# TECHNICAL REPORT on the MINERAL RESOURCES of the NORTHSHORE PROPERTY

## Thunder Bay Mining Division
## Priske Township, Ontario, Canada

**Latitude 48° 45’ 54’’ North by Longitude 87° 16’ 30” West**
**Zone 16 U 5401359 m North by 4797800 m East**

- Report Prepared For –

**GTA RESOURCES AND MINING INC.**
855 Brant Street, Burlington,
Ontario, Canada L7R 2J9

- Report Prepared By –


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and

**MINOREX CONSULTING LIMITED**
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Aldergrove, British Columbia V4W 2Z8



Report Date: June 30, 2014

Effective Date: April 28, 2014

## DATE and SIGNATURE PAGE

The undersigned prepared this report titled 'Technical Report on the Mineral Resources of the Northshore Property, Thunder Bay Mining Division, Priske Township, Ontario, Canada', dated June 30, 2014, in support of the public disclosure of technical aspects for the Northshore property by GTA Resources and Mining Inc. The format and content of the report are intended to conform to Form 43-101F1 of National Instrument 43-101 of the Canadian Securities Administrators.

Effective Date: April 28, 2014

Signed on June 30, 2014

Signed by,

*(Signed and Sealed by G. Giroux, P. Eng.)*

*(Signed and Sealed Original Copy On File)*

Gary Giroux, P. Eng.
Consulting Geological Engineer

*(Signed and Sealed by J. D. Blanchflower, P. Geo.)*

*(Signed and Sealed Original Copy On File)*

J. Douglas Blanchflower, P. Geo.
Consulting Geologist

# CERTIFICATE OF QUALIFICATIONS

**I, G. H. Giroux, of 982 Broadview Drive, North Vancouver, British Columbia, do hereby certify that**:

1) I am a consulting geological engineer with an office at #1215 - 675 West Hastings Street, Vancouver, British Columbia.

2) I am a graduate of the University of British Columbia in 1970 with a B.A. Sc. and in 1984 with a M.A. Sc., both in Geological Engineering.

3) I am a member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia.

4) I have practiced my profession continuously since 1970. I have had over 35 years' experience calculating mineral resources. I have previously completed resource estimations on a wide variety of intrusive hosted gold deposits, including Brewery Creek, Kisladag and Red Mountain.

5) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, independence and affiliation with a professional association, I meet the requirements of an Independent Qualified Person as defined in National Instrument 43-101.

6) This report titled "Technical Report on the Mineral Resources of the Northshore Property, Thunder Bay Mining Division, Priske Township, Ontario, Canada' and dated June 30, 2014, is based on a study of the data and literature available on the Northshore Property. I am responsible for the Mineral Resource Estimate Section 14. I have not visited the property.

7) I have not previously worked on this property.

8) As of the date of this 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.

9) I am independent of the issuer applying all of the tests in section 1.5 of National Instrument 43-101.

10) I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated this 30th day of June, 2014

"Signed" G. H. Giroux

**G. H. Giroux, P. Eng., MASc.**

# CERTIFICATE OF QUALIFICATIONS

**I, J. DOUGLAS BLANCHFLOWER, of Aldergrove, British Columbia, DO HEREBY CERTIFY THAT:**

1) I am a Consulting Geologist with a business office at 25856 – 28th Avenue, Aldergrove, British Columbia, V4W 2Z8; and President of Minorex Consulting Limited

2) I am a graduate of Economic Geology with a Bachelor of Science, Honours Geology degree from the University of British Columbia in 1971. I have practised my profession as a Professional Geologist since graduation.

3) I am a Registered Professional Geoscientist in good standing with the Association of Professional Engineers and Geoscientists of British Columbia (No. 19086) and the Association of Professional Geoscientists of Ontario (No. 1913). I am a 'Qualified Person' as defined in Section 1.1 of National Instrument 43-101.

4) I was retained by GTA Resources and Mining Inc. in September 2013 to prepare a technical report on the Northshore property. I visited the property on November 30, 2013, reviewed all 2012 and 2013 exploration results, and collected verification drill core samples. I later reviewed all documented historical exploration results, and prepared and submitted this report.

5) I am responsible for Sections 1 to 13 and 23 to 27 of this report titled 'Technical Report on the Mineral Resources of the Northshore Property, Thunder Bay Mining Division, Priske Township, Ontario, Canada' and dated June 30, 2014. My work is based upon my personal experience, available public government reports and documents, and private exploration data and information provided by GTA Resources and Mining Inc. and Balmoral Resources Ltd.

6) I previously prepared the 'Technical Report on the Northshore Property, Thunder Bay Mining Division, Priske Township, Ontario, Canada', dated May 22, 2012, which is referred to in this report and has been filed on SEDAR.

7) As of the date of this 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.

8) I am independent of GTA Resources and Mining Inc. and Balmoral Resources Ltd. as defined in Section 1.5 of National Instrument 43-101.

9) I have read National Instrument 43-101 and Form 43-101F1, and this technical report has been co-authored by me in compliance with the foregoing Instrument and Form.

Submitted by,

*Signed and Sealed by J. D. Blanchflower, P. Geo.*

*(Signed and Sealed Original Copy On File)*

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**J. Douglas Blanchflower, P. Geo.**
Consulting Geologist

Dated at Aldergrove, British Columbia, Canada this 30th day of June, 2014

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# 1 SUMMARY

The Northshore property (the 'Property') is situated within the Thunder Bay Mining Division in Priske Township, approximately 4 kilometres south of the town of Schreiber, Ontario. It is owned by Balmoral Resources Ltd. ('Balmoral') of Vancouver, B.C. and operated by GTA Resources and Mining Inc. ('GTA') of Burlington, Ontario, subject to a terms of an Option Agreement with Balmoral Resources Ltd. to acquire up to a 70% interest in the Property.

GTA retained Minorex Consulting Limited ('Minorex') in September 2013 to review all available exploration results and recommend further advanced exploration work to develop this Property. Mr. J. D. Blanchflower, a consulting geologist employed by Minorex, visited GTA's drill core storage facility in Schreiber on November 30, 2013. He inspected the 2012 and 2013 drill core, collected verification drill core samples, reviewed all aspects of past and recent exploration campaigns with GTA geological personnel, and modelled the known mineralization based upon drilling and assay information provided by GTA. Mr. G. Giroux, a consulting geologist employed by Giroux Consultants Ltd. ('Giroux'), estimated the mineral resources within the Afric Zone situated centrally within the Property. These geologists, both independent qualified persons according to NI 43-101, then prepared this technical report (the 'Report') in accordance with disclosure and reporting requirements set forth in the Canadian Securities Administrators' National Instrument 43-101 ('NI 43-101'), Companion Policy 43-101CP, and Form 43-101F1 (Standards of Disclosure for Mineral Properties) to be a comprehensive review of the exploration activities and current estimated mineral resources on the Property.

## 1.1 Executive Summary

### 1.1.1 Conclusions

Gold mineralization within the Afric Zone is hosted by Archean-age felsic to intermediate porphyritic and syenitic intrusive rocks that have undergone pervasive but variable silicification, pyritization and sericitization with local tourmalinization and potassic alteration, and brittle deformation and fracturing. Quartz and quartz carbonate veins, veinlets, stringers and fracture infillings are commonly mineralized with pyrite and minor to trace amounts of chalcopyrite, sphalerite, galena, molybdenite, and often visible gold and electrum.

A total of 100 diamond drill holes, totalling a reported 19,547 metres of drilling, have now been completed on the Property, of these GTA has completed 52 diamond drill holes, totalling 11,390 metres of NQ-size core drilling. This drilling has been largely focused on testing the gold mineralization within the Afric Zone. Current drilling results show that this zone underlies an area measuring at least 500 by 350 metres and the gold-bearing mineralization has been shown to extend vertically to at least a depth of 350 metres beneath the surface. The Afric Zone remains open for expansion both at depth and to the northeast. In addition, the newly-discovered Gino vein structure hosting significant gold-bearing mineralization and situated 250 m north of the Afric Zone represents an excellent exploration target that remains open for expansion both laterally and downdip.

It is estimated that the drill-tested portion of the mineralized Afric Zone hosts Indicated mineral resources of 12.36 million tonnes grading 0.99 gpt gold at a cut-off grade of 0.50 gpt gold, representing approximately 391,000 contained ounces of gold. Furthermore, there are an estimated 29.58 million tonnes of Inferred mineral resources grading 0.87 gpt gold at the same cut-off grade, representing approximately 824,000 ounces of gold. These mineral resources are undiluted and assume that they could be extracted to the limits of the mineralized solid and do not include any external waste or internal dyke material. Furthermore, the mineral resource estimate assumes 100% recoveries since there has been no definitive metallurgical testwork carried out on the gold-bearing mineralization.

A second set of mineral resource estimates for the same block model reports a mineral resource if the entire 10 by 10 by 5-metre block was mined including waste and barren to very weakly mineralized dyke material. Thus, there are Indicated mineral resources of 12.16 million tonnes grading 0.98 gpt gold at a cut-off grade of 0.50 gpt gold, representing approximately 382,000 contained ounces of gold. Furthermore, there are an estimated 29.12 million tonnes of Inferred mineral resources grading 0.86 gpt gold at the same cut-off grade, representing approximately 804,000 ounces of gold. The same assumption of 100% recoveries was applied to these mineral resource estimates.

Based upon current metal prices and operating expenses in the region, a gold cut-off grade of 0.5 gpt has been highlighted for these resource estimates since it is believed that this value represents a reasonable incremental cut-off grade for exploiting a bulk tonnage gold deposit, such as the Afric Zone, located in northern Ontario with excellent existing infrastructure.

Mineral exploration by its nature has attendant risks and uncertainties from the discovery stage through to advanced mine development. For this reason it is incumbent that the Company minimize the uncertainties and financial risks involved in advanced exploration by continuing systematic in-fill drilling to better interpret the gold mineralization of the Afric Zone and exploratory drilling of adjacent targets, such as the Gino vein structure, that may have the potential for addition mineral resources. Furthermore, the Company must institute environmental and metallurgical studies. The results of these studies will be required in the near future for a recommended economic assessment.

It is the authors' opinion that the Northshore property has very good exploration potential for both lode and bulk-tonnage gold mineralization and may have significant economic potential pending the results of further study. Continued advanced exploration work is warranted.

### 1.1.2 Recommendations

Given that continued exploration work on this Property is warranted, a two-phase exploration program is recommended to advance this project for an economic assessment of both its lode and bulk-tonnage gold mineralization. A description of the recommended exploration program follows.

#### Phase I

- Base-line environmental monitoring should be carried out upon commencement of any future exploration work. This monitoring should be regularly conducted under the supervision of a qualified environmental consultant for a period designated by existing Federal and Provincial regulations;

- Preliminary metallurgical test work should be carried out on three 20-kilogram composite samples that are representative of the near-surface gold mineralization targeted for initial open pit extraction. This study would determine a preliminary gold recovery rate plus grindability and processing characteristics for the mineralized rock;

- Targeted fill-in diamond drilling should be carried out to continue defining the geometry and tenor of the Afric Zone mineralization;

- The Company should file the appropriate documentation in application for an 'Advanced Exploration Closure Plan' ('AECP') and any other permits required prior to the extraction of a large bulk sample from the property; and

- Pending approval of required permits, a 5,000-tonne bulk sample should be extracted and tested for its full metallurgical and processing characteristics under the supervision of a qualified metallurgist.

**Phase II**

- Pending a thorough review of the Phase I results, the base-line environmental monitoring study should be continued in conjunction with initial geotechnical and hydrological studies. Additional diamond drilling will be required for these studies at sites recommended for geotechnical, hydrological and bulk density data collection, plus some drilling will be required to sterilize areas for possible future infrastructure;

- A Preliminary Economic Assessment (PEA') should be prepared for the Project after the results of aforementioned studies and additional diamond drilling have been thoroughly reviewed. This assessment should be prepared by a qualified mining consultant familiar with both mining operational parameters and regulations in Ontario; and

- Following the Phase II work, the results should be thoroughly reviewed and a project report prepared documenting this work for corporate and assessment credit purposes.

### 1.1.3 Proposed Exploration Budget

**Phase I Exploration Budget**

| | |
|---|---|
| Base-line environmental monitoring, analyses, supervision and reporting | CAD $ 100,000 |
| Preliminary metallurgical testing (3 x 20 kg samples) plus supervision, reporting | 30,000 |
| Fill-in diamond drilling (1,200 m @ $200/m all-in; including: drilling, assaying, supervision, etc.) | 240,000 |
| Documentation and filing of appropriate permits and 'Life of Mine' closure documentation | 10,000 |
| Bulk sample collection, road and site upgrades, metallurgical testing, reporting (5,000 tonnes) | 270,000 |
| Contingency | 50,000 |
| **Total Estimated Phase I Expenditures** | **$ 700,000** |

Pending a thorough evaluation of the Phase I results, it is recommended that the following Phase II advanced exploration work should be undertaken.

**Phase II Exploration Budget**

| | |
|---|---|
| Base-line environmental monitoring, analyses, supervision and reporting | CAD $ 100,000 |
| Diamond drilling geotechnical, hydrological and work site sterilization (1,000 m @ $200/m all-in) | 200,000 |
| Geotechnical and hydrological studies, supervision and reporting | 70,000 |
| Preliminary economic assessment study ('PEA') and reporting | 80,000 |
| Contingency | 50,000 |
| **Total Estimated Phase II Expenditures** | **$ 500,000** |
| **Total Estimated Phases I and II Expenditures** | **CAD $1,200,000** |

## 1.2 Technical Summary

### 1.2.1 General Description

The Northshore property (the 'Property') is situated within the Thunder Bay Mining Division in Priske Township, approximately 4 kilometres south of the town of Schreiber, Ontario. It is comprised of 5 patented and 2 unpatented mining claims covering 322.255 hectares or 796.31 acres. The mineral claims are owned by Balmoral Resources Ltd. ('Balmoral') of Vancouver, B.C. and operated by GTA Resources and Mining Inc. ('GTA') of Burlington, Ontario. On July 24, 2011 GTA Resources and Mining Inc. entered into an Option Agreement with Balmoral Resources Ltd. to acquire up to a 70% interest in the Property. This agreement was approved by the regulatory authorities on September 20, 2011.

The Northshore property is readily accessible via the four-wheel drive gravel 'Worthington Bay' road which joins Trans-Canada Highway No. 17 approximately 4.4 kilometres east of the town of Schreiber. The Worthington Bay road leads 5 kilometres south to the shore of Lake Superior where the old Northshore mill was located. The 2011 diamond drilling sites within the Afric Zone are about 1.5 km west of the Worthington Bay road via an upgrade 4-wheel drive road. The city of Thunder Bay has the closest commercial airport to the town of Schreiber and the Property. There are regular daily flights to Thunder Bay from Toronto and elsewhere in Canada, and it is a 260 km, or a 3-hour drive, from Thunder Bay to Schreiber.

The Schreiber area has a humid continental climate with average mean temperatures ranging from -20° C (January) to +20° C (July), and an annual average precipitation of 840 mm. Local lakes will usually start to freeze over in mid-November and thaw in early to mid-May. The Property is situated on the rugged northern shore of Lake Superior with considerable relief. The land rises steeply from the lake shore with elevations ranging from approximately 625 m along the shore of Lake Superior to 1,375 m along the northern property boundary. The Property is extensively covered by a mixture of spruce and fir trees with moderate undergrowth in poorly drained areas, and birch and alder and thinner undergrowth along hillocks. Bedrock exposures are quite common along cliffs, steep slopes and ridge tops, but elsewhere outcrop is scarce except where exposed by road cuts or trenches. Exploration work could be carried out year-round.

There is no useable surface mining infrastructure on the Property. The nearby cities of Marathon, to the east, and Thunder Bay, to the west, are dominated by the mining and logging industries respectively where an experienced labour pool and all types of exploration and mining services are readily available.

There are adequate areas within the Property available for potential tailings storage, waste disposal and processing plant sites. In addition, the Trans-Canada Highway is within 4 km of the Property and there is abundant water for exploration and possible development purposes, plus the CP Rail railroad and a major power transmission line are situated within 2 to 3 km of the claim holdings.

Gold was first discovered within the BJ 122 mining claim by Peter McKellar in 1898. Between 1920 and 1937 W. L. Longworth (later McKellar-Longworth Ltd.) operated the claim, discovered 14 veins and later mined the 'Main' vein with a series of adits and underground workings. North Shores Gold Mines Limited was later formed in 1933, a 25-ton mill was built in 1934 at Worthington Bay on the shore of Lake Superior, and gold production began in 1935. Mine production ceased in 1937 after 3,808 tons of ore were milled yielding 2,441 ounces of gold and 226 ounces of silver. From 1939 to 1980 several operators acquired the Northshore property, but none reportedly carried out any advanced development or production. In 1980 Autotrac Limited acquired all of the Northshore patented and unpatented mining claims, and in 1988 optioned their property to Noranda Exploration Company Ltd. which later became Hemlo Gold Inc. Over the next four years

Noranda/Hemlo Gold carried out a comprehensive exploration program that led to the discovery of lode gold mineralization at the Afric Zone and five other lode gold occurrences, in addition to the mined Northshore Zone.

In mid-1997 Cyprus Canada Inc. optioned the Northshore property from Autotrac Limited and conducted an aggressive exploration program focused on discovering a low grade, bulk-tonnage gold deposit. Their work failed to fulfill their goal but it did show that the Property was underexplored and that there are “numerous, high grade zones” on the Property that were poorly explored.

International Taurus Resources Inc. purchased the Autotrac Limited patented and unpatented mining claims in 1999, and later became American Bonanza Gold Corp. From 2005 to 2008 American Bonanza Gold Corp. carried out two drilling campaigns, trenching, rock geochemical sampling and limited prospecting. The results of their work confirmed the locations and tenor of the six or seven known lode gold occurrences. In January 2011, American Bonanza Gold Corp. transferred 100% of their interest in the Property to Balmoral Resources Ltd. No reported exploration work was carried out by Balmoral until the option agreement with GTA in July 2011.

GTA carried out surface sampling of the exposed Audney, Caly and Caly North gold-bearing veins within the Afric Zone during September 2011 and later completed twelve NQ-size diamond drill holes, totalling 1,038 metres, during the latter half of October 2011. The diamond drilling program focused on evaluating the three sampled vein structures where surface rock samples had returned significant to high gold values. The drill core logging and sampling work was carried out at GTA’s field office/warehouse facility in Schreiber, Ontario where the drill core is currently being stored. The 2011 exploration program utilized handling, logging, sampling, QA/QC, security and storage procedures compliant with current industry-standard practises and within NI 43-101 guidelines.

### 1.2.2 Geological Setting

The Schreiber area is underlain by Archean-age rocks that form the western portion of the Hemlo-Schreiber greenstone belt of the Superior structural province. The Property is underlain by northeasterly trending felsic to intermediate and mafic volcanics that have been intruded by syenitic to dioritic and feldspar porphyritic (± quartz) stocks. Northwesterly-trending diabase and lamprophyre dykes crosscut the sequence. These lithologic units are regionally altered to greenschist facies, and have been affected by at least one major episode of deformation which folded the supracrustal rocks along east-southeasterly axes and imposed a pervasive regional foliation. Northeasterly and northwesterly faulting and fracturing within the Property appear to be parasitic structures to the Worthington Bay and Schreiber Point strike-slip faults that bound most of the known mineral occurrences on the east and west respectively.

The gold mineralization on the Property is genetically associated with quartz and quartz-carbonate veins, quartz-carbonate (± tourmaline) vein stockworks and minor base-metal sulphide mineralization. The Audney, Caly and Caly North quartz-carbonate veins within the main Afric Zone host locally coarse, high grade gold mineralization. These two vein structures strike east-northeasterly, vary in true widths from less than 5 cm to 60 cm, and have been traced by drilling to a vertical depth of at least 125 m. They commonly have poorly defined selvages with narrower subparallel veins, veinlets and infilled fractures hosting native gold, electrum and other gold-bearing mineralization. They may also host pyrite with trace to minor amounts of tourmaline, chalcopyrite, sphalerite, galena and molybdenite. These east-northeasterly to northeasterly trending vein structures appear to be structurally related to conjugate, dilational fracturing associated with northwesterly trending extensional fracturing and north-northeasterly displacements along the Worthington Bay and Schreiber Point faults.

There are numerous narrow quartz and quartz-carbonate (± tourmaline) vein and veinlets throughout the Afric Zone subparalleling the better defined Audney, Caly and Caly North vein structures. These narrow veins may occur individually or collectively as vein stockworks often hosting considerable gold values as native gold, electrum and gold-bearing sulphide mineralization. In addition, gold mineralization is associated with the pyritized feldspar (+/- quartz) porphyritic and syenitic intrusive host rocks. Gold mineralization appears to be genetically associated with the hydrothermal alteration of the host intrusive rocks that produced finely-disseminated to blebby pyrite and extensive zones with pervasive ankerite (iron-carbonate) alteration associated with variable sericitization and potassic alteration, especially in close proximity to the syenitic intrusive body. Gold-bearing pyrite mineralization seems to be more concentrated at or near the loci of northeasterly and northwesterly trending fracturing.

Significant gold mineralization also occurs associated with several pyrite, chalcopyrite and/or arsenopyrite-bearing shear zones and veins elsewhere on the Property that may also carry locally elevated silver values. Past operators have suggested that this style of mineralization may be genetically related to volcanogenic massive sulphide mineralization known elsewhere in the Archean-age sequence.

### 1.2.3 2012 and 2013 Exploration Work

In 2012 GTA carried out two phases of diamond drilling (i.e. Phases 2 and 3), totalling 7,188 metres, plus drill hole surveying, and property-wide prospecting and detailed geological mapping.

The Phase 2 diamond drilling program was undertaken between March 6th and May 11th, 2012 spanning the spring break-up period. Eight drill holes, designated WB-12-13 to WB-12-20, were completed totalling 2,431 m of NQ-size diamond drilling.

The most significant results from this drilling included: drill hole WB-12-15 with an intercept averaging 0.90 gpt gold over a drilling length of 143 metres (4.00 to 147.00 m) including four separate one-metre intercepts ranging from 8.98 to 18.2 gpt gold; drill hole WB-12-17 with an intercept averaging 0.53 gpt gold over a drilling length of 82 metres (144.00 to 226.00 m) including two separate half-metre intercepts of over 13 gpt gold; and drill hole WB-12-18 with an intercept averaging 1.09 gpt gold over a drilling length of 90.50 metres (59.50 to 142.50 m) and a higher grade vein section grading 44.2 gpt gold over 0.5 metres (372.00 to 372.50 m) (GTA, 2012). All intercepts are drilled lengths, not true widths due to insufficient drilling data.

During May 2012 GTA contracted two prospectors to locate and sample the historic trenches plus GPS survey existing grid-lines, drill hole collars, adits and shafts. Seventy-five rock samples were collected during this prospecting work. Eight rock samples returned gold grades in excess of 1 gpt with one sample (E5442606), from a 0.5-cm wide quartz-carbonate-sulphide vein situated near the portal of the Eastern Adit, returning grades of 6.82 and 6.26 gpt gold (GTA, 2013).

GTA later contracted geologists to carry out property-wide, 1:1000-scale geological mapping focusing on: delineating the surface mineralization and identifying the sulphide contents of the various Afric intrusive rocks, mapping the attitude of the barren diabase dyke set, and detailed mapping and sampling of historic trenches and stripped outcrop areas.

In July 2012 ten large surface grab samples of quartz vein material were collected along the exposed portion of the Audney vein structure. These ten samples were shipped to ALS Metallurgical in Kamloops, British Columbia for preliminary metallurgical testing. The assayed 'head' grades of these samples reportedly ranged from 47 to 716 gpt gold with a weighted average grade of 230 gpt gold. Given the high gold grades of these samples it was decided that they were not representative of local mineralization and no further metallurgical work was undertaken.

Based upon recommendations by federal and provincial inspectors GTA filled-in the Northshore No. 4 shaft located alongside the Casque Iles section of the Voyageur hiking trail.

The Phase 3 diamond drilling program was undertaken from August 13th to October 2nd, 2012. Sixteen drill holes, designated WB-12-21 to WB-12-35, were completed totalling 4,757 m of NQ-size diamond drilling. Following this drilling GTA contracted the surveying of all 2011 and 2012 drill hole collars, access roads, plus the located historic drill hole collars, adits and shafts. In addition, a petrographic study was initiated to better understand the controls and associations related to the distribution of gold mineralization on the Property.

Drill holes WB-12-21 to WB-12-25 were drilled to test the northeastern extension of the Audney Vein and the broader Afric Zone and holes WB-12-26 and WB-12-27 were drilled to test the southwestern extensions. The highest assays of these first 7 holes included 47.2 gpt gold and 31.6 gpt gold (each over a core length of 0.5 metres) from holes WB-12-26 and WB-12-27 respectively (GTA, 2012).

Drill holes WB-12-32 and WB-12-33 tested the depth extent of the Afric Zone. Drill hole WB-12-33 intersected 68.0 metres (421.00 to 489.0 m) of gold mineralization with an average grade of 1.37 gpt gold including a higher grade section grading 12.16 gpt gold over a core length of 4.0 metres (421.0 to 425.0), representing one of the deepest gold intersections at approximately 390 metres vertically beneath the surface. This drill hole was also terminated in gold mineralization at a drilling length of 563 m.

Drill holes WB-12-29, WB-12-30 and WB-12-35 were located to test the northeastern extension of the Afric Zone at depth. Drill hole WB-12-29 intersected significant gold mineralization between drilling lengths of 9.2 to 84.0 metres (74.8 m) and 229.0 to 287.0 metres (58.0 m) averaging 1.12 and 1.54 gpt gold respectively including several 0.5- to 1.0-metre intercepts in excess of 20 gpt gold. Drill hole WB-12-35 intersected gold mineralization graded 1.06 gpt across a drilling length of 16.0 metres (413.0 to 429.0 m). These mineralized drilling intercepts occur approximately 200 to 330 m vertically below surface indicating the mineralization had both significant depth and strike extension.

GTA carried out two more phases (i.e. Phases 4 and 5) of diamond drilling in 2013. The Phase 4 diamond drilling program was carried out between March and May, spanning the spring break-up period. Twelve drill holes, designated WB-13-36 to WB-13-47, were completed totalling 2,313 m of NQ-size diamond drilling. This drilling focused on testing the eastern and northeastern extensions of the Afric Zone.

Drill holes WB-13-37 and WB-13-38 returned mineralized intercepts of 2.50 gpt gold over a drilling length of 13.0 metres (88.0 to 101.0 m) and 1.47 gpt gold over a drilling length of 70.0 metres (110.5 to 180.5 m) respectively. These drill intercepts confirmed the strike continuity of the East Extension for a distance of 170 from the central Afric Zone.

Drill holes WB-13-39 and -40 tested the Northeast Extension approximately 130 metres northeast of the central Afric Zone. Drill hole WB-13-39 intersected 4.77 gpt gold over a drilling length of 8.0 metres (46.0 to

54.0 m) within a wider zone grading 1.35 gpt gold over 34.2 m (29.8 to 64.0 m). Drill hole WB-13-40 tested the downdip extension, 50m beneath the mineralization, and intersected 7.97 gpt over a drilling length of 1.5 metres (101.0 to 102.5 m) within a 49.0-metre section (73.0 to 122.0 m) grading 0.53 gpt gold.

Drill holes WB-13-41, -42 and -46 continued testing the Eastern and Northeastern Extensions respectively. Drill hole WB-13-41 intersected gold mineralization grading 8.56 gpt gold over a drilling length of 1.5 m (192.5 to 194.0) within a wider zone grading 0.51 gpt gold over a drilling length of 102.0 metres (92.0 to 194.0 m). Drill hole WB-13-42 intersected 1.45 gpt gold over a drilling length of 6.0 metres (54.5 to 60.5 m). Drill hole WB-13-46 tested the Northeast extension intersecting gold mineralization between 137.0 metres and the end of the hole at 200.0 metres. This 63.0-metre drilling interval returned an average grade of 0.59 gpt gold including 7.45 gpt gold over 1.5 metres (197.0 to 198.5 m).

Drill holes WB-13-43, -44 and -45 were sited to test the western extension of the Afric Zone, called the 'Pup Extension'. Drill hole WB-13-44 returned 0.66 gpt gold over a drilling length of 196.5 metres (33.5 to 230.0 m) including a higher grade section of 3.14 gpt gold over a core length of 13.0 metres (114.0 to 127.0 m). Drill hole WB-13-43, drilled on the same cross-section but 40 metres up-dip, intersected a faulted section of the Audney quartz vein that graded 59.96 gpt over a drilling length of 3 metres (65.0 to 68.0 m) including a one-metre section (65.0 to 66.0 m) with visible gold that graded 178.0 gpt gold. Drill hole WB-13-45 also intersected the Audney vein returning 4.07 gpt gold over a core length of 1.5 metres (74.0 to 75.5 m).

Drill hole WB-13-47, the final hole of the Phase 4 drilling, discovered the 'Gino' vein structure in the intervening area between the Afric Zone and the past-producing Northshore underground mine. This drill hole returned two intercepts of significant gold mineralization associated with quartz veining. There is a near-surface intersection of 5.23 gpt gold over a drilling length of 6.0 metres (17.0 to 23.0 m), including 19.20 gpt gold over 1.5 metres (18.5 to 20.0 m), and a deeper intersection between the drilling length of 104.0 and 105.0 metres that graded 8.85 gpt gold. Multiple visible gold grains were reported in the deeper vein intersection. The drilling results suggested that the Gino vein structure sub-paralleled the Northshore vein system and was open along strike and downdip.

In late October 2013 GTA completed an additional 5 diamond drill holes during their Phase 5 drilling program. The Phase 5 drill holes, designated WB-13-48 to WB-13-52, totalled 853 m of NQ-size diamond drilling. The first three holes, drill holes WB-13-48, WB-13-49 and WB-13-50 intersected the steeply dipping, east-west trending quartz-carbonate Gino vein structure. Significant mineralized intercepts included: 46.4 gpt gold over a drilling length of 1.0 metre (101.0 to 102.0 m) in drill hole WB-13-48; 41.6 gpt gold over a drilling length of 1.0 metre (110.0 to 111.0 m) in drill hole WB-13-49; and 6.38 gpt gold over a drilling length of 2.0 metres (146.0 to 148.0 m) in drill hole WB-13-50. All of these intercepts occur at vertical depths of less than 125 metres.

Drill holes WB-13-51 and -52 continued testing the Afric Zone. Drill hole WB-13-51 intersected a higher grade interval of 9.47 gpt gold over a core length of 9.0 metres (159.5 to 168.5 m) within a 201-metre wide zone (23.0 to 224.0 m) of anomalous gold returning a length-weighted average grade of 0.73 gpt gold. Drill hole WB-13-52 intersected a 192-metre drilled section (20.0 to 212.0 m) of the Afric Zone that returned a length-weighted average grade of 0.54 gpt gold, including a drilled length of 1.5 metres (179.0 to 180.5 m) grading 16.80 gpt gold.

A total of 100 diamond drill holes, totalling a reported 19,547 metres of drilling, have now been completed on the Property of which GTA has completed 52 diamond drill holes, totalling 11,390 metres of NQ-size core drilling since September 2011,. This drilling has been mostly focused on testing the gold mineralization within the Afric Zone. Current drilling results show that this zone underlies an area measuring at least 500 by 350 metres and the gold-bearing mineralization has been shown to extend vertically to a depth of 350 metres beneath the surface. The Afric Zone remains open for expansion both at depth and to the northeast. In addition, the newly discovered Gino vein structure hosting significant gold-bearing mineralization represents an excellent exploration target that remains open for expansion both laterally and downdip.

### 1.2.4 Mineral Resource Estimate

G. H. Giroux, P. Eng., of Giroux Consultants Ltd. was retained to prepare a mineral resource estimate on the Northshore property. He is independent of both the issuer and the vendor applying all of the tests in Section 1.5 of NI 43-101, and he has not visited the property.

The geological model was constructed by J. D. Blanchflower, P. Geo., from vertical and horizontal cross-sections spaced 25 metres apart using Gemcom software. A broad mineralized solid was utilized to constrain the resource estimation within the Afric Zone, excluding the adjacent Gino and Northshore vein structures. Several northwesterly trending, barren to weakly mineralized, post-mineral diabase dykes cross-cut the mineralized Afric Zone, and these features were also modelled.

The current drilling and assay data base is comprised of 100 drill holes with 479 downhole surveys and 13,777 gold assays. Of these, 432 assays were less than 0.001 gpt gold and were set to 0.001 gpt gold, and there was a total of 473 missing sampling intervals for which a value of 0.001 gpt gold was inserted. Of the 100 diamond drill holes in the database, 87 intersected the mineralized solid and were coded according to their lithologic domains.

The gold grade distribution for all domains was evaluated using lognormal cumulative frequency plots. A total of 7 overlapping gold populations were identified within the mineralized solid. There are 2 assay samples in Population 1 representing erratic high grade outliers that were capped at 180 gpt gold (i.e. 2 standard deviations above the mean). Populations 2, 3, 4 and 5 represented the higher grade veins and stockwork mineralization. Population 6 represented the low grade mineralization that surrounds the higher grade veins and stockworks, and finally Population 7 represented internal waste within the mineralized solid. Each of the domains were examined and an appropriate capping level was chosen to try and remove the effect of erratic high grade samples. Capping reduced the coefficients of variation significantly in all domains.

A composite length of 2.5 m was chosen to best fit the data and be an even multiple for a possible 5-metre bench height. Within each domain uniform downhole composites 2.5 m in length were formed to honour the domain boundaries. At the edges of the domain solids samples less than 1.25 m were combined with adjoining samples while those greater than 1.25 were left intact. In this manner a uniform support was achieved at 2.5 ± 1.25 m.

Since it was not possible to model the individual narrow, higher grade vein structures, a method to avoid over smearing was used, called ‘Indicator Kriging’. With this interpolation method the higher grade mineralization is separated for semivariogram analysis, estimated separately and then brought back to determine an overall block grade. A threshold separating the predominantly low grade mineralized material from the higher grade mineralization was determined statistically at 1.4 gpt gold. Semivariograms were then produced for both the indicator and lower grade composites. The indicator value was then kriged for every block representing the probability of finding the high grade populations in each block.

Following pairwise semivariogram analyses, a block model with blocks 10 x 10 x 5 metres was superimposed over the geologic solids with the percent below topography, percent below bedrock, percent inside mineralized solid and percent inside dykes recorded in each block. Based upon specific gravity analyses conducted by AGAT Laboratories in Mississauga, Ontario an average bulk density value of 2.74 g/cm$^3$ was used to convert volumes to tonnes.

Gold grades were interpolated into blocks using Ordinary Kriging and an Indicator approach. A gold grade for low grade (Au ≤ 1.4 g/t) was first estimated for blocks within the mineralized solid using composites within the mineralized solid that were ≤ 1.4 g/t Au. Next, the higher grade indicator variable was estimated for each block using the indicator variable for all composites within the mineralized solid.

For all variables, the kriging was completed in a series of 4 passes with the search ellipsoid for each pass tied to the range of the semivariogram. For pass 1 the dimensions of the search ellipsoid were equal to ¼ of the semivariogram range in each of the three principal directions. A minimum of 4 composites were needed to estimate a block with a maximum of 3 from any one drill hole. In this manner all blocks required a minimum of 2 drill holes within the search volume to make an estimate. For blocks not estimated in Pass 1 a second pass was made with the search ellipsoid dimensions expanded to ½ the semivariogram range. A third pass using the full range and a fourth pass using twice the range completed the exercise. Due to the fewer number of high grade composites a fifth pass was required to estimate the high grade gold value. For blocks containing some percentage of dyke material the average grade of the dykes, a value of 0.015 gpt gold, was assigned. Blocks containing some percentage of material outside the mineralized solid were estimated using composites from outside the solid. The total gold grade for each 10 x 10 x 5 m block was then a weighted average grade.

Delineated mineralization was classified as a resource according to the definitions from National Instrument 43-101 and CIM (2005). The geological continuity of the mineralization within the Afric Zone has been established by surface geological mapping, trench sampling and diamond drilling. Grade continuity can be quantified by semivariogram analysis. Thus, the classification of mineral resources within the Afric Zone was 'Indicated' if the mineralized solid blocks were estimated during pass 1 and 2 using search ellipses with dimensions up to ½ the semivariogram range. All remaining blocks were classified as Inferred. While one drill hole extends below –100 m AMSL elevation the majority do not and, thus, the mineral resource is only reported above the -100 m AMSL elevation.

The results are tabulated for a series of gold cut-off values for the percentage of blocks within the mineralized solid. These tables assume no dilution from any external waste or dyke material. Also, there are no metallurgical testwork results available so a recovery of 100% is assumed. In addition, without an economic study a gold cut-off of 0.50 g/t has been highlighted as a possible open pit cut-off value based upon current metal prices and regional operating expenses where there is excellent existing infrastructure.

**Indicated Resource within the Mineralized Solid**

| Au Cut-off (g/t) | Tonnes > Cut-off (tonnes) | Grade > Cut-off | |
|---|---|---|---|
| | | Au (g/t) | Contained Ounces Au |
| 0.20 | 27,980,000 | 0.61 | 549,000 |
| 0.25 | 23,320,000 | 0.69 | 516,000 |
| 0.30 | 19,990,000 | 0.76 | 487,000 |
| 0.40 | 15,400,000 | 0.88 | 435,000 |
| **0.50** | **12,360,000** | **0.99** | **391,000** |
| 0.60 | 10,080,000 | 1.08 | 351,000 |
| 0.70 | 8,230,000 | 1.18 | 313,000 |
| 0.80 | 6,650,000 | 1.28 | 275,000 |
| 0.90 | 5,350,000 | 1.39 | 239,000 |
| 1.00 | 4,180,000 | 1.52 | 204,000 |
| 1.20 | 2,560,000 | 1.78 | 147,000 |

**Inferred Resource within the Mineralized Solid**

| Au Cut-off (g/t) | Tonnes > Cut-off (tonnes) | Grade > Cut-off | |
|---|---|---|---|
| | | Au (g/t) | Contained Ounces Au |
| 0.20 | 63,490,000 | 0.58 | 1,184,000 |
| 0.25 | 54,160,000 | 0.64 | 1,116,000 |
| 0.30 | 48,890,000 | 0.68 | 1,070,000 |
| 0.40 | 38,740,000 | 0.77 | 955,000 |
| **0.50** | **29,580,000** | **0.87** | **824,000** |
| 0.60 | 21,720,000 | 0.98 | 686,000 |
| 0.70 | 16,140,000 | 1.10 | 570,000 |
| 0.80 | 12,090,000 | 1.22 | 472,000 |
| 0.90 | 8,640,000 | 1.36 | 378,000 |
| 1.00 | 6,420,000 | 1.51 | 311,000 |
| 1.20 | 4,210,000 | 1.73 | 233,000 |

***Indicated Mineral Resource***

*"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 drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed."*

*"Mineralization may be classified as an Indicated Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such as to allow confident interpretation of the geological framework and to reasonably assume the continuity of mineralization. The Qualified*

*Person must recognize the importance of the Indicated Mineral Resource category to the advancement of the feasibility of the project. An Indicated Mineral Resource estimate is of sufficient quality to support a Preliminary Feasibility Study which can serve as the basis for major development decisions."*

***Inferred Mineral Resource***

"*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, workings and drill holes."*

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

The interpolated block model was verified using swath plots where the average grades for gold from composites are compared with the average grades from estimated blocks in three principal directions: North-South, East-West and bottom to top. The interpolated block model was also verified by visually comparing the block model interpolated grades with the gold composited grades along drill hole traces at 10-metre intervals north-south and east-west. There is no indication of any bias and the estimated grades seem reasonable based on available data.

# 2 INTRODUCTION and TERMS OF REFERENCE

## 2.1 Introduction and Terms of Reference

The Northshore property is situated in Priske Township, approximately 4 kilometres south of the town of Schreiber, Ontario, on the northern shore of Lake Superior. It is comprised of 5 patented and 2 unpatented mining claims covering 322.255 hectares or 796.31 acres. The mineral claims are owned by Balmoral Resources Ltd. of Vancouver, B.C. and operated by GTA Resources and Mining Inc. ('GTA') of Burlington, Ontario, subject to the terms of an Option Agreement dated July 24, 2011 and approved by regulatory authorities on September 20, 2011.

GTA retained Minorex Consulting Limited ('Minorex') in September 2013 to review all available exploration results pertaining to this Property and recommend further exploration work to advance the development of the Property. Mr. J. D. Blanchflower, a consulting geologist employed by Minorex, visited GTA's drill core storage facility in Schreiber on November 30, 2013. He inspected the 2012 and 2013 drill core, collected verification drill core samples, reviewed all aspects of past and recent exploration campaigns with GTA geological personnel, and modelled the known mineralization based upon drilling and assay information provided by GTA. Mr. G. Giroux, a consulting geologist employed by Giroux Consultants Ltd. ('Giroux'), estimated the mineral resources and has not visited the Property.

These geologists, both independent qualified persons according to NI 43-101 Section 1.5, then prepared this technical report (the 'Report') in accordance with disclosure and reporting requirements set forth in the Canadian Securities Administrators' National Instrument 43-101 ('NI 43-101'), Companion Policy 43-101CP, and Form 43-101F1 (Standards of Disclosure for Mineral Properties) to be a comprehensive review of the exploration activities and currently known mineral resources on the Property. It is intended to be read in its entirety.

The Effective Date of this technical report is April 28, 2014.

## 2.2 Site Visit

Mr. Blanchflower has visited the Northshore property on November 2 2011, August 21 2012 and lately on November 30 2013. During his earlier visits he examined the sites of the 2011 and 2012 diamond drill holes, in addition to examining the drill core and collecting verification samples. During his latest property visit he could only examine the drill core from the later 2012 and 2013 drilling campaigns and collect verification drill core samples. Unfortunately, due to a heavy snowfall at the time, vehicle access to the property was not possible. However, all aspects of the 2012 and 2013 drilling campaigns were reviewed with GTA geological personnel, including: local lithological and structural features, drilling results, sampling and shipping procedures, geological logging techniques, surveying methods and documentation procedures.

## 2.3 Sources of Information

GTA provided the authors with recent exploration data, including reports, maps, and other public and private information pertaining to the Property. In addition, the authors have downloaded several pertinent geological and assessment reports that are publicly available from the Ontario Ministry of Northern Development and Mines' (aka 'Geology Ontario') website (http://www.geologyontario.mndm.gov.on.ca/gosportal/gos).

Mr. J. D. Blanchflower prepared a 43-101 technical report on this property, titled 'Technical Report on the Northshore Property, Priske Township, Ontario, Canada', and dated May 22, 2012. This report documented the Property's exploration history and the exploration work carried out by GTA to October, 2011. Several sections of this technical report have been quoted from the May 2012 report.

Ms. Caroline Vallat, P. Geo., was retained by GTA to supervise the Company's quality assurance and quality control (QA-QC) program during the 2011, 2012 and 2013 drilling programs, and maintain an up-to-date assay database for all drilling results. GTA provided the authors of this report with Ms Vallat's 2014 QA-QC report and assay database. Mr. Blanchflower accepts full responsibility for the QA-QC work and results documented by Ms. Vallat.

The information provided by GTA and that available from public sources appears to be of good quality and the authors have no reason to believe that any of the information is incomplete or inaccurate. Technical reports and other documents used in the preparation of this Report are listed in the Section 27 ('References') of this report.

## 2.4 Acknowledgements

The authors wish to thank Mr. Wayne Reid, Chief Executive Officer and Director for GTA, and Mr. Robert Duess, Vice President of Exploration and Director for GTA. Both Messrs. Duess and Reid accompanied Mr. Blanchflower during his latest examination of the 2012 and 2013 drill core in Schreiber and provided detailed exploration information data on the Property during the preparation of this Report.

## 2.5 Abbreviations and Units of Measure

Metric units are used throughout this report and any reference to funds are in Canadian Dollars (CAD$). Market gold or silver metal prices are reported in US$ per troy ounce. A list of abbreviations that may be used in this report is provided below.

| | | | |
|---|---|---|---|
| % | per cent | l | litre |
| AA | atomic absorption | li | limonite |
| Ag | silver | m | metre |
| AMSL | above mean sea level | $m^2$ | square metre |
| As | arsenic | $m^3$ | cubic metre |
| Au | gold | Ma | million years ago |
| AuEq | gold equivalent grade | mg | magnetite |
| Az | azimuth | mm | millimetre |
| b.y. | billion years | $mm^2$ | square millimetre |
| CAD$ | Canadian dollar | $mm^3$ | cubic millimetre |
| cl | chlorite | mn | pyrolusite |
| cm | centimetre | Moz | million troy ounces |
| $cm^2$ | square centimetre | ms | sericite |
| $cm^3$ | cubic centimetre | Mt | million tonnes |
| cc | chalcocite | mu | muscovite |
| cp | chalcopyrite | m.y. | million years |
| Cu | copper | NI 43-101 | National Instrument 43-101 |
| cy | clay | opT | ounces per short ton |
| °C | degree Celsius | oz | troy ounce (31.1035 grams) |
| °F | degree Fahrenheit | Pb | lead |
| DDH | diamond drill hole | pf | plagioclase |
| ep | epidote | ppb | parts per billion |
| ft | feet | ppm | parts per million |
| $ft^2$ | square feet | py | pyrite |
| $ft^3$ | cubic feet | QA | Quality Assurance |
| g | gram | QC | Quality Control |
| gl | galena | qz | quartz |
| go | goethite | RC | reverse circulation drilling |
| GPS | Global Positioning System | RQD | rock quality description |
| gpt | grams per tonne | Sb | antimony |
| ha | hectare | SG | specific gravity |
| Hg | mercury | sp | sphalerite |
| hm | hematite | st | short ton (2,000 pounds) |
| ICP | induced coupled plasma | t | tonne (1,000 kg or 2,204.6 lbs) |
| kf | potassic feldspar | to | tourmaline |
| kg | kilogram | um | micron |
| km | kilometre | US$ | United States dollar |
| $km^2$ | square kilometre | Zn | zinc |

# 3 RELIANCE ON OTHER EXPERTS

The authors were not involved in any exploration work on the Property, and therefore this report has made extensive reference to the works undertaken by other qualified geologists and professional field personnel. Other non-project specific reports by qualified personnel have been referenced whenever possible. The information, conclusions, opinions and recommendations are based upon:

- information available to the author at the time of the preparation of this report;
- assumptions, conditions and qualifications as set forth in this report; and
- data, reports and other information provided by GTA and other third party sources.

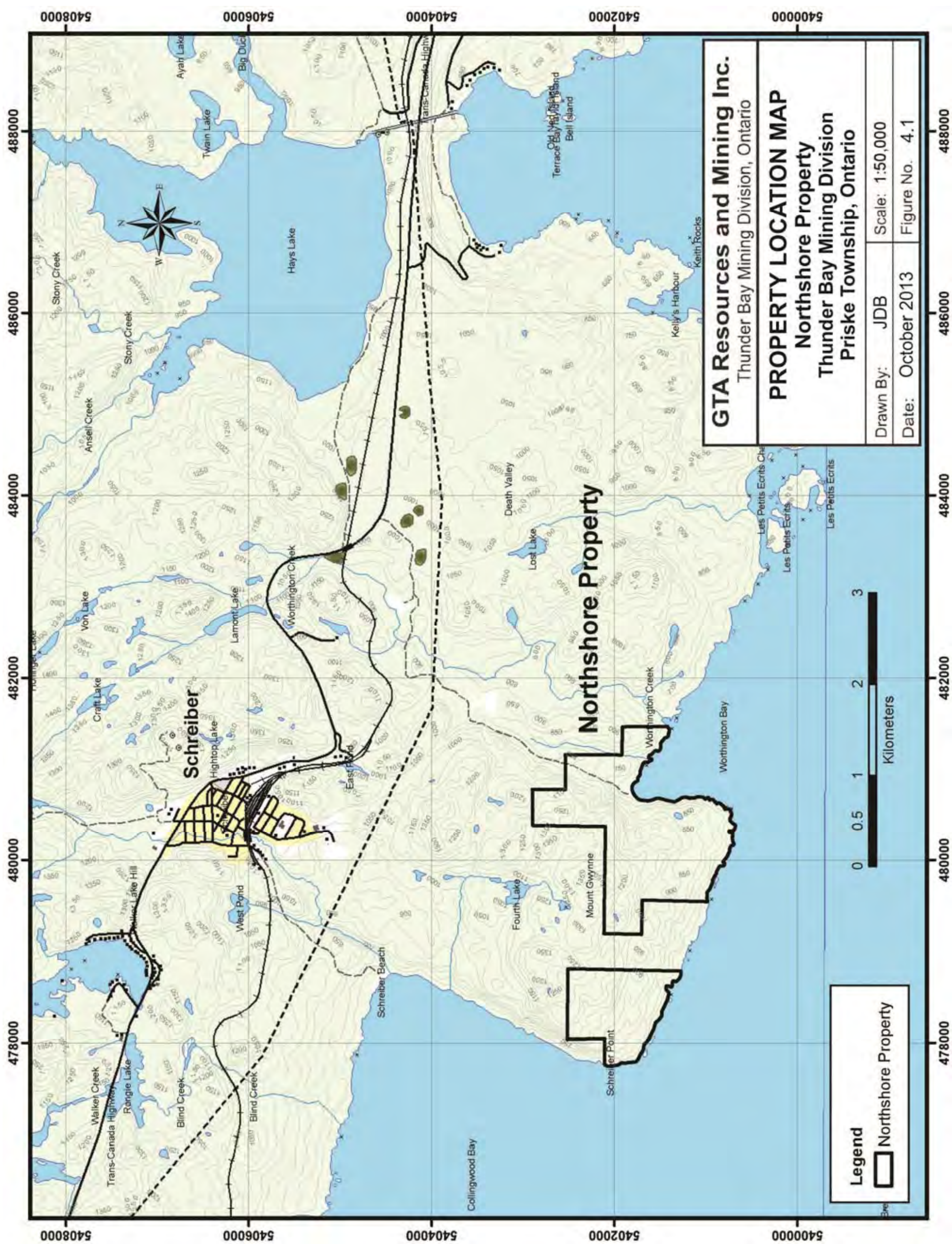
Messrs. Reid and Duess accompanied Mr. Blanchflower during his property examination and provided information on all aspects of the recent exploration work. The authors have reviewed all of the readily available exploration and assessment reports pertaining to this property. This exploration information is of good quality, and there is no reason to believe that any of the information is incomplete or inaccurate.

GTA employed Ms. Caroline Vallat, P. Geo., to analyse and document the procedures and analytical results from the 2012 and 2013 Quality Assurance and Quality Control (QA/QC) work conducted by GTA. Her report on this work accompanies this report in Appendix III. Mr. Blanchflower accepts full responsibility for the work and results documented by Ms. Vallat.

On September 25, 2013, the author confirmed the status of the subject mineral claims with information provided on the MNDM mineral titles website (http://www.mndm.gov.on.ca/mines/claimaps_e.asp). The unpatented mineral claims appear to be properly located, recorded and currently valid. However, such an online mineral claim check does not constitute a legal title opinion, and no legal title opinion has been provided to the authors by GTA.

The authors are not experts in legal matters, such as the assessment of the legal validity of mining claims, mineral rights, and property agreements. The authors did not conduct any detailed investigations of the environmental or social-economic issues associated with the Northshore project, and the authors are not experts with respect to these issues. The authors have relied on GTA to provide full information concerning the legal status of Northshore mining claims, as well as current legal title, material terms of all agreements, and material environmental and permitting information that pertain to the Property.

This report has been prepared for use by GTA Resources and Mining Inc. and Balmoral Resources Ltd. It is intended to be read as a whole, and sections or parts thereof should therefore not be read or relied upon out of context.


GTA Resources and Mining Inc.
Thunder Bay Mining Division, Ontario
PROPERTY LOCATION MAP
Northshore Property
Thunder Bay Mining Division
Priske Township, Ontario
Drawn By: JDB
Scale: 1:50,000
Date: October 2013
Figure No. 4.1
Legend
Northshore Property
Kilometers
Northshore Property
Schreiber
Hays Lake
Worthington Bay
Collingwood Bay
Schreiber Point
Schreiber Beach
Mount Gwynne
Death Valley
Lost Lake
Fourth Lake
Twain Lake
Trans-Canada Highway

# 4 PROPERTY LOCATION and DESCRIPTION

## 4.1 Property Description and Location

The Northshore property is situated in the Thunder Bay Mining Division within Priske Township, approximately 4 kilometres south of the town of Schreiber, Ontario, on the northern shore of Lake Superior. The geographic coordinates of the main mineral occurrence within the Property, called the 'Afric' Zone, are 48° 45' 54'' North latitude by 87$^{o}$ 16' 30" West longitude, or UTM NAD83, Zone 16 U, 4797800 m East by 5401359 m North.

Five patented and two unpatented mining claims comprise the Property which covers 322.255 hectares or 796.31 acres. The Property is irregularly-shaped with one non-contiguous mining claim (Claim No. TB4211126). Figures 4.1, 4.2 and 4.3 of this report illustrate the location and configuration of the mining claims comprising the Property, and Table 4.1 documents the pertinent unpatented and patented mining claims' information.

## 4.2 Property Ownership

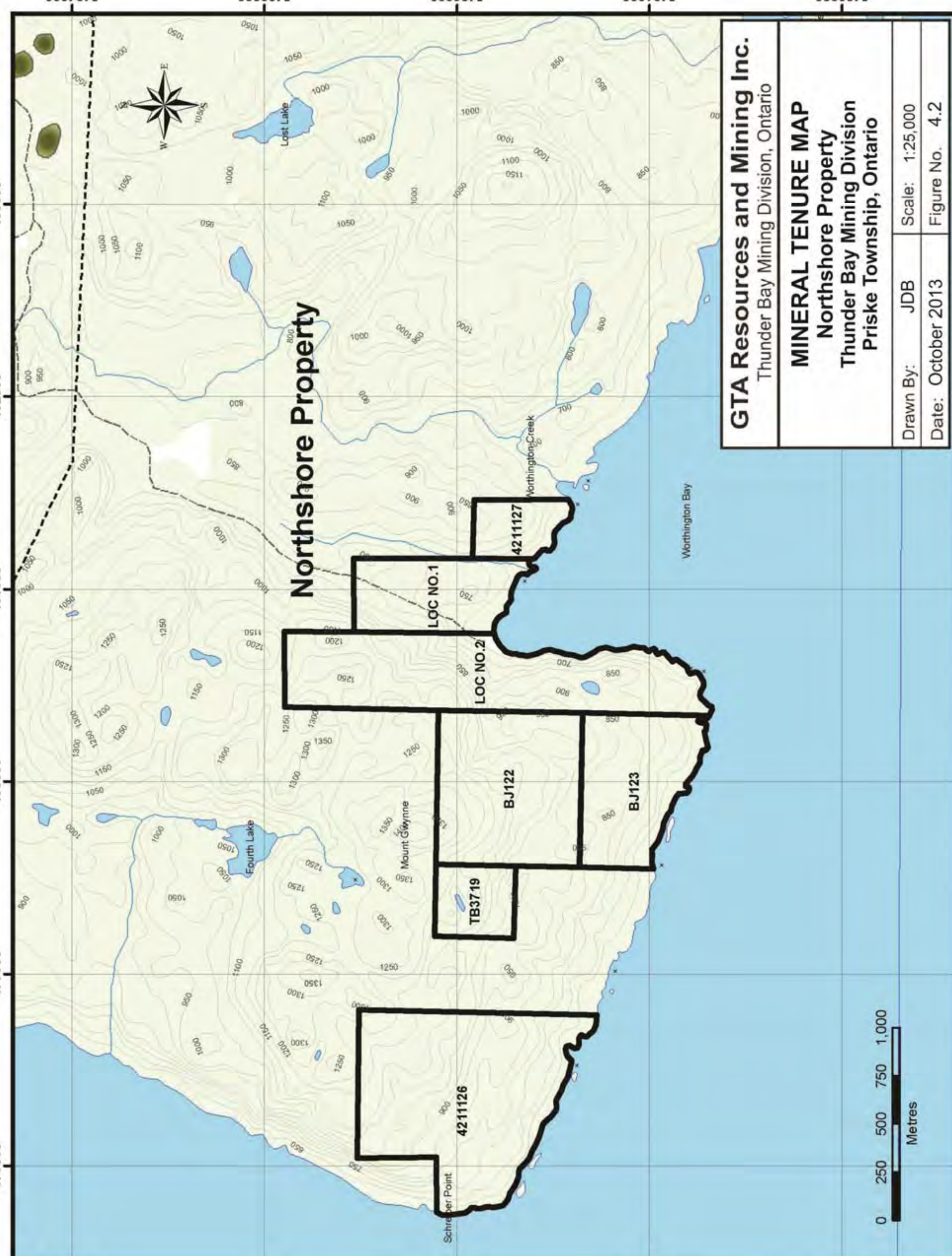
According to the Ontario Ministry of Northern Development and Mines online mineral titles website (http://www.mndm.gov.on.ca/mines/claimaps_e.asp), Balmoral Resources Ltd. of Vancouver, B.C. is the registered owner of the two unpatented mining claims, TB4211126 and TB4211127, effective February 18, 2014. Based upon titles documents researched by Nordic Solutions and made available to the author by GTA, Balmoral Resources Ltd. is also the registered owner of the five patented mining claims BJ122, BJ123, LOC 1, LOC 2 and TB3719 which are subject to annual Provincial taxes.

The following Table 4.1 contains all the pertinent claim numbers, areas, and record and expiration dates of the subject claims according to the MNDM (2014) and GTA (2014).

**Table 4.1: Patented and Unpatented Mining Claim Data**

| Mining Clam No. | Owner (Client No.) | Area (ha) | Record Date | Expiry Date |
|---|---|---|---|---|
| BJ122 | Balmoral Res. Ltd. (408919) | BJ122&123 | Patented | Surface and Mineral rights |
| BJ123 | Balmoral Res. Ltd. (408919) | = 97.125 | Patented | Surface and Mineral rights |
| LOC 1 | Balmoral Res. Ltd. (408919) | LOC 1&2 | Patented | Surface and Mineral rights |
| LOC 2 | Balmoral Res. Ltd. (408919) | = 97.125 | Patented | Surface and Mineral rights |
| TB3719 | Balmoral Res. Ltd. (408919) | 16.005 | Patented | Surface and Mineral rights |
| TB4211126 | Balmoral Res. Ltd. (408919) | 96.000 | 21-Nov-06 | 21-Nov-14 |
| TB4211127 | Balmoral Res. Ltd. (408919) | 16.000 | 21-Nov-06 | 21-Nov-14 |
| | | 322.255 | | |

*Note: After Ontario M.N.D.M., Mineral Titles Online website (effective February 18, 2014) and Nordic Solutions patented mining claim titles documents effective March 15, 2012.*


GTA Resources and Mining Inc.
Thunder Bay Mining Division, Ontario
MINERAL TENURE MAP
Northshore Property
Thunder Bay Mining Division
Priske Township, Ontario
Drawn By: JDB
Scale: 1:25,000
Date: October 2013
Figure No. 4.2
Northshore Property
4211127
LOC NO.1
LOC NO.2
BJ122
BJ123
TB3719
4211126
Lost Lake
Fourth Lake
Mount Gwynne
Worthington Creek
Worthington Bay
Schreiber Point
Metres
0 250 500 750 1,000
478000
479000
480000
481000
482000
483000
5400000
5401000
5402000
5403000
5404000

On July 24, 2011 GTA Resources and Mining Inc. entered into an Option Agreement (the 'Agreement') with Balmoral Resources Ltd. to acquire up to a 70% interest in the mining claims comprising the Northshore property. Under the terms of the Agreement, GTA may earn an initial 51% interest in the Property by making cash payments in the amount of $50,000, issuing 2,500,000 common shares of GTA, and incurring $2,500,000 in eligible exploration expenditures over a three-year period. A cash payment of $10,000, issuance of 1,000,000 common shares of GTA and a one year exploration expenditure of $350,000 were firm commitments by GTA under the terms of the Agreement. This agreement was approved by regulatory authorities on September 20, 2011.

