

**FIRST MINING FINANCE CORP.  
SILVER ONE RESOURCES LTD.**

**NI 43-101 TECHNICAL REPORT  
FOR THE  
PEÑASCO-QUEMADO SILVER PROPERTY  
MAGDALENA – TUBUTAMA MINING DISTRICT  
SONORA, MEXICO**

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**Report By**

**William J. Lewis, B.Sc., P.Geo.**

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## **1.0 SUMMARY**

### **1.1 INTRODUCTION**

First Mining Finance Corp. (First Mining) has retained Micon International Limited (Micon) to provide an independent summary and review of the Peñasco Quemado property located in the state of Sonora, Mexico, on behalf of Silver One Resources Inc. (Silver One). Micon has also been retained to compile this Technical Report to disclose the results of its review of the previous work conducted on the property, such that the report complies with the Canadian National Instrument (NI) 43-101 Standards of Disclosure for Mineral Projects, Form NI 43-101F1 requirements.

The term Peñasco Quemado project refers to the immediate area surrounding the existing silver deposit where exploration has been conducted since 2005, while the term Peñasco Quemado property refers to the entire land package optioned and controlled by First Mining and now by Silver One.

The information in this report was derived from published material, as well as data, professional opinions and unpublished material submitted by the professional staff of First Mining or their consultants, supplemented by Micon's independent observations and analysis. Much of these data came from Micon reports prepared and provided originally for Silvermex Resources Limited (December, 2005 and March, 2007) and subsequently by First Mining, as well as information researched by Micon.

Micon does not have nor has it previously had any material interest in Silvermex, First Mining, Silver One or related entities. The relationship with Silvermex, First Mining and Silver One was and is solely a professional association between the client and the independent consultant. Micon's reports are prepared in return for fees based upon agreed commercial rates and the payment of these fees are in no way contingent on the results of the reports.

This report includes technical information which requires subsequent calculations or estimates to derive sub-totals, totals and weighted averages. Such calculations or estimations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, Micon does not consider them to be material.

This report is intended to be used by First Mining and Silver One subject to the terms and conditions of its agreement with Micon. That agreement permits First Mining and Silver One to file this report as a Technical Report with the CSA pursuant to provincial securities legislation or with the SEC in the United States. Except for the purposes legislated under provincial securities laws, any other use of this report, by any third party, is at that party's sole risk.

The conclusions and recommendations in this report reflect the authors' best independent judgment considering the information available to them at the time of writing. The authors and Micon reserve the right, but will not be obliged, to revise this report and conclusions if

additional information becomes known to the, subsequent to the date of this report. Use of this report acknowledges acceptance of the foregoing conditions.

The requirements of electronic document filing on SEDAR necessitate the submission of this report as an unlocked, editable pdf (portable document format) file. Micon accepts no responsibility for any changes made to the file after it leaves its control.

## **1.2 PROPERTY DESCRIPTION AND LOCATION**

The Peñasco Quemado property is located within the north central portion of the state of Sonora, Mexico. The property is approximately 70 kilometres (km) southwest of Nogales, on the border with the American state of Arizona and 77 km northwest of the Mexican city of Magdalena de Kino (Magdalena). Specifically, the project is located approximately 14.5 km west of the town of Tubutama and in the Magdalena – Tubutama mining district.

The longitude and latitude for the project site are approximately 30°53' N, 111°33' W. The UTM coordinates for the project are 3,357,802 N, 489,017 E and the datum used was NAD 27 Mexico.

Silver One advises that it holds its 100% interest in the Peñasco Quemado property through its wholly-owned Mexican subsidiary Minera Terra Plata, S.A. de C.V. (Terra Plata) which holds the option on seven exploitation concessions. Except for two fractional mineral concessions, all of the mineral concessions are contiguous and vary in size, for a total property area of 3,746.18 ha. All concessions are subject to an bi-annual fee (twice yearly) and the filing of reports in May of each year covering the work accomplished on the property between January and December of the preceding year. At present, the total estimated bi-annual fee payable to the Mexican government for the mineral concessions is approximately US \$31,585.

### **1.2.1 Ownership History**

In September, 2010, Silvermex and Genco Resources Ltd. (Genco) agreed to merge their respective businesses in an all-share transaction. As part of the merger the new company would be known as Silvermex Resources Inc.

On April 3, 2012, First Majestic Silver Corp. (First Majestic) announced a friendly acquisition of Silvermex for Can\$175 million. On July 3, 2012, First Majestic completed its friendly acquisition of all of the issued and outstanding shares of Silvermex pursuant to a court-approved plan of arrangement. As a result, First Majestic became the owner of Silvermex and all of Silvermex's subsidiaries, including Minera Terra Plata S.A. de C.V. (Terra Plata).

On July 1, 2014, First Majestic spun-out Terra Plata (which was a wholly-owned subsidiary at that time), to Sundance Minerals Ltd., (Sundance) a private exploration company focused on precious metal and base metal projects in Mexico and the United States, which subsequently changed its name to KCP Minerals Inc. (KCP Minerals).

On March 30, 2015, First Mining (named Albion Petroleum Ltd. at the time) completed the acquisition of all of the issued and outstanding shares of KCP Minerals through a reverse takeover arrangement (RTO), constituting its “qualifying transaction” under the applicable policies of the TSXV. As a result of the RTO, KCP Minerals became a wholly-owned subsidiary of First Mining, and all of the assets and subsidiaries of KCP Minerals, such as Terra Plata, became indirectly owned by First Mining.

On August 22, 2016, Silver One Resources Inc. (named BRS Ventures Ltd, at the time) , KCP Minerals and Terra Plata entered into a share purchase agreement (Purchase Agreement) whereby Silver One agreed to purchase all of the issued and outstanding shares of KCP in exchange for 2 million shares (subject to adjustments in the event of a stock split or stock consolidation by Silver One) in the capital of Silver One and a 2.5% net smelter returns (NSR) royalty granted by Silver One in favour of KCP (the Transaction). Silver One can buy back 1.5% of the NSR by paying US\$1 million to First Mining.

On September 1, 2016, BRS Ventures Ltd. changed its name to Silver One Resources Inc. and as a result, First Mining or its nominee will receive 6 million shares of Silver One, on a post-split basis, pursuant to the terms of the Purchase Agreement. The Transaction is subject to the approval of the TSXV and is set to be completed by the end of September, 2016.

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

The Peñasco Quemado property is located within the north-central portion of the state of Sonora, Mexico. The property is approximately 70 kilometres (km) southwest of Nogales, on the border with the American state of Arizona and 77 km northwest of the Mexican city of Magdalena de Kino (Magdalena).

The closest population centres are the villages of Tubutama and Sáric situated along Sonora Hwy 43 with the village of Tubutama the closest and Sáric situated to the northeast of Tubutama.

The major population centres for the region are Magdalena to the east of Tubutama and Caborca, 50 km west. With populations of over 50,000 inhabitants, these cities are the supply centres for the region. An airstrip is located on the property, but is presently unusable. The closest accommodations are in Altar, to the southwest of Tubutama, but a camp could be situated on site as there is an adequate water source and electric generator for lighting.

The Project is located within the Arizona-Sonora desert in the northern portion of the Mexican state of Sonora. The climate at the project site ranges from semi-arid to arid. The average ambient temperature is 21° C, with minimum and maximum temperatures of -5° C and 50° C respectively. The average annual rainfall for the area is 330 millimetres (mm) with a maximum of 880 mm. The wet season or desert “monsoon” season occurs between the months of July and September and heavy rainfall can hamper exploration at times. However, exploration work can generally be conducted year-round in the desert.

The Peñasco Quemado Project is situated within the southern basin and range physiographic province, which is characterized by elongate, northwest-trending ranges separated by wide alluvial valleys. The Peñasco Quemado property is located in a relatively flat area of the desert with the topography ranging between 700 and 800 m above sea level.

The desert vegetation surrounding the Peñasco Quemado Project is composed of low lying scrub, thickets, and various types of cacti, with the vegetation type classified as Microphyllus Desertic Thicket. The state of Sonora is well known for its mining and cattle industries, although US manufacturing firms have established operations in the larger centres as a result of the North American Free Trade Agreement (NAFTA).

#### **1.4 HISTORY**

Mining in the northern part of the state of Sonora, Mexico dates back to the precolonial period and both Father Kino and later Father Alvaro mentioned the mineral wealth of the surrounding country side during their missionary travels through this area. The newspapers, Daily Alta California in its August 6, 1860 ran an article on the mineral wealth of Sonora and the Los Angeles Herald on November 6, 1904 commented on interest in the valuable properties that had been neglected in the Magdalena Mining District.

In the 1700s and 1800s a number of mineral properties were operated on various scales but most were abandoned due to the raids conducted on them by the native American tribes in the area with the most prominent being the Apaches.

The Peñasco Quemado property was mined on a small scale many years ago, most likely prior to the 1910 revolution; however, no details are available regarding this early activity. Foundations of an old foundry or mill and a slag pile remain about 200 m west of the present pit. The shafts located on the property, one in the centre and one to the east of the present pit, as well as one which doubles as a water well in the arroyo west of the pit, are all most likely from this early period.

Modern exploration activity on the property dates from the early 1960's when Asarco Mexicana (Asarco) reportedly optioned the property as a copper-silver prospect and drilled a total of 531 m of core in 12 holes. Incomplete reports regarding the Asarco exploration indicate that the core recoveries averaged less than 50%. Intercepts of silver were encountered in several drill holes, however the average grades as indicated by drilling (0.04% copper and 56 g/t silver) were uneconomic (per the 1982 Cerro de Plata report). None of the Asarco reports has survived and the author was unable to independently confirm the Asarco data contained in the Cerro de Plata report.

Small scale mining was carried out intermittently at Peñasco Quemado by Adalberto Ballesteros beginning in the late 1970's. Silver ore with a grade averaging approximately 225 g/t was mined from a small open pit and the material was shipped as flux ore to the Phelps Dodge smelter in Douglas, Arizona. A total of approximately 10,000 tons was mined from the pit area.

Cerro de Plata optioned the Peñasco Quemado property in early 1981 from Adalberto Ballesteros Duran and Bartolome Lugo Lopez. Cerro de Plata completed the initial geological mapping and surface sampling by March, 1981, which was immediately followed by a drilling program. During the Phase 1 drilling program in April and May, 1981, 12 vertical percussion holes totalling 469 m were drilled in a rectangular grid pattern 30 m by 20 m, extending 200 m west of the pit. In 10 of the 12 holes, significant grades were encountered over good widths. Subsequently, 13 additional holes totalling 814 m were drilled between December, 1981 and February, 1982. During both phases of drilling, the average depth of the holes was 51 m. In addition to the extra drill holes, the geological mapping program and geochemical sampling program were extended over the entire mineralized area. The exploration results delineated shallow silver mineralization in the West zone.

## **1.5 GEOLOGICAL SETTING AND MINERALIZATION**

In general, the Peñasco Quemado property is extensively covered by a cap of alluvium and valley fill which varies from 0 to 40 m thick. The alluvium and fill overlie a red conglomerate which is up to 200 m thick as evidenced from drill hole intersections. The red conglomerate is in a high angle fault contact with a volcanic sequence that includes andesite tuffs, andesite breccia and andesite flows. The entire upper lithological column is unconformably overlying a basement of gneissic granite and between the two units there exists a complex unit that has been described by the geologists of Silvermex/Terra Plata as felsite. The felsite is associated with a mylonite zone that has been identified along a strike distance of several kilometres from the west portion of the property where it outcrops in the areas called the Low Angle, The Pink Breccia and the Stockwork. In the Peñasco pit area the mylonite has been encountered up to 130 m to 150 m deep in the drill holes.

In the eastern portion of the property there are scant outcrops of sandstones, limestones, jaspers and siltstones. However, these outcrops are being explored for borax in the San Carlos area where the borax appears to be contained in the lower portion of the Tubutama Formation, interbedded in a succession of sandstone and tuffaceous shale.

The Peñasco Quemado project is primarily a silver occurrence with minor amounts of gold and copper hosted in structurally-controlled fissure fillings in granite and disseminated in sheared polyclastic sedimentary breccia.

Two separate zones of anomalous silver mineralization were previously identified by Cerro de Plata at Peñasco Quemado by mapping and percussion drilling. Of the two zones, only the West zone was previously drilled and the East zone randomly chip sampled. The East zone is considered to be part of the same epithermal system which deposited the West zone, but higher in the system and above the silver-rich West zone.

## **1.6 RECENT EXPLORATION PROGRAMS, 2004 TO 2006**

In 2004, exploration work was carried out by geologists Julio Cesar Esquer and Jaime Castillo. They conducted field mapping and sampling on the brecciated zones and successfully delineated a continuous 1,500 by 150 m mineralized zone. A total of 21 chip samples were collected at this time; 14 samples were collected from the brecciated zone to confirm the continuity of the West and East zones and 7 samples were collected from the granitic intrusive within previously identified strongly fractured and oxidized zones.

In September, 2005 Silvermex, conducted its first exploration program on the Peñasco Quemado property which was comprised of 15 reverse circulation drill holes and totalled 1,449.35 m. The objective of the exploration program was two-fold: first, to confirm the results of the previous drilling programs conducted by Cerro de Plata on the West zone and, secondly, to progressively extend the drilling to the southwest to explore and to expand the limits of the known silver mineralization on the West zone, and to begin to explore the mineral potential of the East zone.

Silvermex's fall 2005 drilling program was successful in confirming the nature of the mineralization which Cerro de Plata encountered during its exploration programs in the early 1980's. Silvermex also extended the mineralization in both the southeast direction towards what Cerro de Plata referred to as the East zone and in the southwest direction towards the arroyo (creek). The drilling program also explored the nature and extent of the silver mineralization in the East zone.

Subsequent to the 2005 drilling program, prospecting, geological mapping and sampling were carried out on the property and this information was combined with the 2005 drilling results to identify further exploration and in-fill drilling targets.

The 2006 drilling program conducted by Silvermex on the property was comprised of 19 drill holes totalling 2,248.61 m, of which 12 holes (1,639.03 m) were diamond drilling and 7 holes (609.58 m) were reverse circulation. The core drilling was distributed as follows: 4 holes were drilled in the Peñasco Quemado area (West zone), 4 holes in the southeastern portion of the Peñasco Quemado area (East zone) and the remaining four holes were drilled at the San Luis-Pink Breccia area west of the Peñasco Quemado area. The reverse circulation drilling was distributed as follows: two in-fill drill holes in Peñasco Quemado (West zone), 2 holes in the Stockwork area and 3 holes in the Low Angle area, which lie to the west of the Peñasco Quemado area.

The first area covered by the drilling program was the immediate area southeast of the old pit in-order to extend the trend of the high-grade mineralization exposed in the pit. The 2006 drill holes confirmed the presence of high grade silver mineralization in the conglomerates and breccias for at least 300 m along strike to the southeast and extended the mineral deposit 50 m to the southwest down dip. The step-out drilling program provided valuable information regarding the structural history and orientation of the mineral deposit. While the

mineralization is consistent along the entire 750 m of strike length, its general south-east trend has been offset by north-south faulting approximately 450 m southeast of the old pit.

First Mining has not conducted any exploration programs on the property. As Silver One has just acquired the La Frazada Project it is in the process of outlining its exploration programs on the property.

## **1.7 MINERAL RESOURCE AND RESERVE ESTIMATES**

### **1.7.1 2007 Historical Mineral Resource Estimate**

The historical January, 2007 mineral resource estimate for the Peñasco Quemado property was completed by James A. McCrea, P.Geo and is contained within the March, 2007 Technical Report by Micon. In 2006, Mr. McCrea was asked by Silvermex to estimate the mineral resources for the Peñasco Quemado property using the historical data along with the results of Silvermex's 2005 and 2006 exploration drilling programs.

Mr. McCrea constructed a drill hole database in Gemcom using all available data for the West zone at the time of the resource estimate. The database contains surveyed drill collars for 24 reverse circulation holes from the 1981/82 program, 17 reverse circulation holes from the 2005 program and 8 diamond drill holes from the 2006 drill program. Assay data were available for all 49 of the drill holes and for 12 trenches

The database contains 3,195 assays for silver. The drill holes were sampled on 1-metre intervals for the 1982/82 reverse circulation drilling, 1.52 to 1.53 m intervals for the 2005 drilling and 1.1 to 1.6 m intervals for the 2006 diamond drilling. Drill hole sections were produced with displayed assays and lithology to allow domaining.

Sectional interpretations were produced for the Peñasco Quemado property and were entered into Gemcom as 3D polylines. The polylines were stitched together to produce a 3D solid body model for the West zone of the Peñasco Quemado property. The solid model was used to code the rock type model in the block model, control the interpolation and to filter the composites for statistics and geostatistics.

The sample intervals were composited to 1.5 m for the early drilling but used the existing 1.1 to 1.6 m sample intervals for the 2005/2006 drilling with the majority of the composites in the 1.5 to 1.6 m range. The trenches were composited to 1.5 m.

A 3D block model was laid out to cover the zone of interest on the West zone of the Peñasco Quemado property. The solid model was used to code the rock type model, percent model and control the interpolation. The block model was coded for air (above topography), background and the mineralized zone by coding the block models with a rock type and percent of the block inside of the solid. Blocks with more than 1% of the block inside the solid were given the code of the solid and the percent of the block inside the solid was written to the percent model. The model was interpolated in one pass.

The block model was interpolated using inverse distance to the second power where a minimum of three composites was required to interpolate a block, with a maximum of 18 composites. No restriction was placed on the number of holes per block because of the areas of widely spaced data in the model

Grades were capped for the Peñasco Quemado resource, with capping based on histograms, probability plots and the coefficient of variation for the assays. Peñasco Quemado assays were capped at 700 g/t silver before compositing.

Capping of Peñasco Quemado assays at 700 g/t silver is equivalent to the 99.3 percentile.

The Peñasco Quemado model was classified as measured, indicated and inferred based on distance. Only blocks inside the solid model were classified and all other blocks were not interpolated or classified. Blocks were classified as follows: measured resources ranged of 0 m to 25 m from the trenches (the drill holes alone did not classify measured resources), indicated resource ranged from 25 m to 45 m and inferred resources ranged from of 45 m to 68 m. The trenches controlled the classification of measured resources and away from the trenches the effective indicated range would be 0 m to 45 m based only on drilling. Blocks outside these ranges are not reported in the classified table. Resources are reported in Table 1.1.

The stated January, 2007 resources were not materially affected by any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant issues, unless stated in this report, to the best knowledge of the authors. There are no known mining, metallurgical, infrastructure, or other factors that materially affected the resource estimate.

**Table 1.1**  
**Historical Peñasco Quemado Resource Summary January, 2007 Based on a 30 g Silver Cut-off Grade**

Category	Tonnes (Millions)	Silver Grade (g/t)	Silver Grade (oz/t)	Silver (millions of ounces)
Measured	0.123	151.9	4.88	0.599
Indicated	2.442	115.0	3.70	9.032
<b>Measured + Indicated Total</b>	<b>2.565</b>	<b>116.8</b>	<b>3.76</b>	<b>9.631</b>
Inferred	0.001	41.4	1.32	0.001

Table provided by James McCrea for the March, 2007 Micon Technical Report.

The January, 2007, resource estimate by Mr. McCrea was compliant with the CIM standards and definitions required by NI 43-101 at the time of their original reporting. However, as First Mining and Silver One do not have the block model in their possession Micon has been unable to review the model and been unable to conduct sufficient work to classify the January, 2007 estimate as a current estimate. Neither First Mining nor Silver One is treating the January, 2007, as a current estimate.

Micon recommends that given the changes in silver prices since 2007, First Mining and Silver One revisit the interpretation and resource model for Peñasco Quemado and conduct any

necessary or additional work to reclassify the January, 2007 estimate as a current estimate or update it.

There are no known resource estimates for any of the other portions of the Peñasco Quemado property.

### **1.7.2 Mineral Reserve Estimate**

There are no mineral reserve estimates on the Peñasco Quemado property.

## **1.8 CONCLUSIONS AND RECOMMENDATIONS**

Silver One is in the process of acquiring the Peñasco Quemado Project from First Mining but the property has very little information regarding historical exploration on it prior to the work conducted by Silvermex between 2005 and 2006.

Silver One plans to spend an estimated US \$1,074,425 during its first phase of exploration and a further US \$1,102,670 during a second phase of the exploration program. However, the second phase of the program is dependent on the results of the first phase. If the next two phases of the exploration program are completed Silver One will spend an estimated US \$2,177,095 including payments for the mining taxes, surface rights and access.

Micon has reviewed Silver One's proposal for its exploration program on the Peñasco Quemado property and recommends that Silver One conducts the exploration program as proposed subject to funding and any other matters which may cause the proposed exploration program to be altered in the normal course of its business activities or alterations which may affect the program as a result of exploration activities themselves.

Given the amount of work conducted previously by Silvermex at the Peñasco Quemado Project on the main exploration target and area of mineralization, this area of the property should be regarded as an mid-stage exploration project which may have economic potential. Micon believes that further analysis of the results of Silvermex's 2005 and 2006 exploration program, followed by a focused exploration programs based on this work is warranted and may assist Silver One in outlining further resources on the West zone and identifying further exploration targets elsewhere on the property.

Through its acquisition of the Peñasco Quemado Project, Silver One has acquired a property with the potential to yield significant silver mineralization. Micon agrees with the general direction of Silver One's initial and proposed exploration programs for the project and makes the following additional recommendations for the property:

1. Micon recommends that Silver One reviews the work conducted by Silvermex previously and incorporate this into any future exploration program it may undertake.
2. Micon recommends that Silver One sets up an appropriate QA/QC program for the

Peñasco Quemado Project prior to beginning any exploration program.

Peñasco Quemado should be regarded as a mid-stage exploration project which may have a significant economic potential, should the mineralization prove to be more extensive than is presently indicated.

Micon has reviewed the proposed exploration programs and the results from the previous drilling program conducted by Silvermex and, in light of the observations made in this report, support the concepts outlined by Silver One for further exploration. It is Micon's opinion that the property merits further exploration and that Silver One's proposed exploration plans are properly conceived and justified.

## **2.0 INTRODUCTION**

### **2.1 TERMS OF REFERENCE**

At the request of Mr. Chris Osterman, CEO and Director of First Mining Finance Corp. (First Mining), Micon International Limited (Micon) has been retained to provide an independent summary and review of the Peñasco Quemado property located in the state of Sonora, Mexico, on behalf of Silver One Resources Inc. (Silver One). Micon has also been retained to compile this Technical Report to disclose the results of its review of the previous work conducted on the property, such that the report complies with the Canadian National Instrument (NI) 43-101 Standards of Disclosure for Mineral Projects, Form NI 43-101F1 requirements.

The term Peñasco Quemado project refers to the immediate area surrounding the existing silver deposit where exploration has been conducted since 2005, while the term Peñasco Quemado property refers to the entire land package.

Micon does not have, nor has it previously had, any material interest in First Mining and Silver One or related entities such as Minera Terra Plata, S.A. de C.V. (Terra Plata). The relationship with First Mining and Silver One is solely a professional association between the client and the independent consultant. This report is prepared in return for fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the results of this report. This is the third Technical Report on the Peñasco Quemado property prepared by Micon. The first report was dated December, 2005 and the second dated March, 2007.

This report includes technical information that requires subsequent calculations or estimates to derive sub-totals, totals and weighted averages. Such calculations or estimations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, Micon does not consider them to be material.

The conclusions and recommendations in this report reflect the authors' best independent judgment in light of the information available to them at the time of writing. The authors, and Micon reserves the right, but will not be obliged, to revise this report and conclusions if additional information becomes known to them subsequent to the date of this report. Use of this report acknowledges acceptance of the foregoing conditions.

This report is intended to be used by First Mining and Silver One subject to the terms and conditions of its agreements with Micon. Those agreements permit First Mining and Silver One to file this report as a Technical Report with the Canadian Securities Administrators pursuant to provincial securities legislation. Except for the purposes legislated under provincial securities laws, any other use of this report, by any third party, is at that party's sole risk.

This National Instrument 43-101 Technical Report were prepared for First Mining and Silver One by Micon. The quality of information, conclusions, and estimates contained herein is consistent with the level of effort involved in Micon's services, based on: i) information

available at the time of preparation, ii) data supplied by outside sources and iii) the assumptions, conditions, and qualifications set forth in this report.

The requirements of electronic document filing on SEDAR necessitate the submission of this report as an unlocked, editable pdf (portable document format) file. Micon accepts no responsibility for any changes made to the file after it leaves their control.

## **2.2 DESCRIPTION OF CORPORATIONS**

### **2.2.1 Legal Description of Silver One Resources Inc.**

Silver One Resources Inc. (Silver One) was incorporated pursuant to the provisions of the Business Corporations Act (British Columbia) on June 8, 2007 under the initial name BRS Ventures Ltd.. Following its initial public offering on February 29, 2008, the company qualified as a capital pool company as defined by the CPC Policy of the TSXV, and its common shares were listed for trading under the trading symbol BRV-P.V. After not completing a “qualifying transaction” as defined under CPC Policy within 24 months of its listing date, the company’s common shares were moved to the NEX board of the TSXV under the trading symbol BRV.H. On August 5, 2016, the company completed a “qualifying transaction” by entering into an option agreement with Anstag Mining Ltd. (the “Optionor”), under which the company would acquire a 100% interest in the Margurete Gold property by paying \$10,000 and issuing 200,000 shares to the Optionor, both of which were done as of August 5, 2016, and by spending \$1 million in exploration expenditures on the property within the next five years. On September 1, 2016, BRS Ventures Ltd. changed its name to “Silver One Resources Inc.” and completed a 3:1 forward stock split. The common shares of Silver One are listed on the TSXV under the symbol SVE.

### **2.2.2 Legal Description of First Mining Finance Corp.**

First Mining Finance Corp. (First Mining) is a public company that was incorporated in Alberta, Canada on April 4, 2005 under the initial name Albion Petroleum Ltd., and that was continued into British Columbia, Canada on March 30, 2015 when Albion Petroleum Ltd. completed its “qualifying transaction” under the applicable polies of the TSX Venture Exchange (the “TSXV”) and Canadian securities laws and was subsequently renamed to First Mining Finance Corp. The common shares of First Mining are listed on the TSXV under the symbol FF, and in the United States on the OTCQX under the symbol FFMGF. As a mineral property holding company, First Mining’s principal business activity is to acquire high quality mineral assets with a focus on gold in the Americas.

### **2.2.3 Legal description of Minera Terra Plata S.A. de C.V.**

Minera Terra Plata S.A. de C.V. (Terra Plata) is a Mexican company which was incorporated in Sonora, Mexico by means of public instrument number 3,317, granted on August 23, 2005 before Mr. Jesus Jose Francisco Arturo Lizarraga Murguia, Alternate Public Notary number 35 of Hermosillo, Sonora, registered before the Public Registry of Commerce of Sonora under

the commercial folio 34102-7 on April 1, 2005, and registered before the Public Registry of Mines on October 31, 2002, under registration number 280 page 140, Volume XXXVIII of the Book of Mining Companies. All of the shares of Terra Plata are held by KCP Minerals Inc. (KCP Minerals), a private company and formerly a wholly-owned subsidiary of First Mining.

## 2.3 QUALIFIED PERSONS, SITE VISITS, AREAS OF RESPONSIBILITY

The primary author of this report and Qualified Person is:

- William J. Lewis, B.Sc., P.Geo. a senior geologist with Micon based out of Toronto, Canada.

Micon's latest site visit to the Peñasco Quemado property occurred on August 30, 2016. Micon was accompanied on the site visit by Raul Diaz, with First Mining. Micon's previous site visits occurred on September 9, 2006, September 13, 2005, and July 22, 2005. All of Micon's site visits were conducted by Mr. Lewis. Discussions related to the site visit are contained in Section 12 "Data Verification" of this report.

Mr. Lewis is responsible for all section of this Technical Report.

## 2.4 UNITS AND ABBREVIATIONS

All currency amounts are stated in US dollars (US\$). Quantities are generally stated in metric units, the standard Canadian, Mexican and international practice, including metric tons (tonnes, t) and kilograms (kg) for weight, kilometres (km) or metres (m) for distance, hectares (ha) for area, grams (g) and grams per metric tonne (g/t) for gold and silver grades (g/t Au, g/t Ag). Wherever applicable, Imperial units have been converted to Système International d'Unités (SI) units for reporting consistency. Precious metal grades may be expressed in parts per million (ppm) or parts per billion (ppb) and their quantities may also be reported in troy ounces (ounces, oz), a common practice in the mining industry. A list of abbreviations is provided in Table 2.1. Appendix 1 contains a glossary of mining and other related terms.

