TECHNICAL REPORT ON AN INITIAL RESOURCE ESTIMATE FOR THE ANA SOFIA PROPERTY, SANTIAGO DEL ESTERO, ARGENTINA

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1 Summary

Demetra Minerals Inc. (“Demetra”) is a private Canadian junior mineral exploration company that is the owner of, through a wholly owned subsidiary Demetra Fertilizantes S.A. (formerly Demetra Minerals S.A.), two (2) mining leases (legally granted) and a mineral exploration concession (in application) located in the province of Santiago del Estero, in north-central Argentina. These mineral concessions are referred to collectively throughout this report as the Ana Sofia Property (“Ana Sofia”, or the “Property”) (see Figures 2.1 and 2.2). In November 2015, Demetra signed a Letter of Intent (LOI) with Centurion Minerals Ltd. (“Centurion”), a publicly traded Canadian junior mineral exploration company (CTN:TSX.V), concerning a proposed Joint Venture (JV) with respect to the further exploration and development of the Ana Sofia Property (Centurion Press Release dated November 2, 2015) and in January of this year a formal JV agreement between the two companies was executed (Centurion Press Release dated January 29, 2016). The Ana Sofia Property is being explored and developed for the industrial mineral gypsum as an agricultural product (soil conditioner) and covers past-producing gypsum quarries.

This report is written by Mr. Andrew J. Turner, P.Geol., a Principal and Senior Consulting Geologist, and Mr. Steven J. Nicholls, BA.Sc (Geology)., M AIG, Resource Geologist, both with APEX Geoscience Ltd. (APEX), a geological consulting firm based in Edmonton, Alberta, Canada. Mr. Turner is referred to throughout this report as the “primary author” of the report and is responsible for all of its sections. The co-author, Mr. Nichols, is responsible for section 14 of this report: Mineral Resource Estimates. The authors of this report are independent of both Demetra and Centurion.

APEX was initially retained by a third party in August of 2015 to complete a Technical Report on the Property in support of a proposed arrangement between that company and Demetra. However, this arrangement was terminated after a site visit and the majority of the work on a report had been completed. In early 2016, APEX was retained by Centurion Minerals to complete a Technical Report on the Property in support of a proposed arrangement with Demetra. APEX was given permission by the third party to use the results of the earlier work initially completed on its behalf, including the data from sampling conducted during the September 2015 site visit, and an initial Technical Report on the Ana Sofia Property was completed in February of 2016 by the primary author of this report (Turner, 2016). The following report summarises a sizeable test pitting program at the property conducted in April and May of 2016 and a subsequent maiden resource estimation effort for the Property.

The Ana Sofia Property is located in the Guasayán Department of the Santiago del Estero Province in north central Argentina some 1100 km northwest of the country’s capital city, Buenos Aries, and approximately 45 km southwest of the provincial capital city of Santiago del Estero. The Ana Sofia Property is located within 0.5 km of a paved highway (Hwy 64), and high voltage power lines, and is roughly centered on POSGAR 2007 (Zone 3) coordinates 3643750 m E and 6901200 m N (64°37’49.34” W / 28°00’43.42” S).

The Property comprises two (2) non-contiguous mineral (exploitation) concessions (mineral leases) with a combined total area of approximately 50 ha surrounded by a larger mineral exploration permit block (additional 550 ha). The southern of the mineral concessions is called the Ana Sofia 1 and has an area of approximately 7.0 ha while the northern concession is called Ana Sofia 2 and has an area of approximately 43.0 ha (Figure 4.1). The two concessions are separated by approximately 400m. On November 11, 2014, a 10 year mining lease was issued to Demetra with respect to the Ana Sofia 1 concession and a similar 10 year mining lease was issued to Demetra with respect to the Ana Sofia 2 concession on December 3, 2015. As of the date of this report, Demetra's Ana Sofia exploration permit remains in application and has not yet been formally granted.

The Ana Sofia Property is located in the southern part of the Gran Chaco Plain, which is a large geographic area located on the eastern side of the Andes Mountains extending from northern Argentina to northern Bolivia that is typified by low topographic relief and a generally hot, dry climate.

The Property is underlain by the Miocene Guasayán Formation that comprises flat-lying green clays with interbedded gypsum layers. There are a number of current and past producing gypsum quarries in the area of the Property from which crushed gypsum has been produced and sold as a fertilizer including a past producing quarry located in the central portion of the Ana Sofia 2 concession area. There has been no previous production from the Ana Sofia 1 concession although past-producing quarries are located immediately west and east of the Demetra concession. The gypsum deposits common to the region were deposited in the Tertiary as mountain building and the activation of large regional fault zones resulted in the formation of localized inland basins. During Miocene time, continual marine transgression and a relatively hot climate created the conditions necessary for evaporite, primarily as gypsum, deposition (Cuttle 2013). There has been no mineral production from the Property by Demetra nor are there any NI-43-101 compliant mineral resources on the Property.

In 2014 Demetra conducted a trenching program at, and immediately surrounding, their Property that at the time comprised only the Ana Sofia 1 concession. In total, 35 trenches were excavated with the primary goal of investigating overburden thickness to establish areas where gypsum layers are closest to surface. Eight (8) of the 2014 trenches encountered gypsum beds within 5m of surface and trench D1 returned the best results with gypsum encountered between 2.2 m and 4.1 m from surface and did not encounter the lower contact of the unit (de la Fuente 2014). The 2014 trenching program did not include any sampling.

In June of 2015, two (2) samples of gypsum were collected (one each) from the Ana Sofia 1 and 2 concessions by Demetra. The sample collected from the Ana Sofia 1 concession was called "Alabastro" and the Ana Sofia 2 sample was called "Sulfato". The Alabastro sample comprised relatively high-purity gypsum collected from a layer exposed in a large trench that Demetra had excavated in the northwest corner of the Ana Sofia 1 concession. The Sulfato sample also comprised relatively high-purity gypsum collected from a small stockpile of large (0.3-0.5m in any dimension) gypsum boulders located adjacent to, and presumably removed from, the central (historical) quarry on the Ana Sofia 2 concession. Both samples were submitted to the SEGEMAR laboratory in Buenos Aires where each was crushed and homogenized to produce 2 size fractions; a granular product (2-4 mm) and a powdered product (< 2 mm). The resulting analytical data confirmed the high purity of the samples in both the granular and powdered size fractions returning values between 97.85 and 98.27% gypsum. The Alabstro and Sulfato sample sites were resampled by the primary author of this report during his September 2015 site visit and similar analytical results were returned with gypsum contents of 97.28 wt% and 94.94 wt%, respectively.

The primary author of this report conducted an initial visit to the Ana Sofia Property between September 10 and 12, 2015. During the site visit, the author was able to examine and sample historical excavations (quarries and stockpiles) at the Ana Sofia 2 mineral concession area. At the Ana Sofia 1 mineral concession the author supervised a small excavation program comprising 2 test pits, examined a large previously excavated trench in the northwest corner of the concession area and examined historical quarries immediately adjacent to, but not on, the Demetra concession to the east and west. In total, 9 rock samples were collected from the Demetra concessions and were submitted for analysis at the SEGEMAR laboratory in Buenos Aires, an independent ISO accredited laboratory.

In summary, all nine of the author's rock samples returned calculated gypsum values >90 wt% (weight percent) $CaSO_4 \cdot 2H_2O$ (gypsum). Values ranged between a low of 92.69 wt% and a high of 98.57 wt% gypsum and averaged 95.80 wt% gypsum. As an indicator of silicate impurities, SiO_2, Al_2O_3 and Fe_2O_3 values were low with maximum values for each being 4.90 wt%, 1.22 wt% and 1.22 wt%, respectively. In addition, K and Na values, as indicators of salinity, were also very low with a maximum K_2O value of 0.29 wt% (likely due to clay content) and a maximum Na_2O value of 0.06 wt%, with the remaining and 8 rock samples returning Na_2O values <0.01 wt%.

The following are observations and conclusions made by the author of this report following the September 2015 site visit;

- Flat-lying gypsum-bearing strata of the Guasayán Formation was observed throughout the Ana Sofia Property and surrounding area.
- At least one (1), and possibly 2 to 3, relatively high-purity gypsum layers were observed in all 3 pits (including the NW trench) at the Ana Sofia 1 concession ("high-purity" is used in this report to denote a lithologic unit with 90 wt% or greater gypsum content).
- The high-purity gypsum layers encountered within the 2 test pits completed on the Ana Sofia 1 concession had true thicknesses ranging between 1.0 and 1.5 m.
- The Ana Sofia 1 gypsum target horizon thickness discussed above does not include additional gypsum-bearing layers of lesser purity (higher clay content) that were observed in both test pits adjacent to the main high-purity "target"

horizon. More detailed testing is recommended to properly assess the gypsum content and production potential of these units.

- The Ana Sofia 1 gypsum target horizon thickness discussed above does not include a "lower" high-purity gypsum layer that was observed at the west end (deepest part) of the large NW Trench and at the bottom of both of the 2015 Test Pits, which is believed to represent the same unit at all 3 sites and was not fully penetrated (partial thicknesses ranged between 40 cm and 60 cm).
- One (1) relatively high-purity gypsum layer was observed along an almost 850m long northwest trend through the center of the Ana Sofia 2 concession in historical quarries and several cleared areas where overburden had been removed but no quarrying had been undertaken.
- The true thickness of the "target" gypsum layer at the Ana Sofia 2 concession ranged from 0.8 m to 1.25 m.
- As with the Ana Sofia 1 concession, additional gypsum-bearing layers were observed in the quarries in the south and central parts of the Ana Sofia 2 concession and were not included in the thickness measurements. Similarly, more detailed testing is recommended to properly assess their gypsum content and production potential.

Based on these observations and the results of previous sampling at the Ana Sofia Property, Centurion and Demetra completed a sizeable Test Pitting (Trenching) program at the Ana Sofia 2 concession between April 1 and May 10, 2016. The program was intended to test the lateral extents of the main high-purity gypsum layer that had been exposed by historical quarrying along an 800m-long northeast striking trend that had returned values of up to 96.1 wt% gypsum (2015 APEX sampling).

The 2016 exploration program at the Ana Sofia 2 concession comprised the excavation of 21 test pits. The test pits comprised a total of 169.6m of vertical excavation (depth) and averaged 8m in depth with the shallowest excavation being 3.9m and the deepest being 15.0m. The pits exposed relatively flat-lying stratigraphy throughout the area and thus were mapped and sampled vertically on one wall each to mimic vertical drill holes. The flat-lying, or very shallow east-dipping, nature of the gypsum-bearing stratigraphy combined with a gradual slope of topography in the area down to the west and northwest has resulted in the erosion of the gypsum layers within 1-200m west of the north-easterly trend of the historical quarries on the Ana Sofia 2 concession. This has also resulted in a gradual deepening of the main gypsum layer to the east as topography rises and overburden increases.

At least one (1) high-purity gypsum layer was exposed in 18 of the 21 test pits completed in 2016. In 9 of the 21 test pits, primarily located along the western side of the test area, a second high-purity gypsum layer was identified beneath the main (upper) gypsum layer. The two layers are normally separated by approximately 0.5m of green clay. The gypsum layers ranged in thickness from 0.4 m to 2.0m, with average thicknesses of 1.1m for the upper (main) layer and 0.7m for the lower layer. The upper gypsum layer was observed to be more or less continuous over an area roughly 1,500m in length (striking northeast) by 850m (across strike to the southeast). The lower gypsum layer was observed in test pits along the western edge of the test area along a roughly 850m strike length (to the northeast) by up to 300m across strike (to the southeast).

The two gypsum layers encountered during the 2016 Ana Sofia test pitting program exhibited remarkable consistency and high purity across the tested area. With respect to the 18 samples (from 18 test pits) that comprise the upper gypsum layer, the calculated weight percent gypsum (wt%gyp) values ranged between 79.31 wt%gyp and 97.95 wt%gyp with an (arithmetic) average of 93.58 wt%gyp (length-weighted average is 93.54 wt%gyp). The lower gypsum layer encountered during the test pitting program comprised 9 samples (from 9 test pits) that returned analytical results ranging from 93.89 wt%gyp to 97.95 wt%gyp with an (arithmetic) average of 96.46 wt%gyp (length-weighted average is 96.45 wt%gyp).

The primary author of this report conducted a visit to the property following the completion of the 2016 test pitting program between July 24 and 26, 2016. During the visit, all of the 2016 test pits were examined, sampling locations were confirmed by hand-held GPS and the mapping and sampling completed by Demetra personnel was also examined for accuracy and completeness. In addition, observations were made with respect to stratigraphic correlations between the test pits to facilitate the geological modeling and resource estimation work described in this report. In short, no significant issues were noted by the author and five check samples from five different test pits averaged 90.5 wt% gyp that matched very closely the values obtained from the Demetra samples for the same intervals (correlation coefficient of 0.9194). As a result of these and other check sample results, the final dataset of weight percent gypsum values determined by ALS (Vancouver) was considered by the authors of this report to be sufficiently validated, and therefore suitable, for use in a geological modeling and resource estimation effort.

Geological modeling was completed for both the Upper and Lower gypsum layers examined by the 2016 test pitting program at the Ana Sofia Property. Three-dimensional (3-D) solids were created for both gypsum layers from two-dimensional (2-D) strings created on northwest striking sections through the 2016 test pits, which had an average spacing of approximately 150m. The upper gypsum layer was observed to be more or less continuous over an area roughly 1,500m in length (striking northeast) by 850m (across strike to the southeast). The lower gypsum layer was observed in test pits beneath the western edge of the upper gypsum layer over an area roughly 850m in length (striking northeast) by up to 300m (across strike to the southeast). The Upper (main) gypsum solid was trimmed to remove volumes corresponding to 4 historical quarries where that layer had been mined out. The lower gypsum layer was trimmed to remove material that was mined previously from 1 historical quarry. Both layers were trimmed by a topographic surface that was created from 90m-spaced SRTM data (SRTM - “Shuttle Radar Topography Mission”, near global digital elevation model). In addition, both layers were trimmed to remove those parts of the volumes laying more than 10m from surface above which, in the opinion of APEX, the tested gypsum layers have a reasonable prospect for eventual economic extraction.

Resource modelling and estimation for each gypsum layer was carried out using a 3-dimensional block model based on geostatistical applications using commercial mine planning software (MICROMINE v14.0.6). A parent block size of 50 m x 50 m x 1m was used with sub-blocking down to 5 m x 5 m x 0.1 m. A total of 27 analyses in 18 test pits were contained within the modeled gypsum layers, comprising 18 analyses within 18 test pits for the upper layer and 9 analyses within 9 test pits for the lower layer. Grade (as weight percent gypsum) was assigned to blocks using the inverse distance to the power of one methodology given the very low variability within the gypsum unit analyses. Estimation was only calculated on parent blocks and all sub blocks within each parent block were assigned the parent block grade. A block discretization of 4 (X) x 4 (Y) x 1 (Z) was applied to all blocks during estimation. Each wireframe was estimated as ‘hard boundaries’ such that only samples located within each wireframe were used to estimate the grade of the blocks within each wireframe. A blended density value was similarly assigned to each parent block (and their respective sub-blocks) based upon the grade of each parent block (wt%gyp) where a density value of 2.35 kg/m3 was used for pure gypsum and the remainder was treated as minor interbedded clays for which a density value of 1.65 kg/m3 was used.

The 2016 maiden inferred gypsum resource for the Ana Sofia Property is estimated at **1.47 million tonnes of material averaging 94.1 wt%gyp**. The size and average grade of the resource at a variety of lower cut-off gypsum values is presented in Table 14.7, which includes the reported resource calculated at an 85 wt%gyp cut-off, which is the minimum required gypsum content for agricultural gypsum products in Argentina. The resource was categorized as an indicated mineral resource based primarily on the relatively large sample spacing averaged roughly 125 m to 200 m.

It is the opinion of the authors of this report that the Ana Sofia Property remains a “property of merit’ warranting further exploration work. It is recommended that future work programs should continue to evaluate the current resource area in order to increase the level of certainty with respect to the modeled gypsum layers it comprises. In addition, it is recommended that additional exploration work should be conducted elsewhere at the Property, particularly on and around the Ana Sofia 1 concession, where previous exploration is limited. The recommended work program comprises a ground penetrating radar (GPR) survey in order to examine the depth of the gypsum (overburden thickness) throughout the area, detailed topographic surveying of the entire Property either by systematic ground surveying or by drone surveying (photogrammetric or LIDAR - Light Detection and Ranging), and additional test pitting and/or drilling in order to complete infill work throughout the current resource area and to conduct initial testing elsewhere on the Property to be followed by a re-evaluation of Ana Sofia resources. The total estimated expenditure for all of the recommended work programs is approximately $230,000 (as detailed in Table 18.1).

2 Introduction

2.1 General

Demetra Minerals Inc. ("Demetra") is a private Canadian junior mineral exploration company, which owns through its subsidiary Demetra Fertilizantes S.A. (formerly Demetra Minerals S.A.), two mining leases and a mineral exploration concession in the province of Santiago del Estero, in north-central Argentina that are referred to collectively throughout this report as the Ana Sofia Property (or the "Property", or the "Project") (see Figures 2.1 and 2.2). In November 2015, Demetra signed a Letter of Intent with Centurion Minerals Ltd. ("Centurion"), a publicly traded Canadian junior mineral exploration company (CTN:TSX.V), concerning a proposed Joint Venture with respect to the further exploration and development of the Ana Sofia Property (Centurion Press Release dated November 2, 2015). A definitive Joint Venture Agreement between the two companies regarding the Ana Sofia project was subsequently announced in early 2016 (Centurion Press Release dated January 29, 2016).

The Ana Sofia Property is being explored and developed for the industrial mineral gypsum as a fertilizer/soil conditioner and covers past-producing gypsum quarries. This report is written on behalf of Centurion and Demetra and summarizes exploration work that they conducted at the Project during 2016 and the results of an initial mineral resource estimate for the Project (Centurion Press Release dated October 31, 2016). This report also includes observations and data from a recent property visit conducted by the author (July 24-26, 2016), and recommendations for continued exploration and resource development work throughout the Property.

2.2 Terms of Reference

The primary author of this report, Mr. Andrew Turner, B.Sc., P.Geol., is an independent geologist and principal with the geological consulting firm APEX Geoscience Ltd. ("APEX") and is a Qualified Person as defined by NI 43-101. Mr. Turner is responsible for all sections of this report and unless otherwise specified, he is refered to throughout this report as either "the author" or "the primary author" of this report. The authors of this report have not had any prior involvement in the Ana Sofia Property and are both fully independent of both Centurion and Demetra. Mr. Turner conducted a visit to the Property between July 24 and 26, 2016 and has previously visited the Property on behalf of Centurion and Demetra in March 2016 and September 2015. APEX was formally retained as geological consultants by Centurion Minerals in December 2015 and the author of this report has authored a previous Technical Report for the Property dated February 3, 2016 (Turner, 2016), which is available on SEDAR (www.sedar.com).

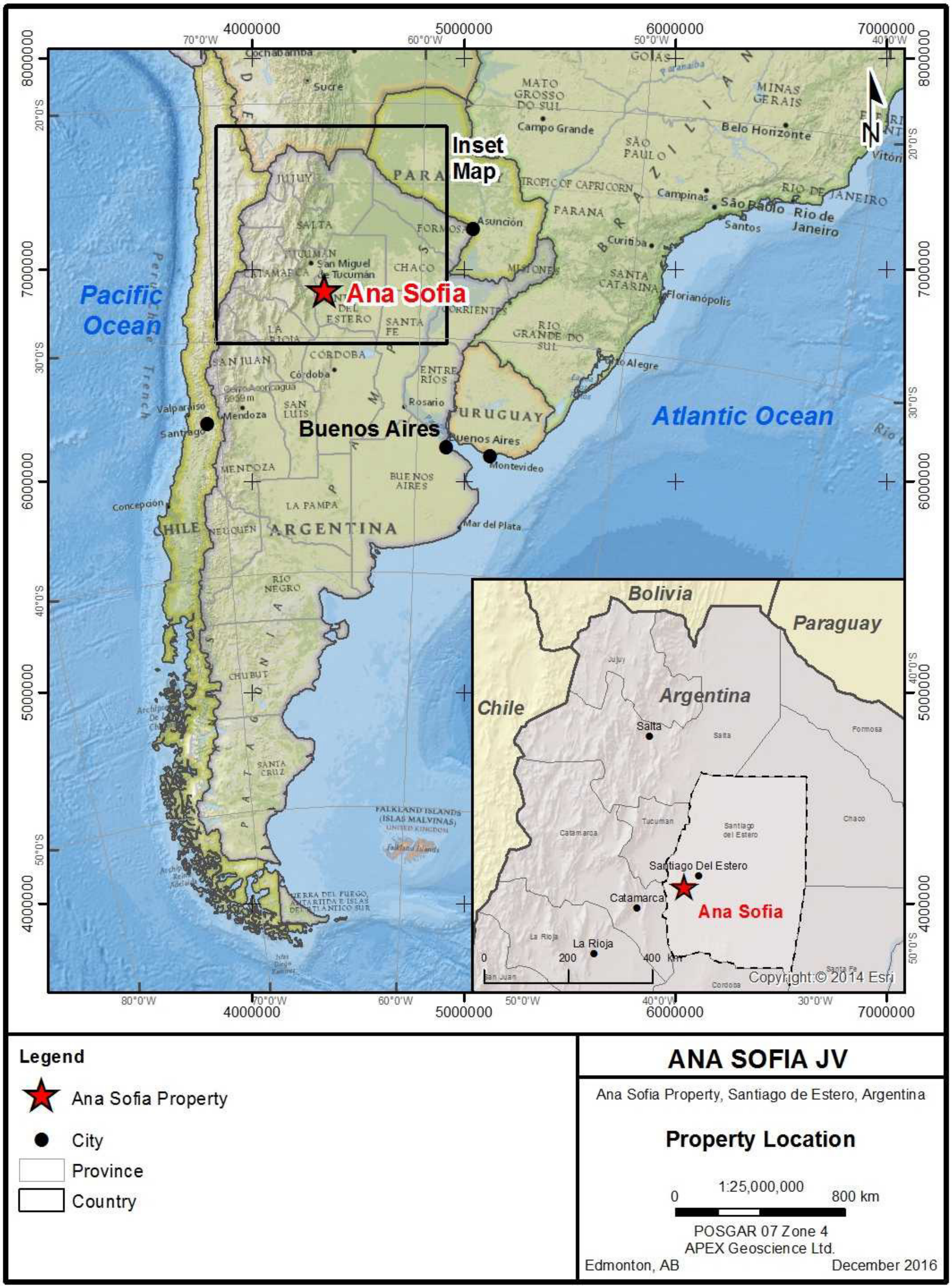

Figure 2.1. Ana Sofia Property Location.

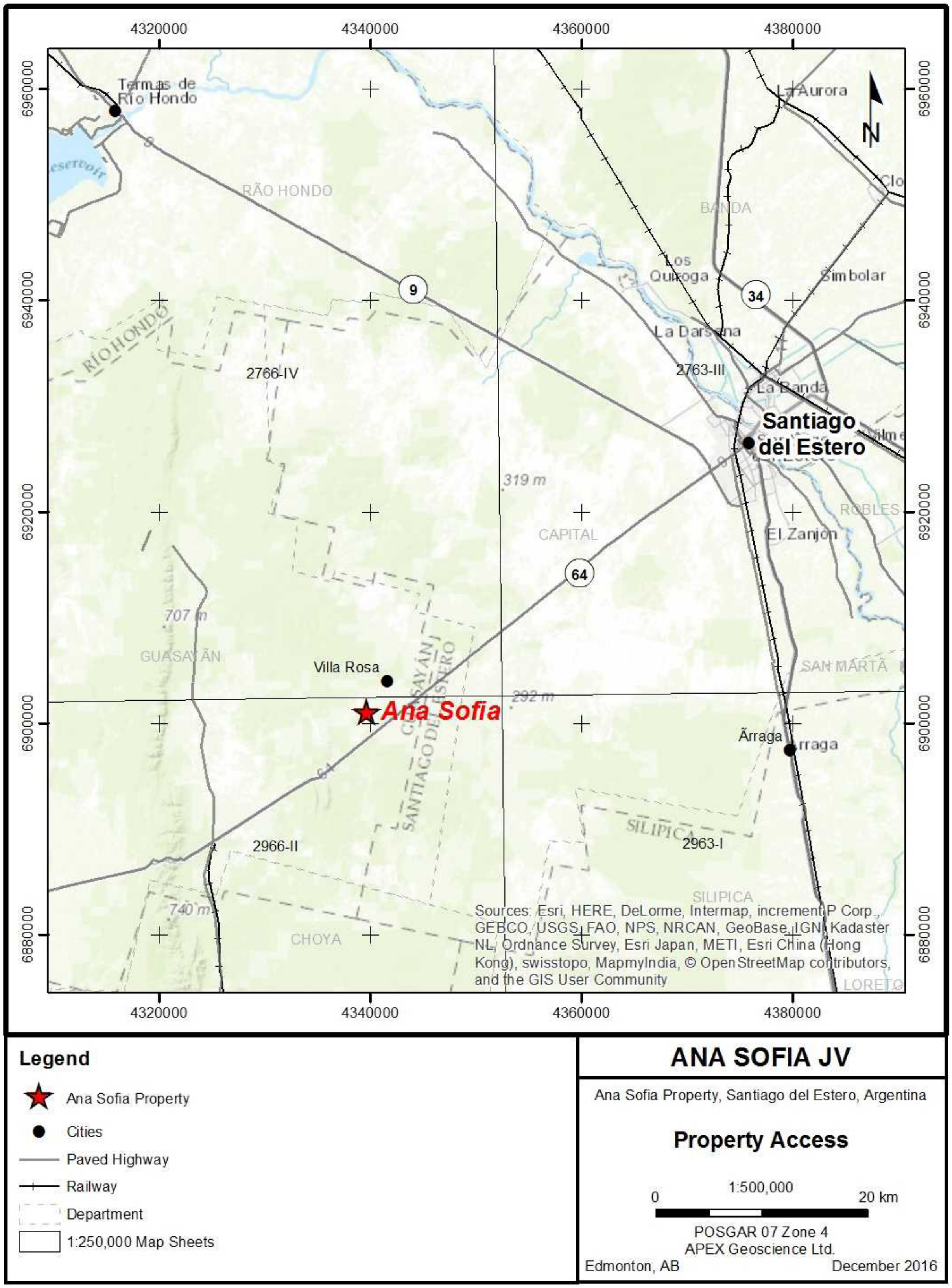

Figure 2.2. Ana Sofia Property Location and Access.

This Technical Report is a compilation of proprietary and publicly available information. Historical exploration data discussed in this report was obtained from Centurion/Demetra in paper and digital format, including previous reports and various other exploration data. The author, in writing this report, has used sources of information that includes reports on previous exploration, which appear to have been completed in a manner consistent with normal exploration practices. All such previous reports and data sources are listed in the 'References' section of this report. A large portion of the background information for prior exploration and geology comes from work performed on, and in the vicinity of, the Property by de la Fuente (2014). The supporting documents that were used as background information in the preparation of this report are referenced in the 'History', 'Geological Setting and Mineralization', 'Deposit Types', 'Adjacent Properties' and 'References' sections. The author, based on several property visits and work performed on the property to date, believes that work performed by others (as per the reports listed in the References section of this report) are substantially accurate and complete.

2.3 Units of Measure

The Technical Report includes references to the following standards or conventions. With respect to the geographic information, APEX has used the Gauss-Kueguer (Transvers Mercator) map projection system relative to the 2007 Posiciones Geodesicas Argentinas (POSGAR) Datum (Zone 3) as the basis for all geospatial data collection. Unless otherwise specified, all maps and coordinates discussed in this report are relative to this projection with metric units. Gypsum measurements are expressed as weight percentages of the mineral gypsum ($CaSO_4 \cdot 2H_2O$). Unless otherwise stated, all units referenced throughout this report are metric units.

3 Reliance of Other Experts

This Technical Report incorporates and relies on contributions with respect to the details of the surface mineral ownership as well as permitting and environmental status from other experts including staff or subcontractors in the employ of Demetra. Details of the surface ownership have been provided by Demetra. In addition, this report makes reference to a Title Opinion for the Ana Sofia Property that was prepared in January 2016 by attorney Ignacio Celorrio (2016), with the firm Quevedo Abogados, located in Buenos Aires, Argentina. This information was previously reported in Turner (2016) and there has been no change in the Property status or ownership since that time and thus the information remains current as of the effective date of this report.

4 Property Description and Location

4.1 Description and Location

The Ana Sofia Property is located in the Guasayán Department, Santiago del Estero Province in north central Argentina. The Property is located approximately 1100 km northwest of the country's capital city, Buenos Aries, and approximately 45 km southwest of the provincial capital city of Santiago del Estero. The Property straddles the border of 1:250,000 scale topographic map sheets 2766-IV “Concepcion” and 2966-II “San Fernando del Valle de Catamarca” (Figure 2.1 and Figure 2.2).

The Ana Sofia Property is roughly centered on POSGAR 2007 coordinates 3643750 m E and 6901200 m N (POSGAR 2007 Zone 3), or geographic coordinates of 64°37’49.34” West and 28°00’43.42” South.

The Property comprises two (2) non-contiguous mineral (exploitation) concessions (or “Minas”) with a combined total area of approximately 50 ha surrounded by a larger mineral exploration permit block (or “Cateo”) that covers an additional 550 ha for a total area of approximately 600 ha. These areas take into account the exclusion of 2 small competitor’s concessions located immediately northwest of the Ana Sofia 2 concession. The southern of the two Demetra minas (mining leases) is called “Ana Sofia 1” and has an area of approximately 7.0 ha while the northern concession is called “Ana Sofia 2” and has an area of approximately 43.0 ha (Figure 4.1). The 2 concessions are separated by approximately 400m, which is covered by the company’s exploration permit (or “cateo”). For Ana Sofia (1) a 10-year mining lease was issued to Demetra on November 11, 2014. A similar 10-year mining lease was issued to Demetra. The two Ana Sofia minas are designated for the exploration and development of “Category 3” minerals, which is intended to cover all non-metallic industrial minerals (e.g. gypsum).

A title opinion with respect to the Ana Sofia Property was completed on behalf of Centurion by Ignacio Cellorio (Cellorio, 2016), an attorney with the law firm Quevedo Abogados of Buenos Aires, Argentina. The title opinion confirmed that Demetra Fertilizantes S.A., a wholly owned subsidiary of Demetra Minerals, is an Argentinian corporation “validly existing and organized under the laws of the Republic of Argentina” (Cellorio, 2016). The title opinion also confirmed that Demetra is the holder of “legally and validly issued” gypsum quarry exploitation concessions for Ana Sofia 1 (mining file no. 329-2014) and Ana Sofia 2 (mining file no. 230-2015) located in the Department of Guasayán in the Province of Santiago del Estero, Argentina. The document also confirmed that Demetra is the owner of the previously described exploration permit application, located in the Department of Guasayán in the Province of Santiago del Estero, that has not yet been issued and remains in application.

One minor inconsistency was noted by the author of this report in that the mining lease document for Ana Sofia 1 states that the concession is 7.2 ha in size whereas the listed corner coordinates defining the concession area, which have been marked in the field by corner posts and were confirmed in the field by the author using a hand-held GPS, actually define an area of approximately 7.008 ha. This is not a significant issue as the concession’s corner coordinates are properly registered and the size of the concession has no bearing on any fees or obligations with respect to Demetra. With respect to the Ana Sofia 2 concession, the lease document lists its size as 43 ha and the registered corner coordinates define an area of 43.06 ha in size. The corners of the Ana Sofia minas have been surveyed and marked in the field whereas those of the Exploration Permit have not been marked but are formally registered with the Mining Department.

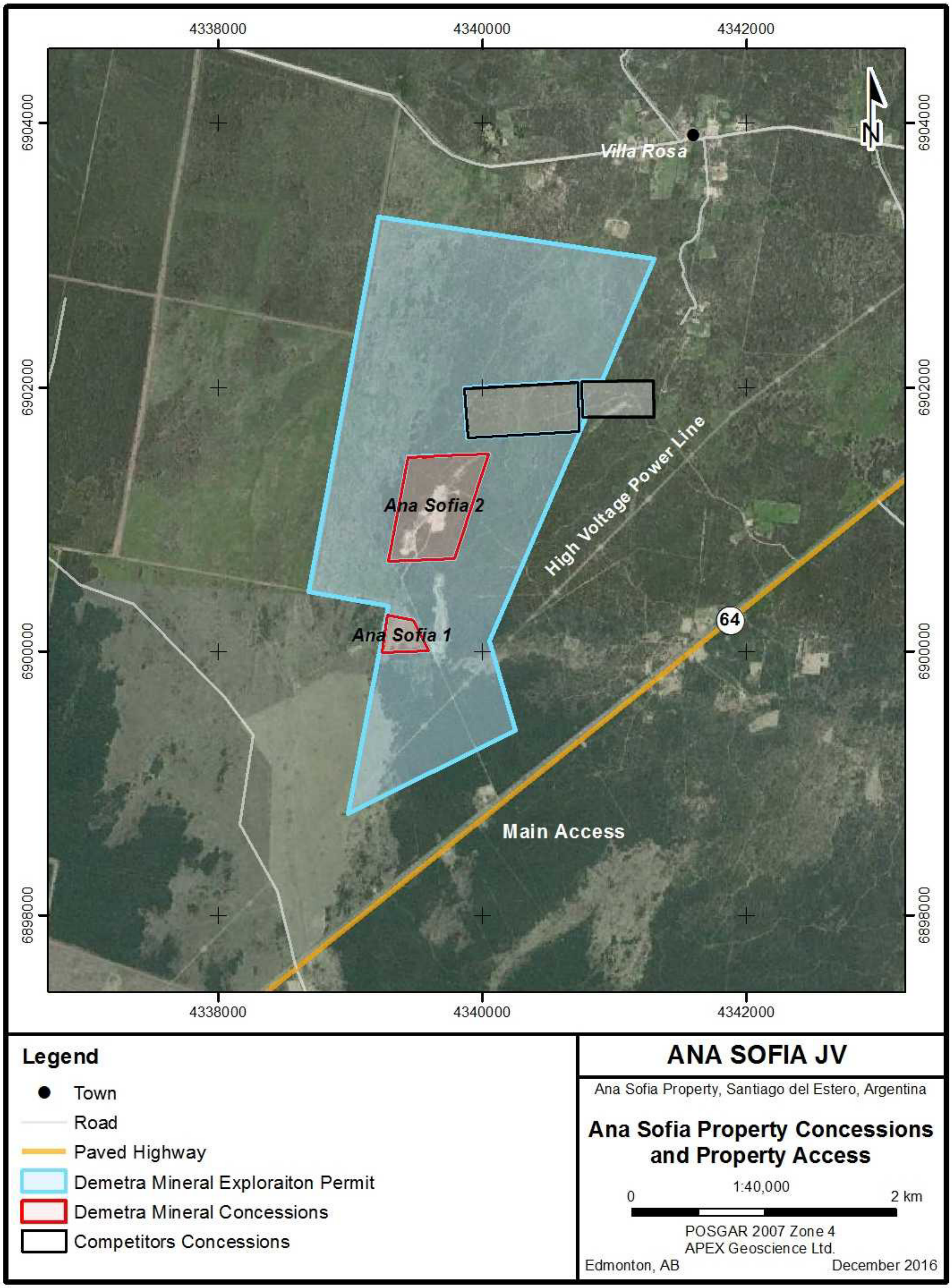

Figure 4.1. Ana Sofia Mineral Concessions.

4.2 Joint Venture Agreement Details

On November 2, 2015 Centurion Minerals Ltd. ("Centurion"), a publically traded Canadian junior mineral exploration company, announced that it had entered into a non-binding Letter of Intent with Demetra describing a proposed 50:50 Joint Venture with respect to the development of Demetra's Ana Sofia agricultural gypsum project, which is the subject of this report (Centurion, 2015). On January 29, 2016 Centurion announced that a formal Joint Venture (JV) agreement had been reached with Demetra with respect to the Ana Sofia Project. The following details with respect to the 50:50 Centurion-Demetra JV agreement are quoted directly from the Centurion press release (Centurion, 2016).

> *"Centurion shall issue common shares equal to 9.9% of its issued and outstanding shares up to a maximum of 2 million. Demetra will be appointed as the operator of the Project and the managing board of the Joint Venture shall consist of 5 members - 3 Centurion nominees and 2 Demetra nominees. Mr. Gregg Jensen, the current CEO of Demetra, shall be appointed to the Board of Directors of Centurion, and shall hold the position of COO of the Company. Centurion shall be responsible for all costs associated with bringing the Ana Sofia Project to commercial production.*
>
> *Provided that the joint venture achieves production, or after Centurion has expended US$4 million in development costs, both parties shall have the right to call for an amalgamation which would be subject to a shareholder's vote. Centurion shall have the right to acquire 100% of Demetra by issuing 23.5 million Common shares. The Company shall set aside 10.4 million Preferred shares for the Demetra founders convertible into Common shares on achievement of certain production milestones. Should Centurion spend US$6 million in development costs prior to amalgamation, all further costs shall be borne equally by the JV partners. Closing is subject to TSX Venture Exchange approval."*

As of the date of this report, APEX was not aware of any other Royalty or other such mineral ownership agreements or encumbrances.