Upon exercising the first aforementioned option, GTA has the right to proceed with a second option under which GTA would have the right to earn an additional 19% interest in the Property by making an additional cash payment of $100,000, issuing an additional 1,000,000 common shares of GTA and incurring additional exploration expenditures totalling $3,000,000 over a subsequent 24-month period.

## 4.3 Location of Mineralization

Exploration programs carried out by Noranda Exploration Ltd. ('Noranda') in 1990, Cyprus Canada Inc. ('Cyprus') in 1997, American Bonanza Gold Corp. ('American Bonanza') in 2006 and 2007, and GTA between 2011 to 2013 have identified several gold-bearing vein and stockwork occurrences throughout the Property. The main 'Afric' Zone, comprising the 'Audney', Caly' and 'Caly North' vein structures, has received the most exploration attention. See Figures 4.3, 9.1 and 10.1 for the locations of the various mineralized showings.

## 4.4 Water and Surface Rights

A permit to use local waters is not required during preliminary exploration work. If exploration work increases to include multiple drilling rigs requiring considerable water use, a 'Permit to Take Water' would be required.

The patented claims, namely 'BJ122', 'BJ123', 'LOC No. 1', 'LOC No. 2' and TB3719' hold both surface land and subsurface mineral rights, but the unpatented mining claims 4211126 and 4211127 only convey subsurface mineral rights.

## 4.5 Environmental, Reclamation and Permitting Issues

The authors are not aware of any current or outstanding environmental or permitting issues that would affect any access or right and ability to perform near-term exploration activities on the Property. To date no permitting has been required to explore the property. However, all current environmental and mining regulations for the Province of Ontario should be respected. Future exploration work, possibly including extensive resource definition drilling, bulk sampling and/or other advanced exploration activities, would require an 'Advanced Exploration Closure Plan' ('AECP') from the Ontario Ministry of Northern Development and Mines and a 'Permit to Take Water' from the Ontario Ministry of Environment.

There are no known First Nations land title issues in this region. The Property is located on traditional lands of the Pays Plat First Nation. GTA has continually consulted with the Pays Plat community since June 2011, and has developed a good working relationship with the elders of the band and the community.

According to the Ontario Ministry of Natural Resources' website 'Species at Risk in Ontario' ('SARO'), the following species may range within the region but the author is not aware whether any of these species are present within the Property.

**Table 4.2: Species at Risk**

| Taxonomy | Common Name | Scientific Name | OMNR Status |
|---|---|---|---|
| Birds | Bald Eagle | Haliaeetus leucocephalus | SC |
| Birds | Black Tern | Chlidonias niger | SC |
| Birds | Bobolink | Dolichonyx oryzivorus | THR |
| Birds | Canada Warbler | Wilsonia canadensis | SC |
| Birds | Chimney Swift | Chaetura pelagica | THR |
| Birds | Horned Grebe | Podiceps auritus | SC |
| Fish | Lake Sturgeon (NW Ontario population) | Acipenser fulvescens | THR |
| Fish | Lake Sturgeon (Upper Great Lakes/St. Lawrence population) | Acipenser fulvescens | THR |
| Insects | Monarch | Danaus plexippus | SC |
| Mammals | Mountain Lion or Cougar | Puma concolor | END |
| Fish | Northern Brook Lamprey | Ichthyomyzon fossor | SC |
| Birds | Olive-Sided Flycatcher | Contopus cooperi | SC |
| Birds | Peregrine Falcon | Falco peregrinus | THR |
| Birds | Short-Eared Owl | Asio flammeus | SC |
| Birds | Yellow Rail | Coturnicops noveboracensis | SC |

**Terminology**

| OMNR Status | | Definition |
|---|---|---|
| EXP | Extirpated | A species that no longer exists in the wild in Ontario but still occurs elsewhere. |
| END | Endangered | A species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's ESA. |
| THR | Threatened | A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed. |
| SC | Special Concern (formerly Vulnerable) | A species with characteristics that make it sensitive to human activities or natural events. |


Figure 4.3

Infrastructure Map
Northshore Property
Thunder Bay Mining Division
Priske Township, Ontario

# 5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE and PHYSIOGRAPHY

## 5.1 Accessibility

Vehicle access to the Property is possible via a gravel road, called the 'Worthington Bay Road', which joins Trans-Canada Highway No. 17 approximately 4.4 kilometres east of the town of Schreiber. The Worthington Bay road leads 5 kilometres south to the shore of Lake Superior where the old Northshore mill was located. The Afric mineralized zone is situated approximately 1.5 km west of the Worthington Bay road and accessed via local gravel roads (see Figures 4.2 and 4.3).

The city of Thunder Bay has the closest commercial airport to the town of Schreiber and the Property. There are regular daily flights to Thunder Bay from Toronto and elsewhere in Canada, and it is a 260 km, or a 3-hour drive, from Thunder Bay to Schreiber.

## 5.2 Climate and Vegetation

The Schreiber area has a humid continental climate with average mean temperatures ranging from -20° C (January) to +20° C (July), and an annual average precipitation of 840 mm. Local lakes will usually start to freeze over in mid-November, and thaw in early to mid-May. Exploration work is possible year-round.

The Property is extensively covered by a mixture of spruce and fir trees with moderate undergrowth in poorly-drained areas. Elsewhere, birch and alder with thinner undergrowth cover hillocks.

## 5.3 Local Resources and Infrastructure

There is no useable surface mining infrastructure on the Property. The old mill on the shore of Lake Superior is dismantled and the old Northshore No. 4 shaft has been backfilled and reclaimed. There are adequate areas within the Property available for potential tailings storage, waste disposal and processing plant sites.

The nearby cities of Marathon, to the east, and Thunder Bay, to the west, are dominated by the mining and logging industries respectively where an experienced labour pool and all types of exploration and mining services are readily available. The nearby town of Schreiber has a population of 1,126 people (2011 census: Wikipedia) and is located on the Trans-Canada Highway 17 beside the Canadian Pacific railroad. There is a major east-west electrical transmission line on the southside of Schreiber, about 2 km north of the Property.

## 5.4 Physiography

The Property is situated on the rugged northern shore of Lake Superior with considerable relief from the lake shore. According to Carter (1988), Cenozoic glaciation, local faulting (i.e. Worthington Bay Fault) and the granitic and metavolcanic country rocks have all contributed to the local cliffs and hilly topography within the claim holdings. Elevations range from approximately 625 m along the shore of Lake Superior to 1,375 m along the northern boundary of mining claim BJ122, near the summit of Mount Gwynne (see Figure 4.2). Local drainage is southward into Lake Superior. The drainages of the local creeks are often straight for long distances owing to the influence of local faults and lineaments.

Bedrock exposures are quite common along cliffs, steep slopes and ridge tops, but elsewhere outcrop is scarce except where exposed by road cuts or trenches.

# 6 HISTORY

The following summary of the exploration history of this property has been compiled from the reports by Carter (1988), Drost (1997) and LeGrand (2009), and is quoted from the technical report by Blanchflower (2012)

**1898:** Gold was first discovered on the BJ 122 mining claim by Peter McKellar. The mining claim was surveyed in 1898 and patented by him in 1903 (Carter, 1988).

**1898 to 1932:** In 1920 the BJ122 patented claim was optioned to W. L. Longworth (later McKellar-Longworth Ltd.) who operated the property and discovered 14 veins, one of which is gold-bearing called the 'Main Vein". The following quote is from the geological report by Carter (1988, p. 134).

*"This vein (Main Vein) is an auriferous quartz vein from 1 to 18 inches wide (3 cm to 46 cm) wide and was about 515 m long, terminated at both ends by faults and hosted in intermediate metavolcanics and hornblende syenite. The trend of the vein is N 80$^o$ W with a dip of -55$^o$ to the south. Hopkins (1922) reported that the vein occupies a fracture in hornblende syenite and felsic and intermediate metavolcanics. It was mineralized with visible gold, pyrite, chalcopyrite, pyrrhotite, galena, arsenopyrite and tetradymite. "A channeled sample across eighteen inches of quartz in which no gold could be seen, gave, on assay $40.00 in gold per ton" (Hopkins 1922, p.13, gold at $22.69 per ounce, 1921 price). Development work on the Main Vein consisted of the driving of adits and diamond drilling. The underground work consisted of workings on three levels and one sub-level. Three adits were driven on the vein system. The No. l adit was driven westerly on the eastern end of the vein to form the second level, for a distance of 1100 feet (335 m) at an elevation of 975 feet (297 m). One hundred feet of cross-cutting were driven from the adit which followed the vein for a total length of about 550 feet (168 m) at three points. At 2 of these points small stopes 240 feet (73 m) and 140 feet (43 m) long had been started and carried to a vertical height of about 35 feet (11 m). A 15-foot (5 m) winze had been sunk on the vein, 15 feet (5 m) from the portal of the adit and two shallow shafts about 50 feet (15 m) south of the portal were sunk. The No. 2 adit was located at the western end of the vein, about 1800 feet (549 m) west of the No. l adit, and at an elevation of 1150 feet (351 m) forming the first level. It was driven eastwards onto the vein for a distance of 700 feet (213 m), and two stopes were made, one for a vertical distance of 80 feet (24 m) to the surface. From this first level a 130-foot (40 m) winze inclined at 27$^o$ west was sunk to a lower level called the sub-level, at an elevation of 1100 feet (335 m), 50 feet (15 m) vertically below. This sub-level was 250 feet (76 m) long and partly followed the vein. From this sub-level ore was stoped for a distance of 175 feet (53 m) mining out all the ore. A third adit, No. 3 adit, located 250 feet (76 m) south of the No. 2 adit and 100 feet (30 m) below it, was driven northeastwards into the hillside onto the vein to form the third level. It followed the vein for 200 feet (61 m) in an easterly direction. The portal of this adit was thus at an elevation of 1050 feet (320 m) forming a level at this horizon on the vein. It was connected by a raise to the 1100 foot (335 m) sub-level. Because of the presence of a fault beneath the sub-level this work was unsuccessful and was abandoned after about 400 feet (122 m) of lateral development. Diamond drilling in 1939 consisted of 10 diamond drill holes by P.A.L Exploration Limited into the vein to test its persistence at depth. The total length drilled was in excess of 2200 feet (671 m) and the Main Vein was intersected at 180 feet below the first level and the occurrence of gold at depth was confirmed."*

**1933 to 1937:** North Shores Gold Mines Limited was formed and a 25-ton mill was built in 1934 at Worthington Bay on the shore of Lake Superior. Gold production began in 1935. Hand-sorted ore was trucked from the adits to the mill where the gold was recovered in an amalgam and a heavy concentrate. North Shores Gold Mines Limited was renamed North Shore Mines Limited in 1936. Production ceased in 1937 by which time 3,808 tons of ore were milled yielding 2,441 ounces of gold and 226 ounces of silver. Recovery of gold averaged 0.64 ounces of gold per ton of ore milled (Carter, 1988). In 1939 R. W. Phelps reportedly acquired the Property.

**1960 to 1979:** In 1960 the original Northshore property, comprised of a block of five contiguous patented claims numbered: Loc. No. l, Loc. No. *2,* BJ 122, BJ 123 and TB 3719, was purchased by Trio Mining Exploration Limited. In 1969 the property was apparently held by G. W. Phelps, and in 1973 the Ontario Charter of Trio Mining Exploration Limited was dissolved. The Property remained in good standing until December 31, 1979 (Carter, 1988).

**1980:** Autotrac Limited acquired all of the Northshore patented and unpatented mining claims.

**1988 to 1992:** Noranda Exploration Company Ltd./Hemlo Gold Inc. optioned the Northshore property and carried out geophysical, geochemical, and geological surveying. Trenching and rock sampling were undertaken on old trenches and other exploration targets resulting in discovery of the 'Afric' Zone. Twenty diamond drill holes, totalling 2494.6 m, were completed. Noranda Exploration Company Ltd. estimated a geological resource of 2 million tonnes grading 2.2 gpt gold at the Afric Zone (Drost, 1997). ***This resource estimate is a non-compliant 43-101 resource estimate; it is obsolete, cannot be relied upon and is only documented for historical reference.***

**1995:** Santa Fe Mining optioned the Property but terminated their Canadian operations before completing any work (Carter, 1988).

**1997:** Cyprus Canada Inc. conducted an exploration program on the Northshore property that included: establishing a widely-spaced survey control grid; geophysical surveying (IP, VLF-EM and magnetics); humus geochemical surveying (773 samples); geological mapping and prospecting. Power stripping and rock geochemical sampling programs (977 samples) focused on extending the Afric Zone to the west and east. Diamond drilling, 7 holes totalling 1,131.3 metres (571 core samples), was carried out during early August to early September, 1997 to extend the Afric Zone westward and to test the Northshore vein. According to Drost (1997), "*The property remains underexplored for a high grade underground Au model, similar to the historic production of the property. Numerous narrow, high grade zones on the property have been under evaluated. The potential for expanding these zones is considered high.*"

**1999 to 2005:** International Taurus Resources Inc. acquired an option to purchase 100% of the patented Northshore property from Autotrac Limited, including the surface rights. The terms of agreement included a cash down payment to acquire the option, plus two additional payments one year and two years later to complete the purchase. Autotrac Limited retained a 2% Net Smelter Return royalty for the first one million ounces produced from the property, then 3% for the next two millions ounces produced, and finally 5% for all production in excess of 3 million ounces. In March 2005, International Taurus Inc. joined American Bonanza Golding Corp. becoming American Bonanza Gold Corp.

**2005 to 2007:** American Bonanza Gold Corp. drilled eleven diamond drill holes (NS 06-01 to -11), totalling 3,163 m, in 2006, and nine diamond drill holes (NS 07-01 to -09) , totalling 1,367 m, in 2007. In addition, they excavated six trenches on their ‘No. 3’ Zone and did some overburden stripping on their ‘No. 5’ southern extension zone. This trenching work was carried out in November and early December 2007 but the trenches were not mapped or sampled due to a heavy snow fall. Such work was proposed for 2008 but there no reports of such work being carried out.

**2008:** Two American Bonanza Gold Corp. personnel prospected and sampled the eastern and southern portions of the non-contiguous mining claim 4211126. No significant results were reported but their work only covered the extreme northern, southern and eastern portions of the claim.

**2010 to 2011:** American Bonanza Gold Corp. transferred 100% of their interest in the Property to Balmoral Resources Ltd. on January 26, 2011. No reported exploration work was carried out by Balmoral until the option agreement with GTA in July 2011.

**2011:** GTA carried out surface sampling of the exposed Audney, Caly and Caly North gold-bearing veins within the Afric Zone during September 2011 and later completed twelve NQ-size diamond drill holes, totalling 1,038.0 m, during the latter half of October 2011. The diamond drilling program focused on evaluating the three sampled vein structures where surface rock samples had returned significant to high gold values. The drill core logging and sampling work was carried out at GTA’s field office/warehouse facility in Schreiber, Ontario where the drill core is currently being stored. This exploration work is documented in detail by Blanchflower (2012).

# 7 GEOLOGICAL SETTING and MINERALIZATION

The Schreiber area has been mapped by several Ontario government geologists since 1900. In 1900 E. V. Neelands accompanied an Ontario Land Survey party in the Long Lake - Pic River area. Then in 1909 there was a reconnaissance geological survey of the area between the Pic and Nipigon Rivers by W. H. Collins. In 1920 T. L. Tanton referred to the geology of the area in his report on the Nipigon-Schreiber District, and in the same year P. E. Hopkins carried out a reconnaissance survey of the Schreiber-Duck Lake area. Between 1936 and 1939 G. A. Harcourt and M. W. Bartley mapped the Schreiber area; the last systematic geological mapping work until 1979 when M. W. Carter (1988) began re-mapping the Schreiber area.

The following sections describing the regional geology, property geology and mineralization of the Property have been quoted from the May 2012 technical report Blanchflower (2012). Figures 7.1 and 7.2 of this report illustrate the regional geological and structural settings of Schreiber area (modified after Carter, 1988). Figure 7.3 shows the geological setting of Northshore property within Priske Township (modified after Carter, 1988).

## 7.1 Regional Geology

The Schreiber area is underlain by Archean-age rocks that form the western portion of the Hemlo-Schreiber greenstone belt of the Wawa Subprovince within the Superior structural province (see Figures 7.1 and 7.2). According to Carter (1988), the geology of the Schreiber area is as follows.

*“The consolidated rocks of the (Schreiber) map-area are of Precambrian age and range from Archean to Proterozoic.*

*The Archean rocks of the Wawa Subprovince are predominantly subaqueous mafic tholeiitic metavolcanics which overlie a less voluminous, predominantly calc-alkalic sequence, both of which are interlayered with minor clastic and chemic metasediments. Two volcanic cycles are present separated by a marker horizon of sulphide-facies ironstone. The lower cycle exceeds 2.3 km in thickness and underlies the southern margin of the (Schreiber) map area, south of Highway 17. It consists of interlayered tholeiitic basalts and calc-alkalic andesite and dacite and tholeiitic or calc-alkalic rhyolite. The upper cycle is in excess of 12 km thick and underlies much of the northern part of the (Schreiber) map-area north of Highway 17. The upper cycle consists predominantly of tholeiitic basalt with subordinate calc-alkalic andesite and dacite, and tholeiitic or calc-alkalic rhyolite. These rocks are folded about an east-southeast trending synclinal axis which plunges to the east-southeast. Wawa Subprovince metavolcanic rocks are overlain, in the northeast of the map-area by metawackes and meta-arenites of the Quetico Subprovince, which are tightly folded along east-west axes. Both subprovinces are intruded by gabbroic rocks, an ultramafic intrusion, granitic batholiths and Archean to Proterozoic diabase dikes following three trends. The grade of metamorphism increases from greenschist facies in the south to amphibolite facies in the north and has affected the metavolcanics, metasediments and mafic intrusions. Contact metamorphism, to pyroxene-hornfels rank, has been superimposed on the greenschist facies by the Terrace Bay Batholith. A pervasive foliation characterizes most of the rocks of both subprovinces, the foliation being parallel to the primary layering in the rocks.*

*Proterozoic rocks include remnants of Animikie Group clastic and chemical sediments, which outcrop along the north shore of Lake Superior in the southwestern part of the area. Archean to Proterozoic rocks comprise narrow diabase dikes which cut all the Archean rocks, and diabase sills which intrude the Proterozoic Animikie Group. The sills are Proterozoic in age (Logan sills) and some of the dikes may be of this age.*

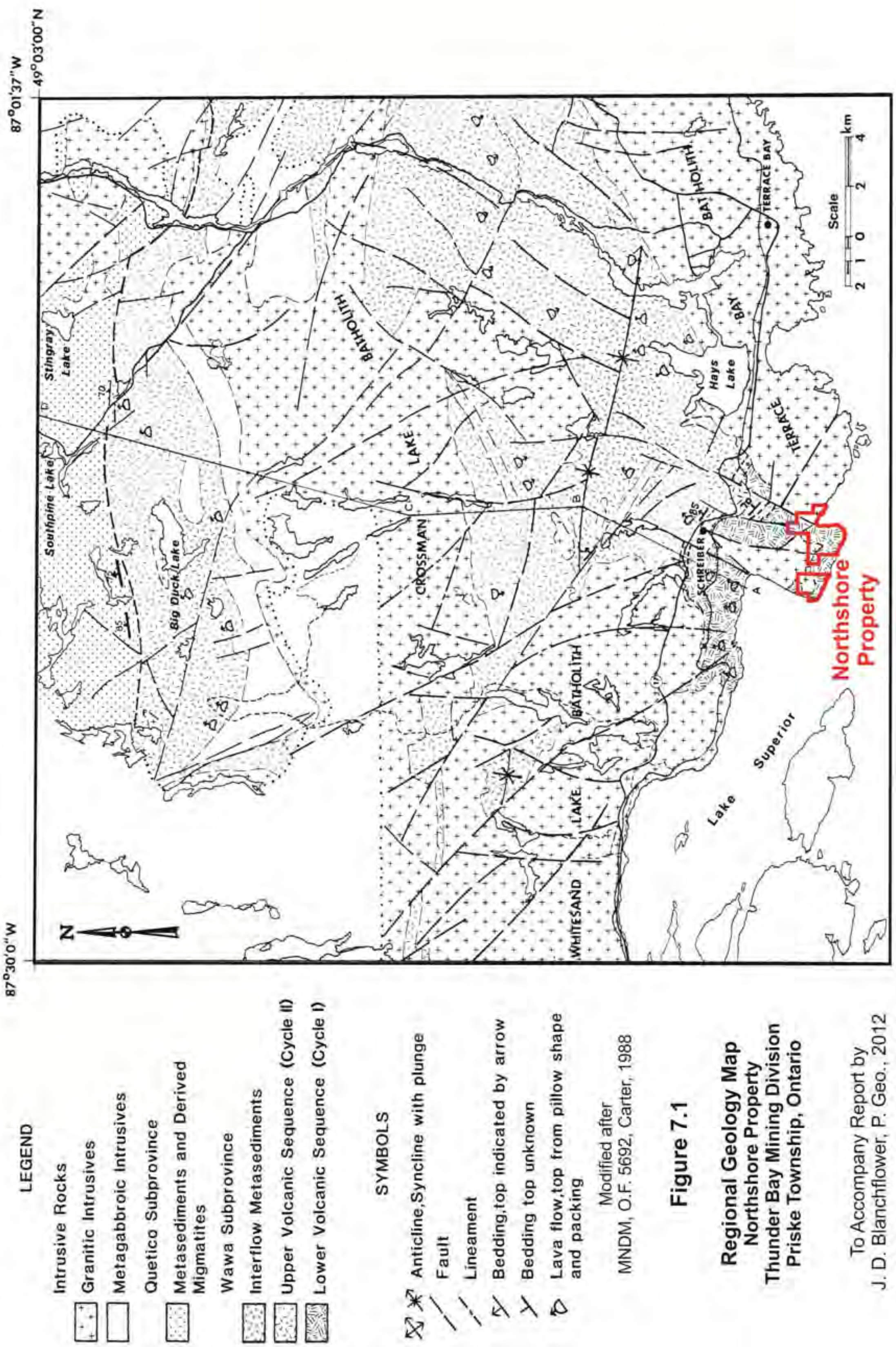



Figure 7.1

Regional Geology Map
Northshore Property
Thunder Bay Mining Division
Priske Township, Ontario

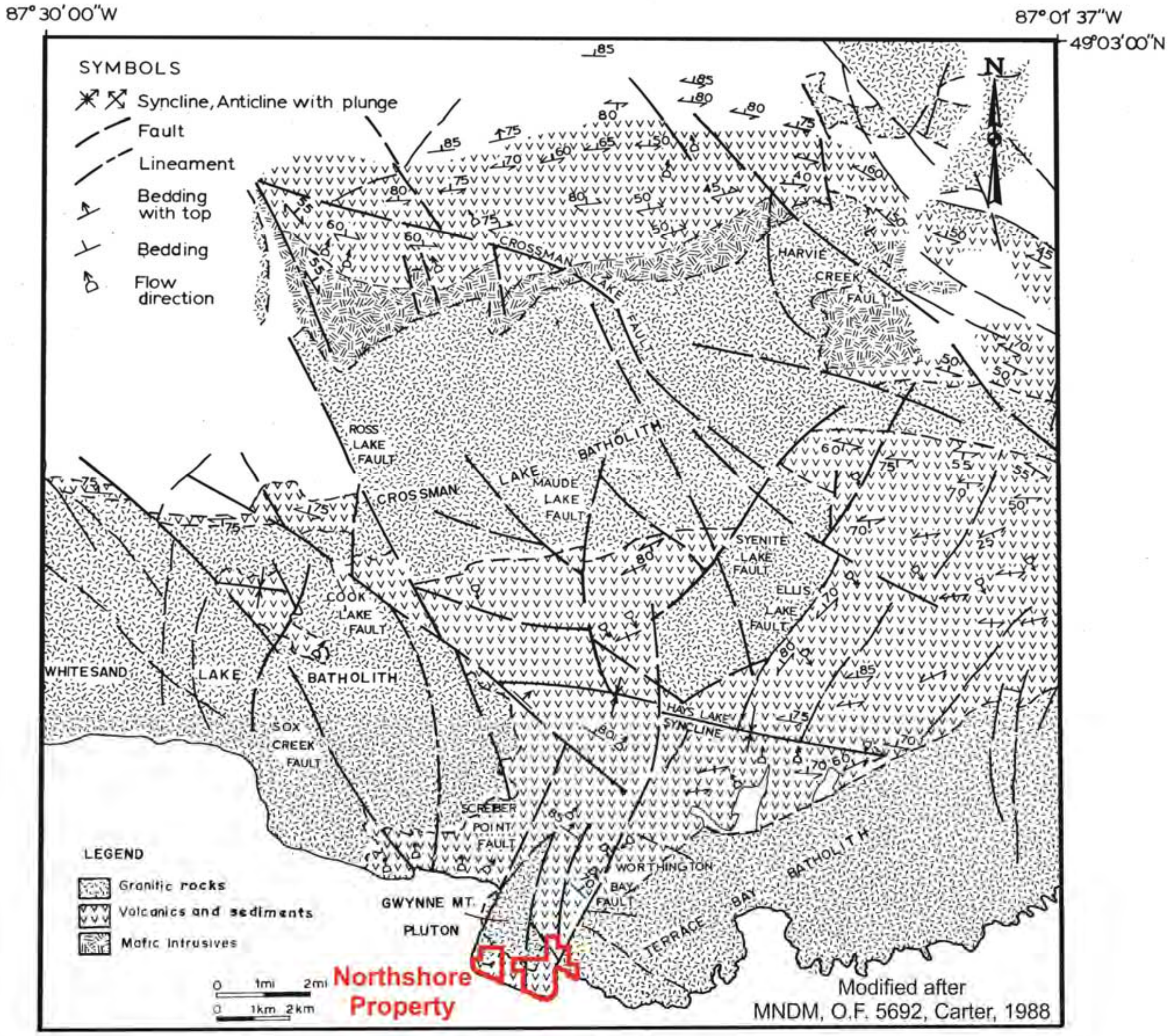



**Figure 7.2**
**Regional Structural Map**
**Northshore Property**
**Thunder Bay Mining Division**
**Priske Township, Ontario**

*Cenozoic rocks comprise Pleistocene morainal, glaciofluvial and glaciolacustrine sands and gravels and Recent alluvial deposits.*

*Faults trending northwesterly, northeasterly and northerly are a characteristic feature of the map-area. A strong vertical component to movement on the faults is interpreted to explain the preservation of supracrustal rocks in the eastern part of the map area.*

*Mineral deposits comprise precious metal (gold and silver) veins in fractures, and shears associated with the mafic metavolcanic rocks, and the granitic rocks; molybdenum-copper vein deposits associated with the border zones of the granitic batholiths; nickel-copper deposits associated with a gabbro intrusion; and polymetallic base-metal copper-lead-zinc-silver occurrences associated with clastic and chemical interflow metasediments."*

Figures 7.1 and 7.2 illustrating the regional geology and structural setting in the Schreiber-Terrace Bay area have been modified after maps contained within MNDM Open File 5692 by Carter (1988).

## 7.2 Property Geology

The property geology was first documented in recent assessment reports by Mackie (1989) for Noranda Exploration, although the assessment work was largely carried out on the adjoining ground to the west, called the 'Hayes Lake' property. Cyprus Canada (Drost, 1997) conducted detailed prospecting and geological mapping over their 'Northshore' property which included the eastern patented mining claims of the current Property. In 2009, American Bonanza personnel mapped and prospected the non-contiguous western claim 4211126, and this work was reported by LeGrand (2009). The geological mapping and prospecting results from these works are as follows.

### 7.2.1 Lithology

Geological mapping during the 1997 field season by Cyprus Canada personnel on the eastern claim holdings reported that this area is underlain by four main lithologies that were described by Drost (1997) as follows:

*"Syenite: medium to dark greyish black color with variable dark brick red potassic overprint; medium grained intrusive grain size and textures; generally unaltered and massive fabric. This lithology is a minor host of Afric Zone mineralization.*

*Feldspar (+I- Quartz) Porphyry: medium greyish to buff-colored, fine-grained, porphyritic matrix with medium- to coarse-grained feldspar (+/- quartz shards) phenocryst phase; identified mainly in the Noranda grid area (covering the Afric Zone); typically exhibits sericitic matrix. This lithology is the main host of known Afric Zone mineralization.*

*Intermediate to Felsic Volcanics: light to medium greyish, buff color; typically fine-grained sericitic matrix; typically with tuffaceous characteristics including: multiphase, broken crystal fragments (crystal tuff). This unit may be confused locally with feldspar (+I- quartz) porphyry depending on bulk crystal content.*

*Mafic Volcanics: medium to dark greyish green colour; fine-grained to locally metamorphosed, amphibolitic medium-grained groundmass; displays typical mafic flow textures such as pillows, vesicles, etc.; moderately chloritic; generally fresh and unaltered.*

*The four main lithologies are cut by various intrusive dyke/sill bodies including diabase dykes, gabbroic sills, lamprophyre dykes, quartz-feldspar porphyry dykes and rare diatreme breccia dykes. Of these, the barren diabase dykes and quartz-feldspar porphyry dykes which were locally sulphide mineralized and weakly auriferous, were common in the main Afric Zone area on the Noranda grid."*

According to Carter (1988), the eastern claim holdings are locally underlain by Archean-age rocks of andesitic and dacitic composition. This unit is the equivalent of the mafic volcanic unit described above by Drost (1997). Carter (1988) describes these volcanic rocks as being grey to dark-grey on the fresh surface and light-grey on the weathered surface and best developed in the eastern half of the Schreiber Peninsula south and southeast of Schreiber.

They have been altered to greenschist facies, vary in thickness up to 3 km, and are almost entirely aphanitic structure-less rocks without mafic interlayers. Massive, aphanitic to fine-grained andesitic and dacitic rocks are believed to be flows because of the absence of fragmental textures seen on outcrops. No flow structures were observed by Carter (1988) on any of the outcrops.

According to Carter (1988), megascopically aphyric, megascopically porphyritic and amygdaloidal felsic volcanic rocks may occur locally. The megascopically aphyric rocks have completely sericitized pseudomorphic feldspars. The ferromagnesian phenocrysts are converted to aggregates of chlorite, brown biotite and opaque grains. Where recrystallization has been more pronounced, green pleochroic actinolite needles have developed in the matrix. Megascopically porphyritic rocks are light grey to dark grey on the fresh surface and light grey and buff on the weathered surface. The phenocrysts consist of irregular, subhedral and euhedral quartz, dusty brownish euhedral, subhedral grains and irregular areas of plagioclase which are sericitized, saussuritized and may contain irregular areas of pale green chlorite and carbonate, and euhedral, subhedral and irregular clotty areas of ferromagnesian minerals now consisting of green pleochroic actinolite. The amygdaloidal felsic rocks are uncommon but similar in appearance and weathering characteristics to the megascopically aphanitic and fine grained rocks. They contain amygdules of mosaic quartz and white carbonate.

Carter (1988) describes the Archean-age intermediate to felsic volcaniclastics, equivalent of the intermediate to felsic volcanics described by Drost (1997), as being massive, light grey, fine-grained to aphanitic rocks on the fresh surface. They are reportedly composed of a "*recrystallized granoblastic aggregate of quartz and untwinned dusty brownish plagioclase feldspar some of which is sericitized. Granoblastic grains of green chlorite, brown biotite, colourless muscovite, carbonate, epidote and titanite are present*."

Lapilli tuffs are reportedly uncommon in the area. They are described by Carter (1988) as being "*grey or pink rocks on the fresh and weathered surfaces with subangular and subrounded lithic fragments. The rocks occur interlayered with the mafic metavolcanics at various horizons in both the lower and upper volcanic sequences; west of Schreiber in the lower sequence and in the eastern half of the upper volcanic sequence. These lapilli tuff units vary in thickness from 60 m to 80 m and are up to 100 m in lateral extent. The absence of bedding structures in these rocks suggests that they are pyroclastic fall-back tuffs.*"

The two main intrusive rocks within the Property and hosts of the Afric Zone mineralization, the syenitic and feldspar (+/- quartz) porphyritic units, are described by Carter as occurring in other parts of his map-area but he did not map them within the Property area.

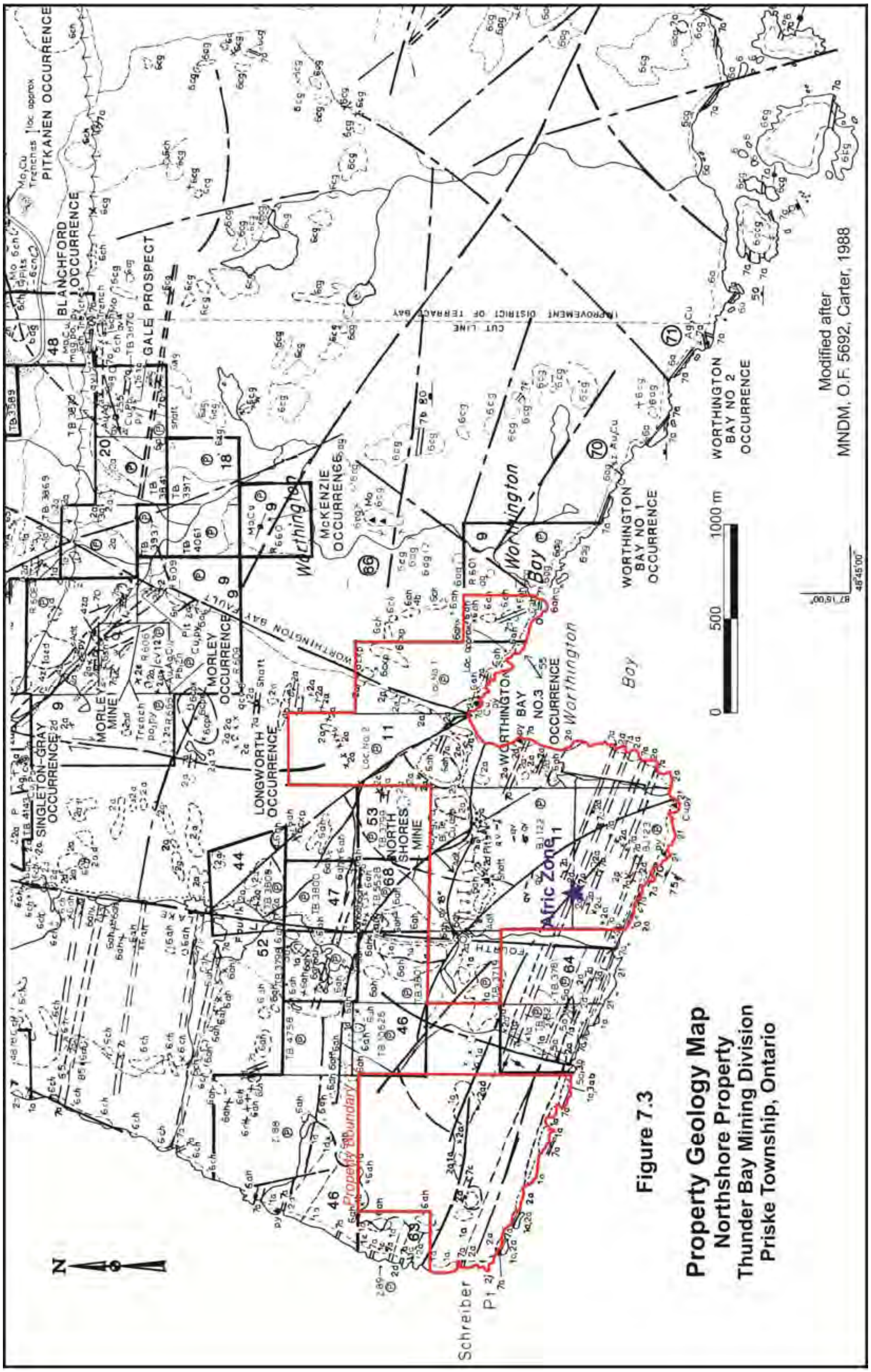


Figure 7.3
**Property Geology Map**
Northshore Property
Thunder Bay Mining Division
Priske Township, Ontario

## - Legend -

PHANEROZOIC
CENOZOIC
QUATERNARY
PLEISTOCENE AND RECENT
Sand, gravel, swamp, and stream deposits

*UNCONFORMITY*

PRECAMBRIAN
PROTEROZOIC
MAFIC INTRUSIVE ROCKS (DIABASE SILLS)[a]

[10] 10a Diabase
10b Diabase, feldspathic

*INTRUSIVE CONTACT*

SEDIMENTARY ROCKS
ANIMIKIE GROUP
GUNFLINT FORMATION

[9] 9 Unsubdivided
9a Conglomerate, polymictic
9b Chert-jasper-magnetite-hematite-pyrite ironst
9c Shale, mudstone
9d Chert
9e Limestone

*UNCONFORMITY*

ARCHEAN TO PROTEROZOIC
DIATREME BRECCIA

[8] 8 Unsubdivided
8a Jasper-chert-volcanic breccia

*INTRUSIVE CONTACT*

MAFIC INTRUSIVE ROCKS (DIABASE AND LAMPROPHYRE DIKES)

[7] 7 Unsubdivided
7a Diabase, quartz diabase
7b Olivine diabase
7c Diabase, feldspathic
7d Hornblende lamprophyre
7e Biotite lamprophyre
7f Diabase, amygdaloidal
7g Diabase, porphyritic

*INTRUSIVE CONTACT*

ARCHEAN
FELSIC INTRUSIVE ROCKS

[6] 6 Unsubdivided
6a Syenite-diorite, quartz syenite-quartz diorite
6b Feldspar porphyry
6c Granite-tonalite
6d Porphyritic or porphyroblastic feldspar
6e Granitoid-metasedimentary migmatite
6f Aplite
6g Hornblende-bearing
6h Hornblende and biotite-bearing
6j Muscovite-bearing
6k Biotite-bearing
6m Biotite microgranite
6n Quartz porphyry
6o Hornblende-quartz-feldspar gneiss
6p Quartz phenocrysts
6q Garnetiferous
6r Biotite-rich segregation
6s Hornblende porphyry
6t Biotite porphyry
6u Granitoid, gneissic
6v Granitoid-amphibole schist migmatite
6w Biotite-quartz-feldspar gneiss
6x Leucocratic
6y Quartz-feldspar porphyry
6z Pegmatite

Modified after
MNDM, O.F. 5692, Carter, 1988

*INTRUSIVE CONTACT*

METAVOLCANICS AND METASEDIMENTS[b]
METASEDIMENTS
CLASTIC

[4] 4 Unsubdivided
4a Argillite, silicified
4b Wacke
4d Biotite-quartz-feldspar schist
4e Wacke breccia
4f Wacke, garnetiferous
4g Biotite-feldspar gneiss
4h Wacke, granitized
4j Wacke with sillimanite
4k Biotite-garnet-quartz-feldspar gneiss
4m Arenite
4n Wacke-granite pegmatite migmatite
4o Arenite-pegmatite migmatite
4p Biotite-quartz-feldspar gneiss
4q Quartz-feldspar schist
4r Conglomerate
4s Wacke, biotite-rich
4t Arenite, garnetiferous
4u Shale, graphitic, with pyrite and pyrrhotite
4v Wacke-granitoid migmatite

CHEMICAL
4w Chert, gray and black
4x Magnetite-chert ironstone
4y Magnetite ironstone
4z Pyrite-pyrrhotite-chert graphitic shale ironstone

METAVOLCANICS
THOLEIITIC AND CALC-ALKALIC SUITES
Rhyolite

[3] 3 Unsubdivided
3a Aphanitic flows
3b Porphyritic flows
3c Lapilli tuff
3d Tuff breccia
3e Crystal tuff
3f Carbonatized flows
3g Tuff

CALC-ALKALIC SUITE
Andesite and Dacite

[2] 2 Unsubdivided
2a Aphanitic and fine-grained flows
2b Lapilli tuff
2c Tuff
2d Porphyritic flows
2e Crystal tuff
2f Tuff breccia
2g Andesite and dacite-granitoid migmatite
2h Porphyritic andesite dike
2j Amygdaloidal flows
2k Variolitic flows
2m Vesicular tuff

THOLEIITIC SUITE
Basalt and Andesite

[1] 1 Unsubdivided
1a Aphanitic and fine-grained flows
1c Amygdaloidal flows
1d Amphibolite, amphibole schist, fine to medium grained
1e Pillowed flows
1f Garnet amphibolite
1g Autoclastic breccia (flow top)
1h Amphibolite-granitoid migmatite
1j Porphyritic flows (feldspar phenocrysts)
1k Hornblende granite-migmatite contact rock
1m Tuff
1n Medium-grained flows
1p Variolitic flows
1q Carbonatized
1s Coarse-grained flows
1t Vesicular flows
1u Lapilli tuff

## - Symbols -


**Figure 7.4**

**Legend for Property Geology Map**
**Northshore Property**
**Thunder Bay Mining Division**
**Priske Township, Ontario**

Carter (1988) mapped and described the diabase dykes that intrude all of the Archean-age volcanic, volcaniclastic and intrusive rocks within the Property as follows.

*"Diabase occurs as dikes varying from about 8 m to about 91 m wide. There are four trends of diabase dikes in the map area: (1) west-northwest to east-west, (2) north-south, (3) north-east, and (4) northwest.*

*The west-northwesterly to east-west dikes are the most numerous and are most common along the southern margin of the map-area intruding both volcanic and granitic rocks. They are not as common in the northern part of the map-area. These are black massive, medium-grained, non-porphyritic rocks with a modal colour index of about 40. They are usually well jointed. The weathered surface of these rocks is reddish brown, the fresh surface is black, and all the specimens examined were moderately magnetic. In thin section these rocks show intergranular ophitic and subophitic textures and comprise plagioclase (labradorite An 56 to An 65) and common clinopyroxene which is usually anhedral, brownish and twinned. The clinopyroxene is commonly marginally altered to greenish brown hornblende, uralite and yellowish green and green chlorite, and brownish biotite. The plagioclase in places is fresh and in places altered and shows composite twinning comprising Carlsbad, albite-carlsbad and acline A twinning. Chlorite commonly occurs along the cleavages of the feldspar."*

A 2008 diamond drilling report by LeGrand for American Bonanza does not provide any further detailed information on the geological setting of the east claim holdings. However, 2009 geological mapping and prospecting results reported by LeGrand for the western, non-contiguous 4211126 claim area indicates that this claim is largely underlain by massive, aphanitic, and medium to dark green-coloured mafic volcanic rocks commonly hosting trace to very minor pyrite. Along the northern claim border this volcanic unit has been intruded by a diabase dyke, similar in composition to those occurring elsewhere within the eastern claim holdings. On the southern claim boundary, along the shore of Lake Superior, there are pinkish, massive, fine-grained barren dykes cutting the mafic volcanic rocks.

Figure 7.3 illustrates the reported geological setting of the Property as reported by Carter (1988).

### 7.2.2 Structure

There is very little information on the detailed structural setting of the Property other than that reported by Carter (1988). The rocks underlying the claim holdings were reportedly affected by at least one major episode of deformation which folded the supracrustal rocks along east-southeasterly axes, and imposed a pervasive regional foliation that generally parallels the trend of stratigraphy (see Figure 7.2).

Folding is about an east-southeasterly trending axis. Along the southern limb of this fold axis the rocks trend southwestwards, and on the northern limb they trend northeastwards. Based on these trends and facing data Carter (1988) interpreted the syncline to plunge east-southeastwards.

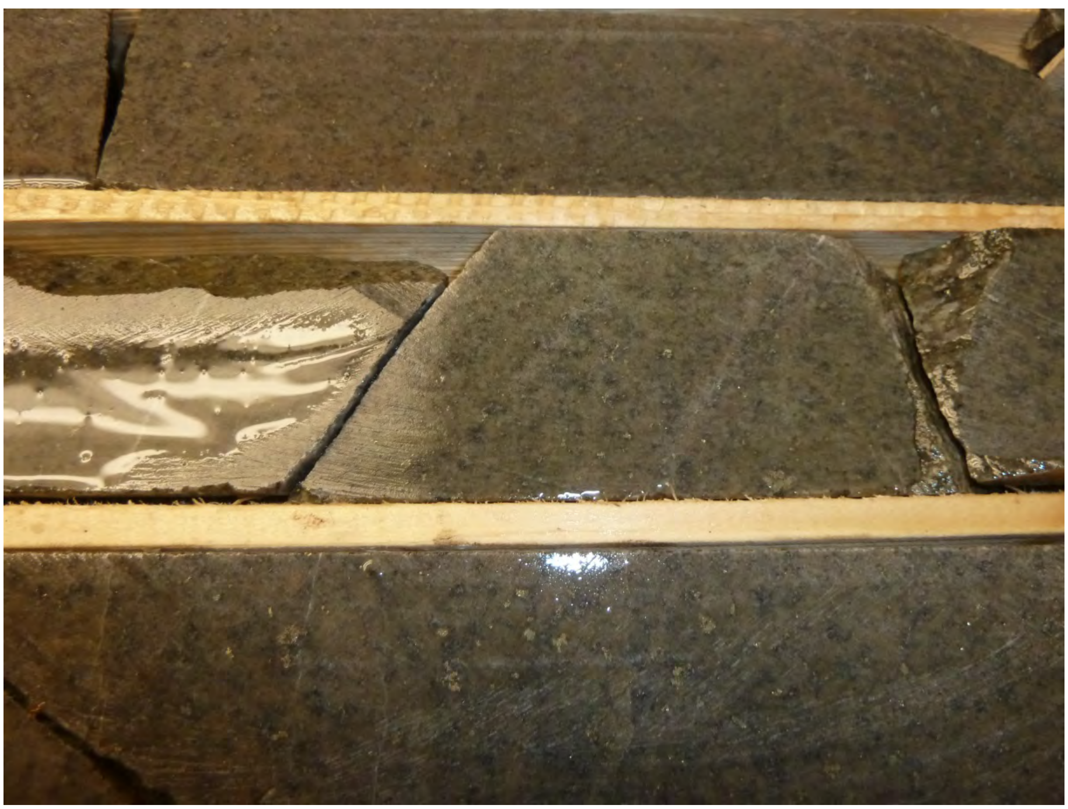
Lineaments with northwesterly trends are most strongly developed, with northeasterly trends less, and northern trends least of all (Carter, 1988). These trend directions are followed by vein structures, and by streams and lakes. The Worthington Bay fault, within the LOC No. 2 mining claim, is one of the major northeasterly trending faults responsible for lineations within the Property.

According to Carter (1988), "*Along the Schreiber Point and Worthington Bay Faults displacement is right lateral and left lateral respectively. On the Syenite Lake Fault a vertical component of movement is considered by the author to have been very important as a pronounced fault scarp is readily discernible in the field trending parallel to much of the western shore of the lake. Along the west shore of Schreiber Peninsula a* *fault scarp is apparent along the Schreiber Point Fault with down throw apparently to the west. If the Syenite Lake Fault and the Schreiber Point Fault are the same, there was probably a scissor movement on this fault with the east side down at the northeastern end of this combined fault, and the west side up at the southwestern end. This would help to explain the occurrence of the Gwynne Mountain granitic wedge. Similarly an important vertical component of movement is believed to have occurred with the east side down on the Worthington Bay Fault as a marked but less spectacular fault scarp occurs along the west side of this fault in the Worthington Bay area.*"

### 7.2.3 Alteration

According to Carter (1988), the Archean-age volcanic and volcaniclastic rocks have undergone regional greenschist alteration resulting in the ubiquitous sericitization and saussuritization of the feldspars, and alteration of the mafic minerals to epidote, chlorite, carbonate, quartz and magnetite.

The syenitic intrusive rocks within the Afric Zone display weak ankeritic to hematitic alteration, pyritization and sericitization of the feldspar phenocrysts. There may be secondary albitization, biotitization and potassic alteration but such determination would require a petrographic examination.

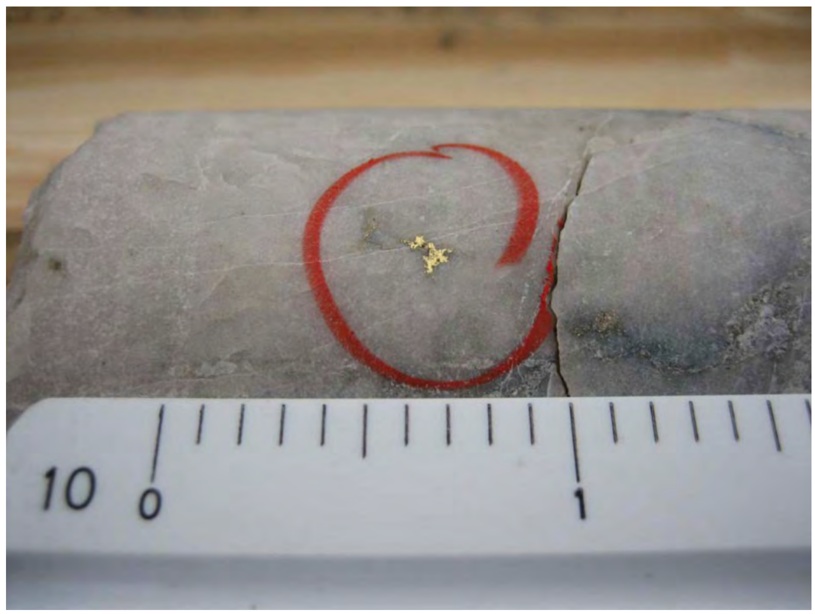


**Photograph No. 7.1: Sericitized, pyritic feldspar porphyry intrusive**

## 7.3 Mineralization

Gold mineralization on the Property occurs in a variety of modes, namely: hosted by well-defined, narrow quartz-carbonate veins (i.e. Audney and Caly veins), quartz-carbonate (± tourmaline) vein stockworks, and associated with base-metal sulphide mineralization. A description of each mode of gold mineralization follows.

**Gold mineralization hosted by quartz and quartz-carbonate veining** – This type of multi-phase quartz and quartz-carbonate veining occurs along several prominent structural trends throughout the property. The Audney, Caly and Caly North quartz-carbonate veins within the Afric Zone host locally coarse, high-grade gold mineralization. These vein structures strike east-northeasterly, vary in true thickness from 5 cm to 60 cm, and have been traced by drilling to a vertical depth of at least 300 m. They commonly have poorly defined selvages with narrower subparallel veins, veinlets and infilled fractures hosting native gold, electrum and other gold-bearing mineralization. They may also host trace to minor amounts of pyrite with lesser tourmaline and chalcopyrite. The east-northeasterly to northeasterly trending vein structures appear to be structurally related to conjugate, dilational fracturing associated with northwesterly trending extensional fracturing and north-northeasterly strike-slip displacements along the Worthington Bay and Schreiber Point faults (see Figure 7.2).




**Photograph No. 7.2: Visible gold in Audney quartz-carbonate vein**
(photograph from Balmoral Resources' website, 2012)

There are numerous narrow quartz and quartz-carbonate vein and veinlets throughout the Afric Zone subparalleling the better defined Audney and Caly vein structures. These narrow veins may occur individually or collectively as vein stockworks often hosting considerable gold mineralization as native gold, electrum and gold-bearing sulphide mineralization.

The high-grade gold-bearing vein at the historic Northshore mine which strikes approximately east-west, paralleling the Afric Zone, may also be a similar quartz-carbonate dilational vein structurally related to extensional shearing between the Worthington Bay and Schreiber Point faults. However, the old shaft exposing the vein is completely flooded and drilling by Cyprus Canada failed to intersect the vein structure.

**Gold mineralization associated with altered and pyritized intrusive rocks** – Within the better-explored Afric Zone gold mineralization is associated with pyritized feldspar (± quartz) porphyritic and syenitic intrusive rocks that also host the high-grade quartz and quartz-carbonate vein structures. Gold mineralization appears to be genetically associated with the hydrothermal alteration of the host intrusive rocks that produced finely-disseminated to blebby pyrite and extensive zones with pervasive ankerite (iron-carbonate) alteration associated with variable sericitization and potassic alteration, especially in close proximity to the syenitic intrusion. Gold-bearing pyrite mineralization seems to be more concentrated at or near the loci of northeasterly and northwesterly trending fracturing.

**Gold associated with base-metal sulphide mineralization** – Gold mineralization also occurs associated with several pyrite, chalcopyrite and/or arsenopyrite-bearing shear zones and veins that may also carry locally elevated silver values. The chalcopyrite and sphalerite-bearing shear zone at the Worthington Bay No. 3 showing, situated within patented claim LOC No. 1 (see Figure 7.3), is an example of this type of mineralization. Past operators have suggested that this style of mineralization may be genetically related to volcanogenic massive sulphide mineralization known elsewhere in the Archean-age sequence such as at the former producing Winston Lake Zn-Cu-Ag-Au system situated north of Schreiber (Balmoral, 2012).

**Photograph No. 7.3: Audney gold-bearing quartz-carbonate vein**

# 8 DEPOSIT TYPES

Gold-bearing vein- and vein stockwork-hosted mineralization on the Northshore property is typical of an Archean mesothermal and intrusive-related gold deposit.

According to Ash and Alldrick (1996), mesothermal gold deposits are characterized by gold-bearing quartz veins and veinlets with minor sulphides crosscutting a wide variety of host rocks, often localized along major transcrustal structural breaks within stable cratonic terranes. The vein deposits occur within fault and joint systems produced by regional compression or transpression (terrane collision), including major listric reverse faults, second and third-order shear splays. Gold-bearing mineralization is deposited at crustal levels within and near the brittle-ductile transition zone at depths of 6 to 12 km, pressures between 1 to 3 kilobars and temperatures from $200^o$ to $400^o$ C. Deposits may have a vertical extent of up to 2 km, and lack pronounced zoning.

Mesothermal vein deposits are usually of greenschist metamorphic facies grade and hosted by a variety of lithologies ranging from virtually undeformed to totally schistose granite-greenstone belts - mafic, ultramafic (komatiitic) and felsic volcanics, intermediate and felsic intrusive rocks, greywacke and shale. Tabular fissure veins form in more competent host lithologies while veinlets and stringers form stockworks in less competent lithologies. Lower grade bulk tonnage styles of mineralization may develop marginal to veins with gold associated with disseminated sulphides, or as broad areas of fracturing with gold and sulphides associated with quartz veinlet networks. Veins usually have sharp contacts with wallrocks and exhibit a variety of textures that may be modified or destroyed by subsequent deformation.

The economic vein mineralogy includes: native gold, pyrite, arsenopyrite, galena, sphalerite, chalcopyrite, pyrrhotite, tellurides, scheelite, bismuth, cosalite, tetrahedrite, stibnite, molybdenite, gersdorffite (NiAsS), bismuthinite ($Bi_2S_2$), and/or tetradymite ($Bi_2Te_2S$). Gangue minerals commonly include: quartz, carbonates (ferroan-dolomite, ankerite ferroan magnesite, calcite and siderite), albite, mariposite (fuchsite), sericite, muscovite, chlorite, tourmaline, and/or graphite.

Silicification, pyritization and potassium metasomatism generally occur adjacent to veins (usually within a metre) within broader zones of carbonate alteration, with or without ferroan dolomite veinlets, extending up to tens of metres from the veins. The type of carbonate alteration reflects the ferromagnesian content of the primary host lithology; ultramafics rocks – talc and Fe-magnesite; mafic volcanic rocks – ankerite and chlorite; sediments - graphite and pyrite; felsic to intermediate intrusions - sericite, albite, calcite, siderite and pyrite. Quartz-carbonate altered rock (listwanite) and pyrite are often the most prominent alteration minerals in the wallrock. Fuchsite, sericite, tourmaline and scheelite are common where veins are associated with felsic to intermediate intrusions.

Gold-bearing quartz veins are often found within zones of intense and pervasive carbonate alteration along second order or later faults marginal to transcrustal breaks. They are commonly closely associated with, late syncollisional, structurally controlled intermediate to felsic magmatism. Gold-bearing veins are more commonly economic where hosted by relatively large, competent units, such as intrusions or blocks of obducted oceanic crust. Veins are usually at a high angle to the primary collisional fault zone with steep, transcrustal breaks often hosting the best deposits in greenstone terranes.

# 9 EXPLORATION

The following summary of historic exploration work was tabulated from reports by Carter (1988) in MNDM Open File 5692, Drost (1997) for Cyprus Canada, LeGrand (2008) for American Bonanza and Blanchflower (2012).

## 9.1 Pre-2012 Exploration Work

Since the late 1980's exploration programs have been carried out by Noranda Exploration Company Ltd. (1988-92), Cyprus Canada Inc. (1997) and American Bonanza Gold Corp. (2005-08). In 2011 GTA conducted their first phase of surface exploration and diamond drilling. The earlier work was property-wide, including: prospecting; geological mapping; soil, humus and rock geochemical sampling; and geophysical surveying (IP, VLF-EM and magnetics). Results from this work identified five mineral trends within what is now called the 'Afric' zone (see Figure 9.1). More recent exploration work has concentrated on drill testing the gold and silver-bearing mineralization within this zone. A total of 59 diamond drill holes, totalling 10,560.9 m, have been completed within and adjacent to the Afric Zone since 1988.

The historic exploration work on the Property has been well documented in the report by Blanchflower (2012) and summarized in the following Table 9.1 of this report. Figure 9.1 of this report is a pre-2012 drilling plan that shows the locations of the 1988 to 2011 drilling, the anomalous gold-in-rock geochemical samples and the locations of the five mineral trends relative to the Afric Zone.

## 9.2 2012 Exploration Work

In 2012 GTA carried out two phases of diamond drilling (i.e. Phases '2' and '3'), totalling 7,188 metres, with drill hole surveying, and property-wide prospecting and detailed geological mapping. The Phase 2 diamond drilling program was undertaken between March 6th and May 11th, spanning the spring break-up period. Eight drill holes, designated WB-12-13 to WB-12-20, were completed totalling 2,431 m of NQ-size diamond drilling. The details and results of this drilling will be documented in the following 'Drilling' section of this report.

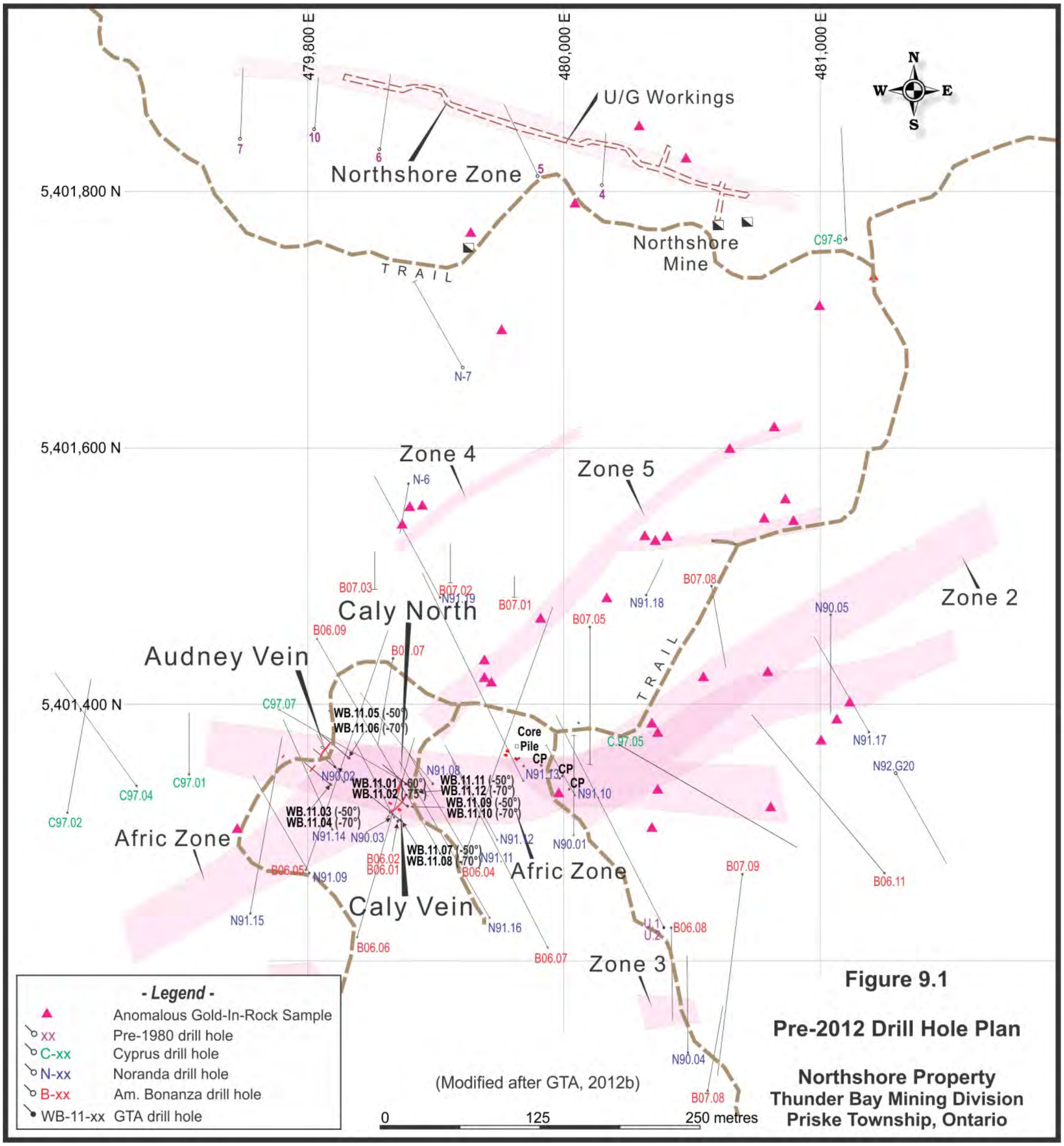
After the completion of the second phase of diamond drilling, GTA contracted two prospectors employed by Stares Contracting to locate and sample the historic trenches excavated by Noranda Exploration Company Ltd., Cyprus Canada Inc. and American Bonanza Gold Corp. plus sample the mineralized trend known as 'Zone No. 3'. This work was carried out from May 16th to 31st and focused on identifying increased disseminated sulphide contents within silicified stockwork host rocks where fine-grained tourmaline is present. In addition, the prospecting surveyed and mapped any historic physical features, such as cut grid-lines, drill hole collars, adits and shafts, using GPS instrumentation (GTA, 2013).

