CONSENT of AUTHOR

Michelle Stone, P.Geo., Ph.D.
34 King St. East, 9th Floor
Toronto, Ontario
Canada, M5C 2X8
Telephone: 416-368-1801
Email: mstone@cciconline.ca

The British Columbia Securities Commission
The Alberta Securities Commission
The Ontario Securities Commission
The Manitoba Securities Commission
Saskatchewan Financial Services Commission
Autorité des marches financiers
New Brunswick Securities Commission
Securities Commission of Newfoundland and Labrador
Nova Scotia Securities Commission
Registrar of Securities, Prince Edward Island
Government of Northwest Territories, Department of Justice, Securities Registry
Nunavut Legal Registries
Registrar of Securities, Government of the Yukon Territory
The TSX Venture Exchange
US Securities and Exchange Commission
The NYSE - AMEX

RE: Quaterra Resources Inc. and Blackberry Ventures 1, LLC Technical Report April 15th, 2009

I, Michelle Stone, P.Geo., PhD., do hereby consent to the public filing of the technical report, *Independent Technical Report Nieves Property, Mexico* (the "Technical Report"), prepared for Quaterra Resources Inc. and Blackberry Ventures 1, LLC., dated April 15th, 2009 and any extracts from or summary of the Technical Report in the press release by Quaterra Resources Inc. and Blackberry Ventures 1, LLC. on March 2nd, 2009.

I also certify that I have read the written disclosure being filed and I do not have any reason to believe that there are any misrepresentations in the information derived from the Technical Report or that the written disclosure of Quaterra Resources Inc. and Blackberry Ventures 1, LLC. on March 2nd, 2009, contains any misrepresentation of the information contained in the Technical Report.

Dated this April 15th, 2009

_"Signed and sealed"_________
Michelle Stone, P.Geo., Ph.D

Independent Technical Report

The Nieves Silver Project

Zacatecas State, Mexico

Quaterra Resources Inc.

1185 West Georgia Street, Suite 1550
Vancouver, British Columbia, Canada
V6E 4E6

and

Blackberry Ventures 1, LLC.

30 Rockefeller Plaza, Suite 4250,
New York, New York 10112

April 15th, 2009

Prepared By:

Caracle Creek International Consulting Inc.
34 King Street East, 9th Floor
Toronto, Ontario, Canada M5C 2X8
+1.416.368.1801
Michelle Stone, P.Geo., Ph.D.

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1.0 Summary

Caracle Creek International Consulting Inc. (CCIC) was contracted by Quaterra Resources Inc. (Quaterra), a Toronto Stock Exchange listed company, and Blackberry Ventures 1, LLC. (Blackberry), a privately held company, to conduct a site visit and prepare an independent NI 43-101 compliant resource estimate and technical report (the Report) on their Nieves Property (the Property) in Zacatecas State, Mexico. This Report is intended to provide an overview of the work programmes conducted by Quaterra and Blackberry from 2006 through 2008 and the results of the resource estimate.

1.1 Property Description, Location and Access

The Nieves Property is located in Zacatecas State, Mexico, approximately 150 km northwest of the state capital of Zacatecas and 90 km north of Fresnillo, Mexico's largest silver mine. The Property consists of 16 concessions covering approximately 6,500 ha centred on 23^{o}58'N latitude and 103^{o}03'W longitude. The concessions are registered in the name of Minera Agua Tierra, S.A. de C.V. (Minera Agua Tierra), a Mexican company wholly owned by Quaterra.

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. 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 sea level. The Property has excellent road access with the main paved highway to Nieves running along the northern portion of the Property.

Nieves is the business centre for the Quaterra exploration activities. The nearest major population and services centre to Nieves is the mining town of Fresnillo. Fresnillo offers a substantial professional work force experienced in mining and mining related activities in addition to most other supplies and services. Access to Fresnillo and to the nearest international airport in the city of Zacatecas is via paved highway. There is a power line adequate to support a 100 tonne per day mill in place and an existing mill structure on the Property at the Santa Rita vein area which could be refurbished. There are two operating smelters within 350 km of the Property.

1.2 Property Ownership and Terms of Agreement

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

On March 13, 1998, Kennecott transferred its rights under the Nieves option to Western Copper Holdings Ltd. (Western) in consideration for an uncapped 2% net smelter return royalty (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 the Company on March 26, 1999, in consideration for 1,444,460 common shares of the Company at a deemed price of CAD$0.20 per share (CAD$288,892). In addition, the Company issued 360,000 common shares at a deemed price of CAD$0.20 per share (CAD$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 22, 1999, February 11, 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. AMR payments of US$75,000 are due on or before January 26 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.

On April 10, 2003, the Company 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 5,300m 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.

1.3 Geological Setting

The Nieves Property occurs on the western flank of the Central Altiplano in Mexico, just east of the Sierra Madre Occidental ranges. Basement rocks underlying the western Altiplano are a Mesozoic assemblage of marine sedimentary and submarine volcanic rocks belonging to the Guerrero Terrane that sits unconformably on Precambrian continental rocks. Units from the late Cretaceous to Tertiary, Sierra Madre Occidental magmatic arc unconformably overlie the Mesozoic basement rocks in the western Altiplano.

Rocks underlying the Nieves Property are of two distinct ages: (1) Mesozoic argillite beds interpreted as belonging to the Caracol Formation overlain by (2) Tertiary rhyolite volcaniclastic rocks separated by a presumably Tertiary age basal conglomerate and conglomeratic sandstone sequence.

1.4 Property Geology and Mineralization

There are three west-southwest bearing, steep south-dipping vein systems on the Nieves Property, which, from south to north, are the Santa Rita-El Rosario; Concordia-Dolores-San Gregorio; and the La California veins. The Santa Rita and Concordia-Dolores-San Gregorio veins have historic production and are marked by numerous shafts, pits, dumps and old buildings. Mining ceased in 1910, with the onset of the Mexican Revolution. Several small-scale efforts to re-open the mines occurred thereafter but no modern exploration took place until 1994. Historic production focused on narrow bonanza veins, and production grades were in excess of 4,000 g/t silver.

The mineral occurrences in the Santa Rita and Concordia-Dolores-San Gregorio veins are hosted in two to ten meter thick shear zones with reverse offset and secondary fault splays in the footwall. The thin (less than 2m wide), sheeted silver-gold bearing veins were deposited during a period of distention and normal offset in Oligocene time. There are three types of veins: silica breccia, quartz-sulfide and ferroan carbonate. Sulfide content varies from minor to 50% pyrite-stibnite-sphalerite-chalcopyrite-galena; marcasite is present in the silica breccia veins.

Identified silver minerals are tetrahedrite-pyrargyrite. A sulfidation alteration halo of 2-5% disseminated pyrite that weathers to an acid leached “bleached” white clay alteration surrounds the mineralized shears. This alteration is geochemically anomalous in gold, arsenic and antimony with erratic silver, copper, lead and zinc. An Eocene-Oligocene paleo-erosion surface in the northwest corner of the district indicates that the historic mines have exploited only the upper third of the epithermal mineral system.

The Concordia-Cerro San Gregorio zone, based on the interpretation of alteration assemblages and geophysics, has dimensions of 2.5 km by 1.5 km and generally trends northeasterly. The California zone is about 2.5 km long by 250m wide. The Santa Rita zone also trends northeasterly and is approximately 2 km long by 600m wide.

1.5 Exploration Concept

The Nieves project occurs within a northwest trending mineral belt known as the Faja de Plata, which hosts many of the world’s premier silver deposits. Within this region, epithermal silver veins are the most dominant deposit type with such world-class examples as Pachuca, Zacatecas, Fresnillo, and Guanajuato. The nearest of these world class examples is the Fresnillo deposit owned and operated by Peñoles, S.A. de C.V. (Peñoles) and located 90 km to the south of the Nieves Property. The geology of the Fresnillo and Nieves Districts are similar and silver mineralization in both areas is related to Tertiary epithermal fluids. As such, Fresnillo styles of mineralization are the primary targets for exploration on the Nieves Property.

In addition to the silver mineralized vein systems on the Property, there is an east-northeast to east-southeast striking manganese breccia system hosted by Tertiary rhyolitic rocks on the east side of the Property. Numerous other east to east-northeast trending geophysical anomalies and alteration zones that have also yet to be explored.

1.6 Status of Exploration, Development and Operations

Between 2004 and 2006 exploration by Quaterra and Blackberry included air photo interpretation, establishing a property wide grid, CSMAT and IP geophysical surveying, surveying of historic drill collars, geochemical sampling and diamond drilling. In total 30 diamond holes were drilled on the Property totaling 16,367m.

An independent technical report completed in November 2006 (Wetherup, 2006) recommended a 10,000m drilling program to infill zones along the Concordia-San Gregorio vein system and to test other targets on the Nieves Property. A 16-hole, 5,388.8m drilling program, primarily consisting of infill holes on the Concordia vein, was completed between September and December 2007.

A 24-hole diamond drill program totaling 6,173m was completed during May to August 2008 and was successful in defining both high-grade vein and potential bulk-mineable silver mineralization along the Concordia vein system over a strike length of 400m, a depth of 150-200m and an average true thickness of 40m. These holes, in combination with those drilled from 2004 through 2007 provide approximately 50 metre drill coverage both along strike and down dip on a 400m section of the Concordia vein. True thicknesses are about 80% of intercept widths reported. All drill holes contained significant mineralization except QTA-60. Drill hole QTA-65, drilled 50m east and 50 vertical metres above drill hole QTA-48 (47.48m averaging 142 g/t silver, including a 4.67m interval with 777 g/t silver), intersected 42.35m beginning at 62m averaging 149 g/t silver, including 4.12m averaging 743 g/t silver. Drill hole QTA-74, drilled 50m east and about 100 vertical metres below the QTA-55 intercept, cut 38m averaging 157 g/t silver, including a 3.9m intercept averaging 581 g/t silver.

The Concordia vein system represents a series of sub-parallel veins and veinlets that have been defined by mapping and drilling over a strike length of 1,100m. The area of mineralization which the joint venture has drilled is open to the east and west. Work programs completed to date have been for exploration only and mainly focused on extending the strike extent of the Concordia mineralization. Very little definition of the high grade zones within the system has been completed. No new mining developments have occurred.

1.7 Initial Resource Estimation for the Nieves Project (2009)

Michelle Stone, P.Geo., independent consultant with CCIC, was contracted in 2008 to undertake a resource estimate of the Concordia vein system within the Nieves Property. The resources estimated by this work are presented in Table 1.1. Note: Resources are not mineral reserves as the economic viability has not been demonstrated.

Table 1.1. Indicated and inferred resources for the Concordia vein system on the Nieves Property reported at a 60 g/t silver cut off.

Category	Tonnes	Ag (g/t)	Au (g/t)	Ag (oz*)	Au (oz*)
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 troy ounce = 31.103 grams.

1.8 Conclusions and Recommendations

Exploration work jointly completed to date by Quaterra and Blackberry have defined several vein systems on the Nieves Property. The Concordia orebody displays strong continuity along strike and down dip. Silver mineralization continues beyond the extent of current drilling. Sufficient drilling has been completed on the Concordia vein system to estimate indicated and inferred resources.

Reported at a 60 g/t silver cut-off, the Concordia vein system is estimated to contain an indicated resource of 2.9 million tonnes at a grade of 110.2 g/t silver, containing 10.26 million ounces of silver. There is also an inferred resource of 2.3 million tonnes at a grade of 96.6 g/t silver contributing an additional 7.0 million ounces of silver.

The resource estimate for the Concordia vein system was subjected to significant capping of high grade values due to the drill hole spacing. It is believed that the historic mining at Nieves was focused on high grade mineralization. Additional drilling (10-20m centres) and sampling may increase the population of high grade samples and result in less silver losses due to capping.

The following work is recommended:

1. Step out drilling to close off the strike extent of the Concordia vein system (100-200m centres).
2. Infill drilling (10-20m centres) in areas of inferred resources should be undertaken to increase the quantity of indicated resources and possibly measured resources and to test the extent of high grade silver mineralization (+500 g/t silver) within the orebody.
3. Initiate preliminary metallurgical test work on the Concordia mineralization to verify potential economic viability. Additional SG determinations are also required to more accurately estimate the deposit tonnage.
4. Update QAQC procedures to include routine duplicate analysis at a secondary laboratory. Property specific standard reference materials should be prepared and analyzed as part of the revised QAQC procedure.
5. Old dumps and tailings should be properly located using a high precision GPS instrument.
6. Initiate baseline environmental studies that will be required prior to a production approval by regulatory authorities.

2.0 Introduction

Caracle Creek International Consulting Inc. was contracted by Quaterra Resources Inc., a Toronto Stock Exchange listed company, and Blackberry, a privately held company, to conduct a site visit and prepare an NI 43-101 compliant independent resource estimate and technical report (the Report) on their Nieves Property (the Property) in Zacatecas State, Mexico. This Report is intended to provide an overview of the work programmes conducted by Quaterra and Blackberry from 2006 through 2008 and the results of the resource estimate.

The author, Michelle Stone, P.Geo., visited the Property on January 29th and 30th, 2009 where she was shown the drill collar locations from the Phase IV and V exploration programmes, most of the major geological features and units and historic shafts, and toured the core cutting, logging, and storage facilities. Five diamond drill holes were reviewed. Most of the information used in the preparation of this Report has been provided by Quaterra, Blackberry and their representatives.

2.1 Terminology and Unit Conversion

Unless otherwise noted, all units in this report are expressed using metric system conventions. Assay grades are typically express in grams per tonne (g/t) and may have been converted from parts per million or ounces as appropriate.

Units of measure and conversion factors used in this report are:

1 troy ounce = 31.103 g/t

1 ppm (part per million) = 1 g/t

13.7 Mexican pesos = US$1

Frequently used abbreviations and acronyms are:

%	=	percent
°C	=	degrees Celcius
AA	=	atomic absorption spectrometry
Ag	=	silver
AMR	=	advance minimum royalty payment
Au	=	gold
Blackberry	=	Blackberry Ventures 1, LLC.
CCIC	=	Caracle Creek International Consulting Inc.
CIM	=	Canadian Institute of Mining, Metallurgical, and Petroleum
cm	=	centimetre(s)
CSMAT	=	controlled source audio-frequency magneto-telluric
DDH	=	diamind drill hole
FA	=	fire assay
g	=	gram(s)
g/t	=	grams per tonne
Ha	=	hectares
ICP	=	inductively coupled plasma spectroscopy
ICPMS	=	inductively coupled plasma mass spectroscopy
INIFAP	=	Instituto de Investigaciones Forestales Agricolas y Pecuarias
IP	=	induced polarization
Kennecott	=	Kennecott Exploration Company
km	=	kilometres(s)
m	=	metre(s)
m^2	=	metres squared
m^3	=	metres cubed
Minera Agua Tierra	=	Minera Agua Tierra, S.A. de C.V.
mm	=	millimetre(s)
NSR	=	net smelter royalty
oz	=	ounces
P.Geo.	=	Professional Geoscientist
Peñoles	=	Peñoles, S.A. de C.V.
Quaterra	=	Quaterra Resources Inc.
RC	=	reverse circulation drilling method
t	=	metric tonne
tpd	=	tonnes per day
Western	=	Western Copper Holdings Ltd.

3.0 Reliance on Other Experts

CCIC have conducted this independent technical assessment in accordance with the methodology and format outlined in NI 43-101, companion policy NI 43-101CP and

Form 43-101F1. This Report is directed solely for the development and presentation of data with recommendations to allow for Quaterra and Blackberry to reach informed decisions. This Report was prepared by Michelle Stone, P.Geo., Senior Geologist with CCIC. The information, conclusions and recommendations contained herein are based largely on a review of company and technical reports, a site visit, and data provided by Quaterra and Blackberry.

All relevant information on the Property presented in this Report is based on data derived from reports written by geologists and/or engineers, whose professional status may or may not be known in relation to the NI 43-101 definition of a Qualified Person. CCIC has made every attempt to accurately convey the content of those files, but cannot guarantee either the accuracy or validity of the work contained within those files. However, CCIC believe that these reports were written for internal purposes only, with the objective of presenting the results of the work performed without any promotional or misleading intent. In this sense, the information presented should be considered reliable, unless otherwise stated, and may be used without any prejudice by Quaterra. CCIC has therefore assumed that the reports and other data listed in the References section of this Report are substantially accurate and complete.

Information on mineral title and ownership and status of concessions as outlined in this Report were obtained from Quaterra and its representatives. The author has not reviewed land tenure documents, nor has she reviewed the legal status or ownership of the Property or underlying option and joint venture agreement, and NSR agreements, except what is disclosed in publicly disseminated news releases. However, to the best of Quaterra's knowledge the 16 current property titles are in good standing and no notifications have been received that any of the claims are invalid. The author has accepted Quaterra's representations that these titles and legal agreements are valid.

CCIC are not responsible for any omissions in, and CCIC do not guarantee, and make no warranty as to the accuracy of, information received from outside sources. CCIC have made all reasonable efforts to outline any land tenure or environmental issues relating to the Property and CCIC disclaim all responsibility for missing or inaccurate Property information.

4.0 Property Description and Location

4.1 Location and Property Status

The Nieves silver Property is located in the Rio Grande Municipality of the Zacatecas Mining District near the southeastern boundary of the Sierra Madre Occidental Physiographic Province in central Mexico (Figure 4.1). The Property is centered near coordinates at 23°58’N latitude and 103°03’W longitude on the 1:250,000 Fresnillo topographic map sheet (F13-6).

The Nieves Property consists of 16 concessions covering approximately 6,500 ha (Table 4.1 and Figure 4.2). These concessions are registered in the name of Minera Agua Tierra, a Mexican company wholly owned by Quaterra.

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.

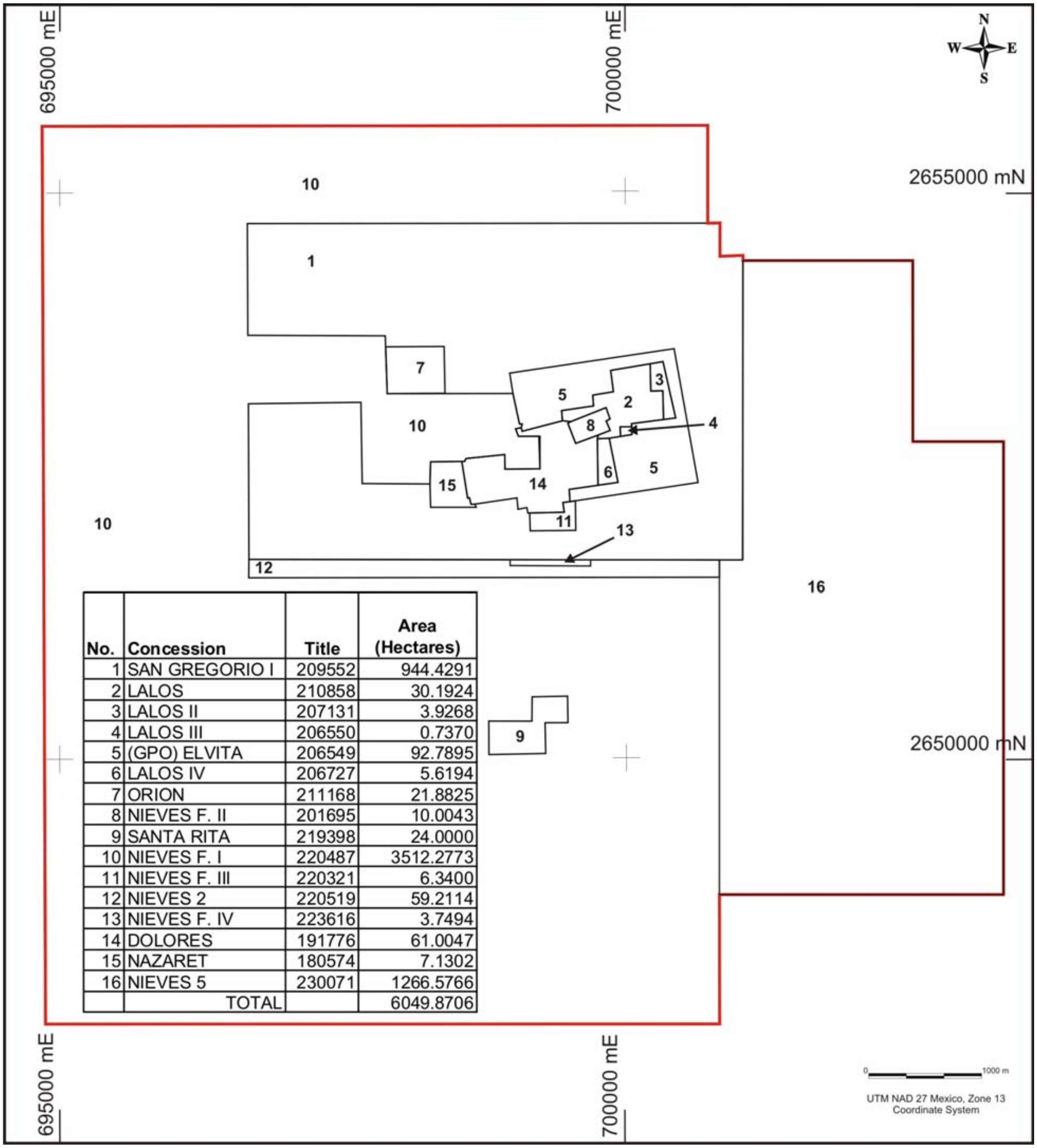
In 2008 Quaterra and Blackberry (Minera Agua Tierra) were required to pay approximately US$11,000 in taxes in two equal instalments during the year to maintain the concessions (Table 4.1). Similar amounts are expected to be required in 2009.

Figure 4.1: Map showing the location of the Nieves Property in the north-central part of Zacatecas state, Mexico.

The Nieves Property is jointly owned by Quaterra and Blackberry. Net smelter return royalties remain outstanding on each of the concessions acquired from Kennecott and the Mexican concessionaires.

Table 4.1: Nieves Property concession summary data.

	Concession	Title	Area (Hectares)	Date Issued	Expiry Date	Taxes	
						Mexican Pesos	US$
1	SAN GREGORIO I	209552	944.4291	03-Aug-99	02-Aug-49	$59,708	$4,333
2	LALOS	210858	30.1924	16-Dec-99	15-Dec-49	$1,910	$139
3	LALOS II	207131	3.9268	29-Apr-98	28-Apr-48	$438	$32
4	LALOS III	206550	0.7370	23-Jan-98	22-Jan-48	$83	$6
5	(GPO) ELVITA	206549	92.7895	23-Jan-98	22-Jan-48	$10,326	$749
6	LALOS IV	206727	5.6194	12-Mar-98	11-Mar-48	$626	$45
7	ORION	211168	21.8825	11-Apr-00	10-Apr-50	$1,384	$100
8	NIEVES F. II	201695	10.0043	11-Oct-95	10-Oct-45	$1,114	$81
9	SANTA RITA	219398	24.0000	04-Mar-03	03-Mar-53	$760	$55
10	NIEVES F. I	220487	3512.2773	12-Aug-03	11-Aug-53	$55,214	$4,007
11	NIEVES F. III	220321	6.3400	11-Jul-03	10-Jul-53	$101	$7
12	NIEVES 2	220519	59.2114	14-Aug-03	13-Aug-53	$932	$68
13	NIEVES F. IV	223616	3.7494	21-Jan-05	20-Jan-55	$60	$4
14	DOLORES	191776	61.0047	19-Dec-91	18-Dec-41	$6,789	$493
15	NAZARET	180574	7.1302	13-Jul-87	12-Jul-37	$794	$58
16	NIEVES 5	230071	1266.5766	17-Jul-07	16-Jul-57	$9,627	$699
	TOTAL		6049.8706			$149,866	$10,876



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11	NIEVES F. III	220321	6.3400
12	NIEVES 2	220519	59.2114
13	NIEVES F. IV	223616	3.7494
14	DOLORES	191776	61.0047
15	NAZARET	180574	7.1302
16	NIEVES 5	230071	1266.5766
	TOTAL		6049.8706

Figure 4.2. Concession map showing the Nieves silver Property (outlined with red). Individual concessions (16) are outlined in black. The Property has no claims adjacent to it.

