

## INDEPENDENT TECHNICAL REPORT

AND ESTIMATED RESOURCES FOR TUG PROPERTY

Utah, United States

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Effective date: June 1, 2012  
Submission date: July 13, 2012

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*This report has been prepared by  
Caracle Creek International Consulting Inc. on  
behalf of West Kirkland Mining Inc.*

*2012*

*Issued by: Sudbury*



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## 1.0 SUMMARY

Caracle Creek International Consulting Inc. ("Caracle Creek" or "Caracle") of Vancouver, British Columbia, Canada was contracted by West Kirkland Mining Inc. ("WKM"), Vancouver, British Columbia, Canada, to estimate a resource on the TUG property (the "Property"), and prepare an Independent Technical Report (the "Report"), compliant with National Instrument 43-101 ("NI43-101"), companion policy NI43-101CP and Form 43-101F1. This report was produced for the purpose of providing WKM and its investors with an independent opinion on current technical aspects its Property.

The TUG project area is located in the Long Canyon trend, and is an advanced-stage exploration project in Box Elder County along the Nevada-Utah border known as the Tecoma mining district. The project area is located approximately 140 km northeast of the city of Elko and 80 km from the town of Wells, Nevada, USA. TUG is currently under earn-in option from Fronteer Development (USA) Inc., a wholly owned subsidiary of Newmont Mining, where WKM can earn 51-60% depending on expenditures.

Tecoma and Lucin Mining Districts have seen sporadic work completed for over 100 years with the first large discovery occurring in 1906, later to become the Jackson Mine in Nevada. Jackson Mine is located approximately 4.8 km to the north west of TUG and was primarily a lead-silver deposit in production from 1907 to 1955. More recent exploration work for precious metals began the late 1970's on the KB-TUG project area. Combined KB-TUG claim areas were explored until 1984 by Noranda Exploration Inc. with a minor exploration program by Phelps-Dodge Mining Company during this period. Noranda completed 145 drill holes. Phelps-Dodge completed 3 drill holes in 1983. In 1984, Noranda joined with Western States Mineral Corporation ("WSMC") where WSMC acted as operator until 1988 when Noranda signed all titles and interests to the KB-TUG to WSMC. WSMC completed a total of 431 drill holes on their KB-TUG project with 101 drill holes on the KB and 330 drill holes on the TUG. NewWest Gold, formed by WSMC, was assigned titles and rights to the properties until 2007 when Fronteer Development (USA) Inc. acquired NewWest. In 2008, Fronteer completed 7 drill holes, the KB-TUG projects were noted to have slightly different geological settings and were separated into two separate project areas (Dilles *et al*, 2009).

The TUG deposit is located in Box Elder County, Utah at and near the crest of the TUG anticline, within the Guilmette Formation, and overlying Tripon Pass and Diamond Peak sandstones, siltstones, conglomerates and minor limestone. TUG mineralization is hosted in sedimentary rocks and primarily within carbonate protoliths. The gold-silver mineralization is stratabound within the the Guilmette Formation at or near the contact with the overlying Diamond Peak or Tripon Pass Formations and tabular

in morphology with abundant decarbonization, silicification and argillic alteration of the calcareous host rocks. Jasperoid and late calcite veins are common as well. Gold is found finely disseminated throughout hematitic highly silicified zones and in quartz veins and veinlets. Gold mineralization is 5 to 40 m thick over a plan view area of 1800 x 750 m.

Previous operators have extensively mapped and sampled the TUG project. WKM collected 129 rock samples on the TUG project area as of spring of 2012, largely confirming what had already been mapped and sampled on the project.

WKM has not completed geophysical surveys on the TUG project area. Existing geophysical databases (i.e., Gravity, Magnetics, Radiometrics) for TUG claims have been compiled and re-interpreted by Wright Geophysics. Gravity was the most effective geophysical tool for identifying the TUG anticline and possible extensions. Wright (2011) hypothesized a semi continuous anticlinal structure between the TUG and KB deposits.

Thirteen core holes totaling 4,022.7 m were completed on the TUG project areas as of March 2012 and incorporated into the drill hole database for modelling.

Caracle Creek's site visit concluded WKM is conducting its drilling program in compliance with industry standards and appropriate for using in CIM compliant mineral resource calculations. Caracle Creek concluded from the QA/QC review of the historic database that the historic database is accurate and can be used for the purpose of resource estimate. Caracle Creek concluded from the QA/QC review of the assays from the 2011-2012 drill program that the assays are of excellent quality, as there is no sample contamination in the analytical lab and the assays are accurate and precise. Thus, there is no significant risk and uncertainty that may be expected to affect the reliability or confidence in the exploration information or the mineral resource disclosed within this report.

Mineral resources for TUG were classified by Mr. Jason Baker, P.Eng, an independent qualified person. Classification was done in accordance with the CIM Standard Definition for Mineral Resources and Mineral Reserves (December 2005) guidelines. The mineral resources for the TUG project are reported at a cut-off grade of 0.1 g/t Au. The Mineral Resource Statement for the TUG project is summarized in Table 1-1.



*Table 1-1 Mineral resource statement1 (Caracle Creek, May 29<sup>th</sup>, 2012)*

Area	Category	Quantity (tonnes) <sup>2</sup>	Grade <sup>4</sup> Au g/t	Grade <sup>3</sup> Ag g/t	Grade <sup>6</sup> AuEq g/t	Ounces <sup>5</sup> Au	Ounces <sup>5</sup> Ag	Ounces <sup>5</sup> AuEq
<b>TUG</b>	<b>Inferred</b>	<b>27,110,000</b>	<b>0.49</b>	<b>15.8</b>	<b>0.78</b>	<b>431,400</b>	<b>13,844,800</b>	<b>679,000</b>

<sup>1</sup> Reported at a cut-off grade of 0.1 g/t Au. Mineral resources are not mineral reserves and do not have demonstrated economic viability.

<sup>2</sup> Tonnes have been rounded to the nearest 10,000.

<sup>3</sup> Ag grade has been rounded to one (1) significant digit.

<sup>4</sup> Au grade has been rounded to two (2) significant digits.

<sup>5</sup> Ounces have been rounded to the nearest 100. One (1) troy ounce = 31.103 grams

<sup>6</sup> AuEq was calculated assuming 100% metal recovery using a metal price ratio between Ag and Au (Ag:Au) = 0.018

(AuEq = Au + (Ag \* 0.018))

*This resource statement supersedes all previous dated statements*

Caracle Creek concludes that the TUG mineralization has the potential to be developed as an open pit mine.

The total cost of the recommended exploration plan for the TUG property is US\$950,000.

To upgrade the resource from inferred to indicated classification, Caracle Creek recommends that WKM do more specific gravity (“SG”) testing on historic samples and do more validation drilling of the historic holes. All of the mineralized samples in the validation holes should be analyzed for SG. All of available historic mineralized intercepts should be SG analyzed to adequately determine the density of the mineralized body. Approximately, 5% of the historic holes used in the resource (485 holes) should be twinned. This amounts to 24 twin holes. The twin holes should be selected to represent 5% of each of the previous operators drill programs and should spatially cover the entire mineralized body. We recommend that reverse circulation (“RC”) drilling be used over diamond drilling due to its significantly cheaper cost, and previous RC drilling on the TUG property has shown that this is effective in producing drill samples and assays that can be used for resource estimation. A budget of \$400,000 for drilling, including assays, geologist and pad construction will cover the confirmation drilling.

Within future drill programs, the QA/QC protocol can be improved by adding an external Ag standard to the sample stream and replace the Vigoro white marble chips blanks with either quartz chips or a certified powdered blank. The Vigoro blank had a high minor failure rate for Ag.

Additional metallurgical studies should be conducted on the TUG property followed by a Preliminary Economic Assessment to advance the project to the next stage.

## **2.0 INTRODUCTION**

### **2.1 Introduction**

Caracle Creek International Consulting Inc. ("Caracle Creek" or "Caracle") of Vancouver, British Columbia, Canada was contracted by West Kirkland Mining Inc. ("WKM"), Vancouver, British Columbia, Canada, to estimate a resource on the TUG property (the "Property"), and prepare an Independent Technical Report (the "Report"), compliant with National Instrument 43-101 ("NI43-101"), companion policy NI43-101CP and Form 43-101F1. The resource disclosed in this report is a material change to WKM.

The Company retains interest in other Nevada and Utah properties that are not included in this Report and are not the focus of this review. Sherri L. Hodder, of Caracle Creek visited the project areas on October 5 and 6, 2010 accompanied by Vice President of Exploration for WKM, Michael Allen and three (3) representatives and two (2) directors from the Company.

The TUG project area is located in the Long Canyon trend, and is an advanced-stage exploration project in Box Elder County along the Nevada-Utah border known as the Tecoma mining district (Figure 2-1). The TUG project area is located approximately 140 km northeast of the city of Elko and 80 km from the town of Wells, Nevada, USA. The TUG property consists of 50.08 km<sup>2</sup> of unpatented federal lode mining claims, state leases and private mineral rights. TUG is currently under earn-in option from Fronteer Development (USA) Inc., a wholly owned subsidiary of Newmont Mining, where WKM can earn 51-60% depending on expenditures.

The information, conclusions and recommendations contained herein are based on a review of digital and hard copy data and information supplied to Caracle Creek by the Company, as well as various published geological reports, and discussions with representatives from the Company who are familiar with the Property and the area in general. Much of the generic information for this report is from a previous Independent Technical Report by Hodder and Wetherup (2012) prepared for WKM. Additional reports/publications used as sources of information for this report are listed in the Reference Section (see section 0).

## 2.2 Terminology

**Fire Assay:** For fire assaying ores fluxes (materials such as borax, soda or silica) are added to the ore. The fluxes are added for the purpose of lowering the melting point and imparting a homogeneous fluidity to the melted oxide impurities. Common oxide impurities are silica, lime, and various metal oxides. Samples are placed in furnace and heated to "fuse" the contents, samples are removed from the furnace and the slag is poured from the crucible into a cast iron or graphite mould and allowed to cool. Lead (containing the gold) will be the heaviest, sinking to the bottom and allowed to cool. Hardened slag is removed lighter material separated leaving a lead button. The button is placed in a cupel and heated in the Cupellation furnace where the lead is absorbed into the cupel, leaving only a tiny gold bead.

**ICP-ES:** Inductively Coupled Plasma - Electron Spectrometer: is an instrument capable of determining the concentrations of 70+ elements simultaneously by measuring the mass of ions generated by argon gas plasma heated to 10,000 °K and passing through a magnetic quadrupole to the detector. ICP-ES is capable of ultra-low detection limits (ppb to ppt) with wide linear ranges (up to 7 orders of magnitude).

**BLEG:** (Bulk Leach Extractable Gold) is a type of chemical sieve, designed to focus on the fine grained gold fraction and largely ignoring the larger fraction of gold within a sample ([http://en.wikipedia.org/wiki/Bulk\\_leach\\_extractable\\_gold](http://en.wikipedia.org/wiki/Bulk_leach_extractable_gold)). BLEG requires samples of 2 to 5 kg which is digested or leached with cold sodium cyanide solution. Gold is dissolved through formation of a cyanide complex and the digest analyzed. Digest is typically analyzed for Au (0.01 ppb), Cu (0.01 ppm), Ag (0.5 ppb), and any other elements of interest. However, gold values in BLEG are often lower than total assays such as those of fire assays, as it analyzes only the fine grained gold fraction and largely ignores coarser or nugget gold.

**BLM:** US Federal Government, Department of the Interior, Bureau of Land Management for Utah administers the Mining Law. The Mining Law Administration program involves primarily three elements: recordation of mining claims, maintenance of mining claims (annual work/surface management), and mineral patents (BLM of Utah website: [http://www.blm.gov/ut/st/en/prog/more/mining\\_law\\_locatable.html](http://www.blm.gov/ut/st/en/prog/more/mining_law_locatable.html)).

**DOGM:** Utah Division of Oil, Gas and Mining. The mission of the Utah Division of Oil, Gas and Mining is to regulate the exploration and development of coal, oil and gas, and other minerals in a manner which: encourages responsible reclamation and development; protects correlative rights; prevents waste; and protects human health and safety, the environment, and the interests of the state and its citizens. They

supervise permitting and inspection/enforcement procedures to ensure proper mine operation and the reclamation of affected lands.

**QA/QC:** Quality Assurance/Quality Control (QA/QC) is a system of routine checks implemented by a company to measure and control the quality of the sample inventory as it is being compiled. QC procedures include accuracy checks, insertion of known blanks in the inventory and the insertion of duplicate samples which is considered the approved standard procedure for geological sampling. QA is a system of reviews external to the QC process and is an audit of the Company procedures used for inventory control. External processes are conducted by persons “independent” of the Company and external initial sampling process. QA audits are considered to be an objective review of the sampling process.

**ISO 9000** family of standards is a part of the QA/QC systems that relates to quality management systems and was designed to help organizations ensure they meet the needs of customers and other stakeholders through third party assessment. Standards are published by the International Organization for Standardization, and available through National standards bodies. ISO 9000 outlines the fundamentals of quality management systems and the requirements organizations wanting to meet the standard need to fulfill. Third party certification bodies provide independent confirmation that organizations meet the requirements.

## 2.3 Units

The International System of Units (abbreviated SI from French: *Système international d'unités*) is commonly referred to as the metric system and is generally known as a system of units of measurement devised around seven base units and the convenience of the number ten. The metric system is the primary system of measure and length used in Technical Reporting and is generally expressed in kilometres (km), metres (m) and centimetres (cm); volume is expressed as cubic metres (m<sup>3</sup>), mass expressed as metric tonnes (t), area as hectares (ha), and gold and silver concentrations as grams per tonne (g/t). Conversions from the Metric System to the Imperial System are provided and quoted where practical. Many of the geologic publications and more recent documents now use the Metric System but older documents and documents from the United States almost exclusively refer to the Imperial System. Metals and minerals acronyms in this report conform to mineral industry accepted usage and the reader is directed to [www.maden.hacettepe.edu.tr/dmmrt/index.html](http://www.maden.hacettepe.edu.tr/dmmrt/index.html) for a glossary.

Conversion factors utilized in this report include:

- 1 troy ounce/ton = 34.285714 grams/tonne
- 1 gram/tonne = 0.029167 troy ounces/ton
- 1 troy ounce = 31.103477 grams
- 1 gram = 0.032151 troy ounces

The term gram/tonne or g/t is expressed as “gram per tonne” where 1 gram/tonne = 1 ppm (part per million) = 1000 ppb (part per billion). The mineral industry accepted terms Au g/t and g/t Au are substituted for “grams gold per metric tonne” or “g Au/t”. Other abbreviations include ppb = parts per billion; ppm = parts per million; oz/t = troy ounce per short ton; Moz = million ounces; Mt = million tonne; t = tonne (1000 kilograms); SG = specific gravity; lb/t = pound/ton; and, st = short ton (2000 pounds).

Dollars are expressed in Canadian currency (CAD\$) unless otherwise noted. Where quoted, Universal Transverse Mercator (UTM) coordinates are provided in the datum of United States, NAD 83, Zone 11.

## **2.4 Caracle Creek International Consulting Inc. Qualifications**

Caracle Creek International Consulting Inc. is an international consulting company with its head office of Canadian operations based in Sudbury, Ontario, Canada. Caracle Creek provides a wide range of geological and geophysical services to the mineral industry. With offices in Canada (Sudbury and Toronto, Ontario and Vancouver, British Columbia) and South Africa (Johannesburg), Caracle Creek is well positioned to service its international client base.

Caracle Creek’s mandate is to provide professional geological and geophysical services to the mineral exploration and development industry at competitive rates and without compromise. Caracle Creek’s professionals have international experience in a variety of disciplines with services that include:

- Exploration Project Generation, Design and Management
- Data Compilation and Exploration Target Generation
- Property Evaluation and Due Diligence Studies
- Independent Technical Reports (43-101)/Competent Person Reports
- Mineral Resource/Reserve Modelling, Estimation, Audit; Conditional Simulation



- 3D Geological Modelling, Visualization and Database Management

In addition, Caracle Creek has access to the most current software for data management, interpretation and viewing, manipulation and target generation.

The Qualified Person for and author of this Report is Dr. Julie Selway, Ph.D., P.Geo. Dr. Selway is a Senior Geologist for Caracle Creek and a geologist in good standing of the Association of Professional Geoscientists of Ontario (APGO #0738). Dr. Selway has worked as a geologist since 1993 with academia and industry on a variety of exploration properties such as rare-element pegmatites, gold, and Ni-Cu-PGE. Dr. Selway has written several Independent Technical Reports (NI 43-101) on a variety of deposit types. Dr. Selway is jointly responsible for the entire Report, except for the Mineral Resource Estimates (section 14.0). Dr. Selway did not visit the property.

Another Qualified Person and co-author of this Report is Jason Baker, B.Eng., P.Eng. Mr. Baker is a Geological Engineer with Caracle Creek and an engineer in good standing with the Association of Professional Engineers of Nova Scotia (APENS#9627). Mr. Baker has over 10 years experience in geological modelling and resource calculations in both exploration (Gold, Lead & Zinc) and operations (Coal, Gypsum, Lead and Zinc). Mr. Baker estimated and is responsible for the independent NI 43-101 compliant resources for this report (Section 14.0). Mr. Baker did not visit the property

Additional Qualified Person and co-author of this Report is Ms. Sherri L. Hodder, M.Sc., P.Geo., Senior Geologist for Caracle Creek and a geologist in good standing with the Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA #76152) and Association of Engineers and Geoscientists of Saskatchewan (APEGGS #13906). Ms. Hodder has 14 years' experience in mineral exploration, mining pre-feasibility studies and feasibility studies in Canada, Mexico, Lesotho, and Russia; she has co-authored Independent Technical Reports (NI43-101). Ms. Hodder visited the project area on October 5 and 6, 2010. Ms. Hodder is jointly responsible for Sections 5.0, 6.0, 7.0 and 8.0.

Another Qualified Person for this Report is Mr. Jim Robinson, B.Sc., P.Geo. Jim is a senior geologist and a geologist in good standing with the Northwest Territories Association of Professional Engineers, Geologists and Geophysicists (member #1662). Jim has been working in mineral exploration since 1981. His expertise lies in gold, silver, and base metal exploration, production, and ore reserve modeling and estimation. Mr. Robison is responsible for the Quality control for check assays on historic core (section 12.3). Mr. Robinson has not visited the property.

Certificates of Qualifications of all authors are provided in Appendix 1.



### **3.0 RELIANCE ON OTHER EXPERTS**

Caracle Creek has completed this Report in accordance with the methodology and format outlined in National Instrument 43-101, companion policy NI43-101CP and Form 43-101F1. This Report was prepared by competent and professional individuals from Caracle Creek on behalf of WKM, the Company, and is directed solely for the development and presentation of data with recommendations to allow WKM and current or potential partners to reach informed decisions.

The information, conclusions and recommendations contained herein are based on a review of digital and hard copy data and information supplied to Caracle Creek by WKM, as well as various published geological reports, and discussions with representatives from WKM who are familiar with the Property and the area in general. Caracle Creek has assumed that the reports and other data listed in the “References” section of this report are substantially accurate and complete.

The Company has provided a legal opinion with respect to title of the claims and leases for the properties. Claims and leases (Appendix 2) appear to be in good standing according to the documentation provided by WKM and its legal representatives. Caracle Creek has reviewed and relied on this legal opinion, but has not verified it.

Caracle Creek has relied exclusively on information provided by WKM regarding land tenure, underlying agreements and technical information not in the public domain, and all of these sources appear to be of sound quality. Caracle Creek is unaware of any technical data other than that presented by the Company or its agents. Caracle Creek did not conduct an in-depth review of mineral title and ownership and the title ownership and status of claims as outlined in this Report was obtained from WKM.

While title documents and option/purchase agreements were reviewed in this study and as provided by the Company, it does not constitute, nor is it intended to represent, a legal, or any other opinion as to title. The dates, titles and authors of all reports that were used as a source of information for this Technical Report are listed in the “References” section of this report. The dates and authors of these reports also appear in the text of this Report where relevant, indicating the extent of the reliance on these reports and other experts.

Caracle Creek is relying on the metallurgical experts quoted in Kuipers (1991) for information provided in Section 13.0.

## 4.1 Location

The map displays the TUG Property in Utah, USA, with a yellow star indicating the mine location. The map includes a legend for symbols: a yellow star for TUG, a blue dot for cities/towns, a blue square for airports, a red line for highways/roads, a blue area for lakes/ponds, and a white outline for state borders. The map shows the TUG Property situated near the town of Tropic, Utah, and the town of Hatch, New Mexico. The map also shows the TUG Property's proximity to the town of Tropic, Utah, and the town of Hatch, New Mexico. The map includes a scale bar and a north arrow. The map is titled 'TUG Property, Utah, USA' and 'Property Location Map, TUG Property, Utah, USA'.

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## 4.2 Mineral Tenure

The TUG property consists of four types of mineral tenure (Figure 4-2):

1. US Federal Government, Bureau of Land Management (“BLM”) leased claims (ACATIM series) leased from Phelps Dodge
2. US Federal Government, BLM mining claims (GUT and OMA series)
3. State of Utah mineral rights leases (Township 8N R19W sections 2, 16 and T9N R19W section 36)
4. Private mineral rights leased from Lucine Energy (Township 8N R19W sections 3,9,11,15,21,23)

WKM has 36 leased claims (ACATIM) and 310 owned claims (GUT and OMA). TUG BLM leased claims cover 3.01 km<sup>2</sup>, owned BLM claims cover 25.7 km<sup>2</sup>, state leases cover 7.68 km<sup>2</sup>, and private leases cover 15.67 km<sup>2</sup>. The total area for the TUG property is 50.08 km<sup>2</sup>. Overlapping mineral rights create a slight discrepancy in total area of the TUG property.

All of WKM’s tenure is contiguous except for the GUT BLM mining claims in Township 9N, Range 19W, section 28 which is separated from the nearby OMA BLM mining claims by a small fraction.

The ACATIM leased claims are owned by Phelps Dodge who is now owned by Freeport. The lease is now held by Fronteer Development (USA) Inc. (“Fronteer”), which became a subsidiary of Newmont Mining (“Newmont”).

The GUT claims are owned by NewWest Gold Corp, who became a subsidiary of Fronteer which became a wholly owned subsidiary of Newmont. WKM is optioning these claims from Fronteer.

The OMA claims are owned by Fronteer, which became a subsidiary of Newmont. WKM is optioning these claims from Fronteer.

The Lucine agreement is held by a subsidiary of Fronteer, which became a subsidiary of Newmont. Lucine Energy is located in Salt Lake City, Utah.

WKM has the mineral rights to explore and access the entire TUG property. The US Federal Government, BLM has surface rights on ACATIM leases and GUT and OMA mining claims. The State of Utah has the surface rights on the state leases. The surface ownership on the private leases is a mix of Fronteer (Newmont) and private individuals. The key portions of the mineralization are under the surface rights



held by Fronteer which is part of the WKM-Fronteer option agreement or the state. There is obligation and professional courtesy to attempt to notify surface rights owners before performing work on the TUG property.

WKM has provided a legal opinion with respect to title of key portions of the property and its associated claims (Figure 4-1). Key claims and leases appear to be in good standing according to the legal opinions provided by WKM; Caracle Creek has relied on this legal opinion, but has not verified it. Claims and leases owned or operated by WKM for the TUG project area is listed in Appendix 2.



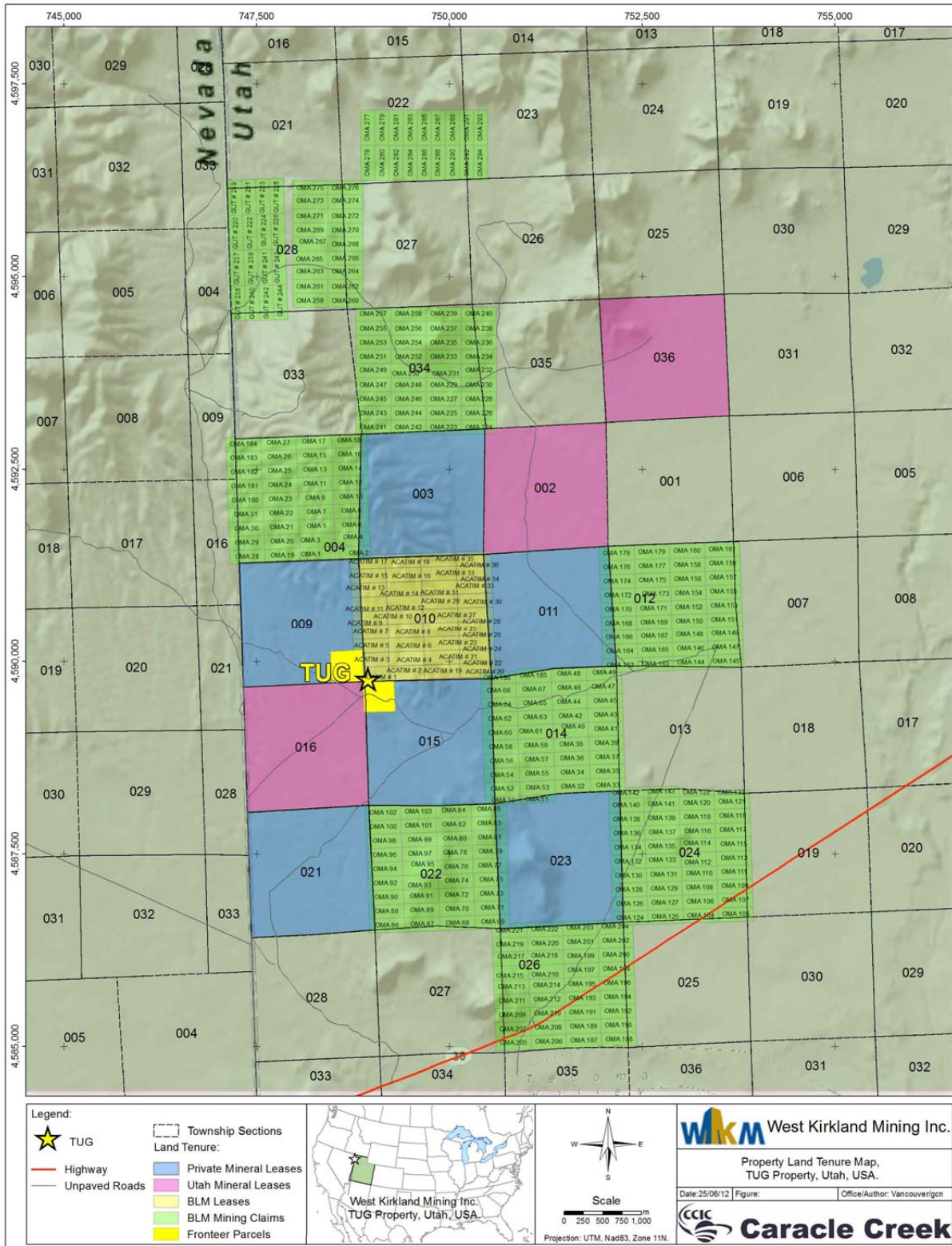


Figure 4-2 Tenure map for TUG property.



*The numbers on the squares are section numbers. Fronteer parcels are private leases in which Fronteer/Newmont has the surface rights.*

#### **4.3 WKM – Fronteer/Newmont option agreement**

On December 14, 2010, West Kirkland Mining optioned 11 properties in Nevada and Utah from Fronteer Gold. The legal transaction took place between WK Mining (USA) Ltd., a subsidiary of West Kirkland Mining Inc. and two subsidiaries of Fronteer Gold; Fronteer Development (USA) Inc, and Nevada Eagle Resources LLC. Included in this package of 11 properties is the TUG Property located in Box Elder County, Utah.

Subsequent to the option agreement between West Kirkland and Fronteer Gold being signed, Fronteer Gold was purchased by Newmont Mining for \$2.2 billion dollars. Fronteer Development (USA) Inc. and Nevada Eagle Resources LLC continue to exist as subsidiaries of Newmont. As a result of the Fronteer/Newmont transaction, WKM is effectively optioning 11 properties from Newmont, all other aspects of the option agreement remain the same.

To earn an undivided 51% interest in the TUG property West Kirkland has to make expenditures totalling US\$1.8 million over four years according to the following schedule:

<b>Year</b>	<b>Amount</b>
<b>1&amp;2</b>	\$ 100,000
<b>3</b>	\$ 700,000
<b>4</b>	\$ 1,000,000
<b>Total</b>	\$ 1,800,000

West Kirkland has the right to accelerate its earn in and any excess amounts from a given year can be carried forward.

To earn an additional nine percent interest (60% total undivided interest) in the TUG property, West Kirkland has the option of spending an aggregate of \$4,000,000 or completing a pre-feasibility study on the property within two years of completing the first earn in right.

The Lucine Lease agreement is included in the option agreement between West Kirkland and Fronteer Gold. The Lucine Lease was signed on August 23, 2001 by Western States Minerals Corporation, which was in turn acquired by Fronteer.



The Lucine Lease covers 6 sections within Township 8 North, Range 19 West, Salt Lake Base and Meridian.

Section 3: Lots 1,2,3,4, the south half of the north ½ and the South half  
Section 9: Lots 1,2,3,4, the East half of the West half, the East half  
Section 11: All  
Section 15: All  
Section 21: All  
Section 23: All

The term of the lease is 20 years. For the remainder of the terms of the lease there is an annual advance royalty of \$15,000 USD.

Under an amendment to the original option agreement with Fronteer, Newmont Mining is responsible for tenure for the 11 optioned properties.

WKM provided Caracle Creek with a summary of the option agreement. Caracle Creek has relied on their legal opinion and has not verified it.

#### **4.4 Legal obligations on TUG property**

A BLM mining claim and leased claim is a parcel of land for which the claimant has asserted a right of possession and the right to develop and extract a discovered, valuable, mineral deposit. This right does not include exclusive surface rights (Utah Bureau of Land Management, Mining Law website: ([http://www.blm.gov/ut/st/en/prog/more/mining\\_law\\_locatable.html](http://www.blm.gov/ut/st/en/prog/more/mining_law_locatable.html))). The annual maintenance fee is \$140 US/claim which is due on or before Sept. 1 of each year to the Bureau of Land Management to keep the claims in good standing. Additional annual fees for \$10.50 (US) are paid to the County in which they are located and the County charges an additional \$4.00 map fee when annual filings are made. The annual fees on the BLM mineral tenure are made by Newmont, as per an amendment to the option agreement with Fronteer.

There is an annual fee for the BLM leased claims is \$4100 US payable to Phelps Dodge.

The annual fee for the state leases is approximately \$4500/year per section.

An annual fee for the private leases is \$15,000 US payable to Lucine Energy.

The known royalty obligations on the TUG property are as follows:

1. BLM leased claims (ACATIM) have 5% NSR on them payable to Freeport (Phelps Dodge).
2. NewWest Gold LLC was granted a 3% NSR on the TUG property to be offset by third party royalties but not less than 1%.
3. State leases have a 4% NSR on non-fissionable metals (i.e., excluding uranium-233, uranium-235 and plutonium-239) payable to the state.
4. Private mineral property leases have a 2.47 % NSR payable to Lucine Energy.

Due to the complex history of the TUG property, other obligations may exist. The above summary is what can be confirmed as of writing this report. WKM provided Caracle Creek with a summary of the tenure obligations on the TUG property. Caracle Creek has relied on their opinion and has not verified it.

There are no significant environmental liabilities on the TUG property. WKM has a bond with the Utah Department of Oil, Gas and Minerals (“DOGM”) that is in place to reclaim any sites that are unreclaimed by WKM.

WKM has an exploration permit through DOGM to work on the TUG property.

A significant risk to the TUG property is title, as the title system is complex, WKM has legal opinions on title based on county records showing they are able to earn their interest in the TUG property. Permitting is straight forward and access is granted with mineral rights.

## **5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY**

### **5.1 Access**

The TUG property is located in high desert and accessible via a network of paved federal roads, local highways, gravel grid roads and dirt tracks. Elko, Nevada has a regional airport with access to two major international airports; one located in Las Vegas, Nevada and the other in Salt Lake City, Utah.

TUG project area is approximately 140 km from the City of Elko, Nevada. The TUG project area is located in Box Elder County, Utah, close to the border with Nevada as shown in Figures 2-1 and 6-1. The project area was accessed by heading west from Elko on Dwight Eisenhower Highway (Interstate Hwy I-80) to the turnoff at Oasis (Hwy 233) and then heading northwest on Hwy 233 towards the town of



Montello, Nevada to the Utah border. TUG project area is located approximately 3.5 km north along a gravel grid road.

## **5.2 Climate and Vegetation**

Mean annual temperatures in the State of Nevada vary but the average high for Elko County is 16.7° C with a daily mean of 8.3° C and an average low of -5.5° C. January is the coldest month with an average maximum of 2.8° C and average minimum of -9.9° C. July is typically the warmest month with an average maximum of 32° C and average minimum of 9.2° C ([http://en.wikipedia.org/wiki/Elko,\\_Nevada](http://en.wikipedia.org/wiki/Elko,_Nevada)).

Box Elder County, Utah climate is semi-arid (Koppen climate classification *BSk*) and classified as a western desert plateau with typical topography of the Great Basin consisting of broad valleys separated by mountain ranges. Vegetation is primarily salt desert shrubs, sagebrush and perennial grasses with lesser pinion-juniper woodlands with mixed conifer stands occurring throughout ([http://www.blm.gov/nv/st/en/fo/elko\\_field\\_office.html](http://www.blm.gov/nv/st/en/fo/elko_field_office.html)). Annual rainfall in Elko County averages 24.3 cm; falling an average of 79 days in the low lying areas. Annual snowfall averages 72 cm with the most snowfall in one year at 256 cm in 1996 and heavier snowfalls reported in the more mountainous areas ([http://en.wikipedia.org/wiki/Elko,\\_Nevada](http://en.wikipedia.org/wiki/Elko,_Nevada)).

Drilling can be conducted year round at lower elevations with short delays expected during the spring thaw from late February to April in more mountainous terrains. Geological mapping, outcrop sampling and soil sampling surveys can easily be conducted from May to November when there is little or no snow on the ground.

## **5.3 Physiography**

Box Elder County, UT are located within the Basin and Range physiographic province. Distinctive features of this province are isolated, longitudinal fault-block mountain ranges separated by long, alluvial-filled basins (Fennemen, 1931; Sass et al, 2000). The Great Basin area of Nevada is characterized by north to northeast trending ranges separated by wide flat valley, internal drainage, high heat flow and sustained periods of episodic magmatism as outlined in Sections 7.0 and 8.0 of this Report.

## **5.4 Infrastructure and Local Resources**

WKM Properties are all located relatively close to several small towns but the City of Elko is considered the 'capital' of Nevada's gold belt. Elko has a population of 18,297 according to the 2010 Census and a history of gold mining, tourism and ranching. It has sufficient railway, interstate highways and local

highways plus many well maintained local gravel and grid roads which allow access to the project areas. Elko and its surrounding towns contain adequate local infrastructure to support both extensive exploration and mining in the area ([http://en.wikipedia.org/wiki/Elko,\\_Nevada](http://en.wikipedia.org/wiki/Elko,_Nevada)). There are two hydroelectric stations both located near the Arizona-Nevada borders: the Davis Dam and the Hoover Dam which provide power to Arizona, Nevada and surrounding States.

The TUG property is currently in the exploration stage, the property does not have a NI43-101 compliant reserve or a prefeasibility study; therefore, discussions on potential tailings storage areas, potential waste disposal areas, heap pad leach pad areas and potential processing tailings storage area for mining operations are not relevant for the purposes of this report.

## **6.0 HISTORY**

The States of Utah and Nevada has been a known exploration areas for over 100 years and several “mineralization trends” have been defined (Figure 7-2). The trends are based on the regional and local geology and structure which has confined specific mineralization to particular units and formations. Mineralization trends outlined in this Report are based on a broad geologic setting for the entire region and do not indicate specific mineralization or known deposits within WKM property boundaries.

### **6.1 Long Canyon Trend: 1864 to 2010**

The following historical information was derived from symposium presentations of Smith *et al*, 2010 (a) and NI43-101 Technical Report for Fronteer Development (USA) Inc. by Smith *et al*, 2010 (b) and references therein. Caracle Creek has reviewed these reports but not verified the accuracy of all data within them. The Long Canyon Trend has also been previously described in assessment reports prepared for NewWest Gold Corporation, AuEx Ventures and Fronteer Development Group (USA) with AuEx Ventures from 2006 to 2010 (Smith *et al*, 2010 (b)).

The Long Canyon Trend, is recognized as part of the old Tecoma Mining District and has seen sporadic exploration for approximately 100 yrs. The Tecoma Mine was originally discovered around 1864 operating until around 1875 (Figure 7-2).

During the 1990’s Pittston Nevada Gold Company came to Nevada with a unique philosophy of exploring away from the known trends using BLEG (Bulk Leach Extractable Gold) technology; BLEG is essentially a chemical sieve, designed to focus on the disseminated, fine-grained gold fraction. Exploration led to the discovery of gold mineralization in the Pequop Mountains, first on the west side of the range in 1995 and

later at Long Canyon on the east side of the range in 2000 in an area previously considered 'not prospective' for precious metal mineralization.

In 2000, Pittston conducted detailed geologic mapping and sampling programs over the Long Canyon area and defined a very strong gold-in-soil anomaly. The anomaly was drill tested in late 2000 and encountered mineralization starting from surface. Weak gold prices and other economic factors contributed to Pittston's decision to discontinue exploration within Long Canyon claims.

In 2005, AuEx Ventures (AuEx) acquired the assets of Pittston Nevada Gold Company, which included Long Canyon. AuEx successfully added to the known extents of mineralization at Long Canyon with a reverse circulation drilling program. It was soon discovered that NewWest Gold (NewWest) controlled private mineral rights under a portion of the Long Canyon property which led to the negotiation of a joint venture agreement between NewWest and AuEx in May, 2006. NewWest further extended the known mineralization in 2006 and 2007.

In September 2007, Fronteer Development (USA) Inc. acquired NewWest and rapidly increased its level of exploration activity in the Long Canyon Trend area by completing an additional 164 holes (109 RC, 55 core) in 2008 (Smith *et al*, 2010 (b)), a predictive geologic model, and a NI43-101 compliant resource of the Long Canyon Deposit was released in March, 2009.

## **6.2 Summary of Exploration History:**

The TUG property (Figure 4-2) was optioned by West Kirkland Mining from Fronteer Resources Ltd on December 16, 2010. This summary is derived from the work of Dilles *et al* (2009) and references therein, Caracle Creek has reviewed the report but not verified the data. Utah mining data is available for public viewing and contained at the Box Elder County (Utah) County Recorder Mining records (Utah State Archives') consisting of microfilm reels commencing from the period 1871 (<http://www.archives.utah.gov/research/inventories/84097.html>).

### **6.2.1 KB-TUG Project Areas**

Tecoma and Lucin Mining Districts have seen sporadic work completed for over 100 years with the first large discovery occurring in 1906, later to become the Jackson Mine in Nevada. Jackson Mine is located approximately 4 km to the southwest of the KB hill and was primarily a lead-silver deposit in production from 1907 to 1955. During this time it was reported that 3.12 M lbs Pb, 67,274 oz Ag, 21,361 lbs Cu, 2000 lbs Zn and 91 oz Au was extracted from the Jackson Mine (Dilles *et al*, 2009). Caracle Creek has

not verified this historical resource, thus it can not be relied upon. This historic resource is mentioned in this report to show the existence of historic mineralization in the area. The key assumptions, parameters and methods used to prepare this historical resource are not known. This historical estimate does not use categories set out in sections 1.2 and 1.3 of the National Instrument 43-101, Standards of Disclosure for Mineral Projects. The Qualified Person has not done sufficient work to classify the historical estimate as current mineral resource and the issuer is not treating the historical estimate as current mineral resource.