During the prospecting work, seventy-five rock samples were collected and the results of this work were documented for later reference. Eight rock samples returned gold grades in excess of 1 gpt with one sample (E5442606), from a 0.5-cm wide quartz-carbonate-sulphide vein situated near the portal of the Eastern Adit, returning grades of 6.82 and 6.26 gpt gold (GTA, 2013).

Following the prospecting work GTA contracted geologists employed by Clark Exploration, assisted by two Pays Plat First Nation personnel, to carry out property-wide 1:1000-scale geological mapping during the summer field season. This work focused on: delineating the surface mineralization and identifying the sulphide contents of the various Afric intrusive rocks, mapping the attitude of the barren diabase dyke set, and detailed mapping and sampling of historic trenches and stripped outcrop areas.

| Operator | Year | Exploration Work | Area | Reference |
|---|---|---|---|---|
| McKellar-Longworth | 1898-1937 | Prospecting | No. 1 vein | Carter, 1988 |
| McKellar-Longworth | pre-1923 | 5 shallow drill holes | Worthington Bay No. 3 claim | Carter, 1988 |
| Northshore Gold Mines | 1935-1937 | 5 drill holes; underground mining (3,808 t yeilding 2,441 oz gold, 226 oz silver; averaged 0.64 opt. | No. 1 vein | Carter, 1988 |
| Trio Mining Exploration Limited | 1960-1979 | Purchased and held 5 contiguous patented claims | Northshore | Carter, 1988 |
| Autotrac Limited | 1980-1988 | Acquired Northshore patented and unpatented claims | No reported work | Carter, 1988 |
| Noranda Exploration Company Ltd. | 1988-1992 | Linecutting; geol mapping; soil and rock geochem sampling; diamond drilling (20 holes, 2,494.6 m) in 1990-91. | Northshore and adjacent Skalesky and Hayes Lake properties | Drost, 1997 |
| Cyprus Canada Inc. | 1997 | Linecutting; geol mapping (1:2500); geophysics (18.9 IP; 19.1 VLF-EM and mag); 773 humus and 464 rock geochem samples; trenching (571 rock samples); diamond drilling (7 holes, 1,131.3 m) | Afric zone | Drost, 1997 |
| American Bonanza Gold Corp. | 2005-2008 | 2006 - diamond drilling (11 holes, 4,530 m); 2007 - trenching (6 trenches); 2007 - diamond drilling (9 holes, 1,367 m); 2008 - prospecting and tock sampling. | Afric zone (2006-07); unpatented calim 4211126 (2008) | LeGrand, 2008 |
| GTA Resources and Mining Inc. | 2011 | Surveying old drill collars; geol mapping and sampling old trenches (73 samples); NQ-core size daimond drilling (12 holes, 1,038.0 m) | Afric Zone | Blanchflower, 2012 |

**Table 9.1: Summary of Pre-2012 Exploration Work**




A total of 42 rock samples were collected during the 2012 geological mapping and sampling program. Nine of the rock samples returned grades in excess of 1 gpt gold, and one grab sample reportedly collected from the Western Adit muck pile has visible gold in a quartz-chlorite-fuchsite vein (GTA, 2013).

The Phase 3 diamond drilling program was undertaken from August 13th to October 2nd, 2012. Sixteen drill holes, designated WB-12-21 to WB-12-35, were completed totalling 4,757 m of NQ-size diamond drilling. The details and results of this drilling will be documented in the following 'Drilling' section of this report.

On July 10, 2012 various government and local agencies carried out a field inspection of various historic mine workings within the Property. Based upon recommendations from this inspection, GTA contracted the backfilling of the Northshore No. 4 shaft located alongside the Casque Iles section of the Voyageur hiking trail. The open shaft was approximately 12 m deep and represented a public safety hazard. This recommended work was completed in late October under the direct supervision of Mr. Paul Brugger, P.Eng, of P.J. Brugger and Associates, from Neebing Ontario.

Following the two phases of 2012 diamond drilling GTA contracted TBT Engineering of Thunder Bay, Ontario to survey all the 2011 and 2012 drill hole collars, access roads, plus the located historic drill hole collars, adits and shafts. In addition, a petrographic study was initiated to better understand the controls and associations related to the distribution of gold mineralization on the Property.

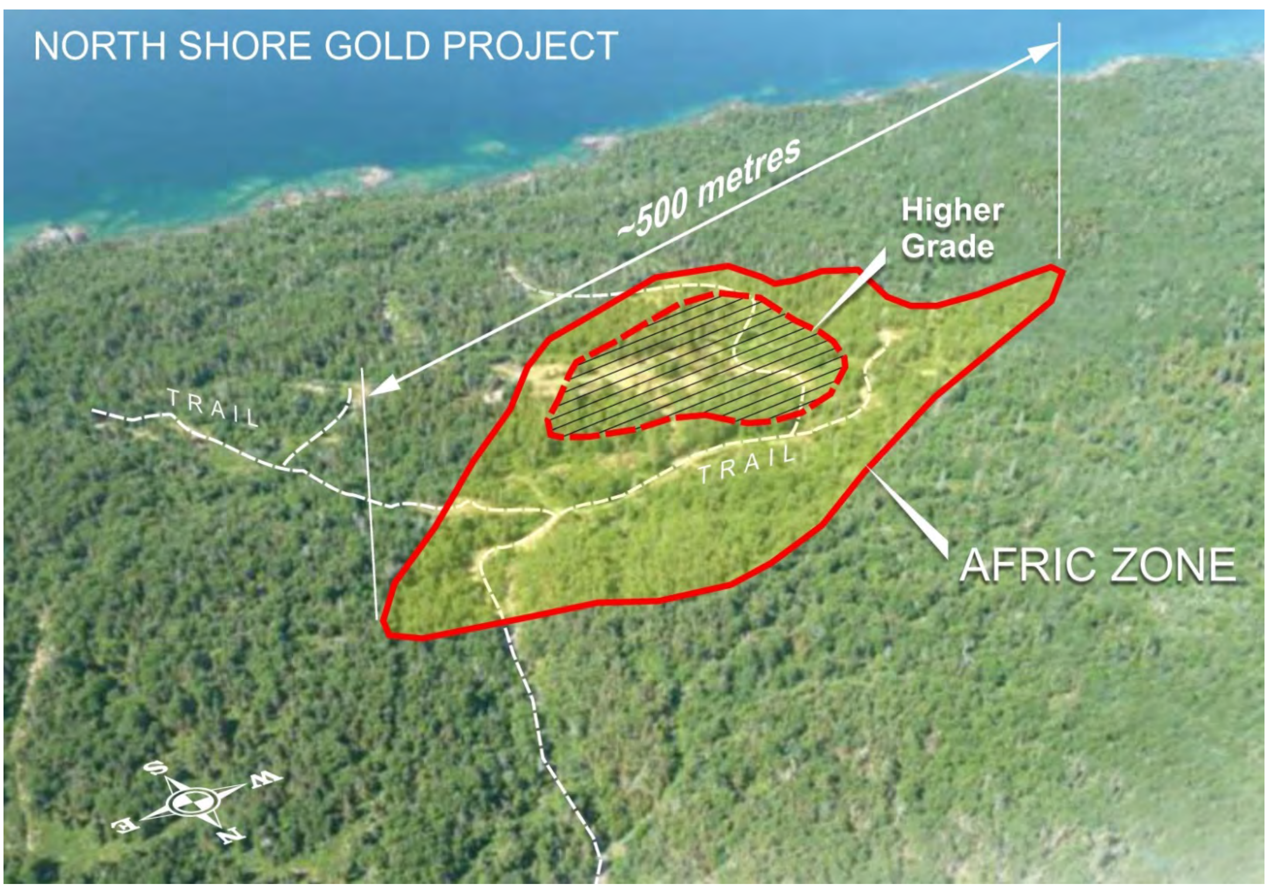
**Photograph No. 9.1: Norex Diamond Drill Rig on the Afric Zone, Northshore Property**

## 9.3 2013 Exploration Work

GTA carried out two additional phases of diamond drilling (i.e. Phases '4' and '5') in 2013, and collected and submitted ten large surface grab samples for metallurgical testing.

The Phase 4 diamond drilling program was carried out between March and May, spanning the spring break-up period. Twelve drill holes, designated WB-13-36 to WB-13-47, were completed totalling 2,313 m of NQ-size diamond drilling. During late October GTA completed an additional 5 diamond drill holes during their Phase 5 drilling program. The Phase 5 drill holes, designated WB-13-48 to WB-13-52, totalled 853 m of NQ-size diamond drilling. The details and results of these drilling campaigns will be documented in the following 'Drilling' section of this report.

Ten large surface grab samples of quartz vein material were collected along the exposed portion of the Audney vein structure. These ten samples, collectively weighing 57.3 kg, were shipped to ALS Metallurgical in Kamloops, British Columbia. It was intended that these samples would be used for preliminary metallurgical testing. The assayed 'head' grades of these samples reportedly ranged from 47 to 716 gpt gold with a weighted average grade of 230 gpt gold. Given the high gold grades of these samples it was decided that they were not representative of the majority of the local mineralization so no further metallurgical work was undertaken. See Section 13 'Mineral Processing and Metallurgical Testing' for a more detailed description of this work.




**Photograph No. 9.2: Aerial View of the Afric Zone, Northshore Property**

# 10 DRILLING

The various pre-2012 drilling campaigns that have been carried out within the Property are well documented and illustrated in the 43-101 technical report by Blanchflower (2012). These drilling campaigns included:

- Twenty 'NR'-series diamond drill holes, totalling 2,494.6 m, completed by Noranda/Hemlo during the 1990 and 1991 field seasons to test the newly discovered Afric Zone;

- Seven BTW ('B-thin wall)-size diamond drill holes, totalling 1,131.3 m, were completed by Cyprus Canada Inc. between August 8th to September 5th, 1997. This drilling tested the eastern and western extensions of the Afric Zone and the eastern extension of the Northshore vein for a large tonnage, low grade gold deposit;

- American Bonanza carried out two diamond drilling campaigns during their tenure. They drilled eleven diamond drill holes, totalling 4,530 m, in 2006 and then nine diamond drill holes, totalling 1,367 m, between December 2007 and January 2008. The 2006 drilling tested the Afric Zone, and the 2007-08 drilling tested the No. 3 mineral trend (see Figure 9.1) situated south of the Afric Zone;

- GTA completed twelve NQ-size diamond drill holes, totalling 1,038.0 m, from October 17th to 30th, 2011. The 2011 Phase 1 program focused on evaluating the Audney, Caly and Caly North vein structures within the Afric Zone where surface rock samples had returned significant gold values.

## 10.1 2012 Diamond Drilling Programs

### 10.1.1 Phase 2 Diamond Drilling Program

A second phase of diamond drilling on the Property was carried out from March 21 to June 7, 2012. GTA contracted Norex Drilling of Timmins, Ontario for the NQ-size core drilling. The drill core logging was undertaken by R. Duess, V.P. Exploration for GTA, and Jeff Myllyaho, a consulting geologist based in Thunder Bay Ontario. Eight diamond drill holes, designated WB-12-13 to WB-12-20, were completed totalling 2,431 metres. The focus of this drilling was to test the continuity of the Afric Zone and its higher grade veins.

**Table 10.1: Phase 2 Diamond Drilling Information (after GTA, 2012)**

| Drill Hole | Northing | Easting | Elevation | Length (m) | Azimuth | Dip |
|---|---|---|---|---|---|---|
| WB-12-13 | 5401378.100 | 479937.560 | 262.759 | 125 | 130 | -50 |
| WB-12-14 | 5401304.823 | 479915.340 | 261.609 | 401 | 311 | -50 |
| WB-12-15 | 5401326.549 | 479842.150 | 258.952 | 188 | 315 | -62 |
| WB-12-16 | 5401348.694 | 479854.410 | 260.600 | 374 | 315 | -62 |
| WB-12-17 | 5401274.244 | 479954.600 | 257.411 | 350 | 315 | -50 |
| WB-12-18 | 5401284.165 | 479902.130 | 260.830 | 386 | 315 | -50 |
| WB-12-19 | 5401425.822 | 479739.040 | 275.632 | 371 | 130 | -50 |
| WB-12-20 | 5401381.812 | 480027.330 | 268.878 | 236 | 130 | -50 |

The significant mineralized intercepts identified during the Phase 2 diamond drilling program have been tabulated as Table 10.2 of the report, modified after GTA News Release dated July 12, 2012.

**Table 10.2: Significant Mineralized Intercepts from the Phase 2 Diamond Drilling Program**

| Drill Hole No. | Length (m) | From (m) | To (m) | Interval (m)* | Gold (gpt) | Zone |
|---|---|---|---|---|---|---|
| **WB-12-13** (-50°) | 125.00 | 31.00 | 111.00 | 80.00 | 0.77 | Afric |
| including | | 103.00 | 111.00 | 8.00 | 4.27 | |
| which includes | | 110.00 | 111.00 | 1.00 | 24.93 | |
| **WB-12-14** (-50°) | 401.00 | 8.00 | 248.00 | 240.00 | 1.41 | Afric |
| including | | 33.50 | 115.00 | 81.50 | 3.15 | Caly |
| | | 42.00 | 76.00 | 34.00 | 3.79 | Caly |
| including | | 33.50 | 45.50 | 12.00 | 7.82 | Cal |
| which includes | | 42.00 | 45.50 | 3.50 | 23.35 | Caly |
| and | | 45.00 | 45.50 | 0.50 | 120.00 | Caly |
| including | | 67.50 | 72.00 | 4.50 | 6.99 | |
| including | | 113.00 | 115.00 | 2.00 | 39.58 | |
| which includes | | 113.00 | 113.50 | 0.50 | 132.00 | |
| including | | 205.00 | 206.00 | 1.00 | 11.20 | Audney |
| **WB-12-15** (-62°) | 188.00 | 4.00 | 147.00 | 143.00 | 0.90 | Afric |
| including | | 29.00 | 38.00 | 9.00 | 5.13 | |
| which includes | | 29.00 | 30.00 | 1.00 | 18.20 | Afric |
| and | | 33.00 | 34.00 | 1.00 | 8.95 | Afric |
| and | | 37.00 | 38.00 | 1.00 | 13.70 | |
| and including | | 53.00 | 54.00 | 1.00 | 14.50 | |
| | | 90.00 | 91.00 | 1.00 | 6.95 | Audney |
| | | 130.00 | 130.50 | 0.50 | 11.10 | |
| **WB-12-16** (-62°) | 374.00 | 3.00 | 123.00 | 120.00 | 0.48 | Afric |
| including | | 3.00 | 19.00 | 16.00 | 0.96 | |
| which includes | | 3.00 | 4.00 | 1.00 | 5.22 | |
| and including | | 95.00 | 108.00 | 13.00 | 1.43 | |
| which includes | | 102.00 | 102.50 | 0.50 | 14.44 | Audney |
| | | 288.40 | 289.40 | 1.00 | 16.14 | |
| **WB-12-17** (-50°) | 350.00 | 144.00 | 226.00 | 82.00 | 0.53 | Afric |
| | | 201.45 | 201.95 | 0.50 | 13.40 | |
| | | 207.35 | 208.00 | 0.65 | 15.80 | |
| **WB-12-18** (-50°) | 386.00 | 59.50 | 150.00 | 90.50 | 1.09 | Afric |
| including | | 59.50 | 60.00 | 0.50 | 7.17 | |
| and | | 69.00 | 73.00 | 4.00 | 4.52 | |
| which includes | | 69.00 | 69.50 | 0.50 | 7.34 | |
| and which incl. | | 72.50 | 73.00 | 0.50 | 26.00 | |
| and | | 93.50 | 94.00 | 0.50 | 14.50 | |
| and | | 106.00 | 107.00 | 1.00 | 7.32 | |
| and | | 142.00 | 142.50 | 0.50 | 8.92 | |

**Table 10.2: Significant Mineralized Intercepts from the Phase 2 Diamond Drilling Program (Continued)**

| Drill Hole No. | Length (m) | From (m) | To (m) | Interval (m)* | Gold (gpt) | Zone |
|---|---|---|---|---|---|---|
| **WB-12-18** (-50°) | | 160.30 | 268.00 | Diabase Dyke | | |
| | | 267.00 | 382.00 | 115.00 | 0.81 | Afric |
| including | | 273.00 | 277.00 | 4.00 | 4.14 | |
| which includes | | 275.00 | 276.50 | 1.50 | 7.86 | |
| | | 312.00 | 313.00 | 1.00 | 5.40 | |
| | | 363.00 | 363.60 | 0.60 | 24.90 | |
| | | 372.00 | 372.50 | 0.50 | 44.20 | |
| **WB-12-19** (-50°) | 371.00 | 42.00 | 154.40 | 112.40 | 0.41 | Afric |
| including | | 42.50 | 43.00 | 0.50 | 18.30 | |
| and | | 127.00 | 127.50 | 0.50 | 6.43 | |
| | | 153.40 | 181.30 | Diabase Dyke | | |
| | | 191.00 | 235.20 | 44.20 | 0.70 | Afric |
| including | | 227.00 | 228.00 | 1.00 | 7.82 | |
| **WB-12-20** (-50°) | 236.00 | 13.00 | 41.00 | 28.00 | 1.10 | Afric |
| including | | 18.00 | 22.00 | 4.00 | 4.89 | |

* ***The drilling interval represents the core length, not the true width of the intercept.***

The drill core from the Phase 2 drilling program was processed and is stored at GTA's field office and core storage facilities in Schreiber, Ontario. GTA personnel split, documented and shipped 2,578 core samples directly to AGAT Laboratories in Sudbury, Ontario for gold fire assays.

According to GTA (News Release dated July 12, 2012), "*All holes intersected widespread sections of quartz, carbonate, pyrite, tourmaline, sericite, (and localized potassic) altered felsic to intermediate intrusive and high level intrusive (porphyritic) rocks. Termed the 'Afric Zone', these rocks are structurally deformed exhibiting brittle deformation and fracturing and host quartz and quartz carbonate veins, veinlets, stringers and fracture infillings. These fracture infillings are mineralized with pyrite and with minor to trace amounts of chalcopyrite, sphalerite, galena, and molybdenite. Multiple occurrences of visible gold were observed in drill core from each of the holes."*

*GTA believes that the "Afric Zone" is hosted within a large felsic intrusive – porphyry system termed the "Afric Intrusive Complex". GTA further believes that this 'Afric Intrusive Complex' represents a porphyry system capable of hosting not only high grade gold bearing quartz veins, but also a bulk tonnage, low to medium grade gold system. Of particular interest, WB-12-19 and WB-12-20 (both drilled at -50° in a southeasterly direction) are the most westerly and easterly (respectively) holes drilled by GTA. Significant widespread gold mineralization encountered in these holes suggests that the gold mineralization of the "Afric Zone" spans a distance of at least 275 metres in an east-west direction. Furthermore, results from drill hole WB-12-18 demonstrates that the Afric Zone gold mineralization extends to a depth of over 300 metres vertically below surface. The limits of the gold mineralization associated with the Afric Zone remain undetermined in all directions."*

### 10.1.2 Phase 3 Diamond Drilling Program

The 2012 Phase 3 diamond drilling program began on August 13th and was completed on October 2nd, and was contracted by Norex Drilling Limited of Timmins, Ontario. Sixteen NQ-size drill holes were competed during this program totalling 4,755 metres. As with the Phase 2 drill program, the drill core was processed at GTA's field office and core storage facilities in Schreiber, Ontario, and consulting geologists, employed by Clark Exploration based in Thunder Bay, Ontario, logged the core. A total of 5,365 drill core samples were split, documented and shipped directly to AGAT Laboratories in Sudbury, Ontario for gold fire assays.

**Table 10.3: Phase 3 Diamond Drilling Information (after GTA, 2012)**

| Drill Hole | Northing | Easting | Elevation | Length (m) | Azimuth | Dip |
|---|---|---|---|---|---|---|
| WB-12-21 | 5401374.340 | 479847.800 | 262.451 | 200 | 310 | -50 |
| WB-12-22 | 5401374.068 | 479848.160 | 262.311 | 101 | 310 | -70 |
| WB-12-23 | 5401387.886 | 479863.960 | 263.258 | 164 | 310 | -50 |
| WB-12-24 | 5401350.412 | 479899.010 | 260.601 | 230 | 310 | -50 |
| WB-12-25 | 54010361.605 | 479961.800 | 263.723 | 347 | 310 | -50 |
| WB-12-26 | 5401304.526 | 479821.110 | 257.004 | 410 | 305 | -50 |
| WB-12-27 | 5401271.378 | 479797.470 | 257.831 | 302 | 315 | -50 |
| WB-12-27A | 5401271.378 | 479797.470 | 257.831 | 17 | 322 | -50 |
| WB-12-28 | 5401230.086 | 479760.710 | 252.549 | 287 | 310.5 | -50 |
| WB-12-29 | 5401361.452 | 480051.840 | 268.144 | 350 | 310 | -50 |
| WB-12-30 | 5401379.093 | 480068.970 | 272.900 | 329 | 314 | -50 |
| WB-12-31 | 5401383.208 | 479982.440 | 265.487 | 344 | 310 | -50 |
| WB-12-32 | 5401249.535 | 479944.180 | 257.193 | 449 | 310 | -50 |
| WB-12-33 | 5401219.201 | 480001.090 | 255.040 | 563 | 310 | -50 |
| WB-12-34 | 5401389.778 | 480055.640 | 272.693 | 215 | 130 | -50 |
| WB-12-35 | 5401399.837 | 480230.550 | 290.955 | 449 | 310 | -50 |

According to GTA (News Release, Nov 12, 2012), *"All holes intersected wide sections of gold mineralization associated with pyritic, tourmaline, and sericitic altered felsic porphyritic rocks (the Afric Intrusive Complex). These rocks are structurally deformed resulting in a variety of fracturing and brecciation which host quartz and quartz carbonate veins and stringers. The quartz rich veins and fracture infillings are mineralized with pyrite, and lesser amounts of sphalerite, galena and telluride. Visible gold has been recognized in most of the holes and the high grade sections are often associated with these occurrences.*

*Drill holes WB-12-21 to WB-12-25 were drilled to test the northeast extension of the Audney Vein and the broader Afric Zone and holes WB-12-26 and WB-12-27 were drilled to test the southwest extensions. The highest assays of these first 7 holes included 47.2 g/t Au and 31.6 g/t Au (each over a core length of 0.5 metres) from holes WB-12-26 and WB-12-27 respectively. Both these high grade values were returned from a quartz vein mineralized with several specks of visible gold, and interpreted to be the faulted southwest extension of the high grade Audney Vein."*

The significant mineralized intercepts identified during the Phase 3 diamond drilling program have been tabulated as Table 10.4 of the report, modified after GTA News Release dated January 8, 2013.

**Table 10.4: Significant Mineralized Intercepts from the Phase 3 Diamond Drilling Program**

| Drill Hole No. | Length (m) | From (m) | To (m) | Interval (m)* | Gold (gpt) |
|---|---|---|---|---|---|
| **WB-12-21** (-50°) | 200.00 | 11.00 | 199.00 | 188.00 | 0.11 |
| including | | 80.00 | 99.00 | 19.00 | 0.22 |
| including | | 15.00 | 16.00 | 1.00 | 0.63 |
| and | | 80.00 | 82.00 | 2.00 | 0.84 |
| **WB-12-22** (-70°) | 101.00 | 4.00 | 78.00 | 74.00 | 0.20 |
| including | | 6.00 | 12.00 | 6.00 | 0.72 |
| **WB-12-23** (-50°) | 164.00 | 43.00 | 48.00 | 5.00 | 0.21 |
| **WB-12-24** (-50°) | 230.00 | 9.00 | 10.00 | 1.00 | 7.88 |
| - and | | 77.00 | 147.00 | 70.00 | 0.20 |
| **WB-12-25** (-50°) | 347.00 | 3.00 | 347.00 | 344.00 | 0.28 |
| including | | 4.00 | 10.00 | 6.00 | 1.89 |
| and | | 150.00 | 152.00 | 2.00 | 8.65 |
| and | | 272.00 | 280.00 | 8.00 | 1.37 |
| and | | 309.00 | 310.00 | 1.00 | 1.92 |
| and | | 336.00 | 341.00 | 5.00 | 1.79 |
| **WB-12-26** (-50°) | 410.00 | 124.80 | 394.00 | 269.20 | 0.34 |
| including | | 124.80 | 162.90 | 38.00 | 0.92 |
| including | | 130.80 | 162.90 | 32.10 | 1.03 |
| including | | 149.80 | 150.90 | 1.10 | 22.72 |
| and | | 150.40 | 150.90 | 0.50 | 47.20 |
| and | | 329.00 | 351.00 | 22.00 | 1.25 |
| including | | 333.00 | 341.00 | 8.00 | 2.83 |
| **WB-12-27** (-50°) | 302.00 | 125.00 | 249.00 | 124.00 | 0.72 |
| including | | 129.00 | 169.50 | 40.50 | 1.41 |
| and | | 160.00 | 169.50 | 9.50 | 1.96 |
| including | | 160.50 | 161.00 | 0.50 | 31.60 |
| **WB-12-28** (-50°) | 287.00 | 24.00 | 41.00 | 17.00 | 0.32 |
| including | | 24.00 | 25.00 | 1.00 | 1.82 |

**** The drilling interval represents the core length, not the true width of the intercept.***

According to GTA (News Release, January 8, 2013), *"Holes WB-12-32 and WB-12-33, the deepest holes ever drilled on the Northshore property, were drilled to undercut the main Afric Zone at depth, and both holes intersected significant gold values. The intersection in WB-12-33 of 1.37 g/t Au over 68.0 meters (including 12.16 g/t over 4.0 meters) represents one of the deepest gold intersections ever encountered on the property, at approximately 390 metres vertically below surface. Furthermore, hole WB-12-33 was stopped at 563 m and ended in gold mineralization (0.7 g/t Au over 7.0m from 557 m to 563 m). These results clearly indicate that gold mineralization on the Northshore Property remains open at depth."*

**Table 10.4: Significant Intercepts from the Phase 3 Diamond Drilling Program (Continued)**

| Drill Hole No. | Length (m) | From (m) | To (m) | Interval (m)* | Gold (gpt) |
|---|---|---|---|---|---|
| **WB-12-29** (-50°) | 350.00 | 9.20 | 84.00 | 74.80 | 1.12 |
| including | | 28.00 | 56.00 | 28.00 | 2.00 |
| including | | 42.00 | 42.50 | 0.50 | 25.30 |
| including | | 237.50 | 282.00 | 44.50 | 1.95 |
| and | | 236.00 | 239.00 | 3.00 | 9.15 |
| and | | 237.50 | 238.00 | 0.50 | 50.90 |
| and | | 268.00 | 285.00 | 17.00 | 3.25 |
| including | | 270.00 | 275.00 | 5.00 | 9.78 |
| including | | 270.00 | 270.50 | 0.50 | 50.90 |
| and | | 274.00 | 275.00 | 1.00 | 20.10 |
| **WB-12-30** (-50°) | 326.00 | 5.00 | 48.00 | 43.00 | 1.02 |
| including | | 12.00 | 20.00 | 8.00 | 4.58 |
| and | | 176.00 | 181.00 | 5.00 | 1.93 |
| and | | 275.00 | 276.00 | 1.00 | 14.50 |
| **WB-12-31** (-50°) | 344.00 | 143.00 | 198.00 | 55.00 | 0.83 |
| including | | 143.00 | 157.00 | 14.00 | 1.32 |
| including | | 146.50 | 147.00 | 0.50 | 20.60 |
| including | | 197.00 | 198.00 | 1.00 | 15.80 |
| **WB-12-32** (-50°) | 444.00 | 231.00 | 244.00 | 13.00 | 1.00 |
| and | | 337.00 | 348.50 | 11.50 | 1.26 |
| and | | 368.00 | 369.00 | 1.00 | 9.91 |
| and | | 419.80 | 432.00 | 12.20 | 1.02 |
| **WB-12-33** (-50°) | 563.00 | 421.00 | 489.00 | 68.00 | 1.37 |
| including | | 421.00 | 430.00 | 9.00 | 5.94 |
| including | | 421.00 | 425.00 | 4.00 | 12.16 |
| including | | 423.50 | 424.00 | 0.50 | 66.50 |
| **WB-12-34** (-50°) | 215.00 | 61.10 | 83.00 | 21.90 | 0.96 |
| including | | 74.00 | 83.00 | 9.00 | 2.01 |
| including | | 74.00 | 76.00 | 2.00 | 6.96 |
| **WB-12-35** (-50°) | 449.00 | 62.00 | 63.00 | 1.00 | 4.11 |
| and | | 413.00 | 429.00 | 16.00 | 1.06 |
| including | | 414.00 | 416.00 | 2.00 | 2.76 |

**** The drilling interval represents the core length, not the true width of the intercept.***

In its news release dated January 8, 2013, GTA stated that *"Holes WB-12-29, WB-12-30 and WB-12-35 were drilled to further evaluate the northeast extension of the Afric Zone and all three holes encountered significant gold mineralization. An average grade of 1.95 g/t Au over 44.5 meters (including 9.78 g/t over 5.0 metres) in hole WB-12-29 occurs at approximately 200 metres vertically below surface, and 1.06 g/t Au over 16 meters in WB-12-35 at approximately 330 metres vertically below surface. These deeper intersections are in an area of very limited drilling and gold mineralization is open up dip, at depth, and along strike."*

Between the Phase 1 drilling in 2011 and the two phases of drilling in 2012 GTA had completed 35 drill holes, totalling 8,224 m, within an area of 450 by 350 metres. The results indicated that the gold mineralization is hosted by, and perhaps genetically related to, a larger intrusive suite. Furthermore, the Property had the potential for hosting both a bulk tonnage deposit and discrete higher grade lode gold zones.

## 10.2 2013 Diamond Drilling Programs

### 10.2.1 Phase 4 Diamond Drilling Program

On March 19, 2013 GTA announced the start of the Phase 4 diamond drilling program on the Property. The focus of this drilling was to continue testing and expanding the Afric Zone and its eastern and northeastern extensions.

Diamond drilling began on March 21st and was completed on June 7th, spanning Spring break-up in May 2013. Norex Drilling of Timmins Ontario was contracted to carry out the NQ-size core drilling, and the drill core logging was undertaken by R. Duess, V.P. Exploration for GTA, or by Jeff Myllyaho, a consulting geologist based in Thunder Bay Ontario. Twelve drill holes, totalling 2,313 m, were completed during the Phase 4 drilling program. The pertinent drill information for these holes is shown in Table 10.5 of this report.

**Table 10.5: Phase 4 Diamond Drilling Information (after GTA, 2013)**

| Drill Hole | Northing | Easting | Elevation | Length (m) | Azimuth | Dip |
|---|---|---|---|---|---|---|
| WB-13-36 | 5401436.427 | 480087.520 | 281.809 | 227 | 121 | -50 |
| WB-13-37 | 5401419.539 | 479980.240 | 269.081 | 170 | 122 | -50 |
| WB-13-38 | 5401419.929 | 479979.600 | 269.371 | 212 | 118 | -64 |
| WB-13-39 | 5401415.463 | 479980.100 | 268.838 | 218 | 323 | -50 |
| WB-13-40 | 5401415.054 | 479980.410 | 268.706 | 152 | 323 | -70 |
| WB-13-41 | 5401401.508 | 479910.380 | 265.564 | 200 | 130 | -52 |
| WB-13-42 | 5401385.043 | 479929.630 | 263.577 | 137 | 310 | -50 |
| WB-13-43 | 5401328.767 | 479764.490 | 258.079 | 92 | 315 | -55 |
| WB-13-44 | 5401254.539 | 479841.740 | 254.443 | 290 | 315 | -50 |
| WB-13-45 | 5401288.730 | 479744.750 | 257.839 | 110 | 314 | -45 |
| WB-13-46 | 5401433.551 | 480089.630 | 282.732 | 200 | 318 | -45 |
| WB-13-47 | 5401680.016 | 479946.170 | 318.968 | 305 | 12 | -45 |

Approximately 92 percent of the Phase 4 drill core, representing 2116.7 m, was split and sampled from which 1,552 samples were collected. As before, this drill core was processed and is stored at GTA's field office and core storage facilities in Schreiber, Ontario. All of the core samples were shipped directly to AGAT Laboratories, either in Sudbury or Thunder Bay Ontario, for gold fire assays.

The Phase 4 diamond drilling program successfully tested the easterly and northeasterly mineral trends to the Afric Zone, called the 'East Extension' and 'Northeast Extension' respectively. These trends are characterized as wide lower grade zones containing higher grade zones over narrower widths. The Phase 4 drill holes intersected significant gold mineralization hosted within altered felsic porphyritic and intrusive rocks with multiple occurrences of visible gold mineralization in all holes.

According to GTA (news release dated May 9, 2013), initial drilling within the East Extension "*include intersections of 2.50 g/t (grams per tonne) gold over 13.0 metres (m) (within a wider zone of 1.4 gpt over 43.5 m) in hole WB-13-37 and 12.28 g/t gold over 2.0 m (within a zone of 1.47 g/t over 70.0 m) in hole WB-13-38. These holes, drilled approximately 50 metres and 100 metres respectively below a previously drilled shallow intersection of 1.51 g/t gold over 50.8 m (hole WB-12-29) help confirm the strike continuity of the East Extension for a distance of 170 metres from the Central Afric Zone. Hole WB-13-36 was drilled 70 metres further east from the above described section and intersected anomalous gold (0.66 g/t gold over 10.0 m) at the interpreted East Extension trend location.*"

Drill holes WB-13-39 and 40 tested the Northeast Extension, approximately 130 m northeast of the central Afric Zone. Drill hole WB-13-39 intersected 4.77 gpt gold over drilled length of 8.0 m within a wider zone of 1.35 gpt over a drilling length of 34.2 m. Drill hole WB-13-40 tested the zone 50 m downdip and it intersected 7.97 gpt over a core length of 1.5 m within a drilling length of 49.0-metre that assaying 0.53 gpt gold (GTA news release, May 9, 2013).

Following resumption of Phase 4 drilling after the Spring breakup, GTA announced that drilling had identified a western extension of the Afric Zone, called the 'Pup' Extension. Drill hole WB-13-44 within this western extension returned 0.66 gpt gold over a core interval of 196.5 m, including a higher grade section of 3.14 gpt gold over a core length of 13.0 m. Hole WB-13-43 that tested the same section and 40 m up dip returned 178.0 gpt gold over a drilling length of 1.0 m from a quartz vein (GTA news release dated May 28, 2013). GTA interpreted this higher grade gold mineralization as a faulted extension of the Audney Vein.

Other Phase 4 drill holes, WB-13-41 and 42 tested the East and Northeast Extensions respectively. WB-13-41 intersected 8.56 gpt gold over a core length of 1.5 m within a wider zone of 0.51 gpt gold over a drilling length of 102.0 m. Drill hole WB-13-42 intersected 1.45 gpt gold over a core length of 6.0 m (GTA news release dated May 28, 2013).

The results of the final three drill holes for the Phase 4 drilling were announced in GTA news release dated July 18, 2013. According to this news release, drill hole WB-13-45 returned 4.07 gpt gold over a core length of 1.5 m from the Pup Extension. Drill hole WB-13-46 intersected 0.59 gpt gold over a drilling length of 63.0 m, including 7.45 gpt gold over a core length of 1.5 m., from a drilling length of 137.0 to the end of the hole at 200.0 m within the Northeast Extension. The last drill hole of the drilling campaign, WB-13-47, intersected a new gold-bearing vein structure, called the 'Gino' vein, that returned an average grade of 5.23 gpt gold over a drilling length of 6.0 m at a vertical depth of less than 15 m, including 19.20 gpt gold over a core length of 1.5 metres. Another quartz vein intersected in the same hole at a greater depth returned 8.85 gpt gold over a core length of 1.00 metre (GTA news release dated July 18, 2013). These higher grade gold intercepts are located in an area of sparse drill testing 250 m north of the Afric Gold Zone and 100 m south the underground workings of the former producing Northshore mine (see Figure 10.1).

Significant mineralized intercepts identified during the Phase 4 diamond drilling program have been tabulated as Table 10.6 of the report, after GTA News Releases dated May 9$^{th}$ and 28$^{th}$ and July 18$^{th}$, 2013.

**Table 10.6: Significant Mineralized Intercepts from the Phase 4 Diamond Drilling Program**

| Drill Hole No. | Length (m) | From (m) | To (m) | Interval (m)* | Gold (gpt) | Target |
|---|---|---|---|---|---|---|
| WB-13-36 | 227.00 | 22.00 | 32.00 | 10.00 | 0.66 | East Ext. |
| | | 64.00 | 68.00 | 4.00 | 1.43 | |
| | | 94.00 | 95.00 | 1.00 | 3.30 | |
| WB-13-37 | 170.00 | 80.00 | 123.50 | 43.50 | 1.40 | East Ext. |
| including | | 88.00 | 101.00 | 13.00 | 2.50 | |
| and | | 122.00 | 123.50 | 1.50 | 14.20 | |
| WB-13-38 | 212.00 | 110.50 | 180.50 | 70.00 | 1.47 | East Ext. |
| including | | 110.50 | 112.50 | 2.00 | 12.28 | |
| WB-13-39 | 218.00 | 29.80 | 64.00 | 34.20 | 1.35 | Northeast Ext. |
| including | | 46.00 | 54.00 | 8.00 | 4.77 | |
| WB-13-40 | 152.00 | 73.00 | 122.00 | 49.00 | 0.53 | Northeast Ext. |
| including | | 73.00 | 74.00 | 1.00 | 5.63 | |
| and | | 101.00 | 102.50 | 1.50 | 7.97 | |
| and | | 121.00 | 122.00 | 1.00 | 3.33 | |
| WB-13-41 | 200.00 | 92.00 | 194.00 | 102.00 | 0.51 | East Ext. |
| including | | 118.20 | 128.00 | 9.80 | 1.16 | |
| and | | 192.50 | 194.00 | 1.50 | 8.56 | |
| WB-13-42 | 137.00 | 11.00 | 72.50 | 61.50 | 0.32 | Northeast Ext. |
| including | incl | 54.50 | 60.50 | 6.00 | 1.45 | |
| WB-13-43 | 92.00 | 65.00 | 66.00 | 1.00 | 178.00 | |
| WB-13-44 | 290.00 | 33.50 | 230.00 | 196.50 | 0.66 | Pup |
| including | | 105.50 | 162.10 | 56.60 | 1.06 | |
| including | | 114.00 | 127.00 | 13.00 | 3.14 | |
| including | | 114.00 | 115.00 | 1.00 | 15.50 | |
| and | | 126.00 | 127.00 | 1.00 | 13.80 | |
| and | | 210.50 | 212.00 | 1.50 | 13.30 | |
| B-13-45 | 110.00 | 74.00 | 75.50 | 1.50 | 4.07 | Audney |
| | | 90.50 | 92.00 | 1.50 | 1.55 | |
| B-13-46 | 200.00 | 110.00 | 111.50 | 1.50 | 1.35 | Northeast Ext. |
| | | 137.00 | 200.00 | 63.00 | 0.59 | |
| including | | 168.50 | 200.00 | 31.50 | 0.91 | |
| including | | 197.00 | 198.50 | 1.50 | 7.45 | |
| B-13-47 | 305.00 | 17.00 | 23.00 | 6.00 | 5.23 | Gino Vein |
| including | | 18.50 | 20.00 | 1.50 | 19.20 | |
| and | | 104.00 | 105.00 | 1.00 | 8.85 | |

***The drilling interval represents the core length, not the true width of the intercept.***

Upon completion of the Phase 4 drilling GTA had completed 47 drill holes totalling 10,537 m in four individual drilling campaigns. This drilling had focused on the Afric Zone which had at the time been tested over an area of 500 by 350 metres and to a vertical depth of 350 metres. It remained open for extension to depth and to the northeast.

### 10.2.2 Phase 5 Diamond Drilling Program

In a news release dated October 22nd GTA announced the start of the Phase 5 diamond drilling program. The focus of this drilling campaign was to provide fill-in drilling information to better understand the relationship between the bulk tonnage gold potential and higher grade vein structures within the Afric Zone. Two holes were also planned to expand on the newly discovered Gino vein structure.

The Phase 5 drilling program was completed in late October 2013, and consisted of five holes totalling 853 metres. The first three drill holes, WB-13-48, -49 and -50, tested the newly discovered Gino vein structure and the last two drill holes, WB-13-51 and -52 tested the Afric Gold Zone.

**Table 10.7: Phase 5 Diamond Drilling Information (after GTA, 2013)**

| Drill Hole | Northing | Easting | Elevation | Length (m) | Azimuth | Dip |
|---|---|---|---|---|---|---|
| WB-13-48 | 479946.100 | 5401680.799 | 318.715 | 125 | 345 | -45 |
| WB-13-49 | 479946.440 | 5401680.854 | 318.978 | 140 | 030 | -45 |
| WB-13-50 | 479946.100 | 5401680.962 | 318.715 | 152 | 010 | -55 |
| WB-13-51 | 480113.160 | 5401306.418 | 279.698 | 244 | 315 | -50 |
| WB-13-52 | 480128.880 | 5401331.500 | 281.732 | 315 | 315 | -50 |

The first three holes of the program were drilled to further evaluate the recently identified Gino Vein (see press release dated July 18, 2013). All three drill holes WB-13-48, WB-13-49 and WB-13-50 intersected the steeply dipping, east-west trending quartz-carbonate Gino vein structure. Significant mineralized intercepts included: 46.4 gpt gold over a core length of 1.0 m in drill hole WB-13-48, 41.6 gpt gold over core length of 1.0 m in drill hole WB-13-49, and 6.38 gpt gold over a core length of 2.0 m in drill hole WB-13-50. All of these intercepts occur at vertical depths of less than 125 metres (GTA news release, Dec 10, 2013).

Drill holes WB-13-51 and -52 continued testing the Afric Zone. Drill hole WB-13-51 intersected a higher grade interval of 9.47 gpt gold over a core length of 9.0 metres within a 201-metre wide zone of anomalous gold returning a length-weighted average grade of 0.73 gpt gold. Drill hole WB-13-52 intersected a 192-metre section of the Afric Zone that returned a length-weighted average grade of 0.54 gpt gold (GTA news release, Dec 10, 2013).

The significant mineralized intercepts identified during the Phase 5 diamond drilling program have been tabulated as Table 10.8 of the report, after GTA News Release dated December 10th, 2013.

**Table 10.8: Significant Mineralized Intercepts from the Phase 5 Diamond Drilling Program**

| Drill Hole No. | Length (m) | From (m) | To (m) | Interval (m)* | Gold (gpt) | Target |
|---|---|---|---|---|---|---|
| WB-13-48 | 125.00 | 101.00 | 104.00 | 3.00 | 15.97 | |
| including | | 101.00 | 102.00 | 1.00 | 46.40 | Gino Vein |
| WB-13-49 | 140.00 | 110.00 | 111.00 | 1.00 | 41.60 | Gino Vein |
| | | 125.00 | 126.50 | 1.50 | 2.69 | |
| | | 137.00 | 138.50 | 1.50 | 7.05 | |
| WB-13-50 | 152.00 | 15.00 | 17.00 | 2.00 | 2.79 | |
| | | 146.00 | 148.00 | 2.00 | 6.38 | Gino Vein |
| WB-13-51 | 244.00 | 23.00 | 224.00 | 201.00 | 0.73 | Afric Zone |
| | | 134.00 | 224.00 | 90.00 | 1.41 | |
| | | 159.50 | 203.00 | 43.50 | 2.51 | |
| | | 159.50 | 168.50 | 9.00 | 9.47 | |
| WB-13-52 | 212.00 | 20.00 | 212.00 | 192.00 | 0.54 | Afric Zone |
| | | 81.00 | 86.00 | 5.00 | 3.80 | |
| | | 128.00 | 180.50 | 52.50 | 1.26 | |
| | | 171.50 | 180.50 | 9.00 | 3.53 | |
| | | 179.00 | 180.50 | 1.50 | 16.80 | |

**** The drilling interval represents the core length, not the true width of the intercept.***

## 10.3 Discussion of the 2012 and 2013 Diamond Drilling Results

Since optioning the Property in July 2011, GTA has completed 52 diamond drill holes, totalling 11,390 metres of NQ-size core drilling. This drilling has been largely focused on testing the gold mineralization within the Afric Zone. Current drilling results show that this zone underlies an area measuring at least 500 by 350 metres and the gold-bearing mineralization has been shown to extend vertically to a depth of 350 metres beneath the surface. The Afric Zone remains open for expansion both at depth and to the northeast. In addition, the newly discovered Gino vein structure hosting significant gold-bearing mineralization and situated 250 m north of the Afric Zone represents an excellent exploration target that remains open for expansion both laterally and downdip.

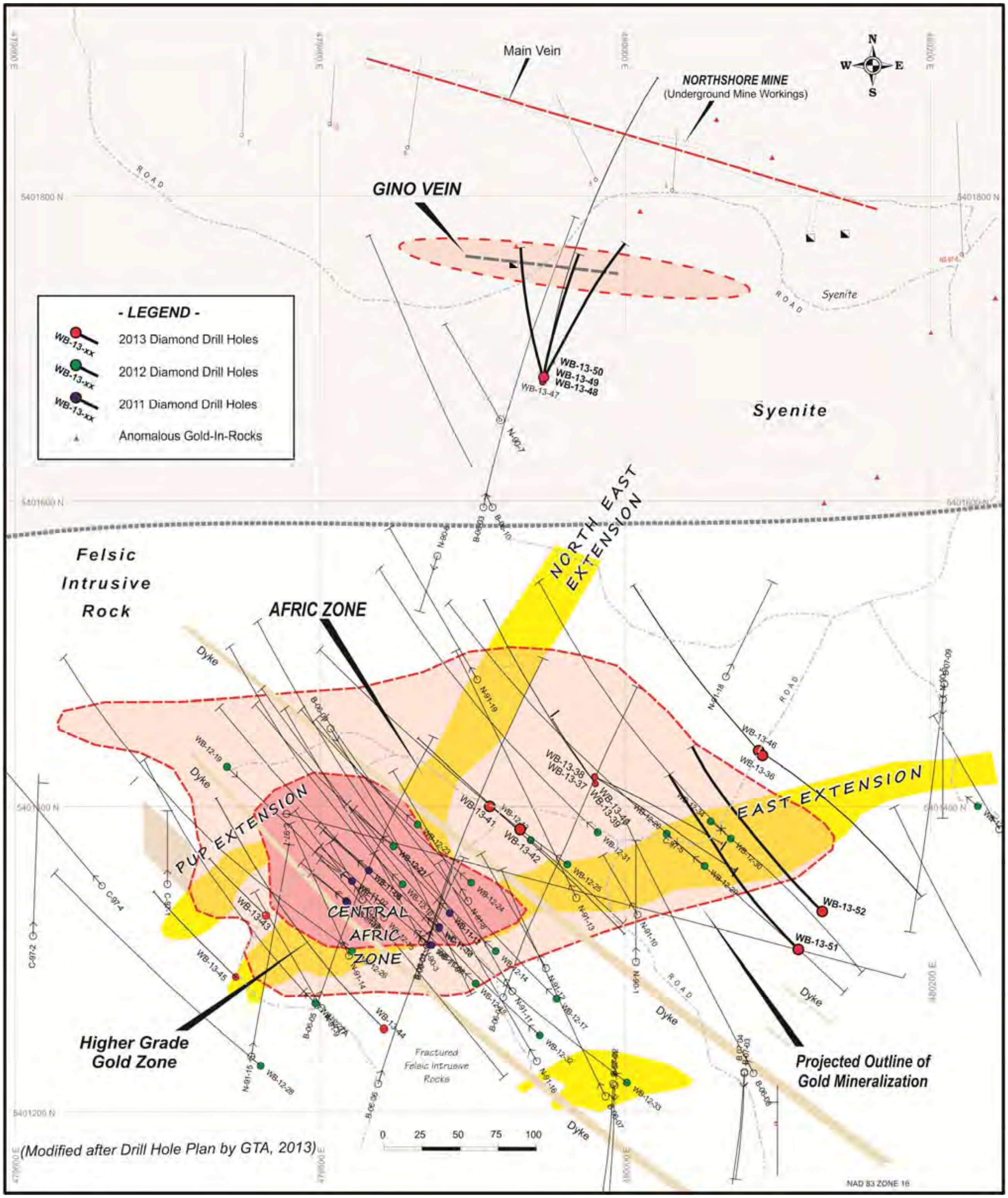



**Figure 10.1: Diamond Drilling Plan, Afric Zone, Northshore Property**

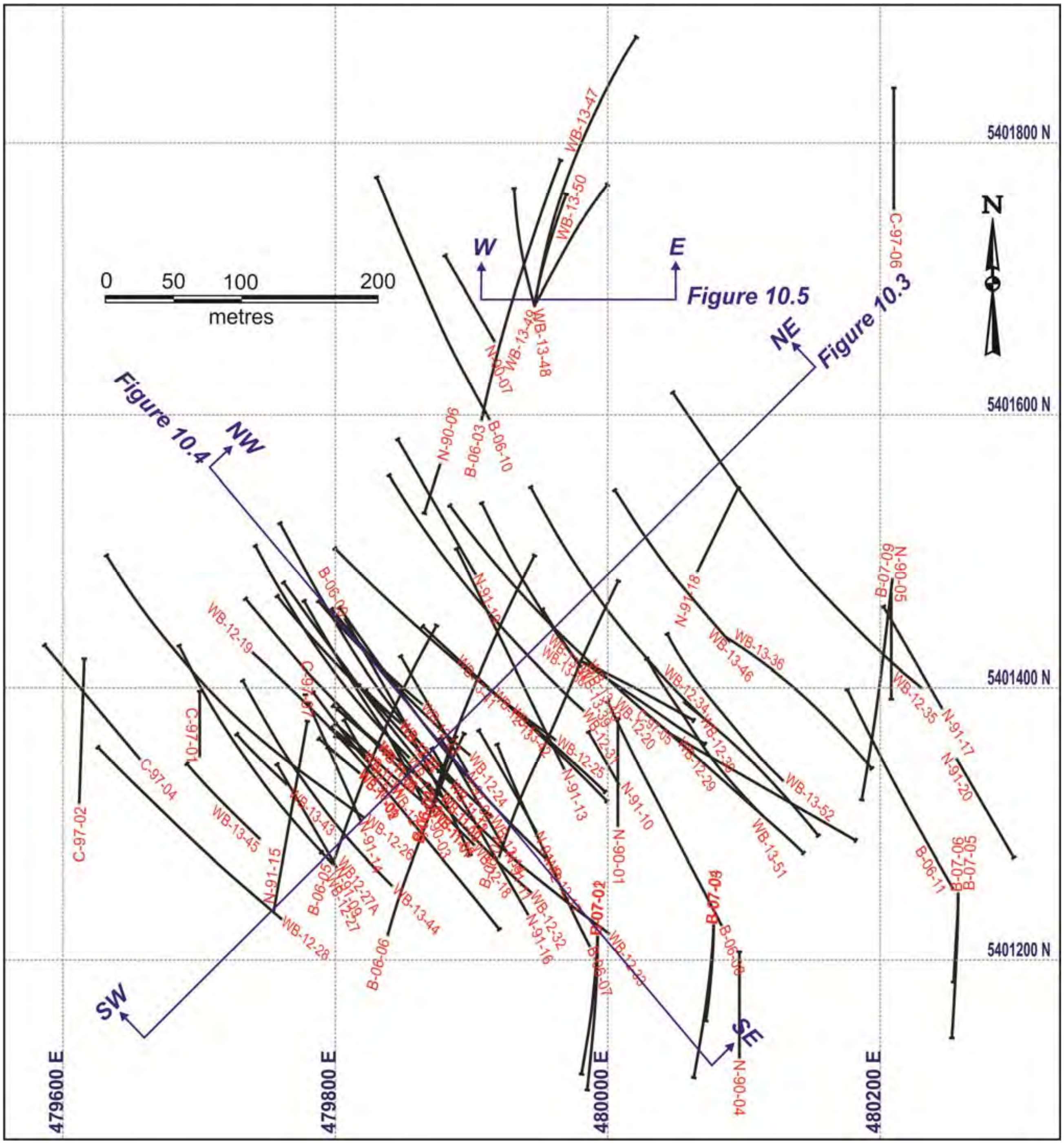



Figure 10.2: Vertical Cross-Section Location Plan, Afric Zone

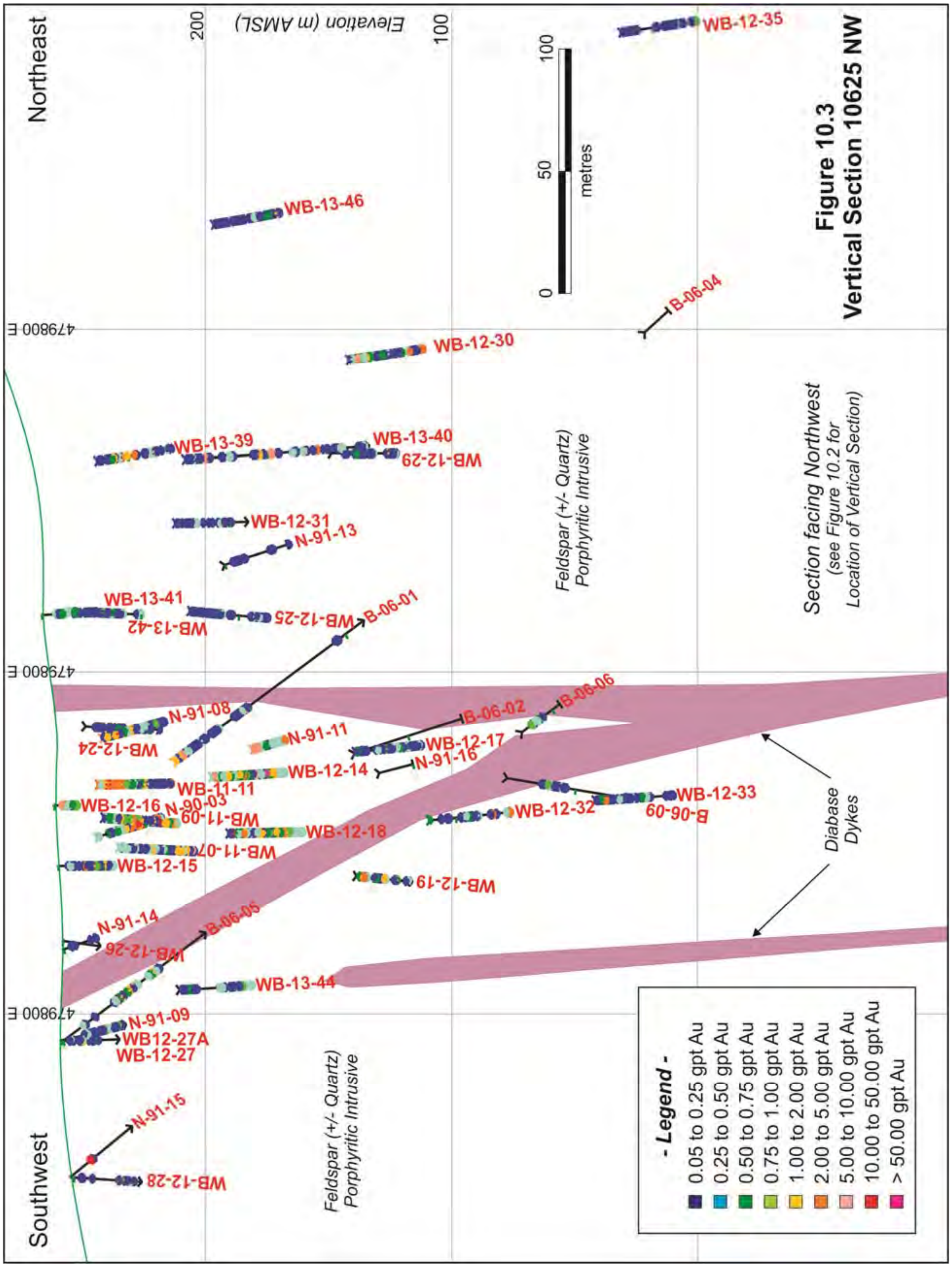



**Figure 10.3**
**Vertical Section 10625 NW**

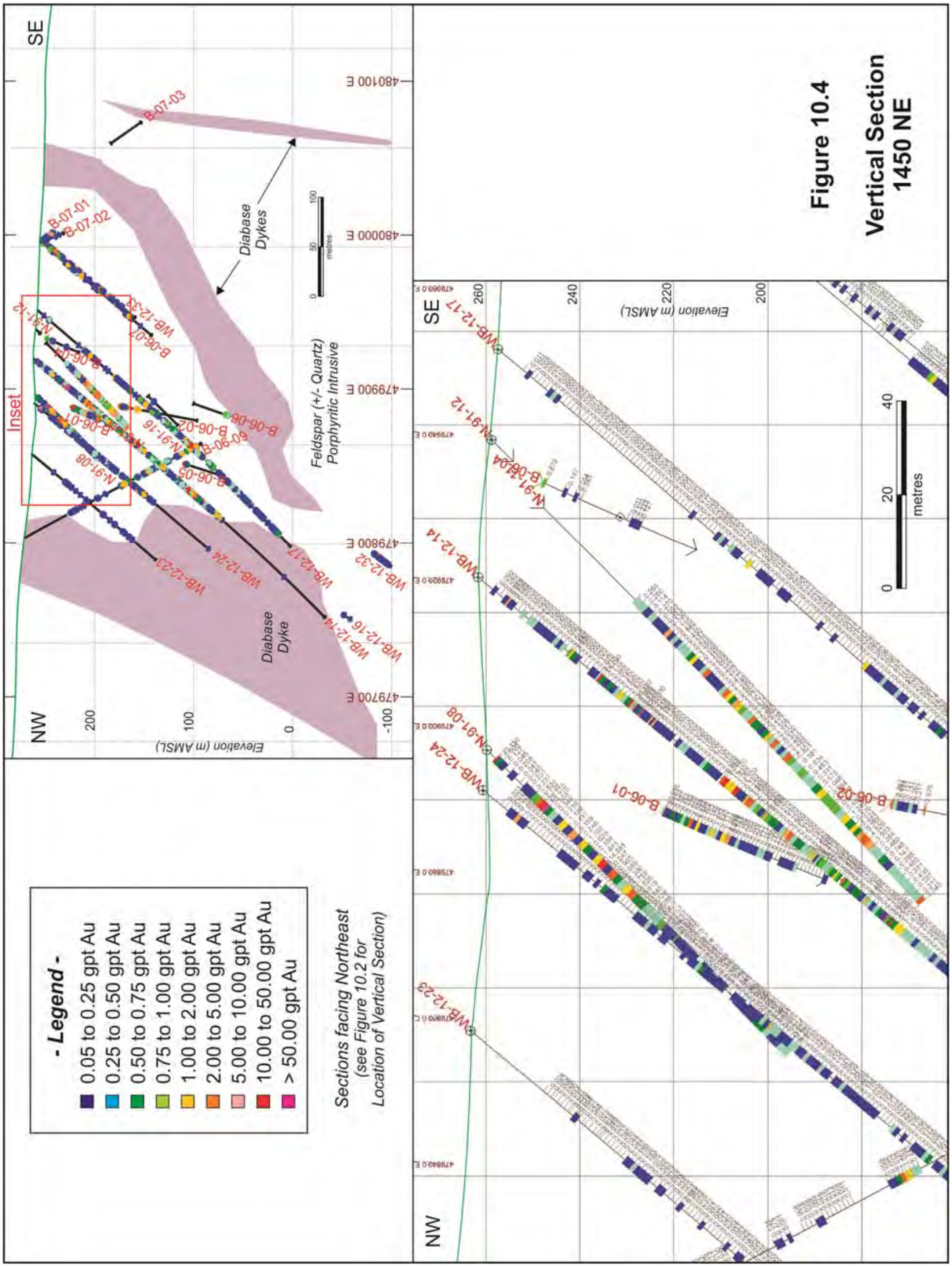



Figure 10.4
Vertical Section
1450 NE

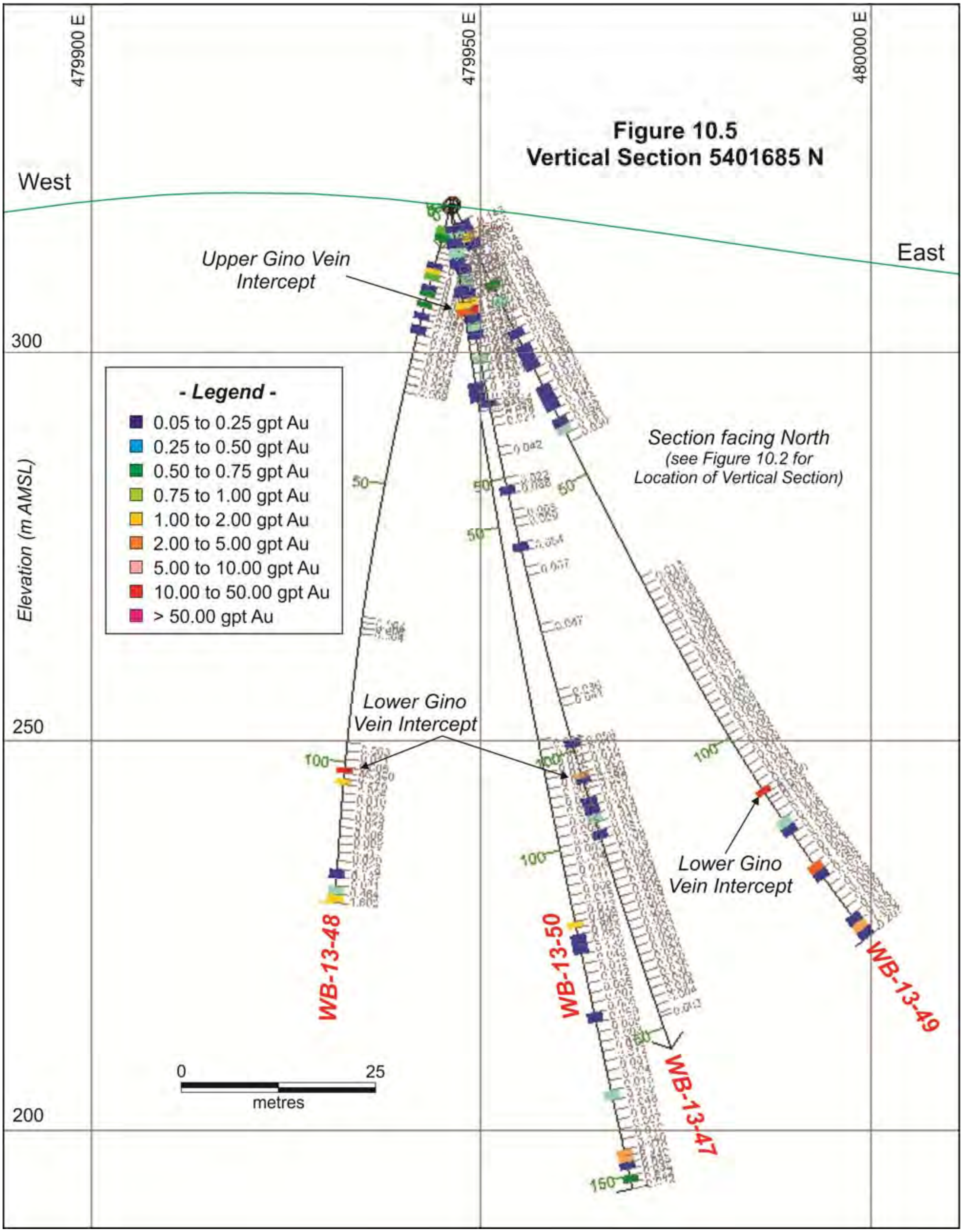


Figure 10.5
Vertical Section 5401685 N
479900 E
479950 E
480000 E
West
East
Upper Gino Vein Intercept
Lower Gino Vein Intercept
Lower Gino Vein Intercept
Section facing North
(see Figure 10.2 for Location of Vertical Section)
- Legend -
0.05 to 0.25 gpt Au
0.25 to 0.50 gpt Au
0.50 to 0.75 gpt Au
0.75 to 1.00 gpt Au
1.00 to 2.00 gpt Au
2.00 to 5.00 gpt Au
5.00 to 10.00 gpt Au
10.00 to 50.00 gpt Au
> 50.00 gpt Au
Elevation (m AMSL)
300
250
200
WB-13-48
WB-13-50
WB-13-47
WB-13-49
0
25
metres

# 11 SAMPLE PREPARATION, ANALYSES AND SECURITY

The following text applies to the procedures utilized by GTA during their 2012 and 2013 drilling programs, based upon information provided to the authors by GTA. No aspect of the sample preparation or analysis was conducted by an employee, officer, director or associate of GTA.

