





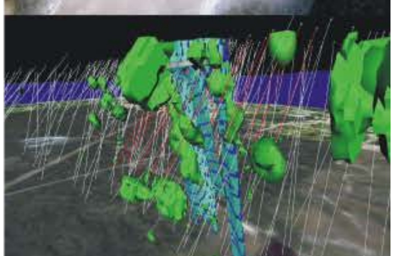


INDEPENDENT TECHNICAL REPORT

NIEVES PROPERTY

Zacatecas State, Mexico

Quaterra Resources Inc.

QUATERRA RESOURCES INC.
1100-1199 West Hastings Street
Vancouver, British Columbia, Canada
V6E 3T5

and

BLACKBERRY VENTURES 1, LLC.
10 Rockefeller Plaza, Suite 720,
New York, New York 10020

Date: August 9th, 2012

Prepared By:

CARACLE CREEK INTERNATIONAL CONSULTING INC.
Zsuzsanna Magyarosi, Ph.D., P.Geo.
Jason Baker, P.Eng.
Doris Fox, M.Sc., P.Geo.

Office Locations

Toronto

34 King Street East, 9th Floor
Toronto, ON
Canada, M5C 2X8

Tel: +1.416.368.1801
Fax: +1.416.368.9794
Canada@caraclecreek.com

Vancouver
409 Granville Street, Suite 1409
Vancouver, BC
Canada, V6C 1T2

Tel: +1.604.637.2050
Fax: +1.604.602.9496
Canada@caraclecreek.com

Sudbury
25 Frood Road
Sudbury, ON
Canada, P3C 4Y9

Tel: +1.705.671.1801
TF: +1.866.671.1801
Fax: +1.705.671.3665
Canada@caraclecreek.com

Johannesburg
7th Floor
The Mall Offices
11 Cradock Avenue, Rosebank
South Africa

Tel: +1.27 (0) 11.880.0278
Fax: +1.27 (0) 11.447.4814
Africa@caraclecreek.com

www.caraclecreek.com

This report has been prepared by
Caracle Creek International Consulting Inc. (Caracle Creek)
on
behalf of Quaterra Resources Inc. and Blackberry Ventures 1, LLC

2012

Issued by: Sudbury

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

1.0 SUMMARY

Caracle Creek International Consulting Inc. ("Caracle Creek") of Toronto, Ontario, Canada was contracted by Quaterra Resources Inc. ("Quaterra") of Vancouver, British Columbia, Canada, to prepare an Independent Technical Report (the "Report"), compliant with National Instrument 43-101 ("NI43-101"), companion policy NI43-101CP and Form 43-101F1 on the Nieves Property (the "Property"). The Report summarizes the details and results of the 2010 and 2011 exploration program and includes an updated resource estimate for the Property.

The Nieves Property is located in the Francisco R. Murguía Municipality of the Zacatecas Mining District near the southeastern boundary of the Sierra Madre Occidental Physiographic Province in central Mexico. The Property is centered approximately at 694856E, 2651009N (NAD27 Mexico, Zone13N), approximately 150 km northwest of the state capital of Zacatecas and 90 km north of the mining community of Fresnillo.

The Nieves Property consists of 18 concessions covering approximately 12,064.0725 ha. The concessions are registered in the name Minera Cerro Gregorio, as of August 5, 2011, a Mexican company wholly owned by Quaterra. The Nieves Property is jointly owned by Quaterra and Blackberry Ventures 1, LLC. (“Blackberry”). In 2011, Quaterra and Blackberry (through Minera Cerro Gregorio) paid US $44,538 in taxes to maintain the concessions. In 2012, Quaterra and Blackberry paid US $33,854 and are required to pay an additional US $36,519 to maintain the Nieves Property. Taxes are payable every six months to the Mexican government. Net smelter return royalties remain outstanding on each of the concessions acquired from Kennecott (recently purchased by Royal Gold Inc.) and the Mexican concessionaires (Abelardo Garza Hernandez, Noel McAnulty and Bill Shafer) (Table 4-3).

The Nieves Property is located on the western flank of the Central Altiplano in Mexico, just east of the Sierra Madre Occidental ranges. The Nieves Property is underlain by Mesozoic “argillite” of the Caracol Formation, which is overlain by Tertiary rhyolitic volcanoclastic rocks. The two units are separated by a Tertiary age basal conglomerate and conglomeratic sandstone sequence. The Caracol Formation is isoclinally folded with an axial plane cleavage. Later brittle deformation, faulting and vein structures, affected all the rocks in the area.

Silver mineralization on the Nieves Property is classified as low-sulfidation epithermal mineralization and it is the primary exploration target. Epithermal silver veins are the dominant deposit type in the region with world class examples such as Pachuca, Fresnillo and Guanajuato.

On the Nieves Property there are three major east to northeast trending silver vein systems: California, Concordia- San Gregorio -Dolores-Nino and Santa Rita vein systems. There is also an east-northeast to east-southeast striking breccia system, containing manganese mineralization, on the east side of the Property. All these areas have been worked on by local miners.

Silver mineralization is hosted in veins that are less than 10 cm wide and contain pyrite, stibnite, sphalerite, galena, chalcopyrite and silver sulphosalts such as proustite, pyrargirite, freibergite, acanthite, jamesonite and tetrahedrite.

Between March 2010 and June 2012, Quaterra and Blackberry completed an exploration program on the Nieves Property consisting of a geophysical survey, mapping and sampling and drilling.

The geophysical survey consists of six lines, a total of 28.4 line-kilometers, of vector controlled source audio-magnetotellurics and induced polarization (CSAMT/CSIP) and nine follow-up lines of pole/dipole induced polarization (IP) totaling 16.5 line-kilometers. Nine anomalous zones were detected and validated with IP lines using 50 meter dipole spacings. Most of the anomalies appear to be westward extensions of mineralized veins previously drilled, including the Dolores, Santa Rita, Niño and Orion veins. The most interesting area identified to date is West Santa Rita, located 1000 to 1200 meters west of the main Santa Rita mine and over 500 meters from Quaterra's nearest drill hole.

Mapping and sampling was completed to follow up the geophysical anomalies. The most interesting area was identified in the West Santa Rita, where mapping identified two groups of narrow, sub-parallel 2 to 30 centimeter wide calcite-quartz veinlets, some of which contain strong gold and silver mineralization. Gold values are up to 8.11 g/t over 0.2 m and silver values are up to 253 g/t over 0.4 m.

Quaterra and Blackberry completed two phases of drill programs (VII and VIII) between March 2010 and October 2011, consisting of 73 drill holes and totaling 18,547.25 m. Most of the drilling concentrated on the Concordia-Dolores-San Gregorio vein system, but significant amount of drilling is located in the California and Santa Rita vein systems as well.

The drill program was very successful at increasing the size of known mineralized zones along all the major vein systems. Mineralization along the Concordia vein system was extended an additional 400 m, to a total of approximately 1,300 m. The length of known mineralization along the California vein system was increased to a total of approximately 550 m and it remains open to the east. Phase VII and VIII drill programs were successful in doubling the strike length of the Gregorio North mineralized zone loated north of the San Gregorio vein, extending the strike length of the mineralized zone to approximately 1200 m. A total of 15 drill holes systematically tested the Santa Rita vein system over 500 m along strike, and the total length of mineralization was extended to approximately 750 m and remains open to the west.

The best intersections include 149 g/t Ag and 0.11 g/t Au over 31.25 m, which includes 6320 g/t Ag and 1.82 g/t Au over 0.25 m in drill hole QTA123 along the Concordia West vein, 104 g/t Ag over 19 m, including 6410 g/t Ag over 0.1 m and 5960 g/t over 0.1 m in drill hole QTA137 along the California vein, and 152.2 g/t Ag and 0.12 g/t Au over 57 m in drill hole QTA144 in the Concordia West area.

Metallurgical testing concluded that 86% of the feed silver can be recovered into a final concentrate of 2.3 kg/tonne silver with open circuit flotation. Minor element assays conducted on the concentrate indicated elevated levels of antimony, arsenic and fluorine, which may result in smelter penalties.

Independent, NI 43-101 compliant resources at the Quaterra Resources Nieves property were estimated by Jason Baker P.Eng. (APENS#9627), a Geological Engineer with Caracle Creek and an independent qualified person as defined by NI 43-101. The mineral resources are reported in accordance with National Instrument 43-101 and have been estimated in compliance with generally accepted CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines. Block model quantities and grade estimates for the Nieves property were classified according to the latest CIM Definition Standards for Mineral Resources and Mineral Reserves. The results of the updated mineral resource estimate are summarized in Table 1-1.

Table 1-1 Mineral resource estimates on the Nieves Property

Vein	**Area**	**Category**	**Quantity (tonnes)[2]**	**Grade[3] Ag g/t**	**Grade[4] Au g/t**	**Ounces[5] Ag**	**Ounces[5] Au**
Concordia	La Quinta	Indicated	33,040,000	50.1	0.04	53,220,000	42,500
Concordia	La Quinta	Inferred	39,260,000	32	0.02	40,390,000	25,200
San Gregorio	North	Inferred	18,770,000	27	0.08	16,293,900	48,300

[1]Reported at a cut-off grade of 15 g/t Ag. Mineral resources are not mineral reserves and do not have demonstrated economic viability.
[2] Tonnes have been rounded to the nearest 10,000.
[3]Ag grade has been rounded to one (1) significant digit.
[4]Au grade has been rounded to two (2) significant digits.
[5]Ounces have been rounded to the nearest 100. One (1) troy ounce = 31.103 grams

The QP's opinion is that the Nieves Property is an excellent exploration project, the size of the silver resource has grown substantially with the last two phases of drilling and silver mineralization on the Nieves Property is comparable to other world class silver deposits in the area, such as Pachuca, Fresnillo and Guanajuato.

Caracle Creek recommends a exploration program of approximately CDN $ 1,761,440, consisting of the collection of more specific gravity data in the Gregorio North area to increase the confidence level of the tonnage estimate, more infill drilling in both La Quinta and Gregorio North areas where there is significant inferred resource present, exploration drilling in the West Santa Rita area to test the geophysical anomaly and the down dip extent of the mineralization identified on the surface, and drill testing of the new geophysical targets in the other areas.

2.0 INTRODUCTION

2.1 Introduction

Caracle Creek International Consulting Inc. ("Caracle Creek") of Toronto, Ontario, Canada was contracted by Quaterra Resources Inc. ("Quaterra") of Vancouver, British Columbia, Canada, to prepare an Independent Technical Report (the "Report"), compliant with National Instrument 43-101 ("NI43-101"), companion policy NI43-101CP and Form 43-101F1 on the Nieves Property (the "Property"). The purpose of the Report is to summarize the 2010 and 2011 exploration program and provide an update to material changes to the property since the last property visit in May, 2010 and the last Technical Report dated September 15, 2010 (Stone, 2010), including an updated resource estimate.

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. Some of the information on the Property are from previous NI 43-101 reports written by Stephen Wetherup in 2006 (Wetherup, 2006) and Michelle Stone in 2009 and 2010 (Stone, 2009 and 2010), both of Caracle Creek. Additional references are listed in the Reference section (19.0).

Doris Fox (P.Geo., Associate of Caracle Creek) visited the Property on March 11th and 12th, 2012 where she was shown the Property by Hector Fernandez, a company employee. Significant intersections from 10 diamond drill holes were reviewed and 11 samples were selected for independent analysis.

2.2 Terminology

Definitions are from Long (2008) and Smee (2008), except where indicated.

Accuracy: the closeness of measurements to a “true” value.

Aqua Regia: Mixture of Hydrochloric Acid (HCl), Nitric Acid (HNO_3) and de-mineralized water (2:2:2). It is a strong acid digestion capable of decomposing metal salts, carbonates, sulphides, most sulphates and *some* oxides and silicates. Aqua Regia will digest precious metals including Au, Ag, Pt and Pd (Acme website: www.acmelab.com). This is also known as a partial digestion, as not all of the rock is dissolved.

Blank: a sample of uncrushed rock or drill core that is known to contain very low or non-detectable concentration of the element being sought. A blank is used to monitor contamination of samples during preparation and analysis.

Certified Reference Materials (“CRM”): standard pulp (powdered) samples that have been subjected to rigorous international testing and have a certificate of analysis with a certified “accepted mean” and standard deviation. Ideally, a cut-off grade, mean grade and high grade CRM is analyzed with samples. CRMs are used to monitor accuracy and precision of analyses.

Duplicates: A split of the original sample analyzed by the same laboratory under the same analytical conditions as the original sample. There are three types of duplicates: field duplicates (split of the drill core), reject or preparation duplicate (split of coarse material) and pulp duplicate (split of powdered material). Field duplicates monitor errors in sampling, preparation and analysis of samples. Reject duplicates monitor errors in preparation and analysis of samples. Pulp duplicates monitor errors in analysis of samples.

Fusion: Method for total to near total decomposition of samples. A portion of sample pulp is mixed with flux such as lithium metaborate ($LiBO_2$) or sodium peroxide (Na_2O_2) that lowers the melting point. The mixture is then heated in a muffle furnace until molten. After cooling the fused mass is digested in 5% HNO_3 (nitric acid) (Acme website: www.acmelab.com). Fusion method is suitable for many refractory, difficult to dissolve minerals (such as chromite, ilmenite, spinel, cassiterite and Ta-W minerals).

ICP-MS: Inductively Coupled Plasma - Mass Spectrometer: An instrument capable of determining the concentrations of 70+ elements simultaneously by measuring the mass of ions generated by an argon gas plasma heated to 10,000°K and passing through a magnetic quadrupole to the detector. Capable of ultra low detection limits (ppb to ppt) with very wide linear ranges (up to 7 orders of magnitude) (Acme Analytical Laboratories Ltd: www.acmelab.com).

ISO: International Standards Organization.

ISO 9001:2008 Quality Management Systems - Requirements: is intended for use in any organization regardless of size, type or product (including service). It provides a number of requirements which an organization needs to fulfill if it is to achieve customer satisfaction through consistent products and services which meet customer expectations. It includes a requirement for the continual (i.e. planned) improvement of the Quality Management System. Certification to an ISO 9001 standard does not guarantee any quality of end products and services; rather, it certifies that formalized business processes are being applied (wikipedia.org and http://isotc.iso.org).

ISO/IEC 17025: is the main standard used by testing and calibration laboratories. There are many commonalities with the ISO 9000 standard, but ISO/IEC 17025 adds in the concept of competence to the equation and it applies directly to those organizations that produce testing and calibration results. There are two main sections in ISO/IEC 17025 - Management Requirements and Technical Requirements. Management requirements are primarily related to the operation and effectiveness of the quality management system within the laboratory. Technical requirements address the competence of staff, methodology and test/calibration equipment (wikipedia.org and http://isotc.iso.org).

QA/QC: Quality Assurance/ Quality Control

Quality Assurance (QA): information collected to demonstrate and quantify the reliability of assay data. Quality Assurance provides a measurement of the uncertainty in the underlying data.

Quality Control (QC): procedures used to maintain a desired level of quality in the assay database. Quality Control leads to corrections of errors or changes in procedures that improve overall data quality.

Pulps: the portion of a sample reduced to a finer size fraction after crushing, pulverizing or sieving and will be used in an analytical test (Acme website: www.acmelab.com).

Precision: the ability to consistently reproduce a measurement. Precise data tightly groups around an average value.

Rejects: the portion of a sample after preparation that is not part of the pulps fraction (Acme website: www.acmelab.com).

2.3 Units

The Metric System is the primary system of measure and length used in this Report and is generally expressed in kilometres (km), metres (m) and centimetres (cm); volume is expressed as cubic metres (m^3), 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 below and quoted where practical. Many of the geologic publications and more recent documents now use the Metric System but older documents 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 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$) unless otherwise noted. Zinc (Zn), copper (Cu) and lead (Pb) are reported in US$ per pound (US$/lb) or US$ per metric tonne (US$/t). Gold (Au) and silver (Ag) are stated in US$ per troy ounce (US$/oz). Where quoted, Universal Transverse Mercator (UTM) coordinates are provided in NAD27, Zone 13Q, Mexico.

2.4 Caracle Creek Qualifications

Caracle Creek International Consulting Inc. is an international consulting company with the 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 and co-author of this Report is Zsuzsanna Magyarosi, Ph.D., P.Geo. Ms. Magyarosi is a Senior Geologist for Caracle Creek International Consulting and a geologist in good standing with the Association of Professional Geoscientists of Ontario (APGO #2031). Ms. Magyarosi has 10 years of experience in the mineral exploration industry and in academia and has authored/co-authored several Independent Technical Reports (NI43-101). Ms. Magyarosi did not visit the property. Ms. Magyarosi is responsible for the entire report, except for the Mineral Resource Estimates section (14.0) and the Caracle Creek Site Visit section (12.1).

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

Another Qualified Person and co-author of this report is Doris Fox, M.Sc., P.Geo. Ms. Fox is an associate senior geologist for Caracle Creek International Consulting and a geologist in good standing with the Association of Professional Geoscientists of Ontario (APGO #1430). Ms. Fox has 10 years of experience in the mineral exploration industry and in academia and has authored/co-authored several Independent Technical Reports (NI43-101). Ms. Fox visited the property and is responsible for the Caracle Creek Site Visit section (12.1) and jointly responsible for the Accessibility, Climate, Local Resources, Infrastructure, and Physiography section (5.0), Geological Setting and Mineralization section (7.0), Deposit Types section (8.0), Sampling Procedures section (10.2) and Sample Security section (11.1).

Certificates of Qualifications 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 the Company and is directed solely for the development and presentation of data with recommendations to allow the Company 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 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. Caracle Creek has assumed that the reports and other data listed in the "References" section of this report are substantially accurate and complete.

Caracle Creek has relied exclusively on information provided by the Company regarding land tenure and underlying agreements, 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 Quaterra. While title documents and option/purchase agreements were reviewed for this study as provided by Quaterra, it does not constitute, nor is it intended to represent, a legal, or any other opinion as to title.

Legal documents provided by Quaterra include:

1. Agreement between Quaterra and Blackberry to option a 50% interest in the Nieves Project, dated April 10, 2003
2. Joint venture agreement between Quaterra and Blackberry, dated January, 2006

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.

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Location

The Nieves Property is located in the Francisco R. Murguia Municipality of the Zacatecas Mining District near the southeastern boundary of the Sierra Madre Occidental Physiographic Province in central Mexico (Figure 4-1 and Figure 4-2). The Property is centered approximately at 694856E, 2651009N (NAD27 Mexico, Zone13), approximately 150 km northwest of the state capital of Zacatecas and 90 km north of the mining community of Fresnillo.

Figure 4-1 Location of the Nieves Property

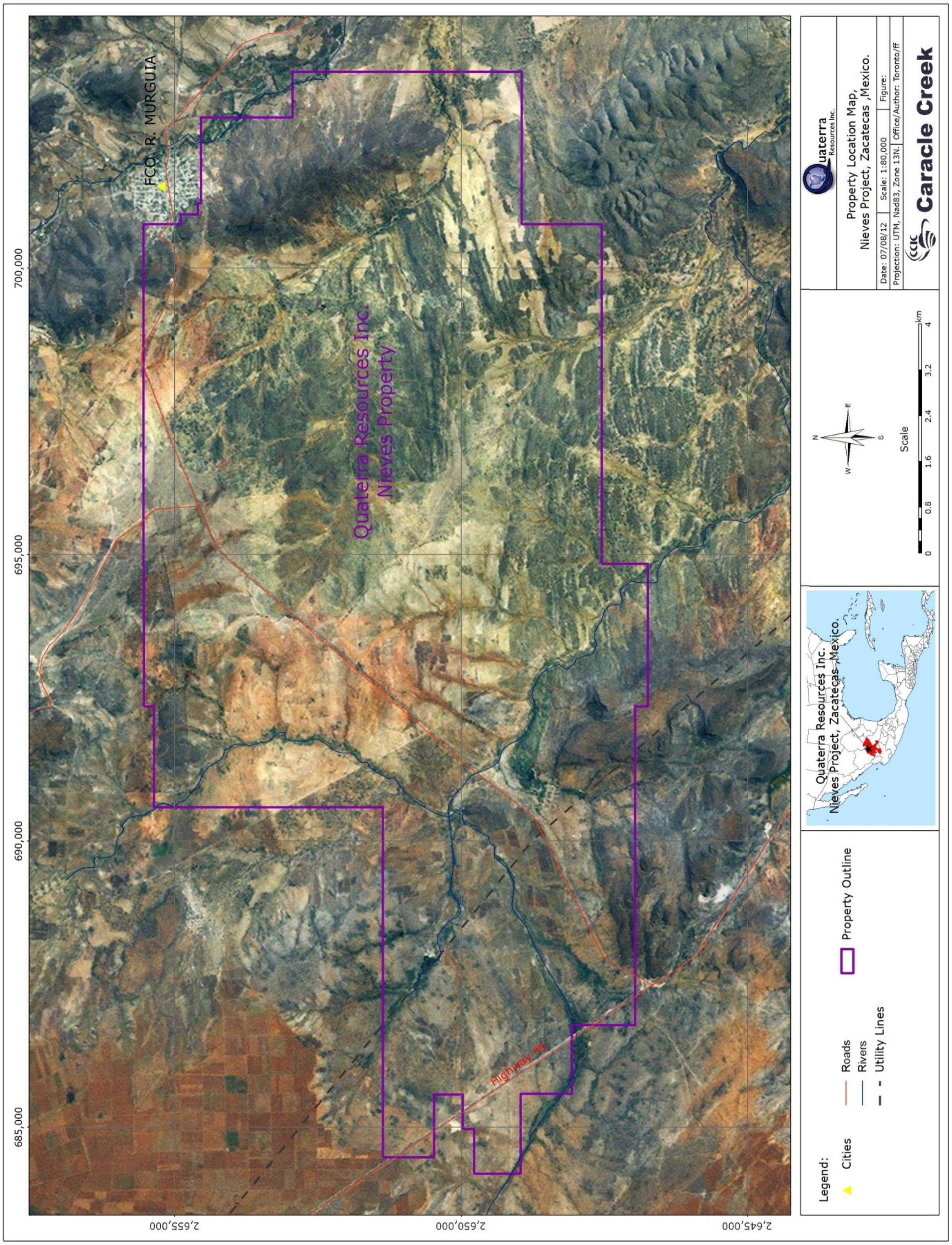

Figure 4-2 Location of the Nieves Property showing major roads and waterways

4.2 Description and Ownership

The Nieves Property consists of 18 concessions, issued for 50 years, covering approximately 12,064.0725 ha (Table 4-1 and Figure 4-3). These concessions are registered in the name Minera Cerro Gregorio, as of August 5, 2011, a Mexican company wholly owned by Quaterra. Minera Cerro Gregorio does not own the surface rights on the concessions. The location of a concession is determined from the position of a single claim monument ("mojonera"). The corners are all located based on surveyed distances and bearings from that monument by a registered Mexican Mineral Concession Surveyor.

The Nieves Property is jointly owned by Quaterra and Blackberry. In 2011, Quaterra and Blackberry (through Minera Cerro Gregorio) paid US $44,538 to the Mexican government in taxes to maintain the concessions (Table 4-2). In 2012, Quaterra and Blackberry paid US $33,854 and are required to pay an additional US $36,519 to maintain the Nieves Property. The taxes are payable every six months. Net smelter return royalties remain outstanding on each of the concessions acquired from Kennecott (recently purchased by Royal Gold Inc.) and the Mexican concessionaires (Abelardo Garza Hernandez, Noel McAnulty and Bill Shafer) (Table 4-3).

On January 16th, 1995, Kennecott entered into an option agreement with Mexican concessionaires that allowed Kennecott to explore and acquire the Nieves Property by making specified option payments over five years, and advance minimum royalty payments.

On March 13th, 1998, Kennecott transferred its rights under the Nieves option to Western in consideration for an uncapped 2% NSR on certain core concessions and a 1% NSR on others.

Western subsequently assigned its rights to the Nieves Project as specified in the "Underlying Agreement" to Quaterra on March 26th, 1999, in consideration for 1,444,460 common shares of the Company at a deemed price of CDN$0.20 per share (CDN$288,892). In addition, the Company issued 360,000 common shares at a deemed price of CDN$0.20 per share (CDN$72,000) to the concessionaires in lieu of the US$50,000 option payment otherwise due under the terms of the Underlying Agreement.

The payment schedule in the Underlying Agreement was amended on November 22nd, 1999, February 11th, 2000 and May 2002, such that US$30,000 was paid in January 2000, US$15,000 in May 2002 and US$25,000 in January 2003, for a total of US$70,000. In addition, to acquire the interest in the claim fractions the Company paid US$40,000 to the concessionaires. Advanced minimum royalty (AMR) payments of US$75,000 are due on or before the 26th of January each year from 2004 until the commencement of commercial production. The Nieves concessions are subject to a maximum 3% NSR to the original concession holders, which the Company may purchase at any time for US$2 million (Table 4-3).

On April 10th, 2003, Quaterra completed a US$1.5 million limited partnership financing with Blackberry, whereby Blackberry could earn a 50% interest in the Property by funding two exploration programs of US$750,000 each. The initial payment of US$750,000 received in the 2003 Fiscal Year was expended on a 5,300-metre drill program on the Nieves Property. During the 2004 Fiscal Year, Blackberry elected to continue by advancing a further US$750,000 towards a follow-up drill program completed in May 2005, thereby earning a 50% interest in the Property. The partners signed a joint venture agreement in 2006 and have jointly contributed to all exploration costs subsequently incurred.

On January 24th, 2007, Kennecott's royalty was purchased by Royal Gold Inc.

On August 5, 2011, the Nieves asset was transferred into a single purpose company, Minera Cerro Gregorio.

The author is not aware of any significant environmental liabilities related to the current exploration of the Nieves Property. The areas of primary mineral exploration are generally flat-lying, sparsely populated with a few cultivated areas and the remaining land area used for the periodic grazing of livestock. Minimal rehabilitation measures such as stabilizing slopes and planting local flora (Buffell grass) in areas of disturbance is usually sufficient to satisfy the ecological authorities, the Instituto de Investigaciones Forestales, Agricolas y Pecuarias ("INIFAP"), a government office based in Calera, Zacatecas. There is little to no surface water for exploration or mining activities but an abundance of ground water exists and the ownership of mineral rights generally allows access to ground water as needed.

Dispersed tailings from historic operations are present and a number of the historic workings have old waste dumps associated with them. It is recommended that Quaterra locate and document all of the historic dumps (ore and tailings), mark and fence off or otherwise make secure all open holes and workings, and initiate baseline environmental studies.

To the extent known to the author, no permits are required to conduct exploration work on the property, there are no significant factors and risks that may affect access, title, or the right or ability to perform work on the property.

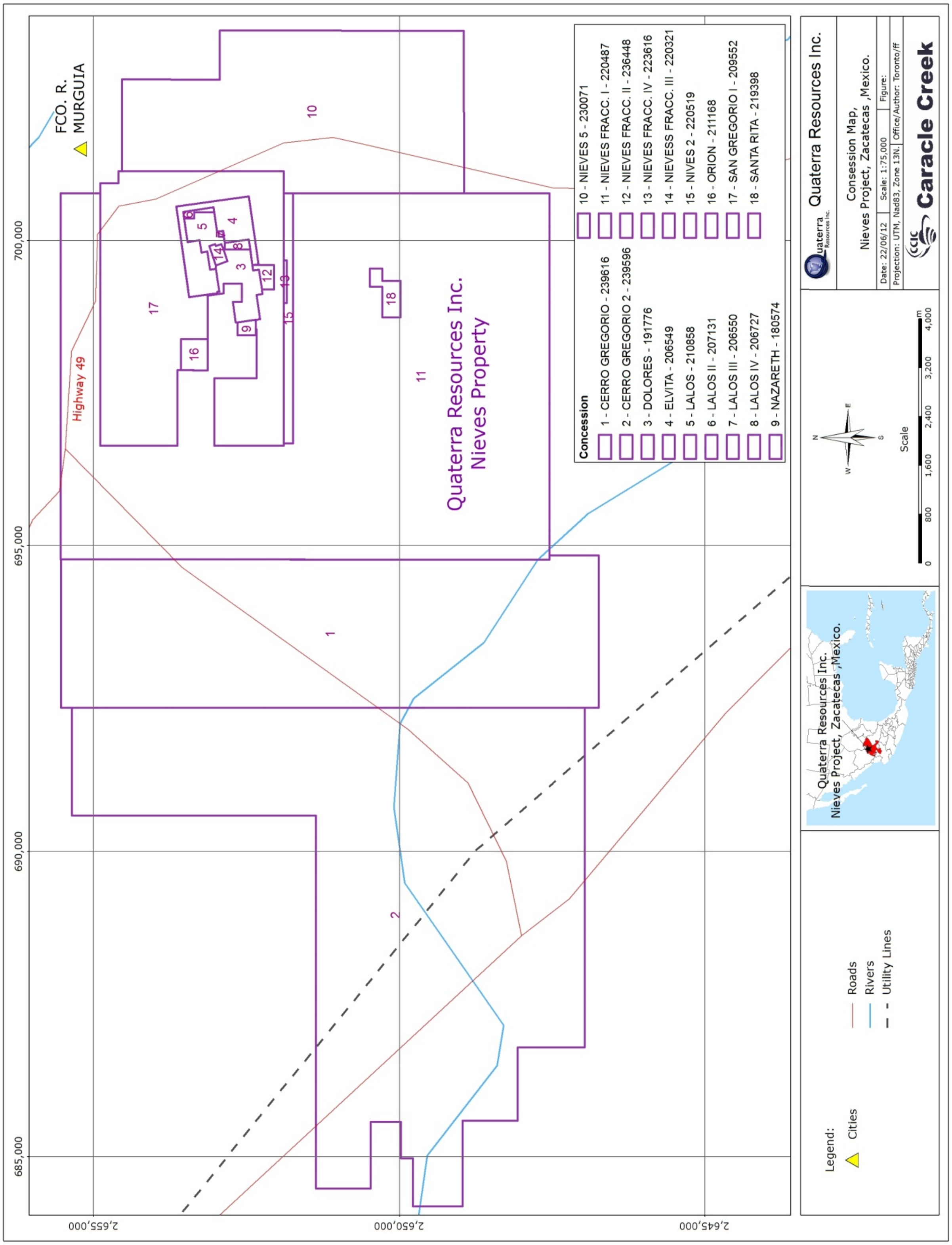

Figure 4-3 Concessions on the Nieves Property

Table 4-1 List of concessions on the Nieves Property

	Concession	Title	Area (ha)	Date Issued	Expiry Date
1	SAN GREGORIO I	209552	944.4291	03/08/1999	02/08/2049
2	LALOS	210858	30.1924	16/12/1999	15/12/2049
3	LALOS II	207131	3.9268	29/04/1998	28/04/2048
4	LALOS III	206550	0.7370	23/01/1998	22/01/2048
5	(GPO) ELVITA	206549	92.7895	23/01/1998	22/01/2048
6	LALOS IV	206727	5.6194	12/03/1998	11/03/2048
7	ORION	211168	21.8825	11/04/2000	10/04/2050
8	NIEVES F. II	236448	6.4577	11/10/1995	10/10/2045
9	SANTA RITA	219398	24.0000	04/03/2003	03/03/2053
10	NIEVES F. I	220487	3638.0359	12/08/2003	11/08/2053
11	NIEVES F. III	220321	6.3400	11/07/2003	10/07/2053
12	NIEVES 2	220519	59.2114	14/08/2003	13/08/2053
13	NIEVES F. IV	223616	3.7494	21/01/2005	20/01/2055
14	DOLORES	191776	61.0047	19/12/1991	18/12/2041
15	NAZARET	180574	7.1302	13/07/1987	12/07/2037
16	NIEVES 5	230071	1266.5766	17/07/2007	16/07/2057
17	CERRO GREGORIO	239616	2200.0000	31/01/2012	30/01/2062
18	CERRO GREGORIO 2	239596	3691.9899	31/01/2012	30/01/2062
	TOTAL		**12064.0725**		

Table 4-2 Details of tax payments to the Mexican government on the Nieves Property

Concession	Title	Taxes paid in 2011		Taxes paid in first half of 2012		Taxes to be paid in second half of 2012	
		Mexican Pesos	US$	Mexican Pesos	US$	Mexican Pesos	US$
SAN GREGORIO I	209552	$210,176	$17,423	$117,809.00	$8,599.00	$117,809.00	$9,233.00
LALOS	210858	$6,722	$557	$3,767.00	$275.00	$3,767.00	$295.00
LALOS II	207131	$876	$73	$491.00	$36.00	$491.00	$38.00
LALOS III	206550	$166	$14	$93.00	$7.00	$93.00	$7.00
(GPO) ELVITA	206549	$20,652	$1,712	$11,576.00	$845.00	$11,576.00	$907.00
LALOS IV	206727	$1,252	$103	$702.00	$51.00	$702.00	$55.00
ORION	211168	$4,872	$404	$2,731.00	$199.00	$2,731.00	$214.00
NIEVES F. II	236448	$68	$6	$56.00	$4.00	$56.00	$4.00
SANTA RITA	219398	$3,036	$251	$1,702.00	$124.00	$1,702.00	$133.00
NIEVES F. I	220487	$230,072	$19,072	$257,865.00	$18,822.00	$257,865.00	$20,209.00
NIEVES F. III	220321	$402	$34	$450.00	$33.00	$450.00	$35.00
NIEVES 2	220519	$3,746	$311	$4,198.00	$306.00	$4,198.00	$329.00
NIEVES F. IV	223616	$240	$20	$134.00	$10.00	$134.00	$10.00
DOLORES	191776	$13,578	$1,125	$7,611.00	$556.00	$7,611.00	$596.00
NAZARET	180574	$1,588	$132	$890.00	$65.00	$890.00	$70.00
NIEVES 5	230071	$39,824	$3,301	$22,318.00	$1,629.00	$22,318.00	$1,749.00
CERRO GREGORIO	239616			$11,053.00	$856.00	$12,541.00	$983.00
CERRO GREGORIO 2	239596			$18,550.00	$1,436.00	$21,045.00	$1,649.00
TOTAL		**$537,270**	**$44,538**	**$461,996.00**	**$33,854.00**	**$465,979.00**	**$36,519.00**

Concession	Title	Taxes paid in 2011		Taxes paid in first half of 2012		Taxes to be paid in second half of 2012	
		Mexican Pesos	US$	Mexican Pesos	US$	Mexican Pesos	US$

Table 4-3 Details of NSR on the Nieves Property

Concession	Title	Area (Hectares)	Date Issued	Expiry Date	% NSR to Mexican Conc.	% NSR to Kennecott (Royal Gold)	Total % NSR
SAN GREGORIO I	209552	944.4291	03/08/1999	02/08/2049	3	2	5
LALOS	210858	30.1924	16/12/1999	15/12/2049	3	2	5
LALOS II	207131	3.9268	29/04/1998	28/04/2048	3	2	5
LALOS III	206550	0.7370	23/01/1998	22/01/2048	3	2	5
(GPO) ELVITA	206549	92.7895	23/01/1998	22/01/2048	3	2	5
LALOS IV	206727	5.6194	12/03/1998	11/03/2048	3	2	5
ORION	211168	21.8825	11/04/2000	10/04/2050	3	2	5
NIEVES F. II	236448	10.0043	11/10/1995	10/10/2045	3	2	5
SANTA RITA	219398	24.0000	04/03/2003	03/03/2053	1	2	3
NIEVES F. I	220487	3512.2773	12/08/2003	11/08/2053	3	2	5
NIEVES F. III	220321	6.3400	11/07/2003	10/07/2053	3	2	5
NIEVES 2	220519	59.2114	14/08/2003	13/08/2053	1	2	3
NIEVES F. IV	223616	3.7494	21/01/2005	20/01/2055	1	2	3
DOLORES	191776	61.0047	19/12/1991	18/12/2041	3		3
NAZARET	180574	7.1302	13/07/1987	12/07/2037	3		3
NIEVES 5	230071	1266.5766	17/07/2007	16/07/2057			
CERRO GREGORIO	239616	2200.0000	31/01/2012	30/01/2062			
CERRO GREGORIO 2	239596	3691.9899	31/01/2012	30/01/2062			
TOTAL		**11941.8605**					

5.0 Accessibility, Climate, Local Resources, Infrastructure, and Physiography

5.1 Access

Quaterra/Blackberry exploration activities are co-ordinated from the small town of Nieves (now re-named Francisco R. Murguia) where they maintain an office and a house. The town of Nieves is accessed via Highway 49, a paved, two-lane toll highway approximately 200km north of the city of Zacatecas. The town of Nieves is accessed via a 17 km paved road from Highway 49. The nearest major population and service centre to Nieves is the mining town of Fresnillo located ~90 km to the south. Fresnillo has a population of approximately 75,000 and services the Fresnillo Mine run by Peñoles. Fresnillo offers a substantial professional work force experienced in mining and related activities in addition to most other supplies and services. International airports are located within approximately a three hour drive of the Property in the city of Zacatecas to the south, and in Torreõn (Coahuila state) to the north. Road access to the Property is excellent with the main paved highway to Nieves running along the northern portion of the Property (Figure 4-1 and Figure 4-2). A network of dirt roads and trails provide access to the historical mining operations and extend southward to all areas of the Property. Drill and access roads can be easily built as most of the Nieves Property is flat-lying with only a few dry creek beds (Figure 5-3).

Figure 5-1 Dirt road accessing Nieves Property (Photo from Doris Fox)

5.2 Physiography, Climate and Vegetation

The Nieves Property lies within the Mexican Altiplano or Mesa Central region. This region is flanked to the west by the Sierra Madre Occidental and to the east by the Sierra Madre Oriental mountain ranges (Figure 5-2). The Altiplano in this region is dominated by broad alluvium filled plains between rolling to rugged mountain ranges and hills reaching up to 3,000m above mean sea level ("AMSL") and average elevations in valleys of approximately 1,700m. Elevations on the Nieves Property range from 1,900m to 2,000m AMSL. The terrain is generally flat-lying with a prominent north-south trending ridge along the eastern portion of the Property with moderate to vertical slopes (Figure 5-3). There is very little human habitation on the Property, with only a few widely scattered farm houses, although the town of Nieves directly borders the Property to the northeast.

The climate in the region is continental, warm and arid with temperatures ranging from $0^{o}C$ to $41^{o}C$, averaging ~$21^{o}C$ and less than 1,000 mm of annual precipitation. Due to the limited precipitation, vegetation is sparse and hardy consisting mainly of grasses, low thorny shrubs (including mesquite) and various cacti, with scattered oak forests at higher elevations. Surface water is rare but ground water is readily available. Drilling is feasible year round. Rain in the wet season, May to October, can make drilling conditions difficult due to muddy ground conditions, but not impossible.

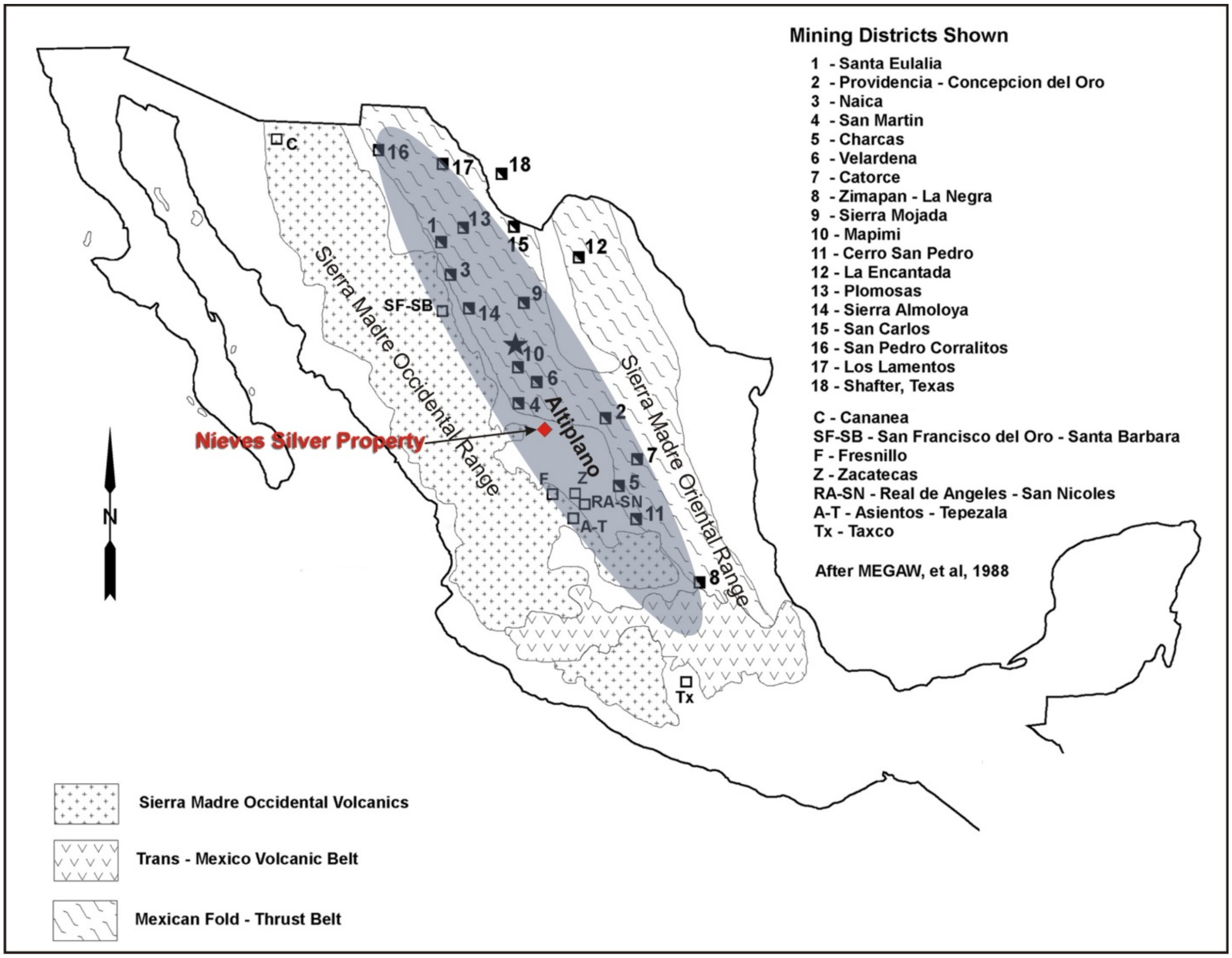

Figure 5-2 Major geological and physiographical regions and mining districts in Mexico (after Stone 2010)

Figure 5-3 Typical landscape on the Nieves Property looking north (photo from Doris Fox)

5.3 Infrastructure and Local Resources

Core logging, cutting and storage facilities are located on the Nieves Property in addition to their La Quinta field office. Other infrastructure in the area includes: (1) a power line adequate to support a small mill (eg. 100 tonnes per day), (2) an existing mill structure on the Property at the Santa Rita vein area which could be refurbished, (3) a spur of the main Zacatecas rail line that connects the city of Rio Grande, located 18 km to the south, and (4) operating smelters in San Luis Potosi (copper and zinc, approximately 350 km to the south) and in Torreõn, Coahuila state (Peñoles lead-zinc smelter, approximately 200 km north). As there are existing mines in the area and historic mining operations on the Property, the people living in the area of the Nieves Property are knowledgeable about mining and exploration and are generally supportive of possible increased employment opportunities.

The Nieves Property is in exploration stage, therefore discussions on potential tailings storage areas, potential waste disposal areas, heap leach pad areas and potential processing tailings storage area for mining operations is not currently relevant.

Figure 5-4 (left) Power lines crossing property, (right) Santa Rita Mill (photos from Doris Fox)

6.0 HISTORY

6.1 Exploration activities between 1560 and 1994

The first discovery on the area covered by the Nieves Property was the Santa Rita Vein in 1560 by Spanish explorers (Turner, 1999; Cavey, 1999). Soon after in 1574 the Concordia vein was discovered. The Santa Rita and Concordia- San Gregorio-Dolores veins were the focus of mining by the Spanish and Mexican miners until 1880.

Most of the activity in the Nieves District occurred between 1880 and 1910, when an English company, the Mexican Rosario Mining Company, and two Californian companies, the Almaden Mining Company and the Concordia M. and M. Company, worked in the area. These companies worked on the Concordia vein primarily while a small independent miner Gonzáles Piñera worked concurrently on the San Gregorio vein (Turner, 1999; Cavey, 1999). The location of the old mines are shown in Figure 6-1.

Prior to the 1910 revolution, which halted all production in the Nieves District, total ore production in the District was estimated at 50,000 tonnes (Turner, 1999). The only production reported is from the Concordia Mine where 5,414 tonnes at a grade of 4,065 g/t silver were produced (Figure 6-1). This production data cannot be relied upon and has not been verified by the qualified person. The qualified person has not done sufficient work to classify the historical production as current mineral resource and is not treating the historical estimate as current mineral resource.

Between 1910 and 1978 several companies (including Fresnillo Mining: 1936; Scurry-Rainbow: mid-1960's to 1978) attempted to de-water, sample, and re-open the historical workings in the Concordia and Santa Rita mines, and were largely unsuccessful (Figure 6-1). However, underground drilling from this period intersected and confirmed the presence of the Santa Rita Vein 100 m below the 8th level. Included in this time period, is a site visit by D.B. Dill for Peñoles Mining, in 1954, who compiled and preserved much of the historical data for the Nieves District. Dill (1954) reported 21,500 tonnes of probable ore at a width of 0.92 m and a grade of 0.92 g/t Au, 1131 g/t Ag, and 2-4% Sb, still remained in the Concordia Vein and a prospective 120,000 additional tonnes. This resource estimate cannot be relied upon, has not been verified by the qualified person, nor is it NI43-101 compliant resource estimate. The qualified person has not done sufficient work to classify the historical estimate as current mineral resource and is not treating the historical estimate as current mineral resource.

The Santa Rita vein and refurbished mill and flotation plant were purchased by Fomento Minero in 1978, who operated the mine until 1987. Fomento Minero also sank three shafts and deepened a historic shaft along the Concordia- San Gregorio vein system during the 1970's (Figure 6-1). The flotation mill was capable of running 100 tonnes/day during this time and was fed 50% tailings and 50% ore with an average head grade of 130 g/t silver, 2% lead, 2.4% zinc and 2.5% antimony, according to Consejo Recursos Minerales (CRM) (Cavey, 1999). Today, all that remains are the building foundations, abandoned shafts and power lines.