Several historic prospects and workings consisting of shafts, drifts, adits and pits exist throughout the district such as the Queen of the West diggings noted in the KB claim area. Predominantly the old workings were exploited for lead, silver and barite with secondary metals including copper, gold, antimony and zinc.

More recent exploration work for precious metals began the late 1970's on the KB-TUG project area (Figure 5-1). At various times in their history, KB and TUG have been considered two separate project or one combined project. WKM considers KB and TUG to be two separate projects divided by the Utah-Nevada border. Additionally, the option agreement between Fronteer and West Kirkland considers the KB and TUG as separate projects. Combined KB-TUG claim areas were explored until 1984 by Noranda Exploration Inc. with a minor exploration program by Phelps-Dodge Mining Company during this period. Noranda completed 145 drill holes. Phelps-Dodge completed 3 drill holes in 1983. In 1984 Noranda joined with Western States Mineral Corporation (WSMC) where WSMC acted as operator until 1988 when Noranda signed all titles and interests to the KB-TUG to WSMC. WSMC completed a total of 431 drill holes on their KB-TUG project with 101 drill holes on the KB and 330 drill holes on the TUG. NewWest Gold, formed by WSMC, was assigned titles and rights to the properties until 2007 when Fronteer Development (USA) Inc. acquired NewWest. In 2008 Fronteer completed 7 drill holes, the KB-TUG projects were noted to have slightly different geological settings and were separated into two separate project areas (Dilles *et al*, 2009).

Table 5-1. Summary of exploration work completed on the TUG-KB Property (Griffith, 2005 and Dillies *et al*, 2009)

Year	Company	Type	Drilling Holes	Meters	Activity
1907-1955	Various				Jackson Mine produced 21,361 lbs Cu, 91 oz Au, 3,129,441 lbs Pb, 67,274 oz Ag and 2000 lbs Zn
1970-1984	Noranda				Regional exploration
1981	Noranda	Rotary	9	441.0	
1982	Noranda	RC	75	3653.0	
1982	Noranda	Core	3	38.1	
1983	Noranda	RC	44	1348.1	
1983	Noranda	Core	14	210.9	
1983	Phelps	RC	3	414.5	



Year	Company	Type	Drilling Holes	Meters	Activity
	Dodge				
1984	TUG JV	RC	82	3985.3	
1985	TUG JV	RC	128	5292.9	
1985	TUG JV	Rotary	10	489.2	
1987	TUG JV	RC	4	460.2	
1988	WSMC	RC	14	1565.1	
1989	WSMC	RC	15	533.4	
1991	WSMC	RC	6	804.7	
1992	WSMC	RC	30	4160.5	
1993	WSMC	RC	69	10568.9	
1994	WSMC	RC	16	1676.4	
1995	WSMC	RC	6	2086.4	
1997	WSMC	RC	49	4637.5	
1998	WSMC	RC	2	278.9	
2008	Fronteer	RC	5	1258.8	Incl. 476 soils, 13 silts, 57 rock samples
2008	Fronteer	Core	2	393.0	3 x 3 km ground mag and 10 x 12 km gravity
			<b>586</b>	<b>44297.0</b>	

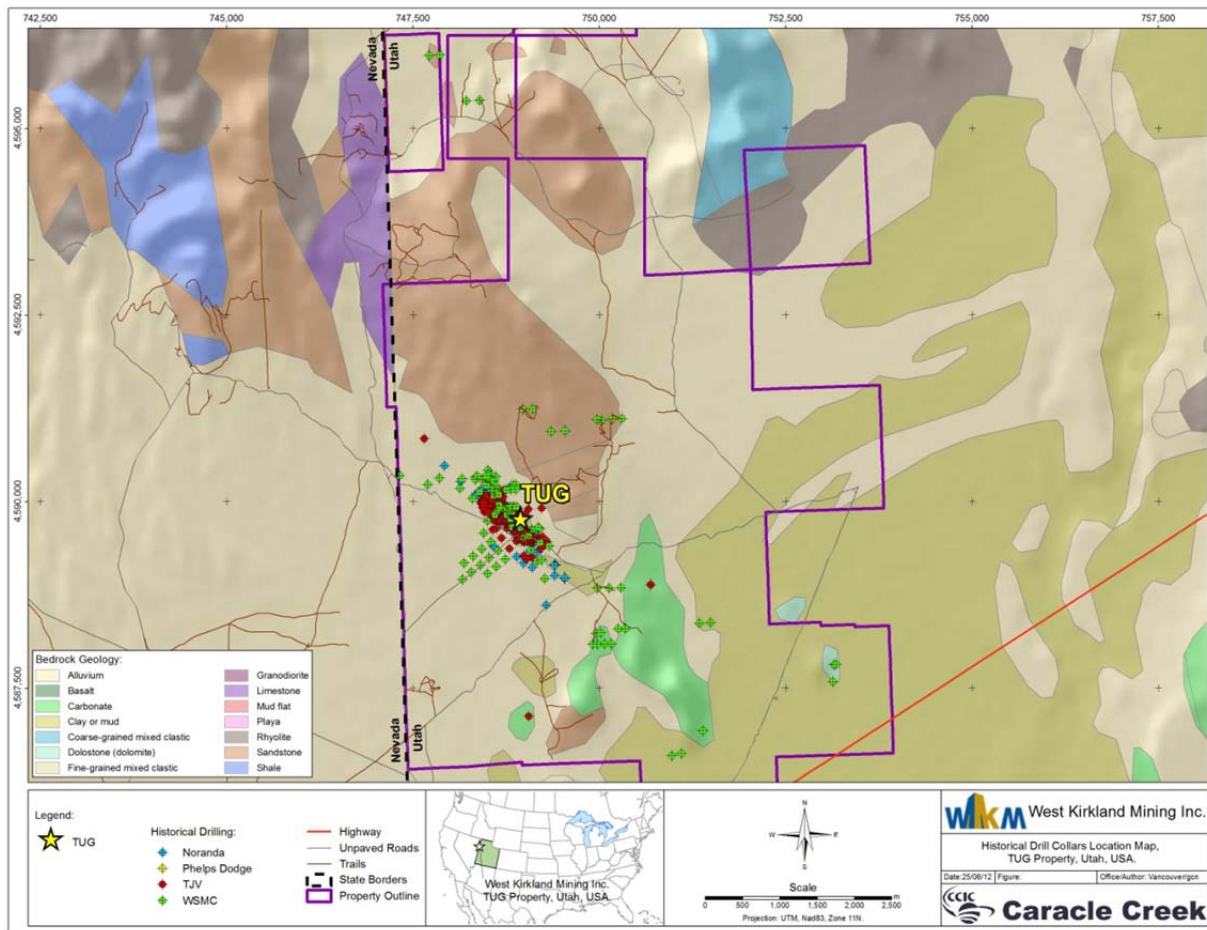


Figure 5-1 Historic drill plan map for TUG property.

Historic mapping of the TUG deposit identified the outcropping mineralized jasperoids hosted at the top of the TUG anticline (Figure 9-1). On a property scale NW structures were identified as being key to hosting mineralization.

A large geophysical data set came with the property. WKM has reinterpreted the data and the results are discussed in Exploration Section 9.2.

## 7.0 GEOLOGICAL SETTING AND MINERALIZATION

### 7.1 Regional Geology

North Central Nevada has had a complex and varied tectonic history that is part of the evolution of the North American Cordillera (Figure 7-1). In the late Proterozoic the region was a west-facing passive rifted continental margin. During the Devonian to early Mississippian Antler Orogeny eugeoclinal rocks of the Roberts Mountain allochthon were thrust eastward over miogeoclinal rocks of the continental shelf which was a significant tectonic event during the Early Mississippian and resulted in the movement eastward, from a source west of Elko County, of silicic and volcanic rocks originally deposited on the ocean floor. The boundary between thrust blocks is considered to be a major east-west-trending wrench, or transcurrent fault known as the Owyhee rift, currently buried beneath Idaho (Coates, 1987; Dilles *et al*, 2009). In the late Permian to early Triassic the Sonoma Orogeny placed eugeoclinal rocks of the Golconda allochthon over the Roberts Mountains allochthon. The Sonoma Orogeny culminated in the establishment of an active margin west of Nevada (Ronning, 2006).

Early to middle to Tertiary tectonism was characterized by a southward sweep of generally east-west belts of magmatism from 43 to 21 Ma and by discrete regions of highly extended domains. Middle to late Tertiary tectonism was characterized by regional uplift, formation of the Northern Nevada rift and widespread development of tilted fault blocks. Rifting in the mid-Miocene was marked by a predominant north-northwest trending linear magnetic high extending for about 483 km, and an alignment of dykes, intrusions and graben filling lava flows which characterize the Basin and Range topography common in the area (Folger *et al*, 1998; Ronning, 2006). The graben fault-block components of the Basin and Range topography have been filled in by erosional effects of the uplifted mountains. Nevada remains a very seismically active area, littered with many north-south trending fault systems throughout the state exhibiting a repeating of the fault-block mountain sequences.

In the region, there are a number of “mineralized trends” which contain numerous gold deposits and showings partially defined on structural boundaries. The location of these trends is outlined in Figure 7-2.



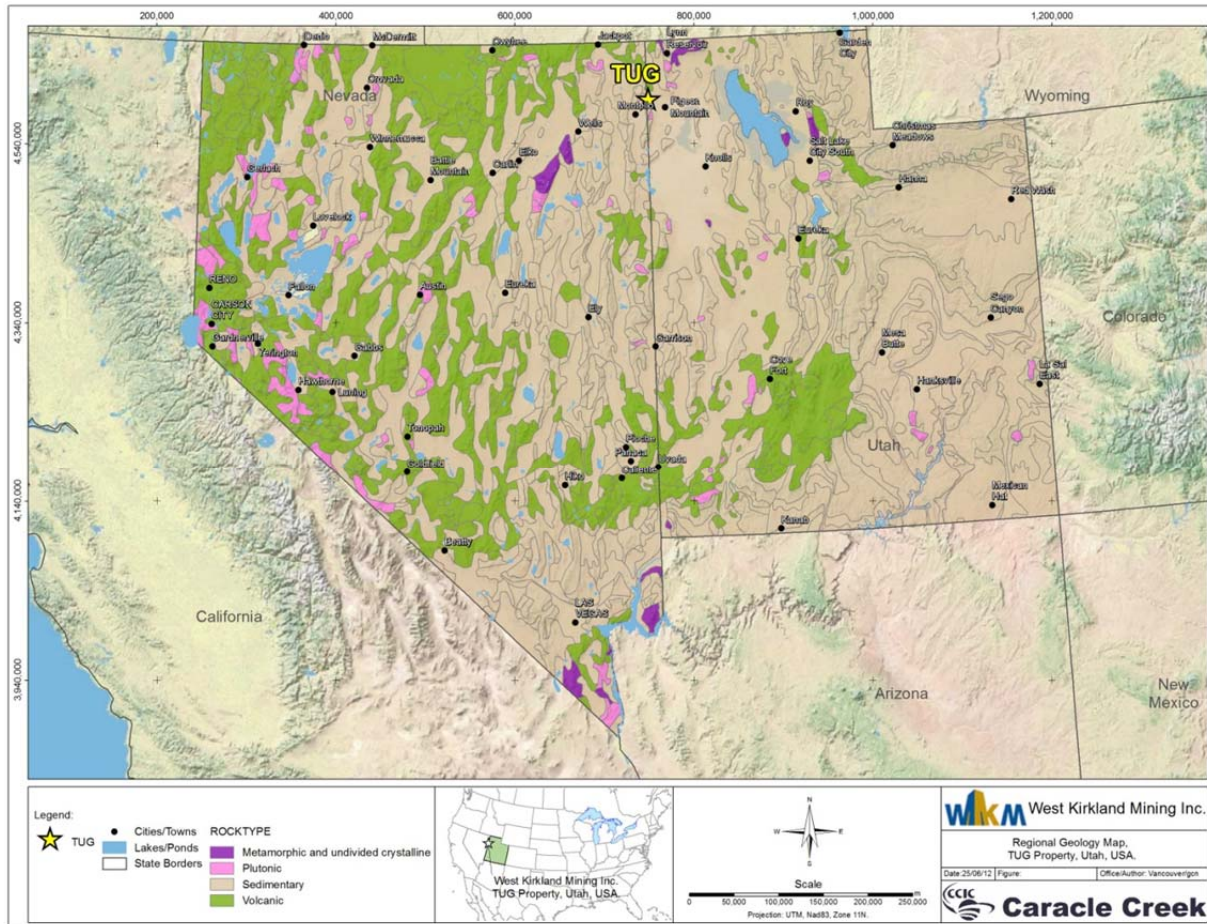


Figure 7-1 Regional geology of Nevada and Utah.  
Data source: Geological Society of America (GSA), *Geologic Map of North America* (Reed et al., 2005, 1:5,000,000).

## 7.2 Local Geology – Long Canyon Trend

The TUG project area lies within the Long Canyon Trend (Figure 7-2). Long Canyon region geology is best described in Muller (1993) Windermere Geologic map of northeastern Nevada, and its accompanying text which outlines the geologic units and structural confines in the area. The following is a brief outline and synopsis of the area which includes the Long Canyon Trend geology of the Pequop Mountains and Windermere Hills.

Stratigraphic units exposed in the Pequop Mountains and Windermere Hills consists of Paleozoic and Mesozoic strata ranging from Ordovician through Triassic and consists of clastic and carbonate units or their metamorphic equivalents. Paleozoic-Mesozoic units were deposited on the continental shelf of the



Cordilleran miogeocline. Tertiary strata were deposited within the half-grabens formed by upper crustal normal faulting during overprinted periods of extension and volcanism (Muller, 1993).

The Pequop Mountains are underlain by Lower and Middle Paleozoic stratigraphic units that recorded episodic shallowing of the passive continental margin and migration of the shelf break westward over time.

Oldest units are Ordovician strata exposed in the Pequop Mountains. The oldest is the Lower Ordovician Pogonip group consisting of light to dark grey limestone, poorly exposed shaly limestone and sandy dolomite. These rocks are in contact with overlying Middle Ordovician Eureka Quarzite, consisting of light grey to white, quartz rich sandstone which appears to have undergone minor heating without any appreciable strain (Muller, 1993). This is overlain by Late Ordovician Fish Haven Dolomite comprised of dark grey dolomite with minor black chert overlain by platy, grey argillaceous limestone of the lower portion of the Silurian-Devonian Roberts Mountain Formation.

Devonian units include the Sevy and Simonson Dolomites and the Guilmette Limestone. Sevy and Simonson dolomites consist of light to dark grey, relatively thickly bedded dolomite units. Overlying Late Devonian Guilmette Limestone consists of light grey, thickly bedded limestone which is overlain by Mississippian Tripon Pass Limestone described as a grey thinly bedded limestone with a thickly bedded sequence of clast supported limestone conglomerate of turbiditic origin. These limestones are interbedded with and grade into coarse sandstones and chert pebble grit and conglomerates of the overlying Melandco sandstone (Muller, 1993).

Based on mapping and stratigraphic studies in adjacent ranges a thick section of the Paleozoic strata has been excised in the northern part of the general area along a major east rooted low angle normal fault named the Black Mountain fault. The fault contains Permian-Miocene strata in its hanging wall and Mississippian-Ordovician strata in its footwall.

West Kirkland Mining has an option agreement to earn up a 60 percent interest in the adjacent KB Property. The KB and TUG property are contiguous, but are separated by the Utah-Nevada border. The KB deposit has been described by some previous workers as a hot spring deposit, where the TUG deposit is recognized as a Carlin type deposit. The KB has only significant Au mineralization, whereas TUG has both Au and Ag mineralization. The KB property is 23.82 square kilometers and hosts the KB deposit located approximately 4 km from the TUG deposit, which has been estimated by previous workers to contain between 15,000 and 40,000 oz Au (Dilles, 2009). These estimates are considered historic in nature and should not be relied upon.

West Kirkland has also optioned property from Rubicon Minerals in the Long Canyon Trend. The Rubicon property and the KB/TUG property interlock and overlap. The interlocking is created by the Rubicon option controlling private mineral rights and the Frontier option controlling staked claims on alternate sections. –Also, on section of land, Township 41N, Range 70E, Section 5, the private mineral rights are owned by both Frontier and Rubicon and West Kirkland is optioning this section from both parties. Approximately 10 kilometers to the west of the TUG deposit is the 12 Mile property, which lies upon ground West Kirkland has optioned from Rubicon. The 12 Mile showing has been drilled by Noranda and Bow Valley which identified a mineralized horizon averaging 80-100 feet in thickness with a strike length of 1000 feet was identified. This horizon had an average grade of 0.006 to 0.015 opt Au. Limbach (1995). Recent sampling by West Kirkland returned 29 meters grading 0.33 g/t Au and 1.00 g/t Ag from continuous chip samples taken from a recently constructed drill pad.

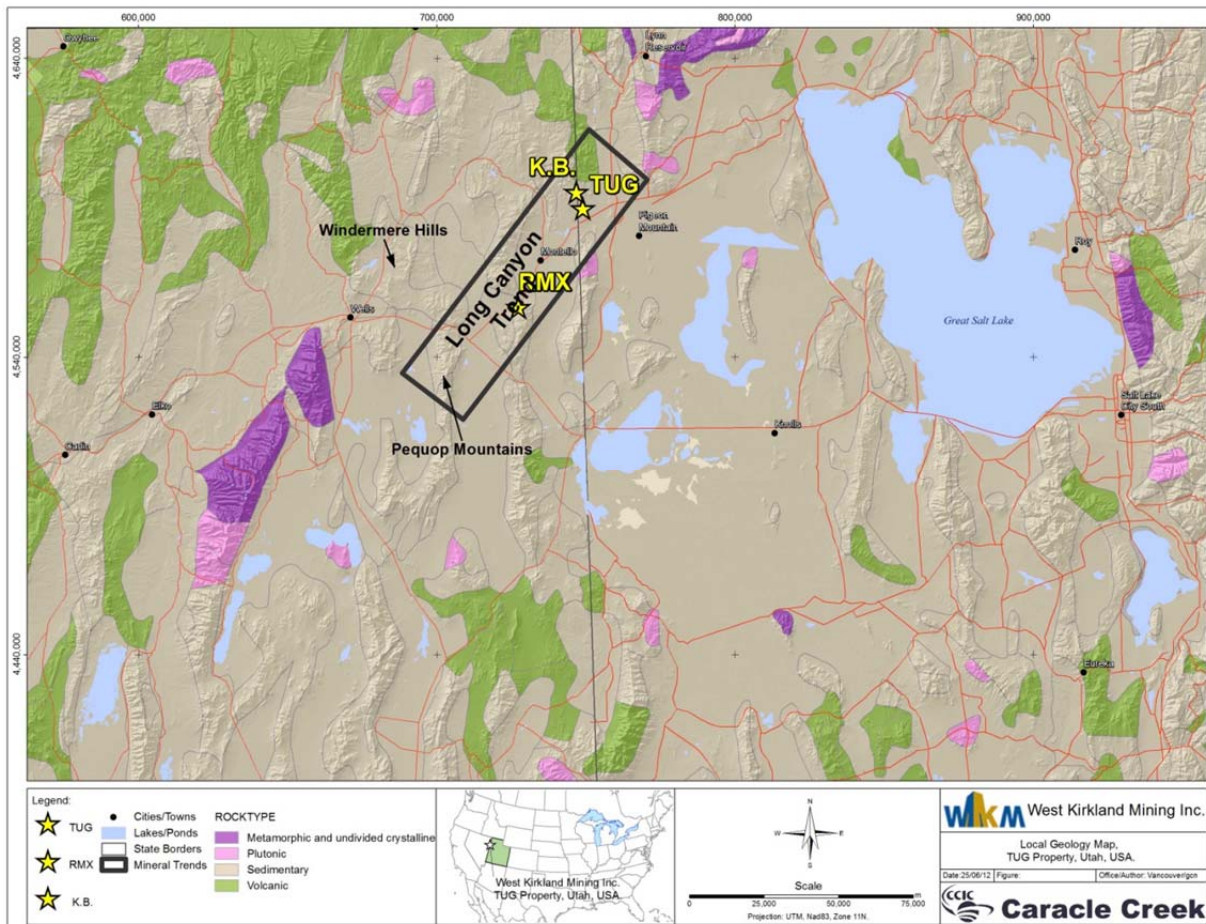


Figure 7-2 Local geology map for northern Nevada and Utah.

Data source: Geological Society of America (GSA), *Geologic Map of North America* (Reed et al., 2005, 1:5,000,000).

### 7.3 Property Geology

The TUG deposit is located in Box Elder County, Utah at and near the crest of the TUG anticline, within the Guilmette Formation, and overlying Tripon Pass and Diamond Peak sandstones, siltstones, conglomerates and minor limestone (Figure 7-3). The oldest sedimentary unit exposed in the TUG project area is a thick section of continental shelf carbonate rocks known as the Devonian Guilmette Formation. These Devonian rocks are unconformably overlain by Mississippian and Pennsylvanian rocks of the Tripon Pass, Diamond Peak and Ely Formations respectively. These strata were deposited in Antler Foreland Basin with the units interpreted as lenticular with a range of thicknesses. The Pennsylvanian beds are discontinuous suggesting that deposition was restricted by topography or has been sliced by attenuation style thrusting and high angle faulting.

Tertiary and Quaternary sedimentary rocks and sediments are present on the TUG project areas where the oldest Tertiary conglomerate formed on a pre-volcanic paleosurface and consists of unsorted to well sorted, well rounded sand, pebbles and cobbles comprised mainly of quartz mica-schist and quartzite. Overlying Quaternary sediments are mainly lacustrine and alluvial. Lacustrine sediments include gravel with sand and finer grained marl, silt and sand of Lake Bonneville (Dillies *et al*, 2009).

A large volume of Guilmette limestone is replaced by hydrothermal dolomite directly below gold-silver mineralization. Silicification as jasperoid occurs above the zone of dolomitization at a contact zone in both the dolomitized limestone and the decalcified Tripon Pass Limestone. Other deposits overlying the Guilmette are Alligator Ridge, Taylor, Hamilton, and Ward Mountain. Altered Tertiary quartz monzonite, monzonite, diorite dikes and sills intrude the rocks with dikes trending north-northwest. Jasperoid is vuggy and cut by multiple generations of quartz veins. There are many zones within the TUG where formation identification is unable to be determined due mainly to overprinting alteration throughout the area.

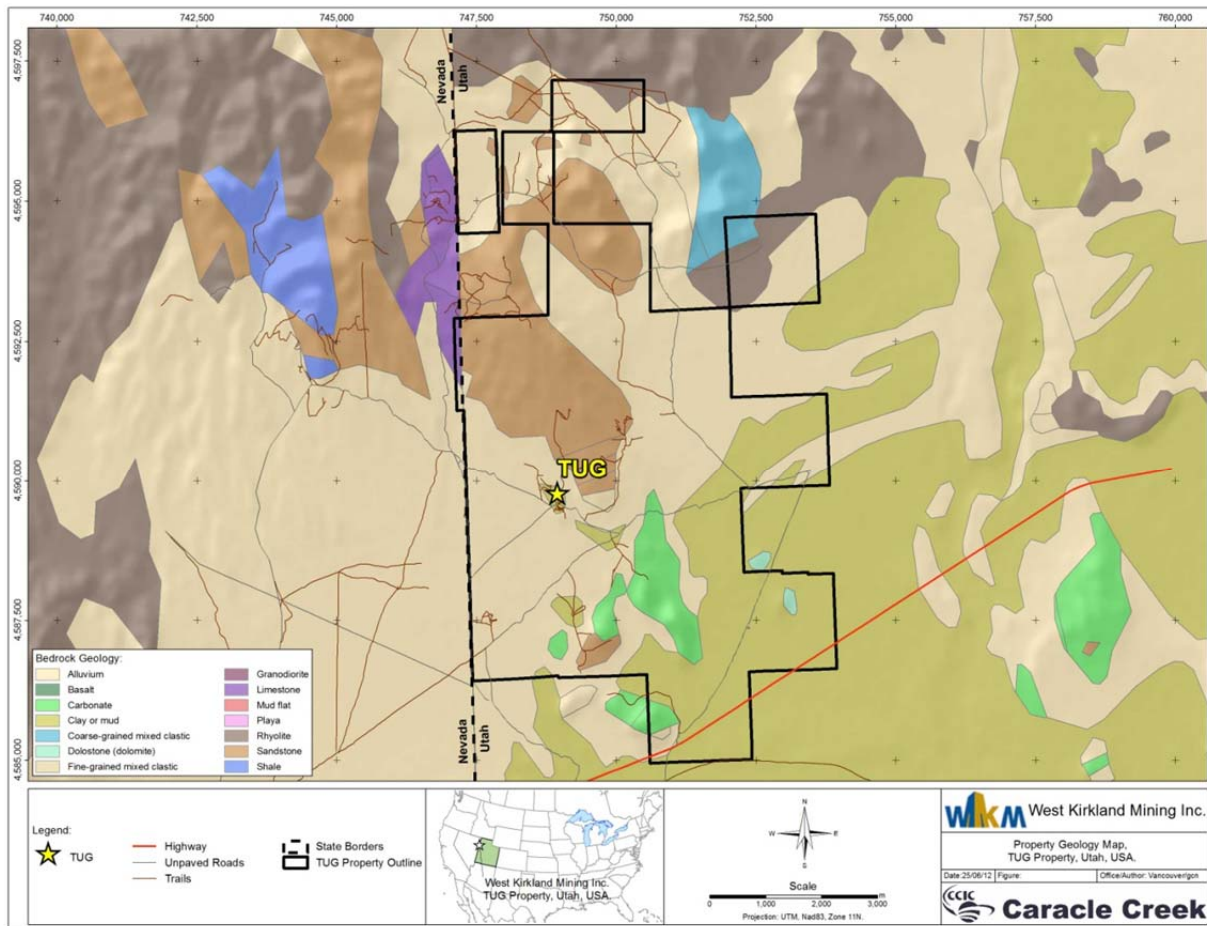


Figure 7-3 TUG property geology map  
Data source: <http://pubs.usgs.gov/of/2005/1305/#NV>

## 7.4 Mineralization

### 7.4.1 Long Canyon Trend

TUG project area is within the Long Canyon exploration trend and 65 km from Newmont's Long Canyon Deposit discovery area (Figure 7-2). Mineralization has been reported by others (Dilles *et al*, 2009; Smith *et al*, 2010 (a,b,c)) as being entirely oxidized in the region and exposed on surface in the southern part of the Long Canyon area is hosted primarily in solution breccias and decalcified silty limestone along the segmented margins of a 100 m thick dolomite horizon marking the Cambro-Ordovician boundary. Subsequent deformation caused brittle segmentation and separation, or 'boudinage', of the dolomite horizon on a regional scale, and ductile flow of the enclosing limestone into the pressure shadows between the boudins (Smith *et al*, 2010 (b)).



Mineralization at Newmont's Long Canyon Deposit has been described by Smith *et al* (2010 (b)) to consist of a series of linear to tabular ore shoots focused along the edges of the northeast to north-trending dolomite "megaboudins", as well as between the areas where the upper and lower limestone have been juxtaposed through separation of the dolomite blocks. The effect of the dolomite megaboudins induced brittle and ductile deformation resulting in fracturing and dissolution cavity development. Late gold-bearing fluids exploited the enhanced permeability of these regions and preferentially precipitated gold within dissolution cavities and along favourable stratigraphic horizons (Smith *et al*, 2010 (b)). The Long Canyon Trend plunges gently to the north under Ordovician cover rocks.

#### 7.4.2 TUG

TUG mineralization is hosted in sedimentary rocks and primarily within carbonate protoliths. The gold mineralization is stratabound within the Tripon Pass limestone at or near the lower contact with the Guilmette formation and tabular in morphology with abundant decarbonization and silicification of the calcareous host rocks. Jasperoid and late calcite veins are common as well. Gold is found finely disseminated throughout hematitic highly silicified zones and quartz veins and veinlets.

Gold mineralization appears to be focused along the axis of an anticline at the Tripon or Diamond Peak and Guilmette contact where it is cut by a low angle structural break or fault. Influences of the Long Canyon Trend pull apart structures are hypothesized to cause local flexures in the steepening plunge of the TUG anticline in the northwestern area of the deposit. These are northeast striking structural zones with little vertical offset, with mineralization locally focused on the margins of the flexures in the mineralized horizon.

Gold mineralization is 5 to 30 m thick over a plan view area of 1800 x 750 m. Drilling by WKM has returned significant intercepts such as WT11-002, which returned 47.70 meters grading 1.04 g/t Au with 24.65 g/t Ag, including 2.41 meters grading 7.88 g/t Au and 69.19 g/t Ag.

## 8.0 DEPOSIT TYPES

The term Carlin-type deposits as outlined in Robert *et al* (2007) was first used to describe a class of sediment hosted gold deposits in central Nevada following the discovery of the Carlin Mine in 1961. Carlin-type mineralization consists of disseminated gold in decalcified and variable silicified, silty limestone and limy siltstone characterized by relatively high gold/silver with enrichment in antimony, mercury, thallium and barium and by the dominance of disseminated gold particles within pyrite and

arsenopyrite or other iron sulfides. Main mineralization consists of gold in the lattice of arsenical pyrite rims on pre-mineral pyrite cores and of disseminated sooty auriferous pyrite which is commonly overprinted by late ore-stage realgar, orpiment and stibnite in fractures, veinlets and cavities (Robert *et al*, 2007).

Deposits are generally hosted by Palaeozoic slope-facies carbonate turbidites and debris flows within the North American continental passive margin (Robert *et al*, 2007). Mineralized zones can be stratiform or discordant and consist of quartz veins and silicified bodies usually impregnated with abundant pyrite, pyrrhotite and/or arsenopyrite accompanied by other minor base sulfides. Primary alteration types are: silicification, chloritization, tourmalinization, pyritization and the development of pyrite. Alteration also occurs by the formation of clay minerals by interaction of water and feldspar (Boyle, 1984; Robert *et al*, 2007; Tosdal *et al*, 2000). They are thought to be largely controlled by deep seated faulted and folded miogeoclinal sequences where the carbonate minerals are dissolved or converted to silicates by silicate-rich hydrothermal water (dolomite to jasperoid).

Carlin-type deposits and the districts in which they cluster are distributed along well-defined, narrow trends that are now understood to represent deep crustal breaks extending into the upper mantle (Robert *et al*, 2007). Main trends are oblique to the early Palaeozoic passive continental margin and possibly represent deep crustal structures related to the Neoproterozoic break-up of the continental (Tosdal *et al*, 2000). The TUG project area is within the Long Canyon trend stretching from the north-northeast to the south-southwest. The Long Canyon Trend is emerging as a Carlin-type sediment hosted gold mineralized zone in northeast Nevada with Fronteer Gold Inc. having significant results in the area (Smith *et al*, 2010 (a)).

The Long Canyon Deposit discovery represents a paradigm shift in the search for gold in Nevada; a summary of the genesis of the deposit below has been modified from Smith *et al*, (2010 (a,b,c)).

Long Canyon Deposit is hosted primarily in solution breccias and decalcified silty limestone along the segmented margins of a 100 m thick dolomite horizon marking the Cambro-Ordovician boundary. Subsequent deformation caused brittle segmentation and separation, or 'boudinage', of the dolomite horizon on a regional scale, and ductile flow of the enclosing limestone into the pressure shadows between the boudins (Smith *et al*, 2010 (b)).

Gold mineralization has been described by Smith *et al* (2010 (b)) to consist of a series of linear to tabular ore shoots focused along the edges of the NE- to N-trending dolomite "megaboudins", as well as between the areas where the upper and lower limestone have been juxtaposed through separation of the dolomite

blocks. The effect of the dolomite megaboudins induced brittle and ductile deformation resulting in fracturing and dissolution cavity development. Late gold-bearing fluids exploited the enhanced permeability of these regions and preferentially precipitated gold within dissolution cavities and along favourable stratigraphic horizons (Smith *et al*, 2010 (b)).

## 9.0 EXPLORATION

### 9.1 Mapping and Sampling

Previous operators have extensively mapped and sampled the TUG project. WKM collected 129 rock samples on the TUG project area as of spring of 2012, largely confirming what had already been mapped and sampled on the project. WKM sampling on the TUG property was carried out in conjunction with mapping of outcrops. The surface sample locations are given in Figure 9-1 and Figure 9-2 and assay highlights are given in Table 9-1. A 1-2 kg sample was collected and placed in a labeled bag with a sample tag. The bags were then sealed and placed in larger sealable “rice” bags for transport to the laboratory. A description of the sample, and UTM coordinate was recorded in the geologist’s handbook and transferred to an electronic database. WKM has proposed future work to build on their mapping and sampling in the TUG property.

Table 9-1 Assay highlights for surface sampling

Sample Id	Zone	UTM_E_NAD83	UTM_N_NAD83	Sample type	Au (ppm)	Ag (ppm)
657255	11	749965	4591719	float	0.242	0.44
657276	11	750172	4590946	outcrop	0.178	0.24
247016	11	748656	4595616	outcrop	0.171	1.90
657128	11	748773	4595341	outcrop	0.098	2.46
657917	11	748549	4591556	float	0.073	0.10
657254	11	749950	4591715	outcrop	0.067	0.36
246993	11	752943.7	4587576	outcrop	0.066	0.52
657275	11	750073	4590677	outcrop	0.066	0.67
657129	11	748753	4595410	outcrop	0.062	1.83
657264	11	749250	4593447	float	0.055	0.20



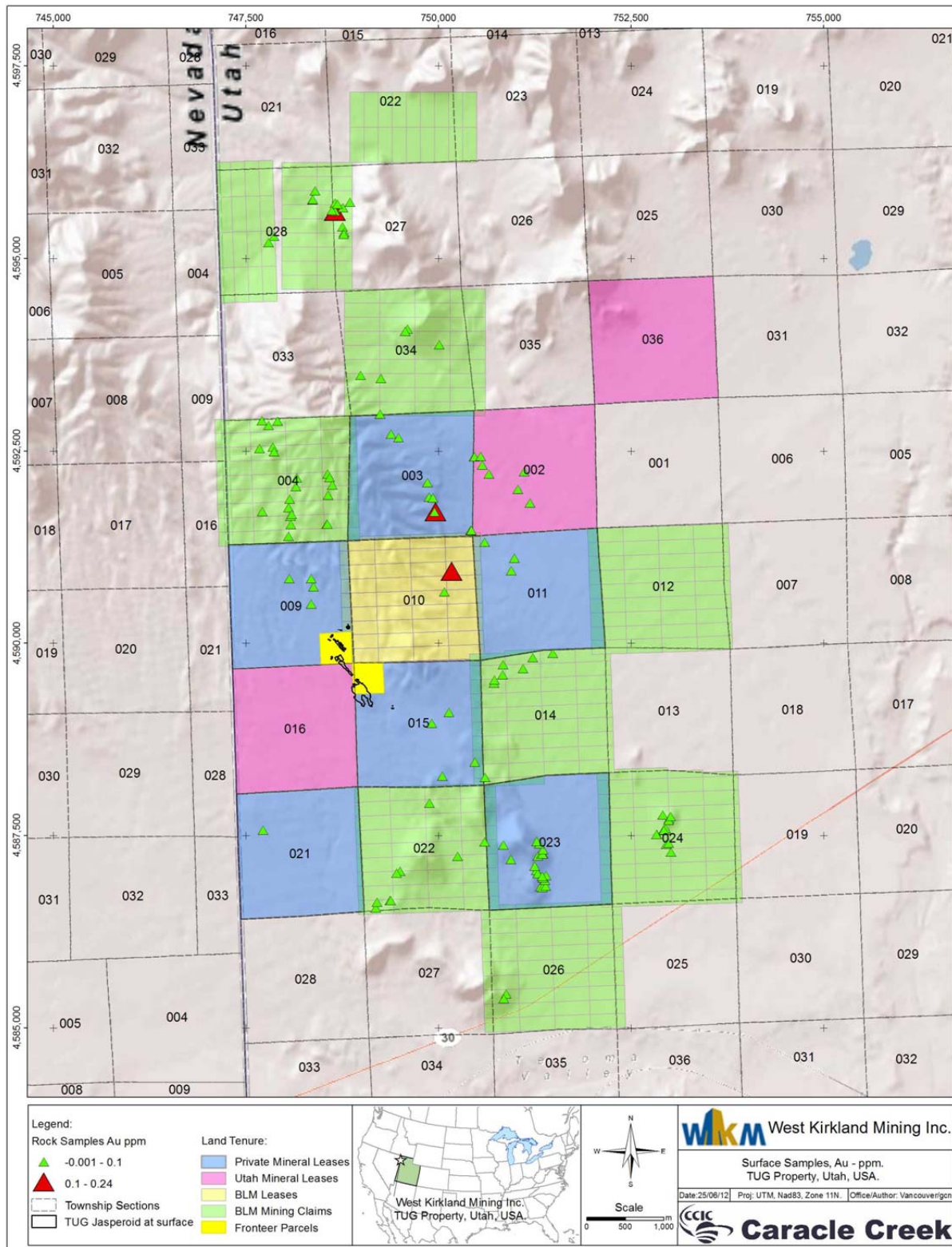


Figure 9-1 Location of surface samples on TUG property highlighting Au anomalies.

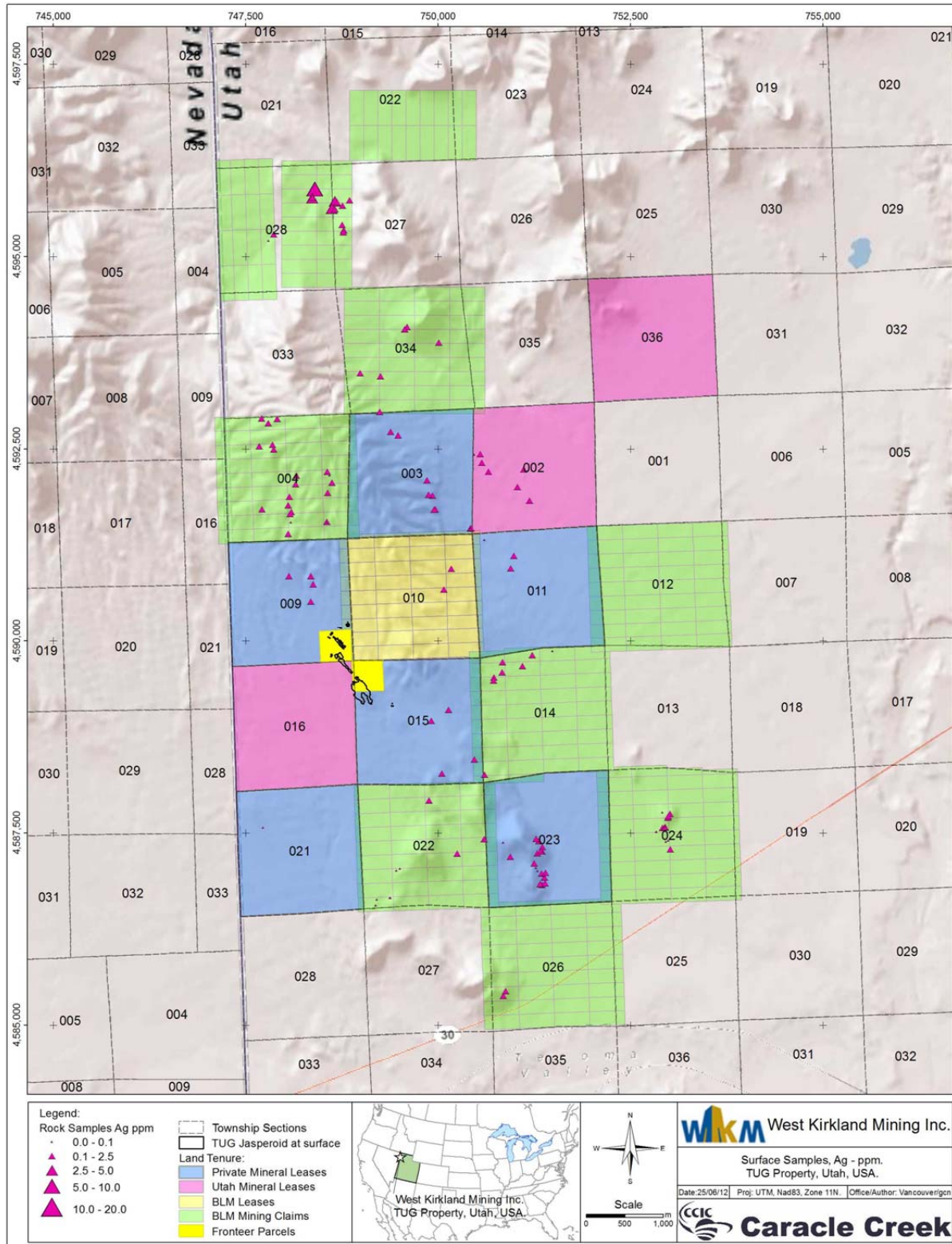


Figure 9-2 Location of surface samples on TUG property highlighting Ag anomalies.