**Table 2.1**  
**List of the Abbreviations**

Name	Abbreviation
Accurassay Laboratories	Accurassay
Acme Analytical Laboratories Ltd.	ACME
ALS-Chemex Laboratories	ALS-Chemex
Canadian Institute of Mining, Metallurgy and Petroleum	CIM
Canadian National Instrument 43-101	NI 43-101
Carbon in leach	CIL
CDN Resources Laboratories Ltd.,	CDN Resources
Centimetre(s)	cm
Compañía Minera Cerro de Plata	Cerro de Plata
Construccion, Arrendamiento de Maquinaria y Minería, S.A. ce C.V.	CAMMSA
cubic feet per minute	cfm
Dateline Internacional S.A. de C.V.	Dateline
Day	d

Name	Abbreviation
Degree(s)	°
Degrees Celsius	°C
Digital elevation model	DEM
Dirección General de Minas	DGM
Diversified Drilling S.A. de C.V.	Diversified
Dollar(s), Canadian and US	\$, Cdn \$ and US \$
First Mining Finance Corp.	First Mining
Gram(s)	g
Grams per metric tonne	g/t
Greater than	>
Hectare(s)	ha
Instituto Nacional de Estadística, Geografía e Informática	INEGI
InterGeografica de Mexico, S.A. de C.V.	InterGeografica
Internal rate of return	IRR
Kilogram(s)	kg
Kilometre(s)	km
Less than	<
Litre(s)	l
Metre(s)	m
Mexican peso	peso
Micon International Limited	Micon
Million tonnes	Mt
Million ounces	Moz
Million years	Ma
Million metric tonnes per year	Mt/y
Milligram(s)	mg
Millimetre(s)	mm
Minera Cerro de Plata S.A. de C.V.	Cerro de Plata
Minera Terra Plata, S.A. de C.V.	Terra Plata
Net present value	NPV
Net smelter return	NSR
North American Datum	NAD
Not available/applicable	n.a.
Ounces	oz
Ounces per year	oz/y
Parts per billion	ppb
Parts per million	ppm
Percent(age)	%
Quality Assurance/Quality Control	QA/QC
Second	s
SGS Mineral Services	SGS
Silvermex Resources Limited	Silvermex
Silvermex Resources Inc.	Silvermex
Silver Standard Resources Inc.	Silver Standard
Specific gravity	SG
Système International d'Unités	SI
Tonne (metric)	t
Tonnes (metric) per day	t/d
TSL Laboratories Inc.	TSL
Universal Transverse Mercator	UTM
Year	y

## **2.5 INFORMATION SOURCES**

The information in this report was derived from published material, as well as data, professional opinions and unpublished material submitted by the professional staff of First Mining or their consultants, supplemented by Micon's independent observations and analysis. Much of these data came from Micon reports prepared and provided originally for Silvermex Resources Limited (December, 2005 and March, 2007) and subsequently by First Mining, as well as information researched by Micon.

James McCrea based his block model on the drilling database and the geological model for the deposit provided by Silvermex. Micon does not have access to the model constructed by James McCrea for his January, 2007, mineral resource estimate. The January, 2007, mineral resource estimate is considered to be a historical estimate for the purposes of this report.

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

#### **3.1 GENERAL INFORMATION**

Micon has reviewed and analyzed data provided by First Mining, Silver One and previously by Silvermex, their consultants, the previous operator of the property, and has drawn its own conclusions therefrom, augmented by its direct field examination. Micon has not carried out any independent exploration work, drilled any holes or carried out an extensive program of sampling and assaying on the property. Previous sampling (Lewis, July, 2005) was conducted to independently substantiate the mineralization at the Peñasco Quemado project and further samples were not obtained during either the September, 2006 or the September 2016 site visits as the original 2005 sampling had verified the mineralization.

To complete the January, 2007, mineral resource estimate as stated in the 2007 Technical Report on the Peñasco Quemado Project Mr. McCrea was provided with both the drilling database, a topographic database and with a block model for the deposit completed by Silvermex. Unfortunately, the database and interpretations was unavailable to review for this report so the January, 2007 estimate must be considered a historical estimate for the purposes of this report as Micon has not done sufficient work to classify the 2007 estimate as a current estimate. Neither First Mining nor Silver One is treating the 2007 mineral resource estimate as a current estimate or relying on it.

While exercising all reasonable diligence in checking, confirming and testing it, Micon has relied upon First Mining's presentation of the current project data for formulating its opinion. For the previous Technical Reports (2005 and 2007) Micon relied on Silvermex's presentation of the project data for the Peñasco Quemado property, including data from the previous operator, in formulating its opinion.

#### **3.2 MINERAL TENURE AND SURFACE RIGHTS**

Micon offers no legal opinion as to the validity of the title to the mineral concessions claimed by First Mining or Silver One and the wholly-owned Mexican subsidiary Terra Plata. Micon had previously examined the English translations of the various agreements under which Silvermex and Terra Plata held title to the mineral lands for the Project. Micon, however, offers no legal opinion as to the validity of the mineral title claimed. A description of the property, and ownership thereof, is provided for general information purposes only.

The surface Rights are owned by the Rancher that owns the Ranch that the mineral deposit is located on and First Mining will need to purchase the surface rights should a exploration and further studies determine that the mineralization can be exploited at the current time.

### **3.3 ENVIRONMENTAL LIABILITIES AND SOCIAL AND COMMUNITY IMPACTS**

The existing environmental conditions, liabilities and remediation have been described where required by NI 43-101 regulations. However, it should be noted that these statements are provided for information purposes only and Micon offers no opinion in this regard.

### **3.4 TAXATION AND ROYALTIES**

Micon is not aware of any royalties that would be payable to third parties should economic mineralization be extracted on the Peñasco Quemado property, beyond any stated elsewhere in this report. Mexico does levy taxes on mineral extraction by mines but this is part of the Mexican tax system and third party royalties would be additional to the taxes due the government.

### **3.5 OTHER INFORMATION**

The description of geology, mineralization, exploration and mineral resource estimation methodology used in this report are taken from reports prepared by various companies or their contracted consultants, as well as from various government and academic publications. The conclusions of this report rely on data available in published and unpublished reports supplied by the various companies which have conducted the exploration on the property, and information supplied by both First Mining and previously by Silvermex. The information provided to First Mining and previously to Silvermex was supplied by reputable companies and Micon has no reason to doubt its validity.

Micon is pleased to acknowledge the helpful cooperation of First Mining's and previously by Silvermex's management and consulting field staff, all of whom made any and all data requested available and responded openly and helpfully to all questions, queries and requests for material.

Some of the figures and tables for this report were reproduced or derived from historical reports written on the property by various individuals and/or supplied to Micon by First Mining. Most of the photographs were taken by the authors of this report during their respective site visits. In the cases where photographs, figures or tables were derived from previous Micon Technical Reports or supplied by other individuals or First Mining they are referenced below the inserted item.

The review of the Peñasco Quemado Project was based on published material researched by Micon, as well as data, professional opinions and unpublished material submitted by the professional staff of First Mining or its consultants. Much of these data came from reports previously prepared by Micon for Silvermex as well as other information researched by Micon.

## 4.0 PROPERTY DESCRIPTION AND LOCATION

### 4.1 GENERAL INFORMATION

The Peñasco Quemado silver project (Peñasco Quemado Project) is located in the Mexican state of Sonora, south of the American state of Arizona. Specifically, the project is located within the north central portion of the Mexican state of Sonora, approximately 14.5 km west of the town of Tubutama and in the Magdalena – Tubutama mining district. The longitude and latitude for the project site are approximately 30°53' N, 111°33' W. The UTM coordinates for the project are 3,357,802 N, 489,017 E and the datum used was NAD 27 Mexico. The location of the Peñasco Quemado project is shown in Figure 4.1.

**Figure 4.1**  
**Peñasco Quemado Project Location Map**



Map provided by Minera Terra Plata, SA de CV. For the 2007, Micon Technical Report.

## **4.2 PROPERTY DESCRIPTION AND OWNERSHIP**

Silver One advises that it holds 100% of the Peñasco Quemado project through its Mexican subsidiary Minera Terra Plata S.A. de C.V. (Terra Plata) via seven exploitation concessions.

The main mineral concessions are contiguous and vary in size for a total property area of 3,746.18 ha. The fractional claims are not contiguous and there is a small mineral concession (San Luis 2) contained within the main Terra Plata mineral concession that is owned by another individual, but it does not impact the main mineralized area on the property. The concessions are subject to a bi-annual fee and the filing of reports in May of each year covering the work accomplished on the property between January and December of the preceding year.

Table 4.1 summarizes the mining concessions owned of controlled by Tera Plata, along with the bi-annual payments to the government for the concessions. Figure 4.2 is a map showing the location of the mineral concessions that comprise the Peñasco Quemado property.

### **4.2.1 Ownership History**

On May 26, 2005, Silvermex through its then Mexican subsidiary Terra Plata, it acquired the rights to explore the exploitation concessions for four years along with the option to purchase the concessions from Santos Jaime Castillo Romo. Santos Jaime Castillo Romo had previously optioned the concessions from Francisca Adelina Salgado Valle on October 29, 2004 for US \$600,000 payable over 48 months. Silvermex agreed to pay US \$50,000 and 500,000 shares of Silvermex to Santos Jaime Castillo Romo and committed to pay the remainder of the US \$600,000 (US \$565,000) due to Francisca Adelina Salgado Valle as stated in the original agreement. Silvermex has also agreed to reimburse Santos Jaime Castillo Romo the US \$35,000 that he had previously paid on the option. Terra Plata staked the exploration concessions in July and September, 2005 and staked further concessions intermittently between January, 2006 and January, 2007.

Silvermex also had obtained a surface access agreement with the owner of the ranch at Peñasco Quemado for a monthly payment in US dollars.

Silvermex advises that Silvermex and Silver Standard Resources Inc. (Silver Standard) entered into a funding agreement dated April 28, 2005 (the Funding Agreement). Pursuant to the Funding Agreement, Silver Standard agreed to provide US \$150,000 in seed capital financing to Silvermex. As part of the Funding Agreement, Silver Standard was granted a back-in right on the Peñasco Quemado property. The general terms of the back-in right include Silvermex providing Silver Standard with a resource estimate described as:

**Table 4.1**  
**Summary of the Mineral Concession Information for the Peñasco Quemado Project**

Claim Name	Title Number	Location (UTM Nad 27 Mex)	Type	Area (hectares)	Location Date	Expiry Date	Bi-Annual Fee (MX\$)	Bi-Annual Fee (US \$)
Lista Negra	182272	447,450.0111 E 3,427,563.2111 N	Exploitation	84.1161	May 31, 1988	May 30, 2038	12,056.36	709.20
Peñasco Quemado	163593	447,450.0111 E 3,427,563.2111 N	Exploitation	3.0000	Oct 30, 1978	Oct. 29, 2028	429.99	25.29
Ballesteros	215202	447,425.184 E 3,427,635.530 N	Exploitation	8.8838	Feb 14, 2002	Feb. 13, 2052	1,273.32	74.90
Terra Plata	225795	447,420.647 E 3,427,638.877 N	Exploration.	3,002.18	Oct. 25, 2005	Oct. 24, 2055	430,302.80	25,311.93
Terra Plata 1 Fracción A	225836	447,787.362 E 3,423,971.820 N	Exploration	30.0000	Oct. 27, 2005	Oct. 26, 2055	4,299.90	252.94
Terra Plata 1 Fracción B	225837	447,787.362 E 3,423,971.820 N	Exploration	18.0000	Oct. 27, 2005	Oct. 26, 2055	2,579.94	151.76
Terra Plata 2	227947	446,123.106 E 3,427,717.9980 N	Exploration	600.0000	Sept. 15, 2006	Sept. 14, 2056	85,998.00	5,058.71
<b>TOTAL:</b>	-	-	-	<b>3,746.18</b>			<b>536,940.31</b>	<b>31,584.73</b>

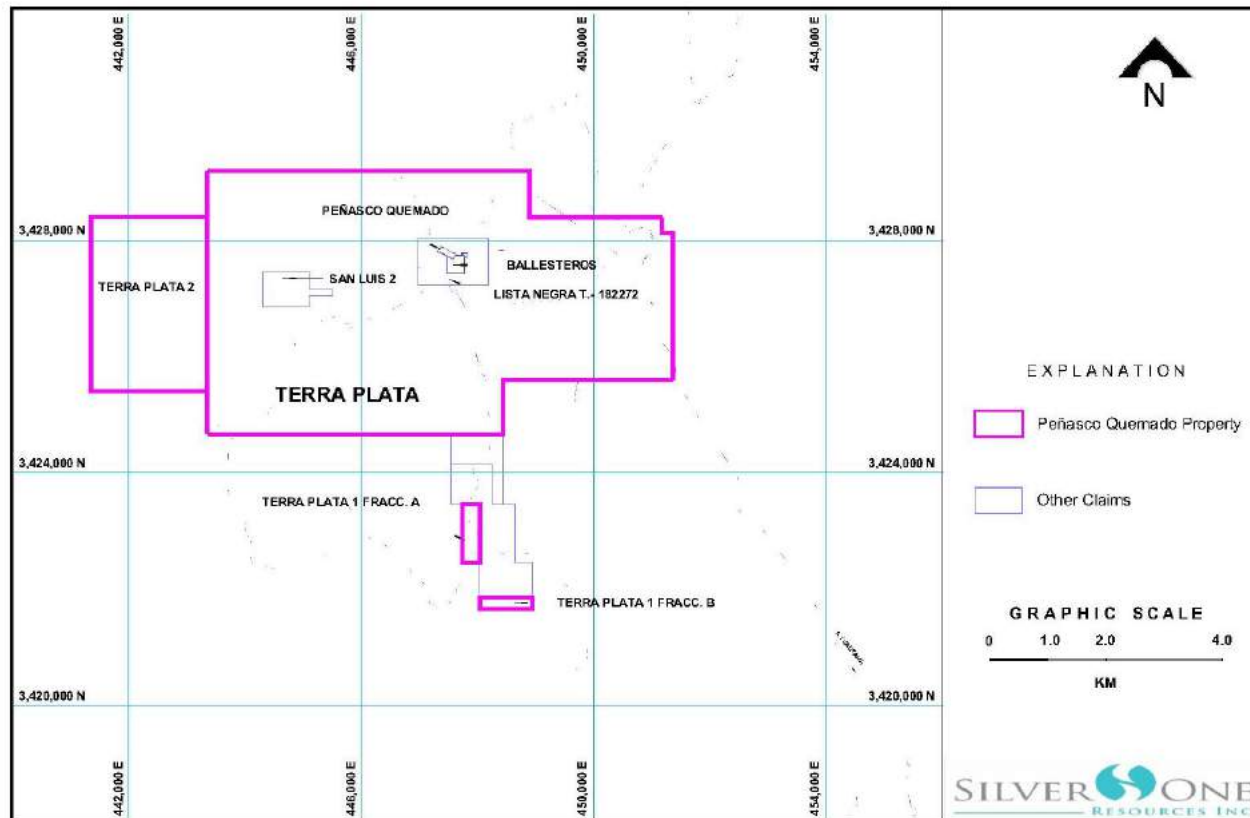
Note: All of the claims are owned by Minera Terra Plata, S.A. de C.V. (Terra Plata).

The exchange rate used is \$1 United States Dollar = 17 Mexican pesos.

**Figure 4.2**  
**Peñasco Quemado Property Mineral Concession Map**

MEXICO

## Concession Map Peñasco Quemado Property



Map provided by Silver One Resources Inc.

“an estimate of the measured, indicated and inferred resources of silver, in ounces, for Peñasco Quemado property based on a silver cut-off grade of 50 grams per tonne prepared by an independent qualified person in accordance with NI 43-101. No mineral other than silver shall be included for the purpose of preparing such estimate.”

In addition, the resource threshold which triggers the back-in right is described as meaning: “an aggregate of 30 million ounces of silver in the measured, indicated and inferred mineral resource categories set out in a Resource Estimate.”

Upon such provision, Silver Standard may elect to enter into a joint venture by expending the greater of double the expenditures incurred to that date by Silvermex or US \$1,000,000. Silver Standard would acquire a 51% interest and would be the operator of the project. Silver Standard would also be responsible for reimbursing Silvermex for all property payments made to that date. Silver Standard may increase its interest to 70% by paying all costs required to complete a feasibility study, and may increase its interest to 90% by paying all costs required to place the property into commercial production. The Silver Standard agreement was terminated and no further obligations survive to date.

Other parties controlled a number of mineral concessions which were either contained within the area of the mineral concessions owned by Silvermex and Terra Plata or occur alongside the concession boundaries, but none of these concessions impacted the main area of the Peñasco Quemado project.

In September, 2010, Silvermex and Genco Resources Ltd. (Genco) agreed to merge their respective businesses in an all-share transaction. As part of the merger the new company would be known as Silvermex Resources Inc.

On April 3, 2012, First Majestic Silver Corp. (First Majestic) announced a friendly acquisition of Silvermex for Can\$175 million. On July 3, 2012, First Majestic completed its friendly acquisition of all of the issued and outstanding shares of Silvermex pursuant to a court-approved plan of arrangement. As a result, First Majestic became the owner of Silvermex and all of Silvermex’s subsidiaries, including Minera Terra Plata S.A. de C.V. (Terra Plata).

On July 1, 2014, First Majestic spun-out Terra Plata (which was a wholly-owned subsidiary at that time), to Sundance Minerals Ltd., (Sundance) a private exploration company focused on precious metal and base metal projects in Mexico and the United States, which subsequently changed its name to KCP Minerals Inc. (KCP Minerals).

On March 30, 2015, First Mining (named Albion Petroleum Ltd. at the time) completed the acquisition of all of the issued and outstanding shares of KCP Minerals through a reverse takeover arrangement (RTO), constituting its “qualifying transaction” under the applicable policies of the TSXV. As a result of the RTO, KCP Minerals became a wholly-owned subsidiary of First Mining, and all of the assets and subsidiaries of KCP Minerals, such as Terra Plata, became indirectly owned by First Mining.

On August 22, 2016, Silver One Resources Inc. (named BRS Ventures Ltd, at the time) , KCP Minerals and Terra Plata entered into a share purchase agreement (Purchase Agreement) whereby Silver One agreed to purchase all of the issued and outstanding shares of KCP in exchange for 2 million shares (subject to adjustments in the event of a stock split or stock consolidation by Silver One) in the capital of Silver One and a 2.5% net smelter returns (NSR) royalty granted by Silver One in favour of First Mining (the Transaction). Silver One can buy back 1.5% of the NSR by paying US\$1 million to First Mining.

On September 1, 2016, BRS Ventures Ltd. changed its name to Silver One Resources Inc. and as a result, First Mining or its nominee will receive 6 million shares of Silver One, on a post-split basis, pursuant to the terms of the Purchase Agreement. The Transaction is subject to the approval of the TSXV and is set to be completed by the end of September, 2016.

### **4.3 OBLIGATIONS, ENCUMBRANCES, ENVIRONMENTAL LIABILITIES AND PERMITTING**

#### **4.3.1 Mexican Mining Law**

When the Mexican mining law was amended in 2006, all mineral concessions granted by the Dirección General de Minas (DGM) became simple mining concessions and there was no longer a distinction between mineral exploration or exploitation concessions. A second change to the mining law resulted in all mining concessions being granted for a period of 50 years, providing the concessions remained in good standing. As part of the second change all former exploration concessions which were previously granted for a period of six years became eligible for the 50-year term.

For any concession to remain valid, the bi-annual fees must be paid and a report has to be filed during the month of May of each year which covers the work conducted during the preceding year. Concessions are extendable, providing the application is made within the five-year period prior to the expiry of the concession and the bi-annual fee and work requirements are in good standing. The annual fee, payable to the Mexican government for First Mining to hold the group of contiguous mining concessions that comprise the Peñasco Quemado property is approximately US\$31,584. The fee is paid on a bi-annual basis and is subject to increasing fees on the mineral concessions as they mature.

All mineral concessions must have their boundaries orientated astronomically north-south and east-west and the lengths of the sides must be one hundred metres or multiples thereof, except where these conditions cannot be satisfied because they border on other mineral concessions. The locations of the concessions are determined on the basis of a fixed point on the land, called the starting point, which is either linked to the perimeter of the concession or located thereupon. Prior to being granted a concession, the Company must present a topographic survey to the DGM within 60 days of staking. Once this is completed, the DGM will usually grant the concession. The exception to the concession boundaries being oriented astronomically north-south and east-west is for some historical concessions.

### **4.3.2 Obligations, Encumbrances and Royalties**

#### **4.3.2.1 Obligations**

Micon is not aware of any obligations that Silver One has that may be associated with the Peñasco Quemado property beyond what is stated in this Technical Report.

However, should surface exploration be renewed Silver One may be obliged to pay a monthly payment to the property owner in order to secure surface access in much the same way that Silvermex did previously.

#### **4.3.2.2 Encumbrances**

Micon is not aware of any encumbrances on the Peñasco Quemado property beyond what is stated in this Technical Report.

#### **4.3.2.3 Royalties**

Micon is not aware of any royalties that would be payable to third parties should economic mineralization be extracted on the Peñasco Quemado property, beyond any stated elsewhere in this report. Mexico does levy taxes on mineral extraction by mines but this is part of the Mexican tax system and third party royalties would be additional to the taxes due the government.

### **4.3.3 Private Concessions and Surface Rights**

There is a private mineral concession (San Luis 2) located within the main mineral concession but it does not interfere with the mineralization already outlined previously by Silvermex.

The owner of the ranch upon which the Peñasco Quemado mineralization is located controls the surface rights. If an economic discovery were to be made, negotiations with the owner would need to be conducted to acquire the surface rights. At this time, the owner of the ranch maintains locked gates across the access roads, but First Mining has obtained access rights. However, should further exploration work be conducted by First Mining the owner may require a monthly fee to be paid to conduct the exploration work as was the case when Silvermex conducted its exploration programs

### **4.3.4 Water Rights**

Although water wells exist on the property, Micon has not investigated the issues regarding Silver One's ability to acquire water use rights for the project in the long term, should a commercial mining operation be developed. Even though water wells are located on the Peñasco Quemado property, Silvermex previously obtained the water for the drilling program from a well located close to the river in Tubutama via the concessionaire who owns the well and supplies water for numerous purposes. The reason for having the water trucked to site was

because of the water volumes involved for the drilling and the location of the drill holes. The contracted supplier for the water was Comision Nacional del Agua and it obtained all the permits required for the water extraction as well as the trucking the water to Peñasco Quemado.

#### **4.3.5 Environmental Permitting**

In order to begin an exploration program on an exploitation concession upon which no substantial mining has been conducted, Silvermex was originally required to file a “Notice of Initiation of Exploration Activities” with the local authorities to inform them of the scope and environmental impact of the exploration work. Also a permit to use the local municipal garbage dump in the village of Tubutama was required for garbage disposal. Silver One will need have these permits in place or apply for them again if they have expired.

Micon is unaware of any outstanding environmental liabilities attached to the Peñasco Quemado Project and is unable to comment on any remediation that may have been undertaken by previous companies.

#### **4.4 MICON COMMENTS**

Micon is not aware of any significant factors or risks besides those discussed in this report that may affect access, title or right or ability to perform work on the property by Silver One or any other party that may be engaged to undertake work on the property by Silver One. It is Micon’s understanding that further permitting and environmental studies could be required if sufficient mineralization was discovered and further economic studies were conducted that demonstrated that the mineralization was sufficient to host a mining operation.

The Peñasco Quemado property is large enough to be able to locate and accommodate the infrastructure necessary to host any future mining operations, should sufficient economic mineralization be identified on the property.

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

### **5.1 ACCESSIBILITY**

The Peñasco Quemado project is accessible from Hermosillo, the state capital of Sonora, via both paved and good quality dirt roads. Access is primarily via the Mexican State Highway 15 north from Hermosillo to the junction of State Highway 49 just before the city of Magdalena. From the junction it is approximately 69 km to the village of Tubutama and thence by 14.5 km of dirt road to the property.

### **5.2 LOCAL RESOURCES AND INFRASTRUCTURE**

The closest population centres are the villages of Tubutama and Sáric situated along Sonora Hwy 43 with the village of Tubutama the closest and Sáric situated to the northeast of Tubutama.

The major population centres for the region are Magdalena to the east of Tubutama and Caborca, 50 km west. With populations of over 50,000 inhabitants, these cities are the supply centres for the region. An airstrip is located on the property, but is presently unusable. The closest accommodations are located in Altar, to the southwest of Tubutama, but a camp could be situated on site as there is an adequate water source and electric generator for lighting.

The owner of the ranch upon which the Peñasco Quemado mineralization is located controls the surface rights, but First Mining has obtained access rights and Silver One should be able to obtain these as well.

Water wells exist on the property, but Micon has not investigated the issues regarding Silver One's ability to acquire water use rights for the project in the long term, should a commercial mining operation be developed.

### **5.3 CLIMATE AND PHYSIOGRAPHY**

The Project is located in the Arizona-Sonora desert in the northern portion of the Mexican state of Sonora. The climate at the project site ranges from semi-arid to arid. The average ambient temperature is 21° C, with minimum and maximum temperatures of -5° C and 50° C respectively. The average annual rainfall for the area is 330 millimetres (mm) with a maximum of 880 mm. The wet season or desert "monsoon" season occurs between the months of July and September and heavy rainfall can hamper exploration at times. However, exploration work can generally be conducted year-round in the desert.

The Peñasco Quemado Project is situated within the southern basin and range physiographic province, which is characterized by elongate, northwest-trending ranges separated by wide alluvial valleys. The Peñasco Quemado property is located in a relatively flat area of the desert with the topography ranging between 700 and 800 m above sea level.

Figure 5.1 is a view of the Peñasco Quemado property looking north. The main ranch house located on the West mineralized zone, to the south of this picture.

**Figure 5.1**  
**Peñasco Quemado Property Looking North**



The desert vegetation surrounding the Peñasco Quemado Project is composed of low lying scrub, thickets, and various types of cacti, with the vegetation type classified as Microphyllus Desertic Thicket. The state of Sonora is well known for its mining and cattle industries, although US manufacturing firms have established operations in the larger centres as a result of the North American Free Trade Agreement (NAFTA).

#### **5.4 MICON COMMENTS**

Micon believes that, to the extent relevant to the Peñasco Quemado Project, Silver One should be able to obtain the surface access, environmental sign-off, power, water, and exploration personnel to conduct an exploration program on the property.

## 6.0 HISTORY

### 6.1 GENERAL PROPERTY AND EXPLORATION HISTORY

Mining in the northern part of the state of Sonora, Mexico date back to the precolonial period and both Father Kino and later Father Alvaro mentioned the mineral wealth of the surrounding country side during their missionary travels through this area. The newspapers, Daily Alta California in its August 6, 1860 ran an article on the mineral wealth of Sonora and the Los Angeles Herald on November 6, 1904 commented on interest in the valuable properties that had been neglected in the Magdalena Mining District.

In the 1700s and 1800s a number of mineral properties were operated on various scales but most were abandoned due to the raids conducted on them by the native American tribes in the area with the most prominent being the Apaches.

The Peñasco Quemado property was mined on a small scale many years ago, most likely prior to the 1910 revolution; however, no details are available regarding this early activity. Foundations of an old foundry or mill and a slag pile remain about 200 m west of the present pit. The shafts located on the property, one in the centre and one to the east of the present pit, as well as one which doubles as a water well in the arroyo west of the pit, are all most likely from this early period. Figure 6.1 shows a view of the old foundry or mill foundations as seen from across the creek. Figure 6.2 is a view of one of the old headframes located on the property in 2007 with Figure 6.3 a view of the same headframe that had been destroyed by a fire between the 2007 and 2016 site visits.

**Figure 6.1**  
**Foundations of the Old Foundry or Mill**



Figure derived from the 2007 Micon Technical Report.

**Figure 6.2**  
**Old Headframe East of the Open Pit in 2007**



Figure derived from the 2007 Micon Technical Report.

**Figure 6.3**  
**Old Headframe East of the Open Pit in 2016 after a Fire**



2016, Micon site visit.

Modern exploration activity on the property dates from the early 1960's when Asarco Mexicana (Asarco) reportedly optioned the property as a copper-silver prospect and drilled a total of 531 m of core in 12 holes. Incomplete reports regarding the Asarco exploration indicate that the core recoveries averaged less than 50%. Intercepts of silver were encountered in several drill holes, however the average grades as indicated by drilling (0.04% copper and 56 g/t silver) were uneconomic (according to the 1982 Cerro de Plata report). None of the Asarco

reports has survived and the author was unable to independently confirm the Asarco data contained in the Cerro de Plata report.

Small scale mining was carried out intermittently at Peñasco Quemado by Adalberto Ballesteros beginning in the late 1970's. Silver ore with a grade averaging approximately 225 g/t was mined from a small open pit and the material was shipped as flux ore to the Phelps Dodge smelter in Douglas, Arizona. A total of approximately 10,000 tons was mined from the pit. Figure 6.3 shows the small open pit located on the Peñasco Quemado property.

**Figure 6.4**  
**Small Open Pit at Peñasco Quemado**



Photo taken during the 2016 Micon site visit.