## 11.1 2012 and 2013 Sample Preparation

The 2012 and 2013 surface sampling and diamond drilling programs conducted by GTA utilized handling, logging, sampling, QA/QC, security and storage procedures compliant with current industry-standard practises and Canadian Institute of Mining and Metallurgy ('CIM') Standards and Guidelines.

During 2012 surface grab and chip samples were collected by GTA-contracted field personnel from exposed mineralized quartz veins, quartz-carbonate stockwork structures and highly altered country rock material. The rock samples were correctly collected and described on site, and placed in a labelled 6-mil plastic sample bags with unique sample tags. The bagged samples were then transported to GTA's field office in Schreiber for secure storage. They were then shipped via Greyhound Bus Parcel Express to the sample preparation and analytical facilities of AGAT Laboratories in Thunder Bay, Ontario where they were prepared and analysed for their gold content.

According to their website (http://www.agatlabs.com/about/accreditation.cfm), AGAT Laboratories is accredited for specific tests as listed in the laboratory's current scope of accreditation by the following organizations: The Standards Council of Canada (SCC), The Canadian Association for Laboratory Accreditation (CALA) and QMI-SAI Global. AGAT Laboratories is accredited to International Standards Organization ISO/IEC 17025:2005 and certified to International Standards Organization ISO 9001:2008.

The cores from the 2012 (Phases 2 and 3) and 2013 (Phases 4 and 5) drilling campaigns were placed in wooden boxes at each drill site and transported by either the drillers or the supervising geologist to GTA's field office in Schreiber. There the core boxes were opened, and the core was gently washed clean of drilling fluids and accurately measured to determine core recoveries. After core recovery measurements the drill core was geologically logged for its lithology, structure, alteration and mineralization. These observations were recorded as written notes on pre-prepared log sheets. During the geological logging, the geologist marked the intervals of drill core that should be sampled, respecting lithological contacts and structural features.

The drill core was cut in half lengthwise using a diamond rock saw for those sections deemed worthy of sampling and analysis. One half of the sawn drill core was placed in a 6-mil sample bag and the other half of the drill core was returned to its correct position in the core box. A unique sample assay tag was placed in each core sample bag before the bag was securely sealed. The drill hole number, drilling interval, sample assay tag number were recorded for later transcribing to Chain of Custody documents that accompanied the samples to the assay laboratory. Quality control standard and blank samples were inserted into the sample sequence at an average rate of 1 standard and 1 blank per 20 drill core samples, representing approximately five percent of the total samples.

After the drill core had been properly logged and sampled the observations recorded on hand-written drill logs were input into a matrix-style spreadsheet for computerization. The core boxes were labelled with an embossed aluminum tag documenting the drill hole number, box number and drilled interval contained in each box. The core boxes were stored in pre-constructed core racks at GTA's Schreiber warehouse.

The sealed, documented and bagged drill core samples were placed in larger 'rice' bags which were securely sealed and stored in a locked room within the GTA field office prior to their transportation to the assay laboratory. The samples were later shipped via Greyhound Bus Parcel Express from Schreiber to the sample preparation and analytical facilities of AGAT Laboratories in Thunder Bay or Sudbury, Ontario where they were prepared and analysed for their gold content. Sample shipping documents accompanied each drill core sample shipment and any differences between the shipping documents and that received by the laboratory were to be reported immediately to the company. There were, however, no irregularities reported during each of the drilling campaigns.

It is the opinion of the author that GTA's sample handling, storage and shipping procedures were good and compliant with current industry-standards and CIM Standards and Guidelines.

## 11.2 2012 and 2013 Sample Analyses and Assays

At AGAT Laboratories the surface and drill core sample bags were opened, the sample information was recorded into the laboratory database, and the contents were dried in ovens at a low temperature. Dried samples are then weighed prior to being crushed in a jaw crusher to 75 percent less than 10 mesh, and 250 to 500 grams of the crushed material from each sample was split off using a Jones riffle. The remaining 'reject' crushed rock was returned to its original plastic sample bag and packed in containers for return to GTA at periodic intervals. The split sub-sample from each crushed rock sample was then pulverized to 85 percent less than -200 mesh with the + 200 mesh material being re-pulverized and re-screened, and a 30-gram portion was then extracted to use as a sample aliquot. Non-silica based sand is used to clean out the pulverizing dishes between each sample preparation to prevent cross contamination. According to AGAT, the following procedures were utilized to initially analyse the surface and drill core samples.

For initial gold analyses, the prepared split sub-samples are mixed with a lead-based flux and fused. Each sample has a silver solution added to it prior to fusion which allows each sample to produce a precious metal bead after cupellation. The fusing process results in lead buttons that contains all of the gold from the samples as well as the silver that is added. The buttons are then placed in a cupelling furnace where all of the lead is absorbed by the cupels and a silver bead, which contains any gold is left in each cupel. The cupels are removed from the furnace and allowed to cool. Once the cupels have cooled sufficiently, the silver bead from each is placed in an appropriately labeled test tube and digested using nitric and hydrochloric acid. The samples are bulked up to 5 ml with a combination of distilled de-ionized water and a 1% digested lanthanum solution. The samples are allowed to cool and are mixed to ensure proper homogeneity of the solutions. Once the samples have settled, they are analyzed for gold using inductively coupled Plasma Optical Emission Spectroscopy ('ICP-OES'). The PerkinElmer 7300DV and 8300DV ICP-OES instruments are calibrated using the appropriate internal laboratory standards.

Any samples that returned gold values exceeding 10 ppm were re-assayed using gravimetric assay methods. The higher grade gold samples are mixed with a lead based flux and fused. Each sample has a silver solution added to it prior to fusion which allows each sample to produce a precious metal bead after cupellation. The fusing process results in lead buttons that contains all of the gold from the samples as well as the silver that is added. The buttons are then placed in a cupelling furnace where all of the lead is absorbed by the bone cupels and a silver bead, which contains any gold is left in each cupel. The cupels are removed from the furnace and allowed to cool. Once the cupels have cooled sufficiently, the silver bead from each is placed in an appropriately labeled porcelain cupel and digested using dilute nitric acid to remove the silver. The remaining sponge is rinsed with water and annealed using a torch to produce a gold bead. The gold bead is weighed on a Mettler Toledo XP6 microbalance. The results are checked and validated before a certificate is issued. AGAT Laboratories' certifications have been discussed in Sections 11.1 and 12.2.3.

## 11.3 2012 and 2013 Sample Security

The 2012 surface samples and the 2012 and 2013 drill core samples were stored in a locked holding room prior to their shipment via Greyhound Bus Parcel Express directly to AGAT Laboratories in Thunder Bay or Sudbury, Ontario. Furthermore, all of the samples were securely sealed and Chain of Custody documents accompanied all shipments. The analytical results from these samples were received by authorized GTA personnel using secure digital transfer transmissions, and these results were restricted to qualified GTA personnel prior to their publication.


**Photograph No. 11.1: GTA's drill core logging and storage facilities in Schreiber, Ontario**

Upon completion of the drilling program the diamond drill core and assay sample rejects were catalogued and securely stored in GTA's field office and core storage facility in Schreiber, Ontario.

# 12 DATA VERIFICATION

## 12.1 Drilling and Assay Database Verification

The pre-2012 drilling and assay data were described and commented upon in the 43-101 technical report by Blanchflower (2012).

During the 2012 and 2013 drilling programs GTA maintained a complete and thorough digitized drilling database documenting the drill hole locations, downhole survey measurements, and drill core lithologies and sample intervals. Assay databases for each phase of drilling, including all quality control and quality assurance sample results, were maintained on behalf of GTA by Ms. Caroline Vallat, P Geo., of Geospark Consulting Inc. based in Nanaimo, British Columbia.

It is the opinion of the authors that the drilling and assay databases provided by GTA and Ms. Caroline Vallat respectively for the purposes of this report and the accompanying mineral resource estimate were complete and accurate.

## 12.2 2012 and 2013 Quality Assurance and Quality Control Procedures and Results

### 12.2.1 2012 and 2013 QA/QC Procedures

Prior to the Phase 1 2011 drilling program GTA established a strict Quality Assurance and Quality Control ('QA/QC') program utilizing quality control samples to monitor accuracy (i.e. sample standards), contamination (i.e. sample blanks), precision (i.e. duplicates) and other possible sampling errors (i.e. sample mislabelling). This same program was utilized during the subsequent 2012 and 2013 drilling programs.

The QA-QC protocol utilized on the project targeted an insertion rate of quality control samples at a rate of 5 percent to the assay laboratory. Thus, a quality control sample was supposed to be inserted randomly within every 20 consecutive samples, alternating between standard, blank or duplicate samples. The standard and blank samples were to be inserted into the sample sequence as the sample shipment was being readied. Any duplicate samples were inserted into the sample sequence at the time of collection. The quality control samples were similarly numbered as the primary samples and were not identified in any other manner.

Standard reference material ('SRM') samples were purchased in prepared 60-gram foil packets from CDN Resource Laboratories Ltd. in Langley, British Columbia. The blank reference material was white decorator stone purchased from a landscape firm that was crushed to fist-size pieces and thoroughly check assayed at AGAT Laboratories prior to its use. The QA-QC insertion rate was scheduled at approximately 1 of each type of QA-QC sample per every 20 drill core samples (i.e. approximately every assay batch) (Duess, 2014).

**Table 12.1: Summary of QA-QC Sample Insertion Rates**

| QA-QC Type | 2012 | 2013 | Total | % of Total |
|---|---|---|---|---|
| Primary Samples | 6,696 | 2,040 | 8,736 | 100.0 |
| Duplicates | 366 | 121 | 487 | 5.57 |
| Blanks | 446 | 122 | 568 | 6.50 |
| Standards | 418 | 117 | 535 | 6.12 |
| Outside Checks | 125 | 113 | 238 | 2.72 |

In addition, GTA submitted 263 duplicate core samples for screened fire metallic assays to compare and confirm the original assay results.

### 12.2.2 2012 and 2013 QA/QC Results

Appendix III of this report contains the QA/QC report titled 'Northshore Project 2012 and 2013 QAQC Report on Analytical Results' by Caroline Vallat, P. Geo., and dated February 7, 2014. This report documents a detailed study of the 2012 and 2013 QA/QC results. The following text is quoted from the 'Summary and Conclusion' section of this report.

*"Sufficient Quality Assurance and Quality Control procedures have taken place in order to ensure that the analytical results used for the Northshore project are of good quality.*

*Review of field duplicate pairs has shown that often have significant difference in gold concentrations. It is the author's opinion that with all things considered: the scatter charts do not show strong bias in the duplicate results, the lab internal QAQC shows strong precision, and the removal of 33 percent of the groups within the THPVC chart shows a near satisfactory precision percent, it is the author's opinion that the results of analysis reported by AGAT for the 2012 and 2013 exploration at the Northshore project are shown to have overall satisfactory precision considering the nature of the mineralization at the project.*

*A large number of screen fire metallic assays (SFA) took place on high grade samples. It is the author's opinion that the metallic screen fire results further infer that the field duplicate results have variation from the primary samples as a function of the nature of the mineralization. Overall, the screen fire assay results show no bias in the fire assay results.*

*The review of each of the many blank materials has found overall strong accuracy. In addition there has been no indication of significant ongoing sample contamination or instrument calibration difficulties.*

*The review of the standard instances of analysis has also inferred overall strong accuracy.*

*A representative set of samples was also analyzed at SGS for review of any potential bias in the results. Overall, it is the author's opinion that any mentioned significant differences noted between the primary samples analyzed by AGAT and the secondary check sample analyzed by SGS are likely a function of the nature of the project mineralization. The author feels that there is no significant bias overall inferred within the primary sample results.*

*This QAQC review of the 2012 and 2013 analytical results reported by AGAT for the Northshore project has shown overall satisfactory precision levels, strong accuracy, and no significant bias. In the author's opinion the analytical results can be considered of good quality for use."*

The authors agree with the conclusions of Vallat (2014). Mr. Blanchflower accepts full responsibility for the QA-QC work and results documented by Ms. Vallat.

### 12.2.3 AGAT Laboratories Ltd. and SGS Canada Inc. Accreditation

AGAT Laboratories is accredited for specific tests as listed in the laboratory's current scope of accreditation by the following organizations: The Standards Council of Canada (SCC), The Canadian Association for Laboratory Accreditation (CALA) and QMI-SAI Global. AGAT Laboratories is accredited to International Standards Organization ISO/IEC 17025:2005 and certified to International Standards Organization ISO 9001:2008 (http://www.agatlabs.com/about/accreditation.cfm).

According to the SGS Canada website (http://www.sgs.ca/en/Mining/Quality.aspx), the SGS Canada, Mineral Services, Lakefield facilities conform to requirements of CAN-P-1579 (Requirements for the Accreditation of Mineral Analysis Testing Laboratories, CAN-P-4E (ISO 17025:2055).

## 12.3 Independent Site Visit and Verification Sampling

### 12.3.1 Independent Site Visit

Mr. Blanchflower visited the Northshore property on November 2 2011 and August 21 2012, and the field offices and core storage facilities of GTA in Schreiber on these two previous occasions plus recently on November 30 2013. During his earlier property visits he examined the sites of the 2011 and 2012 diamond drill holes, in addition to examining the drill core and collecting verification samples. During his latest property visit he could only examine the drill core from the 2013 drilling campaigns and collect verification drill core samples because a heavy snowfall at the time made the access road to the property impassible.

During his 2011 property visit Mr. Blanchflower collected six surface samples and four drill core verification samples. A description of the 2011 verification sampling results is well documented in the 43-101 technical report by Blanchflower (2012). During his August 21 2012 property visit he collected four drill core verification samples and during his November 30 2013 visit he collected an additional ten drill core verification samples.

### 12.3.2 Verification Sampling and Analytical Procedures

The fourteen drill core verification samples that were collected in 2012 and 2013 were split from mineralized intercepts within drill holes WB-12-13, -14, -15, -18, -21, -25 and -32 plus WB-13-38, -39, -41, -42, -43, -48, and -51. These samples were sawn lengthwise from halved drill cores that had been previously sampled and analysed. The sawn one-quarter drill cores were placed in 6-mil plastic sample bags, described and a unique sample assay tag was placed in each sample bag prior to securely sealing it.

The 2012 verification samples were delivered by Mr. Blanchflower to the Greyhound Bus Parcel Express depot in Schreiber for direct shipping to AGAT Laboratories in Thunder Bay, Ontario where they were prepared and analysed for their gold plus multi-element content. AGAT Laboratories was instructed to analyse the verification samples using similar procedures to those utilized for the original drill core analyses so the results might be comparable. The 2013 verification samples were delivered by Mr. Blanchflower directly to AGAT Laboratories facilities in Thunder Bay with similar instructions to assay the samples for gold only using the same original assay methods.

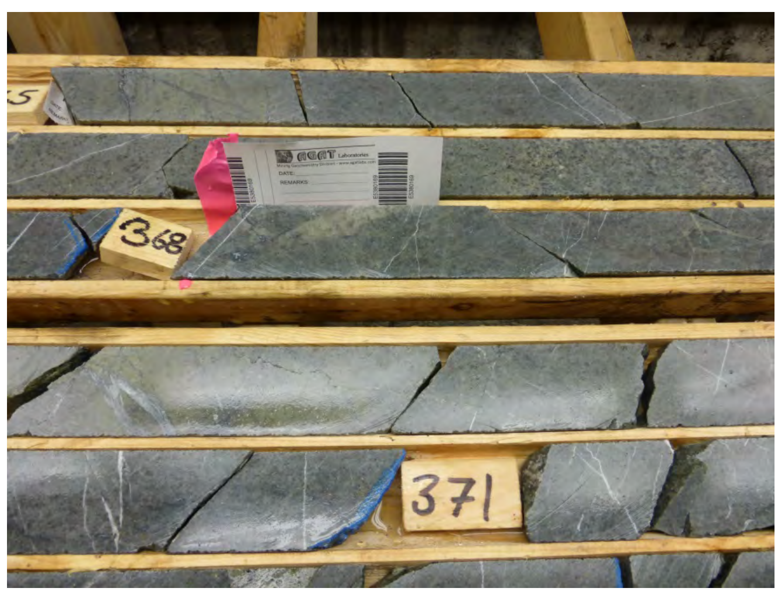
At AGAT Laboratories the samples were logged into their tracking system, dried, weighed and then prepared using the same procedures as described in Section 11.2 of this report. The 2012 verification samples were then initially analysed using ICP procedures for gold plus 33 other elements. See Section 11.2 for a description of the Fire Assay/AA and ICP/OES procedures and Appendix IV of this report contain the assay certificates and analytical procedures used for the verification sample analyses. The certification and accreditation of AGAT Laboratories has been documented in Section 12.2.3 of this report.

### 12.3.3 Verification Sampling Results

The gold values in the verification samples are within reasonable ranges of those reported by GTA for the drill core intervals. Larger differences in gold grades between the two sample sets, and even between the same verification samples analysed initially by a fire assay/atomic absorption method and later by a gravimetric method, are primarily due to a high 'nugget effect' with the gold distribution. In addition, the verification core sample volumes were half of the original core samples which may also contribute to the differences in gold grades.

The AGAT Laboratory assay results and procedures are contained in Appendix IV of this report. A comparison of the original and verification sample gold grades has been tabulated with the sample descriptions in Table 12.2 of this report.


**Photograph No. 12.1: Pyritic and finely veined feldspar porphyry intrusive in drill hole WB-12-25 at 152.0 m**




**Photograph No. 12.2: Silicified and pyritic feldspar porphyry intrusive in drill hole WB-12-32 at 368.0 m**

**Table 12.2: 2012 and 2013 Verification Sample Descriptions and Analytical Results**

| Sample No. | Drill Hole No. | Sample Type | Collection Date | From (m) | To (m) | Length (m) | GTA Sample No. | Au (ppm) FA/AA | Au (gpt) Chk FA/Grav | Au (ppm) GTA |
|---|---|---|---|---|---|---|---|---|---|---|
| G094447 | WB-12-13 | 1/4 Core | 21-Aug-12 | 110.00 | 110.50 | 0.50 | 1249629 | 53.000 | | 39.040 |
| G094448 | WB-12-14 | 1/4 Core | 21-Aug-12 | 71.00 | 72.00 | 1.00 | E5441158 | 2.470 | | 14.300 |
| G094449 | WB-12-15 | 1/4 Core | 21-Aug-12 | 29.00 | 30.00 | 1.00 | E5441493 | 3.160 | | 18.200 |
| G094450 | WB-12-21 | 1/4 Core | 21-Aug-12 | 15.50 | 16.00 | 0.50 | E5353274 | 31.500 | | 0.615 |
| 5380160 | WB-13-48 | 1/4 Core | 30-Nov-13 | 101.00 | 102.00 | 1.00 | 5569097 | >10 | 144.00 | 46.000 |
| 5380161 | WB-13-51 | 1/4 Core | 30-Nov-13 | 165.50 | 167.00 | 1.50 | 5569417 | 0.494 | | 12.900 |
| 5380162 | WB-13-38 | 1/4 Core | 30-Nov-13 | 152.00 | 153.50 | 1.50 | 5176272 | 4.010 | 4.31 | 13.500 |
| 5380163 | WB-13-39 | 1/4 Core | 30-Nov-13 | 53.00 | 54.00 | 1.00 | 5176368 | 2.300 | 2.45 | 2.650 |
| 5380164 | WB-13-41 | 1/4 Core | 30-Nov-13 | 192.50 | 194.00 | 1.50 | 5176783 | 1.610 | | 8.560 |
| 5380165 | WB-13-42 | 1/4 Core | 30-Nov-13 | 59.00 | 60.50 | 1.50 | 5176831 | 3.660 | 3.49 | 2.650 |
| 5380166 | WB-13-43 | 1/4 Core | 30-Nov-13 | 65.00 | 66.00 | 1.00 | 5176908 | >10 | 80.80 | 178.000 |
| 5380167 | WB-12-18 | 1/4 Core | 30-Nov-13 | 275.00 | 276.00 | 1.00 | E5352272 | 0.183 | | 6.690 |
| 5380168 | WB-12-25 | 1/4 Core | 30-Nov-13 | 151.00 | 152.00 | 1.00 | E5354390 | 0.617 | | 8.860 |
| 5380169 | WB-12-32 | 1/4 Core | 30-Nov-13 | 368.00 | 369.00 | 1.00 | E5468020 | 0.250 | | 9.910 |

# 13 MINERAL PROCESSING and METALLURGICAL TESTING

In July 2012 Duess Geological Services Ltd., on behalf of GTA, collected and later submitted 10 large rock samples from the Afric Zone to the metallurgical facilities of ALS Metallurgy in Kamloops, British Columbia. These samples collectively weighed approximately 57 kg. Each sample was assayed for gold and analysed for 35 elements using ICP techniques with an aqua regia extraction. The gold assay results were then correlated with their original gold fire assay results reported by GTA.

According to ALS Metallurgy (2012), “The gold in the samples ranged from approximately 47 g/tonne to about 716 g/tonne. The average gold content in the samples was measured to be about 230 g/tonne.” The analytical work also found low iron and sulphur values less than 2 percent indicating relatively low pyrite contents. The silver contents within the 10 samples averaged 28.1 gpt.

Based upon these high gold contents it was decided, in consultation with other professional metallurgists, that no further testing of these samples should be done since these samples were not representative of the bulk tenor of the Afric Zone.

Although there are no current and representative metallurgical test results, it is obvious from historical mining operations that some such work was carried out during this Property’s history. There is no indication in any of the historical reports that the gold-bearing mineralization presented any specific metallurgical or processing challenges. Nevertheless, detailed metallurgical testwork must be conducted by GTA, and such work must utilize much larger and more representative bulk samples from the Afric Zone. Sample collection for future metallurgical testing needs to consider lithology, grade variations and spatial distribution. A metallurgical sampling program needs to be developed with the objective of developing a geo-metallurgical model for the project.

Ongoing metallurgical test work should include mineralogical analysis in order to give direction to grinding requirements, expected recoveries and preferred processing route. Comminution test work such as Bond Work index, crusher index and abrasion index should also be included in future test work programs.

# 14.0 MINERAL RESOURCE ESTIMATE

This study estimates the resource for the Northshore Property and was completed at the request of Robert Duess, Vice-President of GTA Resources and Mining Inc. Giroux Consultants Ltd. was retained to produce a resource estimate on the Northshore property located approximately 4 km south of Schreiber, Ontario and situated within the western portion of the Hemlo-Schreiber Greenstone Belt. The effective date for this Resource is April 28, 2014, the date the data was received.

G. H. Giroux is the qualified person responsible for the resource estimate. Mr. Giroux is a qualified person by virtue of education, experience and membership in a professional association. He is independent of both the issuer and the vendor applying all of the tests in section 1.5 of National Instrument 43-101. Mr. Giroux has not visited the property.

## 14.1 Geologic Model

The geological model provided as a basis for the 2014 resource estimate was constructed by Doug Blanchflower from cross sections using Gemcom software. Gold mineralization is associated with well-defined, narrow, quartz and quartz-carbonate veins, quartz-carbonate (± tourmaline) vein stockworks and base-metal sulphide mineralization within a felsic to mafic volcanic host that has been intruded by syenitic to dioritic and feldspar porphyritic (± quartz) stocks (see Figure 14.1). At this time, with the information that is available, it is not possible to model individual veins. A broad mineralized solid has been described to constrain the gold estimation (see Figure 14.2). Several northwesterly trending post mineral diabase and lamprophyre dykes cross cut the mineralized solid and have also been modelled (see Figure 14.3).

## 14.2 Data Analysis

For this estimate the data base consisted of 100 drill holes with 479 down hole surveys and 13,777 assays for gold. Of these assays 432 were less than 0.001 g/t Au and were set to 0.001 g/t Au. In addition a total of 473 missing intervals were detected in the assay record and for these gaps a value of 0.001 g/t Au was inserted.

The drill holes were "passed through" the various three dimensional solids and individual assays were back tagged with a domain code. Table 14-1 shows the assay statistics sorted by domain. Of the 100 supplied drill holes 87 intersected the mineralized solid. A list of these drill holes is supplied as Appendix I. The holes that were used in the estimate have been highlighted.

**Table 14-1: Assay Statistics for Gold sorted by Domain**

| Domain | Number | Mean Au (g/t) | Standard Deviation | Minimum Value | Maximum Value | Coefficient of Variation |
|---|---|---|---|---|---|---|
| Mineralized Solid | 12,520 | 0.640 | 8.804 | 0.001 | 760.15 | 13.75 |
| Diabase1 Dyke | 24 | 0.040 | 0.072 | 0.001 | 0.35 | 1.81 |
| Diabase2 Dyke | 29 | 0.029 | 0.074 | 0.001 | 0.41 | 2.55 |
| Diabase3 Dyke | 108 | 0.021 | 0.054 | 0.001 | 0.44 | 2.57 |
| Diabase4 Dyke | 2 | 0.001 | | | | |
| Waste | 1,142 | 0.298 | 3.138 | 0.001 | 70.24 | 10.53 |

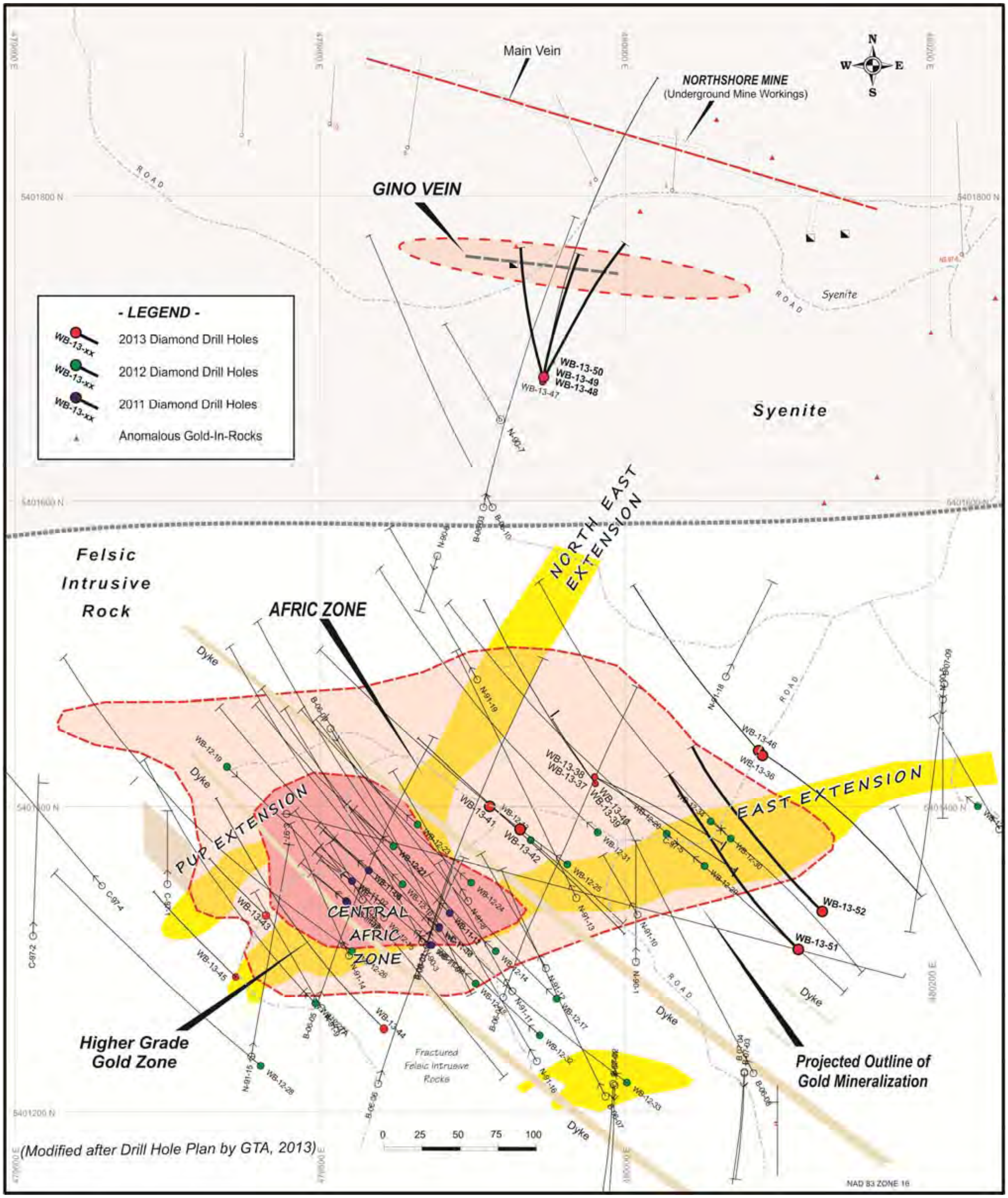



**Figure 14.1: Drill Hole Plan Northshore Property showing Rough Mineralized Outline**

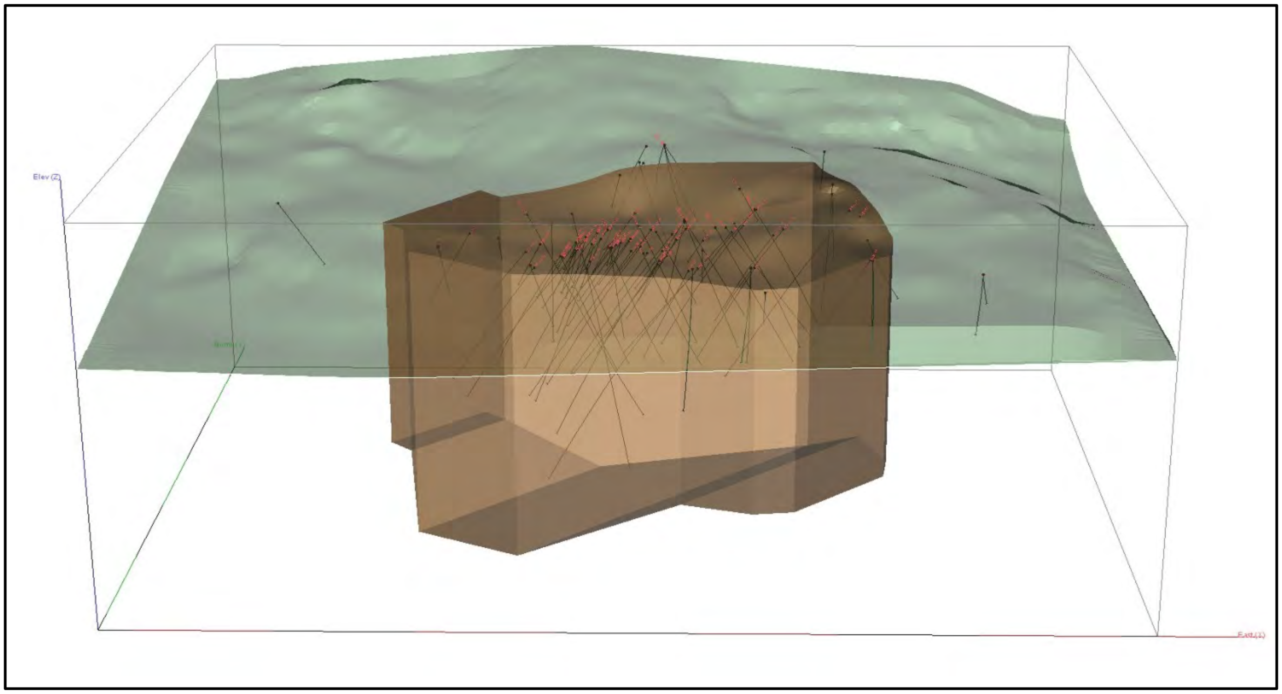


**Figure 14.2: Isometric View Looking East showing Mineralized Solid in Brown, Surface Topography in Green and Diamond Drill Hole Traces**

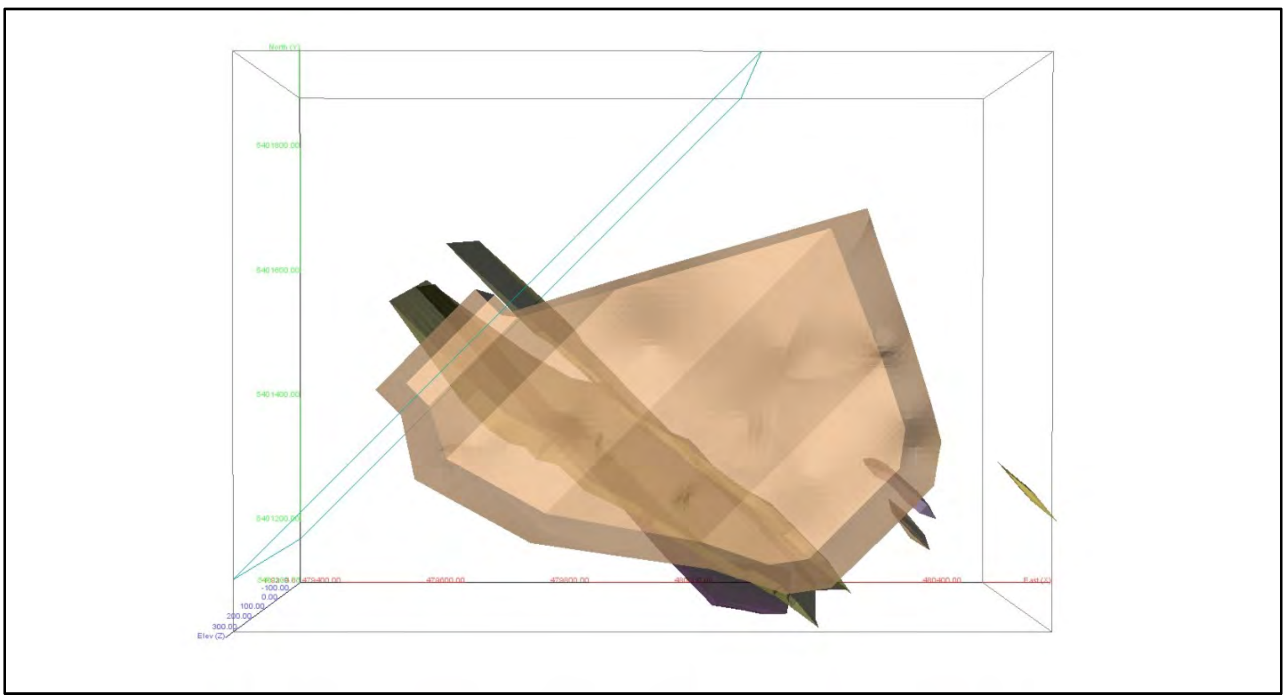


**Figure 14.3: Plan View showing Modelled Dykes cutting through the Mineralized Solid**

The gold grade distribution for all domains was evaluated using lognormal cumulative frequency plots. The procedure used is explained in a paper by Dr. A.J. Sinclair titled Applications of probability graphs in mineral exploration (Sinclair, 1976). In short the cumulative distribution of a single normal distribution will plot as a straight line on probability paper while a single lognormal distribution will plot as a straight line on lognormal probability paper. Overlapping populations will plot as curves separated by inflection points. Sinclair proposed a method of separating out these overlapping populations using a technique called partitioning. In 1993 a computer program called P-RES was made available to partition probability plots interactively on a computer (Bentzen and Sinclair, 1993). A screen dump from this program is shown for gold in the mineralized solid as Figure 14.4. In this figure the actual data distribution is shown with black dots. The inflection points that separate the populations are shown as vertical lines and each population is shown by the straight lines of open circles. The interpretation is tested by recombining the data in the proportions selected and the test is shown as triangles compared to the original distribution.

For gold within the mineralized solid a total of 7 overlapping gold populations were detected. The populations along with average grade and percentage of the total data set are tabulated below.

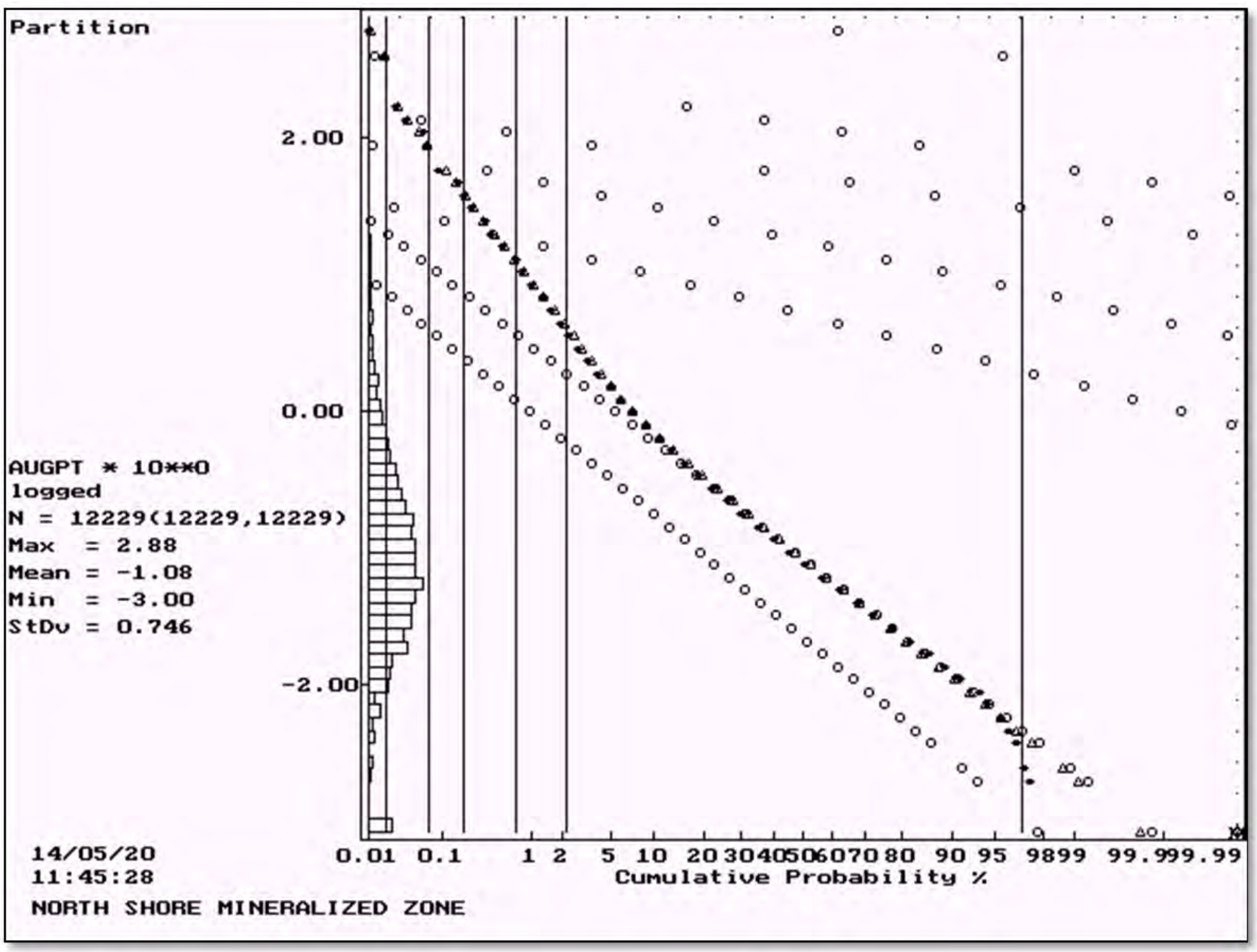



**Figure 14.4: Lognormal Cumulative Frequency Plot for Au Assays in Mineralized Solid**

**Table 14-2: Gold Populations present within the Mineralized Solid**

| Population | Mean Au (g/t) | Percentage of Total | Number of Samples |
|---|---|---|---|
| 1 | 677.90 | 0.02 % | 2 |
| 2 | 123.70 | 0.05 % | 6 |
| 3 | 52.99 | 0.12 % | 15 |
| 4 | 17.76 | 0.52 % | 64 |
| 5 | 5.17 | 1.44 % | 176 |
| 6 | 0.08 | 94.83 % | 11,596 |
| 7 | 0.02 | 3.03 % | 370 |

Population 1 represents erratic high grade outliers and should be capped. An effective cap of 2 standard deviations above the mean of population 2 would be 180 g/t Au. A total of 2 gold assays were capped at 180 g/t. Populations 2, 3, 4 and 5 probably represent the high grade veins and stockwork mineralization. These high grades are representative of a distinct style of mineralization but at this time it is not possible to constrain these grades with a domain solid. Population 6 represents the low grade mineralization that surrounds the higher grade veins and stockworks. Finally, population 7 represents internal waste within the mineralized solid. Each of the domains was examined and an appropriate capping level was chosen to try and remove the effect of erratic high grade samples.

**Table 14-3: Cap Levels for Gold Sorted By Domain**

| Domain | Cap Level (g/t) | Number Capped |
|---|---|---|
| Mineralized Solid | 180.0 | 2 |
| Dykes | 0.06 | 13 |
| Waste | 0.50 | 53 |

The high values within dykes occur along the dyke margins where the modelling has probably included parts of mineralized assays from the mineralized solid.

The high values in samples outside the mineralized solid, called waste, sample some quartz veins that are too far from the mineralized solid to include. The waste samples are only used to determine edge dilution around the mineralized solid so these high values in waste are severely capped. The results of capping a few erratic high outliers in each domain are shown below in Table 14-4.

**Table 14-4: Capped Assay Statistics for Gold Sorted By Domain**

| Domain | Number | Mean Au (g/t) | Standard Deviation | Minimum Value | Maximum Value | Coefficient of Variation |
|---|---|---|---|---|---|---|
| Mineralized Solid | 12,520 | 0.572 | 4.509 | 0.001 | 180.00 | 7.88 |
| Diabase Dykes | 163 | 0.015 | 0.018 | 0.001 | 0.06 | 1.16 |
| Waste | 1,442 | 0.055 | 0.110 | 0.001 | 0.50 | 2.00 |

Capping has reduced the coefficients of variation significantly in all domains.

## 14.3 Composites

Within the mineralized solid, assay lengths ranged from a low of 0.01 to a high of 3 m with the 70% of assays at 1.0 m intervals and 16% at 1.5 m. A composite length of 2.5 m was chosen to best fit the data and be an even multiple for a possible 5 m bench height. Within each domain uniform down hole composites 2.5 m in length were formed to honour the domain boundaries. At the edges of the domain solids samples less than 1.25 m were combined with adjoining samples while those greater than 1.25 were left intact. In this manner a uniform support was achieved at 2.5 ± 1.25 m.

**Table 14-5: 2.5 m Composite Statistics for Gold Sorted By Domain**

| Domain | Number | Mean Au (g/t) | Standard Deviation | Minimum Value | Maximum Value | Coefficient of Variation |
|---|---|---|---|---|---|---|
| Mineralized Solid | 6,136 | 0.387 | 1.686 | 0.001 | 71.45 | 4.35 |
| Diabase Dykes | 555 | 0.003 | 0.007 | 0.001 | 0.06 | 2.48 |
| Waste | 223 | 0.035 | 0.068 | 0.001 | 0.05 | 1.94 |

For estimation of a resource the high grade assays need to be treated in such a manner that precludes smearing this grade into the lower more prevalent low grade mineralization. Since it is not possible to model the individual high grade structures, a method to avoid over smearing, would be to use Indicator Kriging. In this interpolation method the higher grade mineralization is separated for variogram analysis, estimated separately and then brought back to determine an overall block grade. The methodology is as follows.

A lognormal cumulative probability plot was produced for 2.5 m composites within the mineralized solid. A total of 6 overlapping lognormal gold populations were identified.

**Table 14-6: Gold Populations present within the Mineralized Solid Composites**

| Population | Mean Au (g/t) | Percentage of Total | Number of Samples |
|---|---|---|---|
| 1 | 22.59 | 0.12 % | 7 |
| 2 | 7.61 | 1.13 % | 69 |
| 3 | 2.22 | 2.53 % | 155 |
| 4 | 0.12 | 77.27 % | 4,744 |
| 5 | 0.05 | 5.65 % | 347 |
| 6 | 0.004 | 13.30 % | 814 |

The upper 3 populations represent the higher grade veins and stockworks, while populations 4 and 5 represent the low grade mineralization. Population 6 represents internal waste. A threshold that would separate the predominate low grade from the high grade styles of mineralization would be set at two standard deviations above the mean of population 4, a value of 1.4 g/t Au. Assays above this threshold would be assigned an indicator value of 1. Assays below or equal to this threshold would be assigned an indicator value of 0. The data is then simplified into 0's and 1's for modelling. Semivariograms are produced for both the indicators and the low grade composites. The indicator value is then kriged with a value between 0 and 1 produced for every block which represents the probability of finding the high grade populations in this block.

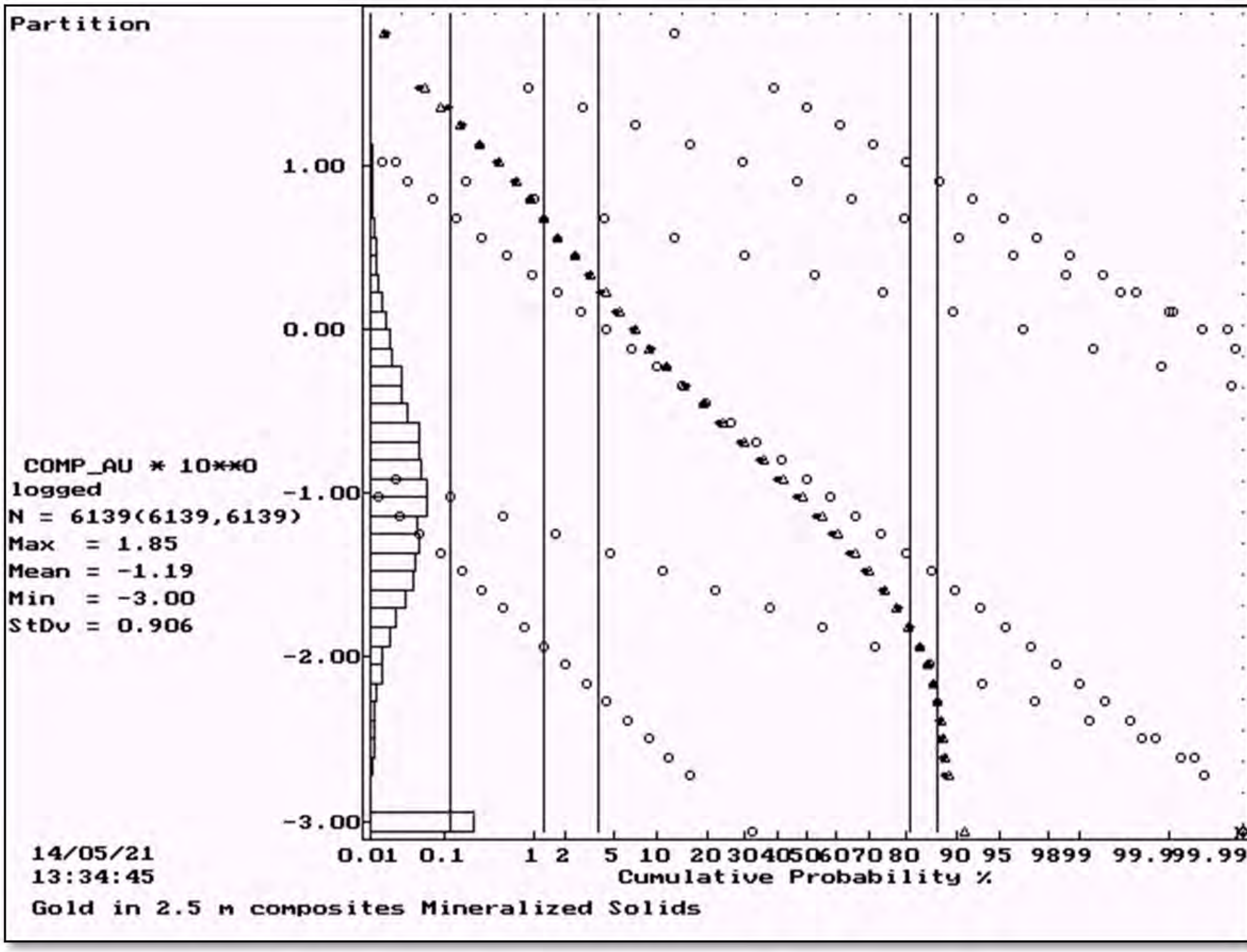



**Figure 14.5: Lognormal Cumulative Frequency Plot for Au in Composites within Mineralized Solid**

## 14.4 Variography

Pairwise relative semivariograms were first produced for the low grade composites (Au ≤1.4 g/t). First the down hole direction was modelled to determine the nugget effect and sill level. Semivariograms were then produced in the 4 principal horizontal directions namely: Az. 90°, 0°, 45° and 135°. The directions with longest continuity were 90° and 135°. Next, azimuths between 90° and 135° were modelled, with the longest continuity found along azimuth 103° in the horizontal plane. The two orthogonal directions azimuth 13° dipping -45° and 193° dipping -45° were then modelled with the longest range along azimuth 13°. Dip directions along azimuth 13° were then modelled with the longest continuity identified along azimuth 13° dipping -55°. The final direction was then azimuth 193° dipping -35°. Nested spherical models were fit to all directions.

A similar strategy was used to model the 0 or 1 indicators. The longest continuity for the high grade indicators was along azimuth 100° dipping 0° and along azimuth 10° dipping -50°. Again nested spherical models were fit to the data.

The semivariogram parameters are tabulated below and the models are shown in Appendix II.

**Table 14-7: Semivariogram Parameters for Mineralized Domain**

| Domain | Variable | Azimuth/Dip | $C_0$ | $C_1$ | $C_2$ | Short Range (m) | Long Range (m) |
|---|---|---|---|---|---|---|---|
| Low Grade | Au | $103^o$ / $0^o$ | 0.50 | 0.30 | 0.20 | 10.0 | 205.0 |
| | | $13^o$ / $-55^o$ | | | | 18.0 | 200.0 |
| | | $193^o$ / $-35^o$ | | | | 8.0 | 20.0 |
| HG Indicator | IND | $100^o$ / $0^o$ | 1.60 | 0.19 | 0.17 | 30.0 | 120.0 |
| | | $10^o$ / $-50^o$ | | | | 25.0 | 90.0 |
| | | $190^o$ / $-40^o$ | | | | 20.0 | 50.0 |
| Waste | Au | Omni Directional | 0.20 | 0.30 | 0.45 | 15.0 | 60.0 |

## 14.5 Block Model

A block model with blocks 10 x 10 x 5 metres was superimposed over the geologic solids with the percent below topography, percent below bedrock, percent inside mineralized solid and percent inside dykes recorded in each block. The origin of the block model was as follows:

**Lower Left Corner**

| | | |
|---|---|---|
| 479400 E | Column size = 10 m | 100 columns |
| 5401000 N | Row size = 10 m | 80 rows |

**Top of Model**

| | | |
|---|---|---|
| 350 m Elevation | Level size = 5 m | 120 levels |

**No Rotation**

## 14.6 Bulk Density

A total of 21 drill core samples were sent to AGAT Laboratories in Mississauga, Ont. for specific gravity determination using a pychnometer. The results are tabulated below.

**Table 14-8: AGAT Specific Gravity Measurements by Pychnometer (201-049)**

| Sample Id | Sample Description | Specific Gravity (g/cm3) (RDL: 0.01) |
|---|---|---|
| 4904823 | E5569351 | 2.77 |
| 4904868 | E5569393 | 2.73 |
| 4904887 | E5569412 | 2.72 |
| 4904892 | E5569417 | 2.72 |
| 4904893 | E5569418 | 2.72 |
| 4904913 | E5569438 | 2.73 |
| 4904919 | E5569444 | 2.77 |
| 4904920 | E5569445 | 2.82 |
| 4904937 | E5569462 | 2.70 |
| 4904939 | E5569464 | 2.69 |
| 4910184 | E5569497 | 2.74 |
| 4910216 | E5569528 | 2.74 |
| 4910253 | E5569565 | 2.73 |
| 4910259 | E5569571 | 2.76 |
| 4910261 | E5569573 | 2.72 |
| 4910264 | E5569576 | 2.76 |
| 4910265 | E5569577 | 2.74 |
| 4910267 | E5569579 | 2.73 |
| 4910270 | E5569582 | 2.72 |
| 4910287 | E5569599 | 2.72 |
| 4910291 | E5569603 | 2.73 |
| **Average** | | **2.74** |

For this resource estimate the average value of 2.74 g/cm$^3$ was used to convert volumes to tonnes.

## 14.7 Grade Interpolation

Gold grades were interpolated into blocks using Ordinary Kriging and an Indicator approach. First a gold grade for low grade (Au ≤ 1.4 g/t) was estimated for blocks within the mineralized solid using composites within the mineralized solid that were ≤ 1.4 g/t Au. Next the high grade indicator variable was estimated for each block using the indicator variable for all composites within the mineralized solid.

*HG IND = 0 if Au ≤ 1.4 g/t*

*HG IND = 1 if Au > 1.4 g/t*

The result was a value between 0 and 1 which represents the probability that the block will contain high grade material. Finally a grade for the High Grade was estimated for any block within the mineralized solid with an estimated IND value greater than 0, using only composites within the mineralized solid that were > 1.4 g/t Au. The grade for the mineralized portion of the block was then a weighted average of the two estimates.

$$Au\_Min = (IND * HG\ Au) + ((1 - IND) * LG\ Au)$$

For all variables, the kriging was completed in a series of 4 passes with the search ellipsoid for each pass tied to the range of the semivariogram. For pass 1 the dimensions of the search ellipsoid were equal to ¼ of the semivariogram range in each of the three principal directions. A minimum of 4 composites were needed to estimate a block with a maximum of 3 from any one drill hole. In this manner all blocks required a minimum of 2 drill holes within the search volume to make an estimate. For blocks not estimated in Pass 1 a second pass was made with the search ellipsoid dimensions expanded to ½ the semivariogram range. A third pass using the full range and a fourth pass using twice the range completed the exercise. Due to the fewer number of high grade composites a fifth pass was required to estimate the high grade gold value.