4.2 Location of Mineralization and Workings

The Nieves Property encompasses three silver veins systems. These vein systems have been the focus of historical mining activity, much of which is poorly documented. Previous mining operations were conducted by privately-held mining companies. Open shafts and pits are abundant, unmarked and in some cases completely hidden and are not fenced off (Figure 4.3 to 4.5).

Figure 4.3. Photograph of derelict buildings from previous mining operations on the Nieves Property. These buildings are being rebuilt and form the foundations of the core logging and cutting areas as well as pulp sample storage.

Figure 4.4. Photograph of stibnite-rich rock dump between an open shaft (fore ground) and some derelict buildings on the Nieves Property.

Figure 4.5. Photograph of the San Gregorio No. 1 shaft area immediately north of the La Quinta field office and core storage area on the Nieves Property. Non-potable water is pumped from the shaft for use when drilling. The shaft has been secured with a fence since the time of CICC's 2009 site visit.

4.3 Terms of Agreements

On January 16, 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 13, 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 26, 1999, in consideration for 1,444,460 common shares of the Company at a deemed price of CAD$0.20 per share (CAD$288,892). In addition, the Company issued 360,000 common shares at a deemed price of CAD$0.20 per share (CAD$72,000) to the concessionaires in lieu of the US$50,000 option payment otherwise due under the terms of the Underlying Agreement.

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On April 10, 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.

4.4 Environmental liabilities and required permits

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 (e.g., Figure 4.4). It is highly recommended that Quaterra locate and document all of the historic dumps (ore and tailings), mark and fence off or otherwise make secure open holes and workings, and initiate baseline environmental studies including water quality monitoring.

5.0 Accessibility, Climate, Local Resources, Infrastructure and Physiography

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 a 17 km paved road from Highway 49. The nearest major population and service centre to Nieves is the mining town of Fresnillo located approximately 90 km to the south. Fresnillo has a population of approximately 75,000 and services the Fresnillo Mine run by Peñoles. As such, 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 a few hours 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 5.1). 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 (arroyos; Figure 5.2).

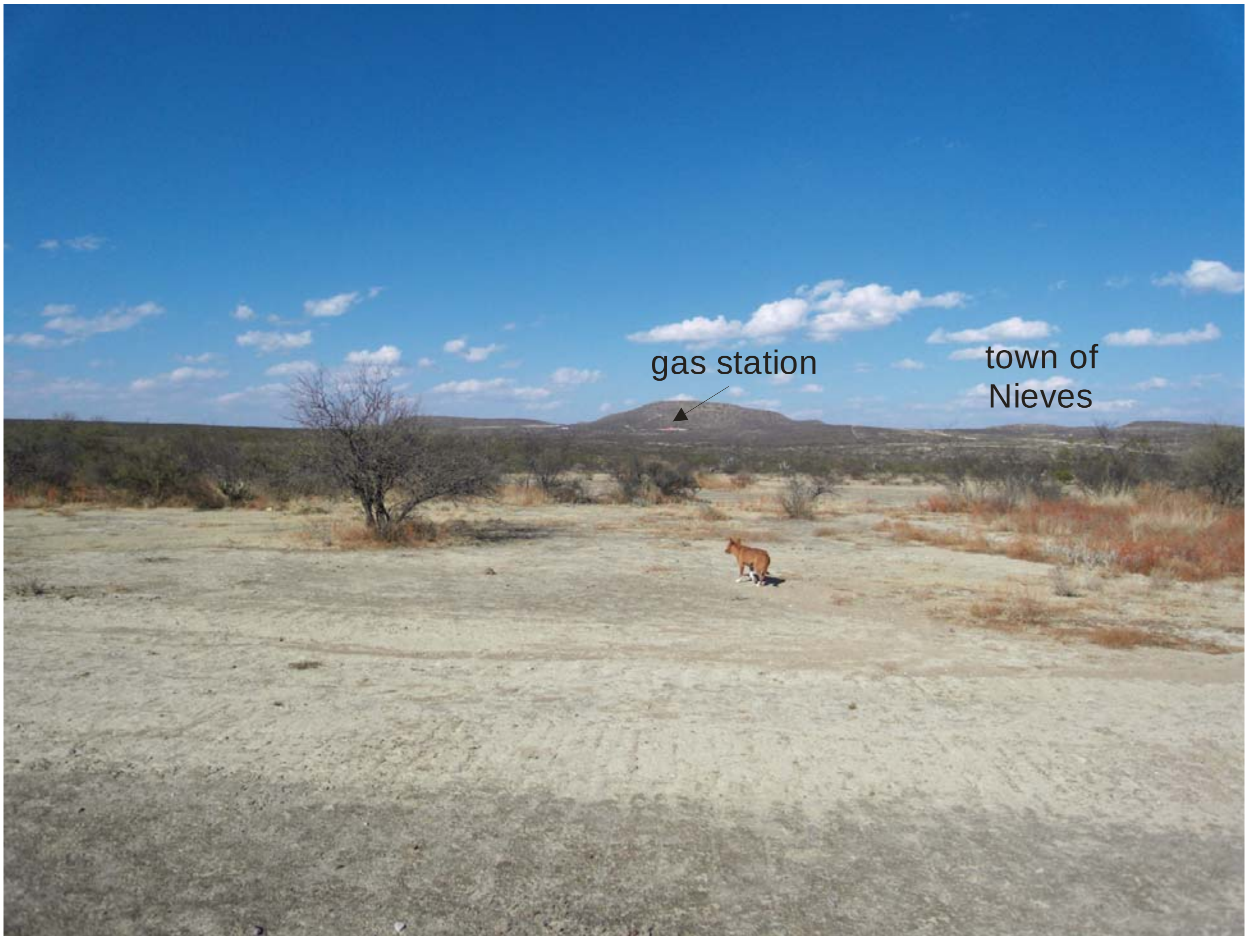


Figure 5.1. Photograph looking toward the northern boundary of the Nieves Property. The town of Nieves is in the top right corner of the photo. Paved highway runs across the picture connecting Nieves to Highway 14 providing access to Fresnillo and the city of Zacatecas. Most of the Property is flat lying making it easy to prepare drill sites and roads, which provide good access throughout the area.

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 (Figure 5.2). Surface water is rare but ground water is readily available.

Figure 5.2. Photograph showing typical vegetation on the Nieves Property. The view is to the south-southeast from near the core cutting facility. The light green plant in the mid-ground is the desert agave, (*Agave desertii*), a succulent plant that has been used by native people in a variety of ways including for food, making soap and textiles. The ridge across the photos is the Chicharrona Hills that host manganese mineralization to the northeast of the photo (to the left).

Quaterra/Blackberry constructed core logging, cutting and storage facilities on the Nieves Property in addition to the La Quinta field office (Figure 5.3). 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 around the Nieves Property are knowledgeable about mining and exploration and are generally supportive of possible increased employment opportunities.

Figure 5.3. La Quinta field office (left) and core storage facility (centre and right) recently constructed on the Nieves Property. View is looking to the east towards the Chicarrona Hills.

Physiographically, 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 5.4). 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 5.5). 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.

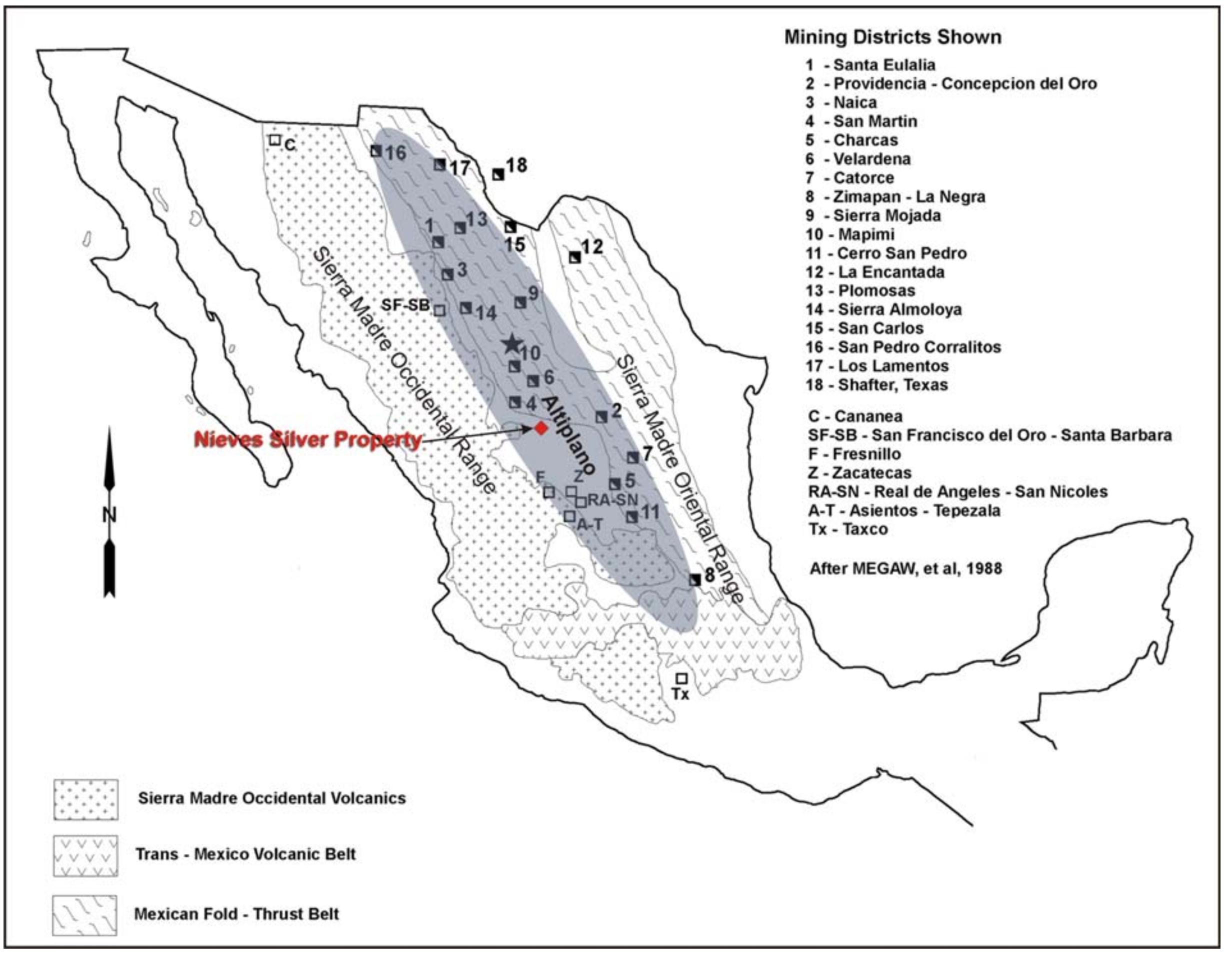


Figure 5.4: Major geological and physiographical belts and mining districts within Mexico and the location of the Nieves Property.

Figure 5.5: Photograph showing the north-northwest trending ridge (Chicharrona Hills) of Tertiary-age rhyolitic rocks on the east side of the Nieves Property. Manganese mineralization occurs just over the back of the ridge shown in the centres of the photograph. There are many dirt roads cross cutting the Property providing good access. Many of the road on the Chicharrona Hills are used by locals to gather rocks to be used for building stone.

6.0 History

6.1 Prior Ownership and Ownership Changes

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).

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.

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.

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. 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 on the site are the building foundations, abandoned shafts and power lines.

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, geophysical surveying and reverse circulation (RC) drilling of the Gregorio North, California and Orion West veins. (Tables 6.1 and 6.2). 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 Silver and 795 g/t 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 180m depth that averaged 82 g/t silver over 28m. Drill hole NV03 also encountered a high grade silver vein at 148 m depth that returned 254 g/t silver over 2m. Drill hole NV06 also encountered a large zone of low-grade silver mineralization that returned 67 g/t silver over 68m.

Table 6.1. Exploration programs completed by Kennecott, Western and Quaterra from 1995 through 2000.

Company	Year	Exploration Program
Kennecott	1995 and 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 soil sampling surveys
		geophysical surveys including airborne and ground magnetics, a single dipole-dipole induced polarization (IP) line, and seven controlled source audio-frequency magneto-telluric (CSAMT) lines
		drilled 8 RC (total = 1901.30m)
Western	1997 and 1998	drilled 5 RC holes (total = 921.60m)
Quaterra	1999 and 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 deepend 4 holes by diamond drilling (QTA03, QTA07, QTA08, NV05) (total metres = 5301.94)

Table 6.2. Drill programs completed by Kennecott, Western and Quaterra from 1995 through 2000.

Company	Year	Phase	Area	Holes Drilled	Hole Type	Drill Metres	Hole IDs
Kennecott	1995	I	Gregorio North	2	RC	388.00	NV02, NV03
			Orion West	2	RC	302.00	NV01, NV04
	1996	I	California	1	RC	202.00	NV08
			Gregorio North	3	RC	1009.30	NV05 to NV07
Total Drilled				**8**		**1901.30**	
Western	1997	I	California	5	RC	921.60	WCNV01 to WCNV05
Total Drilled				**5**		**921.60**	
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)	2058.10	QTA04, QTA06-QTA10
Total Drilled				**10**		**3129.31**	

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 (Tables 6.1 and 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 1,081g/t silver over 0.35m in drill hole WCNV04.

Quaterra completed 10 drill holes on the Concordia and Gregorio North veins in conjunction with surface mapping and sampling programs during 1999 and 2000. Table 6.3 shows significant drill results. 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. Quaterra received payments during the 2003 and 2004 fiscal years, thereby earning Blackberry a 50% interest in the Property. The partners signed a joint venture agreement in January 2006 and have jointly contributed to all exploration costs subsequently incurred.

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

Table 6.3. Significant drill results for drilling completed by Quaterra in 1999 and 2000.

Area	Drill Hole	RC (m)	DDH (m)	Total Drilled (m)	Intercepts			
					From (m)	To (m)	Interval (m)	Ag (g/t)
Concordia	QTA-1	173.00		173.00	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-2	207.00		207.00				
Concordia	QTA-3	213.00	337.00	550.00	33.00	36.00	3.00	243
					386.00	420.00	34.00	21.26
					426.00	434.00	8.00	23
					446.00	452.00	6.00	26
Gregorio North	QTA-4	238.00		238.00	80.75	97.00	16.25	48.25
					116.00	123.00	7.00	17
					195.60	232.10	36.50	98.18
Concordia	QTA-5	140.00		140.00	61.00	68.50	7.50	40.2
Gregorio North	QTA-7	280.00	232.00	512.00	346.00	354.00	8.00	23.7
Gregorio North	QTA-9	348.00		348.00	276.00	278.00	2.00	115

6.2 Historical Mineral Resource and Mineral Reserve Estimates

In 1992, CRM estimated the resources and reserves remaining in the Santa Rita Vein system. For the purpose of this report, the historic resources and reserves have been converted to inferred resources (Table 6.4). These resources are historical, have not been verified by CCIC, are not NI 43-101 compliant and should not be relied upon.

Table 6.4. Historic Santa Rita resources* calculated by CRM (Cavey, 1999).

Resource Category*	Tonnes	Ag (g/t)	Pb (%)	Zn (%)	Sb (%)
Inferred	95,300	259	3.2	4.1	2.7

* Historic resources and reserves have been converted to inferred resources. These resources are not current, have not been verified, were not prepared to NI 43-101 standards, and therefore should not be relied upon.

There are no documented historical resource estimates known for the Concordia vein system.

7.0 Geological Setting

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 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 7.1). 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. 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 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 (Figure 7.1).

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. 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.

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. These units dip shallowly.

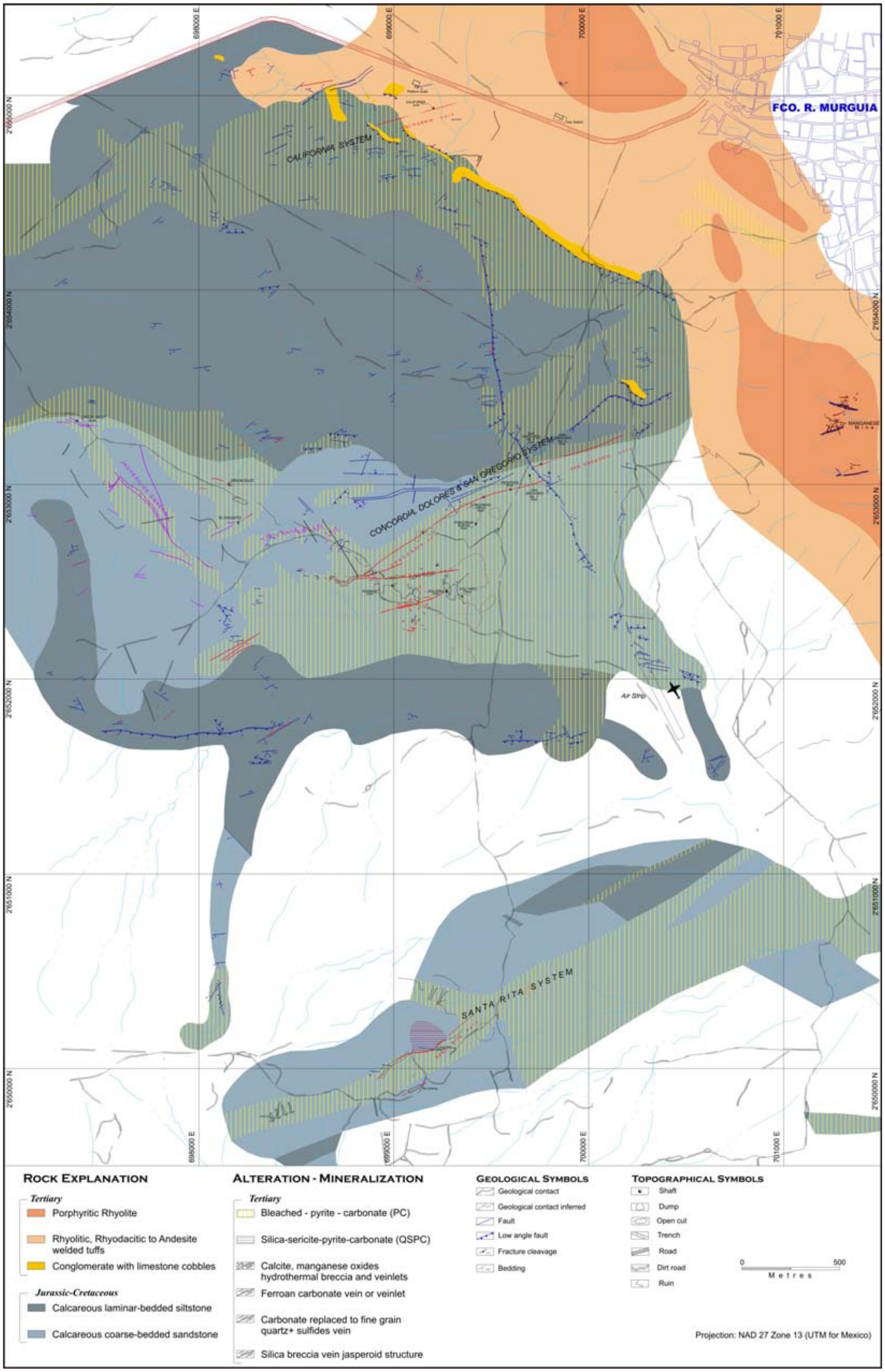


Figure 7.1. Map showing the geology of the Nieves Property.

7.2.3 Tertiary Volcanic Rocks

In drill hole QTA-18, 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.

7.2.4 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.

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 propyllitic 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; etc). 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).

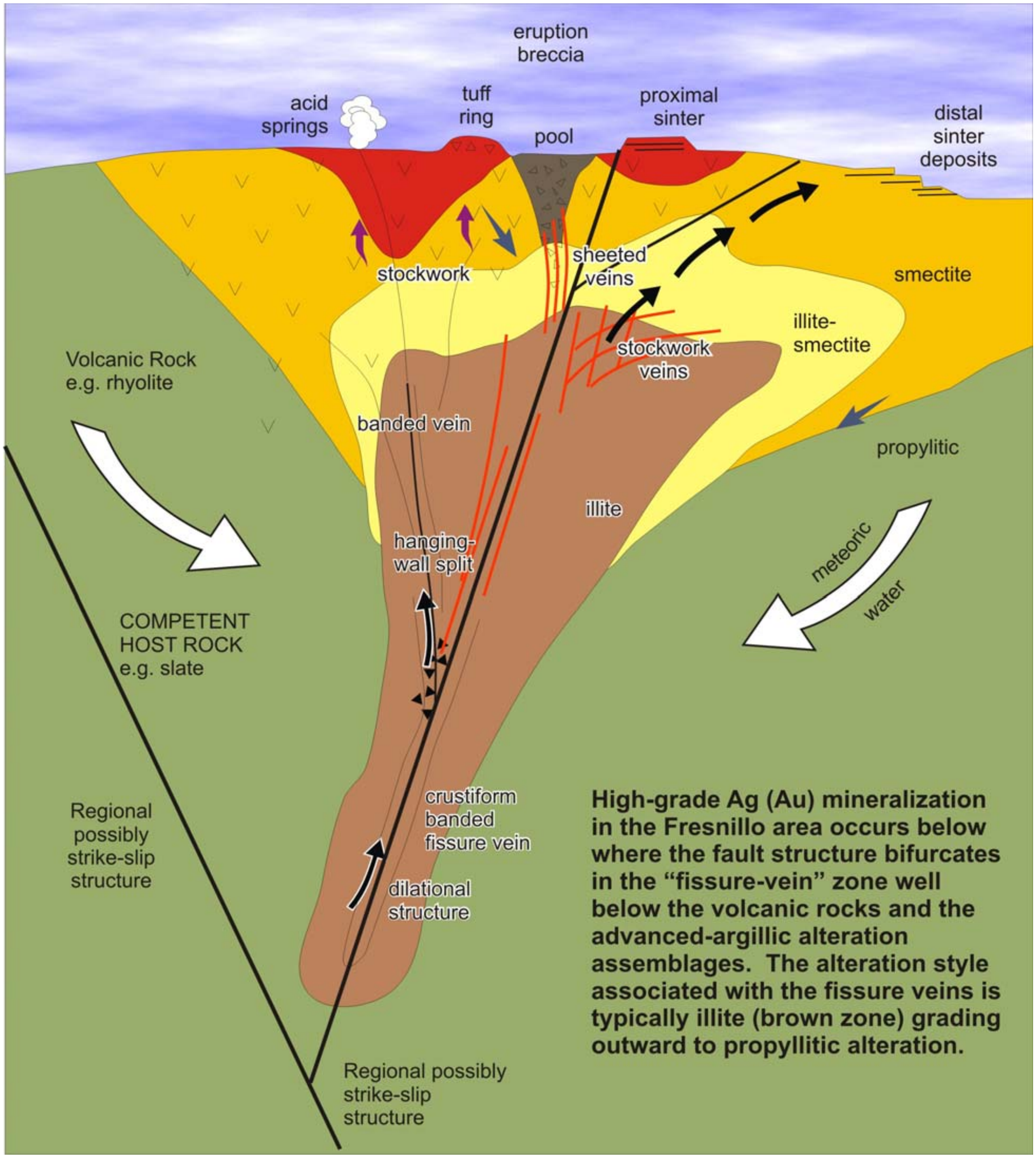


Figure 8.1. Schematic cross-section of a typical rift related epithermal low-sulphidation system (after Corbett, 2004).