#### **6.1.1 Cerro de Plata Exploration 1980's (Known Data)**

Cerro de Plata optioned the Peñasco Quemado property in early 1981 from Adalberto Ballesteros Duran and Bartolome Lugo Lopez. Cerro de Plata completed the initial geological mapping and surface sampling by March, 1981, which was immediately followed by a drilling program. During the Phase 1 drilling program in April and May, 1981, 12 vertical percussion holes totalling 469 m were drilled in a rectangular grid pattern 30 m by 20 m, extending 200 m west of the pit. In 10 of the 12 holes, significant grades were encountered over good widths. Subsequently, 13 additional holes totalling 814 m were drilled between December, 1981 and February, 1982. During both phases of drilling, the average depth of the holes was 51 m. In addition to the extra drill holes, the geological mapping program and geochemical sampling program were extended over the entire mineralized area. The exploration results delineated shallow silver mineralization in the West zone. Figure 6.4 is a view of a cement marker placed to denote the location of drill hole No. 5.

**Figure 6.5**  
**Site Location of Cerro de Plata Drill Hole No. 5**



Figure derived from the 2007 Micon Technical Report.

All 25 holes drilled by Cerro de Plata were percussion holes using a Mission down-the-hole-hammer and a 6.5-inch diameter bit. Phase I drilling was contracted to Pozos Republicos and Phase II was contracted to Proyectos y Perforaciones Hidraulicas del Noroeste. An 8-inch diameter collar pipe a minimum of 1 m long was set in each hole and holes collared in poorly consolidated alluvium were drilled to bedrock using a 10-inch diameter rotary tricone bit. Eight-inch diameter PVC pipe was set as casing through the alluvium and drill cuttings were collected after passing through a cyclone. Bedrock samples were collected over 1-m intervals for each of the drill holes and the samples averaged approximately 10 kg each. Each sample was thoroughly mixed, then split, with one quarter of the sample sent for assay and the remainder were retained and stored on site. Pulps from the assays were retained.

All the drill samples were analyzed by Jacobs Assay Office in Tucson, Arizona for silver and gold by fire assay, and for copper and manganese by atomic adsorption. Sample splits for the Phase I drilling were fire assayed for silver and gold by Valenzuela Laboratories (Santa Ana, Sonora). Phase II sample splits were fire assayed for silver and gold by Metales Santa Ana (Santa Ana, Sonora). Check assays on the sample splits and pulps were conducted by Rochin Assay Laboratories, of Douglas, Arizona. Sample preparation, analysis and security details are not available for the historical work conducted by Cerro de Plata on the property in the 1980s. All the laboratories in this paragraph were independent of Cerro de Plata but as it was prior to the advent of certification it is not known if these laboratories were certified at the time the samples were processed.

Detailed lithologic logs of the 25 drill holes were not prepared because of the small size of the drill cuttings. Recoveries from the percussion material were are believed to good with better than 90% being recovered.

The following summary of Cerro de Plata's exploration program was provided by Silvermex for Micon's 2007 Technical Report:

1981: Prior to March, 1981, geological mapping and surface sampling were completed.

1981: During the months of April and May, 12 vertical percussion holes were completed, totalling 469 m, in a rectangular grid pattern measuring 30 m by 20 m, and extending 200 m west of the pit. Significant grades over good widths were noted in 10 of the 12 holes and an additional 13 holes totalling 814 m were drilled from December, 1981 through February, 1982.

1982 to 1983: The option was dropped.

Tables 6.1 and 6.2 provide a summary of the historical 1982 drilling data at Peñasco Quemado. The data were provided by Silvermex and Terra Plata for the 2007 Technical Report.

From 1983 to 2004 there was no major exploration conducted on the property.

**Table 6.1**  
**Summary of Percussion Drill Hole Statistics from the 1982 Drill Program**

Drill Hole Number	Drill Collar UTM Co-ordinates (Datum WGS84)			Section Line	Azimuth	Angle	Total Depth (m)
	Easting	Northing	Elevation				
B-1	447,336.160	3,427,758.583	813.886	0	0°	-90°	35.00
B-2	447,358.779	3,427,738.444	813.086	30-SE	0°	-90°	81.00
B-3	447,383.684	3,427,715.592	812.633	60-SE	0°	-90°	30.00
B-4	447,463.832	3,427,672.541	813.585	150-SE	0°	-90°	43.00
B-5	447,478.226	3,427,687.645	816.083	150-SE	0°	-90°	38.00
B-6	447,418.348	3,427,712.064	814.327	90-SE	0°	-90°	25.00
B-7	447,397.240	3,427,731.766	815.708	60-SE	0°	-90°	38.00
B-8	447,404.083	3,427,697.195	813.028	90-SE	0°	-90°	43.00
B-9	447,428.096	3,427,676.235	812.293	120-SE	0°	-90°	32.00
B-10	447,450.984	3,427,656.660	812.004	150-SE	0°	-90°	44.00
B-11	447,488.335	3,427,651.373	812.054	180-SE	0°	-90°	42.00
B-12A	447,442.130	3,427,691.475	813.554	120-SE	0°	-90°	32.00
B-13	447,523.577	3,427,644.506	811.263	210-SE	0°	-90°	50.00
B-14	447,472.505	3,427,635.749	810.985	180-SE	0°	-90°	57.00
B-15	447,567.811	3,427,604.704	811.763	270-SE	0°	-90°	44.00
B-16	447,613.618	3,427,564.222	811.087	330-SE	0°	-90°	57.00
B-17	447,563.892	3,427,554.561	809.086	300-SE	0°	-90°	67.00
B-18	447,518.193	3,427,595.217	810.219	240-SE	0°	-90°	70.00
B-19	447,567.042	3,427,646.607	813.868	240-SE	0°	-90°	69.00
B-21	447,415.853	3,427,661.912	811.752	120-SE	0°	-90°	80.00
B-22	447,427.032	3,427,623.497	811.070	150-SE	0°	-90°	80.00
B-23	447,461.211	3,427,620.980	810.720	180-SE	0°	-90°	80.00
B-24	447,465.560	3,427,582.342	810.103	210-SE	0°	-90°	85.00
B-25	447,674.450	3,427,449.450	810.130	450-SE	0°	-90°	80.00

**NOTES:** The above table excludes Cerro de Plata drill holes B-9A (which was not done), B-12 (for which the information has been lost) and B-20 (which could not be located). All existing information for these holes was mentioned in the December, 2005 technical report.

Table supplied by Minera Terra Plata, SA de CV. For the 2007 Micon Technical Report.

**Table 6.2**  
**Summary of the Significant Percussion Drill Hole Intervals from the 1982 Drill Program**

Drill Hole No.	Total Depth (metres)	Angle	Cross Sections	Mineralized Intersections (metres)			Significant Assays				Comments
				From	To	Thick	Ag g/t	Cu %	Au g/t	Mn %	
B-4	43.00	-90°	-120 SE	2.00	15.00	13.00	232	0.45	0.03	3.10	
				15.00	22.00	7.00	117	0.12	0.01	3.40	
B-6	25.00	-90°	-90 SE	1.00	18.00	17.00	110	0.11	0.05	3.16	
		Include		1.00	4.00	3.00	185	0.09	0.02	3.54	
		Include		11.00	14.00	3.00	202	0.16	-	3.28	
B-7	38.00	-90°	-60 SE	-	16.00	16.00	117	0.12	0.07	2.74	
		Include		-	11.00	11.00	139	-	-	-	
B-9	32.00	-90°	-120 SE	2.00	22.00	20.00	288	0.40	0.48	3.85	
		Include		2.00	12.00	10.00	235	-	-	-	
		Include		12.00	20.00	8.00	411	-	-	-	
		-90°	-120 SE	22.00	32.00	10.00	48	0.01	0.23	4.81	
B-10	44.00	-90°	-150 SE	3.00	23.00	20.00	228	0.33	0.13	2.69	
		Include		13.00	23.00	10.00	259	-	-	-	
		-90°	-150 SE	23.00	44.00	21.00	54	0.02	0.29	4.24	
B-11	42.00	-90°	-180 SE	1.00	24.00	23.00	303	0.38	0.23	1.47	
B-13	50.00	-90°	-210 SE	7.00	26.00	19.00	114	0.30	0.33	4.34	
				26.00	41.00	15.00	133	0.31	0.79	7.59	
B-14	57.00	-90°	-180 SE	9.00	29.00	20.00	200	0.21	0.57	3.69	
				56.00	57.00	1.00	394	0.04	0.51	0.85	
B-18	70.00	-90°	-240 SE	5.00	37.00	32.00	125	0.14	0.09	1.54	
				66.00	70.00	4.00	410	0.44	0.28	1.00	
B-21	80.00	-90°	-120 SE	12.00	22.00	10.00	186	0.32	0.07	1.54	
				22.00	30.00	8.00	48	0.21	0.20	6.17	
B-22	80.00	-90°	-150 SE	29.00	34.00	5.00	155	0.10	0.76	2.67	
				34.00	39.00	5.00	73	0.02	0.06	2.32	
				39.00	49.00	10.00	84	0.08	0.07	2.16	
B-23	80.00	-90°	-180 SE	18.00	64.00	46.00	203	0.30	0.11	1.85	
		Include		27.00	42.00	15.00	397	-	-	-	
B-24	85.00	-90°	-210 SE	27.00	53.00	26.00	233	0.33	0.04	0.53	
		Include		25.00	39.00	14.00	302	-	-	-	
		Include		41.00	47.00	6.00	348	-	-	-	

Table supplied by Minera Terra Plata, SA de CV. For the 2007 Micon Technical Report.

In 2004, exploration work was carried out by geologists Julio Cesar Esquer and Jaime Castillo. They conducted field mapping and sampling on the brecciated zones and successfully delineated a continuous 1,500 by 150 m mineralized zone. A total of 21 chip samples were collected at this time; 14 samples were collected from the brecciated zone to confirm the continuity of the West and East zones and 7 samples were collected from the granitic intrusive within previously identified strongly fractured and oxidized zones.

### **6.1.2 Silvermex Exploration Programs at Peñasco Quemado 2005**

After acquiring the property, Silvermex initiated a review of the available geological data for the project and compiled all information into a comprehensive database. Based upon the database Silvermex identified a number of immediate exploration targets in and around the old pit and surrounding West and East zones which warranted further work.

In September, 2005 Silvermex, which was incorporated on April 7, 2005, conducted its first exploration program on the Peñasco Quemado property which was comprised of 15 reverse circulation drill holes and totalled 1,449.35 m. The objective of the exploration program was two-fold: first, to confirm the results of the previous drilling programs conducted by Cerro de Plata on the West zone and, secondly, to progressively extend the drilling to the southwest to explore and to expand the limits of the known silver mineralization on the West zone, and to begin to explore the mineral potential of the East zone.

The drilling was conducted by Dateline Internacional S.A. de C.V. (Dateline) which is based in the city of Hermosillo, Sonora. Dateline is an independent drilling contractor and has no interest in Silvermex or its subsidiary Terra Plata.

The RC program was conducted by using a single track-mounted RC drill, equipped with a 750/900 cubic feet per minute (cfm) compressor. The diameter of the RC drill bit was 12.5 centimetres (cm, five inches) and the drilling pipe was 10.0 cm (four inches).

The drilling program was designed by Silvermex personnel and, in accordance with the existing Cerro de Plata grid, a new grid was laid out over the West and East zones, using a reference line at an azimuth of 134° and using historical drill hole B-1 as the initial point for the grid. The reference line is the support line for a grid in which the cross-sections are situated 30 m apart and strike S44°E and N46°W.

The initial drill hole collar locations were measured from the reference line using a Brunton compass and chain, and marked prior to drilling with wooden stakes denoting the drill hole collar location plus a front sight. The individual crosscutting grid lines along the reference line are spaced out along the line at 30-m intervals by inserting a metal pin into the ground. These metal pins have been flagged and spray painted for ease of location. After the drill hole was completed, the collar locations were marked with cement markers denoting the drill hole number. The collar location is also measured using a hand-held GPS instrument (Garmin model 12XL). The NAD27 (Mexico) Universal Transverse Mercator (Zone 13Q) co-ordinate system was adopted for this drilling program. Silvermex also re-measured the collar locations

of the 1982 Cerro de Plata drill holes using the GPS instrument in order to tie in both programs to a common survey.

Contour lines and other features such as roads, creeks, limit fences et cetera were positioned by approximation using a government map of the area in digital format and, in most cases, were originally surveyed by the Instituto Nacional de Estadística Geografía e Informática (INEGI).

The lithologies and alteration features encountered by the RC drill holes were described on hand-written logs and sampled as they were in progress. A portion of the material generated for each sample interval was retained in a plastic specimen tray. Each compartment in the specimen tray was marked with both the sample interval and sample number. Blank compartments within the trays were left for the locations where both the blank samples and standard samples were inserted into the sample stream. Compartments within the trays were also designated for the duplicate samples.

The RC drilling was primarily confined to the West zone with 13 of the total 15 drill holes concentrated in this area. The remaining two holes were drilled on the East zone close to the silicified-manganese-copper mineralized outcrops located at the southeastern extent of the mineralized trend according to Cerro de Plata's data.

The previous percussion drilling program conducted by Cerro de Plata in the early 1980's indicated that the West zone of silver mineralization dips at a shallow angle to the southwest. Cerro de Plata drilled all holes vertically, whereas Silvermex drilled perpendicular to the apparent strike of the mineralization. The dip of the holes was set at  $-60^{\circ}$  to account for the shallow dip and attempts to crosscut the mineralization perpendicular to its dip. The azimuth of the holes was  $46^{\circ}$ . The depth of the drill holes was based on a preliminary outline of the mineralized zone as indicated by the original Cerro de Plata drilling. The recovery of the material appeared to be good with an estimated better than 90% of the material recovered from the RC holes.

At the northwestern extent of the mineralization (West zone) the holes were drilled to a maximum depth of 121.92 m, with an average depth of 94 m. At the southeastern extent of the mineralization, drill hole PQ-12 was drilled to a depth of 83.83 m and drill hole PQ-13 was drilled to a depth of 134.11 m.

Silvermex's fall 2005 drilling program was successful in confirming the nature of the mineralization which Cerro de Plata encountered during its exploration programs in the early 1980's. Silvermex also began to extend the mineralization in both the southeast direction towards what Cerro de Plata referred to as the East zone and in the southwest direction towards the arroyo (creek). The drilling program also started to explore the nature and extent of the silver mineralization in the East zone. All 15 of the RC drill holes encountered some degree of silver, copper, manganese and lead mineralization on the Peñasco Quemado property.

Table 6.3 provides a summary of Silvermex's 2005 drilling program on the property.

**Table 6.3**  
**Summary of Reverse Circulation Drill Hole Statistics from the 2005 Drill Program**

Drill Hole Number	Drill Collar UTM Co-ordinates (Datum WGS84)			Section Line	Azimuth	Angle	Total Depth (m)
	Easting	Northing	Elevation				
PQ-01	447,426.200	3,427,677.011	812.138	120-SE	44.000	-60.00	67.05
PQ-02	447,390.692	3,427,642.206	811.580	120-SE	44.000	-60.00	91.44
PQ-03	447,421.457	3,427,588.171	810.385	180-SE	44.000	-60.00	100.58
PQ-04	447,457.141	3,427,624.647	810.897	180-SE	44.000	-60.00	91.44
PQ-05	447,488.970	3,427,659.043	812.548	180-SE	44.000	-60.00	60.96
PQ-06	447,451.876	3,427,534.226	809.336	240-SE	44.000	-60.00	114.30
PQ-07	447,488.501	3,427,571.424	809.596	240-SE	44.000	-60.00	94.48
PQ-08	447,525.232	3,427,606.431	810.335	240-SE	44.000	-60.00	64.01
PQ-09	447,507.899	3,427,506.589	808.327	300-SE	44.000	-60.00	121.92
PQ-10	447,564.228	3,427,478.492	807.038	360-SE	44.000	-60.00	121.92
PQ-11	447,608.048	3,427,390.856	805.259	450-SE	44.000	-60.00	115.82
PQ-12	447,843.457	3,427,274.840	799.513	700-SE	44.000	-60.00	85.34
PQ-13	447,980.569	3,427,130.127	795.688	900-SE	44.000	-60.00	134.11
PQ-14	447,360.964	3,427,698.263	812.384	60-SE	44.000	-60.00	73.15
PQ-15	447,430.654	3,427,554.417	809.779	210-SE	44.000	-60.00	109.78

Table extracted from 2005 Silvermex Technical Report.

Table 6.4 is a summary of the depth of the alluvial material encountered in each hole on the Peñasco Quemado property.

**Table 6.4**  
**Depth of Alluvial Material Encountered in the Drill Holes at Peñasco Quemado**

Drill Hole Number	Drill Hole Angle	Section Line	Depth of Alluvial in Drill Hole (m)	
			Drilling Distance	Vertical Distance
PQ-01	-60°	120-S	0.00	0.00
PQ-02	-60°	120-S	18.29	15.83
PQ-03	-60°	180-S	24.38	21.12
PQ-04	-60°	180-S	10.67	9.24
PQ-05	-60°	180-S	0.00	0.00
PQ-06	-60°	240-S	21.34	18.48
PQ-07	-60°	240-S	15.24	13.19
PQ-08	-60°	240-S	3.05	2.64
PQ-09	-60°	300-S	24.38	21.13
PQ-10	-60°	360-S	19.81	17.16
PQ-11	-60°	450-S	19.81	17.16
PQ-12	-60°	700-S	13.72	11.87
PQ-13	-60°	900-S	3.05	2.64
PQ-14	-60°	060-S	9.14	7.92
PQ-15	-60°	150-S	19.81	17.15

Table extracted from 2005 Silvermex Technical Report.

Table 6.5 is a summary of the significant assay results of Silvermex's 2005 exploration drilling program.

**Table 6.5**  
**Summary of the Significant Reverse Circulation Drill Hole Intervals from the 2005 Drill Program**

Drill Hole No.	Total Depth (metres)	Angle	Azimuth	Cross Sections	Mineralized Intersections (metres)				Significant Assays			Comments
					From	To	Interval	True Width	Ag g/t	Cu %	Mn %	
PQ-01	67.05	-60°	44°	120-S	0.00	36.58	36.58	36.58	182	0.228	3.245	Includes values above 30 g/t silver
				Includes	12.19	19.81	7.62	7.62	445	0.554	0.440	
PQ-02	91.44	-60°	44°	120-S	18.29	39.62	21.34	21.34	76	0.048	2.871	
				Includes	22.86	27.43	4.57	4.57	151	0.136	1.803	
PQ-03	100.58	-60°	44°	180-S	35.05	68.58	33.53	33.53	239	0.295	1.231	
				Includes	35.05	54.86	19.81	19.81	279			
				Includes	56.39	68.58	12.19	12.19	377			
PQ-04	91.44	-60°	44°	180-S	9.14	60.96	51.82	51.82	125	0.164	2.884	
				Includes	9.14	28.96	19.81	19.81	163			
				Includes	45.72	60.96	15.24	15.24	154			
PQ-05	60.96	-60°	44°	180-S	0.00	30.48	30.48	30.48	207	0.424	4.960	
PQ-06	115.82	-60°	44°	240-S	51.82	79.25	27.43	27.43	73	0.078	1.871	
				Includes	62.48	65.53	3.05	3.05	242			
PQ-07	94.49	-60°	44°	240-S	15.24	44.20	28.96	28.96	220	0.273	2.295	Hole terminated in high grade silver
				Includes	15.24	19.81	4.57	4.57	319			
				Including	25.91	38.10	12.19	12.19	299			
				And	91.44	94.49	3.05	3.05	151			
PQ-08	64.01	-60°	44°	240-S	3.05	18.29	15.24	15.24	87	0.197	2.481	
				Includes	6.10	10.67	4.57	4.57	153			
PQ-09	121.92	-60°	44°	300-S	41.15	54.86	13.71	13.71	44	0.117	0.283	
				And	65.53	70.10	4.57	4.57	61			
PQ-10	121.92	-60°	44°	360-S	62.48	64.01	1.53	1.53	21	0.018	3.100	From 62.48 m to the end of the hole are anomalous silver values above 10-15 ppm
				And	80.77	83.82	3.05	3.05	27			
				And	108.20	121.92	13.71	13.71	25			
PQ-11	115.82	-60°	44°	450-S	77.72	82.3	4.58	4.58	30	0.017	2.743	
PQ-12	85.34	-60°	44°	700-S	45.72	47.24	1.52	1.52	33	0.022	7.310	
PQ-13	134.11	-60°	44°	900-S	109.73	111.25	1.52	1.52	40	0.072	0.350	Very separated anomalous silver values
PQ-14	73.15	-60°	44°	060-S	7.62	15.24	7.62	7.62	48	0.052	1.914	
PQ-15	109.78	-60°	44°	150-S	50.29	70.72	20.43	20.43	117	0.170	1.781	
				Includes	51.82	67.06	15.24	15.24	168			

Table extracted from 2005 Silvermex Technical Report.

Subsequent to the initial 2005 drilling program, prospecting, geological mapping and sampling were carried out on the Peñasco Quemado property and this information was combined with the 2005 drilling results to identify further exploration and in-fill drilling targets.

### **6.1.3 Silvermex Exploration Programs at Peñasco Quemado 2006**

The 2006 drilling program conducted by Silvermex at the Peñasco Quemado project was comprised of 19 drill holes totalling 2,248.61 m, of which 12 holes (1,639.03 m) were diamond drilling and 7 holes (609.58 m) were reverse circulation. The core drilling was distributed as follows: 4 holes were drilled in the Peñasco Quemado area (West zone), 4 holes in the southeastern portion of the Peñasco Quemado area (East zone) and the remaining four holes were drilled at the San Luis-Pink Breccia area west of the Peñasco Quemado area. The reverse circulation drilling was distributed as follows: two in-fill drill holes in Peñasco Quemado (West zone), 2 holes in the Stockwork area and 3 holes in the Low Angle area, which lie to the west of the Peñasco Quemado area.

The drilling contractor chosen by Silvermex to conduct the diamond drilling was Construcción, Arrendamiento de Maquinaria y Minería, S.A. de C.V. (CAMMSA), which is based in the city of Guanajuato, Guanajuato in central Mexico. Diversified Drilling S.A. de C.V. (Diversified), formerly Dateline Internacional S.A. de C.V. (Dateline), based in the city of Hermosillo, Sonora, was the drilling contractor chosen by Silvermex to conduct the reverse circulation drilling. Both drilling contractors are independent contractors with no interest in Silvermex or its subsidiary Terra Plata.

The diamond drilling portion of the program was conducted by using one drilling rig mounted on skids, model LY-38. The diameter of the diamond drill core was either NQ or HQ, with the size determined by the hardness and conditions of the bedrock that were encountered during the drilling.

The reverse circulation program was conducted by using a single track-mounted drill, equipped with a 750/900 cubic feet per minute (cfm) compressor. The diameter of the reverse circulation drill bit was 12.5 centimetres (cm, five inches) and the drilling pipe was 10.0 cm (four inches).

The locations of new drill holes in the main Peñasco Quemado area (West zone) were based on the drill holes of the 2005 program. The drill locations in the southeastern portion of the Peñasco Quemado area (East zone) and for the targets in the western area of the property were selected based on the geology and the combined interpretation of the geology-alteration and assay results. The initial drill hole collars were located using a hand held Garmin GPS Map model 60CSx and marked prior to drilling with wooden stakes denoting the drill hole collar plus a front sight line to indicate the azimuth of the hole. After a drill hole was completed, the collar location was marked with a cement marker denoting the drill hole number.

The first area covered by the drilling program was the immediate area southeast of the old pit in-order to extend the trend of the high grade mineralization exposed in the pit. The 2006 drill holes confirmed the presence of high grade silver mineralization in the conglomerates and

breccias for at least 300 m along strike to the southeast and extended the mineral deposit 50 m to the southwest down dip. The step-out drilling program provided valuable information regarding the structural history and orientation of the mineral deposit. While the mineralization is consistent along the entire 750 m of strike length, its general south-east trend has been offset by north-south faulting approximately 450 m southeast of the old pit.

The drilling program for the Peñasco Quemado area once again used the original Cerro de Plata grid laid out over the project area in 1982. The section lines are orientated at a 46° azimuth and systematically separated a distance of 30 m with the reference line orientated at an azimuth of 134°.

Upon completion of the drilling program, all drill hole collars, including those of the 2005 drill program and the 1982 program that had a reliable position were surveyed by an independent contractor, InterGeografica de Mexico, S.A. de C.V. (InterGeografica), using a GPS Total Station Trimble 5700 movil and 4700 rover (base), and then linked to the drilling of the 1982 program completed by Cerro de Plata. A detailed survey map was also generated for the Peñasco Quemado West zone, which covered approximately 45 hectares with contour lines every 0.50 m, as this is the location of the silver mineralization which is the subject of the current resource estimate on the property.

For the other target areas, the contour lines and other features such as roads, creeks, limit fences, etcetera were positioned by approximation using a government map in digital format, and, in most cases, these were originally surveyed by the Instituto Nacional de Estadística, Geografía e Informática (INEGI).

Table 6.6 provides a summary of Silvermex's 2006 drilling program on the property. Table 6.7 is a summary of the depth of the alluvial material encountered in each hole on the Peñasco Quemado project.

**Table 6.6**  
**2006 Diamond and Reverse Circulation Drilling Program at the Peñasco Quemado**

Drill Hole Number	Drill Hole Depth (m)	Drill Hole Angle (°)	Azimuth (°)	Section Line	Drill Collar UTM Coordinates (Datum WGS84)		
					Easting	Northing	Elevation
PQ-16	109.73	-90	-----	210-SE	447,4270.183	3,427,550.460	808.999
PQ-17	109.73	-90	-----	270-SE	477,527.681	3,427,561.567	809.130
PQD-01	164.25	-60	45	240-SE	447,485.195	3,427,568.144	809.685
PQD-02	150.05	-60	45	150-SE	447,417.972	3,427,632.365	811.399
PQD-03	160.60	-60	45	180-SE	447,387.204	3,427,560.413	809.538
PQD-04	208.15	-60	45	450-SE	447,664.294	3,427,448.094	808.312
PQD-05	250.45	-50	45	720-SE	447,888.987	3,427,293.098	801.624
PQD-06	288.25	-50	75	960-SE	448,091.312	3,427,154.581	794.831
PQD-07	69.45	-60	75	1080-SE	448,179.974	3,427,068.187	792.316
PQD-08	69.45	-90	-----	150-SE	447,400.076	3,427,614.770	811.016
SLD-07 *	78	-70	60	SLD-07-08	445,978.125	3,427,291.745	831.462
SLD-08 *	51.6	-70	60	SLD-07-08	445,931.741	3,427,260.601	836.775
SLD-09 *	52.25	-70	60	SLD-09	445,950.864	3,427,317.520	838.694
SLD-10 *	55.68	-70	60	SLD-10	445,968.788	3,427,245.915	833.208
STW-01	79.24	-90	-----	STW-01	445,371.910	3,427,200.795	832.553
STW-02	100.58	-90	-----	STW-02	445,521.130	3,427,435.585	870.409

LA-01	42.67	-90	-----	LA-01	446,572.155	3,426,810.500	811.290
LA-02	42.67	-90	-----	LA-02	446,410.590	3,426,693.843	796.489
LA-03	100.58	-90	-----	LA-03	446,708.969	3,426,855.180	810.406
<b>Total Drilling</b>	<b>2,183.38</b>						

NOTE: PQD prefix means diamond drilling.

\* Diamond Drilling

Table taken from the 2007 Technical Report.

**Table 6.7**  
**Depth of Alluvial Material Encountered in the Drill Holes at Peñasco Quemado**

Drill Hole Number	Drill Hole Angle	Section Line	Depth of Alluvial in Drill Hole (m)	
			Drilling Distance	Vertical Distance
PQ-16	-90°	210-SE	12.19	12.19
PQ-17	-90°	270-SE	4.57	4.57
PQD-01	-60°	240-SE	22.70	19.65
PQD-02	-60°	150-SE	18.40	15.93
PQD-03	-60°	180-SE	18.80	16.28
PQD-04	-60°	450-SE	1.60	1.38
PQD-05	-50°	720-SE	0.00	0.00
PQD-06	-50°	960-SE	1.00	0.76
PQD-07	-60°	1080-SE	0.95	0.82
PQD-08	-90°	150-SE	21.50	21.50
SLD-07	-70°	Sec SLD-07	0.85	0.79
SLD-08	-70°	Sec SLD-08	1.30	1.22
SLD-09	-70°	Sec SLD-09	1.40	1.31
SLD-10	-70°	Sec SLD-10	0.65	0.61
STW-01	-70°	STW-01	0.00	0.00
STW-02	-70°	STW-02	0.00	0.00
LA-01	-90°	LA-01	0.00	0.00
LA-02	-90°	LA-02	0.00	0.00
LA-03	-90°	LA-03	0.00	0.00

Table taken from the 2007 Technical Report.

