

# AMENDED MINERAL RESOURCE ESTIMATE UPDATE FOR THE SONORA LITHIUM PROJECT, MEXICO, APRIL 2016

Prepared For  
**Bacanora Minerals Ltd**

Report Prepared by



SRK Consulting (UK) Limited  
UK6560

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## EXECUTIVE SUMMARY

### AMENDED MINERAL RESOURCE ESTIMATE UPDATE FOR THE SONORA LITHIUM PROJECT, MEXICO, APRIL 2016

#### 1 EXECUTIVE SUMMARY

SRK Consulting (UK) Limited (“SRK”) has been commissioned by Bacanora Minerals Limited (TSX-V:BCN) (“Bacanora” or the “Company”) to produce an updated Mineral Resource estimate (“MRE”) of the Sonora Lithium Project (“Sonora” or the “Project”) located in Mexico.

This amended MRE updates the Mineral Resource statement given in the press release announcing completion of the Sonora Lithium Project Pre-Feasibility Study dated March 3<sup>rd</sup>, 2016 (since when SRK has updated cut-off grade and resource pit constraint) and updates the December 2015 Mineral Resource Technical Report previously filed on SEDAR as announced in Bacanora’s press release dated 5<sup>th</sup> January, 2016 (since when potassium has been included in the MRE).

The Sonora Lithium Project is an exploration project in the northwestern Mexican state of Sonora, some 11 km south of Bacadehuachi which is 180 km northeast of Hermosillo. The project site is approximately 170 km south of the USA – Mexico border.

Several concessions cover the Project area and these are majority owned by Bacanora Minerals Limited (“Bacanora”), many of these are 30% held by Rare Earth Minerals PLC (“REM”) in joint venture. REM also owns 17.19% of Bacanora.

The Sonora Lithium Project MRE is for lithium clay units which are distributed across the contiguous El Sauz, El Sauz 1, Fleur and La Ventana concessions (“the concessions”) owned by the daughter companies Mexalit and Minera Sonora Borax. The concessions held by Megalit have not been reviewed by SRK and the Mineral Resource statement does not include material from the Megalit concessions.

The majority of exploration on the Project has been completed under Bacanora’s management since 2010. Following an early sampling and mapping phase, drilling initially took place on the La Ventana area and more recently on the El Sauz and Fleur areas. Over 14,000 m of core drilling has been completed at the Effective Date of this report. A Pre-Feasibility Study (“PFS”) is currently underway to collate the technical work that has been completed to date. Bacanora has also converted an existing metallurgical testwork facility in Hermosillo to enable processing testwork on the clay material and the development of a process flowsheet which is also on-going.

The geology on the property is dominated by the Oligocene and Miocene Sierra Madre Oriental volcanic complex comprising Miocene sediments and volcanics deposited in half graben basins. The mineralisation studied in this report is contained in a stratiform package dominated by pyroclastics including two distinct clay-rich tuffaceous layers. Some of the clay minerals in these units such as polyolithionite are a potentially economic source of lithium. The clay units are separated by an ignimbrite layer and the upper clay layer is overlain by Miocene basalt flows.

The area has mountainous relief with deeply incised valleys where the clay units outcrop in some places; the outcrop geometry is affected by the topography and several faults which offset the deposit. A three dimensional (“3-D”) model of the deposit and faults has been created based on outcrop mapping, aerial photography and drilling.

SRK has based the resource model on geological maps, Ikonos satellite imagery, LIDAR topographic survey data as well as geological and assay data from 97 drillholes and six trenches. Density determinations, sample preparation and assaying of the drillhole samples have been undertaken using industry accepted methods and quality control. The data is considered by SRK to be adequate to support the Mineral Resources stated in this report although some improvements have been recommended.

In the main fault block in the eastern area of drilling, the stratigraphy dips gently, the dip direction changes along the strike of the deposit from northeasterly in the north, easterly in the central area to northerly in the south. The clay units have been shown to be continuous over more than 7 km of strike extent and several hundred metres down dip. Each lithium clay unit is generally 10 m to 50 m thick and separated by approximately 6 m of ignimbrite. Lithium grades, after averaging across the total thickness of each layer, are very uniform and change slowly along the strike of the deposit. The Lower Clay Unit is slightly thicker on average and considerably higher grade than the Upper Clay Units. Drilling coverage is variable and allows for Indicated Mineral Resources in a continuous northwest trending zone along the centre of the deposit that corresponds to an area with the most intense drilling; the remainder is classified as an Inferred Mineral Resource and beyond the drilled areas there is further exploration potential.

In the other fault blocks to the west, the clay units and the faults themselves are defined by fewer outcrops and drillholes, so the deposit in this area has been interpreted with lower confidence and classified as an Inferred Mineral Resource with further exploration potential. The deposit in these areas has similar mineralogy and geology, but has slightly lower thickness and grade; going westwards the dip direction has been interpreted to change from northwesterly to westerly, but this needs confirmation with more drilling.

Solid 3-D wireframes of the clay units were used to generate a block model into which geological codes, dry densities and lithium grades have been assigned and estimated. SRK chose to use composited grades for each sampled intersection of each clay unit and undertook statistical and geostatistical analysis and block grade estimation on this basis. Based on the grade distribution observed in the Upper Clay (higher grades concentrated towards the base of the unit), SRK chose to subdivide the unit based on sample grade to produce a high grade and low grade subdomain within the Upper Clay. This sub-domaining was only possible in the main eastern fault block where sufficient drilling is present to consistently see this vertical grade distribution profile. The mean composited lithium (“Li”) grade in the Upper Clay Unit (high grade sub domain) is 2,870 ppm Li, Upper Clay Unit (low grade sub domain) is 860 ppm Li and the mean composited lithium grade in the Lower Clay Unit is 2,910 ppm Li. Variography on the lithium and potassium grades shows a total range in excess of 1 km. For the grade interpolation, a three-pass Kriging method was used to identify the areas drilled on a tighter grid spacing in the first pass and to ensure all blocks in the model were assigned a grade in the third pass.

In order to determine the ‘reasonable prospects for eventual economic extraction’ required for Mineral Resources, SRK has used mining and processing cost and recovery assumptions developed by Bacanora for use in a Pre-Feasibility study. Bacanora is developing a process flowsheet which is similar to that being developed for the Kings Valley Lithium Project. The flowsheet involves a series of stages starting with beneficiation, followed by calcination, leaching, evaporation, filtering and precipitation.

According to a number of sources, 99.5% pure (Battery Grade) lithium carbonate has typically traded at between USD 6000 and USD 7000 / t in the last three years. According to one specialist market forecast report commissioned by Bacanora, the price is expected to continue in this range and gradually climb in response to supply shortage in the 5 to 15 year timeframe. SRK has interpreted this information to develop a lower cut-off grade for Mineral Resource reporting for Mineral Resources (1000 ppm Li) compared with the cut-off being considered for the PFS production model (1200 ppm Li).

The Mineral Resource is based on exploration results from mapping drilling and trenching made available to SRK on the 19 October 2015. The Effective Date of the Mineral Resource is 12 April 2016 which was approved by the Qualified Person; this is date at which the cut-off grade and pit optimisation parameters were finalised.

The reporting standard adopted for the reporting of the MRE uses the terminology, definitions and guidelines given in the CIM Standards on Mineral Resources and Mineral Reserves (May 2014) as required by NI 43-101.

In the Mineral Resource statement, the lithium metal content is also given as a Lithium Carbonate Equivalent (“LCE”); using a conversion factor of 1 unit of lithium metal to 5.32 units of LCE.

The statement has been classified in accordance with the terminology, definitions and guidelines given in the Canadian Institute of Mining, Metallurgy and Petroleum (“CIM”) Definition Standards for Mineral Resources and Mineral Reserves (May 2014) and has been reported in accordance with NI 43-101, by the Qualified Person, Mr Martin Pittuck (MSc, CEng, MIMMM). Mr Pittuck is an engineering consultant who is independent of Bacanora.

The Mineral Resource is the total for the Project; in respect of the total metal in the Indicated and Inferred Mineral Resources some 81% and 86% respectively is attributable to Bacanora.

Previous estimations were undertaken by SRK in May 2015 and C Verley of Amerlin Exploration Services Ltd in June 2014. The 2014 estimation used a 2-D polygonal estimation method, whereas in both the May 2015, December 2015 and April 2016 estimates, SRK created a 3-D geological model giving better confidence in geological continuity which allows extrapolation over a wider area resulting in a larger overall resource than that produced in the 2014 estimate.

This updated MRE has a greater proportion of Indicated Mineral Resource than in the May 2015 MRE following the recent targeted infill drilling programme. The infill drilling confirmed the previous geological interpretation in most areas, which, along with good quality control results and the improved quality of estimation, allowed for a higher level of confidence to be attributed to more of the estimated block model. The overall Mineral Resource has decreased due to updated parameters from the PFS that were used for the pit optimisation and cut-off grade analysis decreasing the size of the pit shell delimiting the block model and increasing the cut-off grade.

SRK recommends continued drilling to infill the Inferred Mineral Resource to increase the confidence to an Indicated level, and if required infill the Indicated Mineral Resource to increase the confidence to a Measured level.

Some of the quality control procedures should be improved so that the grades of the standard reference materials are more representative of the deposit grades. Some aspects of the density determination also require further study to confirm the accuracy of the density determination method which currently assumed no core shrinkage upon drying.

The laboratory method used for analysis has a maximum detection limit of 10,000 ppm Li; several samples have returned this grade. SRK recommends resubmitting all high grade samples to the laboratory, employing a method with a higher upper detection limit; this will result in a slight increase in the resource grade.

The deposit appears to be robust and to have reasonable prospects for economic extraction. A PFS is currently underway with the aim of determining Mineral Reserves using the block model created by SRK.

**Table ES 1: SRK Mineral Resource Statement as of 12 April 2016**

Classification	Concession	Owner	Geological Unit	Clay Tonnes (Mt)	Clay Grade		Contained Metal		
					Li ppm	K %	Kt Li	Kt LCE	Kt K
Indicated	La Ventana	Minera Sonora Borax (99.9% Bacanora)	Lower Clay	64	3,700	1.7	235	1,252	1,055
			Upper Clay	32	2,100	0.9	68	363	280
	El Sauz	Mexilit (JV-1) (70% Bacanora)	Lower Clay	58	3,000	1.3	174	928	735
			Upper Clay	14	2,100	0.8	28	151	110
	Fleur	Mexilit (JV-1) (70% Bacanora)	Lower Clay	60	4,300	1.8	256	1,363	1,070
			Upper Clay	27	2,200	0.9	59	316	235
	El Sauz1	Mexilit (JV-1) (70% Bacanora)	Lower Clay	4	4,000	1.7	15	80	65
			Upper Clay	1	2,200	0.8	2	10	5
<b>Indicated Total</b>			<b>Combined</b>	<b>259</b>	<b>3,200</b>	<b>1.4</b>	<b>839</b>	<b>4,463</b>	<b>3,555</b>
Inferred	La Ventana	Minera Sonora Borax (99.9% Bacanora)	Lower Clay	45	4,300	1.8	194	1,029	820
			Upper Clay	45	2,000	0.8	90	479	360
	El Sauz	Mexilit (JV-1) (70% Bacanora)	Lower Clay	20	2,500	1.0	50	266	210
			Upper Clay	5	1,900	0.8	10	51	40
	Fleur	Mexilit (JV-1) (70% Bacanora)	Lower Clay	20	4,300	1.8	86	458	360
			Upper Clay	5	2,800	1.0	14	74	50
	El Sauz1	Mexilit (JV-1) (70% Bacanora)	Lower Clay	15	4,000	1.6	60	319	245
			Upper Clay	5	2,400	0.9	12	64	45
<b>Inferred Total</b>			<b>Combined</b>	<b>160</b>	<b>3,200</b>	<b>1.3</b>	<b>515</b>	<b>2,740</b>	<b>2,130</b>

**Notes:**

1. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimate and have been used to derive sub-totals, totals and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, SRK does not consider them to be material.
2. The reporting standard adopted for the reporting of the MRE uses the terminology, definitions and guidelines given in the CIM Standards on Mineral Resources and Mineral Reserves (May 2014) as required by NI 43-101 and JORC.
3. The MRE is reported on 100 percent basis for all project areas.
4. SRK assumes the Sonora Lithium deposit to be amenable to surface mining methods. Using results from initial metallurgical test work, suitable surface mining and processing costs, and forecast LCE price SRK has reported the Mineral Resource at a cut-off 1,000 ppm Li (5,320 ppm Li<sub>2</sub>CO<sub>3</sub>).
5. SRK completed a site inspection of the deposit by Mr. Martin Pittuck, MSc, C.Eng, MIMMM, an appropriate "independent qualified person" as such term is defined in NI 43-101.
6. LCE is the industry standard terminology for, and is equivalent to, Li<sub>2</sub>CO<sub>3</sub>. 1 ppm Li metal is equivalent to 5.32 ppm LCE / Li<sub>2</sub>CO<sub>3</sub>. Use of LCE is to provide data comparable with industry reports and assumes complete conversion of lithium in clays with no recovery or process losses.