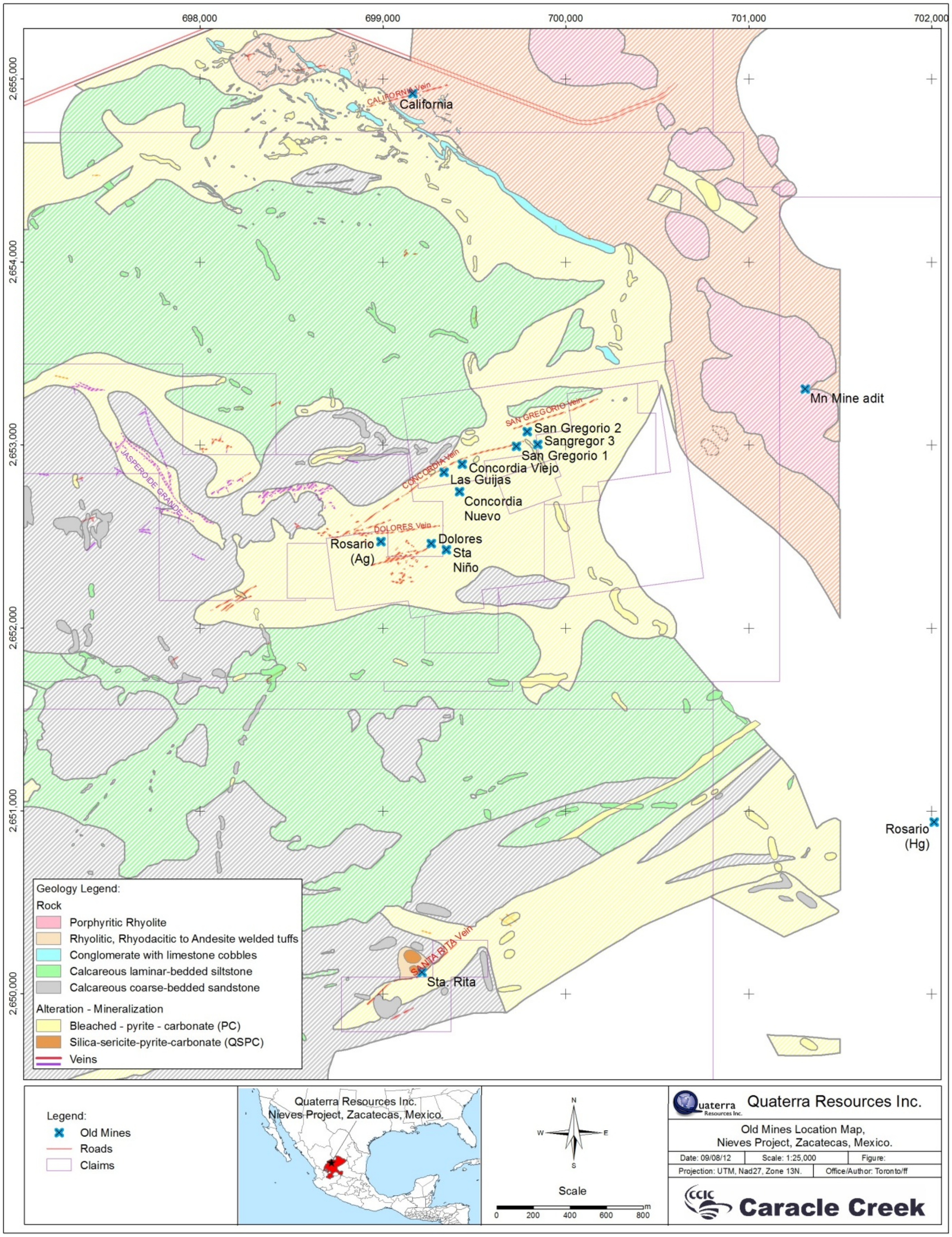

Figure 6-1 Location of old mines on the Nieves Property

6.2 Exploration activities between 1994 and 2010

Exploration activities between 1994 and 2010 included mapping, rock and soil sampling, several geophysical surveys and a total of 9 drill programs (Table 6-1). The companies performing the work included Kennecott, Western Copper, Quaterra and the joint venture of Quaterra and Blackberry.

Table 6-1 Summary of exploration activities between 1994 and 2010

Company	Year	Exploration Activities
Kennecott	1994-1996	Reconnaissance geologic mapping at 1:25,000 scale
		535 rock samples assayed for gold, silver, arsenic, antimony, mercury, copper, lead, zinc and molybdenum
		131 rock chip samples analyzed for gold, silver, arsenic, antimony, mercury, copper, lead, zinc, molybdenum, tin and tungsten
		completed three (3) soil sampling surveys
		geophysical surveys including airborne and ground magnetics, a single dipole-dipole induced polarization-resistivity (IPR) line, and seven controlled source audio-frequency magneto-telluric (CSAMT) lines
		drilled 8 RC holes
Western Copper	1997-1998	drilled 5 RC holes
Quaterra	1999-2000	geological mapping at 1:10,000 scale over an area of 6 x 8 km
		detailed mapping at 1:20,000 scale over the Concordia vein system (approximately 2 km x 800m area)
		205 rock chip samples were analyzed for gold, silver, arsenic, antimony, copper, lead and zinc
		drilled 10 RC holes and deepened 4 holes by diamond drilling (QTA03, QTA07, QTA08, NV05)
Quaterra-Blackberry	2003 to 2006	air photograph interpretation
		established a property wide grid
		CSAMT and IP geophysical surveying
		surveying of historic drill collars
		surface sampling and assaying
		drilled 32 diamond drill holes (total = 16,369.94m; Phases I-III)
		Independent Technical Report (Wetherup, 2006)
	2007 and 2008	air photograph interpretation
		field checking possible geochemical/geophysical/geological anomalies
		drilled 40 diamond drill holes (total = 11,562.80m; Phases IV and V)
	2009	Initial Mineral Resource Estimate and Independent Technical Report (Stone, 2009)
	2009 and 2010	Drilled 29 holes (6,118.70m; Phase VI)
		Geophysical surveying Updated Mineral Resource Estimate and Independent Technical Report (Stone, 2010)

6.2.1 Kennecott exploration between 1994 and 1996

In the early 1990's, a group of Mexican concessionaires (Abelardo Garza Hernandez, Noel McAnulty and Bill Shafer) assembled a land position in the area and presented it to Kennecott who signed the option agreement on January 16th, 1995. Exploration work completed by Kennecott included geologic mapping, surface sampling (535 rock samples and 131 rock chip samples), three soil surveys, geophysical surveying (airborne and ground magnetic surveys, IPR survey, controlled source audio-frequency magneto-telluric survey) and reverse circulation (RC) drilling of the San Gregorio, California and Orion West veins (Figure 6-2 and Table 6-2).

In 1995 and 1996, 8 drill holes (NV01 to NV08) were drilled totaling 1532.5 m. The drilling intersected several zones of significant silver mineralization hosted by two distinct styles of mineralization. Drill hole NV08 in the California area intercepted two separate 2m intervals of high grade silver vein mineralization that returned assay values of 367 g/t and 795 g/t of silver at depths of 108m and 116m, respectively. In contrast, drill hole NV03 intersected a large low grade zone of silver mineralization at a depth of 180 m depth that averaged 82 g/t silver over 28 m. Drill hole NV03 also encountered a high grade silver vein at 148 m depth that returned 254 g/t silver over 2 m. Drill hole NV06 also encountered a large zone of low-grade silver mineralization that returned 67 g/t silver over 68 m.

Kennecott conducted several geophysical surveys including airborne and ground magnetic surveys, a single dipole-dipole induced polarization and resistivity (IPR) line and seven controlled source audio-frequency magneto-telluric (CSAMT) lines. No results were available to the author.

6.2.2 Western Copper exploration in 1997 and 1998

On March 13th, 1998, Kennecott transferred its rights under the Nieves option to Western in consideration for an uncapped 2% NSR on certain core concessions and a 1% NSR royalty on others. Before assigning its rights to the Nieves Project to Quaterra on March 26th, 1999, Western drilled 5 RC holes testing the California vein system (Figure 6-2 and Table 6-2). The holes were drilled in the area around hole NV08. Western also twinned hole NV08 and reproduced similar assay values for the intercepts reported by Kennecott including 890 g/t Silver over 1.0m in drill hole WCNV01. Holes drilled to intercept mineralization below drill hole NV08 returned assay values of 841 g/t silver over 0.45m, 109 g/t silver over 0.8m, and 1,081 g/t silver over 0.35m in drill hole WCNV04.

6.2.3 Quaterra exploration in 1999 and 2000

Western Copper transferred its rights to the Nieves Property to Quaterra on March 26, 1999. In 1999 and 2000 Quaterra completed an exploration program consisting of geological mapping, sampling and drilling (Figure 6-2 and Table 6-1). Quaterra completed 10 drill holes on the Concordia and Gregorio North veins in conjunction with surface mapping and sampling programs during 1999 and 2000 and deepened four holes (Table 6-1 and Table 6-2). Table 6-3 shows significant drill results.

Table 6-2 Drill programs completed by Kennecott, Western and Quaterra

Company	Year	Phase	Area	Number of holes	Hole Type	Total drilled (m)	Holes
Kennecott	1995	I	Gregorio North	2	RC	388	NV02, NV03
	1996	I	Dolores/Ojito	2	RC	302	NV01, NV04
			California	1	RC	202	NV08
			Gregorio North	3	RC	1009.3	NV05 to NV07
			Total Drilled	**8**		**1901.3**	
Western	1997	I	California	5	RC	921.6	WCNV01 to WCNV05
			Total Drilled	**5**		**921.6**	
Quaterra	1999	I	Concordia	4	RC, except QTA03 (extended by diamond drilling)	1071.21	QTA01-QTA03, QTA05
	2000	I	Gregorio North	6	RC, except QTA07 and QTA08 (extended by diamond drilling); NV05 (extended by diamond drilling)	2058.1	QTA04, QTA06-QTA10
			Total Drilled	**10**		**3129.31**	

Table 6-3 Significant drilling results completed by Quaterra in 1999 and 2000

Area	Hole number	RC (m)	DDH (m)	Total drilled (m)	From (m)	To (m)	Interval (m)	Ag (g/t)
Concordia	QTA-1	173		173	65.53	74.67	9.14	204
					74.67	77.72	3.05	23
					97.53	99.06	1.53	273
					99.06	100.58	1.52	29.8
Concordia	QTA-3	213	337	550	33	36	3	243
					386	420	34	21.26
					426	434	8	23
					446	452	6	26
Gregorio	QTA-4	238		238	80.75	97	16.25	48.25

Area	Hole number	RC (m)	DDH (m)	Total drilled (m)	From (m)	To (m)	Interval (m)	Ag (g/t)
North					116	123	7	17
					195.6	232.1	36.5	98.18
Concordia	QTA-5	140		140	61	68.5	7.5	40.2
Gregorio North	QTA-7	280	232	512	346	354	8	23.7
Gregorio North	QTA-9	348		348	276	278	2	115

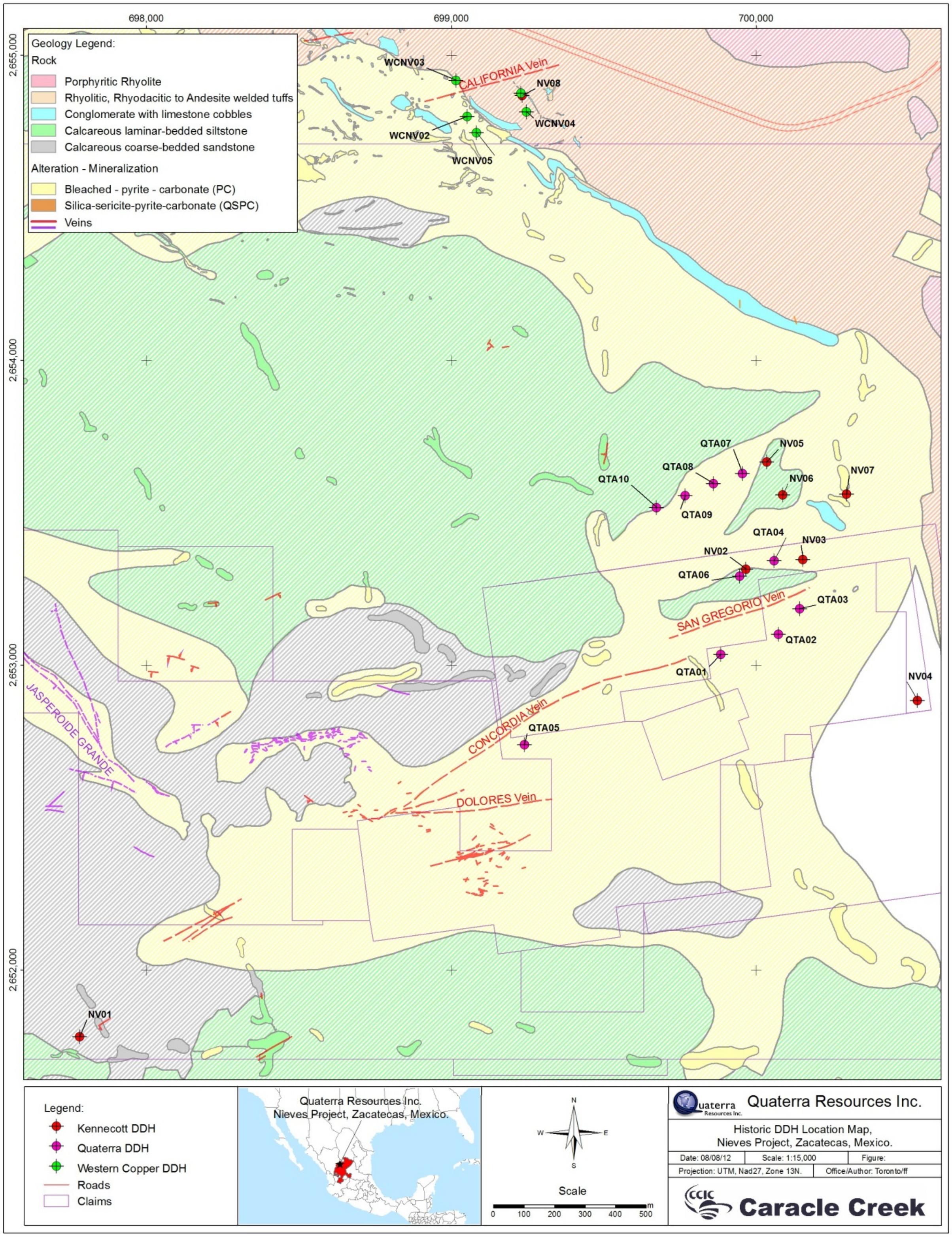

Figure 6-2 Location of holes drilled by Kennecott, Western and Quaterra between 1994 and 2000

6.2.4 Quaterra and Blackberry 2003-2010

On April 10th, 2003, Quaterra completed a US$1.5 million limited partnership financing with Blackberry, whereby Blackberry could earn a 50% interest in the Property by funding two exploration programs of US$750,000 each, which was fulfilled. In 2006 Quaterra and Blackberry signed a joint venture agreement and have jointly contributed to all exploration costs subsequently incurred.

Exploration between 2003 and 2010 by Quaterra and Blackberry included air photograph interpretation, surface sampling, field work, two geophysical surveys, six drill programs and three 43-101 independent technical reports, two of which include 43-101 compliant resource estimations.

Drilling

Drilling by Quaterra and Blackberry started in 2004 and included six drill programs consisting of 72 drill holes, totaling 34,048.43 m (Figure 6-3 to Figure 6-5 and Table 6-4). Holes were drilled on every vein system on the property, but most of the veins concentrated on the Concordia vein system, where the resource was estimated.

Most of the drill holes were planned to target geophysical anomalies, to extend the known mineralized zones in length and depth and for in-fill drilling to increase the confidence in the resource estimation.

The drill programs were very successful and extended the known mineralized zones in several areas. The Concordia vein system was extended to at least 1,100 m along strike and 400 m down dip. Drill highlights are summarized in Table 6-5.

Table 6-4 Drilling summary on the Nieves Property between 2004 and 2010

Year	**Phase**	**Area**	**Number of holes**	**Total drilled (m)**	**Hole(s)**
2004	I	California	2	851.61	QTA11, QTA12
		Concordia/Dolores	8	3,075.38	QTA13-15, QTA19-23
		Mn Mine	1	431.90	QTA18
		Orion	1	343.51	QTA17
		Santa Rita	1	599.54	QTA16
		Total Drilled	**13**	**5,301.94**	
2005	II	California	1	450.49	QTA24
		Chicharrona	1	513.89	QTA34
		Concordia/Dolores	5	2,430.77	QTA27-QTA30, QTA33
		Gregorio North	2	696.47	QTA31, 32
		Santa Rita	2	1,079.30	QTA25, QTA26

Year	Phase	Area	Number of holes	Total drilled (m)	Hole(s)
		Total Drilled	**11**	**5,170.92**	
2006	III	Concordia/Dolores	4	3,329.69	QTA35, QTA36, QTA40, QT41
		Majada East	1	651.05	QTA42
		Manto 4	1	459.03	QTA39
		Concordia/Gregorio North/Orion	1	650.54	QTA38
		Santa Rita	1	803.76	QTA37
		Total Drilled	**8**	**5,894.07**	
2007	IV	Concordia/Dolores	14	4,611.80	QTA43-QTA55, QTA57
		Santa Rita	1	402.00	QTA56
		Jasperiode Grande	1	376.00	QTA58
		Total Drilled	**16**	**5,389.80**	
2008	V	Concordia	23	5,744.00	QTA59-QTA81
		Gregorio North	1	429.00	QTA82
		Total Drilled	**24**	**6,173.00**	
2009	VI	Concordia	13	2,902.70	QTA83-QTA95
		Total Drilled	**13**	**2,902.70**	
2010	VI	Concordia	16	2,778.00	QTA95-QTA111
		Total Drilled	**16**	**3,216.00**	
		Total	**72**	**34,048.43**	**QTA11-QTA111**

Table 6-5 Drill highlights on the Nieves Property between 2004 and 2010

Vein system	Hole	From	To	Interval (m)	Au (g/tonne)	Ag (g/tonne)	Pb (%)	Zn (%)	Phase
Concordia	QTA-13	202.3	203.3	1	0.28	545	0.61	0.5	I
	including	203.1	203.3	0.2	0.66	2590	3.02	2.41	I
	QTA-19	207.6	209.1	1.5	1.39	4020	3.42	2.8	I
		425.2	426	0.8	0.49	915	0.92	0.31	I
	QTA-20	198.2	199.2	1	0.43	463	0.41	0.3	I
	QTA-21	281.41	283.85	2.44	0.47	224	0.63	0.39	I
	including	283	283.85	0.85	0.84	471	1.29	0.75	I
	QTA-22	85.61	89.57	3.96	<0.05	203	0.25	0.29	I
		129.5	131.65	2.15	0.09	201	0.07	0.16	I
	QTA-27	161.3	161.5	0.2	0.9	928	1.79	2.58	II
		172	174	2	<0.05	173	0.27	0.33	II
		174	174.73	0.73	0.07	337	0.37	0.33	II
		182.3	182.6	0.3	0.32	488	1.58	1.72	II
		191.79	192.5	0.71	0.61	932	0.64	0.57	II
		197.57	197.77	0.2	0.58	1105	1.17	2.57	II
		208	208.9	0.9	<0.05	260	0.21	0.22	II
	QTA-28	243.15	243.25	0.1	<0.05	1835	2.11	2.25	II
		243.8	243.9	0.1	0.07	894	1.45	1.17	II

Vein system	Hole	From	To	Interval (m)	Au (g/tonne)	Ag (g/tonne)	Pb (%)	Zn (%)	Phase
		256.8	257.08	0.28	1.13	750	5.65	4.46	II
	QTA-29	337.45	337.65	0.2	0.2	648	0.7	1.45	II
		185.8	186.3	0.5	0.07	275	0.39	1.06	II
		226.5	226.6	0.1	0.17	888	0.27	0.33	II
		226.6	227.1	0.5	0.43	392	0.26	0.21	II
		238.8	239.1	0.3	0.93	799	1.05	2.69	II
		427.7	427.85	0.15	0.2	1550	10.75	0.47	II
	QTA-30	609.4	609.5	0.1	0.19	584	5.52	2.08	II
		615.1	615.2	0.1	0.13	971	9.12	9.84	II
		619.3	619.45	0.15	0.06	773	6.95	5.04	II
		643.5	643.6	0.1	0.06	782	7.37	4.1	II
		653.95	654.2	0.25	0.07	677	6.5	3.89	II
		758.5	758.7	0.2	0.05	443	4.35	4.87	II
		761.5	761.7	0.2	0.24	313	2.23	1.89	II
	QTA-33	333.3	333.8	0.5	<0.05	1795	1.33	0.44	II
	QTA-36	413.32	413.41	0.09	0.4	1030	0.34	1.27	III
		475.5	478	2.5	0.1	82.8	0.06	0.08	III
		878.05	891.8	13.75	0.03	17.92	0.14	0.13	III
	QTA-48	115.97	163.45	47.48	0.13	142	0.37	0.37	IV
	QTA-50	262	268.7	6.7	0.13	128	0.66	0.38	IV
	including	268.05	268.4	0.35	0.93	536	8.65	2.49	IV
		272.45	272.65	0.2	0.27	1085	3.8	2.88	IV
	QTA-53	351.13	352.35	1.22	0.32	1802	2.06	0.69	IV
	including	351.13	351.5	0.37	0.65	5240	4.81	1.83	IV
	QTA-54	381.28	381.9	0.62	1.13	480	1.98	6.16	IV
	QTA-55	62	99.6	37.6	0.15	108	0.1	0.14	IV
	QTA-59	171	228	57	0.05	135	0.14	0.19	V
	QTA-61	70	112	42	0.08	106	0.07	0.08	V
	QTA-65	62	104.35	42.35	0.17	149	0.13	0.2	V
	QTA-66	72	96	24	0.18	106	0.09	0.12	V
	QTA-73	80.5	82.9	2.4	0.45	136	0.06	0.07	V
	QTA-74	96	134	38	0.1	157	0.13	0.15	V
	QTA-80	256.5	270	13.5	0.08	254	0.21	0.23	V
		283.27	296.85	13.58	0.16	213	0.19	0.35	V
		256.5	270	13.5	0.08	253.97	0.21	0.23	V
		283.27	292	8.73	0.23	312.55	0.24	0.48	V
	QTA81	129	130.35	1.35	0.07	151	0	0.04	VI
		204.43	204.74	0.31	0.5	322	2.38	2.43	VI
		206.46	207.07	0.61	1.25	806	4.01	3.67	VI
	QTA82	208	210	2	0.18	289	0.16	0.14	VI
		290	292	2	0.14	68.3	0.05	0.18	VI
		318	324	6	0.21	155	0.13	0.08	VI
		334.05	346	11.95	0.08	107.43	0.12	0.16	VI
		362	364	2	0.13	118	0.3	0.27	VI
		380	384	4	0.17	234	0.22	0.24	VI
		391.4	393.8	2.4	0.29	155.3	0.37	0.52	VI
	QTA83	34.6	34.7	0.1	0.61	1640	0.17	0.09	VI
		72.56	72.8	0.24	0.18	172	0.13	0.21	VI
		100.54	104	3.46	0.06	126.64	0.06	0.12	VI
	QTA84	58	60	2	0.07	62.9	0.01	0.02	VI
		72	84	12	0.15	119.14	0.09	0.14	VI

Vein system	Hole	From	To	Interval (m)	Au (g/tonne)	Ag (g/tonne)	Pb (%)	Zn (%)	Phase
		102	104	2	0.98	2254.07	0.43	1.69	VI
	QTA87	112	114	2	0.16	54.1	0.04	0.07	VI
		126	128	2	0.1	173	0.09	0.15	VI
		138.25	146	7.75	0.07	92.41	0.11	0.16	VI
		167.7	206.85	39.15	0.06	60.58	0.09	0.09	VI
		216.35	216.5	0.15	0.78	1005	1.39	1.43	VI
		222.2	222.45	0.25	3.41	1385	1.94	2.53	VI
		225.4	226.2	0.8	0.58	857	0.58	0.79	VI
	QTA88	106	112	6	0.04	229.53	0.09	0.15	VI
		118.65	119.1	0.45	0.43	475	0.59	0.54	VI
		121.7	122.25	0.55	0.2	290	0.29	0.28	VI
		143.5	143.8	0.3	0.59	964	0.8	0.39	VI
		163.65	164.25	0.6	0.07	287	0.94	0.42	VI
		170.6	176	5.4	0.15	135.63	0.1	0.12	VI
		180.5	180.7	0.2	0.16	258	2.24	1.33	VI
		182.5	182.6	0.1	1.71	6090	5.5	7.45	VI
		210	214	4	0.17	317.5	0.24	0.23	VI
	QTA89	144.7	164	19.3	0.25	310.7	0.28	0.38	VI
	QTA91	119.8	120	0.2	0.17	572	0.34	0.06	VI
		135.55	169.53	33.98	0.04	91.62	0.11	0.12	VI
	QTA92	118	120.85	2.85	0.06	195.23	0.11	0.13	VI
		195.4	196.6	1.2	0.11	308	0.14	0.25	VI
		223.7	223.8	0.1	3.2	2190	0.79	4.28	VI
	QTA93	71.35	71.45	0.1	1.23	1005	0.54	0.52	VI
		91.1	94.22	3.12	0.04	44.01	0.06	0.07	VI
		100.1	100.23	0.13	0.14	339	3.63	0.74	VI
	QTA94	96	98	2	0.14	90.6	0.02	0.03	VI
		124.6	148	23.4	0.09	129.34	0.14	0.16	VI
	QTA95	72	74	2	0.07	98	0.06	0.07	VI
		84	86	2	0.07	83.5	0.06	0.08	VI
		92	94	2	0.07	100	0.11	0.12	VI
		114	116	2	0.07	54.9	0.01	0.03	VI
		127	128.55	1.55	0.09	143.52	0.19	0.15	VI
		140	143.07	3.07	0.07	81.08	0.23	0.19	VI
		152	154	2	0.03	141	0.1	0.1	VI
		169.8	175.1	5.3	0.11	275.26	0.28	0.3	VI
		152	154	2	0.03	1545	0.46	1.89	VI
	QTA96	80	94.6	14.6	0.07	80.79	0.16	0.19	VI
		109.7	109.88	0.18	1.4	583	3.02	1.82	VI
		112.12	114	1.88	0.05	108.96	0.19	0.22	VI
	QTA97	66.4	88.95	22.55	0.14	261.74	0.23	0.29	VI
	QTA98	69.25	69.45	0.2	0.84	808	0.51	0.77	VI
	QTA99	56	58	2	0.1	387	0.13	0.05	VI
		66	71.7	5.7	0.07	109.18	0.06	0.1	VI
		104.8	105.5	0.7	0.52	392	0.25	0.82	VI
	QTA100	80	110	30	0.07	164.76	0.13	0.17	VI
		122.3	122.65	0.35	0.3	462	1.98	1.37	VI
		129.2	130.95	1.75	0.19	343.68	0.27	0.29	VI
	QTA101	42.1	42.8	0.7	0.21	305	0.19	0.08	VI
		80	86	6	0.06	124.2	0.07	0.08	VI
		98	116	18	0.07	122.23	0.09	0.14	VI

Vein system	Hole	From	To	Interval (m)	Au (g/tonne)	Ag (g/tonne)	Pb (%)	Zn (%)	Phase
		144	144.85	0.85	0.31	250.35	0.61	0.63	VI
		193	194.1	1.1	0.03	98.4	0.05	0.06	VI
	QTA102	100	101.2	1.2	0.15	92.9	0.04	0.06	VI
		114	126	12	0.21	227.8	0.16	0.25	VI
		142	142.2	0.2	0.98	929	2.51	1.66	VI
		151.15	151.9	0.75	1.41	315	0.31	0.43	VI
	QTA103	131.4	148	16.6	0.12	153.73	0.14	0.19	VI
		174.93	175.6	0.67	0.21	413	0.24	0.36	VI
	QTA104	113	114.9	1.9	0.03	92.6	0.12	0.1	VI
		130	135	5	0.08	206.81	0.22	0.28	VI
		152.55	152.7	0.15	2.73	2760	1.14	4.55	VI
		158.15	158.85	0.7	0.56	569	0.54	2.61	VI
	QTA105	108	110	2	0.03	63.7	0.03	0.04	VI
		128	129.25	1.25	0.15	1189.04	0.62	1.03	VI
		133.5	133.85	0.35	0.07	511	1.41	0.84	VI
		136	138	2	0.03	77.3	0.04	0.09	VI
		144	151	7	0.13	135.06	0.11	0.13	VI
		157.2	163	5.8	0.07	64.34	0.07	0.07	VI
		167.45	167.75	0.3	1.46	388	0.47	0.55	VI
	QTA106	75.4	75.5	0.1	0.42	1510	0.34	4.32	VI
		105.7	106.35	0.65	0.03	180	0.31	0.17	VI
		111.7	120	8.3	0.1	170.31	0.18	0.21	VI
		177.15	178	0.85	0.15	214.12	0.01	0.12	VI
	QTA107	122	122.45	0.45	0.13	222	0.16	0.3	VI
		128	148	20	0.03	105.39	0.14	0.15	VI
		177	178.7	1.7	0.58	606.91	0.09	0.34	VI
	QTA108	101.95	127.9	25.95	0.08	154.37	0.17	0.22	VI
		140.9	141.05	0.15	0.86	1800	0.92	1.64	VI
		144	144.35	0.35	1.45	2610	0.39	2.25	VI
	QTA111	271.9	272.15	0.25	0.33	530	0.18	0.43	VI
		279.25	279.7	0.45	1.37	317	0.31	0.87	VI
Gregorio North	QTA-04	80.75	97	16.25		48.25			I
		116	123	7		17			I
		195.6	232.1	36.5		98.18			I
	QTA-07	346	354	8		23.7			I
	QTA-09	276	278	2		115			I
	QTA-31	102	102.21	0.21	0.28	151	0.33	0.31	II
		143	144.7	1.7	0.1	136	0.05	0.08	II
		153.2	153.33	0.13	0.45	121	0.2	0.06	II
		157.38	158.1	0.72	1.06	262	0.9	2.47	II
		158.1	158.3	0.2	0.85	620	1.7	1.63	II
		159.9	160.1	0.2	1.53	1105	1.29	2.2	II
		237.4	237.6	0.2	1.21	556	0.6	1.2	II
		241.3	241.5	0.2	0.31	575	0.74	0.83	II
		241.8	242.2	0.4	0.61	1750	2.59	1.96	II
		307.25	307.45	0.2	0.07	492	0.3	0.37	II
		307.45	307.75	0.3	0.07	206	0.16	0.1	II
		324.35	324.45	0.1	0.28	668	2	0.6	II
	QTA-82	189.15	210	20.85	0.06	53	0.02	0.03	V
		382.4	393.8	11.4	0.13	110	0.14	0.19	V
California	QTA-12	342.44	342.54	0.1	<0.05	406	0.26	0.24	I

Vein system	Hole	From	To	Interval (m)	Au (g/tonne)	Ag (g/tonne)	Pb (%)	Zn (%)	Phase
Santa Rita	QTA-16	456.4	459.5	3.1	<0.05	70	0.57	0.91	I
	including	456.4	458	1.6	<0.05	107	0.81	1.44	I
	QTA-25	204.7	205.26	0.56	<0.05	317	1.62	1	II
		239.6	239.7	0.1	<0.05	223	1.13	1.22	II
		284.71	285	0.29	0.89	405	3.42	4.54	II
		351.1	352.9	1.8	0.19	190	2.94	3.94	II
		361.1	362.3	1.2	<0.05	129	0.26	0.69	II
		396.3	396.7	0.4	<0.05	299	2.54	1.41	II
		439.4	439.5	0.1	1.09	360	2.75	3.82	II
		505.5	505.8	0.3	<0.05	184	0.7	0.66	II
		507.2	508	0.8	<0.05	153	0.46	0.44	II
		544.1	544.3	0.2	0.26	206	0.19	0.01	II
	QTA-26	119.8	199.9	0.1	0.13	1415	0.39	2.08	II
		142.2	142.4	0.2	0.53	479	0.3	0.25	II
		382.83	383.1	0.27	<0.05	140	0.03	0.22	II
		505.6	506	0.4	<0.05	166	0.19	0.31	II
	QTA-37	462.28	462.85	0.57	0.77	90	3.8	0.44	III
		466.1	472	5.9	<0.05	104	0.23	0.55	III
		719.15	719.3	0.15	0.32	20	0.72	1.19	III
Orion	QTA-38	101.4	101.55	0.15	1.02	53	0.03	0.21	III
		170.35	170.55	0.2	<0.05	308	0.23	0.27	III
		345.95	349.2	3.25	<0.05	116	0.16	0.14	III

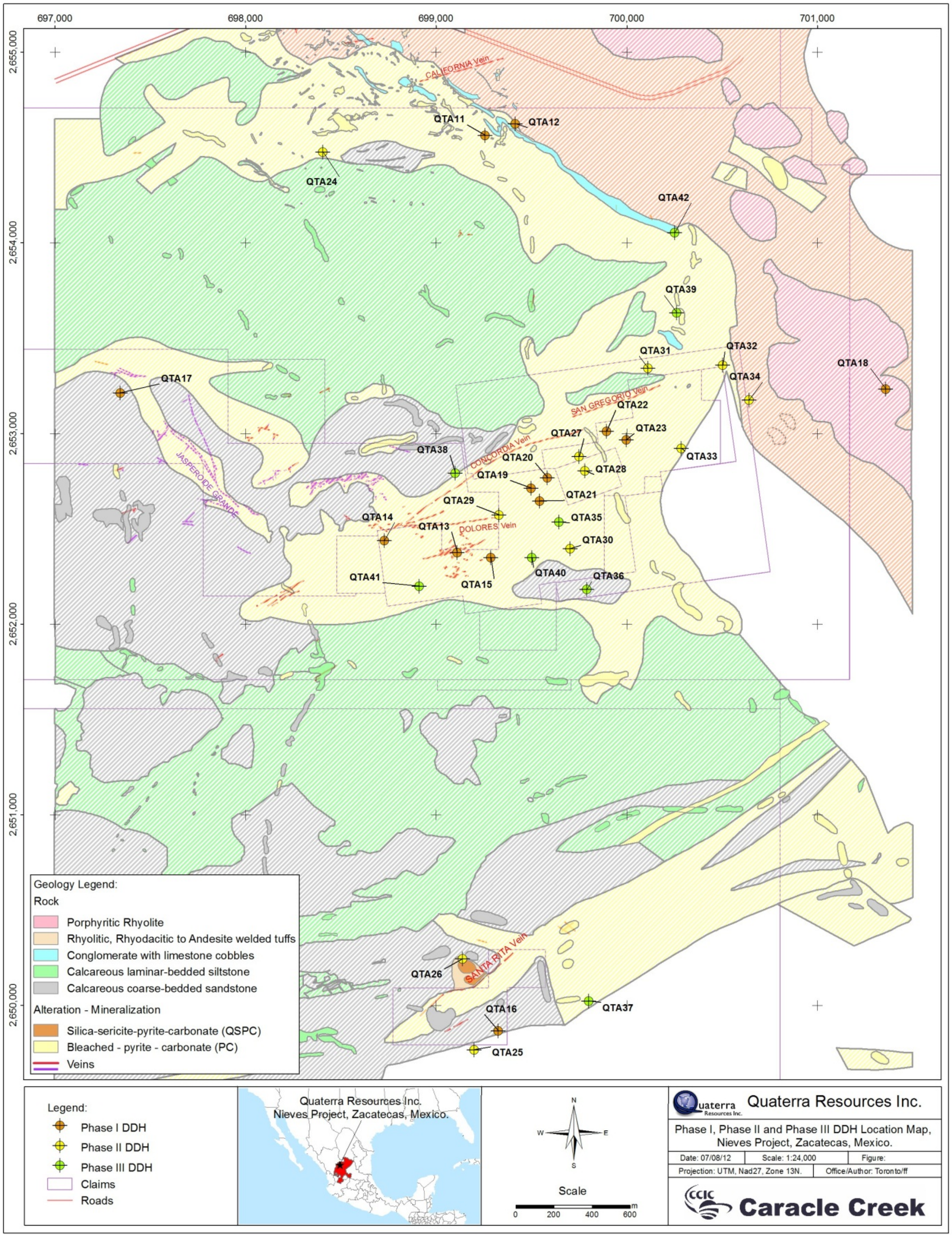

Figure 6-3 Location of drill holes in Phase I, II and III drill programs

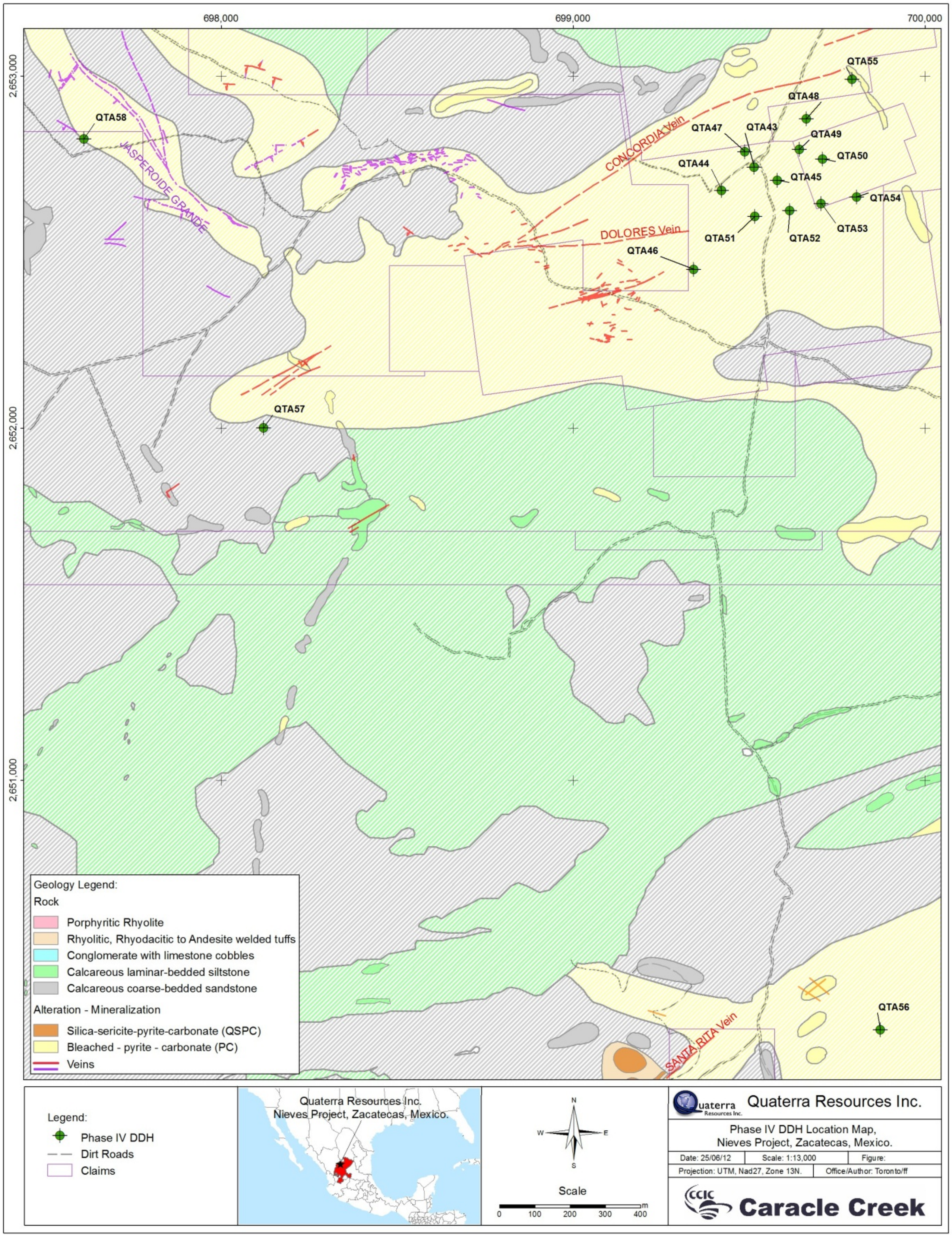

Figure 6-4 Location of drill holes in Phase IV drill program

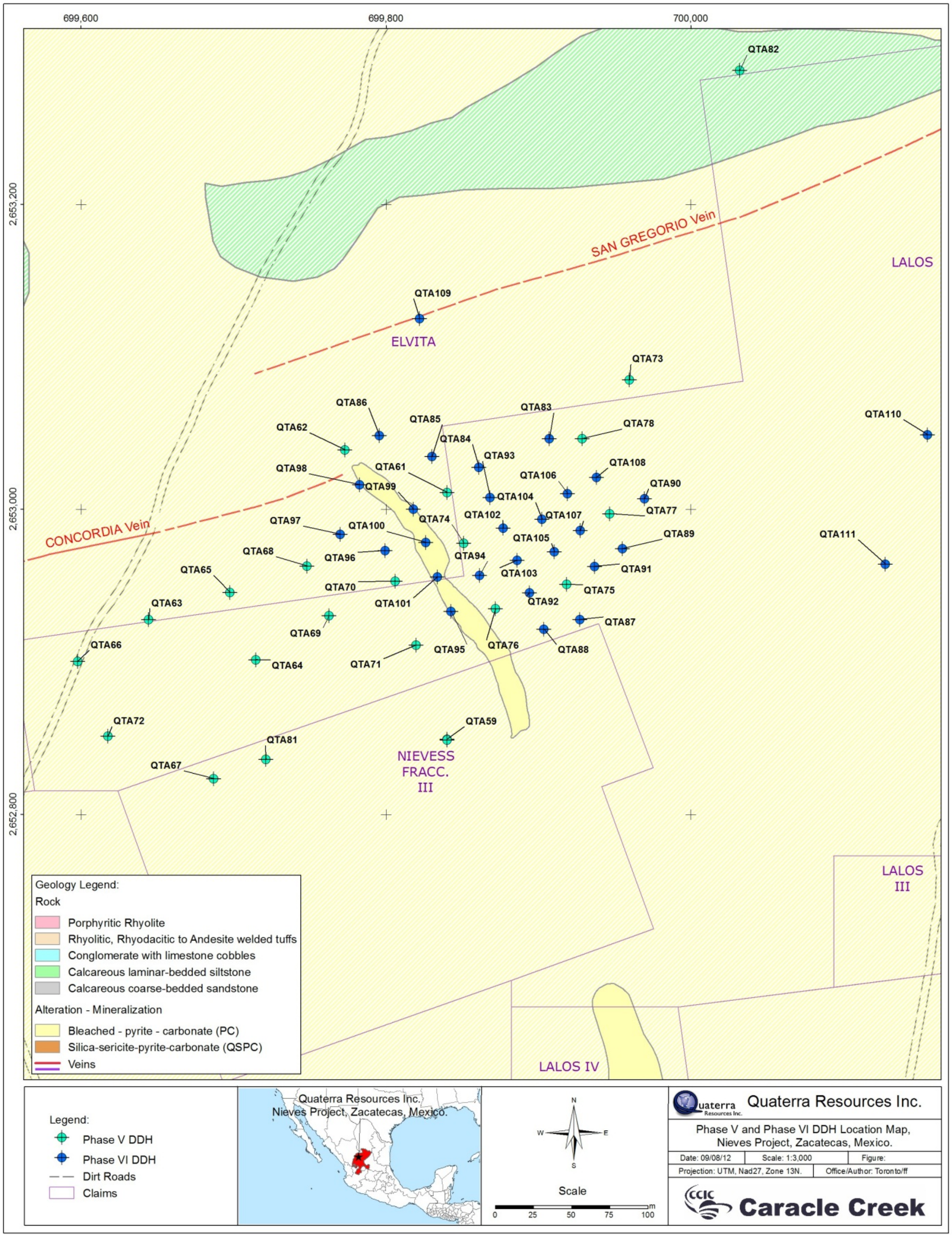

Figure 6-5 Location of drill holes in Phase V and VI drill programs

Geophysical surveys

Geophysical survey 2003

In November and December 2003, Quaterra and Blackberry completed a geophysical survey consisting of 10 lines (6.6 km in length) of CSAMT and Controlled Source Induced Polarization (CSIP) for a total of 66 line-km. In addition, a Ground Magnetometer survey was completed consisting of 12 lines including the 10 lines surveyed with CSAMT for total of 76 line-km of magnetic surveying. The work was performed by Zonge Engineering and Research Organization of Tucson, Arizona (Job No. 0319). The CSAMT survey greatly extended coverage of the survey completed in 1995 and 1996 by Zonge Engineering on behalf of Kennecott. The survey identified several prospective anomalies, a number of which correspond to areas of known mineralization, but extend far beyond the limits of previous drilling (Quaterra News Release February 3, 2004).

The CSAMT survey identified six conductive features, three of which correspond to the areas of known mineralization along the Santa Rita, San Gregorio and Majada veins, the rest were previously unknown. These conductive zones coincide with some of the IP anomalies. The anomalies are interpreted to represent mineralization, have a southwest-northeast trend extending for distances up to 3.5 km and spaced at intervals of approximately 1000 m from north to south across the Nieves property.

The survey also identified a large undrilled IP anomaly west of San Gregorio and several smaller untested anomalies in the adjacent areas.

Geophysical survey 2010

Between May and August 2010, Quaterra and Blackberry conducted a geophysical survey performed by Zonge Engineering (Job No. 10094). The survey consists of 25 lines utilizing dipole-dipole or pole-dipole IPR (Induced Polarization and Resistivity) arrays, covering the Concordia-San Gregorio-Dolores vein system (14 lines); east extension of Santa Rita vein system (4 lines); the California vein system (4 lines); Manto-1 CSAMT target (1 line); and the El Rosario mercury occurrence (2 lines).

The results of the survey indicate the Concordia and San Gregorio are two separate veins and not fault offsets of the same vein, and identified strong anomalies along strike to the east and west of both veins that have not been drilled. The San Gregorio vein appears to be the eastern extension of the Orion vein, which is generally unexplored and under-explored for a distance of over 2500 meters.

The results of the survey east of the historic mine at Santa Rita vein indicate a zone of anomalies extending eastward a distance of 1000 m. The results from the two lines surveyed at the El Rosario mercury occurrence identified narrow zones of weak IP anomalies.

Metallurgical testing

In May, 2010, G&T Metallurgical Services Ltd. completed a metallurgical assessment on behalf of Quaterra and Blackberry. The test used crushed ore that was approximately 100 kg in weight. The main objective of the test was to determine the chemical and mineral content of the composite, assess the ore hardness and develop an outline of a treatment process to recover silver using conventional mineral processing techniques.

The sample contained 79 g/t Ag with minor amounts of Cu (0.08%), Pb (0.14%) and Zn (0.1%). The minerals included quartz, micas, feldspar, pyrite, goethite, sphalerite, galena, silver sulphides (0.07%) and chalcopyrite, in decreasing order of abundance. The silver minerals were polybasite, freibergite and stromeyerite. The ore hardness was determined to be 10.8 kWh/tonne (moderately soft) using a Bond ball mill work index test procedure.

Open circuit flotation testing indicated that about 86% of the feed silver can be recovered into a final concentrate containing 2.3 kg/tonne silver. It was recommended that future test work should investigate coarser primary grind sizes.

The test also suggested that regrinding the rougher concentrate to a nominal 20 µm K_{80} had no significant benefit on silver metallurgy. Increasing the pH level of the cleaner circuit to 10 significantly improved the grade of silver in the final concentrate.

6.3 Historical Mineral Resource and Mineral Reserve Estimates

6.3.1 CRM 1992

In 1992, CRM estimated the resources and reserves remaining in the Santa Rita Vein system (Table 6-6). These resource estimates cannot be relied upon, have not been verified by the qualified person, nor are they NI43-101 compliant resource estimates. The qualified person has not done sufficient work to classify the historical estimates as current mineral resource and is not treating the historical estimates as current mineral resources.

Table 6-6 Historic Santa Rita resources calculated by CRM (Cavey, 1999).

Resource Category	Tonnes	Ag (g/t)	Pb (%)	Zn (%)	Sb (%)
Positive	18,600	398	3	3.5	3
Probable	76,700	225	3.3	4.3	2.6
Possible	71,200	n/a	n/a	n/a	n/a
Tailings	20,000	90	n/a	n/a	n/a

6.3.2 Quaterra/Blackberry 2009 and 2010 resource estimates

Quaterra and Blackberry contracted Caracle Creek to complete 43-101 compliant resources on the Nieves Property (Stone, 2009, 2010). The results are summarized in Table 6-7 and Table 6-8. Caracle Creek is not treating these resources as current; the resource within this report is the current resource on the Nieves Property.

Table 6-7 2009 resource estimate for the Concordia vein system at a 60 g/t cut off grade

Category	Tonnes	Ag (g/t)	Au (g/t)	Ag (oz)[1]	Au (oz)[1]
Indicated	2,897,571	110.231	0.126	10,269,203	11,701
Inferred	2,256,596	96.562	0.115	7,005,797	8,373

[1] ounces calculated using 31.103 g/t

Table 6-8 2010 resource estimate for the Concordia and Gregorio North areas at a 45 g/t cut off grade

Vein	Zone	Resource Class	Tonnes (t)[1]	Au (g/t)[2]	Ag (g/t)[2]	Au (oz)[3]	Ag (oz)[3]
Concordia	La Quinta	Indicated	4,590,000	0.1	103.4	14,757	15,259,171
Concordia	La Quinta	Inferred	10,516,000	0.08	85.5	27,048	28,907,758
San Gregorio	North	Inferred	4,005,000	0.15	79.4	19,315	10,223,998

[1] tonnes have been rounded up to the nearest 1,000.