## **9.2 Geophysics**

WKM has not completed geophysical surveys on the TUG project area. Existing geophysical databases (i.e., Gravity, Magnetics, Radiometrics) for TUG claims have been compiled and re-interpreted by Wright Geophysics. Gravity was the most effective geophysical tool for identifying the TUG anticline and possible extensions (Figure 9-3). Wright (2011) hypothesized a semi continuous anticlinal structure between the TUG and KB deposits. WKM drilled one hole, WT11-006 into a gravity high within this structure. The hole did not reach the horizon that hosts mineralization of the TUG deposit and was terminated. No significant assays were returned.



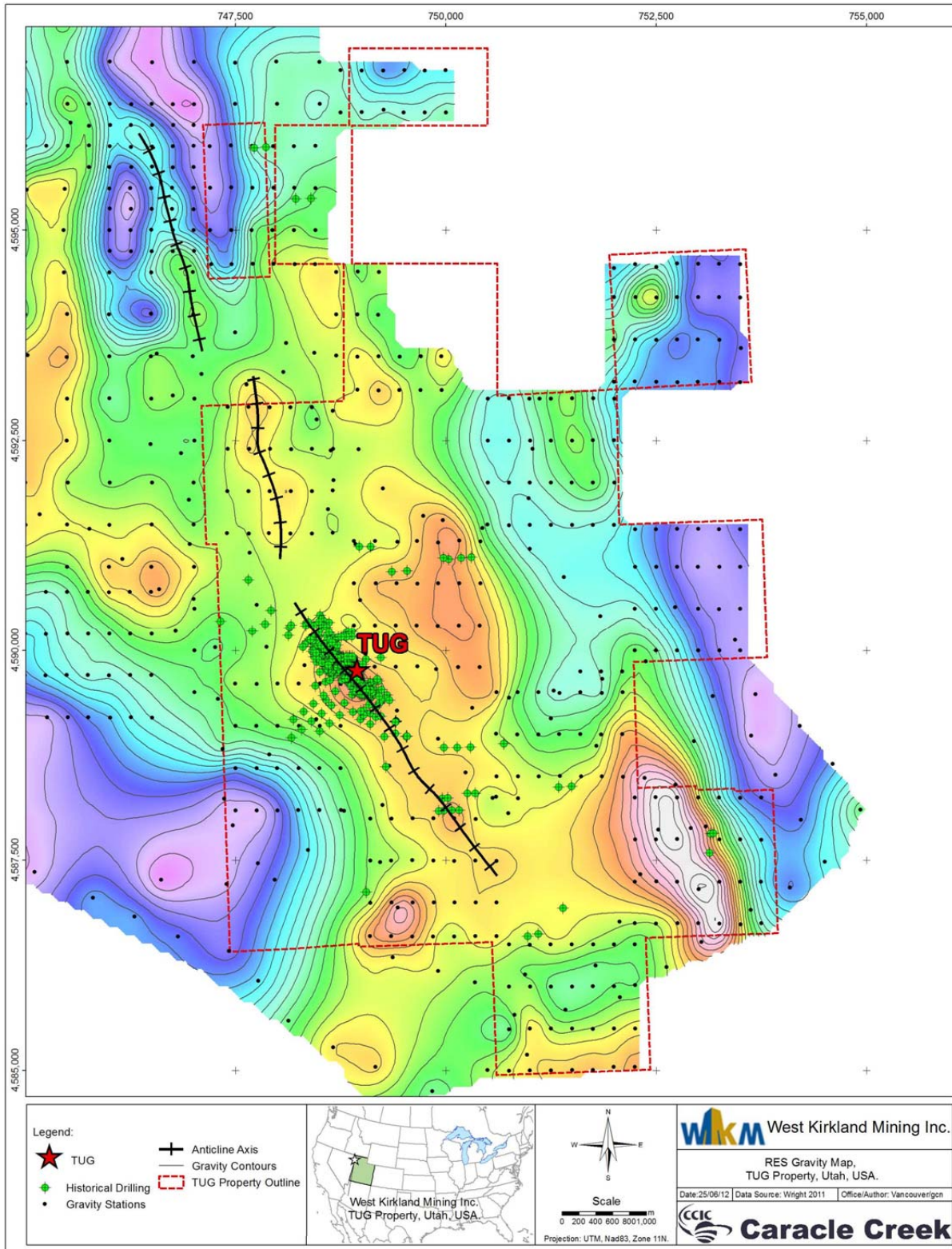


Figure 9-3 RES gravity map for the TUG property showing the location of the TUG anticline (Wright 2011).

### **9.3 Drilling**

Thirteen core holes totaling 4022.71 m were completed on the TUG project areas as of March 8, 2012. Drill core recovery ranged from 0 to 100 percent throughout WT11-001 to WT11-013. WT11-007 recovery was noted during the site visit and viewing of core on October 7, 2011 by the QP, Ms. Hodder. WT11-007 rock was friable throughout sections of the drill core and easily disintegrates to a fine powder. Recovery in fault zones can be notably low due to the broken and fractured rock. Local voids are present at TUG and interpreted by WKM to be “karsting” of the limestone creating sub-surface caverns. Sufficient recovery was acquired and allowed for adequate rock to be retrieved through various fault and void zones. WKM completed a set of logging parameters which included the collection of geological (rock type, mineralization, veining etc.) and geotechnical data (rock quality, hardness, etc.) and used a computerized database to control the logging parameters in order to achieve a consistency in the logging procedures.

WKM drilling is discussed in more detail in the Drilling section (10.0).

### **9.4 Reclamation**

Reclamation on the, TUG project is based on the permitted work allowed by the managing authority. TUG required local access roads and drill pads which will be reclaimed at the end of WKM’s exploration on current lands. Reclamation includes recontouring the pads to a natural slope and seeding the area with local plant seed. Indigenous plants and recommended seeds are outlined by the controlling authority.

## **10.0 DRILLING**

### **10.1 Drilling Progress**

Thirteen diamond core holes were completed at TUG during the period May 20, 2011 to March 8, 2012. Core was transported from the drilling rig to an onsite core logging facility where it was logged and sampled by WKM geologists. Samples were laid out by the geologist logging the core. As a general rule samples were approximately 1.52 m (5 feet) while honouring geological contacts during the sampling process. Samples were split onsite using a rock saw. Water was used to cool the blade and was not recirculated. One half of the split core was put into a sealable bag and firmly closed. Individual samples were collected into larger (rice) bags which were sealed and transported to the laboratory by WKM.



WKM inserted both standards and blanks at a random but regular basis. WKM's 2011-2012 drill hole collar locations are given in Table 10-1 and plotted on a plan map in Figure 10-1.

*Table 10-1 Drill hole collar location and survey information from 2011 WKM drilling*

Hole ID	UTM X (NAD83)	UTM Y (NAD83)	Elevation (m)	Length (m)	Azi (°)	Dip (°)	Year
WT11-001	748842.41	4589841.39	1594.31	304.19	244	-60.00	2011
WT11-002	748491.42	4590489.42	1629.66	298.09	235	-45.00	2011
WT11-003	748496.45	4590492.98	1629.95	190.50	55	-45.00	2011
WT11-004	748837.63	4589848.13	1595.17	245.95	320	-45.00	2011
WT11-005	749054.70	4589902.90	1601.97	551.84	235	-55.00	2011
WT11-006	748173.26	4591835.85	1735.66	397.76	235	-65.00	2011
WT11-007	748489.12	4590493.56	1629.82	339.85	257	-45.00	2011
WT12-008	748490.19	4590500.09	1630.49	363.78	310	-50.00	2012
WT12-009	748491.31	4590496.76	1630.23	294.43	275	-65.00	2012
WT12-010	748528.59	4590272.87	1617.82	406.60	160	-45.00	2012
WT12-011	748227.49	4590323.18	1618.64	233.78	40	-50.00	2012
WT12-012	748228.22	4590324.17	1618.59	191.11	40	-68.00	2012
WT12-013	748224.25	4590321.68	1618.67	204.83	125	-45.00	2012



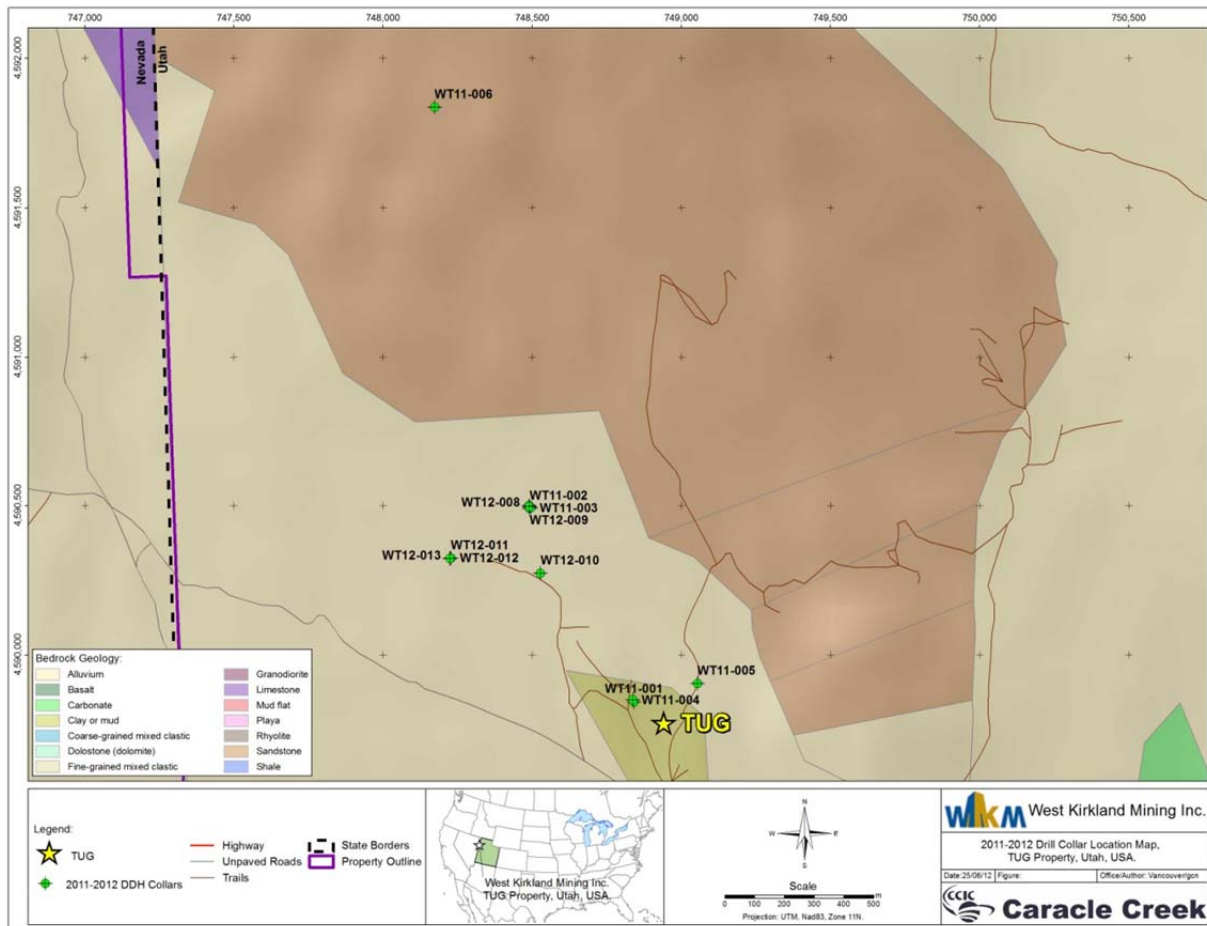


Figure 10-1 Drill plan map for 2011-2012 holes on TUG property.

## 10.2 Drill Data and Drilling Results

Table 10-2 below summarizes the highlights from 2011-2012 drilling based on information provided by WKM. At this early stage of exploration the identified mineralized zones are not well defined and sample lengths do not reflect the true lengths or widths of the mineralized zone. The best assays include: 6.35 g/t Au and 214.4 g/t Ag over 3.2 m from WT11-001 and 4.72 g/t Au and 45.13 g/t Ag over 5.54 m from WT12-011.

Table 10-2 Assay highlights from WKM 2011-2012 Drilling

Hole ID	From (m)	To (m)	Length (m)	Au (g/t)	Ag (g/t)
WT11-001	31.69	47.17	15.48	3.08	94.75
Incl.	39.32	42.52	3.2	6.35	214.4

WT11-002	165.81	213.5	47.4	1.04	24.65
Incl.	165.81	170.4	4.57	3.39	83.34
and	211.1	213.5	2.41	7.88	69.19
WT11-004	58.52	81.08	22.56	1.55	58.58
Incl.	60.05	61.15	1.1	6.45	82
and	69.19	72.24	3.05	3.37	72.45
WT11-007	193.55	240.8	47.24	0.52	18.17
Incl.	193.55	199.6	6.09	2.89	112.05
WT12-011	180.99	197.5	16.51	1.66	26.89
Incl.	180.99	186.5	5.54	4.72	45.13
WT12-012	148.59	157.6	8.99	1.18	200.73
Incl.	148.59	151.6	3.05	1.53	516.21
WT12-013	151.63	165.4	13.78	0.64	19

## 11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

### 11.1 Sample Security

The chain of custody of samples from the drill core to the core shack was performed by the drillers delivering the core to the locked core storage facility onsite until core could be logged and sampled by WKM geologists. Samples were placed in sealed bags, prior to shipping to the laboratory in Elko, Nevada by the geologist onsite. All samples were locked either in the core storage or logging facility onsite prior to delivery of samples to ALS Minerals (part of ALS Global and ALS Chemex) Analytical Laboratory in Winnemucca or Elko, NV, USA.

### 11.2 Sample Preparation

WKM currently uses the facilities owned and operated by ALS Minerals in either Elko or Winnemucca, Nevada, USA. WKM used ALS for the current 2011-2012 drill program and for the check assays of historic holes. Previous operators on the TUG property used other labs for the historic assays. ALS has developed and implemented at each of its locations a Quality Management System (QMS) designed to ensure the production of consistently reliable data. The system covers all laboratory activities and takes into consideration the requirements of ISO standards as previously described in Section 2.2 of this Report.

QMS operates under global and regional Quality Control (QC) teams responsible for the execution and monitoring of the Quality Assurance (QA) and Quality Control programs in each department, on a regular

basis. This laboratory is audited both internally and by outside parties ensuring that all key methods have standard operating procedures (SOPs) that are in place and being followed properly, and ensuring that quality control standards are producing consistent results. ISO registration and accreditation provides independent verification at Winnemucca, NV which is registered to ISO 9001:2008 (<http://www.alsglobal.com/minerals/quality-assurance.aspx>).

ALS analytical laboratories are certified and registered in each region, with global application of standard procedures and audits to maintain standard practice throughout the laboratory network. Most ALS Minerals laboratories are registered or are pending registration to ISO 9001:2008, and a number of analytical facilities have received ISO 17025 accreditations for specific laboratory procedures.

Gold was assayed for using ALS's Au-ICP21 method, samples in excess of 1 g/t Au were assayed using Au-Gra21. WKM also assayed for trace elements and silver using the ME-MS61 method. Silver samples in excess of 100 g/t Ag were assayed using Ag-OG62. Mercury assays were collected using Hg-CV41. In hole WT12-009, 49 samples were assayed for gold using the Au-AA25 method.

Analytical methodology is described below (from ALS website: <http://www.alsglobal.com>):

#### **Au-ICP21**

A prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents as required, inquarted with 6 mg of gold-free silver and then cupelled to yield a precious metal bead. The bead is digested in 0.5 mL dilute nitric acid in the microwave oven. 0.5 mL concentrated hydrochloric acid is then added and the bead is further digested in the microwave at a lower power setting. The digested solution is cooled, diluted to a total volume of 4 mL with de-mineralized water, and analyzed by inductively coupled plasma atomic emission spectrometry against matrix-matched standards.

#### **Au-GRA21**

A prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents in order to produce a lead button. The lead button containing the precious metals is cupelled to remove the lead. The remaining gold and silver bead is parted in dilute nitric acid, annealed and weighed as gold. Silver, if requested, is then determined by the difference in weights.

#### **ME-MS61**

A prepared sample (0.25 g) is digested with perchloric, nitric, hydrofluoric and hydrochloric acids. The residue is topped up with dilute hydrochloric acid and analyzed by inductively coupled plasma-atomic emission spectrometry. Following this analysis, the results are reviewed for high concentrations of bismuth, mercury, molybdenum, silver and tungsten and diluted accordingly. Samples meeting this criterion are then analyzed by inductively coupled plasma-mass spectrometry. Results are corrected for spectral interelement interferences.

### **Hg-CV41**

A prepared sample (0.50 grams) is digested with aqua regia for 45 minutes in a graphite heating block. After cooling, the resulting solution is diluted to 12.5 mL with demineralized water and mixed. A portion of the sample is treated with stannous chloride to reduce the mercury, which is subsequently volatilized by argon-purging and measured by atomic absorption spectrometry.

### **Au-AA25**

A prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents as required, inquarted with 6 mg of gold-free silver and then cupelled to yield a precious metal bead. The bead is digested in 0.5 mL dilute nitric acid in the microwave oven. 0.5 mL concentrated hydrochloric acid is then added and the bead is further digested in the microwave at a lower power setting. The digested solution is cooled, diluted to a total volume of 10 mL with de-mineralized water, and analyzed by atomic absorption spectroscopy against matrix-matched standards.

## **11.1 Quality Assurance**

Quality Assurance was completed by the submission of external blanks, plus the inclusion of duplicating samples on a random but regular basis.

WKM used two certified standards as well as blanks and duplicates as part of its internal QA/QC process. Standards were inserted in a pseudo random sequence into the sample stream as outlined in Table 11-1 below.

*Table 11-1 QC sample insertion sequence for 2011-2012 drill program*

<b>No.</b>	<b>Type of Control Sample</b>
12	Blank
18	Standard, high grade
24	Duplicate of previous sample
38	Duplicate of Previous sample
42	Blank

52	Standard, low grade
67	Blank
70	Duplicate of previous sample
91	Standard, high grade
94	Standard, low grade

External standards were purchased from CDN Resource Laboratories, and selected to be a “matrix match” to the TUG deposit. Both samples were prepared using ore from Barrick Gold Inc’s Bald Mountain Mine, and are from breccias near the contact between Mississippian Pilot Shale and Devonian Guilmette formation. CDN-GS-P2 and CDN-GS-2G are the two external standards inserted in the sample stream. Their certified values and standard deviation is given in Table 11-2.

Reference material CDN-GS-2G has a certified gold concentration of 2.26 g/t Au  $\pm 0.19$  g/t (2 standard deviations), reference material CDN-GS-P2 has a certified gold concentration of 0.214 g/t Au  $\pm 0.020$  g/t Au (2 standard deviations). Blank material was Vigaro white marble chips, selected as a matrix match for the carbonate host rocks of the TUG deposit.

*Table 11-2 Certified values for external QC standards for Au*

standard name	element	units	certified value	1 standard deviation
CDN-GS-P2	Au	ppm	0.214	0.01
CDN-GS-2G	Au	ppm	2.26	0.095

Due to lack of external QC samples for Ag, ALS internal standards were checked for Ag. The certified values and standard deviation for their internal standards are listed in Table 11-3.

*Table 11-3 Certified values for ALS internal QC standards for Ag*

standard name	element	units	certified value	1 standard deviation
GEOMS-03	Ag	ppm	0.7	0.05
GBM908-10	Ag	ppm	3	0.4
MRGeo08	Ag	ppm	4.63	0.29
GBM908-5	Ag	ppm	57.8	5.4

## 12.0 DATA VERIFICATION

### 12.1 Caracle Creek Consulting – Qualified Person, Site Visit

The Qualified Person site was accompanied by representatives of West Kirkland Mining to the, TUG, October 5 and 6, 2011. Present on the KB and TUG visit representing West Kirkland Mining (Vancouver) were; Michael G. Allen, P.Geo., Vice President of Exploration, R. Michael Jones, B.A.Sc., P.Eng., Director, President and CEO, Frank Hallam, B.B.A., C.A., Director, CFO and Corporate Secretary, Knox Henderson, Investor Relations, Richard Histed, Manager (WKM, USA) joined by Qualified Person and Independent Geologist, Sherri L. Hodder, M.Sc., P.Geo., Senior Geologist of Caracle Creek International Consulting, Vancouver.

*Table 12-1. GPS locations of photos, historical sample sites and drill hole collars (WGS84 Zone 11).*

Date	Easting	Northing	Comments	Project WKM
10.5.2011	748932	4589525	photo: jasperoid	KB-TUG
10.5.2011	748841	4589847	WT11-001/twin of 97-33	KB-TUG
10.5.2011	748836	4589836	WT11-004	KB-TUG
10.5.2011	748814	4589804	unknown historic hole	KB-TUG
10.5.2011	748487	4590500	WT11-007	KB-TUG

The group, led by Mr. Michael Allen, traveled to the KB and TUG sites located near the Nevada-Utah border on October 5, 2011. Located on and near the site were several historic drill locations, the historic Jackson Mine, and evidence of recent drilling completed by WKM in September and October, 2011. Evidence of recent drilling was verified at TUG; WT11-001, WT11-004 and WT11-007. The drill holes were observed the QP, collar locations were verified by handheld Garmin GPS map 60cx as outlined in Table 12-1. Table 12-2 lists the samples collected during the site visit including check samples taken from the recent drilling by WKM.

*Table 12-2 Sample locations and comparative assays from site visit Oct 5-7, 2011 (complete assays Appendix 3)*

Sample number	Date	Easting	Northing	Comments	Project WKM	CCIC Check Au (ppm)	WKM Au (ppm)	Historical Au (ppm)
682651	10.5.2011	749006	4589498	Rhyolite flow, jasperoid/silica	KB-TUG	0.348		
682652a	10.5.2011	744625	4591763	Jackson Mine-historic	KB-TUG	0.008		
682652b	10.5.2011	744625	4591763	Jackson Mine-historic	KB-TUG	0.008		
682662	10.7.2011	748489	4590495	WT11-007; grab @ 172 m	KB-TUG	0.011	0.080	
682663	10.7.2011	748489	4590495	WT11-007; grab @ 196.59 m	KB-TUG	2.367	3.150	
682664	10.7.2011	748489	4590495	WT11-007; grab @ 214.88 m	KB-TUG	0.032	0.323	
682665	10.7.2011	748489	4590495	WT11-007; grab @ 227.08 m	KB-TUG	0.045	0.265	
682666	10.7.2011	748489	4590495	WT11-007; grab @ 258.93 m	KB-TUG	0.014	0.007	
682667	10.7.2011	748489	4590495	WT11-007; grab @ 278.89 m	KB-TUG	0.015	0.006	
682668	10.7.2011	748489	4590495	WT11-007; grab @ 290.78 m	KB-TUG	0.024	0.005	
682669	10.7.2011			Blank Marble Chip test	KB-TUG	0.006		





682670	10.7.2011	Sample from WT-342	KB-TUG	0.007	<detection
682671	10.7.2011	Sample from T97-048	KB-TUG	0.955	0.917
682672	10.7.2011	Sample from WT-331	KB-TUG	0.008	<detection
682673	10.7.2011	Sample from T97-009	KB-TUG	5.094	5.612
					FA-ICP

Several hand samples from the area were taken as outlined in the Table 12-2 and assays for these samples are available in Appendix 3 of this Report.

Figure 12-1 is an example of the type of silicification observed at both the TUG and KB project areas on surface. Brittle and ductile deformation has resulted in fracturing and dissolution cavity development as noted by the fracturing of the rock along planes of weakness and the appearance of veinlets throughout (left side). Late gold-bearing fluids can exploit this enhanced permeability and preferentially precipitate gold within dissolution cavities, along veinlets and in permeable host horizons.

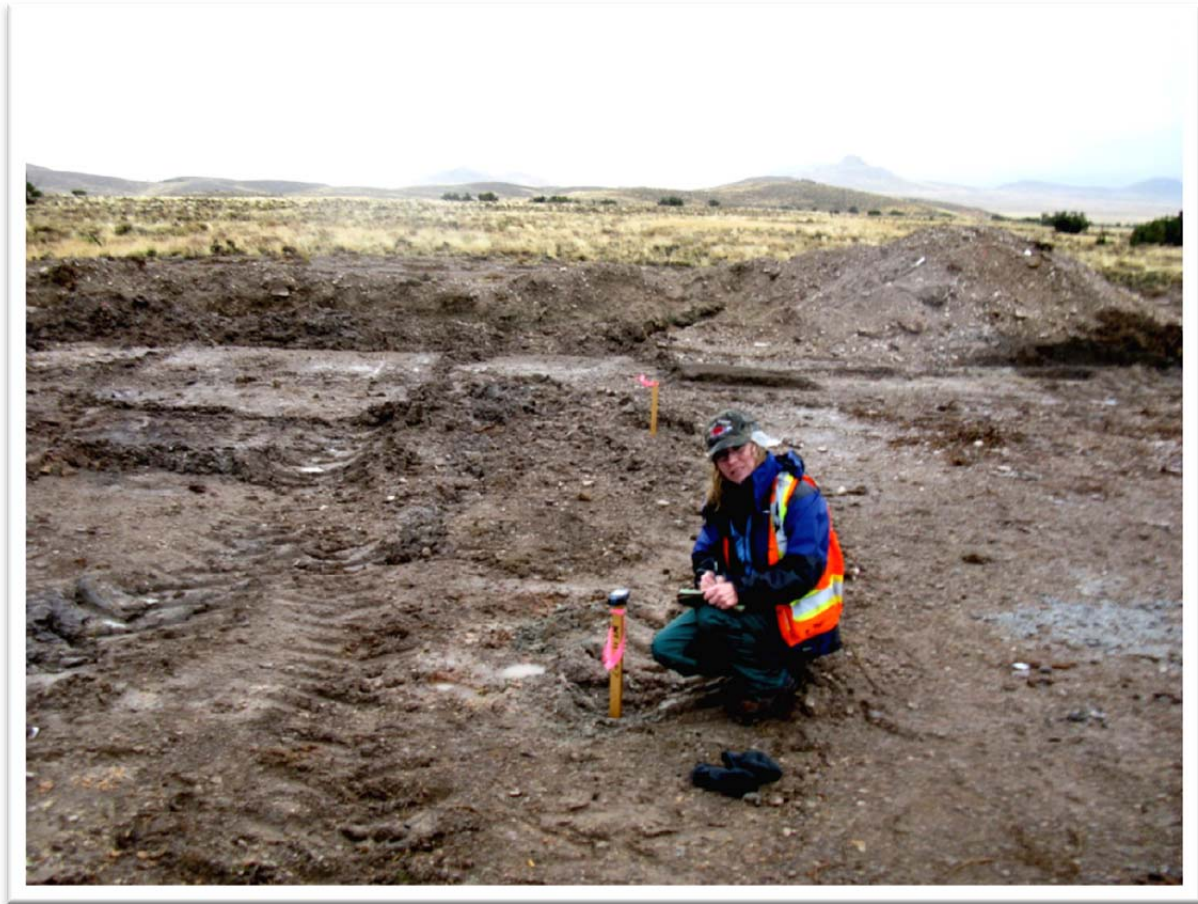
Caliche is noted in Figure 12-1 as a slightly beige to off-white coating on the rocks is a hardened deposit of calcium carbonate, sodium nitrate or sodium chloride. It occurs in arid or semiarid regions such as the Basin and Range area of Nevada and is common throughout the KB-TUG project areas.

*Figure 12-1. Silicified Jasperoid, Sample #682651 from the TUG project area: note veining evident in lower left corner of photo.*



Caracle Creek representative collected 24 samples from the four project areas and included eight samples from drill hole WT11-007 from October 5-7, 2011 as indicated in Table 12-2, assays in Appendix 3. Rock samples and drill core were delivered to ACME Analytical Laboratories Ltd. in Vancouver, BC, Canada by the QP. Samples were crushed, split and pulverized 250 g rock to 85% 200 mesh. Lead collection fire assay, as described in the Terminology (Section 2.2) with assay fusion and AAS finish plus Aqua Regia digestion ICP-ES analyses. Four pulps as listed in Table 12-2 were also taken from storage, the pulps were from historic work by others and acquired by WKM with previous results listed in Table 12-3. The pulps were taken from WKM storage facilities in Elko, NV and delivered to ACME Analytical Laboratories Ltd. in Vancouver, BC, Canada. Lead collection fire assay, assay fusion with AAS finish plus Aqua Regia digestion ICP-ES analyses.

Figure 12-2. Verification of Drilling sites by WKM: check of WT11-007 & WT11-004 from diamond drilling.



On October 7, 2011 Michael Allen and Rich Histed provided access to drill core from WT11-007 on TUG property previously described in Section 7.3.1. Drilling on this hole commenced on September 7, 2011 and was completed on September 17, 2011, it had been logged, split and sampled by WKM prior to the QP site inspection; ALS (Winnemucca, NV) assays were pending during the time of this visit. WT11-007 was available for check sample verification; sampling from a depth of 153 m to 290.78 m for a total of eight (8) samples #682661 to #682668 outlined in Table 12-2. Refer to Appendix 3 for the Qualified Person ACME Assay results with respect to the site visit October 5-7, 2011. Core viewed and sampled by the Caracle Creek QP had been split and previously sampled by WKM (Figure 12-5). All samples collected by the author were grab samples and do not represent the entire interval sampled by WKM.



WKM's interval sampling and the grab samples collected by CCIC compare favorably except for samples 682664 and 682665. These two samples returned high gold assay values in WKM's sampling (0.323 and 0.265 g/t, respectively) versus the CCIC grab samples (0.032 and 0.045 g/t Au). This is likely due to heterogeneity of gold distribution within the sample intervals and is not likely a concern. Figure 12-3. Verification sample – WKM Sample from WT11-007 @290.78 m, Sample #L455927- Check Sample #682668.



Table 12-3 Drill hole summary of the holes where the check pulp samples were collected.

HOLE-ID	EAST	NORTH	ELEV.	LENGTH	AZ	DIP	COMPANY	YEAR	AREA
T97-009	748585	4590276	1617.68	106.7	0	-90	WSMC	1997	TUG
T97-048	749075.3	4589580	1586.03	77.7	294	-50	WSMC	1997	TUG
WT331	749106.6	4591240	1672.05	292.6	269	-60	WSMC	1993	TUG
WT342	747016	4595163	1698.87	170.7	0	-90	WSMC	1993	KB

## 12.2 Quality Control for 2011-2012 Drill Program

### 12.2.1 External Blanks

A total of 93 external blank samples were inserted into the sample stream for the 2011-2012 drill program and analyzed for Au and Ag (Figure 12-4). The blank was Vigoro white marble chips purchased from the local hardware store. A marble blank was chosen over a quartz blank to match the matrix of the drill core. 90 of external blanks were analyzed for Au using 30 g sample fire assay with an ICP finish, 1 external blank was reassayed by FA-ICP and 2 external blanks were analyzed for Au using fire assay with an AAS finish. Only one blank sample (L455865) from WT11-007 failed with 0.057 g/t Au. This sample was close to high grade Au and Ag mineralization and it also failed for Ag, so the failure was likely due to sample contamination during sample preparation. WKM's internal QA/QC review identified the failed blank. The failed sample was reassayed and produced a better result of 0.011 g/t Au which is a minor failure.

All of the blanks were analyzed for Ag using 4 acid digestion and ICP finish. Of the 93 blanks, 7 were failures (8% failure rate) and 26 were minor failures. The high rate of minor failures suggests that the marble contains trace amounts of Ag or there is contamination during sample preparation in the lab. Sample L455865 from WT11-007 contained 0.35 g/t Ag. This sample was close to high grade Au and Ag mineralization and it also failed for Au, so the failure was due likely to sample contamination during sample preparation. WKM's internal QA/QC review identified the failed blank. The failed sample was reassayed and produced result of 0.018 g/t Ag which is better, but still a failure. The other failed Ag blanks were near low to moderate to high grade mineralization. The Qualified Person recommends that the Vigoro white marble chips be no longer used as an external blank.

### 12.2.1 External standard CDN-GS-P2

A total of 44 external low grade Au standards were inserted into the sample stream for the 2011-2012 drill program (Figure 12-5). The Au was analyzed using 30 g fire assay with an ICP finish which is the same as what the standard was certified for. Only one of the Au analyses of this standard failed (L453352, hole WWT11-005) as it was too low and the rest of the analyses were within  $\pm 2 \times$  standard deviation of the certified value. There are no Au mineralized samples 10 above and 10 below the failed standard sample L453352, and thus the standard was not reanalyzed. The Au analyses had no bias.

This standard was not certified for Ag, but its Ag analyses are all close to the data mean, indicating that there were no obvious failures for the Ag. Due to the lack of external Ag standards for the 2011-2012 drill

program, the lab's internal Ag standards were checked (see section 12.2.2). The Qualified Person recommends that an external Ag standard be added to the sample stream in the future.

#### *12.2.2 External standard CDN-GS-2G*

A total of 49 external high grade Au standards were inserted into the sample stream for the 2011-2012 drill program. The Au was analyzed using 30 g fire assay with an ICP finish which is the same as what the standard was certified for. All of the Au analyses of this standard passed and the majority of them were within  $\pm 2$  x standard deviation of the certified value (Figure 12-6). The Au analyses had no bias. This indicates excellent quality of the high grade Au analyses.

This standard was not certified for Ag, but its Ag analyses are all close to the data mean, indicating that there were no obvious failures for the Ag. Due to the lack of external Ag standards for the 2011-2012 drill program, the lab's internal Ag standards were checked (see section 12.2.2). The Qualified Person recommends that an external Ag standard be added to the sample stream in the future.



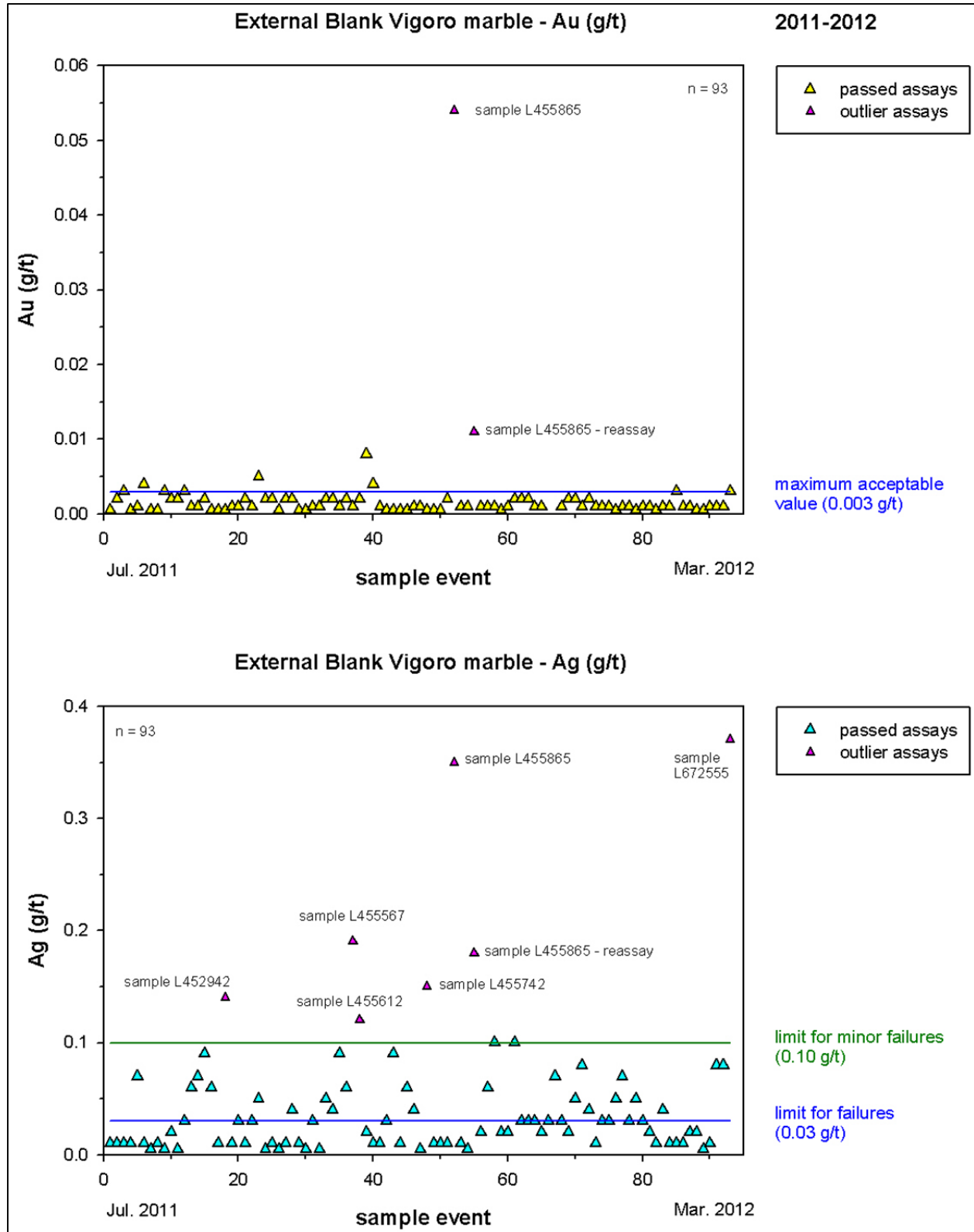


Figure 12-4 Control chart for external blanks for 2011-2012 drill program for Au and Ag.