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## AMENDED MINERAL RESOURCE ESTIMATE UPDATE FOR THE SONORA LITHIUM PROJECT, MEXICO, APRIL 2016

### 2 INTRODUCTION

#### 2.1 Background

SRK Consulting (UK) Limited (“SRK”) is an associate company of the international group holding company, SRK Consulting (Global) Limited (the “SRK Group”). SRK has been commissioned by Bacanora Minerals Limited (TSX-V:BCN) (“Bacanora” or the “Company”) to produce an updated Mineral Resource estimate (“MRE”) of the Sonora Lithium Project (“Sonora” or the “Project”) located in Mexico.

This amended MRE updates the Mineral Resource statement given in the press release announcing completion of the Sonora Lithium Project Pre-Feasibility Study dated March 3<sup>rd</sup>, 2016 (since when SRK has updated cut-off grade and resource pit constraint) and updates the December 2015 Mineral Resource Technical Report previously filed on SEDAR as announced in Bacanora’s press release dated 5<sup>th</sup> January, 2016 (since when potassium has been included in the MRE).

Bacanora is the majority partner in the project via its joint venture with Rare Earth Minerals PLC (“REM”). The two companies have joint ventures in different proportions for several concessions covering the project.

The Sonora Lithium Project MRE is for lithium clay units which are distributed across the contiguous El Sauz, El Sauz 1, Fleur and La Ventana concessions (“the concessions”).

During metallurgical testwork conducted by Bacanora in early 2016 subsequent to the release of the December 2015 MRE, it was discovered that a potassium product can be recovered as a by-product from lithium production. Following this testwork, SRK interpolated grades of potassium (“K”) into the block model and was requested to produce an updated Mineral Resource statement including K. SRK has not received any further drilling data since the December 2015 MRE, however SRK has received new technical and economic information from Bacanora to communicate current values according to the on-going Pre-Feasibility study.

## 2.2 Qualifications of Consultants

SRK is an associate company of the SRK Group. The SRK Group comprises over 1,400 professional staff over 45 offices in 20 countries, offering expertise in a wide range of engineering disciplines. The SRK Group's independence is ensured by the fact that it holds no equity in any project. This permits the SRK Group to provide its clients with conflict-free and objective recommendations on crucial judgment issues. The SRK Group has a demonstrated track record in undertaking independent assessments of resources and reserves, project evaluations and audits, mineral expert reports, independent valuation reports and independent feasibility evaluations to bankable standards on behalf of exploration and mining companies and financial institutions worldwide. The SRK Group has also worked with a large number of major international mining companies and their projects, providing mining industry consultancy service inputs. SRK also has specific experience in commissions of this nature. SRK's contribution to this Technical Report has been prepared based on input from a team of consultants sourced from SRK's office in the UK. These consultants are specialists in the fields of geology and resource and reserve estimation and classification and mineral processing.

The site visit and inspection of the sample preparation facilities were undertaken between 24 and 27 March 2015 by:

**Mr Martin Pittuck** (Project Director), who is a full time employee of SRK. Mr Pittuck is a Chartered Engineer with the Institute of Materials Minerals and Mining and has sufficient experience which is relevant to the style of mineralisation under study to qualify as a Qualified Person ("QP") as defined in the National Instrument 43-101 Standards of Disclosure for Mineral Projects. Martin has 20 years broad geological experience, specialising in Mineral Resource estimation, mine project evaluation and reporting according international reporting codes. He has produced or reviewed resource estimates for a wide variety of commodities and mineralisation styles.

Martin Pittuck supervised the Mineral Resource estimation process. The majority of the Mineral Resource estimation was undertaken by:

**Mr Ben Lepley** (Project Manager), who is also a full time employee of SRK and is a Chartered Geologist with the Geological Society of London (CGeol). Mr Lepley has more than 7 years' geological experience specialising in Mineral Resource estimation.

**Mr Oliver Jones**, who is also a full time employee of SRK and is a Fellow with the Geological Society of London (FGS). Mr Jones has more than 6 years' geological experience specialising in exploration geology and geological modelling.

The individuals responsible for this report have extensive experience in the mining industry and are members in good standing of appropriate professional institutions.

### 3 RELIANCE ON OTHER EXPERTS

SRK has relied upon the Company's in house legal team with respect to validation of mineral tenement and land tenure status, specifically location and ownership agreements, including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.

SRK has relied on a number of sources which provide historical prices for Battery Grade Lithium Carbonate. In addition SRK has relied upon a report which was commissioned by SignumBox, a Chilean based research company that provides market intelligence reports and consulting services in the natural resources industries, with a specific focus on the lithium industry. A key focus of their business is Market Studies looking at demand estimation, supply and forecast of future production capacity, and price modelling and forecast. SignumBox has used its existing database and market intelligence on the lithium market to provide an expert opinion to Bacanora.

### 4 PROJECT DESCRIPTION AND LOCATION

#### 4.1 Project Location

The Project is situated in the northwestern Mexican state of Sonora, some 11 km south of Bacadehuachi which is 180 km northeast of Hermosillo and approximately 170 km south of the USA – Mexico border. A location plan is given in Figure 4-2.

#### 4.2 Project Concessions and Ownership

The Sonora Lithium Project is an exploration project, part of which is owned 99.9% by Bacanora and part of which is owned jointly by REM (30%) and Bacanora (70%). REM also owns 17.19% of Bacanora.

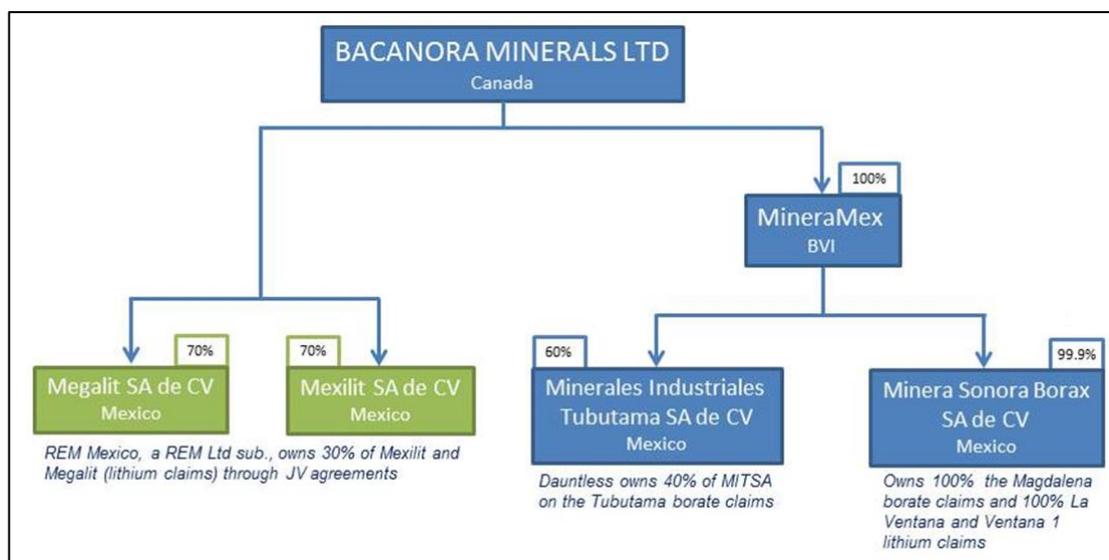
The Sonora Lithium Project consists of seven concessions which confer rights for exploration, mining and production. In addition, Bacanora is a 70% owner of an additional 3 concessions, which surround the Sonora Project, which are not part of the MRE or PFS. The concessions are owned by a number of REM-Bacanora subsidiaries:

- Within Sonora Project:
  - Mexilit SA de CV ("Mexilit"), owned 70% by Bacanora; and
  - Minera Sonora Borax SA de CV ("MSB"), owned 99.9% by Bacanora.
- Outside Sonora Project:
  - Megalit SA de CV ("Megalit"), owned 70% by Bacanora.

Two concessions (La Ventana and La Ventana 1) are 100% owned by MSB. Another five concessions (El Sauz, El Sauz 1, El Sauz 2, Fleur and Fleur 1) are 100% owned by Mexilit. Three concessions (San Gabriel, Buenavista and Megalit) are 100% owned by Megalit. Mexilit and Megalit are owned 70% by Bacanora and 30% by REM.

It should be noted that the data and MRE described in this report relates only to the Mexalit and MSB concessions. The concessions held by Megalit have not been reviewed by SRK and the Mineral Resource statement does not include material from the Megalit concessions.

A separate subsidiary ‘Minerales Industriales Tubutama SA de CV’ is also owned under the Bacanora umbrella; however, this subsidiary deals solely with the Company’s borate holding and as such is not referred to further in this report. The current ownership structure of the Project concessions can be seen in Figure 4-1.



**Figure 4-1: Current Project ownership structure**

**Table 4-1: Concessions of Bacanora Minerals Ltd (Note: red indicates outside Sonora Project)**

Company	Concession	Locality	Title ref.	Area (ha)	Licence Accepted	Expiry
Minera Sonora Borax	La Ventana	Bacadehuachi	235611	875	22-Jan-10	21-Jan-60
Minera Sonora Borax	La Ventana_1	Bacadehuachi	243127	945	10-Jul-14	09-Jul-64
Mexilit	El Sauz	Bacadehuachi	235614	1,025	22-Jan-10	21-Jan-60
Mexilit	Fleur	Bacadehuachi	243132	2,335	10-Jul-14	09-Jul-64
Mexilit	El Sauz_1	Bacadehuachi	244345	200	11-Aug-15	10-Aug-65
Mexilit	El Sauz_2	Bacadehuachi	243029	1,144	30-May-14	29-May-64
Mexilit	Fleur_1	Bacadehuachi	243133	1,630	10-Jul-14	09-Jul-64
Megalith	Buenavista	Huasabas	235613	649	22-May-10	21-May-60
Megalith	San Gabriel	Bacadehuachi	235816	1,500	12-Mar-10	11-Mar-60
Megalith	Megalith	Bacadehuachi		87,086	"Approved for title"	

Of the 10 concessions held within this company structure and dealt with in this programme of study, 9 have been issued to the Company and one has been applied for and currently is ‘Approved for Title’. The issued and Approved for Title concessions of Bacanora Minerals Ltd are set out in Table 4-1.

The “Approved for Title” stage of application, as outlined in Table 4-1, applies to the Megalith concession which does not contain any of the Mineral Resource reported herein. A summary of the process of obtaining title to a concession from the Mexican Federal Mining Registry is as follows:

- initially an application for title is submitted to the local registry where the property is located;

- following the submission of the application, the applicant has 60 days to file a survey with the local registry;
- upon receipt of the survey, the local registry reviews and either approves it or responds to the applicant and gives them a further 15 days to correct their survey; and
- if the survey is approved (that is, no objections are conveyed to the applicant), it is stamped “Approved for Title” and is submitted to the Federal Mining Registry in Mexico City for them to grant title to the applicant as a final administrative step.