4.3 Permits and Environmental Liabilities

Mining leases have been issued to Demetra by the Regional Director of the Ministry of Mines with respect to the Ana Sofia 1 and 2 mineral concessions and the company has also submitted an application for a mineral exploration permit for a 600 ha area surrounding the mineral leases, as discussed in the January 2016 title opinion for the Property (Cellorio, 2016). These mineral rights are sufficient to ensure that the owner of the concessions (Demetra) has the right to conduct mineral exploration work and, with respect to the two mining leases, the right to conduct mineral development work and production (quarrying).

An environmental impact report was prepared by Demetra for the Ana Sofia mining leases and was submitted to the government in August of 2014 (de la Fuente, 2014) in support of the Company's initial application for a Mining Lease at Ana Sofia 1. The report did not identify, and APEX is not aware of, any significant environmental or archaeological issues that might adversely affect the ability of a company to conduct further mineral exploration and/or development work at the Property. It should also be noted that recently environmental permits have been granted to Demetra for the exploration and potential extraction of gypsum from the Ana Sofia 1 and 2 mining leases and were dated 6 October 2015 and 24 November, 2015, respectively.

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Ana Sofia Property is located in the western portion of Santiago del Estero Province in north central Argentina. The nearby provincial capital, Santiago del Estero city, can be accessed daily via commercial flights from Buenos Aires. The Property is accessed from the city of Santiago del Estero by vehicle by driving approximately 45 km (from the city center) to the southwest on paved National Highway 64. The Ana Sofia Property is located along a gravel access road leading north of the highway approximately 1.2 km. There are a number of roads and trails providing access to most of the Property.

The Ana Sofia Project is located at a relatively low elevation of 410 m on the Gran Chaco plain, 18 km east of the Guasayán Mountains. The Gran Chaco plain is a large geographic region located in the central part of South America west of the Paraguay River and east of the Andes comprising parts of northern Argentina, eastern Bolivia, Paraguay and south-eastern Brazil. In the province of Santiago de Estero, the Gran Chaco plain includes a series of low hills and undulations striking approximately north south. Topographic relief across the property is less than 25m.

The Property area is located within a mid-continental semi-arid climatic zone characterized by high temperatures during the day and cool temperatures at night. The average annual temperature is 21°C with highs in excess of 45°C in the summer and freezing temperatures (lows of approximately -5°C) in the winter. Frost is common between May and August. There are two main precipitation seasons; a rainy season between October and May and a dry season between April and September. The rainfall during the rainy season ranges between 300 mm and 540 mm. During the dry season (June – October) total precipitation ranges between a minimum of 55 mm and a maximum of 120 mm. Exploration and development activities can be conducted throughout the year at the Property.

There are no natural waterbodies or waterways on, or in the vicinity of, the Property. During the recent site visit, the author observed standing water in 2 of the historical quarry areas on the Ana Sofia 2 concession, although this water normally evaporates early in the summer (dry) season. A large 120m x 20m trench has been excavated by Demetra along the northern boundary of the Ana Sophia 1 concession at its lowest topographic point in an attempt to capture rain water but it was observed to be dry during the author's recent site visit. If such attempts to capture runoff water are unsuccessful, then water well drilling or the trucking of water may be required for future exploration and development work. However, it should be noted that there will likely be minimal water requirements for material processing as the crushing and sorting of gypsum ore is a dry process and water may only be required for dust suppression.

A high voltage power line runs parallel with Highway 64 and crosses the southern portion of the Demetra exploration permit area approximately 350 m south of the Ana Sophia 1 mining concession. Labour and a variety of material and equipment suppliers and support services are available in Santiago del Estero and/or in other nearby cities within a relatively short (trucking) distance from the Property.

6 History

There are no records available for any previous exploration activities at the Ana Sofia Property. Historic gypsum quarries, which are no longer in production, are located immediately adjacent to the Ana Sofia 1 concession to the west (on private land) and the east (within Demetra's exploration permit area). There is no evidence of any previous mining/quarrying activity on the Ana Sofia 1 mining concession. There is no information available with respect to historical production activities at the quarries located adjacent to the Ana Sofia 1 mineral concession. There has been no production from, nor are there any NI 43-101 compliant resources at, the Ana Sofia 1 concession.

At the Ana Sofia 2 mining concession there are fairly extensive quarries located along a northeast trend through the center of the concession area. Between December 2013 and April 2015, Pan American Fertilizer (and subsidiary Mamasu Servicios y Fertilizantes) conducted the bulk of the historical gypsum quarrying on the Ana Sofia 2 concession and Demetra has indicated that Pan American shipped approximately 5,000 tons (~4536 t) of crushed gypsum product during this time. The historic (Pan American) gypsum processing site is located immediately east of the main (central) quarry on the Ana Sofia 2 concession. Demetra has examined the stockpiles of coarse and processed gypsum materials remaining on site at the Ana Sofia 2 concession and has determined that they comprise crushed gypsum in an approximate 10,000 ton (9072 t) stockpile as well as approximately 500 "mega bags" (~1 ton / 907 kg each). There are no NI 43-101 compliant resources at the Ana Sofia 2 concession.

7 Geological Setting and Mineralization

7.1 Regional Geology

The Ana Sofia Property is located 18 km east of the Guasayán Mountains, on the eastern Gran Chaco Plain. The Guasayán Mountains are a narrow gentle rolling range that trends in a north-south direction over 80 km. The rock formations within the Guasayán Mountains and the Gran Chaco Plain include highly folded schist, quartzite, limestone and other sedimentary units that range between Precambrian to Quaternary (Batalgia 1980, Cuttle 2013) (Figure 7.1).

The gypsum deposits common to the region were deposited in the Tertiary as mountain building, and the activation of large regional fault zones, resulted in the formation of localized inland basins. During the Miocene continual marine transgression and a relatively hot climate created the conditions necessary for evaporite, primarily gypsum, deposition. During the Quaternary the area was covered with aeolian and loess deposits (Cuttle, 2013).

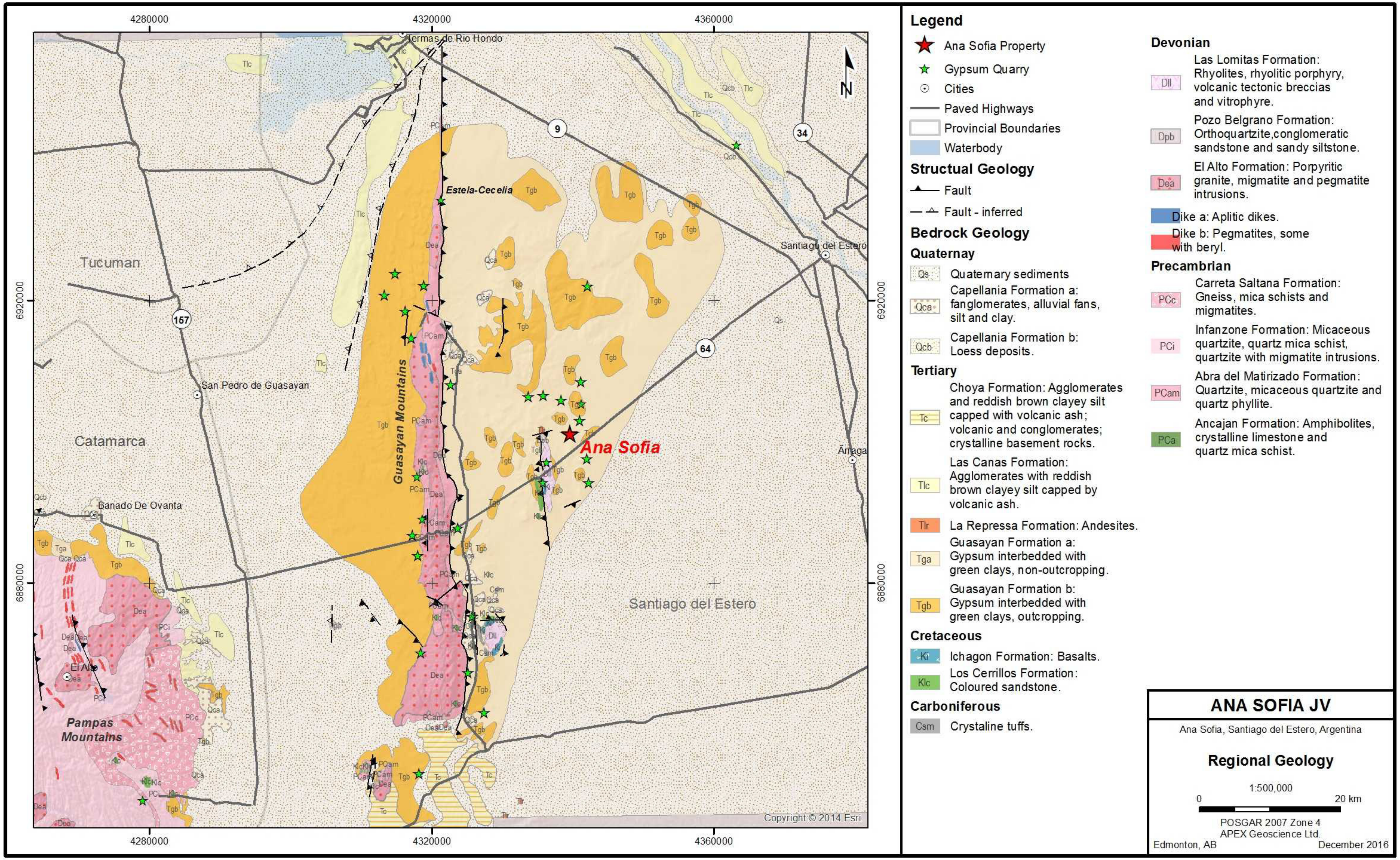

Figure 7.1. Geology of the Eastern Gran Chaco Plain and Guasayán Mountains, after Bataglia (1980, 1982a, 1982b and 1983b).

7.1.1 Precambrian

The Proterozoic rocks of the Ancaján Formation are the oldest rocks in the region and outcrops in the Guasayán and the Pamaps Mountain Ranges. The Ancaján Formation consists of amphibolites, crystalline limestone and quartz mica schist. The Abra del Matirizado Formation consisting of micaceous quartzite and quartz phyllite is found in the peaks of the Guasayán Mountains. The Infanzon Formation consisting of micaceous quartzite, quartz and mica schist quarzite and the Carreta Saltana Formation consisting of gneissic mica schist also migmatites are found in the Pampas Mountains. The Infanzon and Carreta Saltana Formations are intruded with a series of migmaties (Bataglia 1980, 1982a, 1982b,1983b).

7.1.2 Paleozoic

The Devonian El Alto Formation outcrops in the Pampas and the Guasayán Mountains and is made up of porphyritic granite, migmatites and pegmatites. The Las Lomitas Formations is 4 km east of the Property and extends 10 km south it consists of rhyolites, rhyolitic porphyries, and volcanic tectonic breccias. The Carboniferous crystalline tuffs of the Sol de May Formation outcrop in the central Guasayán Mountains (Bataglia 1980, 1982a, 1982b,1983b).

7.1.3 Mesozoic

The Cretaceous basalts of the Ichagon Formation and the coloured sandstones of the Los Cerrillos outcrop in the Guasayán Mountains and 8 km south east of the Property (Bataglia 1982a, 1983b).

7.1.4 Cenozoic

The Tertiary rocks crop out within the foothills and surrounding area of the region. The Guasayán Formation consists of green clays and gypsum and covers approximately 267,000 ha within the region. The Las Canas Formation consists of agglomerates, reddish brown clayey silt that is covered by a layer of volcanic ash. The region is almost 75% covered in Quaternary alluvial and aeolian deposits (Bataglia 1980, 1982a, 1982b,1983a, 1983b).

7.2 Property Geology

The Ana Sofia Property lies entirely within the mapped extents of the Miocene Guasayán Formation which is characterized by a thick accumulation of greenish yellow claystone with interbedded gypsum, and tuffs in the upper portion, and can reach thicknesses up to 400 m (Battaglia, 1982). At the Property the Guasayán Formation comprises a green, thinly bedded to laminated, silty claystone with varying amounts of gypsum. Where gypsum content is low it typically exhibits a nodular texture within the green claystone but primarily occurs as discreet white gypsum layers that can range from ~10-20cm in thickness to upwards of 2-3m in thickness. The Guasayán Fm. is described as being visible along road cuts and trenches within the Property by de la Fuente (2014). However, the author did not observe any significant outcrops on the Ana Sofia concessions and the Guasayán Fm. was only observed in excavated areas. The geological observations of the author made during the recent site visit are presented in greater detail in the Exploration section of this report.

7.3 Mineralization

The gypsum units that are the main exploration and development target on the Property are the result of evaporite deposition in relatively quiescent sedimentary basins developed in the Miocene (Guasayán Formation). The gypsum is often mixed and/or interbedded with green to greenish grey clays. High-purity gypsum units (defined herein as a layers with >90% gypsum) observed on the Property can be coarsely crystalline (grey, translucent and waxy) to finely crystalline (white and sugary) and can occasionally be discolored grey to greenish grey due to minor clay content. The gypsum within lower purity units, with clay content above ~10%, can often exhibit nodular textures. Occasionally, the high-purity gypsum units have significant thicknesses (>0.5 m up to 1.5 m) and can be massive or banded (laminated), very fine grained with some fibrous texture, quartz crystals are also common (de Antonio 2015).

Prior to the 2016 test pitting program, the only exposures of gypsum on the Property were found in four (4) historical quarries and an adjacent area where overburden had been stripped from above a gypsum layer. At that time, relatively pure gypsum was exposed in these quarries within flat-lying stratigraphy over horizontal distances of approximately 850m along a north-easterly trend across the central portion of the Ana Sofia 2 concession. With the gypsum apparently eroded to the west, the 2016 test pitting program was intended to test for the presence of gypsum to the east of this 'quarry' trend. The program allowed for the identification of the main gypsum layer at the Ana Sofia 2 concession over an area 1,500m in length (striking northeast) by 850m (across strike to the southeast). In addition, a second (lower) gypsum layer was identified in test pits along the quarry trend on the western edge of the resource area over an area roughly 850m in length (striking northeast) by up to 300m (across strike to the southeast). Although minor variations in clay content were observed in the gypsum units between individual quarries and test pits, very little variation was observed. Furthermore, no evidence of faulting was observed and only very gentle (<2-3^{o}) warping was observed in the flat-lying stratigraphy.

8 Deposit Types

Gypsum is a soft (definition of Mohs hardness 2) hydrous calcium sulphate mineral ($CaSO_4 \cdot 2H_2O$), the hydrated version of Anhydrite ($CaSO_4$). Gypsum is a common evaporite mineral formed during the intermediate stages of sea water evaporation, in restricted sedimentary basins in hot and arid climates, and is commonly associated with anhydrite and domes of 'rock salt' (halite and potash). Evaporitic deposits of gypsum are commonly massive and tabular to lens shaped and are easily deformed (Guillet 1964). Thicknesses of individual deposits vary significantly from 1 m to over 100 m with mining grades between 85% to greater than 95% calcium sulphate (Cuttle 2013).

Major evaporite deposits are created by direct precipitation of minerals from saturated brines within restricted sedimentary basins, so-called because sediment input is minimal and the basins are partially or complete cut-off from the open ocean. Sea water movement into such basins can be restricted by the localized uplift (large or small topographic features) or the development of other features such as sills, bars or reefs. When evaporation from a basin exceeds the influx of sea water, or fresh water, the conditions for evaporite deposition are present (Hamilton 1971, Cuttle 2013). Evaporation cycles are often repetitive creating a layered sequence of deposits (Cuttle 2013). Gypsum tends to precipitate when the water column has been reduced to approximately 20% of its original volume and follows carbonate precipitation at approximately 50% evaporation and precedes halite precipitation at about 10% of the original volume.

The three main textures of gypsum are; “selenite”, which is often used to refer to any crystalline form of gypsum, but otherwise is the name for colourless and transparent well-formed crystals usually found in massive deposits (Govet 1961, Guillet 1964, Phillips 1978); “satin spar”, which has a distinctive fibrous texture and commonly occurs in veins or joints within gypsum deposits (Guillet 1964, Phillips 1978), and; “alabaster”, which is generally white (when pure), fine-grained and marble like (Govet 1961) and is often used as a carving stone (Guillet 1964, Phillips 1978). The principal form/appearance of gypsum at the Ana Sofia Property is that of alabaster.

9 Exploration

9.1 Recent work by Demetra

In 2014 a limited exploration program was conducted by Demetra at the Ana Sofia Property. The exploration program included the excavation and limited sampling of 35 trenches and the calculation of a non-compliant resource estimation for a portion of the current Property.

The 2014 trenching program was systematic in nature and involved the excavation of 35 trenches to a depth of approximately 5 m on a rough grid pattern covering an area of approximately 55 ha centered on the Ana Sofia 1 concession area (Figure 9.1). The primary goal of the trenching program was to test overburden thickness and thus identify gypsum layers in close proximity to surface. A summary of the 2014 trenching results is provided in Table 9.1. Eight (8) of the 2014 trenches encountered gypsum beds within 5m of surface. Trench D1 returned the best results with gypsum encountered between 2.2 m and 4.1 m from surface and did not encounter the lower contact of the unit (de la Fuente, 2014).

Table 9.1. Summary of the 2014 Ana Sofia Trenching Program (from de la Fuente 2014)

Trench	ID	UTM Easting (POSGAR)	UTM Northing (POSGAR)	Observations	Excavation Depth or Depth to Gypsum
1	A1	4339202	6900772	5.00 clasts clay gypsum	5 m no gypsum
2	A2	4339282	6900760	1.00 to 1.25 gypsum	5 m no gypsum
3	A3	4339378	6900682		5 m no gypsum
4	A4	4339520	6900677		5.50 m gypsum and clay
5	A5	4339665	6900670	1.70 to 190 gypsum	5 m no gypsum
6	A6	4339761	6900659		5 m no gypsum
7	B1	4339182	6900627		5 m no gypsum
8	B2	4339264	6900622		5 m no gypsum

Trench	ID	UTM Easting (POSGAR)	UTM Northing (POSGAR)	Observations	Excavation Depth or Depth to Gypsum
9	B3	4339352	6900589		5 m no gypsum
10	**B4**	**4339475**	**6900558**	**1.80 - 2.10 gypsum**	**4.20 m gypsum**
11	B5	4339594	6900521	1.20 - 1.50 gypsum	5 m no gypsum
12	C1	4339162	6900531		5 m no gypsum
13	C2	4339247	6900483	5 course	5 m no gypsum
14	**C3**	**4339348**	**6900472**	**2.40 clay grains and gypsum**	**2.40 gypsum**
15	C4	4339417	6900462	3.00 - 3.20 gypsum	5 m no gypsum
16	C5	4339501	6900452	0.30 - 2.20 tuff with lots clay content	5 m no gypsum
17	**D1**	**4339144**	**6900386**		**2.20 - 4.10 gypsum (didn't intersect lower contact)**
18	D2	4339232	6900378		5.20 no gypsum
19	D3	4339325	6900345		5.00 no gypsum
20	D4	4339432	6900327		5 m no gypsum
21	D5	4339536	6900336		5 m no gypsum
22	**E3**	**4339308**	**6900237**	**2.20 clays in interbedded gypsum**	**2.30 gypsum**
23	E4	4339431	6900220		5 m no gypsum
24	**F3**	**4339279**	**6900132**	**2.10 red and green clays**	**2.10 gypsum**
25	**F4**	**4339402**	**6900171**	**1.60 gypsum loose in clay**	**3.70 gypsum**
26	F5	4339497	6900163		4.40 no gypsum
27	G3	4339248	6899999	3.20 green and red clay with some gypsum	5.00 no gypsum
28	G4	4339523	6899886		5 m no gypsum
29	**H3**	**4339217**	**6899845**	**2.40 gypsum tuff and course clays**	**3.70 gypsum**
30	H4	4339475	6899784	2.50 clay with lots of gypsum	
31	H5	4339676	6899870	mica schist clasts in gypsum tuff matrix	
32	**I3**	**4339183**	**6899679**		**4 gypsum**
33	I4	4339439	6899614	3.30 equal amount of clay and gypsum	5 m no gypsum
34	J3	4339143	6899484	Gypsum mixed with clay and tuff	5 m no gypsum
35	J4	4339305	6899449		5 m no gypsum

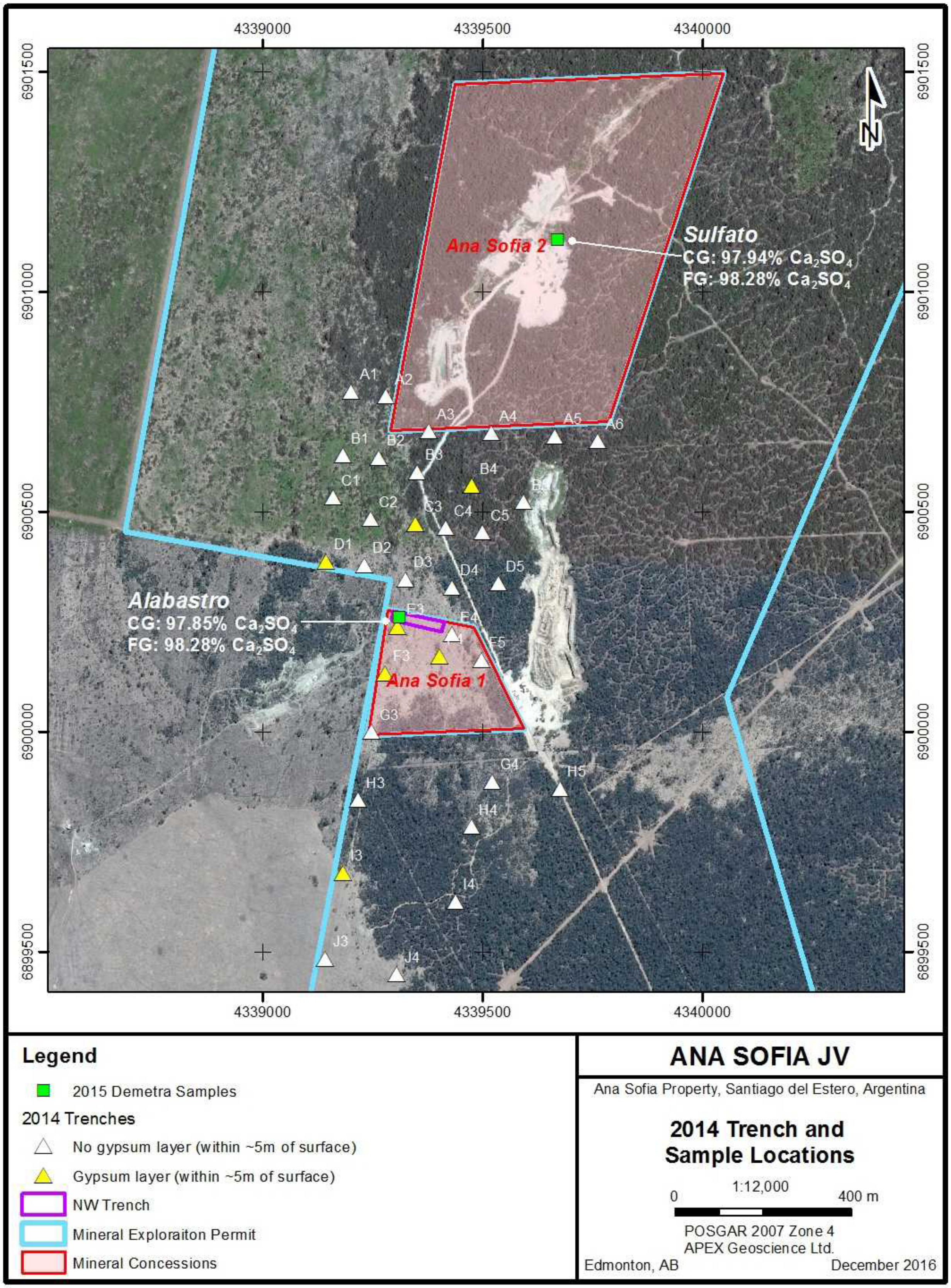

Figure 9.1. 2014 Trench locations and 2015 Demetra sample locations and assays on the Ana Sofia Property.

The following is a brief discussion of a non-compliant resource estimate for gypsum located on the Ana Sofia 1 concession. This area is located approximately 300m southwest of the (current) mineral resource that is the subject of this report (see Section 14 below), which is located on and immediately adjacent to the Ana Sofia 2 concession.

A report on 2014 exploration activities at Ana Sofia (de la Fuente, 2014) included a very brief discussion of a non-compliant resource estimate for the Ana Sofia 1 mineral concession. The reader is cautioned that the Ana Sofia 1 “historical mineral resource estimate” discussed below is not compliant with the standards set out in NI 43-101 or the CIM “Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines” dated November 23rd, 2003 and CIM “Definition Standards for Mineral Resources and Mineral Reserves” dated May 10th, 2014. The reader is cautioned not to treat this as a current mineral resource. The resource was not categorized and there is insufficient information available to fully assess data quality and the complete estimation parameters employed. The following discussion has been included simply to demonstrate the mineral potential of the Ana Sofia 1 concession area. A thorough review of all historic data performed by a Qualified Person, along with additional exploration and validation work to confirm results and estimation parameters, would be required in order to produce a current and compliant NI 43-101 mineral resource estimate for this area.

Briefly, de la Fuente (2014) identified a 4.0 ha area within the Ana Sofia 1 mining concession that was deemed to have ‘mineable’ gypsum, which simply meant that the area had relatively thin overburden and thus the gypsum unit was close to surface. This area was estimated to contain 237,600t of gypsum at a grade of 90% (+/-5%) gypsum. The 4 ha resource area is illustrated in Figure 9.2. However, in the opinion of the author of this report, there has been insufficient work completed at the Ana Sofia 1 concession to conduct formal resource estimation. Although the 2014 trenching program provided useful information with respect to the thickness of overburden above the target gypsum unit, the program did not produce a significant quantity of information pertaining to either the thickness or the grade of the target gypsum horizon. A reference is made in the 2014 exploration report to the analysis of samples at SEGEMAR resulting in gypsum contents of 90+/-5% (de la Fuente, 2014). However, no information is provided regarding any sampling at the concession and no analytical certificates are provided. In addition, it is not clear how the surface area of what was deemed to be “mineable” gypsum (beneath thin overburden cover) was calculated. The report (de la Fuente, 2014) states that the area of “mineable gypsum” is 40,000 m^2 (4 ha) in size. However, a figure in the report showing the low overburden/“mineable gypsum” area includes a polygon (see Figure 9.2), which measures approximately 29,300 m^2 (2.93 ha). Furthermore, it appears that a density for gypsum of 2.2 was used whereas the specific gravity of gypsum is closer to 2.35 and there is no explanation of how the average thickness of 2.7m was calculated.

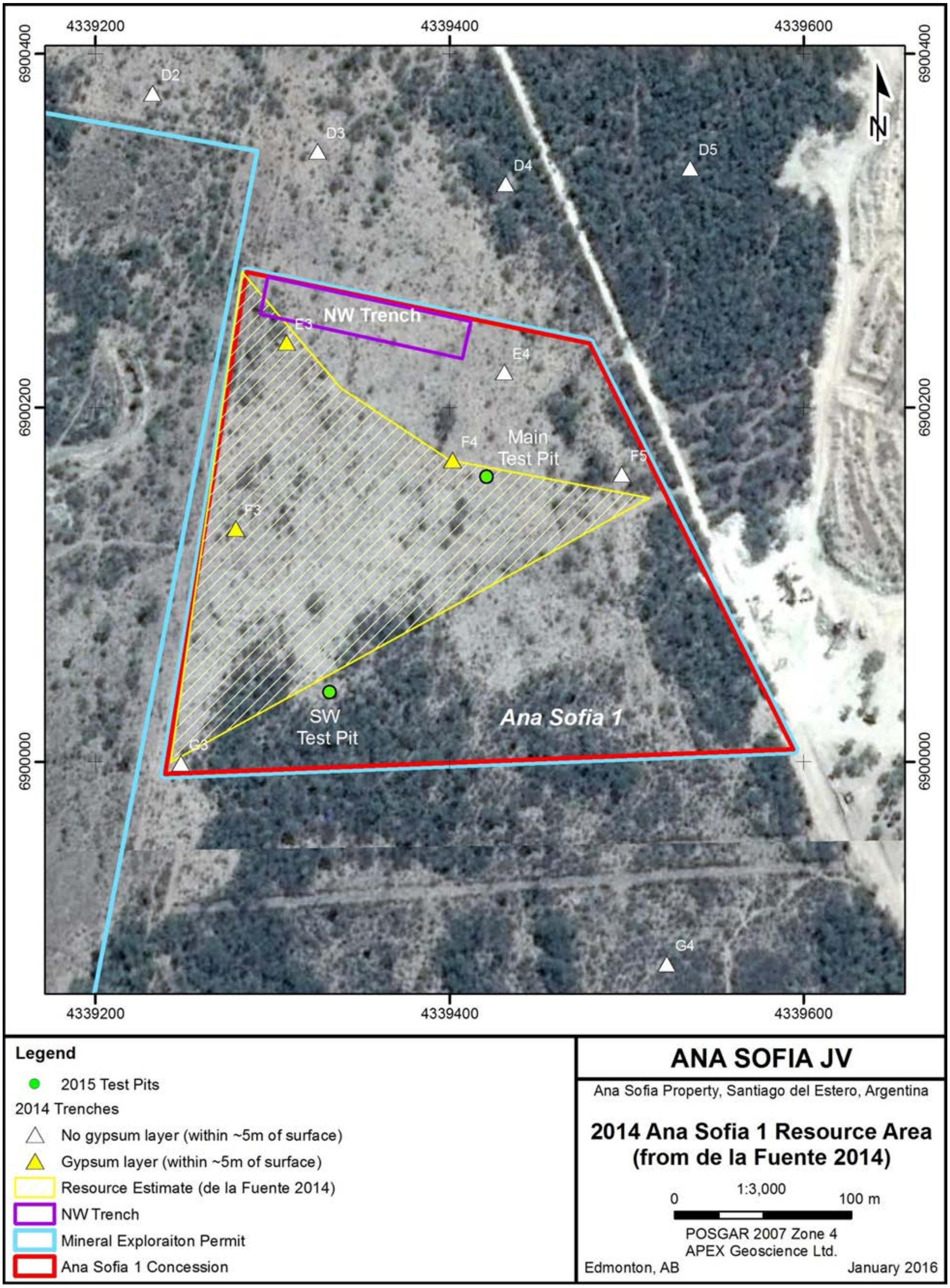

Figure 9.2. 2014 “Resource Area”, Non - NI43-101 – Compliant, from de la Fuente (2014).

In June of 2015, two (2) samples of gypsum were collected (1 each) from the Ana Sofia 1 and 2 concession areas by Gillermo Fernandez and Roberto Saleh, both with Demetra (Figure 9.1). The sample collected from the Ana Sofia 1 concession was called "Alabastro" and the Ana Sofia 2 sample was called "Sulphato". The Alabastro sample comprised high-purity gypsum collected from the lower gypsum unit exposed in the western end of a large trench that had been excavated in the northwest corner of the Ana Sofia 1 concession. The Sulfato sample also comprised relatively high-purity gypsum collected from a small stockpile of large (0.3 to 0.6 m) gypsum boulders located adjacent to (and presumably removed from) the central quarry on the Ana Sofia 2 concession. Both samples were submitted to the SEGEMAR laboratory in Buenos Aires where each was crushed and homogenized to produce 2 size fractions typical for agricultural gypsum products; a granular product between 2 and 4mm in size and a powdered product < 2 mm in size. The resulting analytical data is summarized below (Table 9.2). The analyses confirmed the high purity of the gypsum sampled in both the granular and powdered size fractions.

Table 9.2. Analytical Results for the 2015 Ana Sofia "Alabastro" and "Sulfato" Samples Collected by Demetra.

Sample	Concession	Easting (POSGAR)	Northing (POSGAR)	Granular Frac. (% gypsum)	Fine Frac. (% gypsum)
Alabastro	Ana Sofia 1	4339310	6900260	97.85 %	98.28 %
Sulfato	Ana Sofia 2	4339670	6901120	97.95 %	98.28 %

9.2 APEX 2015 Site Visit

The author of this report conducted an initial visit to the Ana Sofia Property between September 10 and 12, 2015. During the site visit, the author was able to examine and sample historical excavations (quarries and stockpiles) at the Ana Sofia 2 mineral concession, direct a small excavation program comprising two (2) test pits at the Ana Sofia 1 mineral concession, examine a large previously excavated trench in the northwest corner of the Ana Sofia 1 mineral concession and examine historical quarries immediately adjacent to the Ana Sofia 1 concession both to the east and west. In total, 9 rock samples were collected from the Ana Sofia 1 and 2 concessions (Figure 9.3) that were submitted for analysis at the SEGEMAR laboratory in Buenos Aires.

In summary, all nine of the author's rock samples returned calculated gypsum values >90 wt% (weight percent) $CaSO_4 \cdot 2H_2O$ (gypsum). Values ranged between a low of 92.69 wt% and a high of 98.57 wt% gypsum and averaged 95.80 wt% gypsum. As an indicator of silicate impurities, SiO_2, Al_2O_3 and Fe_2O_3 values were low with maximum values for each being 4.90 wt%, 1.22 wt% and 1.22 wt%, respectively. In addition, K and Na values as an indicator of salinity were also very low with a maximum K_2O value of 0.29% and a maximum Na_2O value of 0.06% and 8 of the 9 rock samples returning Na_2O values <0.01 wt%. Photographs and simplified stratographic sections for each of the 2015 APEX sample sites are provided in Appendix 1 at the end of this report, which accompany the following discussion of each site.

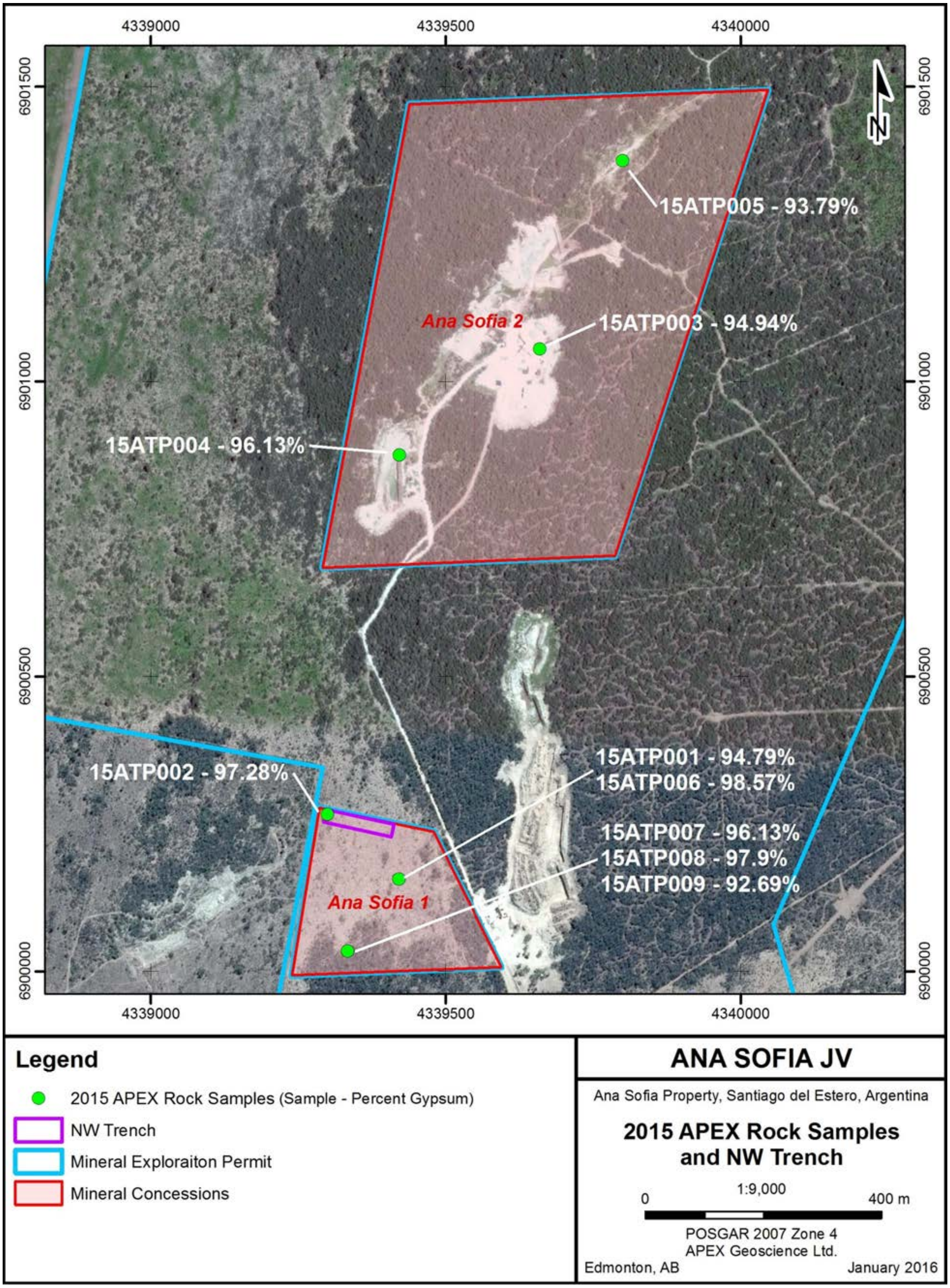

Figure 9.3. 2015 APEX Rock Sample Locations.