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 Jurassic-Cretaceous argillite (Nieves) 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.

Table 8-1: Stratigraphy of the Fresnillo District (modified from Ruvalcaba-Ruiz et al., 1988; Wendt, 2002)

Per.	Age		Group Name	Fm.	Local Name	Thickness (m)	Rock Type	Assoc. min/ alt
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)

#	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	1.00	3.80	0.50
2	Concepcion del Oro	ZAC	CRD	40+ M	8 M+	< 1.5	275	0.2-2.3	12.80	5.80
3	Charcas	SLP	CRD	35 M	12M+		67	0.26	4.50	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	5.20	3.80
6	Catorce	SLP	CRD, E-Vein	10+ M	.5 M	tr	80	tr	6.00	10.00
7	La Negra	QRO	CRD	7 M	2 M		184	0.20	2.30	1.20
8	Zimapan	HID	CRD	3.5+ M	1 M		173	1.20	4.00	2.00
9	Mapimi	DUR	CRD	6 M	none	3.7	475	mod	high	15.80
10	Asientos/ Tepezala	AGS	CRD, E-Vein	6 M min	2.5 M+	0.5	150-600	0.2-3.5	5.00	2.50
11	Cerro San Pedro	SLP	CRD	5M	56 M (Au)	0.57-30	22-325	4.00	9.00	5.00
12	La Paz/ Matehuala	SLP		4 M ?	12 M	0.5	500	0.2-1.4	5.00	7.00
13	Chalchihuites	ZAC		2 M ?	1.5 M	1	350	< 0.3	3.00	2.50
A	Francisco I Madero	ZAC	Sedex ?	minor	20 M+	tr	60	1.50	6.00	1.50
B	Real de Angeles	ZAC	Stockwork	90 M	none		80		0.90	1.00
C	San Nicolas	ZAC	VMS	minor	72 M	0.5	30	1.35	2.30	

9.0 Mineralization

9.1 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 7.1).

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

9.1.1 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.

9.1.2 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.

9.1.3 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. 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.

9.1.4 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. 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 7.1).

9.2 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. 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.

9.3 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.

9.4 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 Concordia vein can be traced in shafts and mine workings for approximately 600m to the southwest of the San Gregorio arroyo. 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.

9.5 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.

9.6 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 7.1)

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.

10.0 Exploration

To date on the Nieves Property, Quaterra and Blackberry have focused their exploration on the Concordia vein system (Tables 10.1 and 10.2). Jointly the companies have drilled 72 drill holes, of which 54 targeted the Concordia vein system.

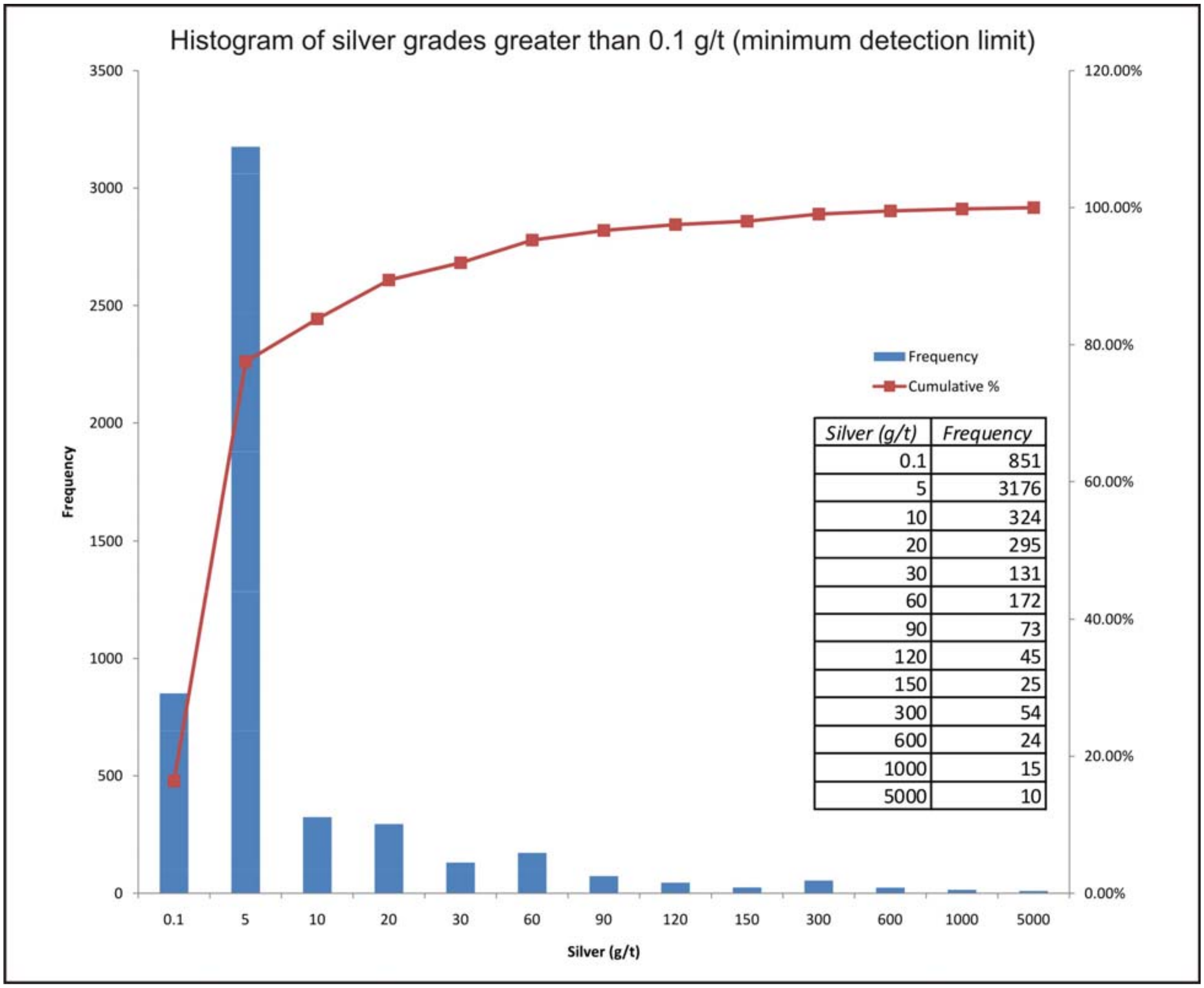
Table 10.1. Exploration programs completed jointly by Quaterra and Blackberry on the Nieves Property from 2004 through 2008.

Year	Exploration Program
2004 to 2006	air photograph interpretation
	established a property wide grid
	CSMAT and IP geophysical surveying
	surveying of historic drill colloars
	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)

Table 10.2. Diamond drilling completed jointly by Quaterra and Blackberry on the Nieves Property from 2004 through 2008.

Year	Phase	Area	Holes Drilled	Drill Metres	Hole(s)
2004	I	California	2	851.61	QTA11, QTA12
		Concordia	8	3,075.38	QTA13-15, QTA19-23
		Mn Mine	1	431.90	QTA18
		Orion West	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	5	2,430.77	QTA27-QTA30, QTA33
		East San Gregorio	1	346.25	QTA32
		Gregorio North	1	350.22	QTA31
		Santa Rita	2	1,082.31	QTA25, QTA26
		Total Drilled	**11**	**5,173.93**	
2006	III	Concordia	4	3,329.69	QTA35, QTA36, QTA40, QT41
		East California	1	651.05	QTA42
		Manto 4	1	459.03	QTA39
		Orion	1	650.54	QTA38
		Santa Rita	1	803.76	QTA37
		Total Drilled	**8**	**5,894.07**	
2007	IV	Concordia	14	4,611.80	QTA43-QTA55, QTA57
		East 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**	
Total Quaterra and Blackberry			**72**	**27,932.74**	QTA01-QTA82

Quaterra and its equal partner, Blackberry, drilled 30 holes in 3 phases of exploration between 2004 and 2006. These phased-drill programs focused on defining the lateral and down dip extent of the Concordia mineralized system in addition to testing some of the surrounding geophysical or geochemical anomalies, and other geologic features. The results of the drilling indicated that the Concordia system was still "open" and that additional exploration was required to define its extents. Ten silver intercepts greater than 1 kg silver were reported in 9 drill holes (Figures 10.1 and 10.2).. Four hundred and nineteen samples reported silver grades greater than 60 g/t (Figures 10.1 and 10.2). The range and frequency of sample grades greater than 60 g/t (approximately 2 ounces) validated the exploration concept for this vein system resulting in a recommendation through an independent technical review (Wetherup, 2006) of continued exploration and drilling on the Property.



Silver (g/t)	Frequency
0.1	851
5	3176
10	324
20	295
30	131
60	172
90	73
120	45
150	25
300	54
600	24
1000	15
5000	10

Figure 10.1. Histogram showing silver assays for samples greater than the minimum detection limit for Phase I, II and III drill holes. Ten samples have greater than 1 kg silver.

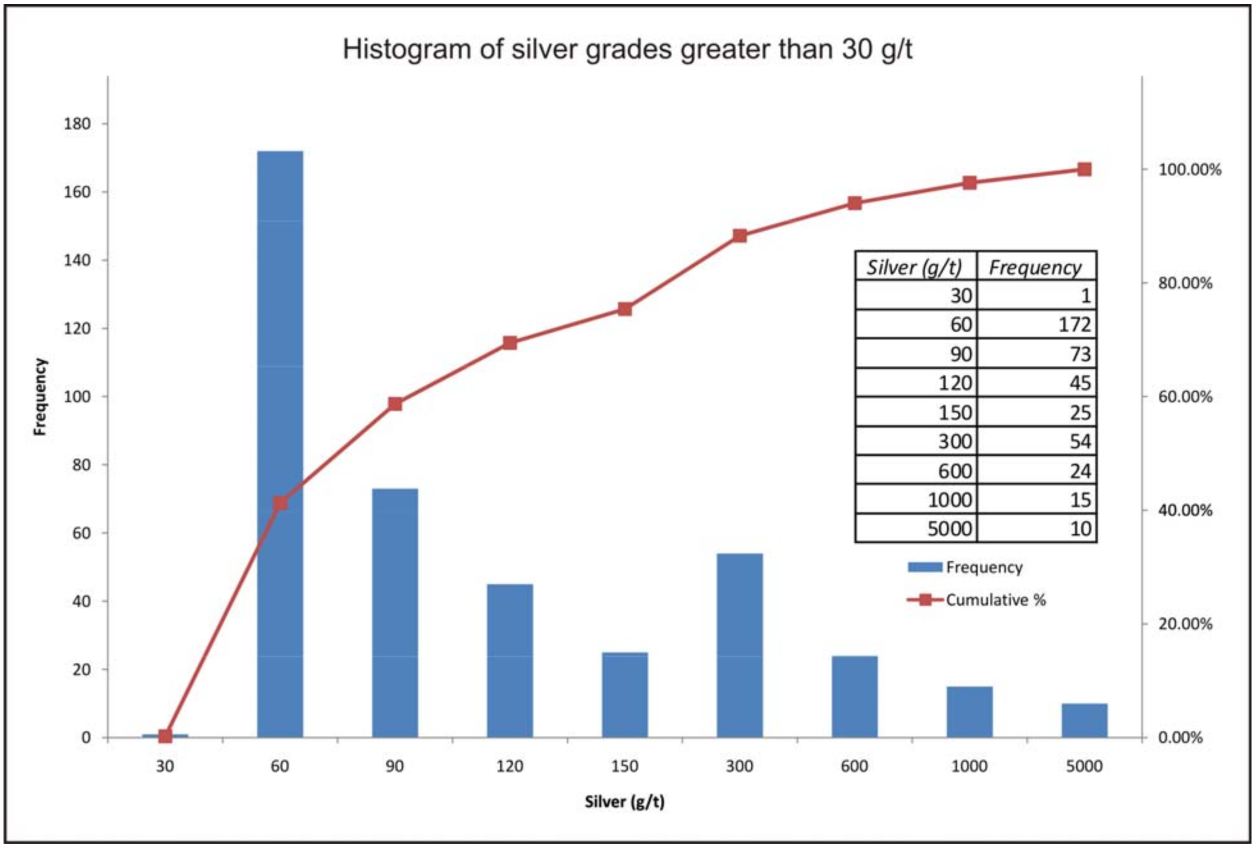


Figure 10.2. Histogram showing assays for samples with greater than 30 g/t silver for Phase I, II and III drill holes. The range and frequency of sample grades greater than 60 g/t (approximately 2 ounces) validated the exploration concept for this vein system resulting in a recommendation through an independent technical review (Wetherup, 2006) of continued exploration and drilling on the Property.

Acting on that recommendation, Quaterra and Blackberry completed Phase IV and V drill programs in 2007 and 2008 respectively (Tables 10.1 and 10.2). Thirty seven of the 40 holes drilled tested for the Concordia mineralization. The drilling again focused on defining the extents of the mineralization rather than infilling around high grade intercepts from the 2004-2007. The Phase IV and V drilling programs were successful in defining both high-grade vein and potential bulk-mineable silver mineralization along the Concordia vein system over a horizontal distance of 400m, a depth of 150-200m and an average true thickness of 40m.

In summary, the Concordia vein system represents a series of sub-parallel veins and veinlets that have been defined by mapping and drilling over a strike length of 1,100m.

The area of mineralization which the joint venture has drilled is open to the east and west. The drill holes completed to date provide approximately 50m-spaced drill coverage both along strike and down dip on a 400m section of the Concordia vein, which is the focus of the resource estimation presented in Section 17.

11.0 Drilling

At Nieves, Quaterra and Quaterra jointly with Blackberry have drilled 82 holes. Of these holes, 58 targeted the Concordia mineralization (Table 10.2). Major Drilling of Mexico S.A. de C.V. was the drill contractor for drill programs completed during 1999 to 2006. B.D.W. International Drilling of Mexico S.A. de C.V. was the drill contractor during 2007 and 2008 drill programs.

Drill hole orientations are generally perpendicular to the strike of the overall structural trend of the vein(s) targeted. HQ (63.5 mm) was the standard drill core diameter. NQ (47.6 mm) was used locally as an extension (a tail) where drill conditions were difficult. 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 11.1).

Figure 11.1. Photograph of a concrete slab marking the location of drill hole collar QTA-19 on the Nieves Property.

Drill holes are 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 or 100m depending on the length of the hole using an Eastman Single Shot instrument. Survey results have been corrected for magnetic declination (+9º). Dip variations in the drilling to date are typically not more than 10% for any interval. Nine values are greater than 10%. These values appear to be real, as corroborating survey readings follow the reading of notable deviation. When these values are omitted fifty percent of the data have a down hole deviation of 2% or less, and 80% of the data has less than 7% deviation (Figure 11.2).

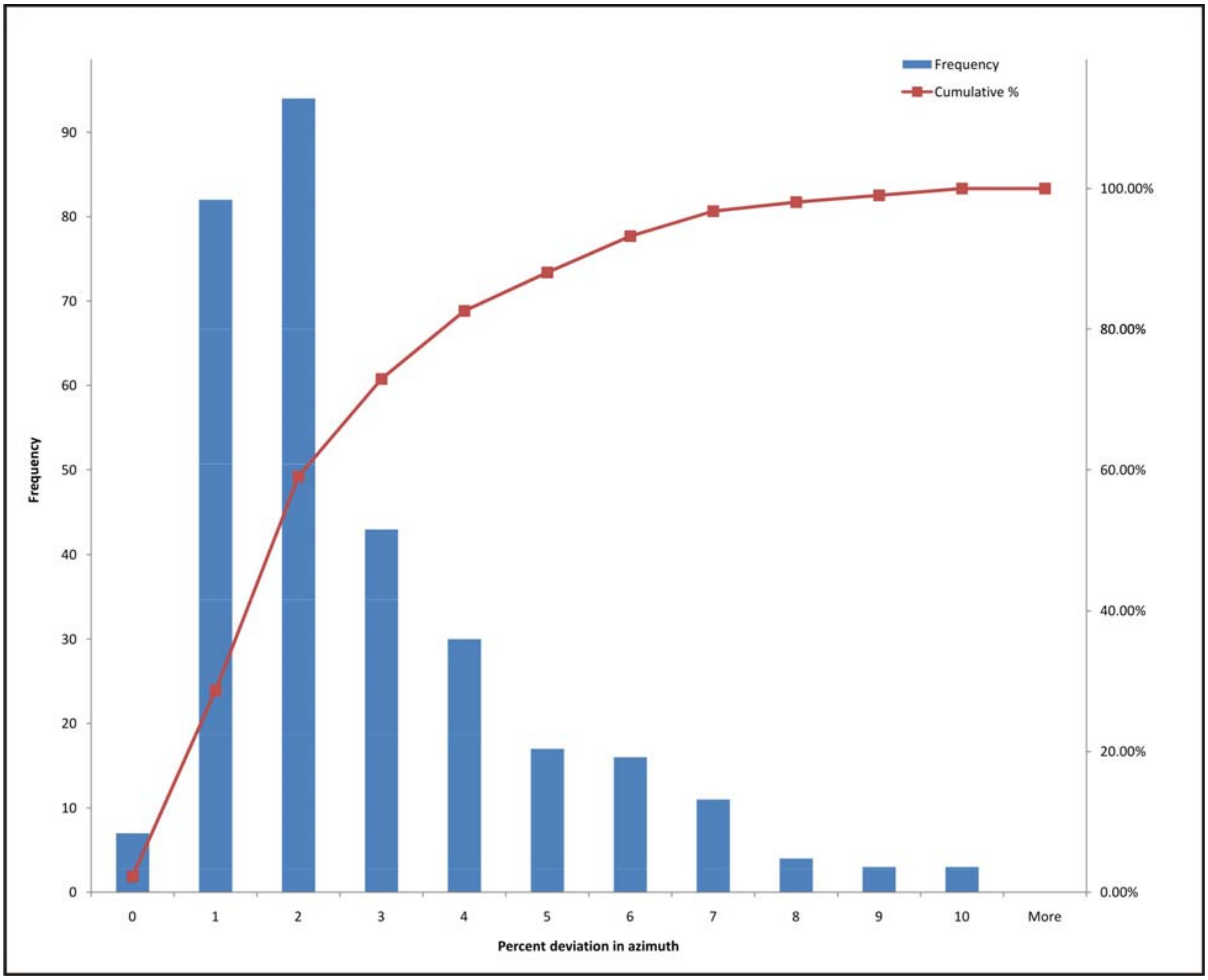


Figure 11.2. Histogram showing the frequency of the percent deviation in the down hole azimuth. The majority of the data has a down hole azimuth deviation of less than or equal to 7%.

A summary of significant intercepts from the Concordia vein are presented in Table 11.1, followed by other veins and mineralization on the Property. True thicknesses are not expressed in the table but are approximately 80% of intercept widths reported. The reader is referred to Quaterra news releases available on SEDAR (www.sedar.com) for a complete list of drill results from the Quaterra and Quaterra-Blackberry drill programs.

The drilling results obtained to date indicate the occurrence of several mineralized veins or vein systems on the Property. In particular, the Concordia vein system extends for at least 1,100m along strike and 400m down dip and represents a series of sub-parallel veins and veinlets with silver grades of up to almost 6 kg.

Table 11-1: Significant drill hole assay (> 17 g/t silver) results from the Nieves Property.

Vein System	Hole	From (m)	To (m)	Interval (m)	Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	Exploration Phase
Concordia	QTA-01	65.53	74.67	9.14		204.00			Q I
		74.67	77.72	3.05		23.00			Q I
		97.53	99.06	1.53		273.00			Q I
		99.06	100.58	1.52		29.80			Q I
	QTA-03	33.00	36.00	3.00		243.00			Q I
		386.00	420.00	34.00		21.26			Q I
		426.00	434.00	8.00		23.00			Q I
		446.00	452.00	6.00		26.00			Q I
	QTA-05	61.00	68.50	7.50		40.20			Q I
	QTA-13	39.80	41.80	2.00	0.27	40.00	0.01	0..01	QB I
		76.48	76.63	0.15	0.06	155.00	0.18	0.17	QB I
		202.30	203.30	1.00	0.28	545.00	0.61	0.50	QB I
	INCLUDING	203.10	203.30	0.20	0.66	2590.00	3.02	2.41	QB I
	QTA-14	54.20	55.00	0.80	0.56	42.00	0.01	0.03	QB I
	QTA-15	92.70	100.80	8.10	0.16	27.00	<0.01	0.02	QB I
	QTA-19	207.60	209.10	1.50	1.39	4020.00	3.42	2.80	QB I
		425.20	426.00	0.80	0.49	915.00	0.92	0.31	QB I
	QTA-20	198.20	199.20	1.00	0.43	463.00	0.41	0.30	QB I
	INCLUDING	198.50	199.20	0.70	0.51	593.00	0.44	0.41	QB I
		219.00	221.50	2.50	<0.05	58.00	1.66	1.61	QB I
		225.40	227.00	1.60	<0.05	92.00	0.21	0.27	QB I
	QTA-21	243.70	244.00	0.30	0.87	261.00	0.29	0.33	QB I
		274.20	274.50	0.30	1.17	237.00	0.47	0.48	QB I
		281.41	283.85	2.44	0.47	224.00	0.63	0.39	QB I
	INCLUDING	283.00	283.85	0.85	0.84	471.00	1.29	0.75	QB I
		294.00	298.54	4.54	0.07	52.00	0.07	0.15	QB I
	QTA-22	72.00	72.20	0.20	<0.05	387.00	0.12	0.03	QB I
		83.00	132.20	49.20	<0.05	52.00	0.06	0.08	QB I
	INCLUDING	85.61	89.57	3.96	<0.05	203.00	0.25	0.29	QB I
	INCLUDING	129.50	131.65	2.15	0.09	201.00	0.07	0.16	QB I
	QTA-23	214.58	217.50	2.92	0.17	24.00	0.03	0.02	QB I

Note: Q = Quaterra. QB = Quaterra jointly with Blackberry.

