

Technical Report on the  
Pino de Plata Property  
Chihuahua, Mexico

A Report Prepared for  
Silver Spruce Resources, Inc.

Location UTM NAD 83, Zone 12  
743,900 E; 3,026,800 N

Prepared by:  
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Effective Date: July 7, 2015

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I, **Leonard J. Karr**, consent to the public filing of the technical report titled "*National Instrument 43-101 Technical Report on the Pino de Plata Property, Chihuahua, Mexico*" dated July 7, 2015 by Silver Spruce Resources Inc.

I certify that I have read the Filing Statement being filed by Silver Spruce Resources, Inc. and that it fairly and accurately represents the information in the sections of the technical report for which I am responsible.

Dated this 7th day of July, 2015, in Golden, Colorado

Per: (s) «Leonard J. Karr»

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(signed)  
**Leonard J. Karr, B. Sc., M. Sc., CPG.**

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## LIST OF ABBREVIATIONS USED IN THIS TECHNICAL REPORT

Units of measurement used in this technical report conform to the SI (metric) system. All currency in this technical report is United State Dollars (US\$) unless otherwise noted:

<	less than
>	greater than
%	percent
°C	degrees Celsius
°F	degree Fahrenheit
°	degree
μ	micron
ASL	Above Sea Level
Ag	Silver
Au	Gold
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
cm	centimeter
Cu	Copper
E	East
ft	foot / feet
ft <sup>2</sup>	square foot
ft <sup>3</sup>	cubic foot
f.g.	fine grained
g	gram
G	billion
g/t	gram per metric tonne
ha	hectare
in	inch
JV	Joint venture
kg	kilogram
km	kilometer
km <sup>2</sup>	square kilometer
LOI	loss on ignition
m	meter
M	million
m <sup>2</sup>	square meter
m <sup>3</sup>	cubic meter
Ma	millions of years ago
MASL	meters above sea level
mm	millimeter
mm <sup>3</sup>	millions cubic meters
Mt	million metric tonnes
North	north
NE	northeast
oz	troy ounce (31.1035 g)
oz/st	ounce per short ton
Pb	Lead
py	pyrite

MW	megawatts
N	north
NI 43-101	National Instrument 43-101
NN	nearest neighbor
NSR	net Smelter Royalty
st	short ton
t	metric tonne
Zn	Zinc



## 1.0 Summary

This technical report describes the historical exploration work and the mineralization potential of the Pino de Plata Property (the “Property”) at the request of Mr. Karl Boltz, of *Silver Spruce Resources, Inc.* (“Silver Spruce”). Silver Spruce is a Junior Mining Company with its main offices at Suite 312 – 197 Dufferin St., Bridgewater, Nova Scotia, B4C 2G9, Canada. It is a publicly traded company on the TSX Venture Exchange under the symbol SSE. The company’s website is <http://www.silverspruceresources.com>.

Silver Spruce has the option of purchasing a 100% interest in the Property under a Binding Letter of Agreement dated April 30<sup>th</sup> 2015. This report was prepared by *Leonard J. Karr, B. Sc., M. Sc., CPG* (the “Author”), and has been prepared in accordance with National Instrument (“NI”) 43-101 and 43-101F standards of disclosure for mineral projects.

The Author is a Qualified Person according to NI 43-101, in his capacity as a mineral exploration consultant, and is independent of the issuer.

By road, the Property is located approximately 440 km southwest of Ciudad Chihuahua, Mexico and approximately 5.5 km due south of the village of Chinipas de Almada within Mexican topographic Map Sheet G12 B38. The Property consists of four exploitation concessions (Theodora, 218861, Theodora II, 223059; Theodora I Fraccion Norte, 214261; and Theodora I Fraccion Sur, 214262) covering 397.

Silver Spruce entered into a Binding Letter of Agreement (“LOA”) with the private owner of the Property, Mr. Matija Ivan Ivacic Futac (the “Vendor”) to earn a 100% interest in the Property for payment of approximately \$5,011,000 cash over a 6 year period. The LOA is valid for six months, beginning April 30, 2015, the date of signing. The Vendor does not retain a royalty.

The Property is an early stage exploration property. There is no historic drill or trench data and no defined mineral resource. Silver mineralization on the Property occurs in veins, as replacement mineralization in marbleized limestone and as replacement mineralization in igneous rocks.

Surface rights on the Property are owned by a local rancher (Joel Salazar) and his family. There are no known environmental liabilities on the Property.

The property was examined by the author during May 23 through May 31, 2015. Field work focused on areas of known mineralization, and mineralized outcrops that were identified in the course of mapping. Ninety-two rock samples were collected during the visit.

This field program confirmed the presence of silver and base metal mineralization in veins, stockworks and replacement deposits. It also identified large areas of gossan and alteration consistent with potentially larger deposits.

The Author is of the opinion that the Property has merit to warrant further exploration to determine its potential for silver mineralization and recommends an exploration program be initiated. The program would include continued mapping, rock and soil sampling, geophysics and drilling of the Santa Elena Target, Terrero and Western Vein targets with the objective of delineating a NI 43-101 compliant mineral resources. The estimated budget for this work is \$1,393,000.

## **2.0 Introduction and Terms of Reference**

This Technical Report on the geology and mineralization of the Pino de Plata Property (“the Property”) was prepared by *Leonard J. Karr, B. Sc., M. Sc., CPG* (the “Author”) on behalf of Silver Spruce Resources, Inc. (“Silver Spruce”) to comply with technical reporting and disclosure requirements set out under National Instrument (“NI”) 43-101.

The Property comprises four exploitation concessions covering 397 Ha. The four concessions are the Theodora, (218861), Theodora II (223059), Theodora I Fraccion Norte (214261), and Theodora I Fraccion Sur (214262). The latter three were originally exploration concessions, but were converted to exploitation concessions per recent changes in Mexican mining law. The claims are located in the state of Chihuahua, Mexico.

This report documents the exploration history of the Property. The information and data used in the preparation of this report was collected during the author’s site visit. Additional historical information was sourced from the private files of the Owner and publicly accessible academic papers and government sources. Citations are provided throughout the report where this information has been referenced.

The Author of this report is a certified professional geologist (CPG) and prepared this report after review of past exploration on the Property and mineralization viewed during the Property visit on May 23 to 31, 2015. Leonard J. Karr, CPG, is a Qualified Person (“QP”) as defined by NI 43-101 and is responsible for all sections of this report. The Author and Silver Spruce worked strictly on a fee for service basis and this work was one of many contracts under management by the Author.

## **3.0 Reliance on Other Experts**

No other experts were consulted in the preparation of this report.

This report was prepared by the Author for Silver Spruce and the information, conclusions and recommendations contained herein are based upon information available to the Author at the time of report preparation. This includes data made available by the Owner, and from government and public record sources. Information contained in this report is believed reliable, but in part the report is based upon information not within the authors’ control.

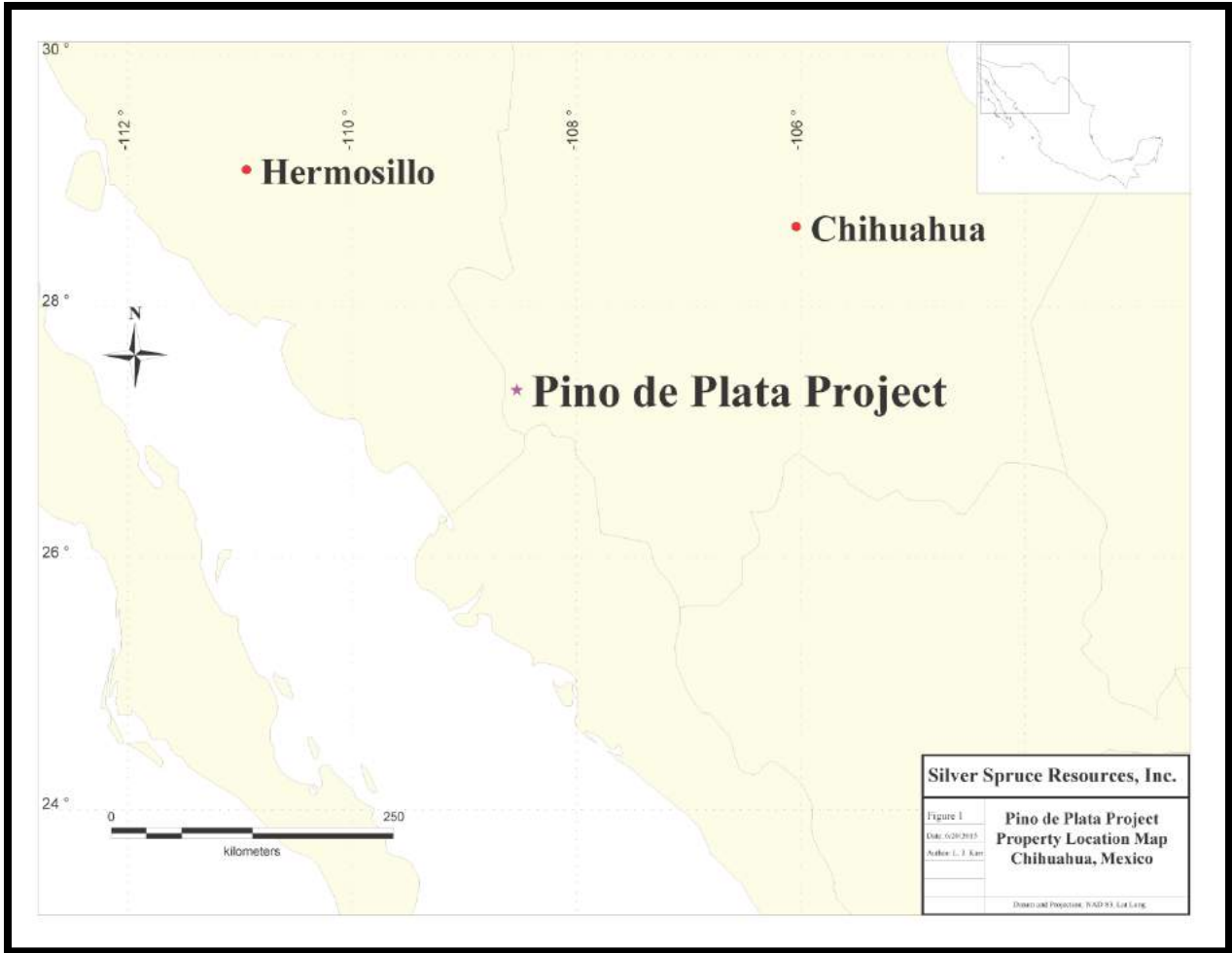
The Author has no reason, however, to question the quality or validity of data used in this report. Comments and conclusions presented herein reflect best judgment at the time of report preparation and are based upon information available at that time.

This report also expresses opinions regarding exploration and development potential for the project, and recommendations for further analysis. These opinions and recommendations are intended to serve as guidance for future development of the property, but should not be construed as a guarantee of success.

An independent verification of land title and tenure was not performed by the Author. The Author is not a Qualified Person with respect to the validity of surface rights, titles, easements, and other issues of land ownership in State of Chihuahua, Mexico.

#### **4.0 Property Description and Location**

The Property is located approximately 5.5 km due south of the village of Chinipas de Almada, in the municipio of Chinipas, state of Chihuahua, Mexico, within Mexican topographic Map Sheet G12 B38 (Figure 1). Geographic coordinates for the Property center are approximately 27° 20'N, 108° 33'W.



**Figure 1. Project location Map.**

The Property consists of four exploitation concessions (Theodora, 218861; Theodora II, 223059; Theodora I Fraccion Norte, 214261; Theodora I Fraccion Sur, 214262). These concessions total 397 Ha., as shown in Table 1 and Figure 2. These concessions have a life span of 50 years after the date of inception. Copies of each concession titulo are presented in Appendix 2.

**Table 1. List of Concessions**

<b>Cerro la Plata Project, List of Mineral Concessions</b>				
<b>Name (Nombre Lote)</b>	<b>Concession Number (Título)</b>	<b>Type</b>	<b>Ha</b>	<b>Date Issued</b>
Theodora	218861	Exploitation	97.5756	January 23, 2003
Theodora II	223059	Exploitation	159.7482	October 8, 2004
Theodora I Fraccion Norte	214261	Exploitation	91.6762	September 6, 2001
Theodora I Fraccion Sur	214262	Exploitation	48	September 6, 2001
<b>Total Hectares</b>			<b>397</b>	

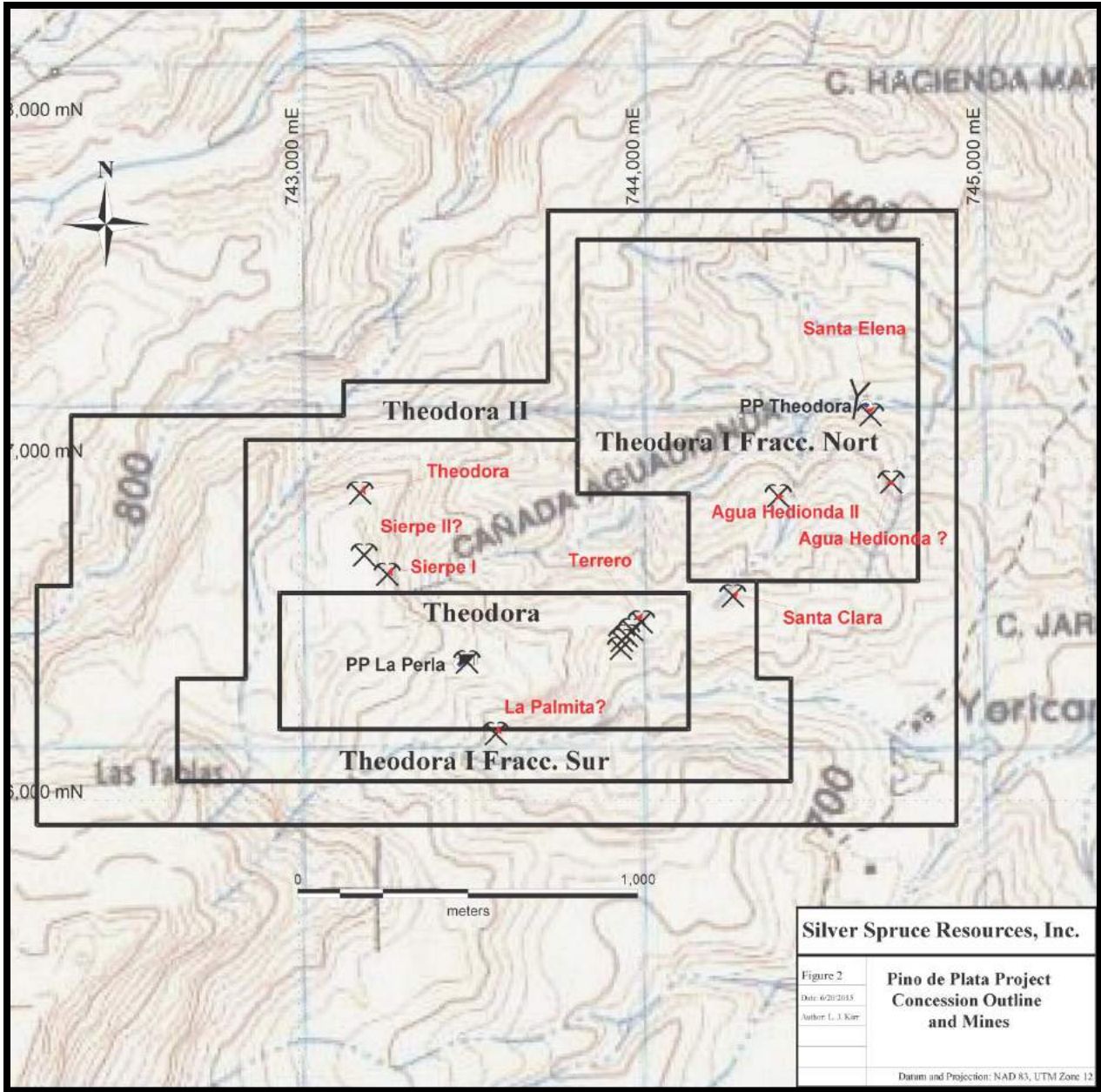


Figure 2. Project Concession Map. Base map 1:50,000 SGM topographic map Chinipas, Chihuahua, Sonora G12-B38.

Silver Spruce entered into a Binding Letter of Agreement (“LOA”) with the private owner of the Property, Mr. Matija Ivan Ivsic Futac (the “Vendor”) to earn a 100% interest in the Property. The LOA is valid for a six-month exclusivity period, beginning April 30, 2015, the date of signing. On or before the end of the six-month exclusivity period, Silver Spruce has agreed to pay the taxes owed on the concessions of approximately U\$11,000 and to formalize a purchase agreement with the owner. On or before the end of the exclusivity period, Silver Spruce will commence four quarterly payments to the owner of U\$250,000 each over the subsequent twelve months. It is Silver Spruce’s intention to pay the remaining U\$4 million over the following five years from cash flow generated from production at the Pino de Plata

project, for a total payment of approximately \$5,011,000 cash over a 6 year period. The Vendor does not retain a royalty.

Under the terms of the agreement, Silver Spruce will be deemed to have exercised the option to acquire a 100% interest in the Property by completing the cash payments according to the following schedule:

1. Paying approximately \$11,000 to the Owner for the purpose of paying current and taxes in arrears on the property on the effective date (October 31, 2015);
2. Paying \$250,000 to the Owner on the effective date (October 31, 2015);
3. Paying \$250,000 to the Owner on a quarterly basis until July 31, 2016 for a total of \$750,000;
4. Paying \$4,000,000 to the Owner during the subsequent five years ending July 31, 2021. The payment schedule of the \$4,000,000 is to be determined by the final purchase agreement, which has not been finalized.

The Vendor does not retain a royalty in the property.