Table 6.8 is a summary of the significant assay results of Silvermex's 2006 exploration drilling program for the Peñasco Quemado area (West zone) and Southeastern Trend (East zone)

Figure 6.6 is a geological map of the Peñasco Quemado area showing the locations of the drill holes in the West and East zones.

Figures 6.7 and 6.8 show the locations of the 2006 drill holes in relationship to the previous drilling on the West zone at the Peñasco Quemado project for Sections 240-SE and 150-SE, respectfully.

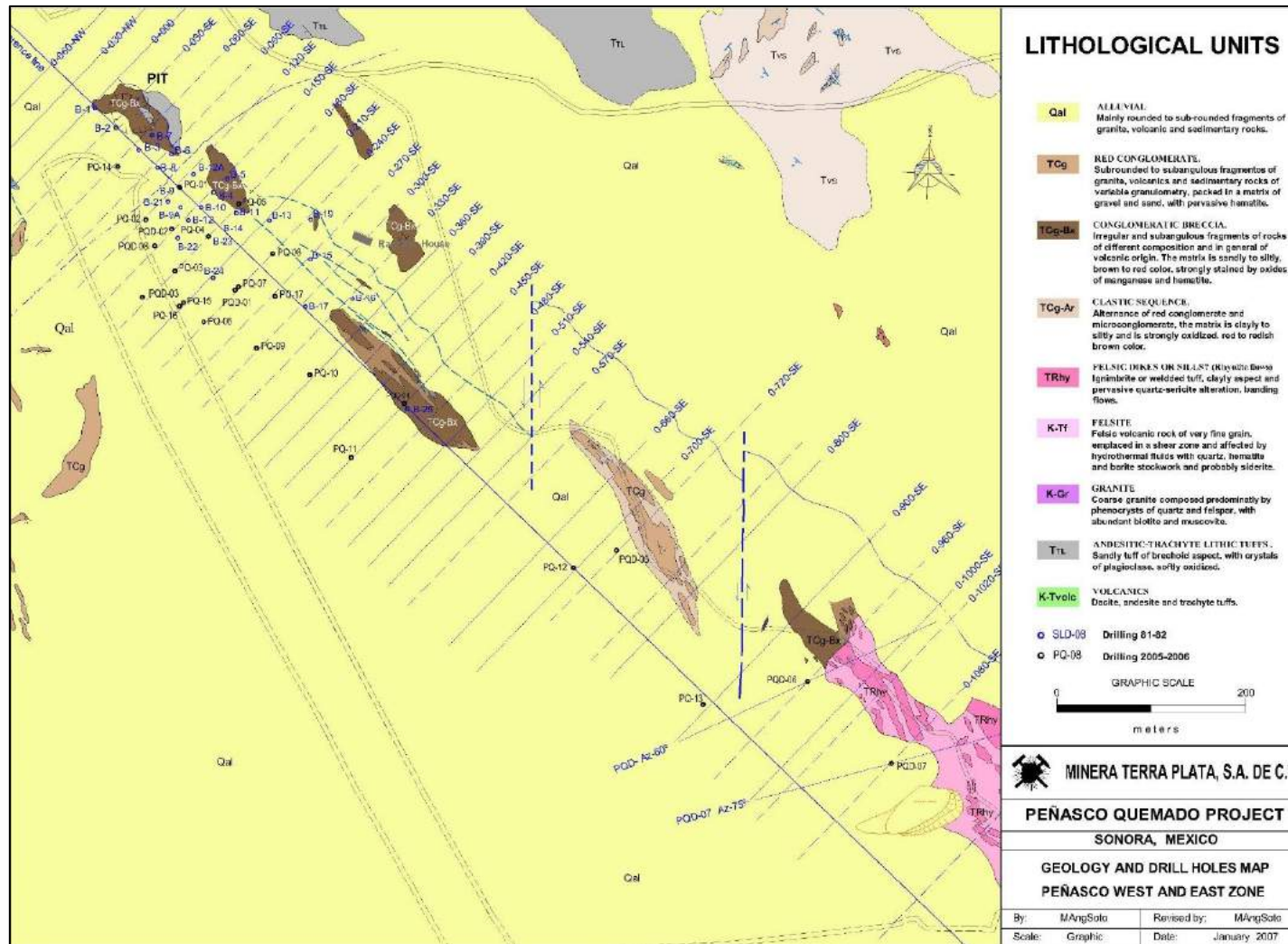
Figures 6.9 and 6.10 show the locations of the 2006 drill holes in relationship to the previous drilling on the East zone at the Peñasco Quemado project for Sections 450-SE and 720-SE, respectfully.

**Table 6.8**  
**Summary of Significant Assay Results for the 2006 Drilling Program Peñasco Quemado Area (West Zone) and Southeastern Trend (East Zone)**

Drill Hole Number	Drill Hole Depth (m)	Drill Hole Angle (°)	Azimuth (°)	Cross-Section	Mineralization Interval (m)				Drill Hole Assay Results			Comments
					From	To	Core Length	True Width	Silver (g/t)	Copper (%)	Manganese (%)	
PQD-01	164.25	-60	46	240-SE	22.70	43.60	20.90	20.90	99	0.215	0.674	This hole is a twin for hole PQ-07 drilled during the 2005 reverse circulation program. Hole drilled for geological data.
				includes	22.70	35.00	12.30	12.30	117			
PQD-02	150.05	-60	46	150-SE	19.60	49.10	29.50	29.50	168	1.143	1.66	In-fill drilling for geological data to support resource estimate.
				includes	19.60	38.40	18.80	18.80	229			
PQD-03	160.60	-60	46	180-SE	56.90	66.05	9.15	9.15	268	0.228	1.24	Exploration and in-fill drilling to test continuity of mineralization to the southwest of the known limit and confirm extension.
PQD-04	208.15	-60	45	450-SE	-----	-----	-----	-----	-----	-----	-----	Low silver values were encountered from surface to a depth of 60 m, more drilling is needed to check its relationship to values in PQD-05
PQD-05	250.45	-50	45	720-SE	55.50	69.50	14.00	14.00	79			The assay results open up the possibilities in the East zone. The mineralization is open at depth and in the direction of the leached outcrop, in the inverse direction of the dip, confirming the displacement of the mineralized structure by north-south faulting.
				Includes	62.00	69.50	7.50	7.50	110			
PQD-06	288.25	-50	75	960-SE	-----	-----	-----	-----	-----	-----	-----	Located 900 m south of the present pit, with no significant assay results encountered.
PQD-07	69.45	-60	75	1080-SE	-----	-----	-----	-----	-----	-----	-----	Located 1,080 m south of the present pit, done to explore the projection in the south of the mineral trend. No significant assays were encountered
PQD-08	110.30	-90	----	150-SE	34.25	46.70	12.35	12.35	321	0.160	0.980	Confirm the extension to the west of the Penasco Quemado silver deposit
				includes	35.85	45.20	9.35	9.35	392			
PQ-16	134.11	-90	----	210-SE	47.24	60.96	13.72	13.72	113			Confirm the extension on the western extreme of cross-section 210 SE
				includes	54.86	60.96	6.10	6.10	146			
PQ-17	109.72	-90	----	270-SE	4.57	15.24	10.67	10.67	112			Confirm the extension on the western extreme of cross-section 270 SE
				includes	4.57	10.67	6.12	6.12	146			
				And	24.38	39.62	15.24	15.24	127			
				includes	25.91	35.05	9.14	9.14	182			
<b>Total Drilling</b>	<b>1,645.33</b>											

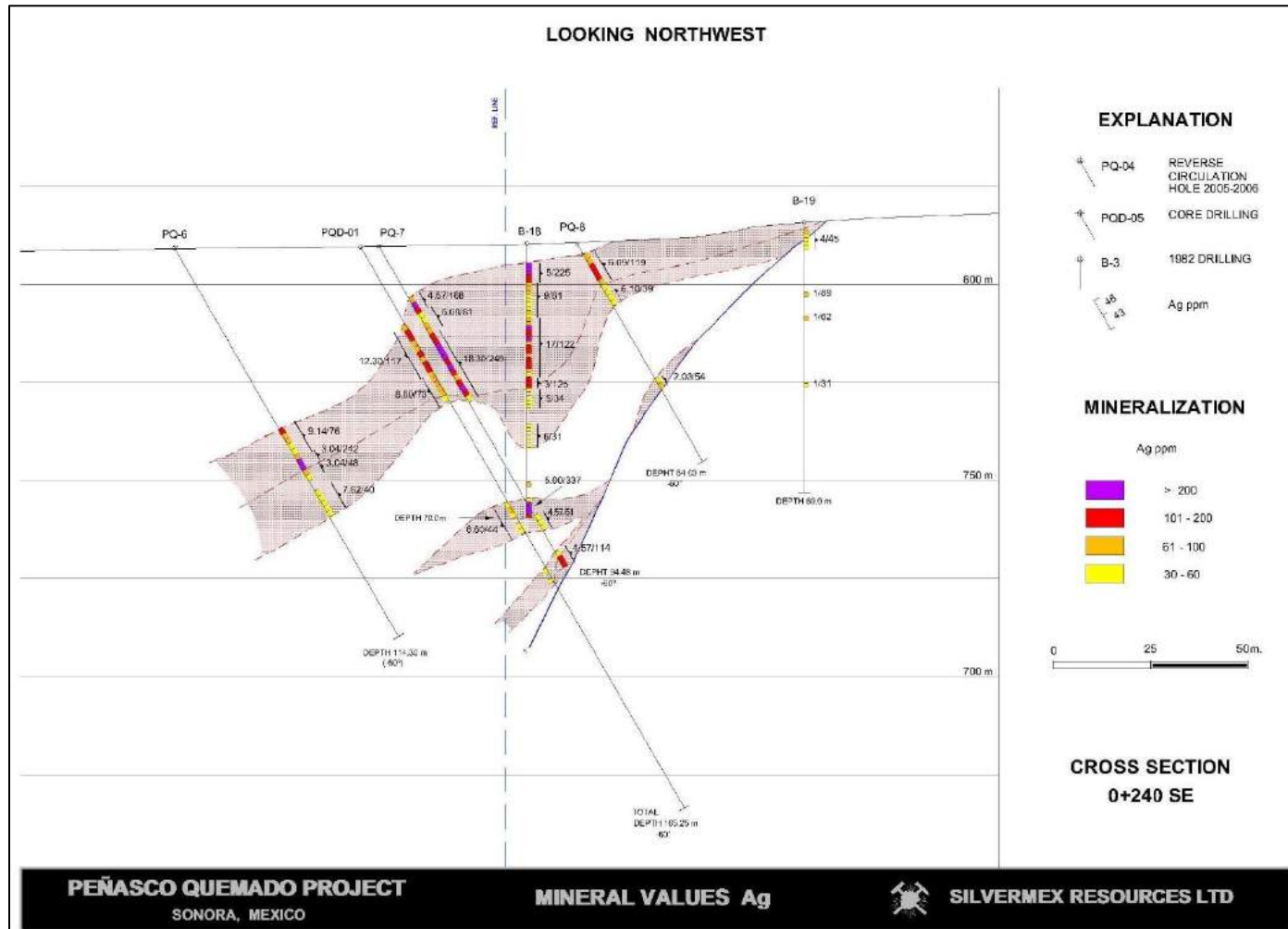
**NOTE:** Considering that the general dip of the mineralized zones is in the order of 20° to 25° southwest, in the drill holes completed with an angle of 70° to the northeast, the intervals shown in this table correspond to the true intercepted thick. For the vertical drill holes the true thickness shall be calculated when the assays return.  
Table taken from the 2007 Technical Report.

**Figure 6.6**  
**Geology and Drill Hole Locations for the Peñasco Quemado West and East Zones**



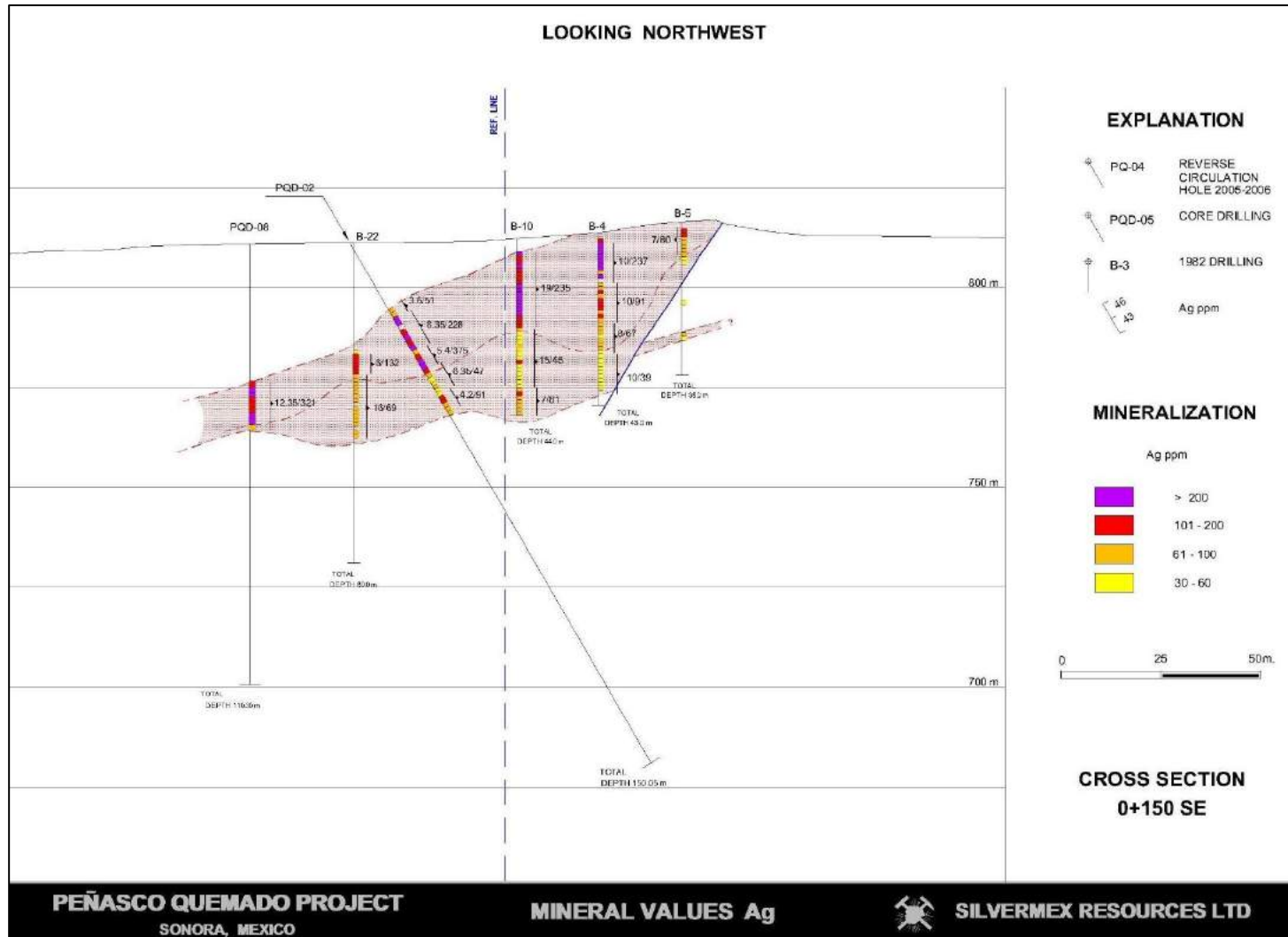
Map provided by Silvermex Resources Limited/Minera Terra Plata, S.A. de C.V. for the 2007 Technical Report.

**Figure 6.7**  
**Section 240-SE Drill Hole Intersections on the Peñasco Quemado West Zone**



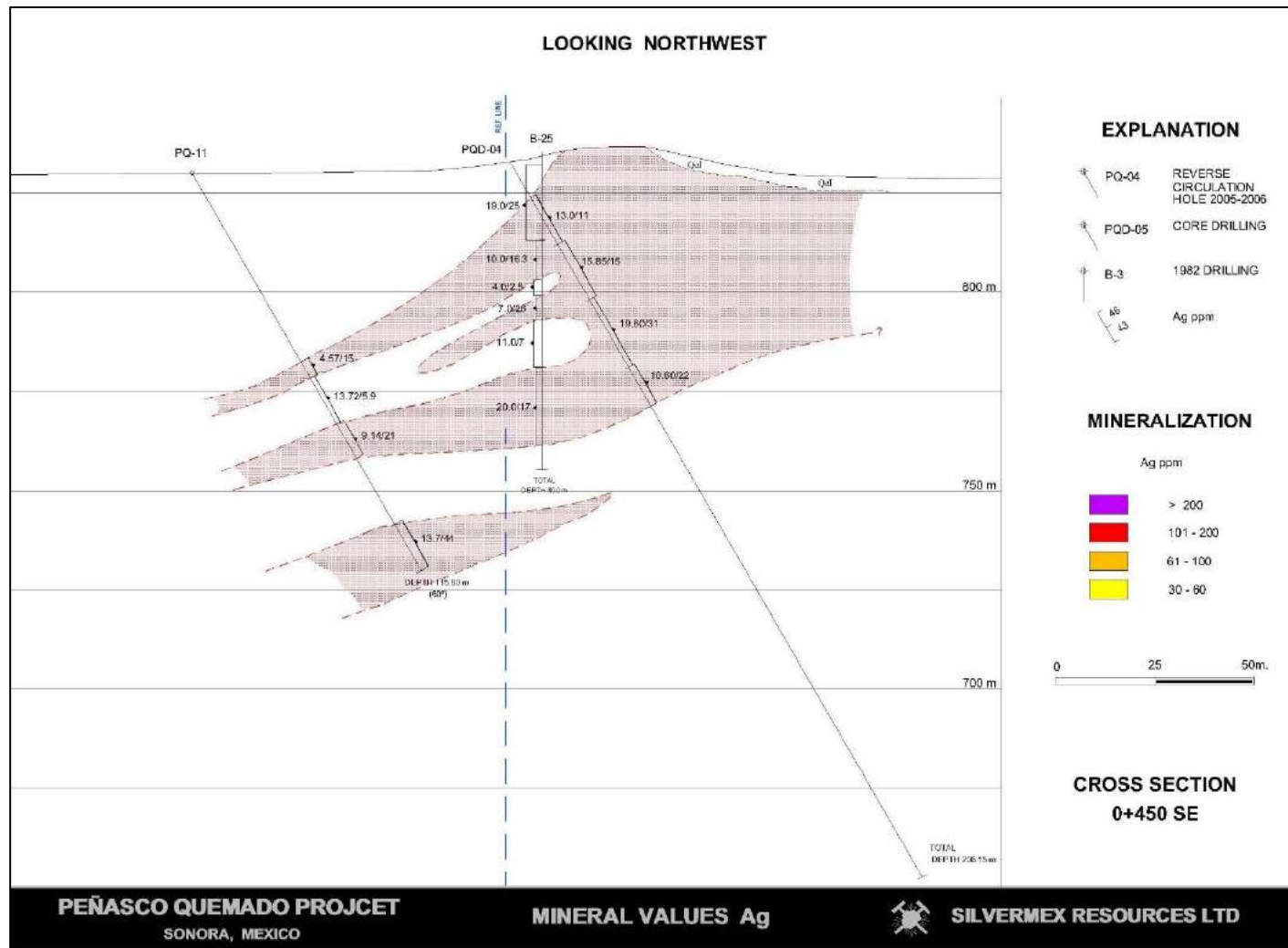
Section provided by Silvermex Resources Limited/Minera Terra Plata, S.A. de C.V. for the 2007 Technical Report.

**Figure 6.8**  
**Section 150-SE Drill Hole Intersections on the Peñasco Quemado West Zone**



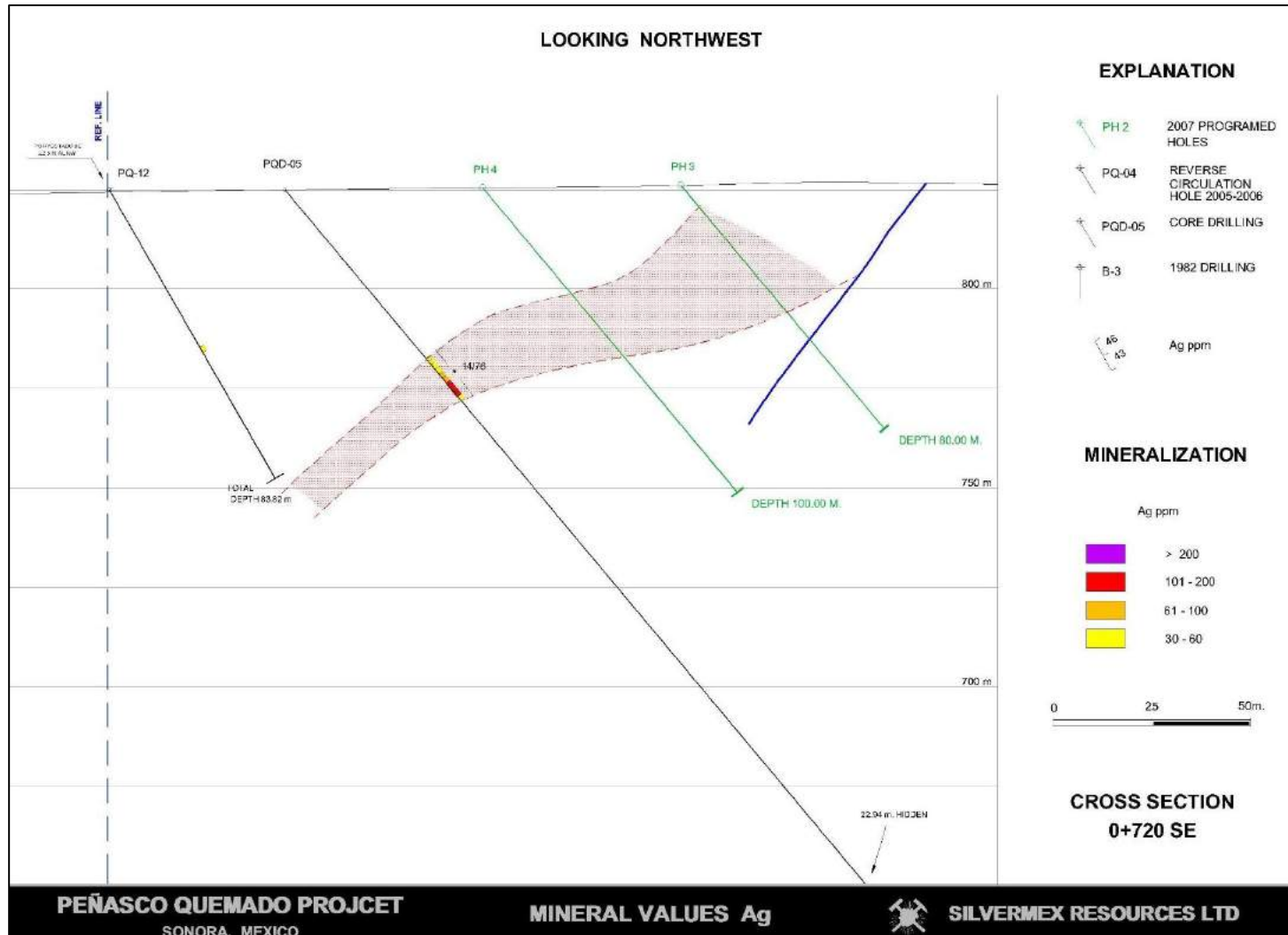
Section provided by Silvermex Resources Limited/Minera Terra Plata, S.A. de C.V. for the 2007 Technical Report.

**Figure 6.9**  
**Section 450-SE Drill Hole Intersections on the Peñasco Quemado East Zone**



Section provided by Silvermex Resources Limited/Minera Terra Plata, S.A. de C.V. for the 2007 Technical Report.

**Figure 6.10**  
**Section 720-SE Drill Hole Intersections on the Peñasco Quemado East Zone**



Section provided by Silvermex Resources Limited/Minera Terra Plata, S.A. de C.V. for the 2007 Technical Report.

The San Luis/Red Breccia area consists of a series of outcrops, which show the red conglomerate overlying a volcanic unit of andesitic composition exhibiting a brecciated aspect and gray to reddish brown in colour. The volcanic unit is in turn resting on a felsite unit that is covering the gneissic granite. The important lithological unit is the brecciated andesite because it contains silver and copper values, is strongly oxidized and contains a stockwork of malachite and chrysocolla. It was not possible to identify the silver mineral, but the grades in separated samples ranged from a low of 10 g/t silver to a high of 758 g/t silver.

The geological sequence found at the San Luis/Red Breccia area outcrops over a strike length of 100 m or more, has a thickness of 15 m to 25 m and dips an average 20° along an azimuth of 225°. Once geological mapping and sampling was completed, four diamond drill holes were laid out in the immediate area of the mineralized outcrops to explore the continuity, at depth, of the silver and copper mineralization encountered on surface.

Table 6.9 is a summary of the significant assay results of Silvermex's 2006 exploration drilling program for the Stockwork and San Luis/Red Breccia areas of the Peñasco Quemado project. Figure 6.11 is a geological map of the Peñasco Quemado project showing the locations of the drill holes in the Stockwork and San Luis/Red Breccia areas.

Figure 6.12 is a cross-section through Section P-P' showing drill holes SLD-07 and SLD-08. Figure 6.13 is a cross-section through Section P-2 to P-2' showing drill hole SLD-10.

Silvermex considered that results of the core drilling in the San Luis/Red Breccia area was successful. However, further interpretation regarding the mineral intersections needed to be conducted. It was originally assumed that the control mechanism for the mineralization was stratigraphic but the results of drill hole SLD-08 demonstrated that other control mechanisms exist. Further exploration comprised of additional geological mapping and sampling needs be conducted and then analyzed to identify the other possible control mechanisms of the mineralization which then can be tested by additional drilling.

Two reverse circulation holes were drilled in what Silvermex termed the Stockwork area to explore, at depth, the silver, copper and gold values detected on surface in veins, breccias and a stockwork system along a strike length of 600 m. The mineralization values are associated with a quartz-hematite stockwork and with a breccia comprised of large fragments developed within a mylonitic rock that corresponds originally to the gneissic intrusive and lenses of the fine-grained felsite. The reverse circulation holes drilled were STW-01 and STW-02, but no mineral values were detected in either of the drill holes and further assessment of the available data for this area should be conducted to identify a reason for the discrepancy between the surface exploration results and the drilling results.

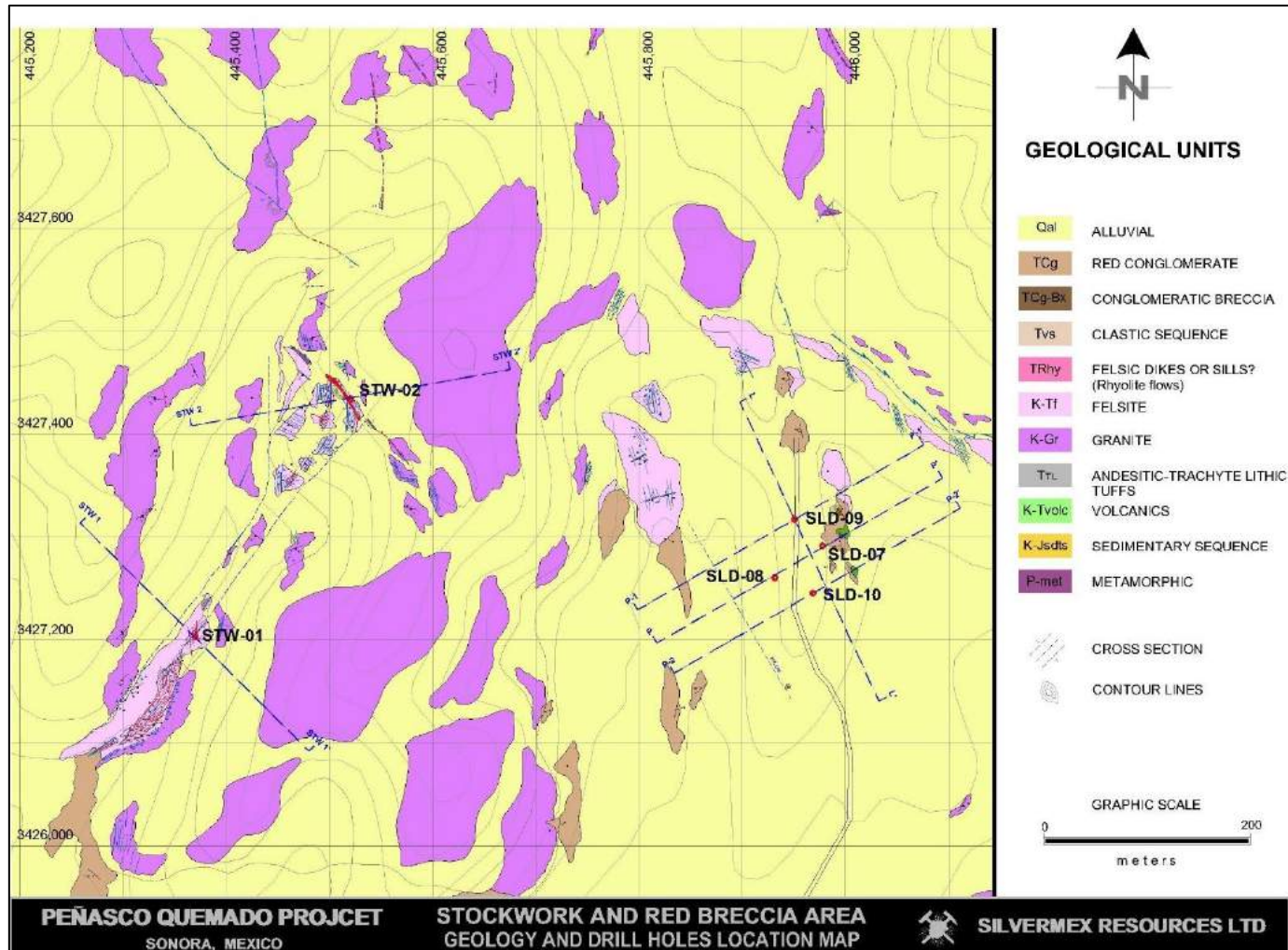
See Figures 6.14 and 6.15 for cross-sectional views through Sections STW-1 to STW-1' and STW-2 to STW-2', showing drill holes STW-01 and STW-02 in the Stockwork Area.