For blocks containing some percentage of dyke material the average grade of the dykes, a value of 0.015 g/t Au, was assigned. Blocks containing some percentage of material outside the mineralized solid were estimated using composites from outside the solid. The total gold grade for each 10 x 10 x 5 m block was then a weighted average as shown below.

$$Au\ Total = \frac{((Au\_Min * \%\ Min) + (Au\ Dyke * \%\ Dyke) + (Au\ Waste * \%\ Waste) + (0.001 * \%\ OVB))}{\%\ Below\ Topography}$$

The kriging parameters along with the number of blocks estimated in each pass are tabulated below.

**Table 14-9: Kriging Parameters for Gold**

| Domain | Pass | Number | Az / Dip | Dist. (m) | Az / Dip | Dist. (m) | Az / Dip | Dist. (m) |
|---|---|---|---|---|---|---|---|---|
| LG Au | 1 | 15,706 | 103° / 0° | 51.25 | 13° / -55° | 50.0 | 193° / -35° | 5.0 |
| | 2 | 42,312 | 103° / 0° | 102.50 | 13° / -55° | 100.0 | 193° / -35° | 10.0 |
| | 3 | 87,518 | 103° / 0° | 205.00 | 13° / -55° | 200.0 | 193° / -35° | 20.0 |
| | 4 | 76.167 | 103° / 0° | 410.00 | 13° / -55° | 400.0 | 193° / -35° | 40.0 |
| Au IND | 1 | 8,249 | 100° / 0° | 30.0 | 10° / -50° | 22.5 | 190° / -40° | 12.5 |
| | 2 | 30,254 | 100° / 0° | 60.0 | 10° / -50° | 45.0 | 190° / -40° | 25.0 |
| | 3 | 71,033 | 100° / 0° | 120.0 | 10° / -50° | 90.0 | 190° / -40° | 50.0 |
| | 4 | 112,167 | 100° / 0° | 240.0 | 10° / -50° | 180.0 | 190° / -40° | 100.0 |
| HG Au | 1 | 885 | 100° / 0° | 30.0 | 10° / -50° | 22.5 | 190° / -40° | 12.5 |
| | 2 | 3,584 | 100° / 0° | 60.0 | 10° / -50° | 45.0 | 190° / -40° | 25.0 |
| | 3 | 11,310 | 100° / 0° | 120.0 | 10° / -50° | 90.0 | 190° / -40° | 50.0 |
| | 4 | 22,723 | 100° / 0° | 240.0 | 10° / -50° | 180.0 | 190° / -40° | 100.0 |
| | 5 | 15,959 | 100° / 0° | 410.0 | 10° / -50° | 400.0 | 190° / -40° | 100.0 |
| Waste | 1 | 7 | Omni Directional | | | 15.0 | | |
| | 2 | 67 | Omni Directional | | | 30.0 | | |
| | 3 | 434 | Omni Directional | | | 60.0 | | |
| | 4 | 1,930 | Omni Directional | | | 120.0 | | |
| | 5 | 13,164 | Omni Directional | | | 240.0 | | |

## 14.8 Classification

Based on the study herein reported, delineated mineralization of the Northshore Property is classified as a resource according to the following definitions from National Instrument 43-101 and from CIM (2005):

> *"In this Instrument, the terms "mineral resource", "inferred mineral resource", "indicated mineral resource" and "measured mineral resource" have the meanings ascribed to those terms by the Canadian Institute of Mining, Metallurgy and Petroleum, as the CIM Definition Standards on Mineral Resources and Mineral Reserves adopted by CIM Council, as those definitions may be amended."*
> The terms Measured, Indicated and Inferred are defined by CIM (2005) as follows:
>
> *"A Mineral Resource is a concentration or occurrence of diamonds, natural solid inorganic material, or natural solid 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."*
>
> *"The term Mineral Resource covers mineralization and natural material of intrinsic economic interest which has been identified and estimated through exploration and sampling and within which Mineral Reserves may subsequently be defined by the consideration and application of technical, economic, legal, environmental, socio-economic and governmental factors. The phrase 'reasonable prospects for economic extraction' implies a judgment by the Qualified Person in respect of the technical and economic factors likely to influence the prospect of economic extraction. A Mineral Resource is an inventory of mineralization that under realistically assumed and justifiable technical and economic conditions might become economically extractable. These assumptions must be presented explicitly in both public and technical reports."*

***Inferred Mineral Resource***

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

***Indicated Mineral Resource***

> *"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 drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed."*

*"Mineralization may be classified as an Indicated Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such as to allow confident interpretation of the geological framework and to reasonably assume the continuity of mineralization. The Qualified Person must recognize the importance of the Indicated Mineral Resource category to the advancement of the feasibility of the project. An Indicated Mineral Resource estimate is of sufficient quality to support a Preliminary Feasibility Study which can serve as the basis for major development decisions."*

***Measured Mineral Resource***

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

*"Mineralization or other natural material of economic interest may be classified as a Measured Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such that the tonnage and grade of the mineralization can be estimated to within close limits and that variation from the estimate would not significantly affect potential economic viability. This category requires a high level of confidence in, and understanding of, the geology and controls of the mineral deposit."*

Within the Northshore mineralized zones the geological continuity has been established though surface mapping and drill hole interpretation. Grade continuity can be quantified by semivariogram analysis. By tying the classification to the semivariogram ranges through the use of various search ellipsoids the resource is classified as follows:

Within the mineralized solid blocks estimated during pass 1 and 2 using search ellipses with dimensions up to ½ the semivariogram range were classified as Indicated.

All remaining blocks were classified as Inferred. While one drill hole extends below elevation -100 the majority do not and as a result the resource is only reported above the -100 m elevation.

The results are presented in two sets of grade-tonnage tables for indicated and inferred resources. The first set tabulates the resource at a series of gold cut-off values for the percentage of blocks within the mineralized solid (Tables 14-10 and 14-11). These tables assume one could mine to the limits of the solids and not include any external waste or internal dyke material. At this time no economic studies have been completed and the economic cut-off value is unknown. A gold cut-off of 0.50 g/t has been highlighted as a possible open pit cut-off.

**Table 14-10: Indicated Resource within the Mineralized Solid**

| Au Cut-off (g/t) | Tonnes > Cut-off (tonnes) | Grade > Cut-off | |
|---|---|---|---|
| | | Au (g/t) | Contained Ounces Au |
| 0.20 | 27,980,000 | 0.61 | 549,000 |
| 0.25 | 23,320,000 | 0.69 | 516,000 |
| 0.30 | 19,990,000 | 0.76 | 487,000 |
| 0.40 | 15,400,000 | 0.88 | 435,000 |
| **0.50** | **12,360,000** | **0.99** | **391,000** |
| 0.60 | 10,080,000 | 1.08 | 351,000 |
| 0.70 | 8,230,000 | 1.18 | 313,000 |
| 0.80 | 6,650,000 | 1.28 | 275,000 |
| 0.90 | 5,350,000 | 1.39 | 239,000 |
| 1.00 | 4,180,000 | 1.52 | 204,000 |
| 1.20 | 2,560,000 | 1.78 | 147,000 |

**Table 14-11: Inferred Resource within the Mineralized Solid**

| Au Cut-off (g/t) | Tonnes > Cut-off (tonnes) | Grade > Cut-off | |
|---|---|---|---|
| | | Au (g/t) | Contained Ounces Au |
| 0.20 | 63,490,000 | 0.58 | 1,184,000 |
| 0.25 | 54,160,000 | 0.64 | 1,116,000 |
| 0.30 | 48,890,000 | 0.68 | 1,070,000 |
| 0.40 | 38,740,000 | 0.77 | 955,000 |
| **0.50** | **29,580,000** | **0.87** | **824,000** |
| 0.60 | 21,720,000 | 0.98 | 686,000 |
| 0.70 | 16,140,000 | 1.10 | 570,000 |
| 0.80 | 12,090,000 | 1.22 | 472,000 |
| 0.90 | 8,640,000 | 1.36 | 378,000 |
| 1.00 | 6,420,000 | 1.51 | 311,000 |
| 1.20 | 4,210,000 | 1.73 | 233,000 |

The second set of tables (Table 14-12 and 14-13) report the resource present if one mined total 10 x 10 x 5 m blocks. This would include both external waste along the outside edge of the solid and internal dyke material. These two sets of tables represent two extremes of the resource present at Northshore. One could never mine to the exact shape of the mineralized solid and internal dykes but on the other hand with decent grade control in an open pit one should certainly not take in all the dilution estimated within a 10 x 10 x 5 m block.

**Table 14-12: Indicated Resource within the Total Blocks**

| Au Cut-off (g/t) | Tonnes > Cut-off (tonnes) | Grade > Cut-off | |
|---|---|---|---|
| | | Au (g/t) | Contained Ounces Au |
| 0.20 | 27,870,000 | 0.60 | 540,000 |
| 0.25 | 23,150,000 | 0.68 | 507,000 |
| 0.30 | 19,800,000 | 0.75 | 477,000 |
| 0.40 | 15,190,000 | 0.87 | 426,000 |
| **0.50** | **12,160,000** | **0.98** | **382,000** |
| 0.60 | 9,890,000 | 1.08 | 342,000 |
| 0.70 | 8,020,000 | 1.18 | 303,000 |
| 0.80 | 6,470,000 | 1.28 | 266,000 |
| 0.90 | 5,200,000 | 1.38 | 231,000 |
| 1.00 | 4,070,000 | 1.51 | 197,000 |
| 1.20 | 2,490,000 | 1.77 | 142,000 |

**Table 14-13: Inferred Resource within the Total Blocks**

| Au Cut-off (g/t) | Tonnes > Cut-off (tonnes) | Grade > Cut-off | |
|---|---|---|---|
| | | Au (g/t) | Contained Ounces Au |
| 0.20 | 64,130,000 | 0.57 | 1,175,000 |
| 0.25 | 54,560,000 | 0.63 | 1,107,000 |
| 0.30 | 49,050,000 | 0.67 | 1,058,000 |
| 0.40 | 38,390,000 | 0.76 | 938,000 |
| **0.50** | **29,120,000** | **0.86** | **804,000** |
| 0.60 | 21,280,000 | 0.98 | 667,000 |
| 0.70 | 15,750,000 | 1.09 | 552,000 |
| 0.80 | 11,700,000 | 1.21 | 454,000 |
| 0.90 | 8,340,000 | 1.35 | 363,000 |
| 1.00 | 6,230,000 | 1.49 | 299,000 |
| 1.20 | 4,040,000 | 1.71 | 222,000 |

## 14.9 Model Verification

One method of model verification was through the use of swath plots. These plots average composite grades and block estimated grades in slices through the deposit. The plots compare the average grades for gold from composites with the average grade from estimated blocks in three principal directions: N-S, E-W and bottom to top. The plots are shown in the following figures.

In all cases the estimated grades in magenta follow the composite grades in yellow reasonably well with any deviations in areas with few data points. There is no indication of any bias and the estimated grades seem reasonable based on the available data.

**Figure 14.6: Swath Plot for Gold by Northing, Northshore Property**

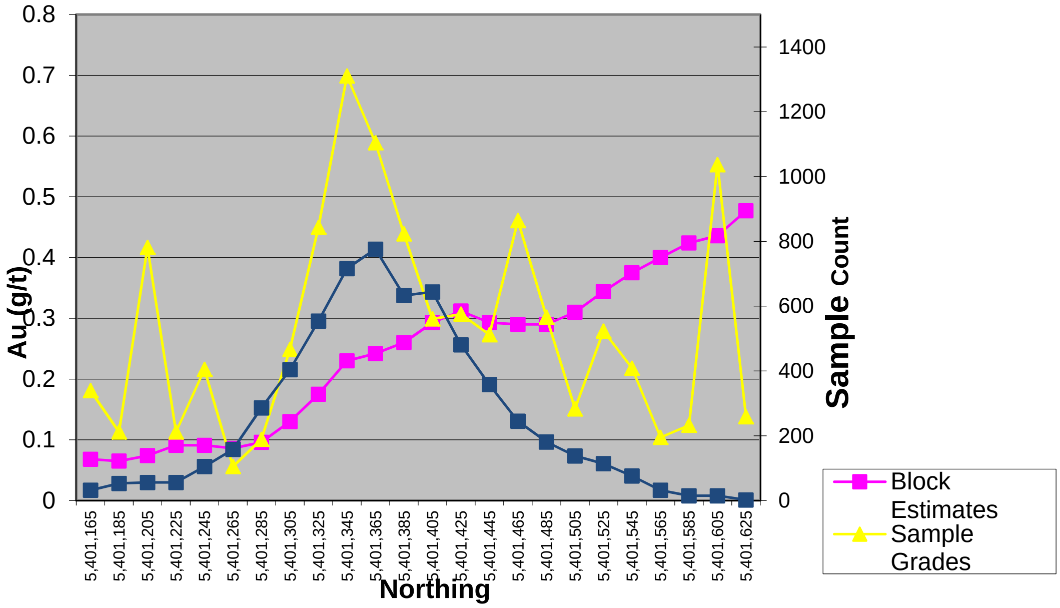



**Figure 14.7: Swath Plot for Gold by Easting, Northshore Property**

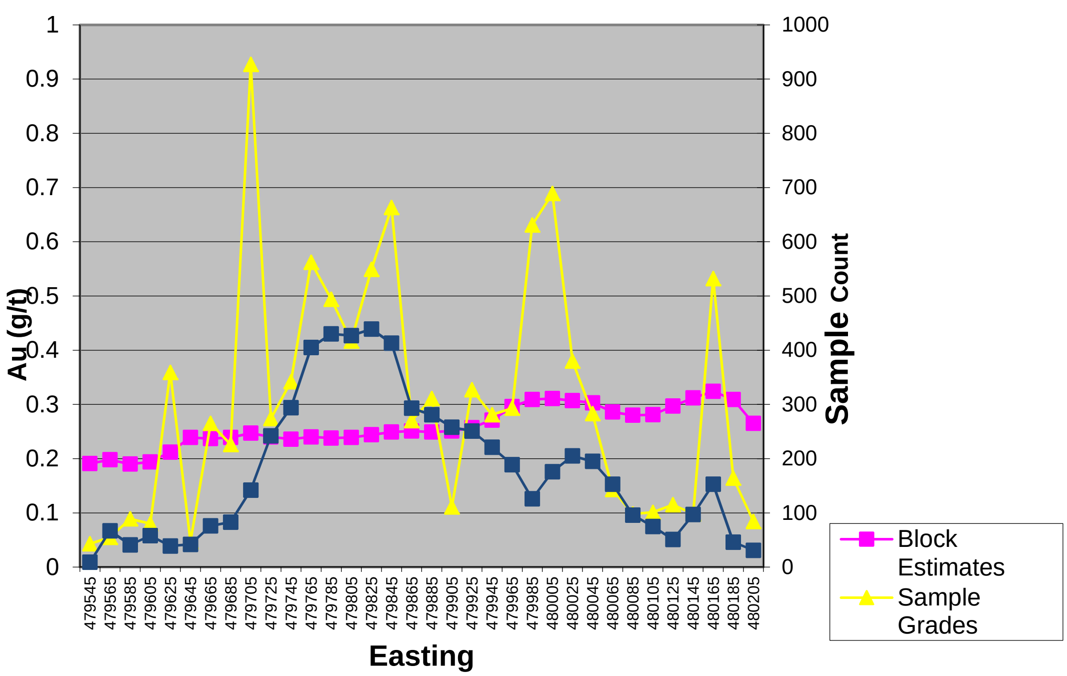
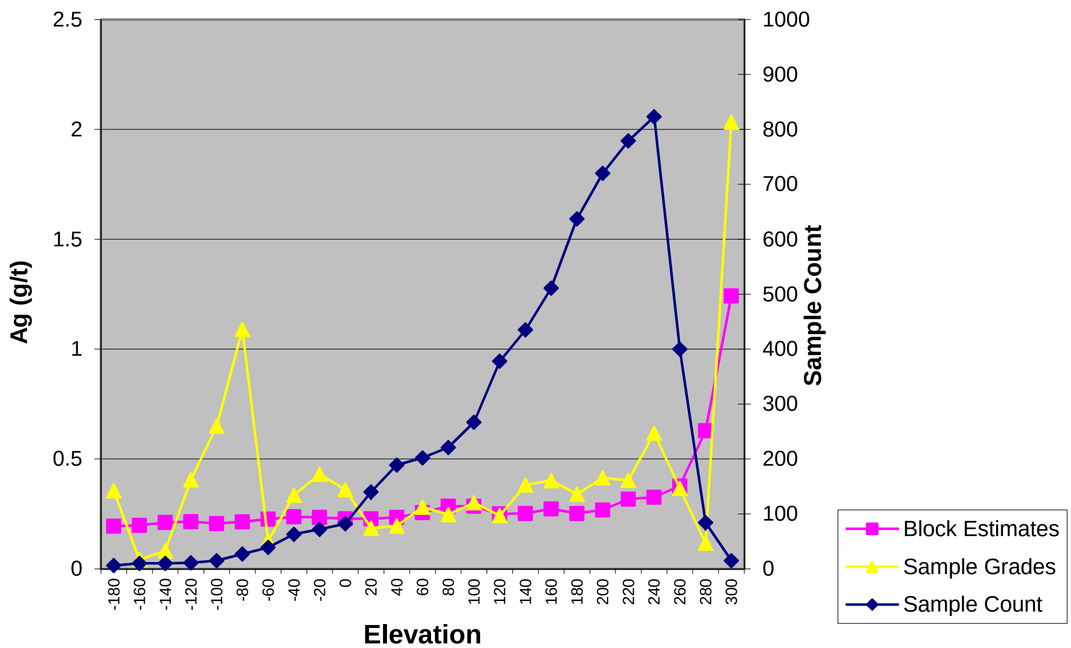
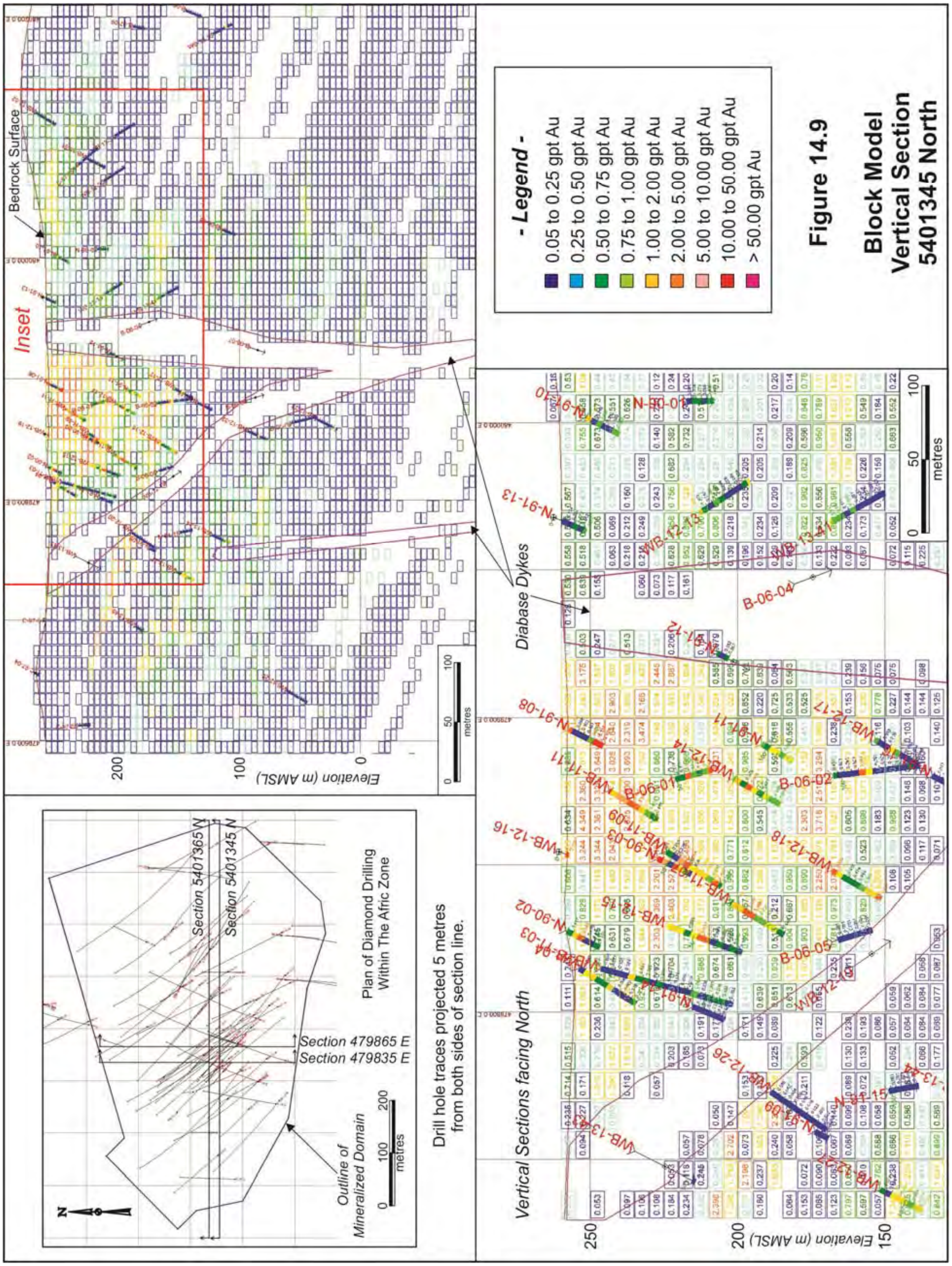


**Figure 14.8: Swath Plot for Gold by Elevation, Northshore Property**




Another check on the block model was completed by producing vertical east-west and north-south cross sectional plots of the block model with interpolated gold grades and the drill hole traces with composite gold grades. Then the estimated block grades were compared with drill hole results data (see Figures 14.9, 14.10, 14.11 and 14.12). The results of this work indicated that the interpolated grades are reasonable based upon the available drill hole data.


- Legend -
0.05 to 0.25 gpt Au
0.25 to 0.50 gpt Au
0.50 to 0.75 gpt Au
0.75 to 1.00 gpt Au
1.00 to 2.00 gpt Au
2.00 to 5.00 gpt Au
5.00 to 10.00 gpt Au
10.00 to 50.00 gpt Au
> 50.00 gpt Au
Figure 14.9
Block Model
Vertical Section
5401345 North
Bedrock Surface
Inset
Elevation (m AMSL)
metres
Diabase Dykes
Vertical Sections facing North
Plan of Diamond Drilling
Within The Afric Zone
Section 5401365 N
Section 5401345 N
Section 479865 E
Section 479835 E
Outline of
Mineralized Domain
Drill hole traces projected 5 metres
from both sides of section line.
B-06-01
B-06-02
B-06-04
B-06-05

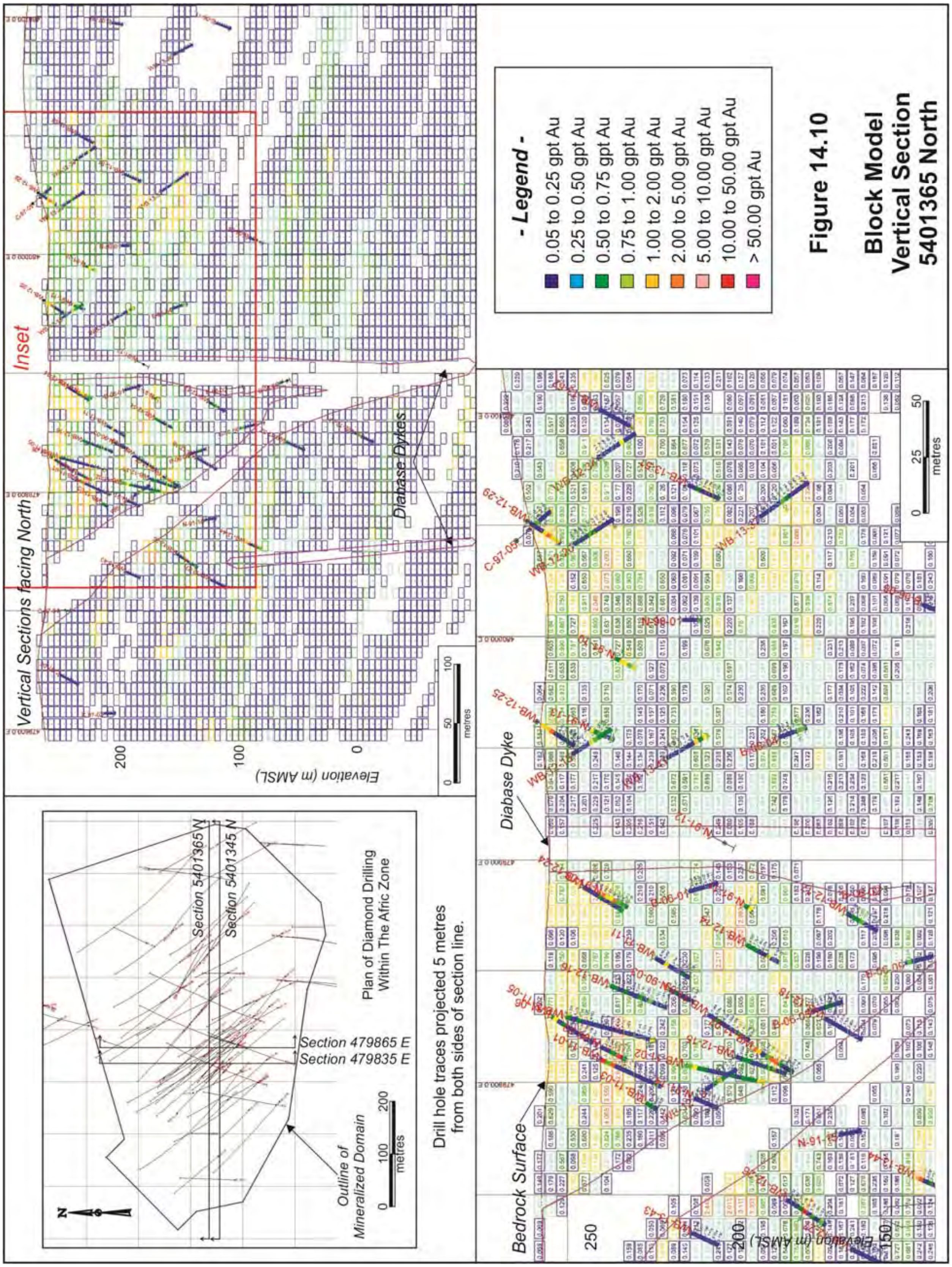
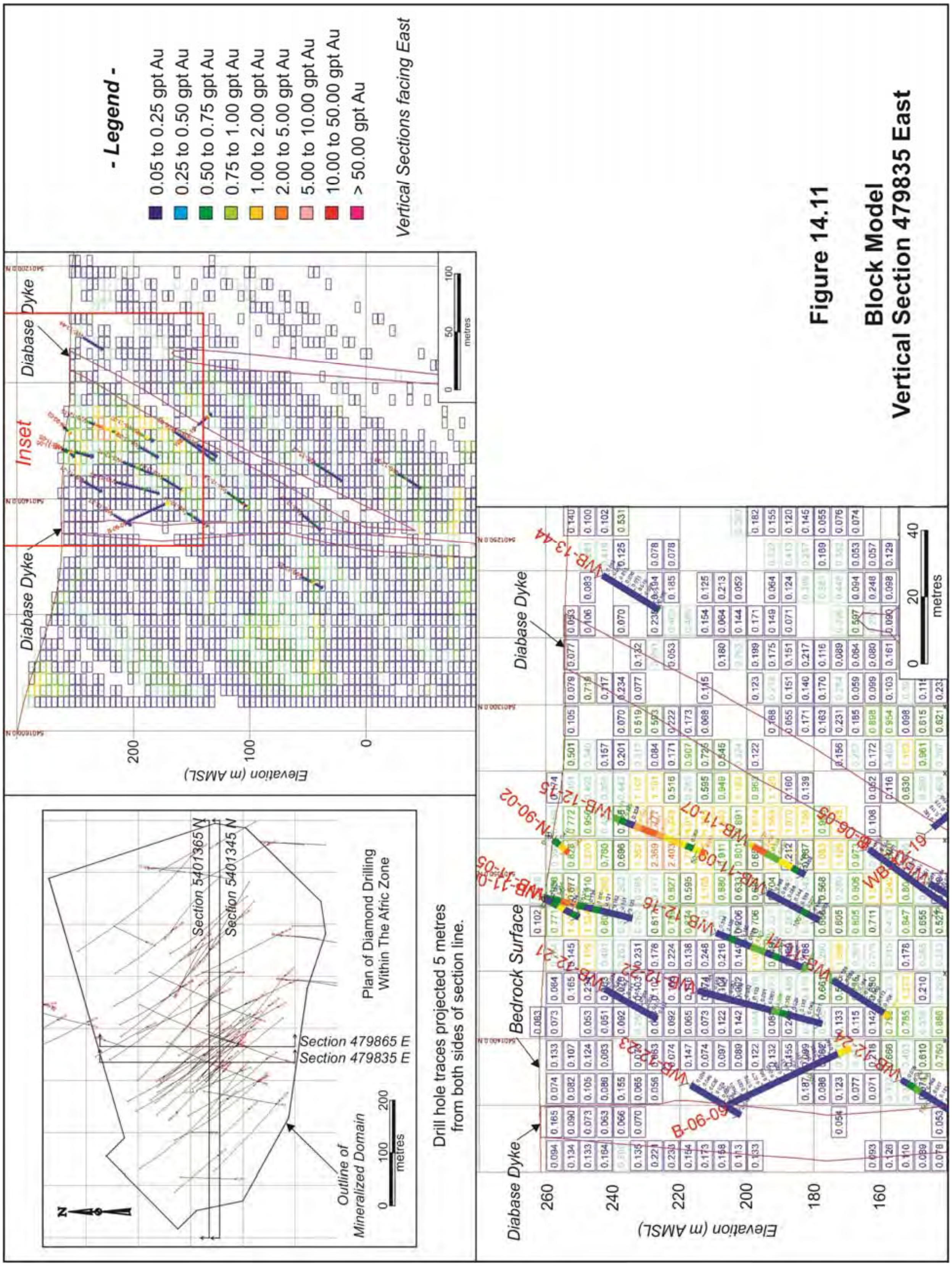


Figure 14.10
Block Model
Vertical Section
5401365 North
- Legend -
0.05 to 0.25 gpt Au
0.25 to 0.50 gpt Au
0.50 to 0.75 gpt Au
0.75 to 1.00 gpt Au
1.00 to 2.00 gpt Au
2.00 to 5.00 gpt Au
5.00 to 10.00 gpt Au
10.00 to 50.00 gpt Au
> 50.00 gpt Au
Vertical Sections facing North
Inset
Diabase Dykes
Elevation (m AMSL)
metres
Plan of Diamond Drilling
Within The Afric Zone
Section 5401365 N
Section 5401345 N
Section 479865 E
Section 479835 E
Outline of
Mineralized Domain
Drill hole traces projected 5 metres
from both sides of section line.
Bedrock Surface
Diabase Dyke


- Legend -
0.05 to 0.25 gpt Au
0.25 to 0.50 gpt Au
0.50 to 0.75 gpt Au
0.75 to 1.00 gpt Au
1.00 to 2.00 gpt Au
2.00 to 5.00 gpt Au
5.00 to 10.00 gpt Au
10.00 to 50.00 gpt Au
> 50.00 gpt Au
Vertical Sections facing East
Figure 14.11
Block Model
Vertical Section 479835 East
Diabase Dyke
Inset
Elevation (m AMSL)
metres
Bedrock Surface
Section 5401365 N
Section 5401345 N
Section 479865 E
Section 479835 E
Plan of Diamond Drilling
Within The Afric Zone
Outline of
Mineralized Domain
Drill hole traces projected 5 metres
from both sides of section line.

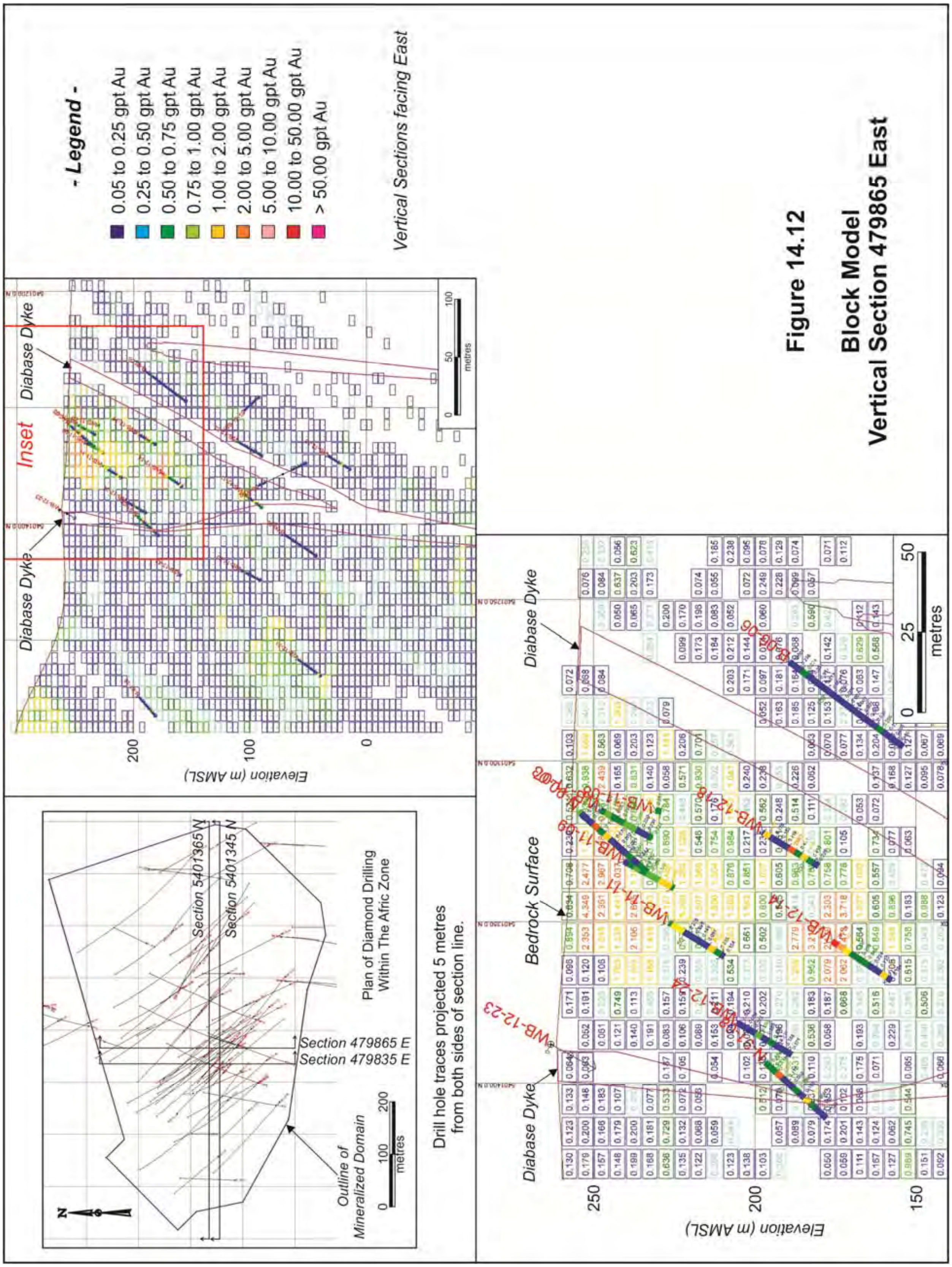



Figure 14.12

Block Model
Vertical Section 479865 East

## 15 Through 22 – Are Not Applicable To This Report

Items 15 through 22, as outlined below, are not applicable to this technical report.

Item 15: Mineral Reserve Estimates

Item 16: Mining Methods

Item 17: Recovery Methods

Item 18: Project Infrastructure

Item 19: Market Studies and Contracts

Item 20: Environmental Studies, Permitting and Social or Community Impact

Item 21: Capital and Operating Costs

Item 22: Economic Analysis

## 23 ADJACENT PROPERTIES

There is no noteworthy adjacent property within 6 miles (10 km) that meets the criteria defined in NI 43-101, Section 1.1.

## 24 OTHER RELEVANT DATA and INFORMATION

To the authors' best knowledge, all the relevant data and information have been provided in the preceding text.

# 25 INTERPRETATION and CONCLUSIONS

## 25.1 Geology and Mineral Exploration

The Northshore property is dominantly underlain by Archean-age metavolcanic and intrusive rocks of andesitic and dacitic compositions that are regionally-altered to greenschist facies and well-fractured by regional deformation and local strike-slip faulting.

Syenitic and feldspar (+/- quartz) porphyritic intrusive rocks underlie the central portion of the Property, are hydrothermally altered, pyritized, and host numerous narrow quartz and quartz-carbonate (+ tourmaline) mesothermal veins and vein stockworks. Various intermediate to felsic and mafic volcanic units also occur locally. Intermediate to felsic volcanics with tuffaceous characteristics are common and may be confused locally with the feldspar (+I- quartz) porphyritic intrusives. The mafic volcanics display typical mafic flow textures and appear generally unaltered.

These four main intrusive and volcanic lithologies are cut by various intrusive dyke/sill bodies including diabase dykes, gabbroic sills, quartz-feldspar porphyry dykes and rare lamprophyre and diatreme breccia dykes. Of these, barren to very weakly mineralized, northwesterly trending and steeply northeasterly dipping diabase and quartz-feldspar porphyry dykes are locally common within the central Afric Zone.

Most of the gold mineralization within the Afric Zone is hosted by the well-altered and fractured feldspar (+/- quartz) porphyritic intrusive rocks. Gold mineralization occurs in widespread sections within the Afric Zone associated with quartz-carbonate and tourmaline-veined, pyritized, sericitized and locally potassically-altered intrusive host rocks. These rocks exhibit brittle deformation and fracturing, and host quartz and quartz carbonate veins, veinlets, stringers and fracture infillings. The fracture infillings are mineralized with pyrite and minor to trace amounts of chalcopyrite, sphalerite, galena, and molybdenite. Visible gold is quite common within quartz-carbonate veins ranging from a few millimetres to over 30 centimetres wide, such as the Audney, Caly and Caly North veins. The syenitic intrusive rocks to the north host the poorly drill tested, fissure-filling, east-west trending Northshore and Gino vein structures.

A total of 100 diamond drill holes, totalling a reported 19,547 metres of drilling, have now been completed on the Property of which 47 drill holes, totalling 8,157 metres, were completed during historic exploration work by Noranda, Cyprus Canada and American Bonanza. These earlier operators identified six mineralized zones, including the east-west trending Afric, Northshore and No. 3 Zones and the east-northeasterly to northeasterly trending No. 2, 4 and 5 Zones.

Since September 2011, GTA has completed 52 diamond drill holes, totalling 11,390 metres of NQ-size core drilling. This drilling has been largely focused on testing the gold mineralization within the Afric Zone. Current drilling results show that this zone underlies an area measuring at least 500 by 350 metres and the gold-bearing mineralization has been shown to extend vertically to a depth of 350 metres beneath the surface. The Afric Zone remains open for expansion both at depth and to the northeast. In addition, the newly-discovered Gino vein structure hosting significant gold-bearing mineralization and situated 250 m north of the Afric Zone represents an excellent exploration target that remains open for expansion both laterally and downdip.

## 25.2 Mineral Resource Estimate

It is estimated that the drill-tested portion of the mineralized Afric Zone hosts Indicated mineral resources of 12.36 million tonnes grading 0.99 gpt gold at a cut-off grade of 0.50 gpt gold, representing approximately 391,000 contained ounces of gold. Furthermore, there are an estimated 29.58 million tonnes of Inferred mineral resources grading 0.87 gpt gold at the same cut-off grade, representing approximately 824,000 ounces of gold. These mineral resources are undiluted and assume that they could be extracted to the limits of the mineralization and not include any external waste or internal dyke material.

A second set of mineral resource estimates for the same block model reports the resource if the entire 10 by 10 by 5-metre block was mined including waste and barren to very weakly mineralized dyke material. Thus, there are such Indicated mineral resources of 12.16 million tonnes grading 0.98 gpt gold at a cut-off grade of 0.50 gpt gold, representing approximately 382,000 contained ounces of gold. Furthermore, there are an estimated 29.12 million tonnes of Inferred mineral resources grading 0.86 gpt gold at the same cut-off grade, representing approximately 804,000 ounces of gold.

These two mineral resources estimates represent the undiluted and diluted extremes for the currently identified and drill-tested mineralization within the Afric Zone. Obviously, these resources could never be mined without dilution but reasonable grade control in an open pit scenario could minimize grade dilution.

No definitive metallurgical testwork results were available so 100% recoveries have been assumed for this mineral resource estimate. The results from recommended metallurgical studies should be utilized for any future reported mineral estimates.

Based upon current metal prices and operating expenses in the region, a gold cut-off grade of 0.5 gpt has been highlighted as it is believed that this value represents a reasonable cut-off grade for exploiting a bulk tonnage gold deposit, such as the Afric Zone, located in northern Ontario with excellent existing infrastructure.

## 25.3 Risks and Opportunities

### 25.3.1 Advanced Exploration and QA/QC Procedures

Recent exploration work appears to have been conducted in a systematic and results-given manner leading to well-documented and verifiable results. Drilling has been concentrated on delineating and evaluating the Afric Zone and its nearby mineralized extensions. The results of this work have been utilized for the aforementioned mineral resource and the discovery of other mineralized structures (i.e. Northshore and Gino vein structures) not included in the current mineral resource estimate.

Further drill testing will be required to infill the current drilling pattern, to better define the continuity of the gold mineralization, and for attendant advanced studies such as hydrology, rock quality, bulk density and infrastructure placement. The results from this work will be necessary to upgrade the current mineral resources for future economic studies. It is possible that with such further drilling the currently-assumed continuity of the mineralization may not be proven. Regardless, such drill testing must be carried out to advance this project.

GTA has maintained continuous and well-documented QA/QC procedures throughout their tenure and these procedures should be continued during any future work. Any deviation from the current QA/QC procedures or results should be immediately corrected.

### 25.3.2 Mineral Resource Estimate

Recent exploration drilling has been focused on evaluating the central higher grade portion of the Afric Zone to a vertical depth less than 250 metres. A combination of in-fill drilling with both near surface and deeper drilling intercepts should improve the interpretation of the vein and stockwork geometry and tenor, and ultimately to the upgrading of the classification of the mineral resources. Such work would also better define the barren to weakly mineralized cross-cutting dykes and identify any significant structural displacements that might influence inferred projections of mineralization.

GTA should consider high-quality surface channel sampling of the bedrock to be carried out during the stripping and collection of a bulk metallurgical sample since positive surface sampling results could also be utilized for a classification upgrade of future estimated mineral resources. Subsequent drilling programs should also include more specific gravity determinations of the mineralized rock and the post-mineral dykes and external waste material so that there could be bulk density values for each domain.

There has not been any recent metallurgical test work carried out on any of the mineral resources. Without such test work a mineral recovery of 100% has been assumed for estimation purposes which, of course, is not possible for any real mining and processing operation. Representative samples of the Afric Zone mineralization must be collected and tested to determine both the recovery rate plus its processing parameters. Successful handling and treatment of material from the Northshore project will be dependent on developing an economic processing route. The metallurgical and processing parameters required to determine an economic processing route have not yet been fully developed. Metallurgical test work is required to determine these parameters, perform engineering evaluations and assess project economics.

### 25.3.3 Environmental Impact and Permitting

Recent exploration work has not required permitting, especially since most of the work has been conducted within patented mineral claims. Advanced exploration work, including resource definition drilling and bulk sampling, would require an 'Advanced Exploration Closure Plan' ('AECP') from the Ontario Ministry of Northern Development and Mines and a 'Permit to Take Water' from the Ontario Ministry of Environment. Delays to the approvals of such permits would represent a risk to a timely advancement of the project.

The Property is located on traditional lands of the Pays Plat First Nation; however, GTA has developed a good working relationship with the elders of the band and the community. It is important for this project that this good working relationship be maintained.

Mineral exploration by its nature has attendant risks and uncertainties from the discovery stage through to advanced mine development. For this reason it is incumbent that the Company minimize the uncertainties and financial risks involved in advanced exploration by continuing systematic in-fill drilling to better interpret the gold mineralization of the Afric Zone and exploratory drilling of adjacent targets, such as the Gino vein structure, that may have the potential for additional mineral resources. Furthermore, the Company must institute environmental and metallurgical studies as the results of these will be required in the near future for a Preliminary Economic Assessment.

It is the authors' opinion that the Northshore property has very good exploration potential for both lode and bulk-tonnage gold mineralization and may have significant economic potential pending the results of further study. Continued advanced exploration work is warranted.

# 26 RECOMMENDATIONS

Given that continued exploration work on this Property is warranted, a two-phase exploration program is recommended to advance this project for an economic assessment of both its lode and bulk-tonnage gold mineralization. A detailed description of a recommended exploration program follows.

### Phase I

Base-line environmental monitoring should be instituted upon commencement of the future exploration work. This monitoring should be conducted at a regular frequency under the supervision of a qualified environmental consultant for a period designated by existing Federal and Provincial regulations. The results of this environmental study would be required for any economic assessment and future project permitting;

Preliminary metallurgical test work should be carried out on three 20-kilogram composite samples that are representative of near-surface gold mineralization that might be targeted for initial open pit extraction. The source for these samples might be selected unoxidized reject material from drill core sampling. The intent of this study would be to determine a preliminary recovery rate plus grindability and processing characteristics for the near-surface gold mineralization;

Based upon a study of the distribution of interpolated blocks in the mineral resource block model, targeted fill-in diamond drilling should be carried out to continue defining the geometry and tenor of the Afric Zone mineralization. The results of this work would be utilized to better interpret the continuity of potentially economic gold mineralization for future mineral resource estimates;

During the ongoing drilling the Company should file the appropriate documentation in application for an ‘Advanced Exploration Closure Plan’ (‘AECP’) from the Ontario Ministry of Northern Development and Mines and any other permits required prior to the extraction of a large bulk sample from the property; and

Following a review of preliminary metallurgical test work results and approval of required permitting, a 5,000-tonne bulk sample should be extracted and tested for its full metallurgical and processing characteristics. Both the preliminary and bulk sample metallurgical test work should be carried out under the supervision of a qualified metallurgist and the results of these studies fully documented.

### Phase II

Pending a thorough review of the Phase I results, the base-line environmental monitoring study should be continued in conjunction with initial geotechnical and hydrological studies. Additional diamond drilling will be required for these studies at sites recommended for geotechnical, hydrological and bulk density data collection, plus some drilling will be required to sterilize areas for possible future infrastructure;

It is recommended that a Preliminary Economic Assessment (PEA’) be prepared for the Project after the results of aforementioned studies and additional diamond drilling have been completed. This assessment should be prepared by a qualified mining consultant familiar with both mining operational parameters and regulations in Ontario; and

Following the Phase II work, the results should be thoroughly reviewed and a project report prepared documenting this work for corporate and assessment credit purposes.

## 26.1 Proposed Exploration Budget

**Phase I Exploration Budget**

| | |
|---|---|
| Base-line environmental monitoring by qualified environmental consultants | |
| Including: water analyses, observations, supervision and reporting | CAD $ 100,000 |
| Preliminary metallurgical testing (3 x 20 kg samples) plus supervision, reporting | 30,000 |
| Fill-in diamond drilling (1,200 m @ $200/m all-in; including: drilling, assaying, supervision, etc.) | 240,000 |
| Documentation and filing of appropriate permits and Life of Mine closure documentation | 10,000 |
| Bulk sample collection, road and site upgrades, metallurgical testing, reporting (5,000 tonnes) | 270,000 |
| Contingency | 50,000 |
| **Total Estimated Phase I Expenditures** | **$ 700,000** |

Pending a thorough evaluation of the Phase I results, it is recommended that the following Phase II advanced exploration work should be undertaken.

**Phase II Exploration Budget**

| | |
|---|---|
| Base-line environmental monitoring (continuation of Phase I monitoring) | |
| Including: water analyses, observations, supervision and reporting | CAD $ 100,000 |
| Diamond drilling geotechnical, hydrological and work site sterilization (1,000 m @ $200/m all-in) | 200,000 |
| Geotechnical and hydrological studies, supervision and reporting | 70,000 |
| Preliminary economic assessment study ('PEA') and reporting | 80,000 |
| Contingency | 50,000 |
| **Total Estimated Phase II Expenditures** | **$ 500,000** |

**Total Estimated Phases I and II Expenditures ........ CAD $1,200,000**

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# APPENDIX I

## Diamond Drilling Data

## Provided By

## GTA Resources and Mining Inc.

Drill holes utilized for the mineral resource estimate are highlighted in light red.

| Drill Hole ID | UTM Easting NAD 83 (m) | UTM Northing NAD 83 (m) | Elevation (m AMSL) | Length (m) | Azimuth (degrees) | Inclination (degrees) |
|---|---|---|---|---|---|---|
| B-06-01 | 479870.130 | 5401309.220 | 258.878 | 320.00 | 15.00 | -50.00 |
| B-06-02 | 479869.980 | 5401308.540 | 258.968 | 173.00 | 17.00 | -70.00 |
| B-06-03 | 479907.300 | 5401596.000 | 312.500 | 299.00 | 12.00 | -49.00 |
| B-06-04 | 479920.080 | 5401275.242 | 260.163 | 332.00 | 19.50 | -50.00 |
| B-06-05 | 479798.080 | 5401270.123 | 257.589 | 308.00 | 19.00 | -50.00 |
| B-06-06 | 479838.320 | 5401218.052 | 254.770 | 254.00 | 16.00 | -50.00 |
| B-06-07 | 479986.890 | 5401209.916 | 254.433 | 248.00 | 333.00 | -48.50 |
| B-06-08 | 480083.620 | 5401225.343 | 254.220 | 272.00 | 333.00 | -47.00 |
| B-06-09 | 479806.860 | 5401450.671 | 270.061 | 407.00 | 150.00 | -60.00 |
| B-06-10 | 479913.240 | 5401596.462 | 311.297 | 299.00 | 332.00 | -48.00 |
| B-06-11 | 480253.510 | 5401252.530 | 257.941 | 251.00 | 330.00 | -50.00 |
| B-07-01 | 479992.550 | 5401216.909 | 255.041 | 164.00 | 180.00 | -45.00 |
| B-07-02 | 479992.430 | 5401217.740 | 254.985 | 209.00 | 181.00 | -60.00 |
| B-07-03 | 480077.700 | 5401225.230 | 254.156 | 155.00 | 182.00 | -45.00 |
| B-07-04 | 480077.700 | 5401225.828 | 253.924 | 140.00 | 180.00 | -60.00 |
| B-07-05 | 480257.160 | 5401248.839 | 257.828 | 152.00 | 180.00 | -45.00 |
| B-07-06 | 480257.130 | 5401249.346 | 257.634 | 130.00 | 180.00 | -60.00 |
| B-07-07 | 480415.720 | 5401217.661 | 247.472 | 98.00 | 190.00 | -45.00 |
| B-07-08 | 480415.720 | 5401217.661 | 247.472 | 95.00 | 10.00 | -45.00 |
| B-07-09 | 480209.000 | 5401480.000 | 310.000 | 224.00 | 187.00 | -45.00 |
| C-97-01 | 479700.450 | 5401349.425 | 261.073 | 68.00 | 360.00 | -45.00 |
| C-97-02 | 479612.000 | 5401315.000 | 258.000 | 150.00 | 2.00 | -45.00 |
| C-97-03 | 479337.000 | 5401532.000 | 262.000 | 201.00 | 20.00 | -45.00 |
| C-97-04 | 479656.720 | 5401347.515 | 269.092 | 170.00 | 320.00 | -50.00 |
| C-97-05 | 480043.000 | 5401368.000 | 273.000 | 227.00 | 120.00 | -45.00 |
| C-97-06 | 480210.000 | 5401751.000 | 290.000 | 126.00 | 360.00 | -45.00 |
| C-97-07 | 479777.990 | 5401395.030 | 269.697 | 190.00 | 0.00 | -90.00 |
| N-90-01 | 480007.440 | 5401297.854 | 258.300 | 110.00 | 0.00 | -45.00 |
| N-90-02 | 479828.010 | 5401339.192 | 259.205 | 61.00 | 330.00 | -45.00 |
| N-90-03 | 479867.250 | 5401311.434 | 259.415 | 94.00 | 332.00 | -45.00 |
| N-90-04 | 480096.650 | 5401127.763 | 248.768 | 108.00 | 0.00 | -45.00 |
| N-90-05 | 480208.130 | 5401469.511 | 296.687 | 110.00 | 180.00 | -45.00 |
| N-90-06 | 479877.000 | 5401564.000 | 300.000 | 56.00 | 198.00 | -50.00 |
| N-90-07 | 479917.000 | 5401654.000 | 324.000 | 109.00 | 330.00 | -50.00 |
| N-91-08 | 479897.210 | 5401337.723 | 259.772 | 137.00 | 330.00 | -45.00 |
| N-91-09 | 479801.000 | 5401268.000 | 257.000 | 124.00 | 330.00 | -45.00 |

| Drill Hole ID | UTM Easting NAD 83 (m) | UTM Northing NAD 83 (m) | Elevation (m AMSL) | Length (m) | Azimuth (degrees) | Inclination (degrees) |
|---|---|---|---|---|---|---|
| N-91-10 | 480008.430 | 5401328.618 | 264.652 | 64.00 | 330.00 | -45.00 |
| N-91-11 | 479925.910 | 5401279.209 | 259.374 | 134.00 | 330.00 | -45.00 |
| N-91-12 | 479947.800 | 5401293.809 | 258.791 | 120.00 | 331.00 | -45.00 |
| N-91-13 | 479968.070 | 5401340.045 | 262.433 | 255.00 | 334.00 | -45.00 |
| N-91-14 | 479818.760 | 5401302.008 | 256.881 | 134.00 | 336.00 | -45.00 |
| N-91-15 | 479754.860 | 5401236.331 | 254.032 | 200.00 | 10.00 | -45.00 |
| N-91-16 | 479941.680 | 5401233.231 | 257.362 | 200.00 | 330.00 | -45.00 |
| N-91-17 | 480245.490 | 5401384.829 | 285.452 | 122.00 | 330.00 | -45.00 |
| N-91-18 | 480065.630 | 5401485.057 | 300.751 | 98.00 | 26.00 | -45.00 |
| N-91-19 | 479903.000 | 5401483.000 | 262.000 | 149.00 | 330.00 | -45.00 |
| N-91-20 | 480256.000 | 5401348.000 | 260.000 | 110.00 | 150.00 | -49.00 |
| WB-11-01 | 479821.040 | 5401351.192 | 259.218 | 62.00 | 310.00 | -60.00 |
| WB-11-02 | 479821.310 | 5401350.940 | 259.101 | 101.00 | 306.00 | -75.00 |
| WB-11-03 | 479817.390 | 5401337.667 | 258.207 | 62.00 | 310.00 | -51.00 |
| WB-11-04 | 479817.860 | 5401337.269 | 258.139 | 92.00 | 310.00 | -70.00 |
| WB-11-05 | 479831.570 | 5401358.263 | 260.295 | 62.00 | 310.00 | -50.00 |
| WB-11-06 | 479832.140 | 5401357.814 | 260.380 | 92.00 | 310.00 | -70.00 |
| WB-11-07 | 479872.150 | 5401309.325 | 259.021 | 152.00 | 310.00 | -50.00 |
| WB-11-08 | 479872.900 | 5401308.782 | 259.102 | 32.00 | 310.00 | -70.00 |
| WB-11-09 | 479877.560 | 5401320.556 | 260.115 | 161.00 | 310.00 | -50.00 |
| WB-11-10 | 479877.880 | 5401320.183 | 260.029 | 35.00 | 310.00 | -70.00 |
| WB-11-11 | 479884.630 | 5401330.239 | 259.930 | 152.00 | 315.00 | -50.00 |
| WB-11-12 | 479884.640 | 5401330.234 | 259.933 | 35.00 | 315.00 | -70.00 |
| WB-12-13 | 479937.560 | 5401378.100 | 262.759 | 125.00 | 130.00 | -50.00 |
| WB-12-14 | 479915.340 | 5401304.823 | 261.609 | 401.00 | 311.00 | -50.00 |
| WB-12-15 | 479842.150 | 5401326.549 | 258.952 | 188.00 | 315.00 | -62.00 |
| WB-12-16 | 479854.410 | 5401348.694 | 260.600 | 374.00 | 315.00 | -62.00 |
| WB-12-17 | 479954.600 | 5401274.244 | 257.411 | 350.00 | 315.00 | -50.00 |
| WB-12-18 | 479902.130 | 5401284.165 | 260.830 | 386.00 | 315.00 | -50.00 |
| WB-12-19 | 479739.040 | 5401425.822 | 275.632 | 371.00 | 132.20 | -48.70 |
| WB-12-20 | 480027.330 | 5401381.812 | 268.878 | 236.00 | 130.00 | -50.00 |
| WB-12-21 | 479847.800 | 5401374.340 | 262.451 | 200.00 | 310.00 | -50.00 |
| WB-12-22 | 479848.160 | 5401374.068 | 262.311 | 101.00 | 310.00 | -70.00 |
| WB-12-23 | 479863.960 | 5401387.886 | 263.258 | 165.00 | 310.00 | -50.00 |
| WB-12-24 | 479899.010 | 5401350.412 | 260.601 | 230.00 | 310.00 | -50.00 |
| WB-12-25 | 479961.800 | 5401361.605 | 263.723 | 347.00 | 310.00 | -50.00 |
| WB-12-26 | 479821.110 | 5401304.526 | 257.004 | 410.00 | 305.00 | -50.00 |
| WB-12-27 | 479797.470 | 5401271.378 | 257.831 | 302.00 | 315.00 | -50.00 |

| Drill Hole ID | UTM Easting NAD 83 (m) | UTM Northing NAD 83 (m) | Elevation (m AMSL) | Length (m) | Azimuth (degrees) | Inclination (degrees) |
|---|---|---|---|---|---|---|
| WB12-27A | 479797.470 | 5401271.378 | 257.831 | 17.00 | 315.00 | -50.00 |
| WB-12-28 | 479760.710 | 5401230.086 | 252.549 | 287.00 | 310.50 | -50.00 |
| WB-12-29 | 480051.840 | 5401361.452 | 268.144 | 350.00 | 310.00 | -50.00 |
| WB-12-30 | 480068.970 | 5401379.093 | 272.900 | 326.00 | 314.00 | -50.00 |
| WB-12-31 | 479982.440 | 5401383.208 | 265.487 | 344.00 | 310.00 | -50.00 |
| WB-12-32 | 479944.180 | 5401249.535 | 257.193 | 449.00 | 310.00 | -50.00 |
| WB-12-33 | 480001.090 | 5401219.201 | 255.040 | 563.00 | 310.00 | -50.00 |
| WB-12-34 | 480055.640 | 5401389.778 | 272.693 | 215.00 | 130.00 | -50.00 |
| WB-12-35 | 480230.550 | 5401399.837 | 290.955 | 449.00 | 310.00 | -50.00 |
| WB-13-36 | 480087.520 | 5401436.427 | 281.809 | 227.00 | 121.00 | -50.00 |
| WB-13-37 | 479980.240 | 5401419.539 | 269.081 | 170.00 | 122.00 | -50.00 |
| WB-13-38 | 479979.600 | 5401419.929 | 269.371 | 212.00 | 118.00 | -64.00 |
| WB-13-39 | 479980.100 | 5401415.463 | 268.838 | 218.00 | 323.00 | -50.00 |
| WB-13-40 | 479980.410 | 5401415.054 | 268.706 | 152.00 | 323.00 | -70.00 |
| WB-13-41 | 479910.380 | 5401401.508 | 265.564 | 200.00 | 130.00 | -52.00 |
| WB-13-42 | 479929.630 | 5401385.043 | 263.577 | 137.00 | 310.00 | -50.00 |
| WB-13-43 | 479764.490 | 5401328.767 | 258.079 | 92.00 | 315.00 | -55.00 |
| WB-13-44 | 479841.740 | 5401254.539 | 254.443 | 290.00 | 315.00 | -50.00 |
| WB-13-45 | 479744.750 | 5401288.730 | 257.839 | 110.00 | 314.00 | -45.00 |
| WB-13-46 | 480089.630 | 5401433.551 | 282.732 | 200.00 | 318.00 | -45.00 |
| WB-13-47 | 479946.170 | 5401680.016 | 318.968 | 305.00 | 12.00 | -45.00 |
| WB-13-48 | 479946.100 | 5401680.799 | 318.715 | 125.00 | 345.00 | -45.00 |
| WB-13-49 | 479946.440 | 5401680.854 | 318.978 | 140.00 | 30.00 | -45.00 |
| WB-13-50 | 479946.100 | 5401680.962 | 318.715 | 152.00 | 10.00 | -55.00 |
| WB-13-51 | 480113.160 | 5401306.418 | 279.698 | 224.00 | 315.00 | -50.00 |
| WB-13-52 | 480128.880 | 5401331.500 | 281.732 | 212.00 | 315.00 | -50.00 |