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

The Property is located 5.5 km due south of the town of Chinipas de Almada. Chinipas de Almada is a 9 hour drive from Ciudad Chihuahua, Mexico. Road conditions from Cd. Chihuahua vary from good pavement to fair dirt roads. Access from Navajoa, Sonora, is said to be a few hours shorter. The main economic industries for the town of Chinipas include ranching, mining (it is the nearest town to the Palmarejo Mine) transportation, communications, and public administration.

### **5.1 Accessibility**

Access to the Property is via dirt road south from the town of Chinipas de Almada, a distance of about 10 kilometers. The Rio Chinipas can be forded at several places about 7 kilometers south of town. The fords are about 100 meters in width. Forging the river was not an issue during the site visit which took place during the dry season, but may prove problematic during the wet season.

A small paved airstrip is located less than 1 kilometer north of Chinipas. It is in regular use by small single and twin engine planes.

### **5.2 Climate**

The climate in the area consists of a wet and a dry season. The wet season occurs from June to September, with the heaviest rains occurring in July and August. Rainfall amounts of 8 to 25 centimeters per month are considered normal during the wet season, while monthly rainfall amounts of less than 4 centimeters can be expected during the dry season.

The hottest months are May to September when daily maximum temperatures average over 34° C, with nighttime minimums of 17° C. During the winter months average daily highs are in the mid-twenties and lows are in the low teens to high single digits centigrade.

Exploration, including drilling programs, will likely be impacted in July and August because of occasional heavy rains and flooding.

### **5.3 Local Resources**

The resident population of Chinipas de Almada in the 2010 census was 1,900, but it appears to have grown since then. The surrounding countryside is sparsely populated. Local field labor is readily available and some local earthmoving services are available. Contractors providing geological and prospecting supplies and assaying and drilling services are readily available in Cd. Chihuahua and Hermosillo.

### **5.4 Infrastructure**

Chinipas offers all the basic necessities for supporting a field project. Medical services are provided by a local hospital. There are several restaurants and grocery stores, a modest but comfortable hotel, and a PEMEX station. Cellular telephone service is available but spotty. High-speed internet services are not readily available.

### **5.5 Physiography**

The property lies within the Sierra Madre Occidental. Topography on the property, and regionally, is mountainous. Elevations on the property range from 475 meters ASL on the eastern edge of the Property to 1100+ meters ASL on the southwest. Nearly all of the property is covered by a scrub deciduous forest which is dense and difficult to traverse. Some small areas have been cleared for pasture. At elevations above 1000 meters the countryside is covered in pine forest with an open understory.

## **6.0 History**

### **6.1 Local History**

Jesuits founded a mission in Chinipas in 1626, and the earliest recorded mining in the region began in the 1700's. The area around Chinipas saw extensive activity in the 1800's with the development of the Palmarejo Mine, among others.

In recent decades several mining companies conducted active exploration programs in the region. In the immediate area, Paramount Gold, Minera Gama, and Coeur d'Alene Mines conducted exploration



programs. The Author has no data from these programs. Regional geology, stream sediment geochemistry, aeromagnetic and other data are available on the Servicio Geologico Mexicano website (<http://mapasims.sgm.gob.mx/GeoInfoMexDb/>).

## 6.2 Property History

Historic workings are mostly developed in small veins where artisanal efforts were likely rewarded with easily delineated, high grade (>1000 g/t Ag) mineralization. Less attention was given to replacement mineralization in igneous rocks and marble, probably because of overall lower grades and less obvious targets. Only three small artisanal workings are known in the large area of gossan developed in the Cretaceous carbonates in the eastern part of the property.

According to the Owner, the Terrero Mine was developed during the Spanish colonial era. Several other small mines were developed on the property in the 1800's and 1900's. These include the Santa Clara, Sierpe I, Sierpe II, La Perla, La Palmita, Theodora, Agua Hedionda, and Santa Elena. Efforts were made to visit all of these mines but we were unable to locate the La Palmita and Agua Hedionda. We encountered an unknown mine which we refer to as the Agua Hedionda II (Figure 2). There are no known production records for these mines. From the very limited extent of their workings it is unlikely that they produced more than a few hundred tons of ore each. Despite a diligent search, we were unable to locate either the La Palmita or the Agua Hedionda mines. No production records for any of these mines are known to exist.

The current owner acquired the property in 1986 but subsequently relocated the original land position with four new concessions between 2001 and 2004. Since acquiring the Property the Owner has collected over 100 samples from several of the mines including the Santa Elena, Terrero, Sierpe I, Sierpe II, La Palmita, and Santa Clara. The Owner verbally characterized the grade of the mineralization at the Santa Elena and in the various veins as => 1,000 g/t Ag along with significant (on the order of hundreds of ppb) Au plus economically important amounts of Cu, Pb and Zn. The Owner gave the Author assay certificates of samples purportedly taken from the Project, and the Author has no reason to doubt that the assay certificates are genuine and represent samples taken by the Owner on the Property. Unfortunately, none the Owner's samples are located on a map nor do they have coordinates, only a few have hand written notations indicating the area or mine from which they were taken (but none could be found in the field), and neither the sample type (grab, channel, select, etc.) nor sampling method was noted for any of them. Finally, the Owner did not have in place a QC/QA protocol. Thus, this body of assay data must be largely disregarded when considering the property's merits. The Owner prepared his own Property report and it is presented in Appendix 3.

In 1985, Consejo de Recursos Minerales (CRM) examined the La Perla, Terrero, Santa Elena y La Palmita mines (Fragoso, et al, 1985). CRM calculated resources of several thousands of tonnes each for La Perla and El Terrero mines based on chip channel samples from each locality. The author reviewed CRM's

report and found it reasonably written, but was unable to duplicate CRM's assay results for the following reasons:

- Most of the sample locations were not found.
- Sample locations were found, but were located within portions of underground workings that were deemed to be unsafe to access.

Consejo de Recursos Minerales report is presented in Appendix 4.

Arcelia Gold examined the property in 2013 and calculated resource volumes at the Santa Elena, Santa Clara, Sierpe and La Perla mines based on chip channel samples. Their report did not include sample locations, descriptions, assay results, or an estimate of tonnage and grade. Arcelia calculated an aggregate resource of 130,000 t based on very little data and no calculations were presented in their report to substantiate this estimate. No grade was assigned to the resource. The report recommended a modest exploration program to explore for low sulfidation Au-Ag mineralization. (Jaimez, A., 2013). The Author reviewed Arcelia's short report and found its geologic descriptions credible but found the resource estimate to be unsupported by evidence. The Author was unable to confirm any of Arcelia's sampling because even though many of Arcelia's samples were clearly marked with spray paint in the field, Arcelia never provided the Owner with the assay data or sample descriptions. Arcelia Gold's report is presented in Appendix 5.

## **7.0 Geological Setting and Mineralization**

### **7.1 Regional Geological Setting**

The property lies within the Sierra Madre Occidental physiographic province, a mountain range that extends nearly 1,100 km north to south and forms the western border of the Mexican Plateau. The range has an average elevation of 2,400 to 2,700 meters ASL. Regionally, the basement is the Cortes Terrane, one of several terranes that were accreted onto the western margin of the Mexico paleo-continental during the Cretaceous (Centeno-García, et al, 2008, fig. 1)(Figure 3).

Jurassic to Cretaceous reef and platform carbonates and siliclastic rocks were deposited on the basement. Regionally, upper Cretaceous sediments are sometimes interbedded with the Lower Sequence Volcanics (McDowell and Clabaugh, 1981).

The basement and older portions of the Lower Volcanic Complex were subsequently deformed by compressional tectonics related to the onset of subduction of the Farallon Plate beneath North America during the Laramide (Cretaceous to Eocene). Subduction generated partial melting created calc-alkaline intrusive and volcanic rocks beginning in the late Cretaceous and continuing throughout the Tertiary.

The Sierra Madre Occidental volcanic stratigraphy is classically subdivided into a lower and upper sequence.

The Lower Volcanic Sequence, which is contained within the more encompassing Lower Volcanic Complex, aka the Lower Volcanic Supergroup, consists of intermediate intrusives and their cogenetic extrusive equivalents; principally andesite with lesser dacite and rhyodacite with associated epiclastic sediments (McDowell and Keizer, 1977).

The Mid-Tertiary Upper Volcanic Sequence is dominated by the eruption of voluminous rhyolitic ignimbrites from calderas. These constitute the Sierra Madre Occidental Large Igneous Province. Beginning in the Eocene, as much as 1,500 m of volcanic rocks covering over 300,000 km<sup>2</sup> were erupted (McDowell, F. W. 2007). The Sierra Madre Occidental is the largest Cenozoic large igneous province in the world. These silicic ignimbrites were emplaced in two pulses; in the Oligocene (ca. 32–28 Ma) and Early Miocene (ca. 24–20 Ma). Basaltic andesites were erupted at the end of each pulse. Some, but not all, epithermal deposits in the Sierra Madre Occidental are associated with these calderas (McDowell and Clabaugh, 1979). The nearest mapped calderas are approximately 40 km to the northeast and 36 kilometers to the southeast of the Property (Ferrari, 2007, fig 6). Rhyolite breccia on the western portion of the Property may represent the base of the Upper Volcanic Sequence.

The last phase of regional volcanism consists of relatively small post subduction Miocene to recent alkaline basalt flows that were erupted across the Sierra Madre Occidental. These flows are not present on the Property but small bodies of fresh to weakly propylitized diorite, which appear to have been emplaced after mineralization, may be their intrusive equivalent on the Property.

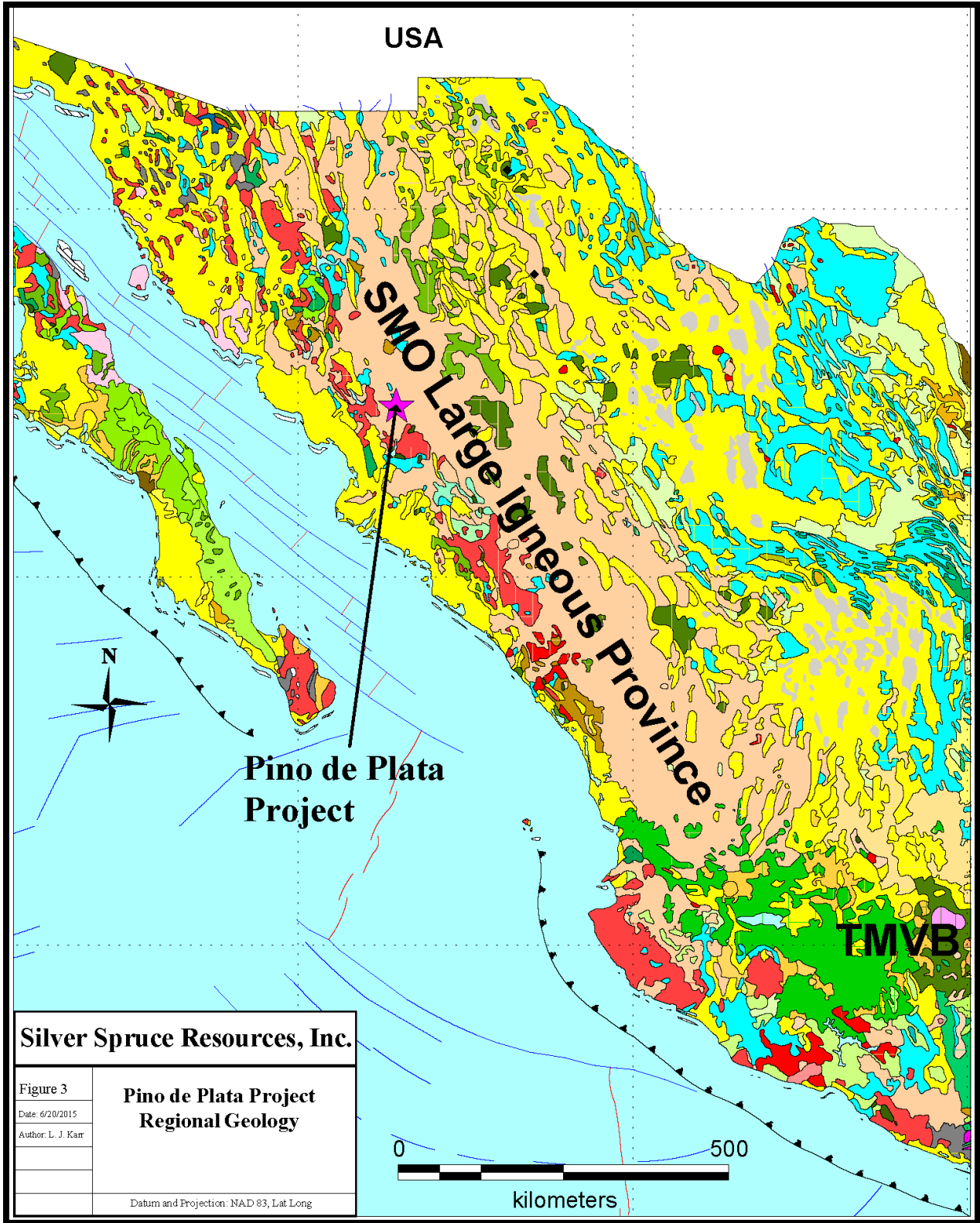


Figure 3. Regional Geology of northwestern Mexico. Tan = Tertiary volcanic rocks, red = intrusives, green = mafic to intermediate volcanic rocks, light blue = generally sediments, yellow = younger cover.

Extension began in the eastern Sierra Madre Occidental in the Oligocene and migrated west during the Miocene. While significant amounts of extension occurred in the Mexican basin and range and the Gulf of California, less than 20% extension took place in the central portion of the Sierra Madre Occidental.

Throughout the Sierra Madre Occidental, porphyry, epithermal and replacement deposits of precious and base metals are associated with the Laramide and Mid-Tertiary magmatic events. Porphyry copper deposits are restricted to rocks of Laramide age (Figure 4). The porphyry copper deposits were emplaced along approximately E-W to ENE-WSW trending extensional structures during the Paleocene to Eocene (Ferrari, et al, 2007, Lukas, 2010). Dated porphyry copper deposits within the Sierra Madre Occidental and adjacent areas range in age from 63 Ma to 45.7 Ma (Hammarstrom, et al, 2010, Garrity and Soller, 2009). The Lower Volcanic Complex also hosts important silver deposits such as Fresnillo and Juanicipio. The Lower Volcanic Complex was deformed by Laramide compression.

In contrast, epithermal Au-Ag deposits are associated with both the Laramide and Mid-Tertiary events but are typically much younger than porphyry copper mineralization. These deposits are hosted by both the lower and upper volcanic sequences and fall into 3 age groups - approximately 48 to 40 Ma, 36 to 27 Ma, and 23 to 18 Ma (Camprubi, A., et al, 2003). The oldest is in the northwest and the youngest in the southeast, just north of the Trans Mexico Volcanic Belt (TMVB). Some of the deposits from the oldest group are hosted in the Lower Volcanic Complex and are related to Laramide magmatism. Deposits in the second group are contemporaneous with the ignimbrite flare-up of the Upper Volcanic Supergroup. The third group is contemporaneous with the last ignimbrite flare-up of the Sierra Madre Occidental, occurs just north of the TMVB, and is aligned west-northwest–east-southeast. The Property lies along the border, as drafted by Camprubi, between the first and second groups.

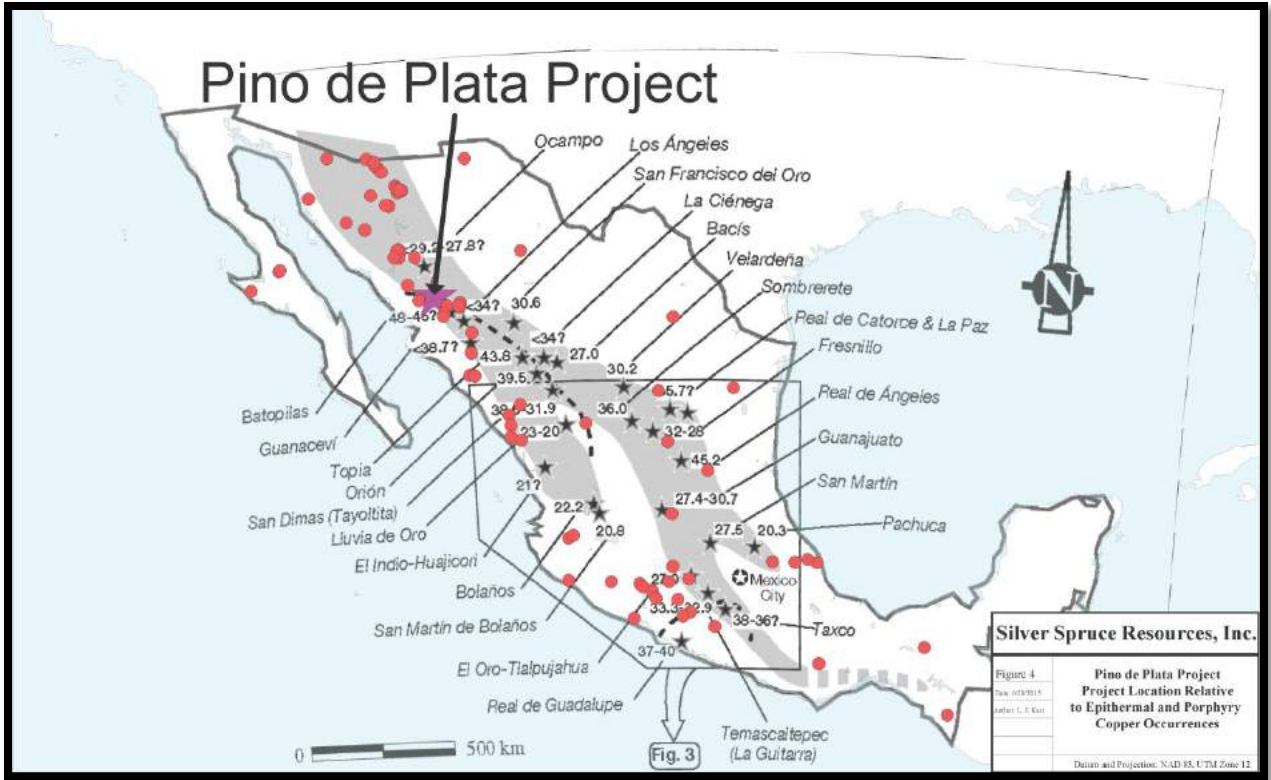


Figure 4. Location of porphyry copper deposits and prospects (red dots) after USGS Porphyry Copper Assessment of Mexico (Hammarstrom, et al, 2010) overlain on figure 2 from Camprubi, et al, 2003; showing ages of select epithermal Au-Ag deposits.