**Table 6.9**  
**Summary of Significant Assay Results for the 2006 Drilling Program San Luis/Red Breccia Area**

Drill Hole Number	Drill Hole Depth (m)	Drill Hole Angle (°)	Azimuth (°)	Cross-Section	Mineralization Interval (m)				Drill Hole Assay Results			Comments
					From	To	Core Length	True Width	Silver (g/t)	Copper (%)	Manganese (%)	
SLD-07	78.0	-70	60	P-P'	0.85	11.30	10.45	10.45	727.7	0.259	0.218	The silver mineralization is hosted by an andesitic breccia, very oxidized.
SLD-08	51.60	-70	60	P-P'								No important silver values were detected at the upper conglomerate.
SLD-09	52.25	-70	60	P-1-P-1'	11.85	21.35	9.50	9.50	560.9	0.249	0.758	Lead and zinc anomalous values were detected at the upper conglomerate.
SLD-10	55.68	-70	60	P-2-P-2'	18.00	18.40	0.40	0.40	148	0.079	0.160	The hole was done at the eastern limit of the mineralized zone and it is narrow. More drilling is needed to explore the continuity of the silver values intersected by the holes SLD-07, 09 and their relationship with hole SLD-10
<b>Total Drilling</b>	<b>237.53</b>											

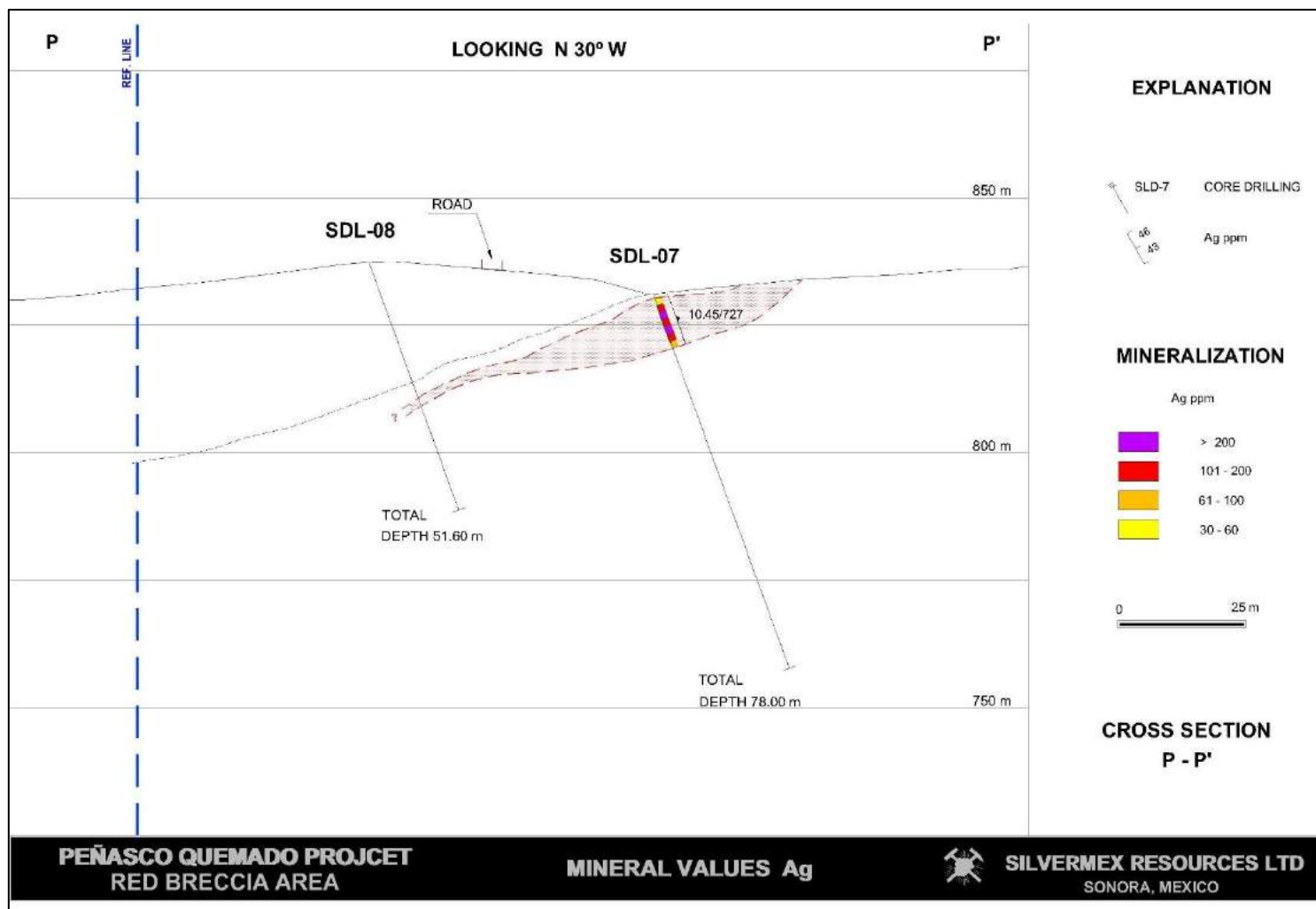
Table provided by Silvermex Resources Limited/Minera Terra Plata, S.A. de C.V.

**Figure 6.11**  
**Geology and Drill Hole Locations for the Stockwork and San Luis/Red Breccia Areas**



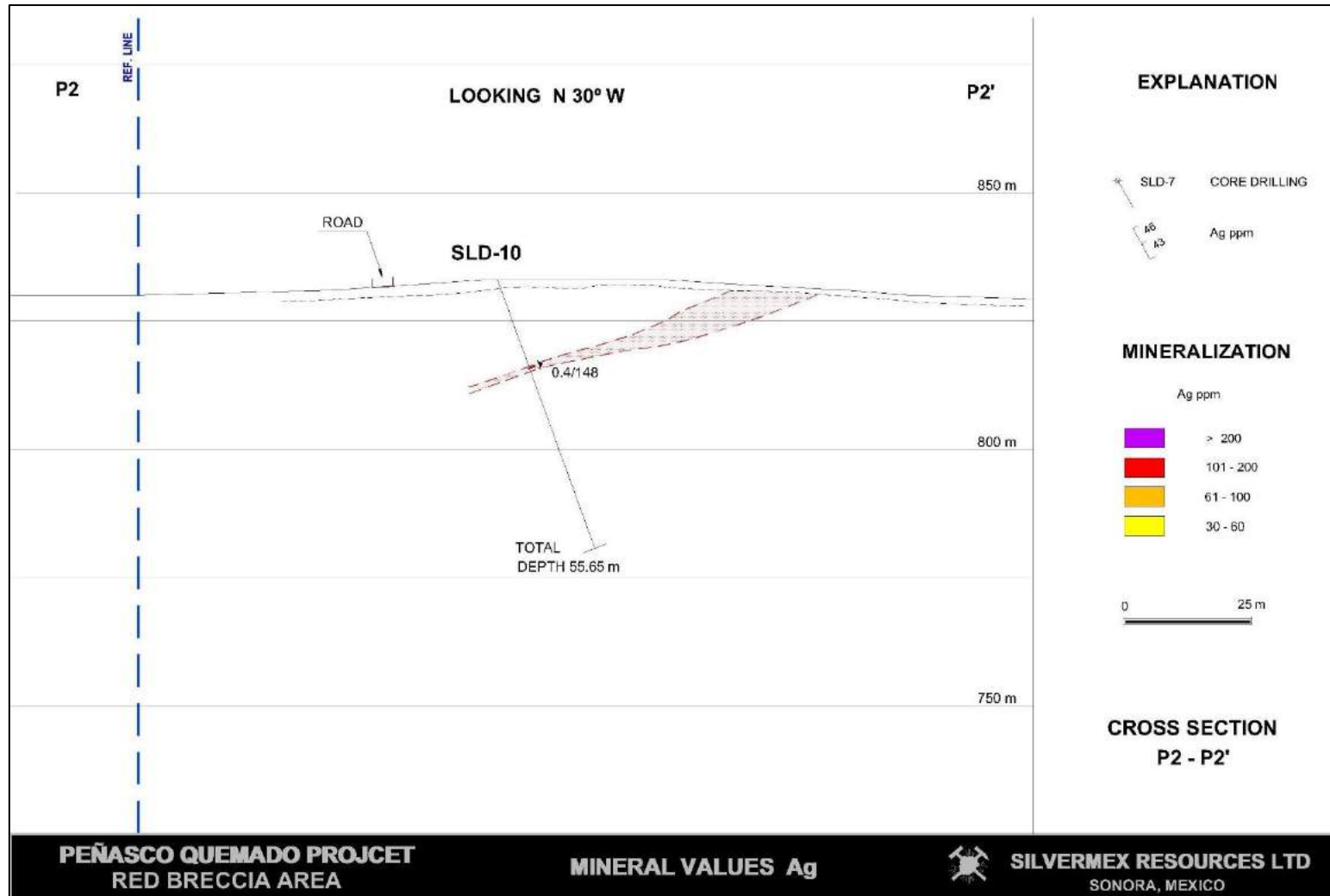
Section provided by Silvermex Resources Limited/Minera Terra Plata, S.A. de C.V. for the Silvermex 2007 Technical Report.

**Figure 6.12**  
**Section P to P' Drill Hole SDL-07 and SDL-08 Intersections within the San Luis/Red Breccia Area**



Section provided by Silvermex Resources Limited/Minera Terra Plata, S.A. de C.V. for the Silvermex 2007 Technical Report.

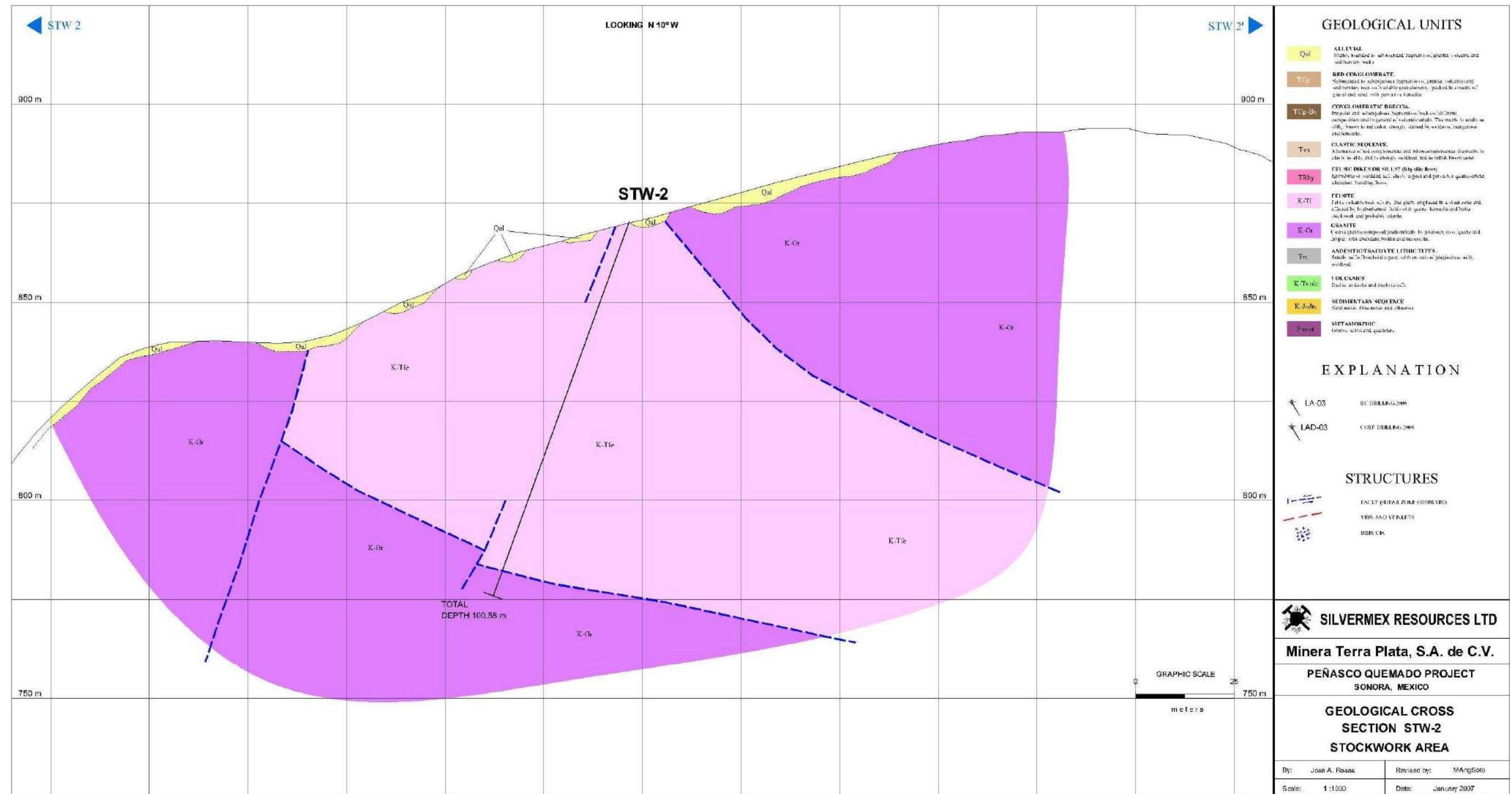
**Figure 6.13**  
**Section P-2 to P-2' Drill Hole SDL-10 Intersections within the San Luis/Red Breccia Area**



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**Figure 6.15**  
**Section STW-2 to STW-2' Drill Hole STW-02 Intersections within the Stockwork Area**

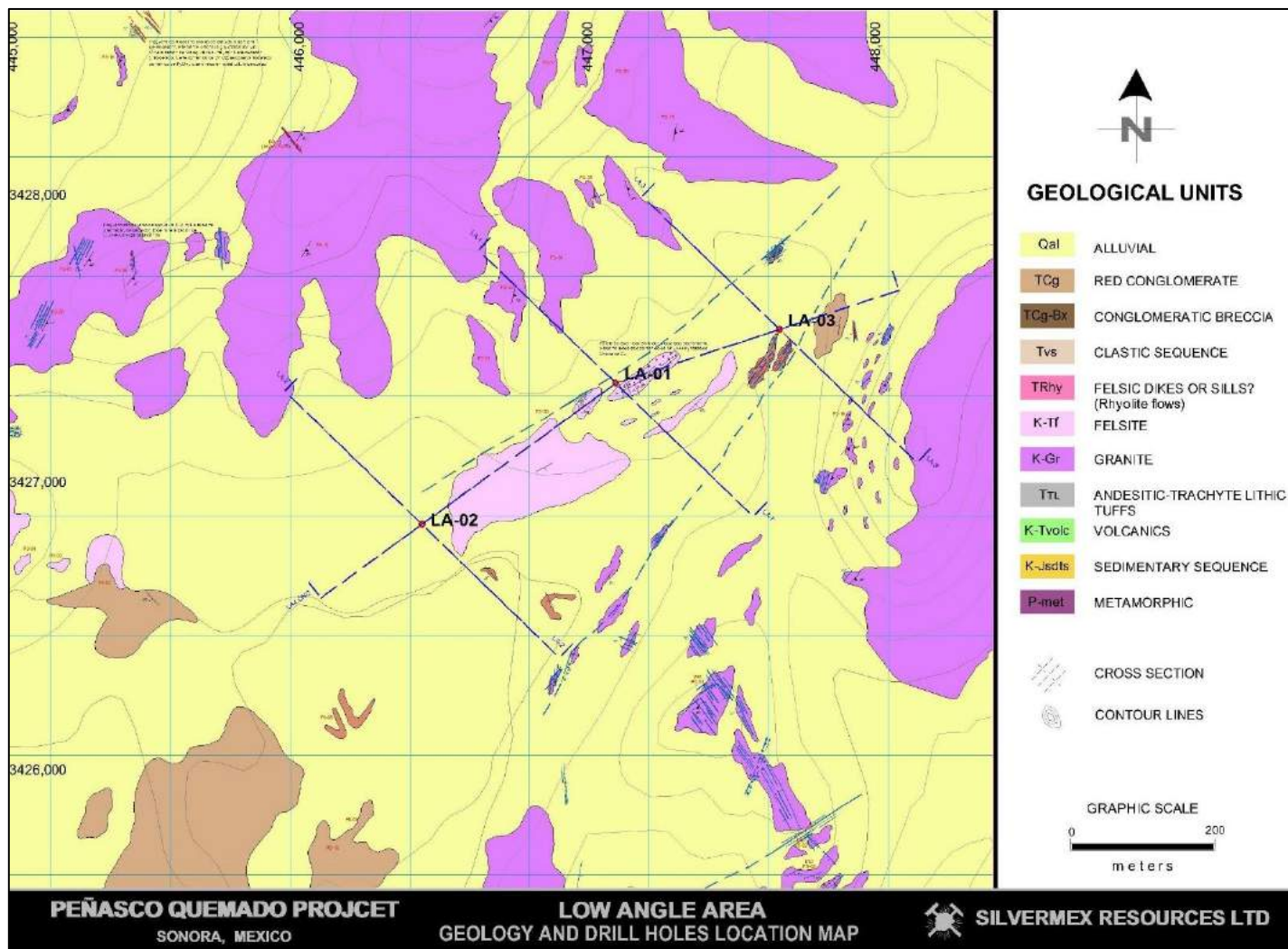


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Three reverse circulation holes were drilled by Silvermex in the area they termed the Low Angle area to test the gold, copper and silver anomalies detected on surface during the previous stage of prospecting and geological mapping and sampling. The mineral anomalies are associated with a rock unit emplaced within a shear zone which consists of a very fine-grained unit that Silvermex calls a felsite. The felsite is located in the contact zone between a younger upper lithological sequence which includes the red conglomerate, volcanic and sedimentary rocks, and the gneissic granite of the basement lithology. The felsite is strongly silicified and affected by a strong stockwork of hematite which has been shown in a mineralogical study to be associated with silver sulphosalts. The reverse circulation holes drilled in the Low Angle area were LA-01, LA-02 and LA-03 and totalled 185.92 m. None of drill holes intersected mineral values and the maximum intersected thickness of the felsite unit was 75 m before penetrating the gneissic intrusive. Like the Stockwork area, an assessment of the available data should be conducted to identify a reason for the discrepancy between the surface results and the drilling results.

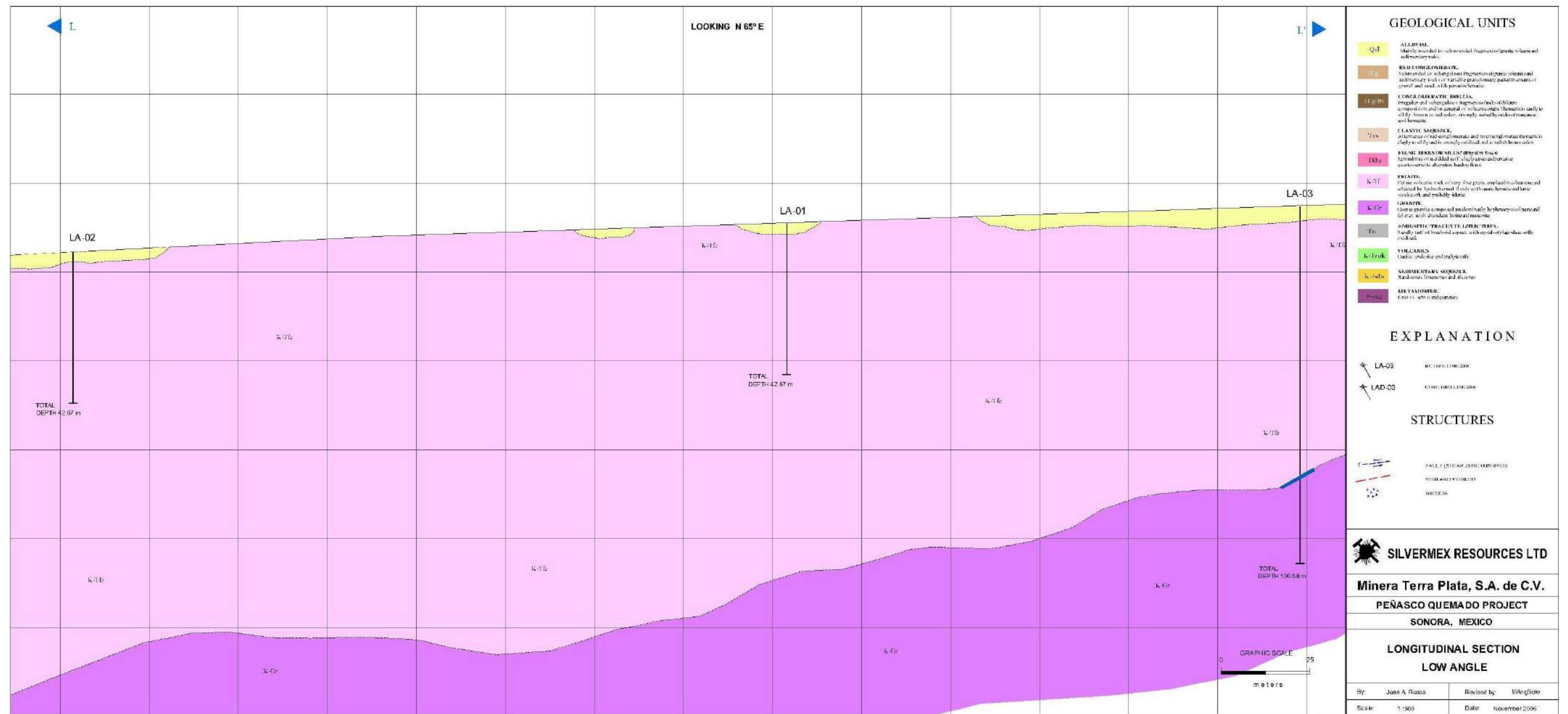
See Figure 6.16 for a geological map of the Peñasco Quemado project showing the locations of the drill holes in the Low Angle area. See Figure 6.17 for a view through Long Section L to L' showing drill holes LA-01 to LA-03.

Figure 6.16  
Geology and Drill Hole Locations for the Low Angle Area



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**Figure 6.17**  
**Long Section STW-2 to STW-2' Drill Hole STW-02 Intersections within the Stockwork Area**



Section provided by Silvermex Resources Limited/Minera Terra Plata, S.A. de C.V. for the Silvermex 2007 Technical Report.

#### **6.1.4 Historical Silvermex Sampling and QA/QC Program**

Silvermex through its Mexican subsidiary (Terra Plata) conducted its initial exploration drilling program on the project in September, 2005 and instituted sampling procedures for the reverse circulation drilling program, as a result. During the August to October, 2006 drilling program Silvermex continued to use the reverse circulation sampling procedures instituted for the 2005 program while instituting a further set of sampling procedures to cover the diamond drilling program. Micon examined both sets of drilling procedures during the site visit in September, 2006 and is satisfied that they have been accurately carried out. The following material has been extracted from the 2007 Silvermex Technical Report from Sections 12 and 13.

##### **6.1.4.1 Reverse Circulation Drilling**

For the reverse circulation drilling, a portion of the material generated for each sample interval was retained in a plastic specimen tray created specifically for the reverse circulation drilling. The plastic specimen tray constitutes the primary reference for the hole in much the same way as the core does for the diamond drilling. The specimen tray was marked with the drill hole number and each compartment within the tray was marked with both the interval and number for the respective sequential sample it contained. Empty compartments were left for the locations where both the blank and standard samples were inserted into the sequential sample stream and two compartments were filled and identified for each duplicate sample.

Due to the nature of the reverse circulation drilling, only rock chip fragments are produced which range from a very fine grained powder up to coarse chips 2 cm in size. Since the stratigraphic contact between the different rock units cannot be identified exactly the holes were sampled on equal 1.52 to 1.53 m (5 ft) intervals from the collar to the toe of the hole. The sample interval was chosen because it represented two samples per drill rod (3.04 m or 10 ft). In general this is considered to be the standard sampling length within the industry, as it is not too large a sample or sampling interval to dramatically skew the assay results for a drill hole.

Samples of the reverse circulation drilling were taken in the overlying alluvium as well within the underlying rock units. The alluvium samples were subject to random assaying, whereas every sample originating from the underlying rock units was assayed. The recovery of the material during the drilling program was excellent, in the order of 90% to 95%.

##### **6.1.4.2 Diamond Drilling (Core)**

For the drilling operations where core drilling is conducted the sampling controls start after a run has been completed and the rods are pulled out of the drill hole. Once the core is removed from the core barrel it is placed in core boxes, with the length of each box depending on the type of core stored in it (2.40 m for HQ diameter or 3.00 m for NQ diameter). This follows standard procedures developed for core placement in the core boxes.

Small wooden tags mark the distance drilled in metres at the end of each run. In the case of the Peñasco Quemado drilling, the drilling rods are measured in imperial units while the tags placed in the boxes and the core logging are measured in metric units. The drill hole number and box number are marked on each filled core box by the drill helper and checked by the geologist. Once the core box is filled at the drill site the box is covered with a lid to protect the core and the box is sent to the core logging facility for further processing.

For diamond drilling where core is produced, a unique record of the exact stratigraphic contact can be identified. Since identification of the exact stratigraphic contact between the different rock units can be established, the stratigraphic contacts are used as the primary basis for separation of the sampling intervals, with the maximum sampling length within a stratigraphic unit restricted to approximately 1.0 m or 2.0 m and no minimum size restriction. The 1.0 m or 2.0 m maximum sampling interval was chosen because it is generally regarded as the standard sampling length within the industry and, in general, it is not too large an interval to dramatically skew the assay results. However, in addition to the stratigraphic restrictions on the length of the core interval, the size of the sample may have been restricted because of the content or type of mineralization encountered in the drill hole. In general, the core recovery for the diamond drill holes in the Peñasco Quemado project was better than 98% and no core loss due to poor drilling methods or procedures was experienced.

A common feature in the sampling process for each of the drilling types is that a unique sample tag was inserted into the sample bag with each sample and each sample bag was marked with its individual sample number. The bags containing the blank and standard samples were added into the sequential numbering system prior to being shipped to the assay preparation facilities of Acme Analytical Laboratories Ltd (ACME) in Hermosillo. ACME uses the Sonora Sampling Preparation-IPL (SSP) facility in Hermosillo to prepare samples for them. SSP is a subsidiary of International Plasma Labs (IPL) of Vancouver, Canada. Samples identified as field-duplicate samples during the reverse circulation drilling were split into two separate sequentially numbered samples during the sampling process at the drill. In the case of the diamond drilling the duplicate samples were identified during core logging and the half of the sawn core chosen as the sample portion was quartered and sequentially numbered in the sampling process. ACME, SSP and IPL are all independent laboratories who conduct testing on samples for a fee and are all independent of Silvermex.

ACME's quality system compliant with the International Standards Organization (ISO) 9001 Model for Quality Assurance and ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.

IPL is officially registered and certified with the BC Ministry of Environment, Land and Parks and the Canadian Association for Environmental Analytical Laboratories. IPL also takes part in regular CEAL performance evaluation programs. Since October, 1997, it has participated in the Proficiency Testing Program for Mineral Analysis Laboratories (PTP-MAL) which is offered by CANMET. KPMG Quality Registrar Inc. (KPMG.QRI) approved IPL's quality system (ISO 9002:1994) in November, 1997. Intertek Testing Services NA Ltd. approved IPL's quality system (ISO 9001:2000) in November, 2003.

While Sonora Sampling preparation still does not have its own ISO certification, it operates under the IPL ISO certification and full time supervision of the Sonora Sampling facilities is reportedly conducted by IPL personal.