# APPENDIX II

## Semivariogram Models

## For

## Low Grade and Indicator Composite Samples

## By

## Giroux Consultants Ltd.

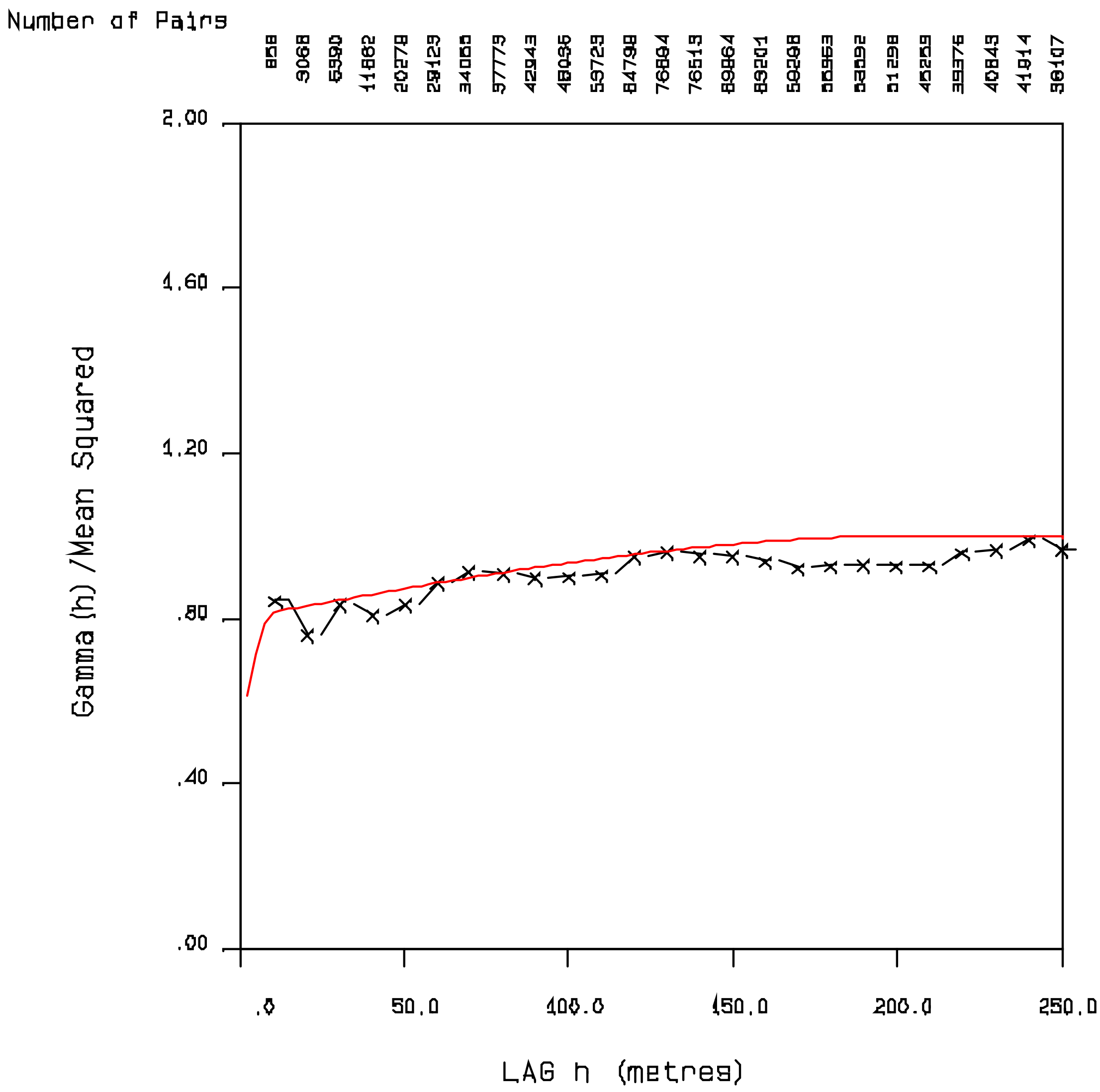
C0 = .500

C1 = .300

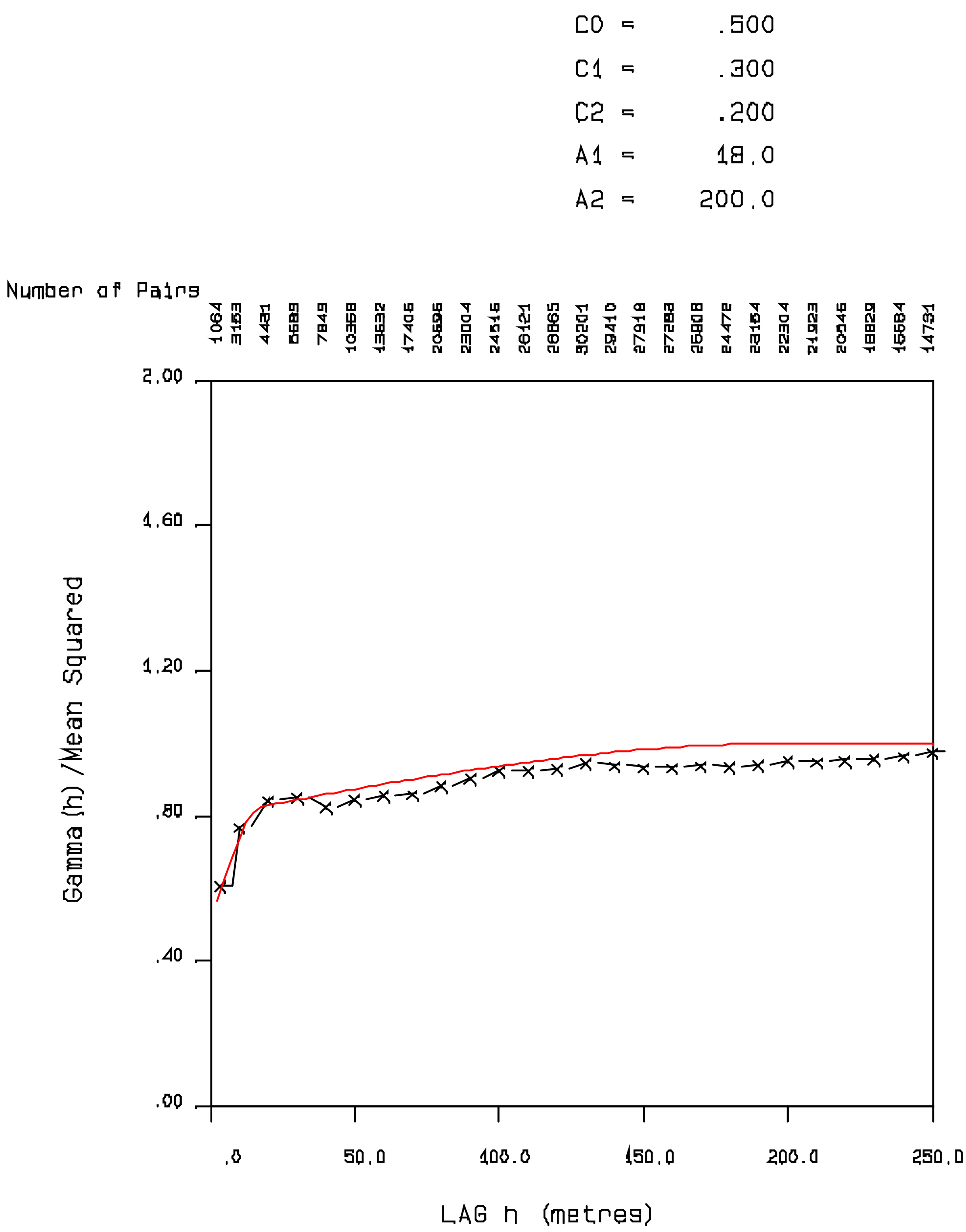
C2 = .200

A1 = 10.0

A2 = 205.0




LG GOLD - AZ 103 DIP 0




LG GOLD - AZ 13 DIP -55

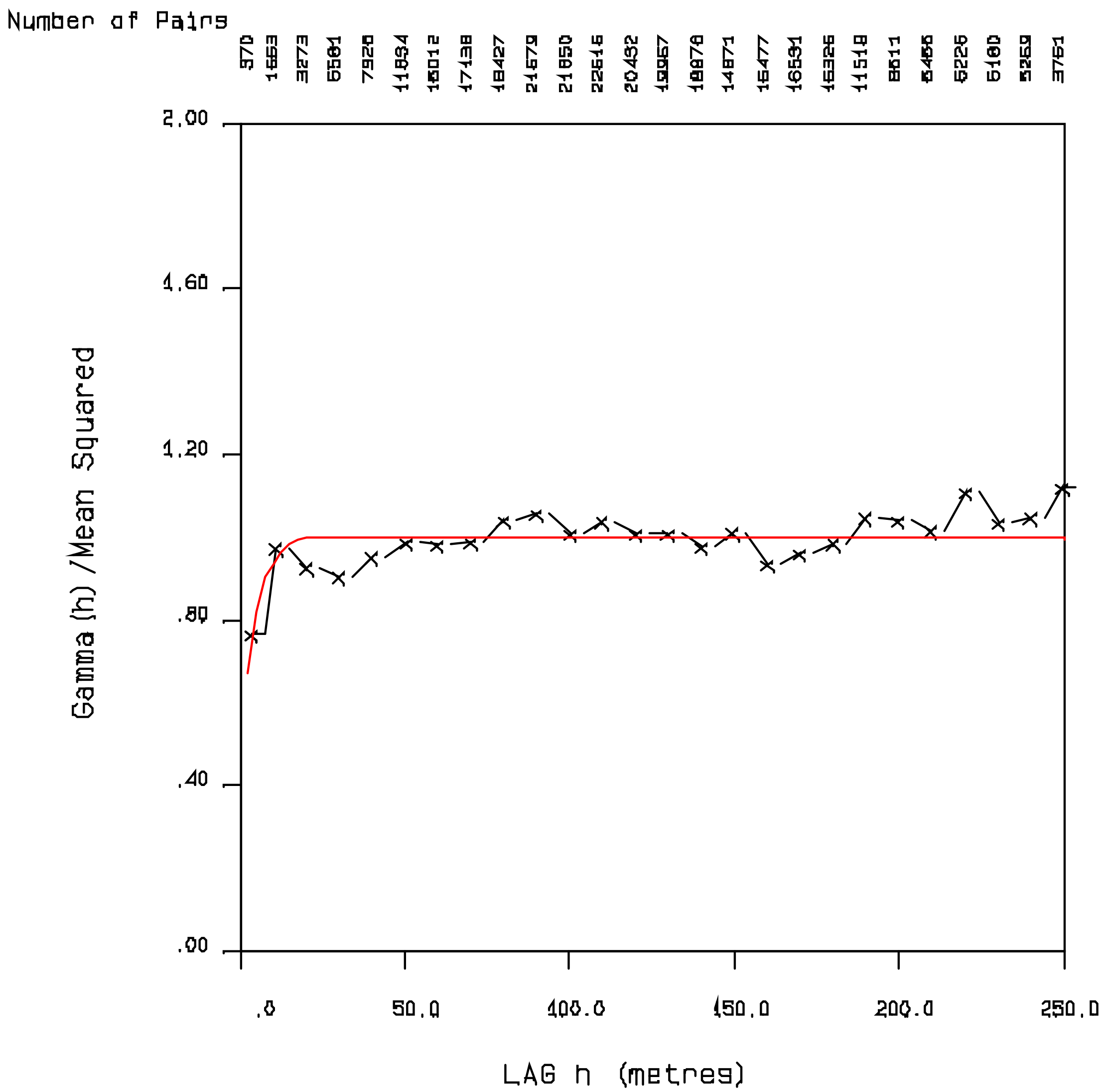
C0 = .500

C1 = .300

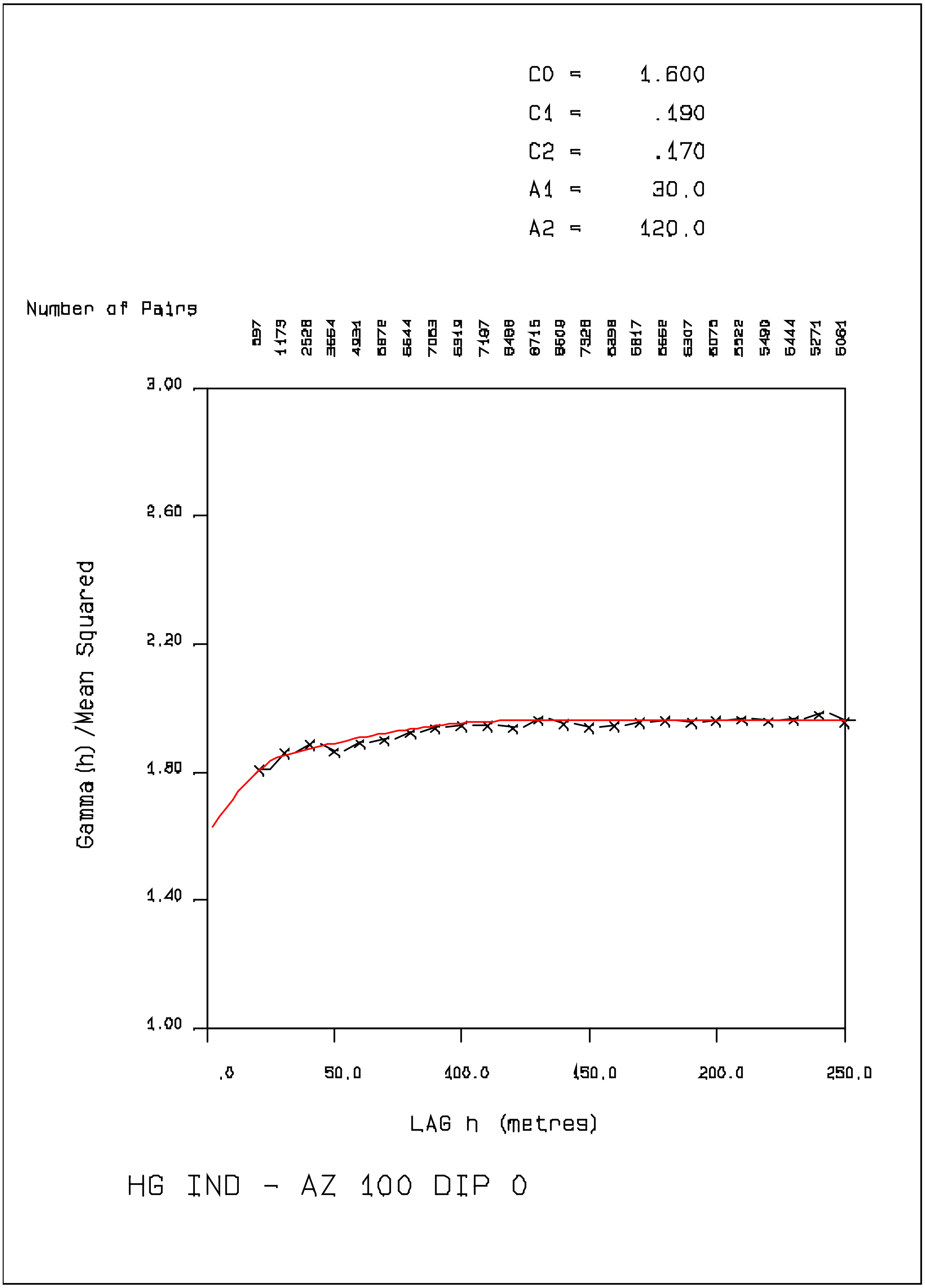
C2 = .200

A1 = 8.0

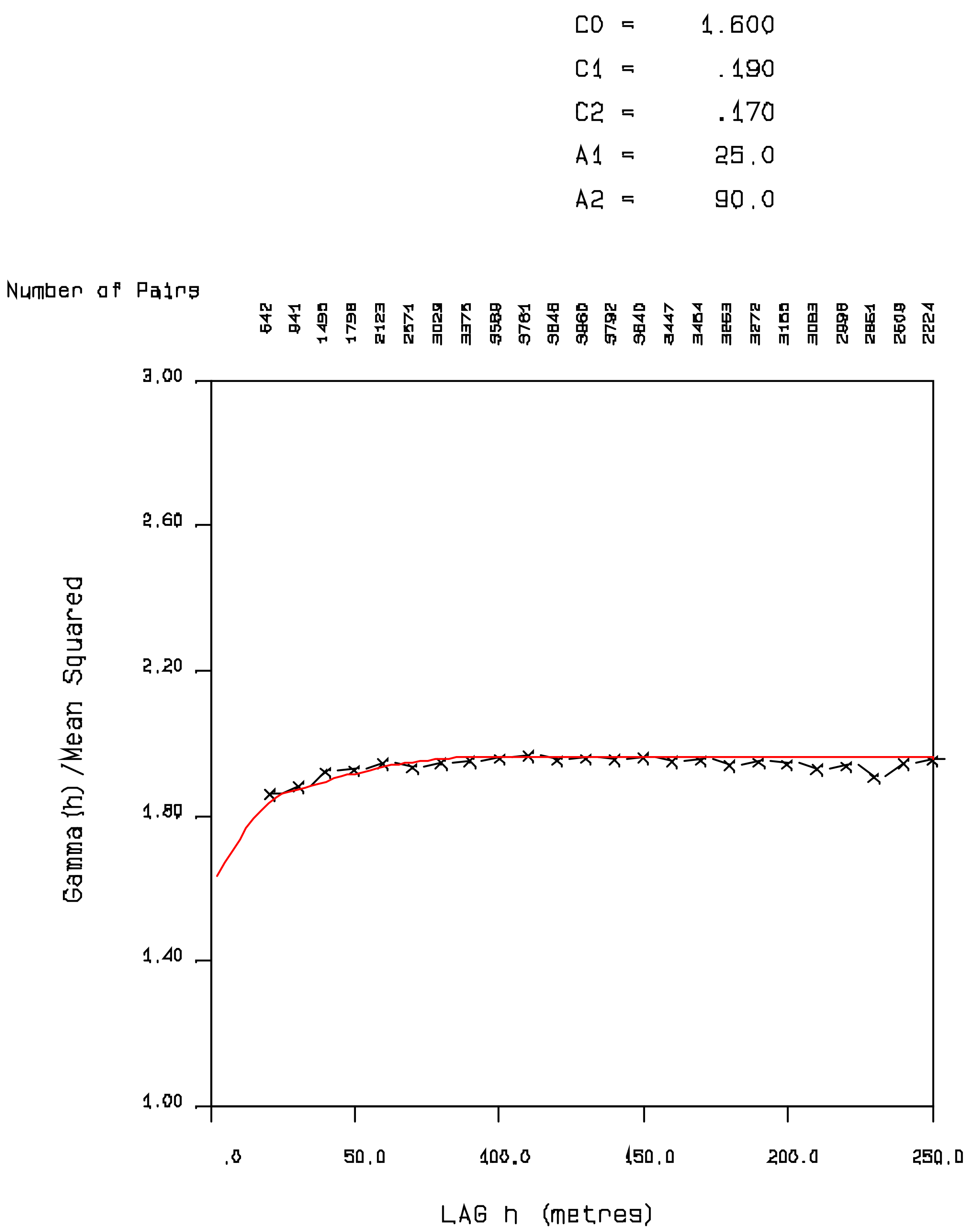
A2 = 20.0



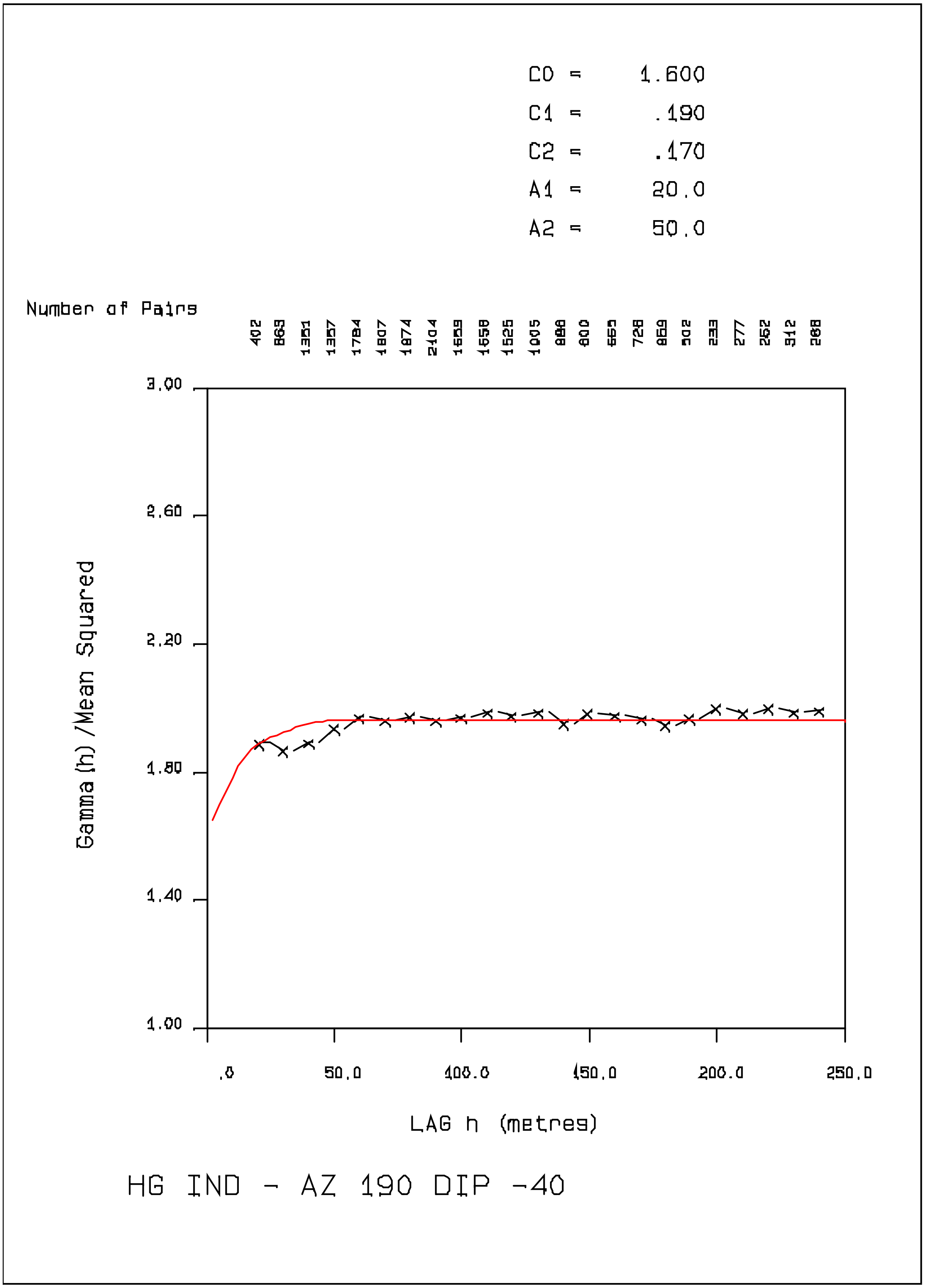

LG GOLD - AZ 193 DIP -35



C0 = 1.600
C1 = .190
C2 = .170
A1 = 30.0
A2 = 120.0
Number of Pairs
597
1179
2528
3664
4931
5872
5644
7053
6919
7197
8400
8715
8509
7928
6398
5817
5662
6307
6075
5522
5490
6444
5271
5061
3.00
2.60
2.20
1.80
1.40
1.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
HG IND - AZ 100 DIP 0




HG IND - AZ 10 DIP -50


C0 = 1.600
C1 = .190
C2 = .170
A1 = 20.0
A2 = 50.0
Number of Pairs
402 863 1351 1357 1784 1807 1874 2104 1659 1658 1525 1005 886 600 665 728 869 502 233 277 262 312 268
3.00
2.60
2.20
1.80
1.40
1.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
HG IND - AZ 190 DIP -40

# APPENDIX III

## Northshore Project 2012 and 2013

## QAQC Report on Analytical Results

**By Caroline Vallat, P. Geo. of GeoSpark Consulting Inc.**

# Northshore Project 2012 and 2013 QAQC Report on Analytical Results

*Written By: Caroline Vallat, P.Geo., GeoSpark Consulting Inc,. February 7, 2014*

## Table of Contents

## Introduction

The Northshore project 2012 and 2013 analytical results were reported by AGAT Laboratories, Mississauga, Ontario, Canada. The assays were performed using fire assay with an ICP-OES finish. High grade samples were also analyzed using a gravimetric finish for improved precision. Analytical certificates were reported including internal lab duplicates and repeats showing that the lab was performing internal quality assurance and quality control (QAQC) during the analysis of the sample batches.

The QAQC procedures for GTA Resources and Mining Inc.'s (GTA) exploration programs on the Northshore Project were under the supervision of Robert (Bob) Duess, P. Geo. (Ontario), VP Exploration of GTA.

QAQC protocols included the insertion of certified standard reference and blank materials into each sample batch. Standards and blanks infer the accuracy within the primary sample results. Blanks also serve to clean the analytical instruments and to monitor for suspected sample contamination or instrumentation calibration issues.

Additionally, field duplicate samples were inserted into the sample batches. The field duplicate sample pairs will be reviewed here in order to represent the precision of primary sample results.

Due to previous indication of localized variations in the mineralization within duplicate pairs, 263 screen fire metallic assays (SFA) were performed on primary samples for comparison and to confirm their differences. The results will be reviewed within this report in order to provide further insight to the analytical results precision.

238 Check samples were submitted to a secondary lab, SGS Canada in Vancouver (SGS), in order to review the primary sample results for bias.

## 1. Field Duplicates

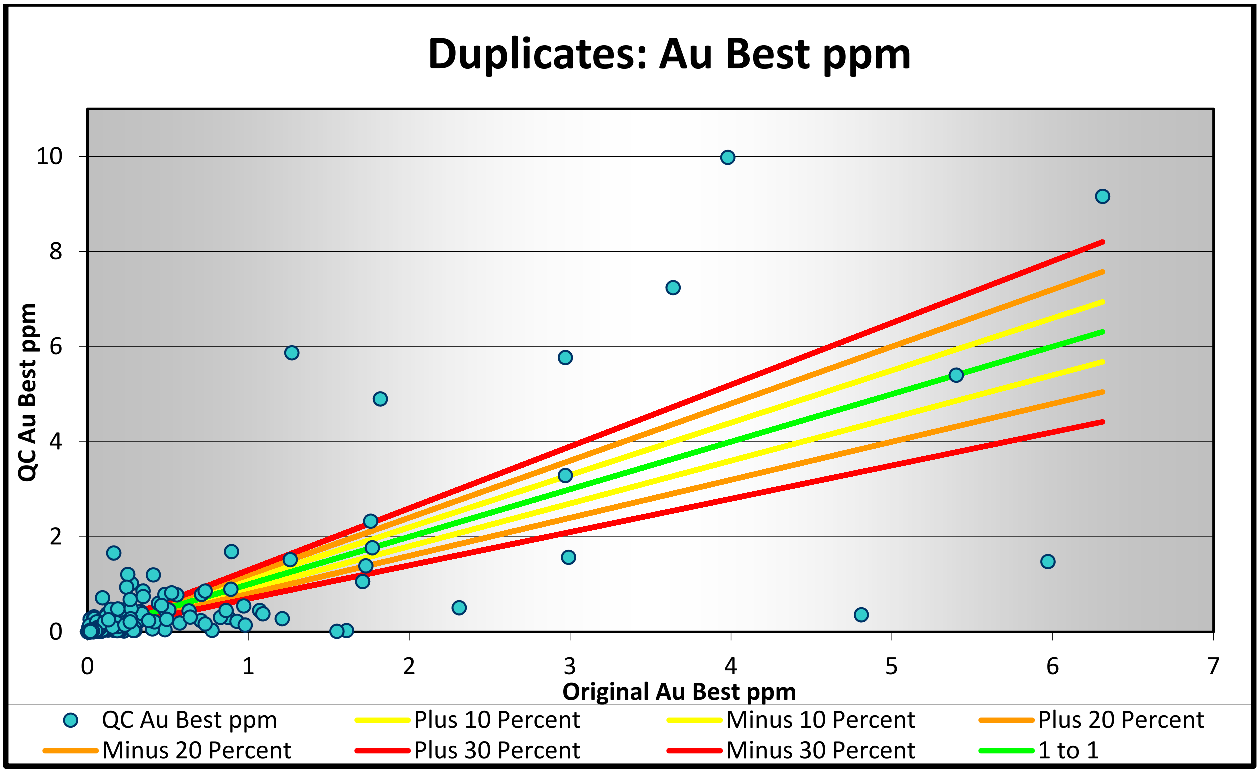
Field duplicate sampling involves the splitting of sample material into a primary and secondary (or duplicate) sample. The splits are submitted to the lab separately with unique sample identification codes. This results in a representation of reproducibility or inferred precision that is blind to the sample preparation lab.

Duplicate sampling is a measure of all levels of error pertaining to the sampling and analysis of geological data. Relevant error includes sample splitting error, sample size reduction at the preparation laboratory, analytical error, and possible sample over-selection. Duplicate samples are compared directly to the primary sample using analytical tests as well as scatter charts. Duplicate samples are also plotted on Thompson-Howarth charts showing a statistical representation of the precision level of the data set.

There were a total of 478 field duplicates inserted within the primary sample batches. This amounts to 5.43 percent relative to the total number of primary samples (8,601) analyzed at AGAT. The correlation of the results is shown in Figures 1 and 2.

## 1.1 Scatter Plots of Field Duplicates

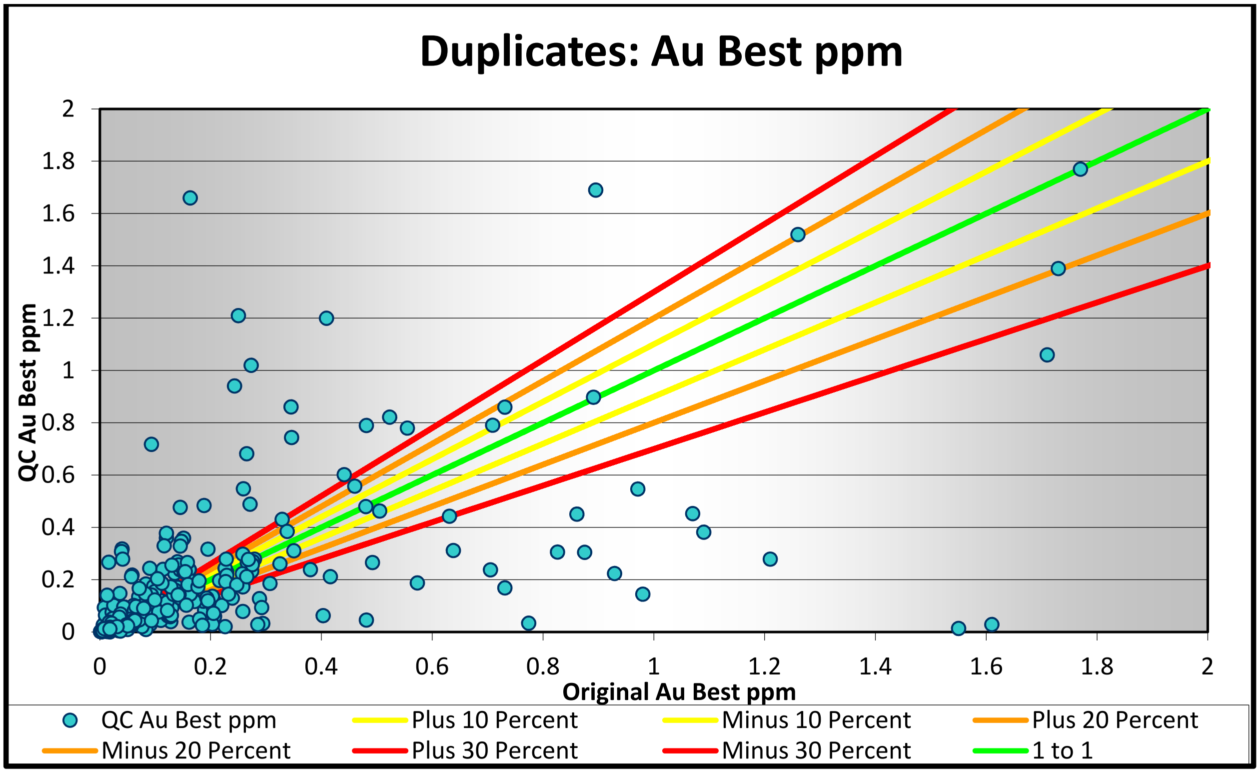
### Figure 1 - Scatter Plot of Field Duplicate Pair Results - 2012 and 2013






GeoSpark Consulting Inc.

## Figure 2 - Scatter Plot of Field Duplicate Pair Results - 2012 and 2013 (Up to 2 ppm Au)




A large amount of the duplicate pairs correlate in excess of the 30 percent difference limits (red lines) on the scatter charts above. The pairs do not show and strong tendency toward bias within the duplicate results. It is the author's opinion that the variation is due to the nature of the mineralization at the project.

## Table 1 - Field Duplicate Results with Greater Than One Average Relative Difference

| Hole | From_m | To_m | Sample | QCSample | QCType | Au Best ppm | QC Au Best ppm | Certificate |
|---|---|---|---|---|---|---|---|---|
| WB-13-45 | 90.5 | 92 | 5570740 | 5570741 | DUP | 1.55 | 0.014 | 13B724318 |
| WB-12-26 | 354 | 355 | E5355029 | E5355030 | DUP | 1.61 | 0.029 | 12U644426 |
| WB-12-26 | 227 | 228 | E5354878 | E5354879 | DUP | 0.774 | 0.034 | 12U644426 |
| WB-12-27 | 113 | 114 | E5173245 | E5173246 | DUP | 0.018 | 0.001 | 12U646034 |
| WB-12-28 | 285 | 286 | E5173849 | E5173850 | DUP | 0.016 | 0.267 | 12U647670 |
| WB-12-27 | 129 | 130 | E5173263 | E5173264 | DUP | 4.81 | 0.361 | 12U646034 |
| WB-12-29 | 164 | 165 | E5174065 | E5174066 | DUP | 0.008 | 0.094 | 12U650199 |
| WB-13-44 | 14 | 15.5 | 5176940 | 5176941 | DUP | 0.013 | 0.141 | 13B707105 |
| WB-12-21 | 100 | 101 | E5353374 | E5353375 | DUP | 0.226 | 0.021 | 12U635937 |
| WB-12-27 | 203 | 204 | E5173367 | E5173368 | DUP | 0.481 | 0.046 | 12U646034 |
| WB-12-26 | 176.9 | 177.9 | E5354819 | E5354820 | DUP | 0.163 | 1.66 | 12U644426 |
| WB-13-47 | 21.5 | 23 | 5570920 | 5570921 | DUP | 0.285 | 0.029 | 13B725310 |
| WB-13-47 | 291.5 | 293 | 5570080 | 5570081 | DUP | 0.037 | 0.004 | 13B725310 |
| WB-12-30 | 159 | 160 | E5174494 | E5174495 | DUP | 0.294 | 0.033 | 12U650612 |
| WB-12-33 | 455 | 456 | E5468637 | E5468638 | DUP | 0.083 | 0.01 | 12U656307 |
| WB-12-35 | 81 | 82 | E5175451 | E5175452 | DUP | 0.039 | 0.308 | 12U658790 |
| WB-12-25 | 218 | 219 | E5354468 | E5354469 | DUP | 0.04 | 0.318 | 12U640863 |
| WB-12-33 | 299 | 300 | E5468444 | E5468445 | DUP | 0.093 | 0.718 | 12U656307 |

| Hole | From_m | To_m | Sample | QCSample | QCType | Au Best ppm | QC Au Best ppm | Certificate |
|---|---|---|---|---|---|---|---|---|
| WB-13-39 | 81 | 82 | 5176400 | 5176401 | DUP | 0.185 | 0.026 | 13B704165 |
| WB-13-47 | 143 | 144.5 | 5570980 | 5570981 | DUP | 0.034 | 0.005 | 13B725310 |
| WB-12-35 | 321 | 322 | E5175739 | E5175740 | DUP | 0.041 | 0.279 | 12U658790 |
| WB-12-33 | 102 | 103 | E5468278 | E5468279 | DUP | 0.203 | 0.03 | 12U656307 |
| WB-13-48 | 3.7 | 5 | E5569060 | E5569061 | DUP | 0.98 | 0.145 | 13B776414 |
| WB-12-36 | 175 | 176 | 5469034 | 5469035 | DUP | 0.01 | 0.065 | 13U701040 |
| WB-12-28 | 232 | 233 | E5173786 | E5173787 | DUP | 0.013 | 0.002 | 12U647670 |
| WB-12-30 | 35 | 36 | E5174347 | E5174348 | DUP | 0.403 | 0.063 | 12U650612 |
| WB-12-20 | 54 | 55 | E5352913 | E5352914 | DUP | 0.013 | 0.077 | 12U606075 |
| WB-12-27 | 10 | 11 | E5173120 | E5173121 | DUP | 0.05 | 0.01 | 12U646034 |
| WB-12-27 | 260 | 261 | E5173435 | E5173436 | DUP | 0.202 | 0.041 | 12U646034 |
| WB-12-33 | 436 | 437 | E5468612 | E5468613 | DUP | 0.25 | 1.21 | 12U656307 |
| WB-12-27 | 145 | 146 | E5173290 | E5173291 | DUP | 1.27 | 5.87 | 12U646034 |
| WB-12-33 | 332 | 333 | E5468486 | E5468487 | DUP | 2.31 | 0.509 | 12U656307 |
| WB-12-27 | 89 | 90 | E5173215 | E5173216 | DUP | 0.006 | 0.027 | 12U646034 |
| WB-13-38 | 161 | 162 | 5176280 | 5176281 | DUP | 1.21 | 0.279 | 13U701568 |
| WB-13-46 | 9.5 | 11 | 5570760 | 5570761 | DUP | 0.731 | 0.169 | 13B724877 |
| WB-12-28 | 242 | 243 | E5173798 | E5173799 | DUP | 0.017 | 0.004 | 12U647670 |
| WB-12-25 | 157 | 158 | E5354396 | E5354397 | DUP | 0.161 | 0.038 | 12U640863 |
| WB-13-44 | 90.5 | 92 | 5177000 | 5177001 | DUP | 0.929 | 0.224 | 13B707105 |
| WB-12-36 | 152 | 153.5 | 5469014 | 5469015 | DUP | 0.036 | 0.148 | 13U701040 |
| WB-13-37 | 152.5 | 153.5 | 5176134 | 5176135 | DUP | 0.025 | 0.102 | 13U701571 |
| WB-13-44 | 114 | 115 | 5177020 | 5177021 | DUP | 5.97 | 1.48 | 13B707105 |
| WB-12-19 | 262 | 263 | E5352688 | E5352689 | DUP | 0.009 | 0.035 | 12U604540 |
| WB-13-52 | 147.5 | 149 | E5569580 | E5569581 | DUP | 0.243 | 0.941 | 13B777890 |
| WB-12-34 | 206 | 207 | E5175306 | E5175307 | DUP | 0.058 | 0.218 | 12U656839 |
| WB-12-33 | 218 | 219 | E5468347 | E5468348 | DUP | 0.273 | 1.02 | 12U656307 |
| WB-13-46 | 162.5 | 164 | 5570880 | 5570881 | DUP | 0.057 | 0.212 | 13B724877 |
| WB-13-39 | 108.8 | 110 | 5176420 | 5176421 | DUP | 0.076 | 0.021 | 13B704165 |
| WB-12-27 | 48 | 49 | E5173166 | E5173167 | DUP | 0.18 | 0.05 | 12U646034 |
| WB-12-36 | 213 | 214 | 5175975 | 5175976 | DUP | 0.022 | 0.076 | 13U701040 |
| WB-12-29 | 203 | 204 | E5174116 | E5174117 | DUP | 0.207 | 0.06 | 12U650199 |
| WB-13-40 | 140 | 141 | 5176620 | 5176621 | DUP | 0.145 | 0.477 | 13B704587 |
| WB-12-17 | 149 | 150 | E5442276 | E5442277 | DUP | 0.028 | 0.092 | 12U600289 |
| WB-13-46 | 86 | 87.5 | 5570820 | 5570821 | DUP | 0.258 | 0.079 | 13B724877 |
| WB-12-30 | 250 | 251 | E5467104 | E5467105 | DUP | 0.128 | 0.04 | 12U650612 |
| WB-12-33 | 554 | 555 | E5468763 | E5468764 | DUP | 0.032 | 0.01 | 12U656307 |
| WB-12-35 | 94 | 95 | E5175466 | E5175467 | DUP | 0.12 | 0.378 | 12U658790 |
| WB-12-31 | 275 | 276 | E5467534 | E5467535 | DUP | 0.292 | 0.094 | 12U653314 |
| WB-12-25 | 336 | 337 | E5354605 | E5354606 | DUP | 0.573 | 0.188 | 12U640863 |
| WB-12-31 | 265 | 266 | E5467522 | E5467523 | DUP | 0.091 | 0.03 | 12U653314 |
| WB-13-45 | 41 | 42.5 | 5570700 | 5570701 | DUP | 0.003 | 0.001 | 13B724318 |
| WB-12-20 | 100 | 101 | E5352970 | E5352971 | DUP | 0.005 | 0.015 | 12U606075 |
| WB-12-21 | 194 | 195 | E5353485 | E5353486 | DUP | 0.12 | 0.36 | 12U635937 |

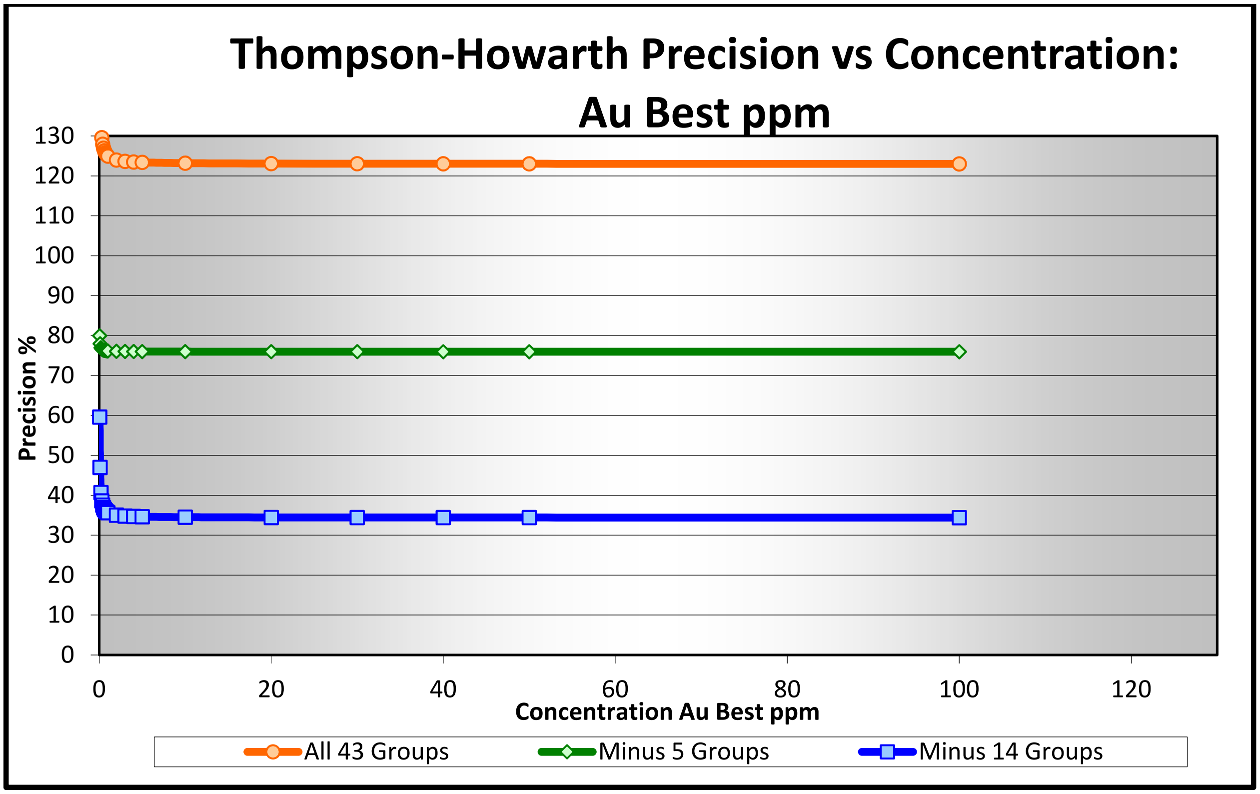
As the assay certificates were reported, they were reviewed for inferred precision by means of comparing the duplicate results. The duplicates where the average relative difference was greater than one were reviewed in detail next to the adjacent analytical results. Each of the pairs was found to likely have differences due to the nature of the mineralization.

In addition the lab, AGAT, reported the internal lab QAQC data with the results and these were also considered for each certificate; the internal lab QAQC data showed consistently good repeatability in their repeat results, implying good precision.

## 1.2 Thompson-Howarth Precision Versus Concentration Charts

Further review of the duplicate pairs can be performed using Thompson-Howarth Precision vs. Concentration (THPVC) plots. These plots display the correlation between the results in more general terms, where the precision percent is a representation of the variability (increased precision percent implies increased percent variability between primary and duplicate samples). If all duplicate pairs are included in the statistical plot the result is as shown in Figure 3.

**Figure 3 - Field Duplicate Pairs THPVC 2012 and 2013**



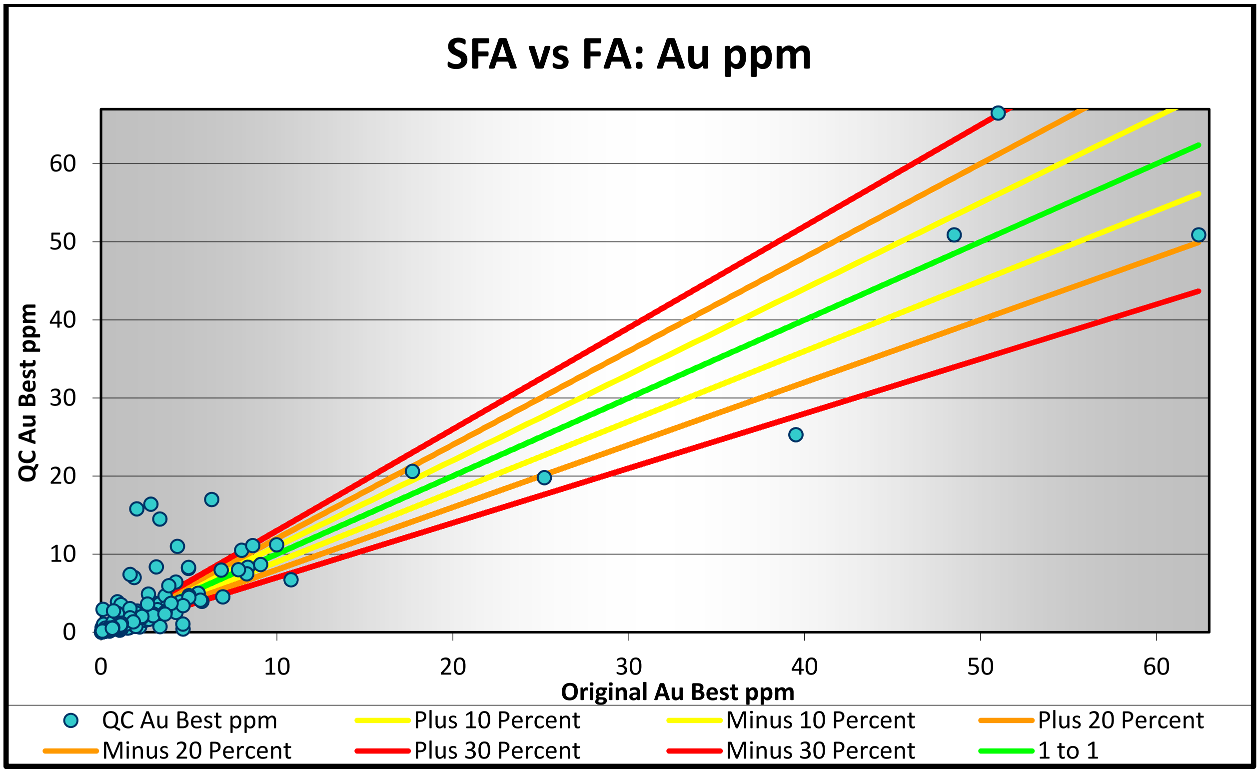

The grouping of the pairs and the inferred precision percent level for all the groups shows a strong variability within the results. Removal of five groups with the greatest group median differences from the selection significantly reduces the apparent variation and removal of fourteen groups moves the precision percent to a nearly satisfactory level.

Overall, it is clear that the pairs are often different. It is the author's opinion that with all things considered: the scatter charts do not show strong bias in the duplicate results, the lab internal QAQC shows strong precision, and the removal of 33 percent of the groups within the THPVC chart shows a near satisfactory precision percent, it is the author's opinion that the results of analysis reported by AGAT for the 2012 and 2013 exploration at the Northshore project are shown to be overall satisfactory considering that the nature of the mineralization at the project is locally variable within the drill core due to the nature of the project mineralization and coarse gold within the samples.

## 1.3 Screen Fire Metallic Assays on Duplicate Pairs

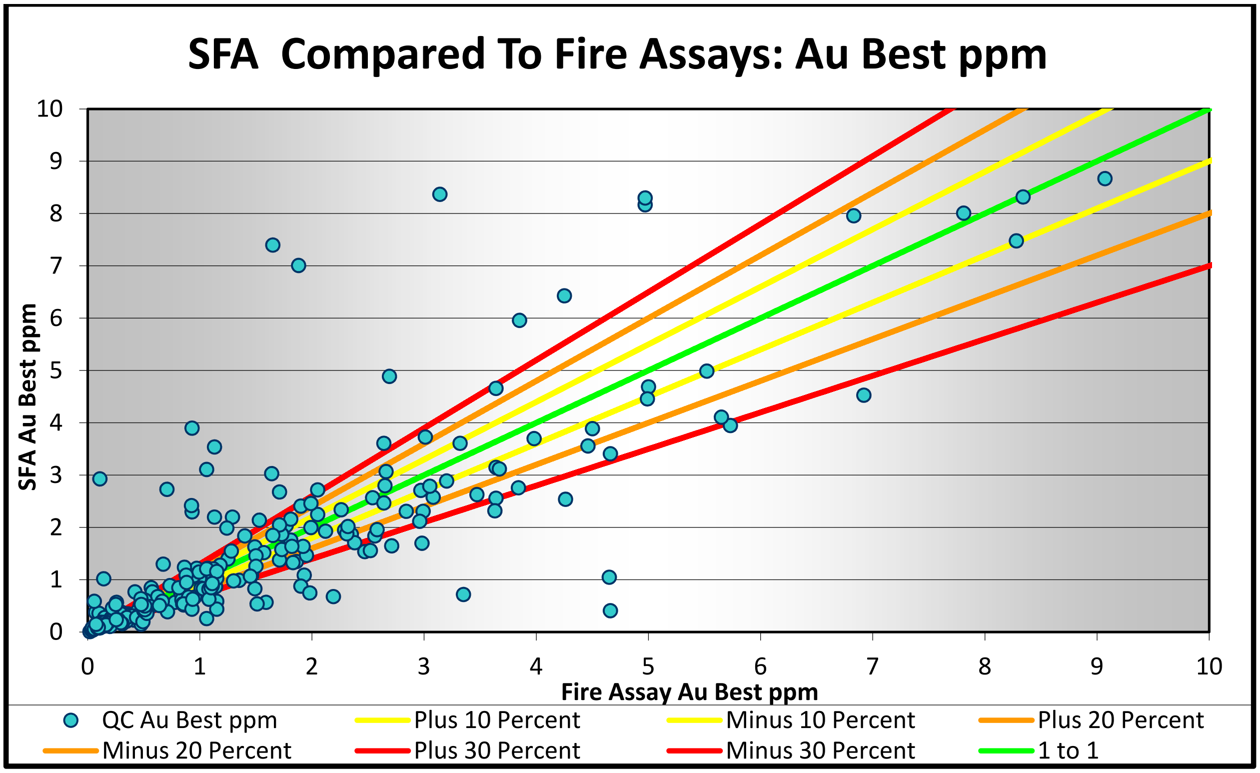
Due to previous indication of localized variations in the mineralization within duplicate pairs, 263 screen fire metallic assays (SFA) were performed on primary samples for comparison and to confirm their differences. The results are reviewed here in order to provide further insight to the analytical results precision.

**Figure 4 - Screen Fire - Metallic Assays Compared To Original Fire Assay Results**



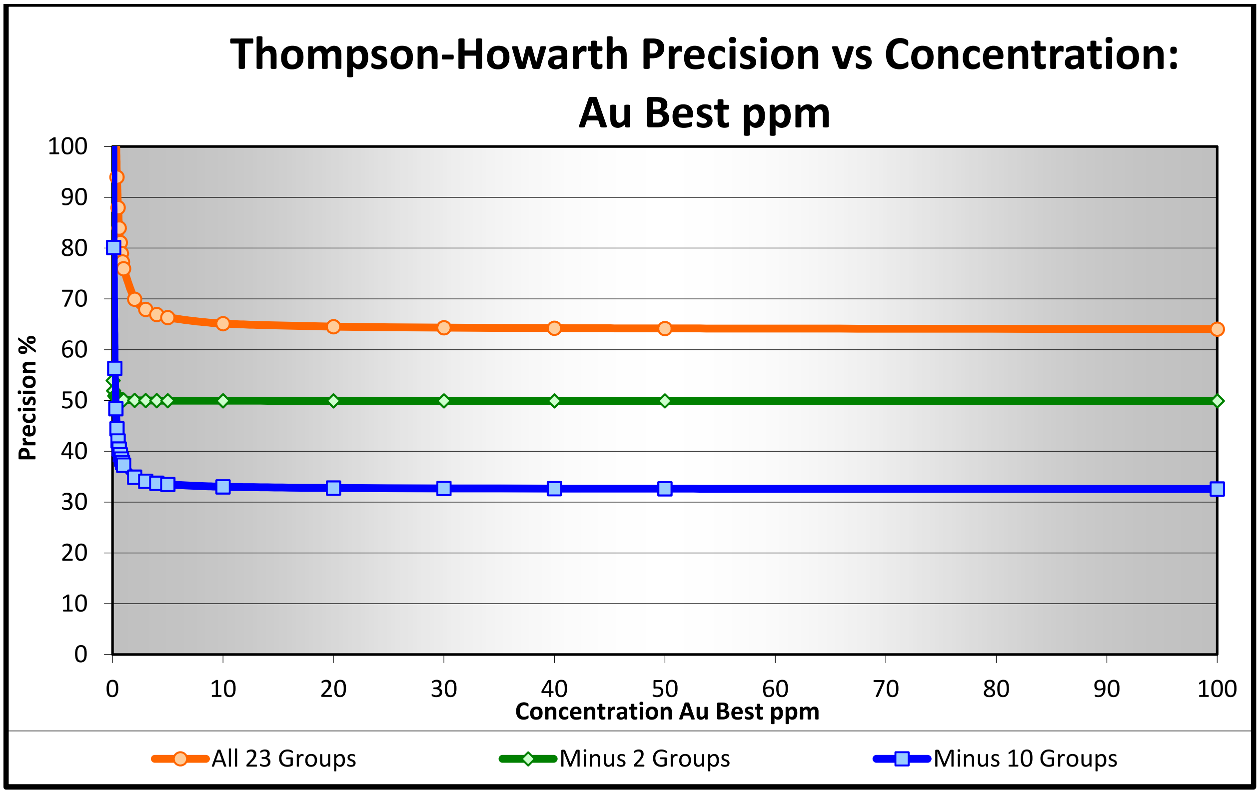

Looking at the metallic screen fire (SFA) results on primary sample original assays by fire assay we can see that in a few cases the SFA analysis resulted in higher grades. It is the author's opinion that this is likely due to the nature of the mineralization at the project having localized coarse gold mineralization.

**Figure 5 - Screen Fire - Metallic Assays Compared To Original Fire Assay Results - Less Than 10 ppm Au**




Looking at the SFA results reported compared to original fire assay results for gold less than ten ppm, it is more clear that overall, the results show a tendency for variation within the sample grades. Similar to the field duplicates the SFA results indicate that there is coarse mineralization present locally within the samples resulting some variation between the primary and secondary sample assay results.

**Figure 6 - THPVC Chart Showing Screen Fire - Metallic Assays Compared To Original Fire Assay Results**




The precision percent shown on the SFA results compared to the originals is similar to that found within the field duplicate pairs.

