductile deformation corridor 200 to 300 metres wide associated with wide spread Sericite±Hematite±Carbonate alteration. Mineralization within the Porphyry Zone(s) is predominantly Quartz-Calcite-Magnetite-Chalcopyrite-Pyrite veining and fracture fillings. The Porphyry Zone(s) and North Contact Zone(s) are hosted primarily within micro-phyrlic hornblende porphyry and feldspar porphyry dykes of the Beaver House Intrusive complex, although veining is also recognized within basaltic flows and a limited amount of volcaniclastic rocks of the Blake River Group.

#### 11.3.5 SURVEYS

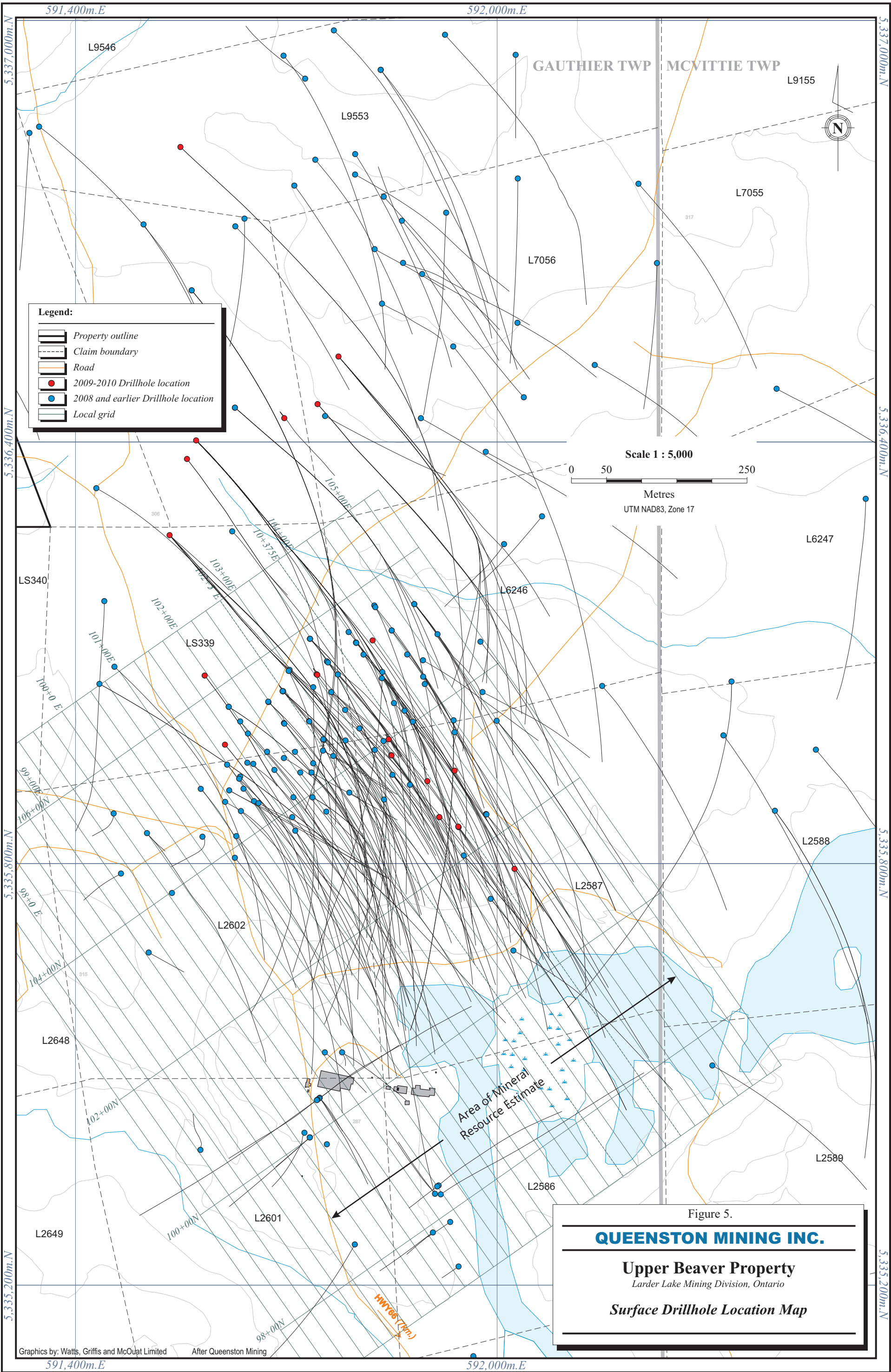
For the 2005 Phase I and II programs, drillholes were spotted using global positioning system ("GPS") and the north trending (100 m spaced lines) cut grid on the Property established for the IP survey. Casings for most of the drill holes were subsequently surveyed in 2005 by Northland Technical Surveys ("**Northland**") of Kirkland Lake, Ontario using Total Station, NAD 83 UTM co-ordinates and geodetic elevation. Phase III and IV program drillhole sites were all (except for one drillhole) spotted directly by Northland using Total Station.

Two fore sites were used to spot the holes because of the configuration of the drill shack. Drillers lined up the drills for azimuth. The drillers will contact the project geologist by phone when the first downhole survey test results were taken 15 m below the casing. As a guideline, if the test results were within  $\pm 0.5^\circ$  of the planned dip and within  $\pm 2^\circ$  of the planned azimuth, the hole was continued. If the results were unsatisfactory, the drillers were instructed to pull the casing and restart the hole. The drillers submitted daily work reports for day and night shifts for each drill rig. The drillers are in radio and/or cell phone contact with their foreman, Queenston's Kirkland Lake exploration office and/or the project geologist at his local residence in case of any problems or questions.

Downhole attitude surveys for Phase I, UB-05-01 to UB-05-15 were by Reflex EZ-SHOT. For subsequent drilling, EZ-SHOT was largely used for surveying only during drilling. After the holes were completed they were resurveyed using a north seeking gyroscopic system by Halliburton Sperry Drilling Services ("**Halliburton**") North Bay, Ontario. However, for a number of drillholes, Halliburton was not available in a timely manner, some holes were lost in faults or were blocked by cave after the drill was dismantled. A number of drillholes therefore only have EZ-SHOT surveys.

Beginning in 2006 and continuing to the present, all drill holes are spotted by Northland and subsequently down hole surveyed by Halliburton.





## **12. SAMPLING METHOD AND APPROACH**

### **12.1 PRE-2002 PROGRAMS**

WGM has not reviewed any pre-2002 program data for the Property. No pre-2002 drillhole data is used in the current Mineral Resource estimate. Information relating to Queenston's drilling programs between 2005 and 2008 are in WGM's 2008 report.

### **12.2 2008 TO 2011 PROGRAMS**

#### **12.2.1 CORE HANDLING, LOGGING AND SAMPLING PROCEDURES**

##### **Core Logging**

During the period March 2008 to February 2011, most surface diamond drillholes were NQ in diameter and three in HQ diameter (Hole UB09\_144, UB09\_146, and UP09\_147). After pulling the rods, the core is placed in wooden core boxes by the drillers. The boxes are picked up by Queenston technicians at the drill site and delivered to the core logging facility at the former Upper Canada mine site.

The core logging protocol by Queenston geologists is summarized as follows:

A rock quality designation ("RQD") technician looks at the core, measures runs and core lengths, joint angles and records the data. The core is re-measured by the geologist and also checked that the drillers' metre blocks are correct, and the metreage is marked at the start of each box. Any lost or ground core, zones of poor RQD (i.e. <75%) or reaming done by wedging are noted within the log.

The core is logged in detail and recorded in a digital format using a Microsoft Excel spreadsheet.

##### **Sampling**

Core displaying obvious mineralization and alteration is sampled. The samples are marked by the geologist and sample tickets are inserted in the core box. Depending on the lithology, alteration and mineralization, sample widths are predominantly confined to 0.5 m or 1.0 m lengths.

The samples are entered on the drill logs and for each sample the percentage of quartz-carbonate veining, % pyrite/pyrrhotite, % magnetite and % chalcopyrite are estimated and entered on the log. After logging is completed the boxes are photographed before being returned to the racks. Digital photographs are stored in folders by hole along with the digital logs. The samples are then cut in half by a Queenston technician using a diamond core saw. Half the core is placed in a plastic bag with a sample ticket and the other half is put back in the box with a duplicate sample ticket at the end of the sampled interval. Samples with visible gold have blanks inserted following the sample and are flagged for the core cutter to take special care to clean the saw blade after cutting the potentially high grade sample in order to avoid contamination of the next sample. The assay lab is also advised of visible gold samples to avoid batch contamination. The bagged samples are placed in rice bags, a lab work order is prepared and the samples are delivered by truck to Swastika Laboratories Ltd. ("**Swastika**") of Swastika, Ontario.

Metal tags with the drillhole number and the depth of hole for the contained core interval are nailed onto the end of each core box. The boxes of mineralized zones are placed in racks outside for future reference including a few uncut boxes above and below the zone. Boxes which have not been sampled are stored on pallets. Starting in 2007, some old holes and the unmineralized tops of drillholes with no samples were stacked on wooden pallets to save core rack space.

#### **WGM Comments on Drill Core Logging and Sampling**

WGM believes that Queenston's logging and sampling methods are to industry standard and appropriate.



### 13. SAMPLE PREPARATION, ASSAYING AND SECURITY

#### 13.1 2002-20011 PROGRAMS

Queenston's assessment program on the Upper Beaver Property was initiated with one drillhole in 2002. Additional drilling was completed from 2005 through 2011 and is currently ongoing. Swastika was the Primary laboratory used for all assay work. Secondary laboratories for external check assaying were used for the 2007 to 2010 programs and is ongoing. The Secondary labs were Polymet Laboratory ("**Polymet**") of Cobalt, Ontario and Laboratoire Expert Inc. ("**Expert**") of Rouyn-Noranda, Quebec. From 2008 to 2011 the secondary labs used were Expert and SGS Laboratories ("**SGS**") of Lakefield, Ontario. SGS is accredited under the Standards Council of Canada. Their scope of accreditation conforms to the requirements of CAN-P-1579 Guidelines for the Accreditation of Mineral Analysis Testing Laboratories and CAN-P-4E (ISO/IEC 17025:2005), General Requirements for the Competence of Testing and Calibration Laboratories for individual analytical and sample preparation methods. None of these other labs are completely accredited, but Swastika, Expert and Polymet do have certificates of laboratory proficiency issued by the Standards Council of Canada and participate in the Proficiency Testing Program for Mineral Analysis Laboratories ("PTP-MAL") round robin assaying for gold and other elements operated by the Canada Centre for Mineral and Energy Technology, Natural Resources Canada.

For Queenston's programs prior to 2006, there were no field-inserted Standards and/or Blanks. For its 2006 to 2011 programs, field-inserted Certified Reference Standards and Blanks supplemented Swastika's internal Quality Assurance / Quality Control ("QA/QC") programs on Blanks and Standards (Table 4).

**TABLE 4.**  
**SUMMARY OF ASSAY METHODS**

Sample Type	Number of Assays
Routine Au Sample Assays	46,639
Metallic Screen Assays	1,456
Assays of Field-inserted Blanks	1,130
Assays of Field-inserted Gold Assay Control Certified Reference Standards	1,318
Secondary Lab Gold Check Assays (pulp and rejects)	1,624
Secondary Lab Copper Check Assays (pulp and rejects)	42

In addition to the details in Table 4, as aforementioned, Swastika, SGS and Expert's internal QA/QC procedures call for the insertion of Blanks and Standards. This data has been compiled by Queenston. The Secondary laboratories also conduct internal QA/QC programs involving insertion of Blanks and Standards.

### 13.1.1 ROUTINE ASSAYING AND TESTWORK

At Swastika, all samples were assayed for gold by fire assay using a 1 assay ton charge and for copper using Atomic Absorption spectroscopy ("AAS"). Routine sample preparation includes sample drying, crushing to 6 to 10 mesh, and splitting out a 400 g sub-sample using a Jones Riffler. The excess is stored as a reject. The 400 g sub-sample is pulverized using a ring and puck pulverizer for sufficient time enabling 90–95% of the material to pass through a 100 mesh screen. The sample is then blended and mixed well.

For gold analysis by fire assay, a charge of 29.17 g is obtained by sub-sampling. Assay finish is routinely by AAS but some samples go directly to gravimetric ("GRAV") finish after cupellation based on visual assessment of the bead. For copper assay, digest is by aqua regia (nitric and hydrochloric acids) in a hot water bath until the pulp is all dissolved.

Samples that on initial assay return results greater than 1 g Au/t are re-assayed using a new pulp from the 400 g subsample. These assays are then finished gravimetrically.

Samples that on initial assay return greater than 1% Cu are re-assayed using a smaller charge of sample.

Swastika procedures call for:

- Cleaning the crushers with compressed air after each sample pass. Barren material is crushed subsequent to each customer run to minimize sample contamination;
- Compressed air is used to clean the riffle divider after the final split of each sample;
- Compressed air is used to clean the bowl, ring, puck and rubber mat after each sample is pulverized; and
- A screen test is performed on pulverized samples at the beginning of each shift, or more frequently when material hardness is in question, to ensure particle size remains within prescribed limits.

During the period of 2005 to 2009 (up to and including Hole UB09\_147), the final gold assay in the database is the metallic screen assay (see below), where such assays were completed. Where gravimetric gold fire assays and AAS finished assays were both completed on a sample, Gold-Final was the average of both AAS and gravimetric finished assays. Where two AAS finished gold assays are completed on the same pulp, the average result of the two assays is Gold-Final. From 2009 onward, the practice of averaging gold assays was abandoned and the first gold value reported, whether it was ASS or GRAV finished, was the value used. Beginning in 2011 if there was a gold value reported for both AAS or GRAV, then the GRAV value would be used in the Gold-Final column. Check assays completed at

the Secondary labs are not used in the calculations of final assays for the assay database used for the Mineral Resource estimate. Where a second copper assay is completed, Copper-Final is the second assay determined using the higher reporting limit. Initial copper assays in such cases are expressed as >10,000 ppm and therefore are not averaged in. No copper repeat assays are done if initial results are less than 10,000 ppm.

### 13.1.2 ADDITIONAL ASSAYING

A total of 1,180 samples from the 2005-2006 drill programs, in addition to routine assaying, were re-assayed by the screened pulp metallic method. Metallic screen assaying is an assaying strategy used to help mitigate the effects of coarse gold towards obtaining more representative assays.

The samples for metallic screen assaying were selected using a variety of criteria. For programs up to the end of 2006, all samples within designated mineralized zones were sent for metallic screen assaying. Early in the program, samples with visible gold were also sent for screen assaying. A number of samples were also selected based on initial high copper assays. Metallic screen assaying was discontinued after the 2006 program, except for one sample that was Check Assayed in 2007. Swastika's metallic screen assaying procedure entails crushing and pulverizing the entire reject sample and dry screening at 100 mesh. The +100 mesh (coarse) fraction is weighed, fire assayed using a gravimetric finish. The -100 mesh (fine) fraction is also fire assayed using a gravimetric finish and a 1 assay ton charge. The gold content for the original samples is calculated using the weighted average assay results for the coarse and fine fractions.

Results for metallic screen fire assays compared to routine fire assays are shown in Figures 6 and 7, and Table 5.

**TABLE 5.**  
**SUMMARY STATISTICS FOR METALLIC SCREEN AND ROUTINE FIRE ASSAY PAIRS**

Description	Number
Count of Samples	1,180
Average Original Regular Fire Assay (g Au/t)	2.779
Average Metallic Screen Fire Assay (g Au/t)	2.906
% Difference Between Averages	4.47

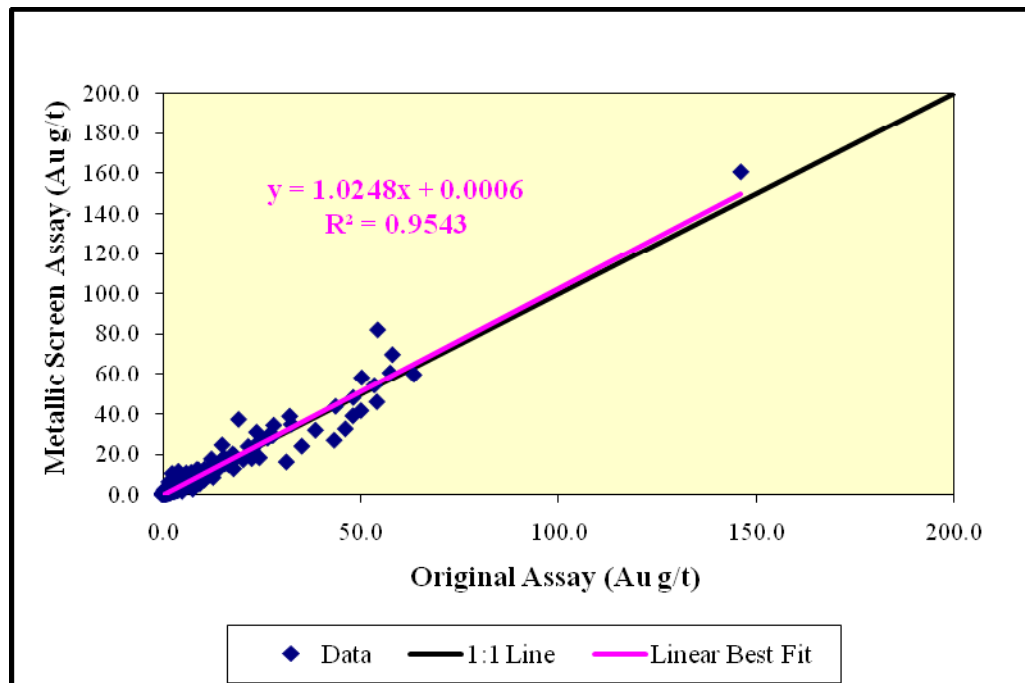


Figure 6. Comparison of Metallic Screen assays to Original regular / routine fire assays

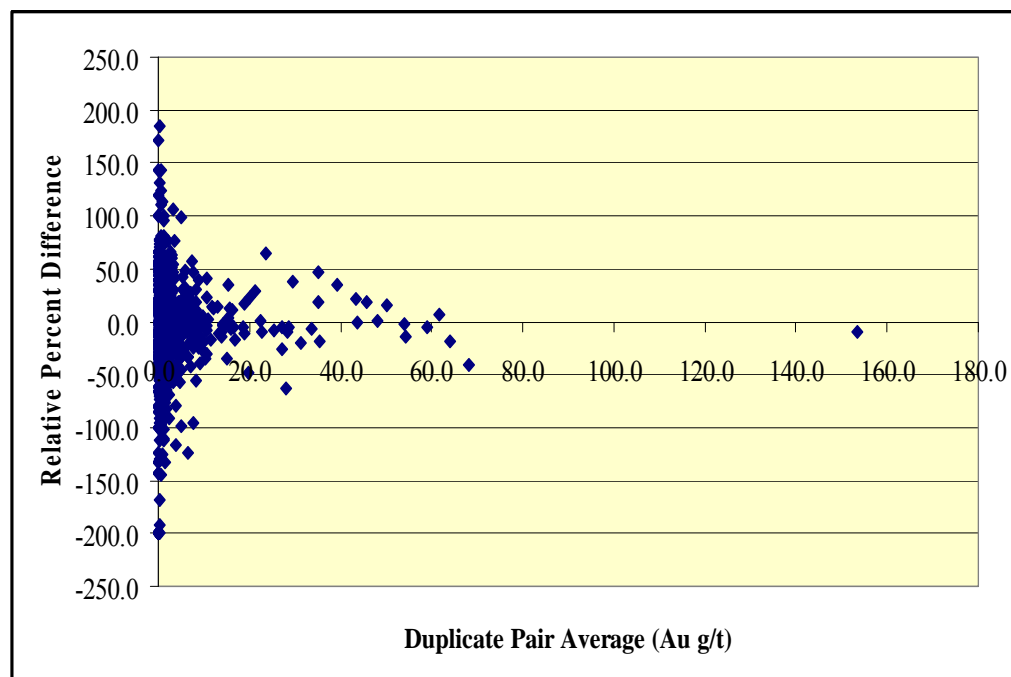


Figure 7. Relative Percent Difference plot for metallic screen fire assays vs. Original regular / routine fire assays

### 13.1.3 QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

QA/QC for assays includes components initiated by Queenston and also components conducted by its Primary and Secondary assay laboratories. Swastika is Queenston's Primary assay laboratory. Secondary assay laboratories used for periodic check assaying of sub-samples previously assayed at Swastika have included Polymet, Expert and SGS. These laboratories carry out their own internal QA/QC programs consisting of the insertion of Blanks, and Certified Reference Standards into the sample stream.