#### 6.1.4.3 Sample Collection

The diamond drilling and reverse circulation sampling was conducted by a team of two or three geological assistants under the close supervision of the Silvermex/Terra Plata staff geologists in charge of the program on site.

##### *Reverse Circulation Drilling*

The samples collected at the drill site were discharged from the drill hole through a hose into a cyclone and then collected in a plastic pail. Sample preparation of the material generated during the reverse circulation drilling was conducted at the drill rig using a stainless riffle splitter if the material was dry and using a rotary splitter situated below the cyclone if the material was wet. The cyclone and splitters were cleaned off between samples and, in the case of wet samples, the cyclone and splitters were blown out using compressed air and also washed out between each sample using clean water. Using a 12.5 cm drill bit and a sample length of 1.52 m, it is estimated that the mass of the recovered sample varied between 42 and 45 kilograms (kg) which represents a recovery of between 90% and 95%.

The method of splitting the samples derived from the drilling was as follows:

- 1) If the sample was dry, the entire sample interval was collected in a bucket and then passed through the riffle splitter twice before the final sample of 21- to 23-kg was collected with the remaining 21- to 23-kg rejected. The 21- to 23-kg sample was subjected to a second split to obtain two samples of 10- to 12-kg (an original and a witness sample). The geologist or one of his helpers (under supervision) had previously marked the drill hole number and sample number on the plastic sample bag and inserted the sample tag in the sample bag for the original sample. Both bags were closed and sealed at the drill with plastic tie wraps and transported to the camp facilities.
- 2) If the sample was wet, it was discharged to a cyclone and then passed through a rotary cone splitter to divide the sample into two equal portions, one of which was automatically rejected and the other half collected and simultaneously split into two equal halves by means of a mechanism designed for this purpose and installed in the lower portion of the rotary splitter. The two samples were collected in fabrine sample (micropore) bags to allow retention of the solids and the slow dissipation of the drilling water through the pores in the sample bags without sample loss. In all cases a flocculent was used to settle the solids, including the fine portion, prior to tying the fabrine bag. The outside of each sample bag was marked with the sample's individual number which corresponded to the number on the sample tag which was inserted into the sample bag.

All samples from the reverse circulation drilling were prepared at the drill site by the Silvermex/Terra Plata staff geologists and their assistants. Several times per day a truck was dispatched to take the samples to the secure camp storage facilities located in the city of Magdalena.

A truck was dispatched twice a week to deliver the samples to the Hermosillo assay preparation laboratory of ACME, which is the SSP facility.

Sample bags containing the blank and standard samples were added into the sequential numbering system prior to being shipped to the assay preparation facility in Hermosillo. Samples selected as duplicates were split into two separate sequentially numbered samples during the sampling process at the drill.

#### *Diamond Drilling (Core)*

For the core drilling, a truck went to each drill site to collect the core boxes at regular intervals during the day. The boxes were loaded into the truck and placed in a criss-cross pattern and then secured to the truck by ropes to prevent movement on the short drive back to the on-site core logging facilities.

Once the core boxes arrived at the logging facility, the boxes were laid out in order, the lids were removed and the core was washed to remove any grease and dirt which may have entered the boxes. The depth markers were checked by the geologist and the depth “from” and “to” for each box was noted on both, the top and the bottom covers of each core box to ensure that the boxes were correctly recorded.

The sampling of the core for the 2006 drilling program was comprised of sampling the entire length of the drill hole from where the hole first intersected bedrock to the toe of the hole. The standard samples intervals varied from 1 m to 2 m in conjunction with the geological and mineral features observed during the logging. Some samples were limited to geological boundaries that were less than 1 meter, but this was only an occasional occurrence. The geologist who was logging the core would begin by examining the core to ensure it was intact. During the core logging process the geologist would define the sample contacts and designate the axis along which to cut the core with special attention paid to the mineralized zones to ensure representative splits. The sample limits were marked on the core as well as on the side of the core box and the sample numbers were marked on the core box next to the sample limits at the beginning and end of each sample interval or at the centre. Afterwards the sample limits were input into an Excel spreadsheet, which defined the sample number and intervals

Once the core was logged and the samples marked, the core boxes were brought to area where a diesel diamond saw had been set up to cut the samples. At the sampling area two core splitters and their helpers processed the samples by using the diamond saw to cut the core in half. Once the core was sawn in half, one half of the core was placed into a plastic sample bag and the other half was returned to the core box. The geologist or his assistant had previously marked the sample bags with the sample number and inserted the individually numbered sample tag

into the plastic bag. A geologist supervised the core sawing to ensure that the quality of the core sample remained high and that no mistakes were introduced into the system due to sloppy practices. The boxes containing the remaining half core were stacked, with lower numbers at the bottom and the higher numbers at the top, and stored on site in a secure core storage facility.

The samples bags were placed into large canvas sacks with generally 7 to 10 plastic sample bags per sack. These sacks were secured and then shipped to the laboratory. A truck was dispatched twice a week to deliver the samples to the SSP assay preparation facility in Hermosillo

#### 6.1.4.4 Historical Silvermex QA/QC

As part of Silvermex's Quality Assurance/Quality Control (QA/QC) procedures, a set of samples comprised of a blank sample, a standard reference sample and a field-duplicate sample were inserted randomly into the sample sequence. The insertion rate for the blank, standard and duplicate samples was one in twenty-five.

Sample bags containing the blank and standard samples were added into the sequential numbering system prior to being shipped to the assay preparation facility in Hermosillo. Samples selected as duplicate samples were split into two separate sequentially numbered samples during the sampling process at the drill for the reverse circulation drilling and in the logging facilities for the drill core samples.

#### *Blank Samples*

The blank sample used for the Peñasco Quemado project drilling program was obtained from sampling a barren tonalite dike which outcrops at the southwestern extent of Timmin's Goldcorp's San Francisco pit located at the San Francisco mine, 2 km west of the town of Estacion Llano. Once the rock was washed, it was dried and a crushed to obtain material down to minus 1 inch in size. The material was homogenized in a gyratory tank during 12 hours and finally passed through a splitter to be distributed in 1-kg lots in sample bags that were sealed with tie wraps.

Five of the one kilogram samples were randomly selected and sent to different laboratories to be assayed for gold using the fire assay method, and also by the multi-element method using multi-acid digestion. All five laboratories were given a sample which corresponded to number 636741. All samples were prepared using the same procedure and the selected laboratories to which the samples were sent for assaying were ALS-Chemex, ACME, Accurassay Laboratories (Accurassay), TSL Laboratories Inc. (TSL), and SGS Mineral Services (SGS), all of which are certified laboratories based in Canada and all of which are independent of Silvermex. Accurassay conforms with requirements of CAN P-4E ISO/IEC 17025, and CAN-P-1579. TSL quality system conforms to requirements of ISO/IEC Standard 17025 guidelines. SGS meets the requirements of the ISO/IEC 17025 standard for 67 specific registered tests for the minerals industry.

From the assay results obtained from five separate independent laboratories, which show a very low to negligible content for silver, it is apparent that the material from the tonalite dyke can be used as a local blank for the drilling program.

#### *Standard Samples*

The standard reference sample used at the start of the 2006 Peñasco Quemado drilling program was an in-house standard reference samples prepared for Silvermex. Later in the program, a package of standard reference samples was purchased from CDN Resource Laboratories Ltd. of Delta, British Columbia, Canada which is independent of Silvermex.

To obtain an In-House Standard Reference Material sample (IHSRM) for the Peñasco Quemado drilling program, Silvermex chose three (a low, medium and high grade silver) samples from among the retained mineralized witness samples generated during the 2005 Peñasco Quemado drilling program and originally assayed by ALS-Chemex. Silvermex engaged six different qualified laboratories to assay the prepared samples to determine the average grade of the sample and a total of 18 randomly selected samples were sent to these six laboratories.

The IHSRM's preparation was contracted with SSP, a preparation facility based in Hermosillo, Sonora, which supplies preparation services to ACME, International Plasma Lab. Ltd. (IPL) and Jacobs Laboratories. All samples were prepared using the same procedure and the selected laboratories to which the samples were sent for assaying were ALS-Chemex, ACME, IPL, Accurassay, TSL, and SGS, all of which are certified laboratories based in Canada and all are independent of Silvermex.

However, a commercial standard reference material was later used because of the high standard deviations reported in the in-house standard reference material. For the commercial standard, Silvermex contacted CDN Resources Laboratories Ltd., (CDN Resources) of Delta, British Columbia, Canada and purchased two standard reference material samples for use at the Peñasco Quemado project. CDN Resources distributes standard reference material samples prepared by themselves. These samples came from the High Lake West Zone deposit, which is an Archean aged Volcanogenic Massive Sulphide (VMS) deposit in the Slave structural province of Canada. The samples contain both high and low silver values within massive to semi-massive sulphides. These samples are labeled as HLLC for the sample grading 65.1 g/t silver and HLHZ for the sample grading 101.2 g/t silver. The matrix of these standard reference material samples does not really match with the geological material at the Peñasco Quemado project; however, these samples were included as a reference sample to check the assay preparation and assaying procedures and accuracy.

#### *Duplicate Samples*

For the reverse circulation drilling, samples which were identified for duplication (i.e. field-duplicates) were processed and split in the same way as the regular samples taken on either side of them. However, the final 21- to 23-kg sample was subjected to a further split in the field which yielded two 10.5- to 11.5-kg samples in the case of dry samples. In the case of wet

samples, they were dried and then passed through the riffle splitter to obtain a second (duplicate) sample of approximately the same mass as the original sample. During the August to October, 2006 drilling program all samples produced during the reverse circulation drilling were dry. The duplicate samples were given sequential numbers and submitted as two separate samples for the purpose of assaying so that the receiving laboratory did not know it was receiving duplicate samples.

For the diamond drilling, samples which were identified as the duplicate samples were sawn in half as the regular samples were and then the half which was identified as the portion which was to be sent for assaying was further sawn to obtain two quarter samples. The quarter samples were each individually placed in a separate plastic bag. One of the quarter samples was identified as the original sample and a tag with the sample number was placed in the bag with the sample. The second quarter core sample was identified as the duplicate and a sample tag with the consecutive sample number after the sample number identifying the original sample was placed in the sample bag for the duplicate sample.

#### *Sample Preparation*

All sample preparation for ACME is conducted through the SSP preparation facilities in Hermosillo and, while SSP does not have its own ISO certification, it operates under ACME's ISO certification. The ACME Vancouver assay laboratory was the first assaying laboratory in North America to be accredited under ISO 9002 and ACME is currently registered with ISO 9001:2000 accreditation.

The ACME assaying procedure chosen by Silvermex for analyzing the drilling samples for the Peñasco Quemado project was the Group 7 Multi-element assay by ICP-MS and specifically the method variation G7TD which corresponds to a hot 4-acid digestion and conventional Inductively Coupled Plasma Mass Spectrometry (ICP-MS) analysis.

In this procedure, 0.5 g is digested with nitric, perchloric, hydrofluoric and hydrochloric acids, and the evaporated to incipient dryness. Hydrochloric acid and demineralized water are added for further digestion, and the sample heated for an additional allotted time, cooled and transferred to a 100-millilitre (ml) volumetric flask. The resulting solution is diluted to volume with demineralized water, homogenized and the solution is analyzed by ICP-MS. The results are corrected for spectral interelement interferences. See Figure 13.8 for the ACME preparation methods and specifications for the Group 7TD sample analysis.

The check assays were done by ALS-Chemex using the methods ME-OG62, ore grade elements by four acid digestion, and ME-MS61, four acid "near total" digestion procedure. The four acid "near total" digestion is conducted for 47 elements by HF-HNO<sub>3</sub>-HClO<sub>4</sub> acid digestion, HCl leach and a combination of ICP-MS and ICP-AES.

#### 6.1.4.5 Results of Silvermex's Historical QA/QC Program

##### *Check Sampling*

A total of 135 pulp samples were chosen and sent to a second laboratory in order to check the assays against the ones obtained from ACME. The samples were comprised of mineralized material as well as samples which were derived from the zone of influence surrounding the mineralized zone, either above or below the zone. The laboratory chosen to conduct the check assaying was ALS-Chemex in Vancouver, B.C.

Table 6.10 shows the correlation between the mean grade for ACME assays and ALS-Chemex assays for the 96 regular duplicate pulps for both the reverse circulation and the diamond drilling.

**Table 6.10**  
**Regular Check Assaying Results for the 2006 Peñasco Quemado Drilling**

Number of Samples	96
Acme Analytical Mean Grade	156.8 g/t silver
ALS-Chemex Mean Grade	151.7 g/t silver
Difference Between Means	-5.1
Mean Difference %	-3.4
Correlation Factor	0.9823

Table provided by Silvermex Resources Limited/Minera Terra Plata, S.A. de C.V.

##### *Standards*

As noted earlier, Silvermex created three of its own IHSRM samples and used these for the first portion of the drilling program before discontinuing their use. For the latter portion of the drilling program Silvermex obtained two commercially available standard reference material samples from CDN Resources.

The commercial samples were labeled as HLLC for the sample grading 65.1 g/t silver and HLHZ for the sample grading 101.2 g/t silver. The matrix of these standard reference material samples does not really match the geological material at the Peñasco Quemado; project however, these samples were included as a reference sample to check the assay preparation and assaying procedures and accuracy. The insertion rate for the standard samples was one for every set of twenty-five samples.

Table 6.11 shows the results of all the silver assaying conducted by ACME on the standard reference material samples used during the 2006 drilling program on the Peñasco Quemado project.

**Table 6.11**  
**Results of ACME Assaying on all of the Standard Reference Material Samples**

Standard Id.	CDN -HLLC	CDN-HLHZ	IHSRM Low Grade	IHSRM Medium Grade	IHSRM High Grade	Total
Number of Samples	21	33	6	8	7	75
Standard Grade (g/t)	65.1	101.2	75	150.0	269.0	109.9
Average Grade (g/t)	67.0	102.4	78.8	154.1	301.6	114.7
Absolute Difference	1.9	1.2	3.8	4.1	32.6	4.83
% Difference	2.9	1.1	4.9	2.7	10.8	4.21
Correlation Factor						0.9885

Table provided by Silvermex Resources Limited/Minera Terra Plata, S.A. de C.V.

### *Blanks*

The blank sample used for the Peñasco Quemado project drilling program was obtained from sampling a tonalite dike which outcrops at the southwestern extent of the existing San Francisco pit located at the San Francisco mine, 2 km west of the town of Estacion Llano. Past experience obtained from an ex-Geomaque geologist currently working for Silvermex considered the material in the dyke as barren rock and this was verified by assaying. The insertion rate for the blank samples was one for every set of twenty-five samples.

During the 2006 drilling program a total of 63 blank samples were added into the sample sequence generated at Peñasco Quemado. Of the total of 63 blank samples, 39 were generated for the diamond drilling portion of the program and 24 were generated for the reverse circulation drilling. In the case of the assaying for the blank samples both gold and silver assays are reported because of the source of the blank sample.

Table 6.12 summarizes the overall assay results for the blank assays.

**Table 6.12**  
**Summary of Blank Assay Data for the 2006 Peñasco Quemado Project Drilling**

Description	Gold (ppb)	Silver (g/t)
Samples	63	63
Mean Grade	4.16	0.767
Maximum Grade	17	2
Minimum Grade	<2	<0.002

Table provided by Silvermex Resources Limited/Minera Terra Plata, S.A. de C.V.

### *Duplicates*

Duplicates samples were taken during the 2006 drilling program at the rate of one duplicate for every 25 samples. For the reverse circulation drilling the duplicate samples were taken after the initial drill sample (41 to 45 kg) had been split in the field to obtain a 21- to 23- kg sample. In the case of a dry sample it was split in the field again to form a duplicate weighing approximately 10.5 to 11.5 kg. All of the 2006 reverse circulation samples generated during the Peñasco Quemado drilling program were dry samples. In the case of the diamond drilling the sawn half core samples were sawn a second time to produce quarter core samples which then acted as the duplicate samples.

The duplicate samples were assigned sequential numbers in the sample numbering sequence so that the laboratory did not know it was receiving duplicate samples. These samples were submitted in the same shipment as their matching original samples but were not necessarily placed in the same furnace load as the matching original sample.

The total number of duplicates assayed for silver by ACME was 63. All sample pairs were assayed systematically for silver and some of them for copper, manganese and gold.

Table 6.13 summarizes the results of the comparison between the duplicate sample assays for silver as well as for copper and manganese.

**Table 6.13**  
**Summary of Duplicate Assay Data for the 2006 Peñasco Quemado Project Drilling**

Description	Silver Assays (g/t)		Copper Assays (ppm)		Manganese Assays (ppm)	
	Original	Duplicate	Original	Duplicate	Original	Duplicate
No of Pairs	62	56	23	23	22	22
Average Grade	29.6	29.7	293.8	326.4	475.6	479.0
Maximum Grade	993.0	729.0	4,950.0	2,000.0	2,000.0	1,700.0
Minimum Grade	0.090	0.090	4.50	28.00	28.00	30.00
Absolute Difference between Avg Grades		0.03		32.53		3.41
Difference %		0.10		9.97		0.71
Correlation Factor		0.9836		0.9709		0.9585

Table provided by Silvermex Resources Limited/Minera Terra Plata, S.A. de C.V.

While there is no apparent nugget effect evident in the diamond drilling portion of the drilling program Micon recommended, in 2007, that for future programs Silvermex discontinue using the quarter core to generate duplicate samples. Instead Micon recommended that Silvermex consider crushing the half core samples identified as the duplicate samples down to a fragment size similar to that obtained from the reverse circulation drilling and then use a riffle splitter to obtain two homogenous samples. This process should help eliminate any bias into the duplicate samples resulting from a nugget effect in the quarter core.

It was Micon's opinion, in 2007, that based on a general and specific assessment of the drill sample data that the quality for the drilling samples meets accepted industry standards and that the sampling is believed to be representative of the areas examined.

## **6.2 HISTORICAL RESOURCE ESTIMATES**

### **6.2.1 Historical 1982 Mineral Resource Estimate**

In the June, 1982 report of Cerro de Plata, there is a reference to an uneconomic resource estimate completed by ASARCO of 4 million tons grading 0.4 % copper and 56 g/t silver. Cerro de Plata completed drill indicated resource estimates and described these in its June, 1982 project report. For the West zone the drill indicated resources were estimated to be 976,270 tons with a weighted average grade of 163 g/t silver, with an additional 345,000 tons [sic] likely to average 170 g/t silver projected to adjoin the drill indicated mineralization to the south and southeast. Cerro de Plata also reported that there was geological potential for 1 million tons or more grading 170 g/t silver [sic] in the East zone.

Micon briefly reviewed the results of previously published generalized estimate of the resource potential on the project. In Cerro de Plata's 1982 report it provided a generalized estimate of the resource potential for the property. The 1982 resource estimate was conducted prior to the current implementation of the CIM resource definitions and the term drill indicated resources does not conform to the current resource definition for indicated resources. Since the key parameters or the model used by Cerro de Plata are unavailable the time to bring the historical estimates up to current standards is unknown. However, Micon has not conducted sufficient work to classify the Cerro de Plata historical estimate as a current estimate. Neither Silver One, First Mining nor Silvermex, previously, has treated the historical estimate as current. All previous historical estimates for the Peñasco Quemado property were superseded by Silvermex's January, 2007, mineral resource estimate by James A. McCrea, P.Geo.

### **6.2.2 January, 2007, Silvermex Mineral Resource Estimate**

In 2006, Mr. McCrea was asked by Silvermex to estimate the mineral resources for the Peñasco Quemado property using the historical data along with the results of Silvermex's 2005 and 2006 exploration drilling programs. The resource estimate for the Peñasco Quemado property was completed by Mr. McCrea in January, 2007 and this estimate was included as part of Micon's March, 2007, Technical Report and is discussed below.

Mr. McCrea constructed a drill hole database in Gemcom using all available data for the West zone at the time of the resource estimate. The database contains surveyed drill collars for 24 reverse circulation holes from the 1981/82 program, 17 reverse circulation holes from the 2005 program and 8 diamond drill holes from the 2006 drill program. Assay data were available for all 49 of the drill holes and for 12 trenches

The database contains 3,195 assays for silver. The drill holes were sampled on 1-metre intervals for the 1982/82 reverse circulation drilling, 1.52 to 1.53 m intervals for the 2005 drilling and 1.1 to 1.6 m intervals for the 2006 diamond drilling. Drill hole sections were produced with displayed assays and lithology to allow domaining.

Sectional interpretations were produced for the Peñasco Quemado property and were entered into Gemcom as 3D polylines. The polylines were stitched together to produce a 3D solid body model for the West zone of the Peñasco Quemado property. The solid model was used to code the rock type model in the block model, control the interpolation and to filter the composites for statistics and geostatistics.

The sample intervals were composited to 1.5 m for the early drilling but used the existing 1.1 to 1.6 m sample intervals for the 2005/2006 drilling with the majority of the composites in the 1.5 to 1.6 m range. The trenches were composited to 1.5 m.

A 3D block model was laid out to cover the zone of interest on the West zone of the Peñasco Quemado property. The solid model was used to code the rock type model, percent model and control the interpolation. The block model was coded for air (above topography), background and the mineralized zone by coding the block models with a rock type and percent of the block inside of the solid. Blocks with more than 1% of the block inside the solid were given the code

of the solid and the percent of the block inside the solid was written to the percent model. The model was interpolated in one pass.

The block model was interpolated using inverse distance to the second power where a minimum of three composites was required to interpolate a block, with a maximum of 18 composites. No restriction was placed on the number of holes per block because of the areas of widely spaced data in the model

Grades were capped for the Peñasco Quemado resource, with capping based on histograms, probability plots and the coefficient of variation for the assays. Peñasco Quemado assays were capped at 700 g/t silver before compositing.

Capping of Peñasco Quemado assays at 700 g/t silver is equivalent to the 99.3 percentile.

The Peñasco Quemado model was classified as measured, indicated and inferred based on distance. Only blocks inside the solid model were classified and all other blocks were not interpolated or classified. Blocks were classified as follows: measured resources ranged of 0 m to 25 m from the trenches (the drill holes alone did not classify measured resources), indicated resource ranged from 25 m to 45 m and inferred resources ranged from of 45 m to 68 m. The trenches controlled the classification of measured resources and away from the trenches the effective indicated range would be 0 m to 45 m based only on drilling. Blocks outside these ranges are not reported in the classified table. Resources are reported in Table 6.14.

The stated January, 2007 resources are not materially affected by any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant issues, unless stated in this report, to the best knowledge of the author. There are no known mining, metallurgical, infrastructure, or other factors that materially affect this resource.

**Table 6.14**  
**Peñasco Quemado Resource Summary January, 2007 Based on a 30 g Silver Cut-off Grade**

Category	Tonnes (Millions)	Silver Grade (g/t)	Silver Grade (oz/t)	Silver (millions of ounces)
Measured	0.123	151.9	4.88	0.599
Indicated	2.442	115.0	3.70	9.032
<b>Measured + Indicated Total</b>	<b>2.565</b>	<b>116.8</b>	<b>3.76</b>	<b>9.631</b>
Inferred	0.001	41.4	1.32	0.001

Table provided by James McCrea for the March, 2007 Micon Technical Report.

The January, 2007, resource estimate by Mr. McCrea was compliant with the CIM standards and definitions required by NI 43-101 at the time of their original reporting. However, as First Mining and Silver One do not have the block model in their possession Micon has been unable to review the model and been unable to conduct sufficient work to classify the January, 2007 estimate as a current estimate. Neither First Mining nor Silver One is treating the January, 2007 as a current estimate.

Micon recommends that given the changes in silver prices since 2007, First Mining and Silver One revisit the interpretation and resource model for Peñasco Quemado and conduct any necessary work needed to reclassify the January, 2007 estimate as a current estimate.

There are no known resource estimates for any of the other portions of the Peñasco Quemado property.

### **6.3 HISTORICAL PRODUCTION**

Some historical production has occurred on the Peñasco Quemado property. In the late 1970's Adalberto Ballesteros conducted intermittent small scale mining from a small open pit. Approximately 10,000 tons averaging 225 g/t silver were shipped as flux ore to a Phelps Dodge smelter at Douglas, Arizona during this period. There is also evidence of small scale mining, probably conducted prior to the 1910 revolution, as there are remains of the foundations of an old foundry or mill, a small slag pile, and a number of shafts on the property. However, no records remain of the previous mining at Peñasco Quemado.

Other mines or exploratory shafts within the district are: El Muro (borax), Juarez (borax), Tubutama (borax), La Salada (borax), Las Tranquitas (copper), Oso Coloured (gold/silver), El Sauzal (copper/gold/silver), Las Carmelitas (gold/silver) and San Francisco (copper/gold/silver). Most, but not all of these mines and shafts have silver reported in varying amounts. There is very little published on these workings and production statistics for these mines or exploratory shafts are unavailable.

## **7.0 GEOLOGICAL SETTING AND MINERALIZATION**

### **7.1 REGIONAL GEOLOGY**

The Peñasco Quemado property is situated in the Sonora desert morphotectonic province, which has undergone a complex depositional and tectonic history dating back to the Precambrian period. Basement rocks of the region include Precambrian gneisses, metamorphosed andesites and granites. Proterozoic quartzites and limestones, Paleozoic and Mesozoic carbonate rocks and Mesozoic volcanic, clastic and carbonate sedimentary rocks overlie the Precambrian units. Mesozoic plutonic rocks, and Tertiary extrusive and intrusive rocks related to the volcanism of the Sierra Madre Occidental Physiographic Province, are broadly distributed in the region. Wide areas are underlain by volcanics and associated intrusives of the Sonora-Sinaloa batholith of Cretaceous to early Tertiary age. See Figure 7.1 for a regional geology map of the area surrounding the Peñasco Quemado property.

Multiple phases of deformation and metamorphism occurred during the Precambrian period followed by three separate phases of compressional deformation during the Paleozoic period (Roldan and Clark, 1992). These tectonic events were followed by a period of extensional deformation resulting in continental rifts at the onset of the Mesozoic (late Triassic). The Mojave-Sonora megashear formed during the late Jurassic and is located roughly 100 km west of the Peñasco Quemado area. During the Cretaceous there were two periods of compressional deformation. During the Cenozoic, the deformation was extensional and probably coincided with the faulting and period of mineralization at Peñasco Quemado.

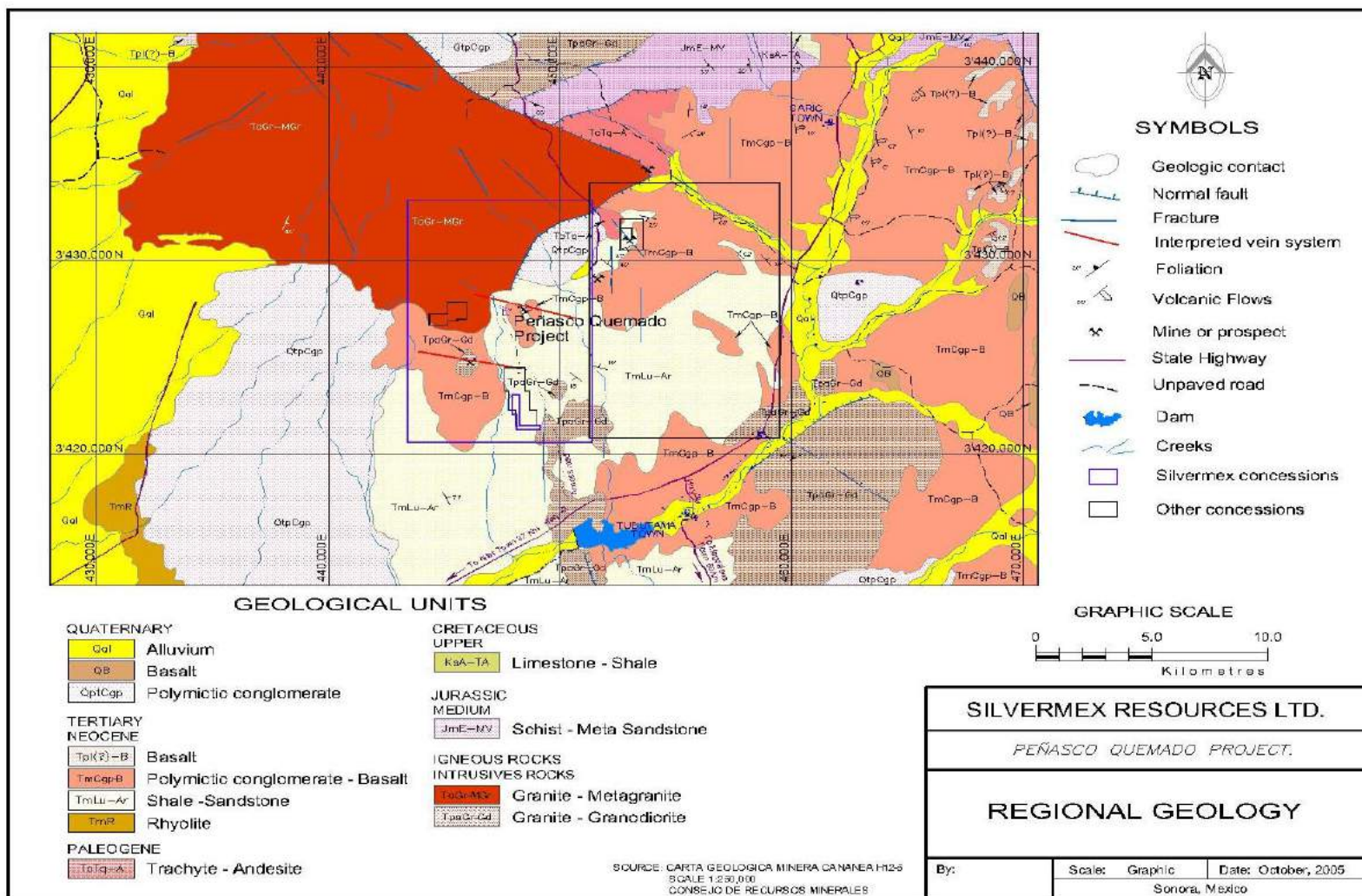
The rocks exposed in the Magdalena district range in age from Jurassic to Quaternary. The Jurassic rocks consist of black shale, siltstone, sandstone and conglomerate with interbedded volcanics which outcrop southwest of Magdalena and are not exposed on the Peñasco Quemado property.