Vein System	Hole	From (m)	To (m)	Interval (m)	Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	Exploration Phase
Concordia	QTA-27	124.28	126.00	1.72	<0.05	120.00	0.08	0.10	QB II
		161.30	161.50	0.20	0.90	928.00	1.79	2.58	QB II
		165.80	165.90	0.10	0.52	145.00	0.91	1.19	QB II
		172.00	174.00	2.00	<0.05	173.00	0.27	0.33	QB II
		174.00	174.73	0.73	0.07	337.00	0.37	0.33	QB II
		174.73	175.00	0.27	0.13	183.00	0.56	0.43	QB II
		175.00	176.00	1.00	<0.05	103.00	0.11	0.11	QB II
		180.60	180.80	0.20	0.24	126.00	0.20	0.55	QB II
		182.30	182.60	0.30	0.32	488.00	1.58	1.72	QB II
		186.50	186.70	0.20	0.34	111.00	0.49	0.73	QB II
		189.30	189.87	0.57	1.24	229.00	1.90	1.49	QB II
		191.30	191.50	0.20	0.14	108.00	0.11	0.11	QB II
		191.50	191.79	0.29	0.15	236.00	0.18	0.13	QB II
		191.79	192.50	0.71	0.61	932.00	0.64	0.57	QB II
		197.57	197.77	0.20	0.58	1105.00	1.17	2.57	QB II
		208.00	208.90	0.90	<0.05	260.00	0.21	0.22	QB II
		271.37	271.57	0.20	0.18	311.00	0.44	0.18	QB II
	QTA-28	187.65	187.76	0.11	0.10	420.00	0.99	0.68	QB II
		190.90	191.00	0.10	0.10	238.00	2.14	0.60	QB II
		194.15	194.25	0.10	0.07	171.00	0.98	0.44	QB II
		243.15	243.25	0.10	<0.05	1835.00	2.11	2.25	QB II
		243.80	243.90	0.10	0.07	894.00	1.45	1.17	QB II
		252.60	252.66	0.06	2.47	394.00	2.66	0.58	QB II
		254.81	254.95	0.14	1.39	110.00	0.43	0.24	QB II
		255.90	256.10	0.20	0.21	362.00	0.51	0.64	QB II
		256.10	256.50	0.40	0.29	128.00	0.18	0.24	QB II
		256.80	257.08	0.28	1.13	750.00	5.65	4.46	QB II
		268.55	268.70	0.15	0.17	138.00	0.23	0.28	QB II
		282.28	282.48	0.20	<0.05	127.00	0.13	0.24	QB II
		337.45	337.65	0.20	0.20	648.00	0.70	1.45	QB II
	QTA-29	185.80	186.30	0.50	0.07	275.00	0.39	1.06	QB II
		188.00	188.30	0.30	0.18	117.00	0.07	0.11	QB II
		224.00	225.00	1.00	<0.05	130.00	0.15	0.12	QB II
		226.50	226.60	0.10	0.17	888.00	0.27	0.33	QB II
		226.60	227.10	0.50	0.43	392.00	0.26	0.21	QB II
		238.80	239.10	0.30	0.93	799.00	1.05	2.69	QB II
		284.10	284.30	0.20	0.06	108.00	0.55	0.55	QB II
		427.70	427.85	0.15	0.20	1550.00	10.75	0.47	QB II

Vein System	Hole	From (m)	To (m)	Interval (m)	Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	Exploration Phase
Concordia	QTA-30	511.24	512.57	1.33	0.05	133.00	0.11	0.03	QB II
		563.60	563.75	0.15	1.74	224.00	0.94	0.53	QB II
		582.40	582.50	0.10	0.05	136.00	4.66	2.16	QB II
		592.15	592.20	0.05	0.13	199.00	4.24	10.30	QB II
		592.60	592.65	0.05	0.07	267.00	2.19	2.34	QB II
		598.00	598.45	0.45	0.06	251.00	2.10	2.14	QB II
		604.30	604.45	0.15	0.05	237.00	2.48	1.35	QB II
		605.33	606.00	0.67	0.05	129.00	2.26	1.72	QB II
		608.00	608.38	0.38	0.05	107.00	0.94	0.60	QB II
		609.40	609.50	0.10	0.19	584.00	5.52	2.08	QB II
		609.50	610.00	0.50	0.05	118.00	0.71	0.29	QB II
		614.00	615.10	1.10	0.05	131.00	0.80	0.72	QB II
		615.10	615.20	0.10	0.13	971.00	9.12	9.84	QB II
		618.20	618.40	0.20	0.05	185.00	1.58	1.30	QB II
		619.30	619.45	0.15	0.06	773.00	6.95	5.04	QB II
		626.80	626.90	0.10	0.32	121.00	4.35	4.59	QB II
		628.60	629.50	0.90	0.05	176.00	2.13	1.84	QB II
		632.33	632.53	0.20	0.05	202.00	2.17	1.44	QB II
		643.50	643.60	0.10	0.06	782.00	7.37	4.10	QB II
		643.60	644.10	0.50	0.05	151.00	1.14	1.11	QB II
		653.95	654.20	0.25	0.07	677.00	6.50	3.89	QB II
		655.45	655.65	0.20	0.07	186.00	1.83	3.09	QB II
		656.05	656.50	0.45	0.05	137.00	1.34	1.36	QB II
		657.45	658.00	0.55	0.13	216.00	2.55	2.61	QB II
		663.60	664.50	0.90	0.06	160.00	1.87	1.59	QB II
		670.40	670.54	0.14	0.13	270.00	2.12	2.81	QB II
		675.60	676.00	0.40	0.05	127.00	0.88	0.50	QB II
		682.20	682.70	0.50	0.05	168.00	1.17	1.92	QB II
		689.32	689.50	0.18	0.05	131.00	0.85	3.96	QB II
		732.00	732.25	0.25	0.05	134.00	0.86	1.59	QB II
		738.50	738.60	0.10	0.32	295.00	4.24	13.50	QB II
		758.30	758.50	0.20	0.05	208.00	1.62	0.99	QB II
		758.50	758.70	0.20	0.05	443.00	4.35	4.87	QB II
		761.50	761.70	0.20	0.24	313.00	2.23	1.89	QB II
	QTA-33	333.30	333.80	0.50	<0.05	1795.00	1.33	0.44	QB II
		351.78	351.88	0.10	0.26	239.00	0.28	0.38	QB II
	QTA-35	508.00	546.00	38.00	0.03	24.26	0.17	0.26	QB III
		478.00	546.00	68.00	0.01	19.86	0.13	0.20	QB III
	QTA-36	413.32	413.41	0.09	0.40	1030.00	0.34	1.27	QB III
		475.50	478.00	2.50	0.10	82.80	0.06	0.08	QB III
		851.23	851.70	0.47	<0.05	72.00	0.92	1.55	QB III
		878.05	891.80	13.75	0.03	17.92	0.14	0.13	QB III
		920.00	922.00	2.00	0.07	61.00	0.83	0.32	QB III
		959.10	959.20	0.10	0.26	175.00	1.62	0.78	QB III

Vein System	Hole	From (m)	To (m)	Interval (m)	Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	Exploration Phase
Concordia	QTA-40	467.00	468.00	1.00	0.17	61.90	0.01	0.04	QB III
		514.90	515.10	0.20	<0.05	76.00	0.52	0.02	QB III
		551.90	552.90	1.00	0.07	58.90	0.08	0.43	QB III
		570.00	572.00	2.00	0.05	56.00	0.47	0.61	QB III
		578.00	622.00	44.00	<0.05	29.80	0.45	0.30	QB III
		667.40	682.00	14.60	0.03	46.49	0.45	0.36	QB III
	QTA-41	237.70	237.90	0.20	0.25	147.00	0.23	0.15	QB III
		742.00	745.10	3.10	0.06	51.00	0.19	0.19	QB III
		802.30	804.00	1.70	0.09	43.00	0.31	0.20	QB III
	QTA-43	194.00	198.00	4.00	0.25	24.00	0.02	0.05	QB IV
	QTA-44	232.55	234.65	2.10	0.04	51.00	0.06	0.04	QB IV
		240.00	240.90	0.90	0.10	87.00	0.13	0.08	QB IV
	QTA-45	252.60	254.25	1.65	0.39	44.00	0.38	0.26	QB IV
	QTA-46	30.00	36.00	6.00	0.13	45.00	0.04	0.08	QB IV
		411.00	411.90	0.90	1.15	104.00	2.56	0.18	QB IV
	QTA-47	142.45	147.55	5.10	0.15	65.00	0.06	0.06	QB IV
	QTA-48	115.97	163.45	47.48	0.13	142.00	0.37	0.37	QB IV
	QTA-49	223.00	226.00	3.00	0.19	94.00	0.66	0.38	QB IV
	QTA-50	262	268.7	6.7	0.13	128	0.66	0.38	QB IV
	INCLUDING	268.05	268.4	0.35	0.93	536	8.65	2.49	QB IV
		272.45	272.65	0.2	0.27	1085	3.8	2.88	QB IV
	QTA-51	412.8	414.2	1.4	0.06	125	0.91	0.09	QB IV
	QTA-52	384.84	393	8.16	0.03	33	0.25	0.29	QB IV
	QTA-53	351.13	352.35	1.22	0.32	1802	2.06	0.69	QB IV
	INCLUDING	351.13	351.5	0.37	0.65	5240	4.81	1.83	QB IV
	QTA-54	381.28	381.90	0.62	1.13	480.00	1.98	6.16	QB IV
	QTA-55	62.00	99.60	37.60	0.15	108.00	0.10	0.14	QB IV
	QTA-59	171.00	228.00	57.00	0.05	135.00	0.14	0.19	QB V
	QTA-61	70.00	112.00	42.00	0.08	106.00	0.07	0.08	QB V
	QTA-62	45.75	46.40	0.65	3.83	99.00	0.05	0.05	QB V
	QTA-63	88.95	136.00	47.05	0.05	35.00	0.02	0.04	QB V
	QTA-64	126.00	167.20	41.20	0.12	57.00	0.26	0.25	QB V
	QTA-65	62.00	104.35	42.35	0.17	149.00	0.13	0.20	QB V
	QTA-66	72.00	96.00	24.00	0.18	106.00	0.09	0.12	QB V
	QTA-67	202.22	213.45	11.23	0.21	54.00	0.41	0.45	QB V
	QTA-68	70.40	105.00	34.60	0.09	76.00	0.12	0.11	QB V
	QTA-69	72.00	146.60	74.60	0.11	84.00	0.13	0.16	QB V
	QTA-70	60.00	157.90	97.90	0.06	59.00	0.06	0.08	QB V
	QTA-71	114.00	165.63	51.63	0.04	45.00	0.07	0.08	QB V
	QTA-72	120.00	160.00	40.00	0.12	91.00	0.06	0.10	QB V
	QTA-73	80.50	82.90	2.40	0.45	136.00	0.06	0.07	QB V
	QTA-74	96.00	134.00	38.00	0.10	157.00	0.13	0.15	QB V
	QTA-75	124.70	204.30	79.60	0.07	53.00	0.05	0.07	QB V
	QTA-76	100.50	214.70	114.20	0.07	48.00	0.06	0.08	QB V
	QTA-77	91.00	169.10	78.10	0.12	76.00	0.09	0.12	QB V
	QTA-78	74.00	88.00	14.00	0.19	94.00	0.08	0.15	QB V

Vein System	Hole	From (m)	To (m)	Interval (m)	Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	Exploration Phase
Concordia	QTA-79	340.00	358.00	18.00	0.03	53.00	0.09	0.11	QB V
	QTA-80	256.50	270.00	13.50	0.08	254.00	0.21	0.23	QB V
		283.27	296.85	13.58	0.16	213.00	0.19	0.35	QB V
	QTA-81	186.07	207.07	21.00	0.09	43.00	0.22	0.23	QB V
Gregorio North	QTA-04	80.75	97.00	16.25		48.25			Q I
		116.00	123.00	7.00		17.00			Q I
		195.60	232.10	36.50		98.18			Q I
	QTA-07	346.00	354.00	8.00		23.70			Q I
	QTA-09	276.00	278.00	2.00		115.00			Q I
	QTA-31	102.00	102.21	0.21	0.28	151.00	0.33	0.31	QB II
		143.00	144.70	1.70	0.10	136.00	0.05	0.08	QB II
		153.20	153.33	0.13	0.45	121.00	0.20	0.06	QB II
		157.38	158.10	0.72	1.06	262.00	0.90	2.47	QB II
		158.10	158.30	0.20	0.85	620.00	1.70	1.63	QB II
		159.90	160.10	0.20	1.53	1105.00	1.29	2.20	QB II
		237.40	237.60	0.20	1.21	556.00	0.60	1.20	QB II
		241.30	241.50	0.20	0.31	575.00	0.74	0.83	QB II
		241.80	242.20	0.40	0.61	1750.00	2.59	1.96	QB II
		307.25	307.45	0.20	0.07	492.00	0.30	0.37	QB II
		307.45	307.75	0.30	0.07	206.00	0.16	0.10	QB II
		324.35	324.45	0.10	0.28	668.00	2.00	0.60	QB II
	QTA-82	189.15	210.00	20.85	0.06	53.00	0.02	0.03	QB V
		382.40	393.80	11.40	0.13	110.00	0.14	0.19	QB V
California	QTA-12	342.44	342.54	0.10	<0.05	406.00	0.26	0.24	QB I
Santa Rita	QTA-16	456.40	459.50	3.10	<0.05	70.00	0.57	0.91	QB I
	INCLUDING	456.40	458.00	1.60	<0.05	107.00	0.81	1.44	QB I
	QTA-25	204.70	205.26	0.56	<0.05	317.00	1.62	1.00	QB II
		239.60	239.70	0.10	<0.05	223.00	1.13	1.22	QB II
		284.71	285.00	0.29	0.89	405.00	3.42	4.54	QB II
		351.10	352.90	1.80	0.19	190.00	2.94	3.94	QB II
		361.10	362.30	1.20	<0.05	129.00	0.26	0.69	QB II
		396.30	396.70	0.40	<0.05	299.00	2.54	1.41	QB II
		439.40	439.50	0.10	1.09	360.00	2.75	3.82	QB II
		505.50	505.80	0.30	<0.05	184.00	0.70	0.66	QB II
		507.20	508.00	0.80	<0.05	153.00	0.46	0.44	QB II
		544.10	544.30	0.20	0.26	206.00	0.19	0.01	QB II
	QTA-26	119.80	199.90	0.10	0.13	1415.00	0.39	2.08	QB II
		142.20	142.40	0.20	0.53	479.00	0.30	0.25	QB II
		382.83	383.10	0.27	<0.05	140.00	0.03	0.22	QB II
		505.60	506.00	0.40	<0.05	166.00	0.19	0.31	QB II
	QTA-37	462.28	462.85	0.57	0.77	90.00	3.80	0.44	QB III
		466.10	472.00	5.90	<0.05	104.00	0.23	0.55	QB III
		719.15	719.30	0.15	0.32	20.00	0.72	1.19	QB III
Orion	QTA-38	101.40	101.55	0.15	1.02	53.00	0.03	0.21	QB III
		170.35	170.55	0.20	<0.05	308.00	0.23	0.27	QB III
		345.95	349.20	3.25	<0.05	116.00	0.16	0.14	QB III

12.0 Sampling Method and Approach

Drill core was collected from the drill rig 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. At the core logging facility (Figure 12.1), the core was measured, core recovery estimated, and the rock types, alteration minerals, textural features, structures, veining, and mineralized zones documented. Sample intervals were measured, marked with permanent marker and given a sample number and sample tag by the geologists. 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 (Figure 12.2). The other half was placed back into the core box in its original position and the core boxes were then stacked and stored in order and by hole number in the core storage facility (Figure 12.3). Where the veins were coherent they were sawed in half perpendicular to the "grain" to get a representative split.

Figure 12.1. Photograph of the drill core logging area on the Nieves Property.

Figure 12.2. Photograph of the drill core sawing area on the Nieves Property.

Figure 12.3. Photograph of the drill core storage facility on the Nieves Property.

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. The minimum sampling width for all drill holes on the Nieves Property is 0.03m and the maximum width is 4.95m, with an average width of 1.47m however the highest frequency sample interval is in the range of 2-2.25m (Figure 12.4). Samples from all drill holes targeting the Concordia vein system have a minimum width of 0.03m, a maximum width of 3.6m, and an average width of 1.4m (Figure 12.5). Both data sets show a high proportion of samples in the 2-2.25m range (Figures 12.6 and 12.7). Approximately 75% of these samples are from barren areas surrounding the mineralization (Figure 12.8). Otherwise the majority of samples were collected in quarter metre intervals or multiples thereof (Figure 12.7).

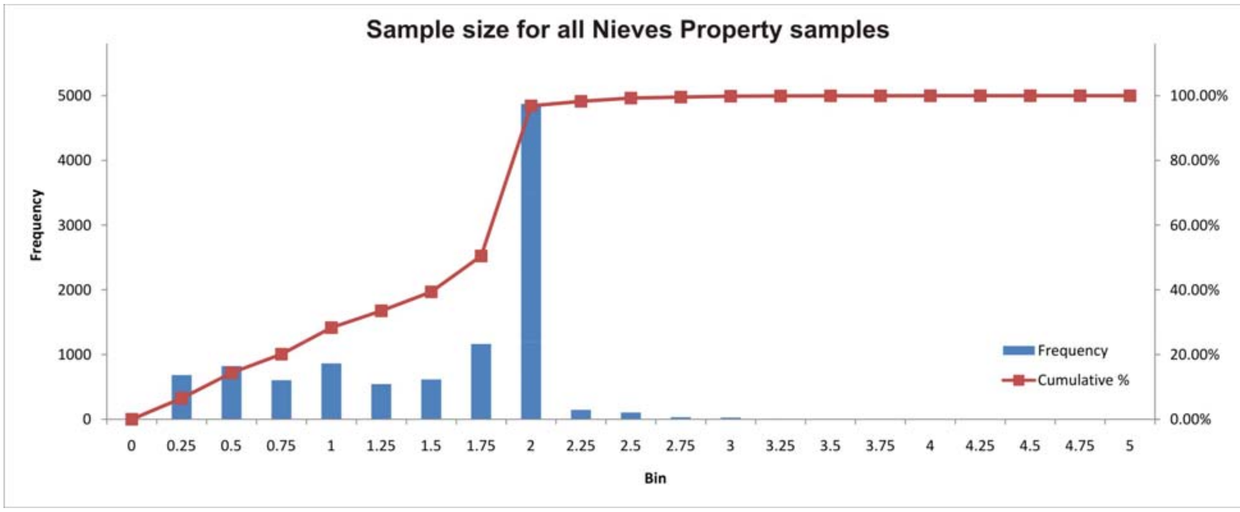


Figure 12.4. Histogram showing all sampled intervals on the Nieves Property. Sample widths range from 0.03 to 4.95m, with an average width of 1.47m.

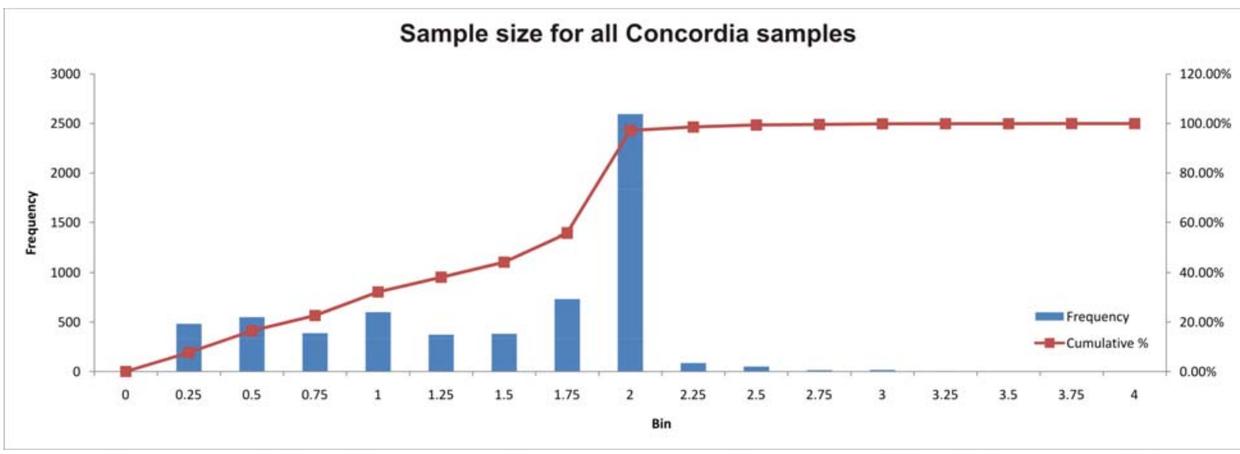


Figure 12.5. Histogram showing all of the samples from drill holes targeting the Concordia vein system on the Nieves Property. Sample widths range from 0.03m to 3.6m, with an average width of 1.4m.

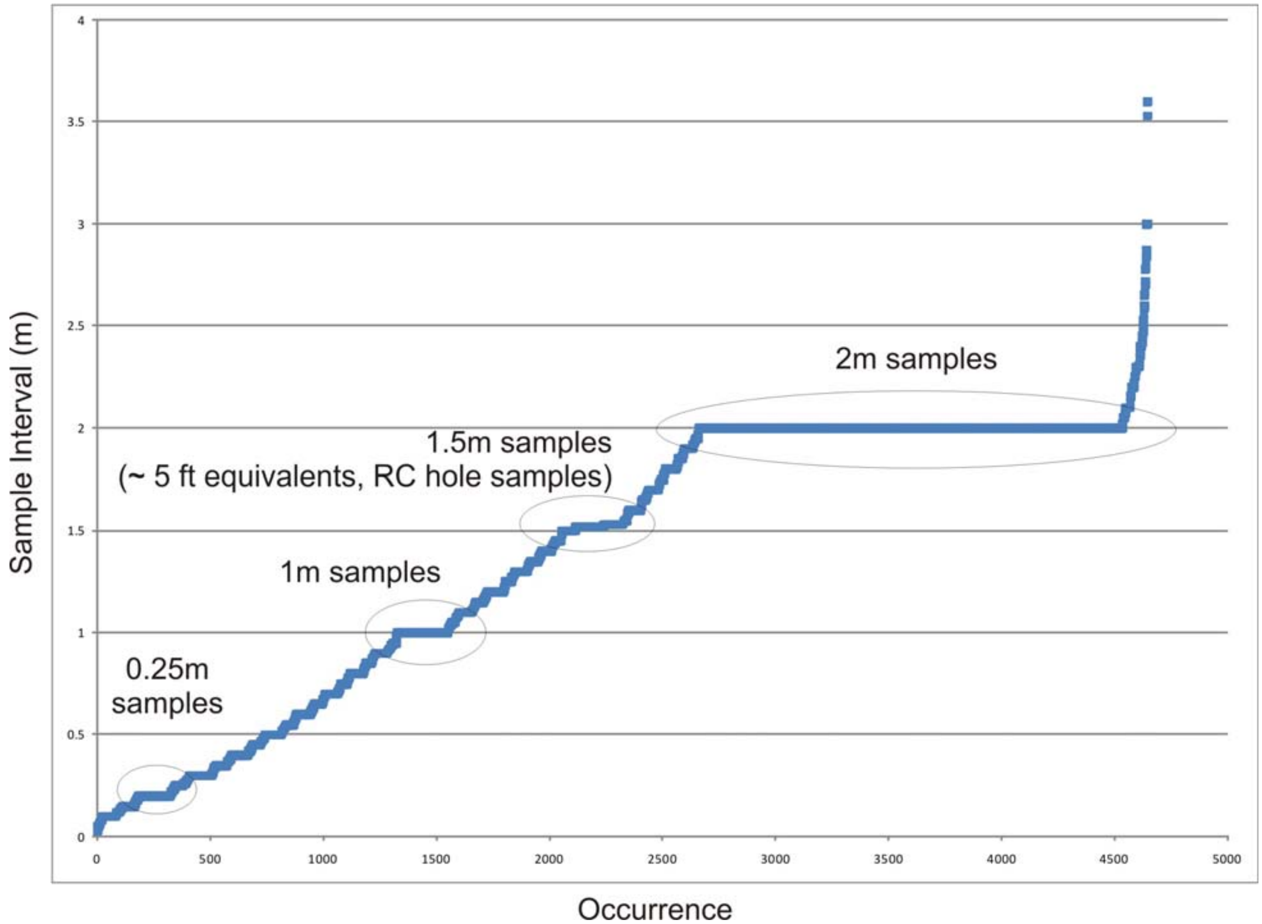


Figure 12.6. Scatter plot showing sample intervals expressed in metres. Samples are commonly collected in 0.25m intervals or multiples thereof.