### 7.2 Local Geology

The Servicio Geologico Mexicano (SGM) published a 1:50,000 scale geologic map of the Chinipas quadrangle in 2004. On this map the Property lies within the Zona Mineralizada Chichaco (Servicio Geologico Mexicano, 2004) (Figure 5).

The Pino de Plata property lies near the western edge of the Sierra Madre Occidental. It straddles the contact between the upper and lower volcanic sequences and is centered on a diorite porphyry intrusive. This intrusive was mapped by SGM as a granite or granodiorite of Cretaceous to early Tertiary age, but it does not contain quartz phenocrysts. Mineralization is associated with this and several other similarly mapped intrusives on the SGM geologic map of the area (Figure 5).

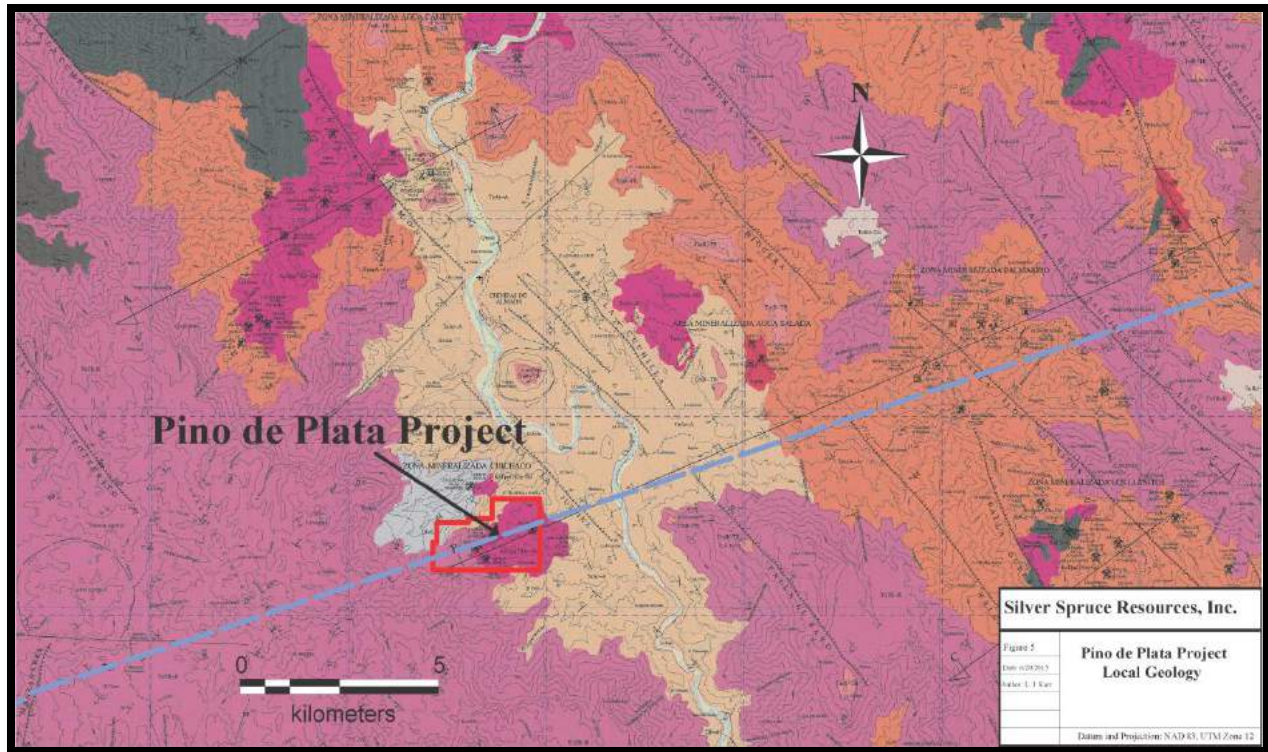


Figure 5. Local Geology - SGM 1:50,000 geologic map of the G12-B38 quadrangle (Servicio Geologico Mexicano, 2004). Pink = Upper Volcanic Sequence, light tan & brown = Lower Volcanic Sequence, dark pink = K-T intermediate intrusives. The light grey unit immediately northwest of the property is mapped as a Holocene lahar by SGM. Dark greenish grey units in the NW, NE and SE quadrants of the map are Cretaceous sediments which are present on the property but are not mapped. Light blue dashed line from Ferrari, 2007 (see text for explanation).

The property lies on, or very near to, a WSW-ENE trending accommodation zone that separates tilt domains (light blue dashed line on Figure 7), although this is not apparent from the dips on the SGM geologic map (Ferrari, et al. 2007, fig. 7). Ferrari's figure 7 also shows WSW-ENE trending normal faults within the accommodation zone. These correspond to vein strikes observed at the Theodora, Sierpe I and La Perla mines which strike ENE and dip steeply northwest (Figure 6., Theodora – Santa Elena Trend). They also agree with Camprubí and Albinson's observation of alignment of districts within western Chihuahua (Camprubí, A., and Albinson, T., 2007, Fig. 3). Sedlock noted that E-W and ENE trending structures commonly developed in the Laramide (Sedlock et al., 1993). This trend is also reflected in subcrops of hydrothermal breccia and the alignment of replacement mineralization at the Santa Elena Mine.

A few kilometers east of the Property are a series of NW-SE trending normal faults with apparently minor displacement. These are on strike from NW-SE striking extensional faults about 150 km to the north-northwest in Sonora which formed about 16 to 27 Ma (Ferrari, et al. 2007, fig. 7).

## 7.3 Geology of the Pino de Plata Property

### 7.3.1 Lithology and Structure

Based on mapping by the Author, the oldest exposed units on the property are thick bedded Cretaceous limestones and shales which are altered to marble and hornfels. A medium bedded, fine grained, well sorted sandstone unit that is probably less than 10 m thick overlies the limestone section. The stratigraphic thickness of the Cretaceous section could not be determined because of poor exposure and structural complexity, but it is likely to be > 100 m. Bedding attitudes in the Cretaceous sediments are highly variable and may be a result of folding during Laramide compression (Staudé and Barton, 2001).

The sediments are unconformably overlain by a thin andesitic agglomerate unit. The agglomerate is either the Cretaceous polymictic conglomerate described and shown on the SGM geologic quadrangle map, and thus one of the epiclastic volcanic units at the top of the Cretaceous within the Lower Volcanic Complex; or a unit at the base of the Lower Volcanic Sequence. Either way, no or very little of the Lower Volcanic Sequence is preserved on the western portion of the property. This is consistent with other Upper Volcanic Sequence-Cretaceous and Lower Volcanic Sequence-Cretaceous contacts on the SGM geologic quadrangle (Figure 5) which shows that significant erosional unconformities exist both within the Lower Volcanic Sequence and between the Lower Volcanic Sequence and Upper Volcanic Sequence. The Lower Volcanic Sequence in this area was greatly thinned by erosion and tilted westward prior to the eruption of the Upper Volcanic Sequence.

The base of the Upper Volcanic Sequence is provisionally placed by the Author at the base of the rhyolite breccia in the western part of the property.

The Cretaceous sediments may lie within an uplifted fault block. In other words, within the project area, it appears that the Upper Volcanic Sequence may have been deposited directly onto the Cretaceous section or onto an extremely erosional attenuated section of the Lower Volcanic Sequence.

The presence of Cretaceous sediments in the eastern portion of the Property suggests the presence of a fault near the east side line of the property. The Falla La Justina has a permissive strike and displacement for this purpose, but it is about 950 m too far to the northeast. It is possibly mis-plotted on the SGM map, or possibly there is an unmapped fault with significant throw between the Falla La Justina and the eastern edge of the property (Figures 6 and 7). According to the Owner, limestone continues into the next drainage to the southeast. This would move the Cretaceous-andesite contact at least 350 m to the southeast and consequently increase the area with potential to host carbonate replacement deposits. The Author did not map this area and cannot confirm the presence of Cretaceous rocks in that area.

The section is intruded by an intermediate to mafic quartz-free intrusive containing about 30% randomly aligned 0.5-1.5 mm plagioclase phenocrysts and a few percent relict amphibole/pyroxene in a very fine



grained groundmass. Determination of its rock type is difficult because it is everywhere altered, mineralized and/or weathered. It has been provisionally interpreted by the Author as diorite porphyry.

Mapping by the Author shows that the intrusive is roughly 1.6 km by 1 km in plan and may be larger. It appears to be about one half the size as is shown on the SGM map, but it extends off the Property and the author did map those areas (Figures 6 & 7).

Replacement and epithermal mineralization is likely related to this intrusive. This is supported by alteration and geochemical zoning patterns that suggest a thermal center near the Santa Elena Mine.

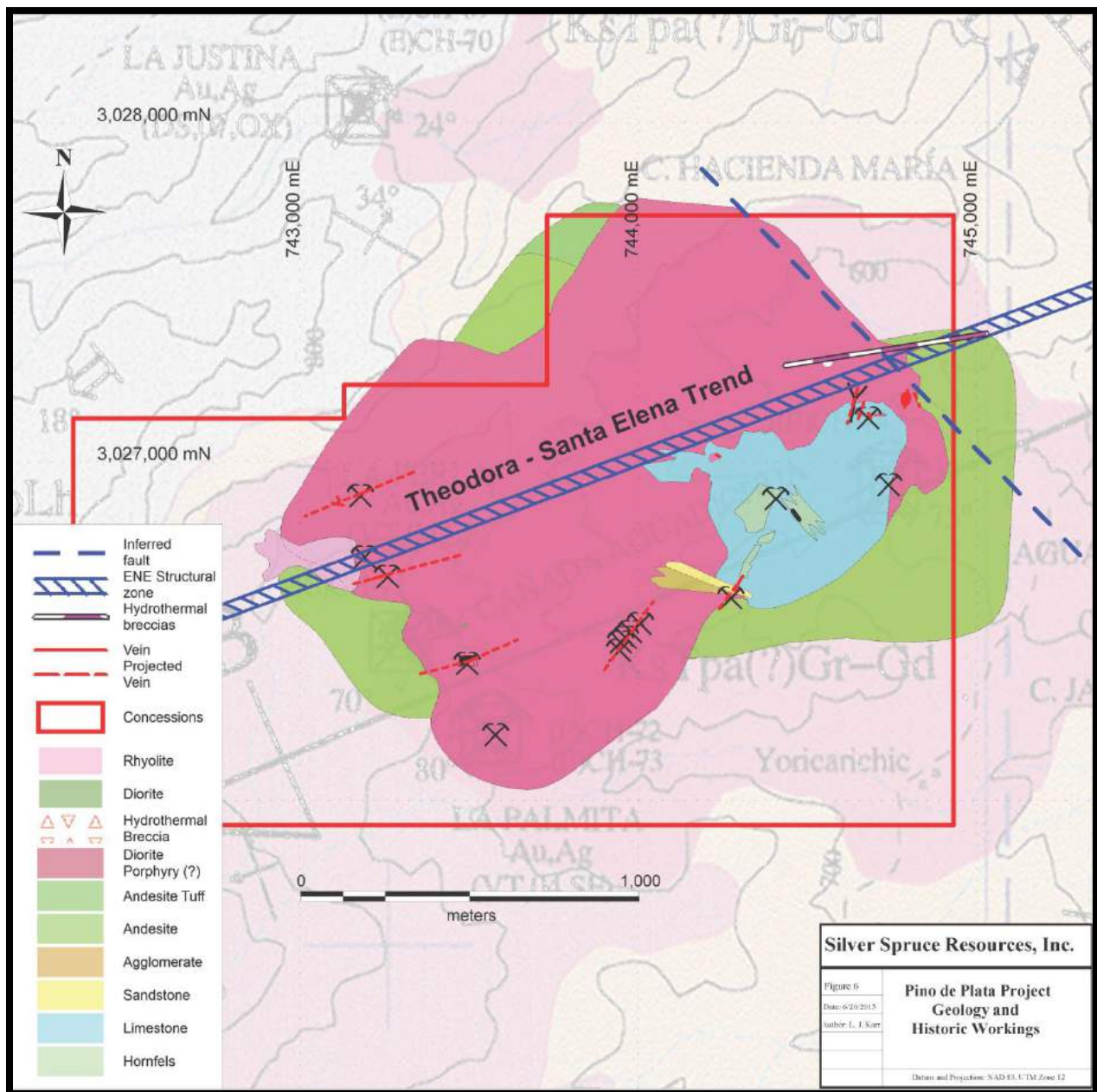


Figure 6. Geologic map of the Pino de Plata Project. Mapping by LJK, May 2015. Geology on underlying base map from SGM Carta Geologico-Minera Chinipas G12-B38. Note that the post-mineral intrusive diorite (different from the mineralizing diorite porphyry) occurs in only two small areas and is not visible at this scale. Note that the perimeter of the drafted lithology portrays the approximate limits of field investigation and not an actual geologic contact.

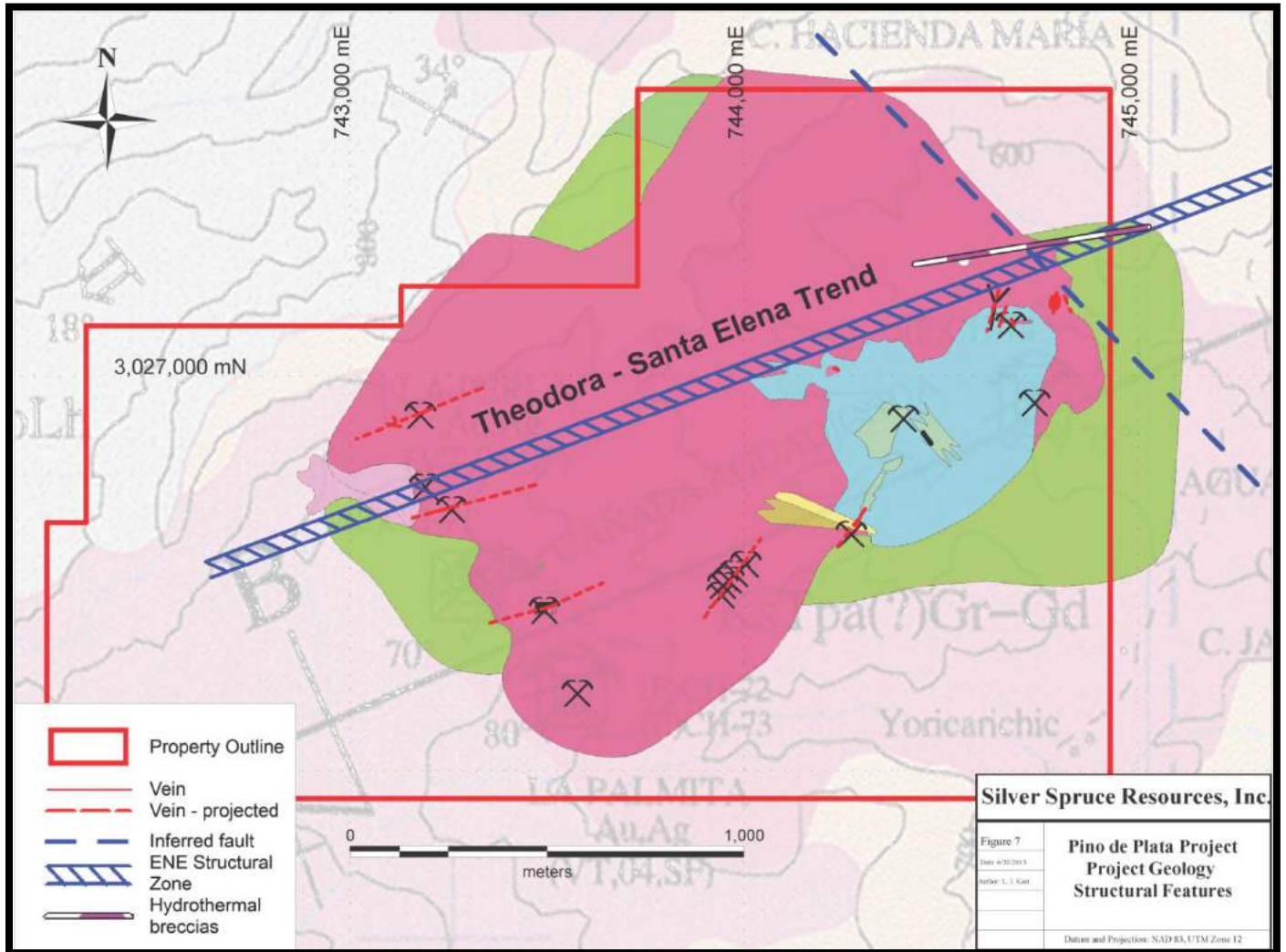


Figure 7. Geologic map of the Pino de Plata Project with inferred fault on east side of property and veins. Veins in the Theodora, Sierpe I and La Perla mines are exaggerated to illustrate their strike. Mapping and interpretation by LJK, May 2015.