9.2.1 Ana Sofia 1

NW Trench:

Upon arriving on site, the author confirmed that the 2014 trenches had been filled and reclaimed and were thus unavailable for examination and sampling. However, a small excavation program was underway on the Ana Sofia 1 concession and a test pit (hereafter called the "Main Test Pit") was in progress. The only gypsum exposure on the Ana Sofia 1 concession was in a large 120m x 20m trench located in the NW corner of the concession and extending along its northern boundary. The trench had been excavated previously by Demetra in order to expose gypsum and to act as a potential reservoir for rain water, being located in the topographically lowest point on the concession. No water was present in the trench, which was found to expose two (2) gypsum layers.

The eastern half of the "Northwest Trench" on the Ana Sofia 1 concession was excavated to a depth from surface of approximately 1.5-2.0 m through red soil and clay overburden to the top of a relatively high purity gypsum layer. This layer was observed to be approximately 25-30 cm in thickness. The excavation in the western half of the trench was stratigraphically deeper than the eastern half where overburden, the upper gypsum layer and an underlying 40-50 cm green clay layer had been excavated to expose the top of a second relatively high purity gypsum layer. A hydraulic hammer tip was placed on the arm of the excavator and was used to penetrate approximately 40-50 cm into the second gypsum layer in the northwest corner of the trench. An examination of the broken blocks of gypsum revealed high purity gypsum, which was sampled as 15ATP102 (Figure 9.3) that returned a value of 97.28 wt% gypsum. Sebastian Catanneo (Demetra) indicated that this was the same material sampled earlier that year by Demetra as the "Alabastro" sample, which as discussed above returned analytical values of 97.85% gypsum (granular fraction) and 98.27% gypsum (powder fraction). The full thickness of the lower high-purity gypsum layer was not determined as its lower contact was not encountered.

Main Test Pit:

The excavation of what is referred to in this report as the "Main Test Pit", located in the central portion of the Ana Sofia 1 concession approximately 75m south of the east end of the NW Trench, was underway when the author arrived on site. Eventually, the Main Test Pit was excavated to a depth of 7.6 m from surface. A figure illustrating the Main Test Pit and the author's sampling is provided in Appendix 1.

After excavating soil and overburden and green clays (+/- gypsum), a nodular gypsum and clay unit, with roughly equal proportions of both, was encountered between 3.1 and 4.7 m of depth. A relatively thick unit of gypsum with variable but generally low (<10%) clay content was encountered between 4.7 and 6.6 m. A sample of this unit was collected at a depth of approximately 6.1 m by the author and was identified as 15ATP101, which returned a value of 94.79 wt% gypsum.

A thin (~40 cm) green clay layer was encountered beneath the main (upper) gypsum unit and, as the excavator worked to clear this unit, it was apparent that the teeth of the bucket were scraping a hard unit at the bottom of the pit that turned out to be a second gypsum layer that was apparently unexpected by the Demetra personnel on site and was observed to have high gypsum purity and low (<5%) clay content. As with the NW Trench, the excavator penetrated approximately 60 cm into the lower gypsum unit (from 7.0 to 7.6m) but did not encounter its lower contact. The lower gypsum unit was sampled as 15ATP106, which returned a value of 98.57 wt% gypsum.

Southwest (SW) Test Pit:

In order to evaluate the southwest portion of the Ana Sofia 1 concession, the author requested that a second test pit be excavated in this area. The Southwest (SW) Test Pit was excavated approximately 150m southwest of the Main Test Pit and eventually reached a depth of 8.1 m from surface. A figure illustrating the SW Test Pit and the author's sampling is provided in Appendix 1.

After excavating soil (0.5 m), a thin 15-20 cm gypsum layer and a thick layer of green clays to a depth of 3.9 m, the first significant gypsum layer was encountered between 3.9 m and 4.9 m. This upper gypsum unit contained variable amounts of green clay (5-15%) and had a nodular texture and was sampled as 15ATP109, which returned a value of 92.69 wt% gypsum. A green clay unit was encountered between 4.9 m and 5.25 m depth. A second and relatively thick layer of gypsum was encountered between 5.25 m and 7.1 m. Green clay content was again variable although at least 2 and possibly 3 relatively high-purity gypsum layers were encountered during the excavation of this interval, each with a thickness of 30-40cm, and one such unit at a depth of approximately 5.5 m was sampled as 15ATP107, which returned a value of 96.13 wt% gypsum. As with the Main Test Pit, a thin (~40 cm) green clay layer was encountered beneath the main gypsum unit from 7.1 m to 7.5 m and, similarly, a somewhat unexpected lower (high-purity) gypsum layer was encountered. Again, time and the limited reach of the excavator prevented the complete penetration of the lower gypsum unit, which was encountered between 7.5 m and 8.1 m depth. This unit was sampled as 15ATP108, which returned a value of 97.90 wt% gypsum.

9.2.2 Ana Sofia 2

Southern Quarried Area:

In the southern portion of the Ana Sofia 2 concession area is an approximate 115m x 20m historical quarry. The main gypsum unit exposed in the east wall of the quarry is approximately 1.1 m to 1.6 m in thickness, with minor green clay interbeds, and was observed between depths from surface of approximately 1.8 m to 3.4 m. Relatively high-purity gypsum is estimated to comprise approximately 75% of this interval and was sampled as 15ATP104 at a depth of approximately 1.5m from the floor of the quarry or approximately 2.4m from surface. A value of 96.13 wt% gypsum was returned from sample 15ATP004. A figure illustrating the Southern Quarried Area of the Ana Sofia 2 concession, and the author's sampling, is provided in Appendix 1.

An intriguing possibility is that additional gypsum layers may exist beneath those exposed in the quarry wall similar to the high-purity unit identified in the bottom of the two test pits completed at the Ana Sofia 1 concession to the south.

Central (Main) Quarried Area:

Immediately north of the southern quarry at the Ana Sofia 2 concession (discussed above) are several smaller historical quarries where relatively high-purity gypsum layers, approximately 1.25 m in thickness, are exposed over a strike length of approximate 125 m. Immediately north of these exposures is the Main Quarry in the central portion of the Ana Sofia 2 concession area, which measures approximately 175 m in length and varies in width from 30 m to 75 m. Gypsum exposures are relatively rare in the main quarry area due to the sloughing of overlying materials, although a relatively high-purity gypsum layer was observed in a corner of the eastern side of the quarry with a thickness of approximately 0.8 to 1.0 m.

Immediately southeast of the central quarry on the Ana Sofia 2 concession is a large area where Pan American Fertilizer crushed and processed gypsum. A large stockpile of crushed gypsum and approximately 500 - 1 ton “mega-bags” of crushed gypsum are located in this area along with a small pile of unprocessed gypsum boulders. The author was informed by Demetra that their sample identified as “Sulfato” was collected from this stockpile as a composite grab sample of several of the gypsum boulders (Appendix 1). This pile of gypsum boulders was similarly re-sampled by the author as 15ATP103. Although not directly comprising ***in situ*** material, the boulders that were sampled as “Sulfato” (and 15ATP103) were most likely excavated from the adjacent central quarry area. A figure illustrating the Central Quarry and processing area on the Ana Sofia 2 concession, and the author’s sampling, is provided in Appendix 1.

The Demetra sample “Sulfato”, collected earlier this year, was found to contain 97.95 wt% gypsum (granular fraction) and 98.28 wt% gypsum (powder fraction). The author’s sample (15ATP103) from the same stockpile of gypsum boulders returned a value of 94.94 wt% gypsum.

Northern Area:

There is no significant historical quarrying north of the Main (central) Quarry at the Ana Sofia 2 concession area. However, further along the trend of the quarries to the northeast are several (~50m x ~20m sized) areas where overburden has been cleared and relatively high-purity gypsum horizons have been exposed along an approximate 200m distance. Vertical exposures are rare and thus the thickness of the main gypsum horizon in this area could not be determined but, in the opinion of the author, it is unlikely to vary significantly from that observed elsewhere on the concession. A composite grab sample of the exposed gypsum layer observed in one of the northern cleared areas was sampled as 15ATP105, which returned a value of 93.79 wt% gypsum. A figure illustrating the cleared areas located in the northern portion of the Ana Sofia 2 concession, and the author’s sampling, is provided in Appendix 1.

9.3 2016 Test Pitting Program

Between April 1 and May 10, 2016, Centurion and Demetra completed a Test Pitting (trenching) Program at the Ana Sofia Project. The program was focused on the Ana Sofia 2 mineral concession and was intended to test the lateral extents of the main gypsum layer that has been exposed by historical quarrying across the concession.

Previous sampling conducted by the author of this report (see section 9.2 above) confirmed the almost continuous exposure of gypsum layers along an 800m-long northeast striking trend that has returned values of up to 96.1 wt% gypsum.

The 2016 exploration program at the Ana Sofia 2 concession comprised the excavation of 21 test pits (Figure 9.4). The test pits comprised a total of 169.6m of vertical excavation (depth) and averaged 8m in depth with the shallowest excavation being 3.9m and the deepest being 15.0m. The pits exposed flat-lying stratigraphy throughout the area and thus were mapped and sampled vertically on one wall each to mimic vertical drill holes. Due to the flat-lying nature of the observed gypsum layers and their vertical measurement and sampling, all references to "thickness" in the following sections that discuss this work program can also be thought of as "true thickness". The flat-lying nature of the gypsum-bearing stratigraphy combined with a gradual slope of topography in the area down to the west and northwest has resulted in the erosion of the gypsum layers within 1-200m west of the north-easterly trend of the historical quarries on the Ana Sofia 2 concession. This has also resulted in a gradual deepening of the main gypsum layer to the east as topography rises and overburden increases.

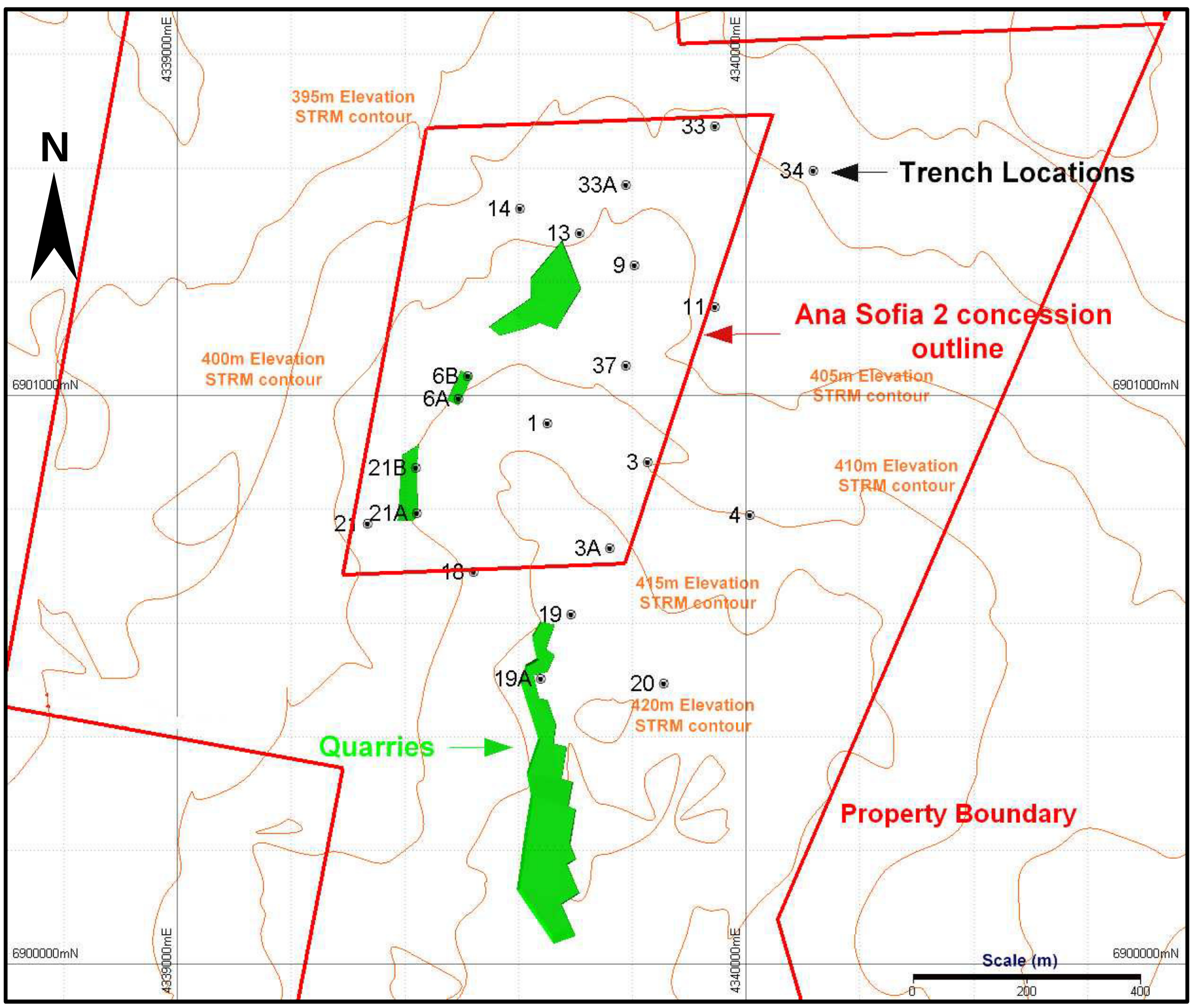

Figure 9.4. 2016 Ana Sofia Test Pit Locations.

Each test pit was sampled vertically down one wall. All measurements of lithological units and sample intervals were made relative to ground level at the top of each pit. The locations and elevations of the sampled points at each test pit (i.e. the ground level point at the top of each mapped and sampled wall) were determined by differential GPS surveying by an independent surveying contractor (see Table 9.3).

At least one (1) high-purity gypsum layer was exposed in 18 of the 21 test pits. The phrase "high-purity gypsum" refers to discreet gypsum layers where visible impurities, primarily clays, are less than 10%. From initial examinations of the area it was believed that the exploration target comprised a single high-purity gypsum layer that, as previously mentioned, could be observed at surface and in historical quarries over a northeast strike length of approximately 800m. However, in 9 of the 21 test pits completed in 2016, primarily located along the western side of the test area, a second high-purity gypsum layer was identified beneath the main (upper) gypsum layer. The two layers are normally separated by approximately 0.5m of green clay. The gypsum layers ranged in thickness from 0.4 m to 2.0m, with average thicknesses of 1.1m for the upper (main) layer and 0.7m for the lower layer.

The primary author of this report conducted a visit to the property following the completion of the test pitting program between July 24 and 26, 2016. During the visit, all of the 2016 test pits were examined. Sampling locations were confirmed by hand-held GPS and the mapping and sampling completed by Demetra personnel was also examined for accuracy and completeness. In addition, observations were made with respect to stratigraphic correlations between the test pits to facilitate the geological modeling and resource estimation work described in a subsequent section of this report. In short, no significant issues were noted by the author.

Table 9.3. 2016 Ana Sofia Test Pit Locations and Depths.

Test Pit	(UTM POSGAR 2007 Zone 3)		Elevation (m)	Depth (m)	Gypsum Layer Encountered
	Easting (m)	Northing (m)			
P-1	3634719.5	6901264.8	435.4	8	Upper
P-3	3634894.4	6901192.6	433.2	8.9	Upper
P-3A	3634823.7	6901043.3	437.2	7.4	Upper
P-4	3635071.6	6901094.8	431.7	8	Upper
P-6A	3634565.1	6901312.4	430.0	5.3	Upper / Lower
P-6B	3634582.1	6901351.3	430.0	5.2	Upper / Lower
P-9	3634879.4	6901538.9	427.4	11.1	Upper / Lower
P-11	3635019.8	6901462.9	425.9	14.15	Upper / Lower
P-13	3634784.6	6901598.1	425.1	9.95	Upper
P-14	3634681.0	6901643.5	423.3	6	
P-18	3634583.6	6901007.1	433.3	8	Upper
P-19	3634753.0	6900928.7	436.9	8	
P-19A	3634696.6	6900815.9	435.9	5	Upper
P-20	3634914.0	6900803.0	435.0	8	Upper
P-21	3634399.2	6901096.9	429.3	8	Upper / Lower
P-21A	3634486.9	6901113.0	432.4	8.6	Upper / Lower
P-21B	3634487.1	6901193.2	433.2	9	Upper / Lower
P-33	3635027.1	6901781.0	421.9	6.1	Upper
P-33A	3634867.6	6901681.4	425.3	3.9	Upper / Lower
P-34	3635198.3	6901698.7	418.4	6	
P-37	3634861.3	6901363.2	430.3	15	Upper / Lower

In total, Demetra personnel collected 78 samples from the 2016 test pits, 69 of which were sent to ALS Laboratories ("ALS") in Mendoza, Argentina. The remaining 9 samples comprised primarily soil horizon material and were thus not sent for analysis. Sample collection and analysis is discussed in greater detail in a subsequent section of this report. Briefly, sample preparation was conducted at ALS Minerals' facility in Mendoza, Argentina and 250 gram sub-samples were then sent on to the ALS Laboratory in Vancouver, Canada for analysis. A table summarizing the results of the mapping and sampling of the 2016 Ana Sofia test pits is provided in Appendix 2 at the end of this report.

The primary means of measuring the gypsum content of a (gypsum-bearing) sample is by measuring the loss of the chemically bound water within the gypsum crystal structure ($CaSO_4 \cdot 2H_2O$) by measuring the weight change of an aliquot of the sample before and after heating at between 215^oC and 230^oC. The weight percent water value is then multiplied by 4.778 (as per ASTM C-471-91) to produce a result that is reported as a calculated weight percentage gypsum value (wt% gyp). Water-loss measurements were completed on all of the 69 samples submitted for analysis. The calculated gypsum content of 27 key gypsum-bearing samples was confirmed by measuring the total Sulfur content of these samples (by acid sulphate leaching). The final data set comprising 69 samples with calculated wt% gypsum values was deemed acceptable by APEX Geoscience Ltd. (and the author of this report) and was used in the resource estimation work described in a subsequent section of this report. Analytical certificates for the water-loss analyses of the 2016 Ana Sofia test pitting samples are provided in Appendix 3.

Detailed sampling information, analytical results and certificates, and schematic stratigraphic sections for the 2016 Ana Sofia Test Pitting program are appended to this report (Appendices 2-7). The weight percent gypsum (wt%gyp) values for the gypsum-bearing samples used in the resource estimation effort that is the subject of this report are presented in Table 9.4. The consistency in the purity of the two gypsum layers can be seen in the remarkable consistency of the sample data presented below, which has an overall standard deviation of only 4.2 wt%gyp. With respect to the 18 samples (from 18 test pits) that comprise the upper gypsum layer, the gypsum content ranges between a low of 79.31 wt%gyp to a high of 97.95 wt%gyp with an (arithmetic) average of 93.58 wt%gyp (length-weighted average is 93.54 wt%gyp). A total of 9 samples (from 9 test pits) were collected from the lower gypsum layer and returned analytical results ranging from 93.89 wt%gyp to 97.95 wt%gyp with an (arithmetic) average of 96.46 wt%gyp (length-weighted average is 96.45 wt%gyp).

Table 9.4. Summary of 2016 Ana Sofia Test Pit Sampling Results.

Trench	From (m)	To (m)	Thickness (m)	Sample ID	Upper Layer (wt%gyp - waterloss)	Lower Layer (wt%gyp - waterloss)	Lithology
1	1.45	2.55	1.1	16GFG001A	89.59		Gypsum-clay
3	1.7	2.4	0.7	16GFG003	95.32		Gypsum
3A	5.4	5.9	0.5	16GFG003AB	92.69		Alabaster
4	3.5	4.2	0.7	16GFG004	89.83		Gypsum
6A	0	1.4	1.4	16GFG006AA	96.99		Alabaster
6A	1.9	2.6	0.7	16GFG006AB		96.04	Alabaster
6B	0	1.4	1.4	16GFG006BA	95.56		Alabaster
6B	1.95	2.75	0.8	16GFG006BB		93.89	Alabaster
9	7.8	9.1	1.3	16GFG009A	96.99		Alabaster
9	9.5	10.25	0.75	16GFG009B		96.52	Alabaster
11	11	12.1	1.1	16GFG011A	96.99		Alabaster
11	12.5	13.25	0.75	16GFG011B		95.56	Alabaster
13	2.2	2.8	0.6	16GFG013A	94.84		Alabaster
18	5.3	7.3	2	16GFGC018	87.68		Gypsum-clay
19A	3	3.8	0.8	16GFG019A	93.41		Gypsum
20	6	7	1	16GFG020	97.95		Alabaster
21	5.2	5.8	0.6	16GFG021		97.95	Alabaster
21	2	3	1	16GFCG021	79.31		Gypsum-clay
21A	3	4.2	1.2	16GFG021AA	96.99		Alabaster
21A	5	5.8	0.8	16GFG021AB		97.47	Alabaster
21B	2.5	3.6	1.1	16GFG021BA	96.04		Alabaster
21B	4.5	4.9	0.4	16GFG021BB		95.32	Alabaster
33	0.8	2.1	1.3	16GFG033	89.35		Alabaster
33A	0	1.4	1.4	16GFG033AA	96.99		Alabaster
33A	1.9	2.6	0.7	16GFG033AB		97.95	Alabaster
37	11.9	13	1.1	16GFG037B	97.95		Gypsum
37	13.6	14.2	0.6	16GFG037C		97.47	Gypsum

10 Drilling

Demetra has not conducted any drilling at the Ana Sofia Property. Furthermore, there is no record of any historical drilling on the Ana Sofia mineral concessions or exploration permit area.

11 Sample Preparation, Analyses and Security

In total, 78 chip samples were collected in the 21 test pits that comprised the 2016 Ana Sofia trenching/test pitting program. As previously described, channel samples were collected vertically down one wall in each of the test pits. Samples were collected in plastic sample bags having been marked front and back with individual sample numbers. Demetra staff created their own sample identification system that included a prefix using the year and the sampler's initials followed by a 2-3 letter code corresponding to the sample lithology followed by the test pit number. The initial set of test pit samples was collected by Roberto Saleh (Demetra) in late May 2016 and are prefixed with "16RS...". The samples were stored in a secure location on site until the end of the program when they were packed in poly-woven rice sacks for shipment to a laboratory. The author of this report had an opportunity to examine the samples before they left site during the July 2016 site visit and no issues were noted with respect to the sample intervals or their descriptions as the author was able to compare many of the samples with their respective sources. Subsequently, a member of Demetra's staff drove the samples to ALS Minerals laboratory in Mendoza, Argentina.

The principle means of determining the gypsum ($CaSO_4 \cdot 2H_2O$) content of a gypsum-bearing sample is by measurement of the sample's loss of chemically combined water at high temperatures. The total water-loss from gypsum, and its conversion to anhydrite, occurs at temperatures above 200°C. ASTM C-471-91, the ***Standard Test Method For The Chemical Analysis of Gypsum and Gypsum Products***, states that samples should be weighed and heated at between 215°C and 230°C. Due to a miscommunication with the laboratory, the initial set of test pit samples from Ana Sofia was subjected to temperatures above 100°C during the sample drying procedure, which resulted in the loss of at least some chemically bound water. This was initially suspected by comparing the initial calculated gypsum values with those from previous testing of several high-gypsum units at the Property.

Upon recognition of this issue, APEX immediately recommended to Demetra that resampling should be conducted for 40 key gypsum-bearing (or possibly gypsum-bearing) sample intervals in the still open test pits at the Property. The 40 recommended sample intervals were resampled at the end of August 2016 by Guillermo Fernandez (Demetra management) and are easily differentiated from the initial set of samples due to their prefix "16GF…". The second set of samples was driven to ALS in Mendoza, Argentina by Demetra staff, and thus was under the secure control of the company from sampling to the laboratory.

Following the receipt of the samples by ALS in Mendoza, it was determined that drying was not required and the samples were simply crushed and homogenized and a 250g sub-sample was collected and sent to ALS Laboratories in Vancouver, Canada for analysis. Calculated weight percent (wt%) gypsum values were determined for the second set of Ana Sofia test pit samples following high temperature water-loss measurements. The data for the new samples was, as expected, higher than the initial compromised samples and corresponded with previous sampling at the Ana Sofia 2 concession by Centurion and Demetra and the primary author of this report. In addition, Figure 11.1 illustrates a comparison between the measured water-loss data for the initial compromised samples and the second set of samples and clearly shows that the two data sets exhibit the same overall pattern and thus there does not appear to have been any issue with the re-sampling effort. Analytical certificates for the water-loss analyses of the 2016 Ana Sofia test pitting program are provided in Appendix 3.

No other issues were noted with respect to the sample collection, preparation and security for the 2016 Ana Sofia test pitting program. As a result, the final dataset of 69 weight percent gypsum values determined by ALS Vancouver (29 original samples with low-gypsum contents and 40 samples from re-sampled high-gypsum intervals) was considered by the authors of this report to be sufficiently validated, and therefore suitable, for use in the geological modeling and resource estimation effort discussed in a subsequent section of this report.

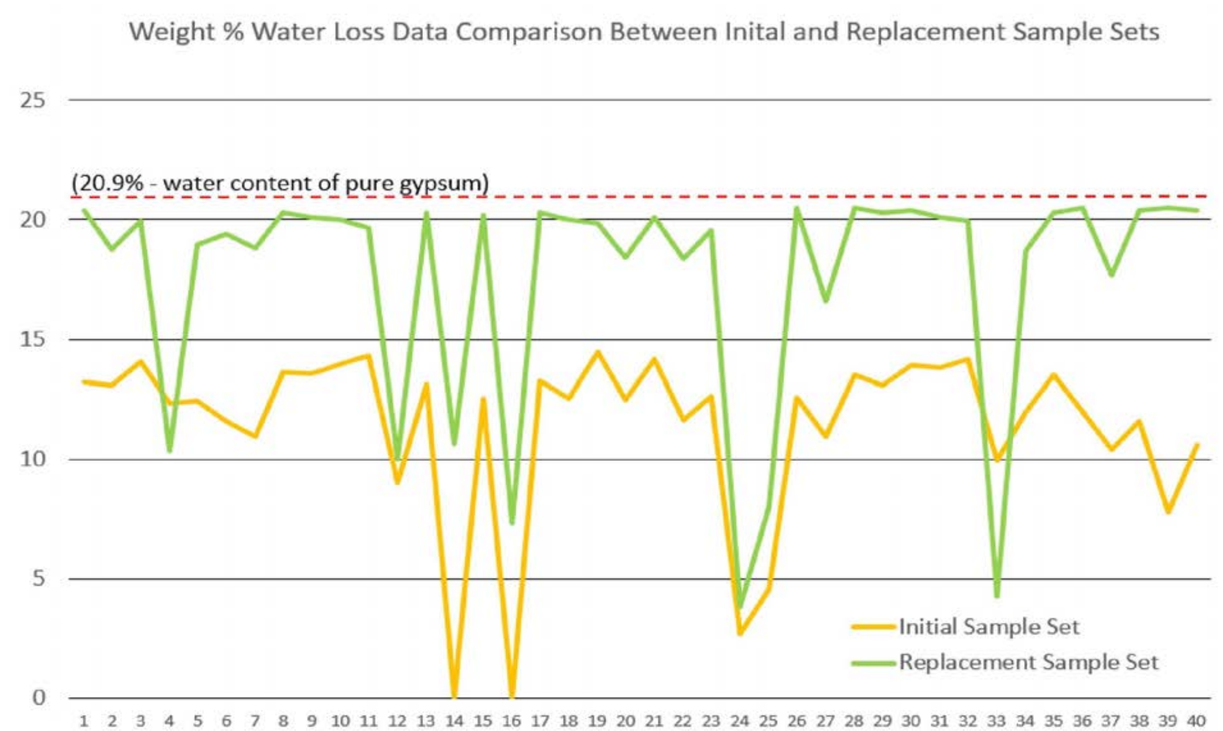

Figure 11.1. Weight % Water-loss Data for the 40 original and replacement samples from the 2016 Ana Sofia 2 test pit samples illustrating the amount of combined water that was lost from the original samples due to excessive drying during sample preparation.

12 Data Verification

Data verification for exploration work prior to 2016 is discussed in a previous technical report on the Property by the primary author of this report (Turner, 2016). During an earlier site visit to the Property, the author was able to observed and checked by hand-held GPS the surveyed corner posts of the Ana Sofia 1 mineral concession.

During the primary author’s most recent site visit (July 24-26, 2016), survey contractors were observed surveying the sample sites at each of the 2016 test pits, several of which were confirmed by hand-held GPS. The surveyors were also tasked by Demetra with laying out and surveying the corner posts of the Ana Sofia 2 concession. Unfortunately, this was completed after the author had left site but a copy of the official corner point locations, which were subsequently registered with the government, was sent to the author. These points were used to generate the concession outline displayed in the figures within this report and showed no significant variance from the original estimated corner posts coordinates that were presented to the government in Demetra's initial application for the Ana Sofia 2 concession.

During the most recent site visit (July 2016), the primary author of this report was also able to visually examine all of the 2016 test pits and was able to verify that the mapping and sampling conducted by Demetra was properly conducted according to industry standards. In short, no issues were noted with respect to either the lithologies and descriptions of the sample intervals or with the depth measurements made by Demetra's sampling crew. Sample intervals were restricted to lithologic boundaries.

As discussed in the preceding section of this report, an issue with respect to excessive heating during sample preparation resulted in the compromising of the initial set of sample from the 2016 Ana Sofia test pitting program, which included five (5) check samples that were collected by the primary author during the most recent site visit in July 2016. As a result, an alternate means of testing these samples was determined that involved the complete conversion of an aliquot of each sample to anhydrite by heating followed by its testing by acid leach sulphate analysis. The resulting %S data was back calculated to yield calculated weight percent gypsum (wt% gyp) values for the original samples. A comparison of the wt% gyp data for the 2016 Ana Sofia test pitting check samples and their original sample data are presented in Table 12.1 and Figure 12.1. In short, the check samples confirmed the high purity of the original sample intervals and averaged 90.5 wt% gyp and the two data sets have a correlation coefficient of 0.9194. Analytical certificates for the acid leach sulphate testing of the APEX check samples are appended to this report (Appendix 4).

Table 12.1. Comparison of 2016 Ana Sofia test pit check sample and original gypsum analyses.

Trench	From (m)	To (m)	Lithology	Demetra Samples	wt% gyp	Check Samples	wt% gyp	Work Order
Tr-9	7.8	9.1	Alabaster	**16GFG009A**	96.99	**16ATP201**	96.72	ME16207561
Tr-33	0.8	2.1	Alabaster	**16GFG033**	89.35	**16ATP202**	86.99	ME16207561
Tr-33A	0	1.4	Alabaster	**16GFG033AA**	96.99	**16ATP203**	96.04	ME16207561
Tr-1	1.45	2.55	Alabaster	**16GFG001A**	89.59	**16ATP204**	82.99	ME16207561
Tr-6B	1.95	2.75	Alabaster	**16GFG006BB**	93.89	**16ATP205**	96.04	ME16207561

In order to confirm the weight percent gypsum data generated by water-loss measurements for the 2016 Ana Sofia test pitting samples, acid leach sulphate tests were conducted at ALS (Vancouver) on a subset of 27 high-gypsum samples. This sample subset comprised the 18 samples of the upper gypsum layer and the 9 samples of the lower gypsum layer that were used in the modeling and resource estimation work described in a subsequent section of this report. In addition, a second aliquot of crushed material for 8 of the 2016 test pit samples was submitted to SEGEMAR in Buenos Aires, Argentina for gypsum analysis. The SEGEMAR laboratory conducts the full analytical protocol for calcium sulphate sample analysis as described within ASTM C-471-91 but was unfortunately too busy to accept for analysis the full suite of samples from the 2016 Ana Sofia Test Pitting program. Analytical certificates for the acid leach sulphate testing of the 27 duplicate confirmation samples by acid leach sulphate analysis, as well as the 8 check samples analysed at SEGEMAR, are appended to this report (see Appendix 5 and 6, respectively).

In short, the two sets of check analyses conducted at ALS (Vancouver) and SEGEMAR (Buenos Aires) confirmed the original gypsum values determined by the water-loss measurement method. A comparison of the final wt% gypsum data by water-loss and the acid leach check analyses is shown in Figure 12.2. The check analyses show an excellent correlation with the original water-loss data with a correlation coefficient of 0.9813. The correlation coefficient and Figure 12.2 represent 26 of the 27 check samples as one sample was removed due to the fact that it comprised a non-gypsum bearing sample incorrectly selected for analysis by ALS, although as expected the sample yielded a low calculated wt% gyp value (1.67 wt% gyp). A comparison of the final wt% gypsum data by water-loss and the corresponding data (also generated by water-loss measurement) at SEGEMAR are shown in Figure 12.2. The check analyses show an excellent correlation with the original water-loss data with a correlation coefficient of 0.9854. As with the acid leach check data, one sample has been omitted from Figure 12.2 and the calculation of the correlation coefficient as an incorrect non-gypsum bearing sample was inadvertently sent for analysis.

As a result, the final dataset of 69 weight percent gypsum values determined by ALS Vancouver (29 original samples with low-gypsum contents and 40 samples from re-sampled high-gypsum intervals) was considered by the authors of this report to be sufficiently validated, and therefore suitable, for use in the geological modeling and resource estimation effort discussed in a subsequent section of this report.

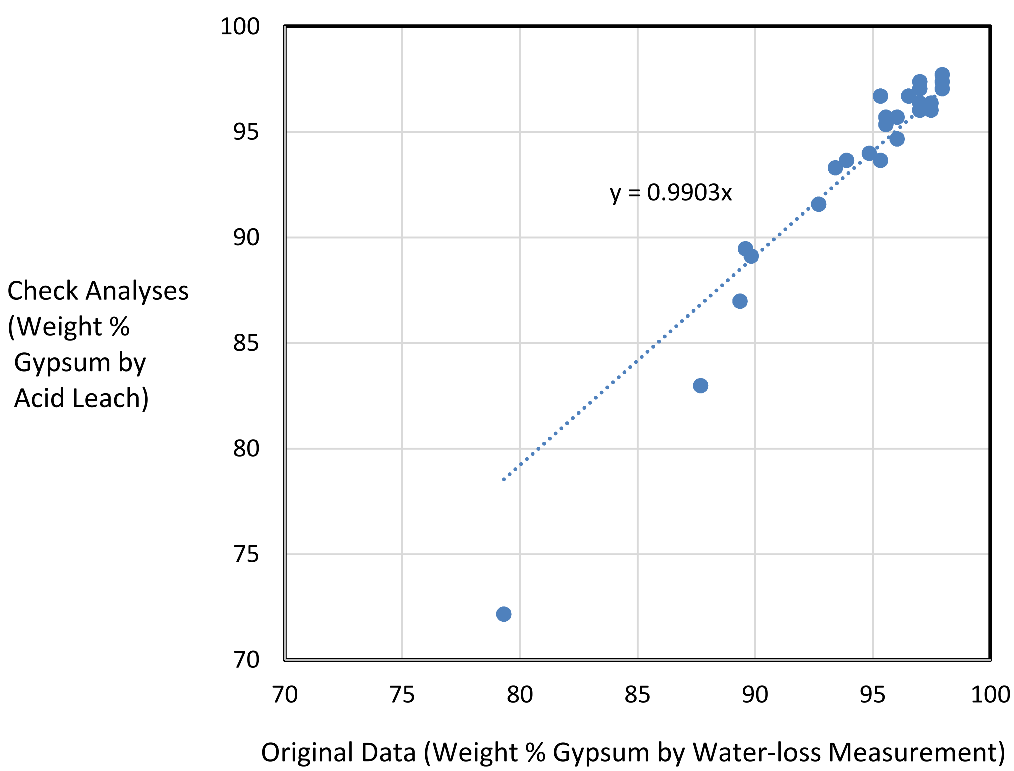

Figure 12.1. Comparison of original weight% gypsum data by water-loss with acid leach sulphate check analyses

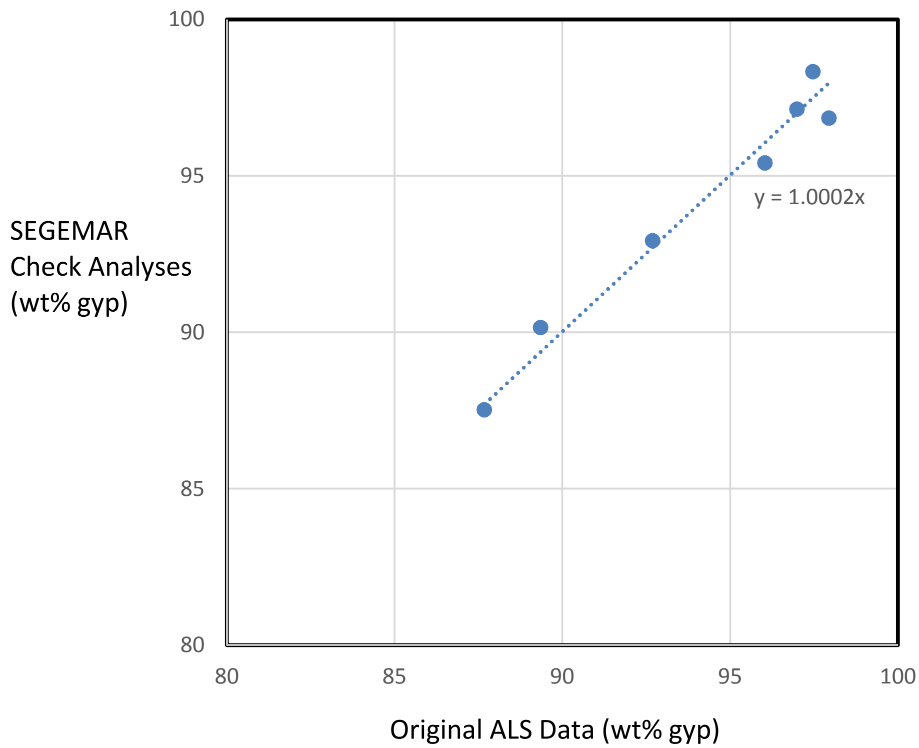

Figure 12.2. Comparison of original (ALS) and check (SEGEMAR) weight% gypsum data.