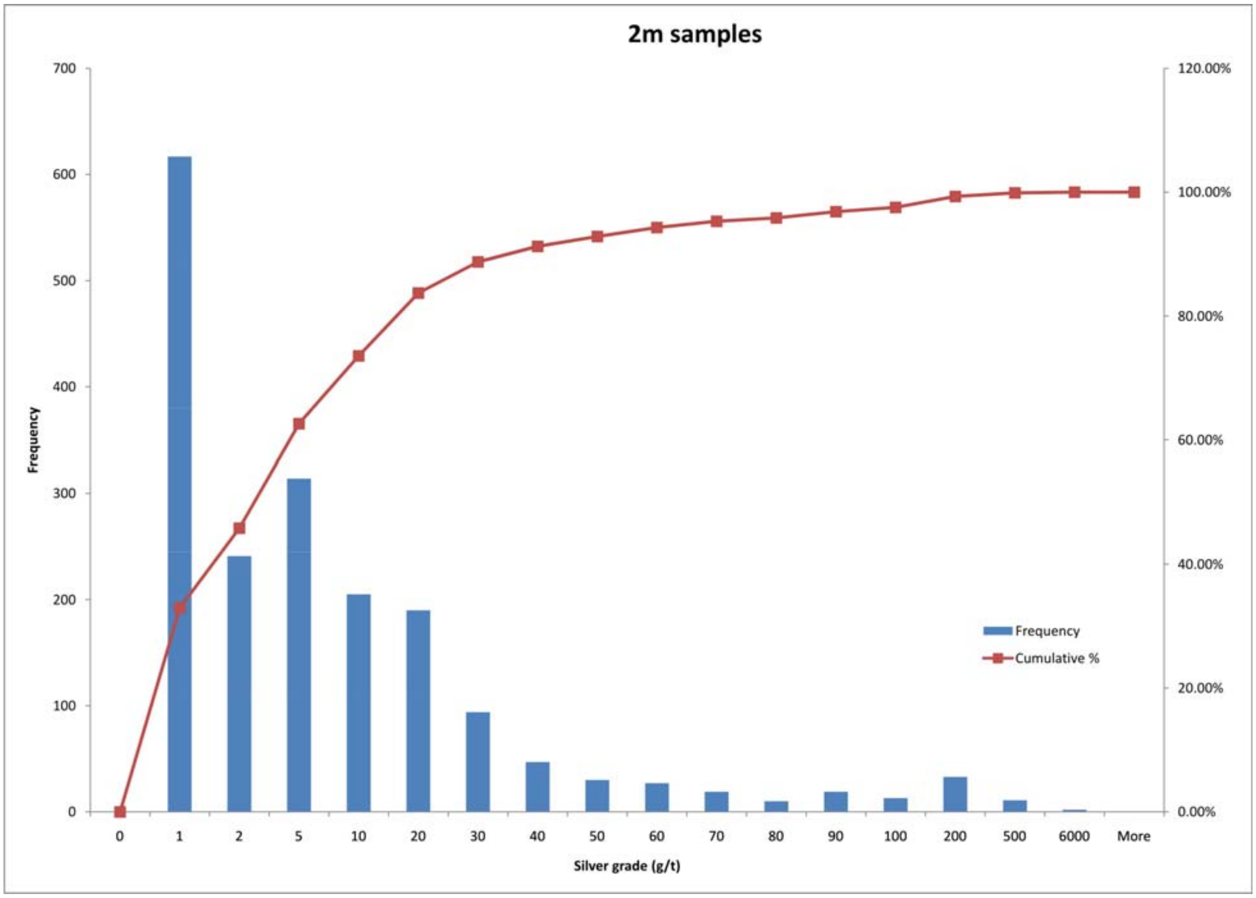


Figure 12.7. Histogram showing all of the 2m samples from drill holes targeting the Concordia vein system on the Nieves Property. Approximately 75% of the 2m samples were collected from barren rock surrounding the Concordia mineralization.

13.0 Sample Preparation, Analyses and Security

No employees, offices, directors or associates of Quaterra or Blackberry are involved in the preparation of the samples used in preparation of this Report.

A total of 10,503 drill core samples from all phases of exploration on the Nieves Property were marked by supervising and core logging geologists before being split using a diamond saw by a technician. 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 onto the core trays.

Samples were then packaged into sealed sacks and taken by Quaterra employees to ALS Chemex Laboratories in Guadalajara for analysis.

ALS Chemex is an ISO 9001:2000, ISO 17025:2005 and Standard Council of Canada accredited laboratory with preparation and analytical laboratories operating in over 16 countries. Samples are sent to ALS Chemex in Guadalajara for preparation using their PREP-32 procedure. Upon receipt samples are dried, weighed and crushed. Two hundred and fifty grams of material is split and pulverized to at least 85% passing 75 microns. Reject material is retained at ALS Chemex in Guadalajara. Prepared pulp samples are sent for analysis to ALS Chemex in Vancouver.

All samples were analyzed using a 41 element ICP method (ME-ICP41), in addition to analyzing gold and silver by standard fire assay (ME-GRA21). Lead and zinc values over 10,000 ppm and silver values over 100 ppm were re-assayed by atomic-absorption methods (ME-OG62). A full description of the preparation and analytical methods is provided on ALS Chemex's website (www.alsglobal.com).

Internal quality assurance and quality control (QAQC) procedures such as the insertion of blanks and standards into the sample sequences were not utilized by Quaterra and Blackberry during initial phases of exploration. Routine analysis of standard reference material (standards) began in 2007 with the insertion of a commercially prepared standard. At least two standards were included with each hole. Standard reference material was inserted into the sample sequence approximately every 20th sample after the start of each drill hole. Duplicate samples were not prepared.

In December 2008 at the request of the author 155 splits of previously prepared pulps and 6 coarse reject samples from the Concordia drill holes (approximately 3.5% of the Concordia samples or 10% of samples with a primary assay greater than 10 g/t silver used in the resource estimate) were submitted for check analysis in December 2008. These samples were packaged and shipped using the same security protocols as drill core samples.

The QAQC of samples used in preparation of the resource estimate are presented in Section 14. In the opinion of the author, an acceptable number of standards and duplicates were submitted for analysis and the results demonstrate an acceptable level of analytical accuracy and precision.

14.0 Data Verification

14.1 Site Visits and Database

Stephen Wetherup (P.Geo., CCIC) conducted a site visit to the Nieves Property in 2006. He collected five samples of mineralized drill core which represented the mineralization from each of the vein systems and mineralization styles tested by Quaterra and Blackberry during its drilling programmes to verify the assay results. The assays of these check samples compared favourably with the data provided by Quaterra and Blackberry (Wetherup, 2006).

On January 29th and 30th, 2009, the author, Michelle Stone (P.Geo.), accompanied by Quaterra geologist Hector Fernandez, visited the Property. She was shown the drill collar locations from the 2007-2008 drilling programmes targeting the Concordia vein system, most of the major geological features and units and historic shafts, and toured the core cutting, logging, and storage facilities. Five diamond drill holes were also reviewed.

A drill hole database was supplied to CCIC by Quaterra in the format of a series of Microsoft Excel workbooks. The files contained collar location, down hole directional survey data and assay results. These data were compiled into Microsoft Access for reviewing and validated before being finalized into an appropriate format for resource evaluation.

The following general activities were undertaken during database validation by CCIC:

- Cross check total drill hole depth and final sample depth data.
- Check for overlapping and missing sampling intervals.
- Replace assay entries with less than detection limit values to one half the lower limit of detection for use with the resource modeling software.
- Check drill hole survey data for unusual or suspect down-hole deviations.
- Checks were made using all available digital assay certificates for comparison with the results from provided in data files supplied by Quaterra. All but 2 certificates were available (WCNV-04 and 5). In total 10,317 of 10,502 assays were checked. Only 6 errors were identified.

The database supplied was suitable for use for resource estimation after minor corrections were made.

14.2 QAQC Summary

The following section is a summary of the QAQC results from the joint Quaterra-Blackberry drilling programs from 2004 through 2008. Procedures for QAQC has been quite variable ranging from none (initial phases of exploration) to the inclusion of a commercially prepared standard with the samples to be assayed (current practice). Duplicate samples have not been collected. However, 165 samples of remaining rock pulp and coarse crush reject material were selected and analyzed to substantiate assays used in the resource estimation. The available data demonstrate an acceptable level of accuracy and precision during analysis. Therefore, the primary data are considered valid and acceptable for use in the resource estimation.

In this section less than detection limit values are considered equal to zero for plotting purposed so that they can be easily distinguished from values equal to the detection limit.

Standards

One hundred and fifty eight standards submitted by Quaterra with the drill core samples were analyzed. The standard used was commercially prepared by CDN Resource Laboratories Ltd. in Delta, BC. Details of its preparation and analysis are provided in Appendix 1 and the expected range of values is shown in Table 14.1.

Table 14.1. Range of expected assay values for standard CDN-SE-1.

Metal	Expected range of values
Au (g/t)	0.480 +/- 0.0034
Ag (g/t)	712 +/- 57
Cu (%)	0.097 +/- 0.005
Pb (%)	1.92 +/- 0.09
Zn (%)	2.65 +/- 0.20

Figures 14.1 and 14.2 summarize the assay results for standard CDN-SE-1. Most values occur within the high and low range reported for the standards or within one standard deviation for silver and two standard deviations for gold. Standard analyses are considered acceptable if they occur within 3 standard deviations of the data mean of the data. Five silver assays and 3 gold assays plot outside of these limits. Only one of these assays corresponds to an outlying standard sample for both metals. However, none of these standard samples is the only standard analyzed on its corresponding certificate. The other standards plot within acceptable deviation limits and therefore the data is overall considered precise and of good quality.

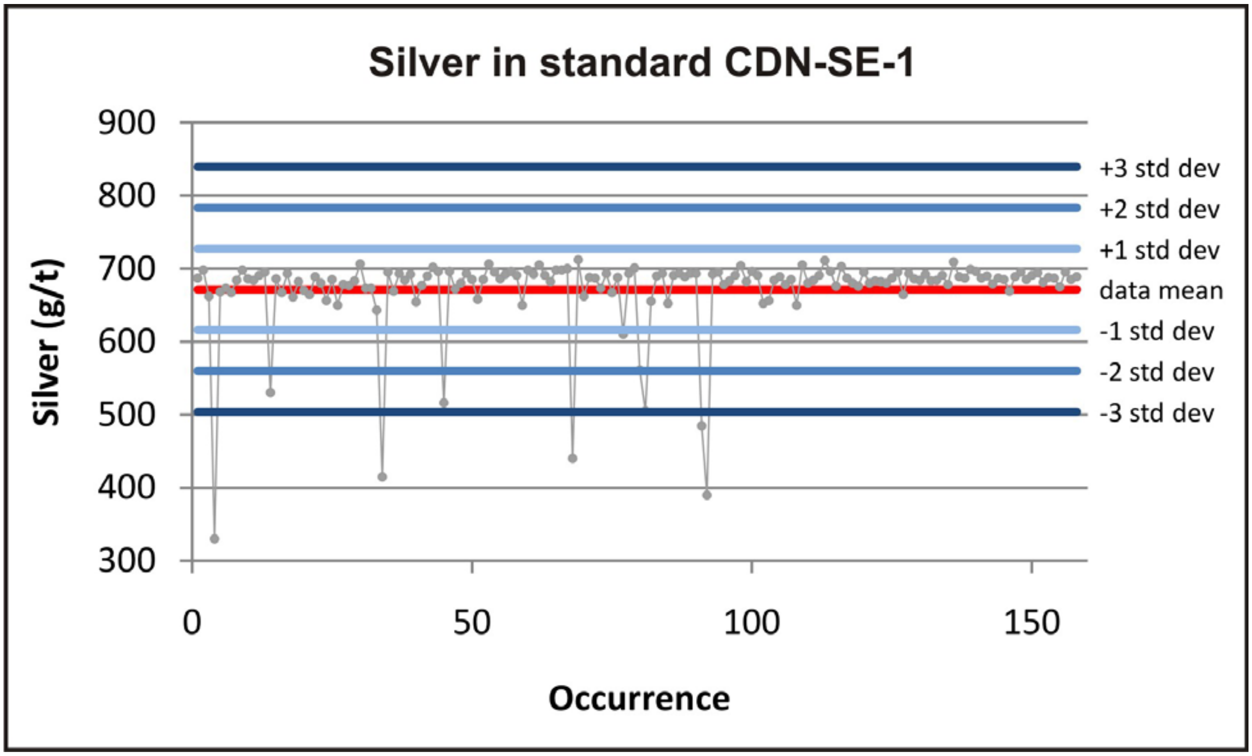


Figure 14.1. Graph showing the silver grade (g/t) in standard analyses of CDN-SE-1 as determined by fire assay methods.

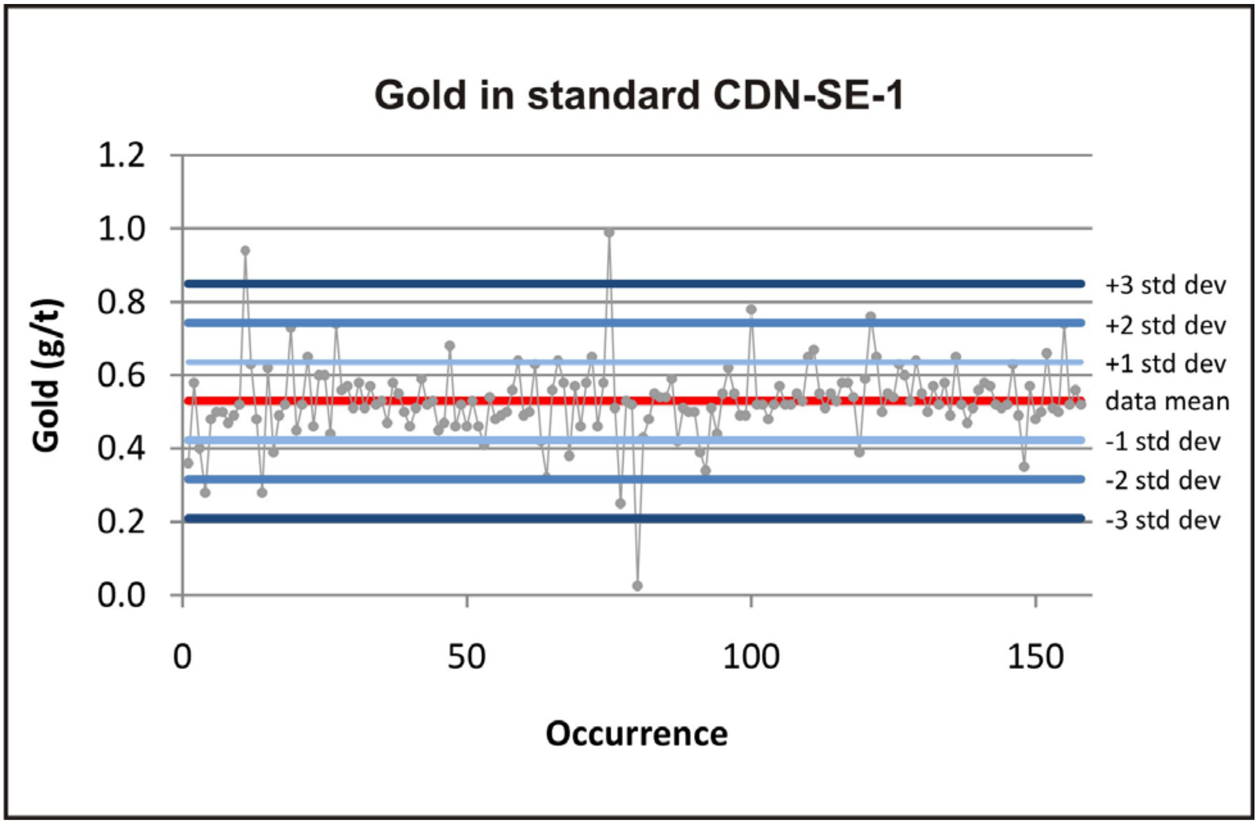


Figure 14.2. Graph showing the gold grade (g/t) in standard analyses of CDN-SE-1 as determined by fire assay methods.

Pulp Duplicates

Quaterra at the request of the author submitted 159 pulp duplicate samples and 6 coarsely crushed (reject) samples for analysis. The pulp samples were randomly selected from the 2007 and 2008 drilling programs (every 20th sample) and the 6 reject samples were selected because the primary assay returned silver contents greater than 2,000 g/t. Samples were preferentially selected from the 2007 and 2008 drilling because they form the majority (72 percent) of the drill holes used in the resource estimate.

The pulp samples were collected by taking a second split of the pulp remaining after the primary assay had been completed. The reject samples were prepared using the same protocol as primary samples and all samples were analyzed using the same methods as the primary samples so that the results can be directly compared. Table 14.2 summarizes these results and indicates that there is a good correlation between the original assay and the duplicates.

Table 14.2. Statistical analysis of pulp duplicates.

	ALL DATA			SELECT DATA*	
	Au (FA)	Ag (ICP)	Ag (FA)	Ag (ICP)	Ag (FA)
R2 value	0.8451	0.9836	0.9994	0.9415	0.9989
Correlation coefficient	0.9260	0.9997	0.9959	0.9995	0.9706

Silver was assayed by ICP-MS and fire assay techniques. Both data sets show very high R^2 values indicating a very good correlation (Table 14.2 and Figures 14.3 to 14.6). Figure 14.4 which shows the silver duplicates analyzed by fire assay, has a larger range of silver values. This is because the upper detection limit for silver by ICP is 100 g/t. The R^2 value and correlation coefficient were recalculated for the ICP data excluding values within 10% of the maximum detection limit (reported for values less than 90 g/t) (Figure 14.5). The statistics were also recalculated for the fire assay data, which is more appropriate for higher grade samples, and reported for values greater than 90 g/t silver (Figure 14.6). These results show that the ICP data were positively skewed by the detection limit values (21 of 165 samples or approximately 13% of the data). However, the recalculated statistics still show that there is a very good correlation between the original assay and the duplicate (Table 14.2).

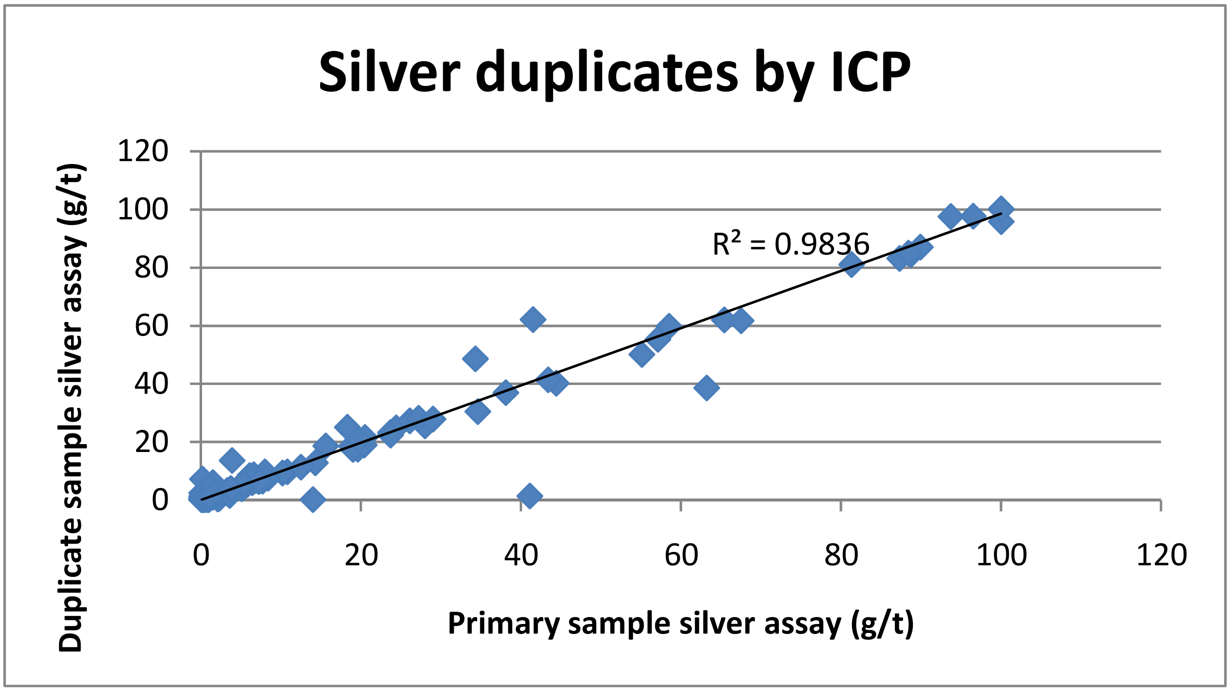


Figure 14.3. Pulp duplicate assays for silver by ICP-MS.