### 7.3.2 Hydrothermal Alteration

Hydrothermal alteration as mapped by the Author is shown in Figure 8. Note that the patchy 'postage stamp' appearance of alteration reflects the reconnaissance nature of the mapping, difficult access, poor exposure and time constraints, and that the actual extent of alteration is likely to be larger and much more continuous. Mapping was generally restricted to mineralized areas with road access.

Hydrothermal fluids and elevated temperatures related to the intrusion of the diorite porphyry altered the rocks in various ways. Cretaceous limestone was marbleized and shales altered to hornfels. It is possible that the Cretaceous section was favorably preserved from erosion by alteration making the shales and limestone harder and more competent.

The intrusive is typically argillized, and locally silicified, especially where mineralized or adjacent to mineralization in veins, or adjacent to limestone replacement mineralization such as at the Santa Elena Mine. Most of the intrusive and areas around it were not mapped, so we do not have a full understanding of the system's alteration. The interior portion of the intrusive was not mapped, and so it is shown as unaltered, but it is likely to be altered.

Extensive areas of gossan are developed within the limestone, presumably where replacement sulfide mineralization was leached by weathering. Gossan was sampled in several areas and is weakly to strongly anomalous in Au, Ag, Cu, Pb and Zn (Appendix 6). The gossan is considered an especially good indication of mineralization (Figure 8). Gossan is probably more extensive than shown as only areas traversed are depicted on Figure 8. Areas of dark red soils visible on hill sides are suspected to be underlain by gossan, but were not mapped as such in the absence of field verification. Large areas of limonite staining, visible on hill sides, were noted and are enclosed in Figure 8 by dashed red lines. It is likely that more mapping would enlarge these areas.

Adjacent to epithermal veins, volcanic and intrusive wall rocks were silicified and argillized and sericitized. Mapping also suggests a more or less continuous zone of propylitic alteration consisting of chlorite +/- calcite and magnetite developed around the perimeter of the intrusive.

West of the Theodora and Sierpe veins is a large area of chalcedonic quartz float and argillic alteration that is suggestive of the upper or capped portions of epithermal mineralization. Northeast of the Theodora Mine is an area of extensive coarse grained quartz vein float which is so abundant that a large stone wall nearly 100 m long was built from it. Silver bearing quartz veins are exposed in new road cuts west of the Theodora Mine (Figure 10).

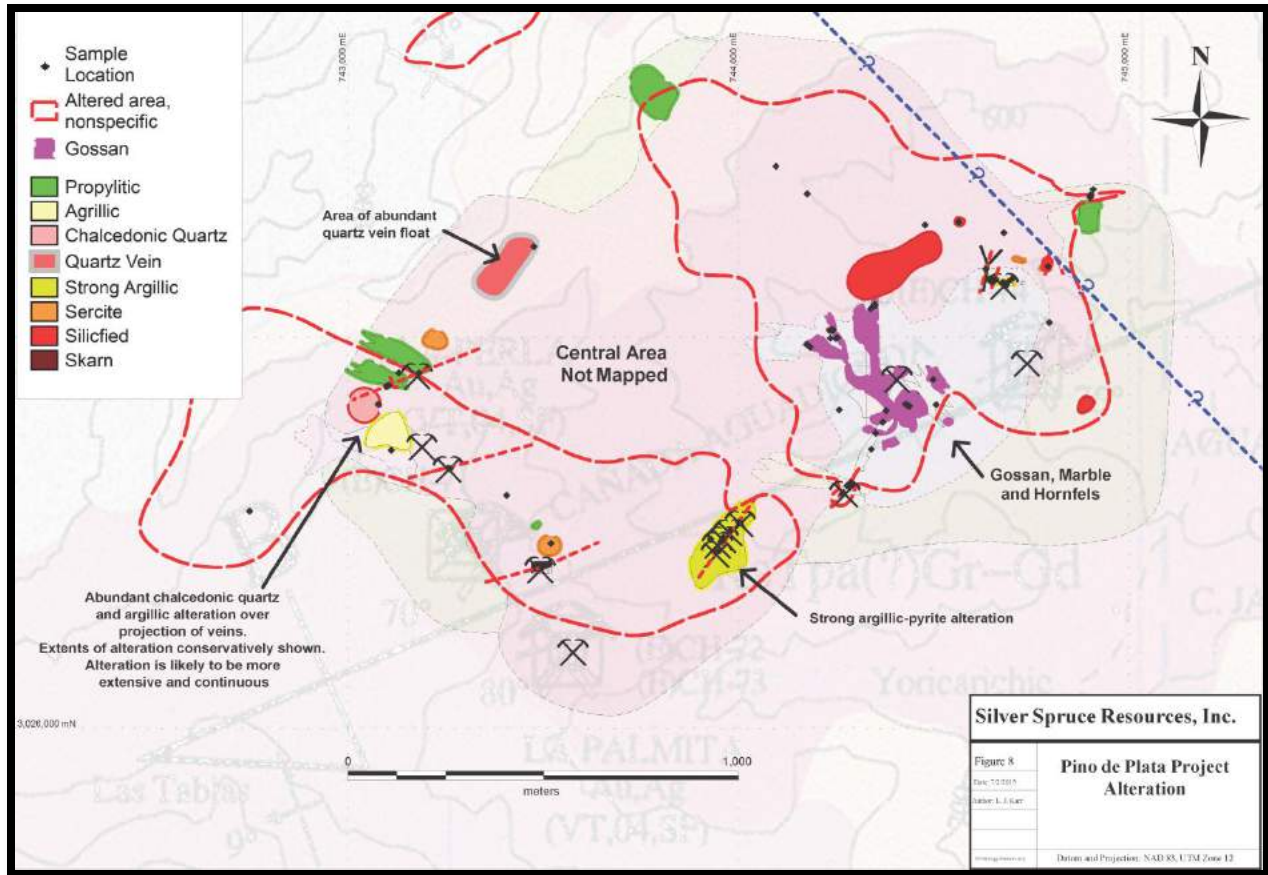


Figure 8. Alteration Map of the Pino de Plata Project. Mapping by LJK, May 2015.

## 8.0 Deposit Types

The property hosts both epithermal veins and replacement mineralization and both types of mineralization are hosted by both igneous and sedimentary rocks. However, the most likely targets are volcanic hosted epithermal silver-base metal veins, silver-base metal carbonate replacement deposits, and silver-base metal stockwork and replacement deposits within volcanic and intrusive rocks.

Carbonate replacement deposits of Ag-Pb-Zn could occur where ever limestone/marble beds are present in the section. It is likely that they will be related to structural feeder zones and more than one mineralized horizon may be present. Ore may also be developed along the marble-intrusive contact as skarn mineralization. Indeed, the mineralization at the Santa Elena Mine might be classified as low temperature skarn mineralization.

There is potential for discovering extensions of existing epithermal veins and enlarging the area of known limestone replacement mineralization, as well as delineating a body of mineralization hosted by igneous rocks at the Terrero Mine.

Porphyry copper deposits are important regionally (Hammarstrom, et al, 2010)(Figure 4). Porphyry copper mineralization may exist on the property, but strong indications of porphyry style mineralization (potassic alteration, quartz veinlets with Cu or Mo minerals, etc.) were not observed during mapping. The presence of porphyry copper mineralization is not considered likely, but insufficient data exists to completely condemn the possibility.

## **9.0 Exploration**

### **9.1 Site Visit**

Previous exploration work by Arcelia Gold, Consejo de Recursos Minerales, and the Owner was discussed in Section 6.0. These data were utilized to the degree the Author thought prudent to advance the understanding and potential of the property.

The Author visited the Pino de Plata property from May 24<sup>th</sup> to May 31<sup>st</sup>, 2015 in the company of Mr. Karl Boltz. The Author mapped and sampled mineralized outcrops and historic workings, including the Santa Elena, Santa Clara, La Perla, Sierpe I, Theodora, Terrero and Agua Hedionda II mines. Additionally, numerous road cuts and other outcrops were sampled. The Author made a preliminary geologic map. Silver Spruce had not done any exploration on the property prior to the Author's visit.

### **9.2 Mapping and Rock Chip Sampling**

Mapping was done by a combination of computer and paper based methods. Mine workings at the Santa Elena, Agua Hedionda II, and Santa Clara were mapped using Brunton and tape. More aerially extensive features were mapped using a GPS enabled Trimble Yuma field computer. Sample locations, descriptions and other relevant field information were recorded in the field either electronically or in a field note book. A generalized version of the Author's geologic map is presented in Figures 6, 7 and 8.

#### **9.2.1 Sample Results and Geochemistry**

Ninety-two samples were collected by the Author. These samples, their descriptions and assays are presented in Appendices 6 and 7.

Historic and sampling by the Author show that principal metals of interest on the property are silver and base metals. Mineralization is gold poor, with Au values typically less than 0.1 g/t.

Elevated Ag values are widespread across the property and are present in epithermal veins, carbonate replacement deposits, gossans, and intrusive/volcanic replacement deposits. Silver mineralization is usually associated with Pb, and Zn and occasionally Cu. Arsenic and Sb concentrations are generally low although elevated Sb is associated with some vein epithermal mineralization.

The area shows clear geochemical zoning. A central zone of higher Mo, Bi and W is centered on the Santa Elena and gossan areas. This is interpreted as a thermal center. Peripheral to this, Ag:Au ratios are highest in veins and the Terrero area. This is interpreted as an aureole of lower-temperature epithermal mineralization.

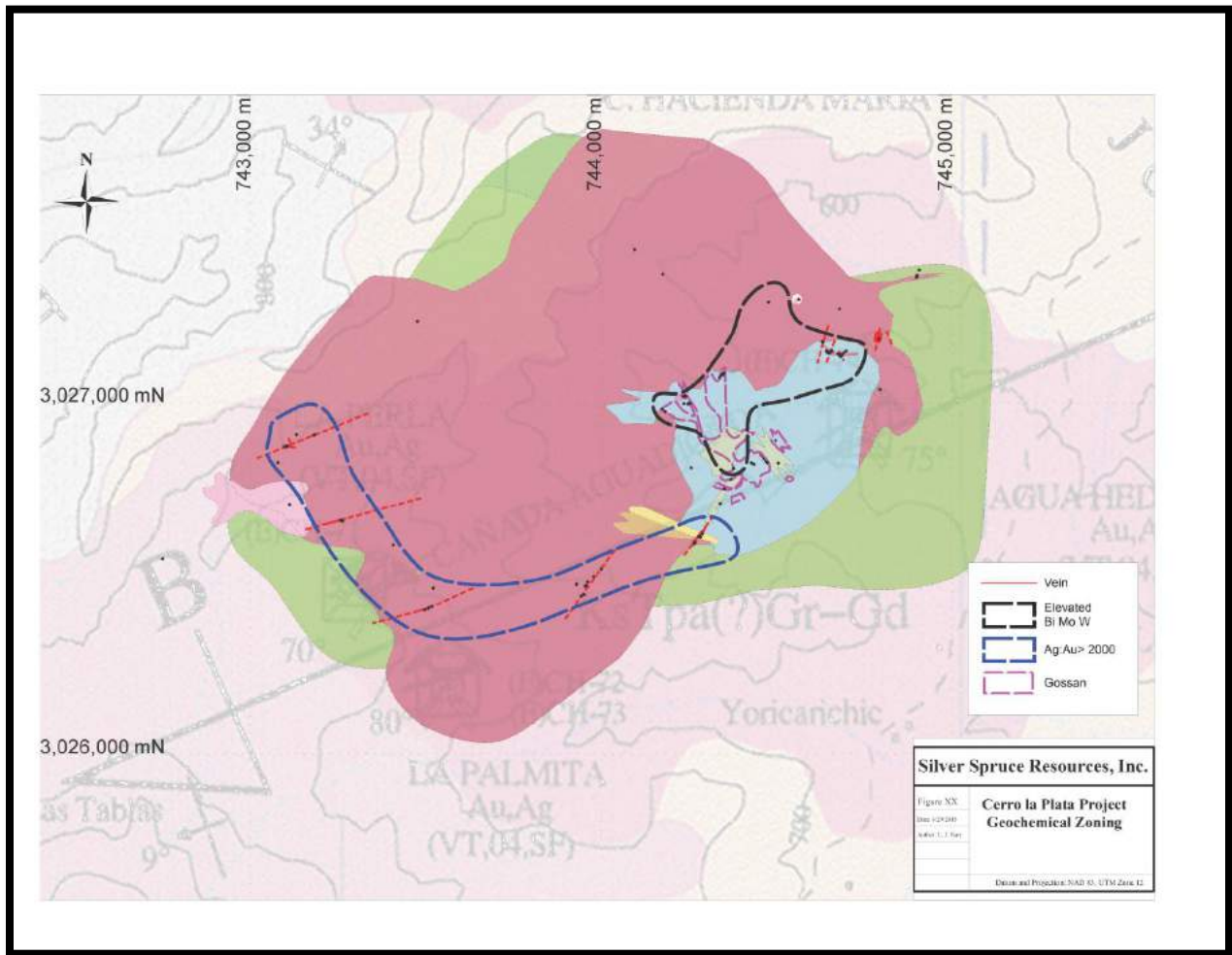


Figure 9. Geochemical zoning at Pino de Plata.

## 9.3 Vein Mineralization

Vein mineralization at Pino de Plata may be characterized as intermediate to low-sulfidation epithermal on the basis of mineralogy, alteration assemblages and quartz morphology (Camprubí, et al, 2007). The veins themselves typically contain medium to coarse grained white massive comb quartz. In more distal areas, and at higher elevations, the veins contain some late-stage massive white chalcedonic quartz as veinlets a few centimeters wide and cementing brecciated quartz vein and wall rock (Theodora, Sierpe I and La Perla). They are also sometimes composed of massive very fine grained quartz. Colloform banding and bladed textures were not observed in any of the veins. Alteration consists of silicification and argillic/sericitic alteration which extends less than one or two meters into the wall rock. The provisional interpretation is that the level of exposure in these veins is beneath the boiling zone.

The veins tend to occur at higher elevations, perhaps due a regional elevation control such as paleo water table, the presence of more suitable host rocks, or distance from the heat source. Historic mines that were developed on veins include the Theodora, Sierpe I, Sierpe II, La Perla and Santa Clara. None of these workings are very extensive, vein widths are seldom more than a meter, and usually less than 20 meters of strike length is developed and only shallow (<20 meters vertical development) sublevels have been developed. It is difficult to imagine that more than a few thousand tons of ore could have been developed and mined, even under the most generous assumptions.

### 9.3.1 Theodora, Sierpe I and Sierpe II

The Theodora, Sierpe I, and Sierpe II are developed in the east facing escarpment on the western side of the property. The Sierpe I, Sierpe II, Santa Clara, and Theodora mines are all developed on narrow quartz veins with apparently limited strike length. Vein width rarely exceeds 1 meter and the development along strike seldom does not exceed 20 meters. Mapping did not reveal any significant strike extension of well mineralized vein. Efforts to trace the Sierpes' veins to the west in an area of reasonable exposure were unsuccessful, but this area is covered by what is possibly a post mineralization rhyolite breccia. Additionally, rocks in this area are argillized and chalcedonic quartz float is abundant. It is possible that the veins continue westward beneath a cap of anomalous argillically altered volcanic. This represents a viable exploration target.

Several veins were found in a recent road cut 80 m west of the Theodora. Two of these veins were sampled and returned 108 g/t Ag over 0.5 m and 72 g/t Ag with 0.403 g/t Au over 0.95 m. Other veins exposed in this road cut were not sampled. These veins are generally on strike with the Theodora vein, but themselves have different strikes so they appear to be different veins. The veins in this area are likely integral parts of a larger, possibly anastomosing, vein system. This is an interesting area for future exploration.

Consejo de Recursos took samples across the veins in the Sierpe I and Sierpe II in 1985 that reportedly contained 0.0 g/t Au, 123 g/t Ag, 2.31% Pb, 0.072% Cu, 2.57% Zn in the Sierpe I and 0.0 g/t Au, 146 g/t Ag, 0.41% Pb, 0.118% Cu, and 0.153% Zn in the Sierpe II.

We were unable to locate the Sierpe II Mine until the end of the field program, and so did not sample it. The Sierpe I and Theodora have shafts developed at the portals which barred safe entry into the adit level. This limited our sampling, but we were able take enough samples to generally confirm the tenor of the Consejo samples. Of particular interest was a 1.4 m chip channel (SN 383903) on the Theodora vein which returned 553 g/t Ag.