#### Queenston's in-field QA/QC Protocol

Starting with the infill definition drilling program in January 2007 (Hole UB07-75), Queenston's QA/QC program was implemented. Queenston initiated insertion of Certified Gold Reference Standards and Blanks into the sample stream at frequencies of one control sample every 25<sup>th</sup> regular/routine sample. Blank samples were drill core of un-mineralized basalt and interflow sediments from a previous Queenston drill program and starting in late 2009, barren diabase from the Upper Beaver was used. These Blanks were also inserted following samples containing coarse visible gold for the purpose of determining if there was any contamination between samples. A value of 200 ppb Au was designated by Queenston as the upper limit threshold for separating anomalous from non-anomalous values. This value may have been selected based on previous experience with similar samples. Figure 8 shows assay results for field-inserted Blanks since start of program in early 2007.

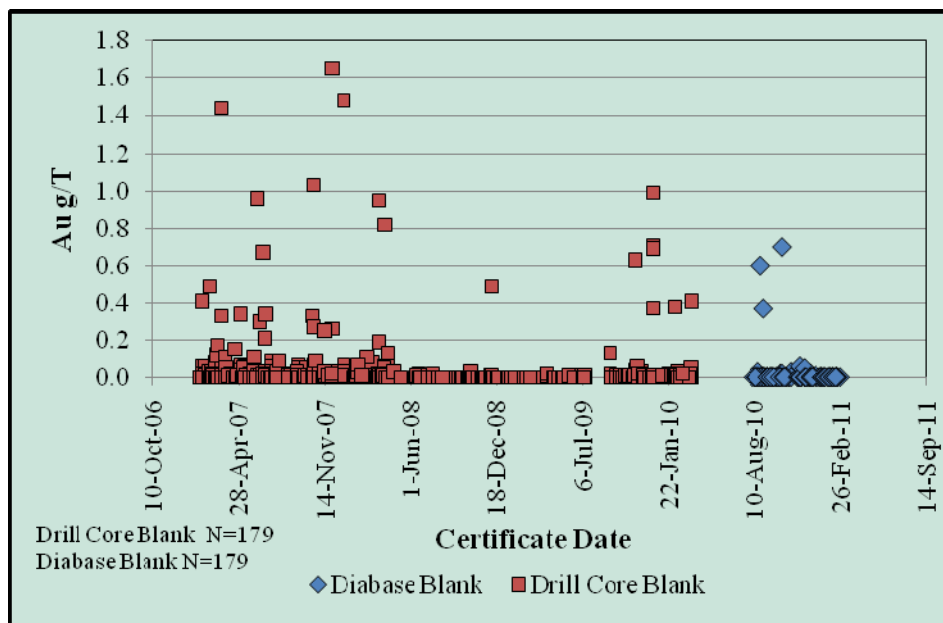


Figure 8. Gold assay results for field-inserted blanks 2007 to 2011

The Certified Reference Standards for gold control were purchased from Rocklabs Ltd. ("Rocklabs") Auckland, New Zealand. Eight different Standards have been used since 2007. The certified copper-molybdenum ore reference material (HV-2) was purchased from CANMET. These control samples were inserted in the field by the sampler as requested by the core logging geologist. About 50 g was scooped from the supplier's container and placed in a sample bag. The sample bags were numbered in accordance with the routine sampling scheme. The identity of the control material was not provided to Swastika.

Figure 9 shows results Queenston's eight field-inserted Au Standards since program reception. Table 6 summarizes statistical results. Figure 10 shows results for the copper field inserted Standard HV-2 and Table 7 summarizes statistical results.

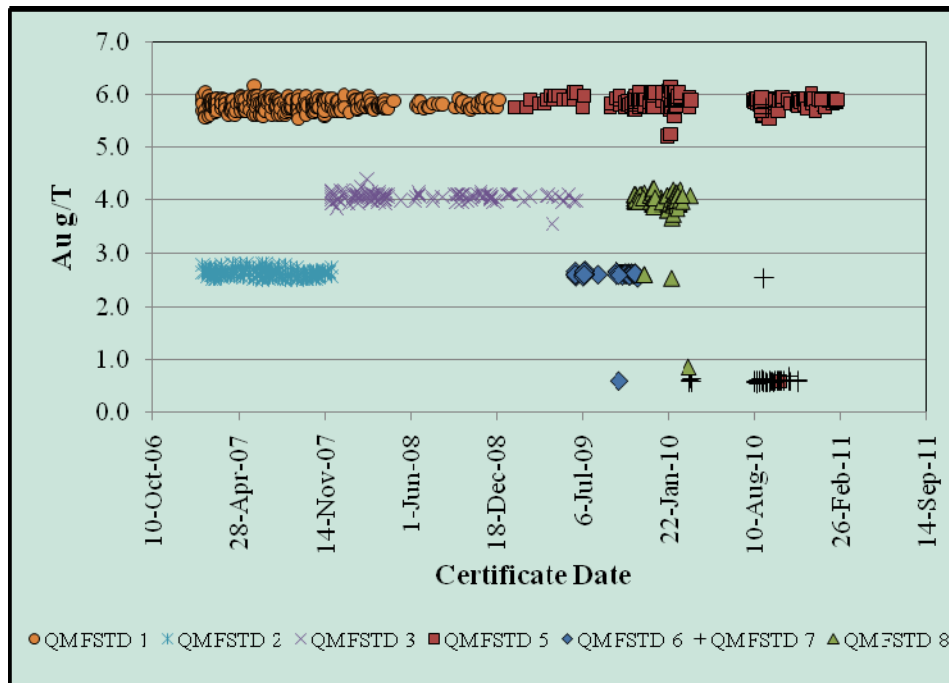


Figure 9. Gold assay results for field-Inserted Certified Reference Standards 2007 to 2011

**TABLE 6.**  
**STATISTICAL SUMMARY FOR GOLD ASSAYS**  
**FOR FIELD-INSERTED CERTIFIED REFERENCE STANDARDS**

Queenston Standard ID	Standard	Provider	Certified Value (g Au/t)	95% Cofid	Standard Deviation	Count	Avg (g Au/t)	Median (g Au/t)	Min (g Au/t)	Max (g Au/t)	Date Usage
QM Std 1	OxL51	Rocklabs	5.85	0.051	0.123	317	5.80	5.82	5.53	6.17	Feb 2007 to Dec 2008
QM Std 2	SJ32	Rocklabs	2.645	0.027	0.068	192	2.64	2.63	2.51	2.81	Sept 2007 to Nov 2007
QM Std 3	SK33	Rocklabs	4.041	0.041	0.103	119	4.05	4.05	3.57	4.39	Nov 07 to Jun 09
QM Std 5	SL46	Rocklabs	5.867	0.066	0.17	206	5.80	5.89	0.58	6.15	Jan 09 to Feb 11
QM Std 6	SJ39	Rocklabs	2.641	0.033	0.083	38	2.57	2.61	0.60	2.69	Jun 09 to Nov 09
QM Std 7	OxE74	Rocklabs	0.615	0.006	0.017	50	0.73	0.59	0.54	5.75	Aug 10 to Nov 10
QM Std 8	SK43	Rocklabs	4.086	0.036	0.093	81	3.93	4.00	0.85	4.23	Nov 09 to Mar 10
QM Std 11	SH41	Rocklabs	1.344	0.015	0.041	40	1.3	1.3	1.21	1.38	Dec 10 to Feb 11

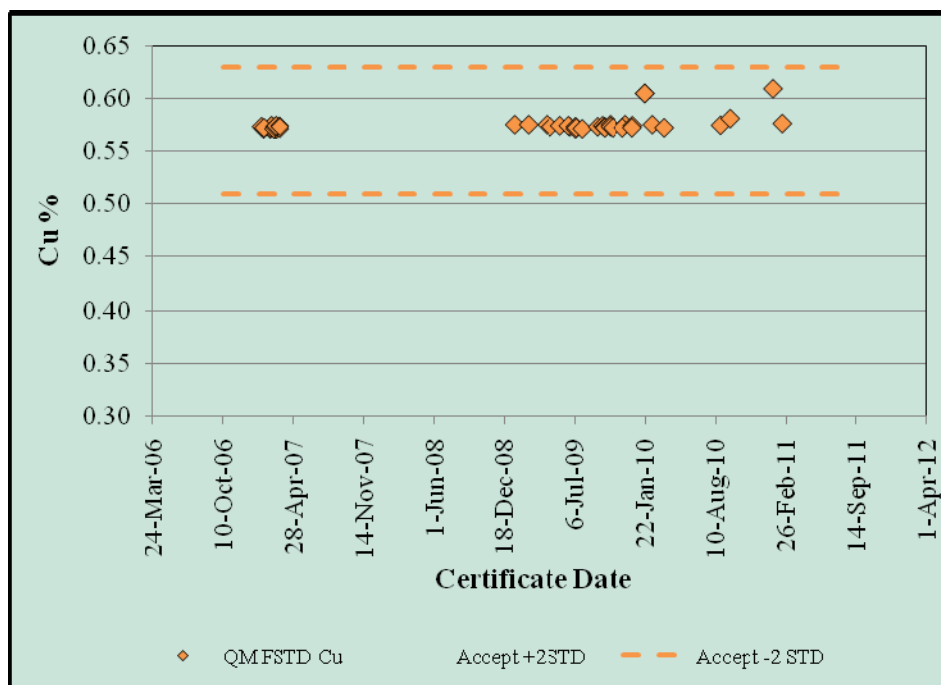


Figure 10. Copper assay results for field-inserted Certified Reference Standards 2007 to 2011

**TABLE 7.**  
**STATISTICAL SUMMARY FOR COPPER ASSAYS**  
**FOR FIELD-INSERTED CERTIFIED REFERENCE STANDARDS**

StandardID	Standard	Provider	Certified Value (% Cu)	95% Confid	Standard Deviation	Count (%Cu)	Avg (%Cu)	Median (%Cu)	Min (%Cu)	Max (%Cu)	Date Usage
QM Cu Std (%)	HV-2	CANMET	0.57	0.02	0.03	49	0.57	0.57	0.57	0.57	Feb 07 to Feb 11

No re-assaying was done by Queenston on the basis of the results for field-inserted Blanks and Standards, however, a re-assaying of all samples on certificate 10-1037 (19/04/2011) was requested by Queenston due to a discrepancy between the digital file and the signed hard copy from the lab, as well as a >20 g difference between several Au values due to a nugget effect.

### Swastika's Internal QA/QC Protocol

Swastika's lab internal QAQC protocol includes analytical duplicates and assaying of Certified Reference Standards. Figure 11 shows the results for Certified Reference Standards for gold and Table 8 summarizes statistical results for these Standards versus certified values.

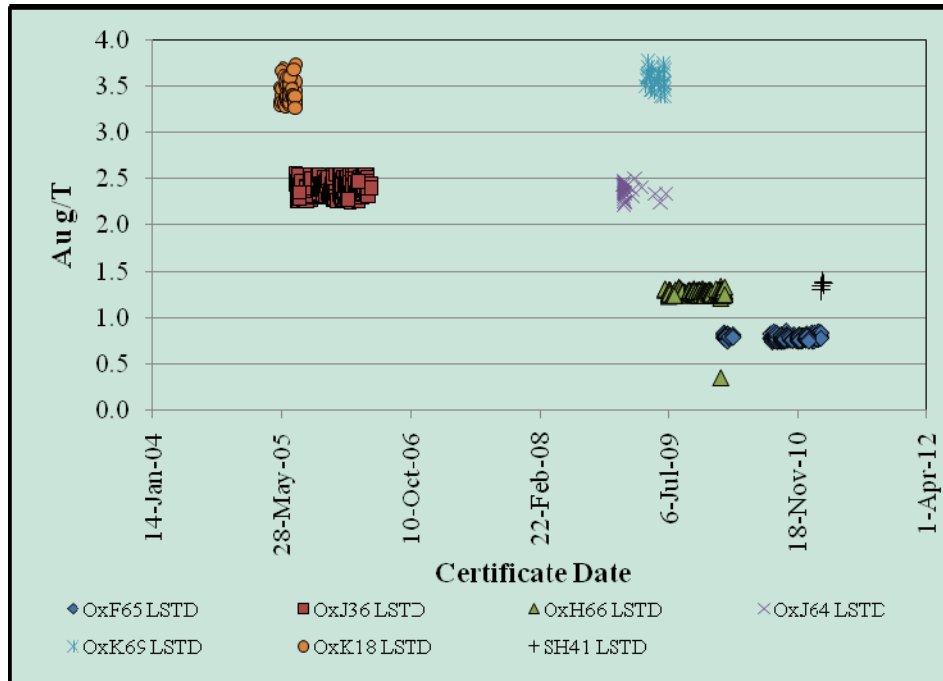


Figure 11. Gold assay results for Swastika-Inserted Certified Reference Standards 2005 to 2011

**TABLE 8.**  
**STATISTICAL SUMMARY FOR GOLD ASSAYS**  
**FOR SWASTIKA-INSERTED CERTIFIED REFERENCE STANDARDS**

Standard	Provider	Certified Value (g Au/T)	95% Cofid	Standard Deviation	Count	Avg (g Au/t)	Median (g Au/t)	Min (g Au/t)	Max (g Au/t)	Date Usage
OxF65	Rocklabs	0.805	0.014	0.034	277	0.79	0.79	0.74	0.86	Feb 10 to Feb 11
OxJ36	Rocklabs	2.398	0.031	0.073	487	2.39	2.39	2.24	2.55	Jul 05 to May 06
OxJ64	Rocklabs	2.366	0.031	0.079	17	2.34	2.33	2.21	2.50	Jan 09 to Jun 09
OxK69	Rocklabs	3.583	0.033	0.086	35	3.57	3.60	3.39	3.77	Apr 09 to Jun 09
OxH66	Rocklabs	1.285	0.012	0.032	274	1.27	1.27	0.35	1.34	Jun 09 to Feb 10
OxK18	Rocklabs	3.463	0.058	0.132	57	3.43	3.40	3.26	3.73	May 05 to Jul 05
SH41	Rocklabs	1.344	0.015	0.041	5	1.35	1.34	1.30	1.39	Feb-11

Queenston has not compiled similar results for copper so this data is not available for WGM's review. Assay results for Analytical Duplicates and re-assays with gravimetric finish versus AAS finish have also not been compiled and have not been reviewed by WGM.

The Secondary assay laboratories also use Certified Reference Standards, Blanks and Duplicates but WGM has not reviewed this data.



### Check Assay Program

Selected pulps and rejects from mineralized intervals were pulled from the initial sample populations approximately every two to three months starting with the definition drilling program in 2007 for Check Assaying at a Secondary laboratory. From 2007 through the 2008 program, Queenston used Polymet and Expert for Check assaying a selection of samples originally assayed by Swastika. From 2009 into 2011, Expert and SGS are being used for check assaying. Queenston's aim was to complete Check assaying on 5% of rejects and 5% of pulps from the gold-copper mineralized zones. Rejects were bagged in larger plastic bags, sealed and labelled. Pulps were placed in cardboard boxes sealed and labelled. Sample numbers remained the same as the original sample numbers. The rejects and pulps were delivered by truck by a Queenston employee to the Secondary lab or picked up by a laboratory vehicle. After results were received from the Secondary labs, the pulps and rejects were picked up and returned to the storage containers at the Upper Canada mine site.

Tables 9 and 10, and Figures 12 to 17 illustrate and summarize pre-2008 Check assaying results for gold and copper for pulps and rejects at Polymet and Expert.

**TABLE 9.**  
**SUMMARY STATISTICS FOR GOLD CHECK ASSAYS PRE 2008**

Description	Polymet Pulps	Expert Pulps	Polymet Rejects	Expert Rejects
Count of Samples	93	164	123	247
Average Swastika Original Assays (g Au/t)	12.017	10.416	7.684	7.502
Average Check Assays (g Au/t)	12.200	11.257	7.541	7.247
% Difference Between Averages	1.52	7.76	1.88	3.46

Similar to the Check assaying completed to verify gold values, selected rejects and pulps were also check assayed at Polymet and Expert for copper (Table 10).

**TABLE 10.**  
**SUMMARY STATISTICS FOR COPPER CHECK ASSAYS PRE 2008**

Description	Polymet Pulps	Expert Pulps	Polymet Rejects	Expert Rejects
Count of Samples	93	161	123	247
Average of Swastika Original Assays (% Cu)	0.479	0.501	0.406	0.730
Average of Check Assays (% Cu)	0.453	0.569	0.381	0.843
% Difference Between Averages	5.68	12.61	6.47	14.42

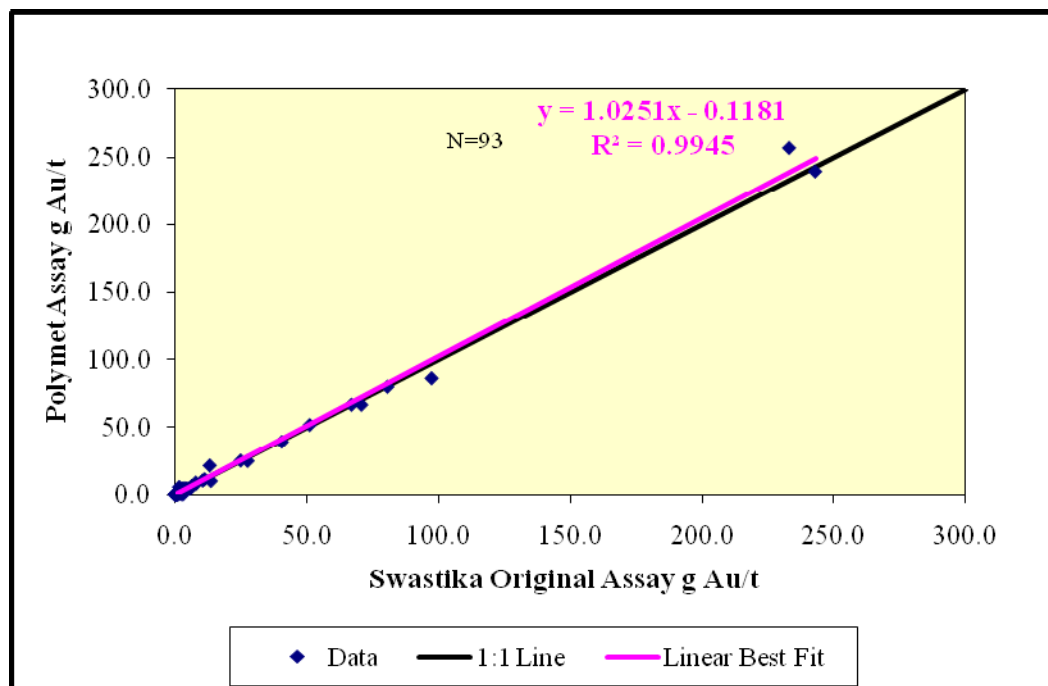


Figure 12. Polymet gold assay of duplicate pulp vs. original Swastika assay

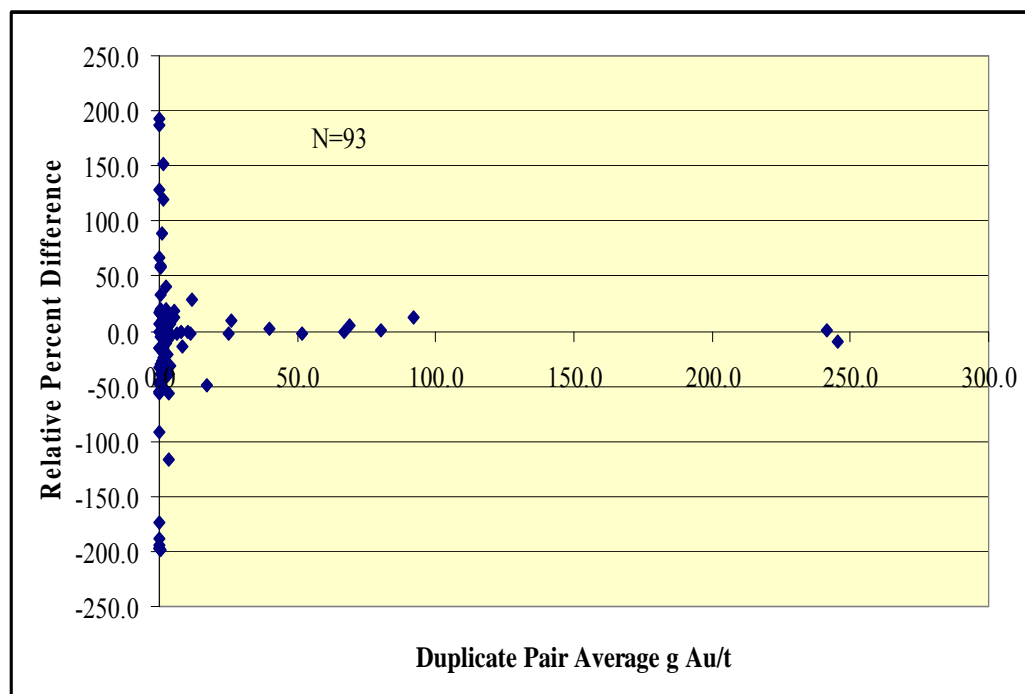


Figure 13. Relative percentage difference chart for Swastika and Polymet gold assays on duplicate pulps