In July 2014 and as part of Bacanora’s admission to the AIM market on the London Stock Exchange, a legal opinion was prepared in relation the mineral concession status. The opinion prepared by Melicoff & Asociados Abogados confirmed that:

- Each mining concession is in full force and effect and has been duly validated by the Mexican Mining Bureau and is free from any liens and encumbrances.
- Each mining concession was validly issued for a period of 50 years.
- Each of the mining concessions are in good standing, and they are not subject of any unusual or onerous conditions, and their existence or validity will not be effected by any change of control.
- Bacanora and REM do not see any reason why the pending applications which have been granted full concession status by the Ministry of Mining will not be approved by the Ministry of Mining and confirm that these transfers are being processed.

The Directors of Bacanora believe that there is minimal risk of title not being eventually granted for concessions currently “Approved for Title”. Further the Directors state that Bacanora is, and has been, appropriately able to conduct its exploration activities within these concessions consistent with Approved for Title status. Once the concession that is presently “Approved for Title” has been issued, the concessions will be transferred to Megalit in line with Mexican law and applicable regulations and in accordance with the contractual obligations under the agreements between Bacanora and REM.

The licence holding by the Company forms a continuous coverage over the Project area. This is illustrated in Figure 4-2 and Figure 4-3. La Ventana and La Ventana 1, covering approximately 1,820 ha. The five concessions El Sauz, El Sauz 1, El Sauz 2, Fleur and Fleur 1 cover approximately 6,334 ha in total and the additional three concessions Buenavista, Megalit and San Gabriel cover approximately 89,235 ha in total.



Figure 4-2: Project Location Plan

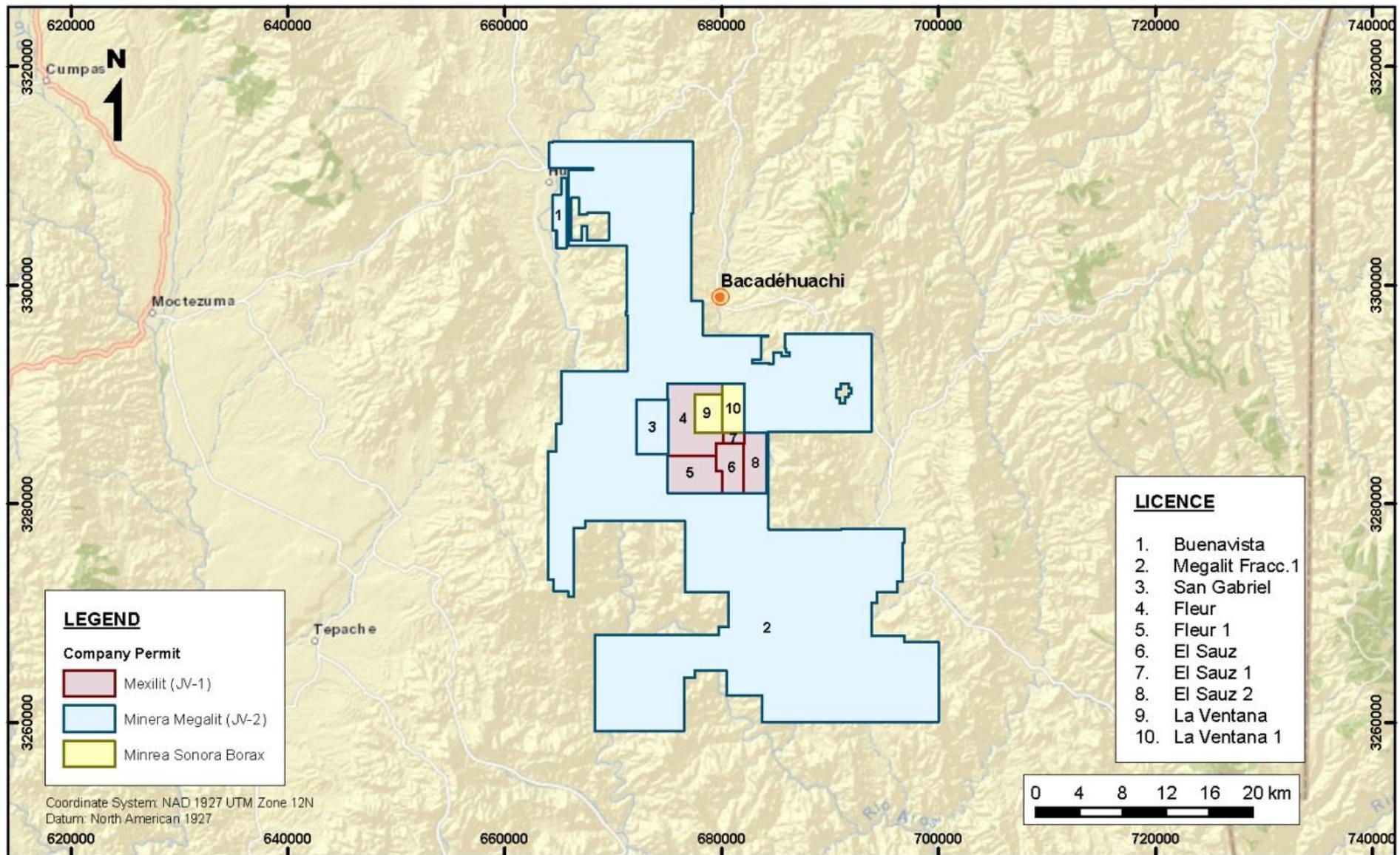


Figure 4-3: Location of the Sonora Lithium Project concessions, Mexico (Note: only Mexalit and MSB are described in this report)

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

### **5.1 International Access**

Sonora lies on the geographic corridor connecting the central Mexican highlands (Mexico City) north into the United States of America along the Pacific Coast. It is a major corridor for travel and shipping, with rail lines and Federal Highway 15 following it. The state contains a total of 24,396 km of highways. Rail lines mostly consist of those which lead into the USA. The major commercial port is in Guaymas, with smaller ones, mostly for tourism, located in San Carlos, Puerto Peñasco and Bahía Kino. The state has four airports in the cities of Hermosillo, Puerto Peñasco, Ciudad Obregón and Nogales. These airports connect the state with 112 other locations both within Mexico and internationally. Airlines that operate out of them include Aeromexico, Volaris, Interjet, Vivaaerobus, US Airways and Aero Calafia.

### **5.2 Regional and Local Access**

The Sonora State and therefore the Project area has well developed infrastructure with an extensive network of roads, including a four-lane highway (Highway 15) that crosses the state from south to north. This not only joins Sonora with the rest of Mexico, but also internationally with the USA.

The Project area specifically is accessed by way of Federal Highway 14, a two-lane highway extending 225 km east of Hermosillo, to the intersection known as “El Coyote”, then south from the intersection for 20 km on a recently paved, two-lane highway to the town of Bacadehuachi. Bacanora has set up its local base of operations in this town and undertakes all core processing facilities from this location.

Access to the concession from Bacadehuachi is on secondary, dry-weather roads, crossing various privately owned ranches for approximately 11 km. The region is well known for cattle ranching, and ranches and fenced zones cross the area. The ranchers have created a network of secondary dirt roads to access other areas, and these roads provide excellent access to the concessions. Land owners have provided authorisation for the Company to access the concessions on these roads.

### **5.3 Physiography and Climate**

#### **5.3.1 Physiography**

The Sonora Lithium Project is situated within the Sonoran Desert in the western portion of the Sierra Madre Occidental physiographic province, within the Basin and Range sub province. It lies between “Mesa de Enmedio”, “Rincon del Sauz” and “El Capulin” mountain ranges. Average elevation at the Project area is 900 m above mean sea level (“amsl”). The concessions are surrounded by mountain peaks with elevations ranging up to 1,440 m amsl.

#### **5.3.2 Climate**

The average ambient temperature is 21°C, with minimum and maximum temperatures of -5°C and 50°C, respectively in the project area. Extreme high temperatures, upwards of 49°C occur in summer, winters are considered cool compared to most of Mexico.

The accumulated annual rainfall for the area is approximately 450 ml. The wet season or desert “monsoon” season occurs between the months of July and September, and heavy rainfall can hamper exploration at times. The Sonoran Desert, because of its seasonal rainfall pattern, hosts plants from the agave, palm, cactus and legume family, as well as many others. The local climate provides no incumbents to undertaking field programmes and as such the length of the operating season is 365 days a year.

## 5.4 Resources and Infrastructure

Bacadehuachi historically is a small farming and ranching community with a population of approximately 2,010. Basic services capable of supporting early stage exploration projects are available in the town. Surface rights sufficient for mining operations are obtainable from local landowners, should such activities develop on the concessions.

The closest electric power line is about 10 km north of the concessions, passing very close to Bacadehuachi. The power line then heads toward Nacori Chico, the next village southeast from Bacadehuachi.

## 6 HISTORY

There are no records of mineral exploration or mineral occurrences on the Property prior to 1992, when an American group, US Borax, initiated regional exploration work in the search for borate deposits.

### 6.1 Previous Mapping and Surface Sampling

In 1996, US Borax conducted detailed field work in the area which consisted of geological mapping and rock sampling. The mapping resulted in the discovery of sequences of calcareous, fine-grained sandstones to mudstones intercalated with tuffaceous bands that are locally gypsiferous. Rock sampling across representative sections of the sequence at intervals along the strike extensions of these units returned weakly anomalous boron values, consequently US Borax abandoned exploration in the area.

### 6.2 Drilling by Previous Explorers

No drilling has been undertaken on the licence concessions prior to Bacanora commencing operations in 2010.

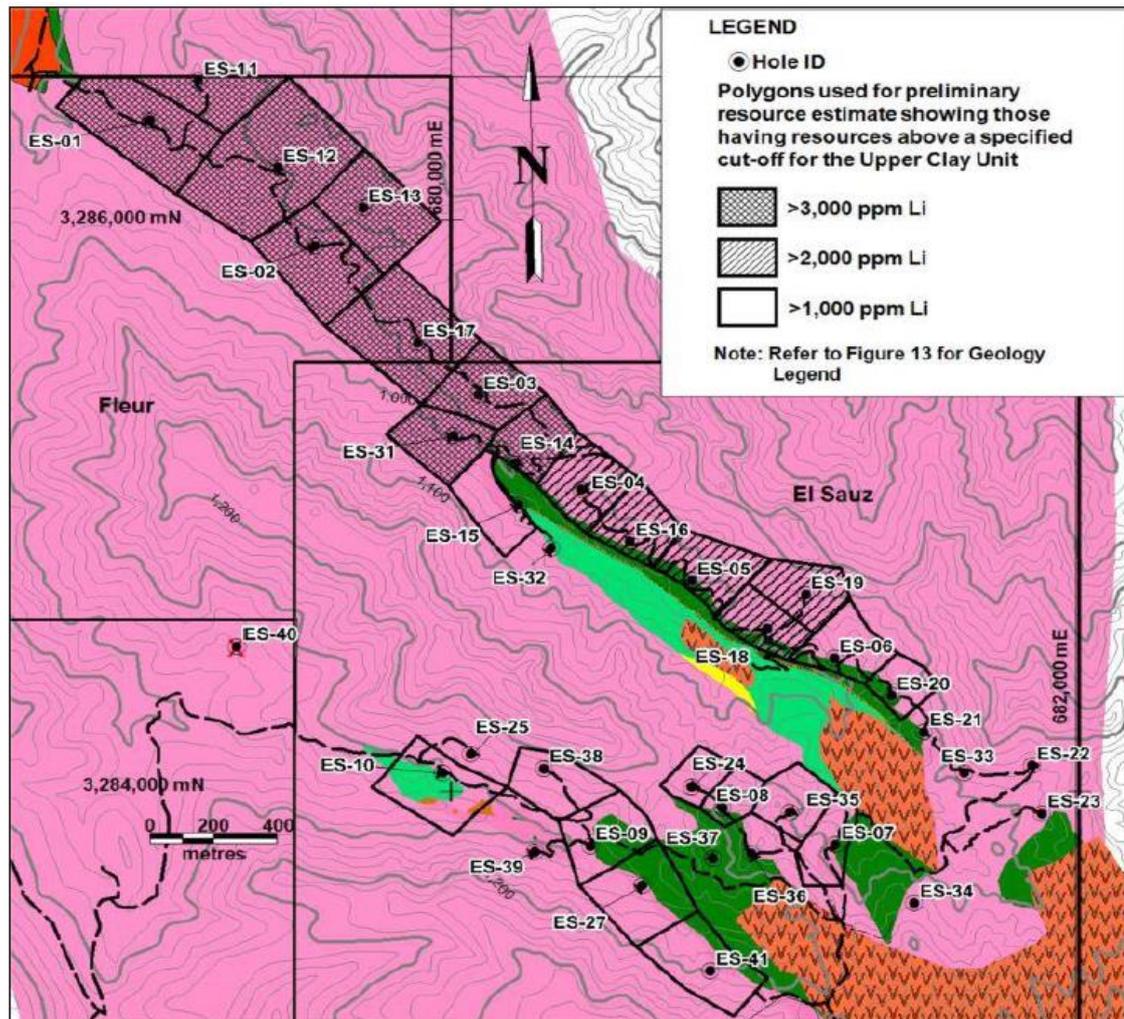
### 6.3 Previous Mineral Resource Estimation

#### 6.3.1 Amerlin Exploration Services 2014

Bacanora has completed mapping, chip sampling, trenching, metallurgical testwork and drilling on the Project. Mineral Resources have been previously estimated by Bacanora for the lithium bearing clays on the Company’s concessions which were reported in *‘Updated and reclassified Lithium resources, Sonora Lithium project, Sonora Mexico’* produced for Bacanora Minerals Ltd on 24 June, 2014 (C Verley of Amerlin Exploration Services Ltd). Within this document, Verley updated earlier estimates based on additional drilling in 2013 and 2014; in the process, reclassifying all resources from inferred to indicated (not reported using NI 43-101 guidelines).