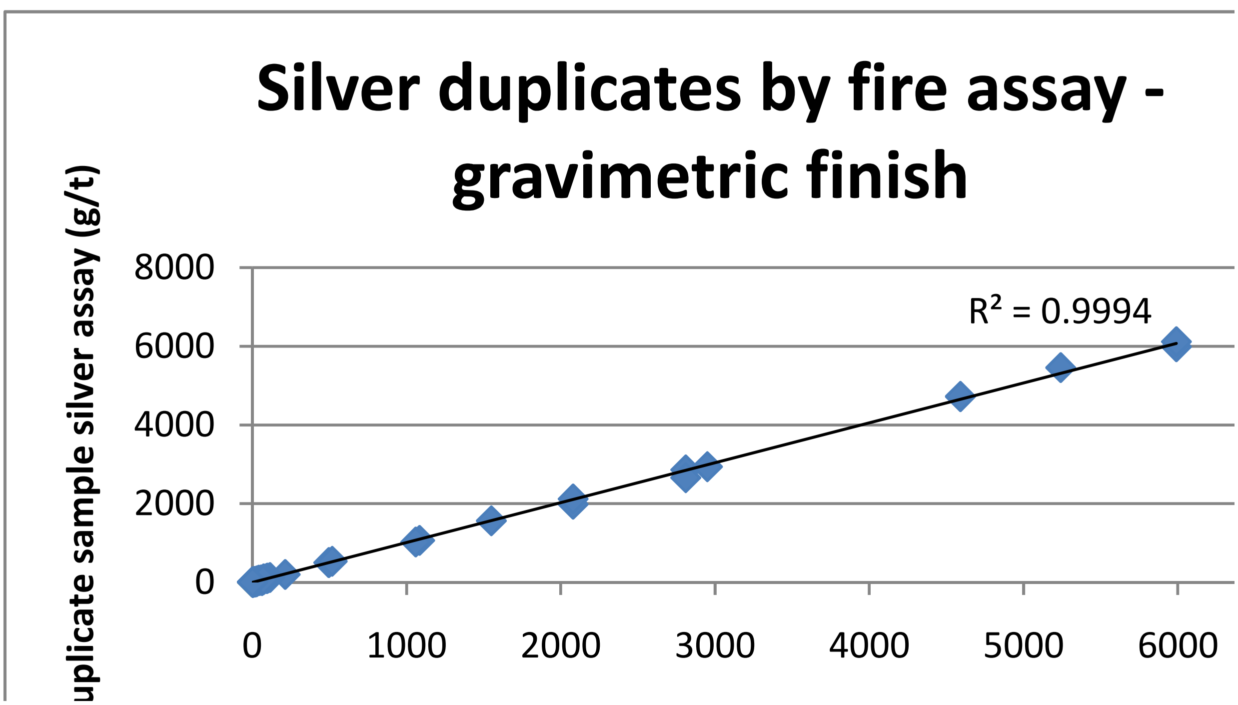


Figure 14.4. Pulp duplicate assays for silver by fire assay using a gravimetric finish.

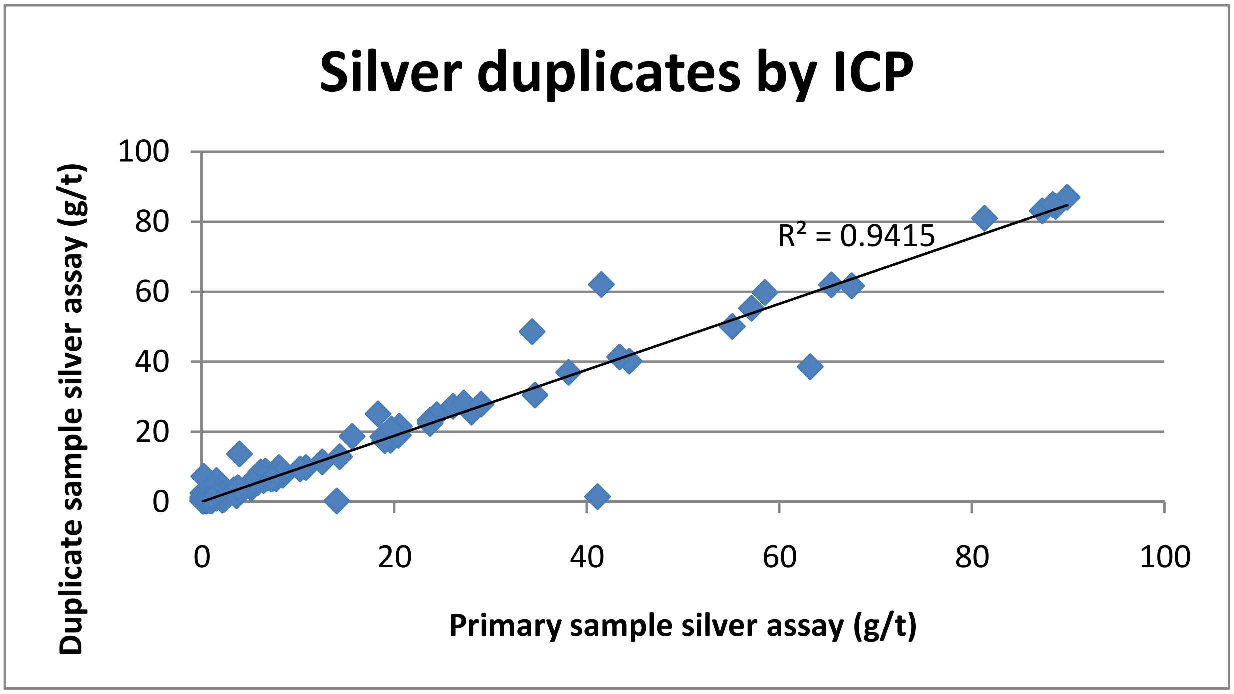


Figure 14.5. Pulp duplicate assays for silver less than 90 g/t by ICP-MS.

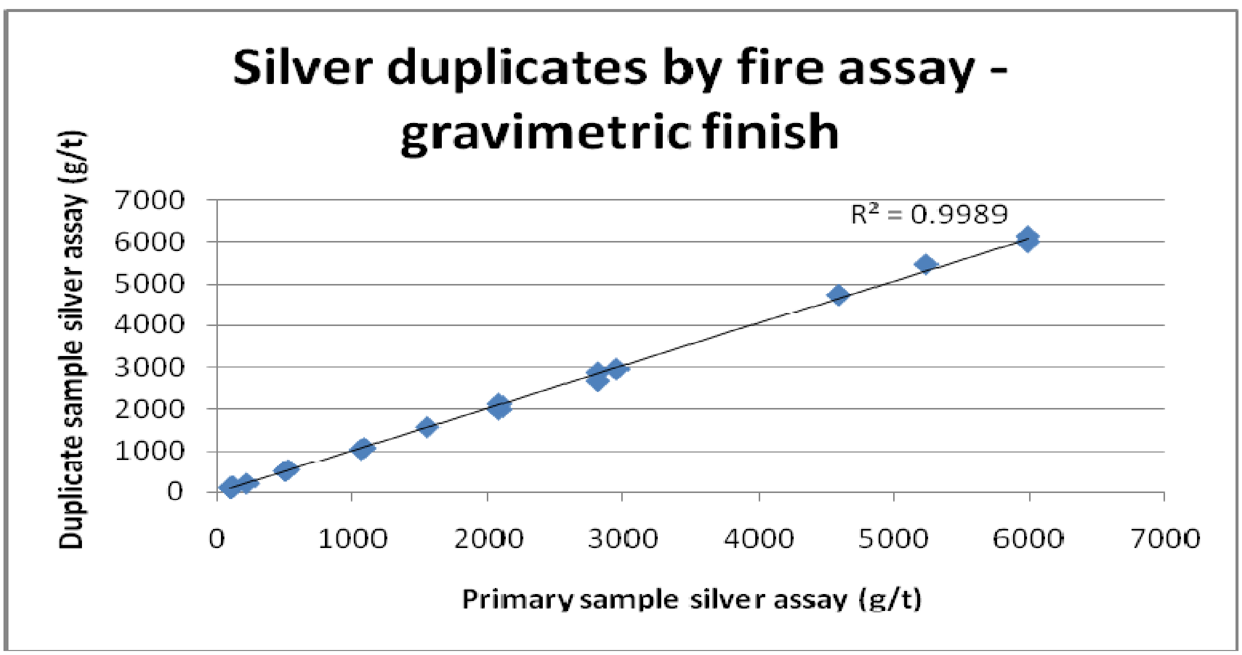


Figure 14.6. Pulp duplicate assays for silver greater than 90 g/t by fire assay using a gravimetric finish.

In summary, the QAQC analysis shows that the primary samples have assays produced with good accuracy and precision indicating that the assay data are of high quality and suitable for use in resource estimation.

15.0 Adjacent Properties

The Nieves Property is not bordered by any other concessions.

16.0 Mineral Processing and Metallurgical Testing

Metallurgical testing has not been completed on rocks from the Nieves Property by Quaterra or jointly by Quaterra and Blackberry.

17.0 Mineral Resource and Mineral Reserve Estimates

An initial, independent NI 43-101 compliant resource for the Concordia vein was estimated by Michelle Stone, P.Geo. using data available as of December 19th, 2008. The database supplied for this estimation included 95 surface drill holes. Fifty eight of the drill holes targeted the Concordia mineralization and of these only 46 drill holes were used in the estimation because they intersected the Concordia system and were useful in constructing a well constrained solid shape representing the silver mineralization (Figure 17.1 and Table 17.1). Grades for silver and gold were estimated using 2m composites and the inverse distance squared method.

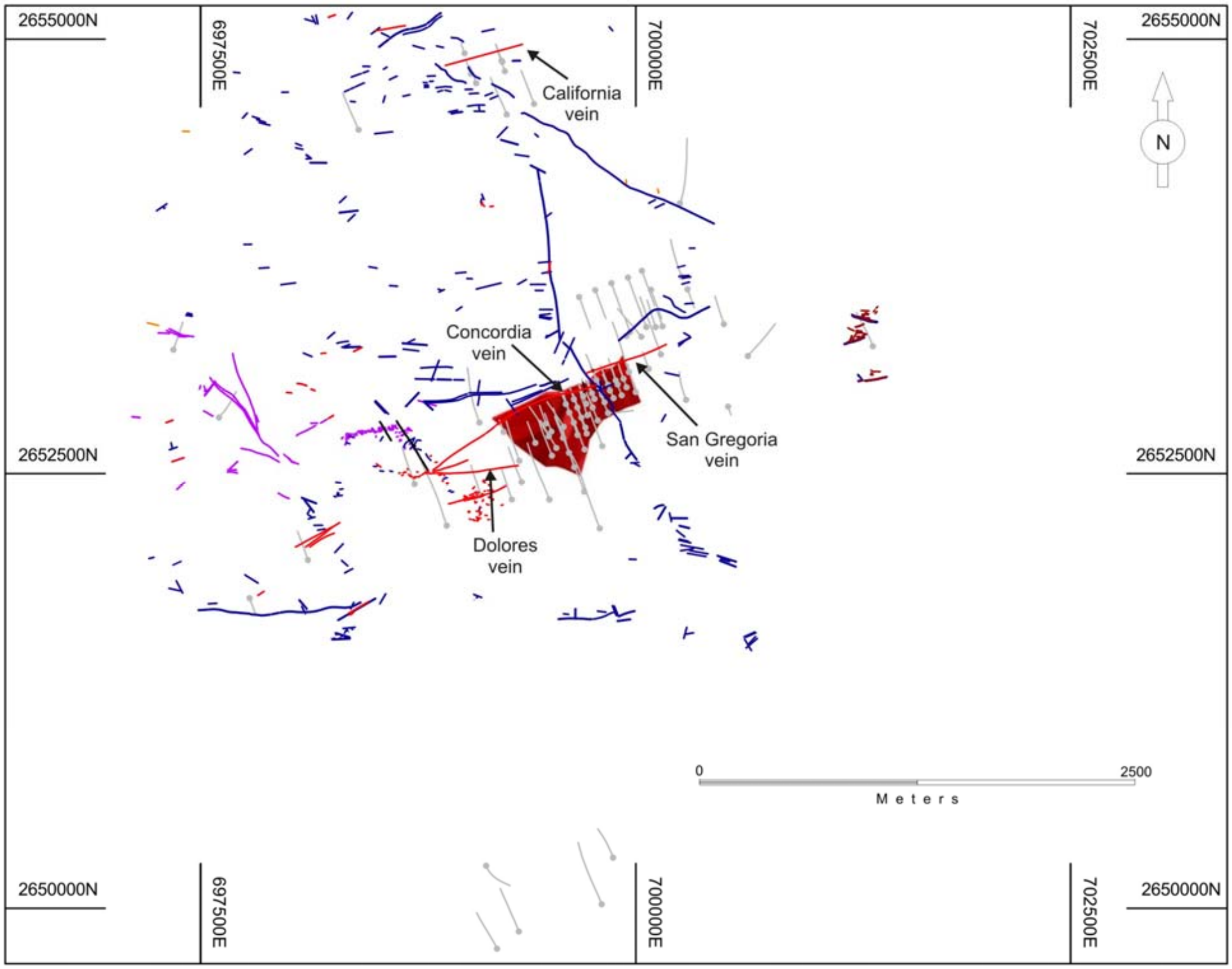


Figure 17.1. Drill hole location map for the Nieves project showing the solid shape representing the Concordia mineralization modelled in this report.

Table 17.1. Sample interval length and frequency for the different drill hole types.

Hole Type	Number of Holes	Holes	Number of Samples
Diamond Holes	44	QTA19-23, QTA27-28, QTA30, QTA35-36, QTA40, QTA43-45, QTA47-55, QTA59, QTA61-72, QTA74-81	4440
RC Holes	2	QTA01, QTA05	204

17.1 Database, software and three dimensional model

The resource estimate is based on the interpretation of 46 surface diamond drill holes (2 reverse circulation (RC) holes and 44 diamond cored holes). The collar position, down hole survey and assay data for these holes are stored in an MS Access database.

Sample intervals with assays below the minimum detection limit were assigned a value equal to one half of the minimum detection limit.

A three-dimensional (3D) model of the silver-dominant mineralization within the Concordia vein system was constructed using interpreted drill hole cross sections. The overall shape of the solid includes the main Concordia mineralization and associated thin, hangingwall and footwall silver-bearing structures. SurpacVision software V.6.1. was used to generate the 3D model and perform the grade estimation.

17.2 Compositing

Raw sampling intervals, histograms and their grade ranges are presented in Table 17.2 and Figures 17.2-17.5. Samples were collected over 0.03 to 4.95m intervals, with the majority collected from 2m intervals. One metre samples or the metric equivalent of 5 foot intervals (approximately 1.5m) were also frequently collected.

Table 17.2. Sample intervals and frequency for the different drill hole types.

	All Drill Holes	Diamond Holes	RC Holes
Sample Interval (m)	Frequency	Frequency	Frequency
0.00	0	0	0
0.25	380	380	0
0.50	435	435	0
1.00	735	735	0
1.54	779	575	204
2.00	2202	2202	0
2.50	94	94	0
3.00	17	17	0
3.50	0	0	0
4.00	2	2	0
Total Samples	4644	4440	204

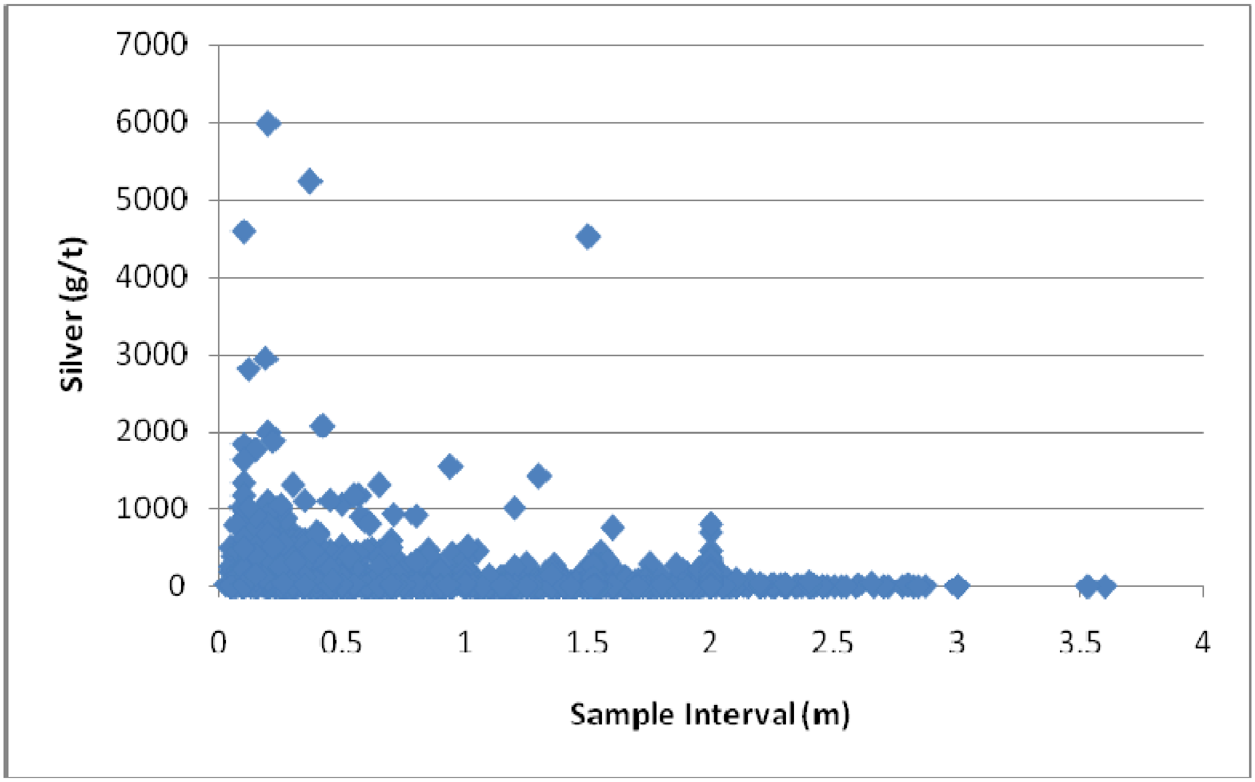


Figure 17.2. Scatter plot showing sample interval length (m) versus silver grade (g/t) for all samples.

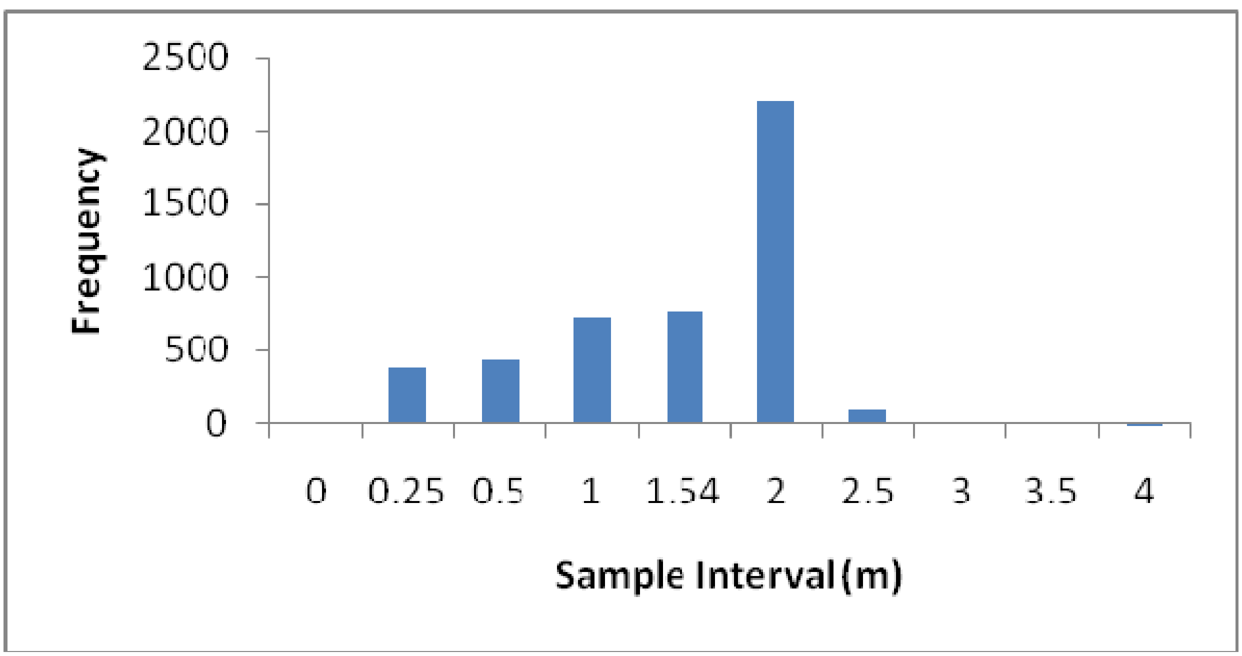


Figure 17.3. Histogram of sample length for all drill holes.

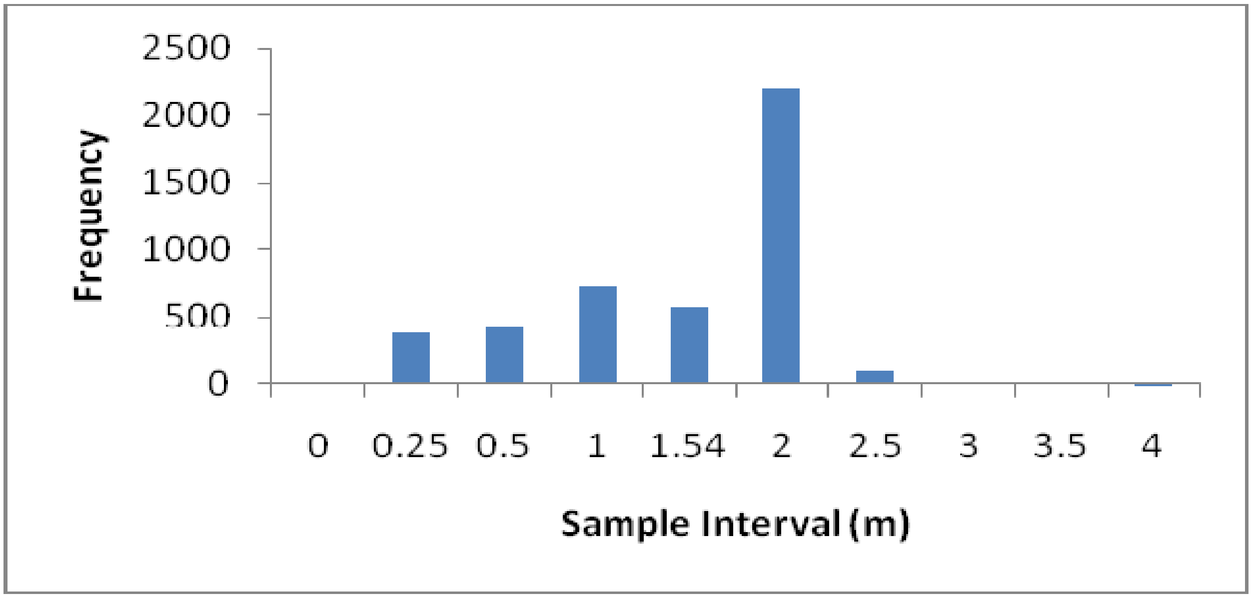


Figure 17.4. Histogram of sample length for all diamond holes.