13 Mineral Processing and Metallurgical Testing

The Ana Sofia Property is an industrial mineral property being explored and developed for its gypsum potential as an agricultural product (soil conditioner). The flowsheet for quarrying and processing gypsum ore is relatively simple and involves crushing and screening for size fractioning to produce two final products; 1) a favored granular (2-4 mm) product and 2) a powdered (<2mm) product. As per Argentina regulations, both of these agricultural gypsum products must contain a minimum of 85 wt% gypsum. To date, Demetra has confirmed through the processing of two (2) raw gypsum samples collected from the Property that the main gypsum target layer is amenable to the production of high-purity (>90% gypsum) granular and powdered materials (see Section 9.1).

In November of 2016 Centurion (and Demetra) announced the successful commissioning of a 200 tonne/day pilot plant (see Centurion Press Release dated November 23, 2016). The operation of the pilot plant will allow the companies to investigate and optimize procedures for the quarrying and processing of gypsum at the

Property. In the same Press Release Centurion reportated that a sales agreement had been executed with a fertilizer distributor who has agreed to purchase up to 50,000 tonnes of gypsum product per annum at prices ranging from CDN$80-$100/tonne. The actual contract has prices quoted in US dollars and thus the above noted price range reflects potential exchange rate fluctuations but also reflects a price difference between the two gypsum products, granular and powdered, with the former commanding a slightly higher price than the latter. Based upon the results of previous small scale testing, the current pilot plant has been designed (and is expected) to produce gypsum in granular and powdered grain sizes at a ratio of approximately 70:30. The pilot plant test work is ongoing and results will be released following the conclusion of the test program.

14 Mineral Resource Estimates

14.1 Introduction

Geological modelling, statistical analysis and resource estimation for the Ana Sofia Project, which is the subject of this Technical Report, was by performed by Mr. Nicholls, MAIG under the direct supervision of Mr. Turner, P. Geol., who is a Qualified Person as defined by National Instrument 43-101. Mineral resource modelling and estimation was carried out using a 3-dimensional block model based on geostatistical applications using commercial mine planning software MICROMINE (v14.0.6).

The project model and limits are based in the POSGAR 07 Zone 4 coordinate system. A parent block size of 50 m x 50 m x 1 m with sub-blocking down to 5 m x 5 m x 0.1 m was applied. Centurion Minerals Ltd. completed 29 trench excavations on the Ana Sofia property in 2016. Mr. Turner, P.Geol, completed a property visit and conducted independent sampling in September 2015 and July 2016 (see the Data Verification section of this report). The Ana Sofia resource discussed in this section of the report was based upon weight percentage gypsum values for samples from the Ana Sofia 2016 test pitting program.

The Ana Sofia Inferred Gypsum Resource estimate is reported in accordance with the Canadian Securities Administrators National Instrument 43-101 and has been estimated using the CIM “Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines” dated November 23rd, 2003 and CIM “Definition Standards for Mineral Resources and Mineral Reserves” dated May 10th, 2014. The reader is cautioned that mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that any part of the mineral resource discussed in this report will be converted into a mineral reserve.

14.2 Data

14.2.1 Drillhole Database Validation

Centurion Minerals Ltd., and partners Demetra Minerals, completed a systematic trenching/test pitting program in 2016 at the Ana Sofia Property. The program was focused on the Ana Sofia 2 concession area in proximity to the four historical gypsum quarries that occur on the Property. The test pitting program was completed systematically and totaled 21 locations with an approximate spacing of 125 to 200 m and depths varying from 6 m to 14.2 m. These trenches were designed to test the main gypsum horizon at the Property but also identified a second underlying gypsum layer is several of the test pits.

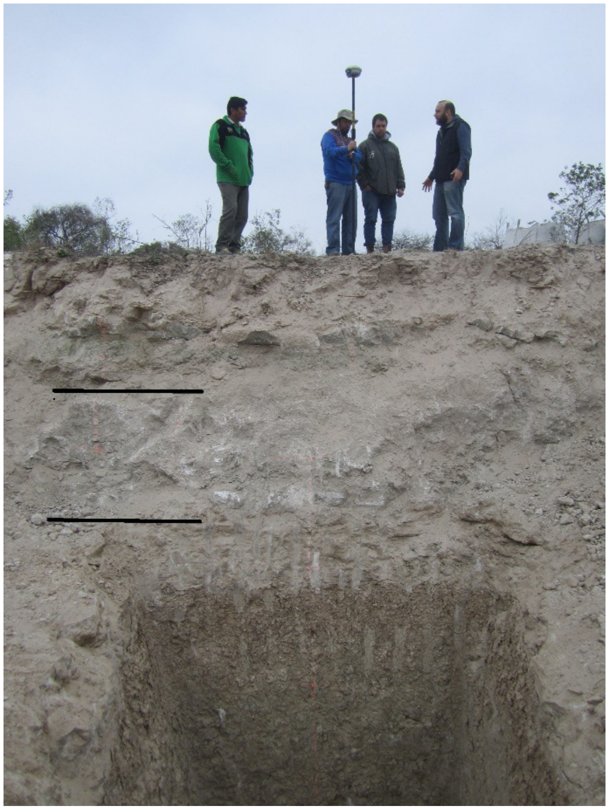

Figure 14.1. Photograph of TR-1 (view west) showing the main gypsum layer in the sampled face and the collection of differential GPS (sample) location data.

The 2016 test pits were sampled vertically from top to bottom on one wall each with depth measurements starting at ground level. As a result, for the purposes of geological modeling and resource estimation work, they could be treated as though they were drill holes. As shown in Figure 14.1, the top of the sampling in each test pit, analogous to a drill hole collar, surveyed by an independent surveying contractor using a differential GPS. The trench information was subsequently loaded into Micromine as drill hole locations and were assigned a vertical dip.

The trench samples were submitted to ALS laboratories in Mendoza for sample preparation following which a subsample was shipped to ALS in Vancouver for the final gypsum analysis. Sample analysis and the results of the 2016 test pitting program are discussed in greater detail elsewhere in this report. Upon the receipt of the final 2016 Ana Sofia test pitting analytical dataset, it was imported into MICROMINE software. Using Micromine’s drillhole database validation function, the data was checked for overlapping sample and geological intervals, and survey, collar and drillhole length data. No issues were identified and thus, in the opinion of APEX Geoscience Ltd. and the primary author of this report, the database is considered reliable and acceptable for mineral resource estimation purposes.

14.2.2 MICROMINE Database

The drilling database used is current (October 11th, 2016). The database incorporates all available trench data. All data for the industrial resource estimation was copied from various excel spreadsheets provided by ALS Laboratories and was imported into Micromine format. The main MICROMINE files that were utilized in the industrial mineral estimation, these include:

- Trenches.DAT – the drillhole/trench collar file;
- Trenches_gypsum.DAT – analytical data file comprising the weight percent gypsum information;
- Thrench_Litho.DAT – mapped depths of lithological/geological units
- SRTM DEM survey.DAT – surface topographic data.
- Quarry 1 to 4 (wireframes) – Survey pick up of historic gypsum quarries 1 to 4.

There were a total of 21 trench locations that were used to guide the estimation of the Ana Sofia Inferred gypsum resource. These 21 trench locations were relatively evenly spaced over a 1 km strike north-south and 650 m east-west. Spacing between trenches/pits varies from 42 m to 330 m (mostly 100 to 200 m). The drilling is evenly spaced over the resource area.

The Ana Sofia estimation file comprised 27 samples from the two favourable gypsum horizons identified during the sampling/mapping work. The reminder of the samples (N=96) are situated in the overburden, inter-fingered clay horizons or minor thin secondary gypsum layers.

14.2.3 Data Summary and Histograms

Summary statistics for the 2016 Ana Sofia test pitting program samples that are situated within the interpreted gypsum horizons are presented in Table 14.1 and Figure 14.2.

As the Ana Sofia Inferred gypsum resource estimate is classified as an industrial mineral, it does not have ‘commodity grade’ per say for estimation. In place of the conventional ‘commodity grade’, the percentage of gypsum was chosen for estimation. The trench samples had gypsum analyses completed by ALS laboratories in Vancouver. Gypsum for the use in fertilizer is the only commodity at the property that currently has a demonstrated potential for economic concentration.

Examination of the gypsum samples indicated that overall they exhibited a positively skewed normal population. As such it is the author’s opinion that as the gypsum analysis exhibits a normal population that linear estimation methodologies could be used for estimations.

Table 14.1. Summary statistics for samples situated within the interpreted gypsum horizons.

	Gypsum (%)
Mean	94.542
Median	95.800
Std Dev	4.221
Variance	17.818
Std Error	0.812
Coeff Var	0.045
Minimum	79.310
Maximum	97.950
Number	27

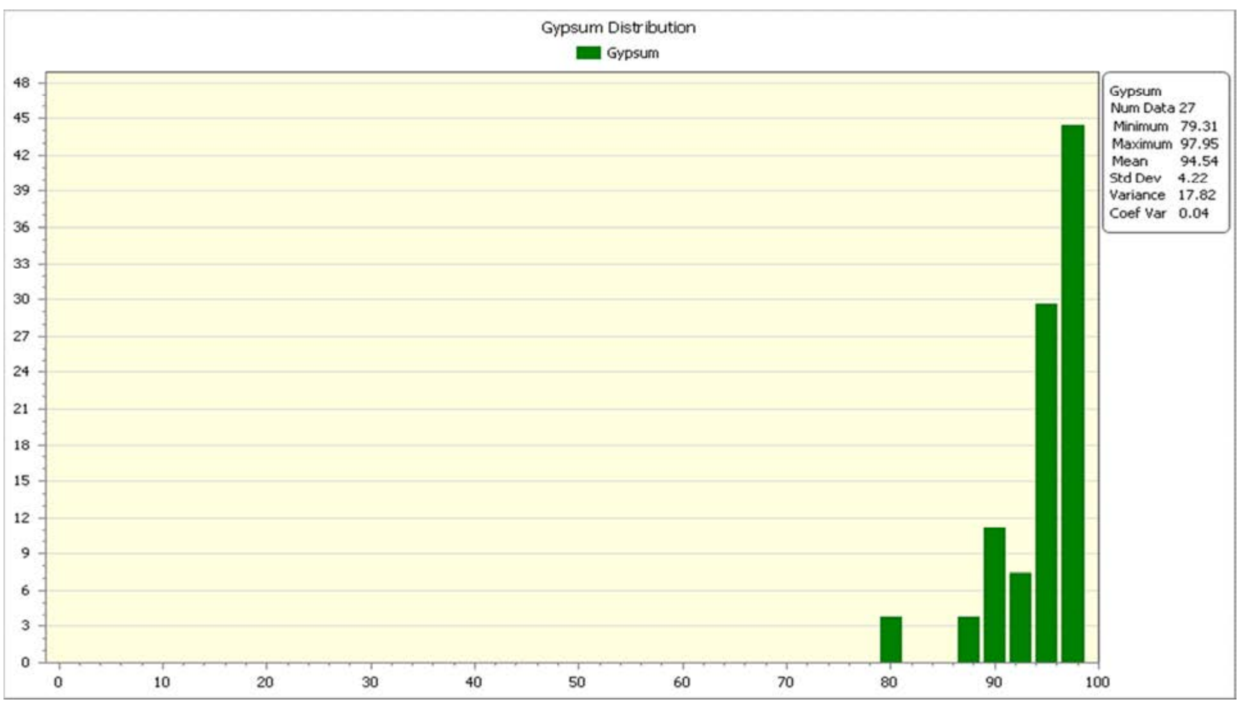

Figure 14.2. Log histogram of the gypsum analysis situated within the interpreted gypsum horizons.

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14.3 Quality Control

With respect to quality assurance-quality control, the reader is referred to Section 12 Data Verification; a summary of which is provided in the text that follows. The primary author of this report was able to verify during his most recent site visit the locations for the 2016 Ana Sofia test pits as well the validity and accuracy of their sampling and mapping. No significant issues were identified and the sampling and mapping of the test pits was found to have been conducted in accordance with industry standards.

With respect to Sampling and analytical data, as discussed in greater detail elsewhere in this report (Sections 11 and 12), there was an issue with respect to excessive heating during sample preparation that resulted in a small but significant loss of chemically combined water from the gypsum within the initial set of sample from the 2016 Ana Sofia test pitting program. This necessitated the re-sampling and replacement of 40 key (gypsum-bearing) sample intervals as the measurement of the loss of chemically combined water is the principal means of determining the weight percentage of gypsum within gypsum-bearing samples (as per ASTM C-471-91). As soon as this issue was identified, Demetra conducted the resampling work and submitted the 40 new samples to ALS in Mendoza for analysis. The calculated weight percentage gypsum values for the second set of (replacement) samples was compared to the original compromised results showing a) that the replacement samples had much higher gypsum values that were more in line with both visual estimates of gypsum content and previous sampling from the same locations, and b) that the two sets of data exhibited the same pattern of gypsum values indicating that the resampling effort had adhered to the original sample intervals.

To validate and verify the results of the gypsum analysis of the “resamples”, check analyses were performed on sample subsets at both ALS laboratories in Vancouver and SEGEMAR laboratories in Buenos Aires. Acid Leach Sulphate testing was conducted on 27 samples at ALS and ASTM C-471-91 analyses (including water-loss measurements) were performed on 8 samples at SEGEMAR. With the exception of one incorrectly selected (lab error) low-gypsum sample that was included in each check assay subset, which did yield low-gypsum values, the remaining 26 and 7 check samples, respectively, yielded duplicate results that very closely matched the original gypsum values. As a result, the final dataset of calculated weight percentage gypsum values was deemed by the primary author of this report, Andrew J. Turner, P. Geol., to be suitable validated and verified, and therefore suitable for use in the geological modeling and resource estimation effort discussed herein.

14.4 Lode Interpretation

Data from all 21 of the 2016 Ana Sofia test pits was used to guide the geological interpretation of the resource area. Geological modeling of the two (2) principal gypsum layers identified and tested during the program was completed using the weight percent gypsum data in conjunction with the lithological data collected by Demetra’s sampling personnel. In addition, the primary author of this report was able to examine all of the 2016 test pits and made careful observations regarding potential correlations of gypsum layers between test pits that facilitated the modeling work.

The Ana Sofia property lies entirely within the Miocene Guasayán Formation comprising poorly consolidated, mainly green, thinly bedded to laminated, silty claystone with varying amounts of gypsum interbeds. The more competent white gypsum layers in the resource area range from 0.1 m to 2 m in thickness. Of the two gypsum horizons examined by the test pitting program, the most significant and most laterally extensive was the upper, or main (AS2), gypsum horizon that occurs throughout most of the resource area of ~1.2 km x 0.85 km. This horizon ranges from 0.5 m to 2 m in thickness and directly overlies the less extensive "lower" (AS2-2) gypsum horizon. The lower gypsum horizon is situated between 0.5 to 2.2 m below the AS2 horizon. This gypsum zone occurs over an area approximately 200 m east-west but extends nearly 900 m in a north-easterly direction. The lower gypsum horizon ranges in thickness from 0.4 m to 0.8 m, but is typically 0.7 m thick. It should be noted that due to the relatively flat-lying nature of the gypsum units and the vertical sampling, any reference to unit "thickness" is synonymous with "true thickness".

The 2016 Ana Sofia test pitting data was examined in Micromine™, a 3-D mine planning software package. The two gypsum horizons (upper and lower) were interpreted from trench-to-trench along a series of cross-sections oriented perpendicular to the apparent strike of the gypsum units on a rough orientation of 110-120° (azimuth). A set of 2-dimensional strings was created on these sections for each of the gypsum horizons. The 2-D strings were then joined to form 3-diemensional solids (wireframes) for each layer. The two wireframes were examined carefully to ensure that there were no intersections (overlapping areas) between them.

Due to the excellent continuity of the gypsum observed throughout the area, it was decided to extend the interpreted edges of the interpreted lodes, particularly for the upper layer, horizontally 100 m from the outer most test pits or half way to any neighbouring test pit where no gypsum was noted. Both the upper and the lower gypsum wireframes were clipped to the topographic surface, which was generated from SRTM 90m DEM data. The wireframes were also clipped with respect to the historical quarries where they had already been removed. The upper layer was quarried historically (removed from) all 4 of the quarries on the Property, whereas the lower gypsum layer was only found to have been quarried (removed) from approximately half of the northernmost quarry and is not interpreted as extending to the southernmost quarry.

An additional limiting factor was used to clip the gypsum wireframes prior to resource estimation based upon an examination of the gypsum layers' "potential for eventual economic extraction". As summarised below in Table 14.2, using the average thickness of the main gypsum layer of 1.1m, it was determined that a reasonable depth cut-off (stripping ratio limit) for the gypsum layers was approximately 10m from surface. As a result, the gypsum wireframes were clipped to remove any portion lying greater than 10m from surface. The final lode (gypsum layer) wireframes are shown in Figures 14.3 to 14.5.

In examining the gypsum layers' "potential for eventual economic extraction", the accuracy of the topographic surface was critical in determining depths from surface.

The available topographic information for the property comprised large scale government topographic maps that, due to the relatively subdued topography of the area, were not considered to be of sufficient detail to be of any use during the geological modeling work. Instead, APEX downloaded a set of SRTM data for the 2016 resource area from Google Earth. SRTM stands for “Shuttle Radar Topography Mission”, which is a near global digital elevation model with 90m spaced radar elevations that were recorded by a specially modified radar system that flew on board the Space Shuttle Endeavour during the 11-day STS-99 mission in February 2000. The test pit elevations determined by differential GPS surveying were used to check the SRTM data. The SRTM data was modified (shifted) slightly in order to achieve a “best fit” with respect to both the surveyed test pit elevations and the approximate location of the erosion edge of the gypsum along the western side of the resource area. The adjusted SRTM topographic data was then used to trim the wireframes with respect to areas lying below 10m from surface which was determined to be a reasonable depth cut-off above which the gypsum has been deemed to have “reasonable prospect for eventual economic extraction”.

With respect to satisfying the requirements for reasonable prospects for eventual economic extraction, the authors of this report considered the following factors and information. Firstly, the poorly consolidated nature of the overburden and surrounding clays of the Guasayán Formation means that quarrying, at least as far as the removal of overburden is concerned, is a relatively simple and efficient free-digging exercise. Secondly, the relatively consistent high quality of the purity of the modeled gypsum layers means that little or no secondary handling of materials will be required to blend materials in order to insure the minimum gypsum content (85%) is maintained. Thirdly, the processing of the gypsum to produce final products for sale is a relatively simple exercise involving crushing and screening. In conjunction with Demetra, APEX conducted a simplified examination of the potential stripping ratio for the project, which is summarized in Table 14.2. Briefly, the table uses reasonable assumptions with respect to the cost per tonne for removing overburden ($5/tonne), the removing and processing of gypsum ($18.50/tonne) and potential revenues based on an estimated average price for granular and powdered gypsum products (where the granular product is normally priced slightly higher than the powdered product). The table indicates that a 1.1m gypsum layer (the average thickness of the main gypsum layer) is likely to return a limited but positive revenue, even with a total of 10m of overburden requiring removal. However, this result is highly sensitive to the actual thickness of the gypsum and the potential revenue is eliminated if the gypsum thickness drops to approximately 0.85 m. As a result, the limit of 10 m of overburden was chosen as a reasonable limit on potential economic extraction for the gypsum at the Ana Sofia Project.

Table 14.2. Potential stripping ratio estimate for the Ana Sofia Project.

Unit	Thickness (m)	SG (t/m3)	Tonnage (t/m2)	Cost to Remove ($/t)	Cost to Process ($/t)	Potential Revenue*** ($/t)	Net Revenue ($/t)	Net Revenue ($/m2)
Overburden *	10	1.65	**16.5**	-$5.00	$0.00	$0.00	-$5.00	-$82.50
Gypsum **	1.1	2.35	**2.59**	-$6.00	-$12.50	$60.00	$41.50	$107.28
		1: 6.38		stripping ratio			**potential net revenue**	**$24.78 /m2**
							or	**$9.59 /t**

* o/b thickness used to crop current resource estimate
** average thickness of main layer
*** estimates average revenue (US$) for granular and powdered gypsum products

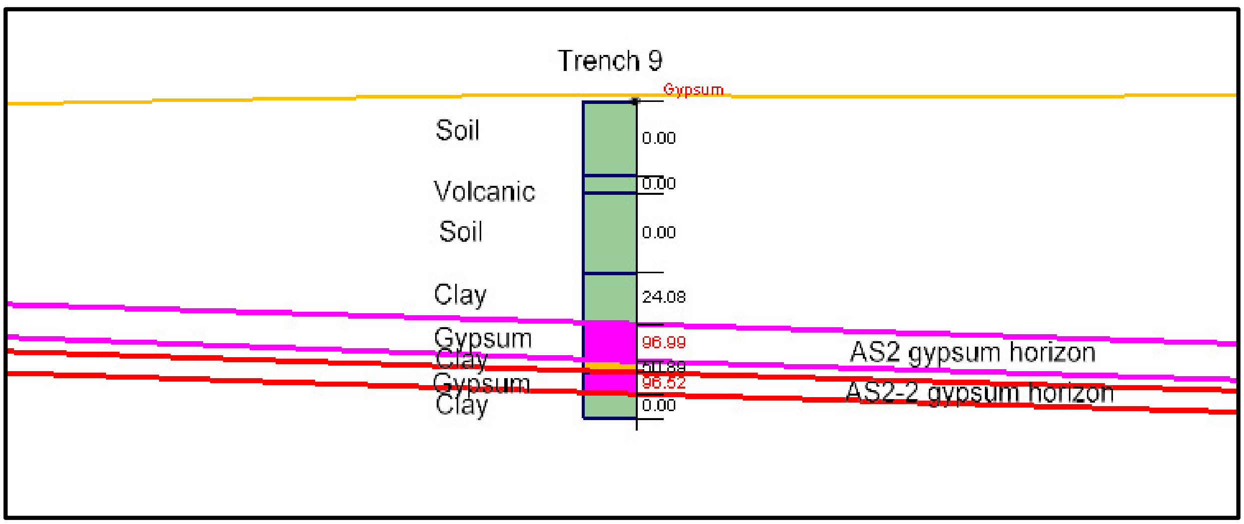

Figure 14.3. Typical cross-section through test pit 9 showing the geological interpretation.

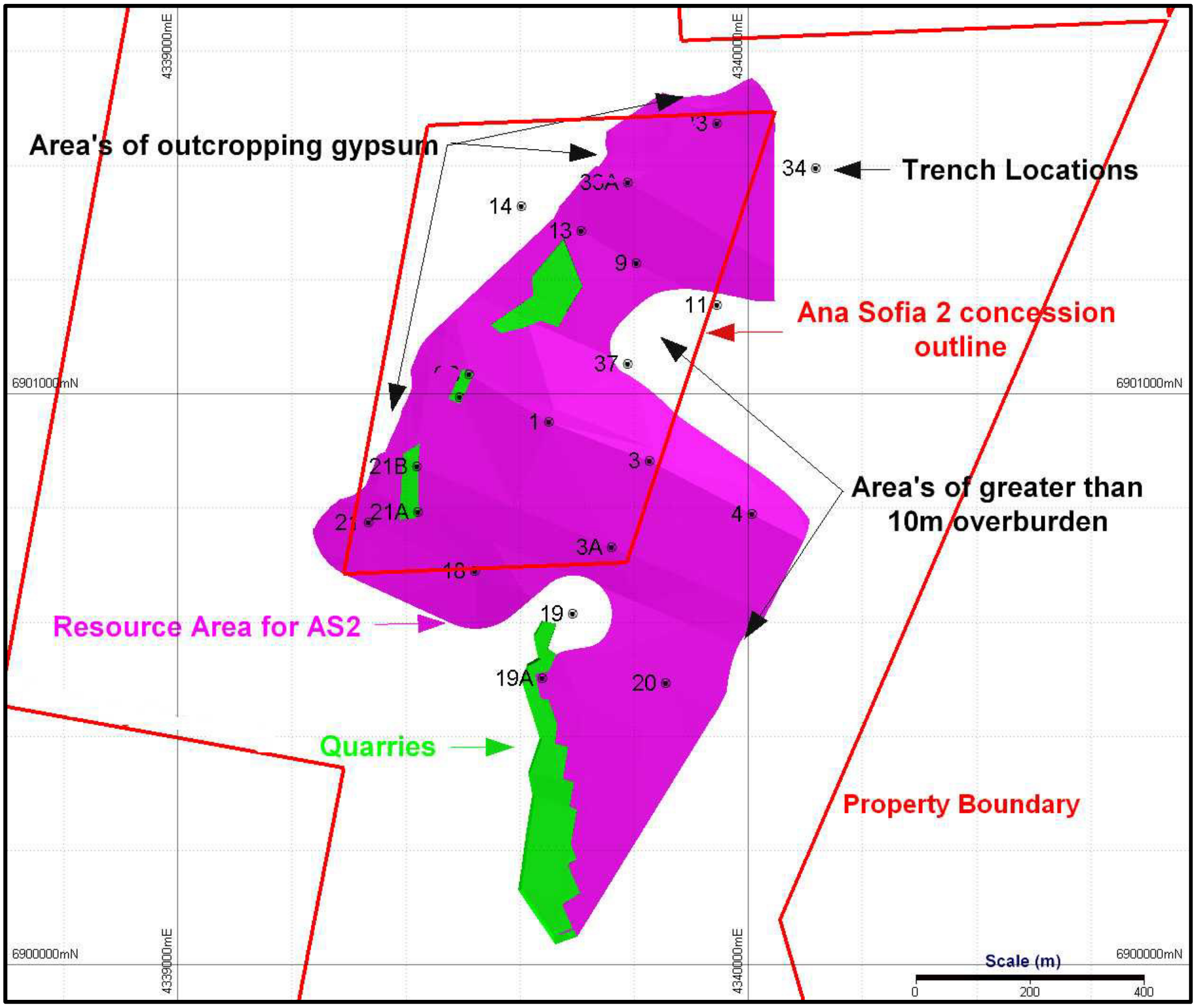

Figure 14.4. Plan view showing the location of the 2016 Ana Sofia test pits relative to the final (trimmed) wireframe for the main (upper) gypsum horizon.

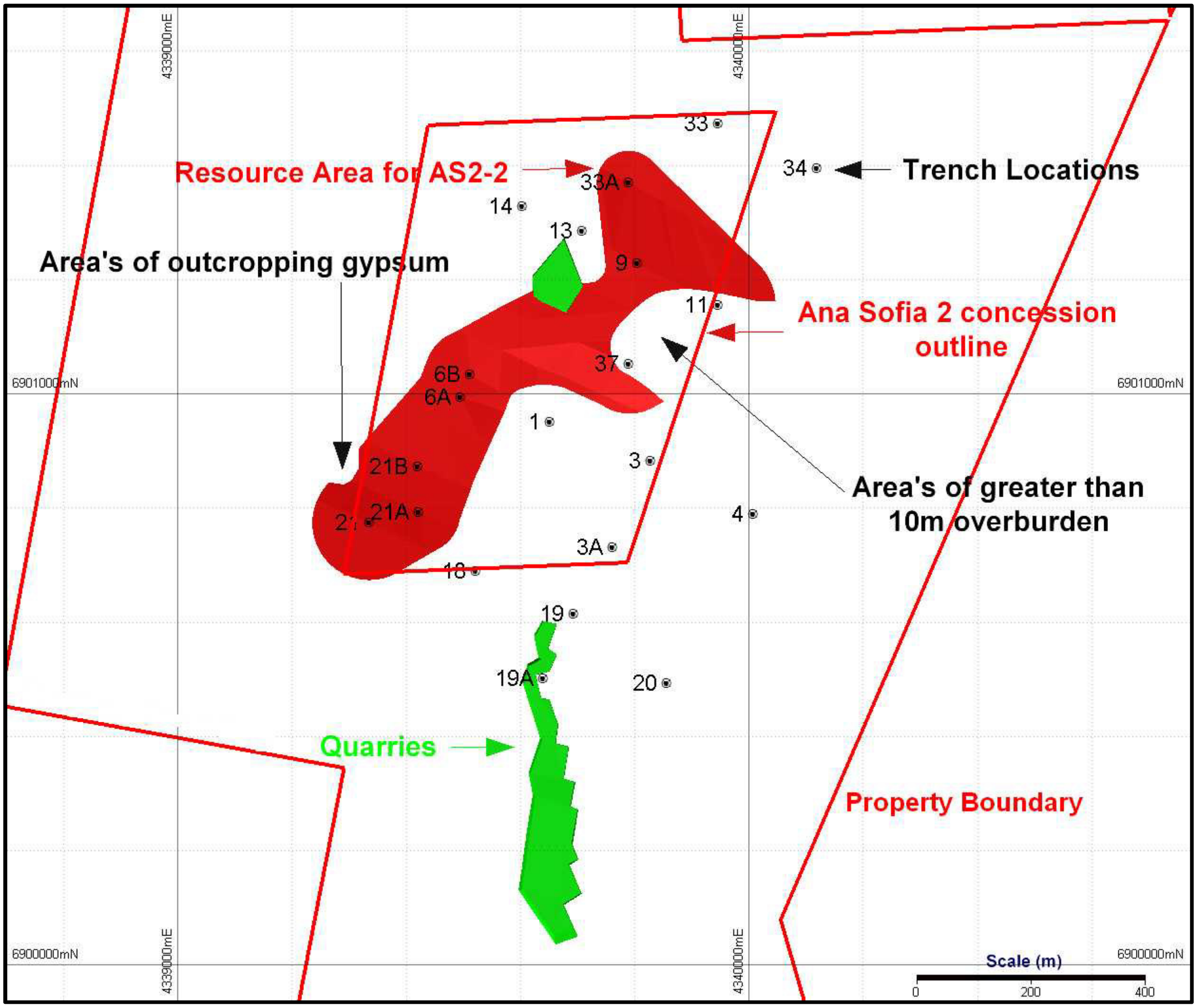

Figure 14.5. Plan view showing the location of the 2016 Ana Sofia test pits relative to the final (trimmed) wireframe for the lower gypsum horizon.

14.5 Drillhole Flagging and Compositing

Test pit samples situated within the interpreted gypsum horizon were selected and flagged with the wireframe name/code. The flagged samples were checked visually next to the drillhole to check that the automatic flagging process worked correctly. All samples were correctly flagged and there was no need to manually flag or remove any samples.

Sample width analysis showed that the trench samples ranged from 0.4 to 2.0 m in length with the dominant population being 0.6 to 0.8 m in length (Table 14.3 and Figure 14.6). It should be noted that gypsum is an industrial mineral and does not exhibit the high variance normally observed in other commodities such as precious metals. The grade of the gypsum is not depended on the sample width size. As such it was deemed that compositing of the trench samples was not necessary and the un-composited samples were used for all sample statistics, estimation input file and validation comparisons.

Table 14.3. Sample length statistics for the Ana Sofia un-composited assay file.

NORMAL STATS	Width
Mean	0.956
Median	0.8
Std Dev	0.361
Variance	0.13
Std Error	0.069
Coeff Var	0.377
Minimum	0.4
Maximum	2
Number	27

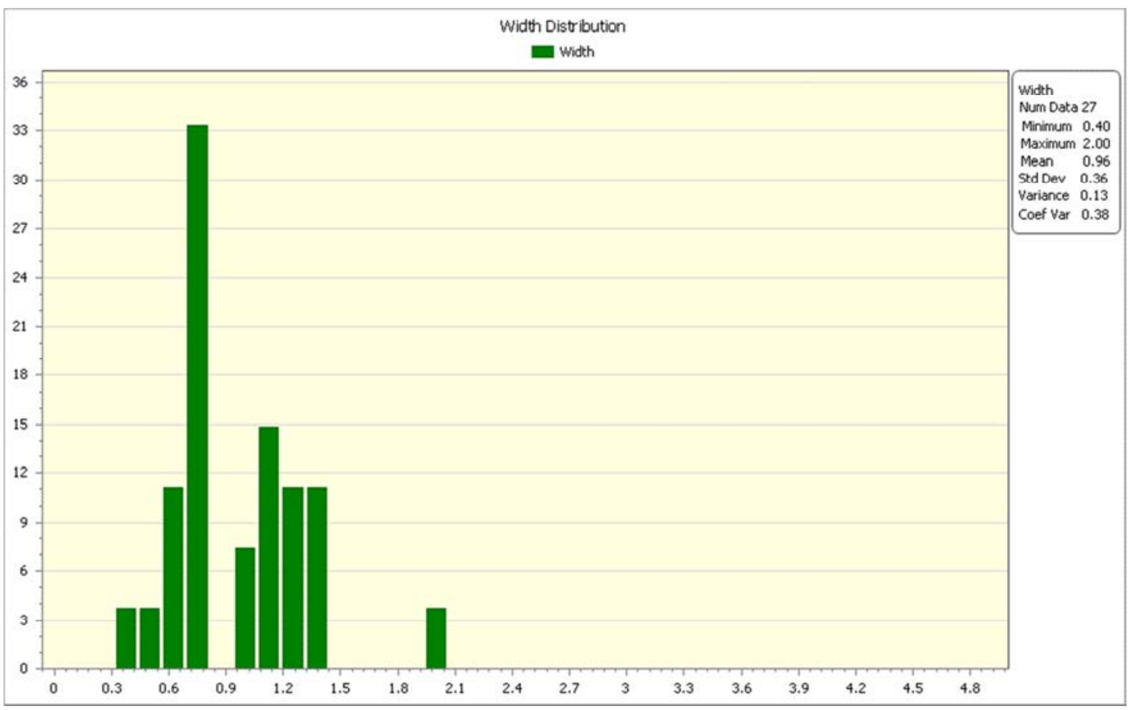

Figure 14.6. Histogram of sample length for the Ana Sofia un-composited assay file.

14.6 Capping

No capping was applied to the gypsum data due to the low variability in the data and the consistent nature of the gypsum layers as observed throughout the area.

14.7 Grade Continuity

Grade continuity was investigated by conducting variography on the un-composited gypsum dataset located within the 2 modeled (upper and lower) gypsum wireframes to produce exponential semi-variograms (see Figure 14.7). Due to the limited number of test pits and samples available for use in the variographic analysis, strike and plunge variograms were deemed the best option (Figure 14.7). As expected, the limited variogram's displayed the greatest range of continuity in the orientation of the stratigraphy. Due to the limited down hole sampling the third direction variogram was poor. This is to be expected, showing the short range of down hole continuity. This is in line with the geological observations whereby the gypsum horizons were found to have excellent horizontal continuity (and limited vertical continuity due to the fact that they were typically samples with a single sample). The maximum range of continuity was approximately 400 m. This is also reasonable based on the drilling and the geological observations. This range and drill hole spacing was used as a guide in the estimation process.

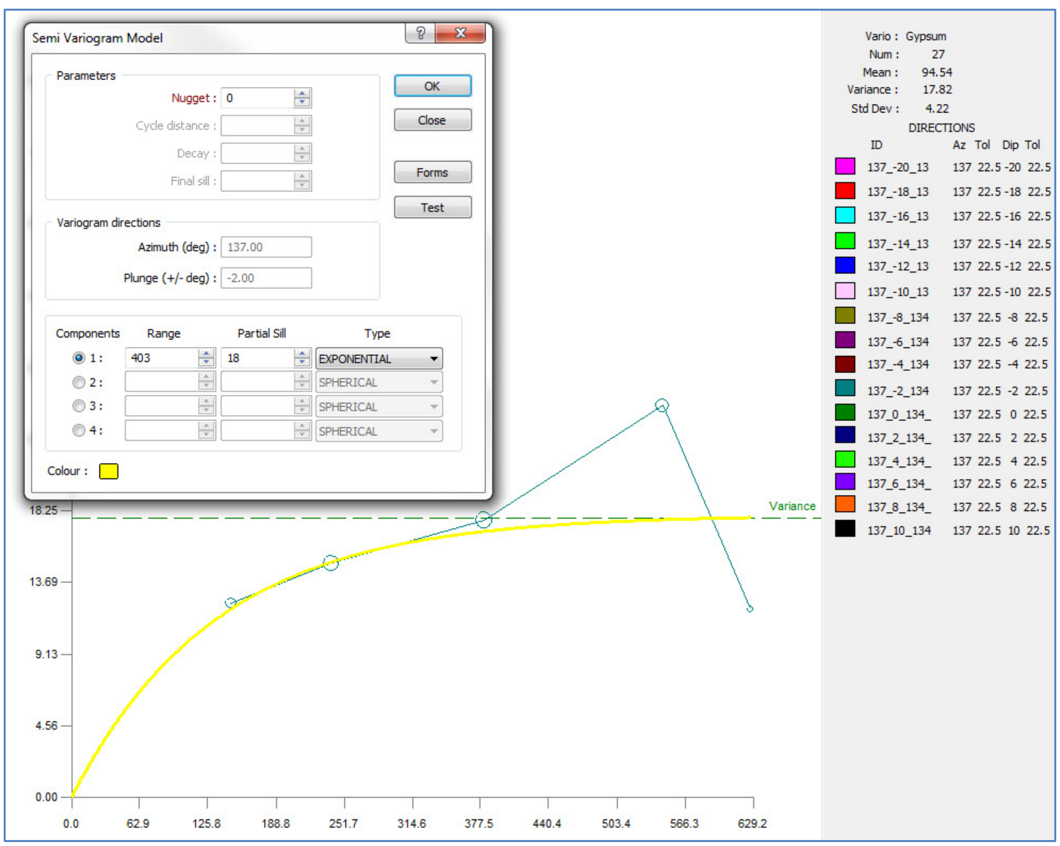

Figure 14.7. Ana Sofia semi-variogram for direction one/ strike of mineralization (137°).