[2] gold is reported to 2 decimal places and silver to 1 decimal place

[3] ounces calculated using 31.103 g/t

7.0 Geological Setting and Mineralization

7.1 Regional Geology

The Nieves Property lies on the western flank of the Central Altiplano in Mexico, just east of the Sierra Madre Occidental ranges (Figure 4-1). Basement rocks underlying the western Altiplano are a Mesozoic assemblage of marine sedimentary and submarine volcanic rocks belonging to the Guerrero Terrane (Simmons, 1991) that sit unconformably on Precambrian continental rocks. In the Nieves area, the boundary between the Guerrero Terrane rocks and younger Jurassic-Cretaceous sedimentary sequences (interpreted to be the Caracol Formation on the Property) is unclear.

The late Cretaceous to early Tertiary Laramide Orogeny folded and thrust faulted the basement rocks throughout the area and preceded the emplacement of mid-Tertiary plutons and related dykes and stocks (Ruvalcaba-Ruiz and Thompson, 1988). Mesozoic marine rocks are host to the San Nicolas VMS deposit (Wendt, 2002).

Unconformably overlying the Mesozoic basement rocks in the western Altiplano are units from the late Cretaceous to Tertiary, Sierra Madre Occidental magmatic arc (Figure 7-3). These rocks consist of a lower assemblage of late Cretaceous to Tertiary volcanic, volcaniclastic, conglomerate and locally limestone rocks, the “lower volcanic complex” and a Tertiary (approximately 25-45 Ma) “upper volcanic supergroup” of caldera related, rhyolite ash-flow tuffs and flows. Eocene to Oligocene intrusions occur throughout the Altiplano and are related to the later felsic volcanic event. Locally, these two units are separated by an unconformity (Ruvalcaba-Ruiz and Thompson, 1988).

A late NE-SW extensional tectonic event accompanied by major strike-slip fault movement affected the Altiplano starting approximately 35 Ma ago. This extension was most intense during the Miocene and developed much of the basin and range topography currently exhibited in the area. Subsequent erosion of the ranges has covered most of the valleys.

7.2 Property Geology

Rocks underlying the Nieves Property are of two distinct ages: (1) Mesozoic “argillite” (interpreted to represent a calcareous finely bedded turbidite flysch) as belonging to the Caracol Formation overlain by (2) Tertiary rhyolitic volcaniclastic rocks separated by a presumably Tertiary age basal conglomerate and conglomeratic sandstone sequence. At Nieves, the Caracol Formation is isoclinally folded with an axial plane cleavage. Nieves veins parallel the cleavage.

7.2.1 Mesozoic Rocks

The most common rock types underlying the Nieves Property form a thick sequence of fine laminar grey to dark green argillite beds up to 1m thick that hosts the silver mineralization (Figure 7-1. These rocks have been assigned to the Caracol Formation of the late Cretaceous age. Argillite beds are more abundant to the south in the Santa Rita area and to the west in the Concordia area. The Caracol Formation is isoclinally folded with an axial plane cleavage, fold axes strike east-northeast to east and beds strike east-west and dip steeply south to near vertical.

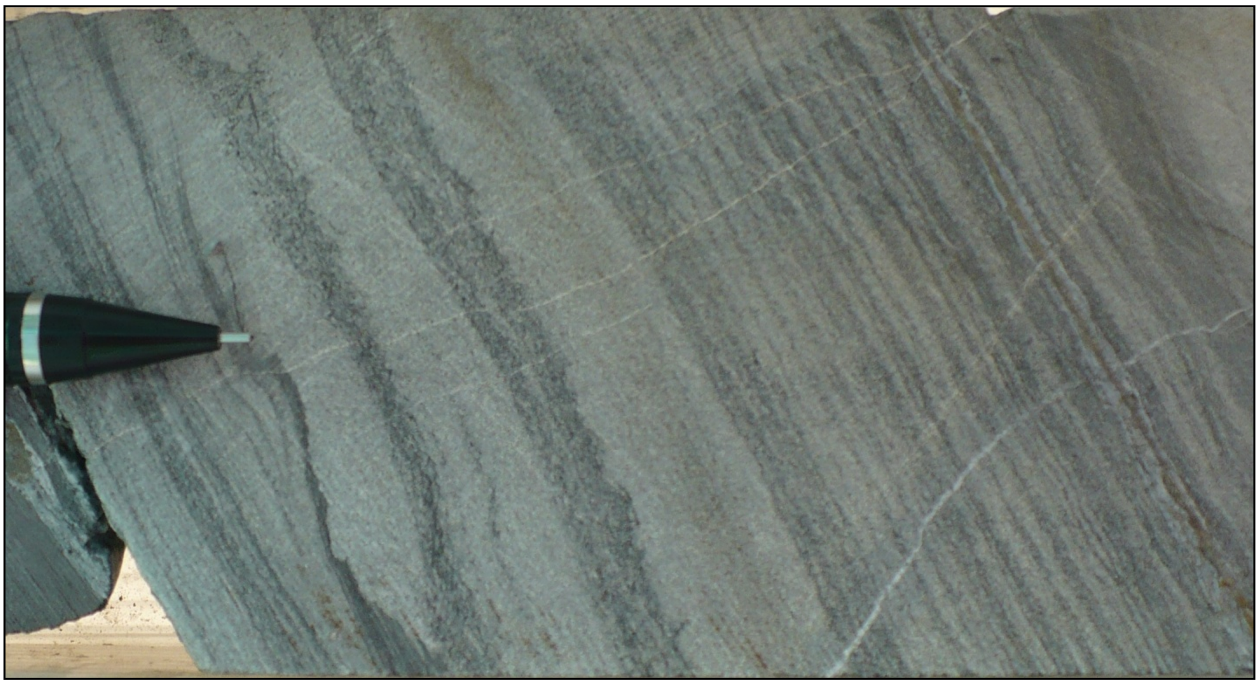

Figure 7-1 Sedimentary layers in argillite (photo from Doris Fox)

7.2.2 Tertiary Clastic Rocks

On the east side of the Nieves Property the Caracol Formation is overlain unconformably by a 1 to 10m thick conglomerate composed of rounded to sub-rounded limestone boulders 2 to 20 cm in diameter in a grey to brown sandstone groundmass. Above the limestone conglomerate there is up to 130m of conglomeratic sandstone with thin bands of calcareous conglomerate which was intersected in drill hole QTA-18 (Figure 7-2). These units dip shallowly.

Figure 7-2 Surface expression of clastic sediments on the property (photo by Doris Fox)

7.2.1 Tertiary Volcanic Rocks

In drill hole QTA-18 (Phase I) 46m of rhyodacitic to andesitic welded tuff occur above the conglomerate and conglomeratic sandstone. A thin 1.5 to 2m unit of grey to dark grey basalt occurs above the tuff and is in turn overlain by at least 56m of porphyritic rhyolite flows striking north-northwest and dipping northeast. These porphyritic rhyolite flows underlie a prominent north trending ridge on the east side of the Property and are the host rock for manganese-calcite veins and breccia mineralization previously exploited by local miners (Figure 5-3 shows the ridge).

7.2.2 Structural Geology

The oldest structures on the Nieves Property are the folds which affect the Mesozoic argillite beds. These structures are likely related to compression during the Laramide Orogeny in the Cretaceous. Thrust faults are also common features of structures attributed to the Laramide Orogeny and several have been suspected to occur on the Nieves Property.

Post-Laramide structures are in all cases brittle in nature and affect both the Mesozoic Caracol Formation sedimentary rocks and the Tertiary volcanic and sedimentary rocks. These structures include: (1) faults that strike 330^o to 000^o and dip moderately northeast to east with east plunging slicken-sides, (2) faults that strike 170^o to 180^o and dip steeply to the west, and (3) major vein structures that strike 240^o to 270^o and dip 60^o to 90^o to the south. A late vertical fault structure striking 020^o to 030^o offsets the major mineralized structures and offsets the Concordia from the San Gregorio vein systems.

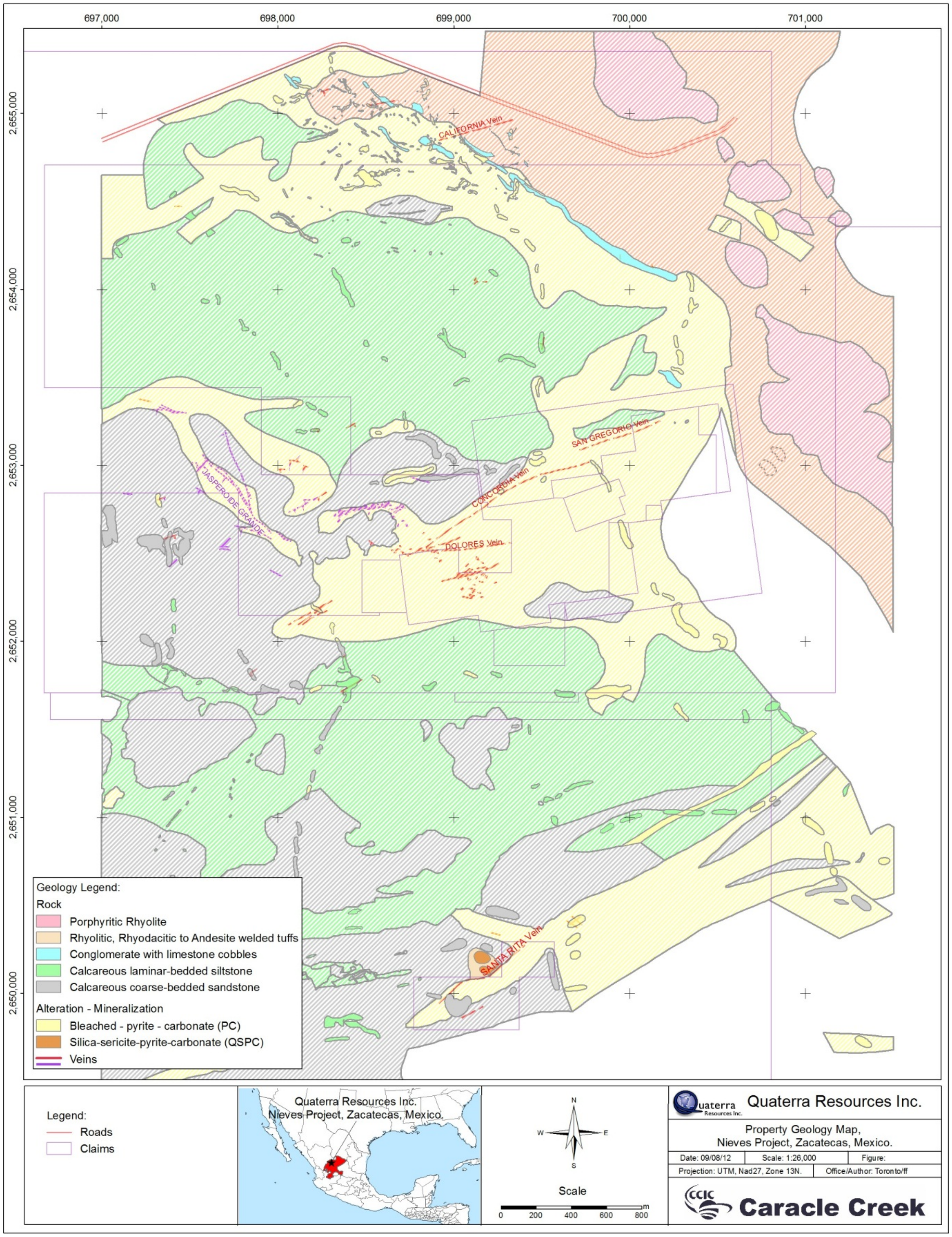

Figure 7-3 Geology map of the Nieves Property

7.3 Mineralization

7.3.1 Alteration and Styles of Mineralization

Generally, Mesozoic Caracol Formation rocks proximal to mineralized zones exhibit a weak bleaching halo that results from the oxidation of 2% to 5% disseminated pyrite throughout these rocks. Pyrite and thin calcite veinlets occur adjacent to mineralized zones in a pyrite-carbonate alteration assemblage called P-C type (pyrite-carbonate).

A local, more intense alteration assemblage includes weak to moderate sericite replacing thin calcite veinlets and weak to advanced fine-grained quartz replacing calcite, associated with an increase in fine grained pyrite. This alteration type, described as QSPC (quartz-sericite-pyrite-carbonate) is present in close proximity to the mineralized structures in some drill holes. Stibnite rosettes are commonly associated with the sericite veinlets.

Silicification, mainly of sandstone beds, occurs in a few zones on the Nieves Property as in the hill located north of the Santa Rita vein. Weak chlorite alteration of tuffs and conglomeratic sandstone occurs in drill hole QTA-18 in the manganese mine area within the Tertiary rhyolitic rocks on the east side of the Property (Figure 7-3).

Four types of mineralization have been identified on the Nieves Property and are described below.

Jasperoid Structures

Jasperoid structures located to the northwest of the Concordia-Dolores vein system are characterized by silicified tan to black coloured rocks with abundant thin jasper, fine grained quartz micro-breccia and veinlets with up to 5% disseminated pyrite. These jasperoid structures are 1 to 12m wide, strike northwest and dip southwest. Locally, jasperoid bodies are anomalous in gold, arsenic and antimony with erratic silver, lead and zinc values.

Possibly a related mineralization style to the jasperoid structures are silica breccia veins that are typically composed of small silicified rock fragments in a saccaroidal quartz groundmass.

Iron carbonate veins

Iron carbonate veins include mostly calcite and scarce rhodochrosite with hairline to 10 cm wide pyrite veinlets which are abundant up to hundreds of meters away from partially to totally replaced quartz veins. Some veinlets contain stibnite and silver sulphosalts and are abundant in surface alteration halos as well as above and below ore intercepts in drill core. Low grade silver often is associated with this type of veinlet.

Carbonate-quartz-sulphide veins

Carbonate-quartz-sulphide veins are the most economically important veins and consist of calcite that is partially to totally replaced by grey to white, chalcedonic, fine-grained quartz veins and veinlets (Figure 7-4). These veins are from centimetres to 1.5m wide with up to 50% sulphide minerals. Sulphides include pyrite, stibnite, sphalerite, galena, chalcopyrite and the silver sulphosalts: proustite, pyrargyrite, jamesonite and scarce tetrahedrite. The best grades of silver, gold, lead and zinc occur in these veins and past production has come primarily from this vein type.

Figure 7-4 Carbonate- quartz-sulphide mineralized veins

Calcite-manganese-oxide breccias and veins

These mineralized structures which may be 5 to 10m wide and up to 150m long include breccias formed by sub-angular volcanic fragments in a clay-altered sandy groundmass (Figure 7-5). Thin veinlets of ferro-manganese oxides form stockwork zones of clay-altered volcanic rocks and occur along the borders of the breccia bodies in the Manganese mine area (Figure 7-3).

Figure 7-5 Mineralized oxide-breccia in core (photo by Doris Fox)

7.3.2 Mineralized Zones

On the Nieves Property there are three major east to east-northeast striking silver vein systems, the California, Concordia- San Gregorio-Dolores, and Santa Rita veins systems (Figure 7-3). In addition to these silver mineralized systems there is an east-northeast to east-southeast striking manganese breccia system hosted by rhyolitic rocks on the east side of the Property. Local miners have worked on all of these areas, previously.

California Vein System

The California vein is marked by a shaft and series of small open cuts aligned 250° to 255° over a distance of 300m. Only thin and discontinuous quartz-oxide veinlets outcrop near the workings. The California vein system shows a large 150-600m wide alteration zone extending about 2,700m along strike. Local stockwork zones contain thin calcite veinlets in part weakly replaced by quartz-oxide veinlets. The California vein was intercepted in Kennecott hole NV08 in two intervals at depths of 108m and 116.0m that returned assays of 367 g/t silver over 2m and 795 g/t silver over 2m respectively. Recent drilling increased the length of known mineralization along the California vein system to approximately 550 m and mineralization remains open to the east.

Concordia- San Gregorio-Dolores Vein System

The Concordia- San Gregorio -Dolores vein system has a known strike length, in mine workings of nearly 1.8 km in two system of veins, (1) the 240º-260° striking Concordia-San Gregorio vein and (2) the 260°-270º striking Dolores splay. Both veins dip from 60º southward to near vertical.

The Concordia- San Gregorio -Dolores system is composed of carbonate to quartz-sulphide veins and varies in width from tens of centimetres up to 1.5m. The most recent drill program extended the total length of the known mineralized zone along the Concordia vein to approximately 1300 meters.

The San Gregorio vein appears to be the continuation of the Concordia structure, assuming approximately 50m of left lateral offset from a north trending fault that presumably follows the San Gregorio arroyo. The San Gregorio vein structure can be traced in some small open cuts for about 500m to the northeast at an azimuth of 250° to 260°. Surface samples from 10 to 40 cm wide calcite to quartz veins with oxides returned silver assays of up to 954 g/t.

The Dolores vein is interpreted to be a splay of the Concordia vein, strikes at 260º to 270° and is traced for nearly 500m on surface by numerous small open cuts and at least five shafts. A stockwork zone of thin calcite to quartz and oxides veinlets in the hanging wall extends on surface for up to 250m across strike from the main vein and along strike for an additional 350m from the last workings on the vein. Surface samples of some of the thin stockwork veinlets from this zone returned silver assays of up to 553 g/t.

The Concordia and Dolores veins appear to intersect to the west of the Rosario Shaft in an area of abundant calcite and lesser quartz veinlets. This area was evaluated on the surface by two long trenches separated by 85m, with 2m wide channel samples collected 10 to 20 cm below the surface. No results were available to the author.

A total of 15 drill holes systematically tested the Santa Rita vein system over 500 along strike, the total length of mineralization was extended to approximately 750 m and remains open to the west. Drilling suggests the presence of several parallel vein systems.

The Gregorio North area is located north of the San Gregorio vein, in the Gregorio Hill area and it is probably part of the Concodia-San Gegorio-Dolores vein system. The recent drill program was successful in extending the length of the mineralized zone to approximately 1200 m.

Santa Rita Vein System

The Santa Rita vein system, located in southern portion of the Property, strikes 230° to 260° and can be recognized in shafts and in short drifts for over 500m. Last production during 1970-1985 came from the lower levels of the mine which was deepening to 9 levels reaching a depth of 282m. The Santa Rita vein contains a series of veinlets in the footwall that form a wide stockwork zone in an area of 100 x 100m centered on a small silica altered hill north of the main Santa Rita drift. A sub-parallel vein also occurs about 100m southwest of the main Santa Rita vein.

Quaterra hole QTA-16 tested the Santa Rita vein at a depth of 350m and intercepted a 3.1m interval that averages 71.44 g/t silver, 0.56% lead and 0.91% zinc. QTA-37 also appears to have cut the Santa Rita vein system at 416m depth where it encountered a 5.90m zone that averaged 104 g/t silver, 0.23% lead, and 0.55% zinc.

In the phase VII and VIII drill program, a total of 15 drill holes systematically tested the Santa Rita vein system over 500 along strike, the total length of mineralization was extended to approximately 750 m and remains open to the west. Drilling suggests the presence of several parallel vein systems.

Recent mapping on the West Santa Rita area identified two groups of narrow, sub-parallel 2 to 30 centimeter wide calcite-quartz veinlets, some of which contain strong gold and silver mineralization. The first group of veinlets has an east-northeasterly trend and extends 120 to 200 meters along strike with a width of 100 meters. The best results include 8.11 ppm gold over 0.2 meters, 253 ppm silver over 0.4 meters, 4,460 ppm lead and 2,690 ppm zinc over 0.4 meters.

7.3.3 Manganese Mineralization

Various small pits and drifts sunk on calcite-manganese-oxides breccias and stockwork veinlets hosted in volcanic rocks occur 1 km east of the Concordia-Dolores- San Gregorio vein system on the eastern side of the Nieves Property (Figure 7-3)

The stockwork zone is flanked to the north and south by two breccia structures formed by sub-angular volcanic fragments in clay altered sandy groundmass with irregular ferroan calcite and manganese oxides of possible hydrothermal origin. The north breccia structure is 150m long by 5 to 10m wide, trends 290 to 300 and dips 75° to south. The southern breccia is 115m long by 7m wide, trends 070 and dips 75^{o} to the north.

A second zone of calcite-manganese-oxide breccia occurs 230m south of those described above. It is 150m long by 5m wide, trends 075 and dips 67^{o} north. Surface and underground rock samples from this area were anomalous in silver, arsenic, antimony, tungsten, molybdenum and cobalt. Drill hole QTA-18 tested the depth extent of these structures but intersected no significant mineralization.

8.0 DEPOSIT TYPES

Silver mineralization on the Nieves Property is best classified as low-sulphidation epithermal mineralization and is the primary exploration target. Several other styles of mineralization are found within the ages of rocks observed on the Nieves Property and are potential secondary exploration targets.

8.1 Epithermal High-Grade Silver Veins

Within the Altiplano Region of Mexico, epithermal silver veins are the dominant deposit type with world-class examples such as Pachuca, Zacatecas, Fresnillo, and Guanajuato. The closest of these world class examples is the Fresnillo Deposit owned and operated by Peñoles, located 90 km to the south of the Nieves Property. Several styles of silver mineralization occur in the Fresnillo Deposit including (1) mantos and chimneys, (2) stockworks (Cerro Proaño area), (3) disseminated ores in areas of propylitic alteration, and (4) veins that show vertical mineralogical zonation (e.g. the Santo Niño vein). The veins are currently being mined by Peñoles and they are actively exploring for more of these mineralized structures (Garcia *et al*. 1991).

In the Santo Niño Vein the high-grade silver mineralization averaging 769 g/t silver, 0.56 g/t gold, 0.99% zinc, 0.5% lead, 0.03% copper; (Gemmel *et al*. 1988) is hosted in a single fault structure that locally bifurcates or is separated into en-echelon offset structures. It is between 0.5 to 4m wide, averaging 2.5m wide, and extends for over 2.5 km. Typically in these veins, the high-grade silver (gold) zone is constrained in elevation within the vein structure to up to 500m vertically, or between 180 to 750m depths (Garcia *et al*. 1991), below which the veins becomes dominated by base-metal sulphides and progressively lower in precious metal content (Garcia *et al*. 1991). A model for the formation of the Fresnillo fissure veins was proposed by authors such as Buchanan (1981) and modified and incorporated into the low-sulphidation epithermal model over the last 20 years (e.g. Corbett 2002; Corbett and Leach 1998; Hedenquist *et al*. 1996, Simmons *et al*. 1988). The low-sulphidation epithermal model predicts that the Fresnillo epithermal veins: (1) formed in rifting or tensional environments; (2) formed along normal or strike-slip fault structures; (3) are mineralogically zoned vertically; (4) have the highest precious metal zones within boiling horizons (likely related to paleo-water tables); and, (5) are in faults that diffuse as they near the surface and are accompanied with intense acid-sulphate alteration (advanced argillic and silicification) that cap the systems (Figure 8-1).

The geology of the Fresnillo District (Table 8-1) has been well studied and appears to be very similar to the geology observed on the Nieves Property. The Nieves Property and the Fresnillo District are underlain by a Jurassic-Cretaceous turbidite flysch sequence (Nieves; appears to be an argillite) and greywacke (Fresnillo) units that have been overlain by Tertiary volcanic rocks. Tertiary volcanism in this region is attributed to have occurred in conjunction with extensional tectonics associated with major strike-slip motion on north to northwest trending faults. In the Fresnillo District, epithermal fluids ascended along steeply dipping extensional fault structures generally oriented east-west (Simmons *et al*. 1988). On the Nieves Property, there are several north to north-northwest trending mapped faults as well as the main vein orientations which have a roughly east-west orientation, very similar to the mineralized veins and structures in the Fresnillo District.

8.2 Other Deposit types in the District

The Altiplano Region contains several other deposit types such as Carbonate Replacement Deposits (e.g. San Martin, Charcas), Volcanogenic Massive Sulphide deposits (San Nicolas), Sedex (Francisco I. Madero) and Stockwork deposits (Real de Angeles) (Wendt 2002) (Table 8-2). These other deposit types are generally hosted within the Mesozoic rock units that underlie the Tertiary volcanic rocks and as the Mesozoic rocks are the dominant rock type underlying the Nieves Property, these other deposit types are possible secondary exploration targets.

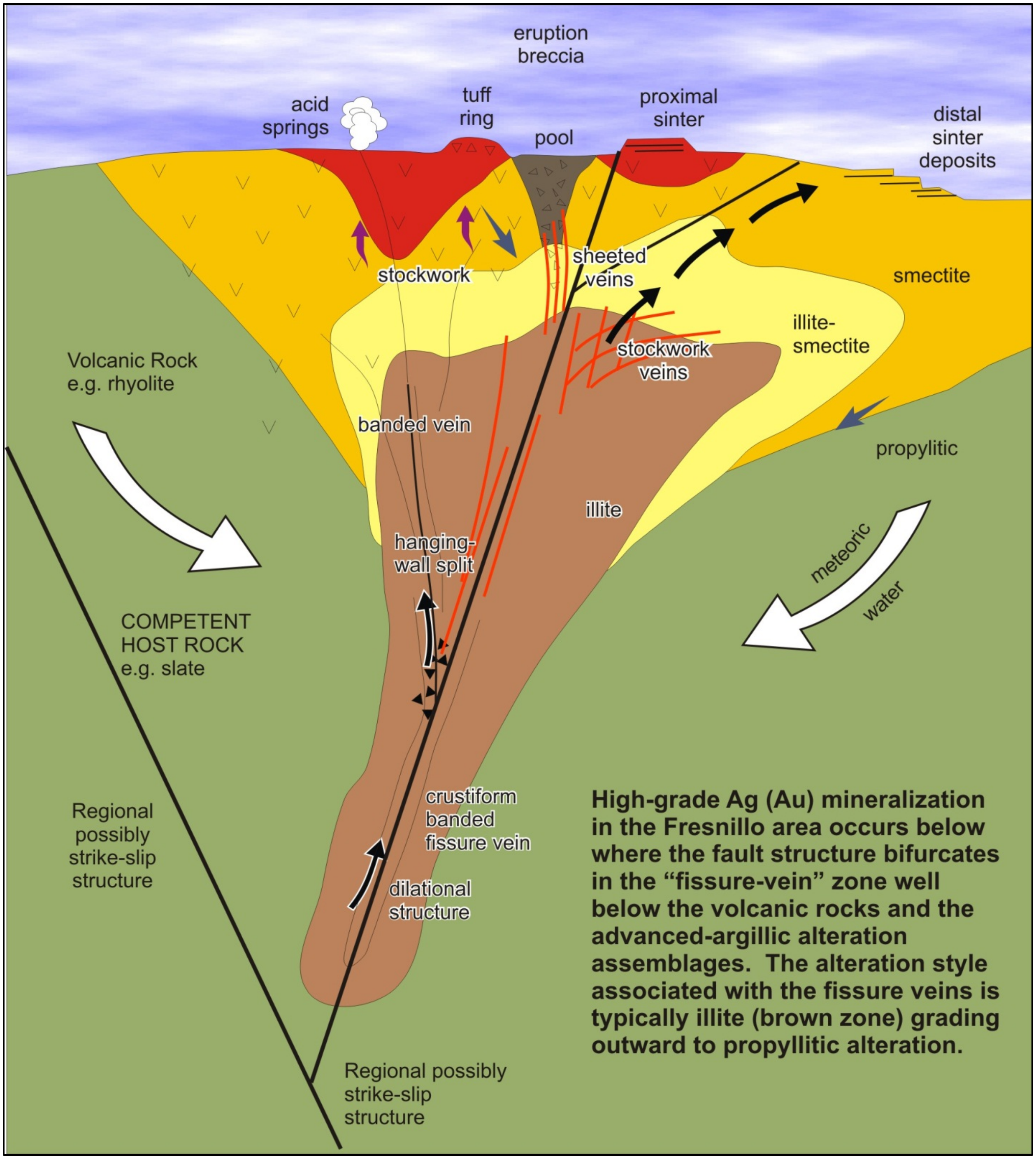

Figure 8-1 Schematic cross section of a typical rift related epithermal low-sulphidation system (after Corbett 2004)

Table 8-1 Stratigraphy and associated mineralization in the Fresnillo District (modified from Ruvalcaba-Ruiz and Ruiz, 1988, Wendt 2002)

Period	Age	Group Name	Formation	Local Name	Thickness (m)	Rock Type	Associated Minerals/ Alteration
Q	**Holocene**				1-250	Alluvium	None
	Pleistocene						
Tertiary	**Miocene-Pliocene**			Basalt	100	Olivine basalt	None
	Eocene-Miocene			Altamira Volcanics	400	Conglomerate, welded rhyolite ash-flow tuff, volarenites	None
	Eocene			Quartz monzonite	-	Quartz-monzonite	Ag-Pb-Zn skarn
	Paleocene-Eocene		Fresnillo	Linares Volcanics	400	Conglomerate, welded rhyolite ash-flow tuff, flow domes, volarenite	Veins, advanced argillic alt., silicification
Cretaceous	**Late**		Cuestra del Cura	Cerro Gordo	300	Limestone	Replacement and veins
				Fortuna	300	Limestone	Replacement and veins
	Early	Proaño	Plateros	Upper Greywacke	250	Calcareous greywacke and shale	Veins
				Calcareous shale	50	Calcareous shale	Veins and replacement
			Valdecañas	Lower Greywacke	700	Greywacke	Veins

Table 8-2 Major Altiplano ore deposits (after Wendt 2002)

ID	District	State	Deposit Type	Production (Tonnes)****	Reserves (Tonnes)	Average Grade				
						Au (ppm)	Ag (ppm)	Cu (%)	Zn (%)	Pb (%)
1	San Martin-Sabinas	ZAC	CRD*	40+ M	30 M	tr	125	1	3.8	0.5
2	Concepcion del Oro	ZAC	CRD	40+ M	8 M+	< 1.5	275	0.2-2.3	12.8	5.8
3	Charcas	SLP	CRD	35 M	12M+		67	0.26	4.5	0.32
4	Fresnillo	ZAC	E-Vein**	50+ M	10+	3-0.6	685-280	0.02-0.3	0.5-3.0	0.6-3.0
5	Velardeña	DUR	CRD	22 M	8 M	< 1.5	156	to 0.4	5.2	3.8
6	Catorce	SLP	CRD, E-Vein	10+ M	0.5 M	tr	80	tr	6	10
7	La Negra	QRO	CRD	7 M	2 M		184	0.2	2.3	1.2
8	Zimapan	HID	CRD	3.5+ M	1 M		173	1.2	4	2
9	Mapimi	DUR	CRD	6 M	none	3.7	475	mod	high	15.8
10	Asientos/ Tepezala	AGS	CRD, E-Vein	6 M min	2.5 M+	0.5	150-600	0.2-3.5	5	2.5
11	Cerro San Pedro	SLP	CRD	5M	56 M (Au)	0.57-30	22-325	4	9	5
12	La Paz/ Matehuala	SLP		4 M ?	12 M	0.5	500	0.2-1.4	5	7
13	Chalchihuites	ZAC		2 M ?	1.5 M	1	350	< 0.3	3	2.5
A	Francisco I Madero	ZAC	Sedex ?	minor	20 M+	tr	60	1.5	6	1.5
B	Real de Angeles	ZAC	Stockwork	90 M	none		80		0.9	1
C	San Nicolas	ZAC	VMS***	minor	72 M	0.5	30	1.35	2.3	

*CRD = Carbonate Replacement Deposit
**E-Vein = Epithermal Vein
***VMS = Volcanogenic Massive Sulphide
****Tonnages reportedin historic, are not current, have not been verified or re-calculcated to NI 43-101 standards. These data should not be relied upon.

9.0 Exploration

9.1 Geophysical work

9.1.1 2011

In April 2011, Quaterra contracted Mira Geoscience AGIC (Advanced Geophysical Interpretation Centre) to invert ground magnetic data from the Nieves Property. The purpose of the project was to advance geological understanding of the magnetic characteristics of the low magnetic anomaly identified in the ground geophysical survey completed by Zonge in 2003 (see section 6.2.4). The results of this data inversion indicated that the geophysics model was poorly constrained due to insufficient data particularly along the western edge of the magnetic low anomaly. In December, 2011, Zonge International was contracted to conduct additional ground magnetometer surveying along 14 N-S lines with a spacing of 200m between lines (Job No. 11191). The data from this survey indicates the magnetic low extends an additional 1200 meters west for a total E-W length of 2200m. Zonge was then retained to model the magnetic low and they concluded the magnetic low is best explained by a reversely polarized source body at a depth of 800m (1150 m elevation) below ground surface with spatial dimensions of 2600m NE-SW and 1800m NW-SE.

In June and July 2011, Quaterra contracted Zonge International to conduct IPR surveys along 9 lines (Job No. 11112) consisting of 6 lines over the Santa Rita vein and its western extension; 2 lines to evaluation the eastern extension of the California vein and 1 line to evaluate the area beneath Tertiary volcanic rocks further east. The results of this survey indicate the Santa Rita vein extends 700m west of the historic workings, appears to become two veins rather than a single vein, and the strike of the veins change from NE-SW to nearly E-W. The two lines on the California vein also suggest the vein extends only a very short distance to the east. The line over the Tertiary volcanic rocks was able to penetrate the volcanic rocks but did not detect anomalous IP response.

9.1.2 2012

At the end of 2011 realization that the geophysical response of several of the vein systems including the Santa Rita, Dolores, Nino and Orion veins extended to the western edge of the existing survey coverage, a decision was made to conduct additional geophysical surveying to better define the extend and character of these vein systems. In the first quarter of 2012 Quaterra retained Zonge International (Job No. 11190) to conduct a survey consisting of six lines, a total of 28.4 line-kilometers, of vector CSAMT and CSIP and nine follow-up lines of pole-dipole IPR totaling 16.5 line-kilometers (Figure 9-1). The six lines of vector CSAMT/CSIP were spaced 400 meters apart and covered 1,000 hectares west of the main veins in the area of the enigmatic magnetic low.

Nine anomalous zones were detected and validated with IP lines using 50 meter dipole spacings. Most of the anomalies appear to be westward extensions of mineralized veins previously drilled, including the Dolores, Santa Rita, Niño and Orion veins.

The anomalies were followed up by mapping and sampling (see section 9.2). The most interesting area identified to date is West Santa Rita, located 1000 to 1200 meters west of the central portion of the main

Santa Rita mine and over 500 meters from Quaterra's nearest drill hole on line 7700E. The IP and resistivity results are shown along lines 6800E and 7200E (Figure 9-2, Figure 9-3 and Figure 9-4).

In addition the data also indicates the Nino vein extends well to the west from its previously known geophysical extent a strike length of 1500m along which no drilling has been done. Outcrop in the area is sparse but at least one sample from a fault zone coinciding with the anomalous IP zone defining the Nino vein is anomalous in gold and silver.

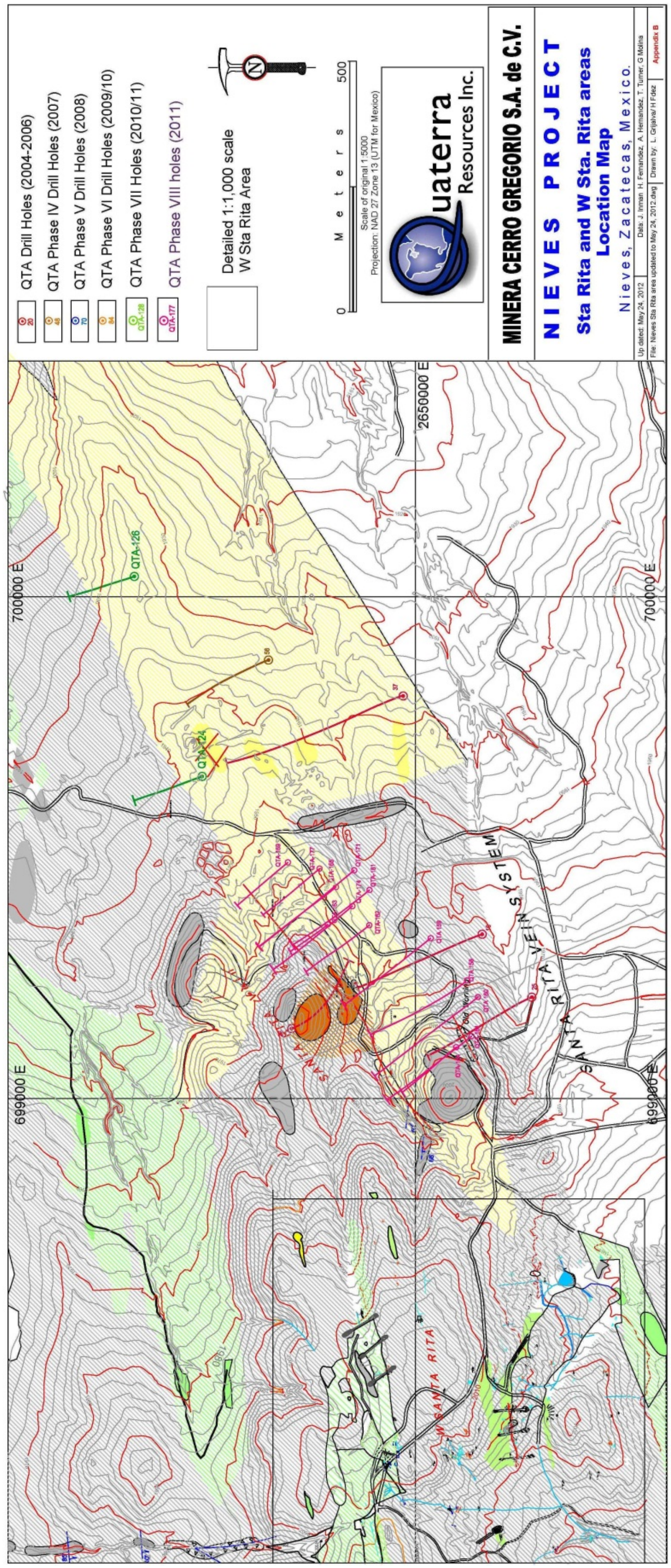

Figure 9-1 Geology and location of drill holes and geophysical survey lines (red lines) in the Santa Rita area

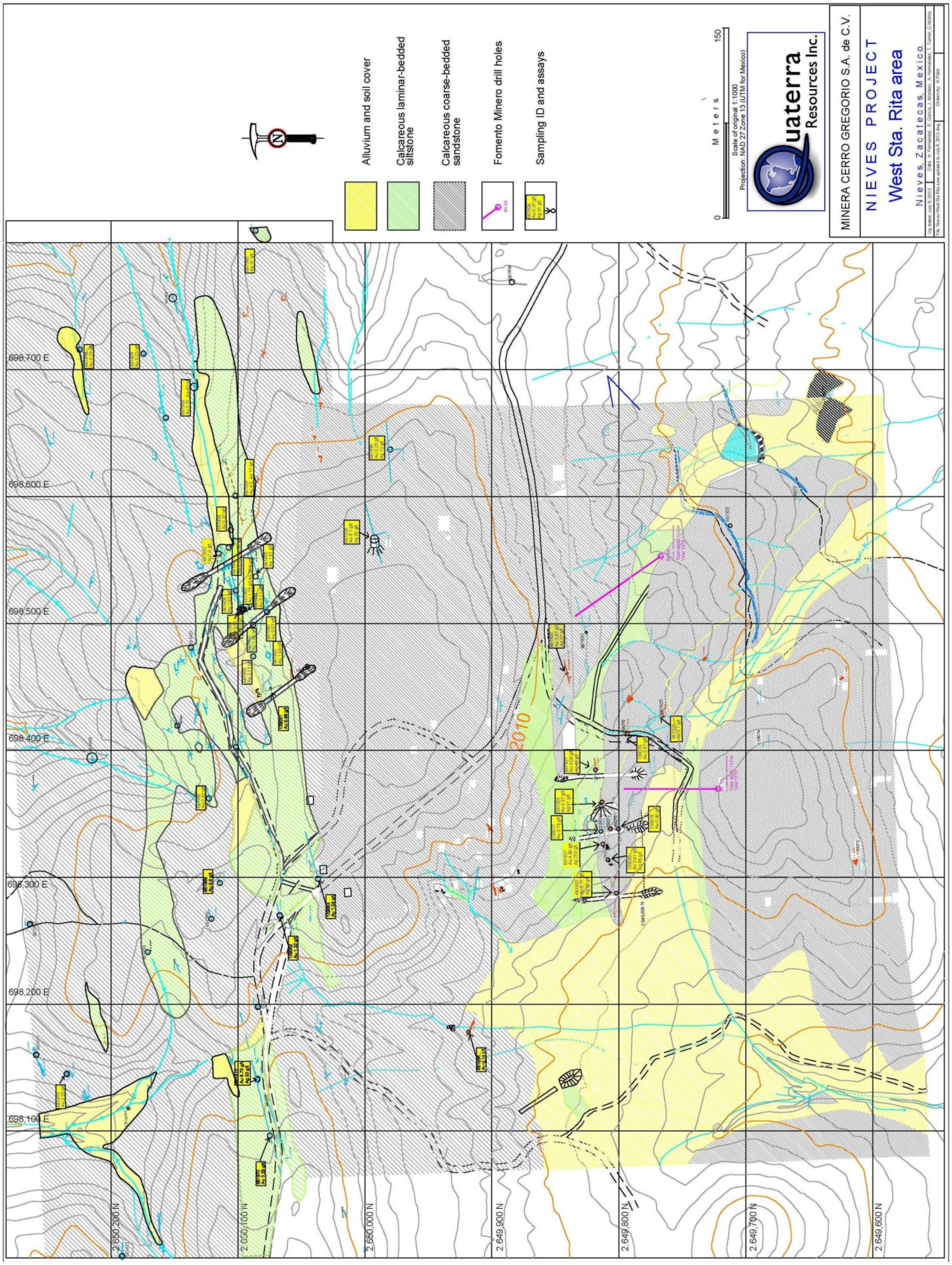

Figure 9-2 Geology and location of channels, samples and geophysical survey lines in the West Santa Rita area

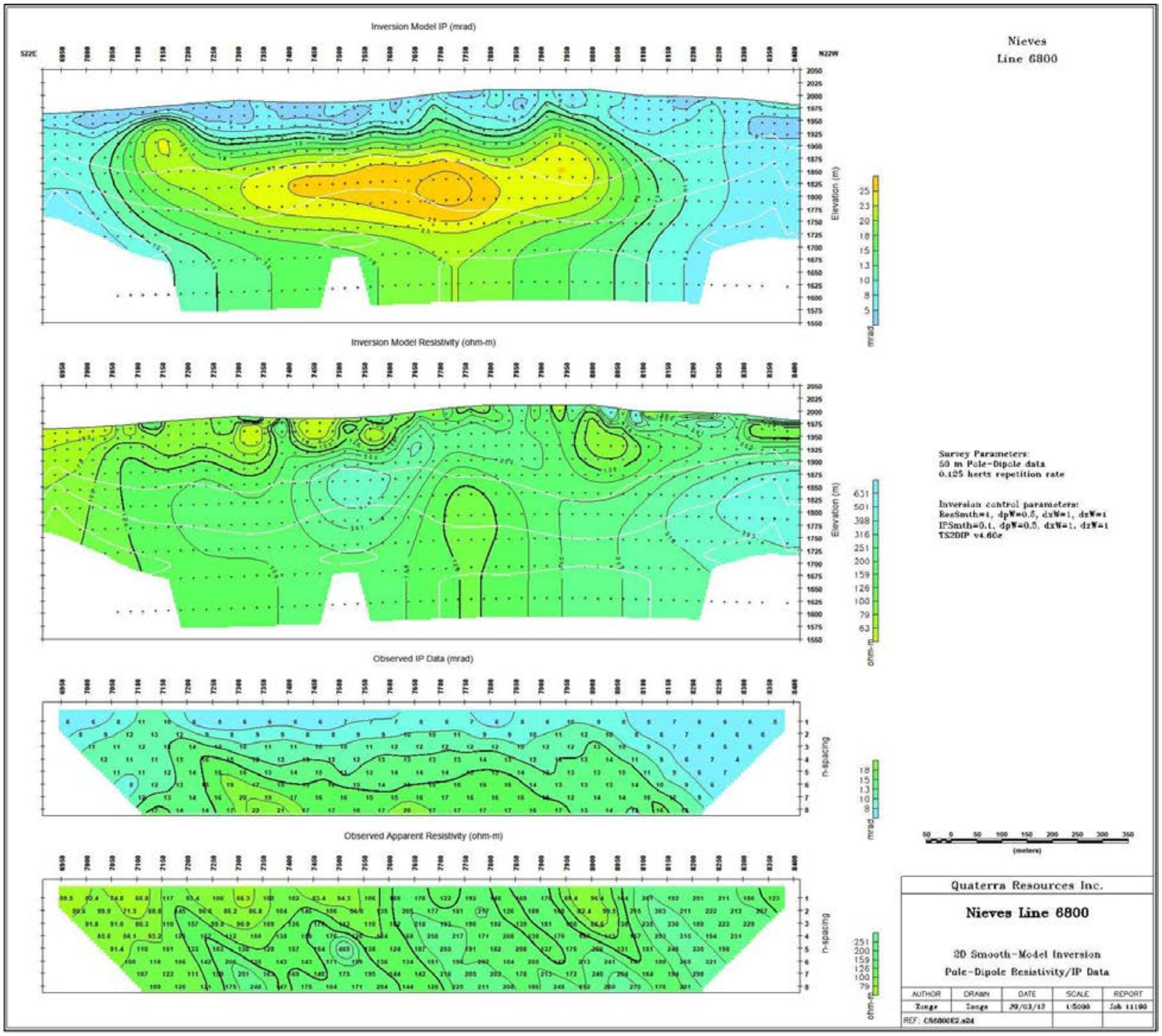

Figure 9-3 Pole-Dipole Resistivity/IP data along Line 6800 in the West Santa Rita area

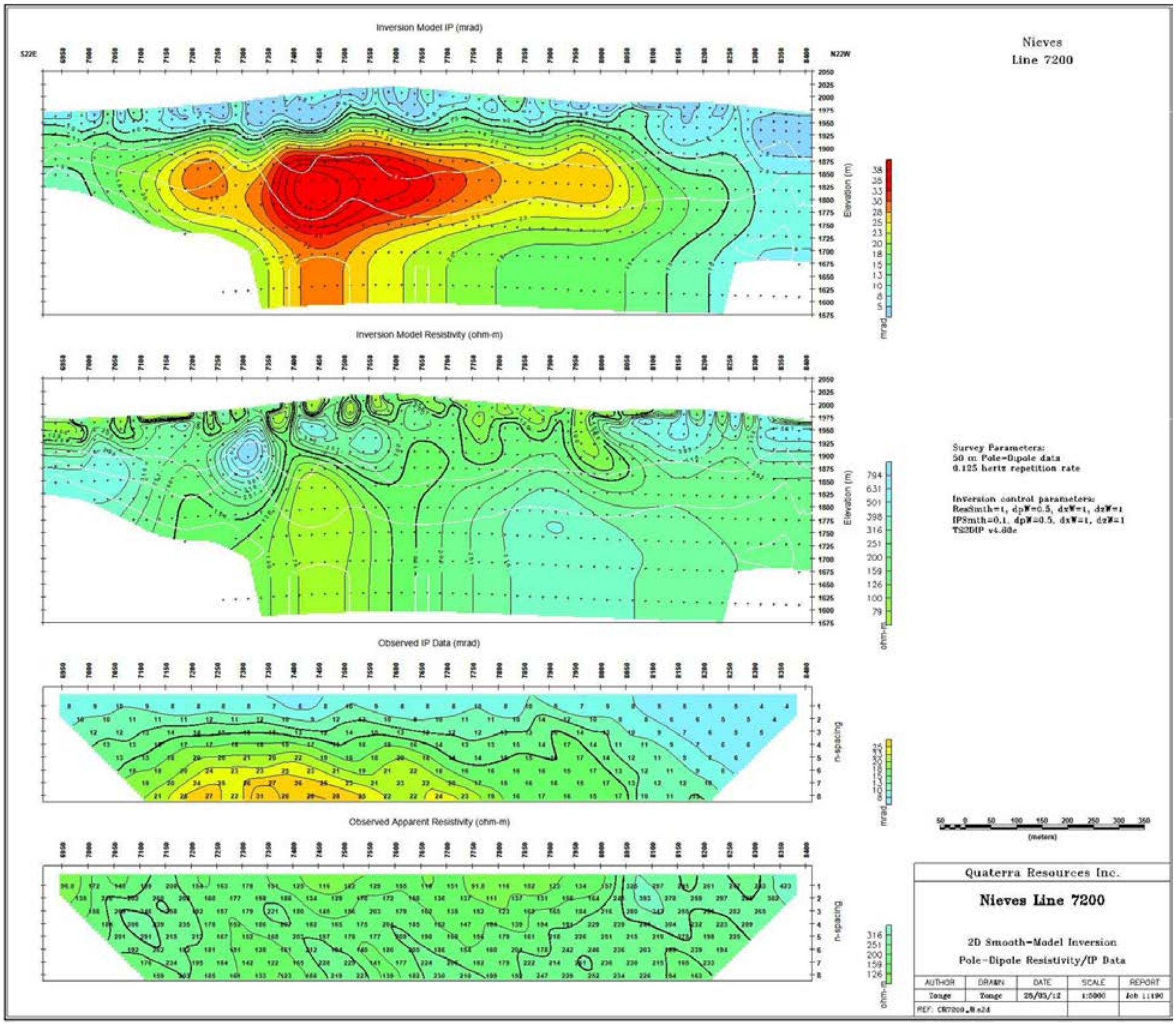

Figure 9-4 Pole-Dipole Resistivity/IP data along Line 7200 in the West Santa Rita area

9.2 Mapping and sampling

Mapping and sampling was completed to follow up the geophysical anomalies. The most interesting area was identified in West Santa Rita in the southern part of the Nieves Property (Figure 9-1 and Figure 9-2). Mapping identified two groups of narrow, sub-parallel 2 to 30 centimeter wide calcite-quartz veinlets, some of which contain strong gold and silver mineralization. The first group of veinlets has an east-northeasterly trend and extends 120 to 200 meters along strike with a width of 100 meters.