*El Sauz and Fleur Concessions*

A Mineral Resource estimate was undertaken for the area drilled on the El Sauz and Fleur concessions using a polygonal estimation method. Grade and thickness continuity were assumed in an area of influence around each drill such that: (i) in the north-south direction the influence area is half of the distance between holes; and (ii) in the east-west direction a distance from outcrop and extending down dip for 150 m was used. Plan views illustrating the areas of the polygons used in the estimate are provided in Figure 6-1. Dry density values of 2.38 and 2.35 tonnes per cubic metre ( $t/m^3$ ) were assumed for the estimate for the Upper and Lower Clay units respectively. The resulting grade and tonnage estimates were reported at cut-offs of 1,000, 2,000 and 3,000 ppm Li, with a cut-off of 2,000 ppm Li used as a base case scenario for future study work.



**Figure 6-1: Plan of resource polygons and base geological map for the Fleur and El Sauz Concessions**

A total Indicated Mineral Resource, based on CIM Definition Standards for Mineral Resources and Reserves (2010), was estimated for each of the lithium-bearing units and is given in Table 6-1. At a cut-off of 2,000 ppm Li, the base case Indicated Mineral Resource for the Upper Clay unit is estimated to be 47 Mt averaging 2,222 ppm Li, and for the Lower Clay unit the Indicated Mineral Resource is 74 Mt averaging 3,698 ppm Li, giving a total Indicated Mineral Resource of 121 Mt averaging 3,120 ppm Li. A distinct zone of higher grade lithium occurs in the northern part of El Sauz and Fleur and continues through Fleur onto the southern half of La Ventana. In the Mineral Resource statement, the lithium metal content is also given as a Lithium Carbonate Equivalent (“LCE”); using a conversion factor of 1 unit of lithium metal is equivalent to 5.32 units of LCE.

**Table 6-1: Historic Indicated Mineral Resources for El Sauz and Fleur (C Verley, 2014)**

Lithological Unit	Li (ppm) Cut-off	Tonnage (Mt) <sup>2</sup>	Li (ppm)	LCE (%) <sup>1</sup>	LCE Tonnage (Kt) <sup>2</sup>
Upper Clay	1000	97	1,657	0.88	856
	2000	47	2,222	1.18	560
	3000	18	3,773	2.01	369
Lower Clay	1000	98	3,028	1.61	1,584
	2000	74	3,698	1.97	1,450
	3000	59	4,140	2.20	1,298
Combined	1000	195	2,347	1.25	2,440
	2000	121	3,120	1.66	2,010
	3000	77	4,053	2.15	1,667

<sup>1</sup>LCE = Lithium carbonate equivalent and assumes that all lithium can be converted to lithium carbonate with no recovery or processing losses.

<sup>2</sup> Dry bulk density = 2.38 t/m<sup>3</sup>

### *La Ventana*

Based upon drilling undertaken during 2010, 2011 and 2013 Verley used a polygonal estimation method to produce an Indicated Mineral Resource for the La Ventana concession based upon the same logic and processes as presented for the El Sauz and Fleur concessions. Plan views illustrating the areas of the polygons used in the estimate are provided in Figure 6-2.

A total Indicated Mineral Resource, based on CIM Definition Standards for Mineral Resources and Reserves (2010), was estimated for each of the lithium-bearing units and is given in Table 6-2. Using a 2,000 ppm Li cut-off, an Indicated Mineral Resource for the Upper and Lower Clay Units of 75 Mt averaging 3,174 ppm Li (1.69% LCE) or 1,273 kt LCE was estimated. Both the Upper and Lower Clay Units were considered to be open down-dip.

**Table 6-2: Historic Indicated Mineral Resources for La Ventana Concessions (Verley, 2014)**

Lithological Unit	Li (ppm) Cut-off	Tonnage (Mt) <sup>2</sup>	Li (ppm)	LCE (%) <sup>1</sup>	LCE Tonnage (kt) <sup>2</sup>
Upper Clay	1000	31	1,824	0.97	289
	2000	21	2,256	1.2	258
	3000	10	3,186	1.7	170
Lower Clay	1000	61	3,247	1.73	1,055
	2000	54	3,540	1.88	1,015
	3000	38	4,510	2.40	917
Combined	1000	92	2,771	1.48	1,353
	2000	75	3,174	1.69	1,273
	3000	48	4,235	2.25	1,087

<sup>1</sup>LCE = Lithium carbonate equivalent and assumes that all lithium can be converted to lithium carbonate with no recovery or processing losses.

<sup>2</sup> Dry bulk density = 2.38 t/m<sup>3</sup>

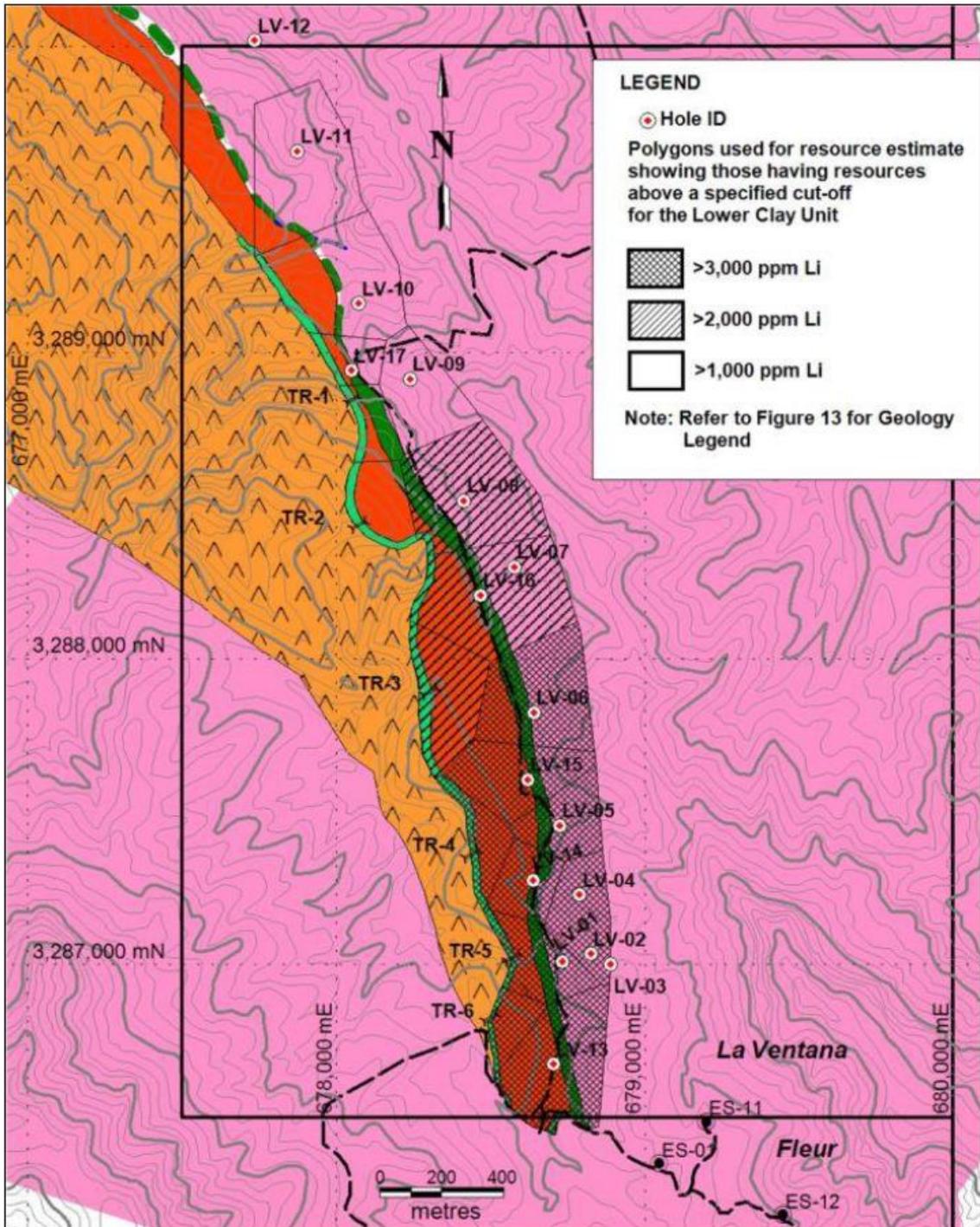


Figure 6-2: Plan of resource polygons and base geological map for La Ventana

### 6.3.2 SRK May 2015

SRK completed an MRE in May 2015 (“May 2015 MRE”) using all data collected prior to the August/September 2015 drilling campaign. The May 2015 MRE utilised 3-D wireframing techniques and block modelling with grades interpolated using Ordinary Kriging (“OK”). A pit optimisation was run on the block model to assess the ‘reasonable prospects for economic extraction’ and the Mineral Resource is stated within the maximum profit pit. The Mineral Resource statement produced by SRK is provided in =Table 6-3. The methodology and results of the May 2015 MRE were described in a NI 43-101 technical report (SRK, 2015).

**=Table 6-3: Previous SRK Mineral Resource Statement (SRK, May 2015)\***

Classification	Concession	Owner	Geological Unit	Clay Tonnes (Mt)	Clay Grade (Li ppm)	Contained Metal (kt Li)	Contained Metal (kt LCE)	
Indicated	La Ventana	Minera Sonora Borax	Lower Clay	35	3,250	110	580	
			Upper Clay	35	1,400	50	260	
	El Sauz	Mexilit (JV-1)	Lower Clay	15	2,350	40	220	
			Upper Clay	8	1,000	8	40	
	Fleur		Lower Clay	1	4,250	4	20	
			Upper Clay	2	1,800	4	20	
<b>Combined</b>				<b>95</b>	<b>2,200</b>	<b>220</b>	<b>1,140</b>	
Inferred	La Ventana	Minera Sonora Borax	Lower Clay	30	3,700	100	500	
			Upper Clay	90	1,700	150	800	
	El Sauz	Mexilit (JV-1)	Lower Clay	100	2,500	250	1,300	
			Upper Clay	100	1,100	100	500	
	Fleur		Lower Clay	80	4,200	350	2,000	
			Upper Clay	60	1,800	100	500	
	El Sauz1	Lower Clay	20	4,300	80	400		
		Upper Clay	30	1,700	60	300		
	<b>Combined</b>				<b>500</b>	<b>2,300</b>	<b>1,200</b>	<b>6,300</b>

**\*Notes:**

1. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimate and have been used to derive sub-totals, totals and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, SRK does not consider them to be material.
2. The reporting standard adopted for the reporting of the MRE uses the terminology, definitions and guidelines given in the CIM Standards on Mineral Resources and Mineral Reserves (May 2014) as required by NI 43-101 and JORC.
3. The MRE is reported on 100 percent basis for all project areas.
4. SRK assumes the Sonora Lithium deposit to be amenable to surface mining methods. Using results from initial metallurgical test work, suitable surface mining and processing costs, and forecast LCE price SRK has reported the Mineral Resource at a cut-off 450 ppm Li (2,400 ppm Li<sub>2</sub>CO<sub>3</sub>).
5. SRK completed a site inspection of the deposit by Mr. Martin Pittuck, MSc, C.Eng, MIMMM, an appropriate "independent qualified person" as such term is defined in NI 43-101

## 7 GEOLOGICAL SETTING AND MINERALISATION

The content of this section is largely based on the following report; *Updated and Reclassified Lithium Resource, Sonora Lithium project* by C Verley, which was lodged with the Canadian Securities Administrators 24 June 2014.