14.8 Bulk Density (Specific Gravity)

No bulk density measurements have been collected to date. A nominal bulk density of 2.35 kg/m^3 has been utilized for pure gypsum, which is reasonable as a review of published data for the density of the mineral gypsum ranges from 2.2 to 2.6 kg/m^3, with the average being approximately 2.35 kg/m^3. As such 2.35 kg/m^3 is reasonable for use for this application. Additionally, a nominal density of 1.65 kg/m^3 was chosen for the poorly consolidated clays that often form a minor component within the gypsum layers. With respect to the resource estimation effort, a blended density value was calculated for each sample within the modeled layers based upon their gypsum content and an assumption that the remainder of each sample is clay. During resource estimation, a blended density value was applied to each block in a similar manner as the estimated gypsum value.

14.9 Block Model Extents and Block Size

A parent block size of 50 m x 50 m x 1.0 m was chosen for the Ana Sofia resource estimation effort. This is deemed appropriate based on the current level of trench spacing which varies from 42 m to 330 m. The trench spacing is reasonably well spaced across the resource area with the average spacing between 100m and 200 m. The block model extents were extended far enough to encompass the entire domain.

The coordinate ranges and block sizes (dimensions) that were used to build the 3D block models for the gypsum layers are presented in Table 14.4. Sub-blocking was used to more effectively honour the volumes and shapes created during the geological interpretation of the wireframes. The sizing data was only interpolated into parent blocks. A comparison of wireframe volume versus block model volume was performed to ensure there was no significant overstating of tonnages (Table 14.5). Each block was coded with the wireframe name so that sizing could be estimated as hard boundaries.

Table 14.4. Block model extents and cell dimensions for the Ana Sofia block model.

Deposit	Block Model Dimensions (m)	Easting	Northing	Elevation
Ana Sofia	Maximum	4340200	6901700	440
	Minimum	439100	6900000	405
	Parent Cell Size	50	50	1
	Sub Blocking Cell Size	5	5	0.1

Table 14.5. Block model versus wireframe volume comparison.

	Wireframe Volume (m3)	Block Model Volume (m3)	% Difference
AS2 Final	542,831	542,823	0.00%
AS2-2 Final	113,112	113,153	0.04%
Total	655,943	655,975	0.00%

14.10 Grade Estimation and Search Ellipsoids

The Ana Sofia gypsum resource estimate was calculated using inverse distance to the power of one methodology. The power of one was chosen given the low variability in the gypsum values. Estimation was only calculated on parent blocks. All sub-blocks within each parent block were assigned the parent block grade (and density). A block discretization of 4 (X) x 4 (Y) x 1 (Z) was applied to all blocks during estimation. Each wireframe was estimated as hard boundaries which means that only samples located within that wireframe were used to estimate the grade of the blocks within that wireframe.

There were four passes (runs) of estimation performed for each wireframe. The size of the an-isotropic search ellipsoid was based on the suggested ranges obtained from variography and the orientation of the test pitting. The first estimation run comprised a search range of 40% (500m) of the suggested range of the structure to determine areas of the resource that had higher levels of confidence. A minimum of four samples from two drill holes were used to constrain the first estimation run. With each of the following estimation runs, either the search ellipsoid increased in size or the estimation criteria decreased in rigor until all blocks had a calculated value of percent gypsum assigned. The estimation criteria for each pass are provided in Table 14.6.

Table 14.6. Estimation and search ellipsoid criteria for the Ana Sofia inferred mineral resource estimation.

Run number	Minimum No. of samples	Minimum No. of holes	Search Ellipse range (m)	% Blocks estimated
1	2	2	75 x 75 x 10	48
2	2	2	150 x 150 x 10	45
3	2	1	300 x 300 x 10	6
4	1	1	500 x 500 x 10	1

14.11 Pricing

In November of 2016 Centurion (and Demetra) announced the successful commissioning of a 200 tonne/day pilot plant (see Centurion Press Release dated November 23, 2016). The operation of the pilot plant will allow the companies to investigate and optimize procedures for the quarrying and processing of gypsum at the Property. In the same Press Release, Centurion added that a sales agreement had been executed with a fertilizer distributor who has agreed to purchase up to 50,000 tonnes of gypsum product per annum at prices ranging from CDN$80-$100/tonne. The actual contract has prices quoted in US dollars and thus the above noted price range reflects potential exchange rate fluctuations but also reflects a price difference between the two gypsum products that will result from the crushing and screening of quarried gypsum material with the favored granular product demanding a slightly higher price than the powdered product. Based upon the results of previous small scale testing, the current pilot plant has been designed (and is expected) to produce gypsum in granular and powdered grain sizes at a ratio of approximately 2:1. The pilot plant test work is ongoing and results will be released following the conclusion of the test program.

With respect to an examination of the resource's "prospects for eventual economic extraction", the authors of this report used a base price of US$60/tonne for quarried and crushed gypsum product.

14.12 Model Validation

14.12.1 Visual Validation

The blocks were visually validated in plan view comparing estimated block %gypsum values with the neighboring sample %gypsum values (Figures 14.4 to 14.5). In addition, the block and sample data was compared by globally, easting and northing slices. These swath plot comparisons are presented in Figure 14.10 to 14.12. Considering the small number of test pits overall the model compares well with the sample data that was used to complete the estimation. There is some local over and under estimation observed. Due to the limited number of sample points available for the estimation this is an expected result. Overall the estimated block gypsum percent compare well with the input sample gypsum values.

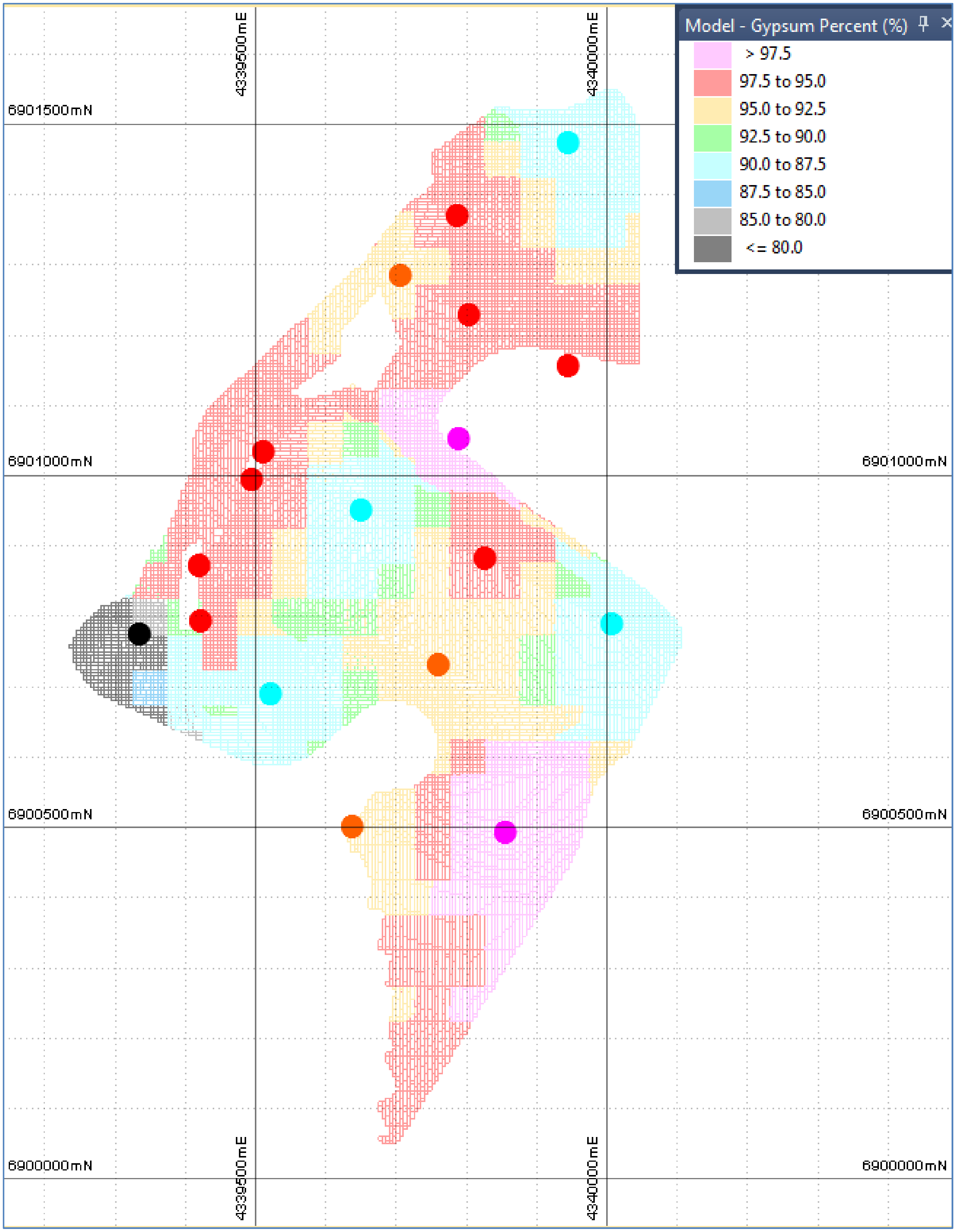

Figure 14.8. Plan view of AS2 gypsum horizon comparing trench sample gypsum percent versus estimated block model gypsum percent.

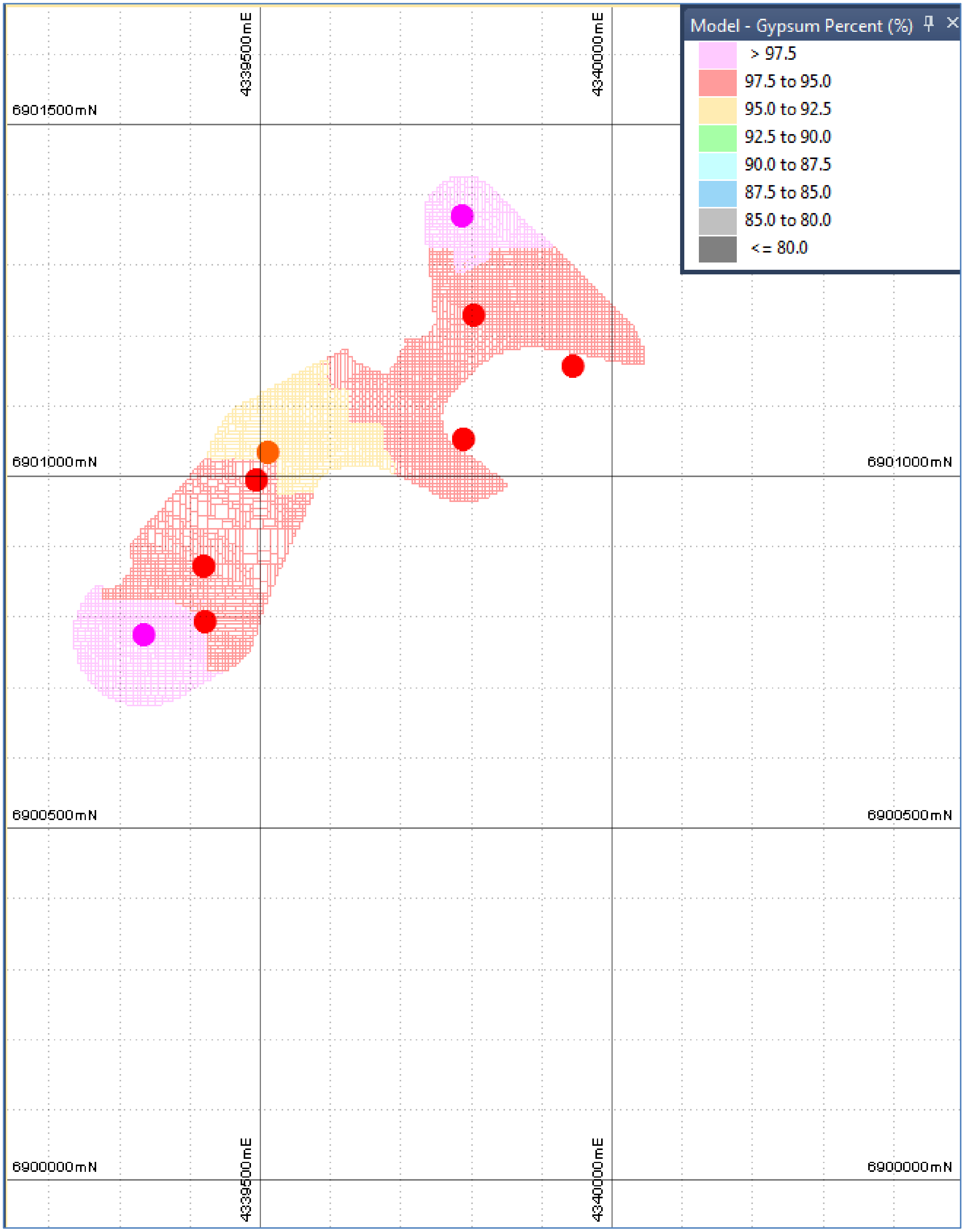

Figure 14.9. Plan view of AS2-2 gypsum horizon comparing trench sample gypsum percent versus estimated block model gypsum percent

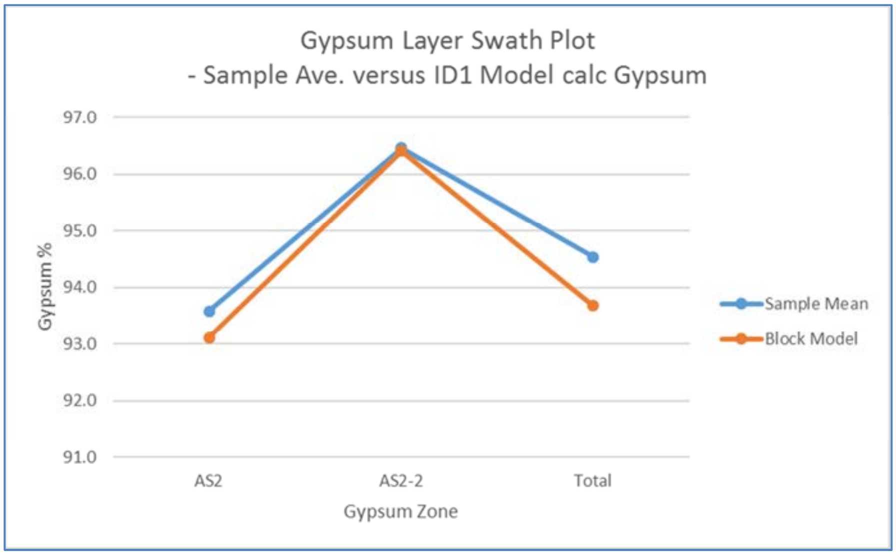

Figure 14.10. Lode/gypsum horizon SWATH plot of sample gypsum (%) versus estimate gypsum (%) in the block model.

14.12.2 Easting, Northing and Elevation Comparison

The composite sample average and the calculated grade of the block model was calculated on 100 m composite sections across the easting (Figure 14.11), and northing (Figure 14.12). The purpose is to compare the input composite sample file with the resulting block model data to make sure no gross over or under estimation occurs. The easting, northing composites generally compare quite well. There is some local over and under estimation observed, but this is to be expected with the estimation process and the limited number of samples and the wide spaced nature of the trenching. Overall the block average grades follow the general trend of the input sample data.

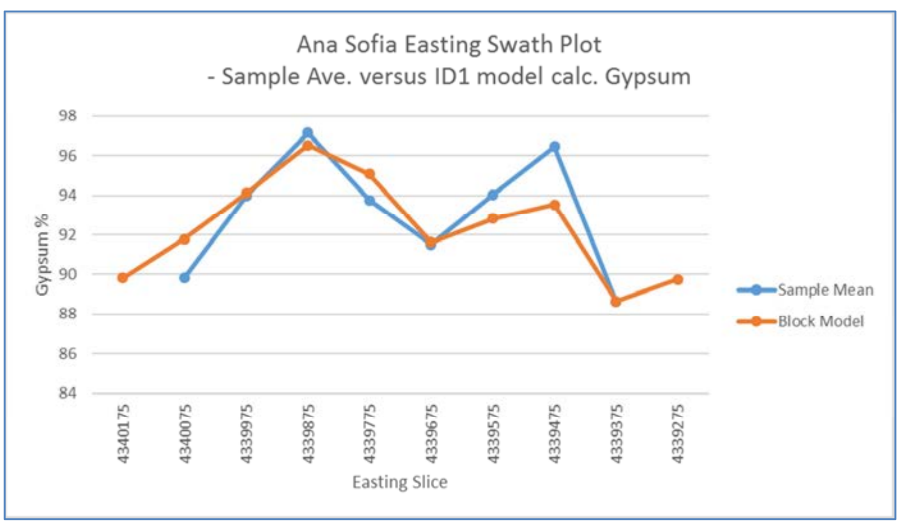

Figure 14.11. Easting SWATH plot of sample gypsum (%) versus estimate gypsum (%) in the block model.

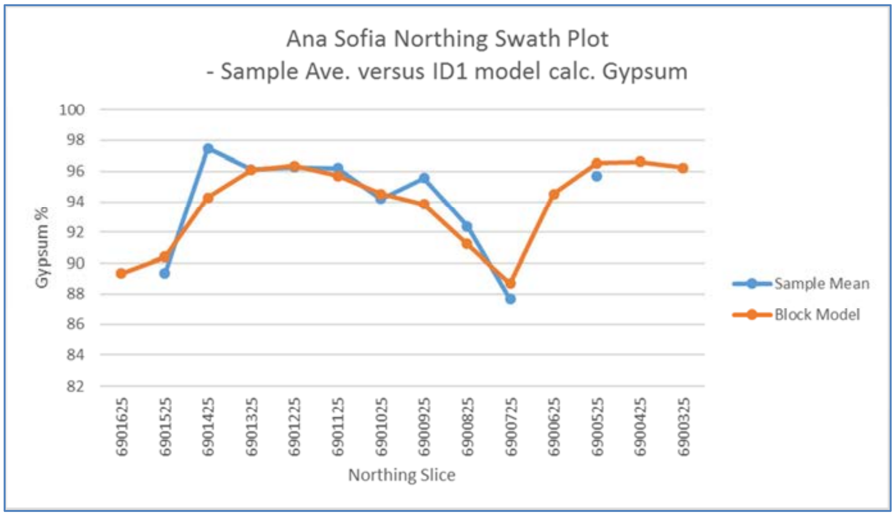

Figure 14.12. Northing SWATH plot of sample gypsum (%) versus estimate gypsum (%) in the block model.

14.13 Resource Classification

The Ana Sofia Inferred Gypsum Resource estimate has been classified in accordance with guidelines established by the CIM "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines" dated November 23rd, 2003 and CIM "Definition Standards for Mineral Resources and Mineral Reserves" dated May 10th, 2014.

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

An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

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

The current Ana Sofia gypsum resource estimate has been classified as inferred according to the CIM definition standards. The classification of the Ana Sofia Inferred Gypsum Resource estimate was based on geological confidence, data quality and grade continuity. The most relevant factors used in the classification process were:

- Trench number and spacing density
- Level of confidence in the geological interpretation where the observed stratigraphic horizons are easily identifiable along strike and across the deposit, which provides confidence in the geological and mineralization continuity; and
- Estimation parameters/run number (i.e. continuity of gypsum)
- Number and nature of the existing sampling.

The reader is cautioned that mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that any part of the Ana Sofia inferred mineral resource will be converted into a mineral reserve. The collective work to date at the Ana Sofia Property indicates that while the project is currently at a relatively early stage of exploration and resource development, there remains a significant potential for economic gypsum development. The main factor preventing the classification of the Ana Sofia Inferred Mineral Resource at a higher level of confidence (i.e. as an Indicated Resource) is data density. Additional test pitting, and/or drilling data, would be required to reduce data spacing and increase the confidence in the correlation of the gypsum layer(s) between sample sites.

14.14 Evaluation of Reasonable Prospects for Economic Extraction

In November of 2016 Centurion (and Demetra) announced the successful commissioning of a 200 tonne/day pilot plant (see Centurion Press Release dated November 23, 2016). The operation of the pilot plant will allow the companies to investigate and optimize procedures for the quarrying and processing of gypsum at the Property. In the same Press Release Centurion added that a sales agreement had been executed with a fertilizer distributor who has agreed to purchase up to 50,000 tonnes of gypsum product per annum at prices ranging from CDN$80-$100/tonne. The actual contract has prices quoted in US dollars and thus the above noted price range reflects potential exchange rate fluctuations but also reflects a price difference between the two gypsum products that will result from the crushing and screening of quarried gypsum material with the favored granular product demanding a slightly higher price than the powdered product. Based upon the results of previous small scale testing, the current pilot plant has been designed (and is expected) to produce gypsum in granular and powdered grain sizes at a ratio of approximately 2:1.

In order to demonstrate that the gypsum estimated in the Ana Sofia Inferred Gypsum Resource has "reasonable prospects of eventual economic extraction", this Technical Report relies on base case cut-offs and conceptual costs. In addition, a base case price of US$60/tonne (~CDN$80/tonne) has been used. A base cut-off grade of 85% gypsum is hereby recommended and is considered suitable for the reporting of the Ana Sofia Inferred Gypsum Resource, as per the minimum requirement for Argi-gypsum products in Argentina.

No pit optimisation studies have been performed to date, but various scenarios of barren overburden to gypsum ratios (stripping ratios) have been examined for their potential economic viability. The results of a review of potential maximum stripping ratios, which is essentially also examining "reasonable prospects of eventual economic extraction" (see Table 14.2), indicates that the gypsum layer(s) at the Ana Sofia Projects will support stripping ratios of up to approximately 6:1 to 7:1. This data also indicates that an overburden thickness (depth to gypsum) of approximately 10m has the potential to yield breakeven to slightly profitable quarrying scenarios depending upon the thickness of the gypsum layer being quarried. The analysis presented in (see Table 14.2) reflects the average thickness of the main (upper), and most extensive, gypsum layer in the resource area, which is 1.1m, and this scenario yields a potentially profitable result. However, if the gypsum thickness drops to approximately 85cm, this analysis becomes essentially a breakeven scenario. As a result, a maximum thickness of overburden of 10m, which represents a potential stripping ration of approximately 6.5:1 based upon the average thickness of the main gypsum layer across the resource area, has been selected in order to limit the resource estimation effort discussed in this report. Thus, the authors of this report consider that the initial inferred gypsum resource, as reported below, has "reasonable prospects of eventual economic extraction".

14.15 Mineral Resource Reporting

The current maiden gypsum resource for the Ana Sofia property has been classified as an 'Inferred Mineral Resource' in accordance with the Canadian Securities Administrators National Instrument 43-101 and has been estimated using the CIM "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines" dated November 23rd, 2003 and CIM "Definition Standards for Mineral Resources and Mineral Reserves" dated May 10th, 2014.

This is the maiden NI 43-101 compliant resource for the Ana Sofia property. The resource has been estimated within three dimensional solids that were created from cross sectional interpretation. The gypsum, percent was estimated into a block model with parent block size of 50 m (E) by 50 m (N) by 1 m (Elev) and sub blocked down to 5 m (E) by 5 m (N) by 0.1 m (Elev). A nominal density of 2.35 kg/m^3 was used for gypsum and 1.65 kg/m^3 for clay. A blended density was calculated based on the gypsum/clay percent ratio. Gypsum estimation was performed using inverse distance to the power of one methodology. The Ana Sofia deposit was classified as an inferred resource estimate.

Using an 85% base cut-off for the gypsum percentage, the maiden Ana Sofia inferred gypsum resource has been estimated to comprise **1.47 million tonnes of**

material containing an average of 94.1% gypsum (Table 14.7). Consistency of "grade", and the generally high quality of the gypsum within the inferred resource, is demonstrated in Table 14.7, which provides a summary of the resource at a variety of cut-off grades (gypsum percentages).

Table 14.7. Estimation and search ellipsoid criteria for the Ana Sofia inferred mineral resource estimation.

Gypsum Lower Cut-off (wt%)	Volume (m3)	Tonnes (t)	Gypsum (wt%)	Density (kg/m3)
0	656,000	1,513,000	93.7	2.31
82.5	642,000	1,483,000	94.0	2.31
85	**637,000**	**1,470,000**	**94.1**	**2.31**
87.5	633,000	1,461,000	94.1	2.31
90	483,000	1,120,000	95.8	2.32
92.5	459,000	1,065,000	96.0	2.32
95	345,000	803,000	96.8	2.33
97.5	88,000	205,000	97.9	2.34

Note 1: Indicated and Inferred Mineral Resources are not Mineral Reserves. Mineral resources which are not mineral reserves do not have demonstrated economic viability. There has been insufficient exploration to define the inferred resources as an indicated or measured mineral resource, however, it is reasonably expected that the majority of the Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration. There is no guarantee that any part of the mineral resources discussed herein will be converted into a mineral reserve in the future.

Note 2: Tonnes have been rounded to the nearest 1,000.

Note 3: The Density figures shown above are blended densities based upon the ratio of gypsum and clay, assuming all non-gypsum sample material is clay, where gypsum and clay have been given the nominal densities of 2.35 kg/m^3 and 1.65 kg/m^3, respectively.

The Ana Sofia mineral resource estimate is reported in accordance with the Canadian Securities Administrators National Instrument 43-101 and has been estimated using the CIM "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines" dated November 23rd, 2003 and CIM "Definition Standards for Mineral Resources and Mineral Reserves" dated May 10th, 2014. Due to the relatively wide spacing of the historical quarries and the 2016 test pits, which varies between 40 m and 300 m, the Ana Sofia 2 resource described herein is categorized entirely as an inferred mineral resource. The preceding table summarizes the results of the mineral resource estimation work at the Ana Sofia 2 concession where a cut-off of 85% gypsum was used for reporting purposes, which represents the minimum required gypsum content for agricultural gypsum products in Argentina.

15 Adjacent Properties

Two (2) small competitor's mineral concessions are located immediately north of Demetra's Ana Sofia 2 mining lease, which are owned by private individuals (Mr. Gaston Figueroa is the owner of the western concession and Mr. Miguel Gomez is the owner of the eastern concession). There is no formal record of any mineral exploration on either of these concessions. The author of this report did not observe any evidence of active or recent mineral exploration or development on the western competitor's concession. However, during the primary author's most recent site visit in July of 2016, active quarrying was observed on the eastern competitor's property approximately 1.6km northeast of the center of Ana Sofia 2 concession just east (outside of) the eastern edge of the Ana Sofia Exploration Permit boundary. At that time, a quarry was observed oon the eastern competitor's concession exposing a ~0.5m thick good quality gypsum layer over an area measuring approximately 100-125 m x 10-15 m.

During the most recent site visit (July 2016), the primary author of this report also observed small scale active quarrying at two other locations on private lands and competitor's mining concessions located within 5-6 km of the Centurion/Demetra Ana Sofia Property. The first is a small historical quarry located approximately 100m west of the Ana Sofia 1 mineral concession. The second is large quarry (~200m wide working face) located approximately 5km northeast of the Ana Sofia Property just north of the town of Villa Rosa (see Figure 4.1). There is no reliable information available with respect to the size and grade of the mineral resources being exploited at these locations.

The Estela-Cecilia Gypsum Property that is owned by the Pan American Fertilizer Corporation and is located 40 km northeast of the Ana Sofia Property. It is located in the northern Guasayán Mountains. The gypsum is hosted within the same formation as at the Ana Sofia Property, the Miocene Guasayán Formation, which consists of (green) clays, shales, sandstones and minor tuff interbedded with gypsum. At Estela-Cecilia, the target stratigraphy contains at least two, and possible six, one metre thick gypsum beds. The upper unit of gypsum has higher grades than the lower unit with values between 87% to greater than 95% gypsum. The lower gypsum unit is lower in purity (grade) with values between 70% and 80% $CaSO_4 \cdot 2H_2O$ (Cuttle, 2013).

16 Other Relevant Data and Information

The author is not aware of any other relevant data that might be material to the Ana Sofia Property or that might otherwise affect the Conclusions and Recommendations presented in this report.

17 Interpretations and Conclusions

The Ana Sofia Property that is the subject of this report is owned by Demetra Minerals Inc., a private Canadian junior mineral exploration company based in Vancouver, British Columbia, Canada, through a wholly owned subsidiary (Demetra Fertilizantes S.A.). On January 29, 2016 Demetra entered into a 50:50 Joint Venture agreement with respect to the evaluation and development of the Ana Sofia Property with Centurion Minerals Ltd., a TSX.V listed Canadian junior mineral exploration company also with head offices located in Vancouver.

The Ana Sofia Property is being explored and developed for the industrial mineral gypsum as an agricultural product (soil conditioner) and covers past-producing gypsum quarries. The Property is located in a district known for its previous and current small scale gypsum production. The flat-lying gypsum layers that are the target of exploration and development in the region are sedimentary (evaporitic) in origin and are interbedded with green clays comprising the Miocene Guasayán Formation.

The Ana Sofia Property comprises two (2) non-contiguous mineral concessions (mining leases), approximately 400m apart, which total 50 ha in size (Ana Sofia 1 – 7 ha, Ana Sofia 2 – 43 ha) within a 600 ha mineral exploration permit area, which remains in application (not yet formally granted). The Property is located within 1 km (north) of a paved highway (hwy 64) approximately 45 km southwest from the city of Santiago del Estero, in the state of the same name in north central Argentina approximately 1100 km northwest of Buenos Aires.

The southern and smaller Ana Sofia 1 mining concession does not have any history of previous exploration or development, although there are historical quarries present within 2-300m both east and west of the concession. The northern and larger Ana Sofia 2 concession was originally selected by Demetra due to the presence of high purity gypsum exposed in several historical quarries located along a northeast trend through the center of the concession area. There is little reliable information available with respect to historical production from any of the quarries located on, or immediately adjacent to, the Ana Sofia Property, although Demeta has indicated that Pan American Fertilizer shipped approximately 5,000 tons (~4536 t) of crushed gypsum product between December 2013 and April 2015 with a similar quantity of crushed gypsum remaining on the Ana Sofia 2 concession in stockpiles and ore bags.

There are no known environmental liabilities at the Ana Sofia Property. Infrastructure at the Property is currently limited but includes a high voltage power line that passes across the southern end of the Ana Sofia Exploration Permit along the north side of highway 64.

Exploration work at the Property prior to 2016 included limited test pitting and surface sampling programs. The result of this work was the identification of several high purity gypsum layers within 5-7m of surface at both the Ana Sofia 1 and 2 mineral concessions.

A trenching program was conducted in 2014 at the Ana Sofia 1 concession in order to test for near surface gypsum units. Eight (8) of the 35 trenches encountered gypsum beds within 5 m of surface and one (Trench D1) encountered 1.9 m of gypsum starting just 2.2 m below surface and did not encounter the lower contact of the unit (de la Fuente, 2014). In June of 2015, a large trench was excavated in the northwest corner of the Ana Sofia 1 concession to expose gypsum-bearing strata and to act as a potential basin for catching rain water. In early 2015 Demetra collected a sample of high purity gypsum from the west end of this trench (sample “Alabastro”) as well as a sample from a stockpile of gypsum boulders adjacent to the main (central) quarry at the Ana Sofia 2 concession (sample “Sulfato”). The processing of these 2 samples showed that both were amenable for the production of the two main gypsum fertilizer products (granular and powdered) and returned gypsum values ranging between 97.85 wt% and 98.27 wt%.

The primary author of this report conducted a site visit to the Property between September 10 and 12, 2015, and collected a total of 9 rock samples. At the Ana Sofia 1 concession, the author examined the large northwest trench previously sampled by Demetra (discussed above) and examined the stratigraphy in two (2) test pits in the central and southwestern portions of the concession. At the Ana Sofia 2 concession, the author examined a series of historical quarries, stockpiles and cleared areas where the top of gypsum layers had been exposed. The samples collected by the primary author of this report ranged from 92.69 wt% and 98.57 wt% gypsum and averaged 95.80 wt% gypsum. In addition, the author examined historical quarries located immediately east and west of the Ana Sofia 1 concession. The following observations were made;

- Flat-lying gypsum-bearing strata of the Guasayán Formation was observed throughout the Ana Sofia Property and surrounding area, although locally portions of the gypsum-bearing stratigraphy appear to have been eroded (i.e. northwest portions of Ana Sofia 2).
- At least one (1), and possibly 2 to 3, relatively high-purity gypsum layers were observed in all 3 pits (including the NW trench) at the Ana Sofia 1 concession ("high-purity" is used in this report to denote a lithologic unit with 90 wt% or greater gypsum content).
- The high-purity gypsum layers encountered within the 2 test pits completed on the Ana Sofia 1 concession had true thicknesses ranging between 1.0 and 1.5 m.
- The Ana Sofia 1 gypsum target horizon thickness discussed above does not include additional gypsum-bearing layers of lesser purity (higher clay content) that were observed in both test pits adjacent to the main high-purity "target" horizon. More detailed testing is recommended to properly assess the gypsum content and production potential of these units.
- The Ana Sofia 1 gypsum target horizon thickness discussed above does not include a "lower" high-purity gypsum layer that was observed at the west end (deepest part) of the large NW Trench and at the bottom of both of the 2015 Test Pits, which is believed to represent the same unit at all 3 sites and was not fully penetrated (partial thicknesses ranged between 40 cm and 60 cm).
- One (1) relatively high-purity gypsum layer was observed along an almost 850 m long northwest trend through the center of the Ana Sofia 2 concession in historical quarries and several cleared areas where overburden had been removed but no quarrying had been undertaken.
- The true thickness of the "target" gypsum layer at the Ana Sofia 2 concession ranged from 0.8 m to 1.25 m.

- As with the Ana Sofia 1 concession, additional gypsum-bearing layers were observed in the quarries in the south and central parts of the Ana Sofia 2 concession and were not included in the thickness measurements.

Based on these observations and the results of previous sampling at the Ana Sofia Property, Centurion and Demetra completed a sizeable Test Pitting (Trenching) program at the Ana Sofia 2 concession between April 1 and May 10, 2016. The program was intended to test the lateral extents of the main high-purity gypsum layer that had been exposed by historical quarrying along an 800m-long northeast striking trend that had returned values of up to 96.1 wt% gypsum (2015 APEX sampling).

The 2016 exploration program at the Ana Sofia 2 concession comprised the excavation of 21 test pits. The test pits comprised a total of 169.6m of vertical excavation (depth) and averaged 8m in depth with the shallowest excavation being 3.9m and the deepest being 15.0m. The pits exposed relatively flat-lying stratigraphy throughout the area and thus were mapped and sampled vertically on one wall each to mimic vertical drill holes. The flat-lying, or very shallow east-dipping, nature of the gypsum-bearing stratigraphy combined with a gradual slope of topography in the area down to the west and northwest has resulted in the erosion of the gypsum layers within 1-200m west of the north-easterly trend of the historical quarries on the Ana Sofia 2 concession. This has also resulted in a gradual deepening of the main gypsum layer to the east as topography rises and overburden increases.

At least one (1) high-purity gypsum layer was exposed in 18 of the 21 test pits completed in 2016. In 9 of the 21 test pits, primarily located along the western side of the test area, a second high-purity gypsum layer was identified beneath the main (upper) gypsum layer. The two layers are normally separated by approximately 0.5m of green clay. The gypsum layers ranged in thickness from 0.4 m to 2.0m, with average thicknesses of 1.1m for the upper (main) layer and 0.7m for the lower layer. The upper gypsum layer was observed to be more or less continuous over an area roughly 1,500m in length (striking northeast) by 850m (across strike to the southeast). The lower gypsum layer was observed in test pits along the western edge of the test area along a roughly 850m strike length (to the northeast) by up to 300m across strike (to the southeast).

The two gypsum layers encountered during the 2016 Ana Sofia test pitting program exhibited remarkable consistency and high purity across the tested area. With respect to the 18 samples (from 18 test pits) that comprise the upper gypsum layer, the calculated weight percent gypsum (wt%gyp) values ranged between 79.31 wt%gyp and 97.95 wt%gyp with an (arithmetic) average of 93.58 wt%gyp (length-weighted average is 93.54 wt%gyp). The lower gypsum layer encountered during the test pitting program comprised 9 samples (from 9 test pits) that returned analytical results ranging from 93.89 wt%gyp to 97.95 wt%gyp with an (arithmetic) average of 96.46 wt%gyp (length-weighted average is 96.45 wt%gyp).