The second group of veinlets is located approximately 200 m north of the first group, has an easterly trend and 60 to 80° dip to the south and extends 300 meters along strike with an 80 meter width.

A total of 39 rock chip samples contain gold values ranging from <0.05 ppm to 8.11 ppm (over 0.2 meters), with six of the samples above 2 ppm gold (Appendix 2). Silver values range from <0.02 ppm to 253 ppm (over 0.4 meters), with seven samples at or above 29 ppm silver. Lead and zinc range from 2 ppm and 7 ppm to 4,460 ppm lead and 2,690 ppm zinc over 0.4 meters, respectively.

Pathfinder elements like mercury and antimony report assays up to 32 ppm and 2280 ppm, respectively, suggesting that the veinlets may represent high level leakage, an idea supported by the presence of geophysical anomalies (chargeability highs and resistivity lows) starting at a depth of 50 to 100 meters below surface (see section 9.1).

10.0 DRILLING

10.1 Drilling progress

Between March 2010 and October 2011, Quaterra completed Phase VII and Phase VIII drill programs. B.D.W. International Drilling of Mexico S.A. de C.V. was contracted to perform the drilling.

Drill holes were located using a RTK Trimble (model R8), double frequency GPS with precision to 1 cm. Down hole survey readings were recorded on average approximately every 50 m using an Eastman Single Shot instrument. Survey results have been corrected for magnetic declination (+9º).

When completed, drill holes are capped with an approximately 45 cm square concrete slab with the drill hole number etched into it for permanent identification (Figure 10-1).

Figure 10-1 Typical Drill Hole Cap and Marker (photo by Doris Fox)

10.1.1 Phase VII

Phase VII diamond drill program on the Nieves Property in Zacatecas, Mexico commenced on March 2010 and was completed at the end of February 2011. Twenty-eight NQ holes were drilled comprising 7759 m (Figure 10-3 and Table 10-1).

The phase VII drill program was designed to test numerous IP anomalies on several separate vein systems that appeared similar to other anomalies associated with known mineralization.

Fourteen drill holes were drilled on the Gregorio North area, two holes were drilled on the Dolores area, six holes were drilled on the Concordia area, four holes were drilled on the California area and two holes were drilled on the Santa Rita area (Table 10-1 and Figure 10-2).

All drill holes in Phase VII drill program were drilled with a 340° azimuth and -60° or -55° dip. True thicknesses are approximately 80% of intercept width.

The average overburden depth is 4.34 m with a maximum overburden depth of 20.5 m in drill hole QTA115.

Table 10-1 Summary of drill holes in Phase VII drill program

Hole	Easting	Northing	Elevation (m)	Length (m)	Azimuth	Dip	Year	Area
QTA112	699720.12	2653353.7	1927.568	81.1	340	-60	2010	Gregorio North
QTA113	699758.32	2653307.8	1926.94	254	340	-60	2010	Gregorio North
QTA114	699836.51	2653346.2	1929.202	236	340	-60	2010	Gregorio North
QTA115	700177.49	2653418.6	1944.206	281	340	-60	2010	Gregorio North
QTA116	700350.75	2653434.7	1936.604	221	340	-60	2010	Gregorio North
QTA117	699950.9	2653359.1	1933.224	383	340	-55	2010	Gregorio North
QTA118	699569.93	2653232.2	1923.628	284	340	-60	2010	Gregorio North
QTA119	699333.74	2652752	1930.365	311	340	-60	2010	Concordia West
QTA120	699147.91	2652691.4	1936.267	314	340	-60	2010	Concordia West
QTA121	700245.45	2652662.2	1915.302	214.9	340	-60	2010	Dolores East
QTA122	699367.76	2653209.4	1930.962	300	340	-60	2010	Gregorio North
QTA123	699516.08	2652844.3	1929.679	342	340	-60	2010	Concordia West
QTA124	699642.23	2650423.9	1944.19	274	340	-60	2010	Santa Rita
QTA125	699148.31	2652196.9	1929.054	387	340	-55	2010	Dolores
QTA126	700041.92	2650555.9	1936.098	276	340	-60	2010	Santa Rita
QTA127	698690.69	2654815.4	1970.91	306	340	-60	2010	California
QTA128	698873.48	2654889.8	1957.357	210	340	-60	2010	California
QTA129	698543.72	2653096.5	1951.797	309	340	-60	2010	W Gregorio North
QTA130	699091.24	2654885.4	1966.625	201	340	-60	2010	California
QTA131	699185.46	2652598.1	1936.292	342	340	-60	2011	Concordia West
QTA132	699866.41	2653299.3	1929.045	300	340	-60	2011	Gregorio North
QTA133	699592.33	2653193.6	1923.98	318	340	-60	2011	Gregorio North
QTA134	699558.62	2653292.8	1925.184	252	340	-60	2011	Gregorio North
QTA135	700453.53	2653435.3	1945.72	279	340	-60	2011	Gregorio North
QTA136	700162.76	2653143.7	1926.229	219	340	-60	2011	Concordia East
QTA137	699329.56	2654907.2	1962.372	243	340	-60	2011	California
QTA138	700553.82	2653434	1958.641	303	340	-60	2011	Gregorio North
QTA139	698957.36	2652621.3	1944.003	318	340	-60	2011	Concordia West / W Gregorio North
			Total	**7759**				

Figure 10-2 Areas of mineralization on the Nieves Property

10.1.2 Phase VIII

Phase VIII drill program commenced in June, 2011 and was completed in October, 2011. Forty-five NQ holes were drilled comprising 10,788.25 m (Figure 10-3 and Table 10-2). Phase VIII drill program was designed to test extensions and shallower parts of the La Quinta-Concordia and Gregorio North vein systems.

Five drill holes were drilled on the Gregorio North area, 2 holes were drilled on the Concordia East area, 12 holes were drilled on the Concordia West area, 5 holes were drilled on the La Quinta area, 3 holes were drilled on the Concordia West/Gregorio North/Orion area, 2 holes were drilled on the Disquito Orion East area, located south of Orion East and northwest of the Concordia vein, 2 holes were drilled on the California area, 13 holes were drilled on the Santa Rita area and 1 hole was drilled on the Mariana vein, located southwest of the Jasperoide Grande vein (Figure 10-2).

All drill holes in Phase VII drill program were drilled with an azimuth between 320° and 340° and a dip between -60° or -50°. True thicknesses are approximately 80% of intercept width.

The average overburden depth is 2.09 m with a maximum overburden depth of 6.25 m in drill hole QTA181.

Table 10-2 Summary of drill holes in Phase VIII drill program

Hole	Easting	Northing	Elevation (m)	Length (m)	Azimuth	Dip	Year	Area
QTA140	699679.49	2652985.99	1922.66	203.00	340	-60	2011	La Quinta
QTA141	699580.55	2652947.98	1928.26	209.00	340	-60	2011	La Quinta
QTA142	699490.84	2652902.20	1929.69	209.00	340	-60	2011	Concordia West
QTA143	699439.28	2652853.30	1930.76	224.00	340	-60	2011	Concordia West
QTA144	699306.58	2652816.26	1931.34	201.00	340	-60	2011	Concordia West
QTA145	698219.43	2652730.23	1961.47	288.00	350	-55	2011	Disquito Orion East
QTA146	699932.09	2653406.66	1933.63	168.00	340	-60	2011	Gregorio North
QTA147	700040.00	2653388.96	1938.15	243.00	340	-60	2011	Gregorio North
QTA148	700113.57	2653395.89	1944.83	309.00	340	-60	2011	Gregorio North
QTA149	700225.22	2653473.81	1938.98	219.00	340	-60	2011	Gregorio North
QTA150	700331.57	2653481.07	1936.18	195.00	340	-60	2011	Gregorio North
QTA151	699940.47	2653131.74	1926.37	141.00	340	-60	2011	Concordia East
QTA152	699866.01	2653083.40	1924.78	105.00	340	-60	2011	La Quinta
QTA153	699220.45	2652787.49	1932.88	237.00	340	-60	2011	Concordia West

Hole	Easting	Northing	Elevation (m)	Length (m)	Azimuth	Dip	Year	Area
QTA154	699286.99	2652862.97	1932.00	213.00	340	-60	2011	Concordia West
QTA155	699432.02	2654911.44	1965.33	180.00	340	-60	2011	California
QTA156	698965.19	2654753.10	1959.09	228.00	340	-60	2011	California
QTA157	699125.20	2652745.03	1935.38	258.00	340	-60	2011	Concordia West
QTA158	699235.86	2649896.45	1970.28	459.00	320	-60	2011	Santa Rita
QTA159	699319.96	2649969.11	1965.00	357.00	320	-50	2011	Santa Rita
QTA160	699202.63	2649874.95	1975.94	408.00	320	-50	2011	Santa Rita
QTA161	699124.64	2649887.81	1982.16	333.00	320	-50	2011	Santa Rita
QTA162	699345.81	2650090.86	1955.02	252.00	320	-50	2011	Santa Rita
QTA163	699347.47	2650173.36	1961.65	144.00	320	-50	2011	Santa Rita
QTA164	699102.80	2649918.28	1986.84	219.00	320	-50	2011	Santa Rita
QTA165	699421.93	2650157.06	1957.72	309.00	320	-50	2011	Santa Rita
QTA166	698919.55	2652714.62	1942.58	300.00	340	-60	2011	Concordia West / Gregorio North/Orion
QTA167	698585.54	2652721.11	1953.82	282.00	340	-60	2011	Disquito Orion East
QTA168	699033.47	2652715.39	1938.03	270.00	340	-60	2011	Concordia West
QTA169	699470.94	2650253.03	1956.51	210.00	320	-50	2011	Santa Rita
QTA170	699051.92	2652668.43	1939.21	327.00	340	-60	2011	Concordia West
QTA171	699455.19	2650120.90	1951.72	381.00	320	-50	2011	Santa Rita
QTA172	699015.67	2652762.84	1937.83	237.00	340	-60	2011	Concordia West / Gregorio North/Orion
QTA173	698986.70	2652698.14	1940.64	288.00	340	-60	2011	Concordia West
QTA174	699383.87	2650124.39	1955.57	318.00	320	-50	2011	Santa Rita
QTA175	698957.81	2652768.33	1939.26	201.00	340	-60	2011	Concordia West / Gregorio North/Orion
QTA176	699414.43	2652898.07	1931.56	228.00	340	-60	2011	Concordia West
QTA177	699458.47	2650189.87	1960.24	227.75	320	-50	2011	Santa Rita
QTA178	699476.14	2652947.48	1929.10	144.00	340	-60	2011	Concordia West
QTA179	699561.90	2652995.22	1924.95	111.00	340	-60	2011	La Quinta
QTA180	699669.62	2653009.59	1922.70	141.00	340	-60	2011	La Quinta
QTA181	699416.01	2650090.31	1952.94	282.00	320	-50	2011	Santa Rita
QTA182	699404.98	2652921.32	1930.83	147.00	340	-60	2011	Concordia West
QTA183	700181.03	2653097.25	1924.47	195.00	340	-60	2011	Concordia East
QTA184	697303.26	2652466.07	1964.40	187.50	350	-50	2011	Mariana vein
			Total	**10788.25**				

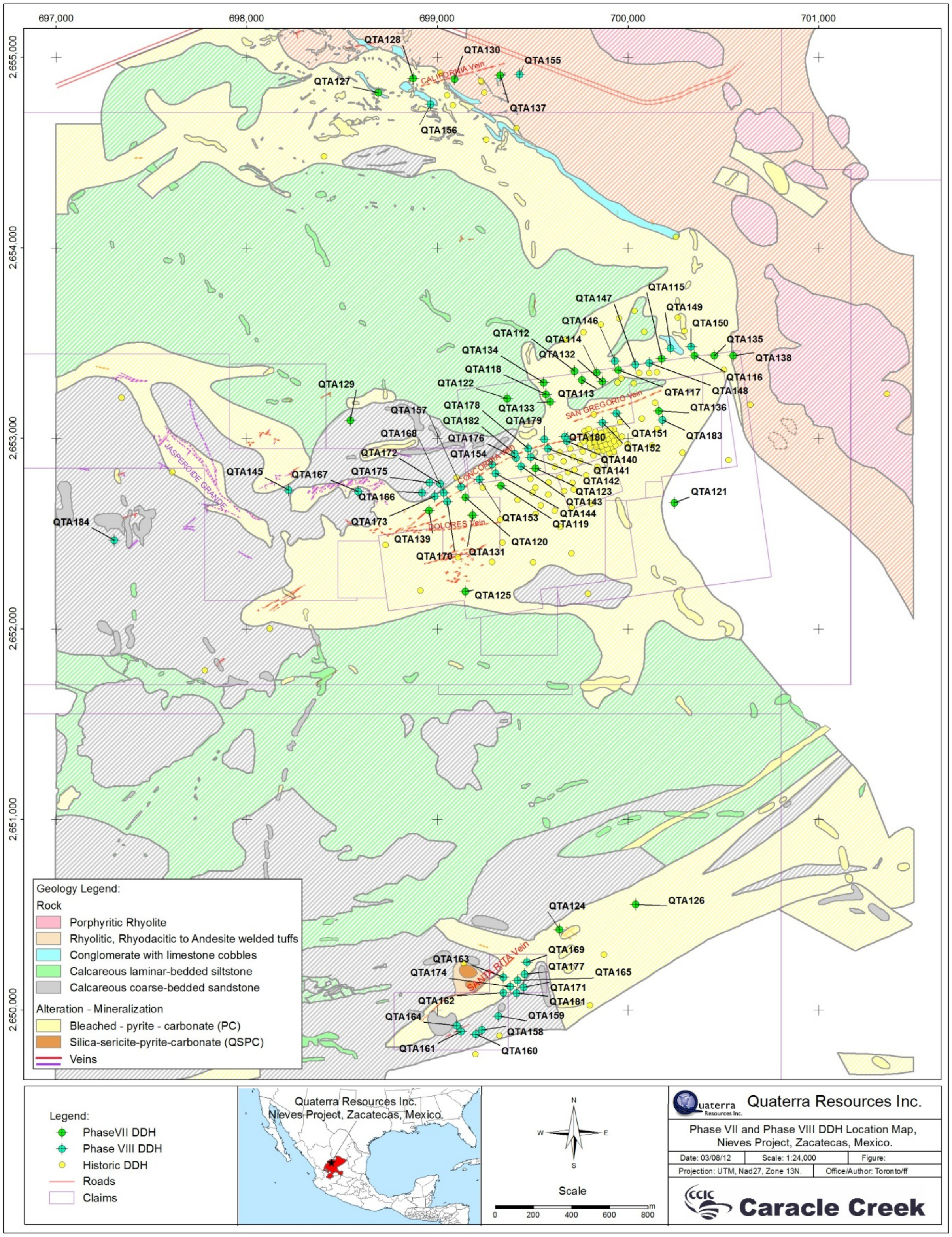

Figure 10-3 Location of drill holes in Phase VII and VIII drill programs

10.2 Sampling procedures

Core boxes were collected from the drill site and brought to the core storage facility on the Nieves Property for logging and sampling by the project or assistant geologists on a daily basis. The drill core was washed, photographed and core recovery estimated. Rock types, alteration minerals, textural and structural features, veining, and mineralized zones documented. Sample intervals were selected and measured, marked with permanent marker and given a sample number and sample tag by the geologists (Figure 10-4). From this point, technicians were given the core to split, using a core saw, into halves where one half of each interval was placed with the sample tag into a sample bag and marked with the sample number. The other half was placed back into the core box in its original position and the core boxes were then stacked on racks and stored in order and by hole number in their core storage facility.

The geologists visually selected sample intervals based on the presence of quartz-carbonate veins, silicification or the presence of sulphide minerals. The rock surrounding any significant mineralized zones was also sampled for several metres above and below the mineralization. Samples were placed into individual plastic bags marked with a unique sample identification number and with a sample tag placed into the bag. Sample ID numbers and meterages were also written on the core trays. Samples were then packaged into sealed sacks and taken by ALS employees to ALS Minerals Laboratories in Guadalajara, Mexico for preparation.

A total of 2884 samples were analyzed in Phase VII drill program, not including standards and blanks (Table 10-3). The length of samples in Phase VII ranges from 0.05 to 3 m; the average length is 1.51 m. 83 blanks and 45 standards were also sent for analysis. No core duplicates were included.

A total of 4876 samples were analyzed in Phase VIII drill program, not including QC samples (standards, blanks and core duplicates) (Table 10-4). The length of samples in Phase VIII ranges from 0.05 to 2.25 m; the average sample length is 1.69 m.

Figure 10-4 A) Core tray marked with hole ID, depth to-from of core and box number. B) typical sample ID marking in core box. C) Locked core storage 1 of 5. D) Core storage.

Table 10-3 Phase VII sampling details

Hole number	Length (m)	Number of samples	Samples/metre	Job number	Date
QTA112	81.10	37	0.68	ZA10140961	10/01/10
		18		ZA10148691	10/13/10
QTA113	254.00	153	0.60	ZA10148694	10/13/10
QTA114	236.00	16	0.36	ZA10153208	10/22/10
		70		ZA10148693	10/13/10
QTA115	281.00	130	0.50	ZA10153209	10/22/10
		11		ZA11005448	01/15/11
QTA116	221.00	78	0.52	ZA10159929	11/03/10
		37		ZA10155630	10/22/10
QTA117	383.00	177	0.46	ZA10161270	11/03/10
QTA118	284.00	167	0.59	ZA10167368	11/12/10
QTA119	311.00	126	0.41	ZA10173032	11/22/10
QTA120	314.00	93	0.38	ZA10173033	11/22/10
		27		ZA11005449	01/15/11
QTA121	214.90	79	0.37	ZA10179912	11/22/10
QTA122	300.00	67	0.22	ZA10179911	11/22/10
QTA123	342.00	106	0.35	ZA10179913	12/01/10
		6		ZA11005449	01/15/11
		7		ZA11007460	01/15/11
QTA124	274.00	61	0.24	ZA10187370	12/11/10
		6		ZA11007461	01/15/11
QTA125	387.00	133	0.34	ZA10187372	12/11/10
QTA126	276.00	72	0.26	ZA10187371	12/11/10
QTA127	306.00	53	0.17	ZA10187359	12/11/10
QTA128	210.00	69	0.33	ZA10189496	12/15/10
QTA129	309.00	83	0.27	ZA10189498	12/15/10
QTA130	201.00	55	0.42	ZA10189497	12/15/10
		10		ZA11056474	04/06/11
		20		ZA11007462	01/15/11
QTA131	342.00	114	0.33	ZA11011198	01/22/11
QTA132	300.00	121	0.40	ZA11011199	01/22/11
QTA133	318.00	134	0.42	ZA11014010	01/28/11
QTA134	252.00	104	0.41	ZA11014011	01/28/11
QTA135	279.00	114	0.41	ZA11017991	02/04/11
QTA136	219.00	63	0.29	ZA11022430	02/12/11
QTA137	243.00	62	0.26	ZA11022299	02/12/11
QTA138	303.00	125	0.41	ZA11022432	02/12/11

Hole number	Length (m)	Number of samples	Samples/metre	Job number	Date
QTA139	318.00	80	0.25	ZA11022431	02/12/11
	Total	**2884**			

Table 10-4 Phase VIII sampling details

Hole number	Length (m)	Number of samples	Samples/metre	Job number	Date
QTA140	203	86	0.42	ZA11112572	06/20/11
QTA141	209	83	0.44	ZA11112573	06/20/11
		9		ZA11220707	10/25/11
QTA142	209	88	0.51	ZA11112574	06/20/11
		8		ZA11123527	07/02/11
		10		ZA11220708	10/25/11
QTA143	224	95	0.49	ZA11123529	07/02/11
		15		ZA11220709	10/25/11
QTA144	201	45	0.44	ZA11123526	06/20/11
		33		ZA11133978	07/15/11
		11		ZA11220720	10/25/11
QTA145	288	87	0.30	ZA11133979	07/15/11
QTA146	168	78	0.46	ZA11134790	07/15/11
QTA147	243	131	0.57	ZA11134791	07/15/11
		8		ZA11220721	10/25/11
QTA148	309	140	0.45	ZA11140962	07/24/11
QTA149	219	66	0.37	ZA11140961	07/24/11
		14		ZA11220722	10/25/11
QTA150	195	70	0.40	ZA11140919	07/24/11
		8		ZA11220723	10/25/11
QTA151	141	43	0.30	ZA11140960	07/24/11
QTA152	105	38	0.36	ZA11140918	07/24/11
QTA153	237	128	0.54	ZA11150810	08/04/11
QTA154	213	128	0.60	ZA11150811	08/04/11
QTA155	180	80	0.44	ZA11150812	08/04/11
QTA156	228	110	0.48	ZA11150813	08/04/11
QTA157	258	130	0.53	ZA11166414	08/22/11
		8		ZA11220724	10/25/11
QTA158	459	247	0.54	ZA11166415	08/22/11
QTA159	357	128	0.52	ZA11166413	08/22/11
		59		ZA11165784	09/04/11
QTA160	408	199	0.49	ZA11166416	08/22/11
QTA161	333	186	0.56	ZA11165787	09/04/11
QTA162	252	111	0.44	ZA11165785	09/04/11
QTA163	144	77	0.53	ZA11165786	09/04/11
QTA164	219	99	0.45	ZA11165788	09/04/11
QTA165	309	178	0.58	ZA11184761	09/13/11
QTA166	300	82	0.32	ZA11184760	09/13/11

Hole number	Length (m)	Number of samples	Samples/metre	Job number	Date
		14		ZA11220725	10/25/11
QTA167	282	105	0.37	ZA11183739	09/13/11
QTA168	270	145	0.57	ZA11183738	09/13/11
		8		ZA11220726	10/25/11
QTA169	210	98	0.47	ZA11183737	09/13/11
QTA170	327	134	0.41	ZA11190047	09/21/11
QTA171	381	139	0.36	ZA11190046	09/21/11
QTA172	237	66	0.28	ZA11190048	09/21/11
QTA173	288	105	0.36	ZA11190049	09/21/11
QTA174	318	183	0.58	ZA11177246	09/25/11
QTA175	201	82	0.41	ZA11177248	09/25/11
QTA176	228	87	0.38	ZA11177249	09/25/11
QTA177	227.75	87	0.38	ZA11177247	09/25/11
QTA178	144	72	0.50	ZA11182540	09/25/11
QTA179	111	59	0.53	ZA11182541	09/25/11
QTA180	141	51	0.36	ZA11182542	10/18/11
QTA181	282	95	0.34	ZA11182543	09/25/11
QTA182	147	83	0.56	ZA11220727	10/25/11
QTA183	195	91	0.47	ZA11220728	10/25/11
QTA184	187.5	56	0.30	ZA11220729	10/25/11
	Total	**4876**			

10.3 Drill Data and Drilling Results

Phase VII and Phase VIII drill programs were very successful at increasing the size of the known mineralized zones along most of the major vein systems on the Nieves Property. Drill highlights are summarized in Table 10-5, Table 10-6 and Table 10-7.

The best intersections include 149 g/t Ag and 0.11 g/t Au over 31.25 m, which includes 6320 g/t Ag and 1.82 g/t Au over 0.25 m in drill hole QTA123 along the Concordia West vein, 104 g/t Ag over 19 m, including 6410 g/t Ag over 0.1 m and 5960 g/t over 0.1 m in drill hole QTA137 along the California vein, and 152.2 g/t Ag and 0.12 g/t Au over 57 m in drill hole QTA144 in the Concordia West area (Table 10-5, Table 10-6 and Table 10-7).

10.3.1 Concordia

A total of 28 drill holes were drilled along the Concordia vein system, which includes the Concordia East, La Quinta and the Concordia West areas.

Twenty drill holes were drilled in the Concordia West area, extending the mineralized zone approximately 200 m to the west. Most of the drill holes (QTA119, QTA120, QTA123, QTA131, QTA139, QTA143, QTA144, QTA153, QTA157, QTA168, QTA170 and QTA172) intersected significant mineralization, but holes QTA131, QTA139, QTA166 and QTA167 did not intersect significant mineralization (Table 10-5, Table 10-6 and Table 10-7). Mineralization remains open to the west.

The Concordia East area was tested with three drill holes (QTA136, QTA151 and QTA183), two of which intersected high grade mineralization extending the mineralized zone 200 m east of the La Quinta area.

The total length of the known mineralized zone along the Concordia vein system was extended to approximately 1300 meters. Stockwork style mineralization, typical of Concordia vein, has now been intersected on a minimum spacing of 100 m over a total strike length of 1000 m. Holes QTA140, QTA141, QTA142, QTA152, QTA154, QTA176, QTA178, QTA179, QTA180 and QTA182 intersected low to moderate grade Ag mineralization at shallow depth, suggesting the presence of mineralization up-dip, near surface (Table 10-6 and Table 10-7).

10.3.2 California

A total of 6 drill holes (QTA127, QTA128, QTA130, QTA137, QTA155 and QTA156) were drilled along the California vein system. QTA130 intersected several shallow, stockwork style mineralization (Table 10-5). Holes QTA137 and QTA155 were drilled near the east end of previously known mineralization and intersected high grade mineralization (Table 10-5 and Table 10-6). QTA127, drilled to the west of the known mineralized zone, did not intersect significant mineralization.

Recent drilling increased the length of known mineralization along the California vein system to approximately 550 m and mineralization remains open to the east.

10.3.3 Gregorio North

A total of 18 holes were drilled along the Gregorio North vein system. Holes QTA112 to QTA118, QTA122, QTA132, QTA133 and QTA134 traced the Gregorio North vein for an additional 500 m to the west (Table 10-5). The grade and thickness of the vein decreases to the west, indicated by drill holes QTA122, QTA133 and QTA134. The two best holes (QTA115 and QTA116) are located on the east end of the Gregorio North vein. Holes QTA135 and QTA138 intersected weak mineralization in the vein 100 and 200 m further to the east.

Phase VII and VIII drill programs were successful in doubling the strike length of the Gregorio North vein, extending the strike length of the vein to approximately 1200 m.

10.3.4 Santa Rita

A total of 15 drill holes systematically tested the Santa Rita vein system over 500 along strike, the total length of mineralization was extended to approximately 750 m and remains open to the west. Drilling suggests the presence of several parallel vein systems.

Most of the drill holes intersected significant mineralization (Table 10-6 and Table 10-7). Low grade Ag mineralization was intersected in holes QTA161 and QTA169. Holes QTA124 and QTA126, drilled east of the known mineralization on the Santa Rita vein, intersected weak mineralization.

10.3.5 Other areas

Two holes (QTA121 and QTA125) intersected weak mineralization on the Dolores vein (Table 10-5). QTA129 drilled at Orion failed to return any mineralization (Table 10-5). Hole QTA184 was drilled along the Mariana vein, but failed to intersect significant mineralization.

Table 10-5 Drill highlights of Phase VII exploration program

Hole	Area	From	To	Interval (m)	Au (g/tonne)	Ag (g/tonne)	Ag (oz/ton)	Pb (%)	Zn (%)
QTA112	Gregorio N	64.8	74.2	9.4	0.15	7	0.2	0	0.01
QTA113	Gregorio N	113.55	116	2.45	0.03	40	1.2	0.02	0.02
		138.5	146.95	8.45	0.06	16	0.5	0.01	0.02
		179.1	188.65	9.55	0.03	16	0.5	0.02	0.04
QTA114	Gregorio N	83.5	108.15	24.65	0.23	11	0.3	0.01	0.01
		126	162.65	36.65	0.08	20	0.6	0.01	0.03
includes		159	162.65	3.65	0.18	132	3.9	0.07	0.1
QTA115	Gregorio N	2	28.55	26.55	0.21	19	0.6	0.02	0.04
includes		22.5	28.55	6.05	0.22	59	1.7	0.06	0.13
		58.25	62.9	4.65	0.14	66	1.9	0.03	0.07
		152	173.65	21.65	0.13	32	0.9	0.02	0.04
QTA116	Gregorio N	58.05	73.7	15.65	0.08	17	0.5	0.02	0.06

Hole	Area	From	To	Interval (m)	Au (g/tonne)	Ag (g/tonne)	Ag (oz/ton)	Pb (%)	Zn (%)
		148.85	187.5	38.65	0.1	23	0.7	0.02	0.03
includes		180.7	183.15	2.45	0.25	120	3.5	0.07	0.16
QTA117	Gregorio N	70.75	85	14.25	0.13	14	0.4	0	0.01
		132	140	8	0.16	56	1.6	0.03	0.06
QTA118	Gregorio N	85.5	87.75	2.25	0.03	24	0.7	0.01	0.02
		99.5	101.05	1.55	0.03	27	0.8	0.01	0.03
		146.1	148.3	2.2	0.27	34	1	0.01	0.03
		154.5	157.85	3.35	0.1	31	0.9	0.03	0.12
		181.95	182.2	0.25	1.2	1175	34.3	0.85	1.6
		205	210.05	5.05	0.03	21	0.6	0.02	0.06
		221.1	224.3	3.2	0.03	57	1.7	0.14	0.21
QTA119	Concordia W	106.7	108.5	1.8	0.52	88	2.6	0.18	0.33
		136.55	142.1	5.55	0.04	30	0.9	0.02	0.04
		158.1	218.05	59.95	0.04	17	0.5	0.05	0.07
QTA120	Concordia W	48.1	52.5	4.4	0.33	15	0.4	0	0.02
		51.85	52.5	0.65	1.8	71	2.1	0.01	0.07
		170.6	182.3	11.7	0.06	36	1.1	0.04	0.27
QTA121	Dolores E	109.3	109.85	0.55	0.61	16	0.5	0	0.12
QTA122	Gregorio N	60.2	67.1	6.9	0.08	14	0.4	0	0.01
QTA123	Concordia W	103.6	181.7	78.1	0.06	69	2	0.07	0.08
		103.6	134.85	31.25	0.11	149	4.4	0.12	0.14
includes		114.4	128.25	13.85	0.12	290	8.5	0.2	0.24
includes		117.2	117.45	0.25	1.82	6320	184.5	2.96	2.94
QTA124	Santa Rita	118	124.6	6.6	0.03	30	0.9	0.06	0.09
QTA125	Dolores	84	87.7	3.7	0.23	11	0.3	0	0.02
		210	225	15	0.05	23	0.7	0.02	0.04
QTA128	California	128	131	3	0.07	13	0.4	0.01	0.02
QTA130	California	22	30	8	0.05	79	2.3	0.03	0.1
includes		26	28	2	0.07	215	6.3	0.08	0.17
		80.1	83	2.9	0.03	108	3.2	0.04	0.24
		99	105	6	0.03	89	2.6	0.03	0.03
includes		103	105	2	0.03	235	6.9	0.09	0.05
		157	158.9	1.9	0.05	119	3.5	0.04	0.1
QTA131	Concordia West	279.95	280.1	0.15	0.1	181	5.3	3.71	1.49

Hole	Area	From	To	Interval (m)	Au (g/tonne)	Ag (g/tonne)	Ag (oz/ton)	Pb (%)	Zn (%)
QTA132	Gregorio North	138	192.1	54.1	0.13	37.4	1.1	0.05	0.04
		204.95	212	7.05	0.03	20.4	0.6	0.03	0.03
QTA133	Gregorio North	207.6	207.7	0.1	0.92	1380	40.3	1.69	10.5
		222.5	222.65	0.15	1.18	1810	52.9	1.41	3.64
QTA134	Gregorio North	47.7	51	3.3	0.05	42.7	1.2	0.01	0.04
		110	111.85	1.85	0.11	66.2	1.9	0.03	0.05
		133	139.6	6.6	0.04	30.9	0.9	0.02	0.04
QTA135	Gregorio North	159	196.65	37.65	0.12	18.1	0.5	0.01	0.03
includes		160.1	162	1.9	0.21	121	3.5	0.02	0.13
includes		172.9	173.2	0.3	1.03	62.3	1.8	0.08	0.27
QTA136	Concordia East	84	90.7	6.7	0.23	92.9	2.7	0.03	0.11
includes		89.45	89.8	0.35	1.15	1510	44.1	0.51	1.81
QTA137	California	77	96	19	0.03	104	3	0.03	0.05
includes		80.55	85.4	4.85	0.03	342.5	10	0.12	0.15
includes		83.7	83.8	0.1	0.03	6410	187.2	2.06	3.28
includes		85.3	85.4	0.1	0.06	5960	174	2.53	0.44
QTA138	Gregorio North	187	195	8	0.14	24.8	0.7	0	0.05
includes		192.6	193	0.4	1.79	290	0.5	0.03	0.78
QTA139	Concordia West	291	293	2	0.03	15.5	0.5	0.01	0.02

Table 10-6 Drill highlights of Phase VIII exploration program from hole QTA140 to QTA169

Hole	Area	From	To	Interval (m)	Au (g/tonne)	Ag (g/tonne)	Ag (oz/ton)	Pb (%)	Zn (%)
QTA140	La Quinta	2	9.5	7.5	0.1	9.9	0.3	0	0.02
		19.2	60.1	40.9	0.12	27.9	0.8	0.01	0.04
includes		43.5	50.2	6.7	0.31	103.9	3	0.04	0.11
QTA141	La Quinta	21.05	41	19.95	0.27	17	0.5	0.02	0.07
includes		35	41	6	0.7	49.4	1.4	0.05	0.21
QTA142	Concordia West	39.9	49.15	9.25	0.34	65.4	1.9	0.03	0.04
		70.65	147	76.35	0.08	23.9	0.7	0.02	0.03
includes		92.05	101	8.95	0.11	80.9	2.4	0.06	0.09

Hole	Area	From	To	Interval (m)	Au (g/tonne)	Ag (g/tonne)	Ag (oz/ton)	Pb (%)	Zn (%)
		155.1	158.3	3.2	0.03	52.4	1.5	0.05	0.06
QTA143	Concordia West	68.1	76	7.9	0.17	15.3	0.4	0	0.01
		98	148	50	0.08	66.9	2	0.05	0.08
includes		108	146	38	0.08	81.5	2.4	0.07	0.1
includes		108	110	2	0.46	353	10.3	0.24	0.29
QTA144	Concordia West	32	38.5	6.5	0.29	12.6	0.4	0.01	0.03
		107	164	57	0.12	152.5	4.5	0.12	0.17
includes		109	125.65	16.65	0.23	290.9	8.5	0.23	0.3
includes		110.85	115.6	4.75	0.41	447.4	13.1	0.35	0.51
QTA145	Disquito Orion East	192.5	192.6	0.1	0.13	115	3.4	0.07	0.16
QTA146	Gregorio North	20	28.35	8.35	0.17	7.5	0.2	0	0.01
QTA147	Gregorio North	145.55	180	34.45	0.15	16.5	0.5	0.01	0.02
QTA148	Gregorio North	0.25	87	86.75	0.13	13.3	0.4	0	0.02
		155	186	31	0.09	30.3	0.9	0.02	0.04
QTA150	Gregorio North	17	29.85	12.85	0.11	6.5	0.2	0	0.02
QTA152	La Quinta	13	17	4	0.23	23.9	0.7	0.01	0.02
		50.3	53	2.7	0.61	20.7	0.6	0	0.02
QTA153	Concordia West	50.3	53	2.7	0.61	20.7	0.6	0	0.02
		107	187	80	0.1	37.5	1.1	0.05	0.07
includes		117.4	125.75	8.35	0.56	134.5	3.9	0.09	0.11
includes		120	121.5	1.5	2.71	317.2	9.3	0.2	0.2
includes		168.5	172.05	3.55	0.13	228.7	6.7	0.4	0.52
QTA154	Concordia West	34	114	80	0.03	18.1	0.5	0.01	0.03
QTA155	California	111.25	111.45	0.2	0.03	64	1.9	0.02	0.15
QTA156	California	90	98	8	0.08	31	0.9	0.01	0.03
QTA157	Concordia West	103	219	116	0.04	20	0.6	0.03	0.03
includes		106	116.05	10.05	0.06	59	1.7	0.02	0.07
includes		173.95	174.2	0.25	2.18	2140	62.5	1.54	2.48
includes		192.65	200.25	7.6	0.07	47	1.4	0.21	0.1
QTA167	Disquito	219.95	220.4	0.45	2.9	11	0.3	0	0.02
QTA168	Concordia West	15	20.6	5.6	1.22	5	0.1	0	0.01
		170.2	213	42.8	0.09	46	1.3	0.04	0.08
		172.1	183.2	11.1	0.14	93	2.7	0.07	0.12
		173.35	181.25	7.9	0.16	107	3.1	0.08	0.13
QTA158	Santa Rita	98	137.1	39.1	0.05	19	0.5	0.1	0.12
		241	259.7	18.7	0.03	18	0.5	0.07	0.25
QTA159	Santa Rita	61	82.8	21.8	0.03	25	0.7	0.09	0.19
includes		62.9	69.05	6.15	0.03	79	2.3	0.27	0.49
includes		68.6	69.05	0.45	0.03	556	16.2	2.07	4.83
		273	288	15	0.05	60	1.8	0.12	0.21
QTA160	Santa Rita	130	150	20	0.04	34	1	0.19	0.16
		200.45	244	43.55	0.08	15	0.4	0.05	0.08
		294	306	12	0.21	19	0.5	0.02	0.07
QTA161	Santa Rita	36	66	30	0.04	24	0.7	0.13	0.2
		124.75	265.6	140.85	0.06	20	0.6	0.03	0.06
includes		183.45	205	21.55	0.03	44	1.3	0.06	0.09
QTA162	Santa Rita	149.5	149.9	0.4	0.39	55	1.6	1.2	2.88
QTA163	Santa Rita	120.35	124.1	3.75	0.08	11	0.3	0.03	0.05
QTA164	Santa Rita	118	121.95	3.95	0.05	58	1.7	0.03	0.14

Hole	Area	From	To	Interval (m)	Au (g/tonne)	Ag (g/tonne)	Ag (oz/ton)	Pb (%)	Zn (%)
		142	153	11	0.03	77	2.3	0.15	0.21
QTA165	Santa Rita	117	163	46	0.03	19	0.6	0.05	0.05
		221.7	250	28.3	0.03	18	0.5	0.02	0.04
QTA169	Santa Rita	34	113	79	0.03	32	0.9	0.02	0.06
includes		68.1	70	1.9	0.03	210	6.1	0.15	0.08

Table 10-7 Ag and Au drill highlights in Phase VIII drill program from hole QTA170 to QTA184

Hole	Area	From	To	Interval (m)	Ag (g/t)	Au (g/)
QTA170	Concordia West	28.9	31	2.1	9.26	1.08
		199	223.3	24.3	45.04	0.04
including		203.15	213	9.85	106.20	0.04
		237	288	51	12.20	0.03
including		237	244.25	7.25	43.96	0.05
QTA171	Santa Rita	165	194	29	6.18	0.03
		300.9	303.05	2.15	15.72	0.37
		313	318	5	44.36	0.03
QTA172	Concordia West / Gregorio North/Orion	132.4	140	7.6	36.65	0.06
QTA173	Concordia West	178	221	43	13.42	0.03
including		204	213.85	9.85	29.37	0.04
QTA174	Santa Rita	140.35	169.05	28.7	5.97	0.07
including		161.15	166	4.85	17.18	0.20
		187.7	228.5	40.8	22.08	0.06
including		216	221.05	5.05	100.68	0.04
		249	295.6	46.6	25.33	0.08
including		268.2	272	3.8	188.95	0.09
QTA176	Concordia West	12	19.05	7.05	0.48	0.01
		37	109	72	15.22	0.03
including		80.75	84	3.25	62.04	0.03
		141	148	7	7.92	0.03
QTA177	Santa Rita	98	117	19	15.72	0.03
including		99.15	101	1.85	97.16	0.02
		146.55	152	5.45	29.61	0.05
		158.6	169	10.4	19.48	0.04
QTA178	Concordia West	7	28	21	13.60	0.03
including		25.8	28	2.2	81.91	0.04
		41.3	62	20.7	92.48	0.05
including		45	56	11	162.37	0.06
		92	98	6	11.97	0.03
QTA179	La Quinta	3	17	14	11.49	0.04
including		9	13	4	22.50	0.06
		99	102	3	51.64	0.09
QTA180	La Quinta	12.7	34.5	21.8	17.07	0.08
including		12.7	18	5.3	46.87	0.17
QTA181	Santa Rita	175.05	183	7.95	13.13	0.17
		201	205	4	13.76	0.03

Hole	Area	From	To	Interval (m)	Ag (g/t)	Au (g/)
QTA182	Concordia West	13	71	58	25.53	0.03
including		53.35	57.1	3.75	58.90	0.04
		93	100	7	8.64	0.03
QTA183	Concordia West	19	23	4	6.58	0.04
		43	44.85	1.85	118.64	0.08
		146	154.2	8.2	27.19	0.03
including		148.5	152	3.5	50.86	0.03

11.0 Sample Preparation, Analyses and Security

11.1 Sample Security

Core boxes are delivered to the core logging facility from the drill twice per day. The core is logged onsite and core samples are selected and marked by the logging geologist. No minimum or maximum sample lengths are used; the sample length is determined by the geologist based on presence and intensity of mineralization. The start and end of a sample and the sample ID are marked by the geologist on the side of the core box using a red permanent marker. The end of the box with the hole number is also marked with a red “X” for easy visual recognition in core storage. The marked core boxes are taken to the onsite core cutting area and the core is split into two halves using a water-cooled circular diamond saw (Figure 11-1). One half of the core is taken for analysis and the remaining half is left in the box for future reference and stored in the locked core storage facility. After a sample is cut, each sample is placed immediately in a plastic sample bag with a pre-printed sample tag supplied by the lab in booklets of 50 sequential, numerical tags. The depth to and from of the core sample are marked in the sample tag booklet. The sample bags are stapled shut and set aside. Once a significant number of samples have been bagged, the samples are placed in rice bags with predetermined standards, duplicates and blanks. Blank and duplicate sample tag id’s are recorded in the core box following the core sample.

Two to three times per month during the drill program, the samples were picked-up at the core logging facility in Nieves by an ALS Minerals operated transport truck. The truck transported the samples directly to the ALS prep lab in Guadalajara, Mexico. While waiting for the ALS truck to arrive, samples in rice bags are stored inside the locked core storage facility.

Figure 11-1 Core Cutting and sample prep area at core logging / core storage facilty (Photo by Doris Fox)

11.2 QA/QC procedures

11.2.1 Frequency of QC samples

In Phase VII, the 3069 samples sent for analysis included 83 blanks (3% of samples) and 45 standards (1% of samples) (Table 11-1). No core duplicates were included. Out of 44 jobs sent to the lab, no external standards were inserted into 9 of the jobs and no external blanks and standards were inserted into 13 jobs.

The frequency of insertion of the quality control samples in Phase VII drill program is adequate for this stage of the project, but the number of quality control samples and the frequency of their insertion should be higher in the future for a systematic monitoring of assay quality. According to Sketchley (1998), 10% to 15% of quality control samples should be included with every sample batch. Every 20 sample should include 1 standard, 1 blank and 1 duplicate.

Table 11-1 Frequency of QC samples in Phase VII drill program

Job number	No. of analyses	No. of blanks	No. of standards	No. of duplicates	Comments
ZA10140961	37	2			no standards
ZA10148691	18	1			no standards
ZA10148693	70	3			no standards
ZA10148694	153	7			no standards
ZA10153208	16	1			no standards
ZA10153209	130	5			no standards
ZA10155630	37	1			no standards
ZA10159929	78	4			no standards
ZA10161270	177	4	3		
ZA10167368	167	4	3		
ZA10173032	126	3	2		
ZA10173033	93	2	2		
ZA10179911	67	2	1		
ZA10179912	79	2	1		
ZA10179913	106	3	2		
ZA10187359	53	2	1		
ZA10187370	61	1	1		
ZA10187371	72	1	2		
ZA10187372	133	3	3		
ZA10189496	69	2	1		
ZA10189497	55	2	1		
ZA10189498	83	2	2		
ZA11005448	11				no standards, no blanks
ZA11005449	27				no standards, no blanks
ZA11005449	6				no standards, no blanks
ZA11007460	7				no standards, no blanks
ZA11007461	6				no standards, no blanks
ZA11007462	20				no standards, no blanks
ZA11011198	114	4	2		
ZA11011199	121	3	3		
ZA11014010	134	3	4		
ZA11014011	104	3	2		
ZA11017991	114	3	3		
ZA11022299	62	3			no standards
ZA11022430	63	1	2		
ZA11022431	80	3	1		
ZA11022432	125	3	3		
ZA11056474	10				no standards, no blanks
ZA11056475	25				no standards, no blanks
ZA11056476	3				no standards, no blanks
ZA11056477	51				no standards, no blanks
ZA11056478	63				no standards, no blanks
ZA11103978	19				no standards, no blanks
ZA11103979	24				no standards, no blanks
Total analysis	**3069**	**83**	**45**		
Percent of QC samples		**3%**	**1%**		

In Phase VIII, the 5315 samples sent for analysis included 132 external blanks (2% of samples), 130 external standards (2% of samples) and 177 core duplicates (3%) (Table 11-2). The frequency of QC samples improved in Phase VIII drill program, compared to Phase VII drill program, following recommendations given by Caracle Creek in August, 2011.