### 7.1 Regional Geology and Tectonics

The Property is underlain by Oligocene to Miocene age rhyolitic tuffs, ignimbrites and breccias of the upper volcanic complex of the Sierra Madre Occidental. This succession was subjected to basin and range extensional normal faulting during the Miocene that resulted in the development of a series of half-grabens. The half-grabens locally filled with fluvial-lacustrine sediments and intercalated tuffs. Alkaline volcanism around this time is thought to have contributed lithium and other alkali metals into these basin deposits. Quaternary basalt flows unconformably cover the basin sediment-volcaniclastic succession, except where later stage faulting and uplift have exposed the basin succession at surface. Mineralisation on the Property consists of lithium-bearing clays localized within these basins.

### 7.2 Deposit Stratigraphy

Geological mapping has defined the following stratigraphic sequence, outlined in Table 7-1. The lithium-bearing sedimentary sequences are well defined and are distinct from the surrounding volcanics by their pale colour and fine to medium bedding, they have been recorded and characterised as dominantly north striking, easterly dipping, Li-bearing sediments. Controls for the lithium sedimentary sequence and resulting mineralisation are considered to follow the shape of a lake in which the clays became entrained. Faults underlying the lake may have served as channel ways for lithium-rich solutions to percolate into the lake basin and possibly alter and enrich the existing clays in lithium. Alternatively, the lithium may have been sourced from underlying volcanics and remobilised into the basin sequence at a later date; however, rhyolites with sufficient lithium-rich melt inclusions to act as source material have not yet been identified in the sequence presented or regionally.

The lithium-bearing clays occur in two discreet units: an upper clay unit and a lower clay unit. The Lower Clay Unit is underlain by basaltic flows, breccias and tuffaceous rocks and is overlain by an ignimbrite sheet. The average thickness of the Lower Clay Unit is approximately 20 m reaching 40 m in places. The ignimbrite sheet is typically 6 m thick and is overlain by the Upper Clay Unit which averages 22 m and reaches over 70 m in thickness; the Upper Clay Unit is overlain by a sequence of basalt flows and intercalated flow top breccias.

These stratigraphic units are reasonably continuous across the La Ventana, Fleur and El Sauz concessions.

Both the Upper and Lower clay units are considered to consist of several mineralised subunits. The Lower Clay Unit consists of a basal red siltstone-sandstone-conglomerate unit, tuffaceous sediments, thin lapilli tuff layers and reworked tuff layers interbedded with lithium-rich clay layers.

The Upper clay unit, consists several subunits of thin, rhythmically laminated clay and silica layers, coarse-grained, poorly sorted brown sandstone beds with a clayey and calcareous matrix; yellowish green clay beds with silica nodules; dark grey clay bands with distinct slump features and local calcite masses; light grey claystone layers interbedded with reddish sandstone beds; reddish medium to coarse-grained sandstone with calcite veinlets.

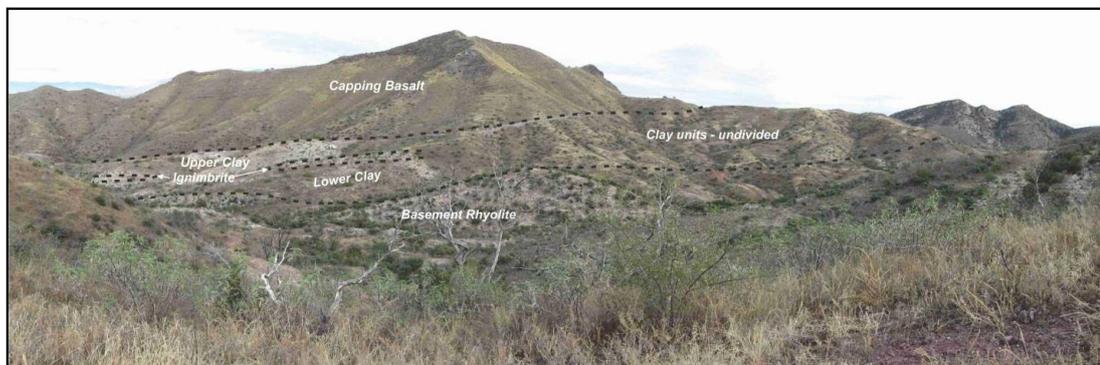
**Table 7-1: Stratigraphic succession on the El Sauz concession (Verley, 2014)**

Unit	True Thickness (m)	Unit/Subunit Description
Capping basalt	Not determined	Basalt. Contains greenish olivine crystals. Veinlets of kaolinite/alunite (white/greenish, powdery).
Upper clay unit	28.0 (14.10 – 40.39)	Reddish, medium-coarse grained sandstone with calcite veinlets.
		Pale grey tuffaceous claystone intercalated with reddish, sandy layers. Scarce FeOx layers (black).
		Dark grey slumping breccias. Dark, clayey groundmass with tuffaceous fragments. Calcite in masses.
		Green-yellowish silica nodules in a clayey waxy, tuffaceous matrix.
		Brown sandstone. Poorly bedded. Highly calcareous. Reddish tuffaceous coarse grained sandstone. Clay matrix. Soft.
		Pale green-pinkish, fine grained sequence of clays and silica nodules. Waxy in zones. Calcite in masses.
Ignimbrite	5.58 (1.29 – 11.89)	Ignimbrite: orange coloured, welded lapilli tuff. Locally brecciated.
Lower clay unit	27.78 (21.57 – 42.11)	Pale grey reworked tuff with abundant lithium-bearing clay zones.
		Pale green tuffaceous sediments. K-feldspar groundmass with quartz and biotite. Indurated. Contains lapilli tuff.
Basement Volcanics	Not determined	Dark green basalt, andesitic basalt and rhyolite tuff.

### 7.3 Deposit Structure

The lithium-bearing sedimentary sequences are considered distinct and easily distinguished in the field from the surrounding volcanics by their pale colour and thin to medium bedding, as illustrated in the northeast view of gently, northeasterly dipping, lithium-bearing sediments near the centre of the El Sauz concession (Figure 7-1). On the La Ventana concession, lithium-bearing clay units are exposed from the northwest corner of the concession to the southeast of the concession, a distance of 3.6 km. The sediments dip approximately 20° to the northeast. A mapped northwesterly striking oblique slip fault has down thrown the clay units to the south of La Ventana under basalt cover so they no longer remain exposed at surface. Drilling, however, has confirmed the continuity of the clay units under the basalt cover for a distance of 2.0 km to the southeast where they are again exposed at surface, on the El Sauz concession for a further distance of 2.0 km to the southeast. In total a 7.6 km strike length of the clay unit from the north end of La Ventana to the southern part of El Sauz has been established in both the upper and lower clay units. The deposit is open at depth; however, the down dip extent to the northeast, southwest and south is not known at present and remains to be tested by further drilling.

The more southerly exposures of the clay units occurring on the western extent of the oblique slip fault and exposed on the El Sauz concession dip gently westerly probably as a result of offsets and rotation on faults. In addition, exposures of the basement volcanics consist of rhyolite tuff on the southern part of El Sauz versus andesitic basalt on La Ventana.



**Figure 7-1: Northeast view of gently dipping lithium-bearing sediments near the centre of the El Sauz concession**

## 7.4 Mineralisation

Mineralisation on the concessions consists of a series of lithium-bearing clays that occur within two bedded sequences, the Upper and the Lower Clay units, which are separated by an ignimbrite sheet.

Bacanora understands there to be a number of lithium-bearing clay minerals, with polythionite being the only one currently positively identified. The clay units are believed to have formed from supergene or diagenetic alteration of volcanic ash. The clay layers also contain relict quartz and feldspar crystal shards, lithic fragments and silica bands (Figure 7-2), and traces of other minerals. The layers are locally interbedded with reddish terrigenous beds composed of sand and silt-sized material.

Initial interpretation has indicated a high grade lithium core in the area covered by the La Ventana, El Sauz and Fleur concessions where the lithium grades are generally above 3,000 ppm Li. This high grade zone extends from the middle of La Ventana southward across Fleur and approximately a third of the distance south into El Sauz. The best grades of lithium are associated with elevated levels of calcium, cesium, magnesium, potassium, rubidium and strontium; however, the correlation (especially for magnesium) is not one-to-one.

On La Ventana, the best grades of lithium are co-incident with elevated levels of potassium and cesium and are found in the southern part of the deposit. Magnesium appears to be irregularly distributed and does not follow lithium or the other alkalis. Mineralised intervals within the clay units vary for the Upper Clay Unit from 25% to 80% of the overall thickness and from 40% to 100% for the Lower Clay Unit, depending on the cut-off used. Vertical grade variation is noted in places, but with the exception of the Upper Clay Unit in the main eastern fault block it has not been identified with sufficient continuity between drillholes to have been reflected in the 3-D modelling process described herein.

Further mineralogical studies are recommended to determine what minerals host the various alkalis in the clay units. Results of such studies could have an impact on beneficiation of these minerals and recovery of the alkalis.



**Figure 7-2: Alternating clay and silica bands within an outcrop on the La Ventana concession**

## **8 DEPOSIT TYPE**

### **8.1 Deposit type**

The Sonora deposit is believed to have formed by hydrothermal alteration as a result of alkaline volcanism effecting layers of volcanoclastic sedimentary rocks deposited in a basin environment. The origin and timing of the mineralised content remains unclear with regard to source and whether the alteration was essentially syngenetic with deposition of the sedimentary rocks or whether the alteration is a post depositional event. Additional work is required to clarify the origin of these deposits.

The Western Lithium Kings Valley development project, Humbolt County, Nevada, has similar mineralogy and deposit geology to the Sonora Project, but the exact lithium clay mineralogy and regional geological setting is significantly different.

There are no directly analogous deposits known to be in operation.

### **8.2 Adjacent/Regional Deposits**

The Sonora region plays a large part in Mexican production of ore minerals, predominantly silver, celestite and bismuth. The state has the largest mining surface in Mexico, and three of the country's largest mines: La Caridad, Cananea, and Minería María. Sonora also remains the leading Mexican producer of gold, copper, graphite, molybdenum, and wollastonite, as well as one of the largest coal reserves in the country. This has resulted in established and well maintained resources, specifically infrastructure which services the existing mining industry through the region.

## **9 EXPLORATION**

### **9.1 Introduction**

There are no records of mineral exploration or mineral occurrences in the Project area prior to 1992, when US Borax initiated regional exploration work in the search for industrial minerals. In 1996, US Borax conducted detailed field work in the area, which consisted of geological mapping and rock sampling. The mapping resulted in the discovery of sequences of calcareous, fine-grained sandstones to mudstones intercalated with tuffaceous bands that are locally gypsiferous. Rock sampling across representative sections of the sequence at intervals along the strike extensions of these units returned weakly anomalous boron values. Consequently, US Borax abandoned exploration in the area.

In 2010, Bacanora initiated a program of limited rock sampling on the La Ventana concession this work led to the discovery of lithium-bearing clays. Follow-up work in 2011 on the El Sauz concession led to the discovery of the lithium-bearing clays within this concession.