The primary author of this report conducted a visit to the property following the completion of the 2016 test pitting program between July 24 and 26, 2016. During the visit, all of the 2016 test pits were examined, sampling locations were confirmed by hand-held GPS and the mapping and sampling completed by Demetra personnel was also examined for accuracy and completeness. In addition, observations were made with respect to stratigraphic correlations between the test pits to facilitate the geological modeling and resource estimation work described in this report. In short, no significant issues were noted by the author and five check samples from five different test pits averaged 90.5 wt% gyp that matched very closely the values obtained from the Demetra samples for the same intervals (correlation coefficient of 0.9194). As a result of this and other check sample analyses, the final dataset of weight percent gypsum values determined by ALS (Vancouver) was considered by the authors of this report to be sufficiently validated, and therefore suitable, for use in a geological modeling and resource estimation effort.

Geological modeling was completed for both the Upper and Lower gypsum layers examined by the 2016 test pitting program at the Ana Sofia Property. Three-dimensional (3-D) solids were created for both gypsum layers from two-dimensional (2-D) strings created on northwest striking sections through the 2016 test pits, which had an average spacing of approximately 150m. The upper gypsum layer was observed to be more or less continuous over an area roughly 1,500m in length (striking northeast) by 850m (across strike to the southeast). The lower gypsum layer was observed in test pits beneath the western edge of the upper gypsum layer over an area roughly 850m in length (striking northeast) by up to 300m (across strike to the southeast). The Upper (main) gypsum solid was trimmed to remove volumes corresponding to 4 historical quarries where that layer had been mined out. The lower gypsum layer was trimmed to remove material that was mined previously from 1 historical quarry. Both layers were trimmed by a topographic surface that was created from 90m-spaced SRTM data (SRTM - “Shuttle Radar Topography Mission”, near global digital elevation model). In addition, both layers were trimmed to remove those parts of the volumes laying more than 10m from surface above which, in the opinion of APEX, the tested gypsum layers have a reasonable prospect for eventual economic extraction.

Resource modelling and estimation for each gypsum layer was carried out using a 3-dimensional block model based on geostatistical applications using commercial mine planning software (MICROMINE v14.0.6). A parent block size of 50 m x 50 m x 1m was used with sub-blocking down to 5 m x 5 m x 0.1 m. A total of 27 analyses in 18 test pits were contained within the modeled gypsum layers, comprising 18 analyses within 18 test pits for the upper layer and 9 analyses within 9 test pits for the lower layer. Grade (as weight percent gypsum) was assigned to blocks using the inverse distance to the power of one methodology given the very low variability within the gypsum unit analyses. Estimation was only calculated on parent blocks and all sub blocks within each parent block were assigned the parent block grade. A block discretization of 4 (X) x 4 (Y) x 1 (Z) was applied to all blocks during estimation. Each wireframe was estimated as ‘hard boundaries’ such that only samples located within each wireframe were used to estimate the grade of the blocks within each wireframe. A blended density value was similarly assigned to each parent block (and their respective sub-blocks) based upon the grade of each parent block (wt%gyp) where a density value of 2.35

kg/m3 was used for pure gypsum and the remainder was treated as minor interbedded clays for which a density value of 1.65 kg/m3 was used.

The 2016 maiden resource for the Ana Sofia Property is estimated at **1.47 million tonnes of material averaging 94.1 wt%gyp**. The size and average grade of the resource at a variety of lower cut-off gypsum values is presented in Table 14.7, which includes the reported resource calculated at an 85 wt%gyp cut-off, which is the minimum required gypsum content for agricultural gypsum products in Argentina. The resource was categorized as an indicated mineral resource based primarily on the relatively large sample spacing averaged roughly 125 m to 200 m.

18 Recommendations

This technical report describes a maiden inferred gypsum resource estimate for the Ana Sofia project in north central Argentina. As a result, it is the opinion of the authors of this report that the Ana Sofia Property remains a “property of merit’ warranting further exploration work. It is recommended that future work programs should continue to evaluate the current resource area in order to increase the level of certainty with respect to the modeled extent of the gypsum layers it comprises. In addition, it is recommended that additional exploration work should be conducted elsewhere at the Property, particularly on and around the Ana Sofia 1 concession, where previous exploration is limited.

In order to further evaluate the current resource area at the Project, the following work programs are recommended. Firstly, a ground penetrating radar (GPR) survey is recommended in order to examine the depth of the gypsum (overburden thickness) throughout the area and to see if it can identify the exact location of the erosional edge of the gypsum along the western side of the resource area. Secondly, detailed topographic surveying is recommended for the entire property. This can either be achieved by systematic ground surveying or by drone surveying, the latter being recommended as a far more cost-effective means of data collection that could comprise either photogrammetric or LIDAR (Light Detection and Ranging) survey systems. Finally, additional test pitting and/or auger drilling is recommended in order to decrease the average spacing of the gypsum test points throughout the area and increase resource confidence.

Additional test pitting and/or drill testing is recommended to thoroughly evaluate the remainder of the Property for additional layers of high-purity gypsum, particularly at and around the Ana Sofia 1 concession area. The information from the recommended work programs should be compiled with previous data for the purpose of updating the gypsum resources on the Property. The review of mineral resources should also include any and all data resulting from the pilot plant test work currently underway at the Property.

It is estimated that the recommended GPR and topographic surveys will require an expenditure of approximately $20-25,000. With respect to the recommended auger drilling and/or test pitting work, budget estimation is somewhat difficult due to a lack of suitable auger drilling contractors that have been identified to date, which Centurion and

Demetra will continue to investigate. As a result, additional test pitting has been used to estimate the cost of this portion of the recommended work program. A sizeable test pitting program at the Property that would add a further 10-15 sample sites at the Ana Sofia 2 (resource area) and another 10-15 sample sites elsewhere on the Property (including the Ana Sofia 1 concession area) is estimated to require an expenditure of approximately $170-175,000. Finally, approximately $35,000 should be budgeted for a re-evaluation of the resources at the Property and subsequent reporting, including a site visit by the Q.P. As a result, the total estimated expenditure for all of the recommended work programs is approximately $230,000 (see Table 18.1).

Table 18.1. Budget For Recommended Work At The Ana Sofia Property.

Items	Details	Units	Unit Costs	Total Cost	
Proposed Ground Penetrating Radar Survey					
	labour - operator	10 days	$500.00	$5,000.00	
	airfare	1		$3,000.00	
	data processing	5 days	$500.00	$2,500.00	
	unit rental	1 week	$2,000.00	$2,000.00	
	line cutting and misc.			$2,500.00	
					$15,000.00
Proposed Topographic Survey (Drone Photogrammetry)					
	survey cost/unit rental	7 days	$1,000.00	$7,000.00	
	data processing	6 days	$500.00	$3,000.00	
					$10,000.00
Proposed Excavation and Test Processing					
	Wages				
	Sampler and Supervision	60 days	$1,500.00	$90,000.00	
	Equipment and Supplies			$7,500.00	
	Excavator				
	work	60 days	$750.00	$45,000.00	
	mob/demob			$10,000.00	
	Sample Analysis	250 samples	$50.00	$12,500.00	
	Miscelaneous				
	including QP visit, resource re-evaluation and reporting			$40,000.00	
					$ 205,000
			Estimated Cost of Recommended Work		**$ 230,000**

APEX Geoscience Ltd.

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Effective Date: October 30, 2016

Signing Date: December 15, 2016

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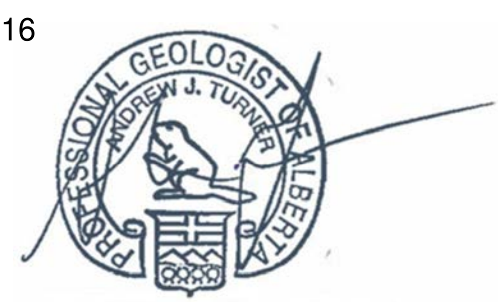
20 Certificate of Author

I, Andrew J. Turner, B.Sc., P.Geol, do hereby certify that:

1. I am Principal of: APEX Geoscience Ltd. (APEX)
Suite 200, 9797 – 45th Avenue
Edmonton, Alberta T6E 5V8
Phone: 780-439-5380
2. I graduated with B.Sc. in Geology from the University of Alberta in 1989.
3. I am and have been registered as a Professional Geologist with the Association of Professional Engineers and Geoscientists of Alberta since 1994.
4. I have worked as a geologist for more than 26 years since my graduation from university.
5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
6. I am responsible for and/or have supervised the preparation of all sections of the Technical Report titled *"Technical Report on an Initial Resource Estimate for the Ana Sofia Property, Santiago del Estero, Argentina"*, with an effective date of October 31, 2016, signing date of December 15, 2016 (the "Technical Report"). I last visited the Property between July 24 and 26, 2016.
7. I am not aware of any scientific or technical information with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
8. I am independent of the issuer applying all of the tests in section 1.4 of NI 43-101.
9. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
10. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files or their websites.

Dated this 15th day of December, 2016
Edmonton, Alberta, Canada



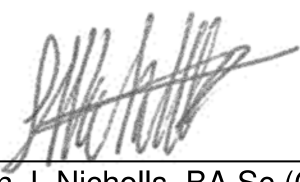
Andrew J. Turner B. Sc., P. Geol

Certificate of Author

I, Steven J. Nicholls, BA.Sc (Geology)., M AIG, do hereby certify that:

1. I am employee of: APEX Geoscience Australia Pty Ltd. (APEX)
   2B Russell Street
   Fremantle, Western Australia 6160
   Phone: 08 92216200
2. I graduated with a Bachelor of Applied Science in Geology from the University of Ballarat in 1997.
3. I am and have been registered as a Member with the Australian Institute of Geoscientists, Australia (AIG) since 2007.
4. I have worked as a geologist for more than 19 years since my graduation from university.
5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
6. I am responsible for Section 14: Mineral Resource Estimates within the Technical Report titled *"Technical Report on an Initial Resource Estimate for the Ana Sofia Property, Santiago del Estero, Argentina"*, with an effective date of October 31, 2016, signing date of December 15, 2016 (the "Technical Report"). I last visited the Property between July 24 and 26, 2016.
7. I am not aware of any scientific or technical information with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
8. I am independent of the issuer applying all of the tests in section 1.4 of NI 43-101.
9. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
10. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files or their websites.

Dated this 13th day of December, 2016
Perth, Western Australia, Australia



Steven J. Nicholls, BA.Sc (Geology)., M AIG

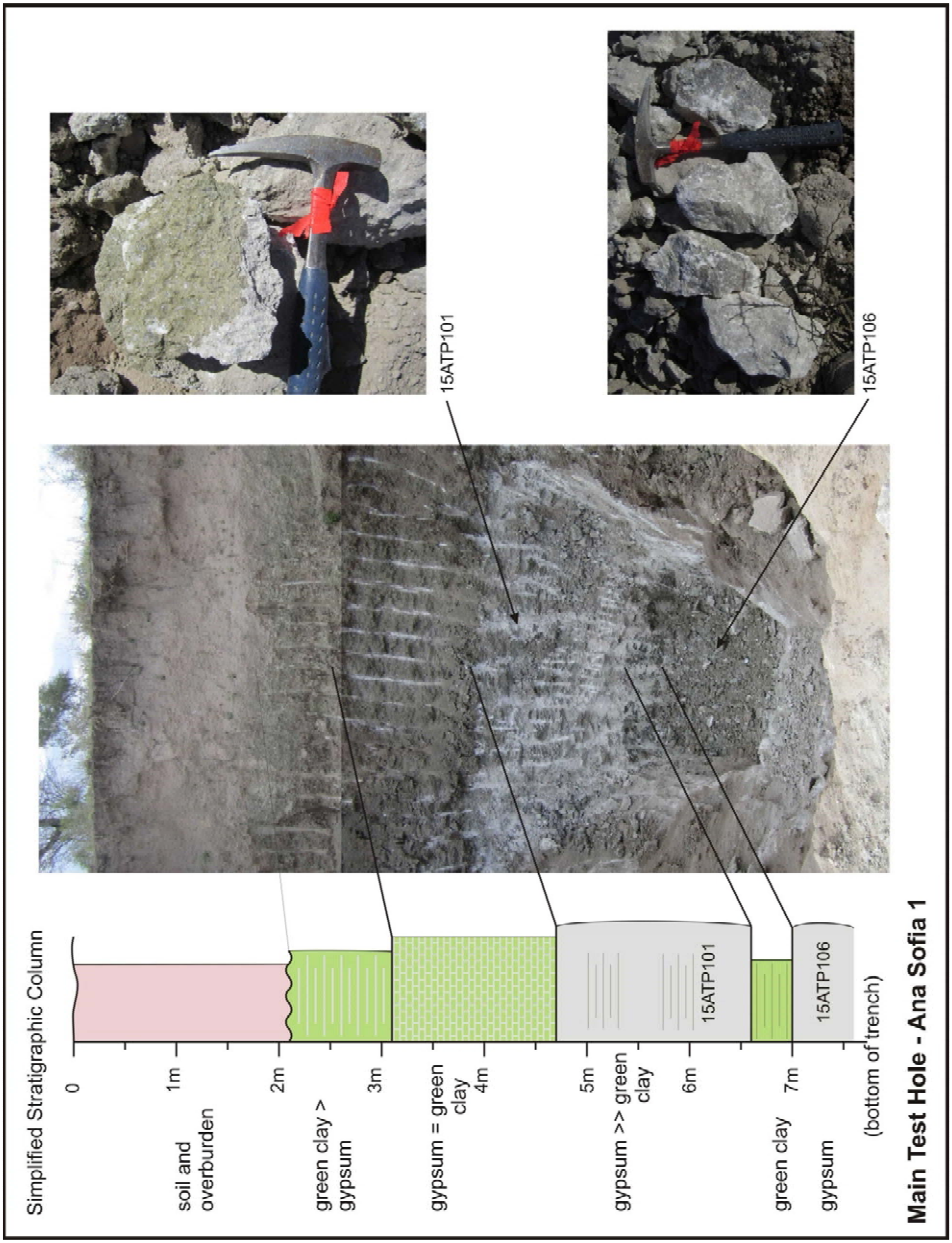
APEX Geoscience Ltd.

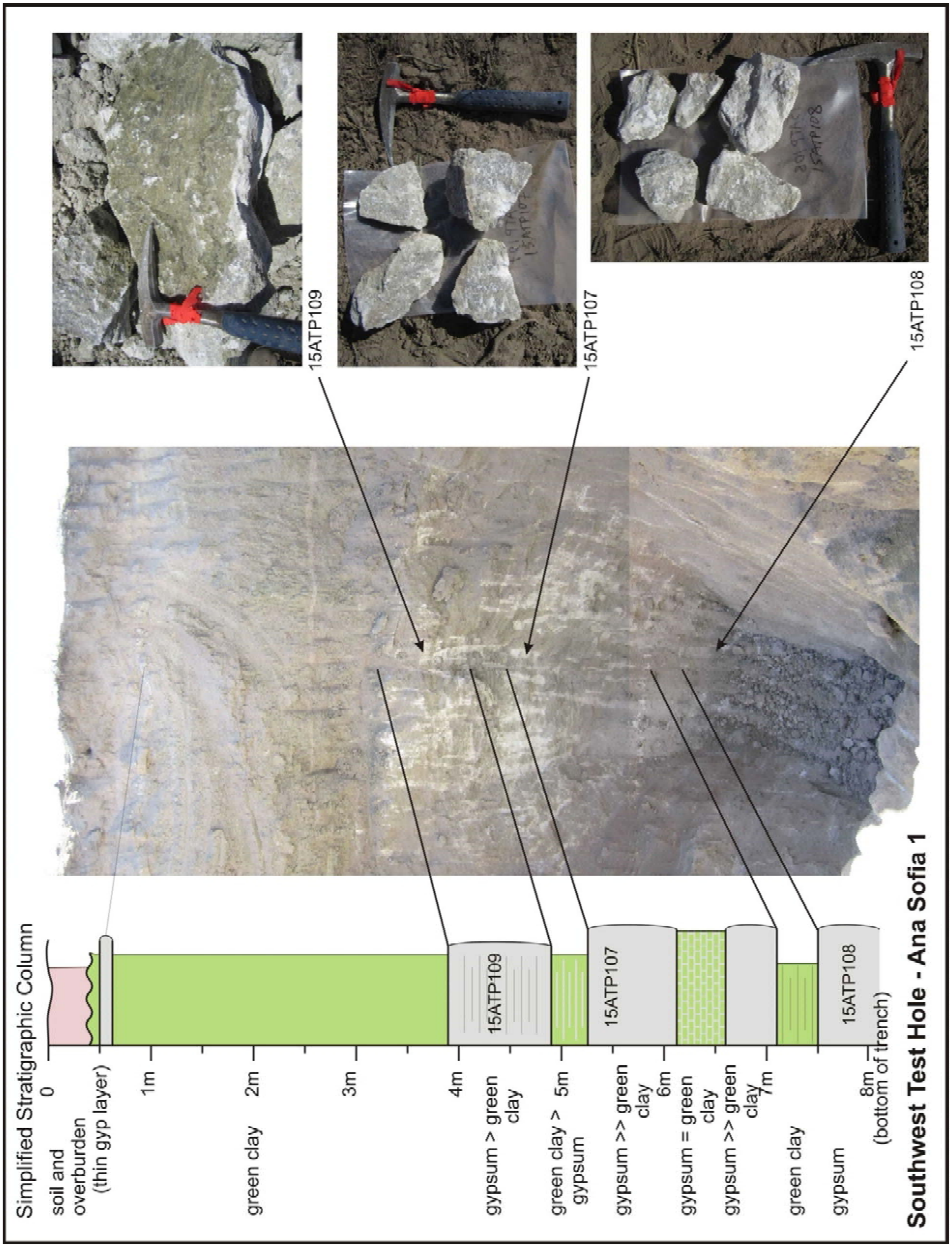
Appendix 1

Descriptions, Simplified Stratigraphic Sections and Photographs For The 2015 APEX Site Visit Rock Samples

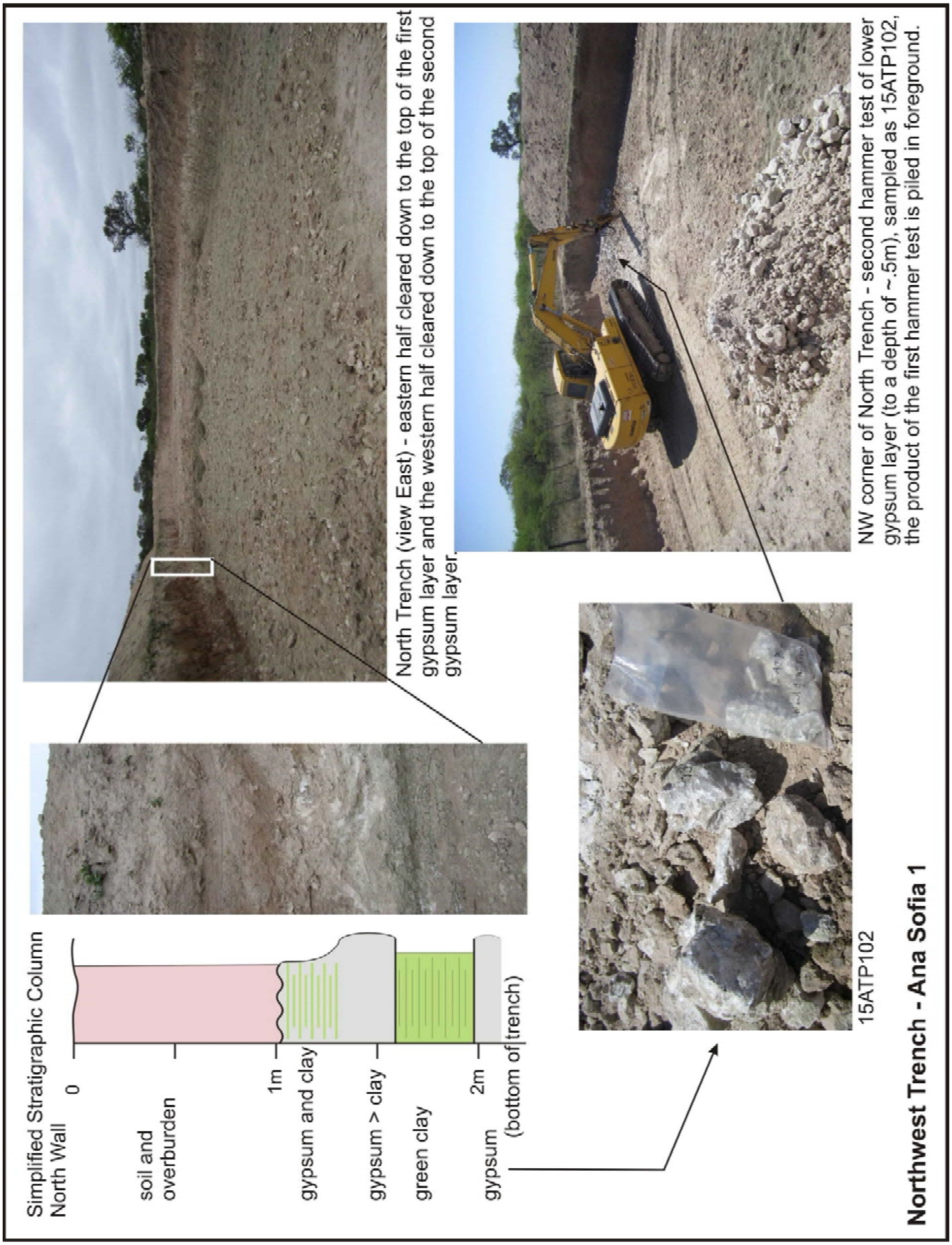
2015 APEX Rock Sample Descriptions

Sample	Mineral Concession	Location	Comment	% gypsum (estimated)	Longitude	Latitude	Easting	Northing	Description
					(WGS 84)		POSGAR 2007 (Zone 4)		
15ATP001	Ana Sofia I	Main Test Hole	lower purity	85%	-64.632729	-28.020688	4339420	6900156	Gypsum (> clay) with irregular patches, nodules and layers of green clay up to 15%
15ATP002	Ana Sofia I	NW Trench - NW corner	high purity = "Alabastro"	95%	-64.633940	-28.019684	4339300	6900266	Massive, grey-white, fine-med grained gypsum (alabaster) with only minor green clay clots and nodules
15ATP003	Ana Sofia II	central quarry area	high purity = "Sulfato"	95%	-64.630173	-28.012606	4339660	6901055	Collected from a stockpile of 30-60cm boulders of quarried massive, grey-white, fine-med grained gypsum (alabaster) with only minor green clay clots and nodules
15ATP004	Ana Sofia II	south quarry	high purity	90%	-64.632620	-28.014201	4339421	6900875	Thinly bedded to wavy laminated, white, fine-med grained gypsum (alabaster) with only minor green clay interbeds (laminae)
15ATP005	Ana Sofia II	(northern area)	high purity	90%	-64.628703	-28.009742	4339800	6901375	Composite grab sample of exposed gypsum, white, med-grained, with minor clay content, weathered
15ATP006	Ana Sofia I	Main Test Hole	high purity	95%	-64.632729	-28.020688	4339420	6900156	Massive, grey-white, fine-med grained gypsum (alabaster) with only minor green clay clots and nodules
15ATP007	Ana Sofia I	New Test Hole	high purity	95%	-64.633626	-28.021781	4339334	6900034	Massive, grey-white, fine-med grained gypsum (alabaster) with only minor green clay clots and nodules
15ATP008	Ana Sofia I	New Test Hole	high purity	95%	-64.633626	-28.021781	4339334	6900034	Massive, grey-white, fine-med grained gypsum (alabaster) with only minor green clay clots and nodules
15ATP009	Ana Sofia I	New Test Hole	lower purity	85%	-64.633626	-28.021781	4339334	6900034	Gypsum (> clay) with irregular patches, nodules and layers of green clay up to 15%


Simplified Stratigraphic Column
soil and overburden
green clay > gypsum
gypsum = green clay
gypsum >> green clay
green clay
gypsum
(bottom of trench)
0
1m
2m
3m
4m
5m
6m
7m
15ATP101
15ATP106
Main Test Hole - Ana Sofia 1



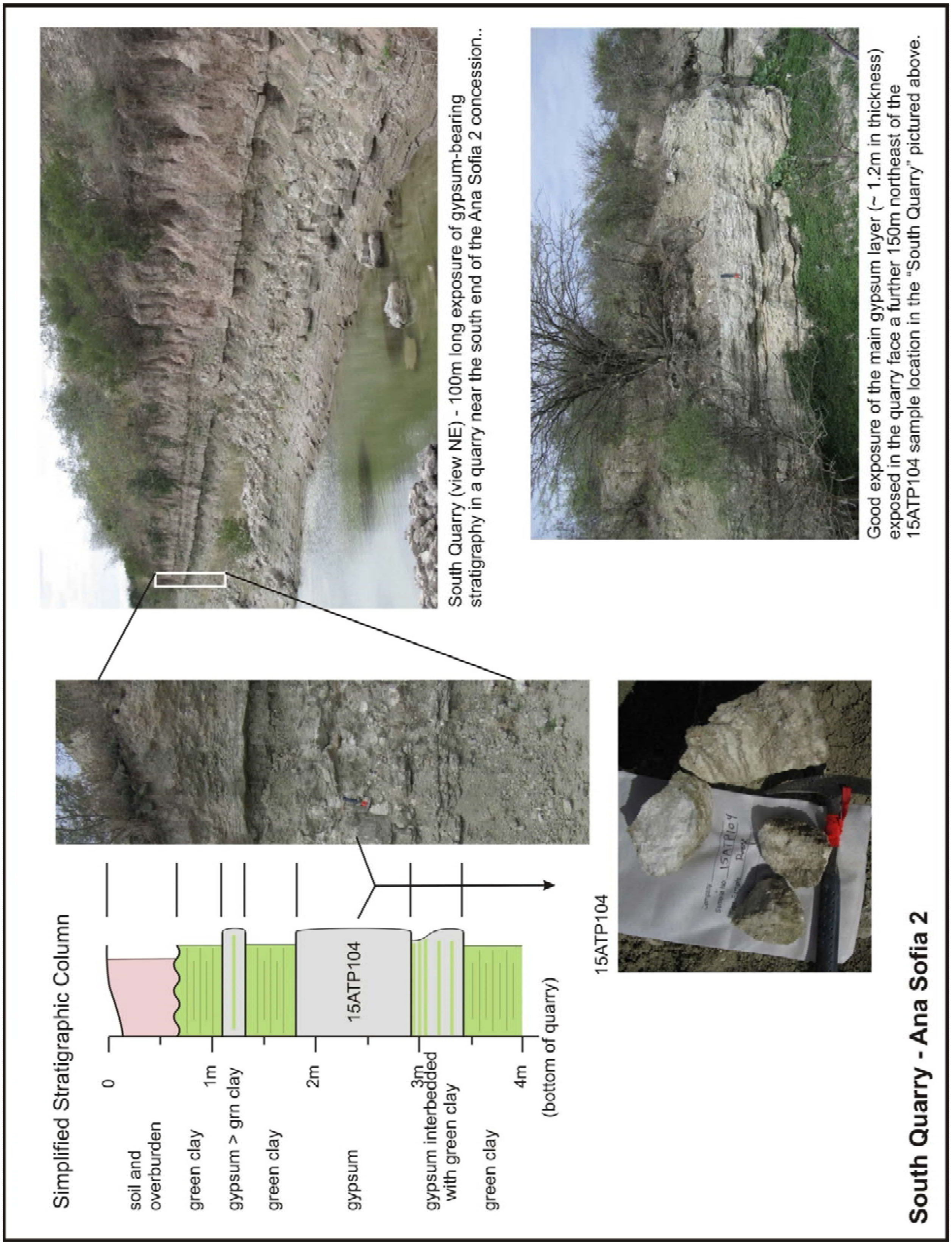
APEX Geoscience Ltd.



North Trench (view East) - eastern half cleared down to the top of the first gypsum layer and the western half cleared down to the top of the second gypsum layer.

NW corner of North Trench - second hammer test of lower gypsum layer (to a depth of ~.5m), sampled as 15ATP102, the product of the first hammer test is piled in foreground.

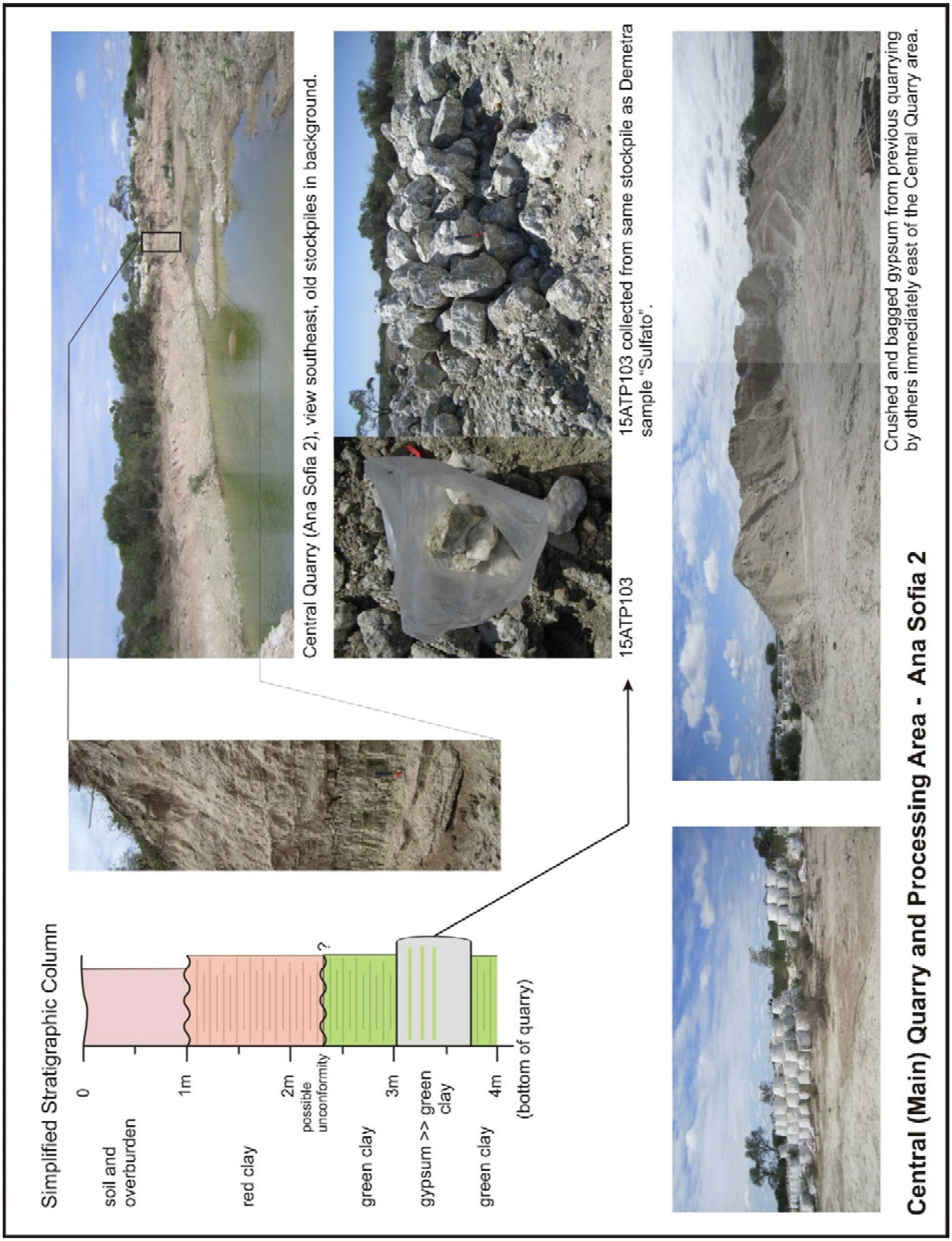
Northwest Trench - Ana Sofia 1



South Quarry (view NE) - 100m long exposure of gypsum-bearing stratigraphy in a quarry near the south end of the Ana Sofia 2 concession..

Good exposure of the main gypsum layer (~ 1.2m in thickness) exposed in the quarry face a further 150m northeast of the 15ATP104 sample location in the "South Quarry" pictured above.

South Quarry - Ana Sofia 2



Central (Main) Quarry and Processing Area - Ana Sofia 2

large (~75m x 20m) cleared area approximately 150m northeast of the Central Quarry where the top of the main gypsum layer has been exposed (15ATP105).