Table 11-2 Frequency of QC samples in Phase VIII drill program

Job number	No. of analyses	No. of blanks	No. of standards	No. of duplicates	Comments
ZA11112572	90	2	2		no core duplicates
ZA11112573	87	2	2		no core duplicates
ZA11112574	93	3	2		no core duplicates
ZA11123526	48	2	1		no core duplicates
ZA11123527	8				no core duplicates
ZA11123529	99	2	2		no core duplicates
ZA11133978	34		1		no core duplicates
ZA11133979	92	3	2		no core duplicates
ZA11134790	82	2	2		no core duplicates
ZA11134791	138	3	4		no core duplicates
ZA11140918	40	1	1		no core duplicates
ZA11140919	74	2	2		no core duplicates
ZA11140960	45	1	1		no core duplicates
ZA11140961	70	2	2		no core duplicates
ZA11140962	147	4	3		no core duplicates
ZA11150810	135	3	4		no core duplicates
ZA11150811	135	4	3		no core duplicates
ZA11150812	88	2	2	4	
ZA11150813	122	3	3	6	
ZA11165784	65	2	1	3	
ZA11165785	122	3	3	5	
ZA11165786	85	2	2	4	
ZA11165787	206	5	5	10	
ZA11165788	109	2	3	5	
ZA11166413	142	3	4	7	
ZA11166414	144	3	4	7	
ZA11166415	274	7	7	13	
ZA11166416	221	5	6	11	
ZA11177246	203	5	5	10	
ZA11177247	95	2	2	4	
ZA11177248	90	2	2	4	
ZA11177249	96	3	2	4	
ZA11182540	79	2	2	3	
ZA11182541	65	2	1	3	
ZA11182542	57	1	2	3	
ZA11182543	105	3	2	5	
ZA11183737	108	3	2	5	
ZA11183738	161	4	4	8	
ZA11183739	116	3	3	5	
ZA11184760	90	2	2	4	

Job number	No. of analyses	No. of blanks	No. of standards	No. of duplicates	Comments
ZA11184761	197	4	5	10	
ZA11190046	153	4	3	7	
ZA11190047	148	4	3	7	
ZA11190048	72	1	2	3	
ZA11190049	116	3	2	6	
ZA11220707	10		1		no core duplicates
ZA11220708	11		1		no core duplicates
ZA11220709	17	1	1		no core duplicates
ZA11220720	11				no core duplicates
ZA11220721	9	1			no core duplicates
ZA11220722	16	1	1		no core duplicates
ZA11220723	9	1			no core duplicates
ZA11220724	9	1			no core duplicates
ZA11220725	15		1		no core duplicates
ZA11220726	9		1		no core duplicates
ZA11220727	92	2	2	5	
ZA11220728	99	2	3	3	
ZA11220729	62	2	1	3	
Total analysis	**5315**	**132**	**130**	**177**	
Percent of QC samples		**2%**	**2%**	**3%**	

11.2.2 Blanks and standards

The source of blank material is a gravel (consisting of barren rocks) quarry located approximately 15 km to the west of the Nieves property and it is supplied by a local farmer by pick-up truck in bulk. The blank samples are prepared by Quaterra geotechs. The blank material is purposely put in plastic sample bags in weights heavier than most samples so that the sample weight can be used to help identify blanks when data is returned from the lab. Blank material is stored outside the core storage facility in sample bags within watertight plastic 45gallon drums.

Standard material is stored in the field office in 2L plastic jugs. The only external standard used is a custom made standard (KM 2653) prepared by Smee & Associates Consulting Ltd. Table 11-3 summarizes the standard information for Ag and Au.

The standard is characterized as a Provisional (not certified) standard for Au with a relative standard deviation between 5% and 15% and caution must be exercised when assessing the accuracy of data (Smee, 2010).

The analytical method used in the round robin of standard KM 2653 for Ag is 4 acid digestion followed by instrument finish and for Au is fire assay and instrument finish.

Table 11-3 Characteristics of customized standard inserted in Phase VII and VIII drill programs

Standard name	Prepared by	Element	Value (ppm)	Standard deviation	Analytical method	Standard type
KM 2653	CDN Resource Laboratories Ltd.	Ag	80.6	1.8	4 acid digestion and instrument finish	Certified (RSD*<5%)
KM 2653	CDN Resource Laboratories Ltd.	Au	0.062	0.004	Fire assay and instrument finish	Provisional (RSD* between 5 and 15%)

* RSD=Relative Standard Deviation

Standards are used to check the accuracy of the analysis. The rules for the standards and blank samples include:

1. The standard is considered a failure when it returns a value that falls outside ±3 standard deviation.

2. The standard is marked as a "warning" when it returns a value between ±2 and ±3 standard deviation. If three or more adjacent standards are on the same side of the Au mean value and fall between ±2 and ±3 standard deviation, then all standards are classified as failure. This may indicate a bias in the laboratory.

3. A blank sample greater than the maximum acceptable value, which is typically three times the detection limit, is a failure. A failure in the blanks indicates a contamination during sample preparation in the laboratory.

11.2.3 Duplicates

Core duplicates were inserted only in Phase VIII drill program. Lab duplicates were inserted in the laboratory.

Core and laboratory duplicates are used to check the precision of the analysis: analytical errors, sample preparation errors and nugget effect. The original values versus the duplicate values are plotted and compared. If the R^2 value of the correlation line is greater than 0.95%, all the duplicates pass. A duplicate is considered a failure when there is a large difference between the original and duplicate analyses and the value of the analysis falls outside the 0.95% confidence interval.

11.3 Sample Preparation

Samples were shipped to ALS Minerals Lab in Guadalajara, Mexico for preparation, then to ALS Minerals Vancouver, B.C. for analysis (Quaterra Resources Inc. webpage: www.quaterra.com). All ALS laboratories in North America are registered to ISO 9001:2008, and have received ISO 17025 accreditations for specific procedures (ALS Minerals website: www.alsglobal.com).

The samples were weighed, logged into the ALS Minerals system, fine crushed to 70%-2 mm or better, split using a riffle splitter and pulverized to 85% passing 75 microns or better.

11.4 Analytical methods

Silver was analyzed with two methods including aqua regia digest and a combination of ICP-AES (Inductively Coupled Plasma – Atomic Emission Spectroscopy) finish and fire assay and gravimetric finish. Gold was analyzed with fire assay and gravimetric finish (Table 11-4). The rest of the elements were analyzed with aqua regia digestion and ICP-AES finish.

In the aqua regia digest and ICP-AES finish, the samples are digested in aqua regia in a graphite heating block (ALS Minerals website: www.alsglobal.com). After cooling, the solution is diluted to 12.5 ml with deionized water, mixed and analyzed by ICP-AES. The results are corrected for inter-element spectral interferences.

In the fire assay and gravimetric finish, the samples are decomposed with fire assay fusion, during which the sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents to produce a lead button, which is cupelled to remove the lead (ALS Minerals website: www.alsglobal.com). The remaining gold and silver bead is separated in dilute nitric acid, annealed and weighed as gold. Silver is determined by the difference in weights.

Table 11-4 Description of analytical methods for Ag and Au

Analytical method	Element	Analyte range (ppm)	Sample weight	Description
ME-ICP41	Ag	0.2-100	>1 g	Aqua regia digestion and ICP-AES finish
ME-GRA21	Au	0.05-1,000	30 g	Fire assay and gravimetric finish

Analytical method	Element	Analyte range (ppm)	Sample weight	Description
ME-GRA21	Ag	5-10,000	30 g	Fire assay and gravimetric finish
Ag-OG46	Ag	1-1,000		Aqua regia digestion and ICP-AES finish

11.5 QA/QC procedures in ALS Minerals Labs

ALS Minerals inserted internal standards (Table 11-5), blanks and duplicates in every job at regular intervals.

For every 50 samples prepared, ALS Minerals inserts an additional split from the coarse crushed material to create a pulverizing duplicate, which is processed and analyzed in a similar manner to the other samples in the submission (ALS Minerals website: www.alsglobal.com).

Table 11-5 List of internal lab standards inserted by ALS Minerals

Standard name	Prepared by	Element	Certified value (ppm)	Standard deviation	Analytical method	Matrix
OREAS 67a	ORE Research and Exploration Pty Ltd.	Au	2.238	0.096	fire assay and AAS or OES finish	epithermal Au-Ag ore hosted in sedimentary and volcanic rocks
OREAS 67a	ORE Research and Exploration Pty Ltd.	Ag	33.6	2	4 acid digestion and AAS, OES or MS finish	epithermal Au-Ag ore hosted in sedimentary and volcanic rocks
OxQ70	RockLabs	Au	49.18	0.69	fire assay	feldspar with minor quantities of Au and Ag minerals
OxQ70	RockLabs	Ag	151.5	6.1	fire assay and/or acid digestion and instrument finish	feldspar with minor quantities of Au and Ag minerals
SP27	RockLabs	Au	18.1	0.429	fire assay and AAS or gravimetric finish	feldspar and pyrite with minor quantities of Au and Ag containing minerals
SP27	RockLabs	Ag	58.38	2.644	aqua regia, multi-acid, 4 acid digestion or fire assay and AAS, ICP-ES or gravimetric finish	feldspar and pyrite with minor quantities of Au and Ag containing minerals
SQ28	RockLabs	Au	30.14	0.473	fire assay and AAS or gravimetric finish	feldspar and pyrite with minor quantities of Au and Ag containing minerals

Standard name	Prepared by	Element	Certified value (ppm)	Standard deviation	Analytical method	Matrix
SQ28	RockLabs	Ag	11.02	0.72	aqua regia, multi-acid or 4 acid digestion and AAS, ICP-ES finish	feldspar and pyrite with minor quantities of Au and Ag containing minerals
GBM908-5	Geostats Pty Ltd.	Ag	58.2	4.4	variable?	oxide cap Ag ore
GBM908-10	Geostats Pty Ltd.	Ag	3	0.4	variable?	oxide copper Au ore
OREAS 15g	ORE Research and Exploration Pty Ltd.	Au	0.527	0.023	fire assay, AAS or OES	quart-feldspar-sericite schist in alkali basalt
OREAS 45p	ORE Research and Exploration Pty Ltd.	Ag	0.3	0.02	aqua regia, ICPOES/MS	ferriginous soil
OREAS 45c	ORE Research and Exploration Pty Ltd.	Ag	0.26	0.03	aqua regia, ICPOES/MS	ferriginous soil
SP49	RockLabs	Au	18.34	0.34	fire assay, instrument or gravimetric	feldspar minerals, basalt and pyrite with minor quantities of Au and Ag containing minerals
SP49	RockLabs	Ag	60.2	2.5	aqua regia, multi-acid, 4 acid digestion or fire assay and AAS, ICP-OES/AES/MS or gravimetric finish	feldspar minerals, basalt and pyrite with minor quantities of Au and Ag containing minerals
SQ44	RockLabs	Au	39.76	0.67	fire assay	feldspar and pyrite with minor quantities of Au and Ag containing minerals
SQ44	RockLabs	Ag	121.8	4.97	fire assay and/or acid digestion and instrument finish	feldspar and pyrite with minor quantities of Au and Ag containing minerals

11.6 Check assays

11.6.1 Phase VII

A total of 158 samples from Phase VII were sent for check assays to Skyline Assayers and Laboratories of Tucson, Arizona. The samples included 145 rejects from ALS Minerals, 3 ¼ core duplicates and their rejects from ALS Minerals, 4 blanks and 3 standards. The standard was the same customized standard inserted with the original assays (KM2653) (Table 11-3).

The analytical methods of check assay samples are summarized in Table 11-6. All Skyline laboratories have received ISO 17025 accreditations for the analytical methods used for the check assays (Skyline website: http://www2.skylinelab.com). Table 11-7 summarizes the properties of lab standards inserted by Skyline.

Table 11-6 Analytical methods of check assays at Skyline

Element	Analytical method	Description	Detection limit
Au	FA-3	Fire Assay - Gravimetric	0.03-1,000 ppm
Ag	FA-3	Fire Assay - Gravimetric	0.03-1,000 ppm
Ag	TE-2	Trace Elements by Aqua Regia leach analyzed by ICP/OES (32 elements)	0.2 ppm

Table 11-7 Summary of lab standards used by Skyline for Phase VII check assays

Standard name	Prepared by	Element	Value (ppm)	Standard deviation	Analytical method	Matrix
CU123	Skyline?	Ag	42.575	0.897	no data	no data
PB138	Skyline?	Ag	198.5	4.479	no data	no data
CDN-GS-10C	CDN Resource Laboratories Ltd.	Au	9.71	0.325	fire assay and gravimetric/ICP finish	mix of mineralized q veins in greywacke and blank granite
CDN-GS-5G	CDN Resource Laboratories Ltd.	Au	4.77	0.200	fire assay and AA/ICP finish	siliceous ores
CDN-GS-8A	CDN Resource Laboratories Ltd.	Au	8.25	0.300	fire assay and ICP finish	banded magnetite iron formation with gold bearing q shears

11.6.2 Phase VIII

A total of 127 samples from Phase VIII drill program were sent to AGAT Laboratories of Sudbury, Canada for preparation and sent to AGAT Laboratories of Mississauga, Ontario for analysis. The samples included 127 pulp rejects from ALS, 7 blanks, 4 silver standards and 3 gold standards. AGAT Laboratories is accredited and certified for ISO 9001 and ISO/IEC 17025 accreditations.

Table 11-8 Summary of external standards inserted in the check assay samples for Phase VIII drill program

Standard name	Prepared by	Element	Certified value (ppm)	Standard deviation	Analytical method	Matrix
OREAS 62c	Ore Research and Exploration Pty. Ltd.	Ag	8.76	0.49	aqua regia or 3 acid digest and instrument finish (AAS, OES, MS)	epithermal vein-style gold hosted by andesitic volcanic rocks
OxD87	Rocklabs	Au	0.417	0.013	fire assay and instrument or gravimetric finish	basalt with feldspar and minor quantities of gold-containing minerals

Analytical methods of check assays for Ag and Au at AGAT are the same as the analytical methods of the original samples (Table 11-9).

Table 11-9 Analytical methods of check assays for Ag and Au at AGAT Laboratories

Element	Analytical method	Description	Detection limit
Au	202064	Fire Assay, Gravimetric finish	<0.05 ppm
Ag	202066	Fire Assay, Gravimetric finish	<5 ppm
Ag	201073	Aqua Regia digest, ICP/OES finish	0.2 ppm

The names of the laboratory standards were not provided by AGAT, but the laboratory QC data indicates that internal standards were inserted for both Ag and Au. Five types of silver standards were inserted ranging from 116 and 811 g/t Ag in value. Two types of gold standards were inserted with values 0.922 and 5.865 g/t Au.

12.0 Data Verification

12.1 Caracle Creek Site Visit

A property site visit was conducted by D. Fox of Caracle Creek on March 11th and 12th, 2012. Several drill sites, artisanal pits, the core storage facility, geological logging area, sample cutting area and field office were all visited while onsite.

The property was accessed by toll highway from Zacatecas to Nieves. From Nieves, the property and core logging facility were accessed by dirt road. A network or narrow dirt roads and trails criss-cross the property from the logging facility to the drill sites and abandoned artisanal pits and shafts.

The compound containing the core logging and core storage facility contained within a chain link fence with locked gate preventing vehicle access (Figure 12-1 and Figure 12-2). Once inside the gated compound, the individual storage rooms are locked and prevent access to the core logging and core cutting areas. The onsite geology office is a separate building within the compound and is also kept locked. The main working office is located in the town of Nieves within a locked house compound and also serves as a field house for the geologists. Paper and digital maps, cross-sections and long sections are stored in the Nieves field house office.

Figure 12-1 Core storage and logging compound

Figure 12-2 Core storage by hole and depth

Several drill sites from the Phase VII and VIII drill programs were visited. The drill programs were completed before the site visit so it was not possible to see a drill in operation on the property. The drill sites are marked with a cement slab with the drill hole ID marked on the top (Figure 10-1). Using a handheld GPS the coordinates of three drill hole markers were recorded to compare with Quaterra's coordinates. The coordinates matched to within the error of the handheld GPS.

Table 12-1 Verification of drill hole locations

Hole ID	QTA Easting	QTA Northing	DF Easting	DF Northing	GPS Accuracy
QTA-143	699439.27	2652853.3	699436	2652851	± 5m
QTA-144	699306.58	2652816.26	699304	2652816	± 4m
QTA-166	698919.55	2652714.62	698918	2652708	± 6m

DF=Doris Fox site visit coordinates

Drilling activities are supported by the town of Nieves and Fresnillo. Drills are supplied by BDW drilling of Guadalajara and holes are drilled using HQ size core rods, reducing to NQ in deeper holes if conditions warrant. Standard drilling practices, such as marking the ends of 3m runs with wooden depth marker blocks are followed. Water for drilling is supplied by a deep water well at the logging compound pumped to the drill up to 1 kilometer away (Figure 12-3). Drilling activities greater than 1 kilometer from the compound are supplied water from the well by water truck into an onsite or nearsite sump.

Figure 12-3 Water well at logging compound

Claims in Mexico are staked as corner points from a known government located survey marker. The Nieves property is a series of claims each registered from the same central government survey monument (Figure 12-4 and Figure 12-5). The monument was visited by Ms. Fox during the site visit. A secondary “back-up” marker registered with the government is located approximately 2 meter from the main monument in the event the main monument is destroyed. Historically claim stakers were required to mark each of the corners of the claim with a separate claim-holder monument. This practice has been abandoned, however there are many monuments of various age scattered across the Nieves property as a testament to the long history of exploration on the property.

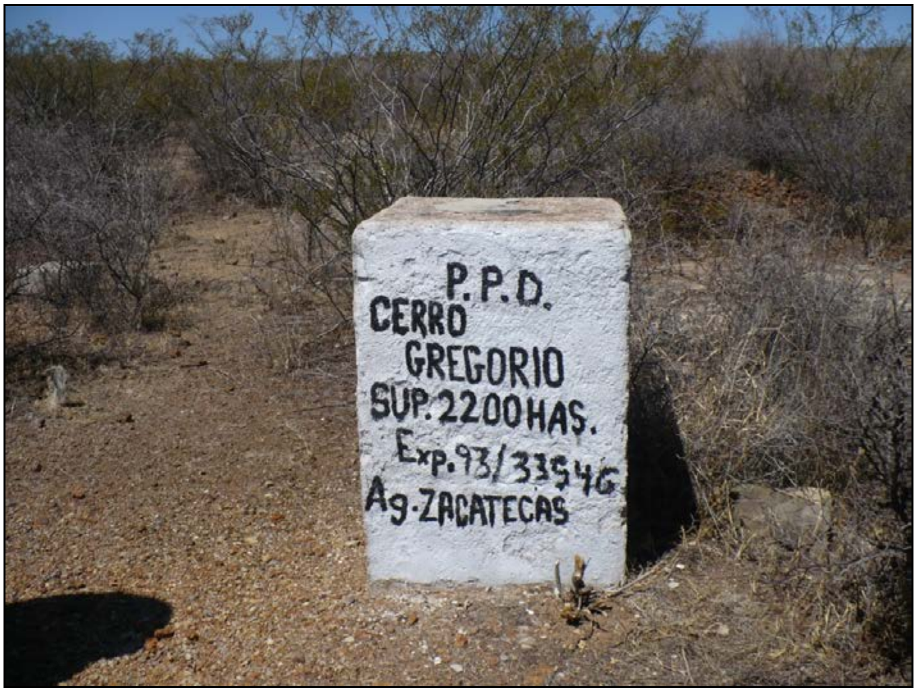

Figure 12-4 Federal survey claim marker monument

Figure 12-5 Federal survey claim marker with datum peg showing date, datum and federal identification number

Abandoned pits and shafts are visible from the main access road that runs from the logging compound south to the Santa Rita mill. Pits at Dolores, Concordia and Santa Rita were visited (Figure 12-6 and Figure 12-7). All pits and shafts are unmarked and no security fencing is present. The sides of the pits and shafts are unstable and the mineralized zone cannot be safely accessed. The extension of the mineralization cannot be traced at surface. No surface expression of the mineralization intersected in core exists on the property. Three samples from stockpiles alongside the pits were collected to verify the presence of mineralization in or around the abandoned workings (Table 12-2).

Figure 12-6 Dolores vein looking down the shaft

Figure 12-7 Concordia shaft

Since no surface expression of the mineralization exists, the site visit focussed on examination of core stored at the logging facility. A total of seven drill holes from Phase VIII were reviewed. The mineralized intersections were identified from cross-sections, and intervals for review were laid out in the core logging area. The assay results for the intervals were reviewed and random samples were selected for quarter splitting and cut by the Quaterra geotechs. Only some of the quarter samples were then selected for check assays and the rest of the cut samples remained in the core boxes in core storage. The selected samples were a mix of low, moderate and high grade to best verify the quality and accuracy of ALS Chemex. Core samples are summarized in Table 12-3.

The samples were bagged and tagged by Ms. Fox and placed in rice bags and then wooden boxes for transport while onsite. The samples remained with Ms. Fox during her visit and were transported by her to DHL in Zacatecas for shipment to Canada. The samples were shipped directly to the CCIC office in Sudbury, Canada. The samples were assigned a CCIC Sample ID and sent to AGAT Laboratories in Sudbury, Ontario for preparation and Mississauga, Ontario for analysis.

Table 12-2 Surface samples collected on the site visit

CCIC ID	Sample Id	Sample Type	Easting	Northing	Sample Location Description	Sample description
51642	df-001	Surface	699182	2650088	dump pile sample near Santa Rita vein	pieces of shale and sandstone in rubbly material, no sign of mineralization, altered, Fe-stained (Fe-oxides, hydroxides?) pieces
51643	df-002	Surface	699203	2650085	dump pile near Santa Rita vein	vein stockwork in shale, lots of pyrite, galena, sphalerite?, q (seems vuggy in places) in veinlets, weathered, Fe-rich oxides, pieces of sandstone or felsic volcanic rocks?
51644	df-003	Surface	699155	2652747	Concordia vein material	brecciated vein material, lots of stibnite? (elongated/acicular, slightly bluish metallic mineral), quartz (vuggy in places), calcite (maybe other carbonate too), some pyrite, host rock is fine grained, q-rich, light grey

Table 12-3 Quarter core samples selected on the site visit

CCIC ID	Sample Id	QTA Sample ID	Hole ID	From (m)	To (m)	Sample description
51645	df-004	571750	QTA-144	152.75	154.55	dark grey shale with stringers (~70 degrees to CA, 10%) composed of fine grained pyrite, calcite and quartz, minor sphalerite? (dark mineral), shale does not appear altered along the stringers, stringers are typically <5 mm, up to 2 cm wide
51646	df-005	571752	QTA-144	154.55	156	dark grey shale, calcite rich, with stringers (~5%, up to 1 cm in width, ~70 degrees to CA) composed of pyrite, calcite, quartz and sphalerite?, second generation of calcite veinlets (~50 degrees to CA) with no sulphides, shale is layered (fine and coarse grained layers) with no sign of alteration along veinlets, some stringers are zoned with pyrite, sphalerite and calcite/quartz (from edge to centre)
51647	df-006	571753	QTA-144	156	157	carbonaceous shale with fine and coarse layers, a few stringers (~30 degrees to CA, <5 mm in width) composed of pyrite calcite, quartz, minor sphalerite?
51648	df-007	571623	QTA-143	112	114	carbonaceous shale with fine and coarse layers, lots of stringers (90, 45, 25 degrees to CA, 15%) composed of pyrite, sphalerite, calcite, quartz. There are at least 3 generations of stringers. Some of the sphalerite postdates pyrite, suggested by crosscutting relationships. Thickness of veinlets is up to 2 cm, but generally ~5 mm.
51649	df-008	571624	QTA-143	114	116	carbonaceous shale with fine and coarse layers, a few stringers (~70 degrees to CA, <5 mm in width) composed of pyrite calcite, quartz, minor sphalerite?

CCIC ID	Sample Id	QTA Sample ID	Hole ID	From (m)	To (m)	Sample description
51650	df-009	658061	QTA-147	207	209	carbonaceous shale with fine and coarse layers, but more lighter, coarse grained layers than previous sample, a few stringers (70, 30 degrees to CA) , up to 1 cm in width, most stringers are parallel to layering in sediments and disseminated pyrite is also found in some of the finer grained layers in the sediment. Stringers are composed of pyrite, calcite, quartz, sphalerite?, silverish locally dendritic/elongated shaped mineral in wider veinlets, more along the edges of veins. May have been some movement along layers, open spaces/fractures filled with quartz/calcite
51651	df-010	658062	QTA-147	209	211	similar to previous sample, veinlets are mostly along bedding, large veins contain silverish mineral, not too shiny, maybe tarnished?
51652	df-011	658088	QTA-148	18	19	rock is broken up and rubbly, host rock is fine grained, light grey shale, but it is strongly silicified, bleached, more altered layers contain disseminated pyrite (~5% in the whole sample) and another dark tarnished mineral

The assay results of the site visit samples are shown in Table 12-4. Surface samples 51642 to 51644, collected near the Santa Rita and Concordia veins, returned high Ag values, verifying the presence of mineralization in the veins. The assays of the selected quarter core samples returned values reasonably well comparable to the original assays, considering the highly variable nature of the mineralization.

Table 12-4 Assay results of the site visit samples compared to the original samples

CCIC ID	Site visit samples		QTA sample ID	Original samples	
	Au (ppm)	Ag (ppm)		Au (ppm)	Ag (ppm)
51642	0.1	123			
51643	0.26	351			
51644	0.86	933			
51645	0.75	505	571750	0.42	442
51646	0.1	154	571752	<0.05	39
51647	0.27	11	571753	<0.05	<5
51648	0.3	163	571623	0.31	140
51649	0.1	64	571624	0.07	59
51650	0.1	27	658061	0.1	33
51651	0.1	7	658062	<0.05	10
51652	0.1	<5	658088	0.1	58

One drill hole, QTA-144, was reviewed in its entirety to compare logging descriptions and listed lithologies with actual core. The logging descriptions, lithologies and to-from depths were consistent with observations from the core. The sample intervals were marked on the sample boxes. During logging, the geologist photographs the core to maintain a complete record in the event core is destroyed. The core photos are digitally stored in the Nieves geology office by hole number and depth.

12.2 Quality Control

12.2.1 External blank and standard

The results of the external blank and standard for Phase VII and VIII are summarized in Table 12-5. The control charts for standard and blank for Ag analyzed with both methods are shown on Figure 12-8 to Figure 12-15. The control charts for Au are in Appendix 3 of the report.

Table 12-5 Failure rates of external blank and standard analysis in Phase VII and VIII

Standard name	Element	Analytical method	Phase VII		Phase VIII	
			Number of analysis	Failure rates	Number of analysis	Failure rates
Blank	Ag	ME-ICP41	83	8%	132	7%
Blank	Ag	ME-GRA21	83	0%	132	1%
Blank	Au	ME-GRA21	83	1%	132	1%
KM 2653	Ag	ME-ICP41	45	31%	129	29%
KM 2653	Ag	ME-GRA21	45	20%	129	20%
KM 2653	Au	ME-GRA21	45	89%	129	88%

Silver assays analyzed with the ME-ICP41 method are biased high (Figure 12-8 and Figure 12-12) and Ag assays analyzed with the ME-GRA21 method are biased low (Figure 12-9 and Figure 12-13). These biases show no correlation with time suggesting a systematic, not a temporary problem.

The failure rates of customized standard KM 2653 is high for Ag analyzed with both methods and very high for Au in both phases of drilling.

The main reason for the high failure rate of Ag with both methods is the difference in the analytical methods between that used to certify the standard and that used to analyze the drill core. The standard is certified for 4 acid digestion and instrument finish and Ag in the Nieves project was analyzed with aqua regia digestion and instrument finish and fire assay and gravimetric finish.

There are several reasons for the high failure rate of the standard for Au. One of them is the difference in methodology. The standard was analyzed for certification with fire assay and instrument finish and Au in the Nieves project was analyzed with fire assay and gravimetric finish.

The other reason for the high failure rate of the standard for Au is that the standard is classified as a provisional (not certified) standard for Au with an RSD (relative standard deviation) between 5 and 15%, therefore it should be used with caution when assessing the accuracy of data (Smee, 2010).

Also, the detection limit for Au is 0.05 ppm and the Au grade of standard is 0.062 ppm, which is very close to the detection limit, within the acceptable interval for a blank sample (3 times the detection limit).

The failure rates of the blank are acceptable for both Ag and Au in both phases of drilling.

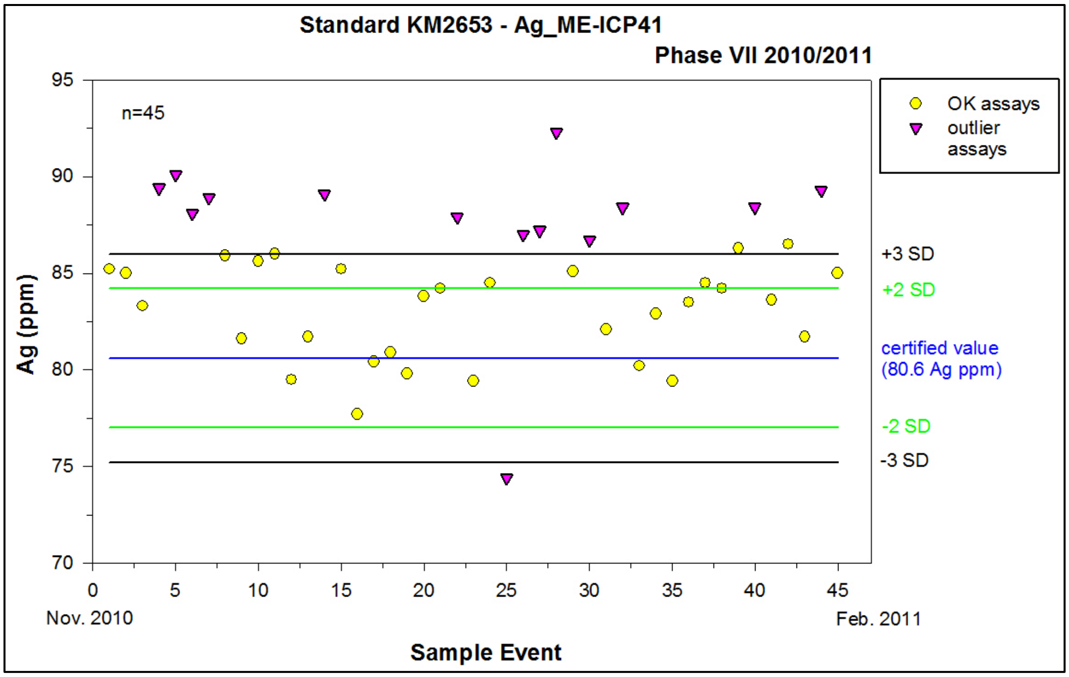

Figure 12-8 Control chart of standard KM2653 for Ag analyzed with ME-ICP41 method in Phase VII

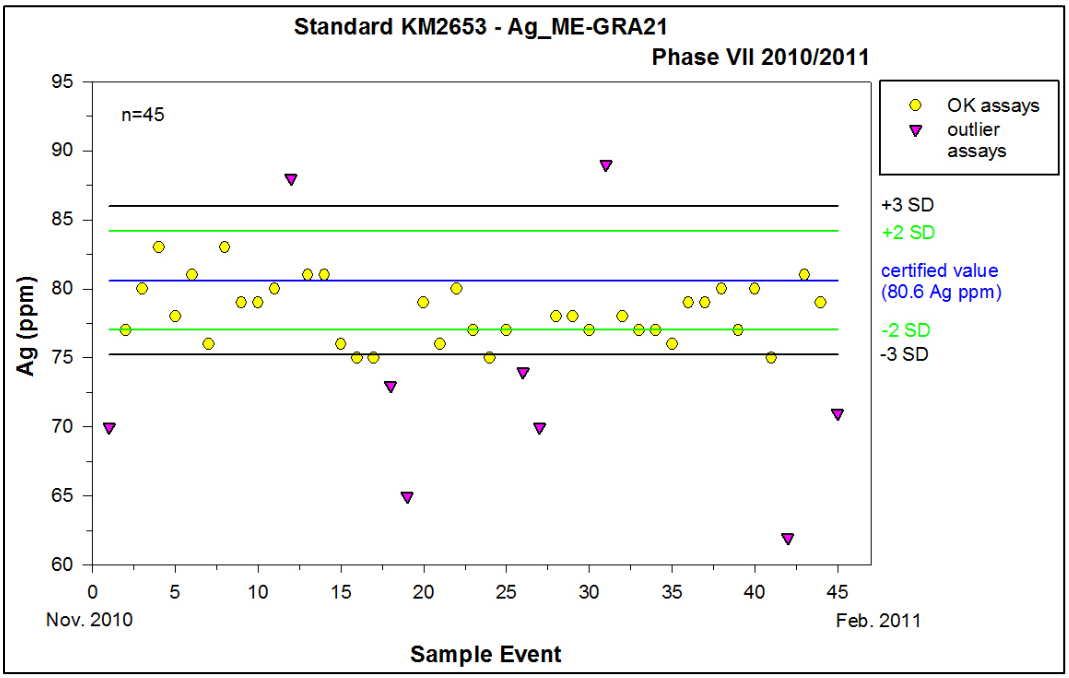

Figure 12-9 Control chart of standard KM2653 for Ag analyzed with ME-GRA21 method in Phase VII

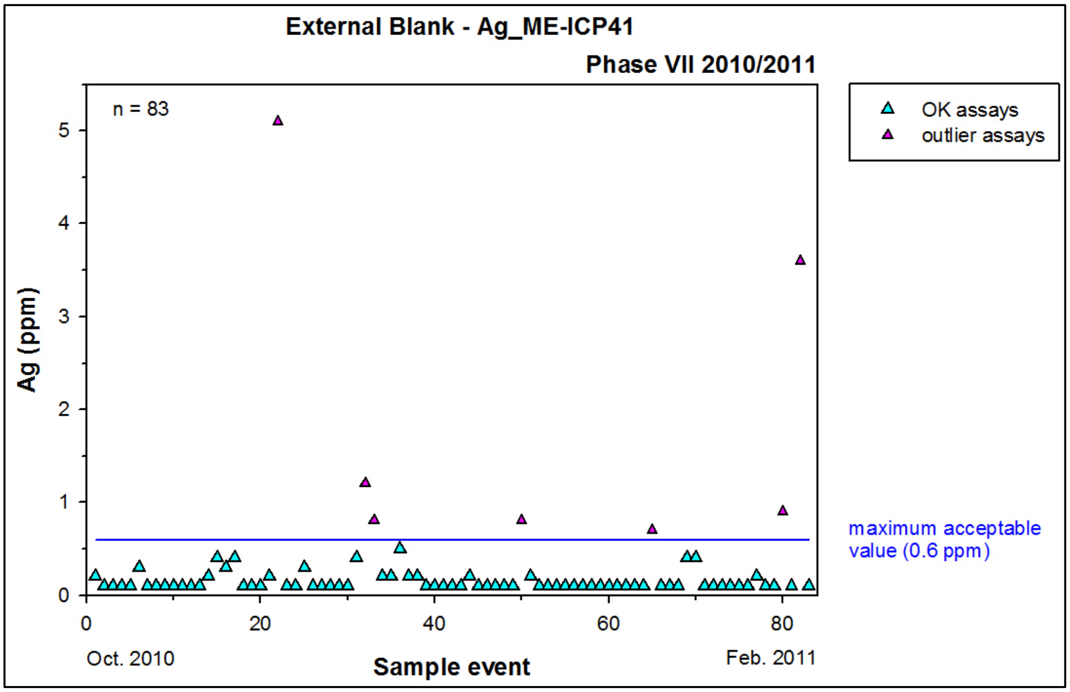

Figure 12-10 Analytical results of blank samples for Ag with ME-ICP41 method in Phase VII

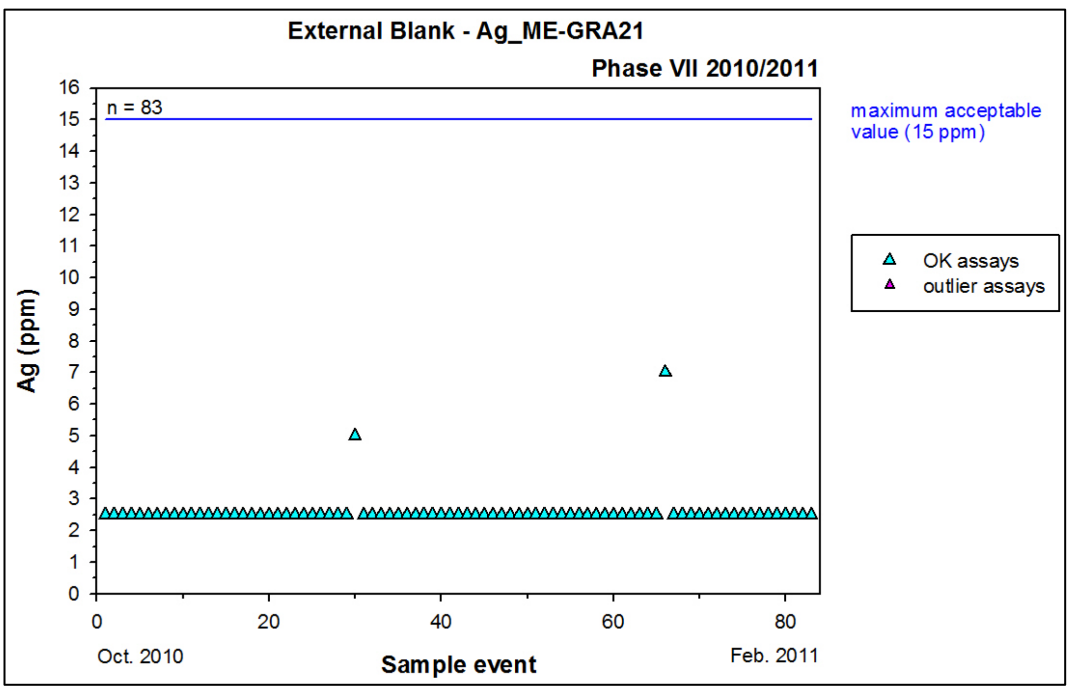

Figure 12-11 Analytical results of blank samples for Ag with ME-GRA21 method in Phase VII

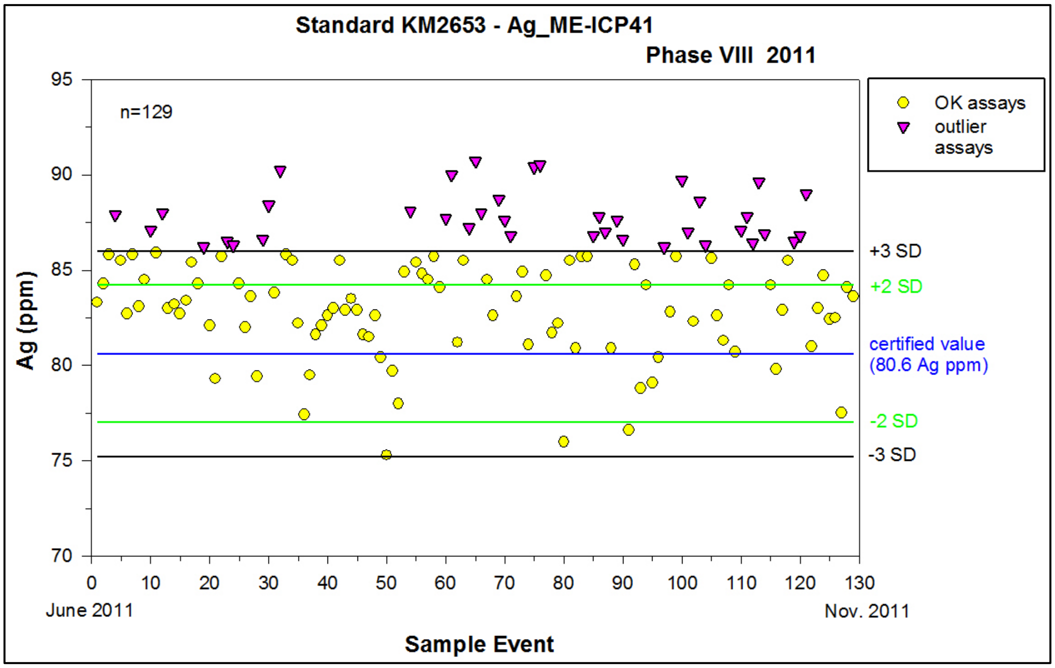

Figure 12-12 Control chart of standard KM2653 for Ag analyzed with ME-ICP41 method in Phase VIII

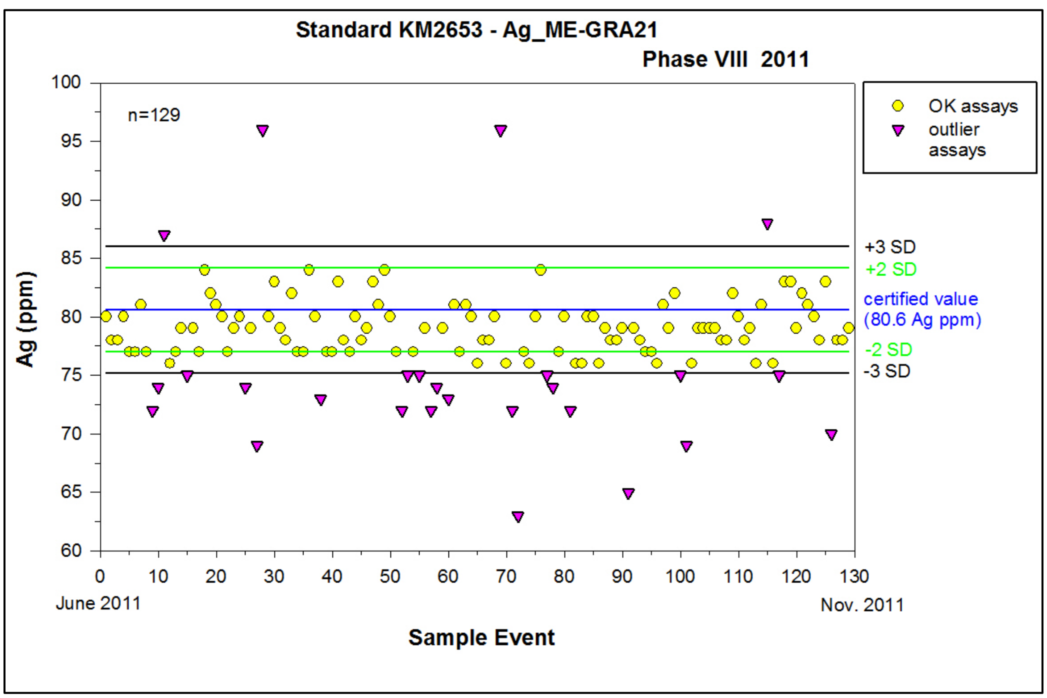

Figure 12-13 Control chart of standard KM2653 for Ag analyzed with ME-GRA21 method in Phase VIII

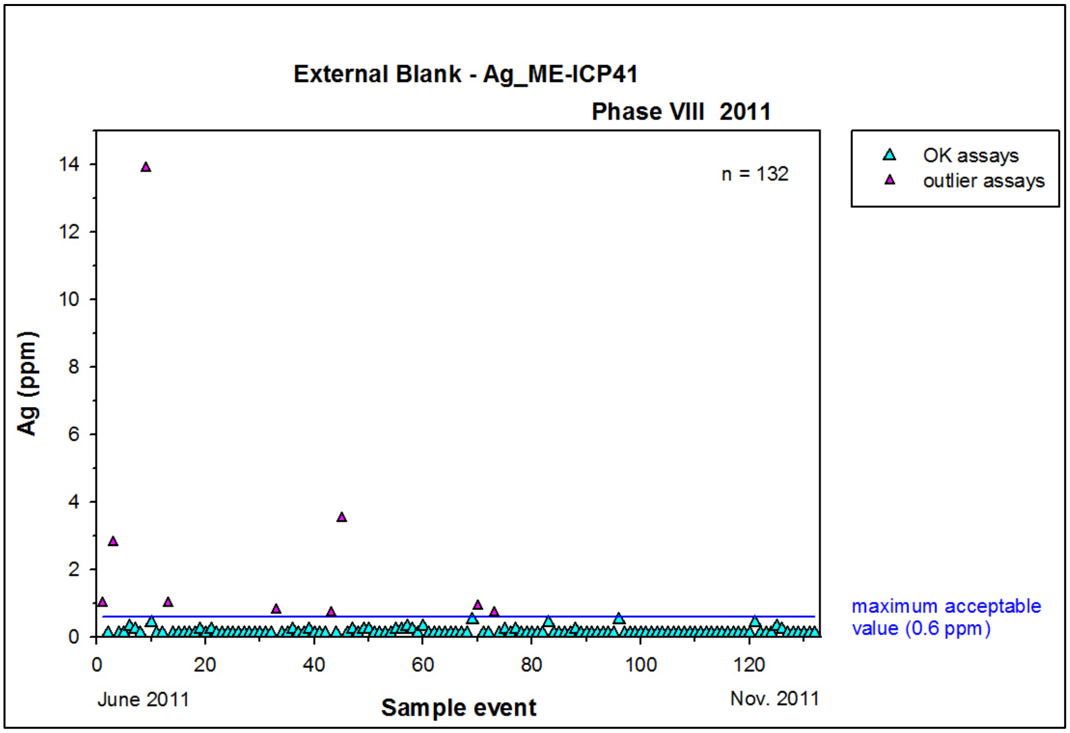

Figure 12-14 Analytical results of blank samples for Ag with ME-ICP41 method in Phase VIII

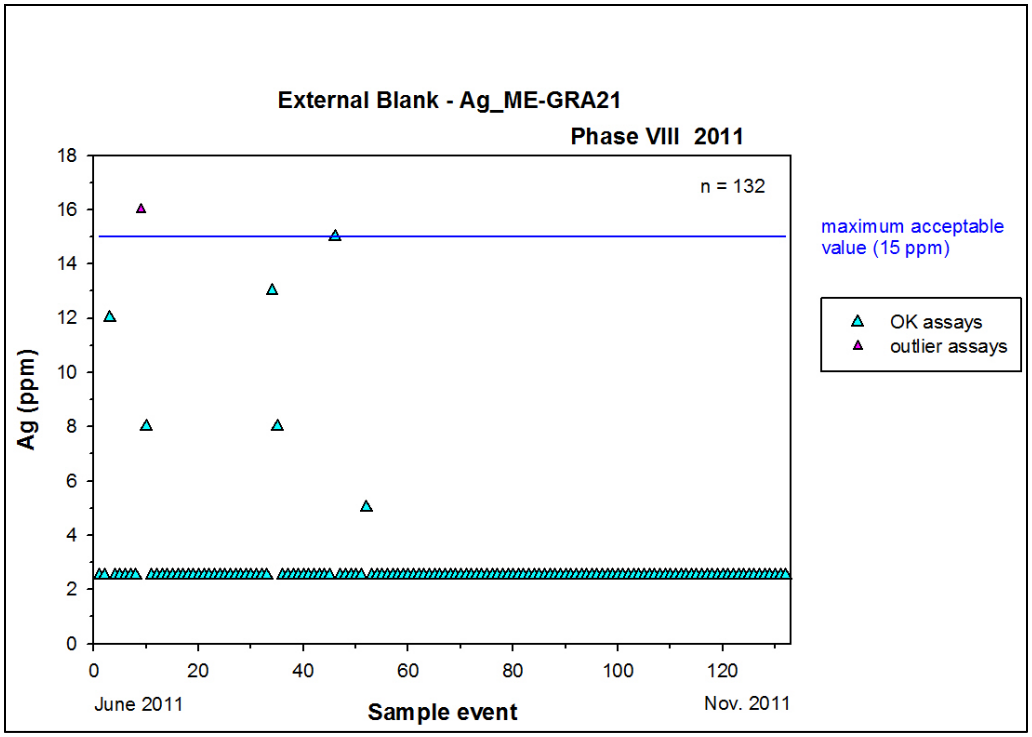

Figure 12-15 Analytical results of blank samples for Ag with ME-GRA21 method in Phase VIII

12.2.2 Laboratory standards

The performance of the laboratory standards were also checked due to the high failure rates of external standards. The failure rates of the laboratory standards are summarized in Table 12-6.

Table 12-6 Failure rates of laboratory standards for Phase VII and VIII

Standard name	Element	Analytical method	Phase VII			Phase VIII		
			Number of analysis	Failure rate	Bias	Number of analysis	Failure rate	Bias
Blank	Au	ME-GRA21	936	0%		1245	0%	
Blank	Ag	ME-GRA21	936	0%		1245	0%	
Blank	Ag	ME-ICP41	936	0%		235	0%	
GBM908-5	Ag	ME-ICP41	55	0%		55	1%	
GBM908-10	Ag	ME-ICP41	0			113	0%	
OREAS-15G	Au	ME-GRA21	22	9%	High	3	0%	
OREAS-45C	Ag	ME-ICP41	28	71%	Low	7	57%	
OREAS-45P	Ag	ME-ICP41	45	82%		0		
OREAS-67A	Au	ME-GRA21	132	0%		207	0%	
OREAS-67A	Ag	ME-GRA21	132	10%	Low	207	8%	low
OXQ70	Au	ME-GRA21	129	0%		210	0%	
OXQ70	Ag	ME-GRA21	129	0%		210	0%	
SP27	Au	ME-GRA21	104	0%		155	2%	
SP27	Ag	ME-GRA21	104	2%		155	4%	
SP49	Au	ME-GRA21	42	0%		23	9%	
SP49	Ag	ME-GRA21	42	7%	High	23	13%	
SQ28	Au	ME-GRA21	172	2%	High	17	0%	
SQ28	Ag	ME-GRA21	172	16%		17	47%	
SQ44	Au	ME-GRA21	18	0%		30	7%	
SQ44	Ag	ME-GRA21	18	0%		30	0%	

Internal standards OREAS-45C and OREAS-45P have very high failure rates probably due to the matrix of these standards, which is ferruginous soil which does not match the matrix of the drill core samples (Table 11-5).