### **9.2 Surface Sampling Programme**

#### **9.2.1 2010 La Ventana Concession**

Bacanora's initial exploration efforts were focused on testing the clay exposures located on the La Ventana concession. In 2010, a series of six continuous chip samples were taken perpendicular to the strike of upper clay unit at the south end of the concession.

Each sample was placed in a numbered, fibre-weave sack. The samples were then taken to ALS Chemex facility in Hermosillo for lithium analysis and a multi-element scan using ICP-MS techniques.

The results of this work confirmed the elevated lithium concentrations in the clay unit. Values for the six samples ranged from 1,710 to 4,680 ppm Li (0.91 to 2.49% LCE).

Bacanora then conducted a diamond drilling campaign at La Ventana in 2010. A total of four holes were drilled as an initial test of the lithium-bearing clay units.

### 9.2.2 2011 El Sauz Concession

A geological reconnaissance and rock-sampling program was conducted on the El Sauz concession by Bacanora's geologists during the period 28 September to 11 November 2011. A total of 116 rock samples were collected from exposures of a pale coloured, clay-bearing sequence of sediments and intercalated tuffaceous rocks. The samples were collected across outcrops as continuous chip samples ranging in width from 0.9 to 2.2 m. and averaging 2.0 m. perpendicular to the strike direction of the sediments. Sample spacing was dependent on exposure; consequently, it was difficult to ascertain how representative the samples were of the overall clay-bearing units on the El Sauz concession.

The sampled exposures occur in the northern half of El Sauz and dip to the east, in the case of the northeastern most outcrops and to the west in the case of the more southerly exposures. These opposing dips appear to indicate an anticlinal structure. The initial mapping of the Fleur and El Sauz concessions is shown in Figure 9-1.

Results of analyses performed on the samples by ALS Chemex ranged from 49 to 7,220 ppm Li, with 39 samples greater than 1,000 ppm Li. The results indicated that significant lithium-bearing clay units occur on El Sauz.

A total of 94 rock samples averaging 1.7 kg were taken from outcrops of the clay units exposed on the El Sauz concession. The samples were collected across outcrops as continuous chip samples perpendicular to the strike direction of the sediments. Results of analyses performed on the samples by ALS Chemex ranged from 10 to 2,130 ppm Li, with 15 samples greater than 1,000 ppm Li. The results further confirmed the 2011 work, which indicated that significant lithium-bearing clay units occur on El Sauz warranting further work to more accurately assess the extent of the units and the concentration of.

In conjunction with the rock sampling, the geology of the area around the clay units on El Sauz and Fleur were mapped (Figure 9-2). Structurally, the clay units on El Sauz and Fleur dip to the northeast at approximately 20° and in the central part of El Sauz the clay units crop out in an arcuate form, with the more easterly arm of the arc dipping to the northeast and the westerly arm dipping westerly.

The geological mapping and Stage 1 drill program suggested that the strata on El Sauz were a continuation of those found on the La Ventana concession. From this comparison it was concluded that the lithium-bearing clay units on the El Sauz are a southern extension of the sedimentary basin from La Ventana onto the Fleur and El Sauz concessions.

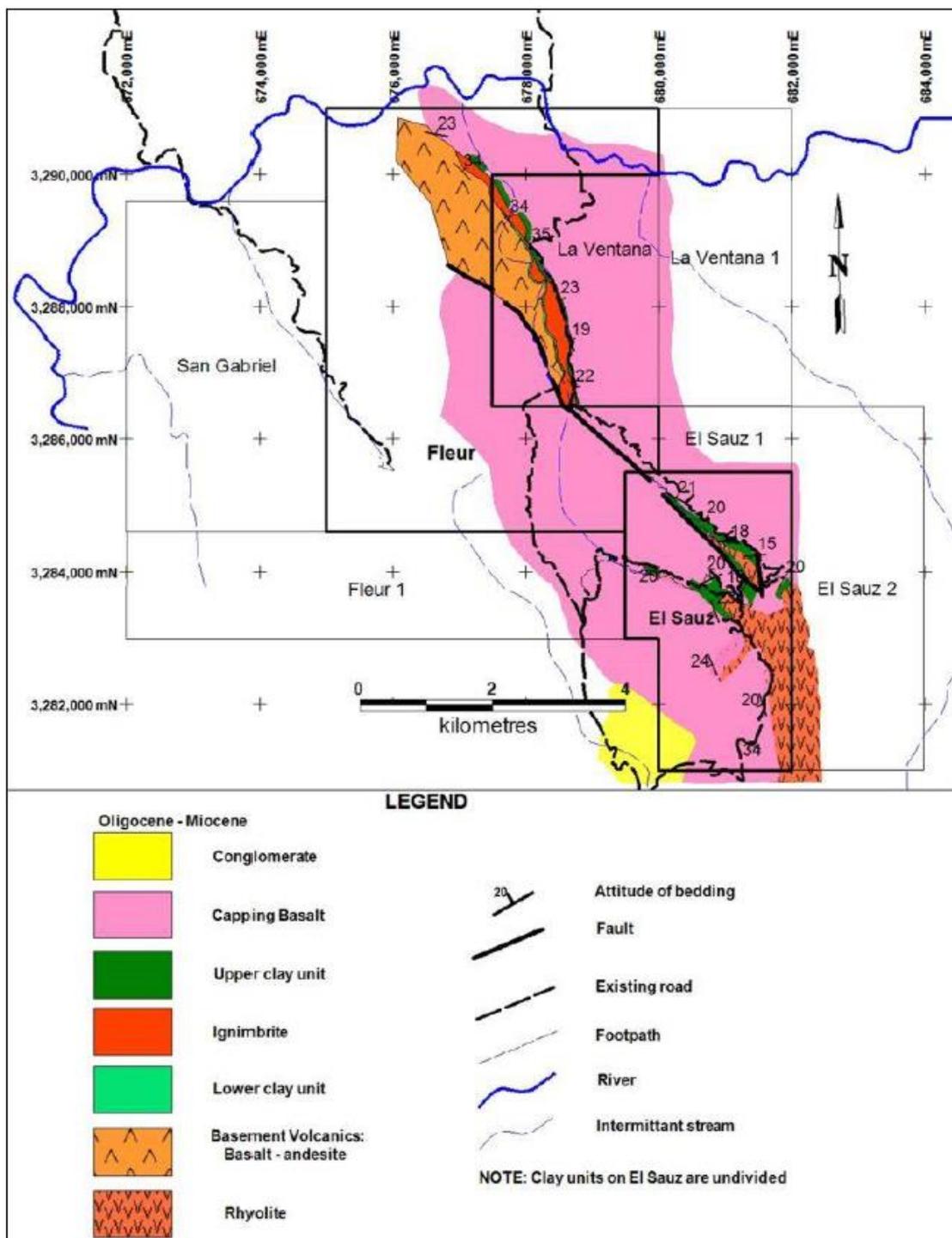


Figure 9-1: Initial mapping undertaken for the Sonora Lithium Project

### 9.2.3 2013 – El Sauz Concession

From February to April, 2013, the mapping and rock sampling campaign continued on the Fleur and El Sauz concessions, as shown in Figure 9-2.

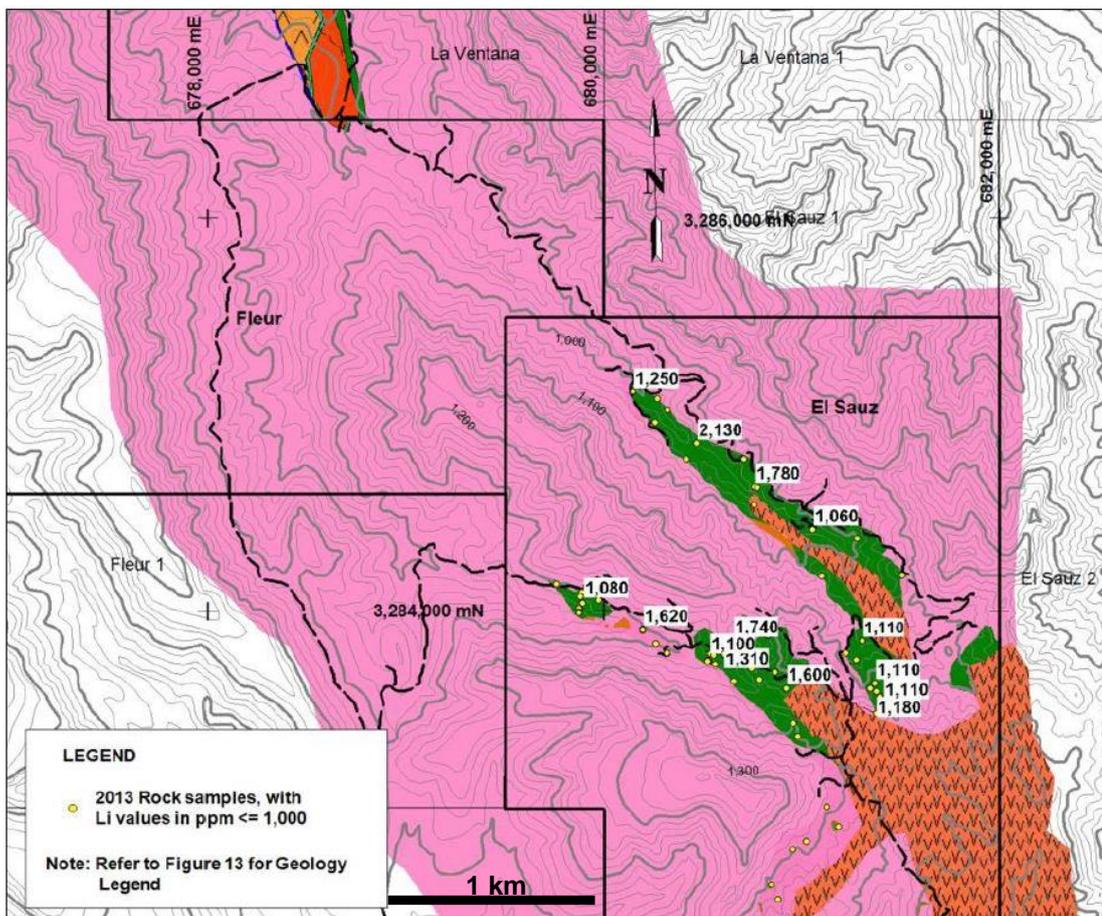


Figure 9-2: 2013 surface sampling and mapping undertaken on the El Sauz and Fleur concessions

### 9.3 Trenching

In early 2014, six trenches were excavated across exposures of the Lower Clay Unit on La Ventana to provide additional grade control. Continuous chip samples were taken at intervals averaging 1.5 m in length. Figure 9-3 shows TR-6 excavated across the Lower Clay Unit in La Ventana. Collar locations of the trench samples are listed in Table 9-1 and illustrated Figure 9-4.