15ATP105

Northern portion of the Ana Sofia 2 Concession

Appendix 2

2016 Ana Sofia Test Pit
Mapping and Sampling Summary Table

2016 Ana Sofia Test Pit Mapping And Sampling

Trench	From (m)	To (m)	Thickness (m)	Lithology	Sample ID (Original Set)	Sample ID (Re-sampled Set)	APEX Check Samples	Comment
TR-1	0.00	0.60	0.60	Soil/Tosca	n/s			
	0.60	0.80	0.20	Gypsum	16RSG001B	16GFG001B		
	0.80	1.45	0.65	Grn Clay	16RSGC001			
	1.45	2.55	1.10	Alabaster	16RSG001A	16GFG001A	16ATP204	
	2.55	8.00	5.45	Red Clay	16RSRC001			
TR-3	0.00	1.70	1.70	Soil	16RSS003			not analysed
	1.70	2.40	0.70	Gypsum	16RSG003	16GFG003		
	2.40	2.60	0.20	Grn Clay	16RSGC003	16GFGC003		
	2.60	4.00	1.40	Grn Clay	16RSCG003			
	4.00	4.40	0.40	Tosca	16RST003			not analysed
	4.40	8.90	4.50	Tosca, Red Clay	n/s			
TR-3A	0.00	1.50	1.50	Soil	n/s			
	1.50	1.70	0.20	Alabaster	16RSG003AA	16GFG003AA		
	1.70	2.50	0.80	Soil	n/s			
	2.50	3.10	0.60	Grn Clay	n/s			
	3.10	4.60	1.50	Soil	n/s			
	4.60	5.40	0.80	Grn Clay	16RSGC003A			
	5.40	5.90	0.50	Alabaster	16RSG003AB	16GFG003AB		
	5.90	7.40	1.50	Red Clay	16RSRC003A			
TR-4	0.00	3.50	3.50	Soil	16RSS004			
	3.50	4.20	0.70	Gypsum	16RSG004	16GFG004		
	4.20	8.00	3.80	Tosca	16RST004			
TR-6A	0.00	1.40	1.40	Alabaster	16RSG006AA	16GFG006AA		
	1.40	1.90	0.50	Grn Clay	n/s			
	1.90	2.60	0.70	Alabaster	16RSG006AB	16GFG006AB		
	2.60	3.30	0.70	Grn Clay	16RSGC006A			
	3.30	5.30	2.00	Red Clay	16RSRC006A			not analysed
TR-6B	0.00	1.40	1.40	Alabaster	16RSG006BA	16GFG006BA		
	1.40	1.95	0.55	Grn Clay	n/s			
	1.95	2.75	0.80	Alabaster	16RSG006BB	16GFG006BB	16ATP205	
	2.75	3.65	0.90	Grn Clay	16RSGC006B	16GFGC006B		
	3.65	5.20	1.55	Red Clay	16RSRC006B			not analysed
TR-9	0.00	2.60	2.60	Soil	n/s			
	2.60	3.20	0.60	Volcanic Ash	16RSVM009			not analysed
	3.20	6.00	2.80	Soil	n/s			
	6.00	7.80	1.80	Grn Clay	16RSGC009			
	7.80	9.10	1.30	Alabaster	16RSG009A	16GFG009A	16ATP201	
	9.10	9.50	0.40	Grn Clay	n/s	16GFGC009A		
	9.50	10.25	0.75	Alabaster	16RSG009B	16GFG009B		
	10.25	11.10	0.85	Grn Clay	n/s			
TR-11	0.00	2.50	2.50	Soil	n/s			
	2.50	3.50	1.00	Tosca	n/s			
	3.50	8.00	4.50	Grn Clay	n/s			
	8.00	11.00	3.00	Grn Clay	n/s	16GFGC011A		
	11.00	12.10	1.10	Alabaster	16RSG011A	16GFG011A		
	12.10	12.50	0.40	Grn Clay	16RSGC011			
	12.50	13.25	0.75	Alabaster	16RSG011B	16GFG011B		
	13.25	13.85	0.60	Grn Clay	16RSRC011			
	13.85	14.15	0.30	Red Clay	n/s			
TR-13	0.00	2.20	2.20	Soil	n/s			
	2.20	2.80	0.60	Alabaster	16RSG013A	16GFG013A		
	2.80	3.70	0.90	Grn Clay	n/s			
	3.70	5.40	1.70	Soil	n/s			
	5.40	7.25	1.85	Red Clay	16RSRC013			not analysed
	7.25	7.45	0.20	Clay Gyp	16RSCG013	16GFCG013		
	7.45	9.55	2.10	Grn Clay	16RSGC013			
	9.55	9.95	0.40	Alabaster	16RSG013B	16GFG013B		
TR-14	0.00	1.60	1.60	Soil	16RSS014			not analysed
	1.60	3.20	1.60	Tosca	16RST014			
	3.20	6.00	2.80	Soil	n/s			

Page 1 of 2

2016 Ana Sofia Test Pit Mapping And Sampling

Trench	From (m)	To (m)	Thickness (m)	Lithology	Sample ID (Original Set)	Sample ID (Re-sampled Set)	APEX Check Samples	Comment
TR-18	0.00	4.00	4.00	Soil	16RSS018			not analysed
	4.00	5.30	1.30	Grn Clay	n/s			
	5.30	7.30	2.00	Gyp Clay	16RSGC018	16GFGC018		
	7.30	8.00	0.70	Red Clay	16RSRC018			
TR-19	0.00	3.00	3.00	Soil	16RSS019			not analysed
	3.00	5.00	2.00	Tosca	16RST019			
	5.00	6.30	1.30	Grn Clay	16RSGC019			
	6.30	8.00	1.70	Red Clay	n/s			
TR-19A	0.00	2.60	2.60	Soil	n/s			
	2.60	3.00	0.40	Grn Clay	16RSGC019A			
	3.00	3.80	0.80	Gypsum	16RSG019A	16GFG019A		
	3.80	5.00	1.20	Soil	16RSS019A			
TR-20	0.00	2.20	2.20	Soil	n/s			
	2.20	2.30	0.10	Gypsum	n/s			
	2.30	3.00	0.70	Gypsum	16RSS020	16GFS020		
	3.00	3.70	0.70	Grn Clay	n/s			
	3.70	5.60	1.90	Red Clay	n/s			
	5.60	6.00	0.40	Grn Clay	16RSGC020	16GFGC020		
	6.00	7.00	1.00	Alabaster	16RSG020	16GFG020		
	7.00	8.00	1.00	Red Clay	n/s			
TR-21	0.00	2.00	2.00	Soil	16RSS021			not analysed
	2.00	3.00	1.00	Gypsum	16RSCG021	16GFCG021		
	3.00	5.20	2.20	Grn Clay	n/s			
	5.20	5.80	0.60	Alabaster	16RSG021	16GFG021		
	5.80	8.00	2.20	Grn Clay	16RSGC021			
TR-21A	0.00	3.00	3.00	Soil	n/s			
	3.00	4.20	1.20	Alabaster	16RSG021AA	16GFG021AA		
	4.20	5.00	0.80	Grn Clay	16RSGC021A			
	5.00	5.80	0.80	Alabaster	16RSG021AB	16GFG021AB		
	5.80	6.70	0.90	Grn Clay	n/s			
	6.70	8.60	1.90	Red Clay	16RSRC021A			
TR-21B	0.00	2.50	2.50	Soil	n/s			
	2.50	3.60	1.10	Alabaster	16RSG021BA	16GFG021BA		
	3.60	4.50	0.90	Grn Clay	n/s			
	4.50	4.90	0.40	Alabaster	16RSG021BB	16GFG021BB		
	4.90	5.50	0.60	Grn Clay	16RSGC021B			
	5.50	9.00	3.50	Red Clay	16RSRC021B			not analysed
TR-33	0.00	0.80	0.80	Soil	16RSS033	16GFS033		
	0.80	2.10	1.30	Alabaster	16RSG033	16GFG033	16ATP202	
	2.10	3.00	0.90	Grn Clay	16RSGC033			
	3.00	6.10	3.10	Red Clay	n/s			
TR-33A	0.00	1.40	1.40	Alabaster	16RSG033AA	16GFG033AA	16ATP203	
	1.40	1.90	0.50	Grn Clay	16RSGC033A			
	1.90	2.60	0.70	Alabaster	16RSG033AB	16GFG033AB		
	2.60	3.90	1.30	Red Clay	16RSRC033A			
TR-34	0.00	3.60	3.60	Soil	n/s			
	3.60	3.90	0.30	Clay Gyp	16RSCG034	16GFCG034		
	3.90	4.80	0.90	Tosca	n/s			
	4.80	5.80	1.00	Green Clay	16RSGC034			
	5.80	6.00	0.20	Tosca	16RST034			
TR-37	0.00	2.10	2.10	Soil	n/s			
	2.10	2.40	0.30	Alabaster	16RSG037A	16GFG037A		
	2.40	5.90	3.50	Soil	n/s			
	5.90	6.00	0.10	Volcanic Ash	n/s			
	6.00	6.50	0.50	Grn Clay	n/s			
	6.50	9.10	2.60	Red Clay	n/s			
	9.10	9.50	0.40	Clay Gyp	n/s			
	9.50	11.00	1.50	Clay Gyp	n/s			
	11.00	11.90	0.90	Grn Clay	16RSGC037A			
	11.90	13.00	1.10	Gypsum	16RSG037B	16GFG037B		
	13.00	13.60	0.60	Grn Clay	16RSGC037B			
	13.60	14.20	0.60	Gypsum	16RSG037C	16GFG037C		
	14.20	15.00	0.80	Green Clay	n/s			

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Appendix 3

Analytical Certificates for Water-loss Analysis of the 2016 Ana Sofia Test Pit Samples

(used to calculate wt% gypsum)

ALS Minerals

ALS Argentina
Altos Hornos Zapla 1605
Godoy Cruz
Mendoza MD 5501
Teléfono: +54 (261) 431 9880 Telefax: +54 (261) 432 4278
www.alsglobal.com

A: DEMETRA MINERAL
GRAL. GUEMES 677
VICENTE LOPEZ BA 1638

Página: 1
Número total de paginas: 3 (A - D)
El Apéndice positivo Pagina
Fecha Completada:
23- AGOSTO- 2016
Esta copia informó en
26- AGOSTO- 2016
Cuenta: DEMETRA

CERTIFICADO ME16127111

Proyecto: ANA SOFIA

Este informe se aplica a 72 muestras de Roca sometidas a nuestro laboratorio de Mendoza, MD, Argentina en 4- AGOSTO- 2016.

Los siguientes tienen acceso a los datos asociados a este certificado:

SEBASTIAN CATTENO | DAVID TAFFEL

PREPARACIÓN DE MUESTRA

CODIGO ALS	DESCRIPCIÓN
WEI- 21	Peso Muestra Recibida
LOG- 22	Reg Muestras - Rcd sin Cod.Barra
CRU- QC	Control de Calidad Chancado
PUL- QC	Control Calidad de Pulverizado
CRU- 31	Chancado Fino - 70% <2mm
SPL- 21	Cuarteo - cuarteador riffle
PUL- 31	Pulverizado cuarteo a 85% <75 um

PROCEDIMIENTOS ANALÍTICOS

CODIGO ALS	DESCRIPCIÓN	INSTRUMENTO
ME- XRF26		XRF
OA- GRA05x	LOI para XRF	WST- SEQ
ME- ICP61	ICP- AES 33 elementos 4 ácidos	ICP- AES
OA- GRA10	Humedad	WST- SEQ

A: DEMETRA MINERAL
ATTN: DAVID TAFFEL
GRAL. GUEMES 677
VICENTE LOPEZ BA 1638

Éste es el Informe Final y substituye cualquier informe preliminar con este número de certificado. Los resultados se aplican a las muestras sometidas. Todas las páginas de este informe fueron comprobadas y aprobadas antes de publicación.

***** Vea Apéndice Página para comentarios con respecto a este certificado *****

Comentarios: ***Corrected copy with SO3 ME- XRF26 reported to absolute upper limit***

Firma:
Colin Ramshaw, Vancouver Laboratory Manager

ALS Minerals

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Página: 2 - A
Número total de paginas: 3 (A - D)
El Apéndice positivo Pagina
Fecha Completada:
23- AGOSTO- 2016
Cuenta: DEMETRA

Proyecto: ANA SOFIA

CERTIFICADO DE ANÁLISIS ME16127111

Descripción de la Muestra / Método / Analito / Unidades / NPI	WEI-21 Peso Rec. kg 0.02	OA-GRA10 H2O % 0.01	ME-XRF26 Al2O3 % 0.01	ME-XRF26 BaO % 0.01	ME-XRF26 CaO % 0.01	ME-XRF26 Cr2O3 % 0.01	ME-XRF26 Fe2O3 % 0.01	ME-XRF26 K2O % 0.01	ME-XRF26 MgO % 0.01	ME-XRF26 MnO % 0.01	ME-XRF26 Na2O % 0.01	ME-XRF26 P2O5 % 0.01	ME-XRF26 SO3 % 0.01	ME-XRF26 SiO2 % 0.01	ME-XRF26 SrO % 0.01
16RSG001B	3.00	13.20	1.68	0.03	35.9	<0.01	0.63	0.35	0.53	0.02	0.27	0.04	45.6	9.35	0.29
16RSGC001	1.46	5.87	7.29	0.03	17.20	0.01	2.53	1.67	3.74	0.13	1.16	0.10	19.80	35.29	0.23
16RSG001A	2.94	13.05	1.43	0.02	35.3	<0.01	0.50	0.33	0.60	0.01	0.22	0.03	49.0	8.45	0.18
16RSRC001	1.84	5.99	14.44	0.06	2.52	0.01	5.05	3.40	3.70	0.07	2.29	0.17	1.76	60.23	0.04
16RSG003	3.78	14.05	0.43	0.02	38.4	<0.01	0.16	0.12	0.11	0.01	0.04	0.02	54.6	2.63	0.46
16RSGC003	2.18	12.35	2.49	0.03	31.7	<0.01	0.83	0.53	1.22	0.02	0.39	0.06	44.9	11.80	0.29
16RSCG003	1.48	3.48	11.37	0.08	8.09	<0.01	3.76	2.51	5.53	0.17	1.89	0.15	3.68	48.91	0.45
16RSG003AA	2.48	12.45	1.34	0.05	34.7	<0.01	0.41	0.29	0.45	0.02	0.23	0.03	49.0	8.35	0.93
16RSGC003A	2.04	7.10	10.28	0.04	12.20	<0.01	3.43	2.18	3.79	0.10	1.66	0.15	12.95	43.79	0.05
16RSG003AB	3.16	11.60	2.45	0.04	32.9	<0.01	0.75	0.39	0.43	0.03	0.53	0.05	46.8	10.81	0.62
16RSRC003A	2.50	3.64	12.84	0.07	4.93	0.01	4.14	2.55	2.15	0.06	2.47	0.20	3.87	61.39	0.06
16RSS004	1.68	2.28	12.54	0.06	4.95	<0.01	3.76	2.77	1.66	0.08	2.45	0.16	2.90	62.75	0.04
16RSG004	1.74	10.95	3.47	0.03	28.8	<0.01	1.03	0.71	0.74	0.02	0.61	0.06	39.1	19.88	0.30
16RST004	2.38	3.84	12.57	0.06	4.43	<0.01	4.17	2.83	2.85	0.07	2.12	0.22	3.35	62.10	0.04
16RSG006AA	2.52	13.60	0.89	0.01	37.7	<0.01	0.39	0.24	0.06	0.01	0.08	0.02	53.5	3.79	0.11
16RSG006AB	2.68	13.55	0.46	0.01	38.8	<0.01	0.21	0.13	0.05	0.01	0.03	0.02	54.5	2.13	0.13
16RSGC006A	2.58	5.35	15.54	0.05	0.92	0.01	6.53	4.61	3.53	0.05	1.68	0.16	0.53	60.95	0.02
16RSG006BA	3.08	13.95	0.24	0.01	39.6	0.01	0.11	0.08	0.05	0.03	<0.01	0.01	55.5	1.22	0.19
16RSG006BB	3.16	14.30	0.10	0.01	40.1	<0.01	0.06	0.04	0.03	0.02	<0.01	0.01	54.6	0.67	0.18
16RSGC006B	2.08	9.00	8.61	0.04	16.55	<0.01	4.07	2.69	3.57	0.19	0.67	0.11	20.2	31.79	0.16
16RSGC009	2.42	4.55	14.33	0.05	1.61	<0.01	5.30	3.81	2.72	0.04	2.09	0.16	0.97	63.42	0.03
16RSG009A	3.72	13.10	0.90	0.01	38.2	<0.01	0.41	0.27	0.28	0.03	0.09	0.02	50.1	3.62	0.29
16RSG009B	4.50	12.55	1.80	0.02	35.0	<0.01	0.81	0.53	0.50	0.04	0.21	0.03	49.8	7.05	0.19
16RSG011A	3.36	13.25	0.61	<0.01	38.7	<0.01	0.29	0.20	<0.01	0.01	0.06	0.02	55.3	2.37	0.13
16RSGC011	2.08	5.74	15.03	0.05	1.22	0.01	6.34	4.36	3.42	0.04	1.89	0.15	0.95	59.84	0.02
16RSG011B	3.32	12.55	0.39	0.01	39.4	<0.01	0.19	0.12	0.05	0.01	0.02	0.02	55.7	1.62	0.13
16RSRC011	2.46	1.65	12.73	0.06	1.53	0.01	3.76	2.85	1.63	0.05	2.54	0.19	0.60	70.59	0.02
16RSG013A	3.80	14.45	0.21	0.01	40.0	<0.01	0.10	0.06	<0.01	0.01	0.01	0.01	55.8	0.96	0.17
16RSCG013	3.26	12.50	3.77	0.02	30.1	<0.01	1.88	1.14	0.76	0.02	0.35	0.05	40.5	13.95	0.11
16RSGC013	3.42	5.04	15.65	0.06	1.45	0.01	7.18	4.36	3.73	0.10	1.74	0.18	0.46	58.95	0.11
16RSG013B	3.00	14.15	0.41	0.01	39.0	<0.01	0.22	0.12	0.02	0.01	0.03	0.02	55.0	1.85	0.18
16RST014	2.78	8.51	5.37	0.03	25.7	<0.01	1.83	1.16	0.91	0.04	0.91	0.09	31.4	26.56	0.09
16RSGC018	1.86	11.65	4.65	0.03	26.6	<0.01	2.16	1.40	1.06	0.02	0.51	0.06	37.7	18.11	0.22
16RSRC018	1.80	8.61	11.16	0.04	11.25	<0.01	4.92	3.17	2.57	0.04	1.10	0.12	15.25	41.49	0.14
16RST019	3.34	7.50	6.91	0.04	18.85	<0.01	2.17	1.52	1.24	0.05	1.31	0.10	23.5	36.83	0.09
16RSGC019	1.10	5.95	14.08	0.05	3.10	<0.01	5.11	3.44	3.85	0.06	2.23	0.20	2.85	58.24	0.03
16RSGC019A	2.34	6.44	13.94	0.06	5.32	<0.01	3.84	2.56	3.69	0.05	2.26	0.17	4.58	55.61	0.05
16RSG019A	3.46	12.65	0.90	0.01	36.3	0.02	0.31	0.20	0.08	0.01	0.13	0.02	52.3	5.63	0.25
16RSS019A	0.86	2.11	12.59	0.06	5.23	<0.01	3.87	2.63	1.73	0.07	2.74	0.16	1.26	63.53	0.04
16RSS020	0.82	2.69	11.21	0.06	9.22	<0.01	3.62	2.43	2.14	0.06	2.14	0.18	2.78	55.81	0.04

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Proyecto: ANA SOFIA

CERTIFICADO DE ANÁLISIS ME16127111

Método Analito Descripción de la Muestra Unidades NPI	ME- XRF26 TiO2 % 0.01	ME- XRF26 Total % 0.01	OA- GRA05x LOI 1000 % 0.01	ME- ICP61 Ag ppm 0.5	ME- ICP61 Al % 0.01	ME- ICP61 As ppm 5	ME- ICP61 Ba ppm 10	ME- ICP61 Be ppm 0.5	ME- ICP61 Bi ppm 2	ME- ICP61 Ca % 0.01	ME- ICP61 Cd ppm 0.5	ME- ICP61 Co ppm 1	ME- ICP61 Cr ppm 1	ME- ICP61 Cu ppm 1	ME- ICP61 Fe % 0.01
16RSG001B	0.09	100.05	5.11	<0.5	0.77	<5	140	<0.5	<2	20.2	<0.5	<1	3	9	0.34
16RSGC001	0.31	100.95	11.31	<0.5	3.75	7	260	1.1	4	11.70	<0.5	4	18	10	1.65
16RSG001A	0.07	100.55	4.23	<0.5	0.65	<5	110	<0.5	3	19.9	<0.5	<1	3	5	0.28
16RSRC001	0.66	100.55	6.05	<0.5	6.77	20	500	2.2	2	1.70	<0.5	11	29	18	3.18
16RSG003	0.03	99.45	2.22	<0.5	0.22	<5	90	<0.5	<2	21.4	<0.5	<1	2	1	0.09
16RSGC003	0.11	101.35	6.81	<0.5	1.20	<5	150	<0.5	<2	19.0	<0.5	1	5	15	0.49
16RSCG003	0.49	101.15	14.01	<0.5	6.10	14	680	1.7	<2	5.96	<0.5	8	25	24	2.61
16RSG003AA	0.07	99.70	3.64												
16RSGC003A	0.42	101.25	10.13												
16RSG003AB	0.12	100.40	4.30												
16RSRC003A	0.59	100.75	5.35												
16RSS004	0.57	100.95	6.17												
16RSG004	0.14	101.15	6.11												
16RST004	0.56	100.95	5.49												
16RSG006AA	0.06	100.60	3.52												
16RSG006AB	0.03	99.12	2.41												
16RSGC006A	0.80	100.00	4.57												
16RSG006BA	0.02	99.02	1.74												
16RSG006BB	0.01	99.34	3.31												
16RSGC006B	0.50	101.30	12.00												
16RSGC009	0.72	99.36	4.03	<0.5	7.22	13	430	2.2	7	1.15	<0.5	12	37	18	3.53
16RSG009A	0.06	99.16	4.69	<0.5	0.41	<5	90	<0.5	<2	21.1	<0.5	<1	3	3	0.24
16RSG009B	0.11	101.40	5.12	<0.5	0.85	<5	80	<0.5	3	20.7	<0.5	1	5	6	0.47
16RSG011A	0.04	101.20	3.26												
16RSGC011	0.79	99.07	4.89												
16RSG011B	0.03	100.25	2.33												
16RSRC011	0.67	99.76	2.45												
16RSG013A	0.02	99.20	1.64												
16RSCG013	0.20	100.75	7.72												
16RSGC013	0.82	100.45	5.58												
16RSG013B	0.03	99.14	2.03												
16RST014	0.26	101.50	6.98												
16RSGC018	0.27	101.55	8.62												
16RSRC018	0.65	101.05	9.04												
16RST019	0.31	100.45	7.40												
16RSGC019	0.65	101.05	7.09												
16RSGC019A	0.51	101.10	8.37												
16RSG019A	0.06	101.20	4.77												
16RSS019A	0.60	100.85	6.25												
16RSS020	0.53	100.65	10.37												

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CERTIFICADO DE ANÁLISIS ME16127111

Método / Analito / Unidades / NPI — Descripción de la Muestra	ME-ICP61 Ga ppm 10	ME-ICP61 K % 0.01	ME-ICP61 La ppm 10	ME-ICP61 Mg % 0.01	ME-ICP61 Mn ppm 5	ME-ICP61 Mo ppm 1	ME-ICP61 Na % 0.01	ME-ICP61 Ni ppm 1	ME-ICP61 P ppm 10	ME-ICP61 Pb ppm 2	ME-ICP61 S % 0.01	ME-ICP61 Sb ppm 5	ME-ICP61 Sc ppm 1	ME-ICP61 Sr ppm 1	ME-ICP61 Th ppm 20
16RSG001B	<10	0.25	10	0.30	56	<1	0.19	2	100	5	>10.0	5	1	2360	<20
16RSGC001	10	1.33	20	2.09	852	<1	0.84	9	410	13	8.08	<5	5	2090	<20
16RSG001A	<10	0.22	<10	0.34	37	<1	0.16	2	100	12	>10.0	<5	1	1370	<20
16RSRC001	20	2.58	20	1.97	494	1	1.56	16	740	15	0.69	<5	10	317	<20
16RSG003	<10	0.08	<10	0.08	32	<1	0.05	<1	30	5	>10.0	<5	<1	3560	<20
16RSGC003	<10	0.38	10	0.66	66	<1	0.27	3	200	9	>10.0	<5	2	2490	<20
16RSCG003	20	2.11	30	3.33	1285	1	1.42	16	730	18	1.56	<5	8	4360	20
16RSG003AA															
16RSGC003A															
16RSG003AB															
16RSRC003A															
16RSS004															
16RSG004															
16RST004															
16RSG006AA															
16RSG006AB															
16RSGC006A															
16RSG006BA															
16RSG006BB															
16RSGC006B															
16RSGC009	20	3.10	30	1.54	329	2	1.49	20	730	8	0.41	<5	12	240	<20
16RSG009A	<10	0.19	<10	0.18	167	<1	0.08	<1	50	3	>10.0	<5	1	2270	<20
16RSG009B	<10	0.37	10	0.31	215	<1	0.15	2	80	7	>10.0	<5	2	1590	<20
16RSG011A															
16RSGC011															
16RSG011B															
16RSRC011															
16RSG013A															
16RSCG013															
16RSGC013															
16RSG013B															
16RST014															
16RSGC018															
16RSRC018															
16RST019															
16RSGC019															
16RSGC019A															
16RSG019A															
16RSS019A															
16RSS020															

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CERTIFICADO DE ANÁLISIS ME16127111

Método	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61
Analito	Ti	Tl	U	V	W	Zn
Unidades	%	ppm	ppm	ppm	ppm	ppm
Descripción de la Muestra / NPI	0.01	10	10	1	10	2
16RSG001B	0.04	<10	<10	17	<10	12
16RSGC001	0.17	<10	<10	69	<10	38
16RSG001A	0.03	<10	<10	12	<10	10
16RSRC001	0.37	<10	<10	92	<10	72
16RSG003	0.01	<10	10	4	<10	2
16RSGC003	0.06	<10	<10	24	<10	20
16RSCG003	0.29	<10	<10	102	<10	62
16RSG003AA						
16RSGC003A						
16RSG003AB						
16RSRC003A						
16RSS004						
16RSG004						
16RST004						
16RSG006AA						
16RSG006AB						
16RSGC006A						
16RSG006BA						
16RSG006BB						
16RSGC006B						
16RSGC009	0.41	<10	<10	101	<10	74
16RSG009A	0.03	<10	<10	9	<10	6
16RSG009B	0.05	<10	<10	17	<10	10
16RSG011A						
16RSGC011						
16RSG011B						
16RSRC011						
16RSG013A						
16RSCG013						
16RSGC013						
16RSG013B						
16RST014						
16RSGC018						
16RSRC018						
16RST019						
16RSGC019						
16RSGC019A						
16RSG019A						
16RSS019A						
16RSS020						

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CERTIFICADO DE ANÁLISIS ME16127111

Método / Analito / Unidades / NPI — Descripción de la Muestra	WEI-21 Peso Rec. kg 0.02	OA-GRA10 H2O % 0.01	ME-XRF26 Al2O3 % 0.01	ME-XRF26 BaO % 0.01	ME-XRF26 CaO % 0.01	ME-XRF26 Cr2O3 % 0.01	ME-XRF26 Fe2O3 % 0.01	ME-XRF26 K2O % 0.01	ME-XRF26 MgO % 0.01	ME-XRF26 MnO % 0.01	ME-XRF26 Na2O % 0.01	ME-XRF26 P2O5 % 0.01	ME-XRF26 SO3 % 0.01	ME-XRF26 SiO2 % 0.01	ME-XRF26 SrO % 0.01
16RSGC020	1.10	12.60	0.37	0.02	39.4	<0.01	0.12	0.08	0.04	0.01	0.04	0.02	54.5	2.14	0.30
16RSG020	1.32	4.54	11.42	0.04	8.79	<0.01	4.27	3.08	2.34	0.04	1.40	0.13	11.20	47.09	0.03
16RSCG021	3.12	10.95	4.76	0.02	28.5	<0.01	2.28	1.37	0.96	0.02	0.46	0.08	36.3	17.62	0.07
16RSG021	1.16	13.50	0.18	0.01	39.1	<0.01	0.14	0.06	0.04	0.01	<0.01	0.01	54.5	0.96	0.21
16RSGC021	1.48	7.19	15.72	0.04	1.05	0.01	7.95	4.55	3.81	0.11	1.54	0.11	1.33	57.16	0.08
16RSG021AA	3.16	13.05	0.42	0.02	40.5	0.01	0.22	0.12	0.06	0.01	0.01	0.02	50.9	2.27	0.34
16RSGC021A	2.46	6.79	14.66	0.05	3.11	0.01	6.82	4.41	5.46	0.22	1.51	0.17	0.82	51.96	0.06
16RSG021AB	4.14	13.90	0.54	0.01	37.8	<0.01	0.28	0.17	0.04	0.01	0.02	0.02	53.0	2.57	0.24
16RSRC021A	2.36	4.17	16.30	0.06	1.44	0.01	6.75	4.44	3.78	0.11	1.96	0.18	0.42	57.41	0.02
16RSG021BA	2.44	13.80	0.99	0.01	36.9	<0.01	0.47	0.30	0.09	0.01	0.06	0.02	51.2	4.20	0.15
16RSG021BB	2.58	14.15	0.42	<0.01	38.8	<0.01	0.20	0.13	<0.01	0.01	0.02	0.02	54.3	2.00	0.15
16RSGC021B	2.10	5.84	15.51	0.05	0.92	0.01	6.71	4.53	3.50	0.05	1.67	0.14	0.53	59.64	0.02
16RSS033	1.50	9.94	4.34	0.03	27.2	<0.01	1.36	1.24	1.20	0.03	0.83	0.08	32.8	22.57	0.24
16RSG033	2.52	12.00	1.54	0.01	37.3	<0.01	0.65	0.45	0.43	0.05	0.13	0.03	45.4	6.48	0.31
16RSGC033	2.44	6.31	12.24	0.04	7.17	0.01	5.42	3.57	2.56	0.04	1.42	0.13	9.27	50.55	0.10
16RSG033AA	3.00	13.50	0.04	<0.01	39.9	<0.01	0.04	0.02	<0.01	0.01	<0.01	0.01	56.4	0.35	0.12
16RSGC033A	2.74	5.76	14.43	0.05	3.06	0.01	6.02	4.21	3.23	0.04	1.44	0.15	3.32	57.59	0.03
16RSG033AB	3.02	12.00	0.21	<0.01	39.1	<0.01	0.14	0.08	0.05	0.01	<0.01	0.01	56.0	0.93	0.12
16RSRC033A	3.00	4.19	15.65	0.06	1.60	0.01	6.53	4.31	3.40	0.10	1.83	0.18	0.77	59.47	0.05
16RSCG034	3.18	10.40	1.85	0.01	34.1	<0.01	0.74	0.47	0.18	0.01	0.26	0.03	48.1	9.21	0.10
16RSGC034	2.12	6.92	13.50	0.05	4.99	0.01	6.65	3.51	2.99	0.04	1.67	0.09	6.71	51.38	0.21
16RST034	2.68	4.83	15.03	0.06	2.24	0.01	5.75	3.52	2.81	0.05	2.10	0.17	1.20	61.24	0.11
16RSG037A	2.54	11.60	1.08	0.01	36.3	0.01	0.50	0.32	0.12	0.01	0.13	0.03	52.0	4.59	0.14
16RSGC037A	2.10	4.35	13.43	0.05	4.25	<0.01	4.85	3.33	2.52	0.04	2.11	0.15	4.30	58.88	0.04
16RSG037B	0.84	7.78	1.34	0.01	35.8	<0.01	0.58	0.38	0.19	0.01	0.16	0.03	51.4	5.29	0.18
16RSGC037B	1.76	5.64	15.22	0.05	1.31	0.01	6.24	4.45	3.39	0.04	2.08	0.15	1.24	59.76	0.04
16RSG037C	2.70	10.60	0.74	<0.01	37.6	<0.01	0.33	0.23	0.07	0.02	0.08	0.02	53.9	3.07	0.18
16ATP201	3.08	12.95	0.22	0.02	38.9	<0.01	0.16	0.08	0.13	0.02	<0.01	0.01	55.6	1.06	0.28
16ATP202	2.24	12.40	1.80	0.01	35.4	<0.01	0.62	0.41	0.72	0.09	0.22	0.03	48.8	6.77	0.20
16ATP203	2.78	11.90	0.37	0.02	39.2	<0.01	0.18	0.12	0.20	0.03	0.01	0.02	54.7	1.70	0.29
16ATP204	2.14	10.30	2.34	0.04	32.5	<0.01	0.81	0.54	0.93	0.02	0.32	0.05	45.1	11.32	0.48
16ATP205	2.30	12.60	0.26	0.01	38.8	<0.01	0.14	0.09	0.16	0.03	<0.01	0.01	55.0	1.38	0.21

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CERTIFICADO DE ANÁLISIS ME16127111

Método	ME- XRF26	ME- XRF26	OA- GRA05x	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61
Analito	TiO2	Total	LOI 1000	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe
Unidades	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%
Descripción de la Muestra NPI	0.01	0.01	0.01	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01
16RSGC020	0.04	101.15	3.85												
16RSG020	0.48	101.35	10.97												
16RSCG021	0.27	100.90	8.07	<0.5	2.22	<5	150	0.6	<2	16.9	<0.5	3	12	6	1.33
16RSG021	0.03	99.09	3.64	<0.5	0.11	<5	30	<0.5	4	22.3	<0.5	<1	1	6	0.08
16RSGC021	0.99	101.15	6.58	<0.5	7.50	10	260	2.0	<2	0.72	<0.5	20	52	45	4.94
16RSG021AA	0.04	99.03	3.89												
16RSGC021A	0.85	99.49	9.27												
16RSG021AB	0.04	99.26	4.33												
16RSRC021A	0.72	99.36	5.69												
16RSG021BA	0.08	99.79	5.12												
16RSG021BB	0.04	100.35	4.04												
16RSGC021B	0.83	99.31	5.13												
16RSS033	0.21	98.96	6.69												
16RSG033	0.10	98.75	5.70												
16RSGC033	0.65	101.35	8.10												
16RSG033AA	0.02	100.70	3.59	<0.5	0.04	<5	<10	<0.5	<2	19.9	<0.5	<1	1	<1	0.02
16RSGC033A	0.77	101.45	7.03	<0.5	7.28	24	360	2.1	2	2.17	<0.5	10	40	19	3.94
16RSG033AB	0.03	100.90	4.02	<0.5	0.13	<5	10	<0.5	4	23.5	<0.5	<1	1	<1	0.08
16RSRC033A	0.74	100.35	5.59	<0.5	7.67	12	490	2.5	<2	1.12	<0.5	13	46	21	4.33
16RSCG034	0.13	100.95	5.59												
16RSGC034	0.79	101.15	8.46												
16RST034	0.75	100.00	4.88												
16RSG037A	0.07	100.70	5.19												
16RSGC037A	0.66	101.10	6.40												
16RSG037B	0.09	101.15	5.49												
16RSGC037B	0.80	100.50	5.61												
16RSG037C	0.06	100.90	4.41												
16ATP201	0.03	100.85	4.15	<0.5	0.13	<5	80	<0.5	<2	21.5	<0.5	<1	1	1	0.08
16ATP202	0.11	100.95	5.57	<0.5	0.80	<5	70	<0.5	3	18.9	<0.5	<1	3	3	0.34
16ATP203	0.04	101.25	4.16	<0.5	0.19	<5	90	<0.5	<2	22.1	<0.5	<1	1	2	0.10
16ATP204	0.12	101.00	6.26	<0.5	1.11	<5	130	<0.5	3	19.7	<0.5	1	5	4	0.48
16ATP205	0.02	100.10	3.80	<0.5	0.14	<5	50	<0.5	<2	22.0	<0.5	<1	1	2	0.08

Comentarios: ***Corrected copy with SO3 ME- XRF26 reported to absolute upper limit***

***** Vea Apéndice Página para comentarios con respecto a este certificado *****

ALS Minerals

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www.alsglobal.com

A: DEMETRA MINERAL
GRAL. GUEMES 677
VICENTE LOPEZ BA 1638

Proyecto: ANA SOFIA

Página: 3 - C
Número total de paginas: 3 (A - D)
El Apéndice positivo Pagina
Fecha Completada:
23-AGOSTO-2016
Cuenta: DEMETRA

CERTIFICADO DE ANÁLISIS ME16127111

Descripción de la Muestra / Método / Analito / Unidades / NPI	ME-ICP61 Ga ppm 10	ME-ICP61 K % 0.01	ME-ICP61 La ppm 10	ME-ICP61 Mg % 0.01	ME-ICP61 Mn ppm 5	ME-ICP61 Mo ppm 1	ME-ICP61 Na % 0.01	ME-ICP61 Ni ppm 1	ME-ICP61 P ppm 10	ME-ICP61 Pb ppm 2	ME-ICP61 S % 0.01	ME-ICP61 Sb ppm 5	ME-ICP61 Sc ppm 1	ME-ICP61 Sr ppm 1	ME-ICP61 Th ppm 20
16RSGC020															
16RSG020															
16RSCG021	10	0.98	10	0.52	122	<1	0.32	5	280	6	>10.0	<5	4	531	<20
16RSG021	<10	0.05	<10	0.03	8	<1	0.01	<1	20	2	>10.0	<5	<1	1700	<20
16RSGC021	20	3.44	30	2.02	727	6	1.02	24	440	25	0.54	<5	18	642	<20
16RSG021AA															
16RSGC021A															
16RSG021AB															
16RSRC021A															
16RSG021BA															
16RSG021BB															
16RSGC021B															
16RSS033															
16RSG033															
16RSGC033															
16RSG033AA	<10	0.02	<10	0.01	<5	<1	0.01	<1	<10	4	>10.0	<5	<1	843	<20
16RSGC033A	20	3.30	30	1.78	307	1	1.00	20	640	7	1.37	<5	14	262	<20
16RSG033AB	<10	0.06	<10	0.03	7	<1	0.02	1	10	4	>10.0	<5	<1	992	<20
16RSRC033A	20	3.46	30	1.92	720	2	1.30	25	790	9	0.32	<5	14	450	<20
16RSCG034															
16RSGC034															
16RST034															
16RSG037A															
16RSGC037A															
16RSG037B															
16RSGC037B															
16RSG037C															
16ATP201	<10	0.06	<10	0.07	54	<1	0.02	<1	10	6	>10.0	<5	<1	2230	<20
16ATP202	<10	0.28	<10	0.40	509	<1	0.15	1	100	4	>10.0	6	1	1495	<20
16ATP203	<10	0.08	<10	0.11	148	<1	0.02	1	30	2	>10.0	<5	1	2280	<20
16ATP204	<10	0.39	10	0.52	65	<1	0.22	1	180	5	>10.0	5	2	3990	<20
16ATP205	<10	0.06	<10	0.10	117	<1	0.02	<1	20	2	>10.0	<5	<1	1670	<20

Comentarios: ***Corrected copy with SO3 ME-XRF26 reported to absolute upper limit***

***** Vea Apéndice Página para comentarios con respecto a este certificado *****

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Página: 3 - D
Número total de paginas: 3 (A - D)
El Apéndice positivo Pagina
Fecha Completada: 23- AGOSTO- 2016
Cuenta: DEMETRA

Proyecto: ANA SOFIA

CERTIFICADO DE ANÁLISIS ME16127111

Método / Analito / Unidades / NPI — Descripción de la Muestra	ME- ICP61 Ti % 0.01	ME- ICP61 Tl ppm 10	ME- ICP61 U ppm 10	ME- ICP61 V ppm 1	ME- ICP61 W ppm 10	ME- ICP61 Zn ppm 2
16RSGC020						
16RSG020						
16RSCG021	0.13	<10	<10	41	<10	25
16RSG021	0.01	<10	<10	3	<10	<2
16RSGC021	0.53	<10	<10	158	<10	120
16RSG021AA						
16RSGC021A						
16RSG021AB						
16RSRC021A						
16RSG021BA						
16RSG021BB						
16RSGC021B						
16RSS033						
16RSG033						
16RSGC033						
16RSG033AA	<0.01	<10	<10	1	<10	<2
16RSGC033A	0.42	<10	<10	113	<10	83
16RSG033AB	0.01	<10	<10	3	<10	2
16RSRC033A	0.42	<10	<10	109	<10	92
16RSCG034						
16RSGC034						
16RST034						
16RSG037A						
16RSGC037A						
16RSG037B						
16RSGC037B						
16RSG037C						
16ATP201	0.01	<10	<10	3	<10	3
16ATP202	0.05	<10	<10	19	<10	8
16ATP203	0.01	<10	10	7	<10	2
16ATP204	0.05	<10	<10	27	<10	17
16ATP205	0.01	<10	<10	4	<10	2

Comentarios: ***Corrected copy with SO3 ME- XRF26 reported to absolute upper limit***

***** Vea Apéndice Página para comentarios con respecto a este certificado *****

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Página: Apéndice 1
Totalice # Páginas de Apéndice: 1
Fecha Completada:
23- AGOSTO- 2016
Cuenta: DEMETRA

Proyecto: ANA SOFIA

CERTIFICADO DE ANÁLISIS ME16127111

COMENTARIOS DE CERTIFICADO

DIRECCIÓN DEL LABORATORIO

	Procesado en ALS Mendoza, Altos Hornos Zapla 1605, Godoy Cruz, Mendoza, MD, Argentina.			
Métodos Aplicados:	CRU- 31	CRU- QC	LOG- 22	PUL- 31
	PUL- QC	SPL- 21	WEI- 21	
	Procesado en ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada.			
Métodos Aplicados:	ME- ICP61	ME- XRF26	OA- GRA05x	OA- GRA10

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Página: 1
Número total de paginas: 2 (A)
El Apéndice positivo Pagina
Fecha Completada:
22- SEPT- 2016
Cuenta: DEMETRA

CERTIFICADO ME16155613

Proyecto: ANA SOFIA

Este informe se aplica a 34 muestras de Roca sometidas a nuestro laboratorio de Mendoza, MD, Argentina en 15- SEPT- 2016.