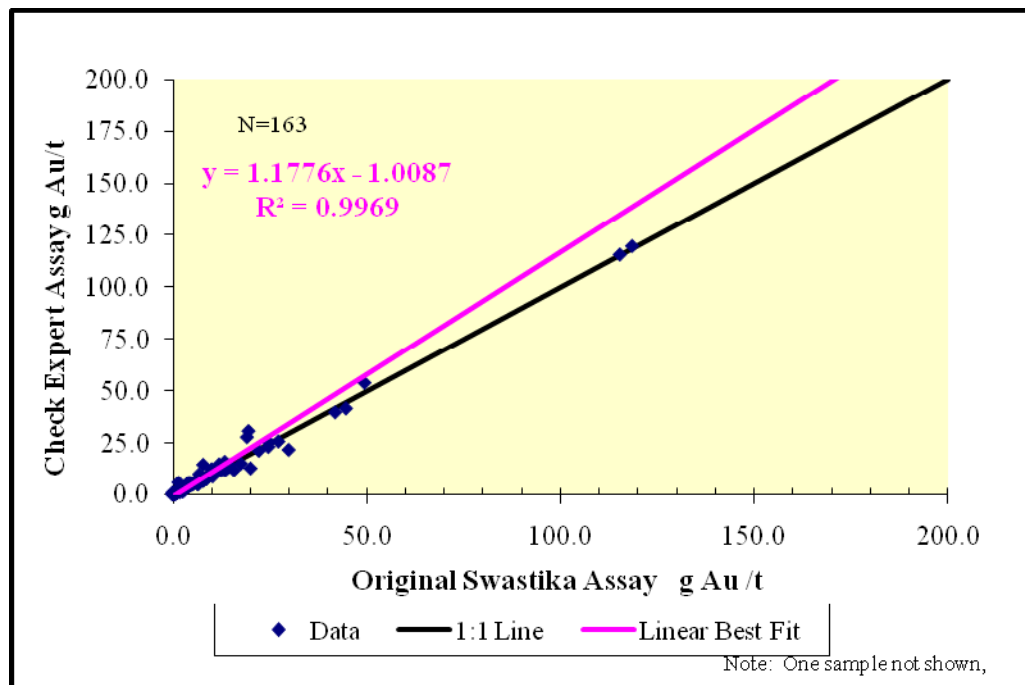


Figure 14. Expert gold assay of duplicate pulp vs. original Swastika assay (truncated distribution)

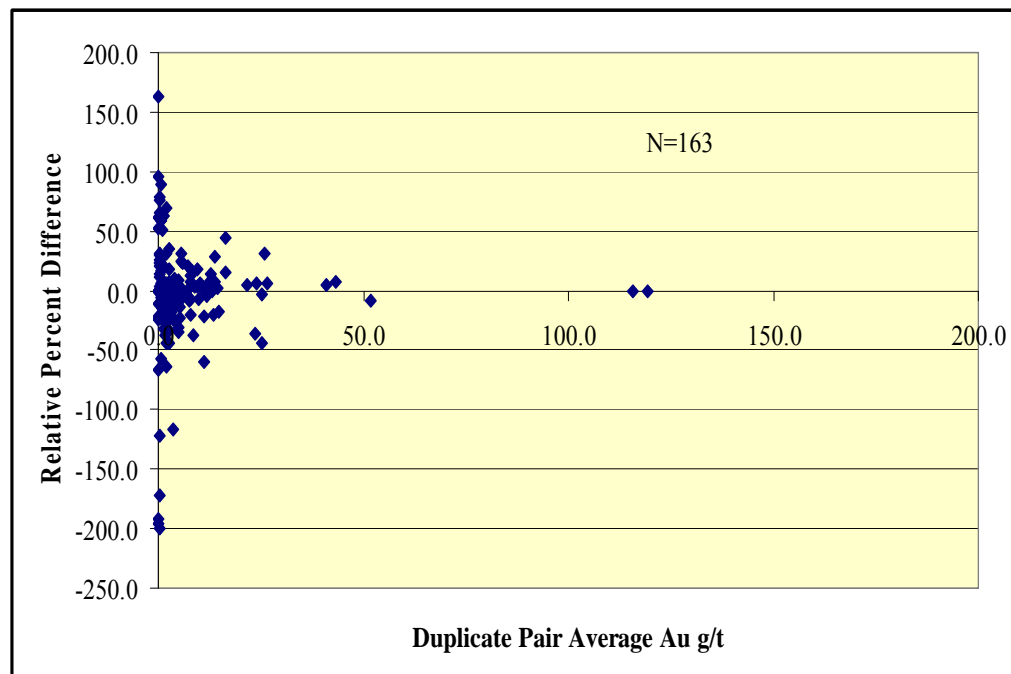


Figure 15. Relative percentage difference chart for Swastika and expert gold assays on duplicate pulps (truncated distribution)

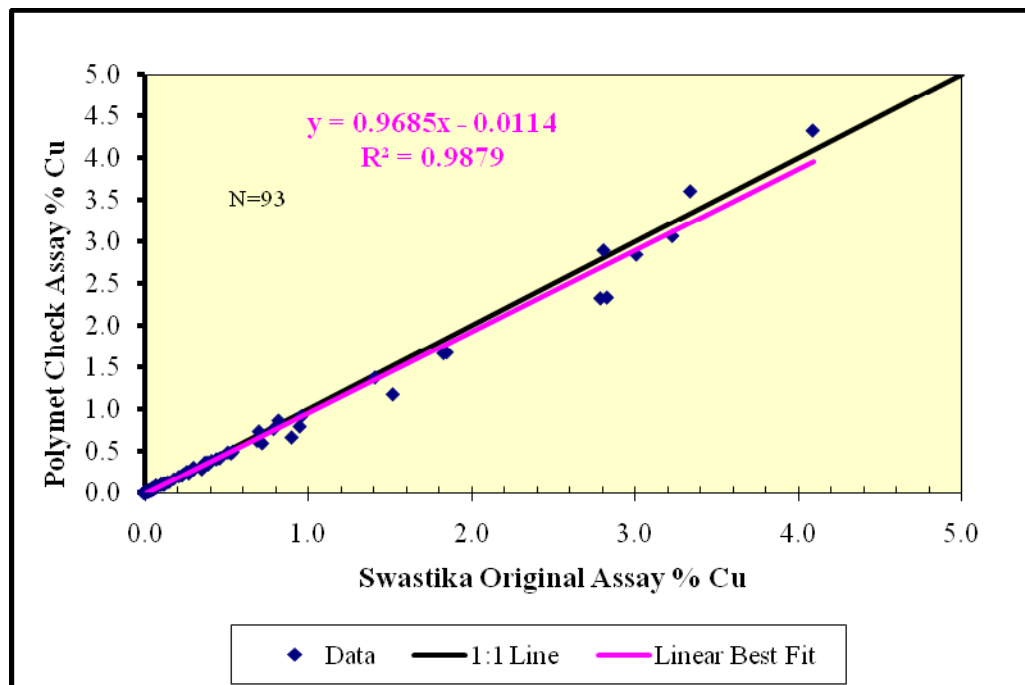


Figure 16. Polymet check copper assays vs. original Swastika assays on same pulps

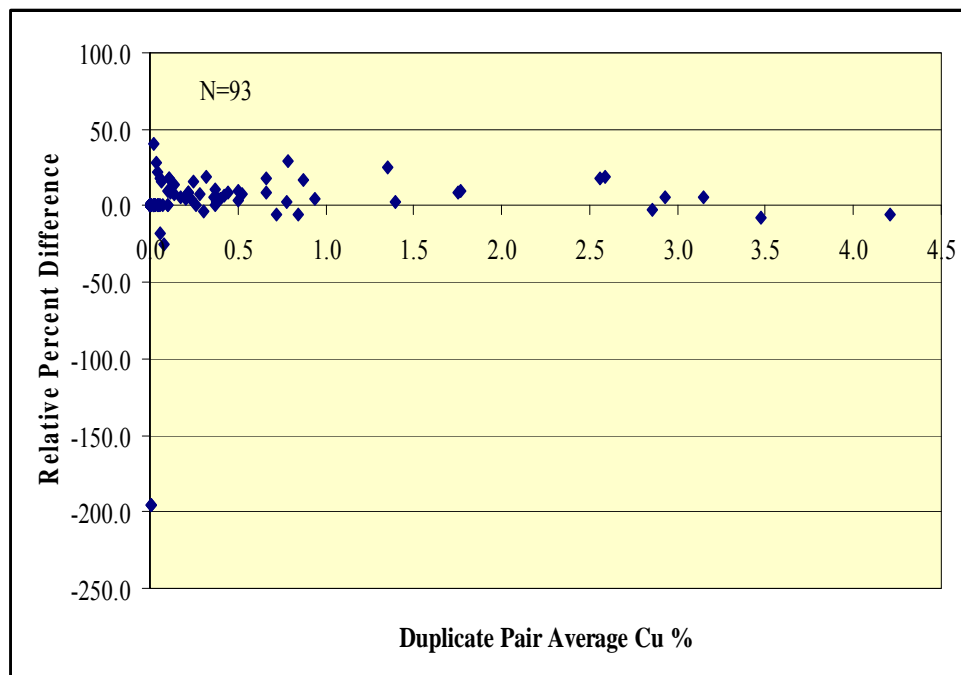


Figure 17. Relative percent difference chart for Polymet check assays and original Swastika assays on same pulps

In 2009, check assaying for 2008 and 2009 drillhole samples was completed at SGS. Results are shown on Figures 18 and 19 and summarized in Table 11, however, not all Check assaying results are shown due to incomplete compilation of data.

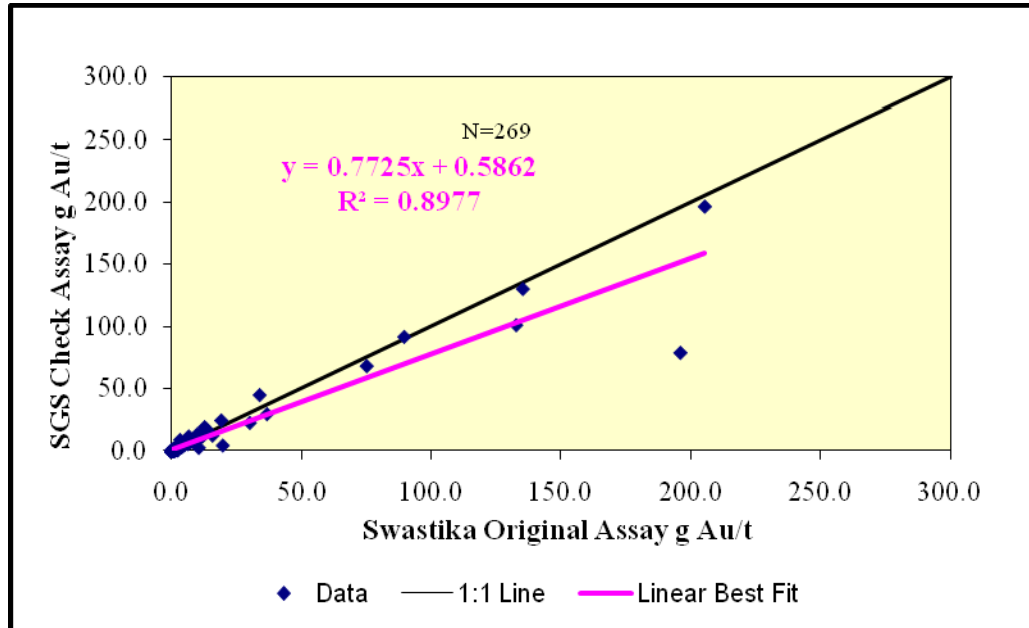


Figure 18. Gold check assay of rejects by SGS vs. original assays by Swastika

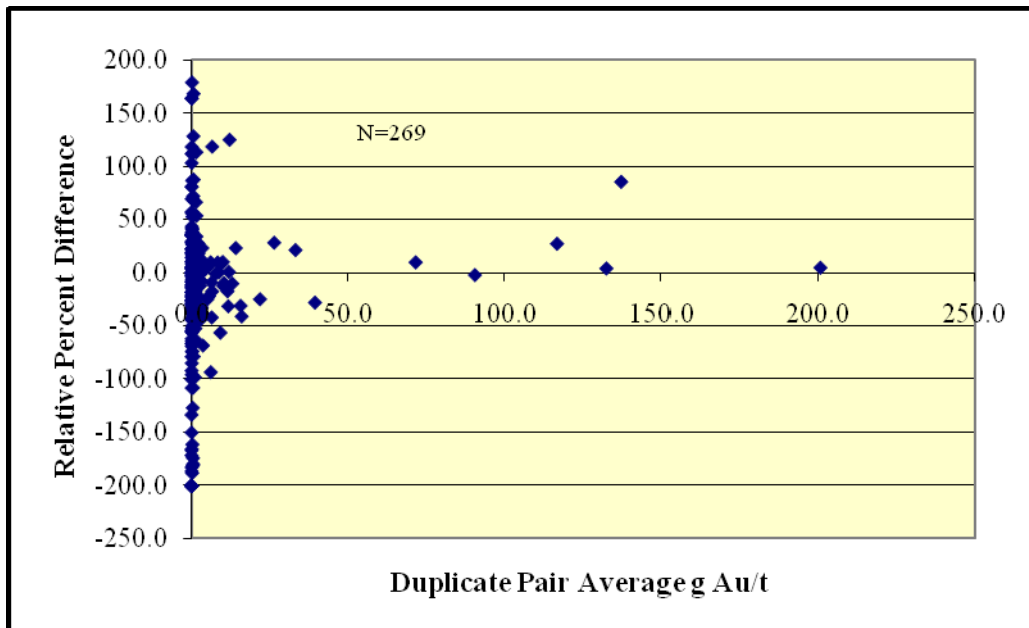


Figure 19. Relative percent difference chart for SGS check gold assays and original Swastika assays on new pulps

**TABLE 11.**  
**SUMMARY STATISTICS FOR SGS CHECK ASSAYING OF REJECTS FOR GOLD**

Count of Samples:	269
Average Assay Swastika:	4.951
Average Assay SGS:	4.394
% Difference Between Averages:	-11.91

In early 2011, approximately 700 pulps for samples originally assayed at Swastika in 2009 and 2010 were Check Assayed at Expert. Results for gold check assaying are shown on Figures 20 and 21. Table 12 summarizes assay results for gold.

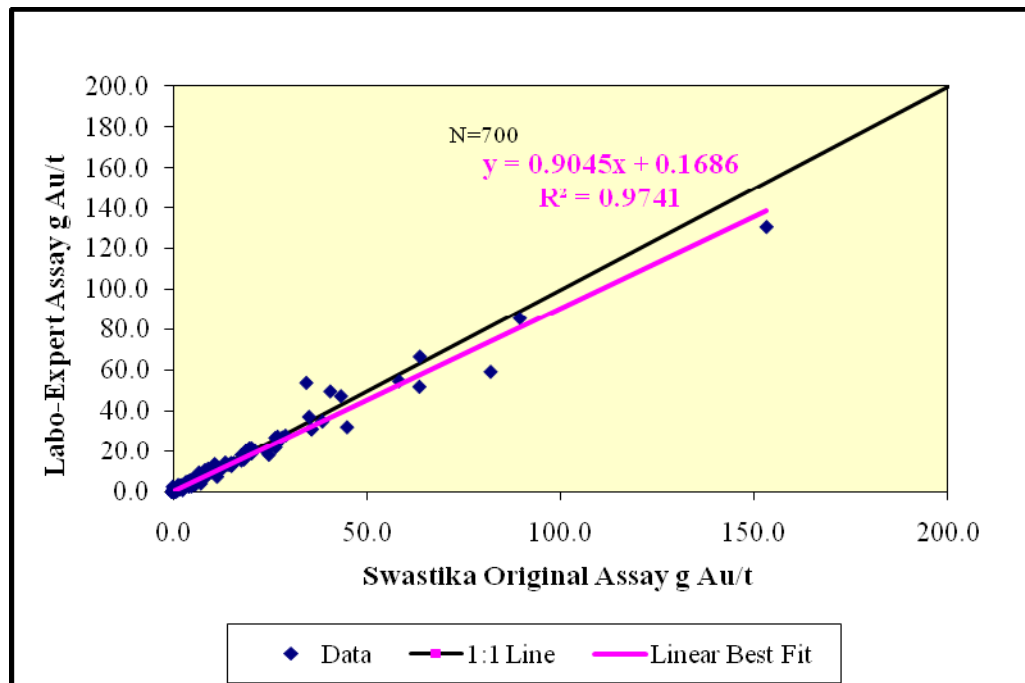


Figure 20. Gold check assays of pulps by Expert vs. original assays by Swastika

**TABLE 12.**  
**SUMMARY STATISTICS FOR EXPERT CHECK ASSAYING FOR GOLD ON PULPS**

Count of Samples:	700
Average Assay Swastika:	2.986
Average Assay Labo-Expert:	2.870
% Difference Between Averages:	-3.96

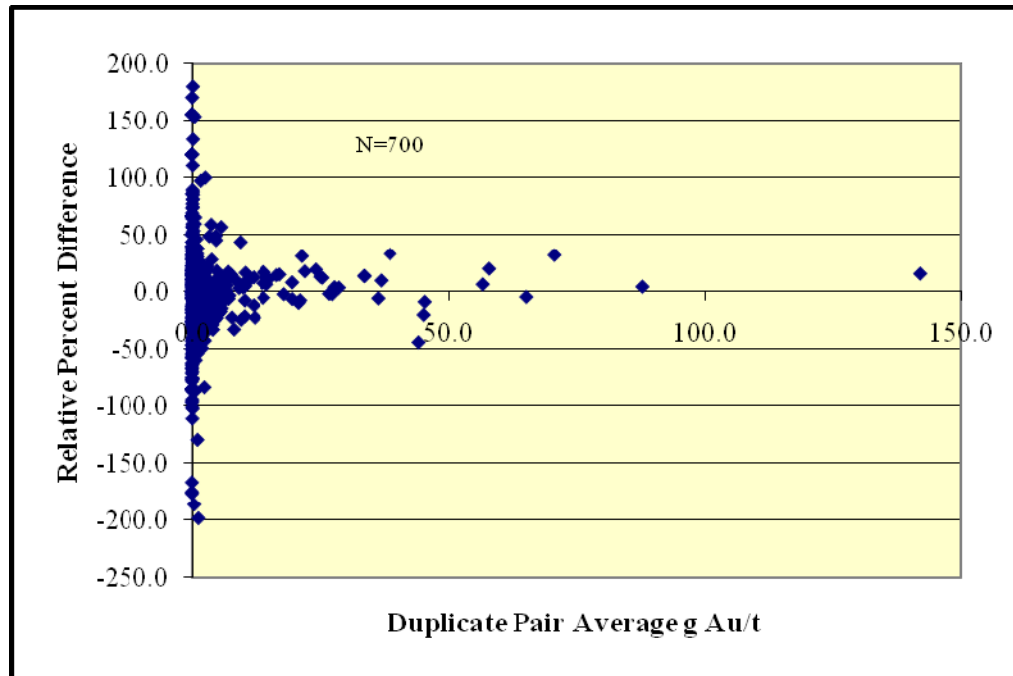


Figure 21. Relative percent difference chart for Expert Check gold assays and Original Swastika assays on same pulps

Forty-two of these 700 samples were analysed for copper. Figure 22 shows the copper check assay results.