The slightly high failure rate of standard OREAS-67A for Ag is probably caused by a difference in analytical methods. OREAS-67A is certified for 4 acid digestion and AAS, OES or MS finish (Table 11-5) and the samples were analyzed with fire assay and gravimetric finish.

The reason of the high failure rate of standard SQ28 for Ag (16% and 47.06%) is probably also due to different analytical methods. Standard SQ28 is certified for instrument finish (AAS or ICP-ES), but the samples were analyzed with gravimetric finish (Table 11-5).

Overall, the results of internal standards are acceptable. There is at least one standard for every analytical method used for Ag and Au that performed adequately.

12.2.3 Duplicates

The failure rates of pulp duplicates in Phase VII are summarized in Table 12-7. The failure rates of pulp and core duplicates in Phase VIII are summarized in Table 12-8. Duplicate plots for silver are shown in Figure 12-16 to Figure 12-21. Duplicate plots for Au are shown in Appendix 3.

The failure rates of all duplicates are within acceptable limits. The failure rates of core duplicates are slightly high, which may be indicative of the style of mineralization characterized by narrow veinlets.

Table 12-7 Failure rates of duplicates in Phase VII

Element	Duplicate type	Analytical method	Number of analysis	Failure rate
Au	pulp	ME-GRA21	125	1%
Ag	pulp	ME-GRA21	125	0%
Ag	pulp	ME-ICP41	74	0%

Table 12-8 Failure rates of duplicates in Phase VIII

Element	Duplicate type	Analytical method	Number of analysis	Failure rate
Au	pulp	ME-GRA21	186	0.54%
Ag	pulp	ME-GRA21	186	0.00%
Ag	pulp	ME-ICP41	131	0.00%
Au	core	ME-GRA21	177	10.17%
Ag	core	ME-GRA21	177	5.65%
Ag	core	ME-ICP41	159	9.43%

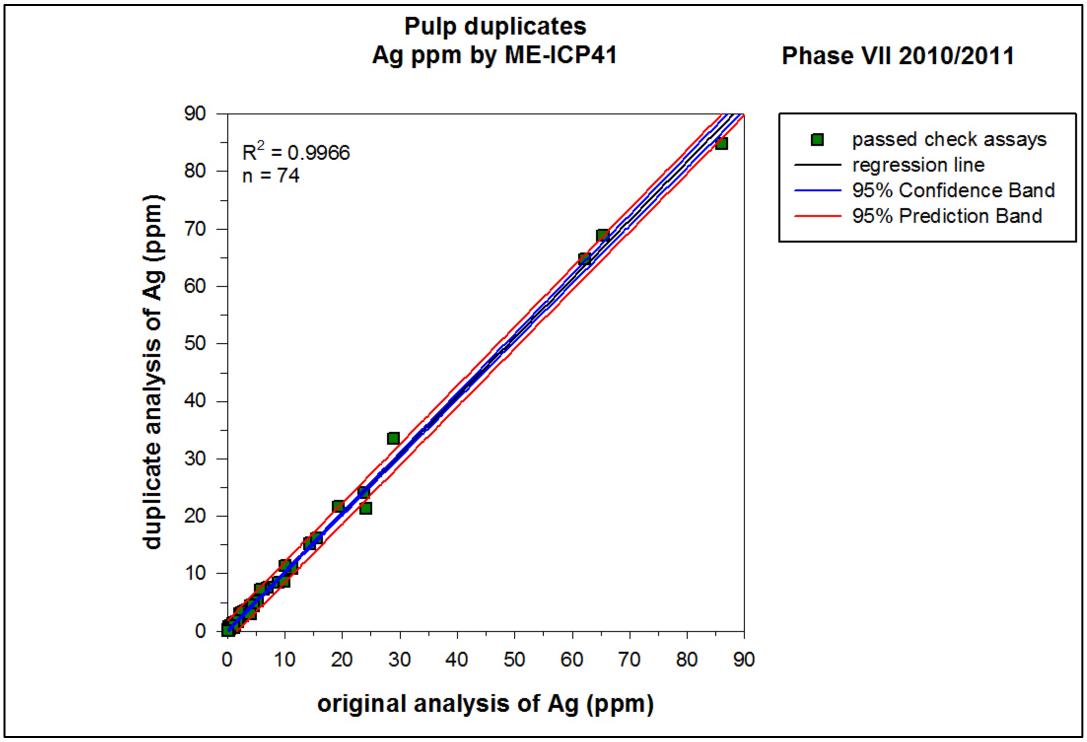

Figure 12-16 Pulp duplicate versus original plot for Ag analyzed with ME-ICP41 method

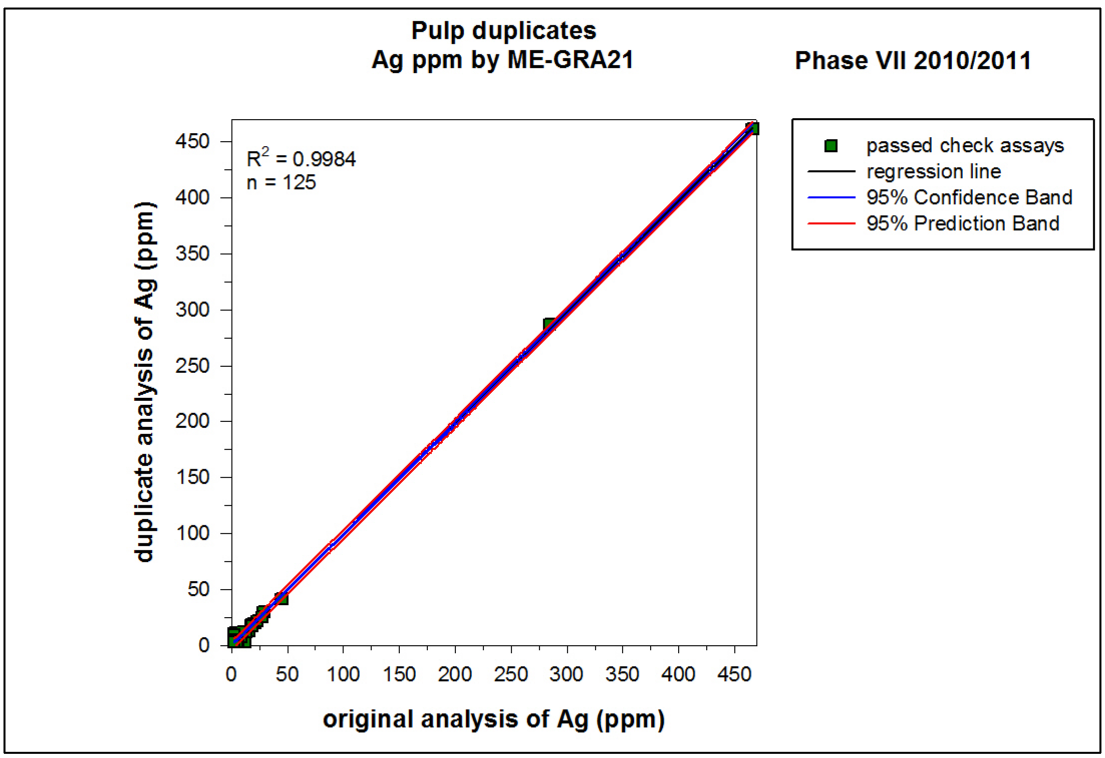

Figure 12-17 Pulp duplicate versus original plot for Ag analyzed with ME-GRA21 method

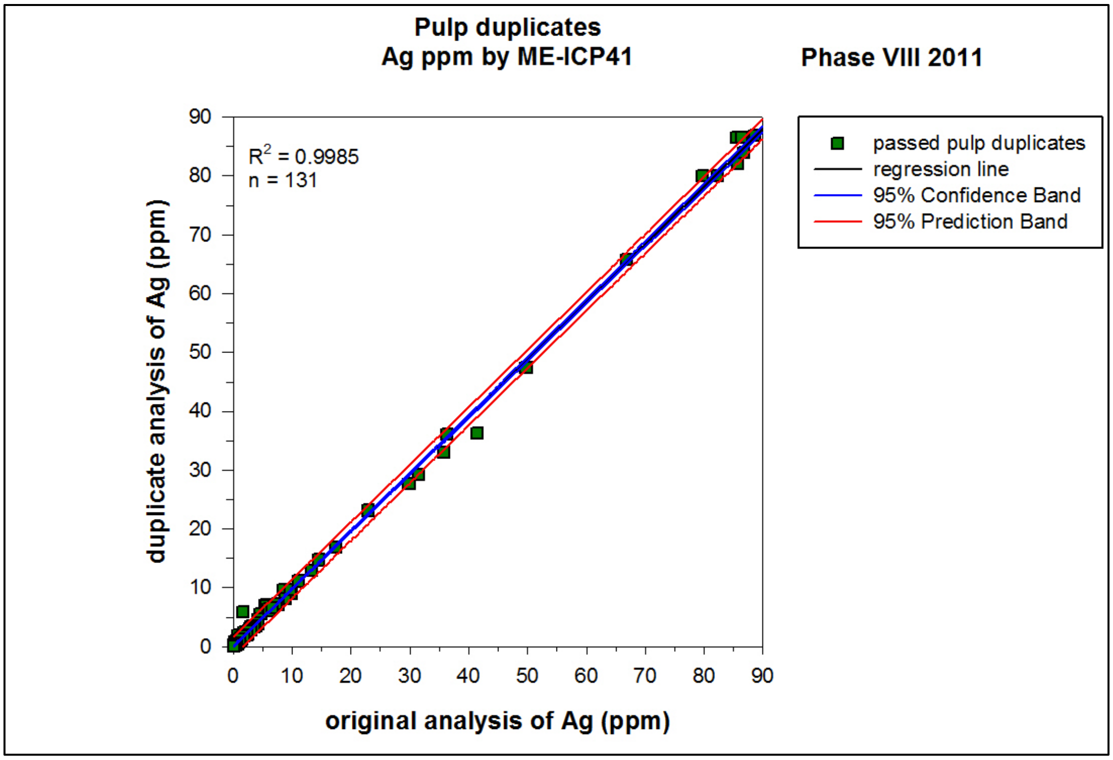

Figure 12-18 Pulp duplicate versus original plot for Ag analyzed with ME-ICP41 method

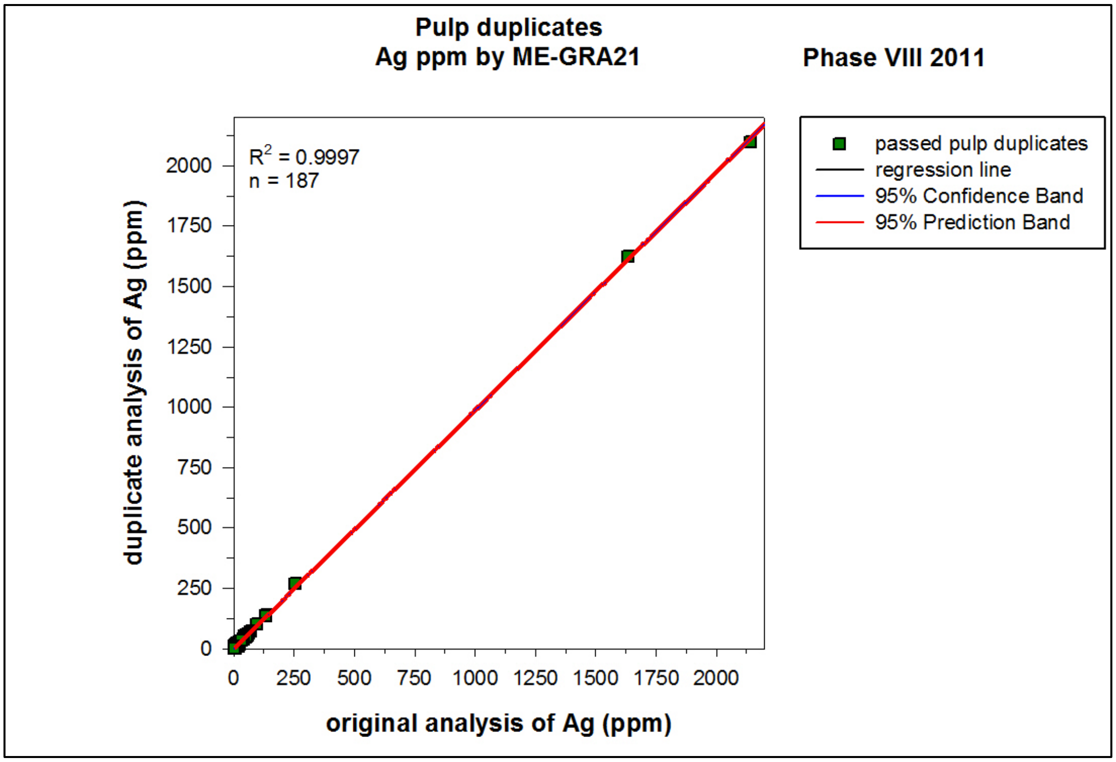

Figure 12-19 Pulp duplicate versus original plot for Ag analyzed with ME-GRA21 method

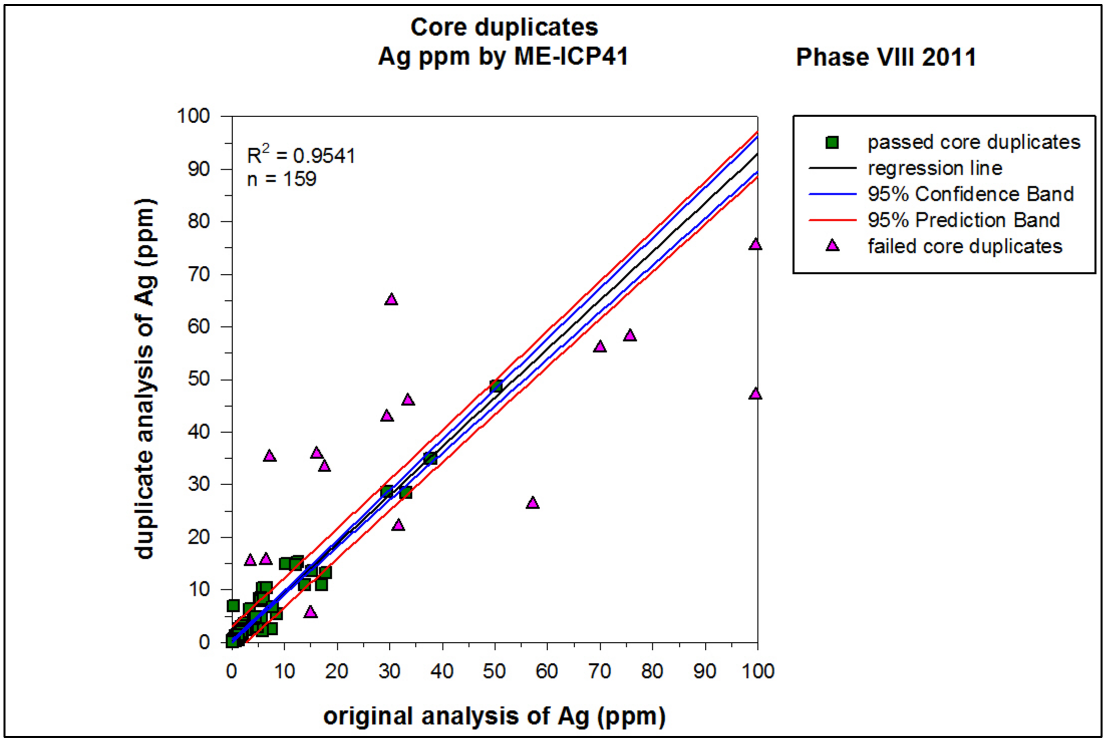

Figure 12-20 Core duplicate versus original plot for Ag analyzed with ME-ICP41 method

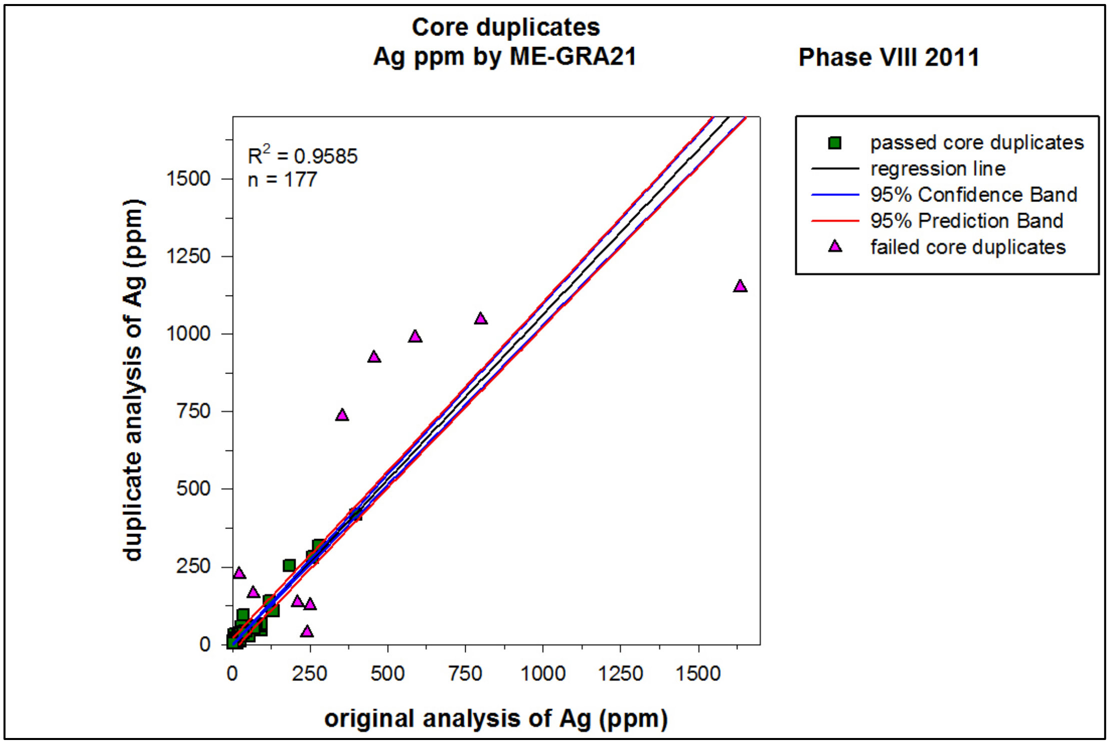

Figure 12-21 Core duplicate versus original plot for Ag analyzed with ME-GRA21 method

12.2.4 Phase VII check assays (Skyline)

The failure rates of the external blank and standard for Ag and Au are summarized in Table 12-9. The failure rates of blanks are acceptable for Au and Ag analyzed with the FA-03 method and too high for Ag analyzed with the TE-2 method (Table 11-6).

The failure rates of the external standard are too high for Au and Ag analyzed with both methods, similar to the original assays by ALS. The reasons for the high failure rates are the same as the reasons for high failure rates in the original analysis (see section 12.2.1).

Table 12-9 Check assay failure rates of external blanks and standards in Phase VII drill program

Element	Analytical method	Standard	Number of analysis	Failure rate
Au	FA-03	Blank	4	0%
Ag	FA-03	Blank	4	0%
Ag	TE-2	Blank	4	25%
Au	FA-03	KM 2653	2	100%
Ag	FA-03	KM 2653	2 (minor failures)	100%
Ag	TE-2	KM 2653	3	33%

The failure rates of laboratory standards are summarized in Table 12-10. The failure rates for Ag are within the acceptable limits for both methods (Table 11-7). The failure rate of Au is too high.

Table 12-10 Check assay failure rates of laboratory standards in Phase VII

Standard name	Element	Analytical method	Number of analysis	Failure rate
CU123	Ag	FA-03	4	0%
PB138	Ag	FA-03	5	0%
CDN-GS-10C	Au	FA-03	2	0%
CDN-GS-10C	Au	FA-03	4	25%
CDN-GS-10C	Au	FA-03	3	0%

The results of the check assays were compared to the original assays from ALS (Table 12-11). The Ag assays compare reasonably to the original assays with an R^2 value of 0.9518 for Ag analyzed with ICP and 0.9842 for Ag analyzed with the gravimetric method (Figure 12-22 and Figure 12-23).

The Au check assays compare a bit poorly to the original Au assays with most of the failures in the lower grades, which is probably also due to the poor choice of analytical method (Figure 1-8 in Appendix 3).

Table 12-11 Failure rates of check assays versus original assays in Phase VII

Element	Original analytical method	Reassay analytical method	Number of analysis	Failure rate
Au	ME-GRA21	FA-03	145	23.45%
Ag	ME-GRA21	FA-03	145	1.38%
Ag	ME-ICP41	TE-2	108	10.19%

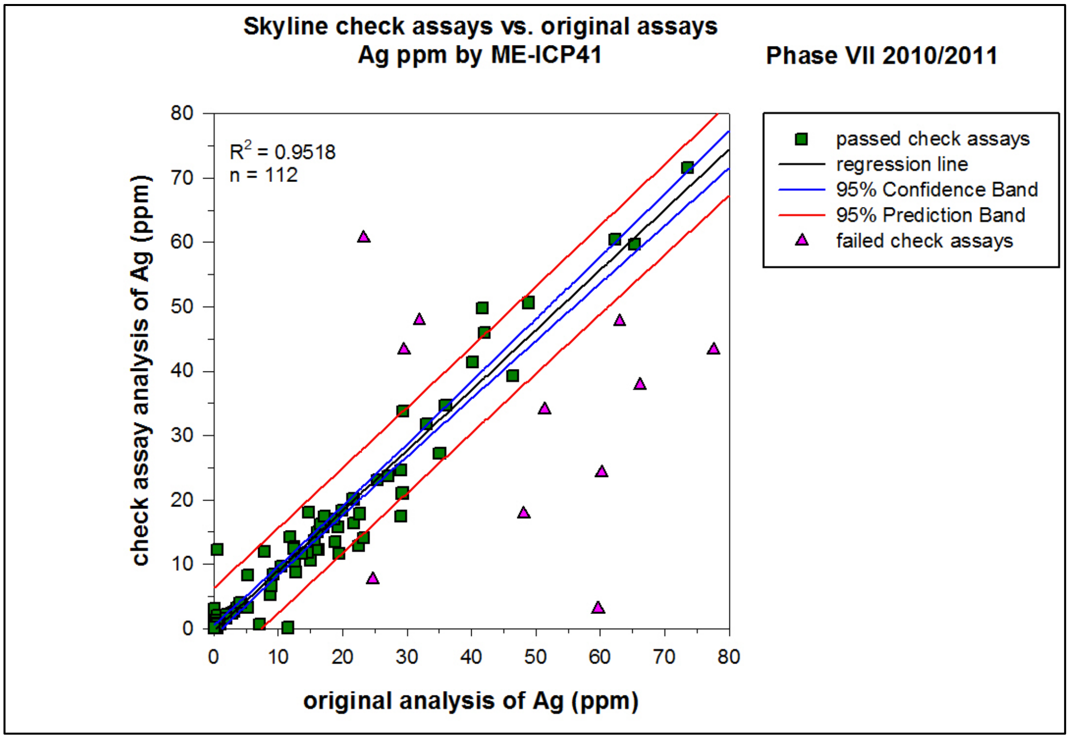

Figure 12-22 Plot of check assays versus original assays for Ag analyzed with ICP

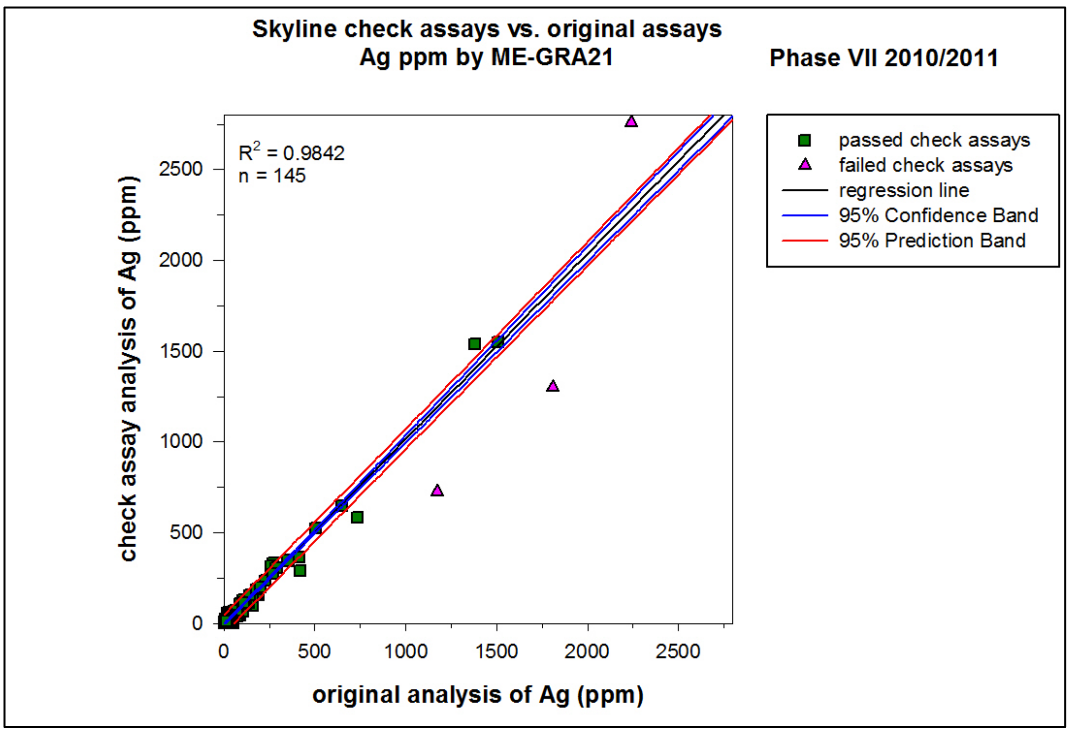

Figure 12-23 Plot of check assays versus original assays for Ag analyzed with gravimetric method

12.2.5 Phase VIII check assays (AGAT)

The failure rates of blanks and standards for both silver and gold are acceptable (Table 12-12). The check assays also compare reasonably to the original assays (Table 12-13, Figure 12-24 and Figure 12-25) for silver analyzed with both methods and for gold (see Appendix 3 for gold check assay versus original plots).

Table 12-12 Check assay failure rates of external standards in Phase VIII

Standard name	Element	Analytical method	Number of analysis	Failure rate
Blank	Ag	ICP-OES finish	7	0.00%
Blank	Ag	gravimetric finish	7	0.00%
Blank	Au	gravimetric finish	7	0.00%
OREAS 62c	Ag	ICP-OES finish	4	0.00%
OxD87	Au	gravimetric finish	3	0.00%

Table 12-13 Failure rates of check assays versus original assays in Phase VIII

Element	Original analytical method	Reassay analytical method	Number of analysis	Failure rate
Au	ME-GRA21	gravimetric finish	127	9.45%
Ag	ME-GRA21	gravimetric finish	127	0.79%
Ag	ME-ICP41	ICP-OES finish	124	10.19%

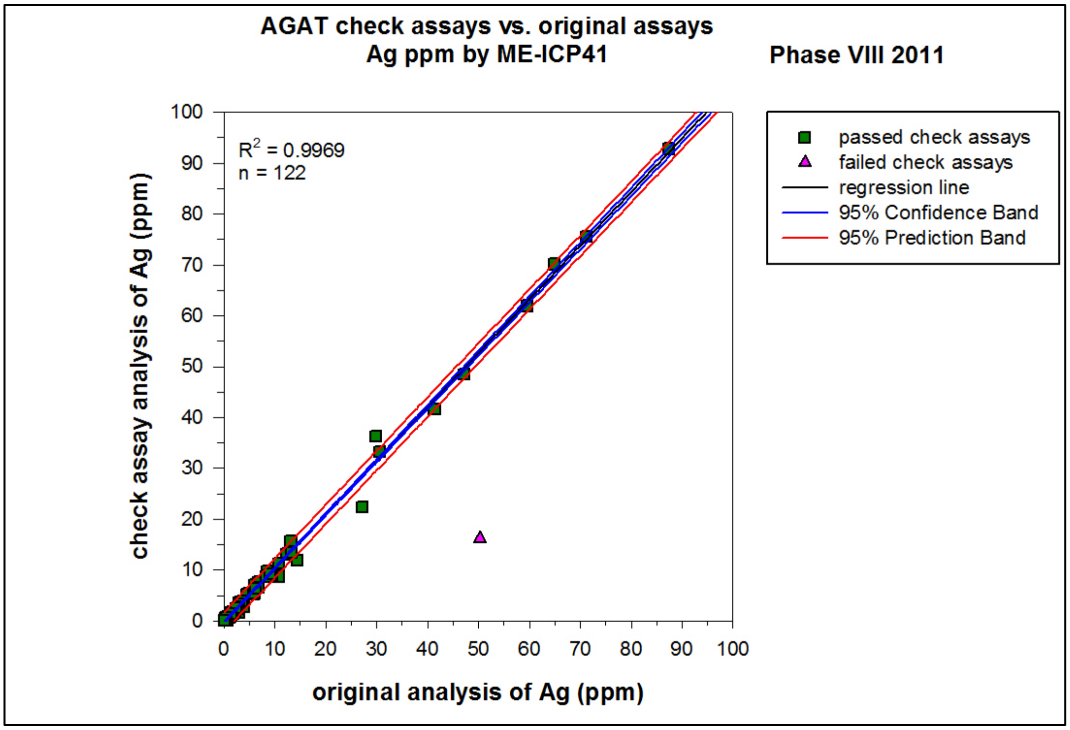

Figure 12-24 Plot of check assays versus original assays for Ag analyzed with ICP

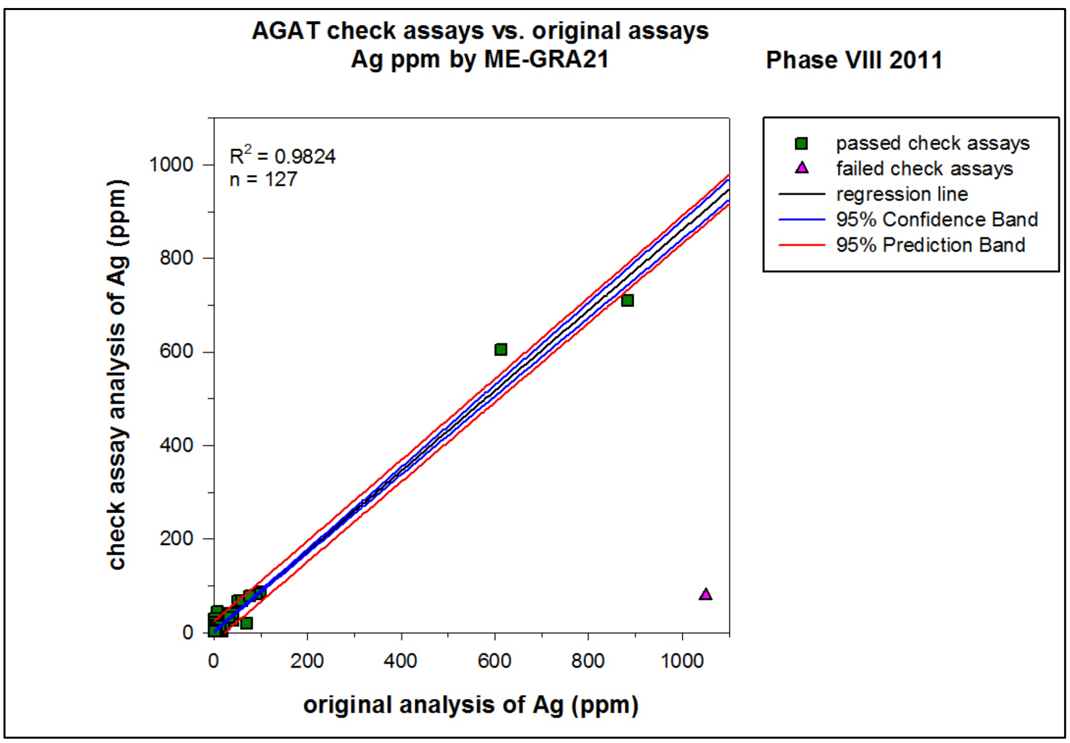

Figure 12-25 Plot of check assays versus original assays for Ag analyzed with gravimetric method

12.2.6 Conclusions and recommendations

Due to the high failure rates in phases VII and VIII, the QC procedures and results of phases IV to VI were also reviewed (see Appendix 3) and approximately 5% of the samples from phases IV to VII were reanalyzed for gold (see Appendix 3).

The QP's opinion is that the quality of the data is adequate at this stage of the project and can be used in 3D modelling for the purpose of resource estimation.

The quality control review indicates that there were no major problems in the core shack such as sample mix ups or contamination. The slightly high failure rate of core duplicates in Phase VIII is probably an indication of the nature of the ore that is characterized by narrow veinlets.

The failure rates of external standard (KM2653) are high for silver in phases VII and VIII, but this is due to the different analytical method and not the poor quality of the data, which is suggested by the performance of the laboratory standards. Also, silver analyzed with the ME-ICP41 method is slightly biased high and silver analyzed with the ME-GRA21 method is slightly biased low, but these biases are not always consistent with the laboratory standard, suggesting that the problem is with the external standard. In the previous phases silver was analyzed with the same methods and a commercially available certified standard (CDN-SE-1) was used and performed well for silver, which also suggests that the reason for the high failure rates for silver is the poor choice of external standard.

The failure rates for gold are very high in phases VII and VII and high in the previous phases. The reason for the high failure rates is the poor choice of standards (different analytical methods) and poor choice of analytical method. The average gold value in phases at Quaterra is 0.058 g/t including all data and 0.22 g/t including only data above the detection limit, therefore gravimetric method should not be used to analyze gold.

Despite the high failure rates of gold standards, the QP's conclusion is that the quality of the Au assay data is adequate to include Au in the resource calculation at this stage of the project, especially because the grade of Au is fairly low and it is not the main commodity at Quaterra. Also, Au analyzed with ICP-OES and gravimetric method is comparable (Appendix 3, Figure 2-4).

It is recommended that in the future drill programs a different external standard is used to check the quality of silver assays, which has similar certified value as the silver grades at Nieves, is certified for the same analytical method and has similar matrix.

It is also recommended that the analytical method for gold is changed to fire assay and instrument finish (AAS or ICP) and a certified standard with a low grade value, same analytical method and similar matrix is inserted.

The frequency of the quality control samples should also be increased to include one standard, one blank and one core duplicate with every twenty samples.

13.0 Mineral Processing and Metallurgical Testing

As a follow up of the metallurgical test completed in May 2010 (see section 6.2.4 of this report), Quaterra and Blackberry contracted G&T Metallurgical Services Ltd. to complete a supplemental metallurgical testing in July and August 2010. The test was completed on a sample that was approximately 76 kg in the form of 2 kg charges.

The main objective of this test was to assess the composite for silver recovery through gravity concentration tests conducted at two primary grind sizes, assess the gravity and pan tailings for additional silver recovery through cyanidation bottle roll tests, conduct two open circuit batch cleaner tests and assess the concentrate from a select open circuit batch cleaner test for silver occurrences by Trace Mineral Search (TMS) using QEMSCAN.

The test determined that silver from the feed, following a primary grind to 104 µm K_{80}, is not recoverable through gravity concentration.

The single cyanide bottle roll test on the whole ore, following a primary grind (104 µm K_{80}), resulted in approximately 48% of the feed silver extraction. The cyanidation bottle roll test on the Knelson gravity and pan tailings resulted in approximately 49% of the feed silver extraction.

Three cleaner tests conducted on the sample revealed that increasing the cleaner pulp pH to 11.0 did not improve the recovery of silver. Reducing the rougher concentrate regrind size to approximately 11 µm, ahead of dilution cleaning, resulted in increase in silver grade, but a slightly lower recovery.

TMS analysis indicated that the majority of silver occurs in freibergite with traces of acanthite, silver sulphides have a mean diameter of approximately 19 µm K_{80}, and the majority of this silver occurs in complex multiphase structures.

Minor element assays conducted on the concentrate indicated elevated levels of antimony, arsenic and fluorine, which may result in smelter penalties. It is recommended that minor element data is further reviewed by a concentrate marketing specialist to determine the marketability of the concentrate.

14.0 MINERAL RESOURCE ESTIMATES

14.1 Introduction

Caracle Creek International Consulting (Caracle Creek) was retained by Quaterra Resources Inc. (Quaterra) to complete a mineral resource estimate update for their Nieves Property located in Zacatecas State, Mexico. The Nieves Property is a large, undeveloped, low grade Ag-Au deposit which has the potential to be mined by open pit.

The mineral resource reported herein is based on drilling information as of June 22nd, 2012. 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 wireframe. GEMCOM's GEMS resource modeling software V.6.3 was used to generate the block model and perform the grade estimation. Grades for Ag & Au 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 Nieves 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 Quaterra Resources Inc. in accordance with NI 43-101 guidelines. Mineral resources were calculated for the Nieves Project by the methods described below. The Mineral

Resource Statement reported for the Nieves Project is presented in Table 14-1 using a 15 g/t Ag cut-off grade.

Table 14-1 Mineral resource statement[1] (Caracle Creek, June 22nd, 2012)

Vein	Area	Category	Quantity (tonnes)[2]	Grade[3] Ag g/t	Grade[4] Au g/t	Ounces[5] Ag	Ounces[5] Au
Concordia	**La Quinta**	**Indicated**	**33,040,000**	**50.1**	**0.04**	**53,220,000**	**42,500**
Concordia	**La Quinta**	**Inferred**	**39,260,000**	**32.0**	**0.02**	**40,390,000**	**25,200**
San Gregorio	**North**	**Inferred**	**18,770,000**	**27.0**	**0.08**	**16,293,900**	**48,300**

[1] Reported at a cut-off grade of 15 g/t Ag. Mineral resources are not mineral reserves and do not have demonstrated economic viability.
[2] Tonnes have been rounded to the nearest 10,000.
[3]Ag grade has been rounded to one (1) significant digit.
[4]Au grade has been rounded to two (2) significant digits.
[5]Ounces have been rounded to the nearest 100. One (1) troy ounce = 31.103 grams

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

14.2 Resource Estimation Methodology

14.2.1 Resource Database, Preparation & Compositing

Drill hole collar coordinates and details were provided in MS Excel format by Quaterra Resources Inc. including assays, lithology and down hole survey. The resource estimate was calculated using data from 8 drill holes from programs of previous operators between 1995 and 1996, 10 drill holes drilled by Quaterra between 1999 and 2000, as well as 174 drill holes drilled by Quaterra and Blackberry between 2004 and 2012. QA/QC was completed by Caracle Creek on the assays prior to incorporation in the 3D model.

All of these data were compiled into a database which links directly to the geological modelling and resource estimation software. 3D wireframes (solids) representing the mineralized areas were constructed and used to constrain (domain) the tonnage and grade estimation. GEMCOM's GEMS software V.6.3 was used to generate the 3D block model and perform the grade estimation (Table 14-2, Figure 14-1).

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

Drill program	# of Holes	# of Samples
Quaterra (1999 – 2011)	184 (55,728 m)	19,967
Historical (1995 – 1996)	8 (1,901 m)	591
Total	**193 (57,629 m)**	**20,558**

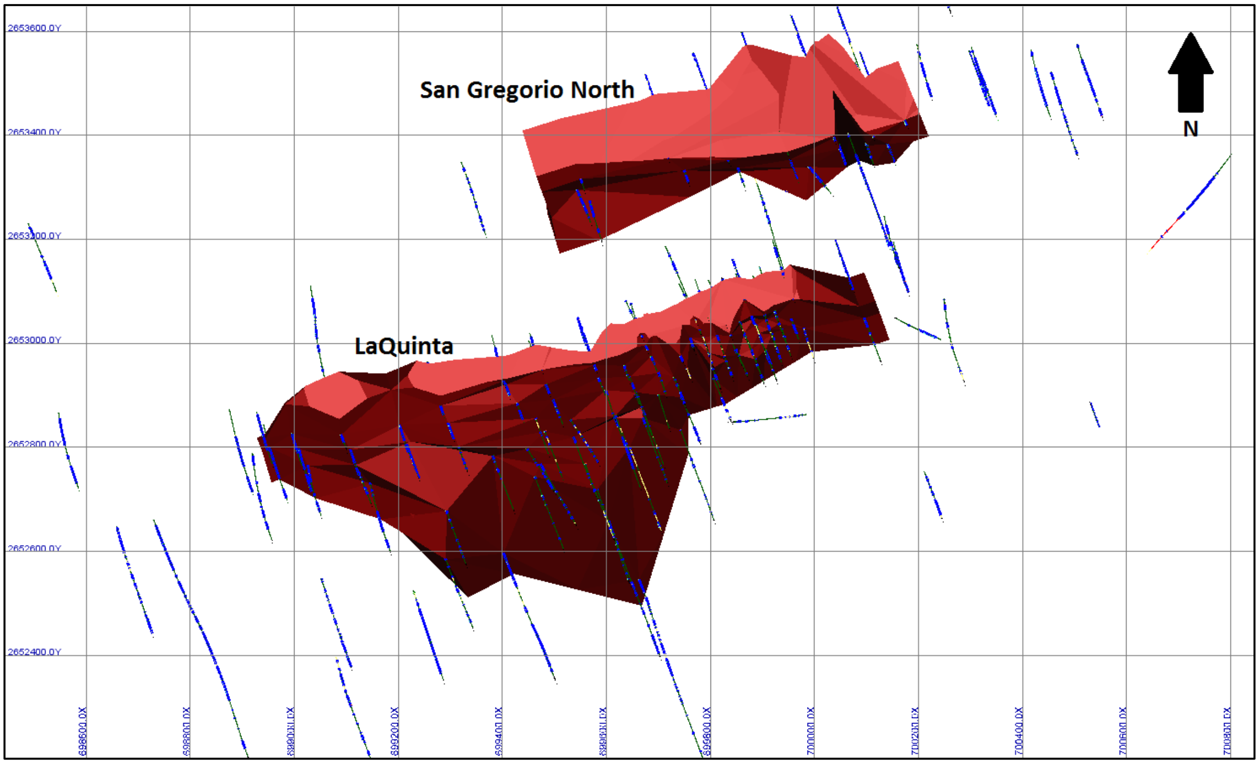

Figure 14-1 Drill Hole Distribution of all holes at Nieves

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.

Geological Modeling & Mineralized Domains

Geological modeling was performed by Caracle Creek using the raw drill hole data. A topography surface was created by Caracle Creek using the drill hole collar coordinates. The mineralized domain was constructed primarily from the Ag grade assay data. The mineralized domain was not constrained by lithology (Figure 14-1, Figure 14-2 and Figure 14-3).

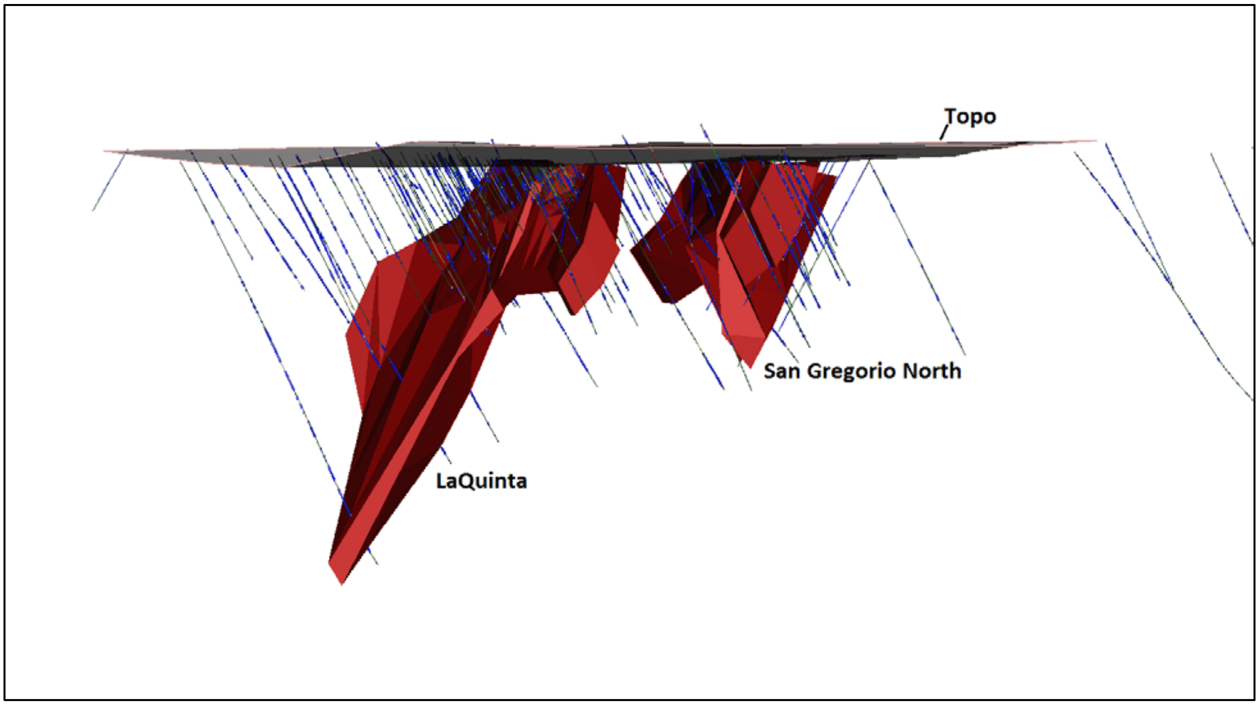

Figure 14-2 View of Topo & Mineralized Domain Looking NW

The La Quinta mineralized domain was defined using 99 drill holes and 5072 samples. The Gregorio North mineralized domain was defined using 25 drill holes and 1729 samples. The drill holes were drilled in a sectional pattern with a drill hole spacing ranging from 20 - 100 meters, in the La Quinta area, and 20 - 175 meters in the Gregorio North area (Figure 14-1). 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.