Los siguientes tienen acceso a los datos asociados a este certificado:

SEBASTIAN CATTENO	DAVID TAFFEL	

PREPARACIÓN DE MUESTRA

CODIGO ALS	DESCRIPCIÓN
FND- 02	Encontrar muestra para analisis adic.

PROCEDIMIENTOS ANALÍTICOS

CODIGO ALS	DESCRIPCIÓN	INSTRUMENTO
OA- GRA10	Humedad	WST- SEQ

A: DEMETRA MINERAL
ATTN: DAVID TAFFEL
GRAL. GUEMES 677
VICENTE LOPEZ BA 1638

Éste es el Informe Final y substituye cualquier informe preliminar con este número de certificado. Los resultados se aplican a las muestras sometidas. Todas las páginas de este informe fueron comprobadas y aprobadas antes de publicación.

***** Vea Apéndice Página para comentarios con respecto a este certificado *****

Firma:
Colin Ramshaw, Vancouver Laboratory Manager

ALS Minerals

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Proyecto: ANA SOFIA

Página: 2 - A
Número total de paginas: 2 (A)
El Apéndice positivo Pagina
Fecha Completada: 22- SEPT- 2016
Cuenta: DEMETRA

CERTIFICADO DE ANÁLISIS ME16155613

Descripción de la Muestra / Método / Analito / Unidades / NPI	OA-GRA10 H2O % 0.01
16RSGC001	8.52
16RSRC001	6.98
16RSCG003	4.51
16RSGC003A	8.95
16RSRC003A	4.55
16RSS004	3.19
16RST004	4.77
16RSGC006A	5.99
16RSGC009	5.04
16RSGC011	6.31
16RSRC011	1.81
16RSGC013	5.39
16RST014	11.70
16RSRC018	10.35
16RST019	9.97
16RSGC019	7.01
16RSGC019A	7.81
16RSS019A	2.70
16RSGC021	7.79
16RSGC021A	7.37
16RSRC021A	4.48
16RSGC021B	6.36
16RSGC033	7.44
16RSGC033A	6.34
16RSRC033A	4.61
16RSGC034	7.88
16RST034	5.48
16RSGC037A	5.13
16RSGC037B	6.48
16ATP201	18.40
16ATP202	16.95
16ATP203	17.00
16ATP204	14.85
16ATP205	17.85

***** Vea Apéndice Página para comentarios con respecto a este certificado *****

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Página: Apéndice 1
Totalice # Páginas de Apéndice: 1
Fecha Completada:
22- SEPT- 2016
Cuenta: DEMETRA

Proyecto: ANA SOFIA

CERTIFICADO DE ANÁLISIS ME16155613

	COMENTARIOS DE CERTIFICADO
Métodos Aplicados:	**DIRECCIÓN DEL LABORATORIO** Procesado en ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada. FND- 02 OA- GRA10

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To: DEMETRA MINERAL
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Page: 1
Total # Pages: 2 (A)
Plus Appendix Pages
Finalized Date: 23- SEP- 2016
This copy reported on
14- DEC- 2016
Account: DEMETRA

CERTIFICATE ME16150555

This report is for 40 Rock samples submitted to our lab in Mendoza, MD, Argentina on 8- SEP- 2016.

The following have access to data associated with this certificate:

SEBASTIAN CATTENO

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
CRU- 31	Fine crushing - 70% <2mm
CRU- QC	Crushing QC Test
SPL- 21	Split sample - riffle splitter

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
OA- GRA10	Moisture	WST- SEQ

To: DEMETRA MINERAL
ATTN: ALS MINERALS

CANADA

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:
Colin Ramshaw, Vancouver Laboratory Manager

ALS Minerals

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To: DEMETRA MINERAL
GRAL. GUEMES 677
VICENTE LOPEZ BA 1638

Page: 2 - A
Total # Pages: 2 (A)
Plus Appendix Pages
Finalized Date: 23- SEP- 2016
Account: DEMETRA

CERTIFICATE OF ANALYSIS ME16150555

Sample Description	Method / Analyte / Units / LOR	WEI-21 Recvd Wt. kg 0.02	OA-GRA10 H2O % 0.01
16GFG001B		1.92	20.4
16GFG001A		1.66	18.75
16GFG003		2.84	19.95
16GFGC003		1.62	10.35
16GFG003AA		2.38	18.95
16GFG003AB		3.40	19.40
16GFG004		2.58	18.80
16GFG006AA		2.84	20.3
16GFG006AB		2.16	20.1
16GFG006BA		1.78	20.00
16GFG006BB		2.56	19.65
16GFGC006B		1.20	10.00
16GFG009A		2.94	20.3
16GFGC009A		2.30	10.65
16GFG009B		2.14	20.2
16GFGC011A		2.12	7.32
16GFG011A		2.54	20.3
16GFG011B		3.14	20.0
16GFG013A		1.84	19.85
16GFCG013		2.96	18.40
16GFG013B		2.56	20.1
16GFGC018		2.92	18.35
16GFG019A		2.74	19.55
16GFS020		1.22	3.81
16GFGC020		2.36	8.03
16GFG020		2.46	20.5
16GFCG021		3.42	16.60
16GFG021		2.40	20.5
16GFG021AA		3.72	20.3
16GFG021AB		2.18	20.4
16GFG021BA		1.62	20.1
16GFG021BB		2.86	19.95
16GFS033		2.00	4.28
16GFG033		1.52	18.70
16GFG033AA		3.92	20.3
16GFG033AB		2.42	20.5
16GFCG034		1.72	17.65
16GFG037A		2.00	20.4
16GFG037B		1.66	20.5
16GFG037C		3.08	20.4

***** See Appendix Page for comments regarding this certificate *****

ALS Minerals

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To: DEMETRA MINERAL
GRAL. GUEMES 677
VICENTE LOPEZ BA 1638

Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 23- SEP- 2016
Account: DEMETRA

CERTIFICATE OF ANALYSIS ME16150555

	CERTIFICATE COMMENTS			
	LABORATORY ADDRESSES			
	Processed at ALS Mendoza located at Altos Hornos Zapla 1605, Godoy Cruz, Mendoza, MD, Argentina.			
Applies to Method:	CRU- 31	CRU- QC	SPL- 21	WEI- 21
	Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.			
Applies to Method:	OA- GRA10			

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Appendix 4

Analytical Certificates for the Acid Leach Sulphate Analysis at ALS of APEX "Check" Samples (2016 Ana Sofia Test Pitting Program)

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Página: 1
Número total de paginas: 2 (A)
El Apéndice positivo Pagina
Fecha Completada:
5- DIC- 2016
Cuenta: DEMETRA

CERTIFICADO ME16207561

Proyecto: ANA SOFIA

Este informe se aplica a 5 muestras de Roca sometidas a nuestro laboratorio de Mendoza, MD, Argentina en 28- NOV- 2016.

Los siguientes tienen acceso a los datos asociados a este certificado:

SEBASTIAN CATTENO	DAVID TAFFEL	

PREPARACIÓN DE MUESTRA

CODIGO ALS	DESCRIPCIÓN
FND- 02	Encontrar muestra para analisis adic.

PROCEDIMIENTOS ANALÍTICOS

CODIGO ALS	DESCRIPCIÓN	INSTRUMENTO
S- GRA06a	Azufre Sulfato (HCl lixiviable)	WST- SEQ

A: DEMETRA MINERAL
ATTN: DAVID TAFFEL
GRAL. GUEMES 677
VICENTE LOPEZ BA 1638

Éste es el Informe Final y substituye cualquier informe preliminar con este número de certificado. Los resultados se aplican a las muestras sometidas. Todas las páginas de este informe fueron comprobadas y aprobadas antes de publicación.

***** Vea Apéndice Página para comentarios con respecto a este certificado *****

Comentarios: Dried samples for 2 hours at 230°C before S- GRA06a analysis per client's instruction.

Firma:
Colin Ramshaw, Vancouver Laboratory Manager

ALS Minerals

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Página: 2 - A
Número total de paginas: 2 (A)
El Apéndice positivo Pagina
Fecha Completada: 5- DIC- 2016
Cuenta: DEMETRA

Proyecto: ANA SOFIA

CERTIFICADO DE ANÁLISIS ME16207561

Descripción de la Muestra / Método / Analito / Unidades / NPI	S- GRA06a / S / % / 0.01
16ATP201	22.6
16ATP202	19.80
16ATP203	22.4
16ATP204	18.70
16ATP205	22.4

Comentarios: Dried samples for 2 hours at 230°C before S- GRA06a analysis per client's instruction.

***** Vea Apéndice Página para comentarios con respecto a este certificado *****

ALS Argentina
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Página: Apéndice 1
Totalice # Páginas de Apéndice: 1
Fecha Completada: 5- DIC- 2016
Cuenta: DEMETRA

Proyecto: ANA SOFIA

CERTIFICADO DE ANÁLISIS ME16207561

	COMENTARIOS DE CERTIFICADO
	DIRECCIÓN DEL LABORATORIO
Métodos Aplicados:	Procesado en ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada. FND- 02 S- GRA06a

Appendix 5

Analytical Certificates for Acid Leach Sulphate "Check" Analyses at ALS for 27 key 2016 Ana Sofia Test Pit Samples

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Página: 1
Número total de paginas: 2 (A)
El Apéndice positivo Pagina
Fecha Completada:
30- NOV- 2016
Cuenta: DEMETRA

CERTIFICADO VA16203545

Este informe se aplica a 28 muestras de Pulpa sometidas a nuestro laboratorio de Vancouver, BC, Canada en 18- NOV- 2016.

Los siguientes tienen acceso a los datos asociados a este certificado:

SEBASTIAN CATTENO	DAVID TAFFEL	

PREPARACIÓN DE MUESTRA

CODIGO ALS	DESCRIPCIÓN
WEI- 21	Peso Muestra Recibida
LOG- 22	Reg Muestras - Rcd sin Cod.Barra
CRU- 31	Chancado Fino - 70% <2mm
SPL- 21	Cuarteo - cuarteador riffle
PUL- 31	Pulverizado cuarteo a 85% <75 um
LOG- 24	Reg Pulpas - Rcd sin Cód. Barra

PROCEDIMIENTOS ANALÍTICOS

CODIGO ALS	DESCRIPCIÓN	INSTRUMENTO
S- GRA06a	Azufre Sulfato (HCl lixiviable)	WST- SEQ

A: DEMETRA MINERAL
ATTN: DAVID TAFFEL
GRAL. GUEMES 677
VICENTE LOPEZ BA 1638

Éste es el Informe Final y substituye cualquier informe preliminar con este número de certificado. Los resultados se aplican a las muestras sometidas. Todas las páginas de este informe fueron comprobadas y aprobadas antes de publicación.

***** Vea Apéndice Página para comentarios con respecto a este certificado *****

Comentarios: SA- MISC code for drying samples at 230 degrees for 2 hours before weighing for S- GRA06a.

Firma:
Colin Ramshaw, Vancouver Laboratory Manager

ALS Minerals

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Página: 2 - A
Número total de paginas: 2 (A)
El Apéndice positivo Pagina
Fecha Completada: 30- NOV- 2016
Cuenta: DEMETRA

CERTIFICADO DE ANÁLISIS VA16203545

Descripción de la Muestra / Método / Analito / Unidades / NPI	WEI- 21 Peso Rec. kg 0.02	S- GRA06a S % 0.01
16GFG001A		20.5
16GFG003		22.6
16GFG003AB		21.1
16GFG004		20.4
16GFG006AA		22.5
16GFG006AB		22.3
16GFG006BA		22.2
16GFG006BB		21.7
16GFG009A		22.7
16GFG009B		22.6
16GFG011A		22.4
16GFG011B		22.3
16GFG013A		21.8
16GFGC018		18.70
16GFG019A		21.6
16GFG020		0.39
16GFG021		22.8
16GFCG021		15.85
16GFG021AA		22.4
16GFG021AB		22.5
16GFG021BA		22.0
16GFG021BB		21.7
16GFG033		19.80
16GFG033AA		22.8
16GFG033AB		22.7
16GFG037B		22.9
16GFG037C		22.4
16ATP101	1.00	22.9

Comentarios: SA- MISC code for drying samples at 230 degrees for 2 hours before weighing for S- GRA06a.

***** Vea Apéndice Página para comentarios con respecto a este certificado *****

ALS Minerals

ALS Argentina
Altos Hornos Zapla 1605
Godoy Cruz
Mendoza MD 5501
Teléfono: +54 (261) 431 9880 Telefax: +54 (261) 432 4278
www.alsglobal.com

A: DEMETRA MINERAL
GRAL. GUEMES 677
VICENTE LOPEZ BA 1638

Página: Apéndice 1
Totalice # Páginas de Apéndice: 1
Fecha Completada: 30- NOV- 2016
Cuenta: DEMETRA

CERTIFICADO DE ANÁLISIS VA16203545

COMENTARIOS DE CERTIFICADO

DIRECCIÓN DEL LABORATORIO

Procesado en ALS Vancouver, 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Métodos Aplicados:	CRU- 31	LOG- 22	LOG- 24	PUL- 31
	S- GRA06a	SPL- 21	WEI- 21	

Appendix 6

Analytical Certificates for the Analysis at SEGEMAR of Coarse Reject Duplicate Samples (2016 Ana Sofia Test Pitting Program)

INTEMIN | SegemAR Servicio Geológico Minero Argentino

INFORME: Final **016 Q0435**

Solicitante: **Demetra Fertilizantes S.A.**

O.T. Nº: **015471**
Fecha: 2016/11/23
Página: 1 de 4

Domicilio: Gral. Guemes 677 – Vicente López

Objetivo:
Análisis químico de ocho muestras de yeso.
Material Recibido:
8 Muestras:
Muestra 6, Muestra 9, Muestra 16, Muestra 17, Muestra 22, Muestra 28, Muestra 34 y Muestra 40 (015471-0001 al 015471-0008)

Fecha de recepción:
7 de noviembre de 2016

Metodología utilizada:
El análisis químico solicitado se llevó a cabo siguiendo la norma ASTM C-471-91.
Resultados obtenidos:

Analito	015471-0001	015471-0002
Pérdida a 45 ºC (g/100g) Agua libre	0,55	0,33
Pérdida a 215-230 ºC (g/100g) Agua combinada	19,45	19,97
SiO_2 (g/100g)	4,00	1,00
Al_2O_3 (g/100g)	0,59	0,20
Fe_2O_3 (g/100g)	0,16	0,06
TiO_2 (g/100g)	0,02	0,01
P_2O_5 (g/100g)	0,01	< 0,01
MnO (g/100g)	< 0,01	0,01
CaO (g/100g)	31,23	32,66
MgO (g/100g)	< 0,01	< 0,01
BaO (g/100g)	0,01	< 0,01
SrO (g/100g)	0,23	0,20
SO_3 (g/100g)	43,41	44,52
K_2O (g/100g)	0,07	0,03
Na_2O (g/100g)	< 0,01	< 0,01
$CaSO_4.2H_2O$ (g/100g)	92,93	95,42
$CaSO_4$ (g/100g)	< 0,05	< 0,05
$CaCO_3$ (g/100g)	1,71	2,82
$MgCO_3$ (g/100g)	< 0,01	< 0,01

Los resultados se refieren exclusivamente a la muestra recibida. El INTEMIN declina toda responsabilidad por el uso indebido de este informe.

Av. General Paz 5445 (colectora) - Parque Tecnológico Miguelete - Edificio 14 y Edificio 25 San Martín (B1650 WAB) - Provincia de Buenos Aires
Servicio Geológico Minero Argentino (SEGEMAR) - info@segemar.gov.ar - Tel: (5411) 5670-0100

INTEMIN | SegemAR
Servicio Geológico Minero Argentino

Solicitante: **Demetra Fertilizantes S.A.**

O.T. Nº: **015471**
Página: 2 de 4

Analito	015471-0004	015471-0005	015471-0006
Pérdida a 45 ºC (g/100g) Agua libre	0,22	0,61	0,23
Pérdida a 215-230 ºC (g/100g) Agua combinada	20,33	18,32	20,27
SiO_2 (g/100g)	0,70	8,20	0,32
Al_2O_3 (g/100g)	0,14	2,28	0,02
Fe_2O_3 (g/100g)	0,03	0,95	0,02
TiO_2 (g/100g)	0,01	0,12	< 0,01
P_2O_5 (g/100g)	< 0,01	0,02	< 0,01
MnO (g/100g)	0,01	< 0,01	< 0,01
CaO (g/100g)	32,42	28,51	32,87
MgO (g/100g)	< 0,01	< 0,01	< 0,01
BaO (g/100g)	< 0,01	< 0,01	< 0,01
SrO (g/100g)	0,29	0,18	0,17
SO_3 (g/100g)	45,39	40,85	45,17
K_2O (g/100g)	0,02	0,55	0,01
Na_2O (g/100g)	< 0,01	0,01	< 0,01
$CaSO_4.2H_2O$ (g/100g)	97,14	87,53	96,85
$CaSO_4$ (g/100g)	< 0,05	< 0,05	< 0,05
$CaCO_3$ (g/100g)	1,39	< 0,01	2,37
$MgCO_3$ (g/100g)	< 0,01	< 0,01	< 0,01

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Servicio Geológico Minero Argentino

Solicitante: **Demetra Fertilizantes S.A.**

O.T. Nº: **015471**
Página: 3 de 4

Analito	015471-0007	015471-0008
Pérdida a 45 ºC (g/100g) Agua libre	0,43	0,22
Pérdida a 215-230 ºC (g/100g) Agua combinada	18,87	20,58
SiO_2 (g/100g)	4,36	0,38
Al_2O_3 (g/100g)	1,14	0,18
Fe_2O_3 (g/100g)	0,45	0,02
TiO_2 (g/100g)	0,05	0,01
P_2O_5 (g/100g)	0,02	0,01
MnO (g/100g)	0,12	< 0,01
CaO (g/100g)	30,91	32,43
MgO (g/100g)	< 0,01	< 0,01
BaO (g/100g)	0,01	< 0,01
SrO (g/100g)	0,30	0,14
SO_3 (g/100g)	42,17	45,84
K_2O (g/100g)	0,29	0,05
Na_2O (g/100g)	0,01	< 0,01
$CaSO_4.2H_2O$ (g/100g)	90,16	98,33
$CaSO_4$ (g/100g)	< 0,05	< 0,05
$CaCO_3$ (g/100g)	2,77	0,71
$MgCO_3$ (g/100g)	< 0,01	< 0,01

INTEMIN | SegemAR
Servicio Geológico Minero Argentino

Solicitante: **Demetra Fertilizantes S.A.**

O.T. Nº: **015471**
Página: 4 de 4

Analito	015471-0003
SiO_2 (g/100g)	60,29
Al_2O_3 (g/100g)	13,53
Fe_2O_3 (g/100g)	6,12
TiO_2 (g/100g)	0,74
P_2O_5 (g/100g)	0,12
MnO (g/100g)	0,04
CaO (g/100g)	0,84
MgO (g/100g)	2,49
BaO (g/100g)	< 0,01
SrO (g/100g)	0,07
Na_2O (g/100g)	1,21
K_2O (g/100g)	4,23
SO_3 (g/100g)	0,34
Pérdida por calcinación a 1000ºC (g/100g)	9,24

NOTA: La muestra 015471-0003 no pudo ser analizada utilizando la norma ASTM C-471-91 ya que su composición química no era la de un yeso.

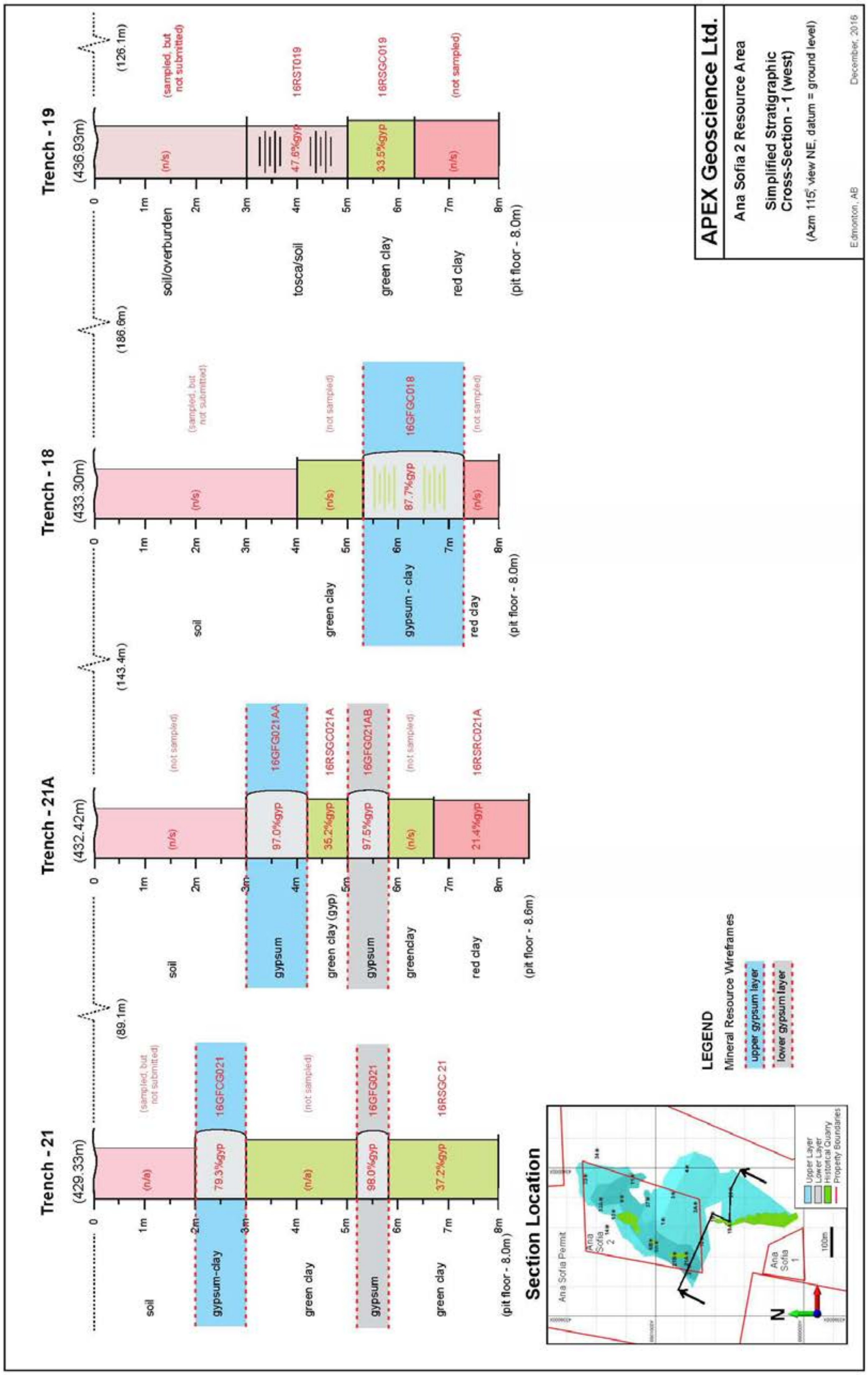
Personal que intervino en este ensayo: Matias Cunci.

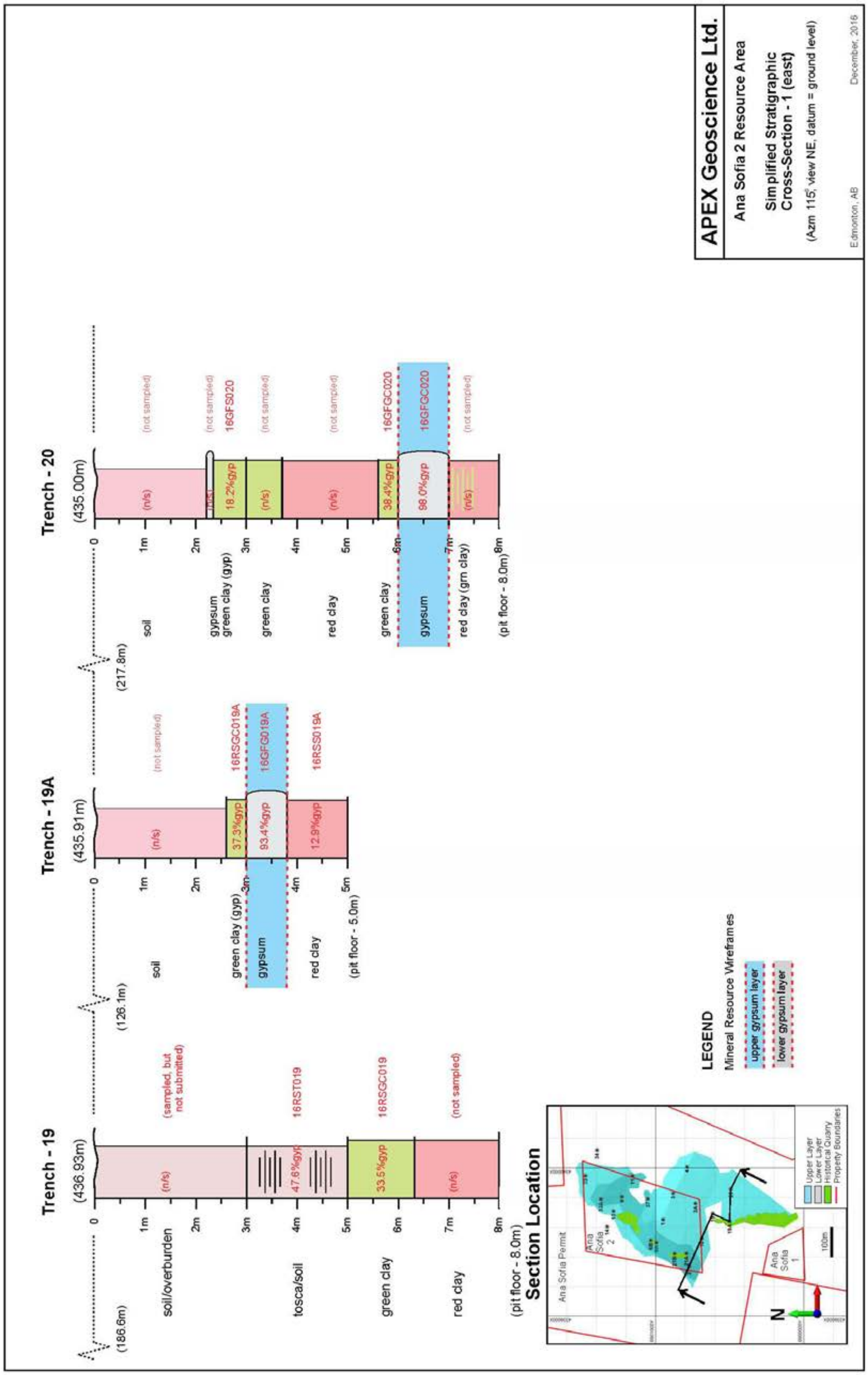
Matias Cunci
Area Fluorescencia de Rayos X

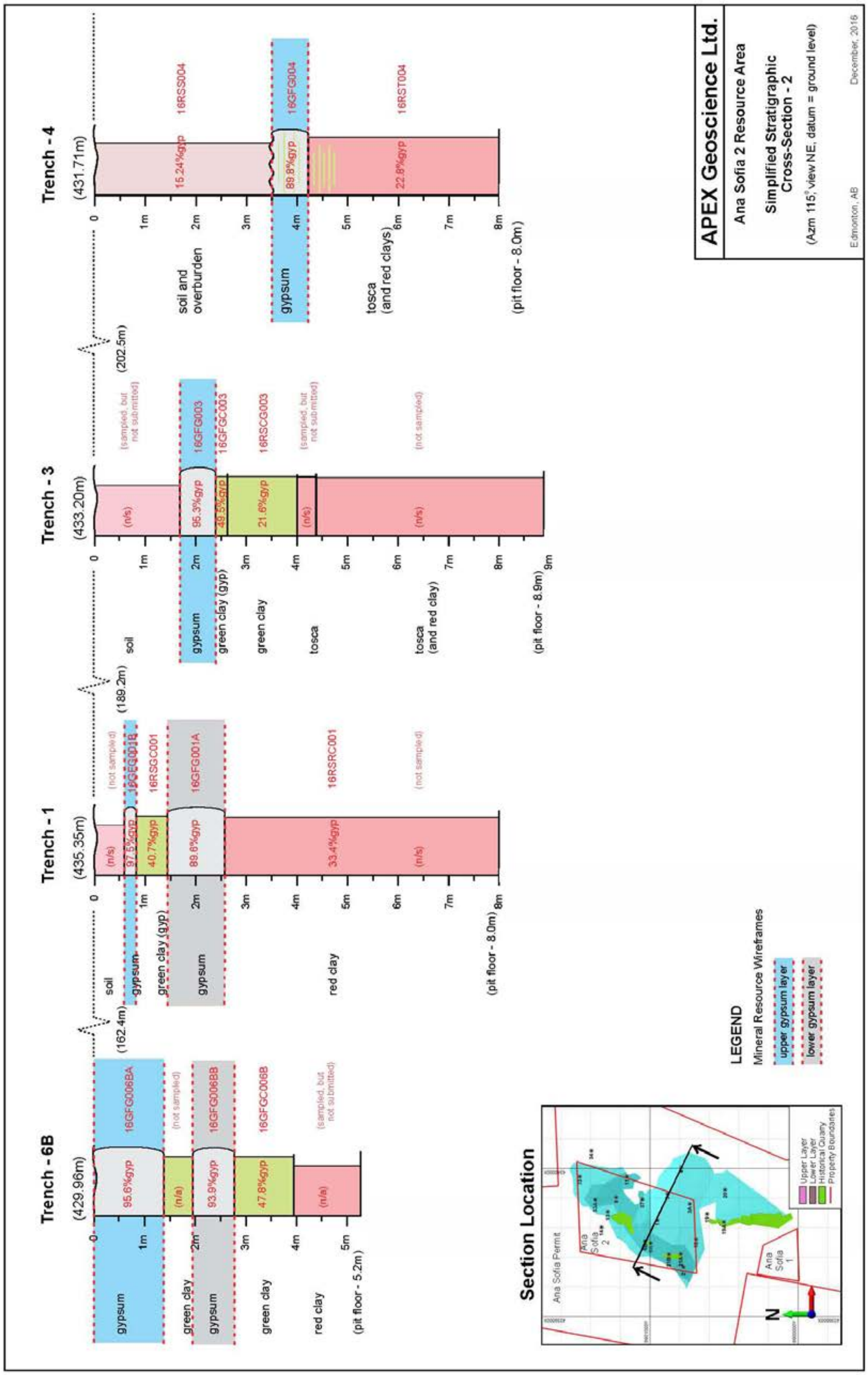
Lic. PATRICIA CLARAMUNT
Jefa Depto Analisis Quimicos
SEGEMAR

Appendix 7

2016 Test Pitting Program Example Cross-Sections with Stratigraphic Columns


APEX Geoscience Ltd.
Ana Sofia 2 Resource Area
Simplified Stratigraphic Cross-Section - 1 (west)
(Azm 115°, view NE, datum = ground level)
Edmonton, AB
December, 2016
Trench - 21
(429.33m)
Trench - 21A
(432.42m)
Trench - 18
(433.30m)
Trench - 19
(436.93m)
(89.1m)
(143.4m)
(186.8m)
(126.1m)
soil
gypsum-clay
green clay
gypsum
green clay (gyp)
greenclay
red clay
gypsum - clay
soil/overburden
tosca/soil
79.3%gyp
98.0%gyp
37.2%gyp
97.0%gyp
35.2%gyp
97.5%gyp
21.4%gyp
87.7%gyp
47.6%gyp
33.5%gyp
16GFCG021
16GFG021
16RSGC 21
16GFG021AA
16RSGC021A
16GFG021AB
16RSRC021A
16GFGC018
16RST019
16RSGC019
(sampled, but not submitted)
(not sampled)
(pit floor - 8.0m)
(pit floor - 8.6m)
LEGEND
Mineral Resource Wireframes
upper gypsum layer
lower gypsum layer
Section Location
Ana Sofia Permit
Ana Sofia 2
Ana Sofia 1
Upper Layer
Lower Layer
Historical Quarry
Property Boundaries
100m


APEX Geoscience Ltd.
Ana Sofia 2 Resource Area
Simplified Stratigraphic Cross-Section - 1 (east)
(Azm 115°, view NE, datum = ground level)
Edmonton, AB
December, 2016
Trench - 19
(436.93m)
Trench - 19A
(435.91m)
Trench - 20
(435.00m)
(186.6m)
(126.1m)
(217.8m)
soil/overburden
tosca/soil
green clay
red clay
(pit floor - 8.0m)
soil
green clay (gyp)
gypsum
red clay
(pit floor - 5.0m)
gypsum
green clay (gyp)
green clay
red clay
green clay
gypsum
red clay (grn clay)
(pit floor - 8.0m)
(n/s)
47.6%gyp
33.5%gyp
37.3%gyp
93.4%gyp
12.9%gyp
18.2%gyp
38.4%gyp
98.0%gyp
(sampled, but not submitted)
16RST019
16RSGC019
(not sampled)
16RSGC019A
16GFG019A
16RSS019A
16GFS020
16GFGC020
LEGEND
Mineral Resource Wireframes
upper gypsum layer
lower gypsum layer
Section Location
Ana Sofia Permit
Ana Sofia 2
Ana Sofia 1
Upper Layer
Lower Layer
Historical Quarry
Property Boundaries



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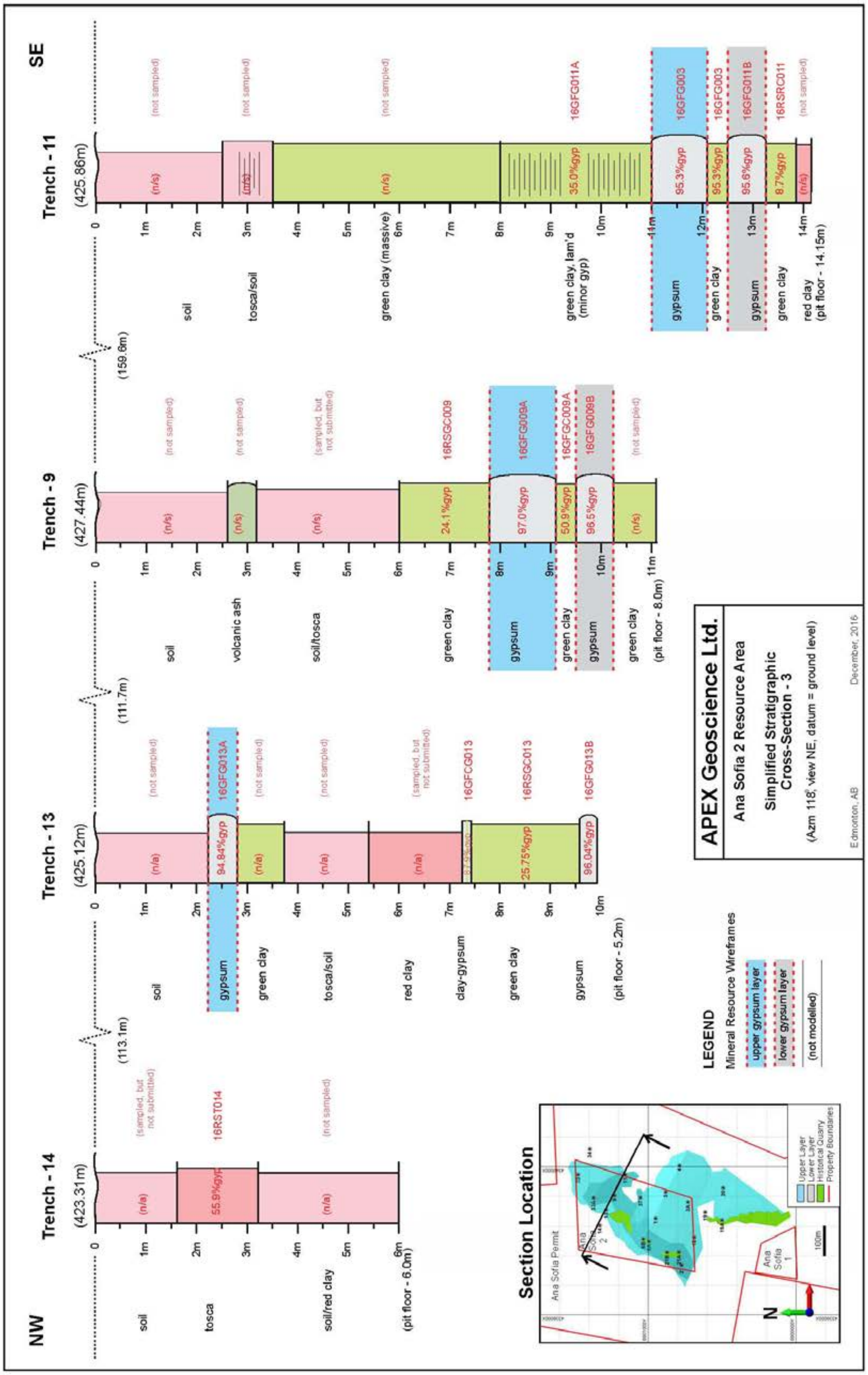

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