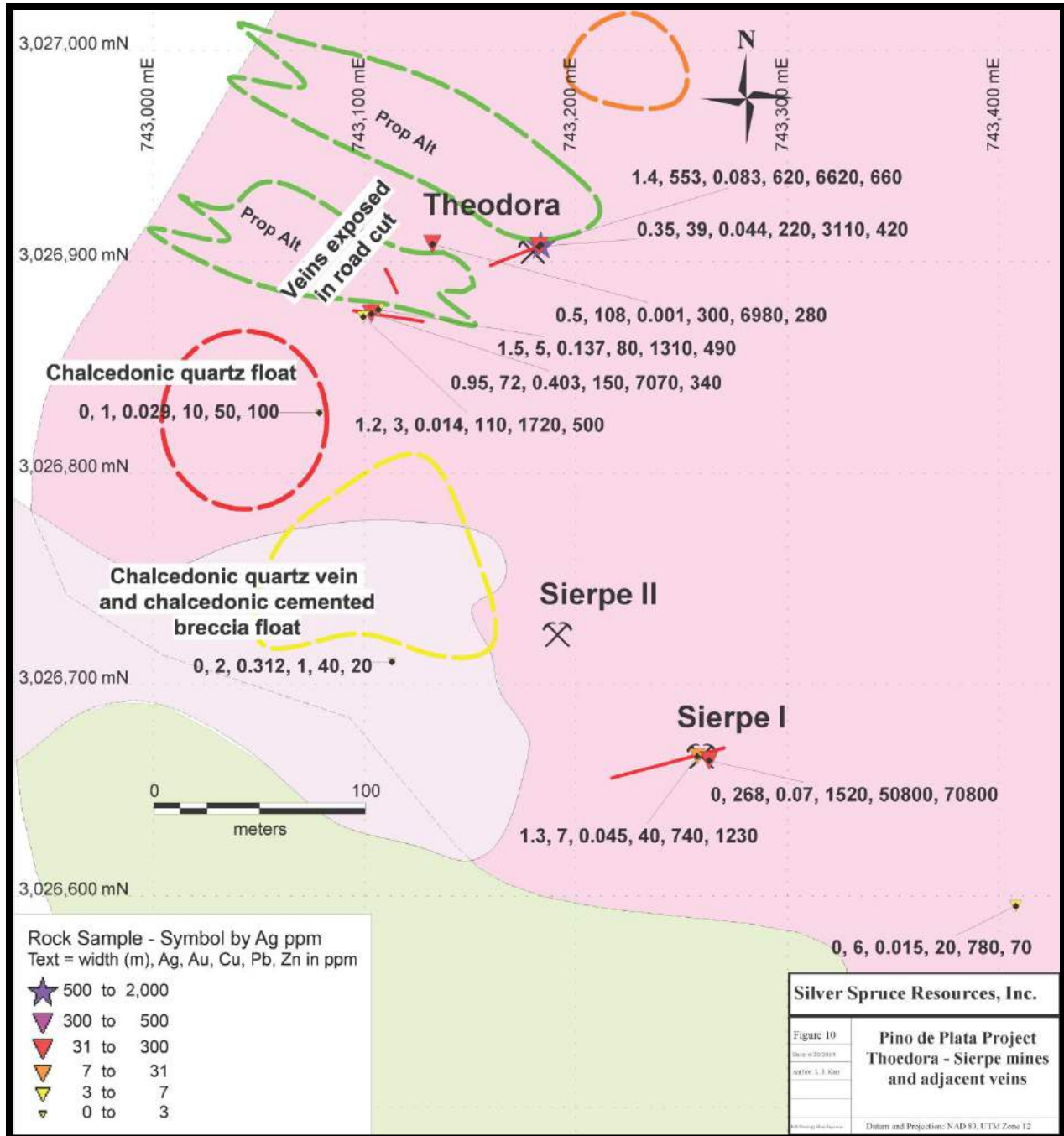


Figure 10. Sierpe and Theodora Veins and other nearby quartz veins.

A grab sample of high grade from the Sierpe I dump contained 268 g/t Ag and 5% Pb and 7% Zn. The vein width in the Sierpe I was 1.3 m but we were unable to optimally sample the vein because of hazardous mine workings.



Figure 11. Theodora Mine samples 383904, 0.35 m @ 0.044 g/t Au, 39 g/t Ag (bottom sample), 383903, 1.4 m @ 0.083 g/t Au, 553 g/t Ag (top sample).

### 9.3.2 La Perla Mine

The La Perla mine is developed by two short adits (each <7 m in length) and two shallow shafts, each of which is developed near the mouth of each adit. The vein, which is generally less than 1 meter wide, strikes at an azimuth of 77° and dips 77° south. The entire developed strike length is <25 meters and the vein pinches to a narrow fault zone at both ends. It appears that the mineralized portion of the fault was developed by right lateral displacement at an inflection in strike.

At the La Perla Mine, Consejo de Recursos used 8 channel samples to calculate a resource of 6,750 tonnes at a grade of 0.41 g/t Au and 466.37 g/t Ag, using an average vein width of 1.2 m. The field examination by the Author cannot verify this resource. The actual mineralized strike length of the structure is half of that used by Consejo, and they did not account for material already extracted. Our sampling, while less extensive than Conesco's, showed generally lower values as well. Efforts by the Author to extend the strike length of the La Perla in an area of good exposure were unsuccessful.

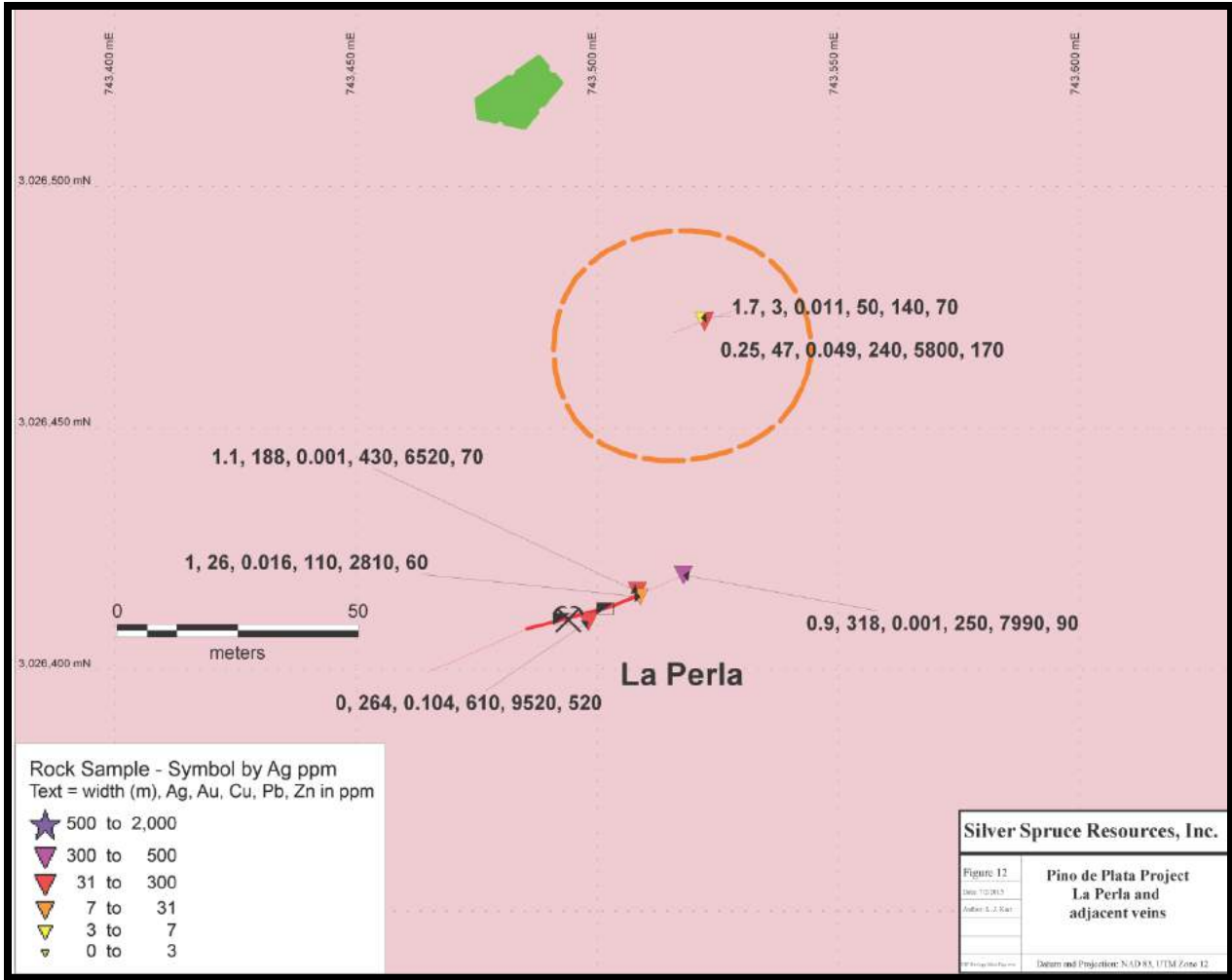


Figure 12. La Perla mine and adjacent veins.

### 9.3.3 Santa Clara Mine

The vein in the Santa Clara Mine strikes northeast and dips moderately to steeply to the northwest. The structure is generally < 1 m wide and no stopes were developed, but a short decline was driven in the plane of the vein. Perhaps a one hundred tonnes of unknown grade might have been removed. Of more interest is the fact that this structure continues to the northeast in the direction of the Santa Elena Mine and an area with extensive gossan. The northernmost sample across the vein yielded 308 g/t Ag over 0.7 m in sandstone. Three other samples were taken between this sample and the portal in an area of outcropping iron stained sandstone. One of these samples in limonite stained sandstone returned 6 ppm Ag over 3 m. This indicates the potential for a larger low grade Ag resource within the upper Cretaceous section.

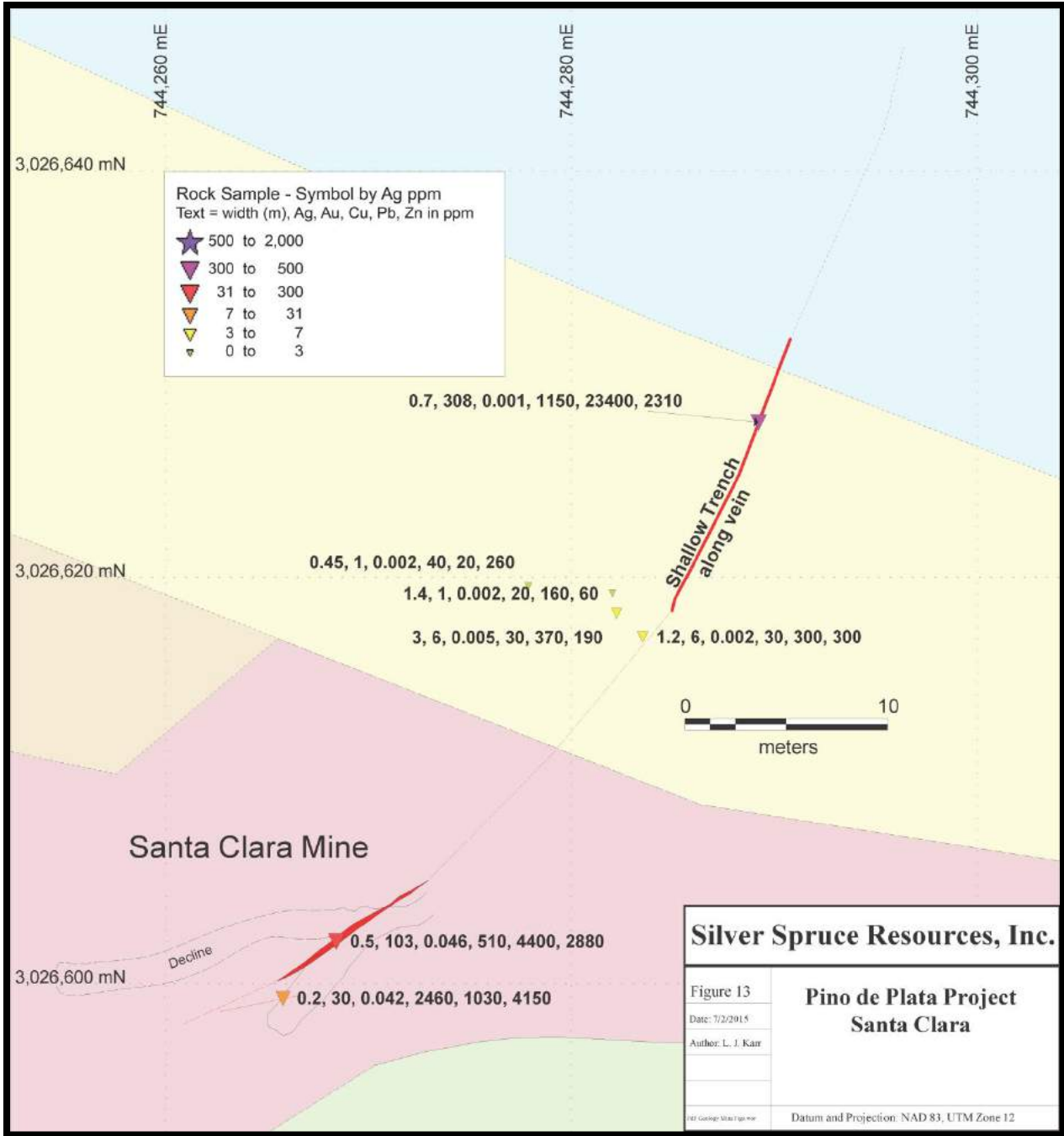


Figure 13. Santa Clara Mine and environs.

Consejo de Recursos took 2 samples at the Santa Clara mine but did not calculate a resource. Their samples contained 0.0 g/t Au, 8.84 g/t Ag, 1.69% Pb, 0.059% Cu, 0.379% Zn over 1.1 m and 0.0 g/t Au, 362 g/t Ag, 1.86% Pb, 0.046% Cu, and 0.092% Zn over 1.8 m. By comparison the Author's mapping showed a vein width of 0.2 to 0.7 m and somewhat lower grades.

## 9.4 Disseminated mineralization within igneous rocks

### 9.4.1 Terrero Mine

The Terrero Mine was reportedly worked in colonial times. Workings consist of several small adits and shafts that were developed in an irregular fashion. Declines often follow gently dipping mineralized horizons. The workings are located near the center of the concession block about 600 m north of the southern boundary.

Consejo de Recursos took 26 samples at the Terrero mine and calculated a resource totaling 18,887 t grading 0.078 g/t Au, 206 g/t Ag, 1.47% Pb, 1.23% Cu, and 0.52% Zn. The current report did not verify this resource but the Author's sampling confirms the tenor of Consejo's Ag values. Seven of nine samples returned values of > 1 opt Ag and three of the nine were over 300 ppm Ag.

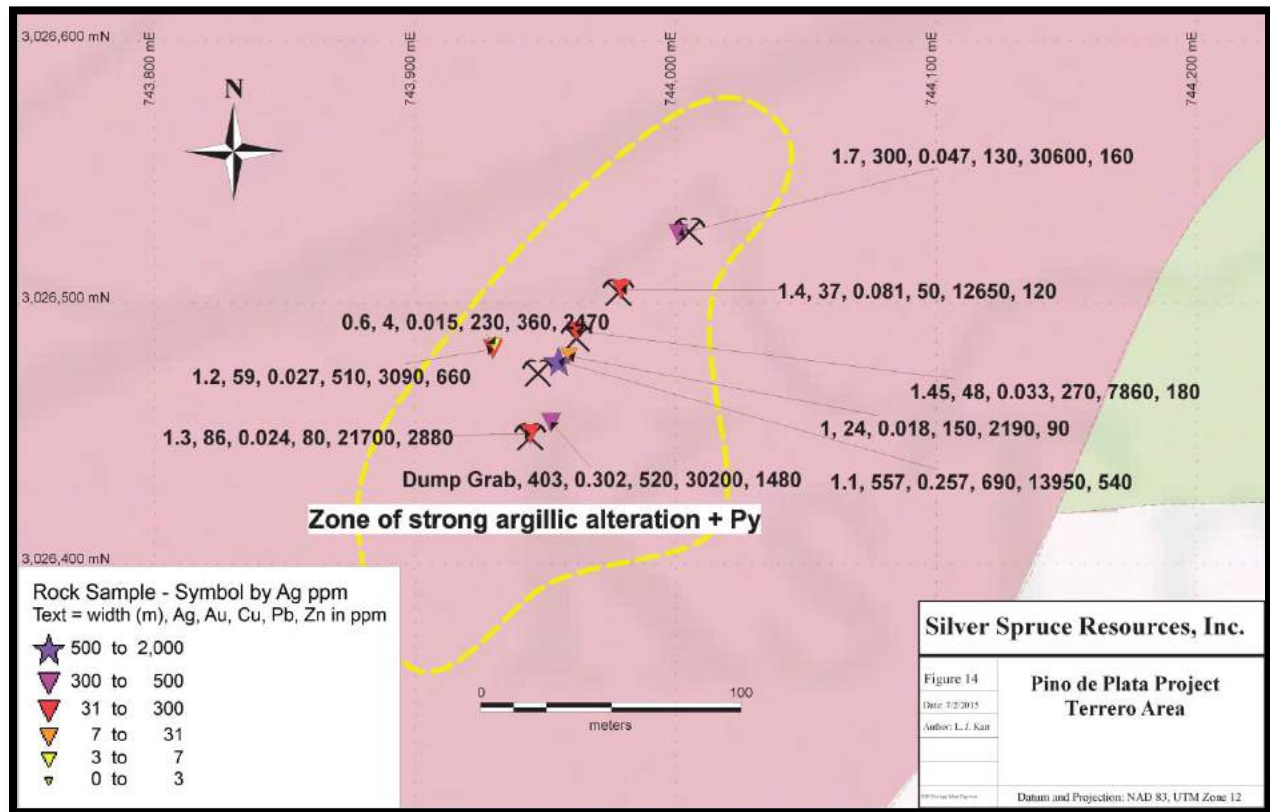


Figure 14. Terrero Area.

The geology and controls on mineralization at the Terrero Mine are enigmatic. Here a group of at least 5 small workings, mostly declines, is aligned SW-NE. Alteration in this area is characterized by very strong clay alteration that largely obliterated the original rock textures. No vuggy silica was observed in this

area, but it is suspected that alunite, dickite or some other mineral indicative of advanced argillic alteration might be found here.

Mineralization is characterized by stratiform zones a meter or more thick containing  $\leq 1$  cm thick parallel lenses of medium grained pyrite. The host rock is possibly a diorite intrusive, but sub-horizontal zones of pyrite replacement are suggestive of flow banding that might be seen in a volcanic rock. The sub-horizontal zones generally dip northwards, into the hill, but their orientation is not consistent from area to area, suggesting that the area has been faulted into smaller structural domains. It is clear from the orientation of the workings that these zones of pyrite replacement were the target of early mining efforts. In many places the host rock has been replaced by as much as 10% fine to medium grained pyrite. An area of  $>20,000$  m<sup>2</sup> is very strongly clay altered, deeply colored yellow, brown and red with jarosite, limonite and hematite and occasionally silicified.