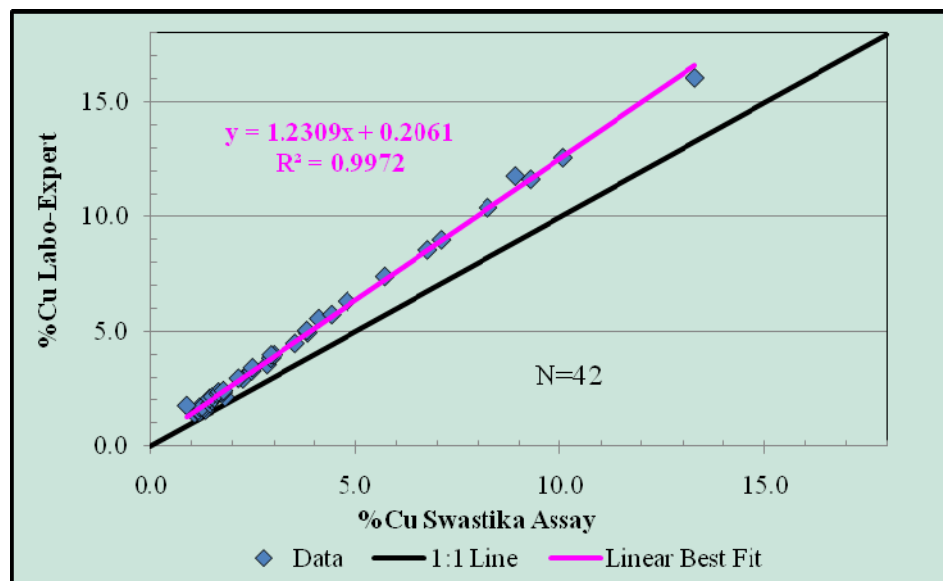


Figure 22. Copper check assays of pulps by Expert vs. original assays by Swastika

### 13.1.3 SAMPLE SHIPPING AND SECURITY

Samples are delivered by truck to the Swastika Laboratories Ltd. The Upper Canada mine site, where the core is stored and the Queenston office is located, is surrounded by fences and locked gates are in place at all road access points to the site.

### 13.1.4 WGM COMMENTS ON 2005 - 2011 SAMPLING, ASSAYING AND QA/QC

WGM agrees that Queenston's current sampling, assaying and QA/QC protocols represent good industry practice. Analytical results for Certified Reference Standards inserted by Queenston into the sample stream in the field and Check assaying completed at its Secondary labs indicates Swastika laboratory results are, in general, reasonably accurate and precise and suitable for the purposes of a Mineral Resource estimate. Metallic screen assaying indicated no evident significant bias between routine fire assaying and metallic screen assaying. The sample and assay database is currently inadequate for the project as assay information is not readily accessible for review, validation and auditing.

Check assaying results between labs are generally mixed indicating Swastika assays are generally reasonably reliable. For Check gold assaying of pre-2008 samples, two of the four sets of Secondary lab Checks, (Polymet rejects, Expert rejects) returned slightly lower assay averages than Swastika originals, while the pulp Checks returned slightly higher average assay than Swastika originals. SGS Check gold assays of 2008 program rejects were generally lower than original Swastika assays. The Expert Check assay results for 2009 and 2010 sample pulps were also slightly lower than Swastika original assays, but bias is minimal and a high degree of correlation exists between original and Check assays. Check assaying by Expert in 2011 returned significantly higher copper assays than Swastika. Earlier copper Check assaying returned mixed results. Copper assay results by Swastika used in the Mineral resource estimate are therefore probably conservative.

Assay results for field-inserted and lab-inserted Blanks and Standards also indicate accurate assaying. A few of the field and lab inserted Standards report erroneous values likely due to sample mix-ups in the field. Apparently, however, anomalous results are not followed up.

WGM recommends that Queenston needs to improve its sampling and assaying database and data handling capabilities. It should compile all of its assay records. Presently it is difficult to audit and process assay data except on a one by one basis as all assay records are not compiled. A relational database is ideal to accomplish these purposes and to enhance data review and validation. The databases should include all assays, not just the Finals computed from component assays and also include assays at Secondary labs. The database also should



include results for all QA/QC materials both for Queenston inserted materials and also laboratory inserted materials. Tables should also contain results for specific gravity measurements. Basic tables for a relational sample and assay database are: Sample table listing and classifying all samples by type and location, various Assay tables (perhaps one for the Primary lab and one each for the Secondary labs) and a Certificate table listing all certificates, by laboratory and date of issue.

Queenston should also strive to avoid repeating sample numbers, as sample number repeats complicate tracing assays to certificates and archived core and processing and interpreting results. Towards building an assay database in a relational database system historic sample it is very advantageous for Sample IDs to be unique. One possible strategy to accomplish this would be to add a year prefix to the existing Sample IDs. Where samples have no pre existing Sample ID, the best policy might be to create one by combining Hole ID and From meterage.

WGM also recommends that Queenston develop a written protocol to specify definition and practice of QA/QC failures. The assay database should also include a table to track QA/QC issues and responses. Going forward some simplification of assay certificates may be possible to simplify data entry.

## **14. DATA CORROBORATION**

Information relating to past work on the property was primarily obtained from Queenston. On March 30, 2011, WGM Resource Engineer and Vice-President, Marketing, Kurt Breede, P.Eng. and Qualified Person, visited the Property, the Queenston field office and core storage facilities at the old Upper Beaver mine site. During WGM's original site visits in 2007 and 2008, the old shaft areas, trenches/pits and some old showing areas were visited. Several drills were in operation on the Upper Beaver Property during WGM's recent site visit, of which one was visited, along with several newer drillhole collars locations which were located with a GPS instrument.

Discussions were held with Mark Masson, project lead for Queenston, Christal Hanuszczak, and Manuel NgLai, Project Engineer. WGM observed that logging and sampling procedures were meticulous and "general housekeeping" at the site, core shack and field office was very good. While at the site, WGM reviewed numerous intersections of drillholes completed by Queenston throughout the various newer phases of drilling. Drill core was examined and compared with drill log descriptions and representations on drill cross sections.

### **14.1 DATABASE VALIDATION**

Prior to the site visit and Mineral Resource estimation, WGM carried out an internal validation of the drill holes in the digital drill hole database used in this Mineral Resource estimate. Holes were selected for validation according to the following criteria:

- distribution in the various zones;
- representative selection based on the drilling year; and
- grade distribution.

As listed in Table 13, a total of 6 holes were selected for validation. Laboratory assay certificates were requested from Swastika and received in digital PDF and Microsoft Excel format, and values matched against the database entry.

No discrepancy was noted.

## **14.2 COLLAR COORDINATE VALIDATION**

Collar coordinates for 4 holes selected for validation were checked against the printed drill logs with no discrepancy noted. These same 4 collars were validated in the field with the aid of a hand-held GPS. Collar stakes were generally wooden with spray painted and flagged tips, although newer holes have been marked with stronger steel stakes. It was noted that some areas in proximity to the current and historical drill collars were designated for foresting.

As shown on Table 13, results indicated an average difference in the X-Y plane of  $\pm 5.0$  m for the 4 hole collars where the instrument was located near the top of the casing. The calculated differences in the X-Y plane are in close agreement to Queenston's reported measurements and drill hole design considering a conversion was applied to the hand held GPS coordinate to record the information in mine grid.

**TABLE 13.**  
**WGM DRILL HOLE COLLAR FIELD VERIFICATION**

Hole-ID	WGM (UTM)		Queenston (UTM)		$\pm$	
	North	East	North	East	North	East
UB10-165	591747	5336458	591745	5336454	2	4
UB08-135	591622	5336452	591627	5336449	-5	3
UB09-142A	591700	5336056	591695	5336045	5	11
UB09-100W1	591731	5336130	591734	5336120	-3	10

## **14.3 ASSAY VALIDATION**

Assay validation was undertaken by comparing entries in the GEMS database entry against the laboratory certificate from the signed PDF copy and certificate in XLS spreadsheet format, for a total of 6 holes. Validation results showed no erroneous data. WGM regards the sampling, sample preparation, security, and assay procedures as adequate to form the basis of the Mineral Resource estimation.

Twelve independent samples of mineralized split drill core (the remaining half) were taken for check assaying. They were bagged, sealed on site and were transported personally by car to WGM's Toronto office by Mr. Breede. On arrival at the office, the samples were boxed up and couriered to the SGS Mineral Services Inc. ("SGS") ISO 9001:2000 accredited laboratory in Toronto for independent assaying. The samples were analyzed for Au and Cu using a similar analysis package offered by Swastika to Queenston (SGS codes FAI515 and FAG505 for Au and ICP90Q for Cu), however, WGM decided to use a 50 g sample size instead of one assay ton due to the high grade nature of the mineralization being tested. Please see previous sections in this report for a more complete description of the Swastika analytical procedures.

The WGM samples were taken as characterization samples to confirm that gold and copper was present and the general nature/tenure of the mineralization. All samples returned gold/copper values and our sampling results, along with those of the original Queenston assays for the same intervals, are shown in Table 14.

**TABLE 14.**  
**WGM INDEPENDENT SAMPLING RESULTS**

Sample Number	Hole-ID	Original Au (Queenston) (g Au/t)	WGM Au FAI515 (ppb)	WGM Au FAG505 (g Au/t)	Original Cu (Queenston) (ppm)	WGM Cu ICP90Q (ppm)
8784	UB09-148W1	8.64	6,050	N.A.	0.61	0.76
8785	UB09-148W1	10.79	>10,000	10	0.57	0.35
8786	UB010-148W4	11.1	>10,000	14	0.28	0.22
8787	UB010-148W4	48.97	>10,000	39	1.76	1.43
8788	UB010-161W5	9.94	8,850	N.A.	0.52	0.21
8789	UB010-161W5	43.16	>10,000	65	2.21	2.16
8790	UB010-139W3	5.31	768	N.A.	0	0.02
8791	UB010-139W3	8.23	>10,000	11	0.58	0.49
8792	UB09-143W1	9.63	>10,000	9	1.44	1.13
8793	UB09-143W1	4.46	3,750	N.A.	3.01	2.19
8794	UB09-143W1	5.11	5,670	N.A.	0	0.01
8795	UB09-153	6.55	3,600	N.A.	1.59	1.74

WGM's sampling results generally corroborated those obtained by Queenston. The variance in assays from one half of the core to the other is typical of gold mineralization and, in particular Upper Beaver-style deposit mineralization, where there may be coarse gold particles present.

## 15. ADJACENT PROPERTIES

The Kirkland Lake area has been an active exploration area for more than 100 years and has produced more than 30 million ounces of gold from multiple operations. Queenston's Kirkland Lake Project, which includes the Upper Beaver Property, consists of a large block of claims within the Kirkland Lake gold camp. The camp extends for some 50 km and encompasses five townships from the Town of Kirkland Lake in Teck Township, to the Quebec border. The Kirkland Lake Project itself is large, covering almost 1,200 mining claims in the historic gold camp. Geologically, the Kirkland Lake gold camp is defined by a 5 km corridor around the Cadillac–Larder Lake Break from Kirkland Lake to the Quebec border. The properties that are truly adjacent to the Upper Beaver Property are Lac McVittie, Upper Canada and Victoria Creek (Figure 23).

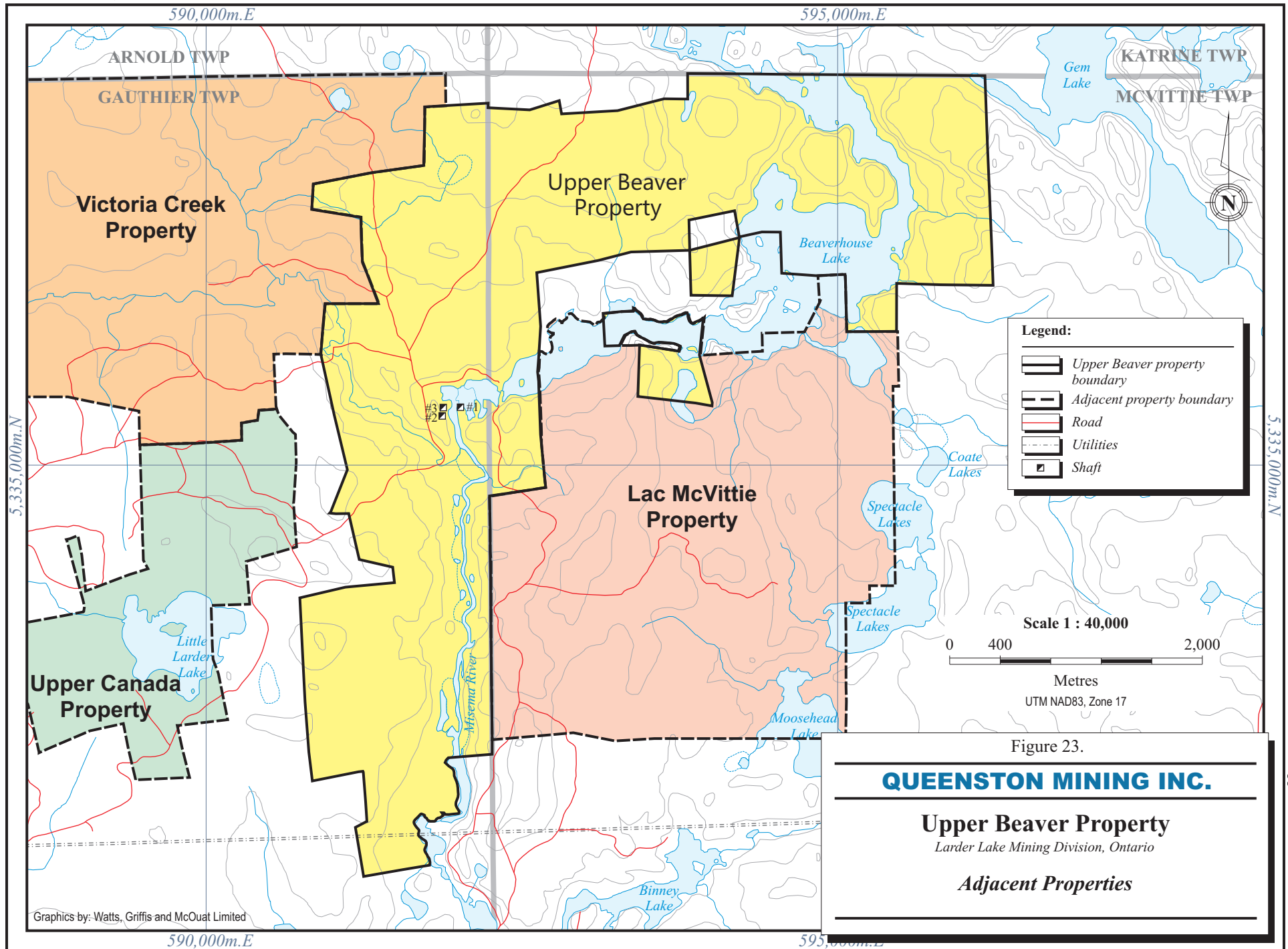
### **Lac McVittie**

The following is a description of the Lac McVittie property from Queenston (Queenston, AIF, 2010).

The Lac - McVittie property comprises 59 unpatented mineral claims (955 ha) and lies east and adjacent to the Upper Beaver property. Prior to the 2009 exploration program on the property, ownership in the JV was Barrick Gold Corporation ("**Barrick**") 49%, Queenston 41% and Sudbury Contact Mines Limited ("**Contact**") 10%. Following the 2009 program, wherein Queenston was the only participant the partners' ownership changed to Queenston 70%, Barrick 30% and Contact 0%.

The first reported work on the property was in the late 1930s and 1940s when Spectacle Larder Lake Mines and Mary Ann Gold Mines completed trenching and a limited amount of diamond drilling. In the early 1980s Queenston completed 8 shallow drill holes and in 1985 - 88 Lac Minerals drilled an additional 8 holes. In 1989 the property was optioned from Lac Minerals and from 1989 to 1996 a joint venture between Royal Oak Mines, Queenston and Contact completed a variety of exploration activities that included 16 diamond drill holes. In 2005 Queenston purchased the Royal Oak interest in the joint venture. Barrick's current interest in the joint venture came as a result of its merger with Lac Minerals in 1994. There is no past production recorded on the property and no mineral resources.

The property is located approximately 8 km north of the Cadillac - Larder Lake Break and is underlain by volcanic and sedimentary rocks of the Upper Tisdale and Lower Blake River assemblages intruded by small syenite plugs and stocks. The Victoria Creek Deformation



Zone is traced across the central portion of the property and the south branch of the Upper Canada Break is interpreted to trend through the northern portion of the claim group. Two main areas of alteration and mineralization occur on the property. In the north western portion exploration drilling has intersected altered mafic volcanic fragmental rocks in the vicinity of a syenite plug with a best intersection of 3.36 g Au/t over 0.61 m in drill hole 94 - 6. Another drill hole in this area (94 - 7) intersected a broad zone of alteration assaying 0.18 g Au/t over a core length of 85.4 m. In the central portion of the property drill hole 01 - 03 also intersected anomalous gold values near the Victoria Creek Deformation Zone including a composite section assaying 0.96 g Au/t over 5.64 m.

No exploration work was conducted in 2008. In December of that year, Queenston proposed an exploration program on the property targeting previous mineralization and the potential for repetition of the gold - copper system on the adjoining Upper Beaver property. Both Barrick and Contact declined to participate in the program.

In 2009, Queenston completed a \$324,000 program on the property that consisted of 5 drill holes for a total of 3,742 m targeting weakly anomalous gold - copper Upper Beaver - type mineralization in the northwest part of the property. The best assay results were encountered in hole LM09 - 3 where a quartz carbonate vein zone associated with a north shallow dipping fault zone averaged 0.31 g Au/t and 0.1% Cu over 13.9 m.

In 2010, one hole begun in 2009 was completed for a total of 112 m. Two of the drill holes completed in 2009 were the subject of downhole Pulse EM surveys in 2010. Results of this survey were inconclusive.

In 2011, further exploration on the property has been recommended. Two holes totalling approximately 1,400 m of drilling additional drilling are planned. The projected cost of the program is \$185,000.

### **Upper Canada**

The Upper Canada Property is owned 100% by Queenston and is subject to a 2% NSR to Franco-Nevada Mining Corporation, and comprises 63 claim units (955 ha) located in the central portion of Gauthier Township, southwest of the Upper Beaver Property. The property is underlain by Timiskaming assemblage flows, tuffs, sediments with syntectonic dykes, sill and plugs of syenite and porphyry. The deposit sits within a 300-400 m thick deformation corridor framed by the north and south branches of the Upper Canada Break, a structural splay feature emerging from the Larder Lake Break. The property hosts two gold deposits (Upper Canada and Brock) with past production of approximately 1.5 million oz. of gold.



The initial discovery of gold at Upper Canada was in 1920 and in 1928 a shaft was sunk to 40 m. In 1929, Upper Canada Mines acquired the property, deepened the shaft to 150 m and established 4 levels. At the Brock deposit, gold was discovered in the 1930s and between 1938-41, Brock Mines sank a shaft to 192 m with four levels. No production was reported and the property was acquired by Upper Canada Resources in 1946. The Upper Canada deposit commenced production in 1938 and produced gold continuously to 1971. The assets of Upper Canada Resources were acquired by Queenston in 1977.

Past production amounted to 1.52 million oz. of gold from 4,294,873 tonnes averaging 11.01 g Au/t, with the primary production shaft and winze to a depth of 1,930 m. With a substantial resource remaining, the mine was closed in 1971 due to a major capital infusion required for expanding the operation; including a power change over from 25 to 60 cycle. The mill continued to operate until 1972 processing material from the Upper Beaver mine and in 1984 the mill was used to process ore from the McBean mine until 1986. In 2001, Queenston dismantled the mill and ancillary buildings as part of the Closure Plan filed with the Ministry of Northern Development and Mines. Since 1990, no exploration has been undertaken on the property.