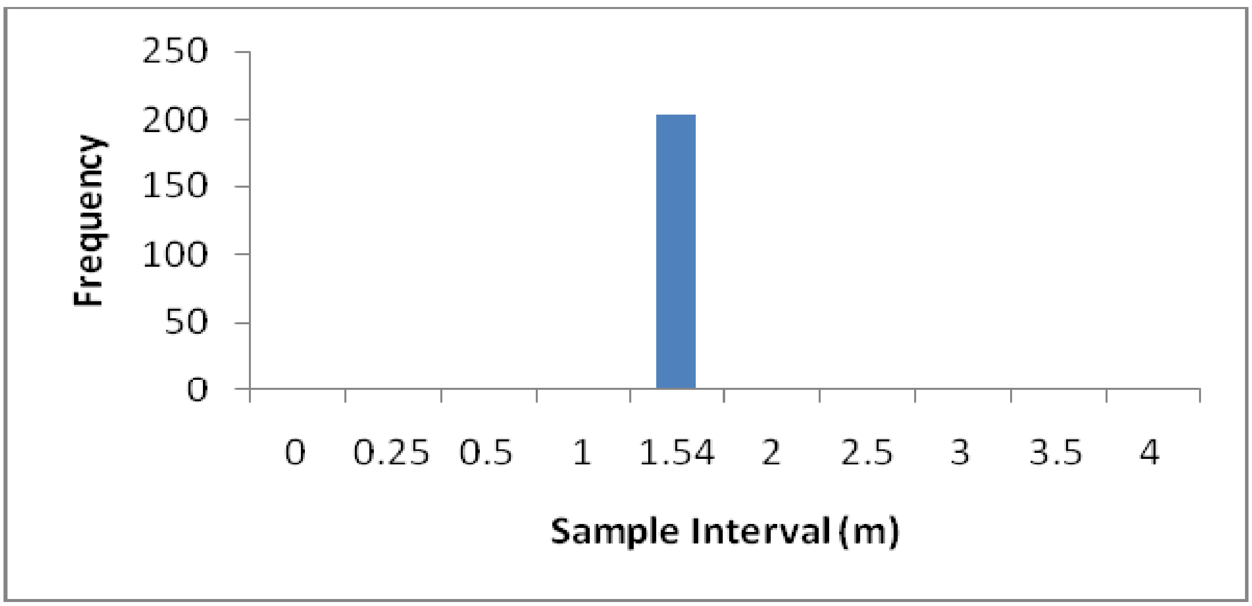


Figure 17.5. Histogram of sample length for all RC holes.

Two metre composites were produced from the assay data within the 3D ore solid. Intervals less than 2m were composited near the contacts where sample length was equal to 0.02m (1% of the maximum composite length). Table 17.3 summarizes the composite interval statistics.

Table 17.3. Summary of assay statistics for composite samples.

Composites	Au (g/t)	Ag (g/t)
Number of samples	623	623
Minimum	0.0025	0.1
Maximum	1.25	3165.4
Mean	0.1052	80.8
Median	0.0439	39
Variance	0.0210	29882.2
Standard Deviation	0.1448	172.9
Coefficient of Variation	1.3772	2.1389
97th percentile (cut value)	**0.4175**	**371.2**
Number of samples cut	19	19
Revised Coefficient of Variation	1.0609	1.2421

The coefficient of variation was checked for the composites. If the coefficient of variation was greater than 1.2, the grade was capped using the 97th percentile value. A summary of the capping statistics for the composites are shown in Table 17.3. The composited and capped values exhibit a lower coefficient of variation with the value for silver equal to 1.2. These data indicate that the composite grades are acceptable for use in estimating the grade of the Concordia vein.

17.3 Block Model

The block model parameters are shown in Table 17.4. Block dimensions in the north-south direction were limited to 2m to try and restrict across vein smoothing. A rotation was not applied to the model. Partial percents were used as part of the volume estimation. The block volumes were adjusted based on the proportion that the block was “in” the solid shape representing the mineralization.

Table 17.4. Block model description.

	Y	X	Z
Minimum Coordinates (m)	2,652,400	699,000	800
Maximum Coordinates (m)	2,653,300	700,100	2,000
Block Size (m)	2	10	5
Rotation	0	0	0
Total Blocks	372,350		

17.4 Density

Specific gravity (SG) measurements were made on 9 pieces of mineralized quarter core (7 different cores) as well as pulp samples composited through the mineralized portion of three diamond drill cores by ALS Chemex using the following procedures:

1. Bulk Samples (OA-GRA08a)

The rock or core section (up to 6 kg) is covered in a paraffin wax coat and weighed. The sample is then weighed while it is suspended in water. The specific gravity is calculated from the following equations.

$$\text{Specific Gravity} = \frac{A}{B - C - [(B - A) / Dwax]}$$

where: A = weight of sample in air

B = weight of waxed sample in air

C = weight of waxed sample suspended in water

D = density of wax

2. Pulverized Material (OA-GRA08b)

A prepared sample (3g) is weighed into an empty pycnometer. The pyncometer is filled with a solvent (either methanol or acetone) and then weighed. From the weight of the sample and the weight of the solvent displaced by the sample, the specific gravity is calculated according to the equation below.

$$\text{Specific Gravity} = \frac{\text{Weight of sample (g)}}{\text{Weight of solvent displaced (g)}} \times \text{Specific Gravity of Solvent}$$

Conversion of Specific Gravity to Density

Density = Specific gravity x Density of water (at temperature (t°C)

Factors for converting specific gravity to density are tabulated below:

Temp (°C)	Density of water (g/cm^3)	Temp (°C)	Density of water (g/cm^3)
19	0.9984	23	0.9975
20	0.9982	24	0.9973
21	0.9980	25	0.9970
22	0.9978	26	0.9968

Sample Preparation (Compositing)

A 100g composite is prepared by mixing equal (or specified) quantities from individual samples and homogenizing.

The SG determinations on the individual pieces of core is slightly higher, but very close to the average value reported for the composite pulp samples (Table 17.5). An SG of 2.83 was used for the model.

Table 17.5. Specific gravity determinations on drill core and pulps by ALS Chemex.

CORE	Sample	SG	Hole	From (m)	To (m)
(OA-GRA08a)	PE #2	3.83	QTA-19	208.48	208.63
	PE #3	2.50	QTA-20	198.80	198.88
	PE #4	3.02	QTA-21	283.68	283.85
	PE #5	2.70	QTA-22	129.50	131.65
	PE #6	2.62	QTA-27	191.30	192.50
	PE #7	2.66	QTA-28	255.90	257.08
	PE #8	2.70	QTA-29	225.20	225.43
	PE #9	2.81	QTA-29	225.72	226.00
	PE #10	3.01	QTA-29	226.50	226.60
	Average	2.87			
PULP	Sample	SG	Hole	From (m)	To (m)
(OA-GRA08b)	NV-SW48-1	2.85	QTA-48	115.97	163.45
	NV-SW48-1-DUPLICATE	2.92	QTA-48	115.97	163.45
	NV-SW70-1	2.75	QTA-70	60.00	157.90
	NV-SW70-1-DUPLICATE	2.79	QTA-70	60.00	157.90
	NV-SW75-1	2.81	QTA-75	124.70	204.30
	NV-SW75-1-DUPLICATE	2.87	QTA-75	124.70	204.30
	Average	2.83			

17.5 Block Interpolation

The tonnage for each block was established as follows:

Block volume (10m x 5m x 2m) * SG * the proportion of the block within the ore zone.

The grade was estimated using a 100m search ellipse oriented along the general strike and dip of the ore zone (250°/65°) with a major to semi-major ratio of 1:1 and a major to minor ratio of 10:1. A minimum of 4 samples and a maximum of 12 samples were used in the estimation with a maximum of 5 samples from any particular drill hole.

17.6 Validation

Detailed visual inspection of the block model has been conducted in both section and plan to ensure the desired results of the estimation. This checking includes partial percentage estimates and grades. The estimated grades were checked in relation to the underlying drill hole sample grades. The silver and gold grades in the model appear to be a valid representation of the underlying drill hole sample data.

17.7 Classification

Based on the study reported herein, delineated mineralization within the Concordia vein system, Nieves Property, is classified as a resource according to the following definitions from NI 43-101:

> "*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."*
>
> 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."*

17.8 Results

Blocks were classified as follows:

Indicated: if the average distance between sample pairs used in the estimate was less than 50m.

Inferred: if the average distance between sample pairs used in the estimate was 50-100m.

The material reported in the resource estimate for the Concordia vein system (Table 17.6) is classified as indicated and inferred only because of the lack of any metallurgical testing and the broad drill spacing. Material was reclassified from indicated to inferred resource category in areas where the classification was supported by only one drill hole. The classification of material in the area of the historic Concordia mine was also reduced in its classification because the actual 3D location and extents of the workings are not accurately known (Figure 17.6). Based on a historic long section circa 1954, development appears to have been completed down to 200m below surface, and mining carried out only to approximately 100m depth.

Table 17.6. Indicated and inferred resources reported at a 60 g/t silver cut off for the Concordia vein system, Nieves Property, Mexico (base case).

Category	Tonnes	Ag (g/t)	Au (g/t)	Ag (oz)	Au (oz)
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

Note: Ounces calculated using 31.103 grams per tonne.

There are no known factors related to environmental, permitting, legal, title, taxation, socio-economic, marketing or political issues which could materially affect the mineral resource.

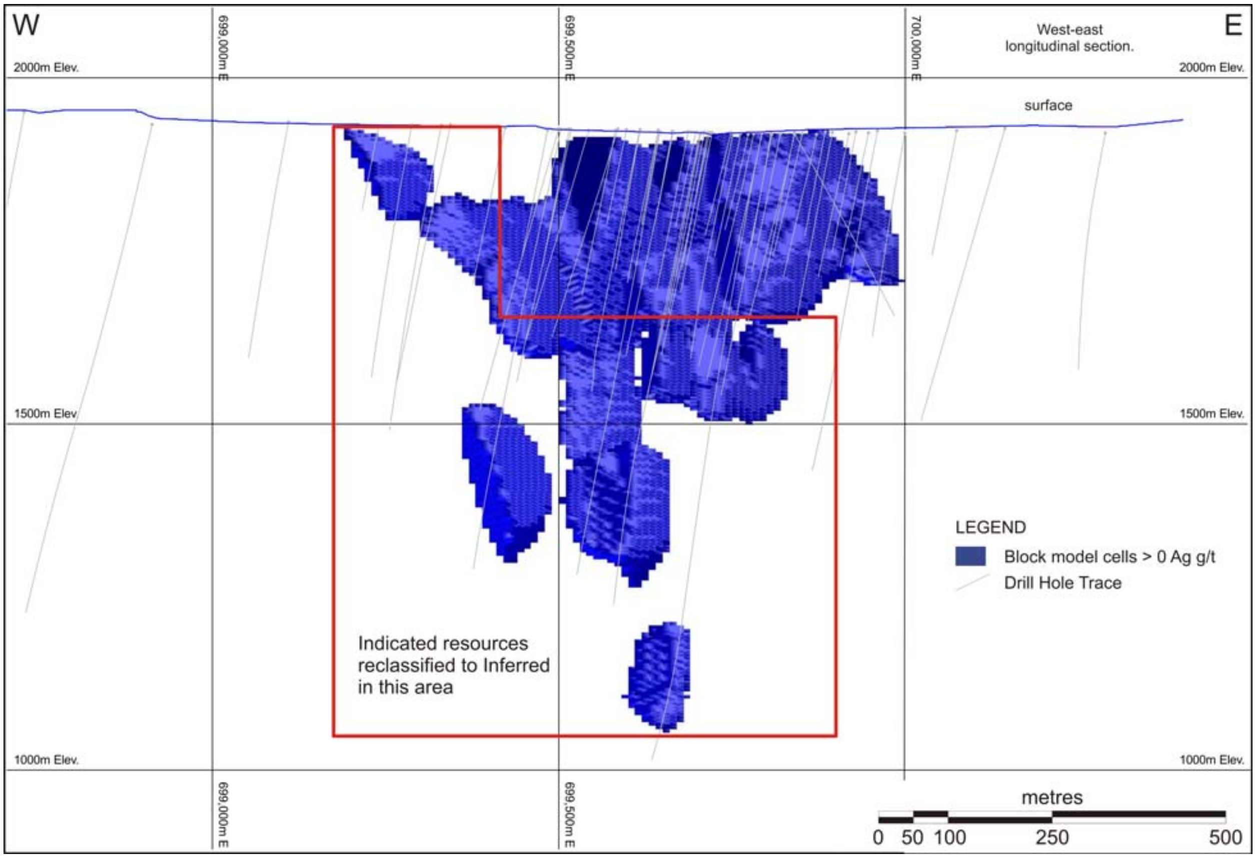


Figure 17.6. Long section looking north through the Concordia vein system showing the area in which indicated resources were reclassified as inferred because of lack of drill hole support or association with the historic Concordia mine (outlined in red).

The distribution of inferred mineral resource above the 60 g/t silver base case is shown in Figure 17.7. The resource at this cut off limit occurs as a fairly continuous zone above 1,500m within the limits of the existing drill holes which suggests that it is favorable with respect to selectivity and other factors when considering mining options. As a result, the stated inferred resource is considered to exhibit a reasonable degree of economic viability.

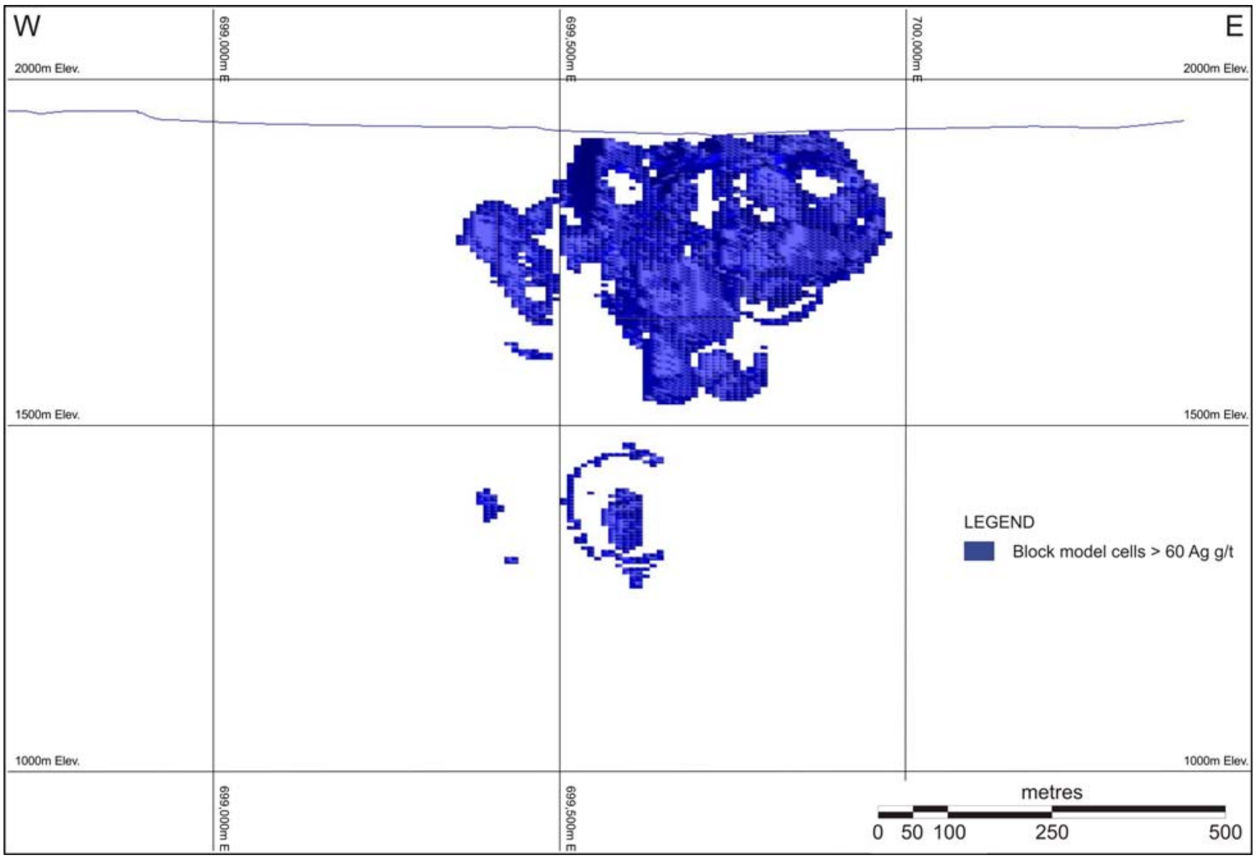


Figure 17.7. Long section looking north through the Concordia vein system. The blue area represents the inferred resource with greater than 60 g/t silver. The extensive and continuous nature of this mineralization suggests that this indicated resource exhibits a reasonable degree of economic viability.

Figure 17.8 and Tables 17.6 through 17.10 show the tonnage and grade estimation results at various silver ranges and cut offs. For these Tables 1 troy ounce = 31.103 grams. Figure 17.9 is a simplified long section showing the resource classification.

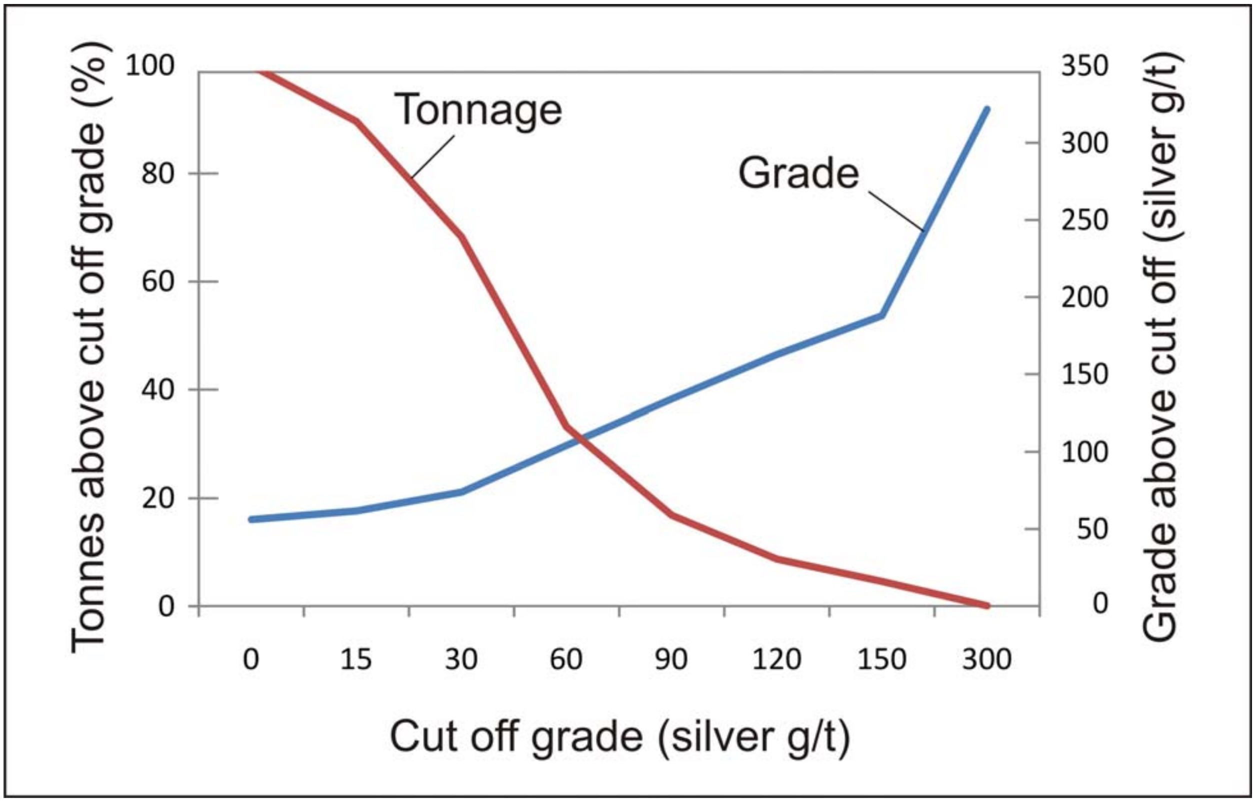


Figure 17.8. Grade-tonnage curve for the Concordia vein system.

Table 17.6. Tonnage and grade estimate for various silver ranges (g/t).

Ag range (g/t)	Classification	Tonnes	Ag (g/t)	Au (g/t)	Ag (oz)	Au (oz)
0.0 -> 15.0	Indicated	133,189	8.348	0.046	35,749	198
	Inferred	1,477,235	8.074	0.050	383,484	2,365
15.0 -> 30.0	Indicated	326,164	22.400	0.071	234,901	748
	Inferred	2,988,093	22.790	0.049	2,189,450	4,714
30.0 -> 60.0	Indicated	863,267	46.909	0.082	1,301,973	2,270
	Inferred	4,587,616	44.857	0.063	6,616,366	9,240
60.0 -> 90.0	Indicated	1,258,964	74.543	0.101	3,017,304	4,084
	Inferred	1,275,489	72.304	0.100	2,965,086	4,102
90.0 -> 120.0	Indicated	754,187	103.125	0.123	2,500,575	2,990
	Inferred	507,865	103.329	0.122	1,687,208	1,998
120.0 -> 150.0	Indicated	388,788	134.132	0.144	1,676,647	1,799
	Inferred	250,484	134.991	0.136	1,087,134	1,092
150.0 -> 300.0	Indicated	480,704	188.975	0.175	2,920,646	2,709
	Inferred	221,639	176.033	0.164	1,254,409	1,171
300.0 -> 500.0	Indicated	14,927	320.946	0.258	154,029	124
	Inferred	1,117	332.728	0.280	11,949	10

Note: Ounces calculated using 31.103 grams per tonne.

Table 17.7. Tonnage and grade estimate at a 30 g/t silver cut off.

Ag range (g/t)	Classification	Tonnes	Ag (g/t)	Au (g/t)	Ag (oz)	Au (oz)
0.0 -> 30.0	Indicated	459,353	18.326	0.064	270,651	947
	Inferred	4,465,327	17.922	0.049	2,572,936	7,074
> 30.0	Indicated	3,760,837	95.696	0.116	11,571,173	13,978
	Inferred	6,844,212	61.905	0.080	13,622,161	17,617

Note: Ounces calculated using 31.103 grams per tonne.

Table 17.8. Tonnage and grade estimate at a 60 g/t silver cut off (base case).

Ag range (g/t)	Classification	Tonnes	Ag (g/t)	Au (g/t)	Ag (oz)	Au (oz)
0.0 -> 60.0	Indicated	1,322,619	36.982	0.076	1,572,621	3,215
	Inferred	9,052,943	31.571	0.056	9,189,299	16,319
> 60.0	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

Note: Ounces calculated using 31.103 grams per tonne.

Table 17.9. Tonnage and grade estimate at a 90 g/t silver cut off.

Ag range (g/t)	Classification	Tonnes	Ag (g/t)	Au (g/t)	Ag (oz)	Au (oz)
0.0 -> 90.0	Indicated	2,581,583	55.300	0.088	4,589,927	7,296
	Inferred	10,328,432	36.602	0.061	12,154,390	20,419
> 90.0	Indicated	1,638,606	137.651	0.145	7,251,892	7,623
	Inferred	981,107	128.098	0.135	4,040,709	4,270

Note: Ounces calculated using 31.103 grams per tonne.

Table 17.10. Tonnage and grade estimate at a 120 g/t silver cut off.

Ag range (g/t)	Classification	Tonnes	Ag (g/t)	Au (g/t)	Ag (oz)	Au (oz)
0.0 -> 120.0	Indicated	3,335,771	66.112	0.096	7,090,500	10,285
	Inferred	10,836,297	39.729	0.064	13,841,590	22,424
> 120.0	Indicated	884,419	167.093	0.163	4,751,320	4,632

Note: Ounces calculated using 31.103 grams per tonne.

For comparison, the tonnage and grade was estimated without the application of a top cut to the silver and gold composited assay grades (Table 17.11). The difference in contained silver ounces between the two models reported at the base case of 60 g/t silver is approximately 1.5 million indicated and 3.8 million inferred (Tables 17.13 and 17.14). Infill drilling may increase the population of high grade samples and result in less silver losses due to the application of top cuts.