Table 9-1: Trench collar locations

Trench	Easting	Northing	Elevation	Length (m)
TR-2	678073.4	3288432	874.7755	30
TR-3	678298.8	3287890	883.1865	27.7
TR-4	678436.1	3287359	925.7235	27
TR-5	678569.9	3287025	882.845	22.5
TR-6	678487.2	3286830	929.467	33.6



**Figure 9-3: TR-6 excavated through clay horizon in the south of La Ventana**

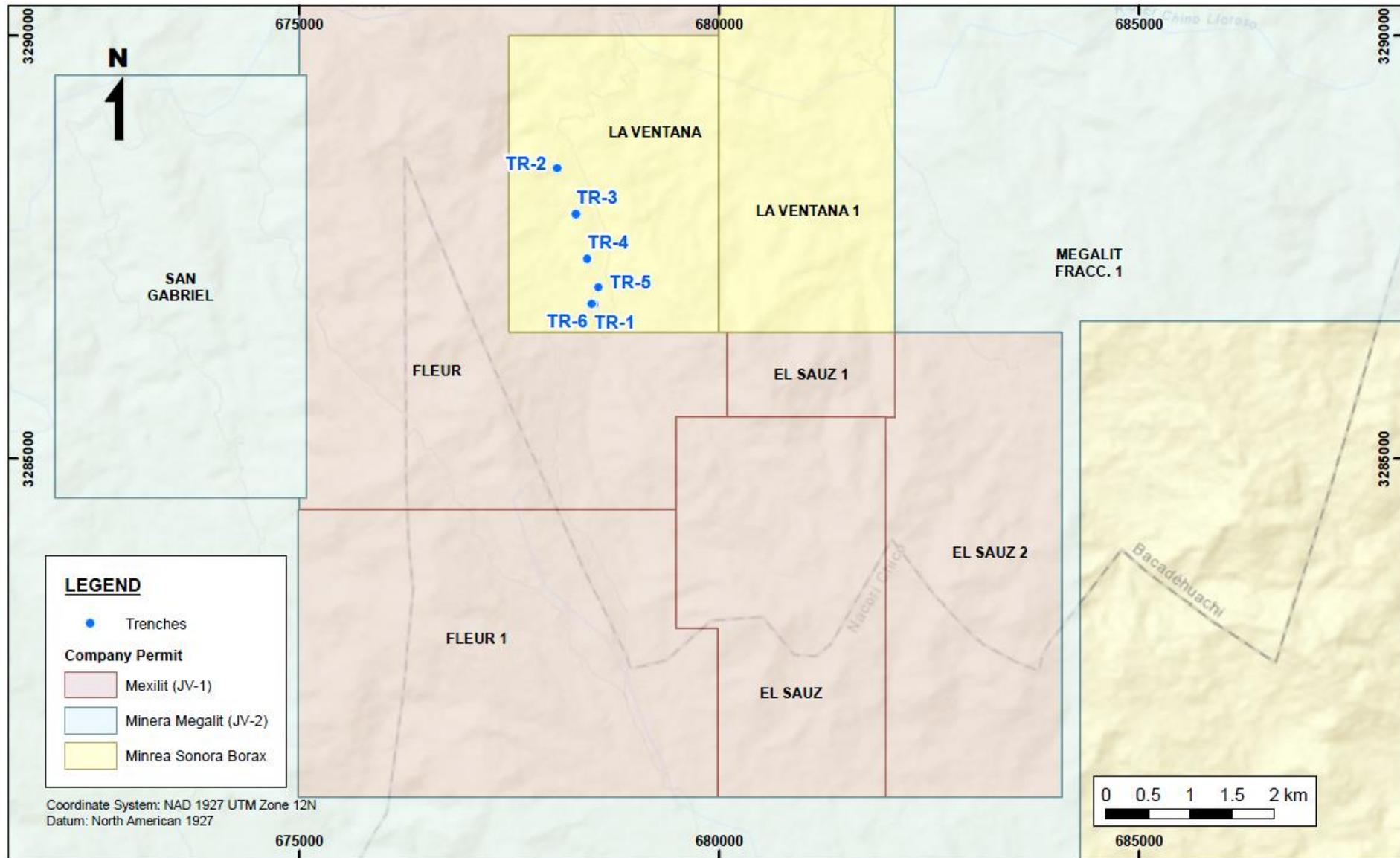


Figure 9-4: 2014 Trench locations

## 10 DRILLING

### 10.1 Introduction

In 2010, Bacanora commenced a diamond drill program on the La Ventana concession before expanding the targeted area to include the El Sauz and Fleur concessions in 2013. Further drilling was conducted in two phases in 2015 to improve the drilling grid density. At the time of writing, a total of 14,069 m has been completed on the Sonora Lithium Project.

Initial drilling accounting for 5,065 m completed from 39 holes was undertaken on the La Ventana concession and a further 58 holes were completed on the El Sauz and Fleur concessions since 2013 resulting in some 9,004 m of NQ core which further established the continuation of lithium-bearing clay units across the entire Sonora project area. Drilling demonstrated that the lithium mineralisation exists in two units along approximately 7.2 km of strike length.

All the drilling conducted to date on the concessions was undertaken by Perforaciones Godbe de Mexico SA de CV, a Mexican subsidiary of Godbe Drilling LLC, based in Montrose, Colorado. The drill rig used for the recent drilling is shown in Figure 10-1.

Drilling has been completed on a 200 to 250 m grid basis with locations frequently constrained by access and topography.

#### 10.1.1 La Ventana Concession

Bacanora's first drilling campaign on the La Ventana concession was conducted from May to September 2010. Four holes totalling 458 m were completed in this initial programme using NQ-core diamond drilling. Drill sites were laid out to optimally test a section of the lithium-bearing clays exposed at the south end of the La Ventana concession with holes completed on 200 m spacing along strike.

A second campaign in 2011 totalled 1,453 m in 8 drillholes and extended the known strike length of the deposit to over 2.5 km. The culmination of a successful surface mapping programme (outlined in Section 8.2) and sub-surface intercepts established the continuity of both the upper and lower clay mineralised units down dip and along strike.

Drilling in the La Ventana concession continued through 2014 and 2015. The current programme consists of some 27 holes generating 3,154 m of NQ drill core. This drilling has increased the depth extent of the upper and lower clay units and further confirmed the lithological continuity along strike.



**Figure 10-1: 2015 drill rig producing NQ drill core**

### **10.1.2 Fleur and El Sauz Concessions**

In addition to the drilling undertaken on the La Ventana licence, Bacanora has undertaken a number of drill programmes aimed at extending the known strike of the mineralised clay units towards the southeast through the Fleur and El Sauz concession areas, driven by the continuity established in the La Ventana concession and supported by a positive surface mapping and sampling programmes which are outlined in Section 9.2.

An initial drilling campaign was undertaken from May to September 2013 in which a total of 1,470 m of NQ-core was completed in 10 holes. Drill sites were laid out with the objective of testing the extension of the lithium-bearing clays on the La Ventana concessions which outcrop in El Sauz.

A second drill program on the Fleur and El Sauz concessions commenced in October 2013 and was completed in February 2014. A total of 2,436 m of NQ drilling was completed in 20 holes extending the strike extent of the known lithium mineralisation. This drilling also defined the southern and southwestern extents of the mineralised unit. This area is considered to be more structurally complexity as a result of numerous offset fault sets and potential rotation or folded movement within the stratigraphic sequence.

A third drill programme along with field mapping was undertaken on the Fleur and El Sauz concessions from late 2014 to early 2015 comprising 12 drillholes totalling 1,164 m. This programme targeted this structurally complex area to test continuity using a 200 m drill spacing as used in La Ventana and along the eastern extent of El Sauz and Fleur. This drilling and additional mapping established that the mineralisation dips gently toward the east in this area.

A four drill programme was completed in summer 2015 which comprised 16 drillholes totalling 3,934 m. This programme aimed to provide more detail in the southeastern area of the Fleur concession and northern area of the El Sauz concession, where the majority of higher grade lithium is situated.

## 10.2 Collar Surveys

All collars were surveyed using a handheld GPS unit (Garmin 62S) taking an average waypoint over a time lapse of five minutes. Due to the higher resolution of the LIDAR topographic survey, the elevation (Z) values of the collars were taken from the LIDAR survey. All collar related coordinates are reported in UTMNAD27 Z12.

SRK understands that all drillholes to date have been drilled vertically, except for hole ES-052, which dips at 70°. None of the holes has been surveyed with down-hole survey or core orientation technology.

## 10.3 Summary of Drillhole Locations

Figure 9-2 shows the locations of the drillhole collars across the Sonora concessions. These holes have been coded based on year drilled and as such reflects the development of the project over time.

## 10.4 Summary of Major Mineralisation Intersections

A summary all major lithium mineralisation intersections within the modelled resource wireframes are shown in Appendix B.

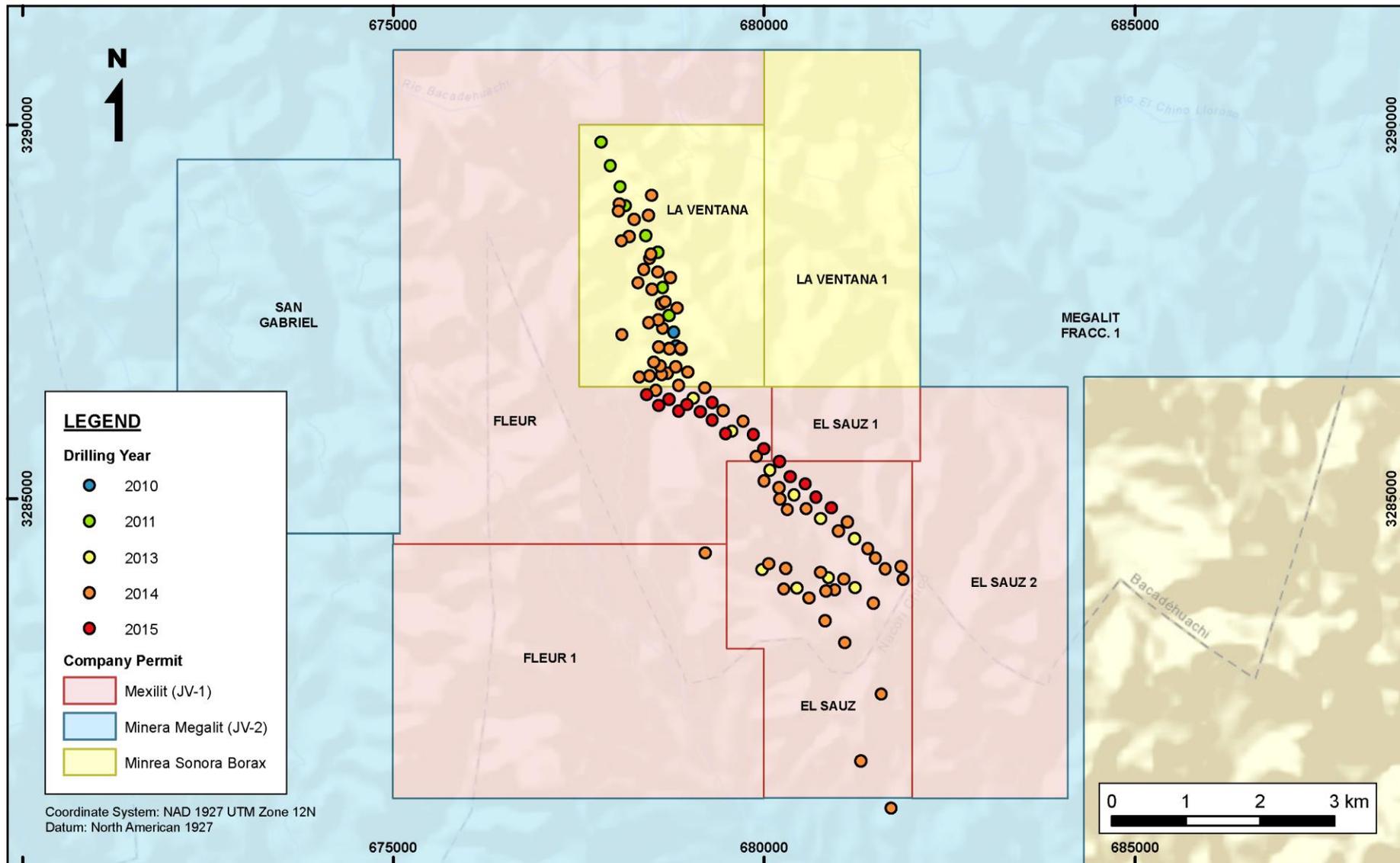


Figure 10-2: Sonora concessions drillhole collars

## 11 SAMPLE PREPARATION, ANALYSIS AND SECURITY

### 11.1 Sampling Methodology and Approach

All core drilled on site was arranged into referenced core boxes and moved from the drill sites by Bacanora personnel to a secure compound in Bacadehuachi where under the supervision of the onsite geologist, it was logged, split and sampled (Figure 11-1). Core was then moved to Bacanora's secured facility in Magdalena de Kino for storage. In addition to logging of geological parameters in drill core, core recovery was also measured and recorded.



**Figure 11-1: Bacanora staff preparing core in a dedicated and secure compound, Bacadehuachi**

#### 11.1.1 Core Presentation and Photography

Core and core blocks are placed in core boxes by the driller. Upon receipt in the core shed, the drill core is cleaned or washed, if required, and core blocks are checked by Bacanora staff. The core is split using a hydraulic splitter and then photographed wet and dry in a frame ensuring a constant angle and distance from the camera (Figure 11-2).