**Figure 15. Chip channel sample 383889 near the middle of the Terrero area, 1.1 m @ 0.257 g/t Au, 557 g/t Ag, 13950 ppm Pb. This sample was not in a mined area and the outcrop was not particularly noteworthy compared to adjacent outcrops.**

There are no clearly defined structures or fracture sets on which artisanal miners could focus. Somewhat telling, perhaps, is the clear SW-NE alignment of the workings, alteration and pyrite mineralization,

which when viewed in the larger context of the district presents something of a distorted radial pattern with the well-defined veins pointing towards the gossan area to the northeast.

While additional mapping and sampling are clearly needed to better define the controls of mineralization, this area is already a clear drill target.

## **9.5 Replacement Mineralization in Marble**

Replacement mineralization in marble and hornfels is widespread and the majority of marble and hornfels outcrops examined contain sulfides. Sphalerite and galena were commonly encountered in random marble outcrops and large areas of mineralized marble have been completely transformed to gossan. Gossan is usually formed by strong weathering and leaching of sulfide-rich mineralization (Figures 8, 9, 17, 20). South and west of the Santa Elena Mine, gossans developed where replacement mineralization was strongly weathered and leached. These gossans are the oxidized equivalents of the mineralization exposed at the Santa Elena Mine.

This indicates that replacement mineralization could exist anywhere within the area of Cretaceous rocks (limestone/marble and hornfels - light blues) in Figure 6. The Santa Elena Mine exposed low grade Ag-Cu-Pb-Zn mineralization on the northern edge of the Cretaceous outcrop.

### **9.5.1 Santa Elena Mine**

The Santa Elena mine is located near the northeast corner of the Property. The original prospect consisted of a 4 meter adit driven along a 190° trending diorite intrusive-marble contact. Mineralization consists of veinlet and disseminated marmatite (dark, iron-rich sphalerite), galena, chalcopyrite, and calcite hosted by marble (Figure 16).

Consejo de Recursos took a sample at the Santa Elena in 1985 that reportedly contained 672 g/t Ag, 2.09% Pb and 4.15% Zn.

The Author mapped and sampled the Santa Elena adit, open cuts and stockpiles on May 25th and 26th, 2015. Here diorite intrudes the Cretaceous limestones and shale, possibly as a dike. This contact trends roughly E-W, subparallel and probably coincident with the district-scale ENE trending Theodora-Santa Elena structural zone.

The sediments have been metamorphosed to marble and hornfels and locally silicified. Some exoskarn alteration containing epidote and chlorite occurs within the marble but no other macroscopic skarn minerals were observed, although the presence of microscopic skarn minerals cannot be ruled out. The intrusive is argillized and locally silicified near the contact.

Sulfide mineralization consisting of marmatitic sphalerite, galena, pyrite, chalcopyrite and bornite is principally hosted by marble but also occurs within the intrusive. Mineralization is concentrated along the intrusive-marble contact. Mineralization within the marble consists of disseminated clots as much as several centimeters in dimension containing medium to coarse grained sulfides, and calcite-sulfide veinlets 1 mm to 1 cm in width. Mineralization within the intrusive appears to be veinlet controlled. No endoskarn mineral assemblages were observed.

Other than the gross E-W trend to mineralization, smaller mineralized structures occur at a variety of orientations and no clear pattern was apparent. A structure in the Santa Elena adit strikes SSW and is roughly aligned with the Santa Clara vein 630 m to the SSW.



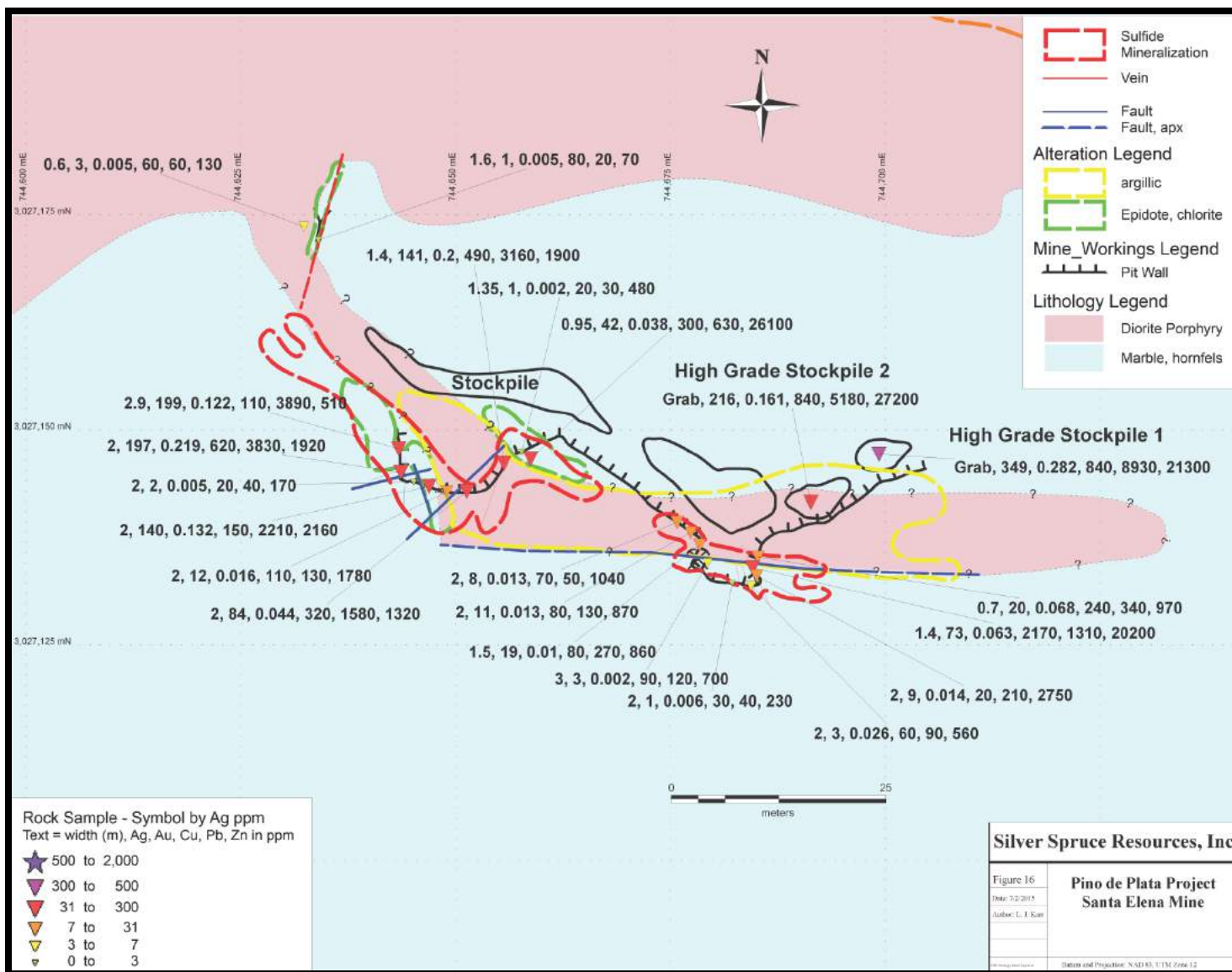


Figure 16. Santa Elena Mine geology, alteration and assays.

## Dump Sampling at Santa Elena

The Owner developed two open cuts at the Santa Elena prospect (Figures 2, 16). He believes that there is about 300 tonnes grading about 1,000 g/t on the stockpiles. The Author investigated this potential. Four stockpiles were examined, two of which were deemed to contain high-grade, probably hand-sorted material. These are shown as “High Grade Stockpile 1” and “High Grade Stockpile 2” on Figure 16. Two other stockpiles appeared to contain lower grade material and were not sampled.

The two high grade stockpiles were sampled by collecting bulk samples consisting of all material within a 40 cm diameter hole to the bottom of the stockpile (where the original surface was reached), which was 0.5 m deep in both cases. The samples weighed 35.88 kg and 41.59 kg and were taken near the centers of the stockpiles. Material on the stockpiles consists of cobbles of ore 5 to several tens of centimeters in diameter. The stockpiles are loosely packed and do not contain fine material so interstitial space between rocks are open voids. This partially explains the very low calculated in situ specific gravity (Table 2). The stockpiles are fairly uniform in thickness, having been constructed in a spread-out fashion and have areas of 16.99 m<sup>2</sup> and 21.77 m<sup>2</sup>, respectively. Using these data it is possible to determine a rough in situ specific gravity of the two stockpiles of 571 kg/m<sup>3</sup> and 662 kg/m<sup>3</sup>, respectively. By way of comparison, the Owner assigned a specific gravity of 3,400 kg/m<sup>3</sup>, which is not unreasonable for unbroken material of this type and grade.

Table 2. Calculation of Santa Elena stockpile specific gravity

Sample wt kg	Diam m	Depth m	Sample Vol m <sup>3</sup>	kg/m <sup>3</sup>
35.88	0.4	0.5	0.062832	571.0479
41.59	0.4	0.5	0.062832	661.9254

This corresponds to a contained tonnage of roughly 4.8 and 7.2 t, respectively, for a total of roughly 12 t with a weighted average grade of 0.21 g/t Au, 270 g/t Ag, 840 ppm Cu, 6,689 ppm Pb, and 24,829 ppm Zn. These values are not considered highly accurate. In particular the in situ specific gravity appears too low, but values are believed to represent a reasonable and prudent estimate of the quantity and values present in the two stockpiles.

Table 3. Calculation of Santa Elena stockpile tonnage

Stockpile	Area m <sup>2</sup>	Depth m	Volume m <sup>3</sup>	kg/m <sup>3</sup>	Kg
“High Grade Stockpile 1”	16.99	0.5	8.495	571.048	4,851
“High Grade Stockpile 2”	21.77	0.5	10.885	661.925	7,205
Total				Total	12,056

### ***Rib sampling of open cuts***

The ribs of the open cuts were sampled by continuous and contiguous chip channels. The results are presented on Figure 16. Values of mineralized rock were less than the Owner indicated in his report, but mineralized marble and diorite within a few meters of the contact often ran between 1 to 6+ opt Ag along with a few tenths of a percent Pb + Zn and a few hundred ppm Cu. Gold grades were usually <0.10 g/t. Some of the better silver grades (in the 3 to 6 opt range) could constitute ore grade if sufficient tonnage could be proved. These values, lying at the extreme north end of the Cretaceous outcrop, are very encouraging for the discovery of better material elsewhere. They are evidence of a robust mineral system that warrants closer examination.

### **9.5.2 The Gossan Area**

Exposure is generally poor in the area of Cretaceous sediments, but outcrops of hornfels and marble, where they are found, commonly contain pyrite, sphalerite and galena. Additionally, a significant area of gossan is present in this area (Figure 8). Samples of the gossan are usually anomalous in precious or base metals (Figure 17). The lower grades in the gossans may be explained in large part by leaching of Ag and base metals during the weathering process (Blanchard, 1968). Additional areas of gossan are likely to be revealed by additional mapping.

Gossan is formed by the weathering and leaching of primary sulfide minerals such as pyrite, sphalerite, galena, chalcopyrite and others. The cubic boxwork visible in many of the gossans examined indicates that pyrite was present in most of the gossans, and anomalous Ag, Pb, Zn, and Cu suggest that base metal sulfides were present as well. It is reasonable to assume that most of the Ag, Pb, Zn and Cu were leached during gossan formation. Commonly the leached metals are concentrated in an enrichment zone near the water table. A drilling campaign could determine if that has occurred on the Property.

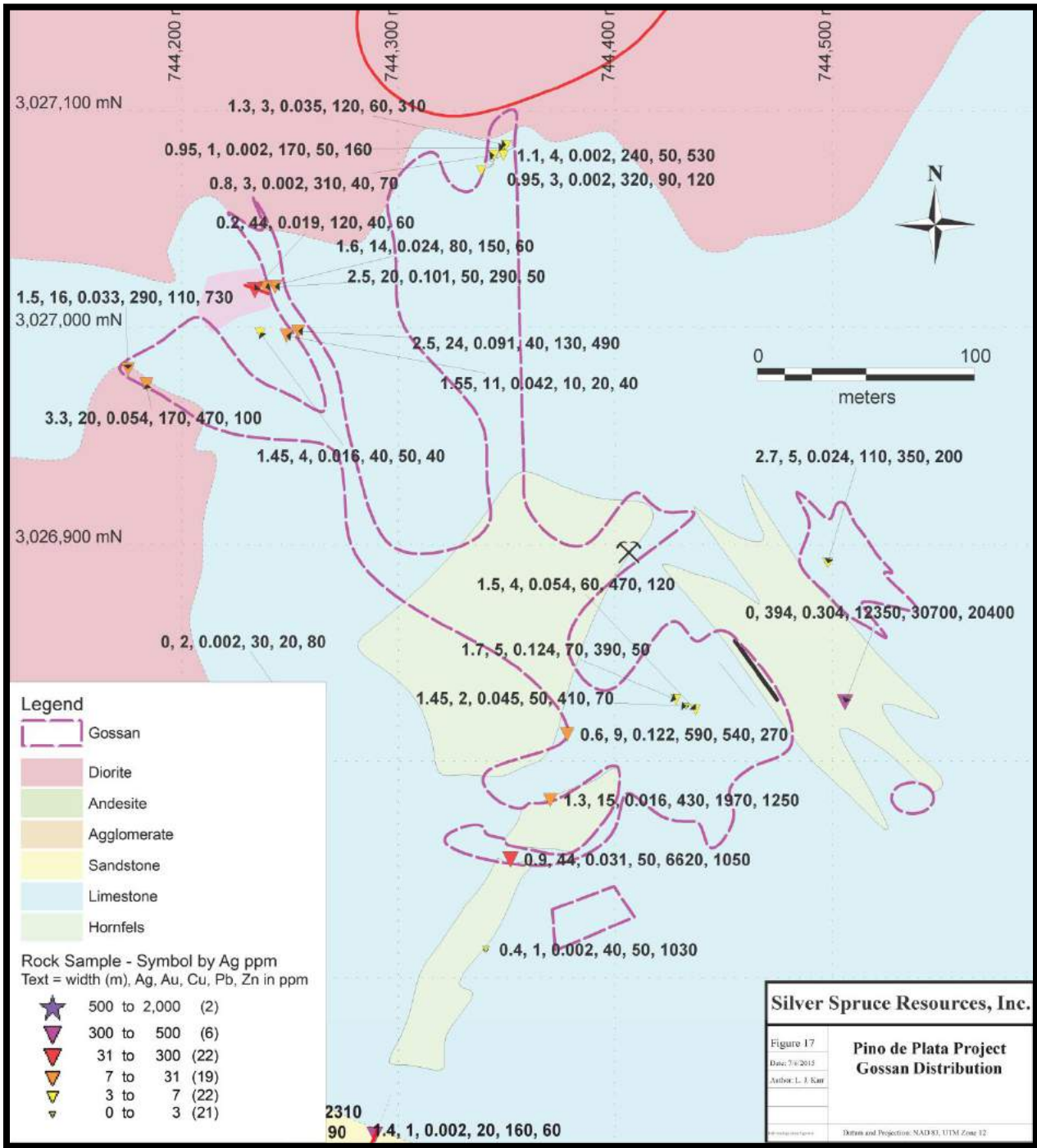


Figure 17. Sample results of gossan and associated mineralization. Samples with Zero (“0”) width are grab samples. Note that the sample in the southeast containing 394 g/t Ag is float from a quartz vein in a small ore pile of unknown provenance. The Santa Elena Mine is about 100 m ENE from the upper right corner of the map.



Figure 18. Sample 383930 from new road cut in gossan area; 3.3 m @ 0.054 g/t Au, 20 g/t Ag.



**Figure 19. Consecutive samples 383946, 383947 and 383978 totaling 4.65 m with a weighted average values of 0.072 g/t Au, 3.55 g/t Ag, 60 ppm Cu, 1100 ppm Pb, 80 ppm Zn. The 4.65 m is nearly perpendicular to layering and is believed to represent true stratigraphic thickness.**



Figure 20. View of the gossan area, looking due east. The switchbacks are on the northwest edge of the mapped gossan. The Santa Elena Mine is about 500 m east of the switchbacks behind the ridgeline. Note widespread red soil on ridgeline east of switchbacks.

### 9.5.3 Agua Hedionda II

A flat-lying bed of gossan sandwiched between two hornfels beds was mined in this artisanal open cut in the Gossan Area. The single sample within the gossan returned only 0.002 g/t Au and 4 g/t Ag while samples in the hanging wall returned as much as 0.035 g/t Au and 6 g/t Ag.