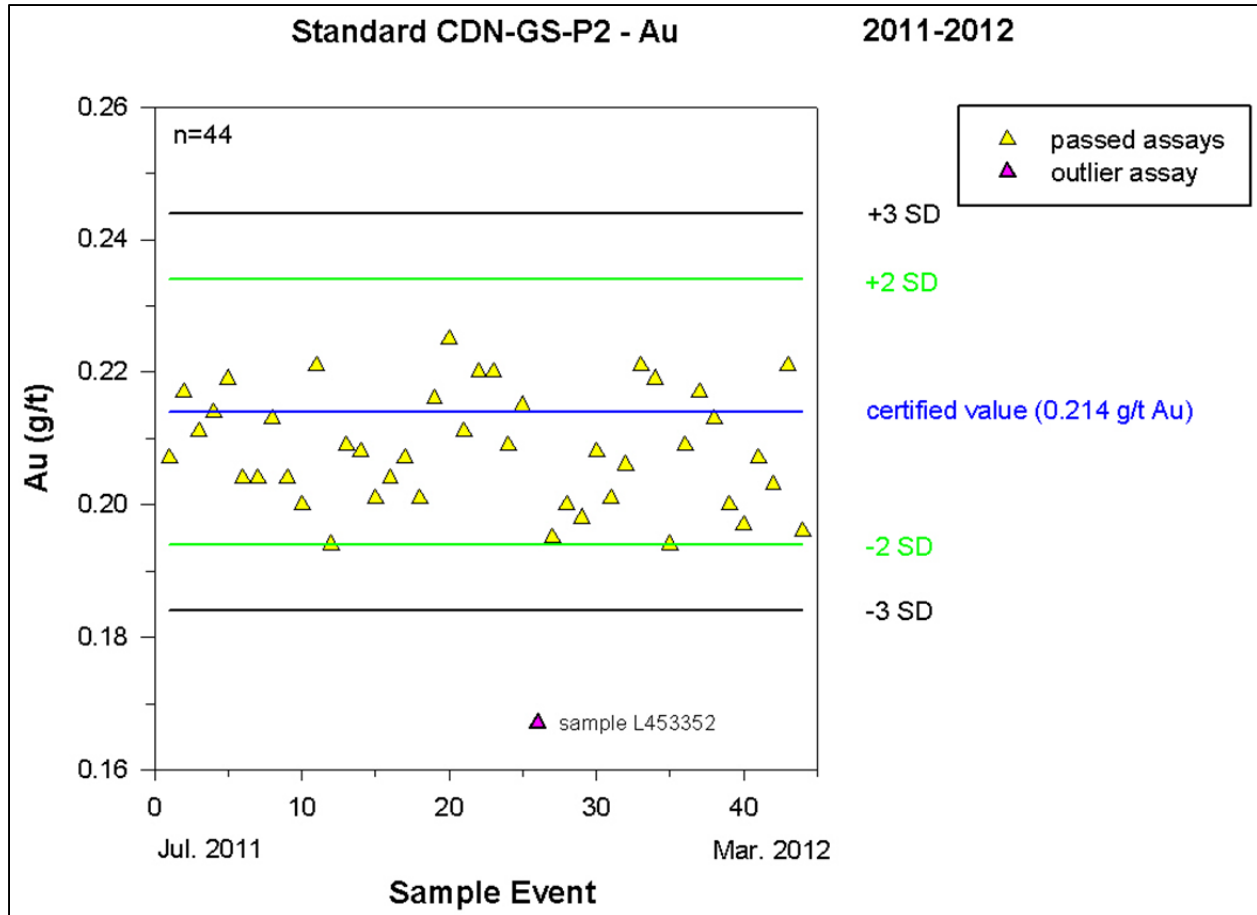


Figure 12-5 Control chart for CDN-GS-P2 for 2011-2012 drill program for Au.

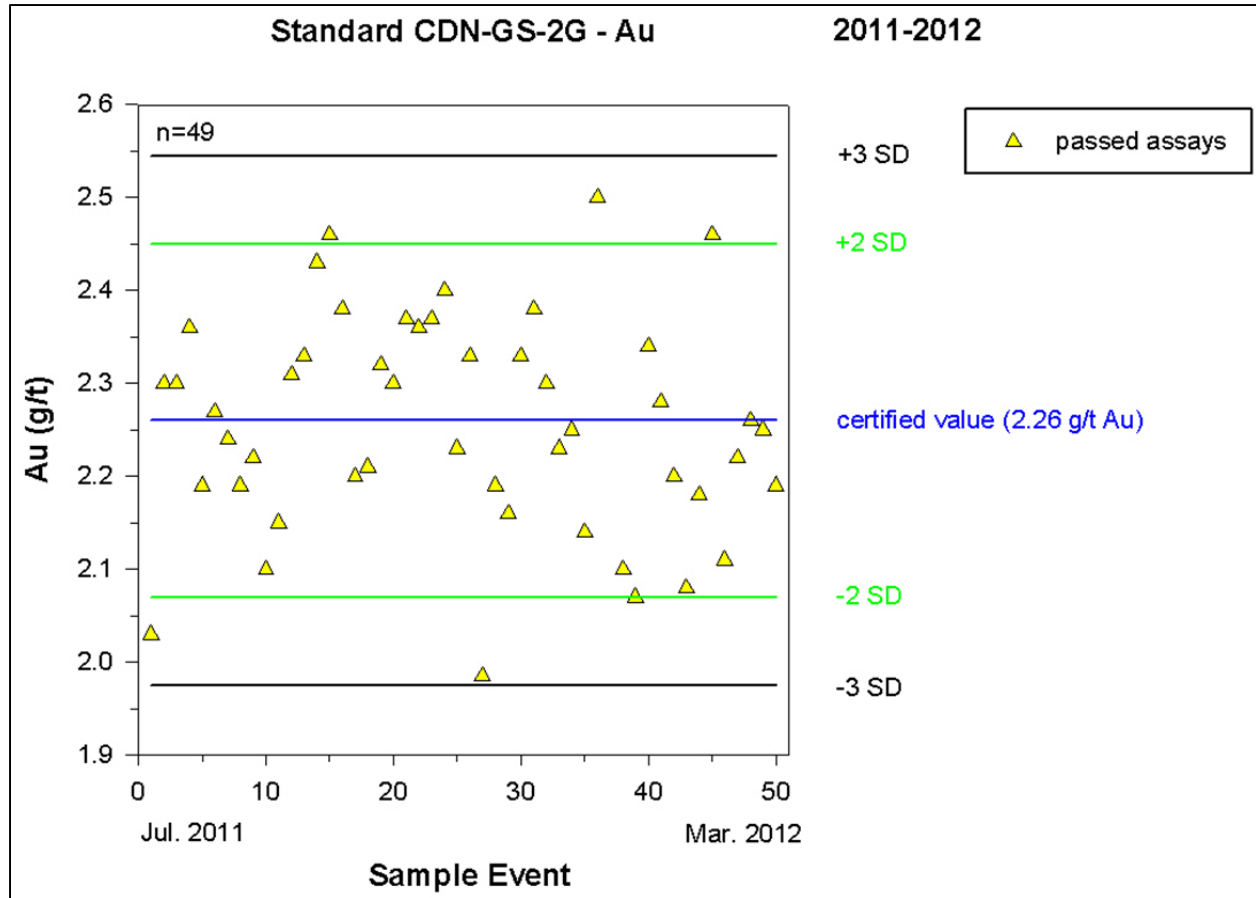


Figure 12-6 Control chart for CDN-GS-2G for 2011-2012 drill program for Au.

### 12.2.1 Core duplicates

A total of 71 core duplicates were included in the sample stream for the 2011-2012 drill program. A total of 69 of the core duplicates were analyzed for Au using 30 g fire assay with an ICP finish. All of these Au core duplicates passed with a low pair absolute difference and an  $R^2$  of 0.9992 (Appendix 4, Figure 20-1). The core duplicates have a high  $R^2$  value indicating that Au nugget effect is not an issue for these samples. The two other core duplicates (sample numbers L455028 and L455029, L455072 and L455073, WT12-009) were analyzed for Au using both fire assay with an AA finish and screen metallic. These two core duplicate pairs also passed. For these two core duplicates, the screen metallic coarse fraction and fine fraction assays for Au are very similar indicating that Au nugget effect is not an issue in these two samples. By the weight, most of the Au is in the fine fraction rather than the coarse fraction.

A total of 70 of the 71 core duplicates were analyzed for Ag using 4 acid digestion and an ICP finish. All of these Ag core duplicates passed with a low pair absolute difference and an  $R^2$  of 0.9975 (Appendix 5,

Figure 20-2). The core duplicates have a high  $R^2$  value indicating that Ag nugget effect is not an issue for these samples. The other core duplicate pair (sample numbers L452536 and L452537, WT11-001) was analyzed by 4 acid digestion for ore grade samples as it was over the limit of 100 g/t Ag. This high grade core duplicate also passed.

### *12.2.2 Internal standards*

ALS' internal blanks and standards were checked for Ag because there was a high minor failure rate for Ag for the external blank and no external standards for Ag were submitted in the sample stream for the 2011-2012 drill program.

ALS use analytical blanks which are just reagents used in digestion and calibration blanks which are just a blank solution. The calibration blanks are not reported. A QC review of the 128 analyses of analytical blanks for Ag by 4-acid ICP indicates that they all passed. All of the 31 analysis of the analytical blank for Au by gravimetrics passed. A total of 84 analysis of the analytical blank for Au by fire assay with an ICP finish showed that only one analysis failed (1 % failure rate) from job WN11096782. This failed blank for Au was flagged by ALS system and a comment was made that it was contaminated by surrounding high Au samples. The affected samples were sent for re-assay following the required ALS protocol. The re-assay result for the drill core is what was reported in the assay certificate, not the original result. Thus ALS followed protocol and reported the corrected assay results. As all of the analyses of the analytical blank passed for Ag by 4-acid ICP and Au by gravimetrics passed and only one analysis of the blank failed for Au by fire assay failed which indicates that contamination is not a problem at ALS.

ALS used GBM908-10, GBM908-5, GEOMS-3 and MRGeo08 as external standards for Ag. ALS set the pass/fail limits based on precision and detection limits of the analytical method. All of the Ag analyses for GBM908-10 (n=73), GBM908-5 (n=47) and MRGeo08 (n=73) passed. Only one analysis out of the total of 50 analyses of GEOMS-03 failed (2 % failure rate). The failed internal GEOMS-03 was in job WN11119141. The fact that three of the internal standards had no failures for Ag and one internal standard had only one failure indicates that the Ag assays are accurate.

## **12.3 Quality control of check assays on historic core**

### *12.3.1 Introduction*

In order to verify historic assay results from previous exploration on the TUG property, a program to re-analyze a subset of the historic samples was undertaken. This program consisted of selecting a set of 869

sample pulps from the historic drilling and submitting them to ALS Minerals for analysis. The samples were selected to be analyzed for gold and silver to test for reproducibility of historic analytical results. They were selected from 27 drill holes covering a representative area of the historic drilling. These samples were submitted following a standard QA protocol. This involved submitting a set of standard, blank and duplicate samples at random intervals into the sample stream. The results of the analysis of these standards, blanks and duplicates were examined to ensure that there were no systematic problems or unexplained variations in the laboratory results. It was determined that there were no noteworthy discrepancies in the standards, blanks and duplicates analyses.

The laboratory also followed their own internal QA/QC process, and the correlation between internal laboratory duplicates was examined in order to ensure that the analytical results were repeatable and accurate. The internal duplicates analyses were compared to the sample results using RMA regression to determine repeatability and accuracy. Minor inconsistencies were noted, but they were not of sufficient quantity or magnitude to render the results invalid. Other internal lab QA results were not examined since no problems were encountered in the external QA program.

The results of the check sampling were then compared to the historic analytical results to determine whether the historic data could be used to calculate a modern mineral resource estimate complying with NI43-101 standards. It was determined by statistical analysis that the check assay results agree with the historic analytical results. It is the author's opinion that the re-assaying program has demonstrated that the historic analytical results may be used to construct a NI43-101 compliant mineral resource estimate on the TUG property.

### *12.3.2 Methods*

The laboratory procedure requested for the re-assaying was fire assay for gold with a gravimetric finish. This is analytical procedure ME-GRA21 at ALS Minerals. It was determined that the lower detection limit for this procedure was not low enough, and the lower grade assays did not agree well with the historic results. The samples were re-submitted and analyzed using an ICP finish (AU-ICP21), and the results were much more acceptable.

### *12.3.3 Analysis*

The results of the analysis of the standards and blanks were examined using regression analysis. Any analytical results lying between two and three standard deviations from the known standard or blank

value were flagged. Any results differing from the standard or blank value by three or more standard deviations were considered to have failed.

All of the tables and figures for this section are given in Appendix 5.

### *Standards*

Tables 1 and 2 show the results for the analyses of Standard ME-15, a gold and silver standard. Two of the gold assays were between two and three standard deviations (3 SD) off the correct value, but none failed. Two of the silver analyses failed as a result of being more than three SD lower than the correct value. This failure rate is not sufficient to warrant questioning the lab results.

Table 3 above shows the results of the assay analysis of samples of standard CDN-GS-2G. One sample, number 243468, failed the initial gravimetric analysis, was resubmitted and analyzed using procedure AU-ICP21, which analysis also failed. This was the only sample which did not pass the 3SD test, and is not sufficient to bring the quality of the laboratory procedures into question.

Table 4 below shows the results of the assay analysis of samples of standards CDN-GS-P2 and P2A. The analyses in red indicate that the samples were re-run using laboratory procedure AU-ICP 21 as the initial analyses using the gravimetric finish did not yield consistent results. As can be seen from the chart, only 3 samples were questionable, and none failed the 3 SD test.

### *Company Duplicates*

Table 5 below is a comparison of the assay results for the analysis of certain samples and the duplicates of those samples which were randomly inserted into the sample stream as a blind test of the repeatability of the laboratory analyses. The accompanying chart, Figure 1 is an X-Y scatter plot of the assay pairs. These data were subjected to Reduced Major Axis (RMA) regression analysis. RMA regression is generally utilized as the statistical analysis technique for data sets containing independent data points. Neither the check sample assay nor the duplicate sample assay are dependent on the other, and neither is one more likely to be correct than the other. RMA regression removes any inference of dependence as both variables are treated as independent. The formula for generalized RMA Regression is:

$$y = b_0 + b_1x + -e$$



where **x** and **y** are the paired, independent values such as historical and check assays, or assays and duplicates.

**b<sub>0</sub>** is the y intercept of the regression line

**b<sub>1</sub>** is the slope of the regression line

**e** is the scatter standard deviation of data points

**b<sub>1</sub> = S<sub>y</sub>/S<sub>x</sub>** (standard deviations for x and y)

**b<sub>0</sub> = Mean (y) – b<sub>1</sub> \* Mean (x)**

Dispersion is written as:

**S<sub>(RMA)</sub> = (2(1-r)(S<sub>x</sub><sup>2</sup>+S<sub>y</sub><sup>2</sup>))** , where

**r** = Coefficient of Correlation

The error bars in the following charts are  $\pm$  the **S<sub>(RMA)</sub>** as calculated for each set of data pairs. The scatter should properly have been shown as a tolerance interval above and below the regression line, but unfortunately the author's graphing software was unable to produce this. The error bars around the points should be perpendicular to the regression line, rather than vertical as shown on the charts.

Of the 34 sample pairs, three of the gold samples and one of the silver samples show an RMA dispersion outside the acceptable scatter. All the gold duplicates that failed were at or near the lower detection limit, with one member of each pair being below the limit. A 10% failure rate for duplicate samples may seem high. It must be noted however that all the Au duplicate assays that failed were at or below the detection limit for the analytical procedure. The discrepancy in results is possibly due more to the coarse nature of the gold grains and the inherent heterogeneity of the assay pulps. These results are acceptable as a measure of the consistency and reproducibility of the lab results.

### *Blanks*

Analytical results for blank samples inserted into the data stream are shown in Table 6. One sample, 243708 was initially analyzed by gravimetric methods, and yielded an anomalously high result. It was re-analyzed using the ICP finish and the result shown in the table is within acceptable bounds. The lower detection limit for procedure ME-GRA21 is 0.05 ppm. All the samples but #243708 were below this

limit and are shown on the chart as one half the low detection limit. The low detection limit for procedure AU-ICP21 is 0.001 ppm, and the sample is twice that threshold. These results are acceptable as a measure of the consistency and accuracy of the laboratory procedures.

#### *Internal (lab) Duplicates*

In addition to the blind duplicate samples submitted along with the check samples, the laboratory also introduced a suite of their own duplicate samples as a further test of analytical quality. Table 7 shows the results of analysis for gold and silver of the internal (laboratory introduced) samples. Figures 3 and 4 are X-Y scatter plots of check sample versus laboratory duplicate point pairs for gold and silver assays. There was adequate agreement between the samples and duplicates for gold, with 4 samples differing by more than one RMA standard deviation. For silver, out of the 26 samples duplicated, only two assay result pairs fell outside the one RMA standard deviation limit. Again, the discrepancies are likely more a result of inhomogeneous distribution of gold in the sample than problems in the laboratory.

#### *Check Assays*

A total of 869 samples were selected to be analyzed for gold and silver to test for reproducibility of historic analytical results. These samples were selected from 27 drill holes covering a representative area of the historic drilling. Of the 869 samples that were re-assayed, 26 of the gold assays fell outside the RMA scatter limit and 43 of the silver assays failed to duplicate historic results. Of the 26 gold re-analyses that did not reproduce historic values, two were the result of an insufficient amount of sample submitted and no analysis being performed. Table 8 below shows the gold assay results which failed to replicate historic results within statistically meaningful limits. Table 9 shows silver assays which failed to replicate historic results. Of the 43 silver check assays that failed to match historic values, all but two of the assays were higher than the historic values. This is a high failure rate, and care must be exercised if using the historic silver values in calculating a modern mineral resource. It is somewhat encouraging to note that the historic assays tend to understate the actual silver values, so an estimate calculated using the historic values will not overstate the silver content of the deposit.

Figure 5 is an X-Y scatter plot of the gold historic and re-assay pairs, with the  $S_{RMA}$  shown as error bars around the points. A scatter of only plus or minus one RMA standard deviation is a very stringent test, and to have only 26 samples fall outside this limit shows that the historic gold assays are reproducible using modern assay techniques. This leads to the conclusion that the historic gold assays can be used in the formulation of modern, NI43-101 compliant mineral resource and reserve estimates.

Figure 6 above is the X-Y scatter plot of check assays versus historic assays for silver. It is interesting to note that of all the points where the check assays failed to match historic values, all but two of the check assays are higher than the corresponding historic assay values.

Due to discrepancies between the analytical techniques employed in the past, their detection limits and their representation in data sets, there was some concern with the number of check assays that differed appreciably with the historic data. This was an artifact caused by following the common practice of stating the value of an assay which was below the detection limit of a laboratory procedure as one half the detection limit (DL). This method of recording values <DL works on simple data sets, but causes difficulties when various analytical methods are employed over time, each with its own lower DL.

#### *12.3.4 Conclusion*

Review of the data provided for QA/QC by standard deviation tests and RMA Regression indicate that:

1. Company standards and blanks pass.
2. Company duplicates pass.
3. Laboratory internal duplicates pass.
4. Historical Au assays compare well with current re-assays when employing the AU-ICP21 analytical procedure on the low-grade gold samples.
5. Historical Ag samples caused some initial concern due to the variation in detection limits (DL) incorporated, as they were recorded as  $\frac{1}{2}$  DL (Detection Limit).
6. Some of the historic analytical procedures employed had a very high DL. Gold assays below this DL were arbitrarily assigned a value of 0.0001 ppm. This did not correlate well the modern DL of 0.05 ppm which is incorporated in the data set with a value of 0.025 ppm ( $\frac{1}{2}$  DL).
7. RMA Regression analysis was chosen as the statistical technique as it allows for comparison of independent variables. In this case, check assays are independent of historical assays, and duplicates are independent of each other.

8. Based upon a statistical regression analysis of historical assays, check assays, along with standards, duplicates and blanks, there is a strong correlation between historical and check data obtained from the samples.
9. Absolute difference and pair mean were calculated and plotted for check assays versus company duplicates, check assays versus lab duplicates and check assays versus historic assays for both gold and silver. In all cases the plots of absolute difference versus pair mean agreed with the RMA regression results. Therefore these plots will not be included or discussed in this report due to their redundancy.

## **12.4 Data verification of drill hole database**

A comparison was made between the original drill core logs and the drill hole database for the TUG property for the lithology; between the PDF version of the assay certificates and the drill hole database and between survey certificates and the collars in the drill hole database. The assay database is large, so only every 10<sup>th</sup> Au and Ag assay in the database, the 10 highest Au assays and 10 highest Ag assays were checked with the assay certificate.

For the collar check, the survey certificates used a local grid and feet for units, whereas the drill database used UTM coordinates and metres for units. Caracle Creek checked that the conversion of coordinate systems and units was correct. There were holes listed in the database, but not in the survey certificates. Caracle Creek was given additional survey certificates. There were holes in the survey certificates that were not in the database. The 8X-N-XX holes were renamed and the WT series holes that were in the survey certificates but not the database are all from KB. Several holes had a discrepancy between the depth listed in the database and the depth recorded in the survey certificates. For these holes, the drill logs were checked and were the final opinion on the depth of the holes. All issues related to the collar check were resolved.

For the assay check, the database was found to contain thousands of entries of “-5” where no data was available in logs or assays to back up the reason or need for the entry. These entries were changed to null values for the entire database. Note that this did not remove values of “-5.00”, which were determined to represent results that were below detection limits (ie. <5). Similarly, some entries of “-10”, “-15”, and “-20” were found to be erroneous and replaced with null values. In these instances, a comment was inserted into the database explaining the deletion. Values that represented an assay below detection limits were replaced with a value of half of the detection limit (ie. -1.000 representing <1 was replaced with 0.5).



For the lithology check, some lithologies in the database were corrected based on the log information. The following holes did not have detailed lithologies in the database and had to be manually entered: N82008, N82009, N82010, N82020, N83097, N83097, N83098 and N83108. Two holes had no lithology information entered in the database and no drill logs were found: WT079 and WT080.

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

No mineral processing or metallurgical test work has been commissioned by WKM on potential ores from the project area.

Historic metallurgical work has been completed by previous operators on the TUG deposit and a summary from Kuipers (1991) is presented below. Caracle Creek did not verify the historic metallurgical testing. Caracle Creek is relying on the metallurgical experts quoted in Kuipers (1991) for this section.

### **13.1 Noranda, 1983**

#### **Cyanide Leach Tests on Core Samples, Kappes Cassiday and Associates, June 13, 1983.**

- Noranda initiated the study.
- Four composites were prepared and classified as 1) unsilicified dolomite, 2) high silver silicified, 3) low silver silicified, and 4) unsilicified shale.
- The sample source is core from drill holes #3 (6 to 90 ft) and #15 (5 to 30 ft).
- A column leach test was run on each of the four samples.
- Tests ran for nine days on minus 1 ½-in. The material was then air-dried and the plus ¼ in fraction was screened out and crushed through a jaw crusher to minus 3/8-in.
- The results indicate that 56% of the gold and 32% of the silver can be recovered at minus 3/8-in grind.
- Agitated cyanide tests on pulverized samples (“medium grind”) indicate that 82% of the gold and 58 % of the silver can be recovered by milling techniques.

#### **Lakefield Research, September 21, 1983 through November 14, 1983.**

- Cyanidation testing was initiated by Noranda.
- Three sample composites were prepared: siliceous, dolomitic, and shale.
- Flotation test results ranged from 30 to 50% gold recovery.
- Bottle roll tests yielded gold recoveries ranging from 70.6 to 89.6%, and silver recoveries ranged from 39.8 to 66.4% at 85 to 96% minus 400 mesh.
- Variations in pH, leach time, and cyanide concentration were investigated with only minimal optimization observed.
- A SO<sub>2</sub> pre-leach was conducted to investigate reduction of manganese minerals before cyanidation. Increases in silver recovery were noted for the dolomitic sample. No other increases were documented.



- Gravity separation showed very little concentration of gold or silver in the gravity concentrate.
- Sample sources for the above testing are assay intervals from RC drill holes # 83-79, 83-81, 83-82, and 83-84 for siliceous material; 83-80, 83-81, 9-83-82, and 83-83 for dolomitic material; and 83-83 for shale material.
- Head grades for the samples are in the range of 0.050 to 0.060 oz/ton for gold, and 1.0 to 3.4 oz/ton for silver.
- Filtration, settling, and thickener investigations were also conducted.

### **13.2 Noranda, 1984**

#### **Cyanide Leach Test Results Final Report, Kappes Cassiday Associates, July 11, 1984.**

- Noranda initiated the study.
- Three column leach tests were run on minus 3/8-in material and six column leach tests were run on minus six mesh material for 150 days.
- Twenty-four hour, pulverized, agitated cyanide centrifuge tests and bottle roll tests were conducted. The centrifuge tests used 10-gram samples and the bottle roll tests used 200-gram samples.
- Column leach recoveries are 52.2% for gold and 15.2% for silver for material crushed to minus 3/8 in, and 55.5% gold and 21.9% silver for material crushed to minus 6 mesh. Gold extraction for all rock types is similar. The silver recovery for the shale was low, ranging from 2 to 4.7% at the sizes leached.
- The sample source is a combination of core and RC cuttings.

### **13.3 WSMC, 1984**

#### **Allis-Chalmers Crushability and Grindability tests, July 13, 1984.**

- WSMC initiated the tests.
- Impact work index – 19.8
- Abrasion index – 0.9923
- Ball mill work index at 200 mesh – 15.9
- Specific gravity – 2.73 g/cm<sup>3</sup>
- Rod mill work index at 28 mesh – 17.3
- The bulk sample is from a surface source.

#### **Hazen Research, Inc., September 14, 1984.**

- WSMC initiated the study.
- The study consisted of two vat and two agitation leach tests.
- Samples were ground to 80% minus 200 mesh.
- Gold recoveries by vat leaching are 78 and 84% at five and 10 lbs/ton cement agglomerate, respectively. Silver recoveries are 36.4 and 36%, respectively.
- Gold recoveries by agitation leach with and without flocculent were 76.2 and 76.3%, respectively. Silver recoveries were 34.2 and 35.3%, respectively.

- Settling and thickener characteristics were investigated.
- The sample source is RC drill holes WT-26, 27, 34, 35, 36, 52, 53, 54, 56 and 71.

### **13.4 WSMC, 1985**

#### **Hazen Research, Inc., March 20, 1985.**

- WSMC initiated the study.
- Twenty-one cyanidation tests were conducted to investigate if silver dissolution could be improved. Test parameters included pH, lime vs. caustic soda, agglomeration with and without cyanide, fine grinding, gravity concentration, and various pretreatments. Only grinding finer than 10 microns (finer than 400 mesh) resulted in increased silver recovery. It was concluded that silver recovery greater than 50% would not be achieved by conventional cyanidation.
- Thickening characteristics were investigated.
- The sample source is a rotary drill hole composite from the central area of the resource. The sample head grades are 0.072 oz Au/ton and 3.54 oz Ag/ton.

### **13.5 WSMC, 1987**

#### **Skyline Labs, April 24, 1987.**

- WSMC initiated the study.
- Seven bottle roll tests utilizing chemical pre-treatment were conducted in an effort to enhance silver recovery.
- $\text{H}_2\text{SO}_4$ ,  $\text{H}_2\text{O}_2$ ,  $\text{Cl}_2$ , and caustic preleach chemicals were tested.
- Gold recovery averaged 48.7% and silver recovery averaged 22.8%.
- The sample was a composite of dolostone, jasperoid, and shale with head grades of 0.051 oz Au/ton and 2.21 oz Ag/ton.

#### **Skyline Labs, June 30, 1987.**

- WSMC initiated the study.
- The study involved the continued oxidation of the composite sample described above.
- Tests included  $\text{H}_2\text{O}_2$  pre-oxidation over a period of two weeks, and high temperature roasting at 650°C.
- Both methods were ineffective in increasing gold and silver recovery.
- Gold assays show no preference with respect to sieve size indicating very small particle size.

#### **Skyline Labs, December 16, 1987.**

- WSMC initiated the study.
- The study consisted of one 96-hour bottle roll test and one 31-day bucket leach test.

- The bottle roll test was run at minus  $\frac{3}{4}$ -in and recovered 39.02% of the contained gold and 9.95% of the silver.
- The bucket leach test was at minus  $\frac{3}{4}$ -in and recovered 34.15% of the contained gold and 5.62% of the silver.
- The specific sample source is not reported.

### **13.6 WSMC, 1989**

#### **McClelland Laboratories, July 10, 1989.**

- WSMC initiated the test.
- The test consisted of one 58-day leach cycle column leach test at minus  $\frac{1}{2}$  in crush size.
- Gold recovery was 48.5% and silver recovery was 8.3% under the test conditions.
- The specific sample source is not reported.

### **13.7 WSMC, 1990**

#### **Hazen Research, Inc., March 28, 1990.**

- WSMC initiated the study.
- The study consisted of five bottle roll tests on drill cuttings.
- Gold recovery ranged from 41.2 to 76.5%.
- From a sieve analysis of the tails, grinding to less than 200 mesh is required for optimization of gold recovery.
- The sample source is drill cuttings of dolostone, jasperoid and siltstone. The specific drill holes not reported.

#### **Grindability Studies on TUG, Hazen Research, Inc., April 6, 1990.**

- WSMC initiated the study.
- The product size is 80% minus 100 microns (150 mesh).
- Bond rod mill work index is 16.9.
- Bond Ball mill work index is 16.6.
- The sample is of the “hardest” material from the TUG deposit area representing 70% of the deposit.

### **13.8 WSMC, 1992**

#### **Barmac Report Kappes Cassiday and Associates, October 12, 1992.**

- WSMC initiated the work.
- Work consisted of one bottle roll test at 100% minus 100 mesh, and one column test on Barmac crushed minus ¼ in material.
- The bottle roll test yielded 83.02% gold recovery and 47.58% silver recovery.
- The column test yielded 51.61% gold recovery and 11.8% silver recovery.
- The sample source is not reported.

### 13.9 TUG Discussion

Metallurgical testing on TUG deposit is fairly extensive. The information is conclusive enough to do an analysis of various process flow-sheet alternatives. Of the three lithologies that host mineralization, shale, dolostone and jasperoid, the jasperoid represents the greatest difficulty in processing due to its more siliceous nature. The jasperoid has a higher size reduction abrasion coefficient and requires a finer grind size to obtain metallurgical recoveries similar to the other lithologies.

Metallurgical response to cyanidation on TUG deposit samples has been tested by Lakefield Research, Kappes Cassiday and Associates, Hazen Research, Skyline Labs, and McClelland Laboratories. The work indicates that heap leaching at a nominal crush size of 100 percent passing 3/8 in should give recoveries of 50-60 percent for gold and 20-40 percent for silver. All laboratories concur that gold and silver recovery is related primarily to grind-size.

The following summarizes metallurgical test results:

- Sieve analyses of ore samples demonstrate comparable gold assays across all sieve sizes. Gold assay repeatability is good and supports the observed very fine-grained particle size of the gold.
- Gold and silver recoveries from cyanidation tests increase as the quantity of minus 200 mesh increases. The highest recoveries from pulverized samples by bottle roll agitation techniques were achieved at 87% minus 400 mesh. This size range yielded 89.6% recovery of the contained gold and 66.4% of the silver.
- Recovery of precious metals by ground and agglomerated vat-leaching techniques yielded 84% of the contained gold and 36% of the silver at a grind size of 80% minus 200 mesh.
- Metallurgical response to column leaching has been demonstrated at various crush sizes. Gold recovery by column testing is 56% and silver recovery is 32% when crushed to minus 3/8 in.
- Efforts to concentrate precious metals by flotation techniques show promise. Chemical pre-oxidation techniques utilizing SO<sub>2</sub>, H<sub>2</sub>SO<sub>4</sub>, H<sub>2</sub>O<sub>2</sub>, Cl<sub>2</sub>, and caustic were used. Testing indicates that the highest recoveries, 90-95% gold and greater than 75% silver, can be obtained by a

combined process of flotation and cyanidation at costs standard for mill cyanidation alone. Flotation at a relatively coarse grind (80%-150 mesh) can recover approximately 50% of the gold and silver. The flotation tails, which contain gold and silver in the difficult to float slimes fraction, respond very favorably to cyanidation (greater than 95%).

- Crushability and grindability studies by Allis-Chalmers indicate that the impact work index is 19.8, the abrasion index is 0.9923, the ball-mill work index at 200 mesh is 15.9, and the rod mill work index at 28 mesh is 17.3. Crushing and grinding work indices are typical for gold ores. Abrasion indices are significantly higher than typical.
- Metallurgical advantages should be gained by crushing TUG material with a High Pressure Grinding Roll, prior to agglomeration and heap leaching, as this process generates higher quantities of fines compared to other comminution techniques.

## **14.0 MINERAL RESOURCE ESTIMATES**

### **14.1 Introduction**

Caracle Creek International Consulting (Caracle Creek) was retained by West Kirkland Mining Inc (WKM) to complete a mineral resource estimate for their TUG project located in Nevada, USA. The TUG project is a large, undeveloped, low grade Au-Ag deposit which has the potential to be mined by open pit.

The mineral resource reported herein is based on drilling information as of March 26<sup>th</sup>, 2012 (Figure 14-1). All of the drill hole data, including collars, assays, survey and lithology, were compiled into a database which links directly to the geological modelling and resource estimation software. The mineral resource estimation was evaluated using geostatistical block modeling methods constrained by a mineralised wire frame. Gemcom's GEMS resource modeling software V.6.3 was used to generate the block model and perform the grade estimation. Grades for Au and Ag were estimated using the inverse distance method of interpolation. The mineral resources have been estimated in conformity with the CIM "Mineral Resource and Mineral Reserves Estimation Best Practices" guidelines and were classified according to the CIM Standard Definition for Mineral Resources and Mineral Reserves (December 2005) guidelines. The mineral resources are reported in accordance with the Canadian Securities Administrators National Instrument 43-101.

Independent, NI 43-101 compliant resources at the TUG property were estimated by Jason Baker P.Eng., a Geological Engineer with Caracle Creek. QA/QC was completed by Caracle Creek on the historic assays prior to incorporation in the 3D model (Section 12, Data Verification). Because of his education,



project experience and affiliation to a recognized professional association, Mr. Baker is a “qualified person” independent of WKM in accordance with NI 43-101 guidelines. Mineral resources were calculated for the TUG project by the methods described above. The Mineral Resource Statement reported for the TUG project is presented in Table 14-1 using a 0.1 g/t Au cut-off grade.

*Table 14-1 Mineral resource statement<sup>1</sup> (Caracle Creek, May 29<sup>th</sup>, 2012)*

Area	Category	Quantity (tonnes) <sup>2</sup>	Grade <sup>4</sup> Au g/t	Grade <sup>3</sup> Ag g/t	Grade <sup>6</sup> AuEq g/t	Ounces <sup>5</sup> Au	Ounces <sup>5</sup> Ag	Ounces <sup>5</sup> AuEq
<b>TUG</b>	<b>Inferred</b>	<b>27,110,000</b>	<b>0.49</b>	<b>15.8</b>	<b>0.78</b>	<b>431,400</b>	<b>13,844,800</b>	<b>679,000</b>

<sup>1</sup> Reported at a cut-off grade of 0.1 g/t Au. Mineral resources are not mineral reserves and do not have demonstrated economic viability.

<sup>2</sup> Tonnes have been rounded to the nearest 10,000.

<sup>3</sup> Ag grade has been rounded to one (1) significant digit.

<sup>4</sup> Au grade has been rounded to two (2) significant digits.

<sup>5</sup> Ounces have been rounded to the nearest 100. One (1) troy ounce = 31.103 grams

<sup>6</sup> AuEq was calculated assuming 100% metal recovery using a metal price ratio between Ag and Au (Ag:Au) = 0.018

(AuEq = Au + (Ag \* 0.018))

This resource statement supersedes all previous dated statements

This report summarizes the methodology, data and validation techniques used by Caracle Creek in estimating the mineral resources for the TUG project.

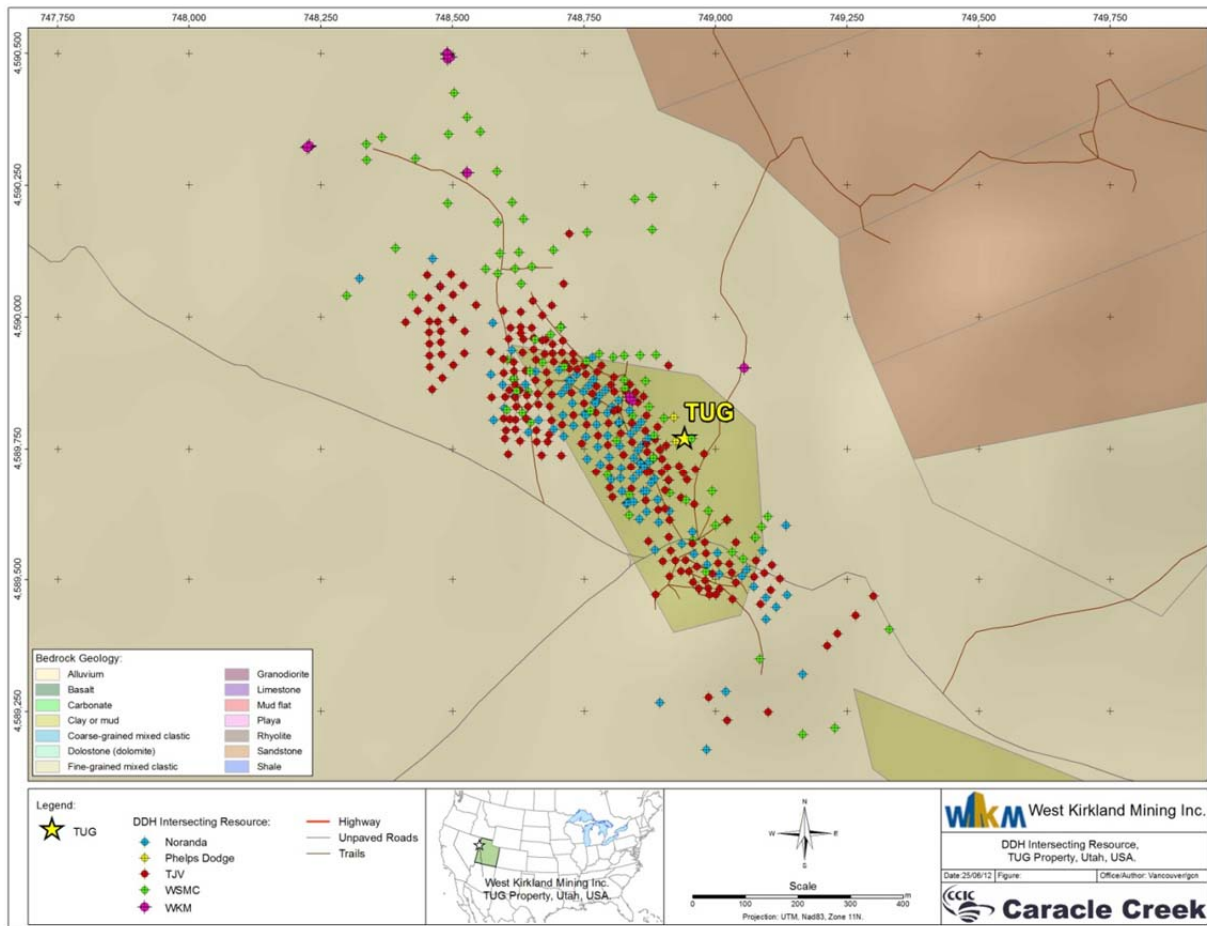


Figure 14-1 Plan map of drill holes included in the resource on the TUG property.