Production was principally recorded from the H, M, Q, B, Upper and Lower L zones. The L Zone is the largest ore bearing vein system occurring along the east side of a spotted porphyry body. It is represented by bluish quartz veins in a siliceous tuff and accounts for approximately 75% of the past production and 46% of the remaining historic non-compliant mineral resources (Table 15).

**TABLE 15.**  
**HISTORIC RESOURCES – UPPER CANADA (NI 43-101 NON-COMPLIANT)**

Zone	Measured + Indicated Resources	Oz. of Gold
C Zone	720,508 t @ 7.4 g Au/t	170,700
Upper L	109,216 t @ 4.3 g Au/t	15,000
Lower L	773,475 t @ 7.7 g Au/t	191,250
M&Q	<u>296,774 t @ 4.5 g Au/t</u>	<u>42,750</u>
<b>Total</b>	<b>1,899,973 t @ 6.9 g Au/t</b>	<b>419,700</b>

On May 4, 2011, Queenston announced the completion of an independent NI 43-101 compliant Mineral Resource estimate for the Upper Canada deposit. Indicated and Inferred mineral resources were determined for both near surface mineralization to an average depth from surface of 125 m within an optimized pit shell, with additional resources possibly amenable to underground mining methods (Table 16).



**TABLE 16.**  
**MINERAL RESOURCES – UPPER CANADA**

Capped Resource Cutoff (g Au/t)	Indicated			Inferred		
	Tonnes	Au (g/t)	Au (oz)	Tonnes	Au (g/t)	Au (oz)
Pit (0.44 g Au/t)	1,721,000	1.88	104,000	1,273,000	1.86	76,000
UG Below Pit (2.4 g Au/t)	<u>238,000</u>	<u>4.25</u>	<u>33,000</u>	<u>3,622,000</u>	<u>4.78</u>	<u>557,000</u>
<b>Total</b>	<b>1,959,000</b>	<b>2.17</b>	<b>137,000</b>	<b>4,895,000</b>	<b>4.02</b>	<b>633,000</b>

### **Gauthier**

The following is a description of the Gauthier property from Queenston AIF, 2010.

The property, comprising 88 staked mining claims (1,400 ha), is situated in northern Gauthier Township about 3 km north of the past - producing Upper Canada gold mine. The claim group covers 5.3 km of strike extent of the west - northwest trending Victoria Creek Deformation Zone ("VCDZ"), a major structural unconformity and that represents a high - priority gold exploration target. In October 2008, Vault acquired a 100% interest in the claim group from Stornoway Diamond Corporation, in consideration of the issuance of 100,000 common shares of Vault and the grant of a 2% NSR. The property is one of the assets Queenston acquired through the merger with Vault, completed on April 20, 2010.

The VCDZ hosts the Victoria Creek gold deposit, 700 m west of the Company's Gauthier property, on which Sudbury Contact Mines Limited expended in excess of \$20 million in development during the late 1990s. The VCDZ is thought to have exerted some structural control over mineralization at the Upper Beaver deposit, located 500 m east of the Gauthier property. A preliminary compilation by Vault of previous exploration work on the property reveals untested geophysical anomalies along interpreted splays off of the VCDZ. The anomalies comprise highly magnetic areas with co - incident IP and VLF conductors surrounding circular magnetic lows (at least one of which contains an identified felsic intrusive outcrop). These geophysical signatures are highly analogous to that of the Upper Beaver deposit, where mineralization is associated with magnetite bordering a circular felsic intrusive having a magnetic - low expression.

No material work projects were completed on the property in the period from 2008 to 2009.

In 2010 a deep IP survey was completed over 6.2 kilometres of line by Insight Geophysics and along with a 3.6 km survey completed in February 2010 these surveys have identified coincident IP east - northeast trending anomalies to that of the Titan 24 survey. Of interest, these anomalies are situated to the immediate west of the projected strike of the Upper Beaver North Basalt Zone. Following the receipt of the Insight Interpretive Report and field investigation, a proposed diamond drill program will be designed to test these IP targets.

## 16. MINERAL PROCESSING AND METALLURGICAL TESTING

### **16.1 HISTORICAL OVERVIEW**

Samples of Upper Beaver ore are thought to have been first tested by American Cyanimid Co. in 1939. From material grading 10.9 g Au/t and 0.9% Cu, recoveries of 96 and 95% respectively of the gold and copper were achieved with a combination of jigging (42% recovery to a bullion form), Cu-Au flotation and cyanidation of the flotation tailings. The next documented series of tests was performed by H. Lynch of Upper Canada Mines Ltd. ("**Upper Canada**") in 1963. Jigging was attempted, but the laboratory equipment was said to be inadequate and the test results unsatisfactory. Using a procedure involving flotation and cyanidation of the flotation tailings, 94 and 95.5% of the copper was recovered from two composite samples with 86.6 and 89.6% Au flotation recovery, which increased to 96.2 and 96.9% after cyanidation of the flotation tailings. Direct cyanidation was also attempted but the presence of 1% Cu resulted in significant solution fouling problems unless extreme cyanide levels were employed.

The best result was 92% Au extraction after 72 hours with very high cyanide consumption. Lynch's work was carried out at a fineness of grind of 65-70% passing 200 mesh, following the earlier work of American Cyanimid and testing by Faraday Mines. Lynch stated that flotation cleaning was unnecessary as the copper minerals floated cleanly in the rougher stage at good grades.

Faraday Mines undertook three tests of Upper Beaver ore in 1964 and were able to recover 95.5 – 97.2% of the copper in a Cu-Au concentrate, together with 84.5 – 87% of the gold, which could be increased to 96.8% by cyanidation of the flotation tailings. These tests were performed at a fineness of grind of 56% passing 200 mesh. Dick Roach, the Faraday Mill Superintendent described the Upper Beaver ore as 'one of the most free-milling ores he had ever seen'.

In 1964, J. Botsford, Upper Canada General Manager, recommended putting the Upper Beaver deposit into production by retro-fitting of the Upper Canada mill with a separate milling circuit to include jigging and flotation. Kilborn Engineering was consulted on flow sheet design and equipment selection. The 150 tpd flowsheet eventually developed and constructed had no jigging stage. The flotation circuit comprised seven Denver No. 24 cells – four roughing, two scavenging and a single cleaner cell. The flotation tailing was thickened and introduced to an agitator at the tail end of the Upper Canada cyanidation circuit. Early production figures from Feb. to Nov. 1965 showed 37,277 tons milled at 12.3 g Au/t and

0.64% Cu, with recoveries of 90% for copper and 93.6% for gold. First shipments of concentrate to the Horne Smelter in Rouyn-Noranda, Quebec, assayed 189 g Au/t and 23.3% Cu.

## **16.2 UPPER BEAVER SGS-LAKEFIELD TESTWORK PROGRAMS**

The following is a summary of the metallurgical testwork as described by Queenston.

### **16.2.1 2008 TEST PROGRAM REVIEW**

In 2008 a limited scoping program of metallurgical tests was conducted by SGS-Lakefield on two Upper Beaver ore composites representing high (H) and low (L) copper-gold variants with the objective of confirming performance of earlier evaluations and mine production. Preliminary results of the testwork program were incorporated into a technical report following issuance September 22, 2008 of a NI 43-101 mineral resource for the Upper Beaver property.

The metallurgical testwork consisted of gravity separation, flotation from the gravity tailings and run-off-mine ores and kinetic gold cyanidation tests of the flotation tailings.

Using a Knelson concentrator followed by upgrading with a Mozley table at a grind size of K(80) of about 75 microns, 62-64% of the gold in both composites was recovered in the Knelson and 34-57% in a Mozley concentrate.

The copper minerals and residual gold were effectively recovered by conventional flotation of the gravity tailings. For sample H, the best performance is test F2 yielding copper and gold recoveries of 98.9 and 88.7% respectively; the combined Knelson and flotation recovery (G2-F2) for gold was 95.9%. For sample L, the best result was test F10 which gave copper and gold recoveries of 93.2 and 82.1% respectively; including the Knelson gravity component the combined gold recovery (G4-F10) was 93.1%. A flotation test F9 carried out on sample H without prior gravity concentration produced copper and gold recoveries of 98.0 and 94.8% respectively, a performance close to the combined gravity-flotation tests.

Applying 72-hour kinetic cyanidation stage tests of the flotation tailings increased the overall gold recovery to 99% for both H and L samples.

A basic environmental test program to characterize the F9 rougher tailings showed all of the Canadian Metal Mining Effluent Regulations controlled parameters reported at concentrations well within the specified limits; the very low sulphide content and significant carbonate

contents reported during the ABA testing indicated that the F9 rougher tailings is potentially acid consuming.

In summary the 2008 testwork program met or exceeded the metallurgical expectations based on previous studies and production reports.

## 16.2.2 2011 TEST PROGRAM

As part of Queenston's 2011 SGS-Lakefield testwork program, a composite high grade sample (UB-P) from the Upper Beaver Porphyry Zone was investigated in order to compare metallurgical performance with respect to the 2008 tests on Upper Beaver samples. (The majority of the Upper Beaver mineral resource occurs in a series of breccias zones that dip steeply north (75°) below the old mine workings. These zones contain chalcopyrite, magnetite, pyrite and visible gold within a mineralized corridor, the most prominent of which are the Porphyry Zones that contain approximately 80% of the mineral resource.)

The principal head assays of the UB-P and earlier H and L composites are compared below in Table 17.

**TABLE 17.**  
**HEAD ASSAYS OF UPPER BEAVER COMPOSITES**

Sample	2008 - L	2008 - H	2011 – UB-P
Au, gpt	4.83	9.64	28.1
Ag, gpt	0.8	6.54	13.9
Cu, %	0.16	1.17	2.37
Fe, %	5.47	8.33	14.4
S, %	0.85	1.61	3.13
SiO <sub>2</sub> , %	51.8	49.1	42

A Bond ball mill work index determination on the UB-P ore sample gave 14.1 kwh/mt, placing the ore in the medium category, whereas the H composite from 2008 tested medium-hard at 17.0 kwh/mt.

A gravity concentration test was performed using the Knelson concentrator and upgrading with the Mozley table. The Mozley concentrate graded 7,878 gpt Au at a recovery of 41.3%; the Knelson recovery was not determined. In the 2008 testing the H composite produced a Mozley concentrate of 21,137 gpt Au at 33.9% recovery, with a corresponding Knelson recovery of 61.2%.

A single flotation test was conducted on the UB-P sample using the same procedure as test F4 from the 2008 test program and the results are shown in the metallurgical balance, Table 18.

**TABLE 18.**  
**UB-P FLOTATION TEST FI-0**

Product	Weight		Assays, %, g/t				% Distribution			
	g	%	Cu	Au	Ag	S	Cu	Au	Ag	S
1st Cl Conc	205.7	10.3	22.9	130	55.0	28.5	93.1	89.5	85.4	91.3
1st Cl Tail	98.4	4.9	1.31	6.31	4.6	1.43	2.5	2.1	3.4	2.2
Scav Conc	97.7	4.9	0.91	2.58	3.8	1.04	1.8	0.8	2.8	1.6
Ro Tail	1590.1	79.8	0.081	1.43	0.7	0.20	2.5	7.6	8.4	5.0
Head (calc)	1991.9	100.0	2.54	15.0	6.7	3.22	100.0	100.0	100.0	100.0
Head (direct)			2.37	14.6	6.2	4.06				

**Combined Products**

Product	Weight		Assays, %, g/t				% Distribution			
	g	%	Cu	Au	Ag	S	Cu	Au	Ag	S
1st Cl Conc	205.7	10.3	22.9	130	55.0	28.5	93.1	89.5	85.4	91.3
Ro Conc	304.1	15.3	15.9	90	38.7	19.7	95.7	91.5	88.8	93.5
Ro Conc + Scav Conc	401.8	20.2	12.3	69	30.2	15.2	97.5	92.4	91.6	95.0

An acceptable 1<sup>st</sup> cleaner concentrate grade of 22.9% Cu was achieved with copper and gold recoveries of 93.1 and 89.5% respectively. The copper recovery was slightly lower in the UB-P test compared to the results of the H composite though the gold recovery was significantly higher, 89.5% versus 80.4%.

A series of kinetic cyanidation tests were carried out to confirm that residual gold in the flotation tailings can be effectively extracted though gravity and flotation recovery amounted to almost 98%. The results are shown in Table 19. The combined gold recovery from gravity, flotation and cyanidation was 99.4, even at the coarsest grind tested of K(80) 89 microns.

**TABLE 19.**  
**UB-P KINETIC CYANIDATION TESTS**

Test No.	Sample	K80 µm	pH Range	Reagent Cons. kg/t		Au Extraction %				Residue Au g/t	Head Au, g/t calc.	Head Au, g/t direct	Grav (+ Flot Rec) Au %	(Grav+ Flot + tail CN) Au %
				NaCN	CaO	8h	24h	48h	72h					
CN-3	F1 Tail (UB)	89	10.5-11.1	0,74	0,41	40,1	61,9	70,4	74,0	0,35	1,34	1,56	97,9	99,4
CN-9	F1 -0 Tail (UB)	60	10.6-11.1	0,72	0,57	26,2	66,4	74,8	76,2	0,34	1,43	1,43	97,9	99,5
CN-17	F1 -0 Tail (UB)	35	10.5-11.3	0.95	0.86	11,0	80,4	88,5	89,5	0.16	1.48	1.43	97,9	99,8

The 2011 test program results on the Upper Beaver Porphyry Zone composite generally corroborated those of the 2008 testwork on the H sample which also returned combined gold extractions of 99%.

## 17. MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

### 17.1 WGM MINERAL RESOURCE ESTIMATE STATEMENT

WGM has prepared an updated Mineral Resource estimate for the Upper Beaver Property mineralized zones that have sufficient data to allow for continuity of geology and grades. A summary of the Mineral Resources is provided in Table 20.

**TABLE 20.**  
**SUMMARY OF UPPER BEAVER PROPERTY UPDATED MINERAL RESOURCE ESTIMATE**  
**(Cutoff of 2.5 g Au/t)**

Category	Tonnes	Cu (%)	Au (g/t) (uncapped)	Ounces (uncapped)	Au (g/t) (capped)	Ounces (capped)
Indicated	3,074,000	0.54	8.84	874,000	6.98	690,000
Inferred	3,093,000	0.41	7.15	711,000	6.19	616,000

Note: Au is capped at 50 g/t.

The classification of Mineral Resources used in this report conforms with the definitions provided in the final version of NI 43-101, which came into effect on February 1, 2001, as revised on December 11, 2005. We further confirm that, in arriving at our classification, we have followed the guidelines adopted by the Council of the Canadian Institute of Mining Metallurgy and Petroleum ("CIM") Standards. The relevant definitions for the CIM Standards/NI 43-101 are as follows:

A **Mineral Resource** is a concentration or occurrence of diamonds, natural, solid, inorganic or fossilized organic material including base and precious metals, coal, and industrial minerals in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge.

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

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

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

A **Mineral Reserve** is the economically mineable part of a Measured or Indicated Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A Mineral Reserve includes diluting materials and allowances for losses that may occur when the material is mined.

A **Probable Mineral Reserve** is the economically mineable part of an Indicated, and in some circumstances a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified.

A **Proven Mineral Reserve** is the economically mineable part of a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction is justified.

Mineral Resource classification is based on certainty and continuity of geology and grades. In most deposits, there are areas where the uncertainty is greater than in others. The majority of the time, this is directly related to the drilling density. Areas more densely drilled are usually better known and understood than areas with sparser drilling.

## **17.2                    GENERAL MINERAL RESOURCE ESTIMATION PROCEDURES**

The block model Mineral Resource estimate procedure included:

- importing/compiling and validation of data from Microsoft Excel to Gemcom GEMS v6.2.4 to create a Project database;
- generation of cross sections and plans to be used for validation of geological interpretations;
- basic statistical and decile analyses to assess cutoff grades, compositing and cutting (capping) factors;
- validation of 3-D wireframe models for zones with continuity of geology/mineralization, using available geochemical assays for each drillhole sample interval; and
- generation of block models for Mineral Resource estimates for each defined zone and categorizing the results according to NI 43-101 and CIM definitions.

## **17.3                    DATABASE**

### **17.3.1                GENERAL**

Data used to generate the Mineral Resource estimates originated from Microsoft Excel files supplied to WGM by Queenston via ftp. A GEMS project was established to hold all data and to be used for the manipulations necessary for the Mineral Resource estimate.

The Property drillhole database consisted of 270 drillholes, geological codes, and 52,462 assay intervals for Au and Cu averaging 1 m in length. Additional information, including copies of the geological logs, summary reports, mine workings, and geological interpretations were supplied as DXF or similar electronic files.

### **17.3.2                DATA VALIDATION**

Upon receipt of the data, WGM performed the following validation steps:

- ✓ checking for location and elevation discrepancies by comparing collar coordinates with the copies of the original drill logs received from the site;
- ✓ checking minimum and maximum values for each quality value field and confirming/modifying those outside of expected ranges;
- ✓ checking for inconsistency in lithological unit terminology and/or gaps in the lithological code;
- ✓ spot checking original assay certificates with information entered in the database; and



- ✓ checking for gaps, overlaps and out of sequence intervals for both assays and lithology tables.

The assay table contained no errors when compared to the original certificates, and were deemed appropriate for use in the subsequent Mineral Resource estimate. Some gaps or missing intervals identified were due to unsampled / unassayed intervals outside of the mineralized zones. WGM found the database to be in good order and accurate and no errors were identified that would have a significant impact on the Mineral Resource estimate.

### 17.3.3 DATABASE MANAGEMENT

The drillhole data were imported into a GEMS multi-tabled workspace specifically designed to manage collar and interval data. The line work for the geological interpretations and the resultant 3-D wireframes were also stored within the GEMS project. The project database stored cross section and level plan definitions and the block models, such that all data pertaining to the project are contained within the same project database. A copy of the project database is stored in WGM's servers in Toronto.

## 17.4 GEOLOGICAL MODELLING PROCEDURES

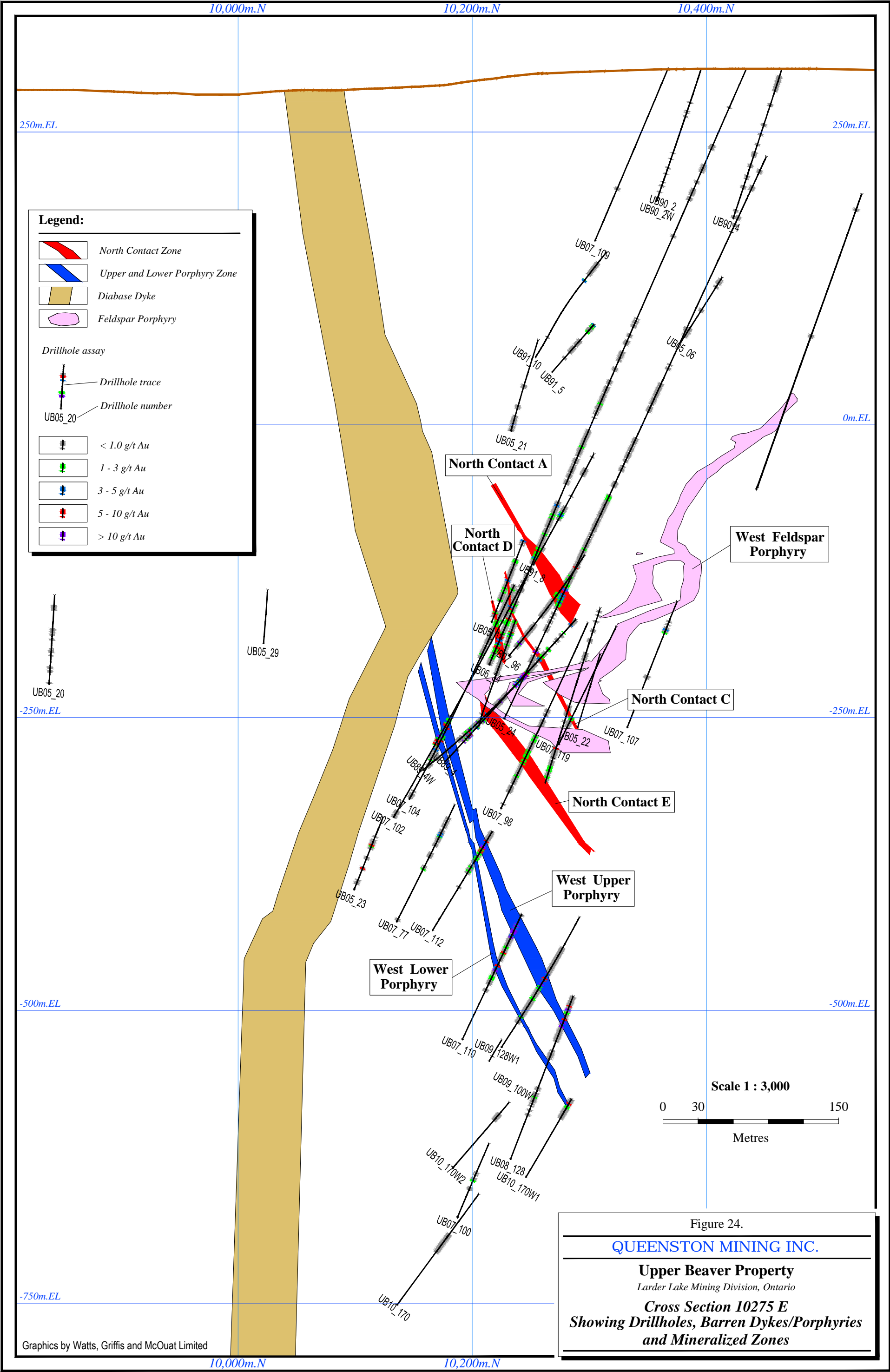
### 17.4.1 CROSS SECTION DEFINITION

Vertical sections were defined for the Upper Beaver Property to mimic those defined by Queenston staff for its cross sectional interpretation. The drilling for zone definition was conducted on cross sections that had a spacing that varied from 25 m to 50 m, but most drilling was conducted on the 25 m spaced sections.