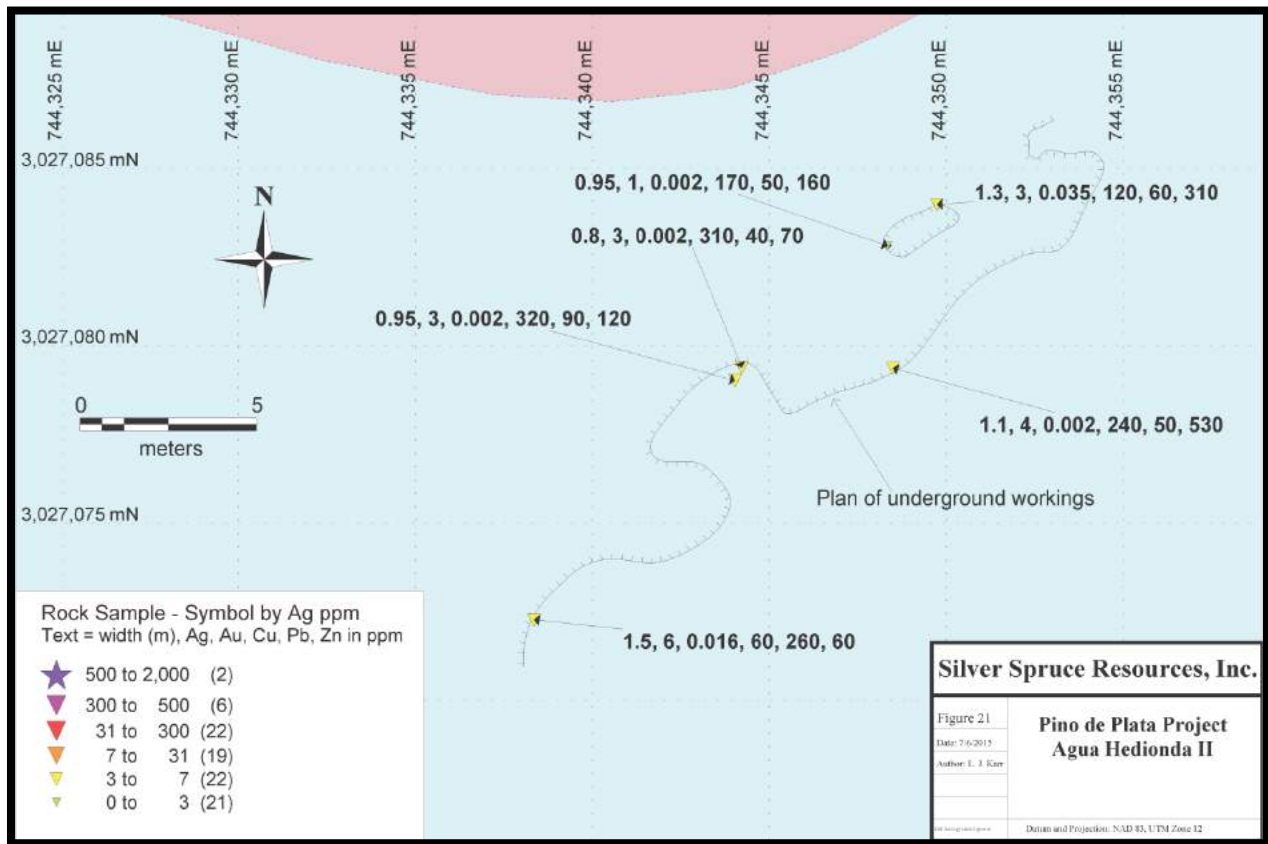


Figure 21. Agua Hedionda II workings with assays.

## 9.6 Hydrothermal Breccias.

Hydrothermal breccias were traced to subcrop in two areas in the northeastern portion of the concessions (Figure 7). These two areas aligned with both the northern contact of the marble, the on-strike extension of the Theodora vein, and the regional normal fault/accommodation linear defined by Ferrari, et al (Ferrari, et al 2007). It is suspected that the breccias were emplaced along an ENE fault zone near the eastern margin of the system late in the paragenetic sequence of mineralizing events.

The breccias are polymictic, with  $\leq 0.5$  cm to 3 cm subrounded to subangular fragments of silicified limestone and intrusive in a black, silicified, aphanitic rock flour matrix. They usually contain  $\leq 1\%$  fine grained disseminated pyrite.

Of three sample of hydrothermal breccia taken, two samples were relatively barren, but a third, SN 383906, assayed 0.056 ppm Au and 3 ppm Ag. This sample was strongly silicified and cut by 1 to 3 mm quartz veinlets.



## **9.7 Assessment of individual deposit types**

In general, rock sampling by the Author confirmed the findings of Consejo de Recursos Minerales and the Owner that the Property hosts Ag mineralization with grades varying from several g/t Ag to hundreds of g/t Ag. Silver values of > 50 ppm are spread over an area of > 1 km x 1 km.

### **9.7.1 Carbonate Replacement Target**

The Santa Elena – Gossan Area presents a viable target for replacement Ag-Pb-Zn-Cu deposits. The gossans are anomalous in Ag and base metals and this allows for the possibility of economic grades in the unweathered marble. Unoxidized replacement mineralization from the Santa Elena Mine approaches 200 g/t Ag. This area has the potential for relatively shallow replacement mineralization over an area of > 20 Ha.

### **9.7.2 Terrero Target**

Here the replacement epithermal mineralization in igneous rocks contains good silver grades at surface in unoxidized rock. Seven out of nine samples contained > 1 opt Ag to as much as 17.9 opt Ag. Little additional work in the way of mapping and sampling is required prior to drilling this prospect.

### **9.7.3 Vein Targets**

The Sierpe and Theodora veins are open on strike and have indications of ore grade Ag (>250 g/t Ag) and reasonably minable widths ( $\geq 1$  m). Newly exposed, Ag mineralized quartz veins in road cuts to the west along with favorable alteration west of the Sierpe and Theodora mines make these attractive vein targets.

### **9.7.4 Porphyry Target**

The initial field work gave no unambiguous indications of a porphyry target. While the age and styles of mineralization and alteration in the district area entirely interpretable in the context of a porphyry system, no strong direct evidence of a viable target was observed such as elevated Cu or Mo values, potassic alteration, or quartz stockwork with Cu and/or Mo minerals. It is possible that a porphyry copper system is present at depth, but this is considered unlikely.

## **10.0 Drilling**

Silver Spruce has not conducted any drilling on the Pino de Plata property nor is the author aware of any historic drilling on the property.

## **11.0 Sample Preparation, Analyses and Security**

No QC/QA data is available for work done by Consejo de Recursos Minerales or Arcelia Gold.

Samples taken by the Owner were sent to variety of labs, most of which were not ISO compliant. No other QC/QA data is available for sampling done by the Owner on the property.

The Author, on behalf of Silver Spruce Resources, collected Ninety-two rock samples on the property during May 2015. The samples were either taken directly by the author or under his direct supervision. The samples were under the Author's control during the entire field investigation and were personally delivered by the Author to ALS Laboratories in Ciudad Chihuahua, Mexico, where they were logged-in for analysis. The samples were dried, crushed and pulverized in Chihuahua by ALS and a 250 g pulp of each sample was sent by ALS to their laboratory in Vancouver, Canada for analyses.

Samples were analyzed for Au, Ag and a suite of 32 elements. Gold analysis was done by a 30 g fire assay with AAS finish. Ag and 32 other elements were analyzed by ICP-AES after a 4 acid digestion. Ag samples that were over limits (>200 ppm) were reassayed by 50 g fire assay with gravimetric finish. Initial Cu, Pb, and Zn values that were over limits were reassayed by aqua regia digestion and analyzed using ICP-AES or AAS finish. The detection limits were 5 ppb for gold and 1 ppm for silver.

Results from ALS are presented in Appendices 7 and 8. Sample results with descriptions, sample type and coordinates are presented in Appendix 6.

ALS is an ISO accredited analytical laboratory using industry standard analytical techniques and equipment. It is an independent laboratory and is independent of Silver Spruce Resources, Inc.

The Author is cognizant of the need for a formal QA/QC program and used two reference standards from CDN Resource Laboratories Ltd. of Langley, B.C., Canada and a blank consisting of crushed limestone aggregate sourced in Mexico. On average, one standard and one blank were submitted for every 25 rock samples. Values returned by ALS for the standards and blanks were within the accepted range of values for Au, Ag, and Cu. Values for Pb and Zn were generally slightly lower than the certified values (Appendix 9). Certificates for the two standards used are presented in Appendix 10.

## **12.0 Data Verification**

An initial review was completed by the author in May 2015 of the available data, and verified in discussions with Silver Spruce and the Owner. The author also completed a review of the published maps and data prior to completion of this report, including historical work done by the owner.

## **13.0 Mineral Processing and Metallurgical Testing**

The Pino de Plata Project is an early stage exploration project for which a mineral resource has not yet been defined; therefore, metallurgical testing is not applicable.

## **14.0 Mineral Resource Estimates**

There are no mineral resources or mineral reserves known on the Pino de Plata Property. This section is not applicable.

## **15.0 Adjacent Properties**

There are no adjacent properties as defined by NI 43-101 that exist in relation to the Pino de Plata Property.

## **16.0 Other Relevant Data and Information**

There is no other relevant information that has a bearing on the Pino de Plata Property.

## **17.0 Interpretation and Conclusions**

The property consists of 4 contiguous exploration concessions cover 397 Ha for which \$11,000 is due in back taxes, but are otherwise in good standing.

Exploration on the property prior to the site visit consisted of three limited efforts by the Owner, Consejo de Recursos Minerales, and Arcelia Gold; whose reports are presented Appendices 3, 4 and 5; and very limited historical artisanal mining. Recently constructed roads greatly improved access and presented sampling opportunities that were previously unavailable. The new road exposures allowed a

much better appreciation of the gossan zone, which was previously noted by, but perhaps not fully appreciated by Arcelia Gold.

Mapping by the Author and the regional and local geologic context suggest that this is a Laramide-aged mineral system. An intermediate intrusive was emplaced along an ENE trending structural zone near the intersection of a NW to NWN trending extensional zone. An uplifted block of Cretaceous carbonate and siliclastic sediment (possibly a horst block) provided a window into the replacement mineralization as exemplified by the Santa Elena mine and the Gossan area.

The diorite porphyry intrusive created a silver-rich hydrothermal mineral system which consists of epithermal veins, replacement mineralization in marble and replacement and stockwork and replacement mineralization in intrusive and volcanic rocks. Subsequent weathering of replacement sulfide mineralization in marble created extensive gossan zones from which most of the Ag, Cu, Pb, and Zn have likely been leached.

Verification and reconnaissance sampling by the Author confirms that known alteration and mineralization on the property are consistent with epithermal vein and replacement hosted silver deposits with potentially economic grades and tonnages, but it also shows that more work is required to fully evaluate the silver mineralized targets on the property.

## **18.0 Recommendations**

The existence of epithermal and carbonate replacement mineralization with economic grades and widespread hydrothermal alteration shows that the Pino de Plata Property has the potential to host deposits of economic tonnage and grade for both of these deposit types. Accordingly, it is recommended that an aggressive, but limited exploration program be conducted. At this time, three areas are deemed the most prospective:

1. The Terrero Mine.
2. The Santa Elena-Gossan Area.
3. The Sierpe, Theodora veins and their possible strike extensions to the west.

A key objective of this program is to identify and drill potential targets as quickly as possible to minimize the number of quarterly payments made, should the prospect prove less attractive after the first round of exploration.

The following exploration program is recommended:

1. Create a detailed geologic map of the property. Many aspects of the Property's geology are poorly understood. These include the precise location of geologic contacts, the internal structure of the Cretaceous section, and a complete understanding of alteration patterns. Mapping of the central portion of the intrusive is imperative. Alteration mineralogy should be determined with certainty using a Terraspec mineral analyzer.
2. Gain safe access to the Sierpe I, Sierpe II, Theodora, and Terrero mines for additional mapping and sampling. These data are required to ascertain whether drilling these structures is warranted.

3. Thoroughly map and sample all road cuts and outcrops with particular attention to the gossan area, the quartz boulder zone, the area west of the Theodora and Sierpe veins, and the Terrero area. These data are required to design effective trenching and drilling programs.
4. Cover the property with a soil sample grid. This data will serve to both focus time and effort on areas likely to be productive and to downgrade others.
5. Conduct an IP-Resistivity survey of the gossan area if supported by positive results in 1-4
6. Drill geologic, geochemical and geophysical targets as warranted by results.

The program should be modified as results warrant. A Gantt chart showing estimated timeline and budget is presented in Table 4.

Table 4. Gantt Chart and Exploration Budget.

Pino de Plata Proposed Work Program											
Item	Month									Estimated Cost	Comments
	1	2	3	4	5	6	7	8	9		
Mapping										\$ 39,000	Geologist
Rock Sampling										\$ 15,000	300 samples @ \$50
Soil Sampling										\$ 70,000	1400 samples @ \$50
Terraspec Study										\$ 8,000	
Permits										\$ 10,000	Estimate
Supplies, G&A, Travel Expenses										\$ 45,000	\$5000/mo
Labor										\$ 36,000	4 men @ 1000/mo
Road building										\$ 20,000	Estimate
IP-Resistivity										\$ 100,000	Estimate
Diamond Drilling										\$ 1,050,000	3000 m @ \$350/m all in costs
<b>Total</b>										<b>\$ 1,393,000</b>	

## 19.0 References

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## 20.0 Author's Certificate of Qualifications

I, **Leonard J. Karr**, Certified Professional Geologist, of 173 White Ash Drive, Golden, CO, USA, do hereby certify that:

I am the Author of and responsible for this National Instrument 43-101 Technical Report titled "*Technical Report on the Pino de Plata Property, Chihuahua, Mexico*" (the "Technical Report"), dated June, 2015, according to Regulation 43-101 and 43-101F1.

I am a graduate of Michigan Technological University where I obtained a Bachelor of Science degree in Geological Engineering in 1980 and a graduate of Colorado State University where I obtained a Master of Science degree in Geology in 1986. I am a qualified geologist, engaged in mineral exploration since 1980. I have held junior and senior geological positions, as well as senior management and executive positions in the major and junior exploration and mining companies. I have been a consultant in mineral exploration since 1986 and I am a member of the American Institute of Professional Geologists since 2007 (CPG-11072).

I have worked on mineral exploration projects as a geologist and explorationist in major and junior mineral exploration companies and as a mineral exploration consultant for precious and base metals throughout North, Central and South America, China, Papua New Guinea, and Turkmenistan.

I visited the Pino de Plata Property on May 24<sup>th</sup> to May 31<sup>st</sup>, 2015.

I am engaged as an independent consultant for *Silver Spruce Resources, Inc.*, and not as an employee. I do not expect to become an insider, associate or employee of the issuer. I do not hold or expect to receive any securities of the issuer or any royalty interest in the Pino de Plata Property. I have not received, nor do I expect to receive any interest in: (i) the Pino de Plata Property; or (ii) *Silver Spruce Resources, Inc.* I had no prior involvement with the Pino de Plata Property that is the subject of this Technical Report.

I have read the definition of Qualified Person set out in Regulation 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined by NI 43-101) and past relevant work experience, I fulfill the requirements to be a Qualified Person for the purpose of NI 43-101. I have read NI 43-101 and NI 43-101F1, and this Technical Report has been prepared and is in compliance with the Instrument. As of the date of the certificate and to the best of my knowledge, the information contained in this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading. I certify that I thoroughly read and revised the report. I am not aware of any omission or misquotes that could mislead the reader.

I consent to the use of this Technical Report by the issuer *Silver Spruce Resources, Inc.* or by any other person or company that *Silver Spruce Resources, Inc.* may authorize, and to the filing of same with applicable securities regulatory authorities.

Signed in Golden, Colorado, on the 31st day of June, 2015,

Per: (s) «Leonard J. Karr»

(signed)

Leonard J. Karr, B. Sc., M. Sc. CPG

## APPENDIX 1 BINDING LETTER OF AGREEMENT

### BINDING LETTER OF AGREEMENT

#### **BETWEEN SILVER SPRUCE RESOURCES INC. AND MATIJA IVAN IVSIC FUTAC FOR PURCHASE AND SALE OF THE THEODORA PROJECT CONCESSIONS**

This binding Letter of Agreement ("LOA") sets out the mutually agreed representations by Silver Spruce Resources Inc. ("Purchaser") and Matija Ivan Ivsic Futac ("Vendor"), collectively (the "Parties").

The Parties mutually agree to enter a sale and purchase agreement of the four mining concessions that comprise the Theodora project ("Project"), located near Chinipas, Chihuahua State, Mexico.

The Vendor declares that he is the 100% owner of the four mining concessions that comprise the Project and holds clean titles to the concessions. The Vendor agrees to sell 100% of the concessions to the Purchaser with no royalties attached.

The Purchaser agrees to purchase 100% of the four concessions from the Vendor with no royalties attached under the terms below.

#### **Exclusivity Period**

The Vendor will grant the exclusivity to purchase the concessions for a period of six months from the signing of this LOA. Vendor will also grant Administrative rights to Purchaser to conduct all necessary works and improvements required to properly assess the mineral potential and tonnage presently available for production.

#### **Terms for Exclusivity**

During the exclusivity period, the Purchaser will fund and endeavor to contract the completion of a NI 43-101 report on the project, including mapping and sampling programs at the Project, and the Parties agree to formalize the final Purchase Agreements in good faith. Purchaser will bear the costs of the process to formalize and register the final Purchase Agreements, as required by Mexican and Canadian laws.

#### **Terms for Purchase**

Within six months of the signing of this LOA,

1. Purchaser will pay the taxes in arrears on the concessions, which are currently approximately 105,334 Mexican Pesos (approximately US\$7,500) and will also pay the taxes that will be due in July 2015 of approximately 50,000 Mexican Pesos (approximately US\$3,500), and
2. Purchaser will pay the first quarterly payment of US\$250,000 to the Vendor, and will subsequently pay the Vendor three additional quarterly payments of US\$250,000 over the remainder of the first twelve months of the Purchase Agreement. These payments will be made to the US bank account as directed by the Vendor.
3. The Purchaser agrees to make further payments totaling US\$4 million, over the subsequent five years, from the positive cash flows generated from the production of mineralized rock at the Project, subject to timing to be determined in the final Purchase Agreements. These payments will be made to the US bank account as directed by the Vendor.