## 14.2 Resource Estimation Methodology

### 14.2.1 Resource Database, Preparation & Compositing

Drill hole collar coordinates and details were provided in Gemcom GEMS format by WKM including assays, lithology and down hole survey. The resource estimate was calculated using data from 600 drill holes from programs of 4 previous operators between 1981 and 1997, as well as 13 drill holes drilled by WKM in 2011 and 2012 (Figure 14-1, Figure 14-2, Table 14-2).

Table 14-2 Data used in estimating the mineral resources at TUG

Drill program	# of Holes	# of Samples
---------------	------------	--------------

WKM (2011 – 2012)	13 (4022 m)	2456
Historical (1981 – 1997)	600 (45,715 m)	17,923
<b>Total</b>	<b>613 (49,737 m)</b>	<b>20,379</b>

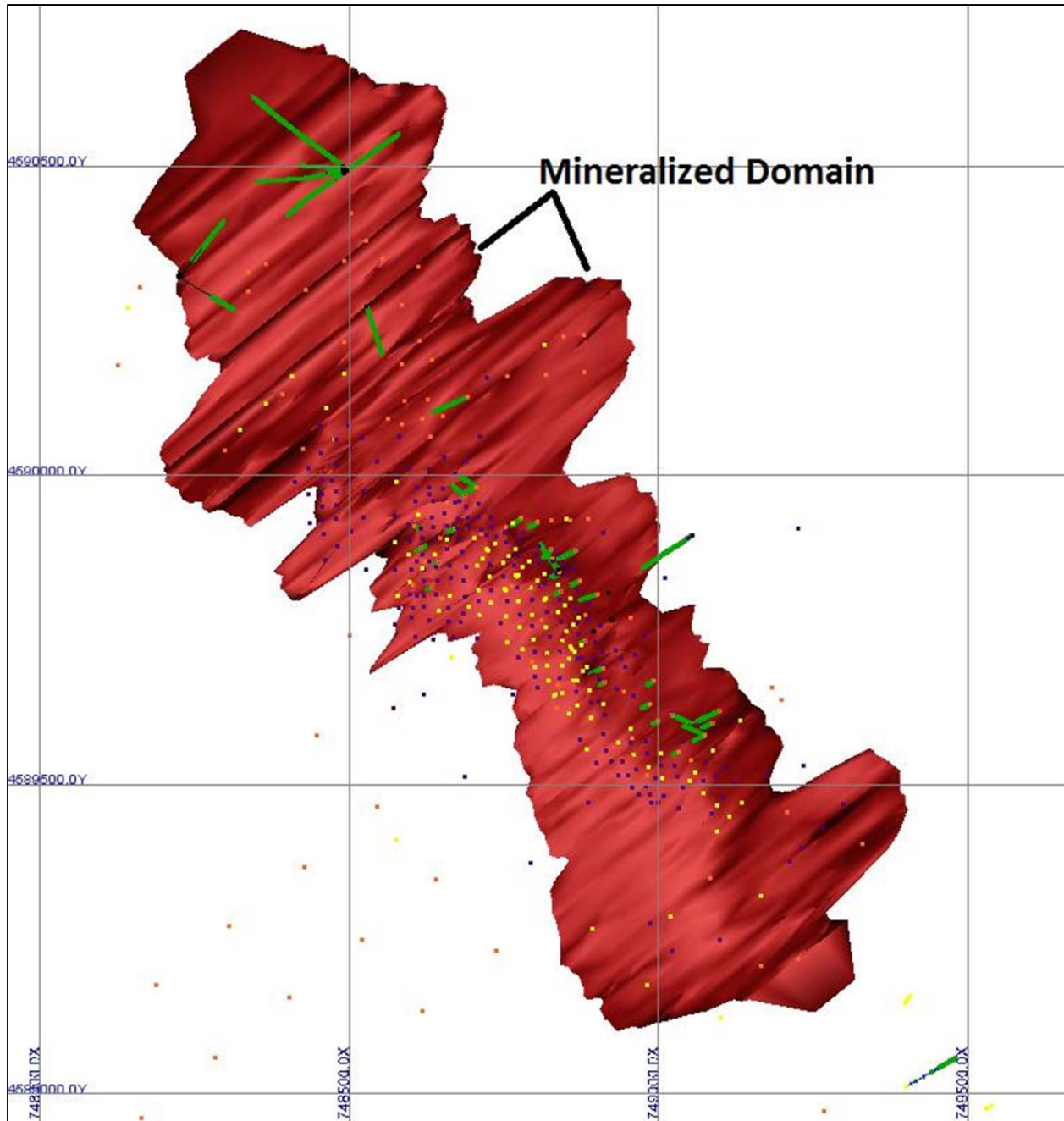


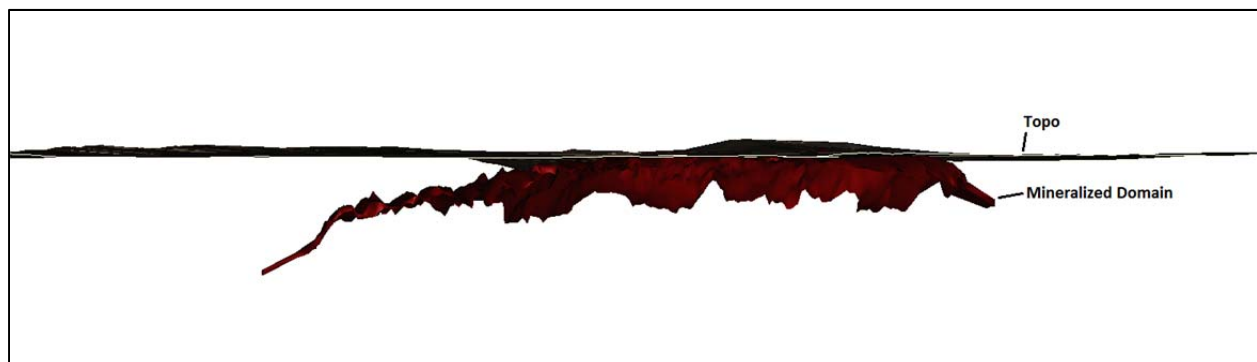
Figure 14-2 Drill hole distribution of all holes at TUG

The data results of each drill program were compiled by WKM and imported into GEMS including, collars, survey, and assay data. The drill core from the 2011- 2012 program was logged by WKM personnel. The lithology data from all drill programs were also imported into GEMS by WKM.

The following section describes how the mineralized domains were used to constrain the resource estimation as well as how compositing and outliers were dealt with in this project. The results of the specific gravity analysis are also discussed.

#### ***14.2.1.1 Geological Modeling & Mineralized Domains***

Geological modeling was performed by Caracle Creek using the raw drill hole data. A topography surface was provided by WKM. The mineralized domain used to constrain the resource grade was provided by WKM and reviewed by Caracle Creek. It was determined that only minor edits were needed which resulted in a reduction in size to the Caracle Creek wire frame when compared to the original wire frame provided by West Kirkland. The mineralized domain was constructed primarily from the Au grade assay data. The mineralized domain was not constrained by lithology (Figure 14-2, Figure 14-3, Figure 14-4).



*Figure 14-3 3D view of topography and mineralized domain looking NE.  
Note the resource model is not above topography. This is the best orientation to show the resource model.*

The mineralized domain was defined using 405 drill holes and 4223 samples. The drill holes were drilled in a sectional pattern with a drill hole spacing ranging from 10 meters, in the center of the mineralized domain, and 100 meters on the outer extremities (Figure 14-2). The mineralized domain was projected 100 meters beyond the last drill hole. Due to the potential for bulk open pit mining, a grade cut-off was not used when constructing the mineralized domain. However, if the last assay in the interval was less than 0.1 g/t Au, then it was not included in the mineralized domain unless it had a significant Ag grade component of 10g/t Ag.

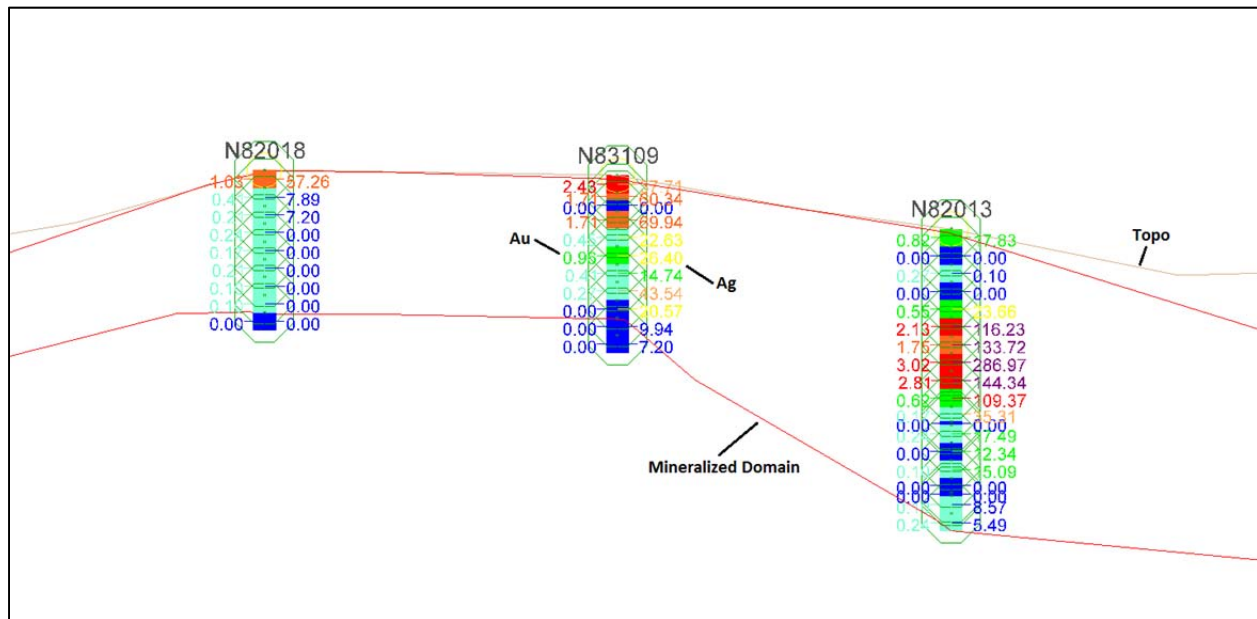


Figure 14-4 Sectional view of mineralized domain with Au and Ag assays (looking NW)

#### 14.2.1.2 Data Analysis & Compositing

All the raw assays within the mineralized domain were extracted from the database for statistical analysis. This included a total of 4223 assay intervals, of which over 3700 (88%) had an assay interval lengths between 1.4 and 1.6 meters (Figure 14-5 and Figure 14-6). The remaining assay intervals were of varying lengths between 0.16 and 6.1 m with 99% of all assay intervals being 3 m or less. Considering the assay data statistics, with respect to interval length, Caracle Creek chose to composite the data to 3 m intervals. The estimation parameters set for the mineral resources were allowed to interpolate through un-sampled intervals. Zero grades were not assigned.



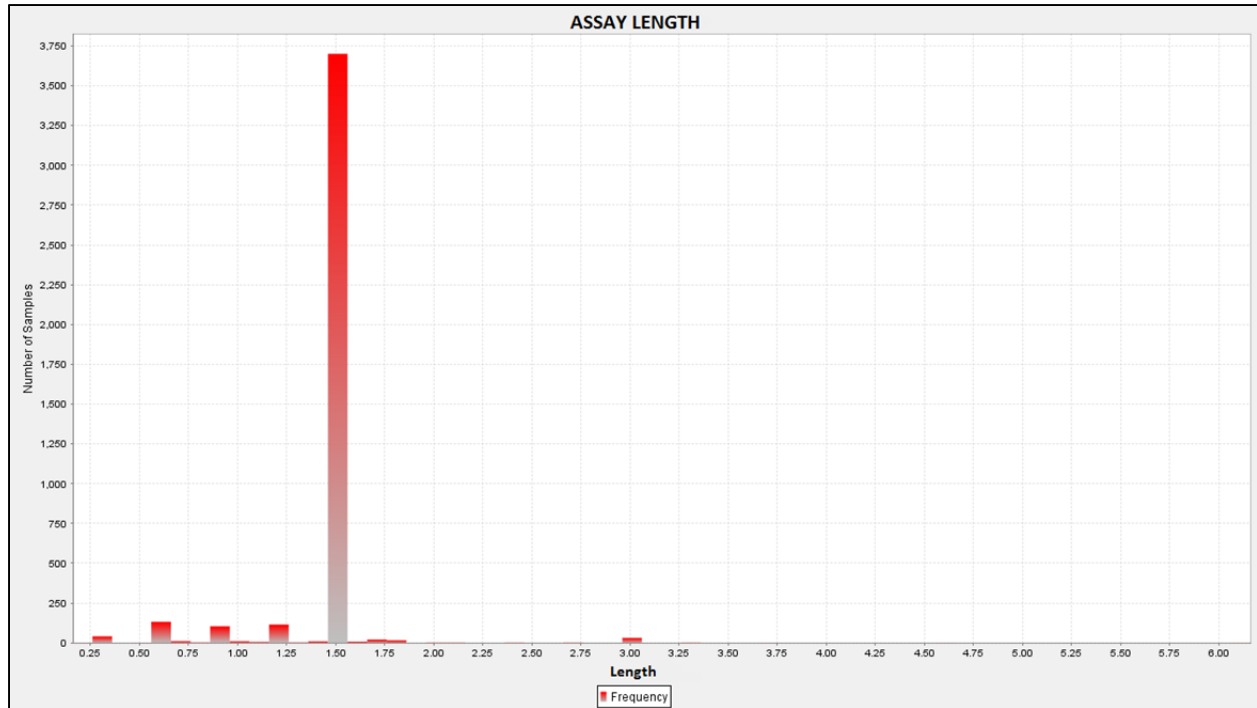


Figure 14-5 Histogram plot showing the distribution of assay lengths

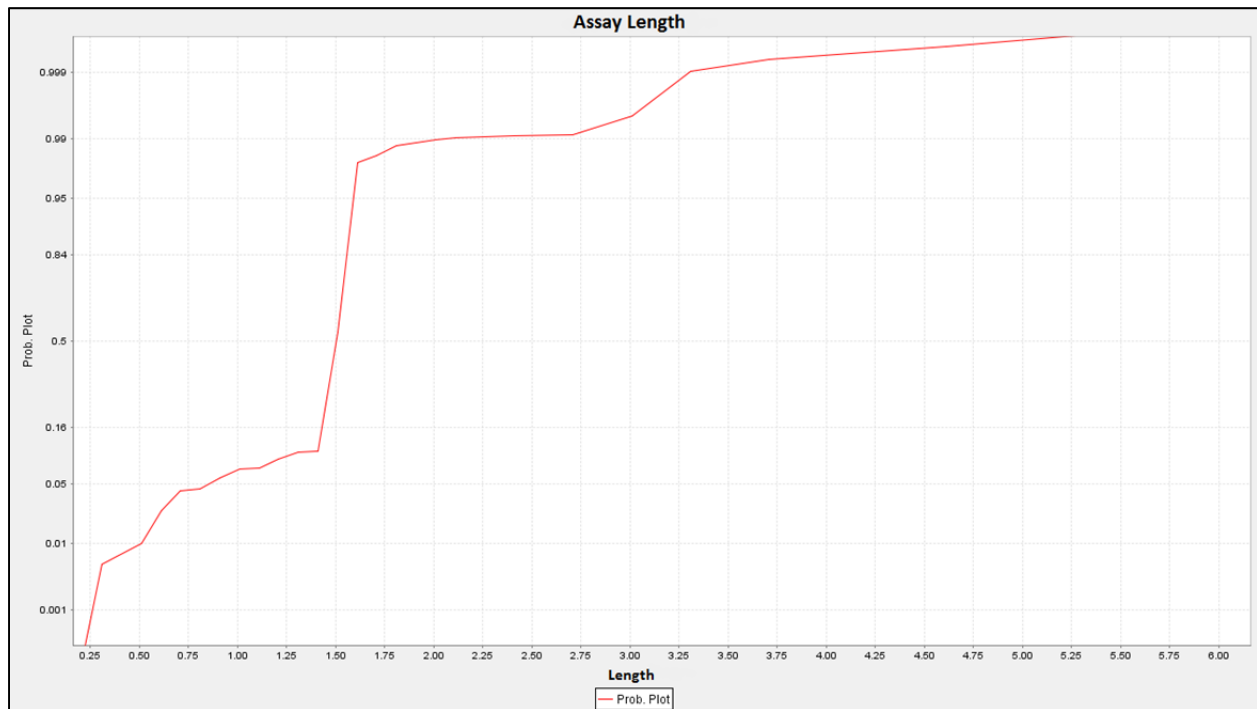


Figure 14-6 Probability plot showing the distribution of assay lengths

Basic assay statistics were calculated for all raw assays within the mineralized domain. See Table 14-3 for the results.

*Table 14-3 Summary of raw assay data statistics for all samples within the mineralized domain*

<b>Sample Data</b>	<b>Au</b>	<b>Ag</b>
Number of Samples	4223	4223
Minimum Value (g/t)	0.01	0.01
Maximum Value (g/t)	32.33	1385.2
Mean (g/t)	0.76	12.0
50 <sup>th</sup> Percentile (Median) (g/t)	0.32	12.0
95 <sup>th</sup> Percentile (g/t)	2.87	142.0
Variance (g/t)	1.94	5149.2
Standard Deviation (g/t)	1.39	71.8
Coefficient of Variation	1.84	2.1

Basic statistics were also calculated for the 3 m composites. See Table 14-4 for the results.

*Table 14-4 Summary of 3m composite data statistics for all samples within the mineralized domain*

<b>Sample Data</b>	<b>Au</b>	<b>Au Cap 8.00 g/t</b>	<b>Ag</b>	<b>Ag Cap 800 g/t</b>
Number of Samples	2352	2352	2352	2352
Minimum Value (g/t)	0.01	0.01	0.01	0.01
Maximum Value (g/t)	18.42	8.00	1263.2	800.0
Mean (g/t)	0.71	0.70	31.8	31.6
50 <sup>th</sup> Percentile (Median) (g/t)	0.35	0.35	13.5	13.5
95 <sup>th</sup> Percentile (g/t)	2.55	2.55	123.4	123.4
Variance (g/t)	1.28	1.09	3512.0	3117.2
Standard Deviation (g/t)	1.13	1.04	59.3	55.8
Coefficient of Variation	1.60	1.49	1.90	1.77

### ***14.2.1.3 Grade Capping***

Caracle Creek performed a capping analysis on the composited data using histogram plots and probability plots. Figure 14-7 and Figure 14-8 show the histogram plots for the Au and Ag 3m composite data, including all outliers. Based on this analysis Caracle Creek capped the Au composites at 8.00 g/t and the Ag composites at 800.0 g/t.

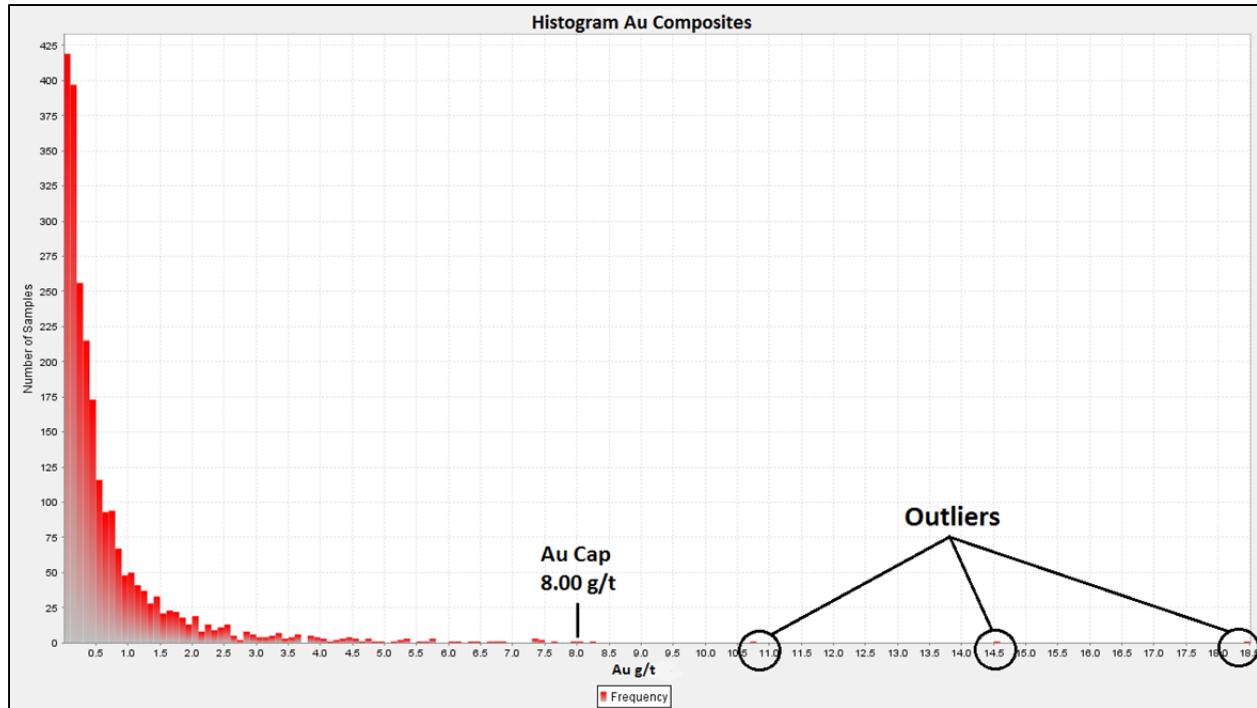


Figure 14-7 Histogram showing Au composite grade distribution

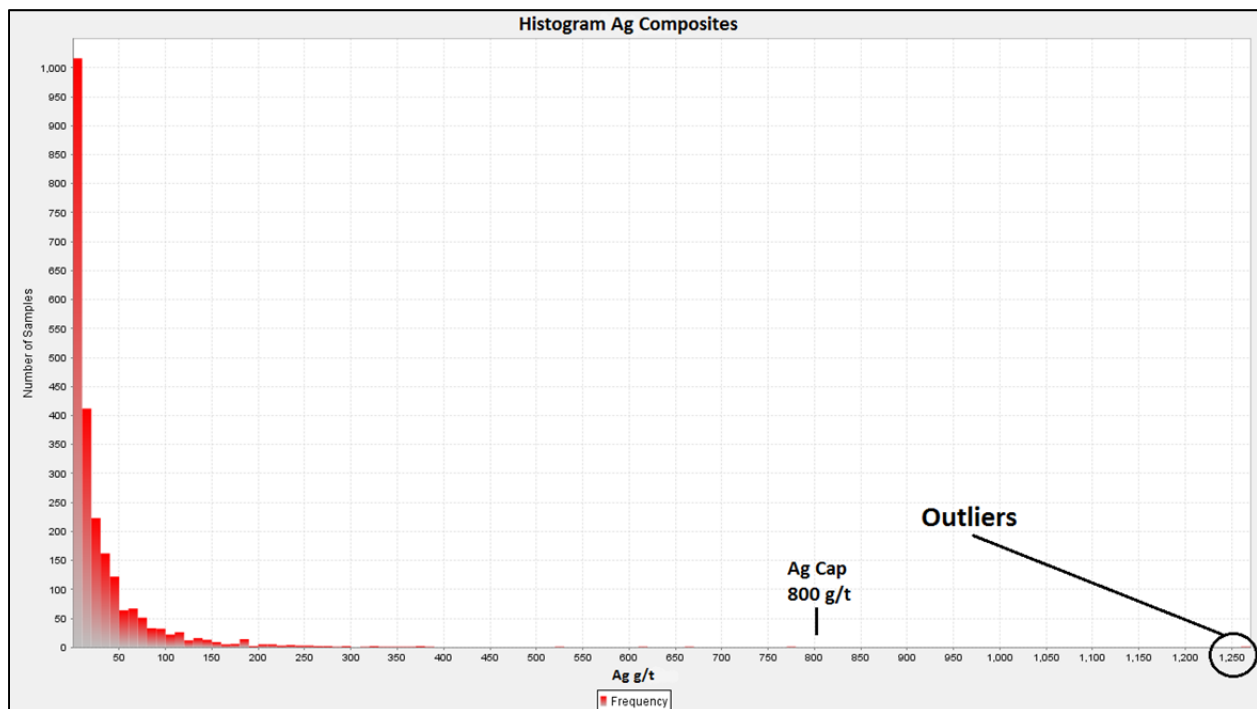


Figure 14-8 Histogram showing Ag composite grade distribution

#### ***14.2.1.4 Specific Gravity***

Specific Gravity (SG) for the TUG property was determined using 52 SG samples, which averaged 2.87. The SG data was not populated throughout the block model using geostatistical estimation; instead, a value of 2.87 was assigned to all of the blocks inside the mineralized domain. The tonnage for each block was calculated as follows:

Block volume ( $5\text{m} \times 5\text{m} \times 5\text{m}$ )  $\times$  (SG)  $\times$  (the proportion of the block within the solid)

#### ***14.2.2 Variography***

Caracle Creek did not evaluate the 3D spatial distribution of Au or Ag using variograms. However, a linear down hole variogram was calculated for Au to estimate the nugget effect. The variogram analysis was performed using Gemcom Software's GEMS V6.3.

Figure 14-9 shows the linear down hole variogram calculated for Au at a 1 meter lag distance within the mineralized domain. The nugget effect with respect to Au was measured and found to be approximately 42%.

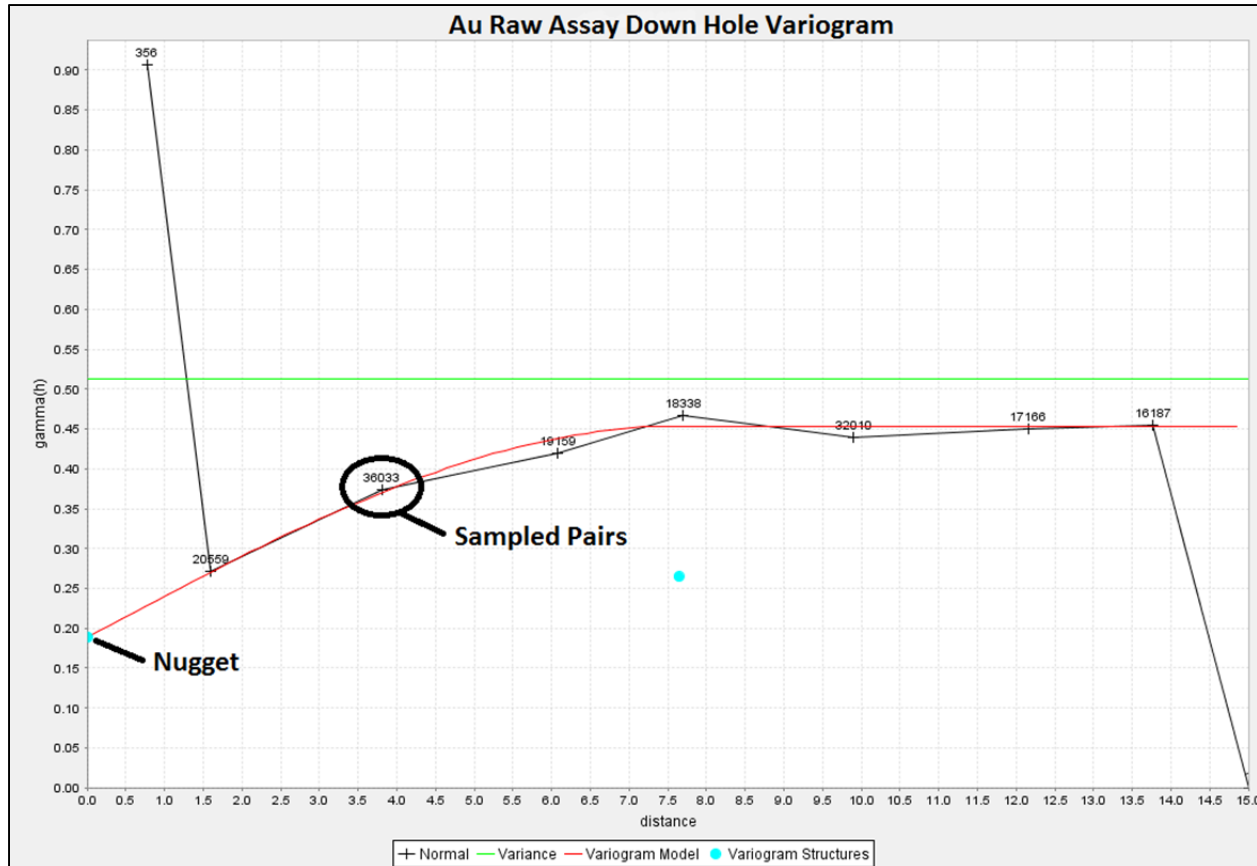


Figure 14-9 Linear down hole variogram within the mineralized domain

Note - The dotted black line represents the variogram, while the smooth red line represents the fitted model.

### 14.2.3 Block Model

The block model definitions for TUG are shown in Table 14-5. Partial percents were used as part of the volume estimation. The block volumes were adjusted using the partial percents based on the proportion of the block that was inside the wire framed solids representing the mineralization. The block model origin coordinates are represented by the Maximum “X”, Maximum “Y” and Minimum “Z”. Positive rotation is clockwise about any axis. Based on the anticipated mining methods, the size of the mineralized domain and the drill hole spacing, Caracle Creek chose a block size of 10m × 10m × 5m. The model was rotated 38° counter-clockwise from north.



*Table 14-5 Block model definitions for TUG*

	<b>Y (m)</b>	<b>X (m)</b>	<b>Z (m)</b>
Origin Coordinates (m)	4588800	749000	1700
Block Size	10	10	5
Rotation	0	-38	0
Number Of Blocks	100	200	80

#### **14.2.3.1 Grade Estimation Strategy**

Grade estimation was based on Inverse Distance (power of 2) using two passes. The first pass was the most restrictive in terms of search radius, the minimum/maximum number of samples required as well as the minimum number of holes required. The second pass was less restrictive under the same terms. The first pass populated approximately 40% of the blocks, with the rest of the blocks within the mineralized domain being populated by the second pass. The search ellipse radius and orientation were chosen based on the drill hole spacing. Table 14-6 summarizes the parameters used in the grade estimation. Figure 14-10 shows the block model.

*Table 14-6 TUG Block model parameters*

	<b>Pass 1</b>	<b>Pass 2</b>
Method of Interpolation	Inverse Distance Squared	Inverse Distance Squared
Search Radius	100 Meters	200 Meters
Search Type	Octant	Ellipsoidal
Min # of Samples	5	2
Max # of Samples	15	15
Min # of Holes	1	1

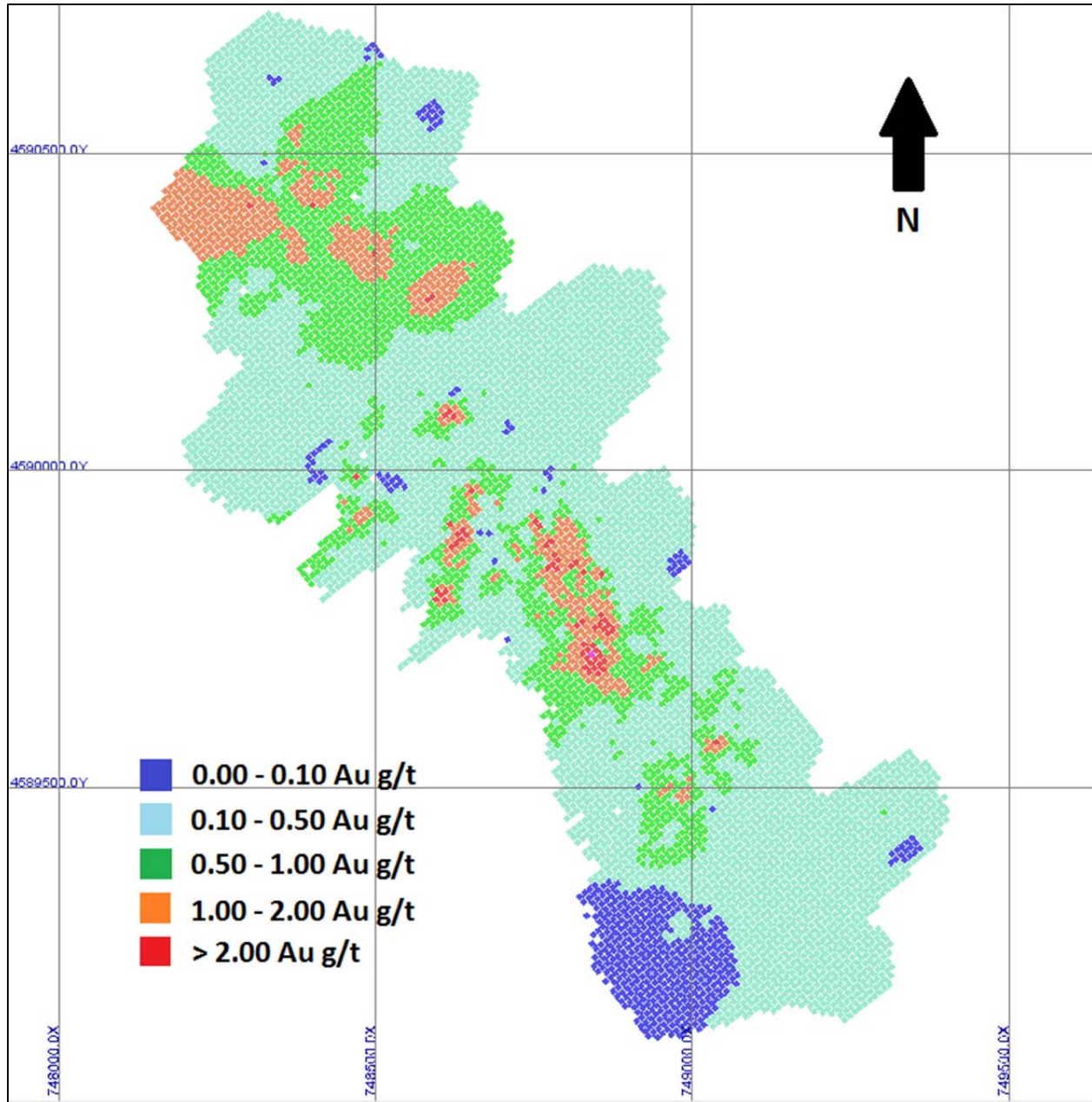


Figure 14-10 Plan view showing block model.

#### 14.2.4 Resource Model Validation

The validity of the block model was evaluated using four techniques. 1) Caracle Creek constructed a parallel estimation model for Au and Ag using an inverse distance method of estimation (power of five). The results were within 10% deviation in total tonnes and Au grade to that of the original model. 2)

Statistical comparisons were made between the interpolated blocks from the inverse distance squared model, the 3m composites and the raw assay data (Table 14-7). 3) The reported total block model tonnage and grade were also compared to a sectional volume method of estimation, which does not involve block modeling. A weighted average of all Au assays within the mineralized domain was calculated along with the volume of the mineralized domain. The results were within 10% to that of the original block grade estimation. 4) The interpolated block grades were visually checked on section and level plans and compared to the raw assay data.

*Table 14-7 Au Block model vs. raw assay data vs. 3m composite statistical analysis*

Statistic	Raw Assay Data	Capped 3m Composites	ID <sup>2</sup> Interpolation
# of Samples	4223	2352	24782
Mean	0.76	0.69	0.50
Median	0.32	0.35	0.35
Variance	1.94	1.09	0.15
Max Value	32.33	8.00	5.05

#### ***14.2.5 Mineral Resource Classification***

Based on the study reported herein, delineated mineralization at TUG is classified in part as **mineral resource** according to the following NI 43-101 definitions:

*“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 Standards on Mineral Resources and Reserves Definitions and Guidelines adopted by CIM Council on December 11, 2005, as those definitions may be amended from time to time by the Canadian Institute of Mining, Metallurgy, and Petroleum.”*

*“A **Mineral Resource** is a concentration or occurrence of natural solid, inorganic or fossilized organic material 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.”*

Mineral resources are not mineral reserves as economic viability of the property has not yet been shown. The terms Measured, Indicated and Inferred are defined in NI 43-101 as follows:

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

*“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.”*

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

The estimated tonnages for the mineralized domain at TUG are classified as Inferred resources, as described in the following section.

### **14.3 Mineral Resource Statement**

Mineral resources for TUG were classified by Mr. Jason Baker, P.Eng, an independent qualified person. Classification was done in accordance with the CIM Standard Definition for Mineral Resources and Mineral Reserves (December 2005) guidelines. The mineral resources for the TUG project are reported at a cut-off grade of 0.1 g/t Au. The Mineral Resource Statement for the TUG project is summarized in Table 14-8.

Table 14-8 Mineral resource statement<sup>1</sup> (Caracle Creek, May 29<sup>th</sup>, 2012)

Area	Category	Quantity (tonnes) <sup>2</sup>	Grade <sup>4</sup> Au g/t	Grade <sup>3</sup> Ag g/t	Grade <sup>6</sup> AuEq g/t	Ounces <sup>5</sup> Au	Ounces <sup>5</sup> Ag	Ounces <sup>5</sup> AuEq
<b>TUG</b>	<b>Inferred</b>	<b>27,110,000</b>	<b>0.49</b>	<b>15.8</b>	<b>0.78</b>	<b>431,400</b>	<b>13,844,800</b>	<b>679,000</b>

<sup>1</sup> Reported at a cut-off grade of 0.1 g/t Au. Mineral resources are not mineral reserves and do not have demonstrated economic viability.

<sup>2</sup> Tonnes have been rounded to the nearest 10,000.

<sup>3</sup> Ag grade has been rounded to one (1) significant digit.

<sup>4</sup> Au grade has been rounded to two (2) significant digits.

<sup>5</sup> Ounces have been rounded to the nearest 100. One (1) troy ounce = 31.103 grams

<sup>6</sup> AuEq was calculated assuming 100% metal recovery using a metal price ratio between Ag and Au (Ag:Au) = 0.018 (AuEq = Au + (Ag \* 0.018))

This resource statement supersedes all previous dated statements

The block model tonnage and grade were calculated at various cut-off grades in order to demonstrate the sensitivity of the resource estimate with respect to reporting cut-off grade. The results are shown in Table 14-9. It should be stressed to the reader that the figures presented in Table 14-9 are not to be misconstrued as a mineral resource as they are intended for the sole purpose of demonstrating the sensitivity of the resource estimate with respect to reporting cut-off grade.

Table 14-9 Block model quantities and grades reported at various cut-off grades

Au Cut-Off g/t	Tonnes <sup>1</sup>	Au g/t	Ag g/t	AuEq g/t
0.1	27,110,000	0.49	15.8	0.78
0.2	22,430,000	0.57	18.1	0.89
0.3	16,690,000	0.67	21.9	1.07
0.4	11,960,000	0.80	25.8	1.27
0.5	9,090,000	0.92	28.8	1.43
0.6	7,350,000	1.00	31.0	1.56

**Note:** <sup>1</sup> Tonnes have been rounded to the nearest 10,000. Au Grade has been rounded to two (2) significant digits. Ag grade has been rounded to three (3) significant digits. These figures are not to be misconstrued as mineral resource as they are intended for the sole purpose of demonstrating the sensitivity of the resource estimate with respect to reporting cut-off grade.