In total, 37 west-looking vertical (cross) sections at 25 m spacing were defined for the mineralized zones. Figure 24 shows the geology and mineralized zone on cross section 10275E.

### 17.4.2 GEOLOGICAL INTERPRETATION

WGM imported Queenston's internal 3-D interpretations from the cross sections which were used as the basis to define the boundaries of the mineralized zones. Many of these same interpretations were originated from WGM's 2008 interpretation which have since been updated based on information from the newer drilling.



The wireframed zone interpretations and the corresponding polylines used in their generation were imported into GEMS and each was assigned an appropriate rock code. WGM verified that the digitized lines were 'snapped' to drillhole intervals to anchor the line which allows for the creation of a true 3-D wireframe that honours the 3-D position of the drillhole interval. Any discrepancies or interpretation differences between Queenston's original interpretation and those used by WGM were discussed with Queenston technical personnel and agreed upon before finalizing the interpretation to be used for the Mineral Resource estimate. The majority of the discussions centred around minimum horizontal widths in the definition of some of the zones at depth. As with the 2008 estimate, a minimum horizontal width of 2 m was used for defining the zones.

Zone boundaries were digitized from drillhole to drillhole that showed continuity of strike, dip and grade, generally from 50 to 100 m in extent, and 25 to 50 m maximum on the ends of the zones where there was no drillhole information (most extensions were limited to 25 m, unless supported by drillhole information on adjacent cross sections). Internally, the continuity of the zones was observed to be very good, and in some cases, with supporting data from adjacent sections, the interpretation was extended beyond 100 m internally. In general, extensions of the boundaries were made consistent with the trends defined by joining known boundaries and with information used from adjacent cross sections. Figure 18 shows a typical cross section through the Upper Beaver mineralized zones.

The Upper Beaver mineralized zones are for the most part discrete and can be identified relatively easily, however, there can also be multiple intercepts within the same general area of a mineralized section of the drillhole. Queenston used a nominal 1.0 g Au/t cutoff to determine the zone outlines for continuity purposes, but this general rule was applied on a case by case basis and was a fairly manual effort. Most bounding assay intervals used to define the zones were much higher grade than 1.0 g Au/t, however, some lower grade intercepts were used internally as internal dilution to ensure zone continuity.

WGM also used the updated 3-D interpretation of the Diabase Dyke and East and West Feldspar Porphyry Units, as supplied by Queenston, to "overprint" the WGM defined zones as the final step in order to subtract this barren material from the Mineral Resources. Queenston also supplied 3-D models of the underground workings for WGM's use. Figure 25 illustrates the 3-D models of the defined zones used for the Mineral Resource estimate and the Upper Beaver underground workings.

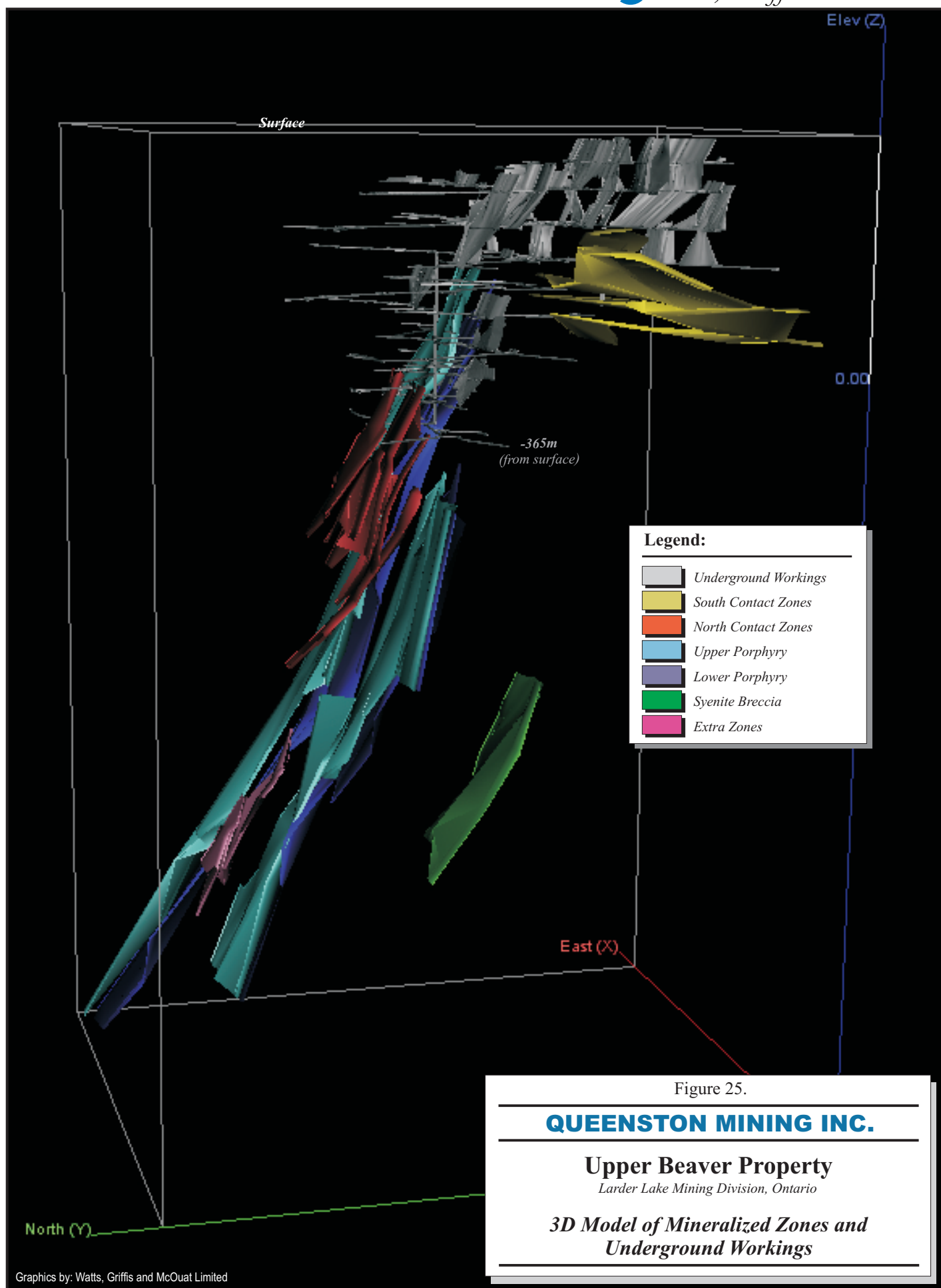


Figure 25.

## QUEENSTON MINING INC.

### Upper Beaver Property

Larder Lake Mining Division, Ontario

### 3D Model of Mineralized Zones and Underground Workings

### 17.4.3 TOPOGRAPHIC SURFACE CREATION

A topographic surface or triangulated irregular network ("TIN") was supplied by Queenston, which was generated using collar elevations of the holes drilled from surface for the entire Upper Beaver Property area. This was not seen as being crucial for this stage of the Mineral Resource estimate, as the zones are going to be mined by underground methods.

## 17.5 STATISTICAL ANALYSIS, COMPOSITING, CAPPING AND SPECIFIC GRAVITY

### 17.5.1 BACK-CODING OF ROCK CODE FIELD

The 3-D solids that represented the interpreted mineralized zones were used to back-code a rock code field into the drillhole workspace. Each interval in the assay table was assigned a new rock code value based on the rock type solid that the interval midpoint fell within.

### 17.5.2 STATISTICAL ANALYSIS AND COMPOSITING

In order to carry out the Mineral Resource grade interpolation, a set of equal length composites of 1.0 m was generated from the raw drillhole intervals, as the original assay intervals were different lengths and required normalization to a consistent length. A total of 2,453 equal length composites were generated, of which 126 were discarded as they were comprised of less than 0.75 m of the original assay intervals. The average capped grade of the 126 omitted samples was 3.43 g Au/t. Table 21 summarizes the statistics of the remaining 2,327 1 metre composites inside the defined mineralized envelopes for Au and Cu, which were used for the Mineral Resource estimate. For our analysis, WGM examined each of the zones separately. The results of this study are illustrated in Figures 26 to 31.

**TABLE 21.**  
**BASIC STATISTICS OF 1 m COMPOSITES**

Zone	Number	Mean Uncapped Au (g/t)	Mean Capped Au (g/t)	Mean Cu (%)	C.O.V.* Capped Au
Lower Porphyry	454	6.77	5.44	0.50	1.70
Upper Porphyry	843	7.71	5.46	0.41	1.63
North Contact	600	2.66	2.07	0.28	1.76
South Contact	205	4.98	4.08	0.40	1.91
Syenite Breccia	126	3.66	2.85	0.05	1.43
Extra Zones	99	2.75	2.75	0.17	1.47