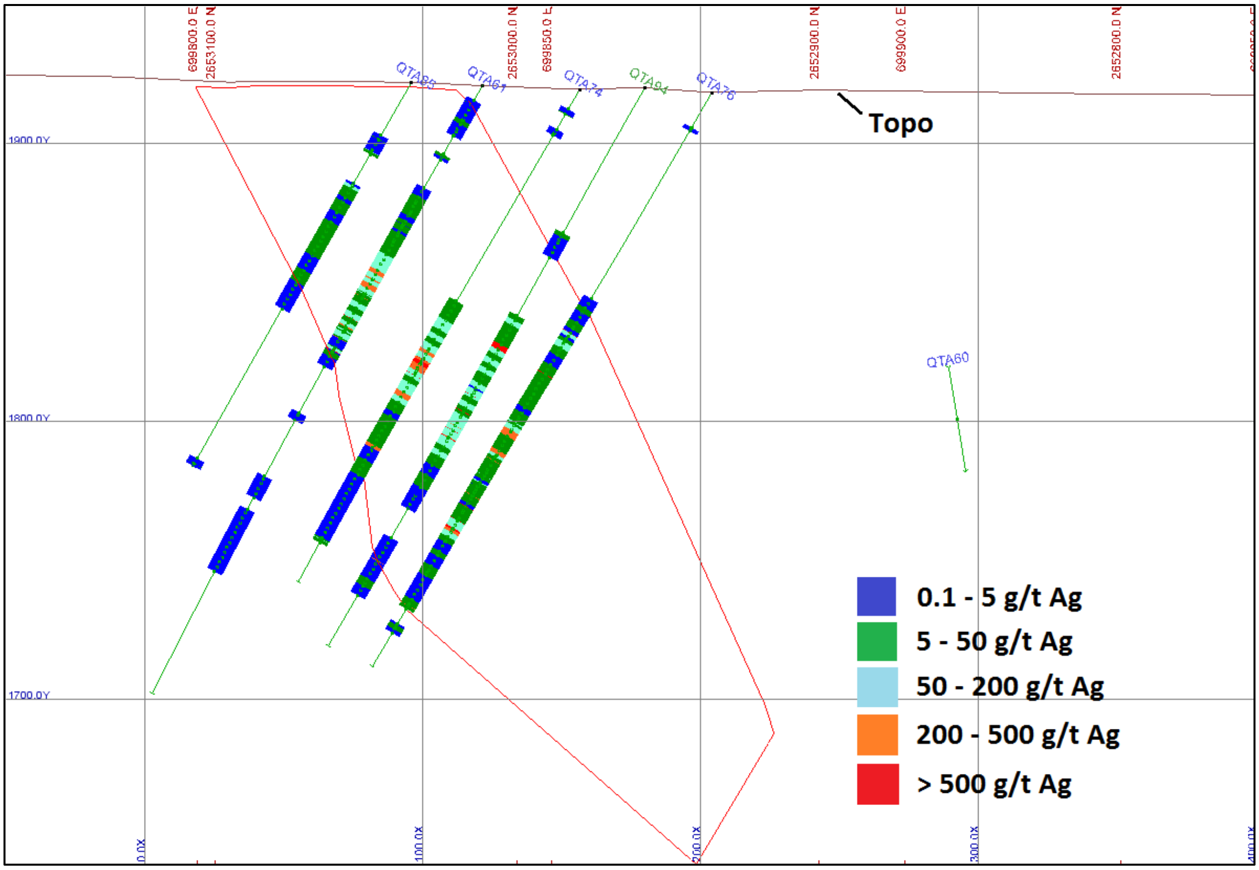

Figure 14-3 Sectional view of mineralized domain showing Ag assays (looking NE)

<u>Data Analysis & Compositing</u>

All the raw assays within the mineralized domains were extracted from the database for statistical analysis. This included a total of 6789 assay intervals, of which over 98% had an assay interval length of 2.0 meters (Figure 14-4 and Figure 14-5). The remaining assay intervals were of varying lengths between 0.03 & 3.7 meters. Considering the assay data statistics, with respect to interval length, Caracle Creek chose to composite the data to 2m intervals. The estimation parameters set for the mineral resources were not allowed to interpolate through un-sampled intervals. An Ag value of 0.1 g/t was assigned to the missing intervals (Half Detection Limit).

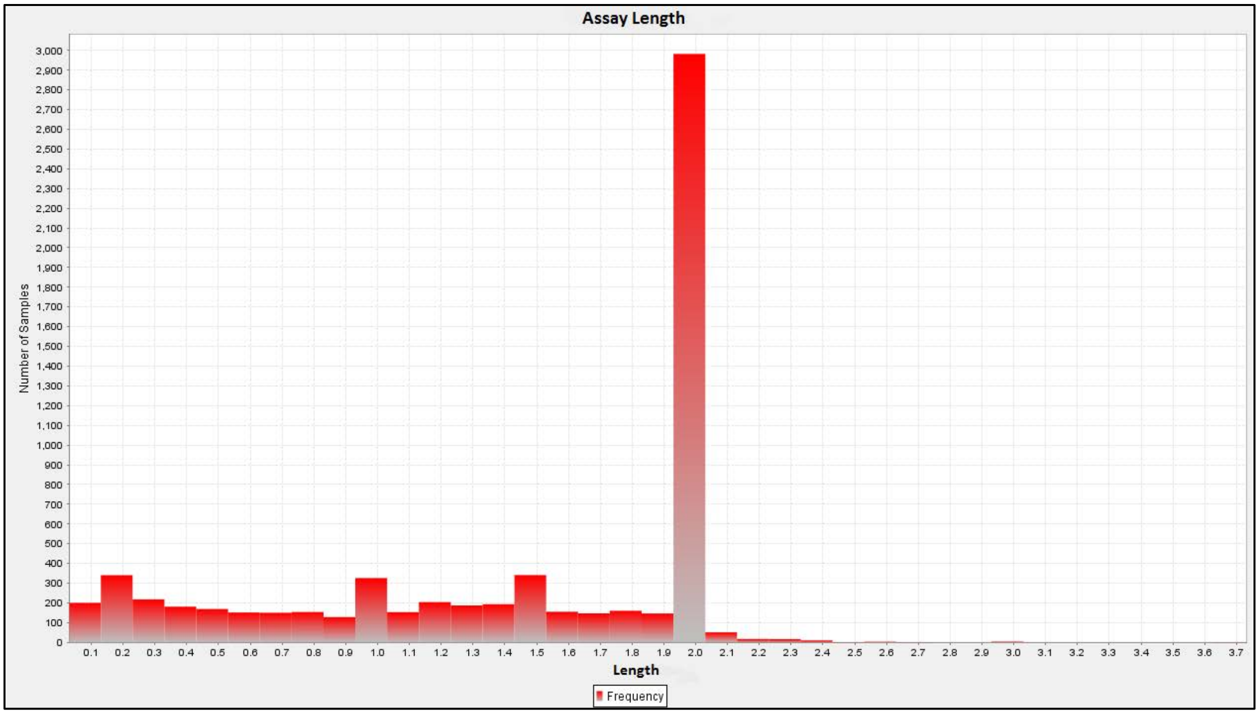

Figure 14-4 Histogram plot showing the distribution of assay lengths

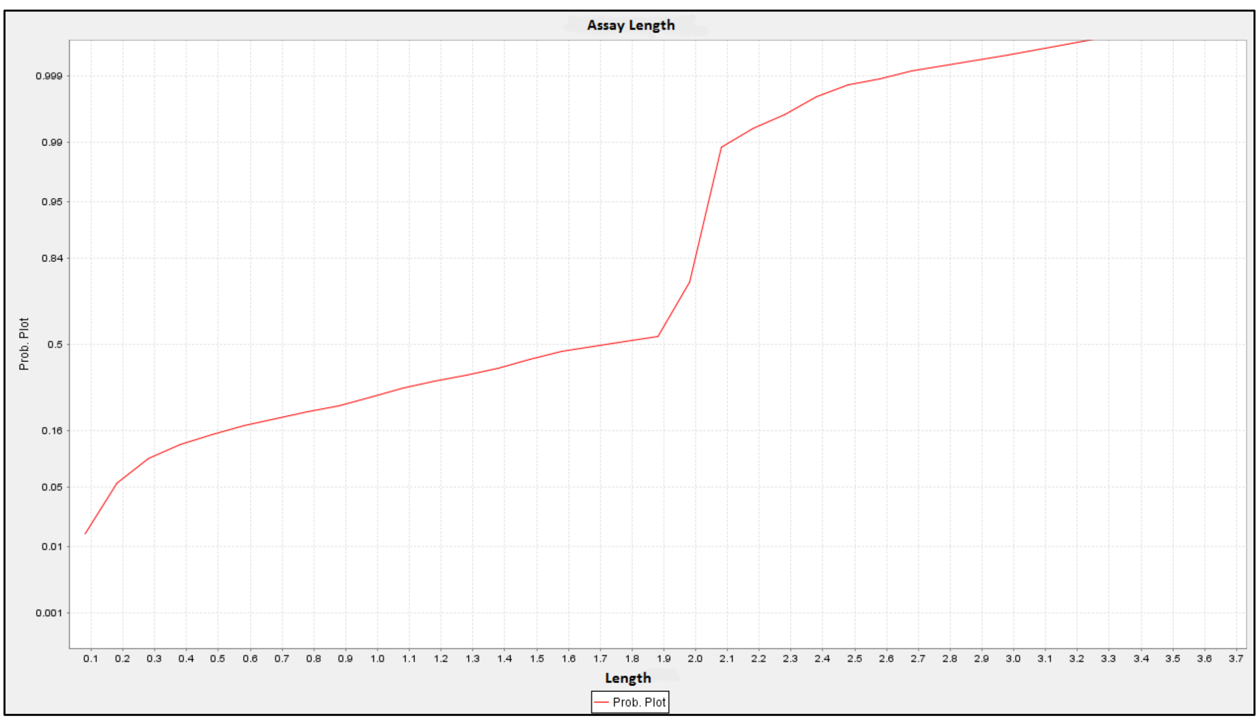

Figure 14-5 Probability plot showing the distribution of assay lengths

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

Sample Data	La Quinta Ag	La Quinta Au	San Gregorio Ag	San Gregorio Au
Number of Samples	5072	5072	1717	1717
Minimum Value (g/t)	0.1	0.01	0.1	0.0
Maximum Value (g/t)	13345.0	4.59	2240.0	1.72
Mean (g/t)	92.7	0.10	26.1	0.08
50th Percentile (Median) (g/t)	13.0	0.03	2.9	.03
95th Percentile (g/t)	406.9	0.39	177.0	0.39
Variance (g/t)	147164.7	0.06	13169.8	0.02
Standard Deviation (g/t)	383.6	0.25	114.8	0.13
Coefficient of Variation	4.1	2.45	4.4	1.59

Basic statistics were also calculated for the 2m composites. See Figure 14-4 and Table 14-4 for the results.

Table 14-4 Summary of 2m composite data statistics for all samples within the mineralized domain

Sample Data	La Quinta Ag	La Quinta Au	San Gregorio Ag	San Gregorio Au
Number of Samples	3842	3842	2960	2960
Minimum Value (g/t)	0.1	0.02	0.1	0.0
Maximum Value (g/t)	2485.7	2.01	411.8	0.62
Mean (g/t)	37.9	0.06	7.5	0.07
50th Percentile (Median) (g/t)	10.6	0.03	0.1	0.03
95th Percentile (g/t)	161.4	0.20	36.1	0.25
Variance (g/t)	9216.8	0.01	579.3	0.01
Standard Deviation (g/t)	96.0	0.09	24.1	0.08
Coefficient of Variation	2.53	1.58	3.2	1.18

Grade Capping

Caracle Creek performed a capping analysis on the composited data using histogram plots and probability plots. Figure 14-6 shows the histogram plots for the Ag 2m composite data, including all outliers. Based on this analysis Caracle Creek capped the Ag composites at 1100.0 g/t.

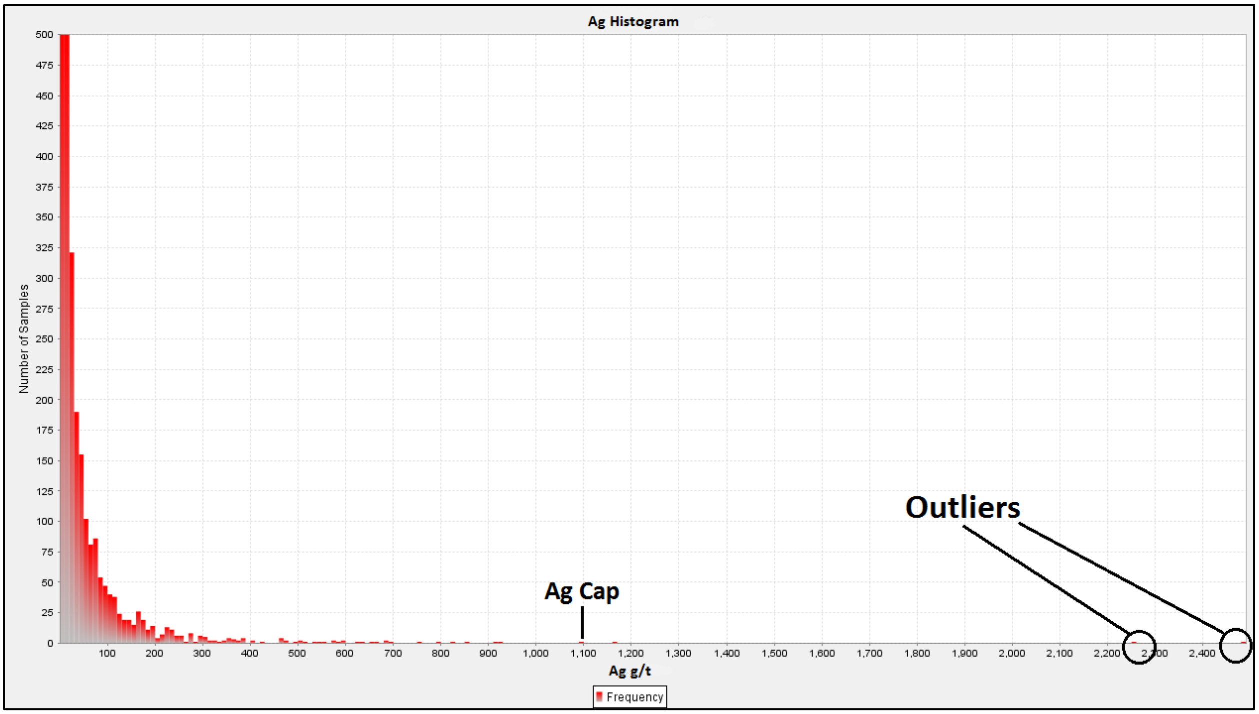

Figure 14-6 Histogram showing Ag composite grade distribution for the La Quinta area

Specific Gravity

Specific Gravity (SG) for the Concordia (La Quinta) area was determined using 173 SG samples within the mineralized domain. The block model was populated with SG values using these 173 SG samples via inverse distance interpolation. There were only 16 SG samples available for the Gregorio North area, therefore, the average of those samples (2.83) was assigned to each block. The tonnage for each block was calculated as follows:

Block volume (5m × 5m × 5m) × (SG) × (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.

14.2.3 Block Model

The block model definitions for Nieves 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 wireframed 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 Nieves

	Y (m)	**X (m)**	**Z (m)**
Origin Coordinates (m)	2653210	698387	2000
Block Size	10	10	5
Rotation	0	-70	0
Number Of Blocks	210	130	215

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 mininum/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 14-7 shows the block model.

Table 14-6 Nieves Block Model Parameters

	Pass 1	**Pass 2**
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	30	30
Min # of Holes	1	1

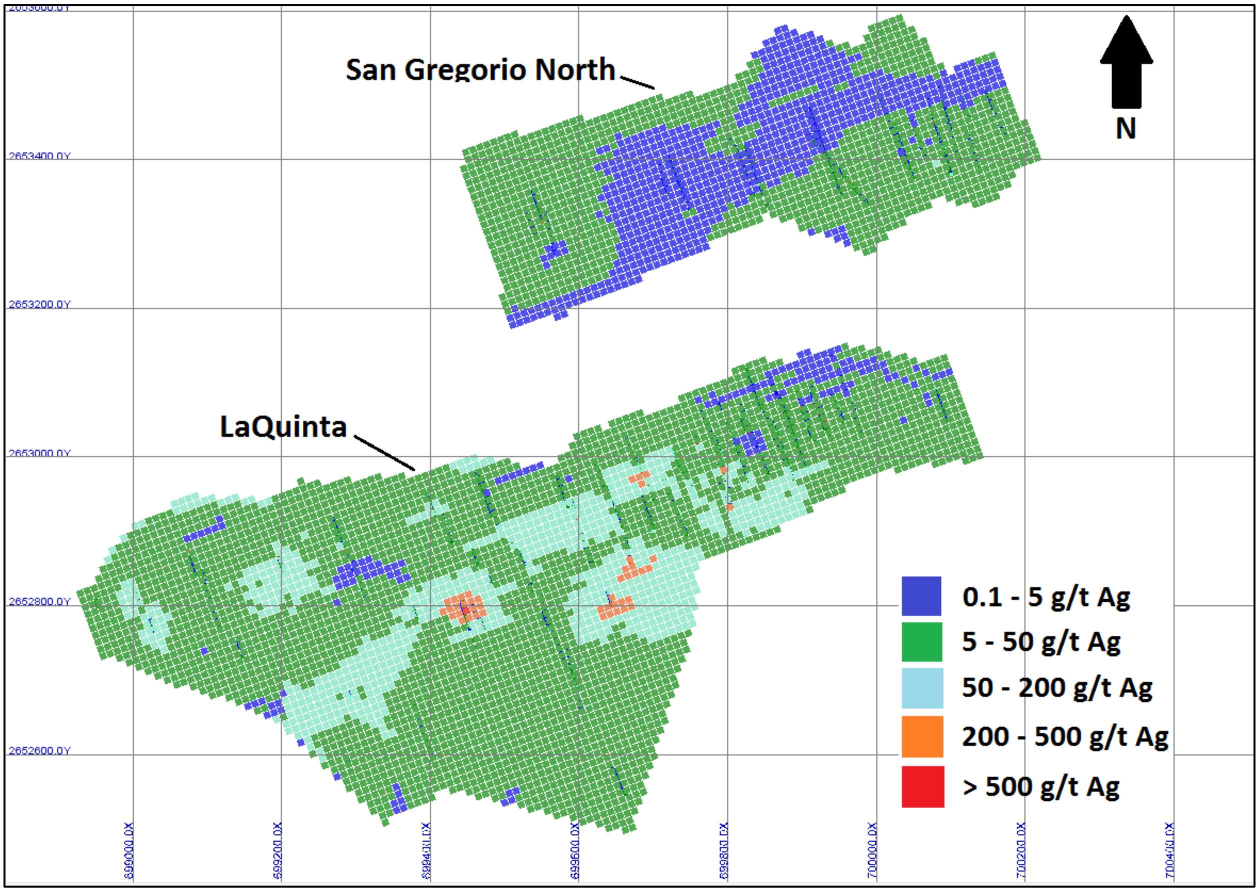

Figure 14-7 Plan view showing block model

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 Ag & Au using an inverse distance method of estimation (power of five). The results were within 10% deviation in total tonnes and Ag grade to that of the original model. 2) Statistical comparisons were made between the interpolated blocks from the inverse distance squared model and the 2m composites (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 composited data.

Table 14-7 Ag Block model vs. 2m composite statistical analysis

Statistic	La Quinta		San Gregorio	
	Capped 2m Composites	**ID2 Interpolation**	**Capped 2m Composites**	**ID2 Interpolation**
# of Samples	3842	98586	2960	55716
Mean	37.9	27.6	7.5	12.6
Median	10.6	18.7	0.1	8.6
Variance	147164.7	854.3	579.3	134.2
Max Value	2485.7	598.5	411.8	137.2

14.2.5 Mineral Resource Classification

Based on the study reported herein, delineated mineralization at the Nieves Project 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 Nieves are classified as Indicated & Inferred resources, as described in the following section. Blocks were classified as indicated if they were populated during pass 1. All blocks populated during pass 2 were classified as inferred.

14.3 Mineral Resource Statement

Mineral resources for Nieves were classified by Mr. Jason Baker, P.Eng, an appropriate 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 Nieves Project are reported at a cut-off grade of 15 g/t Ag. The Mineral Resource Statement for the Nieves Project is summarized in Table 14-8.

Table 14-8 Mineral resource statement[1] (Caracle Creek, June 22nd, 2012)

Vein	Area	Category	Quantity (tonnes)[2]	Grade[3] Ag g/t	Grade[4] Au g/t	Ounces[5] Ag	Ounces[5] Au
Concordia	**La Quinta**	**Indicated**	**33,040,000**	**50.1**	**0.04**	**53,220,000**	**42,500**
Concordia	**La Quinta**	**Inferred**	**39,260,000**	**32.0**	**0.02**	**40,390,000**	**25,200**
San Gregorio	**North**	**Inferred**	**18,770,000**	**27.0**	**0.08**	**16,293,900**	**48,300**

[1] Reported at a cut-off grade of 15 g/t Ag. Mineral resources are not mineral reserves and do not have demonstrated economic viability.
[2] Tonnes have been rounded to the nearest 10,000.
[3] Ag grade has been rounded to one (1) significant digit.
[4] Au grade has been rounded to two (2) significant digits.
[5] Ounces have been rounded to the nearest 100. One (1) troy ounce = 31.103 grams

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

Cut-Off Ag g/t	Area	Category	Tonnes	Ag g/t	Au g/t
5 g/t	La Quinta	Indicated	49,530,000	36.7	0.03
5 g/t	La Quinta	Inferred	67,240,000	22.6	0.02
5 g/t	San Gregorio	Inferred	56,830,000	14.8	0.06
15 g/t	La Quinta	Indicated	33,040,000	50.1	0.04
15 g/t	La Quinta	Inferred	39,260,000	32.0	0.02
15 g/t	San Gregorio	Inferred	18,770,000	27.0	0.08
25 g/t	La Quinta	Indicated	23,420,000	62.6	0.05
25 g/t	La Quinta	Inferred	22,050,000	41.5	0.02
25 g/t	San Gregorio	Inferred	7,350,000	39.8	0.11
35 g/t	La Quinta	Indicated	17,190,000	74.6	0.05
35 g/t	La Quinta	Inferred	12,470,000	50.7	0.02
35 g/t	San Gregorio	Inferred	3,710,000	50.1	0.13
45 g/t	La Quinta	Indicated	12,910,000	86.1	0.06
45 g/t	La Quinta	Inferred	7,100,000	58.8	0.03
45 g/t	San Gregorio	Inferred	2,070,000	58.6	0.15
75 g/t	La Quinta	Indicated	6,230,000	116.5	0.07
75 g/t	La Quinta	Inferred	1,050,000	92.5	0.05

***Note:** Au Grade has been rounded to two (2) significant digits. Ag grade has been rounded to one (1) significant digit. 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 Nieves Project presented in this report are effective as of the 22nd day of June, 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.

15.0 Adjacent Properties

The Nieves Property is not directly bordered by any other mining concessions.

16.0 Other Relevant Data and Information

No additional information or explanation is necessary to make this technical report more understandable.

17.0 Interpretation and Conclusions

Silver mineralization on the Nieves Property is classified as low-sulfidation epithermal mineralization and it is the primary exploration target. Epithermal silver veins are the dominant deposit type in the region with world class examples such as Pachuca, Fresnillo and Guanajuato.

On the Nieves Property there are three major east to northeast trending silver vein systems: California, Concordia-San Gregorio-Dolores and Santa Rita vein systems. There is also an east-northeast to east-southeast striking breccia system, containing manganese mineralization, on the east side of the Property. All these areas have been worked on by local miners. Silver mineralization is hosted in veins less than 10 cm wide that contain pyrite, stibnite, sphalerite, galena, chalcopyrite and silver sulphosalts such as proustite, pyrargirite, freibergite, acanthite, jamesonite and tetrahedrite.

The most recent exploration program on the Nieves Property consisted of a geophysical survey, mapping, sampling and drilling.

The geophysical survey consists of a six lines, a total of 28.4 line-kilometers, of vector controlled source audio-magnetotellurics and induced polarization (CSAMT/CSIP) and nine follow-up lines of pole/dipole induced polarization (IP) totaling 16.5 line-kilometers. Nine anomalous zones were detected and validated with IP lines using 50 meter dipole spacings. Most of the anomalies appear to be westward extensions of mineralized veins previously drilled, including the Dolores, Santa Rita, Niño and Orion veins. The most interesting area identified to date is West Santa Rita, located 600 to 800 meters southwest of the main Santa Rita mine and over 500 meters from Quaterra's nearest drill hole.

Mapping, channel and grab sampling were completed to follow up the geophysical anomalies. The most interesting area was identified in West Santa Rita in the southern part of the Nieves Property. Mapping identified two groups of narrow, sub-parallel 2 to 30 centimeter wide calcite-quartz veinlets, some of which contain strong gold and silver mineralization. Gold values are up to 8.11 ppm over 0.2 m and silver values are up to 253 g/t over 0.4 m.

Quaterra and Blackberry completed two phases of drill programs (VII and VIII) consisting of 73 drill holes and totaling 18,547.25 m. Most of the drilling concentrated on the Concordia/Dolores/Gregorio North vein system, but significant amount of drilling is located in the California and Santa Rita vein systems as well.

The drill program was very successful at increasing the size of known mineralized zones along all the major vein systems. Mineralization along the Concordia vein system was extended an additional 400 m, to a total of approximately 1,300 m. The length of known mineralization along the California vein system was increased to a total of approximately 550 m and it remains open to the east. Phase VII and VIII drill programs were successful in doubling the strike length of the Gregorio North vein, extending the strike length of the vein to approximately 1200 m. A total of 15 drill holes systematically tested the Santa Rita vein system over 500 along strike, the total length of mineralization was extended to approximately 750 m and remains open to the west.

The best intersections include 149 g/t Ag and 0.11 g/t Au over 31.25 m, which includes 6320 g/t Ag and 1.82 g/t Au over 0.25 m in drill hole QTA123 along the Concordia West vein, 104 g/t Ag over 19 m, including 6410 g/t Ag over 0.1 m and 5960 g/t over 0.1 m in drill hole QTA137 along the California vein, and 152.2 g/t Ag and 0.12 g/t Au over 57 m in drill hole QTA144 in the Concordia West area.

A property site visit was conducted by Doris Fox of Caracle Creek on March 11th and 12th, 2012. Several drill sites, artisanal pits, the core storage facility, chain of custody of the samples, geological logging area, sample cutting area and field office were all visited while onsite.

Using a handheld GPS the coordinates of three drill hole markers were recorded to compare with Quaterra's coordinates. The coordinates matched to within the error of the handheld GPS. The logging descriptions, lithologies and to-from depths were consistent with observations from the core. One drill hole was reviewed in its entirety to compare logging descriptions and listed lithologies with actual core.

Three grab samples and eight quarter core samples were collected and sent for check analysis. The three grab samples returned high silver values between 123 and 933 g/t silver verifying the presence of high grade silver mineralization on the property. Quarter core samples yielded silver values up to 505 g/t and they compared reasonably well to the original samples, considering the highly variable nature of the mineralization.

The sampling procedures, sample security and chain of custody are up to industry standards on the Nieves Property. The frequency of insertion of the quality control samples is adequate for this stage of the project, but the number of quality control samples (standards, blanks and core duplicates) and the frequency of their insertion should be higher in the future for a systematic monitoring of assay quality. Samples were sent to ALS Minerals for analysis, which is an ISO 9001:2008 and 17025 certified laboratory. Three to five percent of the samples, randomly selected, were sent to another laboratory, Skyline and AGAT (both ISO 9001 and 17025 certified), for check assays.

The QP's opinion is that the quality of the data is adequate at this stage of the project and can be used in 3D modelling for the purpose of resource estimation, but it is recommended that in the future drill programs a different external standard is used to check the quality of silver assays, which has similar certified value as the silver grades at Nieves, is certified for the same analytical method and has similar matrix. It is also recommended that the analytical method for gold is changed to fire assay and instrument finish (AAS or ICP) and a certified standard with a low grade value, same analytical method and similar matrix is inserted.

Metallurgical testing concluded that 86% of the feed silver can be recovered into a final concentrate of 2.3 kg/tonne silver with open circuit flotation. Minor element assays conducted on the concentrate indicated elevated levels of antimony, arsenic and fluorine, which may result in smelter penalties.

Independent, NI 43-101 compliant resources at the Quaterra Resources Nieves property were estimated by Jason Baker P.Eng. (APENS#9627), a Geological Engineer with Caracle Creek and an independent qualified person as defined by NI 43-101. The mineral resources are reported in accordance with National Instrument 43-101 and have been estimated in compliance with generally accepted CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines. Block model quantities and grade estimates for the Nieves property were classified according to the latest CIM Definition Standards for Mineral Resources and Mineral Reserves.

The results of the updated mineral resource estimate are summarized in Table 17-1. GEMCOM's GEMS software V.6.3 was used to generate the 3D block model and perform the grade estimation. Specific

Gravity (SG) for the Concordia (La Quinta) area was determined using 173 SG samples within the mineralized domain. The block model was populated with SG values using these 173 SG samples via inverse distance interpolation. There were only 16 SG samples available for the Gregorio North area, therefore, the average of those samples (2.83) was assigned to each block. Grades for Ag & Au were estimated using the anisotropic inverse distance method of interpolation. Missing assay intervals were interpolated through and not assigned zero grades.

Table 17-1 Mineral resource estimate

Vein	Area	Category	Quantity (tonnes)[2]	Grade[3] Ag g/t	Grade[4] Au g/t	Ounces[5] Ag	Ounces[5] Au
Concordia	La Quinta	Indicated	33,040,000	50.1	0.04	53,220,000	42,500
Concordia	La Quinta	Inferred	39,260,000	32	0.02	40,390,000	25,200
San Gregorio	North	Inferred	18,770,000	27	0.08	16,293,900	48,300

[1]Reported at a cut-off grade of 15 g/t Ag. Mineral resources are not mineral reserves and do not have demonstrated economic viability.
[2] Tonnes have been rounded to the nearest 10,000.
[3]Ag grade has been rounded to one (1) significant digit.
[4]Au grade has been rounded to two (2) significant digits.
[5]Ounces have been rounded to the nearest 100. One (1) troy ounce = 31.103 grams

The QP's opinion is that the Nieves Property is an excellent exploration project, the size of the silver resource has grown substantially with the last two phases of drilling and silver mineralization on the Nieves Property is comparable to other world class silver deposits in the area, such as Pachuca, Fresnillo and Guanajuato.

Additional drilling is recommended to advance the Nieves Property. Further infill drilling will increase the confidence in the resources at Nieves. Exploration drilling is recommended to explore the extensions of the mineralized zones, which still remain open along the major vein systems, and increase the size of the resource.

All of the objectives of the Report, to summarize the most recent exploration program and provide an update to material changes to the property since the last Technical Report dated September 15, 2010, including an updated resource estimate, were met.

The QP is not aware of any significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information or the mineral resource estimate.

18.0 RECOMMENDATIONS

The following work is recommended by Caracle Creek:

1. More SG sampling in the Gregorio North area to increase the confidence level of the tonnage estimate. Once achieved, it may be possible to add more indicated resource in this area.

2. Further infill drilling is recommended for the Gregorio North area as well as the westerly area of the Concordia (La Quinta). This can increase the amount of indicated resource at the same time possibly increase the grade.

3. Due to the anticipated mining method (bulk open pit mining) it is recommended that all intervals within the defined mineralized domain be sampled.

4. Exploration drilling in the West Santa Rita area to test the geophysical anomaly and the down dip extent of the mineralization identified on the surface.

5. Drill testing of the new geophysical targets in the other areas.

6. Drilling along the California vein system to determine the extent of the mineralization.

Table 18-1 summarizes the budget for the recommended exploration program.

Table 18-1 Recommended exploration budget on the Nieves Property

ITEM	UNIT	No. of UNITS	COST/UNIT	TOTAL COST (CDN$)
Additional SG data (~880 samples)	sample	880	$ 13	$ 11,440
Drilling				
Drilling	m	10,000	$ 120	$ 1,200,000
Assays, QA/QC	m	9,000	$ 20	$ 180,000
Wages, vehicles, support, miscellaneous				$ 300,000
Updated NI43-101 Independent Technical Report and updated resource				$ 70,000
TOTAL				**$ 1,761,440**

19.0 REFERENCES

Buchanan, L.J., 1981: Precious metal deposits associated with volcanic environments in the Southwest; in Dickinson, W.R. and Payne, W.D., eds. Relations of tectonics to ore deposits in the southern Cordillera, Arizona Geological Society Digest, v. 14, p. 237-262.

Cavey, G., 1999: Summary Report on the Nieves Property, Zacatecas, Mexico; Report for Quaterra Resources Inc.

Corbett, G.J., 2002: Epithermal Gold for Explorationists; AIG Presidents Lecture, AIG Online Journal April 2002, AIG website: www.aig.asn.au.

Corbett, G.J., 2004, Epithermal and porphyry gold – Geological models *in* Pacrim Congres 2004, Adelaide, The Australasian Institute of Mining and Metallurgy, p. 15-23.

Corbett, G.J., and Leach, T.M., 1998: Southwest Pacific rim gold-copper systems: Structure, alteration and mineralization; Economic Geology, Special Publication 6, 238 p., Society of Economic Geologists.

Dill, D.B., 1954: Nieves, Valencianna and Miguel Auza Silver Districts of Northwestern Zacatecas; Servicios Industriales Peñoles S.A. de V.V., Archio Oficina, Torreon, Coahila, Mexico.

Folinsbee, J. and Pojhan, A., 2010: Preliminary metallurgical testing on a global composite, Nieves project, Mexico, KM2653, p. 49.

Garcia, M.E., Querol, S.F. and Lowther, G.K., 1991: Geology of the Fresnillo mining district, Zacatecas; in: Salas, G.P., ed., Economic Geology, Mexico, Geological Society of America, Boulder, CO, DNAG Volume P-3, p. 383-394.

Gemmell, J.B., Simmons, S.F. and Zantop, H., 1988: The Santo Nino silver-lead-zinc vein, Fresnillo District, Zacatecas, Mexico; Part I Structure, vein stratigraphy, and mineralogy; Economic Geology, v. 83, no. 8, p. 1597-1618.

Hedenquist, J.W., Izawa, E, Arribas, A, and White N.C., 1996: Epithermal Gold Deposits: Styles Characteristics and Exploration; Society of Resource Geology, resource Geology Special Publication Number 1, Tokyo, Japan, 24 p.

Long, S.D. 2008: Assay quality assurance-quality control program for drilling projects at the pre-feasibility to feasibility report level, third edition, Mining Consulting Group, Amec, Phoenix Arizona, unpublished report.

Ruvalcaba-Ruiz, D.C. and Thompson, T.B., 1988: Ore deposits at the Fresnillo Mine, Zacatecas, Mexico; Economic Geology, v. 83, no. 8, p. 1583-1596.

Simmons, S.F., Gemmell, J.B. and Sawkins, F.J., 1988: The Santo Nino silver-lead-zinc vein, Fresnillo District, Zacatecas; Part II, Physical and chemical nature of ore-forming solutions; Economic Geology, v. 83, no. 8, p. 1619-1641.

Simmons, S.F., 1991: Hydrologic implications of alteration and fluid inclusion studies in the Fresnillo District, Mexico; evidence for a brine reservoir and a descending water table during the formation of hydrothermal Ag-Pb-Zn orebodies; Economic Geology, v. 86, no. 8, p1579-1601.

Sketchley, D.A., 1998: Gold deposits: Establishing sampling protocols and monitoring quality control, Exploration and Mining Geology, v. 7, p.129-138.

Smee, B.W. 2008: Analytical quality control in mineral exploration and mining: compliance with NI 43-101 or "How to bulletproof your database and never fail an audit", Smee and Associates Consulting Ltd, North Vancouver, unpublished report for Century Systems users conference.

Smee, B.W., 2010: Certificate of analysis, Quaterra standard KM 2653, Smee and Associates Consulting Ltd., Consulting Geochemistry/Geology, 2p.

Stone, M., 2009: Independent Technical Report, The Nieves Silver Project, Zacatecas, Mexico, 104p.

Stone, M., 2010: Independent Technical Report, Nieves Property, Zacatecas State, Mexico, 116p.

Turner, T., 1999: The Nieves District, Zacatecas, Mexico, A geologic report; Report for Western Copper Holdings Ltd.

Wendt, C. J., 2002: The Geology and Exploration Potential of the Juanicipio Property, Fresnillo District, Zacatecas, Mexico; Technical Report for Mega Capital Investments.

Wetherup, S. W., 2006: Independent Technical Report, Nieves Silver Project, Zacatecas, Mexico, 56p.

20.0 STATEMENT OF AUTHORSHIP

This Report, titled "Independent Technical Report, Nieves Property, Zacatecas State, Mexico", and dated August 9th, 2012 was prepared and signed by the following authors:

"signed and sealed"

____
Zsuzsanna Magyarosi
Senior Geologist, Ph.D., P.Geo.
August 9th, 2012
Sudbury, Ontario

"signed and sealed"

____
Jason Baker
Geological Engineer, B.Eng., P.Eng.
August 9th, 2012
Fall River, Ontario

"signed and sealed"

____
Doris Fox
Senior Geologist, M.Sc., P.Geo.
August 9th, 2012
Sudbury, Ontario

Appendix 1 – Certificates of Qualified Persons

Zsuzsanna Magyarosi
25 Frood Road
Sudbury, Ontario, Canada, P3C 4Y9
Telephone: 705-671-1801
Email: zmagyarosi@caraclecreek.com

CERTIFICATE OF QUALIFIED PERSON

I, Zsuzsanna Magyarosi, do hereby certify that:

1. I am employed as Senior Geologist for the geological consulting firm of Caracle Creek International Consulting Inc. Canada (CCIC).
2. I am jointly responsible for the entire Technical Report titled "Independent Technical Report, Nieves Property, Zacatecas State, Mexico", except for the "Site Visit" section (Section 12.1) and the "Mineral Resource Estimates" section (Section 14.0), dated August 9th, 2012, and prepared for Quaterra Resources Inc.
3. I hold the following academic qualifications: B.Sc. (Hons) Geology (1996) Brock University, St. Catharines; M.Sc. Geology (1998) Carleton University, Ottawa; Ph.D. (2002) Carleton University, Ottawa.
4. I am a member of the Association of Professional Geoscientists of Ontario (Member #2031).
5. I have worked on exploration projects world wide including: Canada (Ontario, Yukon), Finland and have worked on gold and Ni-Cu-PGE, since 1996. I am a Qualified Person for the purpose of the National Instrument 43-101.
6. I have not visited the 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 9th Day of August, 2012.

Zsuzsanna Magyarosi, Ph.D., P.Geo.
Senior Geologist, CCIC Canada

PROFESSIONAL GEOSCIENTIST
ZSUZSANNA MAGYAROSI
PRACTISING MEMBER
2031
ONTARIO

Jason Baker
5 Short Lane
Fall River, Nova Scotia, Canada, B2T 1H7
Telephone: 902-209-2037
Email: jbaker@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 (CCIC).
2. I am responsible for the "Mineral Resource Estimates" section (Section14.0) of the Technical Report titled "Independent Technical Report, Nieves Property, Zacatecas State, Mexico" dated August 9th, 2012, and prepared for Quaterra Resources Inc.
3. I hold the following academic qualifications: 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 estimation 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 Nieves 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 9th Day of August, 2012.

Jason Baker, B. Eng., P. Eng.
Geological Engineer, CCIC Canada

REGISTERED PROFESSIONAL ENGINEER
DATE Aug 9th 2012
J. A. Baker
9627
PROVINCE OF NOVA SCOTIA

Doris Fox
5537 Columbus Place
Halifax, Nova Scotia, Canada
B3k 2G7
Telephone: 902-453-3945
Email: dfox_123@hotmail.com

CERTIFICATE OF QUALIFIED PERSON

I, Doris Fox, do hereby certify that:

1. I am employed as Senior Associate Geologist for the geological consulting firm of Caracle Creek International Consulting Inc. Canada (CCIC).
2. I am responsible for the "Site Visit" section (Section 12.1) and jointly responsible for sections "Accessibility, Climate, Local Resources, Infrastructure, and Physiography" (Section 5.0), "Geological Setting and Mineralization" (Section 7.0), "Deposit Types" (Section 8.0), "Sampling Procedures" (Section 10.1) and "Sample Security" (Section 11.1) of the Technical Report titled "Independent Technical Report, Nieves Property, Zacatecas State, Mexico", dated August 9th, 2012, and prepared for Quaterra Resources Inc.
3. I hold the following academic qualifications: B.Sc. (Double Major) Geology (2000) Saint Mary's University, Halifax; M.Sc. Earth Sciences (2002) McGill University, Montreal.
4. I am a member of the Association of Professional Geoscientists of Ontario (Member #1430).
5. I have worked on exploration projects world wide including: Canada, Europe, South America, Mexico and Africa. I have worked on gold and Ni-Cu-PGE, since 2002.
6. I have visited the Property on March 11th and 12th, 2012.
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 9th Day of August, 2012

"signed and sealed"

____
Doris Fox, M.Sc., P.Geo.
Senior Geologist, CCIC Canada

Appendix 2 – Surface sampling in the West Santa Rita area

Sample ID	Area	Easting	Northing	Width (m)	Sample type	Description	Au (ppm)	Ag (ppm) FA	Ag (ppm) ICP	As (ppm)	Cu (ppm)	Hg (ppm)	Pb (ppm)	Sb (ppm)	Zn (ppm)	Date	Lab	Job number
139072	North-west of Santa Rita	698597.5	2649658.01	0.08	chanel	White calcite veins with moderate Fe oxides (goethite, hematite and manganese?) striking N84°W/ 88°SW	<0.05	<5	0.6	3170	9	<1	7	15	21	18/04/2012	ALS	ZA12097459
139073	North-west of Santa Rita	698680.54	2649636	0.02	chanel	Light brown calcite veinlet, moderately replaced by fine grained quartz, Fe oxides (goethite) and 1 to 3% pyrite. Fault plane on the hanging-wall N75°W/ 50°SW R-45°SE, left movement 2cm.	<0.05	<5	0.4	894	10	<1	6	12	41	18/04/2012	ALS	ZA12097459
139074	North-west of Santa Rita	698404.32	2649687	0.05	chanel	Black and brown calcite veinlet, moderate Fe oxides (hematite, goethite and manganese). Trace pyrite. N88°W/85°SW.	<0.05	<5	0.3	429	14	1	11	24	62	19/04/2012	ALS	ZA12097459
139075	North-west of Santa Rita	698312.48	2649613.7	0.02	chanel	Four white quartz, brown calcite veinlets - moderate to high Fe oxides (hematite and goethite, manganese). Trace pyrite? N70°W/57°NE.	<0.05	<5	0.3	103	5	<1	6	29	45	20/04/2012	ALS	ZA12097459
139076	North-west of Santa Rita	698413.03	2649793.26	0.20	chanel	Quartz-calcite veinlet, moderate to high Fe oxide (hematite goethite, manganese) and trace pyrite? E-O/50°S.	0.97	<5	1.6	1615	24	1	101	30	375	20/04/2012	ALS	ZA12097459
139077	North-west of Santa Rita	698336.12	2649814.18	0.15	chanel	White and black calcite veinlet, moderate to high Fe oxide (hematite, goethite and manganese), trace sulfosalts? N75°W/75°SW.	0.18	<5	1.2	1385	11	1	11	22	136	23/04/2012	ALS	ZA12097459
139078	North-west of Santa Rita	698338.33	2649806.61	0.15	chanel	Quartz veinlet, moderate to high Fe oxide (hematite, goethite, manganese), possible sulfosalts?. N80°E/85°SE.	<0.05	<5	0.6	1195	14	<1	21	13	97	24/04/2012	ALS	ZA12097459
139079	North-west of Santa Rita	698338	2649800.4	0.20	chanel	Calcite veinlet, high Fe oxide (goethite, hematite, manganese), trace pyrite? N80°W/70°SW.	0.46	<5	1.1	3600	17	1	21	34	724	25/04/2012	ALS	ZA12097459
139080	North-west of Santa Rita	698313.62	2649808.5	0.15	chanel	Calcite replaced by quartz veinlet, highly oxidized to Fe oxides (goethite, hematite, limonite), trace pyrite and sulfosalts? N70°E/75°SE.	2.61	85	83.8	3410	32	5	3420	330	888	24/04/2012	ALS	ZA12097459
139081	North-west of Santa Rita	698448.58	2650074.14	0.09	chanel	Black calcite veinlet in fault (2cm), clays on walls (argillite?), moderate Fe oxides (hematite, goethite). N75°E/73°SE.	0.96	<5	0.9	1960	36	1	27	138	81	28/04/2012	ALS	ZA12097459
139082	North-west of Santa Rita	698269.81	2650067.02	0.25	chanel	Calcite veinlet 2cm to 5cm wide, high Fe oxide (goethite, hematite, manganese) content, trace pyrite? N70°E/50°SE.	1.32	<5	1.2	3280	21	1	44	57	115	30/04/2012	ALS	ZA12097459
139083	North-west of Santa Rita	698298.69	2650036.94	0.13	chanel	Black calcite veinlet 13cm wide, moderate to high Fe oxide (hematite, goethite, manganese), trace pyrite? N75°E/65°SE.	1.04	<5	2.1	2160	16	1	7	55	374	01/05/2012	ALS	ZA12097459
661924	South of Santa Rita Vein	698313	2648871	2 x 2	grab	4-8 per meter thin 0.1-0.5 cm wide goethite bands at N76°E/66°SE.	<0.05	<5	<0.2	23	37	<1	24	4	140	10/03/2012	ALS	ZA12070060
661925	West of QTA-25 (Santa Rita)	698423	2649770	0.15	grab	0.15 m wide calcite veinlet partially replaced by fine grained, white quartz veinlet at N24°W/73°NE. High Fe oxide (goethite/hematite) content.	0.1	<5	0.2	2700	2	1	6	36	24	11/03/2012	ALS	ZA12070060
661926	West of QTA-25 (Santa Rita)	698353	2649814	0.4	grab	0.10 m wide brecciated vein at N85°E/85°NW. Formed by < 2 cm long subangular to subrounded rock fragments cemented by fine grained white quartz.	6.37	61	53.6	4150	98	32	4250	427	2550	11/03/2012	ALS	ZA12070060
661927	West of QTA-25 (Santa Rita)	698318	2649809	0.40	grab	0.40 m wide fine grained, white quartz vein at N80°W/62°SW (Sta. Rita Vein), high Fe oxide (goethite/hematite) content.	4.86	253	>100	4460	69	20	3440	484	2690	11/03/2012	ALS	ZA12070060
661928	West of QTA-25 (Santa Rita)	698568	2649993	0.40	grab	0.40 m wide fine grained, white quartz vein at N75°E/50°SE (Sta. Rita Vein), moderate amount of Fe oxide (goethite/hematite), high amount of Mn oxide?	0.1	82	82.1	1390	32	1	501	374	85	11/03/2012	ALS	ZA12070060
661929	West of QTA-25 (Santa Rita)	697948	2649723	0.15	grab	0.15 m wide brecciated vein at N80°E/55°SE. Formed by < 3 cm long subangular rock fragments cemented by white calcite.	<0.05	<5	0.7	129	15	1	24	10	93	13/03/2012	ALS	ZA12070060
661930	West of QTA-25 (Santa Rita)	698462	2649844	0.33	grab	0.33 m wide brown to white calcite vein at N73°E/67°NW, high amount of Fe oxide (goethite/hematite).	0.87	37	46.3	2090	17	3	612	85	290	14/03/2012	ALS	ZA12070060
661931	West of QTA-25 (Santa Rita)	698376	2649822	0.10	grab	0.10 m wide calcite veinlet, totally replaced by fine grained, white quartz vein at N75°E/75°NW, 30 - 40 % brown sphalerite/goethite?	4.04	48	45.8	1630	61	16	1860	222	1105	14/03/2012	ALS	ZA12070060
661932	West of QTA-25 (Santa Rita)	698282	2649800	0.2	grab	0.20 m wide brecciated vein at N85°E/85°SE. Formed by < 1.5 cm long subangular rock fragments cemented by calcite, partially to totally replaced by fine grained, white quartz (Sta. Rita Vein). Moderate amount of Fe oxides (goethite/hematite).	8.11	29	30	3050	52	13	1950	219	1860	14/03/2012	ALS	ZA12070060
661933	West of QTA-25 (Santa Rita)	698849	2649823	0.20	grab	0.20 m wide black to white calcite vein at N70°E/57°NW.	<0.05	<5	1	152	<1	1	17	5	32	14/03/2012	ALS	ZA12070060
661934	West of QTA-25 (Santa Rita)	698769	2649884	0.5	grab	0.45 m wide brecciated vein at N70°E/70°SE. Formed by < 1.5 cm long subangular rock fragments cemented by calcite, partially replaced by fine grained, white quartz (Sta. Rita Vein). Moderate amount of Fe oxides (goethite/hematite), small amount of Mn oxides.	0.2	8	10.5	2270	32	2	442	94	1730	14/03/2012	ALS	ZA12070060
661935	West of QTA-25 (Santa Rita)	698577	2649717	0.20	grab	0.20 m wide white calcite vein at N57°W/55°SW.	<0.05	<5	2.1	388	5	1	4	5	41	18/03/2012	ALS	ZA12070060
661936	Southwest of Santa Rita	698542	2649370	2 x 2	grab	8-12 per meter thin 0.1-1.5 cm wide calcite veinlets, partially replaced by fine grained, white quartz veinlets at N72°W/60°NE, also less at E-W/75°N.	<0.05	<5	<0.2	19	2	1	8	2	22	18/03/2012	ALS	ZA12070060
661937	Southwest of Santa Rita	697908	2649462	0.25	grab	0.25 m wide white calcite vein at N40°E/62°NW. Moderate amount of Fe oxides (goethite/hematite).	<0.05	<5	0.2	981	9	2	10	105	53	18/03/2012	ALS	ZA12070060
661938	Southwest of Santa Rita (El Papalote)	697880	2648506	0.10	grab	0.10 m wide white calcite veinlet at N42°E/84°NW, high amount of Fe oxides (limonite, minor goethite), 10-15% black to brown sphalerite.	<0.05	<5	<0.2	3050	33	<1	15	2280	175	20/03/2012	ALS	ZA12070060

Sample ID	Area	Easting	Northing	Width (m)	Sample type	Description	Au (ppm)	Ag (ppm) FA	Ag (ppm) ICP	As (ppm)	Cu (ppm)	Hg (ppm)	Pb (ppm)	Sb (ppm)	Zn (ppm)	Date	Lab	Job number
661955	Northwest of Santa Rita	696320	2650435	0.70	grab	0.70 m wide brecciated vein at N01°E/80°NW. Formed by < 3 cm long subangular to subrounded siltstone fragments cemented by calcite partially replaced by fine grained, white quartz. In the footwall, 0.30 m wide moderate silicification in the matrix of fragments with 1-2% fine grained, anhedral disseminated pyrite, 2-3% dark grey to black sulfosalts (jamesonite?) and 2% stibnite?	<0.05	<5	0.3	1265	5	1	7	7	106	29/03/2012	ALS	ZA12097459
661956	Northwest of Santa Rita	696072	2651166	0.30	grab	0.30 m wide brecciated vein at N54°W/70°SW. Formed by < 1 cm long subangular to subrounded to rounded siltstone fragments cemented by calcite, weakly replaced by fine grained, white quartz. High amount of Fe oxides (goethite/hematite). Parallel fault plane in the footwall.	0.14	<5	0.4	2430	23	11	16	16	96	30/03/2012	ALS	ZA12097459
661957	Northwest of Santa Rita	696614	2651473	0.18	grab	0.18 m wide brecciated vein at N25°W/75°NE. Formed by < 2 cm long angular to subangular siltstone fragments cemented by brown to white calcite. High amount of Fe oxides (goethite).	<0.05	<5	<0.2	528	5	<1	2	2	32	01/04/2012	ALS	ZA12097459
661964	Santa Rita	697692	2649964	0.15	grab	0.10 m wide white calcite veinlet at N32°W/88°NE.	<0.05	<5	<0.2	1600	12	3	13	13	74	25/04/2012	ALS	ZA12097459
661965	Santa Rita	697737	2649926	0.20	grab	0.15 m wide brecciated vein at N86°W/80°NE. Formed by < 2 cm long subangular to subrounded to rounded siltstone fragments cemented by white calcite and moderate amount of Feoxides (goethite/hematite).	0.1	<5	<0.2	2690	25	5	28	28	286	25/04/2012	ALS	ZA12097459
661966	Santa Rita	698175	2649909	0.25	grab	0.10 m wide brecciated vein at N68°W/74°NE. Formed by < 2 cm long subangular to subrounded to rounded siltstone fragments cemented by white calcite and small amount of Fe oxides (goethite/hematite).	0.14	<5	0.3	1390	9	2	77	77	60	26/04/2012	ALS	ZA12097459
661967	Santa Rita	697979	2649891	0.25	grab	0.25 m wide brecciated vein at N84°E/73°NW. Formed by < 3 cm long subangular rock fragments cemented by white calcite. High amount of Fe oxides (goethite/hematite) in the matrix of fragments.	<0.05	<5	<0.2	1170	10	1	12	12	74	26/04/2012	ALS	ZA12097459
661968	Santa Rita	697826	2649395	0.10	grab	0.10 m wide brecciated vein at N60°W/41°SW. Formed by < 2 cm long angular to subangular siltstone fragments cemented by white calcite. High amount of Fe oxide (goethite/hematite) in the matrix of fragments.	<0.05	<5	0.2	3610	20	2	9	9	30	26/04/2012	ALS	ZA12097459
661969	Santa Rita	698478	2650559	0.30	grab	0.30 m wide brecciated vein at N86°E/76°SE. Formed by < 3 cm long subangular to subrounded siiltstone fragments cemented by white calcite. High amount of Fe oxide (goethite) in the matrix of fragments.	<0.05	<5	<0.2	143	1	<1	3	3	7	28/04/2012	ALS	ZA12097459
661970	Santa Rita	698095	2650075	0.15	grab	0.15 m wide brecciated vein at N73°E/83°SE. Formed by < 3 cm long angular to subangular siltstone fragments cemented by white calcite. High amount of Fe oxide (goethite/hematite) in the matrix of fragments.	3.29	<5	0.4	3200	39	<1	9	9	157	28/04/2012	ALS	ZA12097459
661971	Santa Rita	697822	2649993	0.15	grab	0.15 m wide brecciated vein at N80°E/64°SE. Formed by < 2 cm long angular to subangularsiltstone fragments cemented by white calcite. High amount of Fe oxide (goethite/hematite) in the matrix of fragments.	<0.05	<5	0.2	3010	13	1	10	10	55	28/04/2012	ALS	ZA12097459
661972	Santa Rita	697947	2650811	0.35	grab	0.15 m wide brecciated vein at N60°E/61°SE. Formed by < 2 cm long angular to subangular siltstone fragments cemented by white calcite. High amount of Fe oxide (goethite/hematite) in the matrix of fragments.	<0.05	<5	0.2	1260	8	2	7	7	38	01/05/2012	ALS	ZA12097459

Appendix 3 – QA/QC plots for gold and QA/QC summary of previous drilling phases

Appendix 3: QA/QC plots for gold and QA/QC summary of previous drilling phases

Quaterra Resources Inc.
1100-1199 West Hastings Street
Vancouver, British Columbia, Canada
V6E 3T5

And

Blackberry Ventures 1, LLC.
10 Rockefeller Plaza, Suite 720,
New York, New York 10020

Date: August 9th, 2012

Prepared By:

Caracle Creek International Consulting Inc.
Zsuzsanna Magyarosi, Ph.D., P.Geo.