Mineral resource estimates for the TUG project presented in this report are effective as of the 29th day of May, 2012 (Table 14-8).

#### 14.4 Issues That Could Affect the Mineral Resource

There are no known factors related to permitting, legal, title, taxation, socio-economic, environmental, and marketing or political issues which could materially affect the mineral resource at the time of reporting. The estimation parameters set for the mineral resources were allowed to interpolate through un-sampled intervals. Zero grades were not assigned.



## **15.0 ADJACENT PROPERTIES**

### **15.1 Miranda Gold Corp. – Angel Wing Project**

Angel Wing project consists of 87 unpatented lode claims 7.3 km<sup>2</sup> in northeast Elko County, Nevada. The project is located 48 km north of Montello, Nevada adjacent to the KB and TUG property areas. The Angel Wing property is immediately west of the Nevada-Utah border along a gravel road that is accessible from early April through late November. Two styles of epithermal gold mineralization are associated with a 9.6 km long, northeast-striking structural zone that cuts Permian and Triassic carbonate rocks, and Tertiary sedimentary/volcanic rocks. High-grade, surface samples up to 2.70 oz Au/t (92.5 g Au/t) occur in steeply dipping quartz-calcite-adularia veins within Triassic limestone. The high-grade veins remain untested in a zone measuring 1.6 km along strike, 366 m wide and open at depth. Surface sampling also identified disseminated, sediment-hosted gold mineralization up to 0.044 oz Au/t (1.507 g Au/t) in silicified and clay altered Palaeozoic and Tertiary rocks. Shallow drilling for disseminated gold returned 0.047 oz Au/t over 50 feet (1.609 g Au/t over 15.2 m). ([Miranda Gold Corp. web site: http://www.mirandagold.com/s/AngelWing.asp](http://www.mirandagold.com/s/AngelWing.asp)).

The Qualified Person has been unable to verify in full the information outlined in the public domain by adjacent property owners. Caution is advised and in reference to adjacent properties. Note that mineralization outlined on adjacent properties is not indicative of mineralization on the property that is subject of this Technical Report.

### **15.2 Pilot Gold – Viper Project**

Pilot Gold's Viper project is located in Elko County, Nevada, approximately 70 kilometres northeast of Montello adjacent to the TUG project area by WKM. The Viper project totals 1,836 hectares, comprised of 831 hectares of private mineral rights owned and leased by Pilot Gold and 1,004 hectares of unpatented lode claims on land administered by the BLM and controlled by Pilot Gold ([Pilot Gold](#)).

The Qualified Person has been unable to verify the information outlined in the public domain by adjacent property owners and that mineralization outlined on adjacent properties is not indicative of mineralization on the property that is subject of this Technical Report.

### **15.3 Newmont – Long Canyon Deposit**

The Long Canyon Trend has become an emerging new exploration area in Nevada and has the classic characteristics for the discovery of Carlin-style gold mineralization (Section 8.0). In December 2010 and January 2011, Fronteer Gold Inc. (Fronteer), announced assay results from drilling program at Long Canyon Deposit, Nevada, United States with highlights including LC657C intersecting 55.0 m at 3.82 g/t gold and LC728 intersecting 38.1 meters averaging 3.35 grams per tonne (g/t) gold, including 6.1 meters averaging 10.22 g/t gold. Fronteer released an interim estimate in January 2011 for Long Canyon which reported Measured and Indicated resources of approximately 1.4 million gold ounces and an additional Inferred resource of approximately 0.8 million gold ounces.

In February 2011, Newmont Mining Corporation (Newmont) and Fronteer announced that they entered into an agreement pursuant to which Newmont will acquire all of the outstanding common shares of Fronteer Gold by way of a Plan of Arrangement under a new company “Pilot Gold”. The Qualified Person has reviewed but not verified the data outlined by surrounding property owners and it is advised that mineralization outlined on similarly trending properties is not indicative of mineralization on the property that is subject of this Technical Report

WKM is well placed within the Long Canyon Trend an emerging gold trend within the state of Nevada and Utah. The Qualified Person has reviewed but not verified the data outlined in these trends by surrounding property owners and it is advised that mineralization outlined on similarly trending properties is not indicative of mineralization on the property that is subject of this Technical Report.

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

There is no other known information that could make this Report more understandable.

## **17.0 INTERPRETATION AND CONCLUSIONS**

The purpose of this report is to provide an updated review of the TUG, project areas on West Kirkland Mining’s “Nevada Properties” and to make recommendations in order for WKM to bring the historical



data into NI 43-101 compliance. Caracle Creek has provided an overview of the regional, local and property geology for the benefit of its shareholders and enable them to make reasonable assessment of WKM's exploration status with respect to WKM's project areas outlined in this report.

The Company has provided a legal opinion with respect to title of the claims and leases for the properties. The claims and leases have been reviewed appear to be in good standing according to information and payments to the BLM for Nevada and Utah. The legal opinion provided by WKM and their legal representatives outline the historical land claims and has been reviewed by the QP for the purposes of this Technical Report. From the information provided to Caracle Creek by the Company with regard to fee payments, Caracle Creek has concluded that WKM has filed with the appropriate Bureau of Land Management (BLM) State offices of Nevada and Utah and provided fees when and where appropriate for claims/leases or land filing purposes. Caracle Creek has relied on the legal opinion with respect to the titles of leases and claims by WKM but has not verified this information independently.

Previous operators have extensively mapped and sampled the TUG project. WKM collected 129 rock samples on the TUG project area as of spring of 2012, largely confirming what had already been mapped and sampled on the project.

WKM has not completed geophysical surveys on the TUG project area. Existing geophysical databases (i.e., Gravity, Magnetics, Radiometrics) for TUG claims have been compiled and re-interpreted by Wright Geophysics. Gravity was the most effective geophysical tool for identifying the TUG anticline and possible extensions. Wright (2011) hypothesized a semi continuous anticlinal structure between the TUG and KB deposits.

Thirteen core holes totaling 4022.71 m were completed on the TUG project areas as of March 8, 2012. The best assays include: 6.35 g/t Au and 214.4 g/t Ag over 3.2 m from WT11-001 and 4.72 g/t Au and 45.13 g/t Ag over 5.54 m from WT12-011.

WKM was in the process of completing its first drilling program on its Nevada Properties during Caracle Creek's site visit and WKM's drilling, logging and sampling procedure was observed. Drill hole placement was within the 4-5 m accuracy of the handheld GPS verification by the QP. Deviations from the reported data are within acceptable limits of the handheld GPS capability. Geological logging procedures are completed onsite during drilling and select sampling is completed during this time by company geologists. The procedure used is acceptable and places a select number of blanks and duplicates within the sampling in order to adequately assess the laboratory results. Check samples collected during the October, 2011 site visit verify that WKM's gold analyses, which were analyzed by an



accredited laboratory, are reasonable. ***It is Caracle Creek's opinion that WKM is conducting its drilling program in compliance with industry standards and appropriate for using in CIM compliant mineral resource calculations.***

Caracle Creek has verified the historic database used for the resource estimating. This verification included collar location, survey, lithology and assays. Selected historic samples were re-assayed to verify the original assay. ***Caracle Creek concludes that the historic database is accurate and can be used for the purpose of resource estimate.*** Caracle Creek also completed a QA/QC review of the assays from the 2011-2012 drill program by looking at the external and internal blanks, standards and core duplicates. ***Caracle Creek concludes that the assays are of excellent quality, as there is no sample contamination in the analytical lab and the assays are accurate and precise. Thus, there is no significant risk and uncertainty that may be expected to affect the reliability or confidence in the exploration information or the mineral resource disclosed within this report.***

Mineral resources for TUG were classified by Mr. Jason Baker, P.Eng, an independent qualified person. Classification was done in accordance with the CIM Standard Definition for Mineral Resources and Mineral Reserves (December 2005) guidelines. The mineral resources for the TUG project are reported at a cut-off grade of 0.1 g/t Au. The Mineral Resource Statement for the TUG project is summarized in Table 1-1.

Table 17-1 Mineral resource statement 1 (Caracle Creek, May 29<sup>th</sup>, 2012)

Area	Category	Quantity (tonnes) <sup>2</sup>	Grade <sup>4</sup> Au g/t	Grade <sup>3</sup> Ag g/t	Grade <sup>6</sup> AuEq g/t	Ounces <sup>5</sup> Au	Ounces <sup>5</sup> Ag	Ounces <sup>5</sup> AuEq
TUG	Inferred	27,110,000	0.49	15.8	0.78	431,400	13,844,800	679,000

<sup>1</sup> Reported at a cut-off grade of 0.1 g/t Au. Mineral resources are not mineral reserves and do not have demonstrated economic viability.

<sup>2</sup> Tonnes have been rounded to the nearest 10,000.

<sup>3</sup> Ag grade has been rounded to one (1) significant digit.

<sup>4</sup> Au grade has been rounded to two (2) significant digits.

<sup>5</sup> Ounces have been rounded to the nearest 100. One (1) troy ounce = 31.103 grams

<sup>6</sup> AuEq was calculated assuming 100% metal recovery using a metal price ratio between Ag and Au (Ag:Au) = 0.018  
(AuEq = Au + (Ag \* 0.018))

This resource statement supersedes all previous dated statements

The TUG resource is a shallow oxidized Carlin deposit. Mineralization outcrops at surface giving the potential for a modestly sized open pit to recover the part of the mineralization by heap leach methods. WKM has the opportunity to add to the potential of the TUG resource through work on its exploration properties also located in the Long Canyon Trend. ***Caracle Creek concludes that the TUG mineralization has the potential to be developed as an open pit mine.***

## 18.0 RECOMMENDATIONS

The total cost of the recommended exploration plan for the TUG property is US\$950,000.

To upgrade the resource from inferred to indicated classification, Caracle Creek recommends that WKM do more specific gravity (“SG”) testing on historic samples and do more validation drilling of the historic holes. All of the mineralized samples in the validation holes should be analyzed for SG. All of available historic mineralized intercepts should be SG analyzed to adequately determine the density of the mineralized body. Approximately, 5% of the historic holes used in the resource (485 holes) should be twinned. This amounts to 24 twin holes. The twin holes should be selected to represent 5% of each of the previous operators drill programs and should spatially cover the entire mineralized body. We recommend that reverse circulation (“RC”) drilling be used over diamond drilling due to its significantly cheaper cost, and previous RC drilling on the TUG property has shown that this is effective in producing drill samples and assays that can be used for resource estimation. A budget of \$400,000 for drilling, including assays, geologist and pad construction will cover the confirmation drilling.

Within future drill programs, the QA/QC protocol can be improved by adding an external Ag standard to the sample stream and replace the Vigoro white marble chips blanks with either quartz chips or a certified powdered blank. The Vigoro blank had a high minor failure rate for Ag.

Additional metallurgical studies should be conducted on the TUG property followed by a Preliminary Economic Assessment to advance the project to the next stage.

*Table 18-1 Recommended exploration plan for TUG property*

<b>Item</b>	<b>Cost (US\$)</b>
Drilling (approximately 24 holes)	\$400,000
Metallurgical studies (including SG)	\$75,000
PEA	\$200,000
Permitting	\$200,000
Property Maintenance	\$75,000
<b>total</b>	<b>\$950,000</b>

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## 20.0 STATEMENT OF AUTHORSHIP

Report, titled “Independent Technical Report and estimated resources for TUG Property, Utah, United States with an effective date of June 1, 2012 and a submission date of July 13, 2012 was prepared and signed by the following authors:

“Signed and sealed”

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Julie Selway, Ph.D., P.Geo.  
July 13, 2012  
Sudbury, Ontario

“Signed and sealed”

---

Jason Baker, B.Eng., P.Eng.  
July 13, 2012  
Fall River, Nova Scotia

“Signed and sealed”

---

Sherri L. Hodder, M.Sc., P.Geo.  
July 13, 2012  
Vancouver, British Columbia

“Signed and sealed”

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Jim Robinson, BSc., P.Geo.  
July 13, 2012  
Juneau, Alaska



## **APPENDIX 1**

### **Certificates of Author**



**Julie Selway**  
25 Frood Road  
Sudbury, Ontario, Canada, P3C 4Y9  
Telephone: 705-671-1801  
Email: jselway@caraclecreek.com

### **CERTIFICATE OF QUALIFIED PERSON**

I, Julie Selway, do hereby certify that:

1. I am employed as Senior Geologist for the geological consulting firm of Caracle Creek International Consulting Inc. Canada ("Caracle Creek").
2. I am jointly responsible for the entire Technical Report, except for the "Mineral Resource Estimates" section 14.0, titled "Independent Technical Report and estimated resources for TUG Property, Utah, United States" with an effective date of June 1, 2012 and a submission date of July 13, 2012 and prepared for West Kirkland Mining Inc.
3. I hold the following academic qualifications: B.Sc. (Hons) Geology (1991) Saint Mary's University; M.Sc. Geology (1993) Lakehead University; Ph.D. Mineralogy (1999) University of Manitoba.
4. I am a member of the Association of Professional Geoscientists of Ontario (Member #0738). I am a member in good standing of the Mineralogical Association of Canada, Geological Association of Canada and Mineralogical Society of America.
5. I have worked on exploration projects world wide including: Canada (Quebec, Ontario, Manitoba and British Columbia), Mexico, Hungary, Czech Republic and have worked on rare-element pegmatites, gold and Ni-Cu-PGE, Nb-Ta carbonatites, porphyry copper deposits since 1993. I am a Qualified Person for the purpose of the National Instrument 43-101.
6. I have not visited the TUG property.
7. I am independent of the issuer of this report applying all the tests in section 1.5 of National Instrument 43-101.
8. I have no prior involvement with the Property that forms the subject of this Technical Report
9. I have read the NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
10. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public.
11. 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.

Dated this 13<sup>th</sup> Day of July, 2012.

"Signed and sealed"

\_\_\_\_\_  
Julie Selway, Ph.D., P.Geo.  
Senior Geologist, Caracle Creek Canada



**Jason Baker**  
5 Short Lane  
Fall River, Nova Scotia, Canada, B2T 1H7  
Telephone: 902-209-2037  
Email: jrbaker@caraclecreek.com

**CERTIFICATE OF QUALIFIED PERSON**

I, Jason Baker, do hereby certify that:

1. I am employed as Geological Engineer for the geological consulting firm of Caracle Creek International Consulting Inc. Canada ("Caracle Creek").
2. I am responsible for Section 14.0 (Mineral Resource Estimates) of the Technical Report titled "Independent Technical Report and estimated resources for TUG Property, Utah, United States" with an effective date of June 1, 2012 and a submission date of July 13, 2012 and prepared for West Kirkland Mining Inc.
3. I hold the following academic qualification: B.Eng. (2000) Dalhousie University (TUNS), Halifax, Nova Scotia.
4. I am a member of the Association of Professional Engineers of Nova Scotia (APENS#9627).
5. I have worked over 12 years in geological modelling and resource calculations in both exploration (Gold, Lead & Zinc) and operations (Coal, Gypsum, Lead and Zinc). I am a Qualified Person for the purpose of the National Instrument 43-101.
6. I have not visited the TUG Property.
7. I am independent of the issuer of this report applying all the tests in section 1.5 of National Instrument 43-101.
8. I have no prior involvement with the Property that forms the subject of this Technical Report.
9. I have read the NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
10. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public.
11. 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.

Dated this 13<sup>th</sup> Day of July, 2012

"Signed and sealed"

---

Jason Baker, B. Eng., P. Eng.  
Geological Engineer, Caracle Creek Canada



*Certificate and Consent of Qualified Person for Technical Report:*

I, Sherri Lynnette Hodder, M.Sc., P.Geo., do hereby certify that:

1. I am an independent Consulting Geologist with residence and business address at 405-2828 Main Street, Vancouver, BC, V5T 3G2 and currently under contract to Caracle Creek International Consulting Inc. of 1409 – 409 Granville Street, Vancouver, BC.
2. I graduated with a Joint Bachelor of Science Degree in Earth Sciences and Geography, B.Sc. (Honors) in Earth Sciences in 1997 from Memorial University of Newfoundland. In addition, I obtained a Master of Science degree specializing in Economic Geology from the University of Calgary in 2003.
3. I have been registered with the Association of Engineers and Geoscientists of Saskatchewan (APEGGS #13906) since 2007 and Association of Engineers, Geologists and Geophysicists of Alberta (APEGGA #76152) since 2008. I am a member in good standing with both APEG and APEGGA. I am a member and director with the Prospectors and Developers Association of Canada (PDAC), a member of the Association for Mineral Exploration BC (AMEBC) and a member of the Geological Association of Canada (GAC).
4. I have practiced my profession continuously as a geologist for over 14 years throughout Canada, Mexico, Lesotho, Tanzania and the Russian Federation. Work has included mineral exploration and mapping, mine geology, property evaluations, pre-feasibility and feasibility evaluations. I have directly supervised and conducted programs of geological mapping, geochemical and geophysical surveys plus diamond and reverse circulation drilling programs for the purposes of mineral exploration and evaluation.
5. I have read the definition of “qualified person” set out in National Instrument 43-101 (NI 43-101) and 43-101F and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirement to be a “qualified person” for the purposes of NI 43-101.
6. I am jointly responsible for Sections 5.0, 6.0, 7.0 and 8.0 of the technical report entitled “Independent Technical Report and estimated resources for TUG Property, Utah, United States” with an effective date of June 1, 2012 and a submission date of July 13, 2012 and prepared for West Kirkland Mining Inc.. I spent one (1) day on the KB-TUG project areas in northwestern Nevada-Utah border on October 5, 2011.
7. I have completed a site visit which included verification of three drill holes by WKM; verification of analyses through 25 independent rock samples on the Nevada Property including KB, TUG, RMX and Bullion project areas; verification of 4 samples through reanalyses of pulps.
8. I am aware of updated financial statements of West Kirkland Mining Inc. which shows that material changes took place in 2011 with the acquisition and staking of property on TUG.
9. I am independent of West Kirkland Mining Inc. applying all 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.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated: July 13<sup>th</sup>, 2012

Signed “Sherri Hodder”

Sherri L. Hodder, M.Sc., P.Geo.



*Certificate and Consent of Qualified Person for Technical Report:*

I, Ronald James Robinson residing at Unit B1, 1901 Davis Avenue, Juneau, Alaska, United States of America hereby certify that:

1. I am presently employed by Aurora Geosciences Ltd. of Yellowknife, Northwest Territories, Canada as a senior resource geologist and on contract with Caracle Creek International Consulting;
2. I am a graduate of the University of British Columbia (1985) and hold a B.Sc. degree in geology. I have been employed in my profession by various mining and consulting companies since my graduation. I have produced and supervised the production of mineral resource estimates and mineral reserve documents on numerous deposits and deposit types for the past twenty years. I am a “qualified person” for the purposes of National Instrument 43-101;
3. I am a member of the Northwest Territories Association of Professional Engineers, Geologists, and Geophysicists (Member #1662). I am also a Fellow of the Geological Association of Canada;
4. I have not visited the TUG property;
5. I have had no prior involvement with West Kirkland Mining Inc nor the TUG property, its predecessors or subsidiaries. I am independent of the issuer applying all of the tests in section 1.5 of National Instrument 43-101;
6. I have not received nor expect to receive any interest, direct or indirect, in West Kirkland Mining Inc., its subsidiaries, affiliates and associates;
7. I have read “Standards of Disclosure for Mineral Projects”, National Instrument 43-101 and Form 43-101F1, and the Report has been prepared in compliance with this Instrument and that Form;
8. I am responsible for the preparation section 12.3 of the technical report entitled “Independent Technical Report and estimated resources for TUG Property, Utah, United States” with an effective date of June 1, 2012 and a submission date of July 13, 2012 and prepared for West Kirkland Mining Inc.
9. As of the date of this certificate, to the best of my knowledge, information and belief, I am not aware of any material fact or material change with respect to the subject matter of the Report that is not reflected in the Report, the omission or addition of which would make the Report misleading;
10. This certificate applies to the NI 43-101 compliant technical report titled “Independent Technical Report and estimated resources for TUG Property, Utah, United States” with an effective date of June 1, 2012 and a submission date of July 13, 2012; and
11. I consent to the filing of this technical report with any stock exchange and any regulatory authority and consent to the publication for regulatory purposes, including electronic publication in the public company files of their websites accessible to the public, of extracts from the technical report.

Dated at Juneau, Alaska, this 13<sup>th</sup> Day of July, 2012.

“Signed and sealed”

R. J. Robinson, P. Geol.  
Senior Resource Geologist



## **APPENDIX 2**

### **Claims and Leases: TUG**



*Table 20-1 List of TUG BLM owned and leased claims*

<b>TUG Claim</b>	<b>Location Date</b>	<b>Filed BLM</b>	<b>BLM Serial No</b>	<b>Expiry Date</b>	<b>Ownership</b>
GUT219	05-Sep-93	08-Oct-93	UMC353730	01-Sep-12	100%
GUT220	05-Sep-93	08-Oct-93	UMC353731	01-Sep-12	100%
GUT221	05-Sep-93	08-Oct-93	UMC353732	01-Sep-12	100%
GUT222	05-Sep-93	08-Oct-93	UMC353733	01-Sep-12	100%
GUT223	05-Sep-93	08-Oct-93	UMC353734	01-Sep-12	100%
GUT224	05-Sep-93	08-Oct-93	UMC353735	01-Sep-12	100%
GUT225	05-Sep-93	08-Oct-93	UMC353736	01-Sep-12	100%
GUT226	05-Sep-93	08-Oct-93	UMC353737	01-Sep-12	100%
GUT237	04-Sep-93	08-Oct-93	UMC353748	01-Sep-12	100%
GUT238	04-Sep-93	08-Oct-93	UMC353749	01-Sep-12	100%
GUT239	04-Sep-93	08-Oct-93	UMC353750	01-Sep-12	100%
GUT240	04-Sep-93	08-Oct-93	UMC353751	01-Sep-12	100%
GUT241	04-Sep-93	08-Oct-93	UMC353752	01-Sep-12	100%
GUT242	04-Sep-93	08-Oct-93	UMC353753	01-Sep-12	100%
GUT243	04-Sep-93	08-Oct-93	UMC353754	01-Sep-12	100%
GUT244	04-Sep-93	08-Oct-93	UMC353755	01-Sep-12	100%
OMA1	01-Apr-08	02-May-08	UMC406161	01-Sep-12	100%
OMA2	01-Apr-08	02-May-08	UMC406162	01-Sep-12	100%
OMA3	01-Apr-08	02-May-08	UMC406163	01-Sep-12	100%
OMA4	01-Apr-08	02-May-08	UMC406164	01-Sep-12	100%
OMA5	01-Apr-08	02-May-08	UMC406165	01-Sep-12	100%
OMA6	01-Apr-08	02-May-08	UMC406166	01-Sep-12	100%
OMA7	01-Apr-08	02-May-08	UMC406167	01-Sep-12	100%
OMA8	01-Apr-08	02-May-08	UMC406168	01-Sep-12	100%
OMA9	01-Apr-08	02-May-08	UMC406169	01-Sep-12	100%
OMA10	01-Apr-08	02-May-08	UMC406170	01-Sep-12	100%
OMA11	01-Apr-08	02-May-08	UMC406171	01-Sep-12	100%
OMA12	01-Apr-08	02-May-08	UMC406172	01-Sep-12	100%



TUG Claim	Location Date	Filed BLM	BLM Serial No	Expiry Date	Ownership
OMA13	01-Apr-08	02-May-08	UMC406173	01-Sep-12	100%
OMA14	01-Apr-08	02-May-08	UMC406174	01-Sep-12	100%
OMA15	01-Apr-08	02-May-08	UMC406175	01-Sep-12	100%
OMA16	01-Apr-08	02-May-08	UMC406176	01-Sep-12	100%
OMA17	01-Apr-08	02-May-08	UMC406177	01-Sep-12	100%
OMA18	01-Apr-08	02-May-08	UMC406178	01-Sep-12	100%
OMA19	01-Apr-08	02-May-08	UMC406179	01-Sep-12	100%
OMA20	01-Apr-08	02-May-08	UMC406180	01-Sep-12	100%
OMA21	01-Apr-08	02-May-08	UMC406181	01-Sep-12	100%
OMA22	01-Apr-08	02-May-08	UMC406182	01-Sep-12	100%
OMA23	01-Apr-08	02-May-08	UMC406183	01-Sep-12	100%
OMA24	01-Apr-08	02-May-08	UMC406184	01-Sep-12	100%
OMA25	01-Apr-08	02-May-08	UMC406185	01-Sep-12	100%
OMA26	01-Apr-08	02-May-08	UMC406186	01-Sep-12	100%
OMA27	01-Apr-08	02-May-08	UMC406187	01-Sep-12	100%
OMA28	01-Apr-08	02-May-08	UMC406188	01-Sep-12	100%
OMA29	01-Apr-08	02-May-08	UMC406189	01-Sep-12	100%
OMA30	01-Apr-08	02-May-08	UMC406190	01-Sep-12	100%
OMA31	01-Apr-08	02-May-08	UMC406191	01-Sep-12	100%
OMA32	28-Mar-08	02-May-08	UMC406192	01-Sep-12	100%
OMA33	28-Mar-08	02-May-08	UMC406193	01-Sep-12	100%
OMA34	28-Mar-08	02-May-08	UMC406194	01-Sep-12	100%
OMA35	28-Mar-08	02-May-08	UMC406195	01-Sep-12	100%
OMA36	28-Mar-08	02-May-08	UMC406196	01-Sep-12	100%
OMA37	28-Mar-08	02-May-08	UMC406197	01-Sep-12	100%
OMA38	28-Mar-08	02-May-08	UMC406198	01-Sep-12	100%
OMA39	28-Mar-08	02-May-08	UMC406199	01-Sep-12	100%
OMA40	28-Mar-08	02-May-08	UMC406200	01-Sep-12	100%
OMA41	28-Mar-08	02-May-08	UMC406201	01-Sep-12	100%



TUG Claim	Location Date	Filed BLM	BLM Serial No	Expiry Date	Ownership
OMA42	28-Mar-08	02-May-08	UMC406202	01-Sep-12	100%
OMA43	28-Mar-08	02-May-08	UMC406203	01-Sep-12	100%
OMA44	28-Mar-08	02-May-08	UMC406204	01-Sep-12	100%
OMA45	28-Mar-08	02-May-08	UMC406205	01-Sep-12	100%
OMA46	28-Mar-08	02-May-08	UMC406206	01-Sep-12	100%
OMA47	28-Mar-08	02-May-08	UMC406207	01-Sep-12	100%
OMA48	28-Mar-08	02-May-08	UMC406208	01-Sep-12	100%
OMA49	28-Mar-08	02-May-08	UMC406209	01-Sep-12	100%
OMA50	23-Apr-08	02-May-08	UMC406210	01-Sep-12	100%
OMA51	23-Apr-08	02-May-08	UMC406211	01-Sep-12	100%
OMA52	28-Mar-08	02-May-08	UMC406212	01-Sep-12	100%
OMA53	28-Mar-08	02-May-08	UMC406213	01-Sep-12	100%
OMA54	28-Mar-08	02-May-08	UMC406214	01-Sep-12	100%
OMA55	28-Mar-08	02-May-08	UMC406215	01-Sep-12	100%
OMA56	28-Mar-08	02-May-08	UMC406216	01-Sep-12	100%
OMA57	28-Mar-08	02-May-08	UMC406217	01-Sep-12	100%
OMA58	28-Mar-08	02-May-08	UMC406218	01-Sep-12	100%
OMA59	28-Mar-08	02-May-08	UMC406219	01-Sep-12	100%
OMA60	28-Mar-08	02-May-08	UMC406220	01-Sep-12	100%
OMA61	28-Mar-08	02-May-08	UMC406221	01-Sep-12	100%
OMA62	28-Mar-08	02-May-08	UMC406222	01-Sep-12	100%
OMA63	28-Mar-08	02-May-08	UMC406223	01-Sep-12	100%
OMA64	28-Mar-08	02-May-08	UMC406224	01-Sep-12	100%
OMA65	28-Mar-08	02-May-08	UMC406225	01-Sep-12	100%
OMA66	28-Mar-08	02-May-08	UMC406226	01-Sep-12	100%
OMA67	28-Mar-08	02-May-08	UMC406227	01-Sep-12	100%
OMA68	28-Mar-08	02-May-08	UMC406228	01-Sep-12	100%
OMA69	28-Mar-08	02-May-08	UMC406229	01-Sep-12	100%
OMA70	28-Mar-08	02-May-08	UMC406230	01-Sep-12	100%





TUG Claim	Location Date	Filed BLM	BLM Serial No	Expiry Date	Ownership
OMA71	28-Mar-08	02-May-08	UMC406231	01-Sep-12	100%
OMA72	28-Mar-08	02-May-08	UMC406232	01-Sep-12	100%
OMA73	28-Mar-08	02-May-08	UMC406233	01-Sep-12	100%
OMA74	28-Mar-08	02-May-08	UMC406234	01-Sep-12	100%
OMA75	28-Mar-08	02-May-08	UMC406235	01-Sep-12	100%
OMA76	28-Mar-08	02-May-08	UMC406236	01-Sep-12	100%
OMA77	28-Mar-08	02-May-08	UMC406237	01-Sep-12	100%
OMA78	28-Mar-08	02-May-08	UMC406238	01-Sep-12	100%
OMA79	28-Mar-08	02-May-08	UMC406239	01-Sep-12	100%
OMA80	28-Mar-08	02-May-08	UMC406240	01-Sep-12	100%
OMA81	28-Mar-08	02-May-08	UMC406241	01-Sep-12	100%
OMA82	28-Mar-08	02-May-08	UMC406242	01-Sep-12	100%
OMA83	28-Mar-08	02-May-08	UMC406243	01-Sep-12	100%
OMA84	28-Mar-08	02-May-08	UMC406244	01-Sep-12	100%
OMA85	28-Mar-08	02-May-08	UMC406245	01-Sep-12	100%
OMA86	28-Mar-08	02-May-08	UMC406246	01-Sep-12	100%
OMA87	28-Mar-08	02-May-08	UMC406247	01-Sep-12	100%
OMA88	28-Mar-08	02-May-08	UMC406248	01-Sep-12	100%
OMA89	28-Mar-08	02-May-08	UMC406249	01-Sep-12	100%
OMA90	28-Mar-08	02-May-08	UMC406250	01-Sep-12	100%
OMA91	28-Mar-08	02-May-08	UMC406251	01-Sep-12	100%
OMA92	28-Mar-08	02-May-08	UMC406252	01-Sep-12	100%
OMA93	28-Mar-08	02-May-08	UMC406253	01-Sep-12	100%
OMA94	28-Mar-08	02-May-08	UMC406254	01-Sep-12	100%
OMA95	28-Mar-08	02-May-08	UMC406255	01-Sep-12	100%
OMA96	28-Mar-08	02-May-08	UMC406256	01-Sep-12	100%
OMA97	28-Mar-08	02-May-08	UMC406257	01-Sep-12	100%
OMA98	28-Mar-08	02-May-08	UMC406258	01-Sep-12	100%
OMA99	28-Mar-08	02-May-08	UMC406259	01-Sep-12	100%



TUG Claim	Location Date	Filed BLM	BLM Serial No	Expiry Date	Ownership
OMA100	28-Mar-08	02-May-08	UMC406260	01-Sep-12	100%
OMA101	28-Mar-08	02-May-08	UMC406261	01-Sep-12	100%
OMA102	28-Mar-08	02-May-08	UMC406262	01-Sep-12	100%
OMA103	28-Mar-08	02-May-08	UMC406263	01-Sep-12	100%
OMA104	28-Mar-08	02-May-08	UMC406264	01-Sep-12	100%
OMA105	28-Mar-08	02-May-08	UMC406265	01-Sep-12	100%
OMA106	28-Mar-08	02-May-08	UMC406266	01-Sep-12	100%
OMA107	28-Mar-08	02-May-08	UMC406267	01-Sep-12	100%
OMA108	28-Mar-08	02-May-08	UMC406268	01-Sep-12	100%
OMA109	28-Mar-08	02-May-08	UMC406269	01-Sep-12	100%
OMA110	28-Mar-08	02-May-08	UMC406270	01-Sep-12	100%
OMA111	28-Mar-08	02-May-08	UMC406271	01-Sep-12	100%
OMA112	28-Mar-08	02-May-08	UMC406272	01-Sep-12	100%
OMA113	28-Mar-08	02-May-08	UMC406273	01-Sep-12	100%
OMA114	28-Mar-08	02-May-08	UMC406274	01-Sep-12	100%
OMA115	28-Mar-08	02-May-08	UMC406275	01-Sep-12	100%
OMA116	28-Mar-08	02-May-08	UMC406276	01-Sep-12	100%
OMA117	28-Mar-08	02-May-08	UMC406277	01-Sep-12	100%
OMA118	28-Mar-08	02-May-08	UMC406278	01-Sep-12	100%
OMA119	28-Mar-08	02-May-08	UMC406279	01-Sep-12	100%
OMA120	28-Mar-08	02-May-08	UMC406280	01-Sep-12	100%
OMA121	28-Mar-08	02-May-08	UMC406281	01-Sep-12	100%
OMA122	25-Mar-08	02-May-08	UMC406282	01-Sep-12	100%
OMA123	28-Mar-08	02-May-08	UMC406283	01-Sep-12	100%
OMA124	28-Mar-08	02-May-08	UMC406284	01-Sep-12	100%
OMA125	28-Mar-08	02-May-08	UMC406285	01-Sep-12	100%
OMA126	28-Mar-08	02-May-08	UMC406286	01-Sep-12	100%
OMA127	28-Mar-08	02-May-08	UMC406287	01-Sep-12	100%
OMA128	28-Mar-08	02-May-08	UMC406288	01-Sep-12	100%



TUG Claim	Location Date	Filed BLM	BLM Serial No	Expiry Date	Ownership
OMA129	28-Mar-08	02-May-08	UMC406289	01-Sep-12	100%
OMA130	28-Mar-08	02-May-08	UMC406290	01-Sep-12	100%
OMA131	28-Mar-08	02-May-08	UMC406291	01-Sep-12	100%
OMA132	28-Mar-08	02-May-08	UMC406292	01-Sep-12	100%
OMA133	28-Mar-08	02-May-08	UMC406293	01-Sep-12	100%
OMA134	28-Mar-08	02-May-08	UMC406294	01-Sep-12	100%
OMA135	28-Mar-08	02-May-08	UMC406295	01-Sep-12	100%
OMA136	28-Mar-08	02-May-08	UMC406296	01-Sep-12	100%
OMA137	28-Mar-08	02-May-08	UMC406297	01-Sep-12	100%
OMA138	28-Mar-08	02-May-08	UMC406298	01-Sep-12	100%
OMA139	28-Mar-08	02-May-08	UMC406299	01-Sep-12	100%
OMA140	28-Mar-08	02-May-08	UMC406300	01-Sep-12	100%
OMA141	28-Mar-08	02-May-08	UMC406301	01-Sep-12	100%
OMA142	28-Mar-08	02-May-08	UMC406302	01-Sep-12	100%
OMA143	28-Mar-08	02-May-08	UMC406303	01-Sep-12	100%
OMA144	03-Apr-08	02-May-08	UMC406304	01-Sep-12	100%
OMA145	03-Apr-08	02-May-08	UMC406305	01-Sep-12	100%
OMA146	03-Apr-08	02-May-08	UMC406306	01-Sep-12	100%
OMA147	03-Apr-08	02-May-08	UMC406307	01-Sep-12	100%
OMA148	03-Apr-08	02-May-08	UMC406308	01-Sep-12	100%
OMA149	03-Apr-08	02-May-08	UMC406309	01-Sep-12	100%
OMA150	03-Apr-08	02-May-08	UMC406310	01-Sep-12	100%
OMA151	03-Apr-08	02-May-08	UMC406311	01-Sep-12	100%
OMA152	03-Apr-08	02-May-08	UMC406312	01-Sep-12	100%
OMA153	03-Apr-08	02-May-08	UMC406313	01-Sep-12	100%
OMA154	03-Apr-08	02-May-08	UMC406314	01-Sep-12	100%
OMA155	03-Apr-08	02-May-08	UMC406315	01-Sep-12	100%
OMA156	03-Apr-08	02-May-08	UMC406316	01-Sep-12	100%
OMA157	03-Apr-08	02-May-08	UMC406317	01-Sep-12	100%



TUG Claim	Location Date	Filed BLM	BLM Serial No	Expiry Date	Ownership
OMA158	03-Apr-08	02-May-08	UMC406318	01-Sep-12	100%
OMA159	03-Apr-08	02-May-08	UMC406319	01-Sep-12	100%
OMA160	03-Apr-08	02-May-08	UMC406320	01-Sep-12	100%
OMA161	03-Apr-08	02-May-08	UMC406321	01-Sep-12	100%
OMA162	03-Apr-08	02-May-08	UMC406322	01-Sep-12	100%
OMA163	03-Apr-08	02-May-08	UMC406323	01-Sep-12	100%
OMA164	03-Apr-08	02-May-08	UMC406324	01-Sep-12	100%
OMA165	03-Apr-08	02-May-08	UMC406325	01-Sep-12	100%
OMA166	03-Apr-08	02-May-08	UMC406326	01-Sep-12	100%
OMA167	03-Apr-08	02-May-08	UMC406327	01-Sep-12	100%
OMA168	03-Apr-08	02-May-08	UMC406328	01-Sep-12	100%
OMA169	03-Apr-08	02-May-08	UMC406329	01-Sep-12	100%
OMA170	03-Apr-08	02-May-08	UMC406330	01-Sep-12	100%
OMA171	03-Apr-08	02-May-08	UMC406331	01-Sep-12	100%
OMA172	03-Apr-08	02-May-08	UMC406332	01-Sep-12	100%
OMA173	03-Apr-08	02-May-08	UMC406333	01-Sep-12	100%
OMA174	03-Apr-08	02-May-08	UMC406334	01-Sep-12	100%
OMA175	03-Apr-08	02-May-08	UMC406335	01-Sep-12	100%
OMA176	03-Apr-08	02-May-08	UMC406336	01-Sep-12	100%
OMA177	03-Apr-08	02-May-08	UMC406337	01-Sep-12	100%
OMA178	03-Apr-08	02-May-08	UMC406338	01-Sep-12	100%
OMA179	03-Apr-08	02-May-08	UMC406339	01-Sep-12	100%
OMA180	01-Apr-08	02-May-08	UMC406340	01-Sep-12	100%
OMA181	01-Apr-08	02-May-08	UMC406341	01-Sep-12	100%
OMA182	01-Apr-08	02-May-08	UMC406342	01-Sep-12	100%
OMA183	01-Apr-08	02-May-08	UMC406343	01-Sep-12	100%
OMA184	01-Apr-08	02-May-08	UMC406344	01-Sep-12	100%
OMA185	23-Apr-08	02-May-08	UMC406345	01-Sep-12	100%
OMA186	23-Apr-08	02-May-08	UMC406346	01-Sep-12	100%