\*Co-efficient of Variation

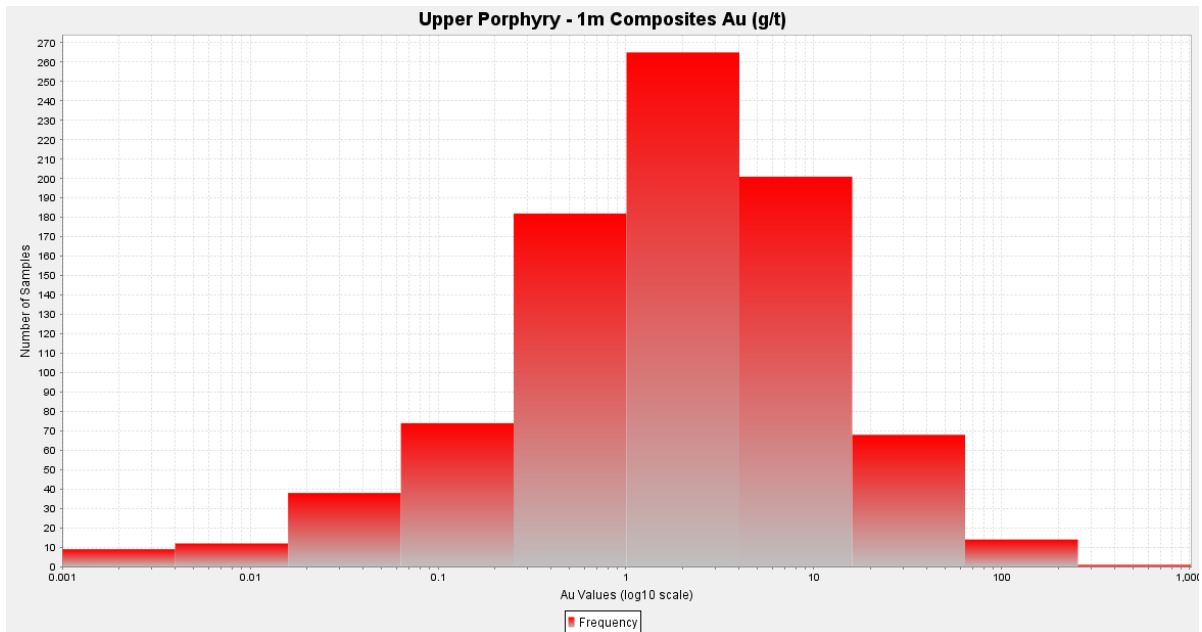


Figure 26. LOG normal histogram, Au composites within Upper Porphyry Zone

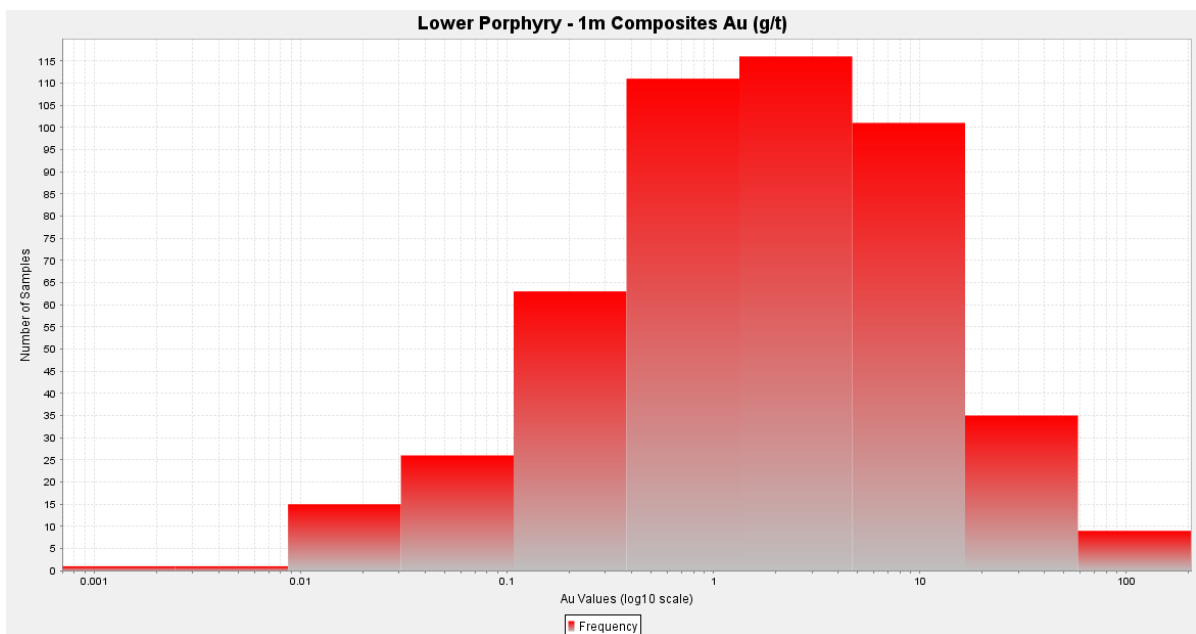


Figure 27. LOG normal histogram, Au composites within Lower Porphyry Zone

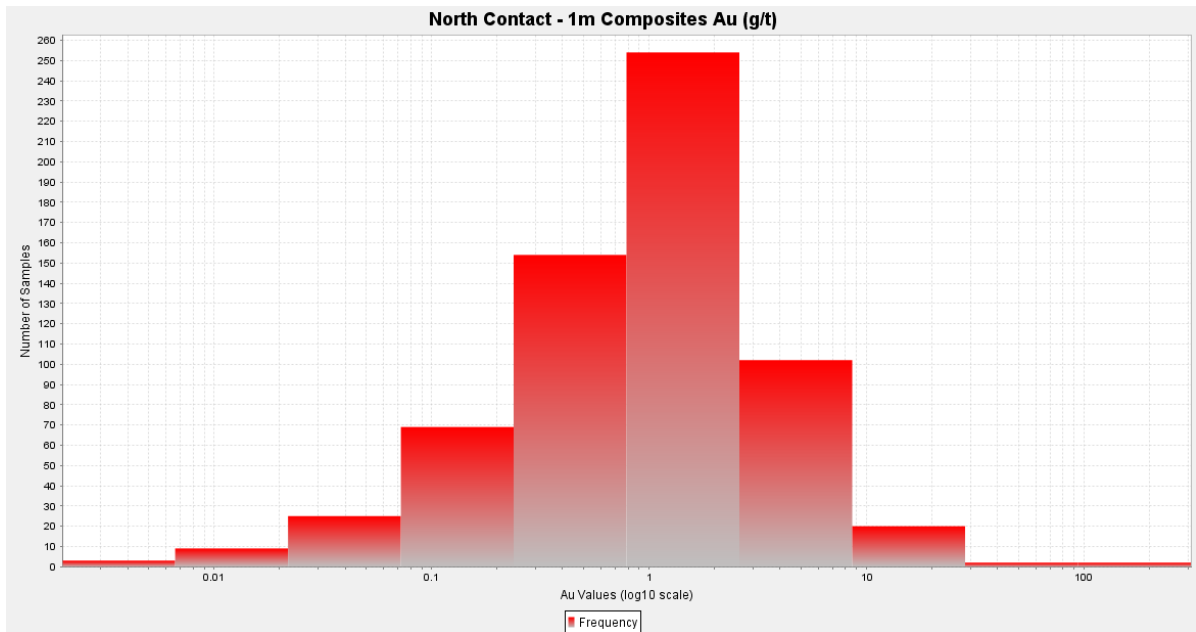


Figure 28. LOG normal histogram, Au composites within North Contact Zone

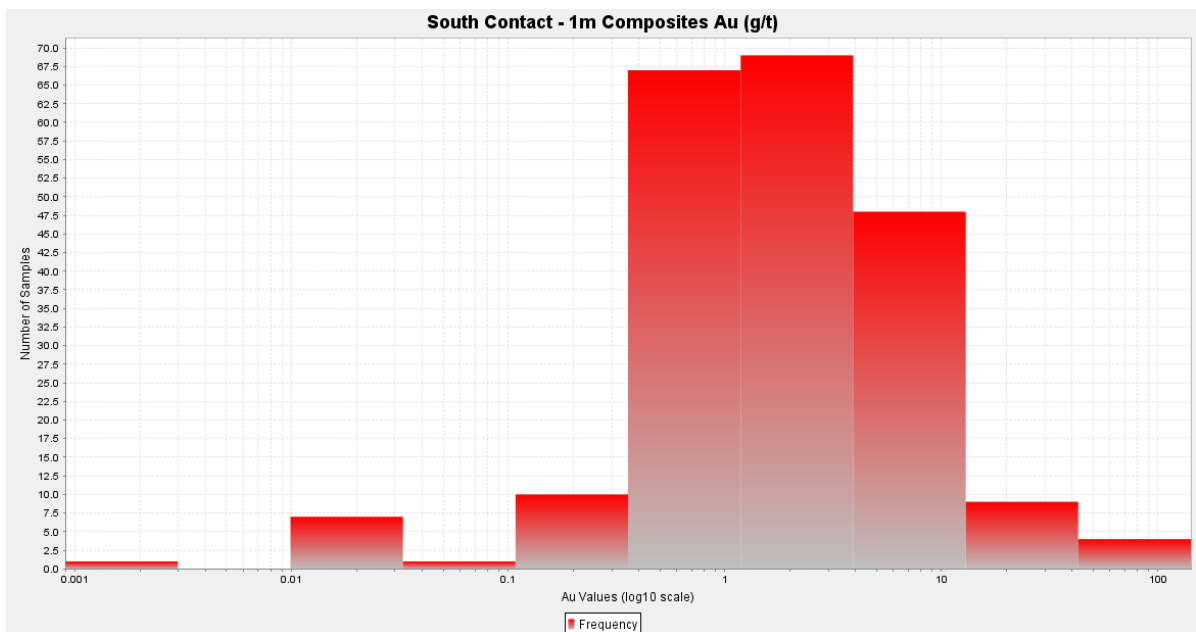


Figure 29. LOG normal histogram, Au composites within South Contact Zone

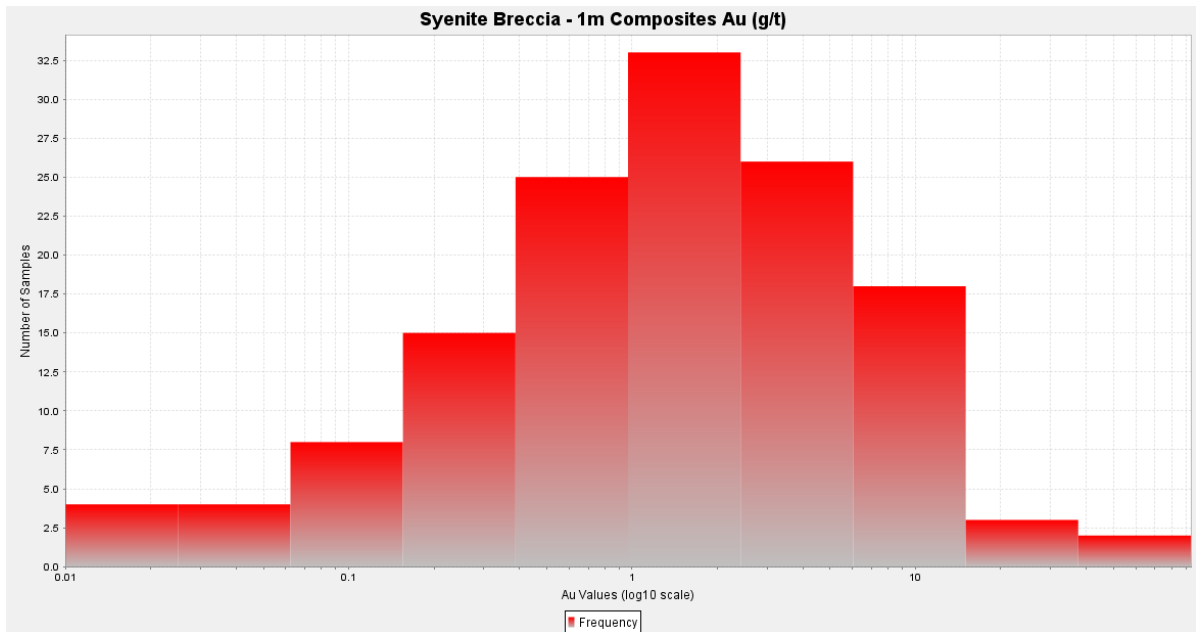


Figure 30. LOG normal histogram, Au composites within Syenite Breccia Zone

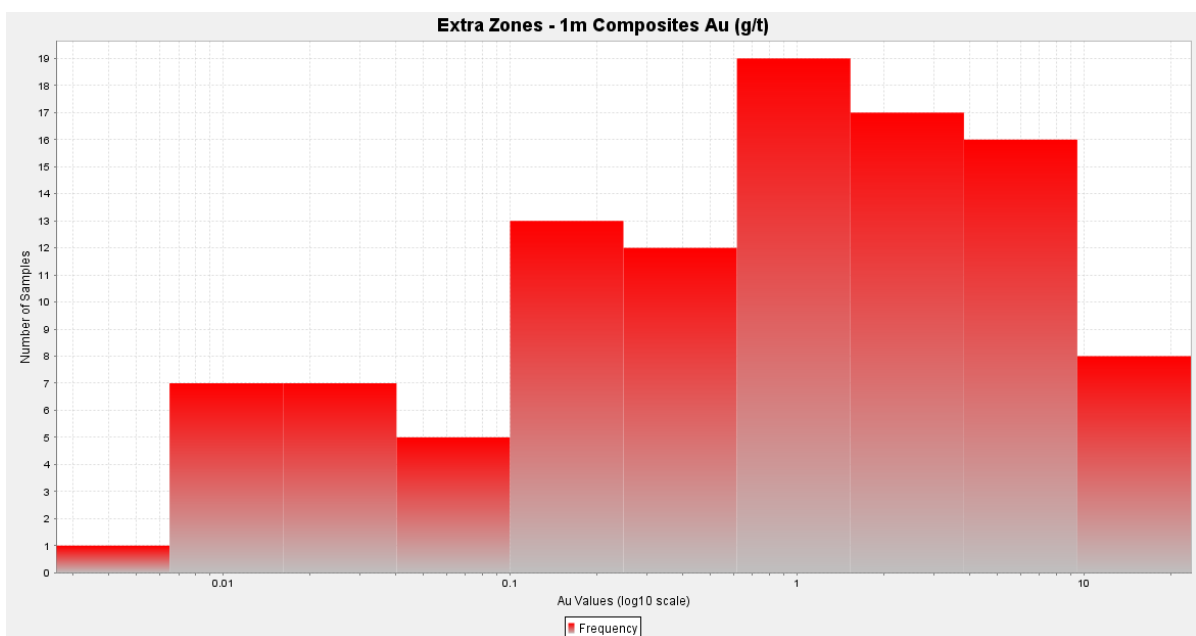


Figure 31. LOG normal histogram, Au composites within Extra Zones



### 17.5.3 GRADE CAPPING

The statistical distributions of both Au and Cu show good lognormal distributions and most of the defined zones exhibit similar behaviour of grade distributions. Considering the nature of the mineralization and the continuity of the zones, WGM studied various capping levels for both Au and Cu. Grade capping, also sometimes referred to as top cutting, assay grades is commonly used in the Mineral Resource estimation process to limit the effect (risk) associated with extremely high assay values since high-grade outliers can contribute excessively to the total metal content of the deposit. Philosophies or approaches to establishing and using a grade cap is variable across the industry and includes, for example, not using grade caps at all, arbitrarily setting all assay grades greater than 1 oz/ton to 1 oz/ton, choosing the grade cap value to correspond to the 95 percentile in a cumulative distribution, evaluation of Mean Grades + multiple levels of Standard Deviations and the evaluation of the shape and values of histograms and/or probability plots to identify an outlier population. Another rule of thumb is to set the capping level to lower the top 10% of the metal content in the deposit.

A combination of decile analysis and a review of probability plots were used to determine the potential risk of grade distortion from higher-grade assays. A decile is any of the nine values that divide the sorted data into ten equal parts so that each part represents one tenth of the sample or population.

Typically, in a decile analysis, capping is warranted if the:

1. last decile has >40% of metal.
2. last decile contains >2.3 times the metal quantity contained in the one before last.
3. last centile contains >10% of metal.
4. last centile contains >1.75 times the metal quantity contained in the one before last.

As expected, the decile analysis results indicated that grade capping was warranted for Au, which was set to 50 g Au/t for all of the domains. Although the 2008 estimate did use a 2% Cu high grade cap to account for high grade outliers, subsequent decile analysis confirms that this was unnecessary. As such, a total of 216 Cu assays (out of 49,369 assays for which Cu grade existed) which were greater than 2% were included in the current resource estimate. The net result of Au capping for the Mineral Resource estimate at a 2.5 g Au/t cutoff grade was to reduce the Indicated Resource Au grade and contained metal by 21%, and to reduce the Inferred Resource Au grade and contained metal by 13%.

#### 17.5.6 DENSITY/SPECIFIC GRAVITY

In 2008 and 2010, Queenston determined specific gravity ("SG") measurements on half core, as well as on rejects of assayed samples. The samples tested were almost entirely from its mineralized zones; no measurements were completed on host rocks (waste), although in a few cases wall rocks to mineralized zones were tested.

Half core samples were generally 6 inches long and the sample selected for SG determination represented a segment of core from assay samples 0.3 to 1.4 m long. The measurements on half core segments were completed by JvX Ltd. ("JvX") and Swastika for the 2008 samples and by Swastika only for the 2010 samples, using the weighing in water/weighing in air method. A total of 31 determinations were completed on half core in 2008 and 11 determinations were completed on half core in 2010.

SG determinations on 151 rejects were completed in 2008 and one determination was completed from the composite sample used for the 2011 metallurgical testwork by pycnometer using water. A constant SG value of 2.9 was used for the Mineral Resource estimate based on the results obtained in the 2008 and 2010 determinations.

WGM recommends that the SG results, like all assays, should also be stored in an assay database table for ease of use and comparison purposes.

### 17.6 BLOCK MODEL PARAMETERS, GRADE INTERPOLATION AND CATEGORIZATION OF MINERAL RESOURCES

#### 17.6.1 GENERAL

The Mineral Resources have been estimated using the Inverse Distance Cubed ("ID<sup>3</sup>") estimation technique for Au and ID<sup>2</sup> for Cu. ID belongs to a distance-weighted interpolation class of methods, similar to Kriging, where the grade of a block is interpolated from several composites within a defined distance range of that block. ID uses the inverse of the distance (to the selected power) between a composite and the block as the weighting factor.

For comparison and cross checking purposes, the ID<sup>2</sup> (for Au) and ID<sup>10</sup> method has also been used which closely resembles a Nearest Neighbour ("NN") technique. In this method, the grade of a block is estimated by assigning only the grade of the nearest composite to the block. All interpolation methods gave similar results, as the grades were very well constrained within the wireframes, and the results of the interpolation approximated the average grade of the all the composites used for the estimate.

### 17.6.2 BLOCK MODEL SETUP / PARAMETERS

The block model was created using the GEMS v.6.2.4 software package to create a grid of regular blocks to estimate tonnes and grades. The deposit specific parameters used for the block modelling are summarized below.

The block sizes used were:

- Width of columns = 5.0 m
- Width of rows = 2.0 m
- Height of blocks = 5.0 m

The specific parameters for each block model are as follows:

- Easting coordinate of model bottom left hand corner: 9850.00
- Northing coordinate of model bottom left hand corner: 9690.00
- Datum elevation of top of model: 210.00 m
- Model rotation: 0.00
- Number of columns in model: 175
- Number of rows in model: 465
- Number of levels: 250

### 17.6.3 GRADE INTERPOLATION

Variograms were generated in an attempt to characterize the spatial continuity of the mineralization in the defined zones, however, due to the lack of data for most of the zones, meaningful variograms could not be computed. The geology and geometry is fairly well understood, so the search ellipse sizes and orientation were based on this geological knowledge, as opposed to variograms. The following lists the Au grade interpolation parameters:

- ID<sup>3</sup> Search Ellipsoid:
  - 100 m in the East-West direction
  - 100 m in the North-South direction
  - 25 m in the Vertical direction
- Minimum / Maximum number of composites used to estimate a block: 2 / 10
- Maximum number of composites coming from a single hole: 5
- Ellipsoidal search strategy was used with rotation about Z, X, Z: -10°, -70°, 0°. For the South Contact zones, the orientation was adjusted to a rotation about Z, Y, Z as follows: -20°, 30°, 0°.

As in the 2008 estimate, Cu grades were interpolated using the same parameters, except for using an ID<sup>2</sup> method.

GEMS does not use the sub-blocking method for determining the proportion and spatial location of a block that falls partially within a wireframed object. Instead, the system makes use of a percent model (if it is important to track the different rock type's proportions in the block – usually if there is more than one important type) or uses a "needling technology" that is similar in concept, but offers greater flexibility and granularity for accurate volumetric calculations. In this technique, all the blocks that are inside the wireframe (the user specifies the % threshold) are coded and thus are assigned the appropriate rock code and the interpolated grade. During the volumetric calculation, GEMS' needling process reports only the volume / tonnage of the block actually within the wireframe itself, but applies the interpolated grade to that portion of the block within the wireframe / solid.

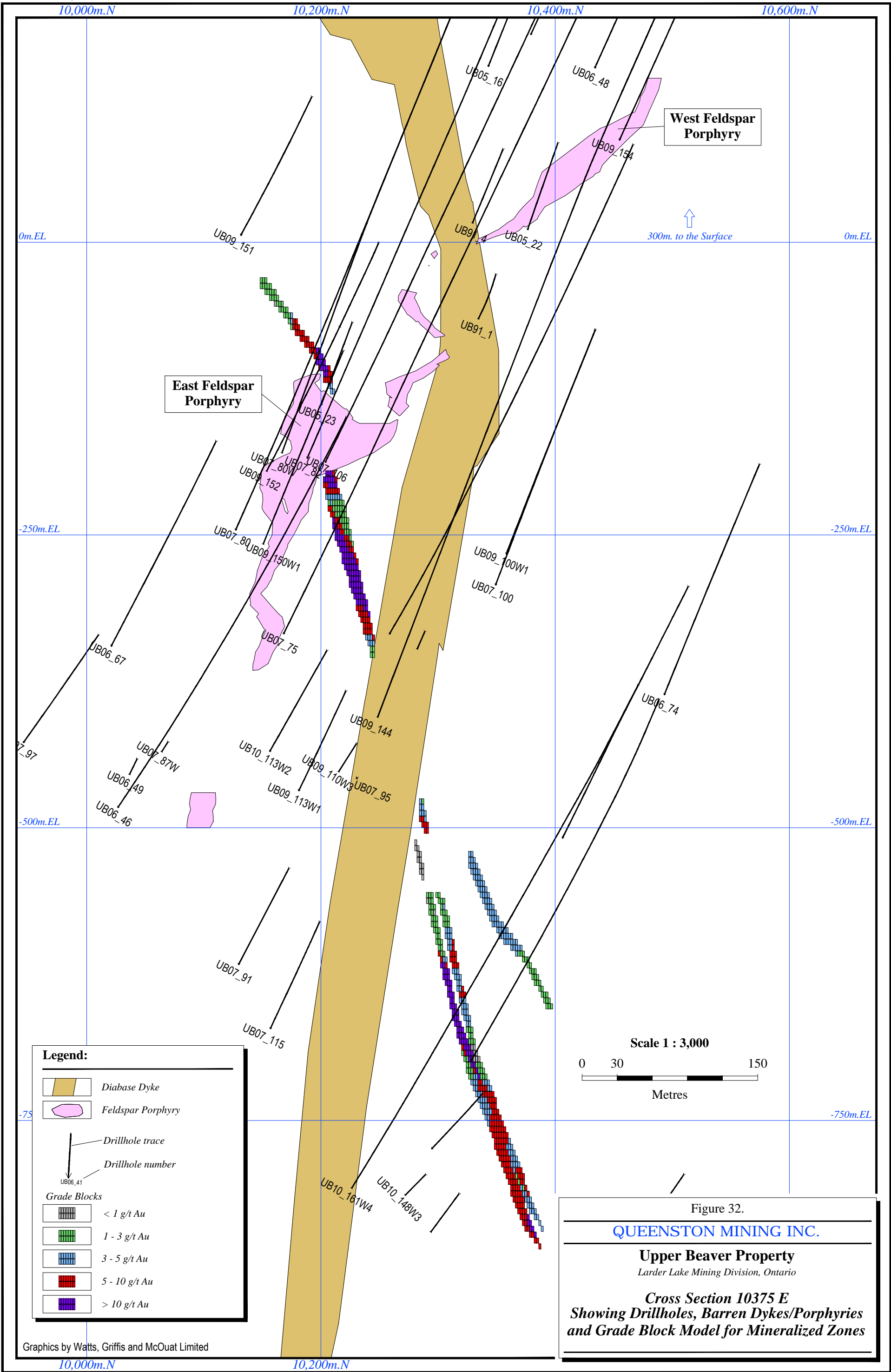
#### 17.6.4 MINERAL RESOURCE CATEGORIZATION

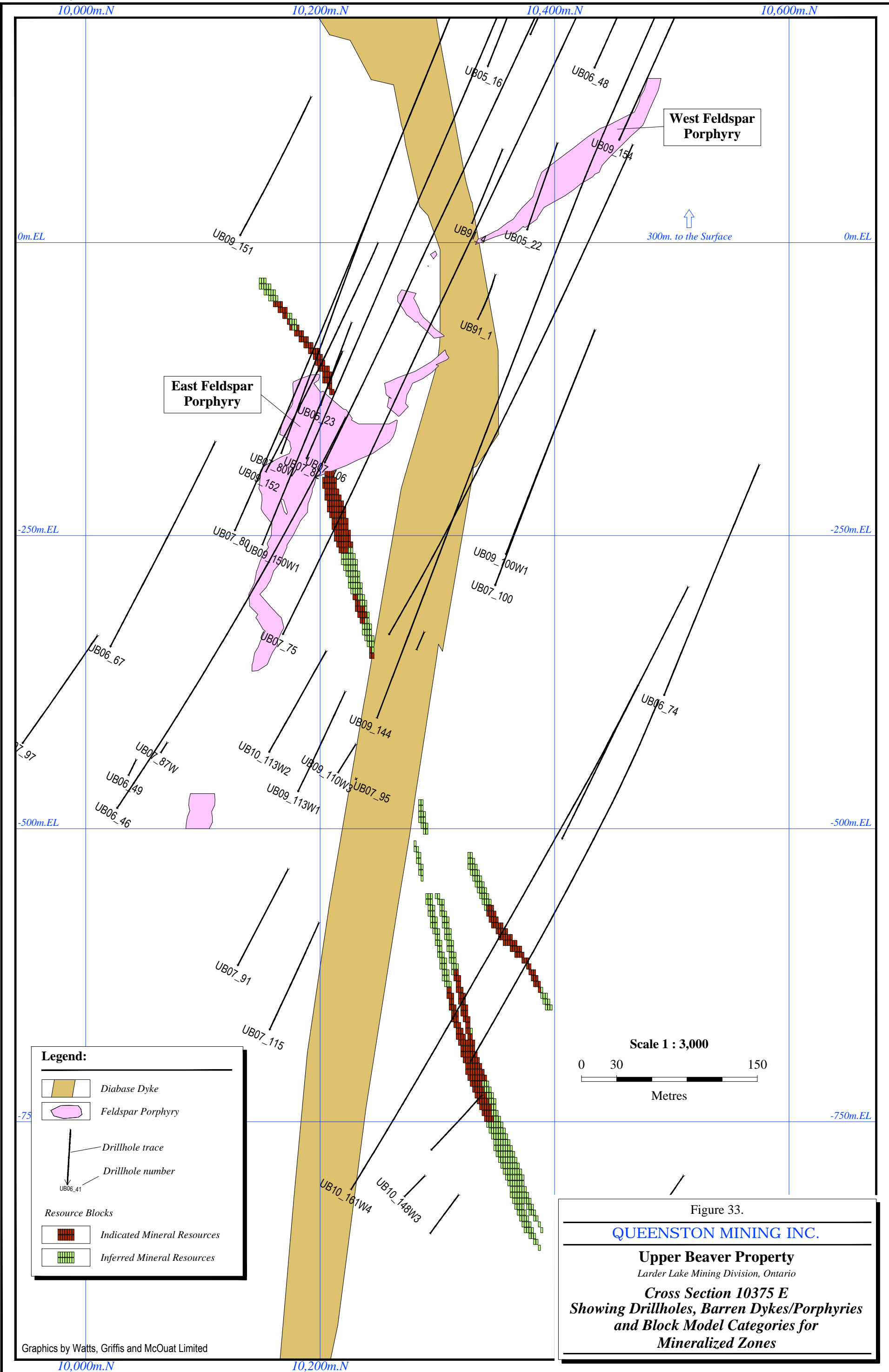
To categorize the Mineral Resources, WGM generated a distance model (distance from actual data point to the block centroid) and reported the estimated resources by distances which represented the category or classification. WGM chose to use the blocks that had a distance of 25 m or less to be Indicated category and +25 m to be Inferred category. The average distances and categories for the most of the zones were similar (especially for the Indicated) and are shown in Table 22.

**TABLE 22.**  
**AVERAGE INTERPOLATION DISTANCE FOR RESOURCE CATEGORIZATION**

Zones	Average Distance for Indicated	Average Distance for Inferred
Lower Porphyry	15.1 m	44.7 m
Upper Porphyry	15.3 m	42.2 m
North Contact	13.7 m	29.7 m
South Contact	15.7 m	36.8 m
Syenite Breccia	14.8 m	40.4 m
Extra Zones	12.4 m	35.6 m

Figures 32 and 33 show the interpolated capped gold grade blocks and categorization on Cross Section 10375E.