The Lower Cretaceous rocks consist of a detrital carbonate sequence of shale, siltstone, limestone and conglomerate belonging to the Bisbee Group. The Upper Cretaceous rocks consist of sandstone, shale, conglomerate, minor limestones and coal beds and belong to the Cubullona Group.

The Lower Volcanic Series of Late Cretaceous to Tertiary age unconformably overlies the preceding rocks and consists of andesite flows and tuffs with intercalated sediments and some rhyolitic tuffs. This period of volcanism was accompanied and followed by the intrusion of a northwest-trending belt of plutonic rocks of the Sonora batholith complex.

The Upper Volcanic Series overlies the Lower Volcanic Series and consists of rhyolites and rhyodacites, and related ash-flow tuff breccias. These rocks were deposited during the Oligocene to Miocene epochs.

**Figure 7.1**  
**Peñasco Quemado Regional Geology Map**



Map provided by Minera Terra Plata, SA de C.V., taken from the Micon Technical Report dated March 9, 2007.

During the Late Tertiary, fault troughs were filled with thick sequences of alluvium forming the conglomerates belonging to the Baucarit Formation. Unconsolidated fluvial sands and gravels comprise the extensive deposits formed during the Quaternary.

## **7.2 PROPERTY GEOLOGY**

The following description of the Peñasco Quemado property geology is based on the geological mapping originally conducted in 1982 and has been modified and updated with the geological mapping and drilling information from the 2005 and 2006 Silvermex exploration programs. Micon obtained this information from the Silvermex/Terra Plata staff through both written and verbal communication during the writing of its 2006 Technical Report.

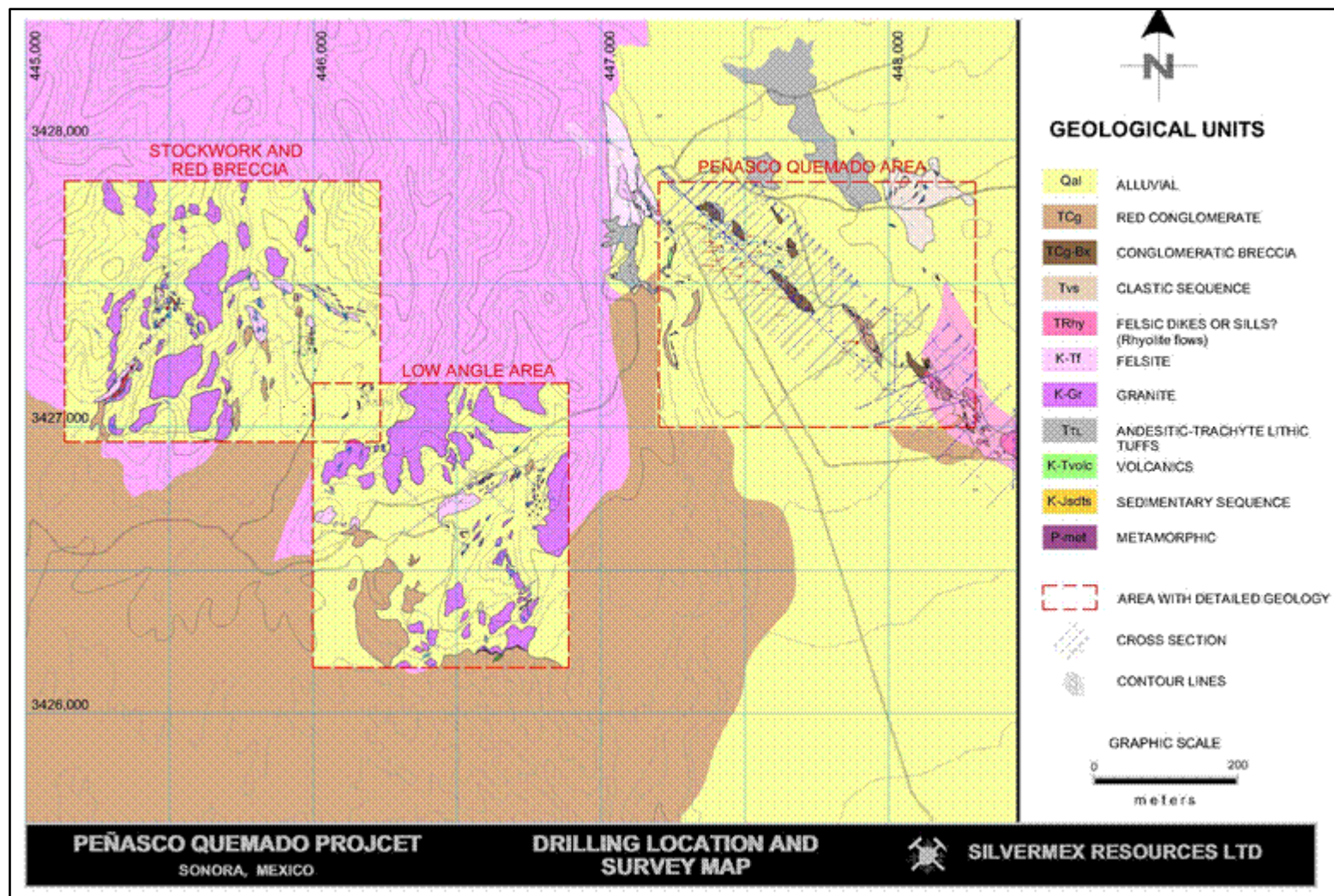
The focus of the exploration and geological mapping has been on three areas of the Peñasco Quemado property which are as follows: the Peñasco Quemado area (West and East zones), the Stockwork and Red Breccia area and the Low Angle area. The geology of these areas and their relationship to each other are shown in Figure 7.2. The inset figures in Figure 7.2 show the local geology for these areas as well as the drilling are found in Section 11.

In general the Peñasco Quemado property is extensively covered by a cap of alluvium and valley fill which varies from 0 to 40 m thick. The alluvium and fill overlie a red conglomerate which is up to 200 m thick as evidenced from drill hole intersections. The red conglomerate is in a high angle fault contact with a volcanic sequence that includes andesite tuffs, andesite breccia and andesite flows. The entire upper lithological column is unconformably overlying a basement of gneissic granite and between the two units there exists a complex unit that has been described by the geologists of Silvermex/Terra Plata as felsite. The felsite is associated with a mylonite zone that has been identified along a strike distance of several kilometres from the west portion of the property where it outcrops in the areas called the Low Angle, The Pink Breccia and the Stockwork. In the Peñasco pit area the mylonite has been encountered up to 130 m to 150 m deep in the drill holes.

In the eastern portion of the property there are scant outcrops of sandstones, limestones, jaspers and siltstones. However, these outcrops are being explored for borax in the San Carlos area where the borax appears to be contained in the lower portion of the Tubutama Formation, interbedded in a succession of sandstone and tuffaceous shale.

The main rock units underlying the Peñasco Quemado property are described below and their importance in relationship to the silver mineralization.

Figure 7.2  
Peñasco Quemado Project Geology Map



Map provided by Minera Terra Plata, SA de C.V., taken from the Micon Technical Report dated March 9, 2007.

### **7.2.1 Gneissic Granite**

The Gneissic Granite is defined as the basement rock unit at the Peñasco Quemado property and has been encountered at the base of geology mapping and within the drill holes in the Peñasco pit area. The Gneissic Granitic is described as a foliated to massive, fine to medium grained granite that has been affected by low grade metamorphism. Some portions of this rock unit appear gneiss like or like a fresh granite.

This rock unit has not been dated but current thinking is that it is late Cretaceous in age

### **7.2.2 Sedimentary Rocks**

Sandstone, siltstone and limestone outcrop on the eastern portion of the property. This unit is correlated with the upper portion of the Tubutama Formation which was deposited in a basin developed in the upper plate of the Tubutama metamorphic core complex. The upper rock succession is largely composed of lacustrine fine grained clastic sedimentary rocks of mid Tertiary age which are interbedded with high potassium basaltic andesitic flows dated at 22.3 Ma. (Miranda-Gasca et al, 1998). In the Tubutama Formation, the lower portion of the succession consists of sandstone and tuffaceous shale units that are locally intercalated with gypsum and borate deposits, while the upper portion contains more siltstone and limestone. The base of the Tubutama Formation is marked by an unconformity beneath which occur andesitic and rhyolitic pyroclastics dated at 33.9 Ma. No significant exploration work has been conducted on the sedimentary sequence although some zones that show an intense oxide alteration and strong fracturing are located east of the present Peñasco Quemado open pit.

### **7.2.3 Felsite**

A complex lithological unit has been defined in the base of the upper plate of rocks on the property, which corresponds to a rock unit called Felsite. This rock unit outcrops in the areas known as the Low Angle and the Stockwork areas and has been found at depth in the Peñasco Quemado open pit area and along the southeastern trend of the Peñasco Quemado area. The rock is pale grey to light brown and sometime white or pink in colour, very fine grained, strongly foliated and composed mainly of quartz and feldspar. Chlorite and sericite are present in minor amounts. The rock in the outcrops and in the core is marked by a dense stockwork of quartz, specularite, barite and probably siderite microveins. It is defined as a typical rock formed within a shear zone, by dynamic deformation; the original rock type (unit) is uncertain. The presence of specular hematite and the low content of silver mineralization are probably related to the silver enrichment of the red conglomerate of the upper plate but this relationship is uncertain at this time.

### **7.2.4 Volcanic Rocks**

#### **7.2.4.1 Andesitic Tuffs and Breccias**

The immediate area to the east of the Peñasco Quemado pit is dominated by tuffs, flows and

breccias of andesitic composition, in contact with the red conglomerate via a high angle fault which can be observed at the present pit. The unit rock situated at the footwall of the fault contact in the present pit has been described as a tuffaceous sandstone reddish brown in colour, brecciated with abundant fragments of plagioclase, fragments of rock in a matrix of iron oxides and probably silica.

Microscopic observations determined that this unit was deposited in a water environment.

#### 7.2.4.2 Andesitic Flows

This rock unit outcrops to the east of the Peñasco Quemado pit, in a small area, and is massive fine grained, brown to yellowish brown in colour. Intensively fractured flows of andesitic composition were found at the base of the red conglomerate in the drill holes. These flows are no more than 10 m thick and are strongly brecciated due to the emplacement of a sill of granite or felsite at the contact producing a mylonitic zone.

An andesitic unit outcrops in the Red Breccia or San Luis Area, and is brecciated, reddish brown in colour, has a thickness of 10 m to 15 m and appears to be a lense running northwest-southeast and dipping slightly to the southwest. The andesitic unit is also an important lithological unit, at least in this area, because it is the host rock of a high grade silver mineralized zone with associated copper values.

#### 7.2.4.3 Rhyolite

In the southeastern extremity of the Peñasco Quemado area along the trend of red conglomerate outcrops, it changes abruptly to a rhyolitic rock, pink in colour, massive, fine-grained and quartz-feldspathic in composition. The rhyolite contains phenocrysts of quartz and unaltered biotite along with flow banding textures. As indicated by two holes drilled in the southeastern extremity the rhyolitic unit is interbedded with the red conglomerate. This unit is strongly fractured forming wide zones of brecciation that make the unit look like a breccia formed by big fragments. There is a high manganese oxide content within the unit, which stain the rock. Fracture refills of chalcedony, and botryoidal manganese were encountered in the outcrops of the Loma Negra area to the south of the area investigated.

A number of events have been identified microscopically which can be associated with hydrothermal processes. These include quartz and feldspar replacement by carbonates, disseminated biotite altered to sericite, ghosts of amphiboles transformed to carbonates, clays and opaque minerals and eutaxitic banding.

#### 7.2.4.4 Red Conglomerate

The red conglomerate is a poly lithic breccia-conglomerate, which is defined as a continental clastic unit containing angular to subrounded clasts of limestone, basalt, andesite, rhyolite, granite, schist and gneiss. To date, it is the most important lithological unit on the property because it is the principal host of the silver mineralization tested by drilling. Local lithologies

are identified as forming the angular to subrounded cobbles and pebbles, including mainly volcanic rocks such as fine grained andesite, feldspar porphyritic andesite, medium-grained, equigranular white granite, and an biotite granite. The matrix is red in colour and is a polyolithic grit strongly stained by hematite and manganese oxides. Petrographic studies have identified discrete hydrothermal activity in the form of silicification. It is important to note that the identified hydrothermal alteration does not affect the entire stratigraphic column of red conglomerate intersected by the drill holes.

#### 7.2.4.5 Alluvium

An estimated 80% of the property is covered by Quaternary fluvial alluvium. The alluvium consists of unconsolidated sands and soils covering flat lying areas and poorly consolidated sandstones and conglomerates exposed in arroyo banks and beds.

### 7.3 STRUCTURAL GEOLOGY

Two structural features can be recognized within the exploration area on the property:

- 1) A shear zone with dynamic metamorphism as evidenced by the felsite, a sheared rock emplaced in the contact between the gneissic granite and the upper sequence of volcanics and the red conglomerate. Both the volcanics and red conglomerate are believed to be of the Tertiary period in contact with the gneissic granite, a probable Cretaceous intrusive. Due to the movement along the shear zone, both mylonitic foliation and stretching lineation were developed in the upper Cretaceous rocks (gneissic granite) and within the lower portion of the Tertiary volcanics and sedimentary rocks, forming zones structurally prepared to host mineralization or at least the movement and remobilization of hydrothermal fluids.
- 2) Normal faulting developed along northwest, northeast and west-east striking structures, with lateral displacement that formed a basin and range morphology, which has suffered erosion and re-depositional filling of the basins with recent materials. The shape of the red conglomerate is very characteristic of this faulting style as it is aligned along a north-south trend in the western portion of the property, apparently controlled by normal faults. At the northern border of the conglomerate, there is strong evidence on the surface of copper, silver and gold mineralization associated with the detachment zone, and in the rock unit immediately above the detachment zone there is an indication that normal faulting or at least high angle faulting played an important role in the mineral deposition.

In the Peñasco Quemado open pit area the red conglomerate is seen in a high angle fault contact with the underlying andesite pyroclastics. The silver mineralization is disseminated in the red conglomerate of the hanging wall up to a distance of 300 m, while there is poor silver mineralization along the andesite in the footwall (only in the first 2 m or 3 m). This suggests that the silver and copper mineralization was emplaced through the fault contact into the red

conglomerate and migrated laterally through the clastic rock, along a zone which was probably sheared or at least had better structural preparation than the rest of the conglomerate.

#### **7.4 MINERALIZATION**

The current view of the mineralization at Peñasco Quemado is based not only on the historical Cerro de Plata work conducted in the early 1980's but also on geological and sampling data collected during the 2005 and 2006 exploration and drilling programs by Silvermex and Terra Plata geologists.

The Peñasco Quemado property lies within the Sierra Madre Occidental metallogenic province which extends along western Mexico from the border of the Mexican and American states of Sonora and Arizona, south to the state of Jalisco. Recently the exploration for silver in the region has been intensified, due to the high silver prices on the world market, as well as the geological re-definition of important silver targets within the old mining districts in northwestern Sonora which were ignored up to recently because of the presence of large deposits of copper and gold discovered several decades ago. The silver occurrences within the region normally were defined as smaller and of lower geological potential because the silver was associated with quartz veins in volcanic rocks or as it occurred as a by-product of the known gold or copper mineral deposits.

The deposit mineralization consists essentially of silver with minor amounts of copper. To date the specific silver minerals have not been identified, although a preliminary petrography and mineralogical study done on samples from drill holes PQD-01, PQD-03 and SLD-7 interpreted that the silver mineralization is in the form of cerargyrite and/or argentojarosite. The preliminary study also found that the silver-copper mineralization at Peñasco Quemado corresponds to an enrichment, which created a concentration within the clastic sequence deformed by shearing. More investigation needs to be conducted to determine more accurately the silver mineral species present within the deposit and other mineral associations.

Other exploration targets in the region are associated with similar geological features, where silver and copper are found in an upper conglomerate, which is overlying a sequence of volcanic rocks affected by high angle faulting.

## 8.0 DEPOSIT TYPES

The present description of the Peñasco Quemado deposit type has been taken from the Micon 2007 Technical Report for Silvermex. The description is based on the historical geological mapping and sampling conducted in 1982 which has been since modified using the geological and sampling data collected by Silvermex during its 2005 and 2006 exploration and drilling programs.

The disseminated silver mineralization at Peñasco Quemado is believed to have been deposited by oxidizing, relatively low-temperature hydrothermal fluids that were undersaturated in silica and carbonates. The chemical nature of the original fluids is deduced because of the abundance of iron and manganese oxides and the lack of quartz and/or carbonate veining in the mineralized rock.

The deposit geometry of the mineralization suggests that the fluids which introduced the silver and copper into the breccia-conglomerate migrated laterally through the clastic rock. The silver deposit as it presently exists is believed to be secondary mineralization, that was the product of remobilization and deposition of silver and copper from a deeper lying zone of sulphide mineralization, which could be related to a felsic porphyry intrusion. The envisioned genetic deposit model has deep circulating meteoric fluids being drawn downwards along normal faults into a zone of hypogene (primary) sulphide mineralization where sulphides such as chalcopyrite and tetrahedrite were oxidized and silver and copper ions dissolved into the solution. At this point, the heated and metal-enriched fluids are envisaged to have circulated back towards surface, channelled along steeply inclined zones of densely spaced fracturing related to, or coincident with the high angle normal faults. As the fluids cooled the mineralization was deposited within the porous zones prepared structurally, probably by the same process of shearing which created the main shear zone known at depth, as the deposit appears to be parallel to the shear zone.

## **9.0 EXPLORATION**

Silver One is in the process of acquiring the Peñasco Quemado Project from First Mining and upon completion of the acquisition will review the existing data and begin its first exploration program on the property.

Since acquiring the Peñasco Quemado Project, First Mining has not conducted any exploration programs on the property.

Prior to First Mining acquiring the property, Silvermex's focus, through its Mexican subsidiary Terra Plata, was concentrated on further exploration and evaluation of the known silver mineralization at Peñasco Quemado in addition to prospecting and exploring the remaining portions of the property for other areas of mineralization. Silvermex's exploration programs are discussed in Section 6.

## **10.0 DRILLING**

Silver One is in the process of acquiring the Peñasco Quemado Project from First Mining and upon completion of the acquisition will review the existing data and outline its first drill program on the property.

Since acquiring the Peñasco Quemado Project, First Mining has not conducted any drilling programs on the property.

Prior to First Mining acquiring the property, Silvermex's focus, through its Mexican subsidiary Terra Plata, was concentrated on further exploration and evaluation of the known silver mineralization at Peñasco Quemado in addition to prospecting and exploring the remaining portions of the property for other areas of mineralization. Silvermex's drilling programs are discussed in Section 6.

## **11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY**

Silver One is in the process of acquiring the Peñasco Quemado Project from First Mining and upon completion of the acquisition will outline its sample preparation, analysis and security procedures prior to beginning its first exploration or drilling program on the property.

Since acquiring the Peñasco Quemado Project, First Mining has not conducted any exploration or drilling programs on the property. As a result of not conducting any work at the project, First Mining has yet to outline its sample preparation, analysis and security procedures at this time.

Prior to First Mining acquiring the property, Silvermex's focus, through its Mexican subsidiary Terra Plata, was concentrated on conducting further exploration and evaluation of the known silver mineralization on the Peñasco Quemado property.

Details of Silvermex's sample preparation, analysis and security programs are summarized in Section 6.

## 12.0 DATA VERIFICATION

This is the third Technical Report that Micon has written for the Peñasco Quemado Project with the previous reports written in 2006 and 2007.

### 12.1 2016 SITE VISIT

Micon's latest site visit to the Peñasco Quemado Project was conducted on August 30, 2016 by William Lewis, B.Sc., P.Geol. a senior geologist based in Toronto, Canada. Mr. Lewis was accompanied Raul Diaz from First Mining. The core shack on site was visited as well as a number of drill sites, the open pit area and one of the old shafts near the farmhouse.

No samples of the mineralization were taken during the 2016 site visit, as Micon had taken a number of grab and drill samples to independently verify the mineralization on the property during the 2005 site visits. The Micon samples verified the mineralization at the property in 2005 and a full discussion of the results is contained in the December 20, 2005 Micon Technical Report for Silvermex. Silvermex filed the 2005 Technical Report on SEDAR on April 28, 2006.

In 2016, the drill core and sample storage area was visited and was in found to be in reasonable shape, given that it has not been used since Silvermex completed its exploration programs on the property. Figure 12.1 is a view of the core shack and sample storage area taken during the 2016 Micon site visit. Figure 12,2 is a view of the interior of the core shack during the 2016 visit.

**Figure 12.1**  
**2016 Coreshack and Sample Storage Exterior**



2016 Micon site visit.

**Figure 12.2**  
**2016 Coreshack and Sample Storage Interior**



2016, Micon site visit.

A number of drill sites examined, close to the farmhouse, retain their cement markers designating the locations of the core and RC drill collars and appear to be in their original locations.

## **12.2 PREVIOUS SITE VISITS**

Micon's previous site visits to the Peñasco Quemado Project were conducted on September 9, 2006. Micon also conducted two site visits to the property in 2005. All of the Micon site visits were conducted by Mr. Lewis. The previous site visits were conducted in relation to Silvermex's 2005 and 2006 exploration programs.

During Micon's site visits in 2005 several of the, several of the historical Cerro de Plata drill holes to the southeast of the pit were located and identified. During the first 2005 site visit, six samples were taken from outcrops of the West and East zones to independently verify the presence of mineralization on the property. Micon was satisfied that its sampling of the outcrops has confirmed the presence of silver mineralization at similar tenor to that reported previously by Cerro de Plata and Silvermex.

During the second site visit in 2005, seven samples were randomly collected by Micon from amongst the drill samples taken by Silvermex to independently verify the presence of mineralization in the drill holes. Micon was satisfied that its sampling of the drill holes confirmed the presence of silver mineralization at similar tenor to that reported by Silvermex for its drilling program.

No samples were taken during Micon's site visit in 2006, however Micon reviewed the procedures and observed the drilling being conducted by Silvermex, as it had previously during its second 2005 site visit. In both cases, the drilling procedures and sampling observed by Micon were consistent with the normal practices in the industry at the time.

### 13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Silver One is in the process of acquiring the Peñasco Quemado Project from First Mining and has yet to decide when it will conduct further metallurgical testwork on the mineralization at the property.

First Mining has performed no metallurgical testwork on the mineralization at Peñasco Quemado.

Prior to First Mining acquiring the property, Silvermex's focus, through its Mexican subsidiary Terra Plata, concentrated on further exploration and evaluation of the known silver mineralization at Peñasco Quemado in addition to prospecting and exploring the remaining portions of the property for other areas of mineralization.

Silvermex announced on February 12, 2012 that they had sent samples of drill core from the Peñasco Quemado Project to Hazen Research, Inc. (Hazen) to conduct a metallurgical testwork program on the mineralization. The results of this testwork program is discussed in Section 13.1. Hazen is an independent metallurgical facility and is fully independent of Silvermex and is accredited in accordance with NELAP. NELAP stands for National Environmental Laboratory Accreditation Program and is a national accreditation program developed by the NELAC institute. NELAC standards for laboratories are modeled after similar ISO standards.

#### 13.1 METALLURGICAL TESTWORK 2012-2013

Silvermex contacted Hazen Research, Inc. (Hazen) to conduct metallurgical testwork on a sample of the Peñasco Quemado mineralization in February, 2012. Previous testwork according to Hazen's report had shown low silver recoveries from this mineralization by direct cyanidation. Therefore, Hazen evaluated other options to improve silver extraction.

The head analysis of the 20-kg sample received by Hazen is summarized in Table 13.1.

**Table 13.1**  
**Analysis of the Metallurgical Sample**

Met Sample	g/t		%							
	Ag	Au	Ca	Cu	Fe	Mg	Mc	Pb	Zn	S
53042	156	<0.2	0.40	0.16	2.27	0.31	1.35	0.06	0.03	0.13

Hazen noted that based on previous experience, and published literature, silver mineralization containing manganese oxides require that manganese be solubilized before silver can be recovered by cyanidation. Manganese solubilization requires a reductant in an H<sub>2</sub>SO<sub>4</sub> leach, which leaves the silver retained in the solids residue. After neutralization, the solids can then be leached in cyanide to solubilize the silver for subsequent recovery using conventional technology. Previous work involved dissolving the MnO<sub>2</sub> directly in H<sub>2</sub>SO<sub>4</sub> in the presence of H<sub>2</sub>O<sub>2</sub>. The residue from this reduction step advanced to cyanidation for silver extraction. These laboratory experiments recovered up to 70% of the silver in the cyanide leach, but at a very

high  $\text{H}_2\text{O}_2$  consumption. Other research and work previously performed at Hazen on similar silver–manganese deposits has used  $\text{SO}_2$ , which is a strong reductant, and was recommended by Hazen for further study on the Peñasco Quemado mineralization.

Based on the data generated from Hazen’s experimental program, approximately 96 to 98% of Mn in the Peñasco Quemado mineralization can be extracted using a combination of concentrated  $\text{H}_2\text{SO}_4$  and  $\text{SO}_2$  as a reductant. Peñasco Quemado mineralization containing 1.35% Mn required approximately 33 to 49 kg  $\text{SO}_2$ /t of mineralization and 23 to 38 kg of 96% concentrated  $\text{H}_2\text{SO}_4$ /t of mineralization to leach the manganese.

When the cyanidation step followed the  $\text{SO}_2$  leach, 67% Ag extraction was achieved on both grind sizes tested, a 65% passing ( $\text{P}_{65}$ ) 200 mesh and 95% passing ( $\text{P}_{95}$ ) 200 mesh. The NaCN consumption was 3 to 4 kg/t, and CaO consumption was 1.4 to –1.5 kg/t. These silver extraction results are in agreement with previous research, using  $\text{H}_2\text{SO}_4$  and  $\text{H}_2\text{O}_2$ . Without a reduction–leach step, only 14 to 16% Ag was extracted from the Peñasco Quemado sample at these particle grind sizes.

When the  $\text{SO}_2$  leach slurry was directly neutralized without a solid–liquid separation step prior to cyanidation, 100% of the Fe was precipitated from solution. This step required 23 to 27 kg/t of CaO in addition to 75 to 85 kg/t  $\text{CaCO}_3$  to neutralize the slurries prior to cyanidation. Subsequent cyanide leaching extracted 68 to 69% of the silver with a 5 to 7 kg/t NaCN consumption. Silver extraction increased slightly when the solid–liquid separation step was bypassed with direct neutralization.

Microprobe analysis on a cyanide leach residue sample confirmed that the remaining silver within the cyanide leach residue was locked as small inclusions (less than 3  $\mu\text{m}$ ) within quartz particles. Hazen recommended that current grinding operations should be evaluated to determine if ultra-fine grinding of the Peñasco Quemado mineralization is economically feasible.

Hazen also recommended additional economic analyses to compare the reagent costs of using  $\text{H}_2\text{O}_2$  versus  $\text{SO}_2$  as a reductant.

## **14.0 MINERAL RESOURCE ESTIMATES**

Since the publication of the March 9, 2007 Micon Technical Report no further mineral resource estimates have been conducted or published that supersede the January, 2007 estimate conducted by Mr. James McCrea. The mineral resource estimate was conducted according to the CIM standards and definitions, in-effect in 2007, as required by NI 43-101 regulations and was therefore, reportable as a mineral resource by Silvermex, at the time.