TUG Claim	Location Date	Filed BLM	BLM Serial No	Expiry Date	Ownership
OMA187	14-Apr-08	02-May-08	UMC406347	01-Sep-12	100%
OMA188	14-Apr-08	02-May-08	UMC406348	01-Sep-12	100%
OMA189	14-Apr-08	02-May-08	UMC406349	01-Sep-12	100%
OMA190	14-Apr-08	02-May-08	UMC406350	01-Sep-12	100%
OMA191	14-Apr-08	02-May-08	UMC406351	01-Sep-12	100%
OMA192	14-Apr-08	02-May-08	UMC406352	01-Sep-12	100%
OMA193	14-Apr-08	02-May-08	UMC406353	01-Sep-12	100%
OMA194	14-Apr-08	02-May-08	UMC406354	01-Sep-12	100%
OMA195	14-Apr-08	02-May-08	UMC406355	01-Sep-12	100%
OMA196	14-Apr-08	02-May-08	UMC406356	01-Sep-12	100%
OMA197	14-Apr-08	02-May-08	UMC406357	01-Sep-12	100%
OMA198	14-Apr-08	02-May-08	UMC406358	01-Sep-12	100%
OMA199	14-Apr-08	02-May-08	UMC406359	01-Sep-12	100%
OMA200	14-Apr-08	02-May-08	UMC406360	01-Sep-12	100%
OMA201	14-Apr-08	02-May-08	UMC406361	01-Sep-12	100%
OMA202	14-Apr-08	02-May-08	UMC406362	01-Sep-12	100%
OMA203	14-Apr-08	02-May-08	UMC406363	01-Sep-12	100%
OMA204	14-Apr-08	02-May-08	UMC406364	01-Sep-12	100%
OMA205	14-Apr-08	02-May-08	UMC406365	01-Sep-12	100%
OMA206	14-Apr-08	02-May-08	UMC406366	01-Sep-12	100%
OMA207	14-Apr-08	02-May-08	UMC406367	01-Sep-12	100%
OMA208	14-Apr-08	02-May-08	UMC406368	01-Sep-12	100%
OMA209	14-Apr-08	02-May-08	UMC406369	01-Sep-12	100%
OMA210	14-Apr-08	02-May-08	UMC406370	01-Sep-12	100%
OMA211	14-Apr-08	02-May-08	UMC406371	01-Sep-12	100%
OMA212	14-Apr-08	02-May-08	UMC406372	01-Sep-12	100%
OMA213	14-Apr-08	02-May-08	UMC406373	01-Sep-12	100%
OMA214	14-Apr-08	02-May-08	UMC406374	01-Sep-12	100%
OMA215	14-Apr-08	02-May-08	UMC406375	01-Sep-12	100%



TUG Claim	Location Date	Filed BLM	BLM Serial No	Expiry Date	Ownership
OMA216	14-Apr-08	02-May-08	UMC406376	01-Sep-12	100%
OMA217	14-Apr-08	02-May-08	UMC406377	01-Sep-12	100%
OMA218	14-Apr-08	02-May-08	UMC406378	01-Sep-12	100%
OMA219	14-Apr-08	02-May-08	UMC406379	01-Sep-12	100%
OMA220	14-Apr-08	02-May-08	UMC406380	01-Sep-12	100%
OMA221	14-Apr-08	02-May-08	UMC406381	01-Sep-12	100%
OMA222	14-Apr-08	02-May-08	UMC406382	01-Sep-12	100%
OMA223	22-May-08	30-Jun-08	UMC406796	01-Sep-12	100%
OMA224	22-May-08	30-Jun-08	UMC406797	01-Sep-12	100%
OMA225	22-May-08	30-Jun-08	UMC406798	01-Sep-12	100%
OMA226	22-May-08	30-Jun-08	UMC406799	01-Sep-12	100%
OMA227	22-May-08	30-Jun-08	UMC406800	01-Sep-12	100%
OMA228	22-May-08	30-Jun-08	UMC406801	01-Sep-12	100%
OMA229	22-May-08	30-Jun-08	UMC406802	01-Sep-12	100%
OMA230	22-May-08	30-Jun-08	UMC406803	01-Sep-12	100%
OMA231	22-May-08	30-Jun-08	UMC406804	01-Sep-12	100%
OMA232	22-May-08	30-Jun-08	UMC406805	01-Sep-12	100%
OMA233	21-May-08	30-Jun-08	UMC406806	01-Sep-12	100%
OMA234	21-May-08	30-Jun-08	UMC406807	01-Sep-12	100%
OMA235	21-May-08	30-Jun-08	UMC406808	01-Sep-12	100%
OMA236	21-May-08	30-Jun-08	UMC406809	01-Sep-12	100%
OMA237	21-May-08	30-Jun-08	UMC406810	01-Sep-12	100%
OMA238	21-May-08	30-Jun-08	UMC406811	01-Sep-12	100%
OMA239	21-May-08	30-Jun-08	UMC406812	01-Sep-12	100%
OMA240	21-May-08	30-Jun-08	UMC406813	01-Sep-12	100%
OMA241	21-May-08	30-Jun-08	UMC406814	01-Sep-12	100%
OMA242	21-May-08	30-Jun-08	UMC406815	01-Sep-12	100%
OMA243	21-May-08	30-Jun-08	UMC406816	01-Sep-12	100%
OMA244	21-May-08	30-Jun-08	UMC406817	01-Sep-12	100%





TUG Claim	Location Date	Filed BLM	BLM Serial No	Expiry Date	Ownership
OMA245	21-May-08	30-Jun-08	UMC406818	01-Sep-12	100%
OMA246	21-May-08	30-Jun-08	UMC406819	01-Sep-12	100%
OMA247	21-May-08	30-Jun-08	UMC406820	01-Sep-12	100%
OMA248	21-May-08	30-Jun-08	UMC406821	01-Sep-12	100%
OMA249	21-May-08	30-Jun-08	UMC406822	01-Sep-12	100%
OMA250	21-May-08	30-Jun-08	UMC406823	01-Sep-12	100%
OMA251	21-May-08	30-Jun-08	UMC406824	01-Sep-12	100%
OMA252	21-May-08	30-Jun-08	UMC406825	01-Sep-12	100%
OMA253	21-May-08	30-Jun-08	UMC406826	01-Sep-12	100%
OMA254	21-May-08	30-Jun-08	UMC406827	01-Sep-12	100%
OMA255	21-May-08	30-Jun-08	UMC406828	01-Sep-12	100%
OMA256	21-May-08	30-Jun-08	UMC406829	01-Sep-12	100%
OMA257	21-May-08	30-Jun-08	UMC406830	01-Sep-12	100%
OMA258	21-May-08	30-Jun-08	UMC406831	01-Sep-12	100%
OMA259	18-Jun-08	30-Jun-08	UMC406832	01-Sep-12	100%
OMA260	18-Jun-08	30-Jun-08	UMC406833	01-Sep-12	100%
OMA261	18-Jun-08	30-Jun-08	UMC406834	01-Sep-12	100%
OMA262	18-Jun-08	30-Jun-08	UMC406835	01-Sep-12	100%
OMA263	18-Jun-08	30-Jun-08	UMC406836	01-Sep-12	100%
OMA264	18-Jun-08	30-Jun-08	UMC406837	01-Sep-12	100%
OMA265	18-Jun-08	30-Jun-08	UMC406838	01-Sep-12	100%
OMA266	18-Jun-08	30-Jun-08	UMC406839	01-Sep-12	100%
OMA267	18-Jun-08	30-Jun-08	UMC406840	01-Sep-12	100%
OMA268	18-Jun-08	30-Jun-08	UMC406841	01-Sep-12	100%
OMA269	18-Jun-08	30-Jun-08	UMC406842	01-Sep-12	100%
OMA270	18-Jun-08	30-Jun-08	UMC406843	01-Sep-12	100%
OMA271	18-Jun-08	30-Jun-08	UMC406844	01-Sep-12	100%
OMA272	18-Jun-08	30-Jun-08	UMC406845	01-Sep-12	100%
OMA273	18-Jun-08	30-Jun-08	UMC406846	01-Sep-12	100%



TUG Claim	Location Date	Filed BLM	BLM Serial No	Expiry Date	Ownership
OMA274	18-Jun-08	30-Jun-08	UMC406847	01-Sep-12	100%
OMA275	18-Jun-08	30-Jun-08	UMC406848	01-Sep-12	100%
OMA276	18-Jun-08	30-Jun-08	UMC406849	01-Sep-12	100%
OMA277	18-Jun-08	30-Jun-08	UMC406850	01-Sep-12	100%
OMA278	18-Jun-08	30-Jun-08	UMC406851	01-Sep-12	100%
OMA279	18-Jun-08	30-Jun-08	UMC406852	01-Sep-12	100%
OMA280	18-Jun-08	30-Jun-08	UMC406853	01-Sep-12	100%
OMA281	18-Jun-08	30-Jun-08	UMC406854	01-Sep-12	100%
OMA282	18-Jun-08	30-Jun-08	UMC406855	01-Sep-12	100%
OMA283	18-Jun-08	30-Jun-08	UMC406856	01-Sep-12	100%
OMA284	18-Jun-08	30-Jun-08	UMC406857	01-Sep-12	100%
OMA285	18-Jun-08	30-Jun-08	UMC406858	01-Sep-12	100%
OMA286	18-Jun-08	30-Jun-08	UMC406859	01-Sep-12	100%
OMA287	18-Jun-08	30-Jun-08	UMC406860	01-Sep-12	100%
OMA288	18-Jun-08	30-Jun-08	UMC406861	01-Sep-12	100%
OMA289	18-Jun-08	30-Jun-08	UMC406862	01-Sep-12	100%
OMA290	18-Jun-08	30-Jun-08	UMC406863	01-Sep-12	100%
OMA291	18-Jun-08	30-Jun-08	UMC406864	01-Sep-12	100%
OMA292	18-Jun-08	30-Jun-08	UMC406865	01-Sep-12	100%
OMA293	18-Jun-08	30-Jun-08	UMC406866	01-Sep-12	100%
OMA294	18-Jun-08	30-Jun-08	UMC406867	01-Sep-12	100%
ACATIM1	22-Aug-93	20-Sep-93	UMC353672	01-Sep-12	100%
ACATIM2	22-Aug-93	20-Sep-93	UMC353673	01-Sep-12	100%
ACATIM3	22-Aug-93	20-Sep-93	UMC353674	01-Sep-12	100%
ACATIM4	22-Aug-93	20-Sep-93	UMC353675	01-Sep-12	100%
ACATIM5	22-Aug-93	20-Sep-93	UMC353676	01-Sep-12	100%
ACATIM6	22-Aug-93	20-Sep-93	UMC353677	01-Sep-12	100%
ACATIM7	22-Aug-93	20-Sep-93	UMC353678	01-Sep-12	100%
ACATIM8	22-Aug-93	20-Sep-93	UMC353679	01-Sep-12	100%



TUG Claim	Location Date	Filed BLM	BLM Serial No	Expiry Date	Ownership
ACATIM9	22-Aug-93	20-Sep-93	UMC353680	01-Sep-12	100%
ACATIM10	22-Aug-93	20-Sep-93	UMC353681	01-Sep-12	100%
ACATIM11	22-Aug-93	20-Sep-93	UMC353682	01-Sep-12	100%
ACATIM12	22-Aug-93	20-Sep-93	UMC353683	01-Sep-12	100%
ACATIM13	22-Aug-93	20-Sep-93	UMC353684	01-Sep-12	100%
ACATIM14	22-Aug-93	20-Sep-93	UMC353685	01-Sep-12	100%
ACATIM15	22-Aug-93	20-Sep-93	UMC353686	01-Sep-12	100%
ACATIM16	22-Aug-93	20-Sep-93	UMC353687	01-Sep-12	100%
ACATIM17	22-Aug-93	20-Sep-93	UMC353688	01-Sep-12	100%
ACATIM18	22-Aug-93	20-Sep-93	UMC353689	01-Sep-12	100%
ACATIM19	22-Aug-93	20-Sep-93	UMC353690	01-Sep-12	100%
ACATIM20	22-Aug-93	20-Sep-93	UMC353691	01-Sep-12	100%
ACATIM21	22-Aug-93	20-Sep-93	UMC353692	01-Sep-12	100%
ACATIM22	22-Aug-93	20-Sep-93	UMC353693	01-Sep-12	100%
ACATIM23	22-Aug-93	20-Sep-93	UMC353694	01-Sep-12	100%
ACATIM24	22-Aug-93	20-Sep-93	UMC353695	01-Sep-12	100%
ACATIM25	22-Aug-93	20-Sep-93	UMC353696	01-Sep-12	100%
ACATIM26	22-Aug-93	20-Sep-93	UMC353697	01-Sep-12	100%
ACATIM27	22-Aug-93	20-Sep-93	UMC353698	01-Sep-12	100%
ACATIM28	22-Aug-93	20-Sep-93	UMC353699	01-Sep-12	100%
ACATIM29	22-Aug-93	20-Sep-93	UMC353700	01-Sep-12	100%
ACATIM30	22-Aug-93	20-Sep-93	UMC353701	01-Sep-12	100%
ACATIM31	22-Aug-93	20-Sep-93	UMC353702	01-Sep-12	100%
ACATIM32	22-Aug-93	20-Sep-93	UMC353703	01-Sep-12	100%
ACATIM33	22-Aug-93	20-Sep-93	UMC353704	01-Sep-12	100%
ACATIM34	22-Aug-93	20-Sep-93	UMC353705	01-Sep-12	100%
ACATIM35	22-Aug-93	20-Sep-93	UMC353706	01-Sep-12	100%
ACATIM36	22-Aug-93	20-Sep-93	UMC353707	01-Sep-12	100%



## **APPENDIX 3**

### **Assay Data from Qualified Person Site Visit**

Sample number	Date	Easting	Northing	Comments	Project WKM	Lab Number	Type	WT	Au (ppm)	Mo (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)
682651	10.5.2011	749006	4589498	Rhyolite flow, jasperoid/silica	KB-TUG	682651	Rock	0.69	0.348	<1	10	11	518	0.4
682652a	10.5.2011	744625	4591763	Jackson Mine-historic	KB-TUG	682652A	Rock	0.47	0.008	<1	21	888	101	3.1
682652b	10.5.2011	744625	4591763	Jackson Mine-historic	KB-TUG	682652B	Rock	0.59	0.008	7	22	528	49	1.2
682653	10.6.2011	521150	4468582	Bullion sample road cut	Bullion	682653	Rock	0.64	0.016	16	6	16	3	0.5
682654	10.6.2011	521158	4468570	Bullion sample near camp	Bullion	682654	Rock	0.74	0.021	18	17	12	21	<0.3
682655	10.6.2011	732824	4554938	Historic workings: Toano	RMX	682655	Rock	0.84	0.685	10	491	<3	2	0.5
682656	10.6.2011	732375	4554113	Historic workings: Toano	RMX	682656	Rock	0.49	0.01	1	<1	104	2	0.6
682657	10.6.2011	732077	4554162	Historic workings: Toano	RMX	682657	Rock	0.47	0.014	5	4	227	<1	0.3
682658	10.6.2011	718671	4573002	Sample from soil area; Leach Mtn.	RMX	682658	Rock	0.18	0.118	3	>10000	1425	8033	84.8
682659	10.6.2011	718671	4573002	Sample from road	RMX	682659	Rock	0.14	0.013	<1	435	344	>10000	16.6
682660	10.6.2011	718671	4573002	Sample from road	RMX	682660	Rock	0.58	0.032	<1	192	15	66	0.8
682661	10.7.2011	748489	4590495	WT11-007; 153 m	KB-TUG	682661	Core Chip	0.1	0.014	1	33	23	1118	0.9
682662	10.7.2011	748489	4590495	WT11-007; 172 m	KB-TUG	682662	Core Chip	0.14	0.011	<1	81	8	26	0.3
682663	10.7.2011	748489	4590495	WT11-007; 196.59 m	KB-TUG	682663	Core Chip	0.18	2.367	6	16	87	98	17
682664	10.7.2011	748489	4590495	WT11-007; 214.88 m	KB-TUG	682664	Rock	0.08	0.032	6	21	17	122	2
682665	10.7.2011	748489	4590495	WT11-007; 227.08 m	KB-TUG	682665	Rock	0.09	0.045	2	3	7	37	2.4
682666	10.7.2011	748489	4590495	WT11-007; 258.93 m	KB-TUG	682666	Core Chip	0.12	0.014	1	23	<3	13	<0.3
682667	10.7.2011	748489	4590495	WT11-007; 278.89 m	KB-TUG	682667	Core Chip	0.12	0.015	<1	1	4	12	<0.3
682668	10.7.2011	748489	4590495	WT11-007; 290.78 m	KB-TUG	682668	Core Chip	0.06	0.024	<1	5	<3	4	0.6
682669	10.7.2011			Blank Marble Chip test	KB-TUG	682669	Rock	0.12	0.006	<1	<1	<3	<1	<0.3
682670	10.7.2011			Sample from WT-342	KB-TUG	682670	Rock Pulp		0.007	<1	10	10	34	<0.3
682671	10.7.2011			Sample from T97-048	KB-TUG	682671	Rock Pulp		0.955	2	40	6	403	2
682672	10.7.2011			Sample from WT-331	KB-TUG	682672	Rock Pulp		0.008	3	27	9	24	<0.3
682673	10.7.2011			Sample from T97-009	KB-TUG	682673	Rock Pulp		5.094	9	47	568	107	52.1

Sample number	Ni (ppm)	Co (ppm)	Mn (ppm)	Fe (%)	As (ppm)	Au (ppm)	Th (ppm)	Sr (ppm)	Cd (ppm)	Sb (ppm)	Bi (ppm)	V (ppm)	Ca (%)	P (%)	La (ppm)	Cr (ppm)	Mg (%)	Ba (ppm)
682651	14	5	4607	2.11	1223	<2	<2	64	5.7	52	<3	21	17.76	0.005	5	12	6.06	2325
682652a	<1	<1	6	1.21	36	<2	<2	2	2.2	4	<3	1	0.02	0.003	2	3	0.01	18
682652b	1	<1	43	1.17	42	<2	<2	5	0.8	5	<3	2	0.13	0.002	1	21	0.04	229
682653	<1	<1	14	0.88	15	<2	<2	15	<0.5	<3	<3	23	0.03	0.016	7	10	0.05	1198
682654	9	<1	118	1.26	31	<2	4	40	<0.5	<3	<3	131	1.47	0.671	15	24	0.33	371
682655	<1	1	5	22.18	1713	<2	<2	27	<0.5	<3	152	171	0.84	0.01	<1	4	0.37	24
682656	4	<1	23	1.26	39	<2	<2	3	<0.5	4	<3	29	0.15	0.008	<1	6	0.27	25
682657	11	4	192	3.08	51	<2	<2	61	0.7	7	<3	44	16.15	0.229	10	5	9.34	20
682658	3	1	351	0.97	22	<2	<2	52	1635.3	45	<3	7	12.55	0.003	2	3	8.38	10
682659	3	3	274	0.13	7	<2	<2	70	972.7	<3	<3	4	15.1	0.006	1	2	9.46	8
682660	11	2	117	0.86	147	<2	<2	147	9	<3	<3	12	7.19	0.082	3	10	0.13	315
682661	3	<1	36	0.51	14	<2	<2	38	42.6	<3	<3	47	0.99	0.084	18	16	0.52	222
682662	1	<1	18	0.21	18	<2	<2	118	3.2	<3	<3	17	0.15	0.053	13	11	0.05	203
682663	4	<1	12	3.41	331	<2	2	59	3.5	77	<3	45	0.18	0.082	22	38	0.09	1262
682664	17	2	655	0.69	82	<2	<2	50	0.9	50	<3	11	13.63	0.008	5	9	8.68	1840
682665	3	<1	485	0.38	24	<2	<2	69	1	12	<3	5	16.46	0.003	2	3	10.44	2645
682666	2	<1	195	0.08	8	<2	<2	152	1	5	<3	4	17.95	0.008	2	2	10.91	564
682667	1	<1	196	0.06	7	<2	<2	111	<0.5	4	<3	2	16.99	0.003	1	2	10.42	240
682668	1	<1	122	0.09	4	<2	<2	110	<0.5	<3	<3	5	17.32	0.002	1	1	10.64	632
682669	<1	<1	219	0.13	<2	<2	<2	46	<0.5	<3	<3	<1	18.3	0.007	2	<1	9.88	12
682670	4	1	148	0.7	3	<2	17	29	<0.5	<3	<3	7	0.65	0.015	23	4	0.58	65
682671	41	13	1259	3.42	735	<2	<2	30	1.1	13	<3	26	0.16	0.03	8	20	0.06	2724
682672	12	2	190	1.09	16	<2	<2	50	<0.5	<3	<3	5	6.83	0.016	4	19	0.55	44
682673	13	4	147	4.08	3460	5	<2	66	2	122	<3	20	0.19	0.021	10	45	0.07	53



Sample number	Ti (%)	B (ppm)	Al (%)	Na (%)	K (%)	W (ppm)	S (%)	Sc (ppm)	Ga (ppm)
682651	0.003	<20	0.15	<0.01	0.03	8	0.13	<5	<5
682652a	<0.001	<20	0.02	<0.01	<0.01	<2	<0.05	<5	<5
682652b	<0.001	<20	0.02	<0.01	<0.01	<2	<0.05	<5	<5
682653	0.002	<20	0.12	<0.01	0.12	<2	0.14	<5	<5
682654	0.013	<20	1.04	0.01	0.27	<2	<0.05	<5	5
682655	0.001	<20	0.02	<0.01	<0.01	9	0.06	<5	<5
682656	0.001	<20	0.02	<0.01	<0.01	<2	<0.05	<5	<5
682657	0.002	<20	0.11	0.02	0.03	<2	0.08	<5	<5
682658	<0.001	<20	0.07	0.01	<0.01	<2	<0.05	<5	<5
682659	<0.001	<20	0.06	0.01	<0.01	11	0.06	<5	<5
682660	<0.001	<20	0.18	<0.01	0.09	<2	<0.05	<5	<5
682661	0.001	<20	0.73	<0.01	0.41	<2	<0.05	<5	<5
682662	<0.001	<20	0.64	<0.01	0.18	<2	0.1	<5	<5
682663	0.004	<20	0.42	<0.01	0.23	<2	0.11	<5	6
682664	<0.001	<20	0.38	0.02	0.14	<2	0.1	<5	<5
682665	<0.001	<20	0.1	0.02	0.01	2	0.13	<5	<5
682666	<0.001	<20	0.06	0.02	0.01	<2	0.09	<5	<5
682667	<0.001	<20	0.03	0.02	<0.01	<2	0.08	<5	<5
682668	<0.001	<20	0.05	0.03	<0.01	<2	0.09	<5	<5
682669	<0.001	<20	0.02	<0.01	<0.01	<2	0.07	<5	<5
682670	0.014	<20	1.78	0.08	0.18	<2	<0.05	<5	6
682671	0.001	<20	0.39	<0.01	0.19	<2	0.07	5	<5
682672	<0.001	<20	0.24	<0.01	0.1	<2	0.09	<5	<5
682673	0.002	<20	0.26	<0.01	0.35	<2	0.5	<5	<5



## **APPENDIX 4**

### **QA/QC plots for 2011-2012 drill program**

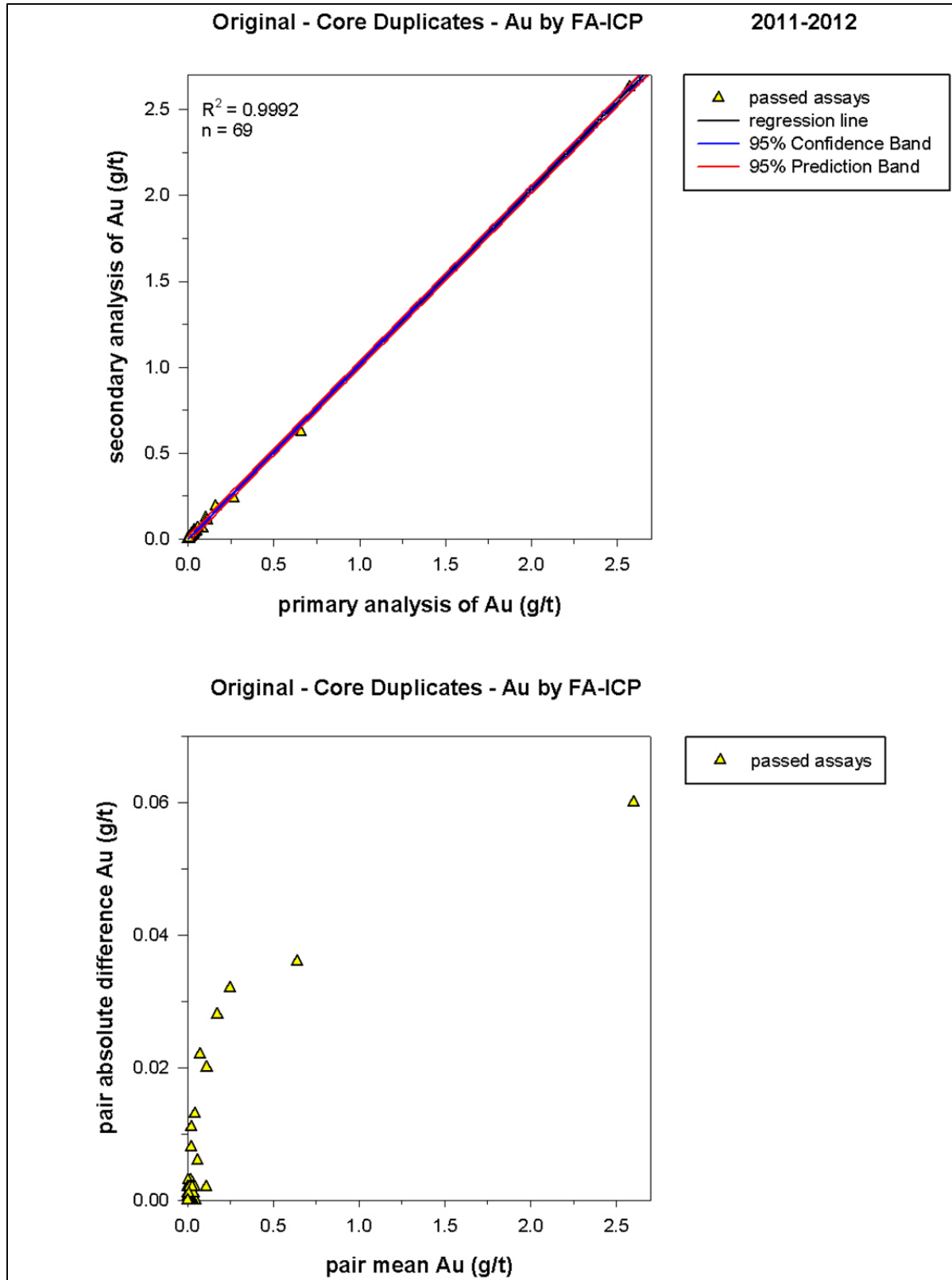


Figure 20-1 Core duplicate charts for 2011-2012 drill program for Au by FA-ICP.

- a) Primary analyses vs. secondary analyses
- b) Pair mean vs. pair absolute difference

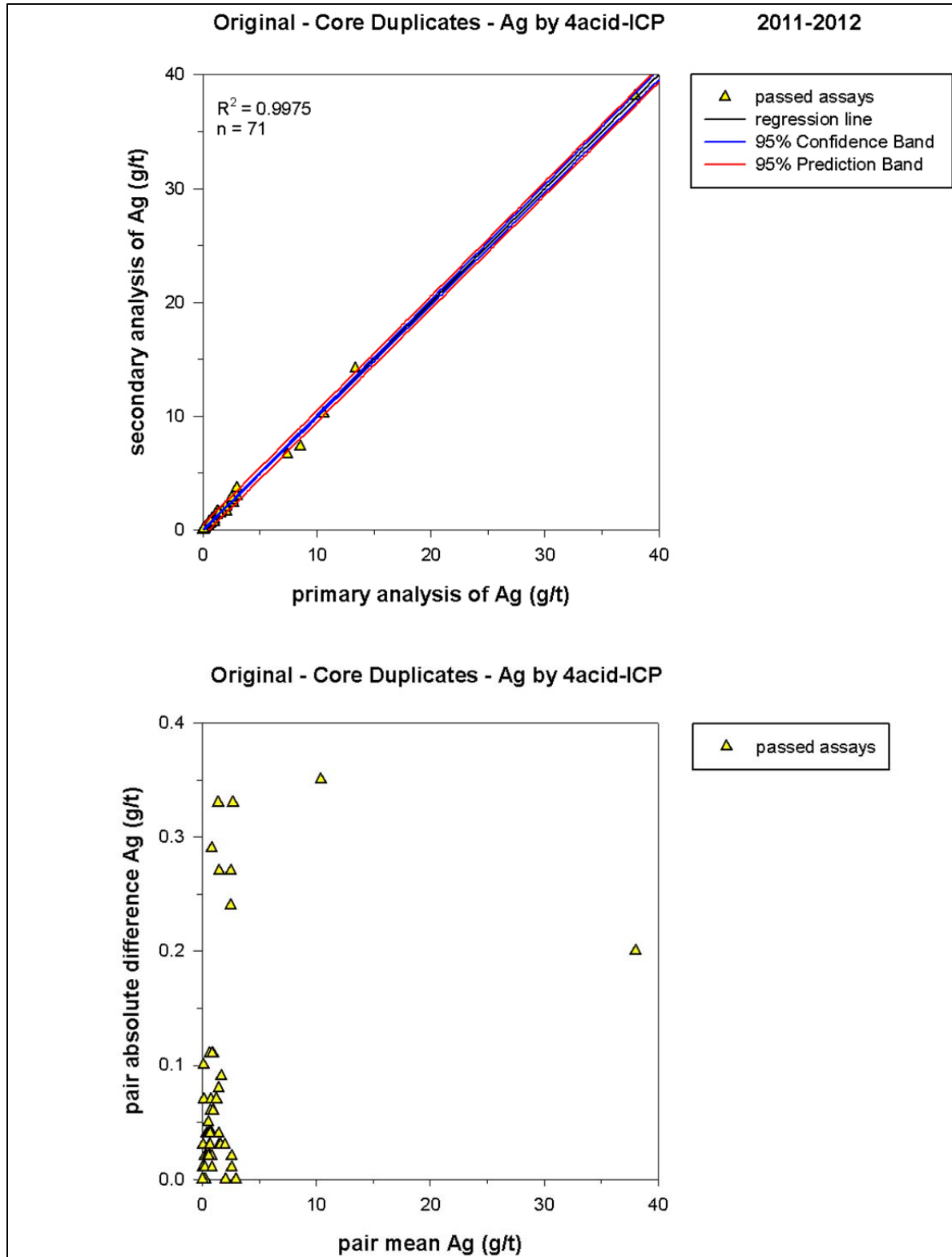


Figure 20-2 Core duplicate charts for 2011-2012 drill program for Ag by 4acid-ICP.

- a) Primary analyses vs. secondary analyses
- b) Pair mean vs. pair absolute difference



## **Appendix 5**

### **QA/QC tables and plots for check assays**



Table 20-2 - Analysis of gold assay results for known standard ME-15

Check Sample #	Au (ppm)	Ag (ppm)	Std Name	QC Gold								
				STD	2 SD	3 SD	-2SD	+2SD	Pass/Fail	-3SD	+3SD	Pass/Fail
242944	1.38	31	ME-15	1.386	0.102	0.153	1.28	1.49	PASS	1.233	1.539	PASS
242990	1.47	28	ME-15	1.386	0.102	0.153	1.28	1.49	PASS	1.233	1.539	PASS
243035	1.31	31	ME-15	1.386	0.102	0.153	1.28	1.49	PASS	1.233	1.539	PASS
243081	1.33	35	ME-15	1.386	0.102	0.153	1.28	1.49	PASS	1.233	1.539	PASS
243126	1.38	37	ME-15	1.386	0.102	0.153	1.28	1.49	PASS	1.233	1.539	PASS
243172	1.3	35	ME-15	1.386	0.102	0.153	1.28	1.49	PASS	1.233	1.539	PASS
243218	1.26	34	ME-15	1.386	0.102	0.153	1.28	1.49	WARN	1.233	1.539	PASS
243263	1.41	36	ME-15	1.386	0.102	0.153	1.28	1.49	PASS	1.233	1.539	PASS
243309	1.34	34	ME-15	1.386	0.102	0.153	1.28	1.49	PASS	1.233	1.539	PASS
243354	1.46	33	ME-15	1.386	0.102	0.153	1.28	1.49	PASS	1.233	1.539	PASS
243400	1.36	32.5	ME-15	1.386	0.102	0.153	1.28	1.49	PASS	1.233	1.539	PASS
243446	1.27	35	ME-15	1.386	0.102	0.153	1.28	1.49	WARN	1.233	1.539	PASS
243491	1.36	35	ME-15	1.386	0.102	0.153	1.28	1.49	PASS	1.233	1.539	PASS
243537	1.42	33	ME-15	1.386	0.102	0.153	1.28	1.49	PASS	1.233	1.539	PASS
243582	1.44	27	ME-15	1.386	0.102	0.153	1.28	1.49	PASS	1.233	1.539	PASS
243628	1.38	38	ME-15	1.386	0.102	0.153	1.28	1.49	PASS	1.233	1.539	PASS
243674	1.37	34	ME-15	1.386	0.102	0.153	1.28	1.49	PASS	1.233	1.539	PASS
243719	1.38	34	ME-15	1.386	0.102	0.153	1.28	1.49	PASS	1.233	1.539	PASS
243765	1.44	35	ME-15	1.386	0.102	0.153	1.28	1.49	PASS	1.233	1.539	PASS
243810	1.37	34	ME-15	1.386	0.102	0.153	1.28	1.49	PASS	1.233	1.539	PASS
243856	1.29	35	ME-15	1.386	0.102	0.153	1.28	1.49	PASS	1.233	1.539	PASS





Check Sample #	Au (ppm)	Ag (ppm)	Std Name	QC Gold								
				STD	2 SD	3 SD	-2SD	+2SD	Pass/Fail	-3SD	+3SD	Pass/Fail
243897	1.435	35	ME-15	1.386	0.102	0.153	1.28	1.49	PASS	1.233	1.539	PASS

Laboratory procedure was ME-GRA21 for all samples except those in red, which were AU-ICP21.

Table 20-3 - Analysis of silver assay results for known standard ME-15

Check Sample #	Au (ppm)	Ag (ppm)	Std Name	QC SILVER								
				STD	2 SD	3 SD	-2SD	+2SD	Pass/Fail	-3SD	+3SD	Pass/Fail
242944	1.38	31	ME-15	34	3.7	5.55	30.30	37.70	PASS	28.45	39.55	PASS
242990	1.47	28	ME-15	34	3.7	5.55	30.30	37.70	WARN	28.45	39.55	FAIL
243035	1.31	31	ME-15	34	3.7	5.55	30.30	37.70	PASS	28.45	39.55	PASS
243081	1.33	35	ME-15	34	3.7	5.55	30.30	37.70	PASS	28.45	39.55	PASS
243126	1.38	37	ME-15	34	3.7	5.55	30.30	37.70	PASS	28.45	39.55	PASS
243172	1.3	35	ME-15	34	3.7	5.55	30.30	37.70	PASS	28.45	39.55	PASS
243218	1.26	34	ME-15	34	3.7	5.55	30.30	37.70	PASS	28.45	39.55	PASS
243263	1.41	36	ME-15	34	3.7	5.55	30.30	37.70	PASS	28.45	39.55	PASS
243309	1.34	34	ME-15	34	3.7	5.55	30.30	37.70	PASS	28.45	39.55	PASS
243354	1.46	33	ME-15	34	3.7	5.55	30.30	37.70	PASS	28.45	39.55	PASS
243400	1.36	32.5	ME-15	34	3.7	5.55	30.30	37.70	PASS	28.45	39.55	PASS
243446	1.27	35	ME-15	34	3.7	5.55	30.30	37.70	PASS	28.45	39.55	PASS
243491	1.36	35	ME-15	34	3.7	5.55	30.30	37.70	PASS	28.45	39.55	PASS
243537	1.42	33	ME-15	34	3.7	5.55	30.30	37.70	PASS	28.45	39.55	PASS
243582	1.44	27	ME-15	34	3.7	5.55	30.30	37.70	WARN	28.45	39.55	FAIL



Check Sample #	Au (ppm)	Ag (ppm)	Std Name	QC SILVER								
				STD	2 SD	3 SD	-2SD	+2SD	Pass/Fail	-3SD	+3SD	Pass/Fail
243628	1.38	38	ME-15	34	3.7	5.55	30.30	37.70	WARN	28.45	39.55	PASS
243674	1.37	34	ME-15	34	3.7	5.55	30.30	37.70	PASS	28.45	39.55	PASS
243719	1.38	34	ME-15	34	3.7	5.55	30.30	37.70	PASS	28.45	39.55	PASS
243765	1.44	35	ME-15	34	3.7	5.55	30.30	37.70	PASS	28.45	39.55	PASS
243810	1.37	34	ME-15	34	3.7	5.55	30.30	37.70	PASS	28.45	39.55	PASS
243856	1.29	35	ME-15	34	3.7	5.55	30.30	37.70	PASS	28.45	39.55	PASS
243897	1.435	35	ME-15	34	3.7	5.55	30.30	37.70	PASS	28.45	39.55	PASS

Laboratory procedure was ME-GRA21 for all samples except those in red, which were AU-ICP21.

Table 20-4 - Analysis of assay results for known gold standard CDN-GS-2G

Check Sample #	Au (ppm)	Ag (ppm)	Standard Name	QC Gold								
				STD	2 SD	3 SD	-2SD	+2SD	Pass/Fail	-3SD	+3SD	Pass/Fail
242921	2.29	2.5	CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	PASS	1.98	2.55	PASS
242967	2.35	2.5	CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	PASS	1.98	2.55	PASS
243012	2.33	5	CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	PASS	1.98	2.55	PASS
243104	2.25	2.5	CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	PASS	1.98	2.55	PASS
243149	2.22	2.5	CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	PASS	1.98	2.55	PASS
243195	2.12	2.5	CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	PASS	1.98	2.55	PASS
243240	2.19	2.5	CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	PASS	1.98	2.55	PASS
243286	2.44	2.5	CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	PASS	1.98	2.55	PASS
243332	2.08	2.5	CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	PASS	1.98	2.55	PASS
243377	1.99	2.5	CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	WARN	1.98	2.55	PASS
243423	2.16	2.5	CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	PASS	1.98	2.55	PASS
243468	2.61	6	CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	WARN	1.98	2.55	FAIL
243514	2.35	2.5	CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	PASS	1.98	2.55	PASS
243560	2.25	2.5	CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	PASS	1.98	2.55	PASS
243605	2.41	2.5	CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	PASS	1.98	2.55	PASS
243651	2.22	2.5	CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	PASS	1.98	2.55	PASS
243696	2.37	2.5	CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	PASS	1.98	2.55	PASS
243742	2.36	2.5	CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	PASS	1.98	2.55	PASS
243788	2.32	2.5	CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	PASS	1.98	2.55	PASS
243879	2.35	2.5	CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	PASS	1.98	2.55	PASS
243468	3.84		CDN-GS-2G	2.26	0.19	0.29	2.07	2.45	WARN	1.98	2.55	FAIL



Check Sample #	Au (ppm)	Ag (ppm)	Standard Name	QC Gold								
				STD	2 SD	3 SD	-2SD	+2SD	Pass/Fail	-3SD	+3SD	Pass/Fail

Laboratory procedure was ME-GRA21 for all samples except those in red.

Laboratory procedure was AU-ICP21 for samples in red.

Sample number 243468 failed initial analysis and subsequent re-assay.