Table 17.11. Tonnage and grade estimate for various silver ranges (g/t) without the application of top cuts.

Ag range (g/t)	Classification	Tonnes	Ag (g/t)	Ag (oz)	Au (g/t)	Au (oz)
0.0 -> 15.0	Indicated	132,655	8.338	35,562	0.054	228
	Inferred	1,461,405	8.046	378,039	0.055	2,601
15.0 -> 30.0	Indicated	320,321	22.354	230,218	0.082	842
	Inferred	2,953,347	22.785	2,163,532	0.057	5,448
30.0 -> 60.0	Indicated	831,698	46.849	1,252,751	0.086	2,308
	Inferred	4,445,965	44.857	6,411,943	0.068	9,699
60.0 -> 90.0	Indicated	1,179,317	74.386	2,820,438	0.101	3,837
	Inferred	1,113,623	71.851	2,572,586	0.103	3,694
90.0 -> 120.0	Indicated	702,897	103.050	2,328,819	0.123	2,777
	Inferred	408,533	103.274	1,356,482	0.126	1,653
120.0 -> 150.0	Indicated	376,106	134.058	1,621,070	0.142	1,713
	Inferred	229,242	134.805	993,569	0.130	957
150.0 -> 300.0	Indicated	580,780	196.209	3,663,767	0.172	3,214
	Inferred	523,467	214.225	3,605,435	0.146	2,452
300.0 -> 500.0	Indicated	80,192	365.155	941,470	0.246	635
	Inferred	144,572	365.273	1,697,852	0.140	652
500.0 -> 9999.0	Indicated	16,223	774.432	403,935	0.289	151
	Inferred	29,385	682.311	644,623	0.202	191

Note: Ounces calculated using 31.103 grams per tonne.

Table 17.12. Resource estimate calculated without application of top cuts and reported at a cut off of 60 g/t silver.

Ag range (g/t)	Classification	Tonnes	Ag (g/t)	Au (g/t)	Ag (oz)	Au (oz)
0.0 -> 60.0	Indicated	1,322,619	36.982	0.076	1,572,621	3,215
	Inferred	9,052,943	31.571	0.056	9,189,299	16,319
> 60.0	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

Note: Ounces calculated using 31.103 grams per tonne.

Table 17.13. Difference between the model calculated with top cuts and without.

Ag range (g/t)	Classification	Tonnes	Ag (oz)	Au (oz)
0.0 -> 60.0	Indicated	- 37,944	- 54,092	164
	Inferred	- 192,227	- 235,781	1,426
> 60.0	Indicated	37,944	1,510,307	625
	Inferred	192,227	3,864,768	1,222

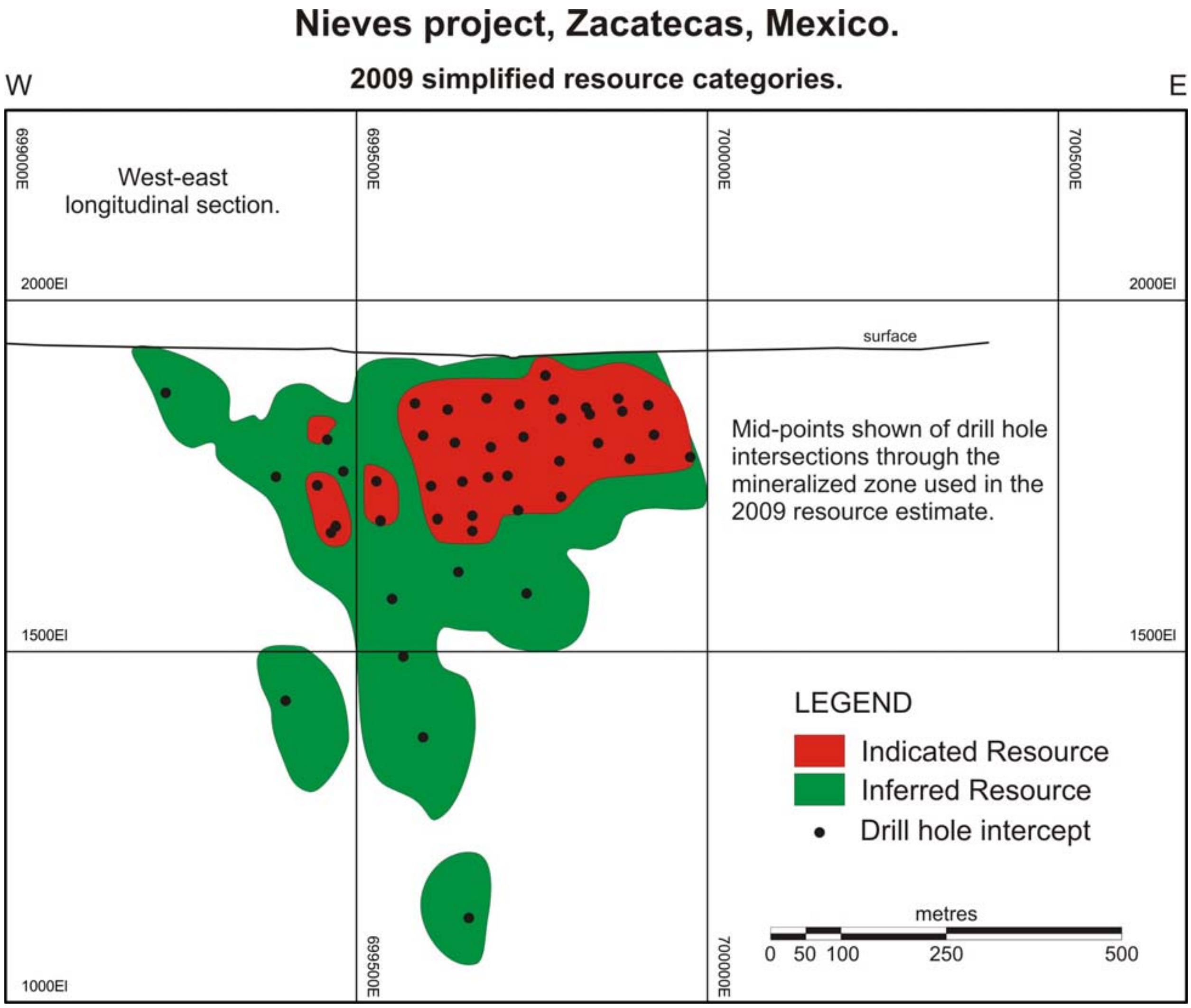


Figure 17.9. Simplified 2009 resource classification for the Concordia vein system mineralization on the Nieves Property.

17.9 Summary and Conclusions

The distribution of drilling completed on the Concordia deposit provides a reasonable basis for estimating the shape and location of the distribution of the mineralization. However, there are limited drill intervals which have intersected high grade silver mineralization. These intervals support the undocumented high grade past production from this deposit. The approach to top cutting the composited drill hole sample grades prior to block grade estimation is believed to be an appropriate approach to dealing with this issue at this stage of the project evaluation. Additional close-spaced drilling is required to gain a better understanding of the nature of the high grade mineralization in the Concordia vein system on the Nieves Property.

The current drilling database is considered reliable for the purposes of estimation of mineral resources. The approach to the development of the resource block model follows accepted industry standards and the methods of dealing with the past production from the deposit are considered appropriate based on the current information.

17.10 Mineral Reserves Estimation

Mineral reserves have not been calculated from the 2009 resource estimates for the Concordia vein system.

18.0 Other Relevant Data and Information

The author is not aware of any other relevant data or information which is relevant to the project.

19.0 Interpretation and Conclusions

The Nieves Property hosts several epithermal style veins and vein systems which have been variably tested by Quaterra and jointly by Quaterra and Blackberry. Most of the exploration and drilling to date has focused on defining the extents of the mineralization associated with the Concordia vein system which includes the Concordia, Dolores and San Gregorio veins. By the end of the 2008 drilling campaign, adequate drill coverage existed to calculate a well constrained resource estimate for the Concordia vein system. High grade zones appear to exist within the system. However, the drill spacing is not conducive to constraining the extents of these higher grade zones.

The resources estimated for the Concordia are classified as indicated and inferred and could be used for a scoping level study (a preliminary economic assessment).

However, a better understanding of the extents of the higher grade zones within these resources would be advantageous and provide a more robust model.

The mineral resource for the Concordia system has been estimated to be approximately 2.9 million tonnes indicated at 110 g/t silver and 2.25 million tonnes inferred at 96.5 g/t silver as reported at a 60 g/t cut off. This equates to over 10 million ounces of indicated silver and over 8 million ounces of inferred silver.

20.0 Recommendations

The following work is recommended for the Nieves Project with particular focus on better defining the resources estimated for the Concordia and advancing this part of the project to a scoping study level:

1. Step out drilling to close off the strike extent of the Concordia vein system (100-200m centres).
2. Infill drilling (10-20m centres) in areas of inferred resources should be undertaken to increase the quantity of indicated resources and possibly measured resources and to test the extent of high grade silver mineralization (+500 g/t silver) within the orebody.
3. Initiate preliminary metallurgical test work on the Concordia mineralization to verify potential economic. Additional SG determinations are also required to more accurately estimate the deposit tonnage.
4. Update QAQC procedures to include routine duplicate analysis at a secondary laboratory. Property specific standard reference materials should be prepared and analyzed as part of the revised QAQC procedure.
5. Old dumps and tailings should be properly located using a high precision GPS instrument.
6. Initiate baseline environmental studies that will be required prior to a production approval by

21.0 References

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22.0 Date and Signature Page

The effective date of this Report, as per Item 24 of NI 43-101F, is the 15th day of April 2009.

Signed and stamped at Burlington, Ontario, on the 15th day of April, 2009.

"Michelle Stone"

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Michelle Stone, P.Geo., Ph.D.

23.0 Additional Requirements for Technical Reports on Development Properties and Production Properties

The author is unaware of any additional requirements for this Property as it is not currently a development or production property.

24.0 Certificates

CERTIFICATE
To accompany the report entitled "Independent Technical Report The Nieves silver project, Zacatecas State, Mexico" dated 15th April 2009.

I, Michelle Stone, of 4361 Latimer Crescent, Burlington, Ontario, do hereby certify that:

I am a Senior Project Geologist with Caracle Creek International Consulting Inc., 34 King Street East, 9th Floor, Toronto, Ontario.

I hold a B.Sc. (1994) from McMaster University (Ontario), an M.S. (1996) from the University of Alabama (Alabama), and a Ph.D. (2005) from the University of Western Australia (Australia).

I am a Professional Geoscientist and a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia since 2006 (registered #30601) and have practiced my profession continuously since 1994.

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

This report titled "Independent Technical Report The Nieves Silver Project, Zacatecas State, Mexico" and dated 13th of April, 2009 (the "Technical Report") is based on a study of the data and literature available on the Nieves Property in Zacatecas state, Mexico and one, two day site visit in or January 29th and 30th, 2009. I am responsible for all sections of the Technical Report.

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.

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

I consent to the filing o f the Technical Report by Quaterra Resources Inc. and Blackberry Ventures 1, LLC, with any stock exchange and other regulatory authority, and any publication of the Technical Report by them for regulatory purposes, including electronic publication in the public company files on their websites accessible to the public.

Signed and stamped this 15th day of April, 2009, at Burlington, Ontario.

"Michelle Stone"

Michelle Stone, P.Geo., Ph.D.

APPENDIX 1

CDN-SE-1 STANDARD REFERENCE MATERIAL DETAILS

CDN Resource Laboratories Ltd.

10945-B River Road, Delta, B.C., Canada, V4C 2R8, 604-540-2233, Fax: 604-540-2237 (www.cdnlabs.com)

ORE REFERENCE STANDARD: CDN-SE-1

Recommended values and the "Between Lab" Two Standard Deviations

Gold 0.480 ± 0.034 g/t
Silver 712 ± 57 g/t
Copper 0.097 ± 0.005 %
Lead 1.92 ± 0.09 %
Zinc 2.65 ± 0.20 %

PREPARED BY: CDN Resource Laboratories Ltd.
CERTIFIED BY: Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia
INDEPENDENT GEOCHEMIST: Dr. Barry Smee., Ph.D., P. Geo.
DATE OF CERTIFICATION: May 15, 2007

METHOD OF PREPARATION:

Reject ore material was dried, crushed, pulverized and then passed through a 200 mesh screen. The +200 material was discarded. The -200 material was mixed for 6 days in a double-cone blender. Splits were taken and sent to twelve laboratories for round robin assaying.

ORIGIN OF REFERENCE MATERIAL:

The ore was supplied by Silver Eagle Mines Inc. from their Miguel Auza property. The material is from a relatively coarse-grained, epithermal Pb-Zn-Ag vein with accessory pyrite, calcite, quartz, sericite and clays. Principal ore minerals are galena, sphalerite, argentite, native silver (electrum?) and minor silver sulphosalts.The latter may comprise one or more of iodargyrite, proustite-pyrargyrite, pearceite-polybasite, nuammanite, aguilarite and eucarite. Arsenic, lesser antimony and copper and minor selenium are all present. The sample was taken from the transition zone between the near-surface oxidized zone and the unweathered (protore) zone of primary sulphides. As such, some cerussite ($PbCO_3$) and smithsonite ($ZnCO_3$) are probably present.

Approximate chemical composition is as follows:

	Percent			Percent
SiO2	51.6		Na2O	0.1
Al2O3	8.3		MgO	0.6
Fe2O3	17.0		K2O	3.1
CaO	2.8		TiO2	0.4
MnO	0.3		LOI	12.2
S	12.7		C	1.1

Statistical Procedures:

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. Outliers were defined as samples beyond the mean ± 2 Standard Deviations from all data. These outliers were removed from the data and a new mean and standard deviation was determined. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

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Assay Procedures:

Au: Fire assay pre-concentration, AA or ICP finish (30g sub-sample).

Ag: either fire assay, gravimetric or 4 acid digestion, ICP finish

Cu, Pb, Zn: 4-acid digestion, AA or ICP finish.

Round-robin assay results:

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12
	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t
SE1-1	0.48	0.43	0.484	0.49	0.46	0.51	0.500	0.52	0.485	0.494	0.475	0.406
SE1-2	0.45	0.44	0.492	0.49	0.46	0.50	0.500	0.51	0.482	0.484	0.465	0.461
SE1-3	0.46	0.49	0.484	0.47	0.44	0.50	0.467	0.50	0.496	0.474	0.475	0.489
SE1-4	0.49	0.44	0.487	0.47	0.46	0.48	0.467	0.48	0.498	0.485	0.475	0.437
SE1-5	0.47	0.46	0.482	0.47	0.48	0.49	0.500	0.45	0.494	0.474	0.475	0.463
SE1-6	0.45	0.48	0.486	0.47	0.47	0.49	0.500	0.48	0.503	0.475	0.465	0.448
SE1-7	0.48	0.48	0.487	0.48	0.46	0.51	0.533	0.49	0.501	0.490	0.480	0.493
SE1-8	0.49	0.45	0.490	0.47	0.46	0.47	0.500	0.49	0.490	0.493	0.475	0.418
SE1-9	0.47	0.44	0.484	0.47	0.49	0.50	0.500	0.50	0.499	0.483	0.460	0.473
SE1-10	0.5	0.46	0.491	0.47	0.47	0.48	0.467	0.50	0.499	0.484	0.480	0.435
Mean	0.47	0.46	0.49	0.48	0.47	0.49	0.49	0.49	0.49	0.48	0.47	0.45
Std. Devn.	0.017	0.019	0.003	0.008	0.014	0.013	0.021	0.019	0.007	0.007	0.007	0.029
% RSD	3.61	4.22	0.69	1.79	2.91	2.71	4.23	3.93	1.41	1.54	1.43	6.38
	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t
SE1-1	716	697	703.2	708.6	645	760	706.2	744	691	716	709.2	730
SE1-2	725	724	701.4	720.6	705	760	695.6	757	652	709	666.1	746
SE1-3	723	682	704.8	716.8	642	755	707.6	731	644	710	698.7	757
SE1-4	714	681	703.2	720.3	726	750	694.1	742	630	721	714.6	735
SE1-5	718	680	698.3	716	679	750	694.6	827	641	716	696.5	757
SE1-6	727	688	704.1	705.4	671	770	694.0	731	660	708	713.4	735
SE1-7	725	694	704.9	720.5	717	760	692.5	752	663	707	710.9	735
SE1-8	729	698	700.2	724.4	654	770	695.9	732	682	708	701.8	751
SE1-9	731	662	697.0	726.7	697	770	701.4	739	678	721	669.6	735
SE1-10	719	675	704.6	726.6	664	750	692.8	734	665	718	718.7	746
Mean	723	688	702	719	698	760	697	749	661	713	700	743
Std. Devn.	5.72	16.69	2.83	7.13	36.53	8.32	5.57	28.85	19.38	5.45	18.37	9.99
% RSD	0.79	2.43	0.40	0.99	5.23	1.10	0.80	3.85	2.93	0.76	2.62	1.35

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	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12
	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu
SE1-1	0.096	0.097	0.10	0.095	0.095	0.098	0.096	0.098	0.101	0.099	0.093	0.098
SE1-2	0.095	0.097	0.10	0.095	0.097	0.096	0.095	0.098	0.099	0.097	0.093	0.095
SE1-3	0.095	0.096	0.10	0.094	0.094	0.097	0.095	0.098	0.098	0.097	0.094	0.098
SE1-4	0.095	0.096	0.12	0.094	0.094	0.098	0.094	0.098	0.101	0.098	0.094	0.098
SE1-5	0.094	0.096	0.10	0.094	0.093	0.095	0.096	0.108	0.098	0.098	0.093	0.096
SE1-6	0.097	0.098	0.10	0.092	0.094	0.098	0.097	0.098	0.096	0.098	0.095	0.096
SE1-7	0.098	0.101	0.10	0.094	0.093	0.098	0.095	0.098	0.101	0.098	0.094	0.099
SE1-8	0.095	0.099	0.10	0.093	0.093	0.096	0.093	0.099	0.098	0.097	0.092	0.099
SE1-9	0.098	0.098	0.10	0.093	0.094	0.098	0.095	0.098	0.099	0.099	0.092	0.100
SE1-10	0.096	0.100	0.10	0.091	0.094	0.097	0.095	0.097	0.095	0.098	0.093	0.099
Mean	0.096	0.098	0.101	0.094	0.094	0.097	0.095	0.099	0.099	0.098	0.093	0.098
Std. Devn.	0.0014	0.0018	0.0070	0.0013	0.0011	0.0011	0.0011	0.0032	0.0021	0.0008	0.0009	0.0016
% RSD	1.43	1.79	6.91	1.36	1.18	1.13	1.16	3.23	2.09	0.85	1.02	1.66
	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb
SE1-1	1.98	1.93	1.94	1.94	1.90	2.10	1.89	2.01	2.04	1.86	1.87	1.87
SE1-2	1.93	1.89	1.90	1.94	1.91	2.08	1.91	2.01	2.02	1.84	1.89	1.89
SE1-3	1.93	1.88	1.96	1.95	1.89	2.10	1.89	1.94	2.01	1.86	1.89	1.87
SE1-4	1.95	1.90	1.95	1.93	1.90	2.08	1.91	2.04	2.08	1.85	1.88	1.87
SE1-5	1.93	1.92	1.97	1.95	1.86	2.08	1.88	2.22	1.98	1.84	1.89	1.89
SE1-6	1.93	1.93	1.88	1.92	1.89	2.12	1.88	2.01	1.94	1.87	1.89	1.86
SE1-7	2.03	1.95	1.92	1.91	1.89	2.10	1.90	2.04	2.03	1.86	1.91	1.84
SE1-8	1.92	1.93	1.89	1.94	1.89	2.11	1.89	2.01	1.96	1.88	1.89	1.87
SE1-9	1.97	1.91	1.92	1.95	1.89	2.10	1.89	2.05	2.02	1.88	1.87	1.85
SE1-10	1.95	1.95	1.91	1.93	1.90	2.10	1.91	1.96	1.94	1.85	1.88	1.87
Mean	1.95	1.92	1.92	1.94	1.89	2.10	1.89	2.03	2.00	1.86	1.89	1.87
Std. Devn.	0.0336	0.0238	0.0305	0.0135	0.0128	0.0134	0.0123	0.0755	0.0459	0.0132	0.0116	0.0167
% RSD	1.72	1.24	1.58	0.70	0.68	0.64	0.65	3.72	2.29	0.71	0.62	0.89
	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn
SE1-1	2.82	2.59	2.60	2.54	2.70	2.91	2.79	2.87	2.72	2.63	2.58	2.54
SE1-2	2.73	2.65	2.58	2.49	2.63	2.95	2.76	2.85	2.68	2.62	2.60	2.49
SE1-3	2.76	2.66	2.65	2.53	2.66	2.84	2.83	2.88	2.66	2.61	2.60	2.55
SE1-4	2.79	2.62	2.64	2.49	2.61	2.85	2.78	2.90	2.75	2.61	2.57	2.51
SE1-5	2.71	2.64	2.63	2.50	2.64	2.86	2.77	3.23	2.63	2.63	2.63	2.57
SE1-6	2.76	2.64	2.53	2.52	2.68	2.83	2.77	2.92	2.58	2.63	2.60	2.54
SE1-7	2.78	2.63	2.63	2.53	2.67	2.87	2.86	2.92	2.73	2.61	2.62	2.53
SE1-8	2.75	2.57	2.54	2.51	2.68	2.88	2.82	2.93	2.62	2.65	2.60	2.56
SE1-9	2.84	2.61	2.54	2.52	2.65	2.82	2.80	2.92	2.69	2.66	2.64	2.58
SE1-10	2.80	2.63	2.58	2.54	2.67	2.86	2.79	2.83	2.57	2.66	2.58	2.55
Mean	2.77	2.62	2.59	2.52	2.66	2.87	2.80	2.93	2.66	2.63	2.60	2.54
Std. Devn.	0.040	0.028	0.045	0.019	0.029	0.039	0.031	0.112	0.062	0.020	0.023	0.027
% RSD	1.44	1.05	1.75	0.75	1.07	1.36	1.12	3.84	2.34	0.77	0.88	1.06

NOTE : Pb data from Lab. 6 was removed for failing the "t" test.
Zn data from Lab. 8 was removed for failing the "t" test.

STANDARD REFERENCE MATERIAL   CDN-SE-1

Participating Laboratories:
(not in same order as listed in table of results)

Acme Analytical Laboratories Ltd., Vancouver
Assayers Canada Ltd., Vancouver
ALS Chemex Laboratories, North Vancouver
Alaska Assay Lab., USA
Alex Stewart Assayers (Argentina) Ltd.
Eco Tech Laboratory, Kamloops, B.C.
Genalysis Laboratory Services, Australia
GTK Laboratory, Finland
OMAC Laboratory Ltd., Ireland
Skyline Laboratory, Arizona, USA
Teck Cominco - Global Discovery Laboratory, Vancouver
TSL Laboratories Ltd., Saskatoon

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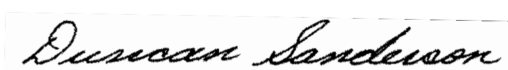
Certified by



Duncan Sanderson, Certified Assayer of B.C.

Geochemist

Dr. Barry Smee, Ph.D., P. Geo.