APPENDIX 2 CONCESSION TITLES

EXP. NUM. 1/1.3/01242

ORIGINAL



SECRETARIA DE ECONOMIA  
COORDINACION GENERAL DE MINERIA  
DIRECCION GENERAL DE MINAS

TITULO  
DE  
CONCESION MINERA DE EXPLOTACION  
NUMERO 218861

NOMBRE DEL LOTE

THEODORA

AGENCIA

EX-TEMORIS, CHIHUAHUA

VIGENCIA DEL TITULO

DEL 23 DE ENERO DEL 2003 AL 22 DE ENERO DEL 2053

EXP. NUM. 016/29658

ORIGINAL



SECRETARIA DE ECONOMIA  
COORDINACION GENERAL DE MINERIA  
DIRECCION GENERAL DE MINAS

**TITULO  
DE  
CONCESION MINERA DE EXPLORACION  
NUMERO 214261**

NOMBRE DEL LOTE

THEODORA I FRACCION NORTE

AGENCIA

CHIHUAHUA, CHIHUAHUA

VIGENCIA DEL TITULO

DEL 8 DE SEPTIEMBRE DEL 2001 AL 8 DE SEPTIEMBRE DEL 2007



SECRETARIA DE ECONOMIA  
COORDINACION GENERAL DE MINERIA  
DIRECCION GENERAL DE MINAS

**TITULO  
DE  
CONCESION MINERA DE EXPLORACION  
NUMERO 214262**

NOMBRE DEL LOTE

THEODORA I FRACCION SUR

AGENCIA

CHIHUAHUA, CHIHUAHUA

VIGENCIA DEL TITULO

DEL 6 DE SEPTIEMBRE DEL 2001 AL 5 DE SEPTIEMBRE DEL 2007

EXP. NUM. 016/32480

ORIGINAL



SECRETARÍA DE ECONOMÍA  
COORDINACIÓN GENERAL DE MINERÍA  
DIRECCIÓN GENERAL DE MINAS

**TITULO**  
**DE**  
**CONCESION MINERA DE EXPLORACION**  
**NUMERO 223059**

NOMBRE DEL LOTE

**THEODORA II**

AGENCIA

**CHIHUAHUA, CHIHUAHUA**

VIGENCIA DEL TITULO

**DEL 0 DE OCTUBRE DEL 2004 AL 7 DE OCTUBRE DEL 2010**

**PROYECTO "THEODORA"**

REALIZADO POR:

- MATIJA IVAN IVSIC FUTAC
- INGENIERO DE MINAS Y  
METALURGISTA
- CEDULA PROFESIONAL No.629988

**APPENDIX 4      CONSEJO DE RECURSOS MINERALES REPORT**

CONSEJO DE RECURSOS MINERALES  
RESIDENCIA CHIHUAHUA

RECONOCIMIENTO GEOLOGICO-MINERO EN LOS PUNOS LA PERLA, SANTA ELENA Y  
LA PALMITA, MUNICIPIO DE CHINIPAS, ESTADO DE CHIHUAHUA.

POR:

ING. G. ANTONIO BODERANES FRANCO

ING. DANIEL ESCOBAR HERNANDEZ

ING. REGELIO SEGURA SANDOVAL

FEBRERO DE 1966.-



**APPENDIX 5 ARCELIA GOLD REPORT**

ARCELIA GOLD S.A. de C.V.		
NAME OF PROPERTY: Theodora I Fracción Norte		TOPO SHEET: G12 B 38
DISTRICT Santa Elena/La Perla		STATE: Chihuahua, Chih.
COMMODITY: Ag-Au, Pb, Zn	DEPOSIT TYPE: Epitermal Baja Sulfuración	DATE 20-27/03/2013
PRESENTED/ SUBMITTED BY	Alejandro Jaimez Hermilo Mendoza	MATERIAL RECEIVED: Expendientes Denuncios mineros Theodora I Fracción Norte
CONTACT INFORMATION: Ivan Ivsic		FILED IN:
TELEPHONE 6144142318		
FAX:		
e-mail: ADDRESS:		
PROPERTY EXAM: Santa Elena, La Perla, La Sierpe, Las Tablas		PROPERTY FILES CHECKED:
PHOTOS INCLUDED:		
CLAIMS: Theodora I Fraccion Norte, Theodora I Fraccion Sur, Theodora		OWNERSHIP: Ivan Ivsic
CONTROL POINT/MOJONERA:		DATE OF RECORD STATUS Vigente
<b>LOCATION AND ACCESS -</b> El acceso se logra por carretera pavimentada 127 desde Chihuahua, efectuando un recorrido de 411 Km, pasando por Cuauhtémoc- La Junta-San Juanito-Creel, Divisaderos Barrancas, San Rafael, para después tomar una terracería en buen estado pasando por Bahuichivo hasta Temoris, de este poblado se tiene una terracería rumbo a Palmarejo, pasando por Los Llanos (16Km) Mineral de Palmarejo (14Km) Agua Salada hasta Chinipas de Almada, de ahí se toma una brecha en buen estado distante a 6 Km sobre el río hasta un poblado denominado Chaichaco, de ahí a la mojonera de Santa Elena son 2,5 Km. Ver Fig. 1		
<b>GEOLOGY –</b> Prospecto Santa Elena Cuerpos de reemplazamiento, exoskam de clorita+epidota+ Calcopirita+galena+ esfalerita+ argentita?, halo de alteración en zona de Gossan, La Perla/ Serpia/ Tablas 3 Vetas Epitermales de cuarzo+ arsenopirita+ galena argentifera rumbo N75/ 80, encajonadas en rocas volcánicas, zona de oxidación intensa en el halo de alteración. En el area Santa Clara Zonas de oxidación intensa- argilitización stockwork vetillas de cuarzo. Las Tablas Vetas de cuarzo encajonadas en Granodiorita.		
<b>MINERALIZATION:</b> Cuerpo de reemplazamiento (Exoskam) de clorita+epidota+pirita, calcopirita 1%, galena argentifera+ esfalerita+ bornita+ especularita+ malaquita.  Vetas cuarzo+arsenopirita, pirita+ calcopirita+ galena+ esfalerita acaramelada, malaquita, oxidación fuerte. Goethita+ limonita, argilitización moderada, vetillas cuarzo, vetillas de hematita+ goethita+ jarosita.		



**APPENDIX 7    ALS CERTIFICATE OF ANALYSIS**



ALS Certificate of  
Analysis - COA\_CH15

**APPENDIX 8    ALS CERTIFICATE OF ANALYSIS QC DOCUMENT**



ALS Certificate of  
Analysis - QCDOC\_C1

## APPENDIX 9 SILVER SPRUCE QC/QA DATA

Pino de Plata Project  
 Silver Spruce Resources, Inc.  
 Assay Results for Silver Spruce QC/QA standards and blanks, May, 2015 rock sampling by Leonard J. Karr  
 Samples assayed by ALS, assay certificate CH15079924

SN	Description	Comment	Au ppm	Accepted Range Au	Ag ppm	Accepted Range Ag	Cu ppm	Accepted Range Cu	Pb ppm	Accepted Range Pb	Zn ppm	Accepted Range Zn
383878	Blank	Zn high	<0.005		<1		10		20		100	
383899	Blank		<0.005		<1		<10		<20		<20	
383919	Blank	Pb high	<0.005		<1		<10		30		20	
383941	Blank		<0.005		<1		10		<20		20	
383877	CDN-FCM-6	Pb and Zn slightly out of range	2.07	1.99 - 2.75	158	148.9 - 164.7	11900	11870 - 13150	14200	15140 - 15260	88200	92260 - 93140
383920	CDN-FCM-6	Pb slightly out of range	2.15	1.99 - 2.75	164	148.9 - 164.7	12450	11870 - 13150	14700	15140 - 15260	93400	92260 - 93140
383900	CDN-ME-19	Pb and Zn slightly out of range	0.59	0.558 - 0.682	106	96 - 110	4600	4560 - 4920	9300	9740 - 9860	7620	7460 - 7540
383940	CDN-ME-19	Pb and Zn slightly out of range	0.619	0.558 - 0.682	102	96 - 110	4560	4560 - 4920	9110	9740 - 9860	7560	7460 - 7540
	CDN-FCM-6	Accepted Value	2.15	1.99 - 2.75	156.8	148.9 - 164.7	12510	11870 - 13150	15200	15140 - 15260	92700	92260 - 93140
	CDN-ME-19	Accepted Value	0.62	0.558 - 0.682	103	96 - 110	4740	4560 - 4920	9800	9740 - 9860	7500	7460 - 7540

## APPENDIX 10 CHECK SAMPLE ASSAY CERTIFICATES

# CDN Resource Laboratories Ltd.

#2, 20148 – 102<sup>nd</sup> Ave, Langley, B.C., Canada, V1M 4B4, 604-882-8422, Fax: 604-882-8466 (www.cdnlabs.com)

### REFERENCE MATERIAL: CDN-FCM-6

Recommended values and the "Between Lab" Two Standard Deviations

<i>Gold</i>	<i>2.15 g/t ± 0.16 g/t</i>	<i>Certified value</i>
<i>Silver</i>	<i>156.8 g/t ± 7.9 g/t</i>	<i>Certified value</i>
<i>Copper</i>	<i>1.251 % ± 0.064 %</i>	<i>Certified value</i>
<i>Lead</i>	<i>1.52 % ± 0.06 %</i>	<i>Certified value</i>
<i>Zinc</i>	<i>9.27 % ± 0.44 %</i>	<i>Certified value</i>

**Note:** Standards with an RSD of near or less than 5% are certified; RSD's of between 5% and 15% are Provisional; RSD's over 15% are Indicated. Provisional and Indicated values cannot be used to monitor accuracy with a high degree of certainty.

**PREPARED BY:** CDN Resource Laboratories Ltd.  
**CERTIFIED BY:** Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia  
**INDEPENDENT GEOCHEMIST:** Dr. Barry Smee, Ph.D., P. Geo.  
**DATE OF CERTIFICATION:** May 22, 2011

#### **METHOD OF PREPARATION:**

Reject ore material was dried, crushed, pulverized and then passed through a 270 mesh screen. The +270 material was discarded. The -270 material was mixed for 5 days in a double-cone mixer. Splits were taken and sent to 15 laboratories for round robin assaying.

#### **ORIGIN OF REFERENCE MATERIAL:**

The ore was supplied by Farallon Resources from their Campo Morado property in Mexico. The Campo Morado precious-metal-bearing, volcanogenic massive sulphide deposits occur in a lower Cretaceous bimodal, calc-alkaline volcanic sequence. Most deposits occur in the upper part of a sequence of felsic flows and heterolithic volcanoclastic rocks or at its contact with overlying chert and argillite. Gold, silver, zinc, and lead are associated with pyrite, quartz, ankerite, sphalerite, chalcocopyrite and galena, with minor tennantite-freibergite, arsenopyrite, and pyrrhotite.

Approximate chemical composition (from whole rock analysis) is as follows:

	Percent		Percent
SiO <sub>2</sub>	36.3	MgO	1.4
Al <sub>2</sub> O <sub>3</sub>	2.5	K <sub>2</sub> O	0.5
Fe <sub>2</sub> O <sub>3</sub>	23.5	TiO <sub>2</sub>	<0.1
CaO	2.4	LOI	13.8
Na <sub>2</sub> O	<0.1	S	24.3

#### **Statistical Procedures:**

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

#### **Assay Procedures:**

**Au:** Fire assay pre-concentration, AA or ICP finish (30g sub-sample).  
**Ag, Cu, Pb, Zn:** 4-acid digestion, AA or ICP finish.

# CDN Resource Laboratories Ltd.

#2, 20148 – 102<sup>nd</sup> Ave, Langley, B.C., Canada, V1M 4B4, 604-882-8422, Fax: 604-882-8466 (www.cdnlabs.com)

## REFERENCE MATERIAL: CDN-ME-19

Recommended values and the "Between Lab" Two Standard Deviations

<i>Gold</i>	<i>0.620 g/t ± 0.062 g/t</i>	<i>Certified value</i>
<i>Silver</i>	<i>103 g/t ± 7 g/t</i>	<i>Certified value</i>
<i>Copper</i>	<i>0.474 % ± 0.018 %</i>	<i>Certified value</i>
<i>Lead</i>	<i>0.98 % ± 0.06 %</i>	<i>Certified value</i>
<i>Zinc</i>	<i>0.75 % ± 0.04 %</i>	<i>Certified value</i>

**Note:** Standards with an RSD of near or less than 5% are certified; RSD's of between 5% and 15% are Provisional; RSD's over 15% are Indicated. Provisional and Indicated values cannot be used to monitor accuracy with a high degree of certainty.

**PREPARED BY:** CDN Resource Laboratories Ltd.  
**CERTIFIED BY:** Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia  
**INDEPENDENT GEOCHEMIST:** Dr. Barry Smee., Ph.D., P. Geo.  
**DATE OF CERTIFICATION:** December 09, 2011

### **METHOD OF PREPARATION:**

Reject ore material was dried, crushed, pulverized and then passed through a 270 mesh screen. The +270 material was discarded. The -270 material was mixed for 5 days in a double-cone mixer. Splits were taken and sent to 15 laboratories for round robin assaying.

### **ORIGIN OF REFERENCE MATERIAL:**

The ore was supplied by Capstone Mining Corp. from the Minto Mine in Yukon, Canada. Mineralization is primary chalcopyrite and bornite pervasively disseminated and as stringers within foliated granodiorite units rich in secondary biotite. Sulphide mineralization is typically accompanied by magnetite. Gold is associated with the sulphide mineralization, typically intimately associated with bornite and rarely observed as free gold. 733 kg of the Minto ore was combined with 67 kg of a Au, Ag, Cu, Pb, Zn concentrate.

Approximate chemical composition (from whole rock analysis) is as follows:

	Percent		Percent
SiO <sub>2</sub>	61.8	MgO	1.3
Al <sub>2</sub> O <sub>3</sub>	15.1	K <sub>2</sub> O	2.9
Fe <sub>2</sub> O <sub>3</sub>	5.7	TiO <sub>2</sub>	0.4
CaO	3.4	LOI	2.7
Na <sub>2</sub> O	3.6	S	1.5
C	0.3		

### **Statistical Procedures:**

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

### **Assay Procedures:**

**Au:** Fire assay pre-concentration, AA or ICP finish (30g sub-sample).  
**Ag, Cu, Pb, Zn:** 4-acid digestion, AA or ICP finish.

Leonard J. Karr  
173 White Ash Drive  
Golden, CO 80403  
Tel: (720) 878-2552

### CONSENT OF QUALIFIED PERSON

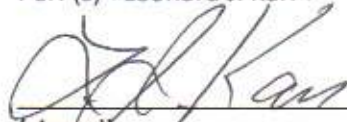
Ontario Securities Commission  
British Columbia Securities Commission  
Alberta Securities Commission  
Saskatchewan Financial Services Commission (Securities Division)  
Manitoba Securities Commission  
Autorité des Marchés Financiers  
New Brunswick Securities Commission  
Nova Scotia Securities Commission  
Commission of Newfoundland and Labrador  
Registrar of Securities, Prince Edward Island  
Registrar of Securities, Government of Yukon Territory  
Registrar of Securities, Government of Nunavut  
Government of Northwest Territories  
The TSX Venture Exchange

I, **Leonard J. Karr**, consent to the public filing of the technical report titled "*National Instrument 43-101 Technical Report on the Pino de Plata Property, Chihuahua, Mexico*" dated July 7, 2015 by Silver Spruce Resources Inc.

I certify that I have read the Filing Statement being filed by Silver Spruce Resources, Inc. and that it fairly and accurately represents the information in the sections of the technical report for which I am responsible.

Dated this 7th day of July, 2015, in Golden, Colorado

Per: (s) «Leonard J. Karr»

  
(signed)

Leonard J. Karr, B. Sc., M. Sc., CPG.





## 20.0 Author's Certificate of Qualifications

I, **Leonard J. Karr**, Certified Professional Geologist, of 173 White Ash Drive, Golden, CO, USA, do hereby certify that:

I am the Author of and responsible for this National Instrument 43-101 Technical Report titled "*Technical Report on the Pino de Plata Property, Chihuahua, Mexico*" (the "Technical Report"), dated June, 2015, according to Regulation 43-101 and 43-101F1.

I am a graduate of Michigan Technological University where I obtained a Bachelor of Science degree in Geological Engineering in 1980 and a graduate of Colorado State University where I obtained a Master of Science degree in Geology in 1986. I am a qualified geologist, engaged in mineral exploration since 1980. I have held junior and senior geological positions, as well as senior management and executive positions in the major and junior exploration and mining companies. I have been a consultant in mineral exploration since 1986 and I am a member of the American Institute of Professional Geologists since 2007 (CPG-11072).

I have worked on mineral exploration projects as a geologist and explorationist in major and junior mineral exploration companies and as a mineral exploration consultant for precious and base metals throughout North, Central and South America, China, Papua New Guinea, and Turkmenistan.

I visited the Pino de Plata Property on May 24<sup>th</sup> to May 31<sup>st</sup>, 2015.

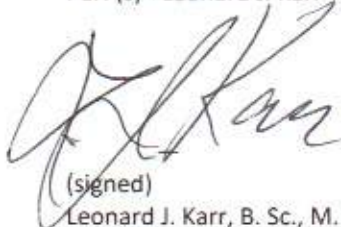
I am engaged as an independent consultant for *Silver Spruce Resources, Inc.*, and not as an employee. I do not expect to become an insider, associate or employee of the issuer. I do not hold or expect to receive any securities of the issuer or any royalty interest in the Pino de Plata Property. I have not received, nor do I expect to receive any interest in: (i) the Pino de Plata Property; or (ii) *Silver Spruce Resources, Inc.* I had no prior involvement with the Pino de Plata Property that is the subject of this Technical Report.

I have read the definition of Qualified Person set out in Regulation 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined by NI 43-101) and past relevant work experience, I fulfill the requirements to be a Qualified Person for the purpose of NI 43-101. I have read NI 43-101 and NI 43-101F1, and this Technical Report has been prepared and is in compliance with the Instrument. As of the date of the certificate and to the best of my knowledge, the information contained in this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading. I certify that I thoroughly read and revised the report. I am not aware of any omission or misquotes that could mislead the reader.

I consent to the use of this Technical Report by the issuer *Silver Spruce Resources, Inc.* or by any other person or company that *Silver Spruce Resources, Inc.* may authorize, and to the filing of same with applicable securities regulatory authorities.

Signed in Golden, Colorado, on the 31st day of June, 2015,

Per: (s) «Leonard J. Karr»



(signed)  
Leonard J. Karr, B. Sc., M. Sc. CPG