Table 20-5 - Analysis of assay results for known gold standards CDN-GS-2 and P2A

Check Sample #	Au (ppm)	Ag (ppm)	Standard Name	QC Gold								
				STD	2 SD	3 SD	-2SD	+2SD	Pass/Fail	-3SD	+3SD	Pass/Fail
242910	0.238	2.5	CDN GS-P2A	0.229	0.03	0.05	0.20	0.26	PASS	0.18	0.27	PASS
242955	0.2	2.5	CDN GS-P2	0.214	0.02	0.03	0.19	0.23	PASS	0.18	0.24	PASS
243001	0.239	2.5	CDN GS-P2A	0.229	0.03	0.05	0.20	0.26	PASS	0.18	0.27	PASS
243047	0.25	2.5	CDN GS-P2A	0.229	0.03	0.05	0.20	0.26	PASS	0.18	0.27	PASS
243092	0.23	2.5	CDN GS-P2	0.214	0.02	0.03	0.19	0.23	PASS	0.18	0.24	PASS
243138	0.19	2.5	CDN GS-P2	0.214	0.02	0.03	0.19	0.23	WARN	0.18	0.24	PASS
243183	0.249	2.5	CDN GS-P2A	0.229	0.03	0.05	0.20	0.26	PASS	0.18	0.27	PASS
243229	0.228	2.5	CDN GS-P2A	0.229	0.03	0.05	0.20	0.26	PASS	0.18	0.27	PASS
243275	0.235	2.5	CDN GS-P2A	0.229	0.03	0.05	0.20	0.26	PASS	0.18	0.27	PASS
243320	0.238	2.5	CDN GS-P2A	0.229	0.03	0.05	0.20	0.26	PASS	0.18	0.27	PASS
243366	0.251	2.5	CDN GS-P2A	0.229	0.03	0.05	0.20	0.26	PASS	0.18	0.27	PASS
243411	0.232	2.5	CDN GS-P2A	0.229	0.03	0.05	0.20	0.26	PASS	0.18	0.27	PASS
243457	0.23	2.5	CDN GS-P2	0.214	0.02	0.03	0.19	0.23	PASS	0.18	0.24	PASS
243503	0.23	7	CDN GS-P2A	0.229	0.03	0.05	0.20	0.26	PASS	0.18	0.27	PASS
243548	0.245	2.5	CDN GS-P2A	0.229	0.03	0.05	0.20	0.26	PASS	0.18	0.27	PASS



Check Sample #	Au (ppm)	Ag (ppm)	Standard Name	QC Gold								
				STD	2 SD	3 SD	- 2SD	+2SD	Pass/Fail	- 3SD	+3SD	Pass/Fail
243594	0.23	2.5	CDN GS-P2	0.214	0.02	0.03	0.19	0.23	PASS	0.18	0.24	PASS
243639	0.21	2.5	CDN GS-P2	0.214	0.02	0.03	0.19	0.23	PASS	0.18	0.24	PASS
243685	0.21	2.5	CDN GS-P2	0.214	0.02	0.03	0.19	0.23	PASS	0.18	0.24	PASS
243731	0.239	2.5	CDN GS-P2	0.214	0.02	0.03	0.19	0.23	WARN	0.18	0.24	PASS
243776	0.21	5	CDN GS-P2	0.214	0.02	0.03	0.19	0.23	PASS	0.18	0.24	PASS
243822	0.186	2.5	CDN GS-P2	0.214	0.02	0.03	0.19	0.23	WARN	0.18	0.24	PASS
243867	0.228	2.5	CDN GS-P2	0.214	0.02	0.03	0.19	0.23	PASS	0.18	0.24	PASS

Laboratory procedure was ME-GRA21 for all samples except those in red.

Laboratory procedure was AU-ICP21 for samples in red.

Table 20-6 - Comparison of analytical results for selected samples and external blind duplicates of those samples

Check Sample #	Sample Type	Au (ppm)	Ag (ppm)	Dupe Sample #	Sample Type	Au (ppm)	Ag (ppm)	Au Pair Mean	Au Abs Diff	Ag Pair Mean	Ag Abs Diff
242927	WT-122	0.96	144	242928	Dup	0.91	146	0.935	0.05	145	1.00
242956	WT-138	0.025	2.5	242957	Dup	0.025	2.5	0.025	0.00	2.5	0.00
242983	WT-147	0.13	16	242984	Dup	0.17	18	0.15	0.04	17	1.00
243013	T97-015	0.025	2.5	243014	Dup	0.025	2.5	0.025	0.00	2.5	0.00
243041	T97-015	0.025	2.5	243042	Dup	0.025	2.5	0.025	0.00	2.5	0.00
243070	T97-016	0.025	2.5	243071	Dup	0.025	2.5	0.025	0.00	2.5	0.00
243098	T97-016	0.025	2.5	243099	Dup	0.1	2.5	0.0625	0.08	2.5	0.00
243127	T97-016	0.025	5	243128	Dup	0.025	2.5	0.025	0.00	3.75	1.25



Check Sample #	Sample Type	Au (ppm)	Ag (ppm)	Dupe Sample #	Sample Type	Au (ppm)	Ag (ppm)	Au Pair Mean	Au Abs Diff	Ag Pair Mean	Ag Abs Diff
243155	T97-017	0.025	2.5	243156	Dup	0.025	2.5	0.025	0.00	2.5	0.00
243184	T97-019	0.014	2.5	243185	Dup	0.015	2.5	0.0145	0.00	2.5	0.00
243212	T97-019	0.024	2.5	243213	Dup	0.022	2.5	0.023	0.00	2.5	0.00
243241	T97-019	0.025	6	243242	Dup	0.1	7	0.0625	0.08	6.5	0.50
243269	T97-035	0.025	2.5	243270	Dup	0.025	2.5	0.025	0.00	2.5	0.00
243298	T97-035	0.098	2.5	243299	Dup	0.099	2.5	0.0985	0.00	2.5	0.00
243326	T97-035	0.025	2.5	243327	Dup	0.025	2.5	0.025	0.00	2.5	0.00
243355	T97-037	0.025	2.5	243356	Dup	0.025	2.5	0.025	0.00	2.5	0.00
243383	T97-037	0.025	9	243384	Dup	0.025	14	0.025	0.00	11.5	2.50
243412	T97-037	0.025	2.5	243413	Dup	0.025	2.5	0.025	0.00	2.5	0.00
243440	T97-040	0.43	10	243441	Dup	0.46	9	0.445	0.03	9.5	0.50
243469	T97-040	0.015	9	243470	Dup	0.011	7	0.013	0.00	8	1.00
243497	T97-042	0.013	2.5	243498	Dup	0.013	2.5	0.013	0.00	2.5	0.00
243526	T97-043	0.025	2.5	243527	Dup	0.025	2.5	0.025	0.00	2.5	0.00
243554	T97-044	0.025	2.5	243555	Dup	0.025	2.5	0.025	0.00	2.5	0.00
243583	T97-047	0.025	2.5	243584	Dup	0.025	2.5	0.025	0.00	2.5	0.00
243611	T97-047	0.025	2.5	243612	Dup	0.025	2.5	0.025	0.00	2.5	0.00
243640	T97-047	0.34	21	243641	Dup	0.36	22	0.35	0.02	21.5	0.50
243668	T97-049	0.025	2.5	243669	Dup	0.025	2.5	0.025	0.00	2.5	0.00
243697	T97-049	0.025	2.5	243698	Dup	0.025	2.5	0.025	0.00	2.5	0.00
243725	WT-241	0.52	10	243726	Dup	0.53	10	0.525	0.01	10	0.00
243754	WT-242	0.025	2.5	243755	Dup	0.025	5	0.025	0.00	3.75	1.25



Check Sample #	Sample Type	Au (ppm)	Ag (ppm)	Dupe Sample #	Sample Type	Au (ppm)	Ag (ppm)	Au Pair Mean	Au Abs Diff	Ag Pair Mean	Ag Abs Diff
243782	WT-286	0.025	2.5	243783	Dup	0.025	2.5	0.025	0.00	2.5	0.00
243811	WT-286	0.025	2.5	243812	Dup	0.025	2.5	0.025	0.00	2.5	0.00
243839	WT-286	0.1	8	243840	Dup	0.025	5	0.0625	0.08	6.5	1.50
243868	WT-286	0.04	2.5	243869	Dup	0.04	2.5	0.04	0.00	2.5	0.00

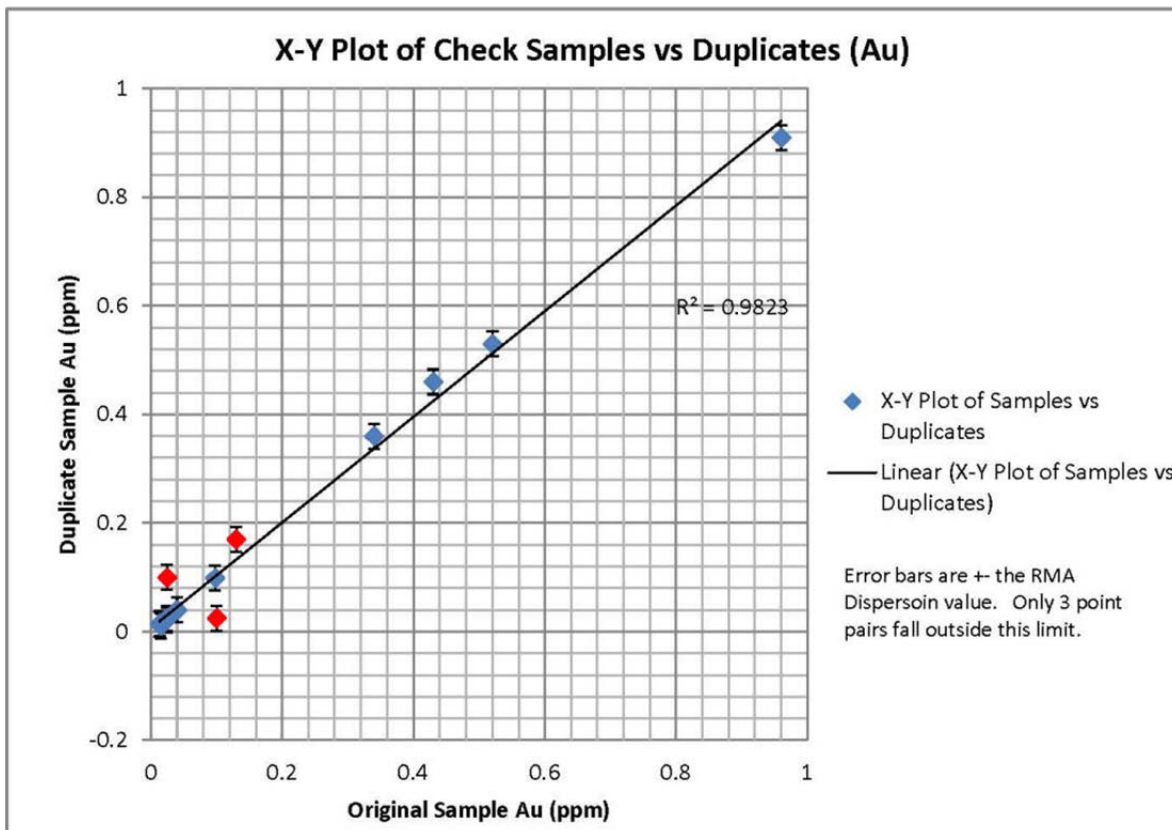


Figure 20-3 Check sample duplicates for Au (ppm).

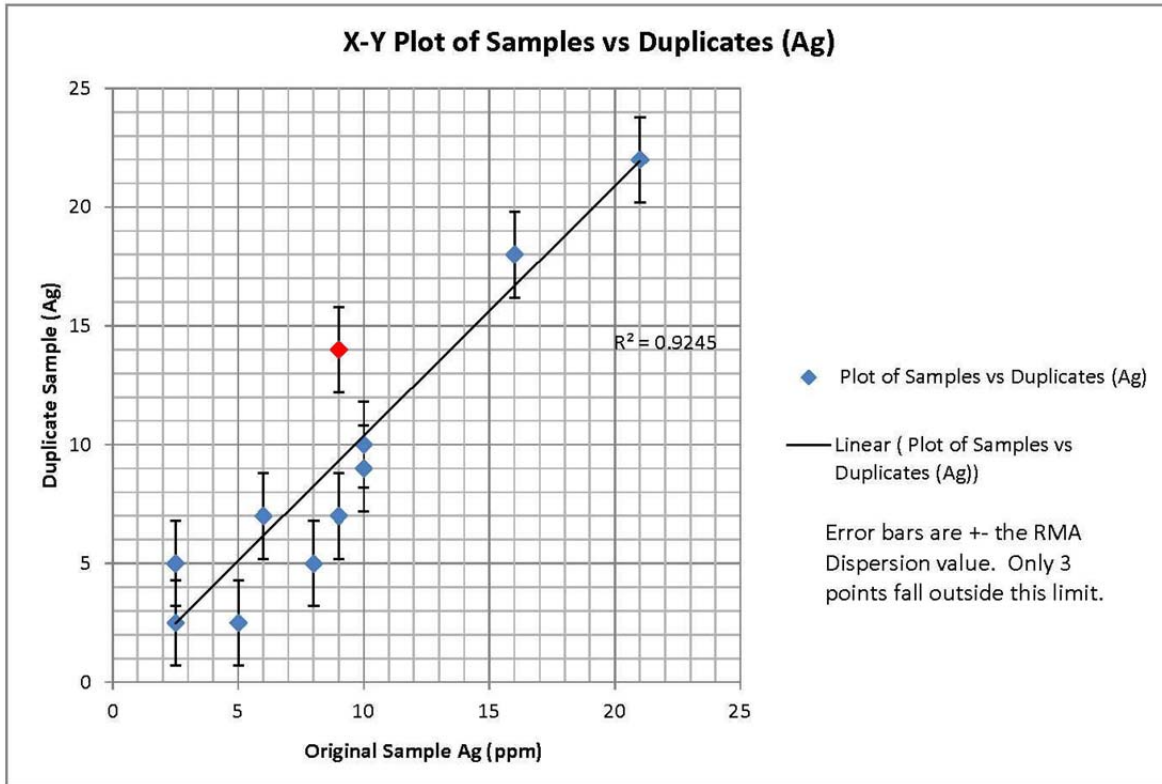


Figure 20-4 Check sample duplicates for Ag (ppm).

Table 20-7 - Analysis of gold and silver assays for inserted blank samples

Check Sample Number	Au (ppm)	Ag (ppm)	Standard Name	QC Result	Pass/Fail
242933	0.025	2.5	Silica Sand	Below Detection Limit	PASS
242978	0.025	2.5	Silica Sand	Below Detection Limit	PASS
243024	0.025	2.5	Silica Sand	Below Detection Limit	PASS
243069	0.025	2.5	Silica Sand	Below Detection Limit	PASS
243115	0.025	2.5	Silica Sand	Below Detection Limit	PASS



Check Sample Number	Au (ppm)	Ag (ppm)	Standard Name	QC Result		Pass/Fail
243161	0.025	2.5	Silica Sand	Below Limit	Detection	PASS
243206	0.025	2.5	Silica Sand	Below Limit	Detection	PASS
243252	0.025	2.5	Silica Sand	Below Limit	Detection	PASS
243297	0.025	2.5	Silica Sand	Below Limit	Detection	PASS
243343	0.025	2.5	Silica Sand	Below Limit	Detection	PASS
243389	0.025	2.5	Silica Sand	Below Limit	Detection	PASS
243434	0.025	2.5	Silica Sand	Below Limit	Detection	PASS
243480	0.025	2.5	Silica Sand	Below Limit	Detection	PASS
243525	0.025	2.5	Silica Sand	Below Limit	Detection	PASS
243571	0.025	2.5	Silica Sand	Below Limit	Detection	PASS
243617	0.025	2.5	Silica Sand	Below Limit	Detection	PASS
243662	0.025	2.5	Silica Sand	Below Limit	Detection	PASS
243708	0.002	2.5	Silica Sand	2x Detection Limit		PASS
243753	0.025	2.5	Silica Sand	Below Limit	Detection	PASS
243799	0.025	2.5	Silica	Below	Detection	PASS



Check Sample Number	Au (ppm)	Ag (ppm)	Standard Name	QC Result	Pass/Fail
			Sand	Limit	
243833	0.025	2.5	Silica Sand	Below Detection Limit	PASS
243845	0.025	2.5	Silica Sand	Below Detection Limit	PASS
243890	0.025	2.5	Silica Sand	Below Detection Limit	PASS

Laboratory procedure was ME-GRA21 for all samples except those in red.

Laboratory procedure was AU-ICP21 for sample in red.

Table 20-8 - Comparison of check samples and internal laboratory duplicates

Sample Number	Check Assays		Lab Duplicates		Au		Ag	
	Au (ppm)	Ag (ppm)	Au ppm	Ag ppm	Pair Mean	Abs Diff	Pair Mean	Abs Diff
242908	0.52	29	0.65	31	0.585	0.13	30	2
242934	0.52	55	0.59	59	0.555	0.07	57	4
242948	3.31	257						
242954	0.07	24	0.14	29	0.105	0.07	26.5	5
242977	1.56	108	1.74	109	1.65	0.18	108.5	1
242980	0.85	53	0.88	60	0.865	0.03	56.5	7
243000	0.025	2.5	0.025	5	0.025	0	3.75	2.5
243026	0.025	2.5	0.025	5	0.025	0	3.75	2.5
243052	0.1	6	0.13	5	0.115	0.03	5.5	1
243079	0.025	2.5	0.025	2.5	0.025	0	2.5	0
243105	0.025	2.5	0.025	2.5	0.025	0	2.5	0
243121	0.26	2.5	0.1	2.5	0.18	0.16	2.5	0
243141	0.025	2.5	0.025	2.5	0.025	0	2.5	0
243167	0.23	18	0.26	21	0.245	0.03	19.5	3
243193	0.025	2.5	0.025	2.5	0.025	0	2.5	0



Sample Number	Check Assays		Lab Duplicates		Au		Ag	
	Au (ppm)	Ag (ppm)	Au ppm	Ag ppm	Pair Mean	Abs Diff	Pair Mean	Abs Diff
243214	0.025	2.5	0.025	2.5	0.025	0	2.5	0
243240	2.19	2.5	2.41	2.5	2.3	0.22	2.5	0
243260	0.025	2.5	0.07	2.5	0.0475	0.045	2.5	0
243297	0.025	2.5	0.025	2.5	0.025	0	2.5	0
243309	1.63	34	Insufficient	Sample				
243336	0.025	2.5	0.025	2.5	0.025	0	2.5	0
243362	0.025	2.5	0.025	2.5	0.025	0	2.5	0
243382	0.1	10	0.07	12	0.085	0.03	11	2
243408	0.025	2.5	0.025	2.5	0.025	0	2.5	0
243434	0.025	2.5	0.025	2.5	0.025	0	2.5	0
243454	0.26	8	0.27	10	0.265	0.01	9	2
243480	0.025	2.5	0.025	2.5	0.025	0	2.5	0
243528	0.025	2.5	0.025	7	0.025	0	4.75	4.5
243548	0.27	2.5	0.33	2.5	0.3	0.06	2.5	0
243601	0.025	2.5	0.025	2.5	0.025	0	2.5	0
243621	0.025	2.5	0.025	2.5	0.025	0	2.5	0
243648	0.025	2.5	0.025	2.5	0.025	0	2.5	0
243674	1.37	34	1.59	34	1.48	0.22	34	0
243694	0.06	2.5	0.025	2.5	0.0425	0.035	2.5	0
243720	0.21	5	0.13	11	0.17	0.08	8	6
243754	0.025	2.5	0.025	2.5	0.025	0	2.5	0
243774	0.025	2.5	0.025	2.5	0.025	0	2.5	0
243800	0.025	2.5	0.025	2.5	0.025	0	2.5	0
243826	0.09	2.5	0.025	2.5	0.0575	0.065	2.5	0
243846	0.2	9	0.07	10	0.135	0.13	9.5	1
243872	0.16	2.5	0.025	2.5	0.0925	0.135	2.5	0
243893	2.95	42						



Sample Number	Check Assays		Lab Duplicates		Au		Ag	
	Au (ppm)	Ag (ppm)	Au ppm	Ag ppm	Pair Mean	Abs Diff	Pair Mean	Abs Diff
243901	0.13	127	0.34	126	0.235	0.21	126.5	1

Table 20-9 – Selection of re-assays where the gold values did not match historic values

Historic Assays					Check Assays		Pair Mean	Absolute Difference
Hole ID	FROM	TO	AU ID	AU PPM	Sample Number	Au (ppm)		
WT-105	13.716	15.240	WT105 45-50	0.0002	243891	2.8	1.4001	2.7998
WT-286	97.536	99.060	WT-286 320-325	0.0150	243831	2.5	1.2575	2.485
WT-134	12.192	13.716	WT13440-45	2.1943	242946	INS		
T97-042	9.144	10.668	T97-042 030-035	1.6300	243489	3.06	2.3450	1.43
T97-017	48.768	50.292	T97-017 160-165	0.1410	243168	1.52	0.8305	1.379
T97-042	7.620	9.144	T97-042 025-030	2.8640	243488	1.61	2.2370	1.254
T97-042	12.192	13.716	T97-042 040-045	1.6960	243492	0.52	1.1080	1.176
WT-138	19.812	21.336	WT13865-70	1.1657	242964	INS		
T97-049	0.000	1.524	T97-049 000-005	0.0200	243645	0.7	0.3600	0.68
T97-044	24.384	25.908	T97-044 080-085	0.9680	243569	0.57	0.7690	0.398
WT-148	4.572	6.096	WT14815-20	0.2743	242989	0.67	0.4722	0.3957
T97-042	41.148	42.672	T97-042 135-140	0.0080	243513	0.36	0.1840	0.352
T97-019	83.820	85.344	T97-019 275-280	0.3270	243247	0.67	0.4985	0.343
WT-121	56.388	57.912	WT121185-190	2.1257	242915	1.79	1.9579	0.3357
WT-131	22.860	24.384	WT13175-80	4.0800	242936	3.78	3.9300	0.3
T97-016	62.484	64.008	T97-016 205-210	1.1390	243110	1.43	1.2845	0.291
WT-039	12.192	13.716	WT-39 40-45	0.4457	243884	0.16	0.3029	0.2857
T97-017	56.388	57.912	T97-017 185-190	0.0200	243174	0.3	0.1600	0.28
WT-121	54.864	56.388	WT121180-185	1.1314	242914	0.86	0.9957	0.2714
WT-163	0.000	1.524	WT1630-5	0.2400	242994	0.51	0.3750	0.27
WT-163	15.240	16.764	WT16350-55	0.0001	242998	0.27	0.1351	0.2699
WT-105	10.668	12.192	WT105 35-40	8.6744	243888	8.94	8.8072	0.2656
WT-121	53.340	54.864	WT121175-180	1.3714	242913	1.63	1.5007	0.2586



Historic Assays					Check Assays		Pair Mean	Absolute Difference
Hole ID	FROM	TO	AU ID	AU PPM	Sample Number	Au (ppm)		
T97-044	22.860	24.384	T97-044 075-080	1.2060	243568	0.95	1.0780	0.256
T97-016	59.436	60.960	T97-016 195-200	1.4600	243108	1.71	1.5850	0.25
WT-105	19.812	21.336	WT105 65-70	4.2858	243895	4.04	4.1629	0.2458



Table 20-10 - Selection of re-assays where the silver values did not match historic values

Historic Assays					Check Assays		Pair Mean	Absolute Difference
Hole_ID	FROM	TO	Sample_ID	AG_PP	Sample	Ag		
WT-118	22.860	24.384	WT11875-80	48.00	242902	60.00	54.00	12.00
WT-121	56.388	57.912	WT121185-190	248.57	242915	297.00	272.79	48.43
WT-139	56.388	57.912	WT139185-190	6.51	242976	23.00	14.76	16.49
T97-016	59.436	60.960	T97-016 195-200	16.90	243108	37.00	26.95	20.10
T97-016	60.960	62.484	T97-016 200-205	21.90	243109	42.00	31.95	20.10
T97-016	62.484	64.008	T97-016 205-210	22.20	243110	48.00	35.10	25.80
T97-016	64.008	65.532	T97-016 210-215	21.20	243111	49.00	35.10	27.80
T97-016	65.532	67.056	T97-016 215-220	17.30	243112	36.00	26.65	18.70
T97-017	47.244	48.768	T97-017 155-160	2.60	243167	18.00	10.30	15.40
T97-017	48.768	50.292	T97-017 160-165	1.40	243168	15.00	8.20	13.60
T97-019	74.676	76.200	T97-019 245-250	1.30	243239	23.00	12.15	21.70
T97-019	82.296	83.820	T97-019 270-275	1.90	243246	16.00	8.95	14.10
T97-035	41.148	42.672	T97-035 135-140	34.60	243288	2.50	18.55	32.10
T97-040	27.432	28.956	T97-040 090-095	4.90	243449	25.00	14.95	20.10
T97-040	28.956	30.480	T97-040 095-100	10.30	243450	43.00	26.65	32.70
T97-040	30.480	32.004	T97-040 100-105	10.60	243451	43.00	26.80	32.40
T97-040	32.004	33.528	T97-040 105-110	6.90	243452	31.00	18.95	24.10
T97-040	33.528	35.052	T97-040 110-115	7.70	243453	28.00	17.85	20.30
T97-042	0.000	1.524	T97-042 000-005	11.60	243483	28.00	19.80	16.40
T97-042	1.524	3.048	T97-042 005-010	98.50	243484	164.00	131.25	65.50
T97-042	3.048	4.572	T97-042 010-015	241.80	243485	350.00	295.90	108.20
T97-042	4.572	6.096	T97-042 015-020	28.80	243486	78.00	53.40	49.20
T97-042	6.096	7.620	T97-042 020-025	14.10	243487	54.00	34.05	39.90
T97-042	7.620	9.144	T97-042 025-030	44.70	243488	112.00	78.35	67.30
T97-042	9.144	10.668	T97-042 030-035	35.10	243489	118.00	76.55	82.90
T97-042	10.668	12.192	T97-042 035-040	47.80	243490	73.00	60.40	25.20
T97-042	12.192	13.716	T97-042 040-045	23.40	243492	53.00	38.20	29.60



Historic Assays					Check Assays		Pair Mean	Absolute Difference
Hole ID	FROM	TO	Sample ID	AG PP	Sample	Ag		
T97-042	13.716	15.240	T97-042 045-050	10.70	243493	35.00	22.85	24.30
T97-042	15.240	16.764	T97-042 050-055	9.60	243494	46.00	27.80	36.40
T97-042	25.908	27.432	T97-042 085-090	1.10	243502	25.00	13.05	23.90
T97-043	0.000	1.524	T97-043 000-005	42.80	243517	69.00	55.90	26.20
T97-043	1.524	3.048	T97-043 005-010	27.70	243518	43.00	35.35	15.30
T97-043	3.048	4.572	T97-043 010-015	11.80	243519	28.00	19.90	16.20
T97-044	15.240	16.764	T97-044 050-055	3.10	243563	18.00	10.55	14.90
T97-044	16.764	18.288	T97-044 055-060	2.90	243564	17.00	9.95	14.10
T97-044	18.288	19.812	T97-044 060-065	6.90	243565	28.00	17.45	21.10
T97-044	19.812	21.336	T97-044 065-070	5.90	243566	18.00	11.95	12.10
T97-047	68.580	70.104	T97-047 225-230	4.20	243634	27.00	15.60	22.80
T97-047	70.104	71.628	T97-047 230-235	12.50	243635	50.00	31.25	37.50
T97-047	71.628	73.152	T97-047 235-240	22.40	243636	52.00	37.20	29.60
T97-047	73.152	74.676	T97-047 240-245	145.40	243637	179.00	162.20	33.60
T97-047	74.676	76.200	T97-047 245-250	41.20	243638	55.00	48.10	13.80
WT-137	10.668	12.192	WT13735-40	73.71	243701	51.00	62.36	22.71

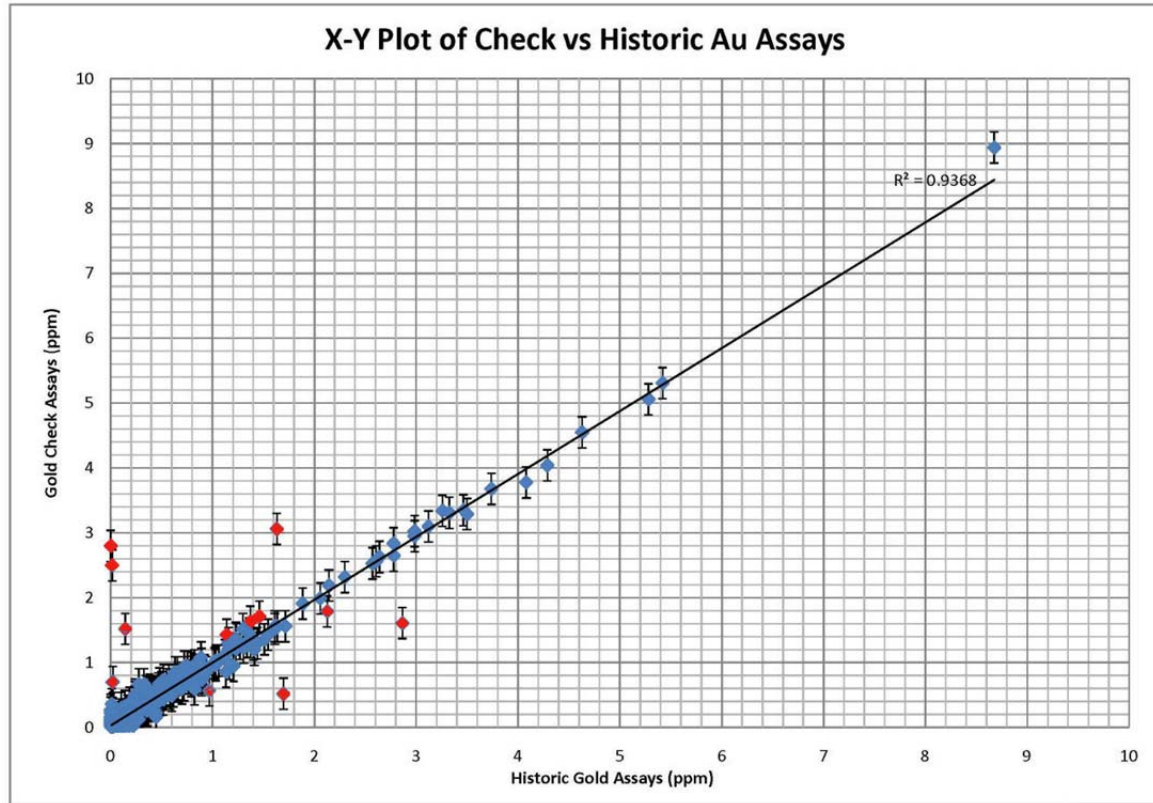


Figure 20-5 Check sample vs historic assay for Au (ppm)

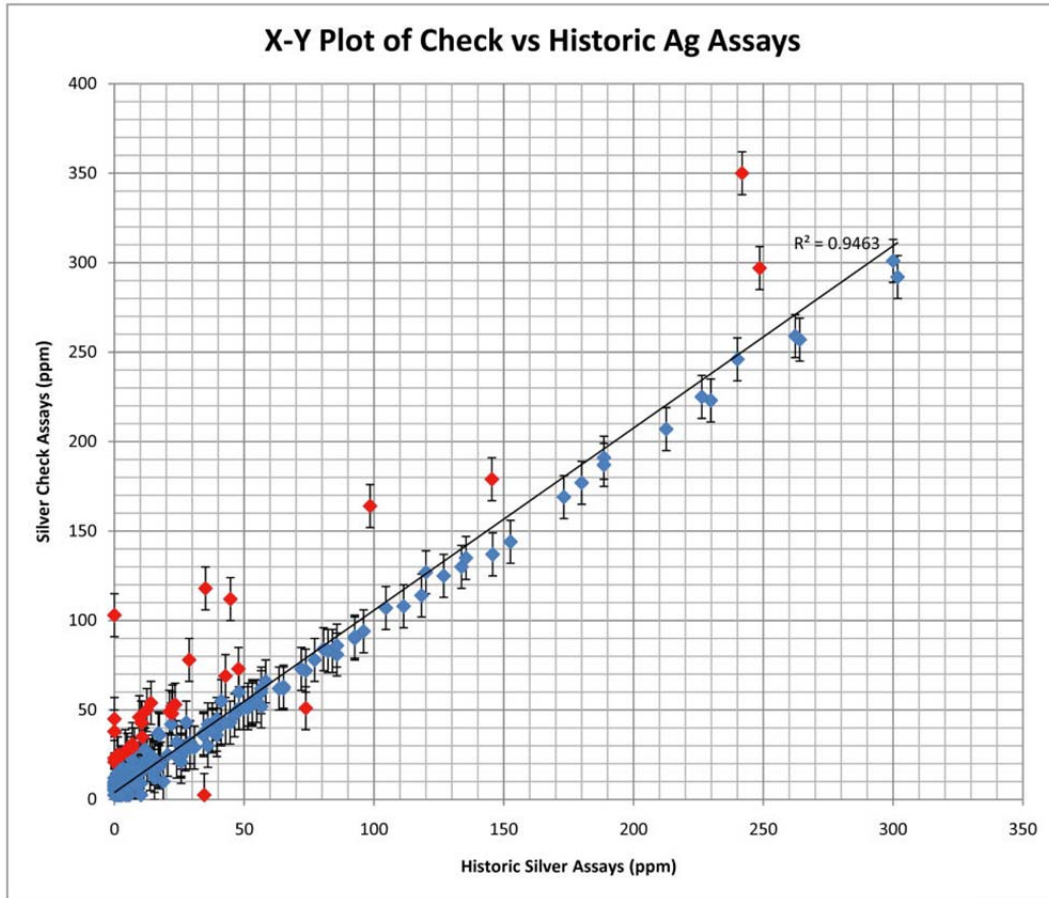


Figure 20-6 Check sample vs historic assay for Ag (ppm)

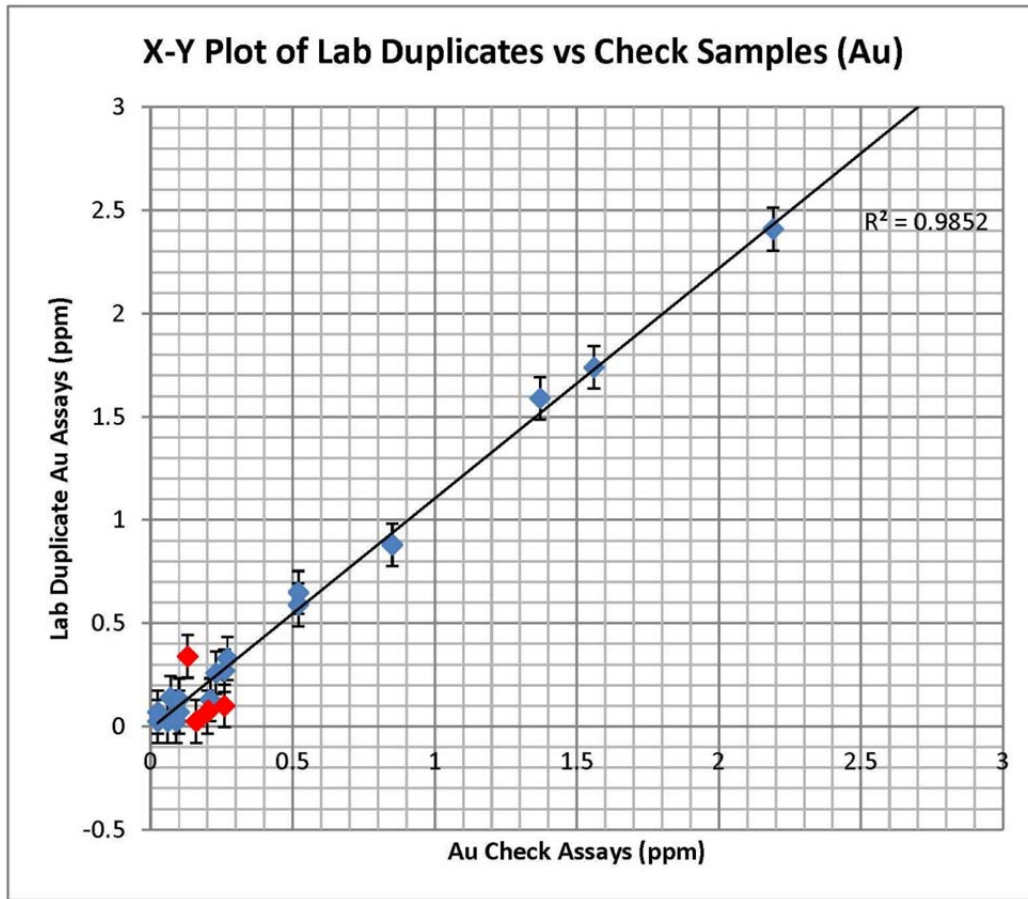


Figure 20-7 Check sample lab duplicates for Au (ppm)

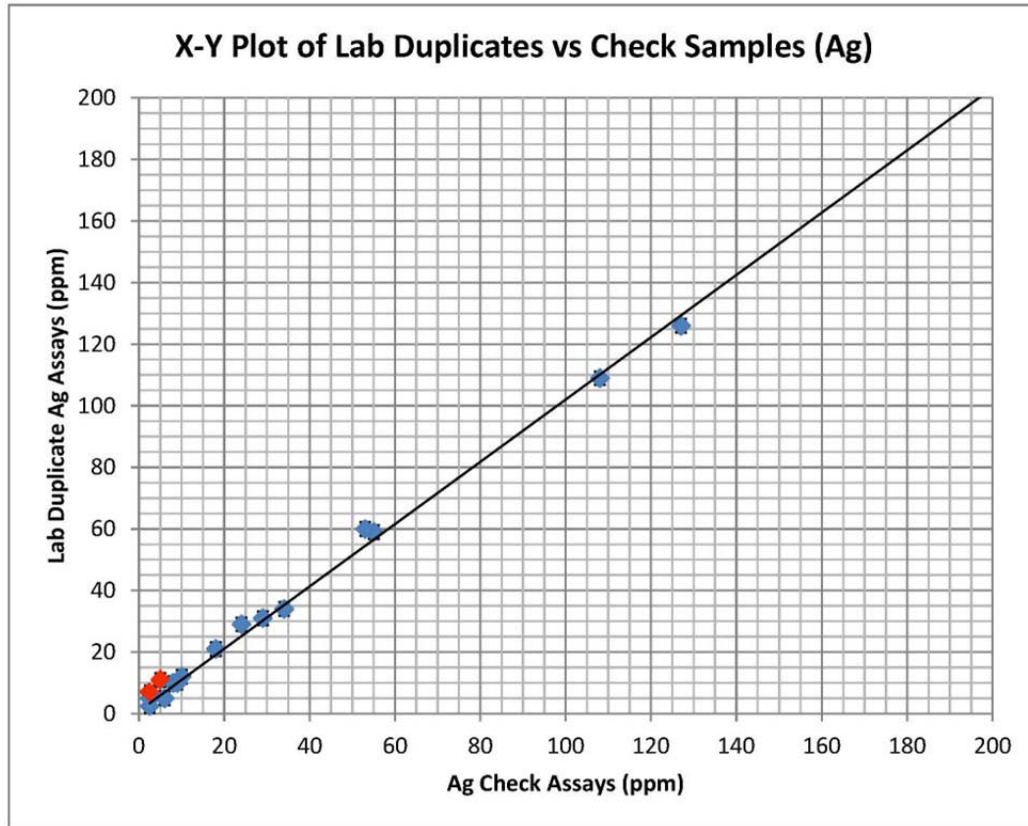


Figure 20-8 Check sample lab duplicates for Ag (ppm)



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