TABLE OF CONTENTS

FIGURES

TABLES

1.0 Au QC figures for phases VII and VIII

1.1 External blanks and standards

1.1.1 Phase VII

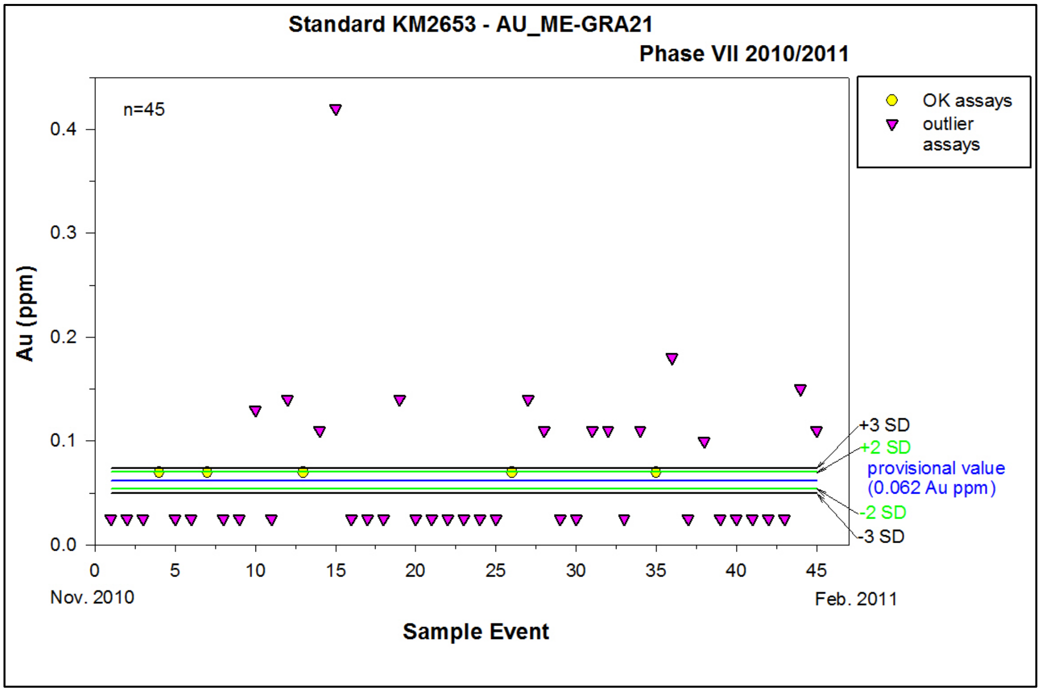

Figure 1-1 Control chart of standard KM2653 for Au analyzed with ME-GRA21 method in Phase VII

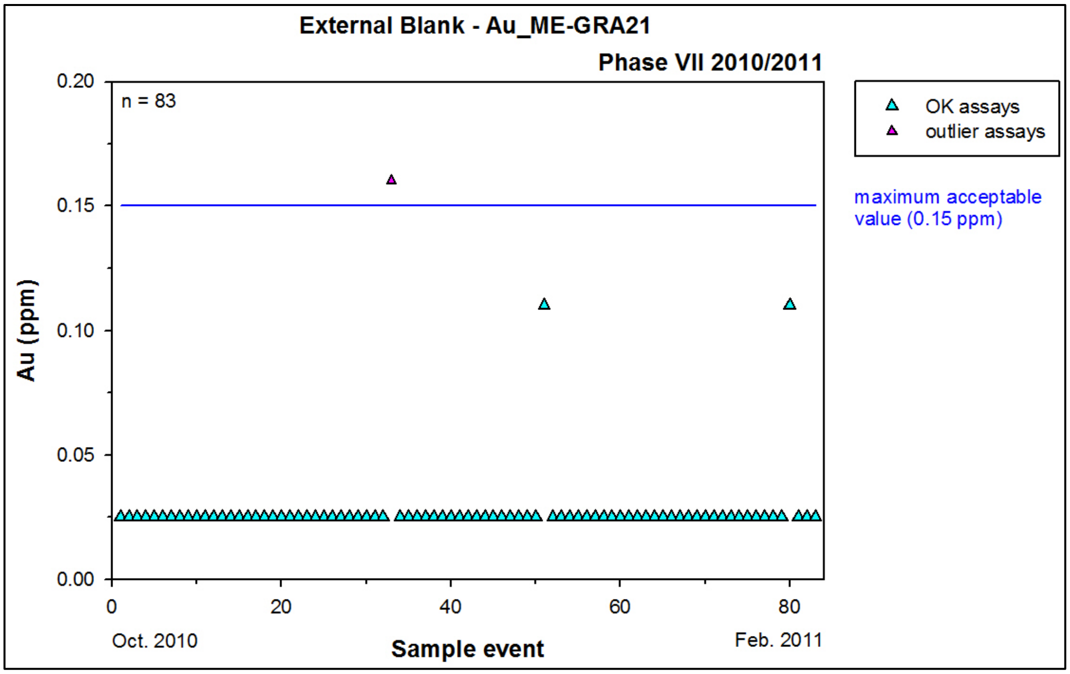

Figure 1-2 Analytical results of blank samples for Au with ME-GRA21 method in Phase VII

1.1.2 Phase VIII

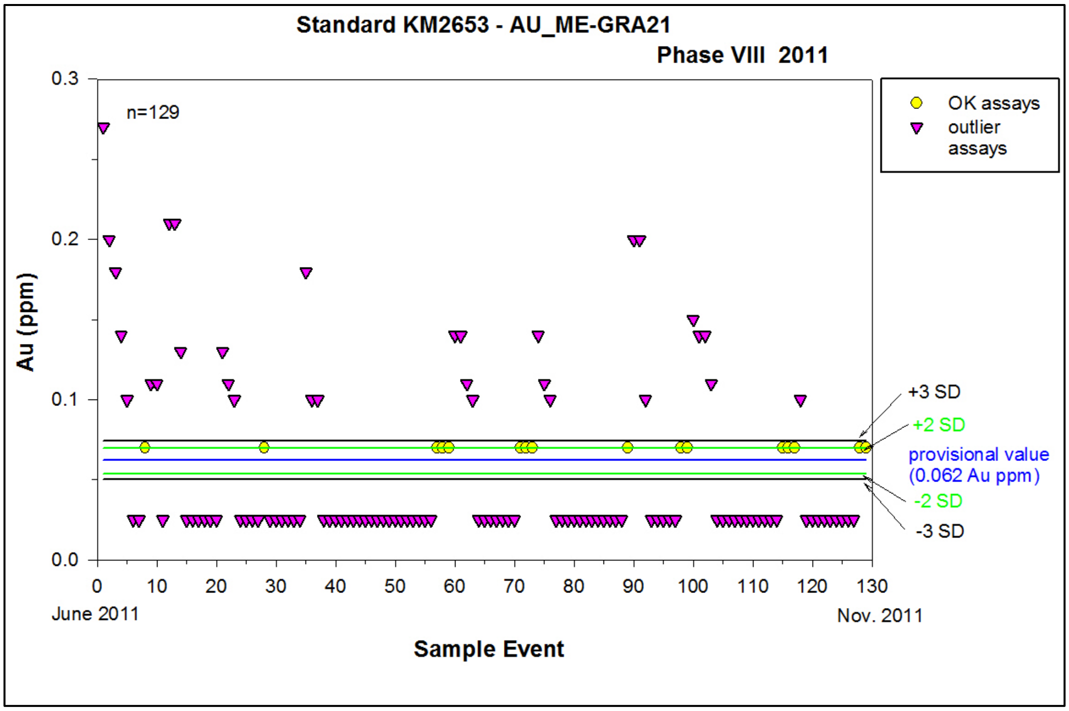

Figure 1-3 Control chart of standard KM2653 for Au analyzed with ME-GRA21 method in Phase VIII

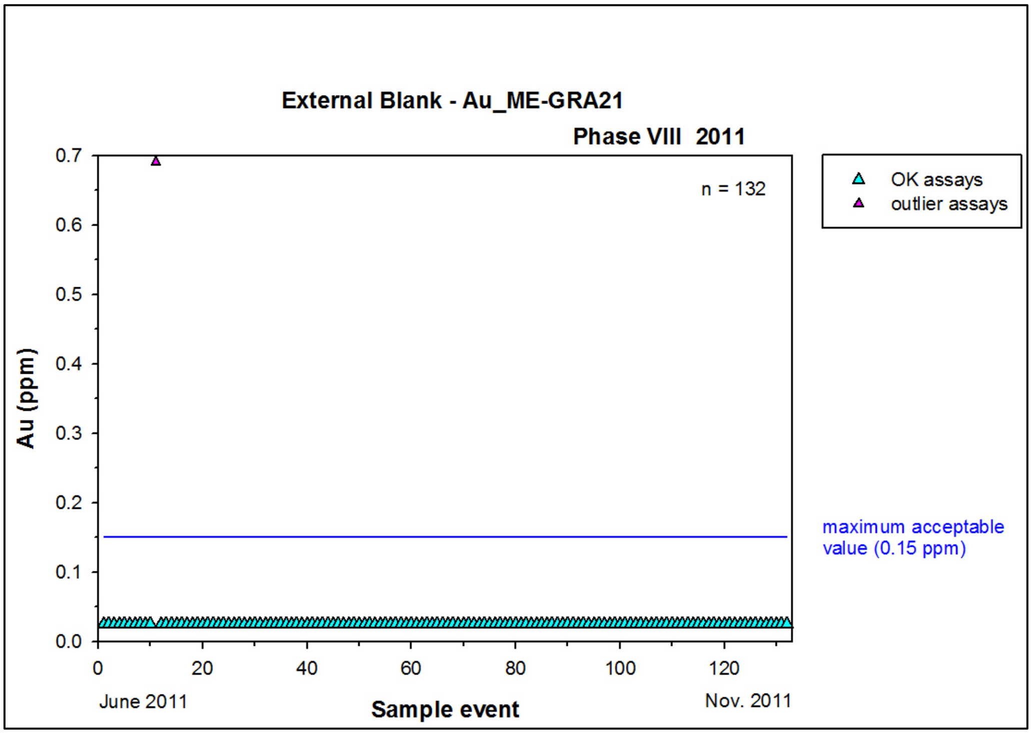

Figure 1-4 Analytical results of blank samples for Au with ME-GRA21 method in Phase VIII

1.2 Duplicates

1.2.1 Phase VII

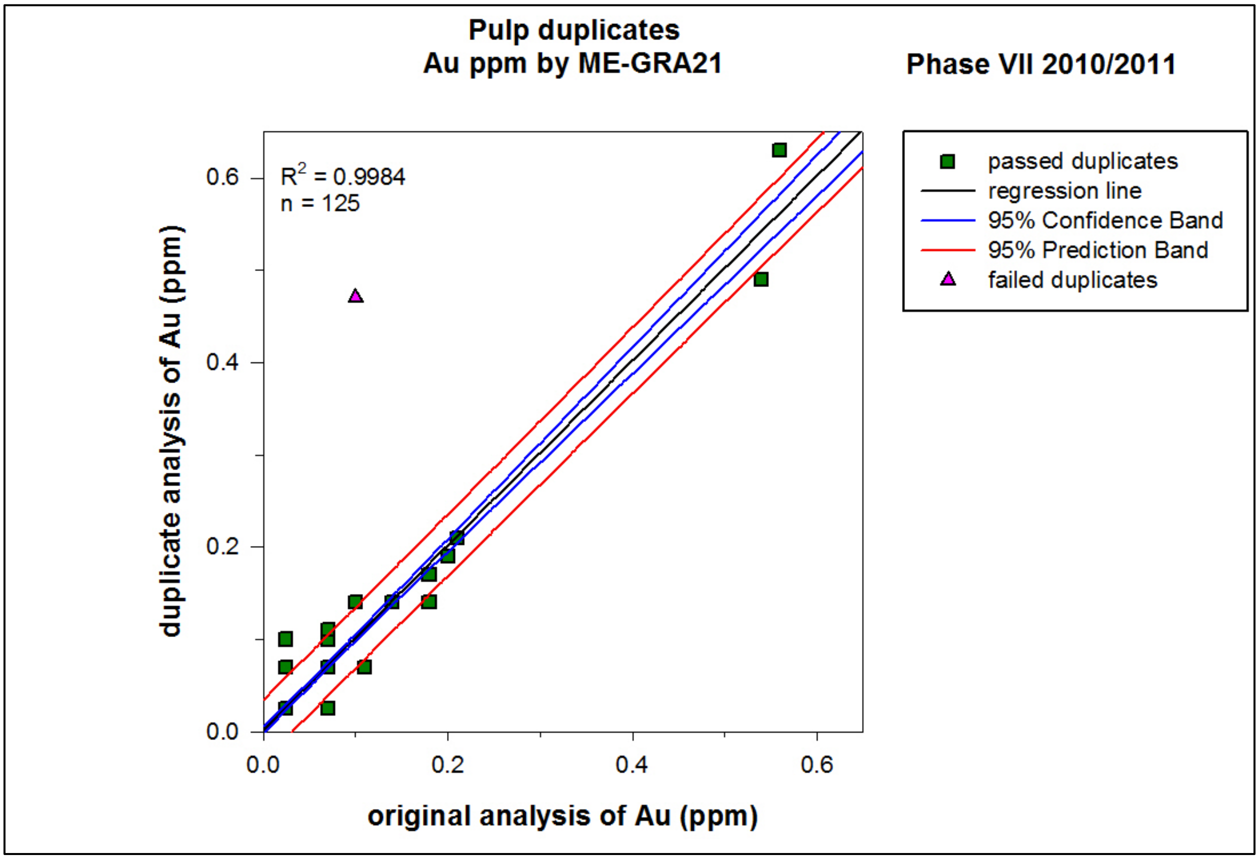

Figure 1-5 Pulp duplicate versus original plot for Au analyzed with ME-GRA21 method

1.2.2 Phase VIII

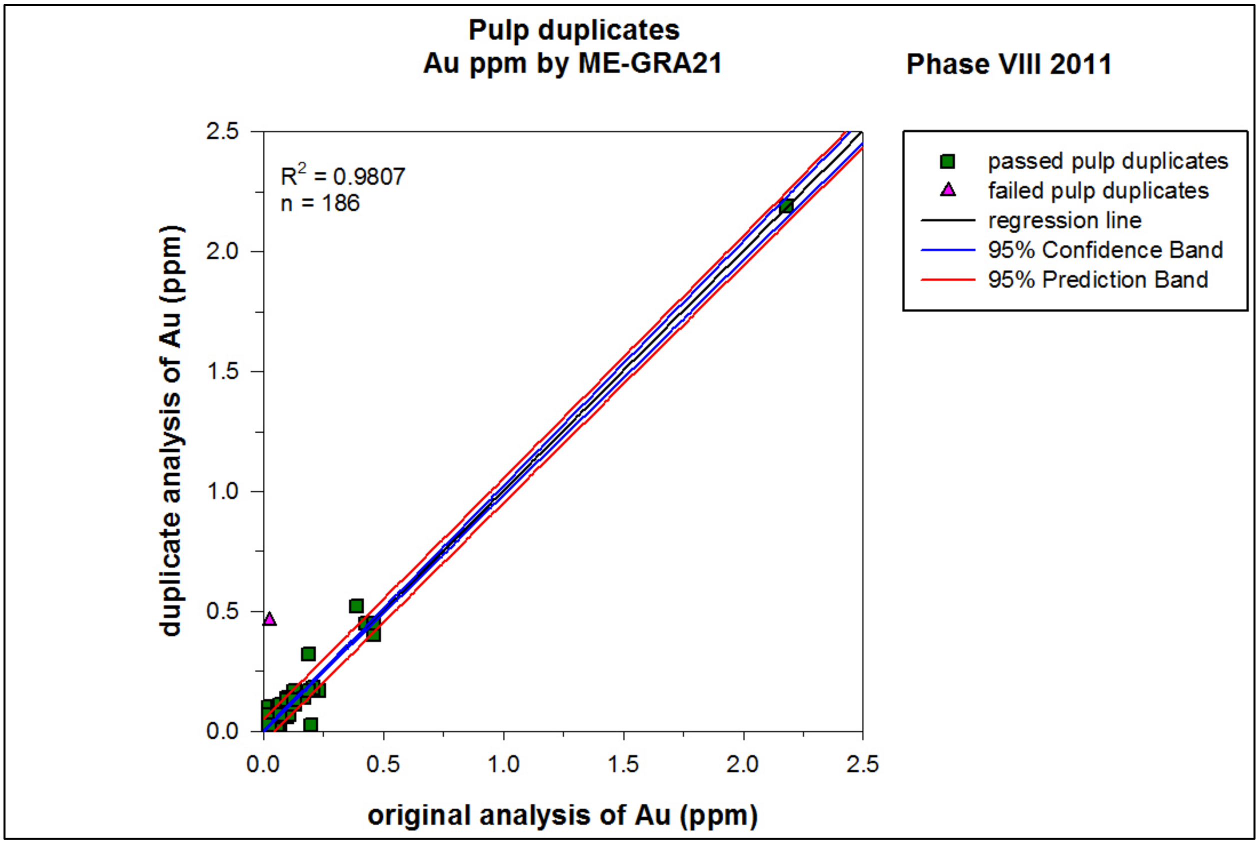

Figure 1-6 Pulp duplicate versus original plot for Au analyzed with ME-GRA21 method

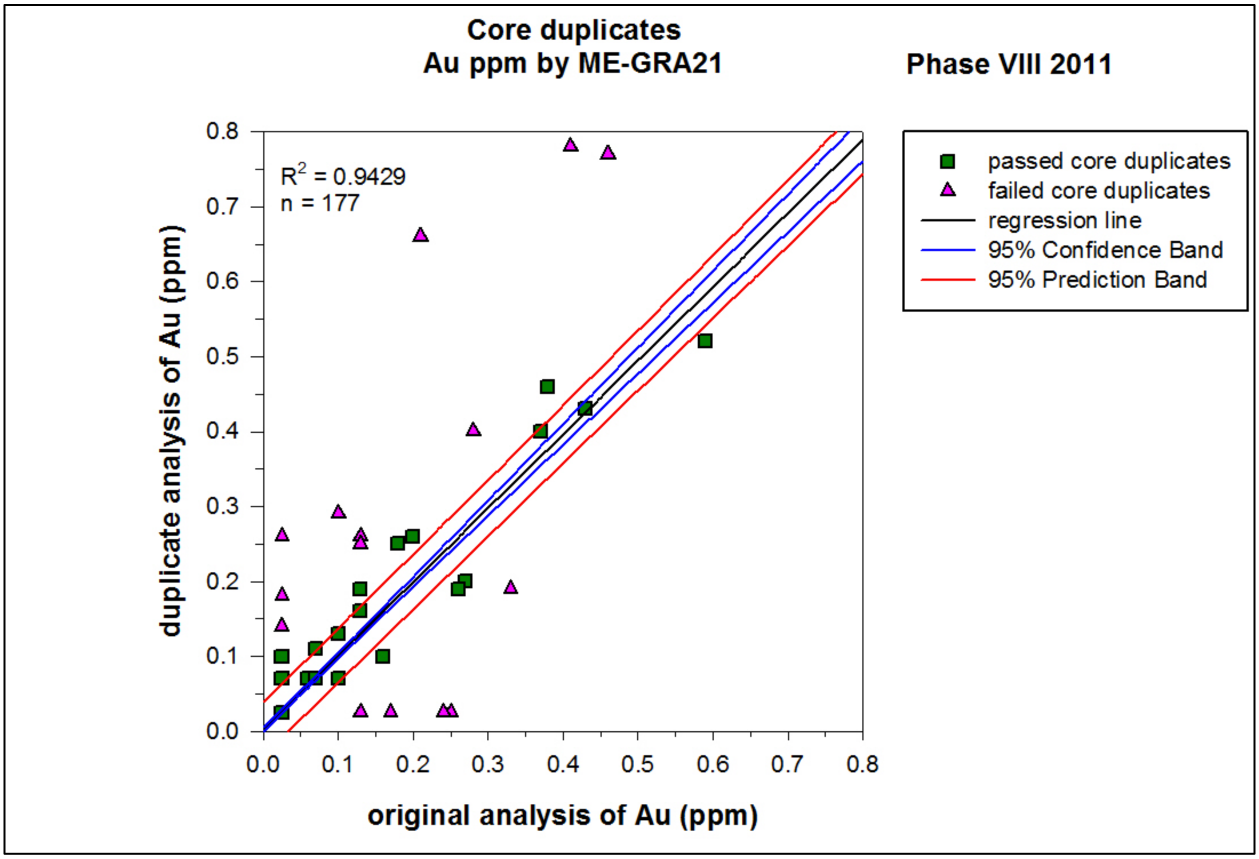

Figure 1-7 Core duplicate versus original plot for Au analyzed with ME-GRA21 method

1.1 Check assays

1.1.1 Phase VII

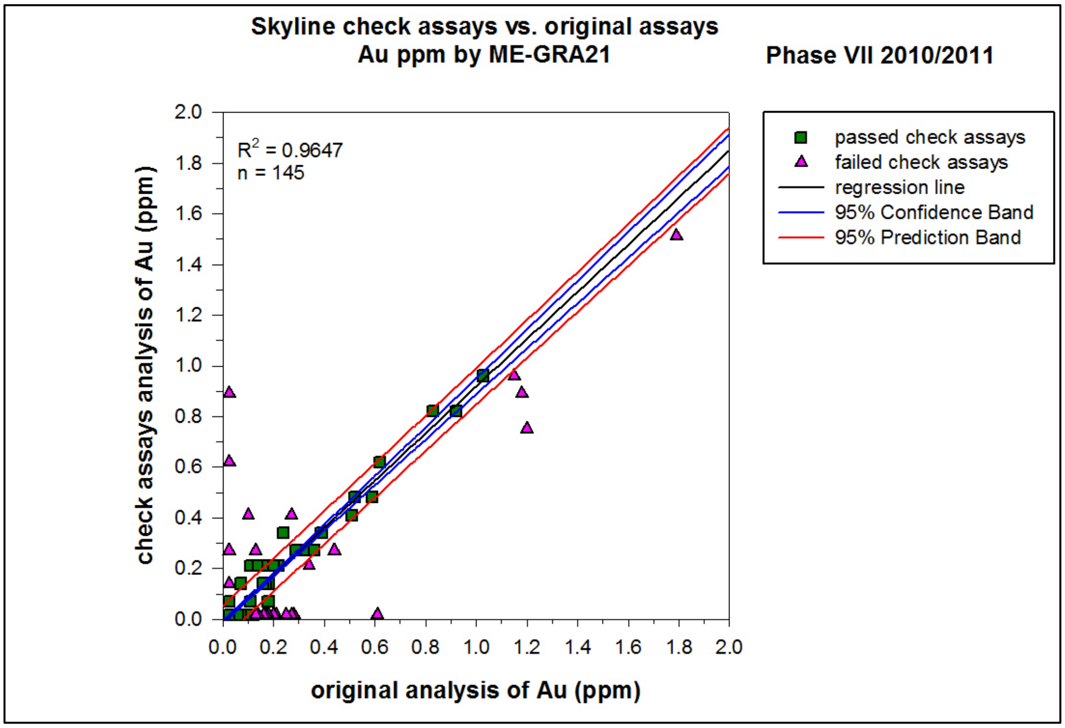

Figure 1-8 Plot of check assays versus original assays for Au analyzed with gravimetric method

1.1.2 Phase VIII

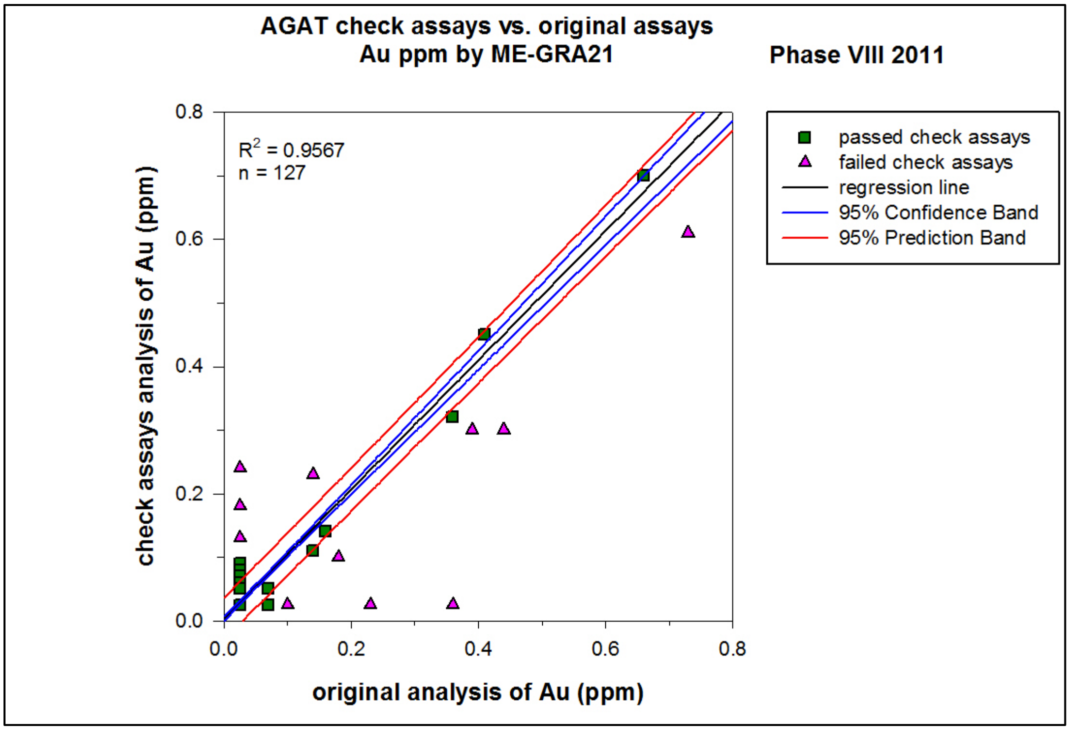

Figure 1-9 Plot of check assays versus original assays for Au analyzed with gravimetric method

2.0 QA/QC OF PHASES IV, V AND VI

2.1 QA/QC procedures and results

QA/QC procedures and results of phases IV to VI were also examined following the poor QC results in phases VII and VIII, especially for gold.

The analytical methods for Au and Ag in phases IV, V and VI were the same as in phases VII and VIII (Table 11-4 of the report). Blanks were inserted only in phase VI, a standard (CDN-SE-1) was inserted at regular intervals in all phases. Characteristics of the standard are summarized in Table 2-1.

Table 2-1 Characteristics of standard CDN-SE-1

Standard name	Prepared by	Element	Value (ppm)	Standard deviation	Analytical method
CDN-SE-1	CDN Resource Laboratories Ltd.	Ag	712	28.5	fire assay or 4 acid digestion and ICP finish
CDN-SE-1	CDN Resource Laboratories Ltd.	Au	0.48	0.017	Fire assay and AA or ICP finish

Standard name	Prepared by	Element	Value (ppm)	Standard deviation	Analytical method

The failure rates of the blank and standard for each phase are listed in Table 2-2.

Table 2-2 QC results for Au and Ag for phases IV, V and VI

Standard name	Element	Analytical method	Phase IV		Phase V		Phase VI	
			Number of analysis	Failure rate	Number of analysis	Failure rate	Number of analysis	Failure rate
Blank	Ag	ME-ICP41	0		0		82	17%
Blank	Ag	ME-GRA21	0		0		82	1%
Blank	Au	ME-GRA21	0		0		82	1%
CDN-SE-1	Ag	ME-GRA21	47	6%	107	6%	42	7%
CDN-SE-1	Au	ME-GRA21	47	43%	107	47%	42	43%

The failure rate of the blank for Ag in phase VI is slightly high. The failure rate of the blank inserted by the laboratory is 0%, therefore this indicates a problem with the external blank.

The failure rate of the standard for Ag is acceptable in all phases.

The failure rate of Au is too high in every phase. The main reason for that is probably due to different analytical methods. The standard is certified for fire assay and AA or ICP finish for Au and the samples were analyzed for Au with fire assay and gravimetric finish.

3.0 Reassay of Gold from Phases IV, V, VI and VII

Due to the high failure rate of gold in the previous phases it was decided to reassay approximately 5% of the samples from phases IV to VI. A total of 412 samples, 23 blanks and 24 standards were sent to AGAT Laboratories in Sudbury, Ontario. The analytical method and the inserted gold standard (OxD87) are the same as for the check assays in Phase VIII (Table 11-8 and Table 11-9 of the report).

The failure rate for blank is 0% (Figure 3-1) and the failure rate of the standard is 79% (Figure 3-2), which is very high. The reason for this failure is probably due to analyzing low grade Au samples with gravimetric method. Although, the standard is certified for gravimetric method too, the standard deviation given for the standard may be too narrow, which is indicated in the standard certificate.

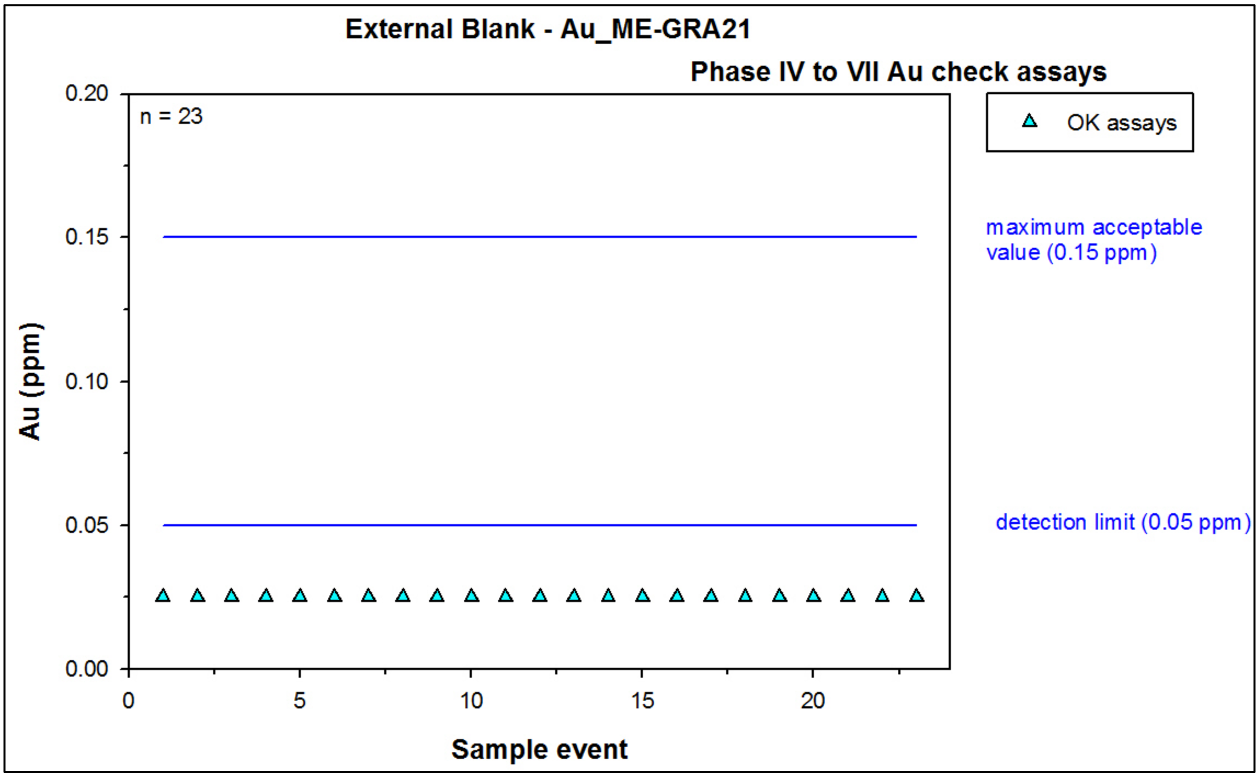

Figure 3-1 Control chart for blank for Au check assays for phases IV to VII

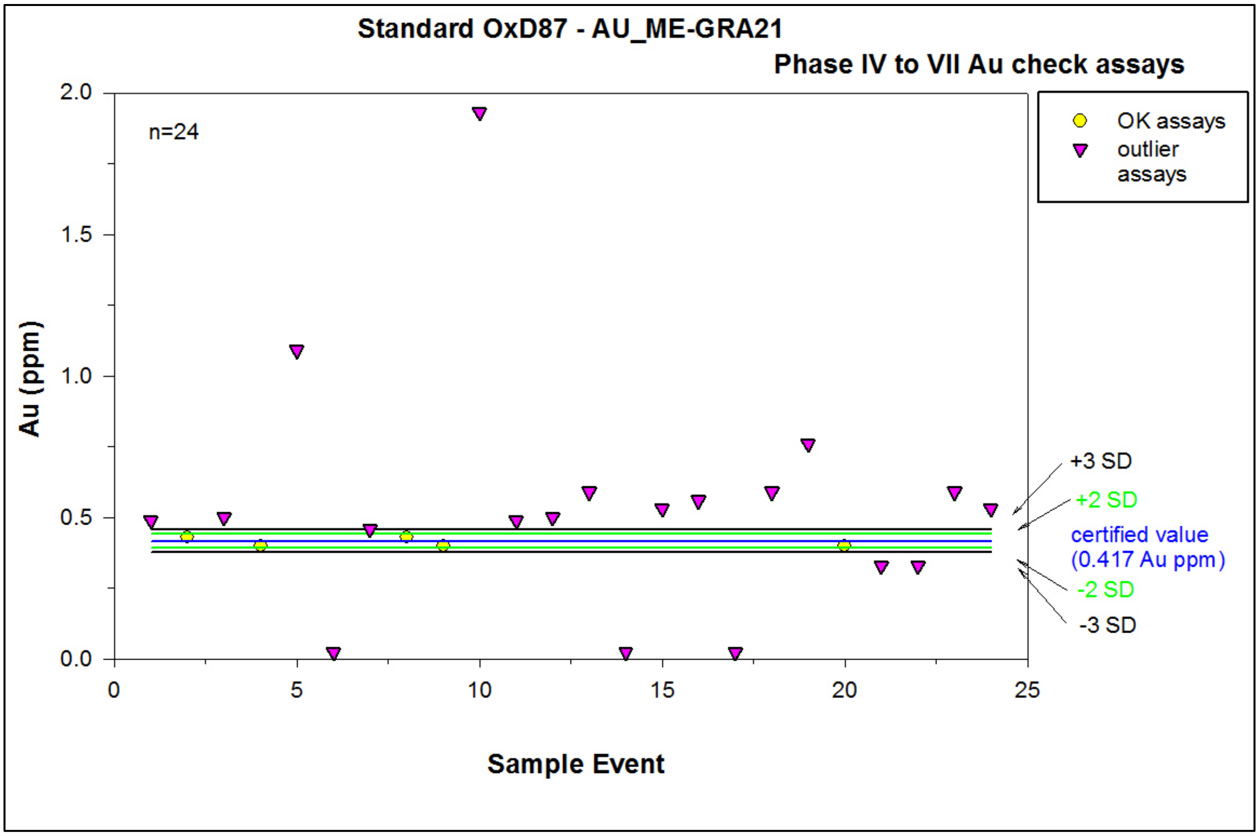

Figure 3-2 Control chart for standard OxD87 for Au check assays for phases IV to VII

The check assay results were compared to the original assays (Figure 3-3). The R^2 value is 0.9493 and the failure rate is 5.24%, which are both acceptable. Most of the failures are at low grades, below 0.2 g/t, suggesting that the gravimetric method is less accurate at lower grades.

A total of 60 samples were analyzed with gravimetric and ICP-OES finish in order to compare the two analytical methods (Figure 3-4). The R^2 value is 0.9859 and the failure rate is 5%, suggesting that the two analytical methods are comparable.

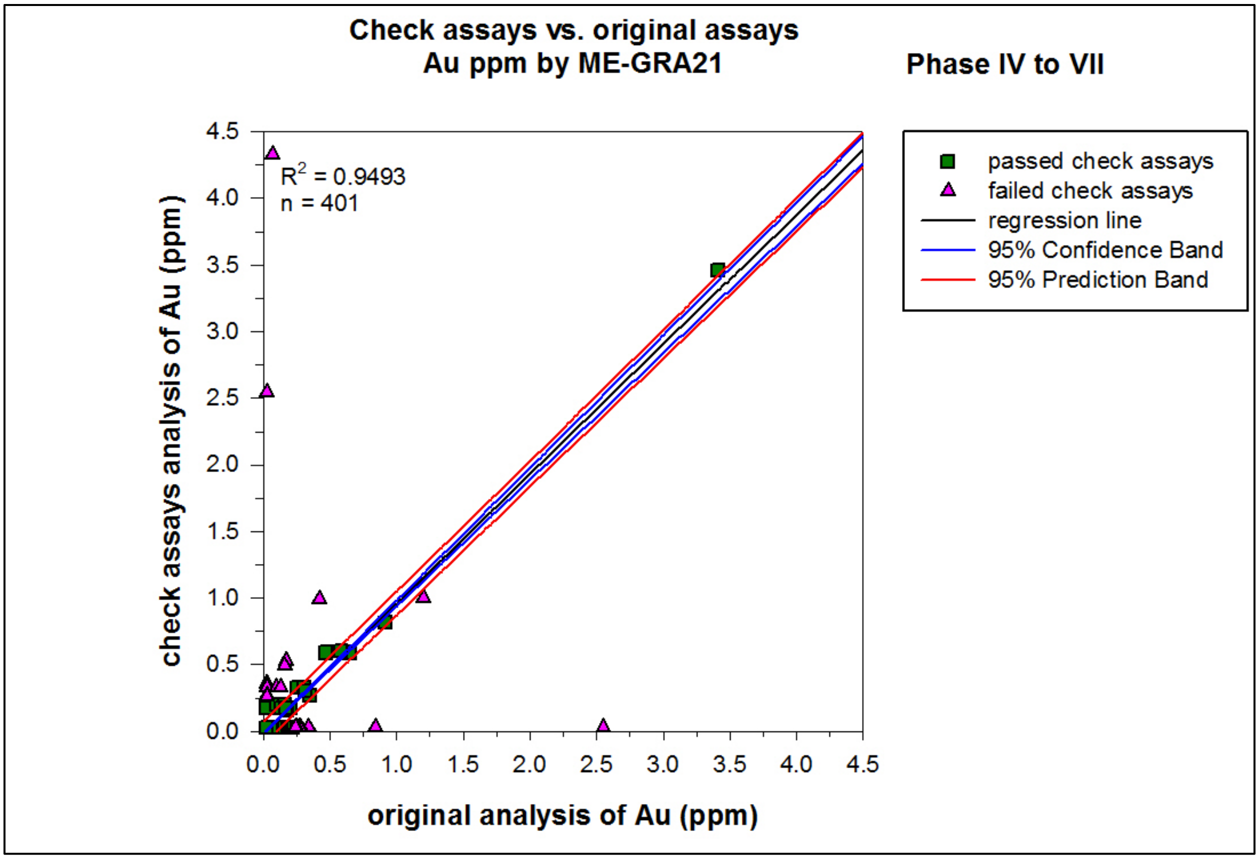

Figure 3-3 Plot of check assays versus original assays for Au in phases IV to VII

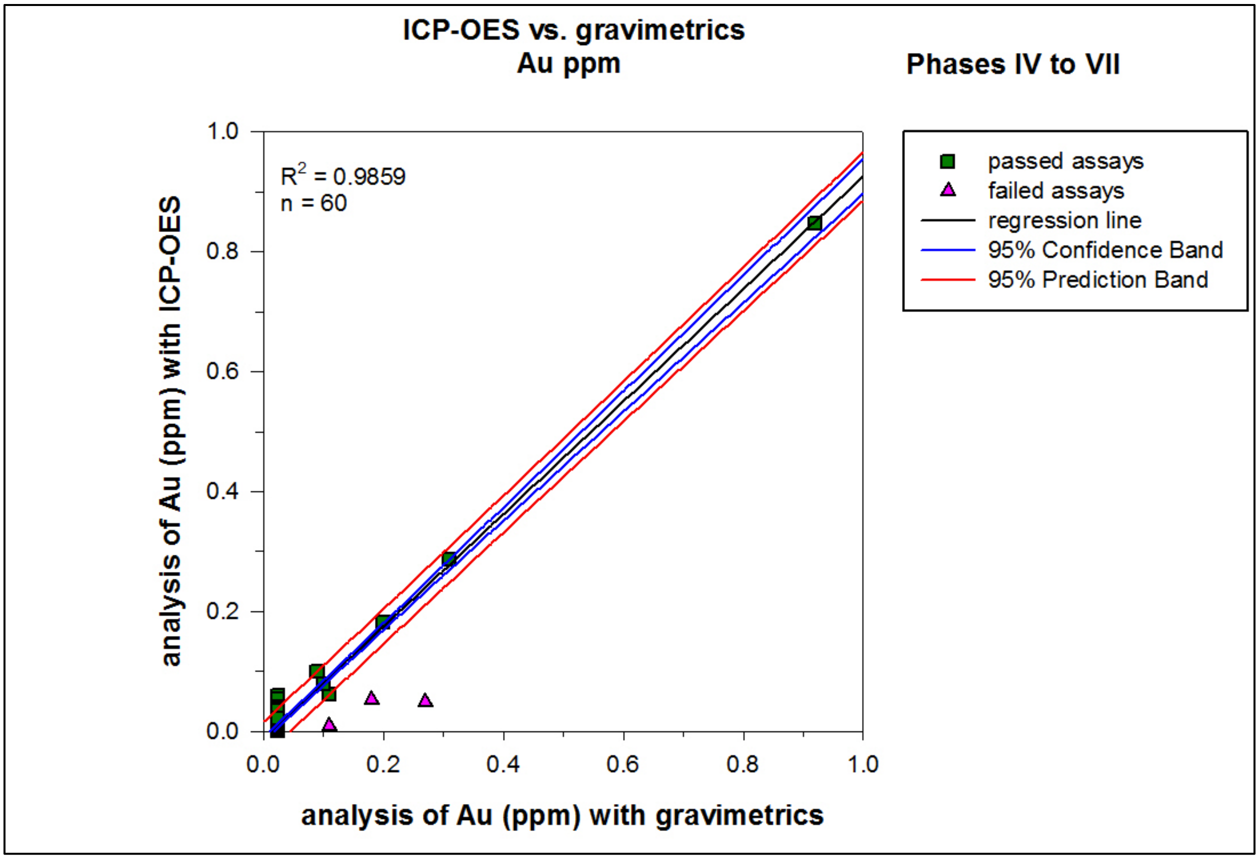

Figure 3-4 Plot of Au analyzed with ICP-OES versus Au analyzed with gravimetric method