However, as neither First Mining and Silver One do not have the block model in their possession, at this time, Micon has been unable to review the model and been unable to conduct sufficient work to classify the January, 2007, estimate as a current estimate. Neither First Mining nor Silver One is not treating the January, 2007, as a current estimate.

Micon recommends that given the changes in silver prices since 2007, First Mining and Silver One revisit the interpretation and resource model for Peñasco Quemado and conduct any necessary work needed to reclassify the January, 2007, estimate as a current estimate or conduct further work to update the estimate.

The discussion related to the January, 2007, estimate conducted by Mr. James McCrea is discussed in Section 6 of this Technical Report as it is considered to be a historical estimate for the purposes of this report.

There are no known resource estimates historical or otherwise for any of the other portions of the Peñasco Quemado property.

## **TECHNICAL REPORT SECTIONS NOT REQUIRED**

The following sections which form part of the NI 43-101 reporting requirements for advanced projects or properties are not relevant to the current Technical Report:

### **15.0 MINERAL RESERVE ESTIMATES**

### **16.0 MINING METHODS**

### **17.0 RECOVERY METHODS**

### **18.0 PROJECT INFRASTRUCTURE**

### **19.0 MARKET STUDIES AND CONTRACTS**

### **20.0 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT**

### **21.0 CAPITAL AND OPERATING COSTS**

### **22.0 ECONOMIC ANALYSIS**

### **23.0 ADJACENT PROPERTIES**

The property exists within the Sierra Madre Occidental Metallogenic Province and is known to host at least two separate zones of anomalous silver mineralization. There are other metallic mineral deposits in the area; however, very little information is available on those properties. There are no immediately adjacent properties, which directly affect the interpretation and evaluation of the mineralization, deposits or anomalies found at Peñasco Quemado.

Mining has occurred for manganese within the Magdalena - Tubutama mining district at the Las Antillas mine. Approximately 5,000 tons, grading 45% manganese, were extracted from the Las Antillas mine, near Magdalena, during a ten-month term in 1918 and was exported to the United States. When the demand for manganese ceased, operations at the mine were completely suspended.

The Magdalena - Tubutama mining district is primarily known for its non-metallic mineral deposits, mainly borate, gypsum and limestone. Also, gold placers have been worked within the district in a number of streams such as Carreno, La Máquina, San Juan and others.

Based on the occurrence of other metallic mineral deposits in the area and the stated exploration potential of the area as contained in previous reports, Micon considers that these factors positively affect the prospectivity of the ground.

## **24.0 OTHER RELEVANT DATA AND INFORMATION**

All relevant data and information regarding the Peñasco Quemado Project are included in other sections of this Technical Report.

Micon is not aware of any other data that would make a material difference to the quality of this Technical Report or make it more understandable, or without which the report would be incomplete or misleading.

## 25.0 INTERPRETATION AND CONCLUSIONS

First Mining acquired the Peñasco Quemado property in March, 2015 when it acquired Terra Plata from First Majestic. First Mining has not conducted exploration or drilling programs on the property since acquiring it. Silver One is in the process of acquiring the Peñasco Quemado Project from First Mining with the purchase of Terra Plata.

In the Peñasco Quemado property, Silver One will obtain a property with a known silver deposit along with a number of other areas which require further exploration based upon the last exploration program conducted by Silvermex on the property in 2006. However, historically very little is known about the prior exploration history regarding the property.

The property also has a historic mineral estimate conducted on the main mineralized zone by Mr. James McCrea in January, 2007. However, Micon since has been unable to review the model and it has been unable to conduct sufficient work to classify the January, 2007 estimate as a current estimate. Neither First Mining nor Silver One is treating the January, 2007, as a current estimate.

The database used by Mr. McCrea contained 3,195 assays for silver. The drill holes were sampled on 1-metre intervals for the 1982/82 reverse circulation drilling, 1.52 to 1.53 m intervals for the 2005 drilling and 1.1 to 1.6 m intervals for the 2006 diamond drilling. Drill hole sections were produced with displayed assays and lithology to allow domaining.

Sectional interpretations were produced for the Peñasco Quemado property and were entered into Gemcom as 3D polylines. The polylines were stitched together to produce a 3D solid body model for the West zone of the Peñasco Quemado property. The solid model was used to code the rock type model in the block model, control the interpolation and to filter the composites for statistics and geostatistics.

The sample intervals were composited to 1.5 m for the early drilling but used the existing 1.1 to 1.6 m sample intervals for the 2005/2006 drilling with the majority of the composites in the 1.5 to 1.6 m range. The trenches were composited to 1.5 m.

The block model was interpolated using inverse distance to the second power where a minimum of three composites was required to interpolate a block, with a maximum of 18 composites. No restriction was placed on the number of holes per block because of the areas of widely spaced data in the model

Peñasco Quemado assays were capped at 700 g/t silver before compositing which was equivalent to the 99.3 percentile.

The Peñasco Quemado model was classified as measured, indicated and inferred based on distance. Only blocks inside the solid model were classified and all other blocks were not interpolated or classified. The historical 2007 mineral resources are summarized in Table 25.1.

The stated January, 2007 resources are not materially affected by any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant issues, unless stated in this report, to the best knowledge of the authors. There are no known mining, metallurgical, infrastructure, or other factors that materially affect this resource.

**Table 25.1**  
**Historical Peñasco Quemado Resource Summary January, 2007 Based on a 30 g Silver Cut-off Grade**

Category	Tonnes (Millions)	Silver Grade (g/t)	Silver Grade (oz/t)	Silver (millions of ounces)
Measured	0.123	151.9	4.88	0.599
Indicated	2.442	115.0	3.70	9.032
<b>Measured + Indicated Total</b>	<b>2.565</b>	<b>116.8</b>	<b>3.76</b>	<b>9.631</b>
Inferred	0.001	41.4	1.32	0.001

Table provided by James McCrea for the March, 2007 Micon Technical Report.

As First Mining and Silver One do not have the block model in their possession Micon has been unable to review the model and been unable to conduct sufficient work to classify the January, 2007 estimate as a current estimate. Neither First Mining nor Silver One is treating the January, 2007, as a current estimate.

Micon recommends that given the changes in silver prices since 2007, First Mining and Silver One revisit the interpretation and resource model for Peñasco Quemado and conduct any necessary or additional work needed to reclassify the January, 2007 estimate as a current estimate or update the estimate.

There are no known resource estimates for any of the other portions of the Peñasco Quemado property.

## 26.0 RECOMMENDATIONS

Silver One is in the process of acquiring the Peñasco Quemado Project from First Mining but the property has very little information regarding historical exploration on it other than the work conducted by Silvermex between 2005 and 2006.

Silver One plans to spend an estimated US \$1,074,425 during its first phase of exploration (Table 26.1) and a further US \$1,102,670 during a second phase of the exploration program (Table 26.2). However, the second phase of the program is dependent on the results of the first phase. If the next two phases of the exploration program are completed Silver One will spend an estimated US \$2,177,095 including payments for the mining taxes, surface rights and access.

**Table 26.1**  
**Estimated Budget for the Phase 1 of Exploration on the Peñasco Quemado Project and Property**

Category	Unit	Unit Cost (US \$)	No. of Units	Total Cost (US \$)
<b>Geology and Exploration</b>				
Project Management	Monthly	3,000	7	21,000
Geologists	Monthly	13,000	7	91,000
Field Hands	Monthly	800	18	14,400
Camp and Accommodation	Month	2,200	7	15,400
Exploration Expenses and Supplies	Lump	5,000	2	10,000
Kitchner and Helper Tubutama Camp	Monthly	1,300	7	9,100
Geophysical Air Survey (Mag-R)	Lump	50,000	1	50,000
Geophysical Survey (NSAMT-Zonge)	Km	2,500	12	30,000
IP & Magnetics Ground Survey	Km	5,000	10	50,000
Reverse Circulation Drilling	Metres	60		-
Core Drilling (Initial in PQD-05 + Red Breccia)	Metres	130	3,500	455,000
Assaying (Geology Mapping and Sampling)	Samples	30	500	15,000
Assaying (Drilling)	Samples	30	2,800	84,000
Assaying Geochemical MMI	Samples	30	500	15,000
Trenching and Access Roads	Hours Dozer	70	400	28,000
Engineering and Feasibility	Lump			-
Gasoline	Lump	700	7	4,900
Maintenance Vehicles	Lump	300	3	900
Tires	Lump	1,200	1	1,200
Metallurgical Testwork	Lump	25,000	1	25,000
Drafting, Reporting, Reproduction, Maps	Monthly	2,000	7	14,000
Office materials (paper for maps, inks, etc.)	Lump	500	4	2,000
Telecommunications	Monthly	500	7	3,500
Travel Expenses	Lump	1,100	7	7,700
Vehicle Rental	Monthly Rent	1,500	7	10,500
Other Equipment Acquisition (Plotter, GPS, Computers)	Lump	500	1	500
Software	Lump	5,000	1	5,000
Other Equipment Rental				-
Social Security and Administration	Estimated	963,100	5%	48,155
<b>Total Geology and Exploration</b>				<b>1,011,255</b>
<b>Property Acquisition &amp; Maintenance Costs.</b>				
Mining Taxes	Annual	31,585	2	63,170
<b>Total Property Acquisition &amp; Maintenance Costs.</b>				<b>63,170</b>
<b>Phase 1 Grand Total</b>				<b>1,074,425</b>

**Table 26.2**  
**Estimated Budget for the Phase 2 of Exploration on the Peñasco Quemado Project and Property**

Category	Unit	Unit Cost (US \$)	No. of Units	Total Cost (US \$)
<b>Geology and Exploration</b>				
Project Management	Monthly	3,000	3	9,000
Geologists	Monthly	13,000	3	39,000
Field Hands	Monthly	800	12	9,600
Camp and Accommodation	Month	2,200	3	6,600
Exploration Expenses and Supplies	Lump	5,000	1	5,000
Kitchner and Helper Tubutama Camp	Monthly	1,300	3	3,900
Geophysical Air Survey (Mag-R)	Lump	50,000		-
Geophysical Survey (NSAMT-Zonge)	Km	2,500	10	25,000
IP & Magnetics Ground Survey	Km	5,000		-
Reverse Circulation Drilling	Metres	60	4,000	240,000
Core Drilling (Initial in PQD-05 + Red Breccia)	Metres	130	3,000	390,000
Assaying (Geology Mapping and Sampling)	Samples	30		-
Assaying (Drilling)	Samples	30	5,800	174,000
Assaying Geochemical MMI	Samples	30	500	15,000
Trenching and Access Roads	Hours Dozer	70	400	28,000
Engineering and Feasibility	Lump			-
Gasoline	Lump	700	3	2,100
Maintenance Vehicles	Lump	300	1	300
Tires	Lump	1,200	1	1,200
Metallurgical Testwork	Lump	25,000	1	25,000
Drafting, Reporting, Reproduction, Maps	Monthly	2,000	3	6,000
Office materials (paper for maps, inks, etc.)	Lump	500	2	1,000
Telecommunications	Monthly	500	3	1,500
Travel Expenses	Lump	1,100	3	3,300
Vehicle Rental	Monthly Rent	1,500	3	4,500
Other Equipment Acquisition (Plotter, GPS, Computers)	Lump	500		-
Software	Lump	5,000		-
Other Equipment Rental				-
Social Security and Administration	Estimated	990,000	5%	49,500
<b>Total Geology and Exploration</b>				<b>1,039,500</b>
<b>Property Acquisition &amp; Maintenance Costs.</b>				
Mining Taxes	Bi-annual	31,585	2	63,170
<b>Total Property Acquisition &amp; Maintenance Costs.</b>				<b>-</b>
<b>Phase 2 Grand Total</b>				<b>1,102,670</b>

Micon has reviewed Silver One's proposal for its exploration program on the Peñasco Quemado property and recommends that Silver One conducts the exploration program as proposed subject to funding and any other matters which may cause the proposed exploration program to be altered in the normal course of its business activities or alterations which may affect the program as a result of exploration activities themselves.

Given the amount of work conducted previously by Silvermex at the Peñasco Quemado Project on the main exploration target and area of mineralization, this area of the property should be regarded as an mid-stage exploration project which may have economic potential. Micon believes that further analysis of the results of Silvermex's 2005 and 2006 exploration program, followed by a focused exploration programs based on this work is warranted and may assist Silver One in outlining further resources on the West zone and identifying further exploration targets elsewhere on the property. on the main exploration target and area of mineralization,

this area of the property should be regarded as an mid-stage exploration project which may have economic potential. The previous work was discussed in Section 6 of this report. Micon believes that further analysis of the results of Silvermex's 2005 and 2006 exploration program, followed by a focused exploration programs is warranted and may assist Silver One in outlining further resources on the West zone and identifying further exploration targets elsewhere on the property.

Through its acquisition of the Peñasco Quemado Project, Silver One has acquired a property with the potential to yield significant silver mineralization. Micon agrees with the general direction of Silver One's initial and proposed exploration programs for the project and makes the following additional recommendations for the property:

1. Micon recommends that Silver One reviews the work conducted by Silvermex previously and incorporate this into any future exploration program it may undertake.
2. Micon recommends that Silver One sets up an appropriate QA/QC program for the Peñasco Quemado Project prior to beginning any exploration program.

Peñasco Quemado should be regarded as a mid-stage exploration project which may have a significant economic potential, should the mineralization prove to be more extensive than is presently indicated.

Micon has reviewed the proposed exploration programs and the results from the previous drilling program conducted by Silvermex and, in light of the observations made in this report, support the concepts outlined by Silver One for further exploration. It is Micon's opinion that the property merits further exploration and that Silver One's proposed exploration plans are properly conceived and justified.

## **27.0 DATE AND SIGNATURE PAGE**

### **MICON INTERNATIONAL LIMITED**

“William J. Lewis” {signed and sealed as of the amended report date}

William J. Lewis, B.Sc., P.Geo.  
Senior Geologist

Report Date: September 20, 2016.  
Effective Date: September 20, 2016.  
Amended Date: January 6, 2017.

## **28.0 REFERENCES**

### **28.1 TECHNICAL REPORTS, PAPERS AND OTHER PUBLICATIONS**

Burk, R., (2006), Report of a Field Examination of the Peñasco Quemado Mineral Property, Sonora, Mexico. 14 p

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## 29.0 CERTIFICATES

### 29.1 CERTIFICATE OF WILLIAM J. LEWIS, B.Sc., P.GEO.

As the author of this report for First Mining Finance Corp. and Silver One Resources Inc. entitled “NI 43-101 Technical Report for the Peñasco Quemado Silver Property, Magdalena – Tubutama Mining District, Sonora, Mexico” dated September 20, 2016 with an effective date of September 20, 2016 and as amended on January 6, 2017, I, William J. Lewis do hereby certify that:

I am employed by, and carried out this assignment for, Micon International Limited, Suite 900, 390 Bay Street, Toronto, Ontario M5H 2Y2, tel. (416) 362-5135, fax (416) 362-5763, e-mail wlewis@micon-international.com.

This certificate applies to the Technical Report titled “NI 43-101 Technical Report for the Peñasco Quemado Silver Property, Magdalena – Tubutama Mining District, Sonora, Mexico” dated September 20, 2016 with an effective date of September 20, 2016 and as amended on January 6, 2017.

I hold the following academic qualifications:

B.Sc. (Geology)	University of British Columbia	1985
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I am a registered Professional Geoscientist with the Association of Professional Engineers and Geoscientists of Manitoba (membership # 20480); as well, I am a member in good standing of several other technical associations and societies, including:

- Association of Professional Engineers and Geoscientists of British Columbia (Membership # 20333)
- Association of Professional Engineers, Geologists and Geophysicists of the Northwest Territories (Membership # 1450)
- Professional Association of Geoscientists of Ontario (Membership # 1522)
- The Canadian Institute of Mining, Metallurgy and Petroleum (Member # 94758)

I have worked as a geologist in the minerals industry for 31 years.

I am familiar with NI 43-101 and, by reason of education, experience and professional registration, I fulfill the requirements of a Qualified Person as defined in NI 43-101. My work experience includes 4 years as an exploration geologist looking for gold and base metal deposits, more than 11 years as a mine geologist in underground mines and five years as a surficial geologist and more than 11 years as a consulting geologist on precious and base metals, specializing in mineral resource and reserve estimates, and industrial minerals.

I have read NI 43-101 and this Technical Report has been prepared in compliance with the instrument.

I visited the Penasco Quemado Project on August 30, 2016 and have visited the property previously in 2005 and 2006.

I have written or co-authored two previous Technical Reports for the mineral property that is the subject of this Technical Report.

I am independent of First Mining Finance Corp. and Silver One Resources Inc. according to the definition described in NI 43-101 and the Companion Policy 43-101 CP.

I am responsible for all Sections within this 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 this technical report not misleading.

Report Dated this 30<sup>th</sup> day of September, 2016 with an effective date of September 20, 2016 and as Amended on January 6, 2017.

*“William J. Lewis” {signed and sealed as of the Amended report date}*

William J. Lewis, B.Sc., P.Geo.  
Senior Geologist, Micon International Limited.

## **APPENDIX 1**

### **GLOSSARY OF MINING AND OTHER RELATED TERMS**

The following is a glossary of general mining terms that may be used in this Technical Report.

## **A**

Ag	Symbol for the element silver.
Assay	A chemical test performed on a sample of ores or minerals to determine the amount of valuable metals contained.
Au	Symbol for the element gold.

## **B**

Base metal	Any non-precious metal (e.g. copper, lead, zinc, nickel, etc.).
Bulk mining	Any large-scale, mechanized method of mining involving many thousands of tonnes of ore being brought to surface per day.
Bulk sample	A large sample of mineralized rock, frequently hundreds of tonnes, selected in such a manner as to be representative of the potential orebody being sampled. The sample is usually used to determine metallurgical characteristics.
Bullion	Precious metal formed into bars or ingots.
By-product	A secondary metal or mineral product recovered in the milling process.

## **C**

Channel sample	A sample composed of pieces of vein or mineral deposit that have been cut out of a small trench or channel, usually about 10 cm wide and 2 cm deep.
Chip sample	A method of sampling a rock exposure whereby a regular series of small chips of rock is broken off along a line across the face.
CIM Standards	The CIM Definition Standards on Mineral Resources and Mineral Reserves adopted by CIM Council from time to time. The most recent update adopted by the CIM Council is effective as of November 27, 2010.
CIM	The Canadian Institute of Mining, Metallurgy and Petroleum.
Concentrate	A fine, powdery product of the milling process containing a high percentage of valuable metal.
Contact	A geological term used to describe the line or plane along which two different rock formations meet.
Core	The long cylindrical piece of rock, about an inch in diameter, brought to surface by diamond drilling.
Core sample	One or several pieces of whole or split parts of core selected as a sample for analysis or assay.

**Cross-cut** A horizontal opening driven from a shaft and (or near) right angles to the strike of a vein or other orebody. The term is also used to signify that a drill hole is crossing the mineralization at or near right angles to it.

**Cu** Symbol for the element copper.

**Cut-off grade** The lowest grade of mineralized rock that qualifies as ore grade in a given deposit, and is also used as the lowest grade below which the mineralized rock currently cannot be profitably exploited. Cut-off grades vary between deposits depending upon the amenability of ore to gold extraction and upon costs of production.

## **D**

**Dacite** The extrusive (volcanic) equivalent of quartz diorite.

**Deposit** An informal term for an accumulation of mineralization or other valuable earth material of any origin.

**Development drilling**

Drilling to establish accurate estimates of mineral resources or reserves usually in an operating mine or advanced project.

**Dilution** Rock that is, by necessity, removed along with the ore in the mining process, subsequently lowering the grade of the ore.

**Diorite** An intrusive igneous rock composed chiefly of sodic plagioclase, hornblende, biotite or pyroxene.

**Dip** The angle at which a vein, structure or rock bed is inclined from the horizontal as measured at right angles to the strike.

**Doré** A semi refined alloy containing sufficient precious metal to make recovery profitable. Crude precious metal bars, ingots or comparable masses produced at a mine which are then sold or shipped to a refinery for further processing.

## **E**

**Epithermal** Hydrothermal mineral deposit formed within one kilometre of the earth's surface, in the temperature range of 50 to 200°C.

**Epithermal deposit**

A mineral deposit consisting of veins and replacement bodies, usually in volcanic or sedimentary rocks, containing precious metals or, more rarely, base metals.

**Exploration** Prospecting, sampling, mapping, diamond drilling and other work involved in searching for ore.

## F

Face	The end of a drift, cross-cut or stope in which work is taking place.
Fault	A break in the Earth's crust caused by tectonic forces which have moved the rock on one side with respect to the other.
First Mining	First Mining Finance Corp, including, unless the context otherwise requires, the Company's subsidiaries.
Flotation	A milling process in which valuable mineral particles are induced to become attached to bubbles and float as others sink.
Fold	Any bending or wrinkling of rock strata.
Footwall	The rock on the underside of a vein or mineralized structure or deposit.
Fracture	A break in the rock, the opening of which allows mineral-bearing solutions to enter. A "cross-fracture" is a minor break extending at more-or-less right angles to the direction of the principal fractures.

## G

g/t	Abbreviation for gram(s) per metric tonne.
g/t	Abbreviation for gram(s) per tonne.
Grade	Term used to indicate the concentration of an economically desirable mineral or element in its host rock as a function of its relative mass. With gold, this term may be expressed as grams per tonne (g/t) or ounces per tonne (opt).
Gram	One gram is equal to 0.0321507 troy ounces.

## H

Hanging wall	The rock on the upper side of a vein or mineral deposit.
Heap Leaching	A process used for the recovery of copper, uranium, and precious metals from weathered low-grade ore. The crushed material is laid on a slightly sloping, impervious pad and uniformly leached by the percolation of the leach liquor trickling through the beds by gravity to ponds. The metals are recovered by conventional methods from the solution.
High grade	Rich mineralization or ore. As a verb, it refers to selective mining of the best ore in a deposit.
Host rock	The rock surrounding an ore deposit.
Hydrothermal	Processes associated with heated or superheated water, especially mineralization or alteration.

## I

### Indicated Mineral Resource

An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

### Inferred Mineral Resource

An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.”

**Intrusive** A body of igneous rock formed by the consolidation of magma intruded into other

## K

**km** Abbreviation for kilometre(s). One kilometre is equal to 0.62 miles.

## L

**Leaching** The separation, selective removal or dissolving-out of soluble constituents from a rock or ore body by the natural actions of percolating solutions.

**Level** The horizontal openings on a working horizon in a mine; it is customary to work mines from a shaft, establishing levels at regular intervals, generally about 50 m or more apart.

**Limestone** A bedded, sedimentary deposit consisting chiefly of calcium carbonate.

## M

**m** Abbreviation for metre(s). One metre is equal to 3.28 feet.

**Marble** A metamorphic rock derived from the recrystallization of limestone under intense heat and pressure.

#### Measured Mineral Resource

A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.

**Metallurgy** The science and art of separating metals and metallic minerals from their ores by mechanical and chemical processes.

**Metamorphic** Affected by physical, chemical, and structural processes imposed by depth in the earth's crust.

**Mill** A plant in which ore is treated and metals are recovered or prepared for smelting; also a revolving drum used for the grinding of ores in preparation for treatment.

**Mine** An excavation beneath the surface of the ground from which mineral matter of value is extracted.

**Mineral** A naturally occurring homogeneous substance having definite physical properties and chemical composition and, if formed under favourable conditions, a definite crystal form.

**Mineral Claim** That portion of public mineral lands which a party has staked or marked out in accordance with federal or state mining laws to acquire the right to explore for and exploit the minerals under the surface.

**Mineralization** The process or processes by which mineral or minerals are introduced into a rock, resulting in a valuable or potentially valuable deposit.

#### Mineral Resource

- A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories. An Inferred Mineral Resource has a lower level of confidence than that applied

to an Indicated Mineral Resource. An Indicated Mineral Resource has a higher level of confidence than an Inferred Mineral Resource but has a lower level of confidence than a Measured Mineral Resource. The term mineral resource used in this report is a Canadian mining term as defined in accordance with NI 43-101 – Standards of Disclosure for Mineral Projects under the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum (the CIM), Standards on Mineral Resource and Mineral Reserves Definitions and guidelines adopted by the CIM Council on December 11, 2005, updated as of November 27, 2010 and more recently updated as of May 10, 2014(the CIM Standards).

## N

### Net Smelter Return

A payment made by a producer of metals based on the value of the gross metal production from the property, less deduction of certain limited costs including smelting, refining, transportation and insurance costs.

### NI 43-101

National Instrument 43-101 is a national instrument for the Standards of Disclosure for Mineral Projects within Canada. The Instrument is a codified set of rules and guidelines for reporting and displaying information related to mineral properties owned by, or explored by, companies which report these results on stock exchanges within Canada. This includes foreign-owned mining entities who trade on stock exchanges overseen by the Canadian Securities Administrators (CSA), even if they only trade on Over the Counter (OTC) derivatives or other instrumented securities. The NI 43-101 rules and guidelines were updated as of June 30, 2011.

## O

Open Pit/Cut	A form of mining operation designed to extract minerals that lie near the surface. Waste or overburden is first removed, and the mineral is broken and loaded for processing. The mining of metalliferous ores by surface-mining methods is commonly designated as open-pit mining as distinguished from strip mining of coal and the quarrying of other non-metallic materials, such as limestone and building stone.
Outcrop	An exposure of rock or mineral deposit that can be seen on surface that is, not covered by soil or water.
Oxidation	A chemical reaction caused by exposure to oxygen that result in a change in the chemical composition of a mineral.

**Ounce** A measure of weight in gold and other precious metals, correctly troy ounces, which weigh 31.2 grams as distinct from an imperial ounce which weigh 28.4 grams.

**oz** Abbreviation for ounce.

## **P**

**Plant** A building or group of buildings in which a process or function is carried out; at a mine site it will include warehouses, hoisting equipment, compressors, maintenance shops, offices and the mill or concentrator.

**Pyrite** A common, pale-bronze or brass-yellow, mineral composed of iron and sulphur. Pyrite has a brilliant metallic luster and has been mistaken for gold. Pyrite is the most wide-spread and abundant of the sulphide minerals and occurs in all kinds of rocks.

## **Q**

**Qualified Person** Conforms to that definition under NI 43-101 for an individual: (a) to be an engineer or geoscientist with a university degree, or equivalent accreditation, in an area of geoscience, or engineering, related to mineral exploration or mining; (b) has at least five years' experience in mineral exploration, mine development or operation or mineral project assessment, or any combination of these, that is relevant to his or her professional degree or area of practice; (c) to have experience relevant to the subject matter of the mineral project and the technical report; (d) is in good standing with a professional association; and (e) in the case of a professional association in a foreign jurisdiction, has a membership designation that (i) requires attainment of a position of responsibility in their profession that requires the exercise of independent judgement; and (ii) requires (A.) a favourable confidential peer evaluation of the individual's character, professional judgement, experience, and ethical fitness; or (B.) a recommendation for membership by at least two peers, and demonstrated prominence or expertise in the field of mineral exploration or mining.

## **R**

**Reclamation** The restoration of a site after mining or exploration activity is completed.

## **S**

**Shoot** A concentration of mineral values; that part of a vein or zone carrying values of ore grade.

Silver One	Silvermex One Resources Inc., including, unless the context otherwise requires, the Company's subsidiaries.
Silvermex	Silvermex Resources Ltd. (later Inc.), including, unless the context otherwise requires, the Company's subsidiaries.
Skarn	Name for the metamorphic rocks surrounding an igneous intrusive where it comes in contact with a limestone or dolostone formation.
Stockpile	Broken ore heaped on surface, pending treatment or shipment.
Strike	The direction, or bearing from true north, of a vein or rock formation measure on a horizontal surface.
Stringer	A narrow vein or irregular filament of a mineral or minerals traversing a rock mass.
Sulphides	A group of minerals which contains sulphur and other metallic elements such as copper and zinc. Gold and silver are usually associated with sulphide enrichment in mineral deposits.

## **T**

Tonne	A metric ton of 1,000 kilograms (2,205 pounds).
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## **V**

Vein	A fissure, fault or crack in a rock filled by minerals that have travelled upwards from some deep source.
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## **W**

Wall rocks	Rock units on either side of an orebody. The hanging wall and footwall rocks of a mineral deposit or orebody.
Waste	Unmineralized, or sometimes mineralized, rock that is not minable at a profit.
Working(s)	May be a shaft, quarry, level, open-cut, open pit, or stope etc. Usually noted in the plural.

## **Z**

Zone	An area of distinct mineralization.
ZTEM geophysical survey	Z-Tipper Axis Electromagnetic) system is Geotech Inc.'s exclusive system which leverages the earth's natural (or passive) fields from global thunderstorm activity as a source of transmitted energy. The ZTEM™ system leverages the earth's

natural (or passive) fields from global thunderstorm activity as a source of transmitted energy. According to Geotech ZTEM™ is ideal for mapping deeply buried, porphyry hosted and structurally controlled targets.