For the Mineral Resource estimate, the minimum horizontal width of 2 m and a 2.5 g Au/t cutoff was determined to be appropriate at this stage of the project, and based on the relative increase in metal prices since the 2008 estimate (Table 23). These parameters were chosen based on a preliminary review of the parameters that would likely determine the economic viability of an underground mining operation and comparison to similar projects in the area that are currently being mined or are at an advanced stage of study / development.

**TABLE 23.**  
**CATEGORIZED MINERAL RESOURCE ESTIMATE FOR MAIN UPPER BEAVER ZONES**  
**(Cutoff of 2.5 g Au/t)**

Category	Zone	Tonnage	Cu	Au (uncapped)	Contained Au (uncapped)	Au (capped)	Contained Au (capped)
		Tonnes	(%)	(g/t)	(oz)	(g/t)	(oz)
<b>Indicated</b>	Lower Porphyry	771,000	0.68	10.04	249,000	8.05	200,000
	Upper Porphyry	1,448,000	0.55	9.72	452,000	7.66	357,000
	North Contact	278,000	0.48	5.72	51,000	4.27	38,000
	South Contact	349,000	0.47	7.04	79,000	5.74	64,000
	Syenite Breccia	157,000	0.08	6.55	33,000	4.37	22,000
	Extra Zones	71,000	0.17	4.11	9,000	4.11	9,000
	<b>Total</b>	<b>3,074,000</b>	<b>0.54</b>	<b>8.84</b>	<b>874,000</b>	<b>6.98</b>	<b>690,000</b>
<b>Inferred</b>	Lower Porphyry	1,048,000	0.48	7.03	237,000	6.51	219,000
	Upper Porphyry	1,479,000	0.35	7.9	376,000	6.64	316,000
	North Contact	66,000	0.43	3.68	8,000	3.26	7,000
	South Contact	386,000	0.53	5.82	72,000	4.81	60,000
	Syenite Breccia	92,000	0.05	5.11	15,000	3.95	12,000
	Extra Zones	22,000	0.15	4.13	3,000	4.13	3,000
	<b>Total</b>	<b>3,093,000</b>	<b>0.41</b>	<b>7.15</b>	<b>711,000</b>	<b>6.19</b>	<b>616,000</b>

1. Interpretations of the mineralized zones were created as 3D wireframes/solids based on a 1.0 g Au/t outline and a minimum horizontal thickness of 2 m.
2. Mineral Resources were estimated using a block model with a block size of 5 m by 5 m by 2m and a specific gravity of 2.9 t/m<sup>3</sup>
3. Individual assays were capped at 50 g Au/t.
4. Mineral Resources were estimated using a three-year rolling average of US\$1,050/ounce, an exchange rate of US\$0.95=C\$1.00 and assumed metallurgical recoveries of 95%.

The majority of the mineral resource occurs in the Porphyry Zones that contain approximately 80% of the mineral resource with 556,000 oz. (2,219,000 t grading 7.8 g Au/t) in the Indicated category and 535,000 oz. (2,528,000 t grading 6.6 g Au/t) in the Inferred category.

The following sensitivity analysis from the base case resource estimate using various cutoff grades ranging between 0.0 g Au/t and 5.0 g Au/t indicates the potential of higher grades employing higher cutoff grades.



**TABLE 24.**  
**MINERAL RESOURCE CUTOFF SENSITIVITY**

Cutoff (g Au/t)	Category	Tonnage (Tonnes)	Cu (%)	Au (uncapped) (g/t)	Contained Au (uncapped) (oz)	Au (capped) (g/t)	Contained Au (capped) (oz)
0	Indicated	5,428,000	0.38	5.57	972,000	4.51	787,000
	Inferred	4,502,000	0.32	5.37	777,000	4.71	682,000
0.5	Indicated	5,061,000	0.4	5.95	969,000	4.82	784,000
	Inferred	4,327,000	0.34	5.58	776,000	4.89	681,000
1	Indicated	4,561,000	0.43	6.52	956,000	5.26	772,000
	Inferred	4,103,000	0.35	5.84	771,000	5.12	675,000
1.5	Indicated	3,986,000	0.47	7.28	933,000	5.84	748,000
	Inferred	3,844,000	0.36	6.15	760,000	5.38	665,000
2	Indicated	3,520,000	0.5	8.01	907,000	6.38	722,000
	Inferred	3,495,000	0.38	6.59	740,000	5.74	645,000
<b>2.5</b>	<b>Indicated</b>	<b>3,074,000</b>	<b>0.54</b>	<b>8.84</b>	<b>874,000</b>	<b>6.98</b>	<b>690,000</b>
	<b>Inferred</b>	<b>3,093,000</b>	<b>0.41</b>	<b>7.15</b>	<b>711,000</b>	<b>6.19</b>	<b>616,000</b>
3	Indicated	2,606,000	0.58	9.93	832,000	7.74	649,000
	Inferred	2,631,000	0.44	7.92	670,000	6.8	575,000
3.5	Indicated	2,232,000	0.62	11.05	792,000	8.5	610,000
	Inferred	2,295,000	0.47	8.59	634,000	7.32	540,000
4	Indicated	1,934,000	0.66	12.15	756,000	9.23	574,000
	Inferred	2,005,000	0.49	9.27	598,000	7.84	505,000
4.5	Indicated	1,680,000	0.7	13.31	719,000	9.98	539,000
	Inferred	1,669,000	0.53	10.26	550,000	8.56	459,000
5	Indicated	1,470,000	0.76	14.49	685,000	10.74	507,000
	Inferred	1,394,000	0.59	11.33	508,000	9.32	418,000

### Visual Comparison

The visual comparison of block model grades with composite grades shows a reasonable correlation between the values. No significant discrepancies were apparent from the sections and plans reviewed. The orientation of the estimated grades on sections follows more or less the projection angles defined by the search ellipsoid. It is doubtful that refining the search ellipsoid orientation by adding a few additional sub-domains or using an unfolding technique would significantly improve the interpolation.

### Global Comparisons

The grade statistics for the raw assays, composites, nearest neighbour and inverse distance models, were tabulated in Table 25. Statistics for the composite mean grade when compared to the raw assay grade shows a slight reduction in value partly due to the addition of zero grade assigned to the un-sampled intervals during the compositing process and also due to smoothing related to volume variance introduced with the 1 m composite size. Composite grade statistics only improved by 0.07 g Au/t (from 4.12 g Au/t to 4.19 g Au/t) when the zero grade composites were removed from the statistics. On a global basis, regardless of the methodology employed for the interpolation, the composite grade average is very close to the interpolated grade. More importantly, the grade of the nearest neighbour and inverse distance



model at 0.00 g Au/t cutoff are very close to each other, showing that no global bias was introduced from the interpolation method used.

**TABLE 25.**  
**GLOBAL GRADE COMPARISON AT 0.00 g Au/t CUTOFF**

Method	Average Grade (g Au/t)
All Assays (within resource wireframes)	4.43
All Composites ( $\geq 0.000$ g Au/t)	4.12
All Composites ( $\geq 0.001$ g Au/t)	4.19
Nearest Neighbour	4.50
Inverse Distance Cubed	4.51

## **18. OTHER RELEVANT DATA**

To WGM's knowledge, there is no other relevant information pertaining to the Property that is not already disclosed in this report.

## 19. INTERPRETATION AND CONCLUSIONS

Based on our review of the available information for the Upper Beaver Property and the results of our Mineral Resource estimate, WGM concludes the following:

- The Upper Beaver deposit is an Archean gold lode deposit with structurally controlled mineralized zones consisting of brittle to ductile discontinuous, anatomising structures. Such deposit types are common along the CLLDZ in the Kirkland Lake area, however, the Cu-Au association at Upper Beaver is not typical in this camp. The Upper Beaver deposits are consistent with an alkali porphyry copper-gold model and the mineralization occurs both in flat and steeply dipping zones; is of replacement-type with rare vein-type mineralization; is associated with minor to pervasive alteration which includes feldspar, epidote, carbonate, sericite, silica and magnetite with trace hematite; and has an element association of Cu, Au, or Au-Cu with associated molybdenum;
- The Upper Beaver Property has three main types of mineralization, or groups of zones; the South Contact Zones, Beaver North Zones, and North Basalt Zones. The North Basalt Zones currently do not have Mineral Resources estimated. The Indicated and Inferred Mineral Resources are summarized in Table 26:

**TABLE 26.**  
**SUMMARY OF UPPER BEAVER PROPERTY UPDATED MINERAL RESOURCE ESTIMATE**  
**(Cutoff of 2.5 g Au/t)**

Category	Tonnes	Cu (%)	Au (g/t) (uncapped)	Ounces (uncapped)	Au (g/t) (capped)	Ounces (capped)
Indicated	3,074,000	0.54	8.84	874,000	6.98	690,000
Inferred	3,093,000	0.41	7.15	711,000	6.19	616,000

Note: Au is capped at 50 g/t.

- Plans and cross sections through the current block model display a reasonable distribution of gold grades based on drillhole intersections;
- Queenston's current sampling, assaying and QA/QC protocols represent good industry practice and are appropriate for this type of deposit. Analytical results for prepared Standards inserted by Queenston and Check assaying completed at Secondary labs indicates Primary assay laboratory results are, in general, accurate and precise. The current sample and assay database is inadequate for the Project as sample and assay information is not readily accessible for review, validation and auditing;

- The follow-up phases of Queenston's drilling programs had a favourable impact on zone interpretations and Mineral Resources, indicating that the main zones of mineralization are fairly continuous and predictable along both strike and dip; and
- The Upper Beaver Property shows excellent potential for additional Mineral Resources being defined, either as extensions of known zones, or as further delineation of known gold mineralization with more drilling. Some of these areas may be better drilled from underground due to the length of the holes from surface or old workings making drilling from surface less than optimal or even impossible.

## 20. RECOMMENDATIONS

WGM offers the following recommendations for the Upper Beaver Project:

- WGM notes that Swastika's lab protocols call only for blowing out the crushers and pulverizers between samples, not using a wash sample between high grade samples. If Queenston is providing notice to the lab that particular samples are high grade, it is WGM's opinion that the lab should be using a wash after high grade samples;
- WGM recommends that Queenston strive to improve its sampling and assaying database for future drilling programs and should compile all of its assay records. A relational database system is ideal for this purpose. The databases should include all assays, not just the Finals computed from component assays. The database also should include results for all QA/QC materials both for Queenston inserted materials and also laboratory inserted materials;
- Queenston should also strive to avoid repeating sample numbers, as sample number repeats complicate tracing assays to certificates and archived core. Towards building a relational database for all assay records historic sample identifiers should probably supplemented with prefixes to make sample IDs unique. Where historic samples have no Sample ID, unique Sample IDs should be created;
- Some historic drillholes were only surveyed with a magnetic system and some drillholes have not been surveyed with the gyro system because they were unsuitable. WGM recommends that Queenston try to complete collar surveys on all drillholes not already surveyed through significant mineralization; and
- WGM recommends that future Mineral Resource estimates, after more drilling is conducted, continue evaluating multiple capping strategies for individual zones.

### **Upper Beaver Proposed Work Program and Budget**

In general, the work in progress and planned for the Upper Beaver Property includes further exploration and Mineral Resource definition drilling, metallurgical testwork, environmental baseline studies and a Preliminary Assessment ("PA") to evaluate the economics of the project. This work is estimated to cost approximately \$3.87 million and upon completion, Queenston will make a decision on whether to advance the project to the pre-feasibility stage.

### Diamond Drilling

Due to the open nature of the mineralized system that hosts the Upper Beaver deposit, Queenston has embarked on a program of further definition diamond drilling, both below and east-west of the current Mineral Resources.

### Metallurgical Test Work

A program of metallurgical testwork is currently in progress to determine the recovery of gold and copper from a variety of mineralization types from Upper Beaver. This program is being supervised by Queenston's consultant, Mr. Peter Godbehere, B.Sc., A.R.S.M. and the testwork is being performed by SGS-Lakefield employing gravity and floatation methods.

### Preliminary Assessment

Queenston anticipates initializing Environmental Baseline Studies and commissioning an independent engineering firm to complete a PA on the Upper Beaver deposit to determine the economic viability of considering a mining operation.

The above description of the work program and estimated cost breakdown for the next phases for the Upper Beaver Property is summarized in Table 27.

**TABLE 27.  
UPPER BEAVER WORK PROGRAM AND BUDGET  
(2011-2012)**

Main Task	Units	Unit Cost (C\$)	Cost (C\$)
Exploration and Resource Drilling	20,000	\$150	C\$3,000,000
Desktop Studies and early Preliminary Economic Assessment work			200,000
Baseline Environmental Studies			450,000
Contingency (6%)			219,000
<b>TOTAL</b>			<b>C\$3,869,000</b>

## 21. SIGNATURE PAGE

This report entitled "*Technical Report and Mineral Resource Estimate Update for the Upper Beaver Property, Ontario for Queenston Mining Inc.*", dated June 15, 2011 was prepared and signed by the following authors:

Dated effective as of June 15, 2011.



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Kurt Breede, P.Eng.,  
Senior Resource Engineer and  
Vice-President, Marketing



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Richard W. Risto, M.Sc., P.Ge.,  
Senior Associate Geologist



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Michael Kociumbas, P.Ge.  
Senior Geologist and Vice-President

## **CERTIFICATE**

**To Accompany the Report Entitled  
"Technical Report and Mineral Resource Estimate Update for  
the Upper Beaver Property, Ontario for  
Queenston Mining Inc." June 15, 2011**

I, Kurt Breede, do hereby certify that:

1. I reside at 76 Woodrow Avenue, Toronto, Ontario, M4C 1G7.
2. I am a graduate from the University of Toronto, Toronto, Ontario with a B.A.Sc. Degree in Geological and Mineral Engineering (1996), and I have practised my profession continuously since that time.
3. I am a Professional Engineer licensed by Professional Engineers Ontario (Registration Number 90501859) and the Association of Professional Engineers and Geoscientists of Saskatchewan (Registration Number 17014).
4. I am a Senior Resource Engineer and Vice-President, Marketing with Watts, Griffis and McOuat Limited, a firm of consulting geologists and engineers, which has been authorized to practice professional engineering by Professional Engineers Ontario since 1969, and professional geoscience by the Association of Professional Geoscientists of Ontario.
5. I am an independent Qualified Person for the purposes of NI 43-101 and have extensive experience with gold deposits, a variety of other deposit types, Mineral Resource estimation techniques and the preparation of technical reports.
6. I am responsible for Sections 4, and 14 to 18. I am jointly responsible with co-author Richard W. Risto for Section 1 to 3, 11, and 19 to 20 of the report.
7. I visited the Upper Beaver Property on March 30, 2011.
8. I have no personal knowledge as of the date of this certificate of any material fact or change, which is not reflected in this report.
9. 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 Queenston Mining Inc., or any associated or affiliated entities.



10. Neither I, nor any affiliated entity of mine own, directly or indirectly, nor expect to receive, any interest in the properties or securities of Queenston Mining Inc., or any associated or affiliated companies.
11. Neither I, nor any affiliated entity of mine, have earned the majority of our income during the preceding three years from Queenston Mining Inc., or any associated or affiliated companies.
12. I have read NI 43-101 and Form 43-101F1 and have prepared the technical report in compliance with NI 43-101 and Form 43-101F1; and have prepared the report in conformity with generally accepted Canadian mining industry practice, and as of the date of the certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.



Kurt Breede, P.Eng.  
June 15, 2011

## **CERTIFICATE**

**To Accompany the Report Entitled  
"Technical Report and Mineral Resource Estimate Update for  
the Upper Beaver Property, Ontario for  
Queenston Mining Inc." June 15, 2011**

I, Richard W. Risto, do hereby certify that:

1. I reside at 22 Northridge Ave, Toronto, Ontario, Canada, M4J 4P2.
2. I am a graduate from the Brock University, St. Catherines, Ontario with an Honours B.Sc. Degree in Geology (1977), Queens University, Kingston, Ontario with a M.Sc. Degree in Mineral Exploration (1983), and I have practised my profession for over 26 years.
3. I am a member of the Association of Professional Geoscientists of Ontario (Membership Number 276).
4. I am a Senior Associate Geologist with Watts, Griffis and McOuat Limited, a firm of consulting engineers and geologists, which has been authorized to practice professional engineering by Professional Engineers Ontario since 1969, and professional geoscience by the Association of Professional Geoscientists of Ontario.
5. I am an independent Qualified Person for the purposes of NI 43-101 and have extensive experience with gold deposits and the preparation of technical reports.
6. I did not visit the Upper Beaver Property.
7. I have no personal knowledge as of the date of this certificate of any material fact or change, which is not reflected in this report.
8. I am responsible for Sections 12 and 13 of the report. I am jointly responsible for Sections 1 to 3, 11 and 19 to 20 of the report with co-author Kurt Breede.
9. 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 Queenston Mining Inc., or any associated or affiliated entities.

10. Neither I, nor any affiliated entity of mine own, directly or indirectly, nor expect to receive, any interest in the properties or securities of Queenston Mining Inc., or any associated or affiliated companies.
11. Neither I, nor any affiliated entity of mine, have earned the majority of our income during the preceding three years from Queenston Mining Inc., or any associated or affiliated companies.
12. I have read NI 43-101 and Form 43-101F1 and have prepared the technical report in compliance with NI 43-101 and Form 43-101F1; and have prepared the report in conformity with generally accepted Canadian mining industry practice, and as of the date of the certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.



Richard W. Risto, B.Sc., M.Sc.,  
June 15, 2011

## **CERTIFICATE**

**To Accompany the Report Entitled  
"Technical Report and Mineral Resource Estimate Update for  
the Upper Beaver Property, Ontario for  
Queenston Mining Inc." June 15, 2011**

I, Michael W. Kociumbas, do hereby certify that:

1. I reside at 420 Searles Court, Mississauga, Ontario, Canada, L5R 2C6.
2. I am a graduate from the University of Waterloo, Waterloo, Ontario with an Honours B.Sc. Degree in Applied Earth Sciences, Geology Option (1985), and I have practised my profession continuously since that time.
3. I am a member of the Association of Professional Geoscientists of Ontario (Membership Number 0417).
4. I am a Senior Geologist and Vice-President with Watts, Griffis and McOuat Limited, a firm of consulting geologists and engineers, which has been authorized to practice professional engineering by Professional Engineers Ontario since 1969, and professional geoscience by the Association of Professional Geoscientists of Ontario.
5. I am an independent Qualified Person for the purposes of NI 43-101 and have extensive experience with gold deposits, a variety of other deposit types, Mineral Resource estimation techniques and the preparation of technical reports.
6. I am responsible for Sections 5 to 10 of the report.
7. I visited the Upper Beaver Property in July 2007 and completed a second site visit June 18 and 19, 2008.
8. I have no personal knowledge as of the date of this certificate of any material fact or change, which is not reflected in this report.
9. 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 Queenston Mining Inc., or any associated or affiliated entities.

10. Neither I, nor any affiliated entity of mine own, directly or indirectly, nor expect to receive, any interest in the properties or securities of Queenston Mining Inc., or any associated or affiliated companies.
11. Neither I, nor any affiliated entity of mine, have earned the majority of our income during the preceding three years from Queenston Mining Inc., or any associated or affiliated companies.
12. I have read NI 43-101 and Form 43-101F1 and have prepared the technical report in compliance with NI 43-101 and Form 43-101F1; and have prepared the report in conformity with generally accepted Canadian mining industry practice, and as of the date of the certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.



Michael W. Kociumbas, P.Geo.

June 15, 2011

## REFERENCES

- Alexander, Dale R.  
2007      Technical Report for the Mineral Properties of Queenston Mining Inc. in the Kirkland Lake Gold Camp.
- Benham, Wayne  
2005-2008      Annual Drill Program Reports for Upper Beaver Property.
- Kontak D.J., Dubé, B and Benham, W.  
2008      The Upper Beaver Project, Kirkland Lake: Investigation of a syenite-associated Cu-Au deposit with magnetite-epidote-feldspar alteration.
- Queenston Mining Inc.  
2005-2011      Various internal and confidential documents and digital data by Queenston or supplied by Queenston, including drill logs and assay certificates.
- Watts, Griffis and McOuat Limited  
2008      Technical Report and Mineral Resource Estimate for the Upper Beaver Property, Ontario for Queenston Mining Inc.