### Figure 7 - Difference Chart Showing Original Gold Minus SFA Gold Results

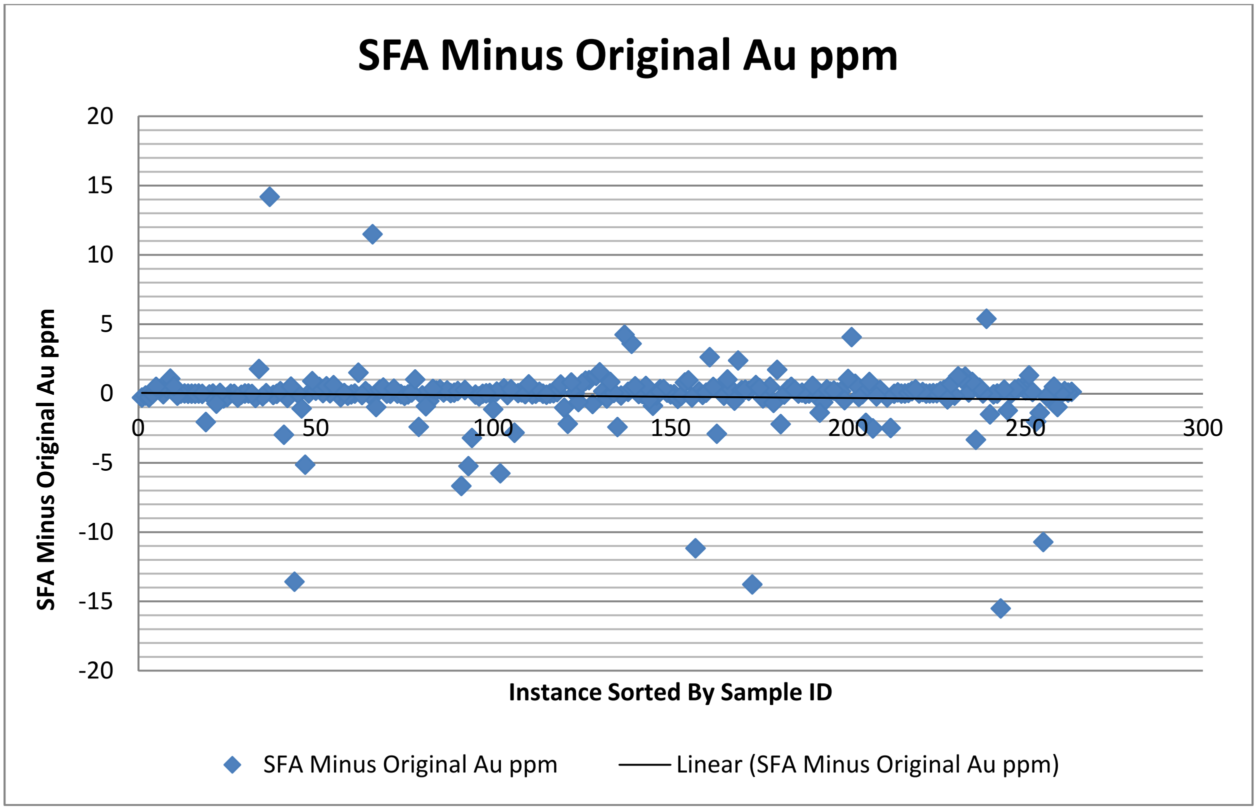
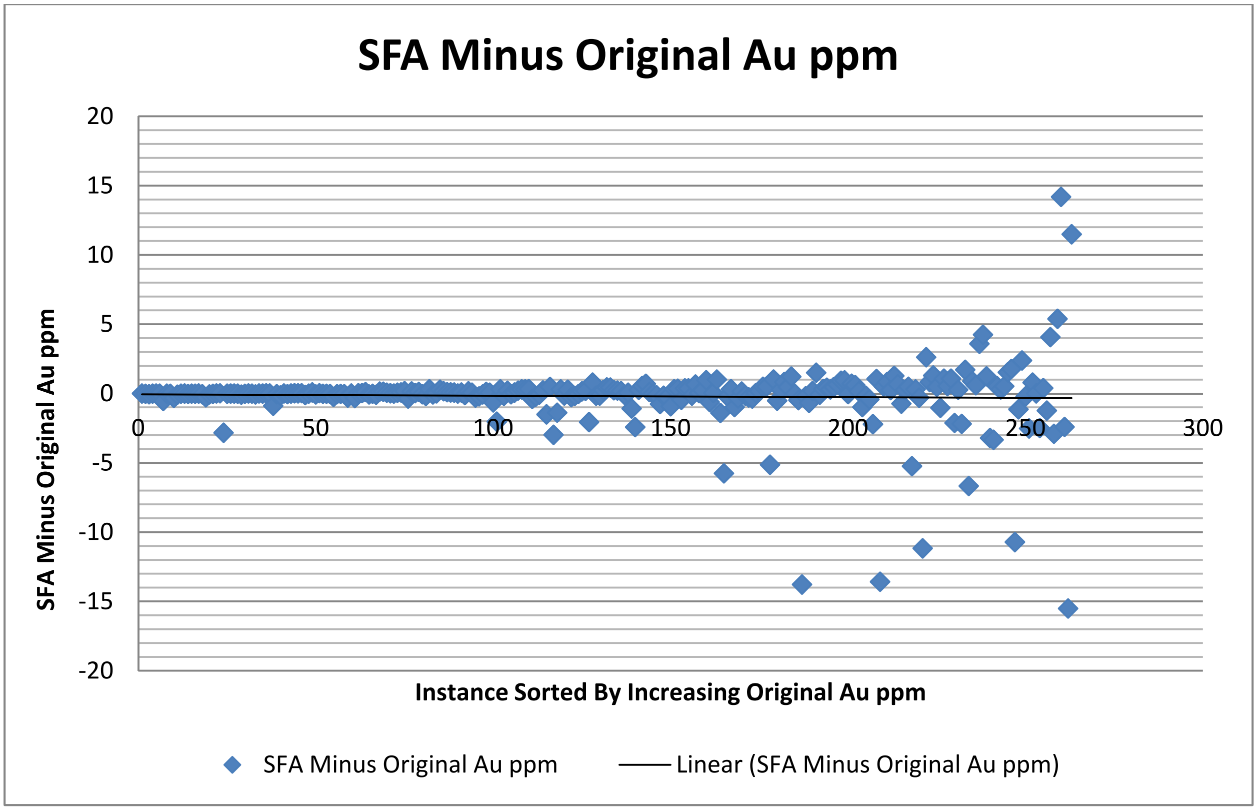


**Figure 8 - Difference Chart Showing Original Gold Minus SFA Gold Results Sorted by Increasing Original Gold Concentration**




It is the author's opinion that the metallic screen fire (SFA) results further show that the field duplicate results have variation from the primary samples as a function of the nature of the mineralization.

Overall, there is no bias shown within the fire assay results compared to the SFA results.

## 2. Standards and Blanks

Standards have a known expected value and a known standard deviation. In order to define where contamination or poor accuracy is apparent within reported results, the standard results are charted within control charts with defined limits. For the Northshore project results limits of plus and minus three standard deviations from the mean expected result were used.

Blanks are expected to return results at or near the lower detection limit for the results being reviewed. Blanks are also plotted within control charts to review the results for potential contamination or instrument calibration issues. Blanks represent the accuracy of the samples in a similar fashion to standards.

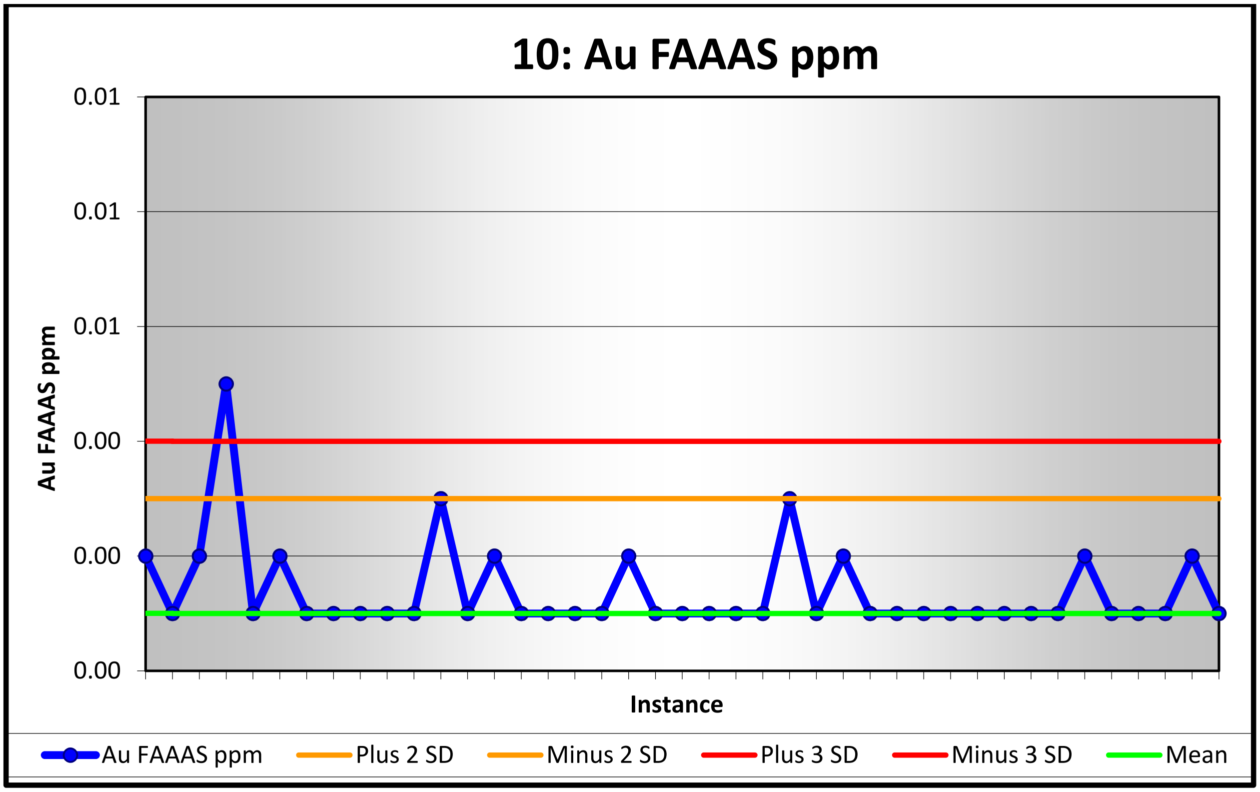
The standards inserted into analytical batches included thirteen different standard materials and one blank, with expected gold results shown in Table 2.

### Table 2 - Expected Gold Values for Blank and Standard Materials.

| Blank Or Standard ID | Result Field | Expected | StdDev |
|---|---|---|---|
| Blank 10 | Au_FAAAS_ppm | 0.001 | 0.001 |
| Blank 11 | Au_FAAAS_ppm | 0.002 | 0.002 |
| Blank 12 | Au_FAAAS_ppm | 0.002 | 0.002 |
| Blank 13 | Au_FAAAS_ppm | 0.002 | 0.001 |
| Blank 14 | Au_FAAAS_ppm | 0.002 | 0.001 |
| Blank 15 | Au_FAAAS_ppm | 0.002 | 0.001 |
| Blank 4 | Au_FAAAS_ppm | 0.028 | 0.186 |
| Blank 9 | Au_FAAAS_ppm | 0.007 | 0.012 |
| Blank B-1 | Au_FAAAS_ppm | 0.003 | 0.003 |
| Blank B-15 | Au_FAAAS_ppm | 0.002 | 5E-04 |
| Blank B-16 | Au_FAAAS_ppm | 0.002 | 0.002 |
| Blank B-17 | Au_FAAAS_ppm | 0.002 | 0.001 |
| Blank B-2 | Au_FAAAS_ppm | 0.001 | 0.001 |
| Blank B-5 | Au_FAAAS_ppm | 0.006 | 0.008 |
| Blank B-6 | Au_FAAAS_ppm | 0.006 | 0.009 |
| Blank B-7 | Au_FAAAS_ppm | 0.005 | 0.007 |
| Blank B-8 | Au_FAAAS_ppm | 0.011 | 0.036 |
| Blank | Au_FAAAS_ppm | 0.022 | 0.107 |
| CDN-GS-1J | Au_FAAAS_ppm | 0.946 | 0.05 |
| CDN-GS-1K | Au_FAAAS_ppm | 0.867 | 0.052 |
| CDN-GS-4C | Au_FAAAS_ppm | 4.26 | 0.193 |
| CDN-GS-4D | Au_FAAAS_ppm | 3.81 | 0.098 |
| CDN-GS-4D | Au_FAGRAV_gmt | 3.81 | 0.594 |
| CDN-GS-9A | Au_FAAAS_ppm | 9.31 | 0.388 |

## 2.1 Blanks

### Figure 9 - Blank 10

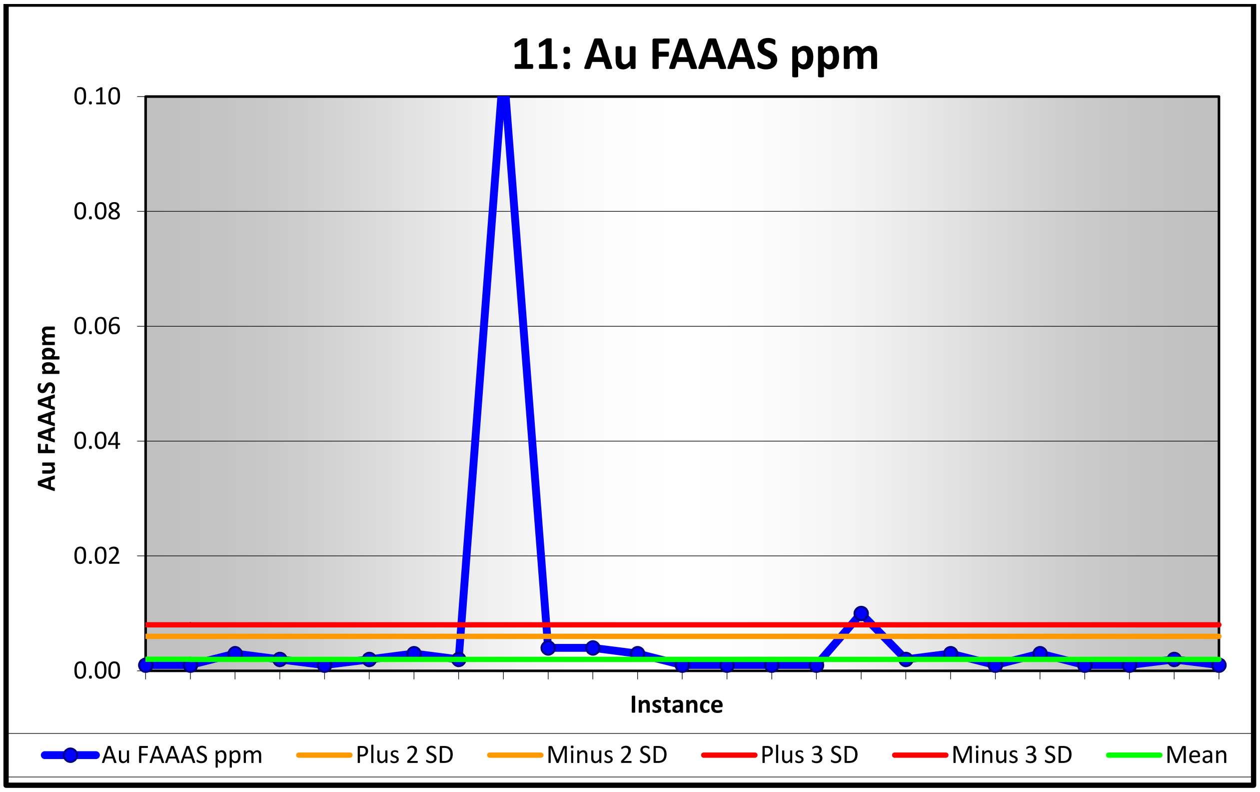



### Table 3 - Failed Blanks - 10

| Hole | Sample | StandardID | Au FAAAS ppm | Expected | Minus 3 SD | Plus 3 SD | Certificate |
|---|---|---|---|---|---|---|---|
| WB-12-36 | 5468930 | 10 | 0.005 | 0.001 | -0.002 | 0.004 | 13U701040 |

This blank was used during the 2012 exploration program. The single failed instance was further reviewed and was determined to show potential minor local accuracy deficiency, but not significant to merit rerun of the nearby results. Overall, the results of analysis show strong accuracy.

## Figure 10 - Blank 11




## Table 4 - Failed Blanks - 11

| Hole | Sample | StandardID | Au FAAAS ppm | Expected | Minus 3 SD | Plus 3 SD | Certificate |
|---|---|---|---|---|---|---|---|
| WB-13-38 | 5176274 | 11 | 0.105 | 0.002 | -0.004 | 0.008 | 13U701568 |
| WB-13-37 | 5176072 | 11 | 0.01 | 0.002 | -0.004 | 0.008 | 13U701571 |

Each of the two instances of failure listed for Blank 11 were further reviewed and each was found to be following a high grade gold result. Therefore, localized contamination of the blank material was likely due to the previous high grades. The blank material is inserted not only to monitor the accuracy of the reported results but also to clean the instrumentation from contamination from previously analyzed samples. The assumption is that these blanks would have removed or significantly reduced the contamination from the instrumentation. No reruns were determined necessary due to these instances. Overall, strong accuracy is inferred.

Figure 11 - Blank 12

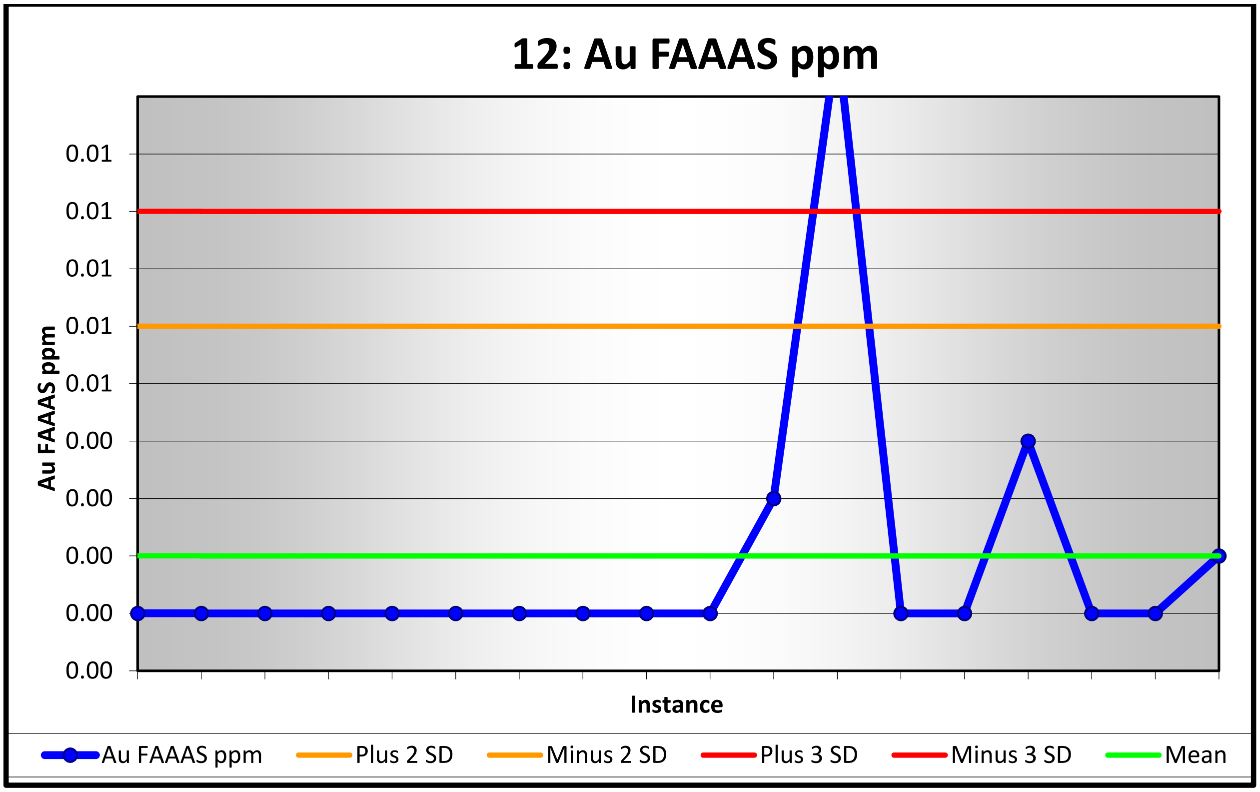
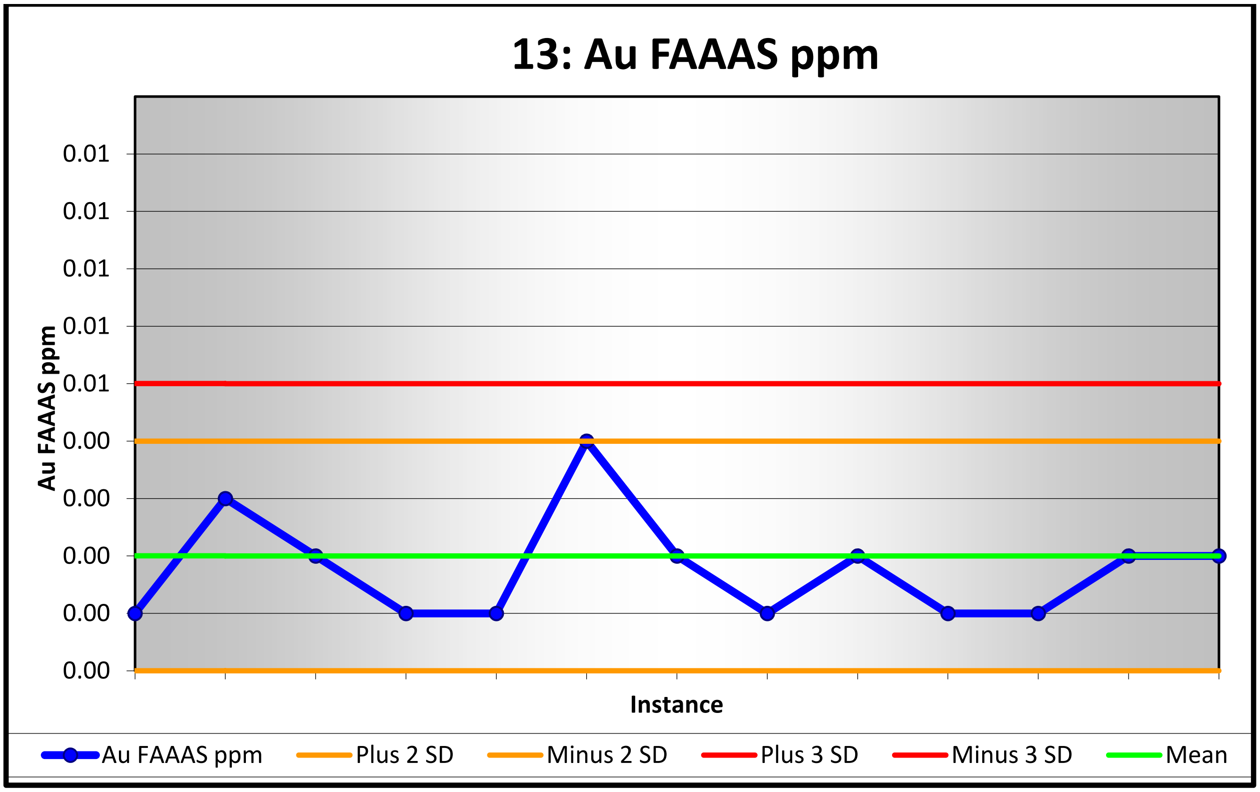



Table 5 - Failed Blanks - 12

| Hole | Sample | StandardID | Au FAAAS ppm | Expected | Minus 3 SD | Plus 3 SD | Certificate |
|---|---|---|---|---|---|---|---|
| WB-13-39 | 5176474 | 12 | 0.011 | 0.002 | -0.004 | 0.008 | 13B704165 |

The one failed blank listed above was further reviewed reruns were determined to be unnecessary due to the minimal amount of failure. The failure does indicate that there may have been some very minor localized accuracy deficiency. Overall, the results show good accuracy.

**Figure 12 - Blank 13**




With each of the instances of analysis on blank material 13 passing the control criteria, it is inferred that there is good accuracy within the reported analytical results.

Figure 13 - Blank 14

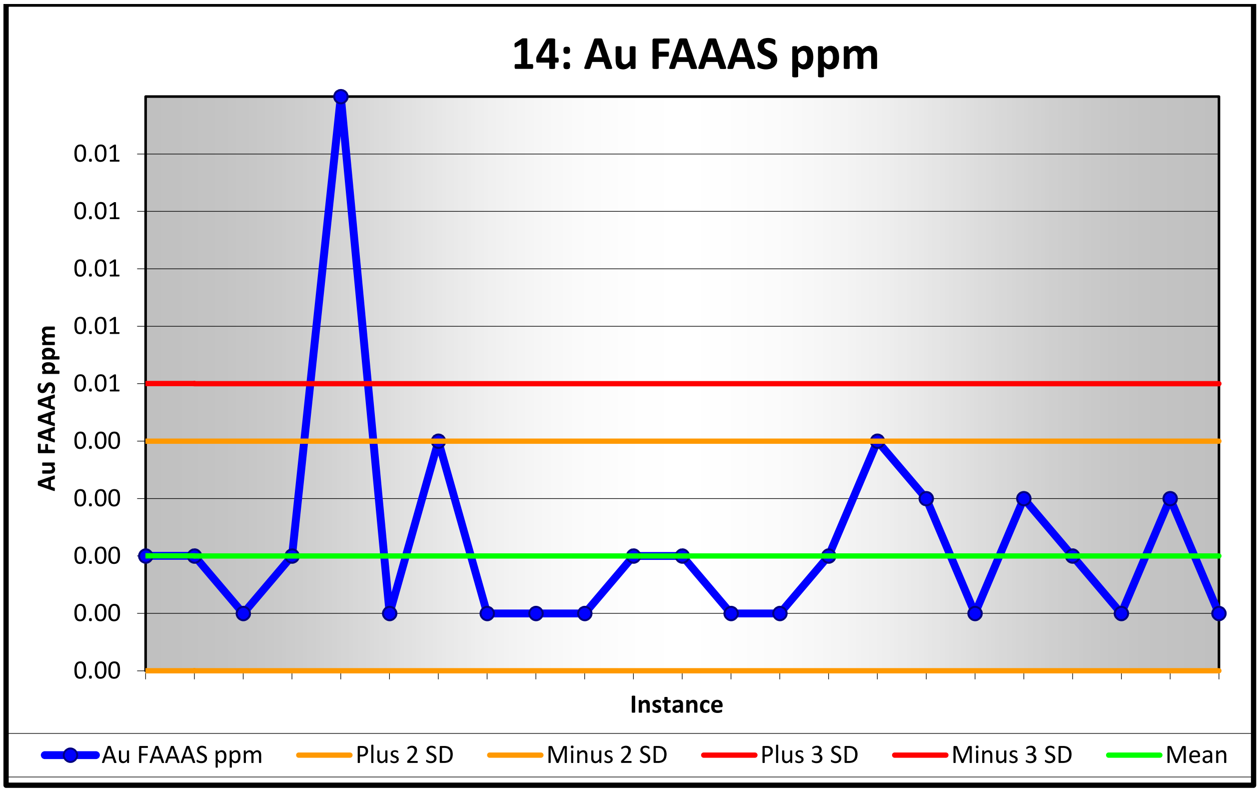
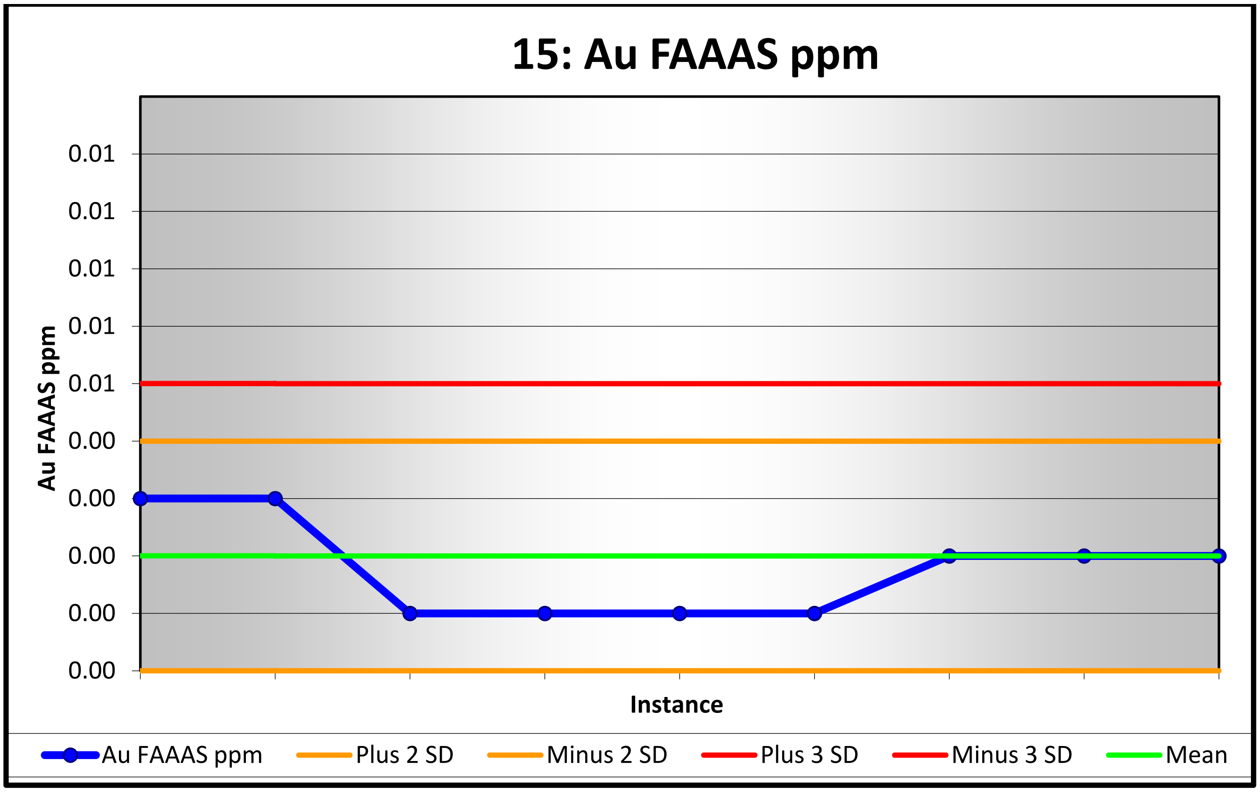



Table 6 - Failed Blanks - 14

| Hole | Sample | StandardID | Au FAAAS ppm | Expected | Minus 3 SD | Plus 3 SD | Certificate |
|---|---|---|---|---|---|---|---|
| WB-13-46 | 5570794 | 14 | 0.01 | 0.002 | -0.001 | 0.005 | 13B724877 |

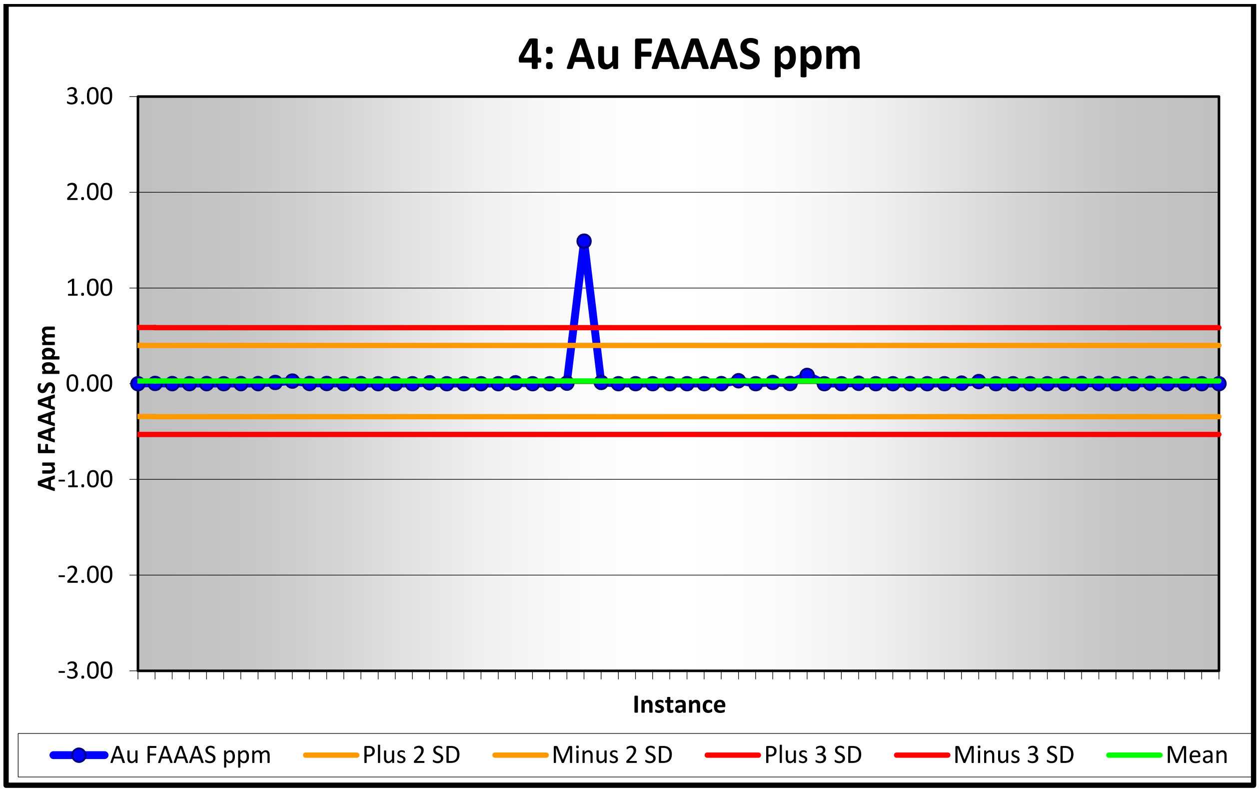
The one failure listed above was further reviewed and although the result shows potential for minor local accuracy deficiency the nearby results were reported quite low and the author determined that the rerun of the nearby results would not benefit the project. Overall, strong accuracy is inferred within the results.

## Figure 14 - Blank 15




With each instance of analysis reported within the control limits, strong accuracy is inferred within the reported results.

### Figure 15 - Blank 4




### Table 7 - Failed Blanks - 4

| Hole | Sample | StandardID | Au FAAAS ppm | Expected | Minus 3 SD | Plus 3 SD | Certificate |
|---|---|---|---|---|---|---|---|
| WB-12-31 | E5467448 | 4 | 1.49 | 0.028 | -0.53 | 0.586 | 12U653314 |

The one failed instance of analysis listed above was further reviewed and it looks like this was likely a mislabelled material. The nearby samples are fairly low grade so it is not suspected that this was truly a primary sample. It is the author's opinion that the material may have been incorrectly labelled or bagged or incorrectly provided by the standard provider. With all of the other results within the control limits it is the author's opinion that strong accuracy is inferred within the reported results.

**Figure 16 - Blank 9**

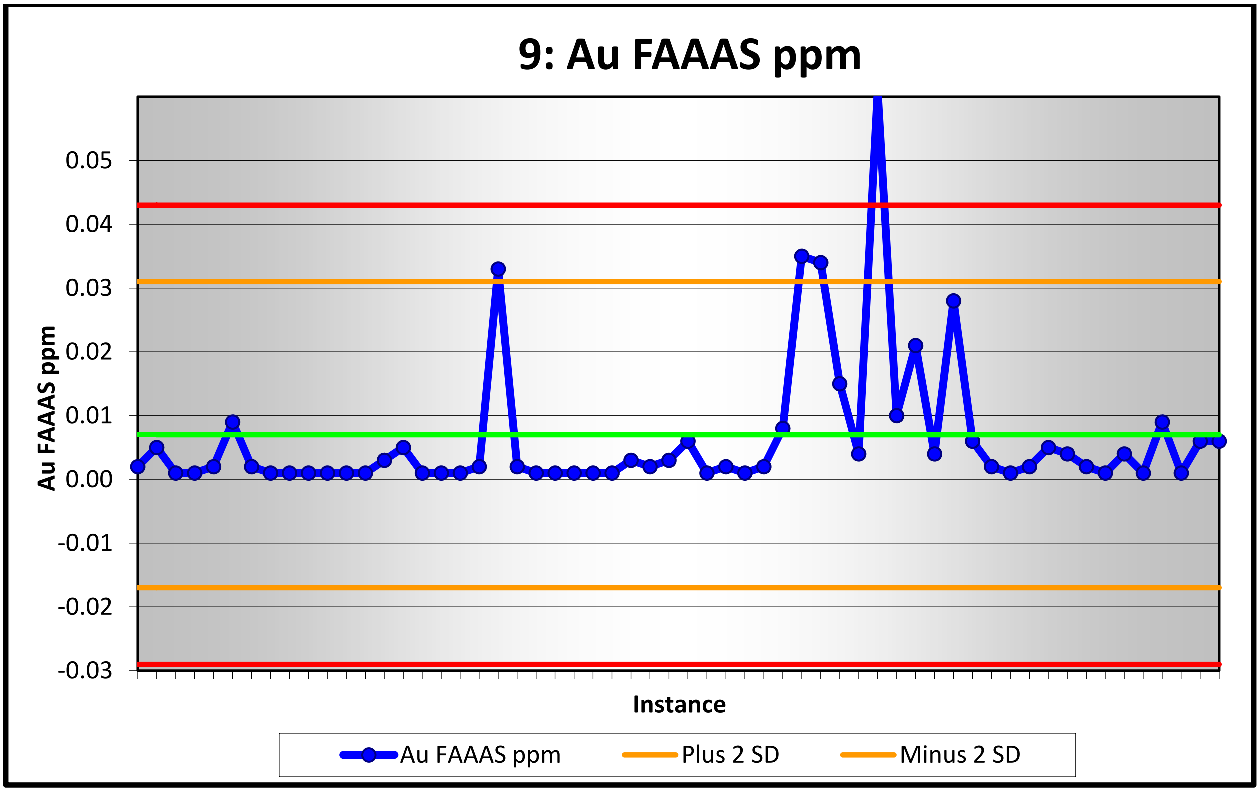
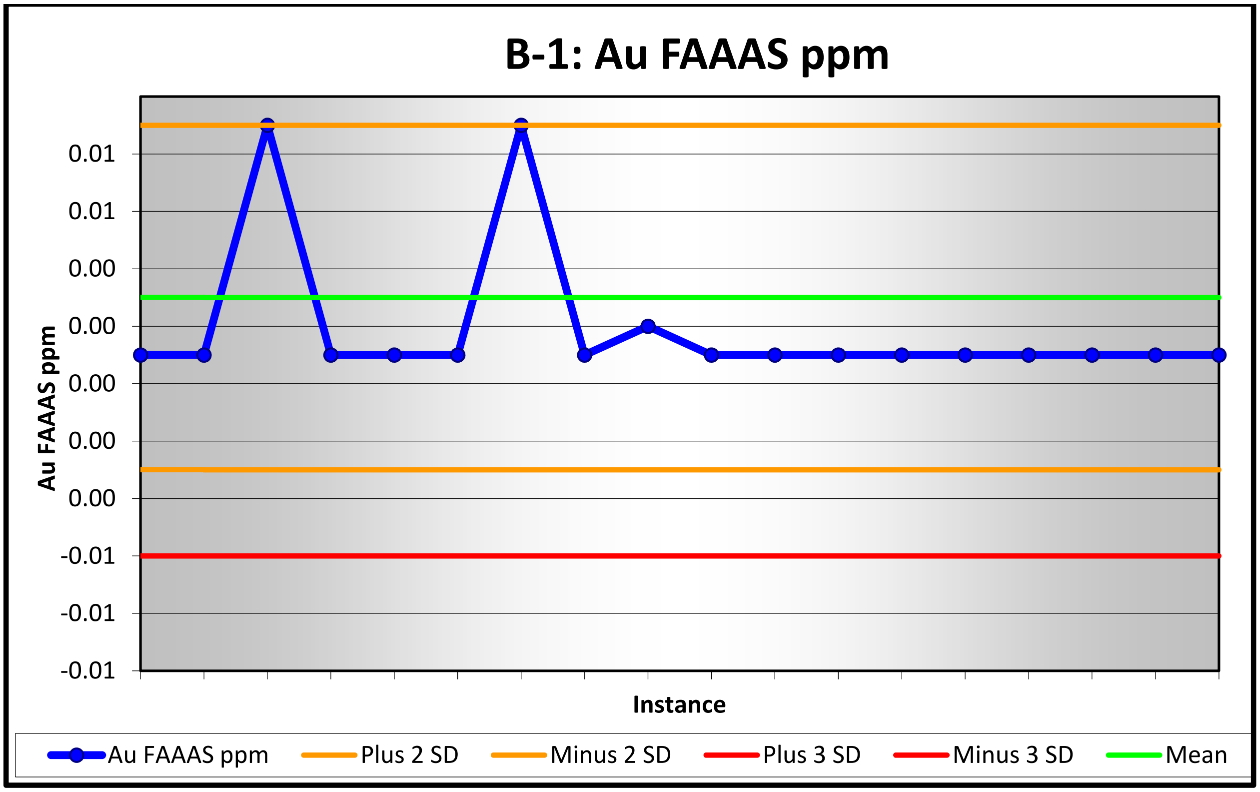



**Table 8 - Failed Blanks - 9**

| Hole | Sample | StandardID | Au FAAAS ppm | Expected | Minus 3 SD | Plus 3 SD | Certificate |
|---|---|---|---|---|---|---|---|
| WB-12-33 | E5468597 | 9 | 0.061 | 0.007 | -0.029 | 0.043 | 12U656307 |

The single failure listed above was further reviewed and found to follow a very high grade sample. Therefore, the indication is that the blanked picked up the contamination within the instrumentation as a results of the high grades. It is assumed that the blank would have removed the contamination from the samples to follow. Strong accuracy is inferred within the reported results.

**Figure 17 - Blank B-1**




Blank B-1 results infer strong accuracy with each of the instances reported within the control limits.

**Figure 18 - Blank B-16**

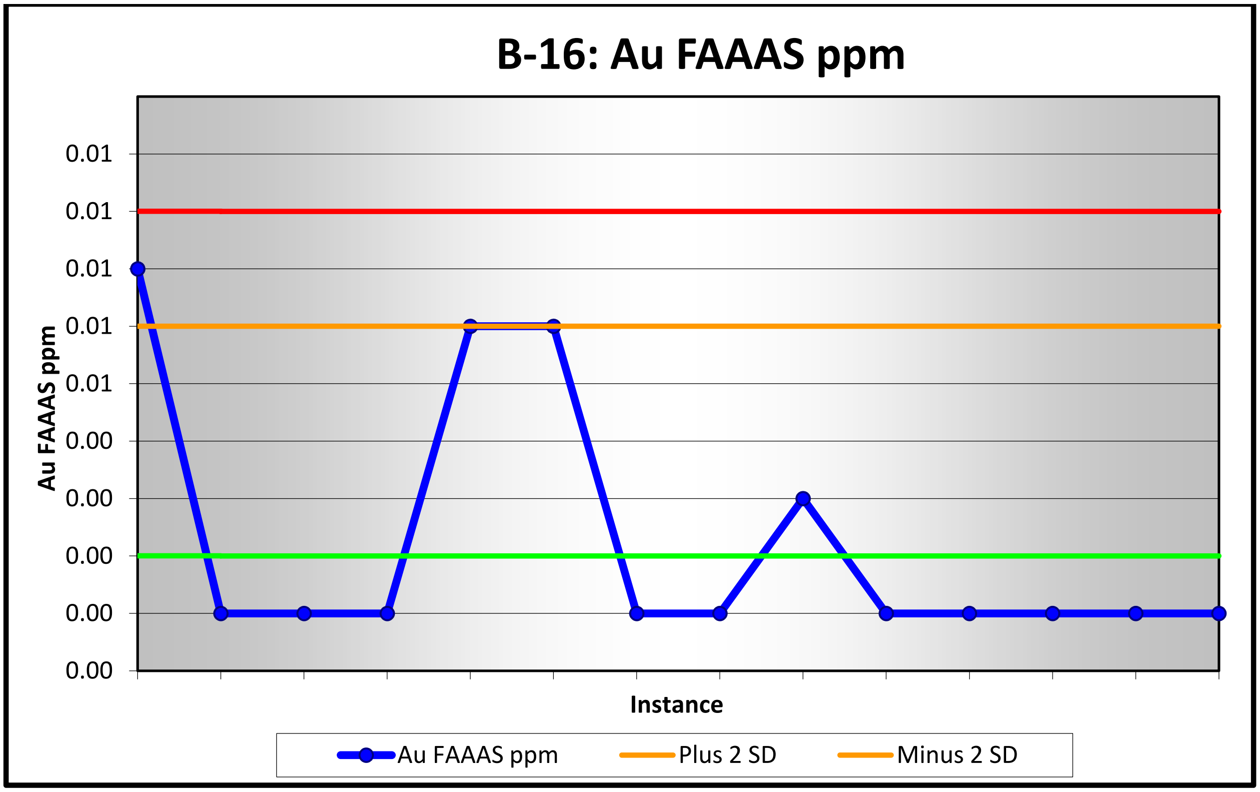
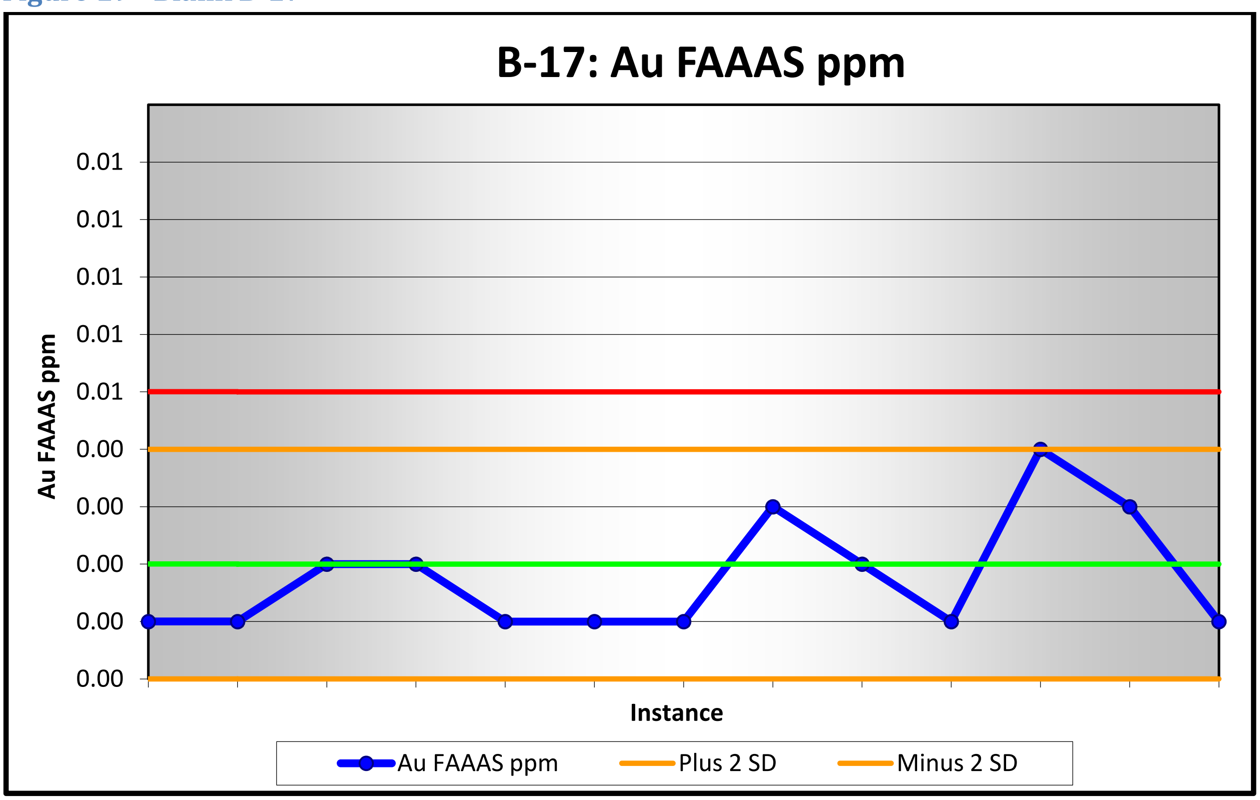



**Figure 19 - Blank B-17**






GeoSpark Consulting Inc.

Both B-16 and B-17 had all instances of analysis reported within the control limits and it can be inferred that there is strong accuracy within the reported primary sample results.

**Figure 20 - Blank B-2**

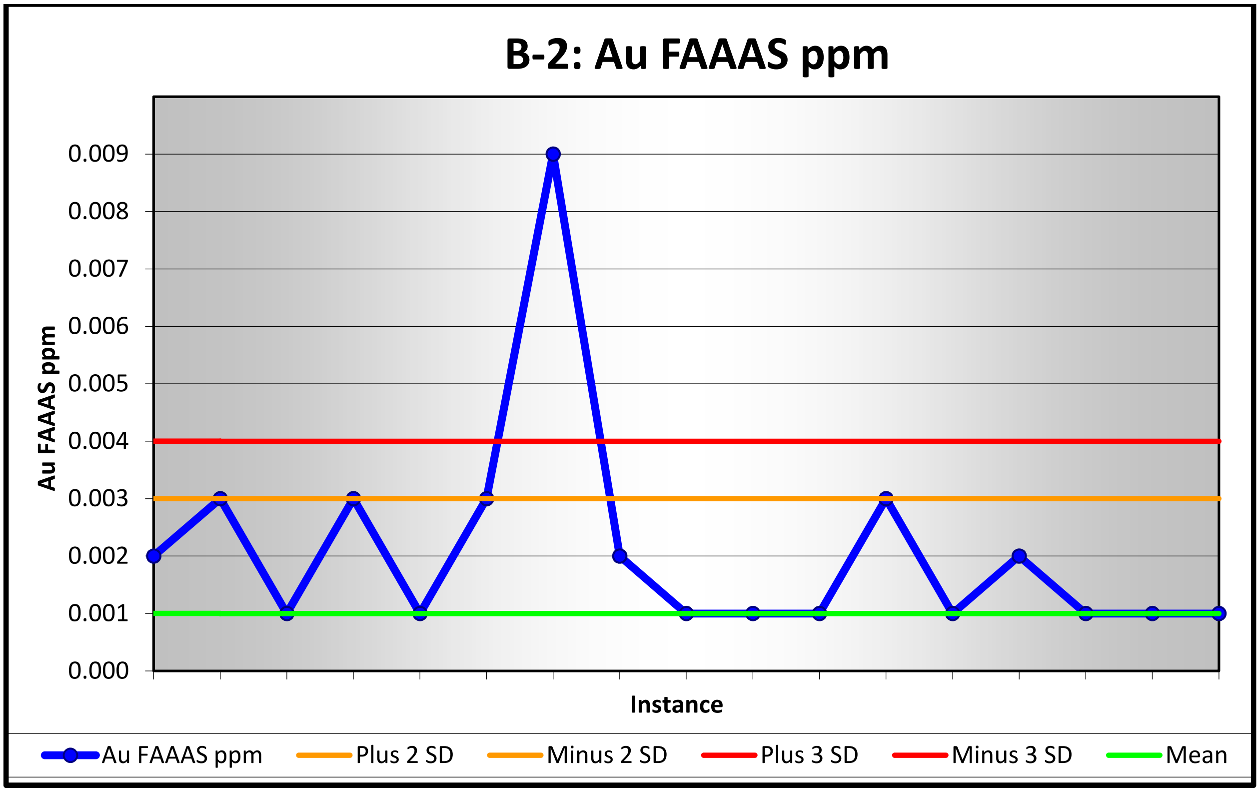
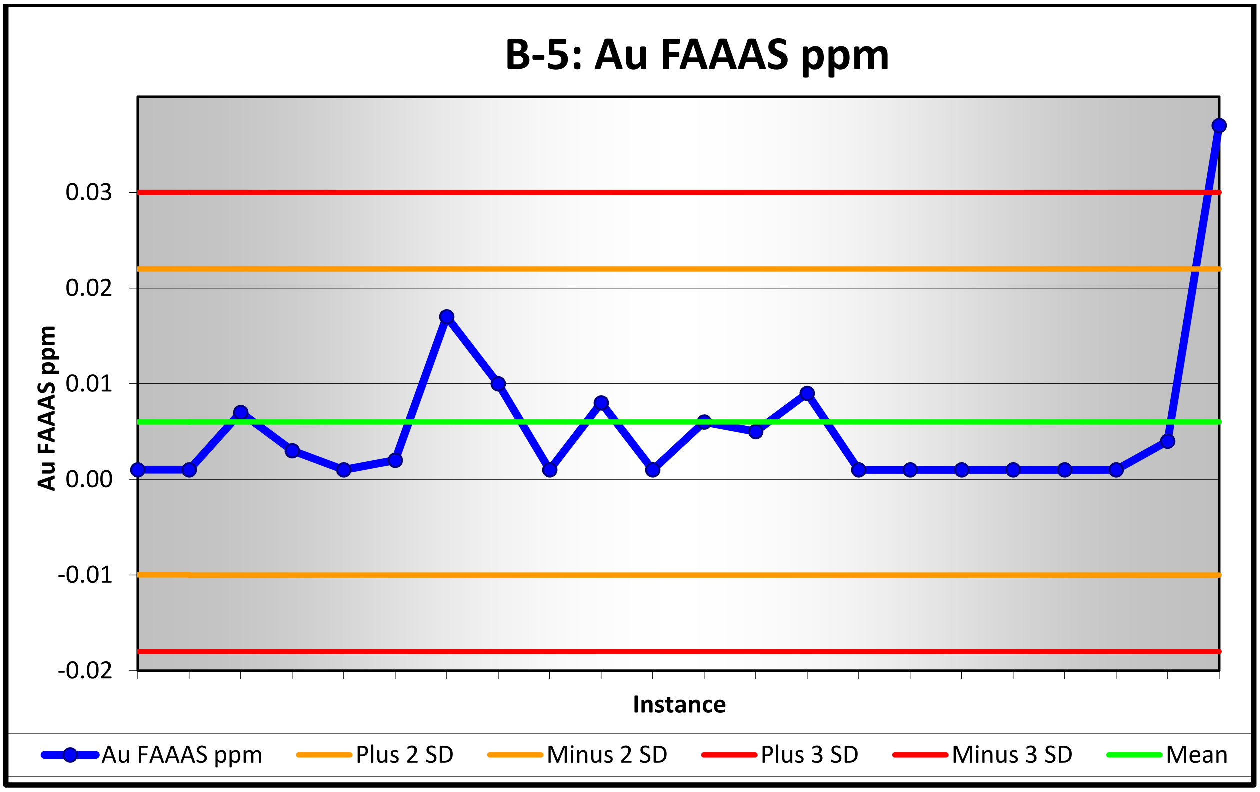



**Table 9 - Failed Blanks - B-2**

| Hole | Sample | StandardID | Au FAAAS ppm | Expected | Minus 3 SD | Plus 3 SD | Certificate |
|---|---|---|---|---|---|---|---|
| WB-12-25 | E5354245 | B-2 | 0.009 | 0.001 | -0.002 | 0.004 | 12U640863 |

Further review of the nearby results show that contamination is unlikely the reason for the higher than expected grade listed above. The material may have been mislabelled or bagged in error. It is the author's opinion that this level of implied accuracy deficiency does not merit concern with the reported primary sample assay quality. Overall strong accuracy is inferred.

### Figure 21 - Blank B-5




### Table 10 - Failed Blanks - B-5

| Hole | Sample | StandardID | Au FAAAS ppm | Expected | Minus 3 SD | Plus 3 SD | Certificate |
|---|---|---|---|---|---|---|---|
| WB-12-27 | E5173468 | B-5 | 0.037 | 0.006 | -0.018 | 0.03 | 12U646034 |

After further review of the failed instance above, the author believes that this may be a duplicate of the previous sample for which a very similar grade was reported. Overall, with all of the remaining instances reported within the control limits it can be inferred that there is strong accuracy within the reported primary sample gold concentrations.

**Figure 22 - Blank B-6**

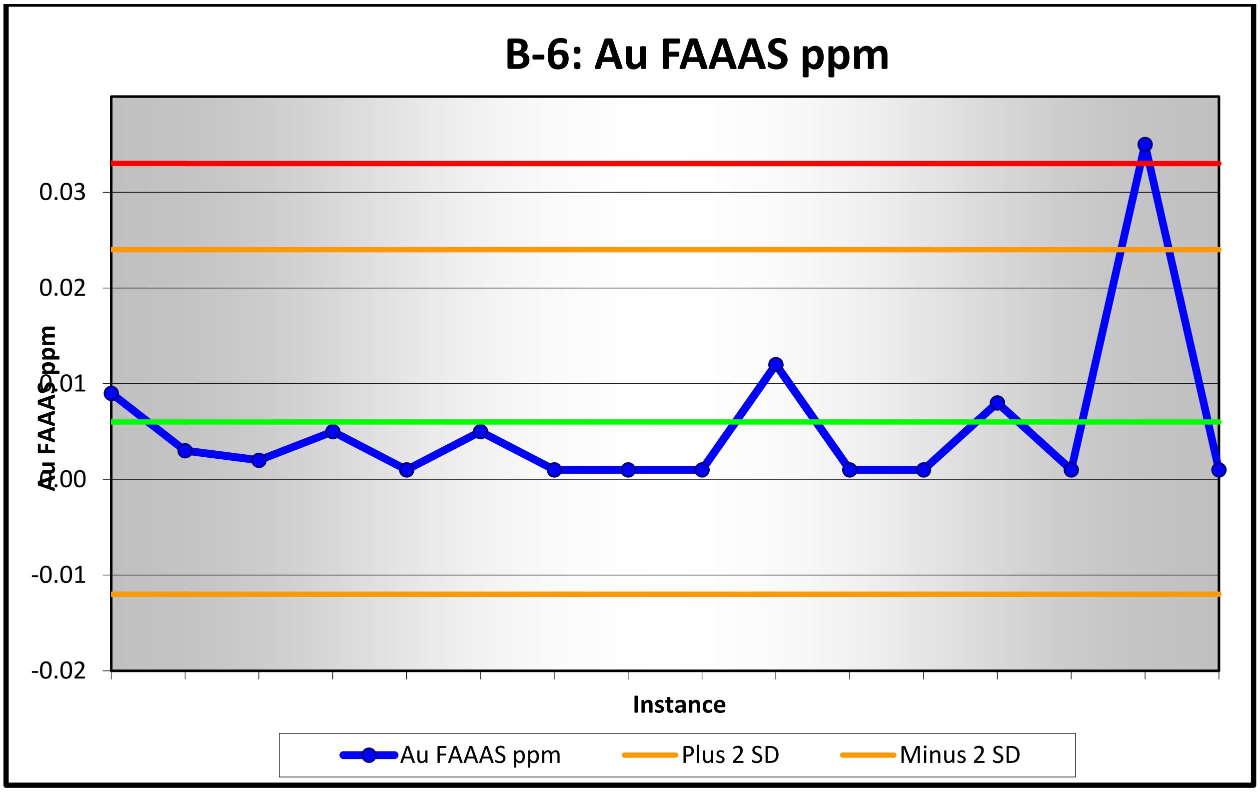



**Table 11 - Failed Blanks - B-6**

| Hole | Sample | StandardID | Au FAAAS ppm | Expected | Minus 3 SD | Plus 3 SD | Certificate |
|---|---|---|---|---|---|---|---|
| WB-12-25 | E5354611 | B-6 | 0.035 | 0.006 | -0.021 | 0.033 | 12U640863 |

Further review of the failed instance listed above shows that the previous sample was high grade and localized minor contamination is suspected to have caused the blank failure. The assumption is that the blank material would have cleaned the instrumentation removing the potential contamination from the samples to follow. Overall, strong accuracy is inferred.

Figure 23 - Blank B-7

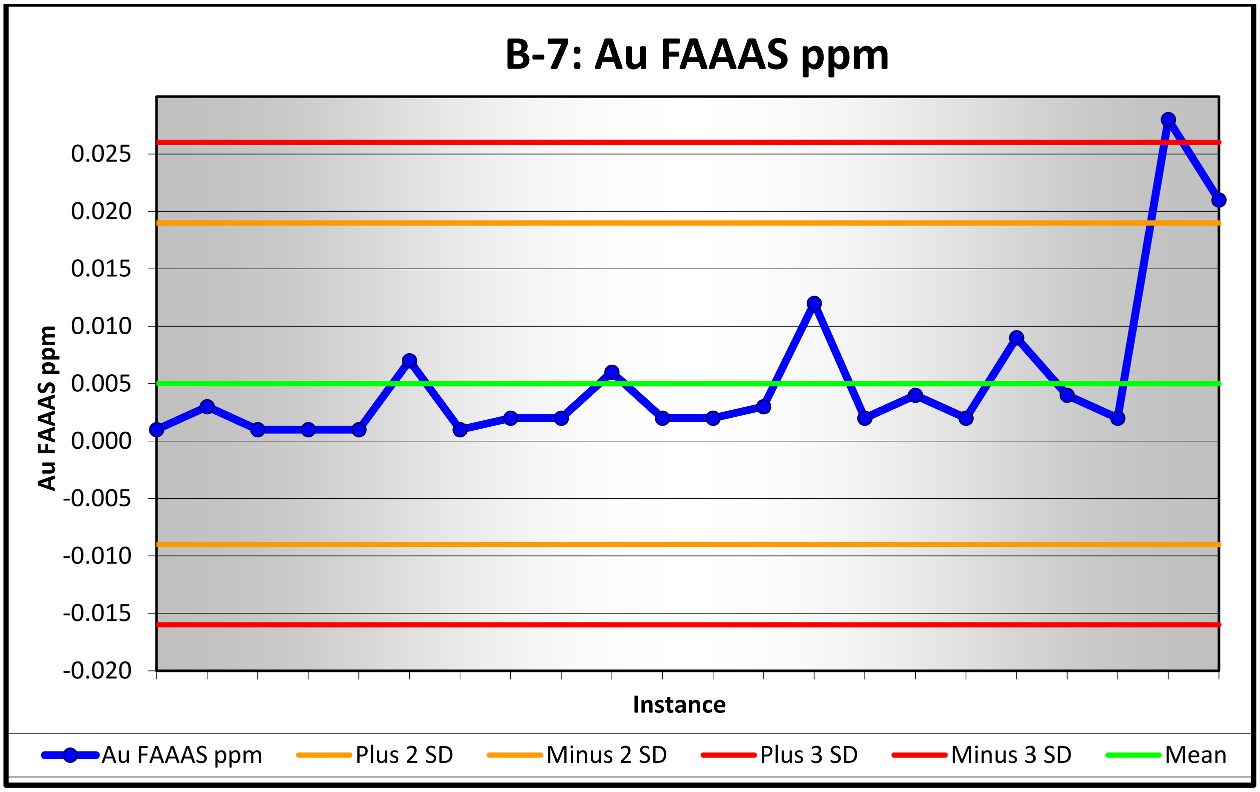



Table 12 - Failed Blanks - B-7

| Hole | Sample | StandardID | Au FAAAS ppm | Expected | Minus 3 SD | Plus 3 SD | Certificate |
|---|---|---|---|---|---|---|---|
| WB-12-26 | E5355057 | B-7 | 0.028 | 0.005 | -0.016 | 0.026 | 12U644426 |

The failed instance listed was further reviewed and found to be within the vicinity of significant grade samples. The failure amount was minimal enough that it was determined that reruns would not be required. Overall, strong accuracy is inferred.

Figure 24 - Blank B-8

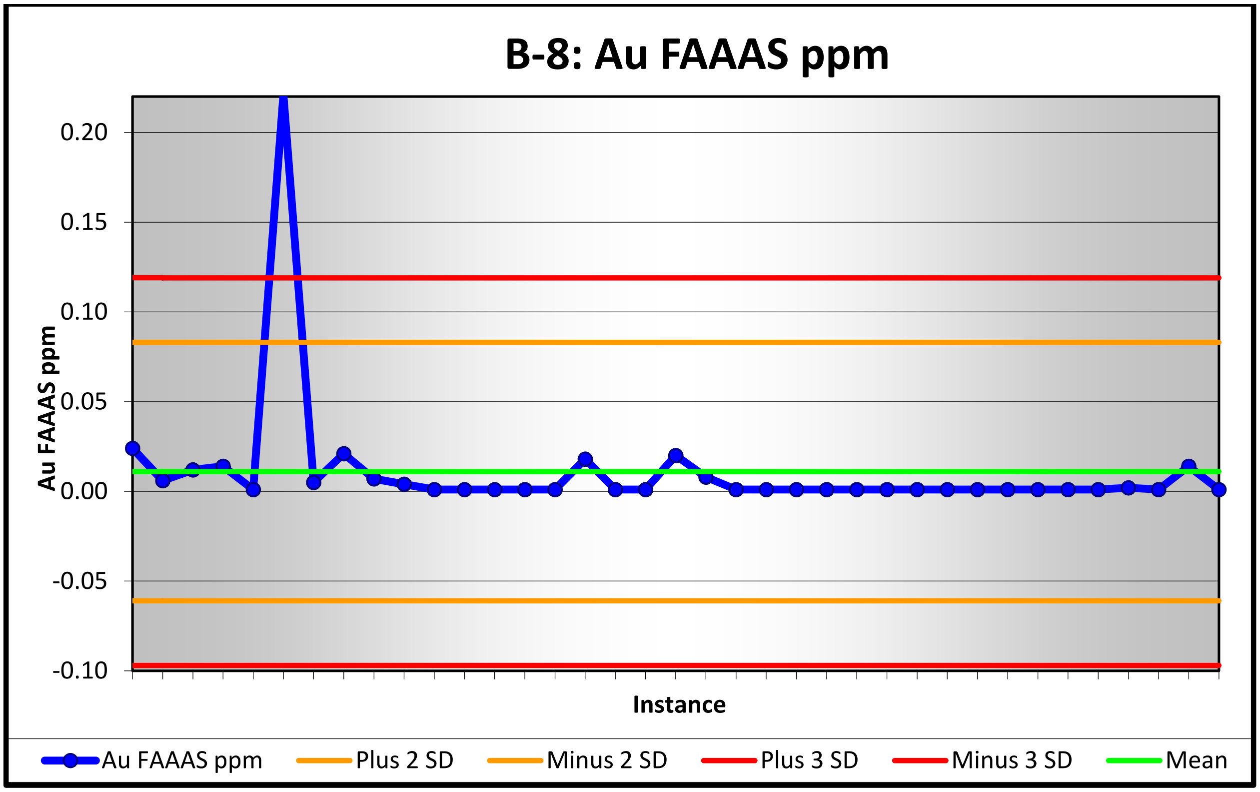
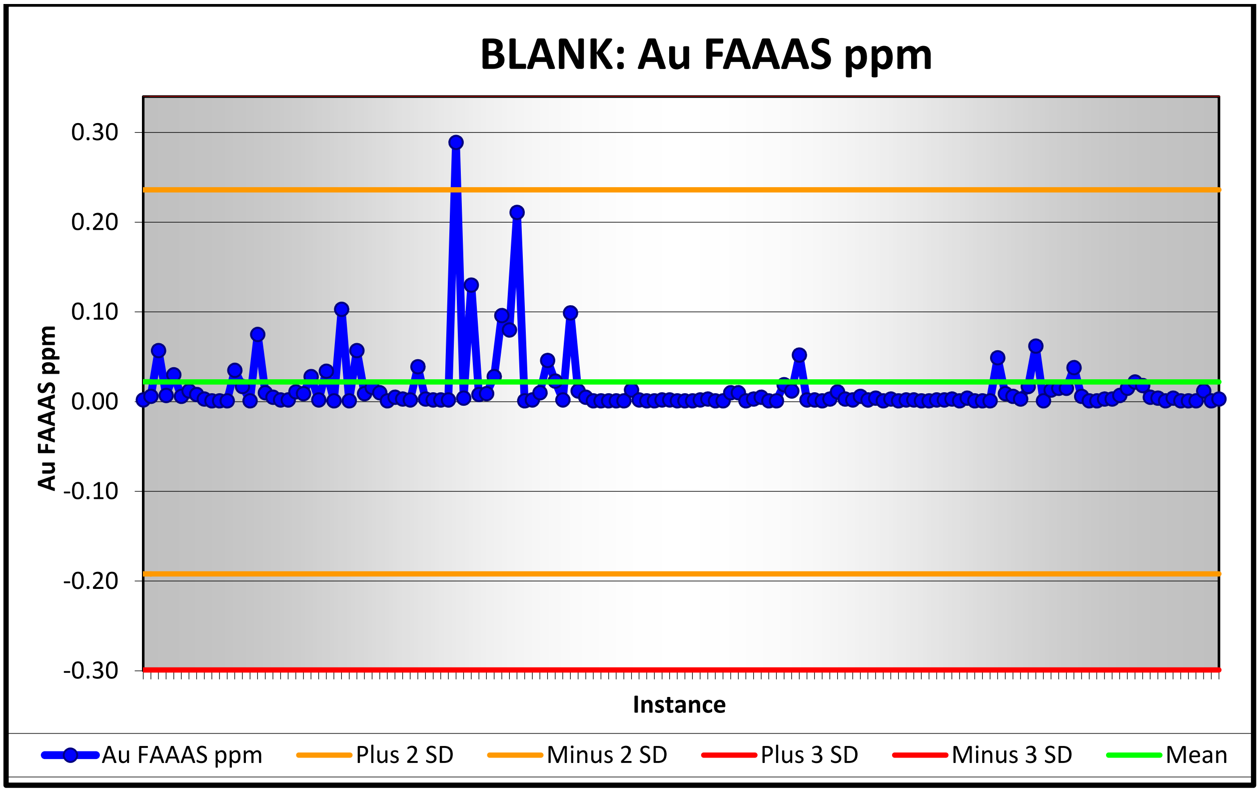



Table 13 - Failed Blanks - B-8

| Hole | Sample | StandardID | Au FAAAS ppm | Expected | Minus 3 SD | Plus 3 SD | Certificate |
|---|---|---|---|---|---|---|---|
| WB-12-29 | E5173915 | B-8 | 0.221 | 0.011 | -0.097 | 0.119 | 12U650199 |

Further review of the failed blank listed above revealed that the previous sample was very high grade likely resulting in some contamination within the instrumentation. The assumption is that the samples to follow were not subjected to the contamination as the blank would have cleaned the instrumentation. Overall, it can be inferred that there is strong accuracy within the reported gold grades.

**Figure 25 - Blank**

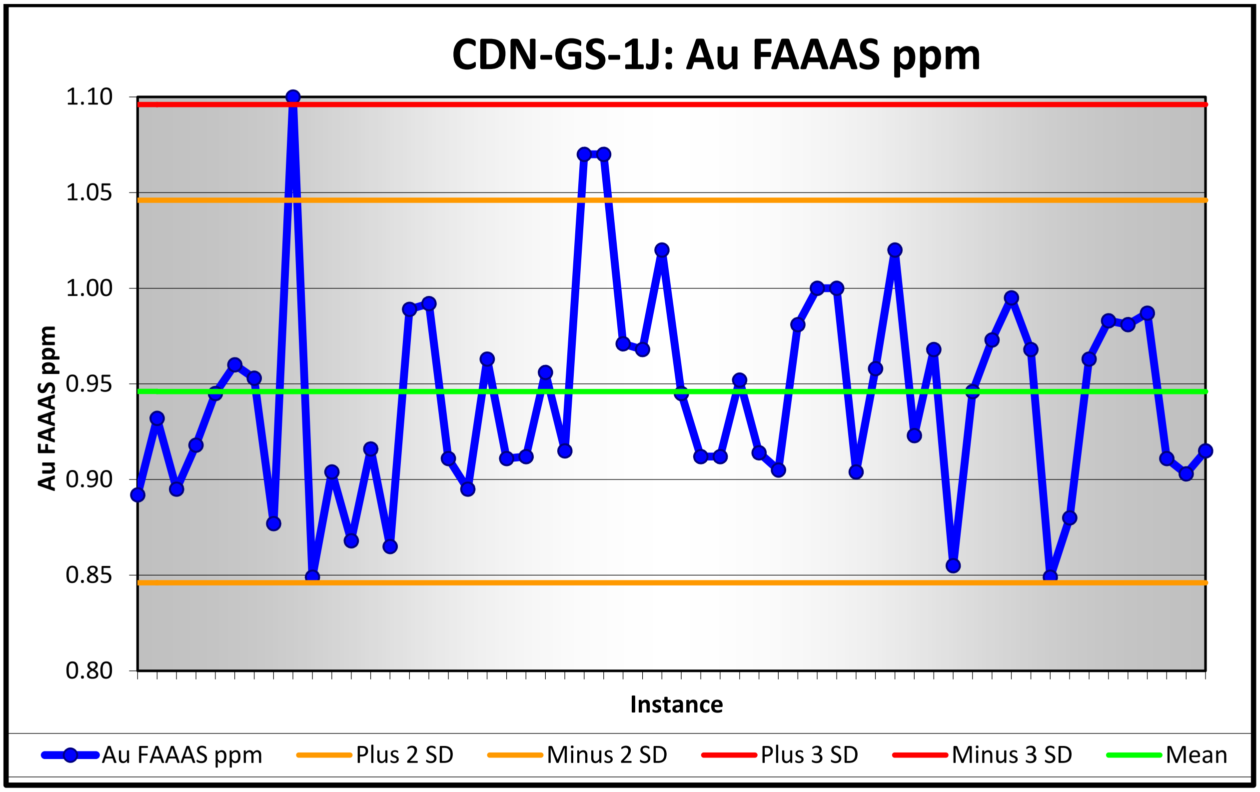



Each of the blank instances labelled Blank were reported within the control limits and it can be inferred that there is strong accuracy within the reported analytical results.

The review of each of the many blank materials has found overall strong accuracy. In addition there has been no indication of significant ongoing sample contamination or instrument calibration difficulties.

## 2.2 Standards

### Figure 26 - CDN-GS-1J

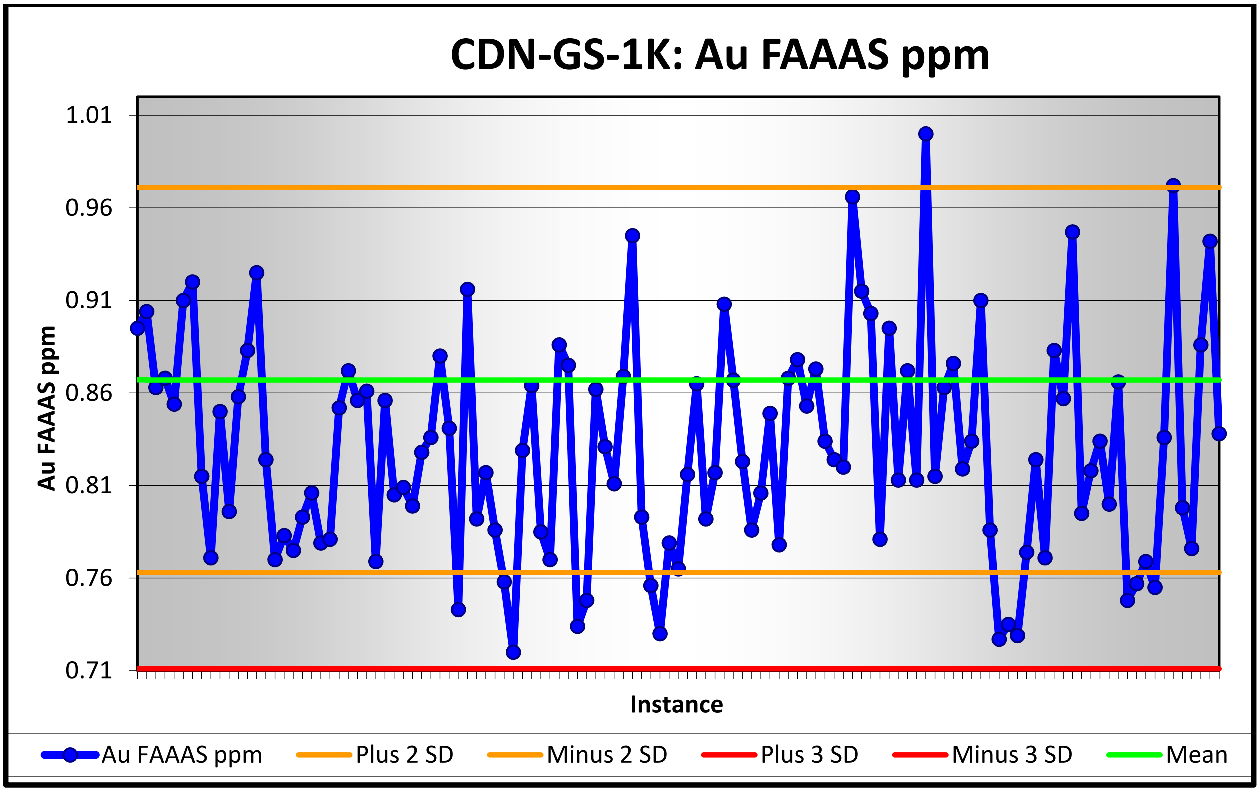



### Table 14 - Failed Standards - CDN-GS-1J

| Hole | Sample | StandardID | Au FAAAS ppm | Expected | Minus 3 SD | Plus 3 SD | Certificate |
|---|---|---|---|---|---|---|---|
| WB-12-21 | E5353426 | CDN-GS-1J | 1.1 | 0.946 | 0.796 | 1.096 | 12U635937 |

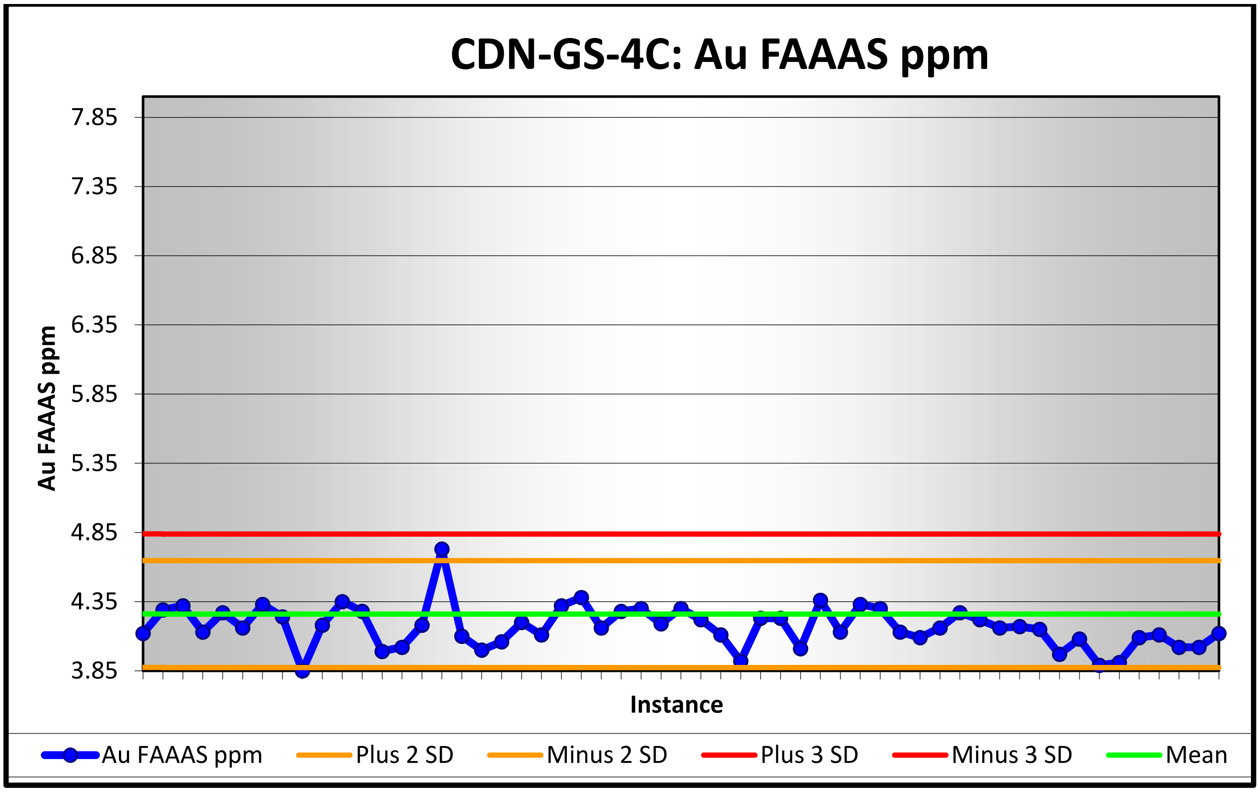
The single failed instance of analysis was further reviewed and found to indicate very minor local accuracy deficiency. However, the level of failure was determine to not merit concern and no reruns were requested. With all other instances of analysis on this standard having been reported within the control limits it can be inferred that there is strong accuracy within the reported results.

Figure 27 - CDN-GS-1K




Each of the instances of analysis on the standard CDN-GS-1K was reported within the defined control limits and strong accuracy is inferred within the reported gold grades.

**Figure 28 - CDN-GS-4C**




Each of the instances of analysis on this standard was reported within the control limits and it can be inferred that there is strong accuracy within the reported priamry sample gold grades.

**Figure 29 - CDN-GS-4D**

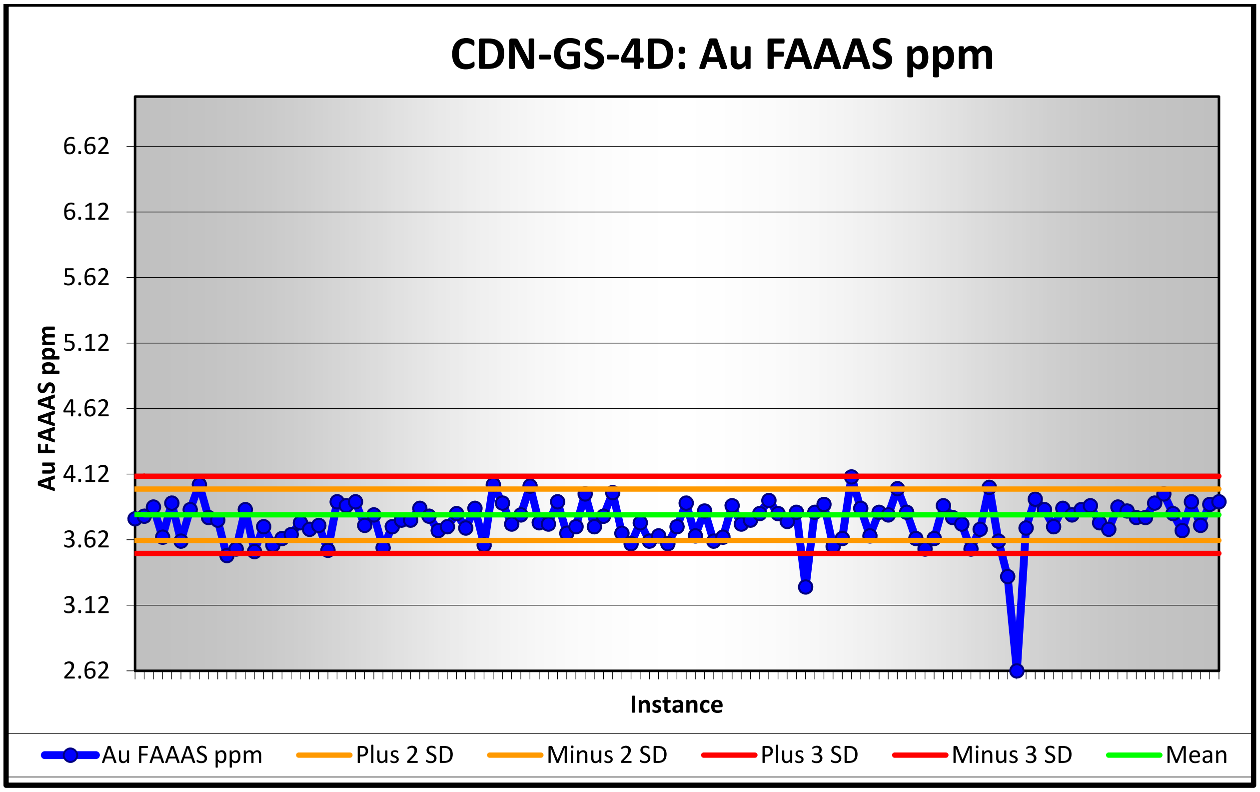



**Table 15 - Failed Standards - CDN-GS-4D**

| Hole | Sample | StandardID | Au FAAAS ppm | Expected | Minus 3 SD | Plus 3 SD | Certificate |
|---|---|---|---|---|---|---|---|
| WB-13-47 | 5570967 | CDN-GS-4D | 3.5 | 3.81 | 3.516 | 4.104 | 13B725310 |
| WB-12-31 | E5467322 | CDN-GS-4D | 3.26 | 3.81 | 3.516 | 4.104 | 12U653314 |
| WB-12-28 | E5173835 | CDN-GS-4D | 3.34 | 3.81 | 3.516 | 4.104 | 12U647670 |
| WB-12-28 | E5173716 | CDN-GS-4D | 2.62 | 3.81 | 3.516 | 4.104 | 12U647670 |

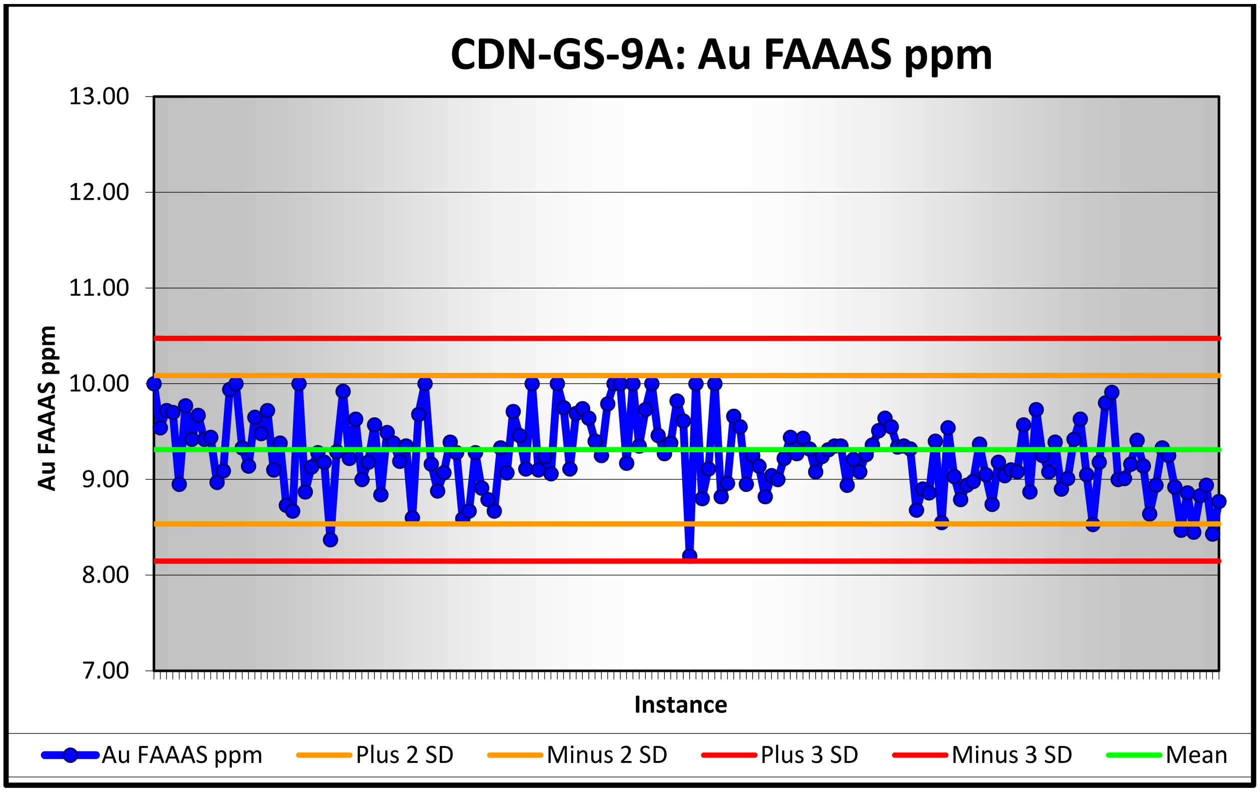
The first listed failure, 5570967, on standard CDN-GS-4D instances was found to be within the vicinity of very low grade gold samples and reruns were determined to be unbeneficial to the project. The gravimetric result for this sample was reported within the control limits.

The second instance of failure, E5467322, was further reviewed and the gravimetric result was also reported lower than the control limit. Therefore, it is assumed that the material may have had a true concentration less than the expected lower limit.

The third and fourth instance were reported near very low grade results and therefore reruns were not requested. In addition, the gravimetric finish results were reported within the control limits.

Overall, it is the author's opinion that strong accuracy is inferred within the reported gold grades.

**Figure 30 - CDN-GS-9A**




With each of the instances of analysis on CDN-GS-9A having been reported within the control limits, it can be inferred that there is strong accuracy within the reported gold grades.

The review of the standard instances of analysis has inferred overall strong accuracy.

## 3. Check Samples

Check samples serve to review the primary samples for bias. For the 2012 and 2013 Northshore exploration programs 238 (2.77 percent relative to total 8,601 primary samples equivalent to five percent of significant grade samples) statistically representative samples were selected randomly within percentile ranges in order to obtain a good representation of the samples for secondary check analysis at SGS Canada. The samples were analyzed using similar analytical techniques (fire assay with atomic absorption finish).

The check samples assays were performed on sample pulp material from the original sample source.

The check sample results will be compared with the primary results to define any sample assay result bias.

The check sample results have been plotted within a scatter chart as well as a difference chart displaying the difference in the reported results.

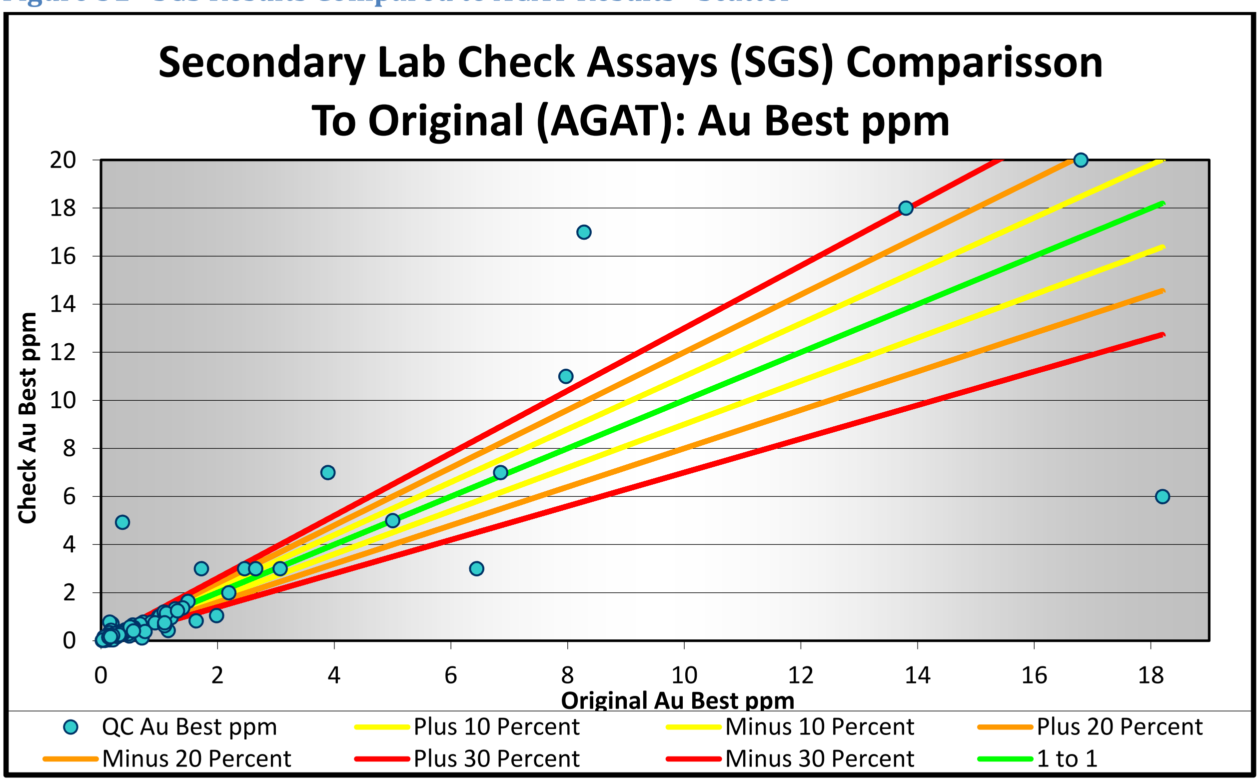
The check sample assay statistics are shown in the below data table.

**Table 16 - Check Assay Statistics**

| | Average Original AGAT | Average Check SGS | Average Difference (AGAT - SGS) |
|---|---|---|---|
| Averages (Au) | 0.664 | 0.704 | -0.04 |
| Averages (Au) Excluding Eight Pairs With Significant Difference From the Total 238 Pairs Amounting to 3 percent of the pairs | 0.358 | 0.35 | 0.008 |

The average gold grade reported by SGS matches well to the average reported by AGAT. It is the author's opinion that the average difference within the check sample pairs indicates a very minor negative bias in the original results. However, the averages are greatly affected by any anomalous pairs. With the removal of the anomalous pairs (eight out of the total 238 pairs removed from calculation) the averages show a difference of significantly less indicative of negligible bias in the results. A much better overview of the results can be achieved within charts displaying the correlation between the pairs and the differences by sample pair instance.

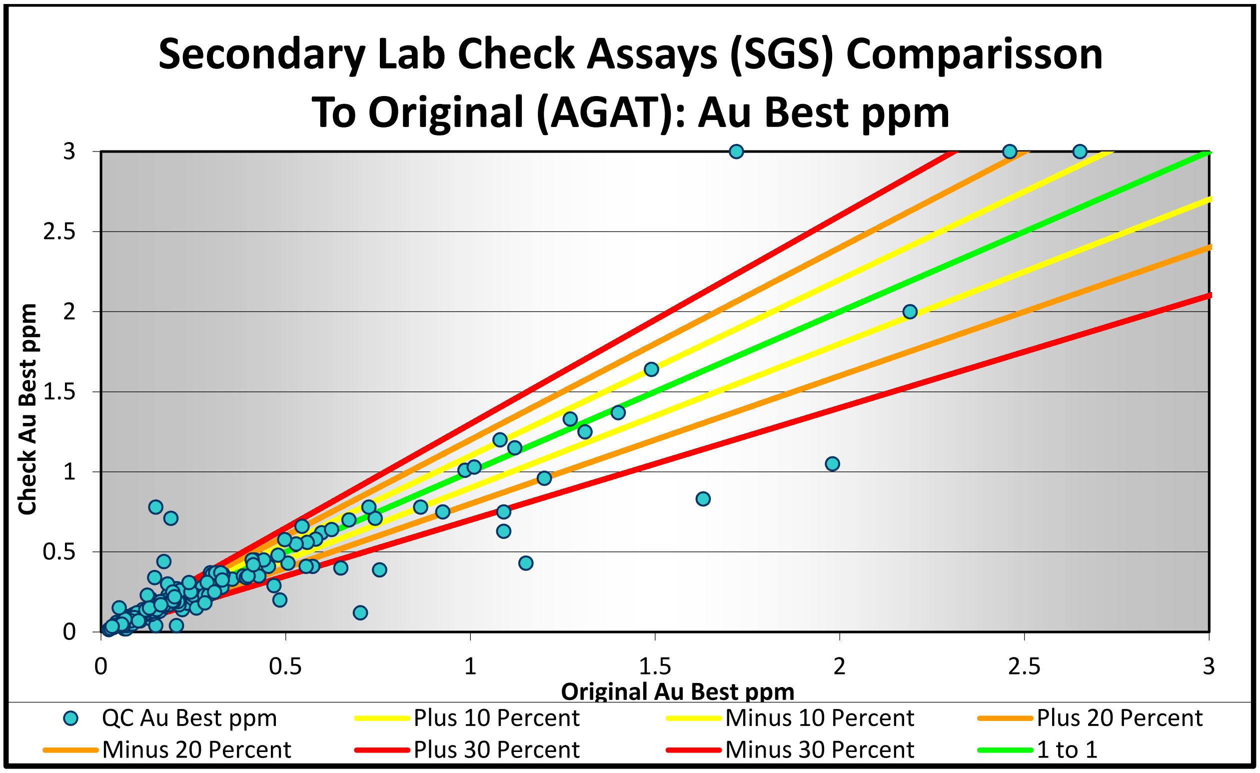
**Figure 31 - SGS Results Compared to AGAT Results - Scatter**



The scatter chart of the check sample pairs shows that there were five check assay that had greater gold grades reported than the original sample assays, also two pairs are shown to have a significantly greater grade reported in the original assays.

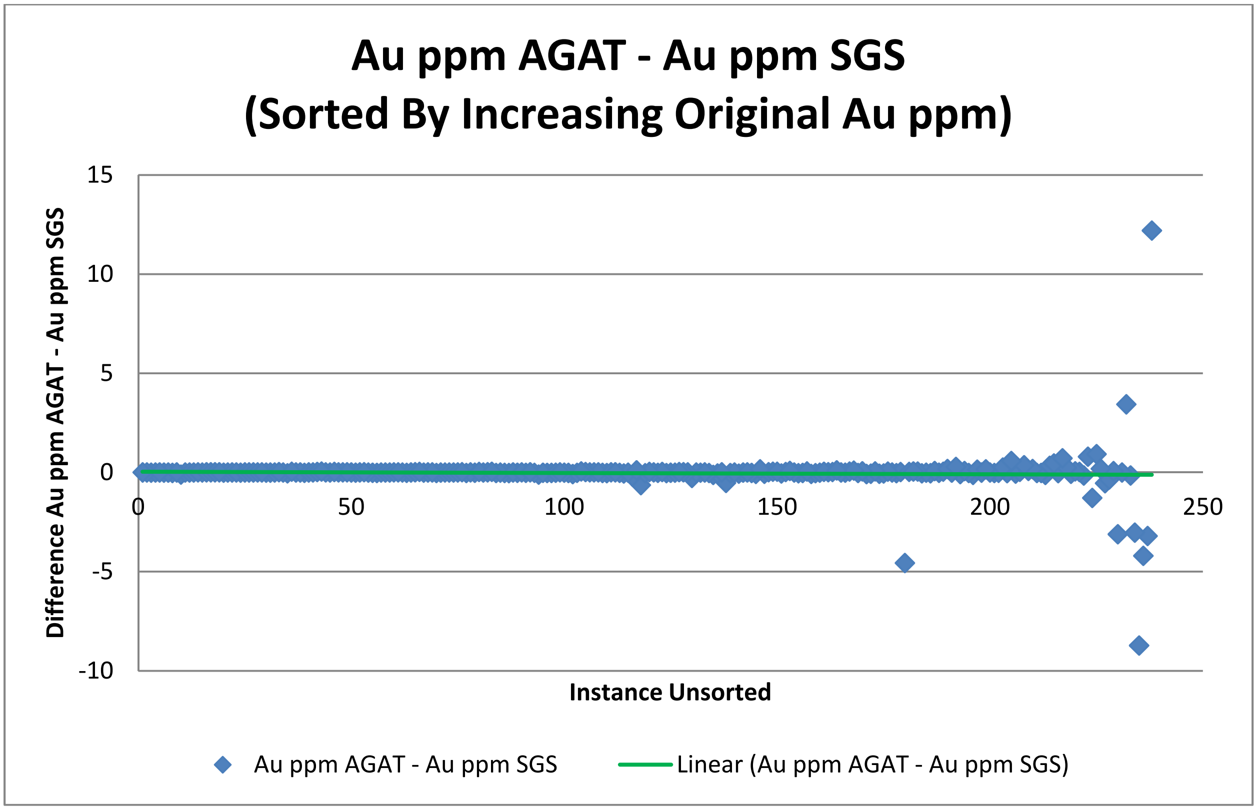
It is the author's opinion that the seven out of 218 pairs with anomalous differences are likely due to the nature of the mineralization, where coarse mineralization was likely variable within the sample materials.

**Figure 32 - SGS Results Compared to AGAT Results - Scatter (Less than or equal to 3 ppm Au)**




A closer look at the majority of the check sample assay pairs shows that overall the pairs correlate fairly well.

**Figure 33 - SGS Results Compared to AGAT Results - Difference**




The difference chart shows that the majority of difference between the original and check sample assay results is where the gold grade is high (Au greater than 8 ppm).

Overall, it is the author's opinion that the mentioned significant differences noted between the primary sample analyzed by AGAT and the secondary check sample analyzed by SGS are likely a function of the nature of the project mineralization. The author feels that there is no significant bias overall inferred within the primary sample results.

## 4. Summary and Conclusion

Sufficient Quality Assurance and Quality Control procedures have taken place in order to ensure that the analytical results used for the Northshore project are of good quality.

Review of field duplicate pairs has shown that often have significant difference in gold concentrations. It is the author's opinion that with all things considered: the scatter charts do not show strong bias in the duplicate results, the lab internal QAQC shows strong precision, and the removal of 33 percent of the groups within the THPVC chart shows a near satisfactory precision percent, it is the author's opinion that the results of analysis reported by AGAT for the 2012 and 2013 exploration at the Northshore project are shown to have overall satisfactory precision considering the nature of the mineralization at the project.

A large number of screen fire metallic assays (SFA) took place on high grade samples. It is the author's opinion that the metallic screen fire results further infer that the field duplicate results have variation from the primary samples as a function of the nature of the mineralization. Overall, the screen fire assay results show no bias in the fire assay results.

The review of each of the many blank materials has found overall strong accuracy. In addition there has been no indication of significant ongoing sample contamination or instrument calibration difficulties.

The review of the standard instances of analysis has also inferred overall strong accuracy.

A representative set of samples was also analyzed at SGS for review of any potential bias in the results. Overall, it is the author's opinion that any mentioned significant differences noted between the primary samples analyzed by AGAT and the secondary check sample analyzed by SGS are likely a function of the nature of the project mineralization. The author feels that there is no significant bias overall inferred within the primary sample results.

This QAQC review of the 2012 and 2013 analytical results reported by AGAT for the Northshore project has shown overall satisfactory precision levels, strong accuracy, and no significant bias. In the author's opinion the analytical results can be considered of good quality for use.

# APPENDIX IV

## 2012 and 2013 Verification Sample
## Analytical Results and Laboratory Procedures

## AGAT Laboratories

5623 McADAM ROAD
MISSISSAUGA, ONTARIO
CANADA L4Z 1N9
TEL (905)501-9998
FAX (905)501-0589
http://www.agatlabs.com

CLIENT NAME: MISC AGAT CLIENT BC, BC
(403)

ATTENTION TO: Doug Blanchflower

PROJECT NO: P2012-04

AGAT WORK ORDER: 12V639652

SOLID ANALYSIS REVIEWED BY: Kevin Motomura, ICP Supervisor

DATE REPORTED: Oct 11, 2012

PAGES (INCLUDING COVER): 6

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.

# Certificate of Analysis

AGAT Laboratories

AGAT WORK ORDER: 12V639652

PROJECT NO: P2012-04

5623 McADAM ROAD
MISSISSAUGA, ONTARIO
CANADA L4Z 1N9
TEL (905)501-9998
FAX (905)501-0589
http://www.agatlabs.com

CLIENT NAME: MISC AGAT CLIENT BC

ATTENTION TO: Doug Blanchflower

## 4 Acid Digest - Metals Package, ICP-OES finish (201070)

DATE SAMPLED: Sep 07, 2012 | DATE RECEIVED: Sep 07, 2012 | DATE REPORTED: Oct 11, 2012 | SAMPLE TYPE: Drill Core

| | Analyte: | Ag | Al | As | Ba | Be | Bi | Ca | Cd | Ce | Co | Cr | Cu | Fe | Ga |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit: | ppm | % | ppm | ppm | ppm | ppm | % | ppm | ppm | ppm | ppm | ppm | % | ppm |
| Sample Description | RDL: | 0.5 | 0.01 | 1 | 1 | 0.5 | 1 | 0.01 | 0.5 | 1 | 0.5 | 0.5 | 0.5 | 0.01 | 5 |
| G09447 | | 3.8 | 3.40 | 6 | 48 | <0.5 | 20 | 5.47 | 0.7 | 34 | 31.1 | 639 | 23.1 | 5.06 | 10 |
| G09448 | | <0.5 | 2.69 | 3 | 341 | 0.6 | 2 | 1.58 | <0.5 | 22 | 5.8 | 52.7 | 31.7 | 1.84 | 19 |
| G09449 | | 0.7 | 2.46 | 11 | 323 | <0.5 | 12 | 1.69 | <0.5 | 21 | 5.6 | 33.3 | 10.6 | 1.55 | 16 |
| G09450 | | 1.9 | 3.13 | 9 | 342 | <0.5 | 20 | 1.59 | 5.1 | 27 | 6.3 | 44.6 | 32.9 | 2.79 | 18 |

| | Analyte: | In | K | La | Li | Mg | Mn | Mo | Na | Ni | P | Pb | Rb | S | Sb |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit: | ppm | % | ppm | ppm | % | ppm | ppm | % | ppm | ppm | ppm | ppm | % | ppm |
| Sample Description | RDL: | 1 | 0.01 | 2 | 1 | 0.01 | 1 | 0.5 | 0.01 | 0.5 | 10 | 1 | 10 | 0.005 | 1 |
| G09447 | | <1 | 0.11 | 11 | 75 | 4.83 | 1600 | <0.5 | 0.20 | 195 | 929 | <1 | <10 | 0.352 | <1 |
| G09448 | | 2 | 1.46 | 8 | 13 | 0.68 | 425 | 2.0 | 2.34 | 16.4 | 373 | 5 | 49 | 0.901 | 1 |
| G09449 | | <1 | 1.57 | 8 | 9 | 0.42 | 232 | 1.5 | 1.68 | 11.5 | 349 | 5 | 43 | 0.950 | <1 |
| G09450 | | <1 | 1.93 | 10 | 12 | 0.56 | 360 | 2.4 | 1.49 | 16.1 | 408 | 7 | 66 | 1.87 | <1 |

| | Analyte: | Sc | Se | Sn | Sr | Ta | Te | Th | Ti | Tl | U | V | W | Y | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit: | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % | ppm | ppm | ppm | ppm | ppm | ppm |
| Sample Description | RDL: | 1 | 10 | 5 | 1 | 10 | 10 | 5 | 0.01 | 5 | 5 | 0.5 | 1 | 1 | 0.5 |
| G09447 | | 15 | 23 | <5 | 221 | <10 | <10 | 5 | 0.16 | <5 | <5 | 143 | 32 | 6 | 172 |
| G09448 | | 3 | 11 | <5 | 143 | <10 | <10 | <5 | 0.09 | <5 | 5 | 45.0 | 2 | 3 | 41.4 |
| G09449 | | 2 | <10 | <5 | 109 | <10 | <10 | <5 | 0.06 | <5 | 6 | 38.6 | 2 | 3 | 33.5 |
| G09450 | | 3 | <10 | <5 | 73 | <10 | <10 | <5 | 0.11 | <5 | <5 | 45.9 | 2 | 4 | 1020 |

| | Analyte: | Zr |
|---|---|---|
| | Unit: | ppm |
| Sample Description | RDL: | 5 |
| G09447 | | 65 |
| G09448 | | 53 |
| G09449 | | 44 |
| G09450 | | 53 |

Comments: RDL - Reported Detection Limit

3686881-3686884 As, Sb values may be low due to digestion losses.

Certified By:

AGAT Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 12V639652

PROJECT NO: P2012-04

5623 McADAM ROAD
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CLIENT NAME: MISC AGAT CLIENT BC

ATTENTION TO: Doug Blanchflower

## Fire Assay - Au Ore Grade, Gravimetric finish (202564) (50g charge)

DATE SAMPLED: Sep 07, 2012 | DATE RECEIVED: Sep 07, 2012 | DATE REPORTED: Oct 11, 2012 | SAMPLE TYPE: Drill Core

| | Analyte: | Sample Login Weight | Au |
|---|---|---|---|
| | Unit: | kg | ppm |
| Sample Description | RDL: | 0.01 | 0.05 |
| G09447 | | 0.51 | 53.0 |
| G09448 | | 1.17 | 2.47 |
| G09449 | | 0.91 | 3.16 |
| G09450 | | 0.58 | 31.5 |

Comments: RDL - Reported Detection Limit

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# Quality Assurance

CLIENT NAME: MISC AGAT CLIENT BC | AGAT WORK ORDER: 12V639652

PROJECT NO: P2012-04 | ATTENTION TO: Doug Blanchflower

## Solid Analysis

| RPT Date: Oct 11, 2012 | | REPLICATE | | | | Method Blank | REFERENCE MATERIAL | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Acceptable Limits | |
| PARAMETER | Batch | Sample Id | Original | Rep #1 | RPD | | Result Value | Expect Value | Recovery | Lower | Upper |
| Fire Assay - Au Ore Grade, Gravimetric finish (202564) (50g charge) | | | | | | | | | | | |
| Au | 1 | 3686881 | 53.0 | 55.5 | 4.6% | < 0.05 | 4.01 | 4.075 | 98% | 80% | 120% |
| 4 Acid Digest - Metals Package, ICP-OES finish (201070) | | | | | | | | | | | |
| Ag | 1 | 3686881 | 3.77 | 3.28 | 13.9% | 0.5 | 12.2 | 13.0 | 94% | 80% | 120% |
| Al | 1 | 3686881 | 3.40 | 2.92 | 15.2% | < 0.01 | | | | 80% | 120% |
| As | 1 | 3686881 | 6 | 7 | 15.4% | < 1 | | | | 80% | 120% |
| Ba | 1 | 3686881 | 48 | 43 | 11.0% | < 1 | | | | 80% | 120% |
| Be | 1 | 3686881 | < 0.5 | < 0.5 | 0.0% | < 0.5 | 0.4 | 0.4 | 97% | 80% | 120% |
| Bi | 1 | 3686881 | 20 | 18 | 10.5% | < 1 | | | | 80% | 120% |
| Ca | 1 | 3686881 | 5.47 | 4.88 | 11.4% | < 0.01 | | | | 80% | 120% |
| Cd | 1 | 3686881 | 0.7 | 0.6 | 15.4% | < 0.5 | | | | 80% | 120% |
| Ce | 1 | 3686881 | 34 | 30 | 12.5% | < 1 | | | | 80% | 120% |
| Co | 1 | 3686881 | 31.1 | 30.6 | 1.6% | < 0.5 | | | | 80% | 120% |
| Cr | 1 | 3686881 | 639 | 630 | 1.4% | < 0.5 | | | | 80% | 120% |
| Cu | 1 | 3686881 | 23.1 | 19.5 | 16.9% | < 0.5 | 5827 | 6000 | 97% | 80% | 120% |
| Fe | 1 | 3686881 | 5.06 | 4.84 | 4.4% | < 0.01 | | | | 80% | 120% |
| Ga | 1 | 3686881 | 10 | 11 | 9.5% | < 5 | | | | 80% | 120% |
| In | 1 | 3686881 | < 1 | 1 | | < 1 | | | | 80% | 120% |
| K | 1 | 3686881 | 0.112 | 0.093 | 18.5% | < 0.01 | | | | 80% | 120% |
| La | 1 | 3686881 | 11 | 10 | 9.5% | < 2 | | | | 80% | 120% |
| Li | 1 | 3686881 | 75 | 69 | 8.3% | < 1 | | | | 80% | 120% |
| Mg | 1 | 3686881 | 4.83 | 4.45 | 8.2% | < 0.01 | | | | 80% | 120% |
| Mn | 1 | 3686881 | 1600 | 1550 | 3.2% | < 1 | | | | 80% | 120% |
| Mo | 1 | 3686881 | < 0.5 | 2.9 | | < 0.5 | 332 | 360 | 92% | 80% | 120% |
| Na | 1 | 3686881 | 0.204 | 0.185 | 9.8% | < 0.01 | | | | 80% | 120% |
| Ni | 1 | 3686881 | 195 | 191 | 2.1% | < 0.5 | | | | 80% | 120% |
| P | 1 | 3686881 | 929 | 877 | 5.8% | < 10 | 550 | 600 | 92% | 80% | 120% |
| Pb | 1 | 3686881 | < 1 | < 1 | 0.0% | < 1 | | | | 80% | 120% |
| Rb | 1 | 3686881 | < 10 | < 10 | 0.0% | < 10 | | | | 80% | 120% |
| S | 1 | 3686881 | 0.352 | 0.337 | 4.4% | < 0.005 | | | | 80% | 120% |
| Sb | 1 | 3686881 | < 1 | 1 | | < 1 | | | | 80% | 120% |
| Sc | 1 | 3686881 | 15 | 12 | 22.2% | < 1 | | | | 80% | 120% |
| Se | 1 | 3686881 | 23 | 22 | 4.4% | < 10 | | | | 80% | 120% |
| Sn | 1 | 3686881 | < 5 | < 5 | 0.0% | < 5 | | | | 80% | 120% |
| Sr | 1 | 3686881 | 221 | 203 | 8.5% | < 1 | 328 | 390 | 84% | 80% | 120% |
| Ta | 1 | 3686881 | < 10 | < 10 | 0.0% | < 10 | | | | 80% | 120% |
| Te | 1 | 3686881 | < 10 | < 10 | 0.0% | < 10 | | | | 80% | 120% |
| Th | 1 | 3686881 | 5 | 7 | | < 5 | | | | 80% | 120% |
| Ti | 1 | 3686881 | 0.164 | 0.145 | 12.3% | < 0.01 | | | | 80% | 120% |
| Tl | 1 | 3686881 | < 5 | < 5 | 0.0% | < 5 | | | | 80% | 120% |
| U | 1 | 3686881 | < 5 | < 5 | 0.0% | < 5 | | | | 80% | 120% |
| V | 1 | 3686881 | 143 | 136 | 5.0% | < 0.5 | | | | 80% | 120% |
| W | 1 | 3686881 | 32 | 28 | 13.3% | < 1 | | | | 80% | 120% |
| Y | 1 | 3686881 | 6 | 5 | 18.2% | < 1 | 8 | 7 | 109% | 80% | 120% |

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# Quality Assurance

CLIENT NAME: MISC AGAT CLIENT BC

AGAT WORK ORDER: 12V639652

PROJECT NO: P2012-04

ATTENTION TO: Doug Blanchflower

## Solid Analysis (Continued)

| RPT Date: Oct 11, 2012 | | REPLICATE | | | | | REFERENCE MATERIAL | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PARAMETER | Batch | Sample Id | Original | Rep #1 | RPD | Method Blank | Result Value | Expect Value | Recovery | Acceptable Limits Lower | Acceptable Limits Upper |
| Zn | 1 | 3686881 | 172 | 167 | 2.9% | < 0.5 | | | | 80% | 120% |
| Zr | 1 | 3686881 | 65 | 60 | 8.0% | < 5 | | | | 80% | 120% |

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# Method Summary

CLIENT NAME: MISC AGAT CLIENT BC
AGAT WORK ORDER: 12V639652
PROJECT NO: P2012-04
ATTENTION TO: Doug Blanchflower

| PARAMETER | AGAT S.O.P | LITERATURE REFERENCE | ANALYTICAL TECHNIQUE |
|---|---|---|---|
| Solid Analysis | | | |
| Ag | MIN-200-12002/12020 | | ICP/OES |
| Al | MIN-200-12002/12020 | | ICP/OES |
| As | MIN-200-12002/12020 | | ICP/OES |
| Ba | MIN-200-12002/12020 | | ICP/OES |
| Be | MIN-200-12002/12020 | | ICP/OES |
| Bi | MIN-200-12002/12020 | | ICP/OES |
| Ca | MIN-200-12002/12020 | | ICP/OES |
| Cd | MIN-200-12002/12020 | | ICP/OES |
| Ce | MIN-200-12002/12020 | | ICP/OES |
| Co | MIN-200-12002/12020 | | ICP/OES |
| Cr | MIN-200-12002/12020 | | ICP/OES |
| Cu | MIN-200-12002/12020 | | ICP/OES |
| Fe | MIN-200-12002/12020 | | ICP/OES |
| Ga | MIN-200-12002/12020 | | ICP/OES |
| In | MIN-200-12002/12020 | | ICP/OES |
| K | MIN-200-12002/12020 | | ICP/OES |
| La | MIN-200-12002/12020 | | ICP/OES |
| Li | MIN-200-12002/12020 | | ICP/OES |
| Mg | MIN-200-12002/12020 | | ICP/OES |
| Mn | MIN-200-12002/12020 | | ICP/OES |
| Mo | MIN-200-12002/12020 | | ICP/OES |
| Na | MIN-200-12002/12020 | | ICP/OES |
| Ni | MIN-200-12002/12020 | | ICP/OES |
| P | MIN-200-12002/12020 | | ICP/OES |
| Pb | MIN-200-12002/12020 | | ICP/OES |
| Rb | MIN-200-12002/12020 | | ICP/OES |
| S | MIN-200-12002/12020 | | ICP/OES |
| Sb | MIN-200-12002/12020 | | ICP/OES |
| Sc | MIN-200-12002/12020 | | ICP/OES |
| Se | MIN-200-12002/12020 | | ICP/OES |
| Sn | MIN-200-12002/12020 | | ICP/OES |
| Sr | MIN-200-12002/12020 | | ICP/OES |
| Ta | MIN-200-12002/12020 | | ICP/OES |
| Te | MIN-200-12002/12020 | | ICP/OES |
| Th | MIN-200-12002/12020 | | ICP/OES |
| Ti | MIN-200-12002/12020 | | ICP/OES |
| Tl | MIN-200-12002/12020 | | ICP/OES |
| U | MIN-200-12002/12020 | | ICP/OES |
| V | MIN-200-12002/12020 | | ICP/OES |
| W | MIN-200-12002/12020 | | ICP/OES |
| Y | MIN-200-12002/12020 | | ICP/OES |
| Zn | MIN-200-12002/12020 | | ICP/OES |
| Zr | MIN-200-12002/12020 | | ICP/OES |
| Sample Login Weight | MIN-12009 | | BALANCE |
| Au | | | GRAVIMETRIC |

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CLIENT NAME: MINOREX CONSULTING
25856 28 AVENUE
ALDERGROVE, BC V4W2Z8
(604) 857-0442

ATTENTION TO: DOUG BLANCHFLOWER

PROJECT NO:

AGAT WORK ORDER: 13B789565

SOLID ANALYSIS REVIEWED BY: Yufei Chen, Analyst

DATE REPORTED: Dec 24, 2013

PAGES (INCLUDING COVER): 5

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.

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# Certificate of Analysis

AGAT WORK ORDER: 13B789565
PROJECT NO:

CLIENT NAME: MINOREX CONSULTING

ATTENTION TO: DOUG BLANCHFLOWER

## Fire Assay - Trace Au, ICP-OES finish (202052)

DATE SAMPLED: Dec 02, 2013 | DATE RECEIVED: Dec 02, 2013 | DATE REPORTED: Dec 24, 2013 | SAMPLE TYPE: Rock

| | Analyte: | Sample Login Weight | Au | Au-Grav |
|---|---|---|---|---|
| | Unit: | kg | ppm | g/t |
| Sample ID (AGAT ID) | RDL: | 0.01 | 0.001 | 0.05 |
| 5380160 (5017872) | | 0.94 | >10 | 144 |
| 5380161 (5017873) | | 1.68 | 0.494 | |
| 5380162 (5017874) | | 1.68 | 4.01 | 4.31 |
| 5380163 (5017875) | | 0.90 | 2.30 | 2.45 |
| 5380164 (5017877) | | 1.56 | 1.61 | |
| 5380165 (5017878) | | 1.76 | 3.66 | 3.49 |
| 5380166 (5017879) | | 1.08 | >10 | 80.8 |
| 5380167 (5017880) | | 0.94 | 0.183 | |
| 5380168 (5017881) | | 0.98 | 0.617 | |
| 5380169 (5017882) | | 1.00 | 0.250 | |

Comments: RDL - Reported Detection Limit

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# Quality Assurance - Replicate

AGAT WORK ORDER: 13B789565

PROJECT NO:

CLIENT NAME: MINOREX CONSULTING

ATTENTION TO: DOUG BLANCHFLOWER

## Fire Assay - Trace Au, ICP-OES finish (202052)

| | REPLICATE #1 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | Sample ID | Original | Replicate | RPD | | | | | | | | | | | | |
| Au | 5017872 | > 10 | > 10 | 0.0% | | | | | | | | | | | | |
| Au-Grav | 5017872 | 144 | 123 | 15.7% | | | | | | | | | | | | |

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# Quality Assurance - Certified Reference materials

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CLIENT NAME: MINOREX CONSULTING

ATTENTION TO: DOUG BLANCHFLOWER

## Fire Assay - Trace Au, ICP-OES finish (202052)

| | CRM #1 (1P5K) | | | | CRM #2 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | Expect | Actual | Recovery | Limits | Expect | Actual | Recovery | Limits | | | | | | | | |
| Au | 1.44 | 1.30 | 90% | 90% - 110% | | | | | | | | | | | | |
| Au-Grav | | | | | 14.8 | 15.2 | 102% | 95% - 105% | | | | | | | | |

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# Method Summary

CLIENT NAME: MINOREX CONSULTING

AGAT WORK ORDER: 13B789565

PROJECT NO:

ATTENTION TO: DOUG BLANCHFLOWER

| PARAMETER | AGAT S.O.P | LITERATURE REFERENCE | ANALYTICAL TECHNIQUE |
|---|---|---|---|
| Solid Analysis | | | |
| Sample Login Weight | MIN-12009 | | BALANCE |
| Au | MIN-200-12006 | BUGBEE, E: A Textbook of Fire Assaying | ICP-OES |
| Au-Grav | MIN-200-12006 | | GRAVIMETRIC |