**Figure 11-2: Drill core presented after cut and sampling procedures**

### 11.1.2 Logging

Geological logging is undertaken once core photography is complete. Logging includes recording from-to intervals and brief descriptions of the lithological units as well as observations and measurements regarding core recovery. The key logging codes used by Bacanora have been summarised in Table 11-1.

**Table 11-1: Key logging codes summarised based on Bacanora core logging procedures**

Geological Unit	Code	Lithology	Description
Capping basalt	UBAS	Capping Basalt	Dark grey olivine basalt. Massive
Upper Sandstone	UPP_SS	Reddish sediments	Reddish-grey medium to coarse grained sandstone. Poorly bedded to massive. Abundant calcite, some iron oxides.
Upper clay	UTC	Upper Tuffaceous sequence	White to light grey claystone. Oxidized. Lithic and reworked. Contains sanidine crystals. Slightly calcareous
	CALCLS	Calcareous sequence	Pink to dark breccias, silty-muddy matrix. Abundant calcite in masses and veinlets. Feldspar altered to clays
	WAXCLS	Tuffaceous sequence	Light green-white altered tuff. Feldspar is being converted into clays (light green honey). Contains glass crystals (sanidine) and biotite. Waxy.
	BRSS	Brown/reddish sandstone	Brown sandstone. Poorly bedded. From 112 to 113. highly calcareous. Reddish tuffaceous coarse grained sandstone. Clay matrix. Soft.
	HS	Hot Spring Type Section	Light green-pink fine grained sequence composed of clays and silica nodules. Waxy in zones. Folded. Friable. Abundant calcite in masses and veinlets. Thin bedded.
Ignimbrite	IGNIMBRITE	Tuffaceous sequence	Orange to pink welded tuff. Well indurated. Brecciated. Highly silicified. Contains pumice flames.
Lower Clay	LWR-T-SED	Lake-beds-altered	Dark green sequence composed of rhythmic beds of clay-silica-marls with abundant calcite in masses and veinlets. Some dark zones with clay and organic matter. Thin to medium bedded.
	LART	Lower Sediments	Grey well indurated sandstone. Reworked andesitic tuff?
	LCGL	Lower conglomerate	Polymictic conglomerate. Reddish matrix to the top and greenish to the bottom. Purple-greenish-white fragments.
Basement	LBAS_AND	Lower Basalt Andesite	Dark green basalt. Biotite rich (black) in a fine grained groundmass. In some holes tuff with andesite frags.

### 11.1.3 Dry Density

Dry in situ density readings are taken at regular intervals within each lithology and on every lithological break. The methodology involves weighing dry samples in air and then in water, all porous samples being wrapped in plastic first. Measurements are carried out on competent whole core (typically 10-15 cm pieces) using a balance with top and modified under-slung measuring capabilities with a detection limit of  $\pm 1$  g.

$$\frac{\text{Weight in air}}{\text{Weight after immersion} - \text{Weight in air}} = \text{Dry in situ density}$$

## 11.2 Chain of Custody, Sample Preparation, and Analyses

### 11.2.1 Sampling Procedure Overview

Sampling was based on lithological intervals and extended 2-3 samples either side the identified lithium clay contacts. Samples ranged from a reported 0.3 – 8.68 m; however, the average sample length remains 1.5 m, reflecting the targeted sample length.

Sample intervals are measured by the Project geologists, who mark the sample length on the core to indicate where it should be cut. The cut line along the core axis is positioned at 90° to the predominant structure to ensure that both halves of the core represent the same geological feature.

The core is then transferred to the core shed for sampling. Samples are then collected by splitting the core in half with a manual core splitter.

### 11.2.2 Sample Preparation

The samples are bagged and labelled with a sequential, unique sample identification number. Mr Martin Vidal (Managing Director of Bacanora) supervised drilling of the first 12 holes on La Ventana; Daniel Calles, geologist under contract to Bacanora, supervised the core sampling during the later campaigns.

Split drill-core samples were shipped to an ALS Chemex Laboratories (“ALS Chemex Hermosillo”) sample preparation facility in Hermosillo, Mexico, for preparation. Sample preparation was conducted according to the ALS Chemex rock, drill-core and chip-sampling procedures (PREP-31). This consists of crushing the sample to minus 5.0 mm sized material, splitting off 250 g and pulverizing the split sample so that greater than 85% passed through a 75 micron aperture screen.

### 11.2.3 Analytical Procedures

Sample pulps were then shipped to ALS Chemex Laboratory in North Vancouver, Canada (“ALS Chemex Vancouver”), for assay and analysis. ALS Chemex is an ISO 14001-2004 certified laboratory in Canada and its preparation facility in Mexico has received ISO 17025 certification.

All core samples were analysed by inductively coupled plasma – mass spectrographic (ICP-MS: ME-MS41) method to provide data for a suite of 51 elements (Ag, Al, As, Au, B, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, Hf, Hg, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn).

## 11.3 Quality Assurance and Quality Control Procedures

### 11.3.1 Introduction

The Quality Assurance and Quality Control (“QA/QC”) procedures included in-house standards submitted within the sample stream. SRK notes that these standards have not been certified and also they do not represent the grade range typically found in the deposit but do monitor consistency of the analytical process to some extent. Additional confidence in the accuracy of grade determinations in the grade range of the deposit was established by independent duplicate samples collected by C Verley as part of his Competent Persons checks, duplicate samples were submitted to an umpire laboratory (ACME Laboratory in Vancouver, Canada (“ACME Vancouver”).

### 11.3.2 Standards

Bacanora produced three in-house lithium standards through localised bulk sampling. These were inserted into the regular sample stream to provide information on the precision of the laboratory results. The standards were prepared at Laboratorio Metalurgico LTM SA de CV in Hermosillo. Approximately 50 kg of bulk sample was milled to <100 µm and homogenised in a single batch in a drum mixer for 24 hours, after which 100 g sub-samples were split and sealed in plastic bags ready for insertion into sample batches.

Two different low grade standards and one higher grade standard were produced. These standards were not used concurrently; instead, each was used to completion before generation of a new standard material. Table 11-2 summarises the insertion rates of the three different standard samples. Table 11-3 summarises SRK’s calculated means and standard deviations of the three reference samples.

**Table 11-2: Summary of reference sample insertion**

Reference Sample	Total Number	Insertion Rate (%)
TT	26	1
MY-TT	56	2
High Grade Sample	77	2
<b>Total Samples</b>	<b>159</b>	<b>4</b>

**Table 11-3: Summary of reference sample calculated means and standard deviations**

Reference Sample	SRK Calculated Mean (ppm)	SRK Calculated Std Dev
TT	256	14.5
MY-TT	175	15.9
High Grade Sample	6,709	875.3

The performance of each standard is shown in Figure 11-3, Figure 11-4 and Figure 11-5; each shows a scattering around the calculated mean grades.

Figure 11-5 also shows that over time there has been a general trend from higher to lower assays within the range of 7,500 ppm to 6,000 ppm. SRK is satisfied at this stage the standard assays are within acceptable parameters and is not a cause for concern; however, if the current trend continues a negative bias effecting high grade samples may become apparent. SRK therefore recommends this standard’s performance is monitored closely.

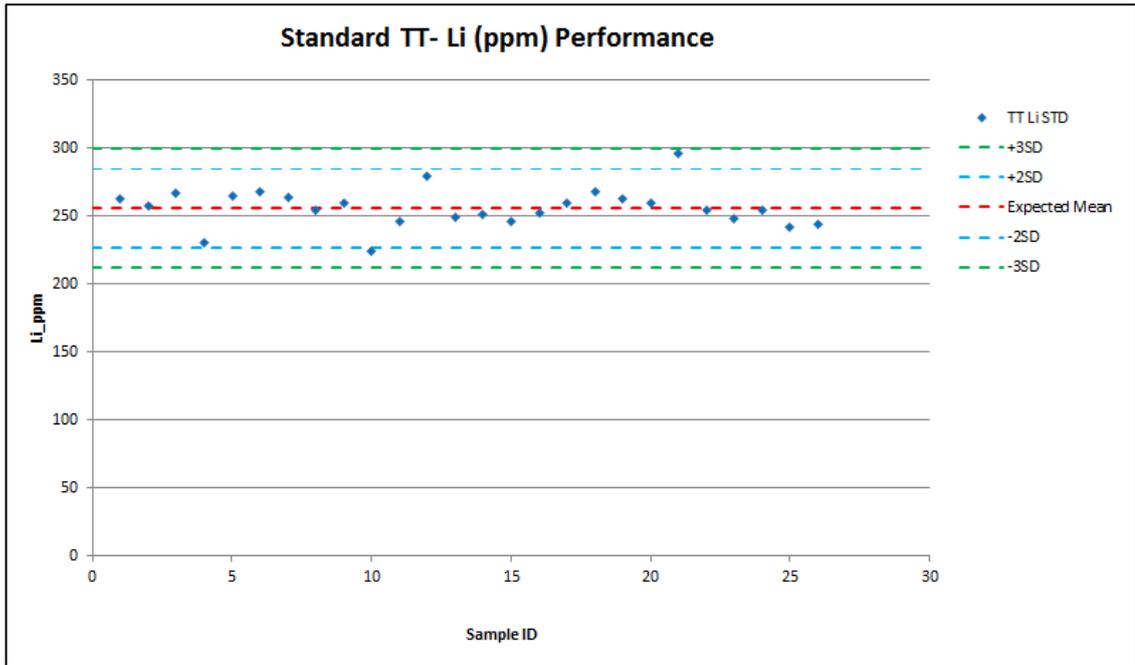


Figure 11-3: Low grade lithium reference standard TT

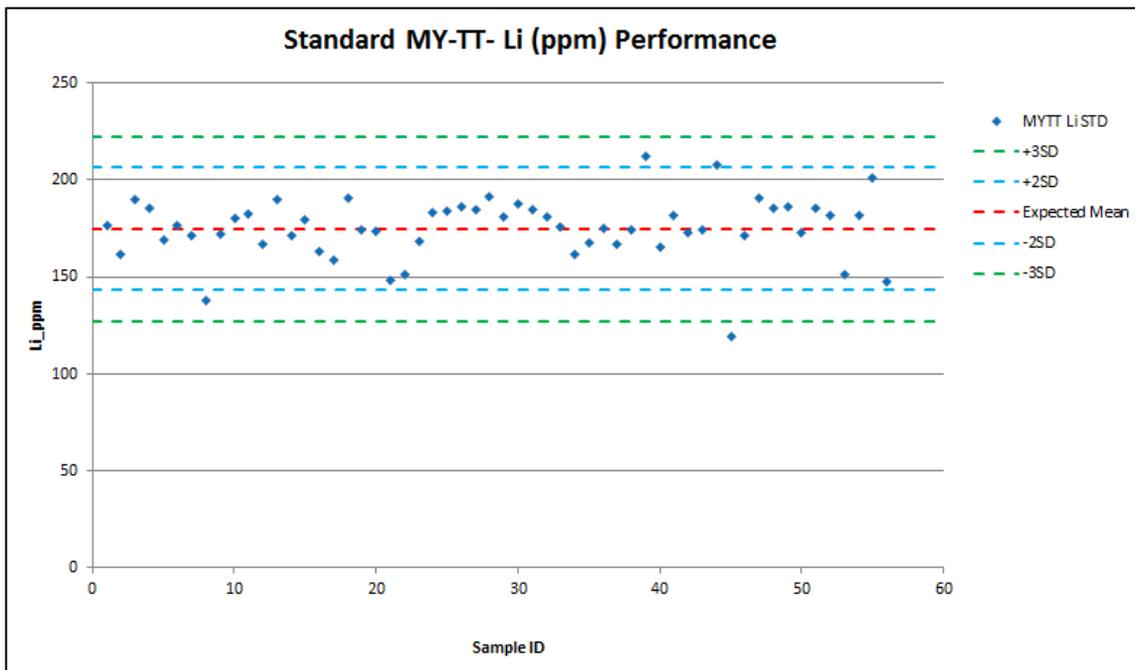


Figure 11-4: Low grade lithium reference standard MY-TT

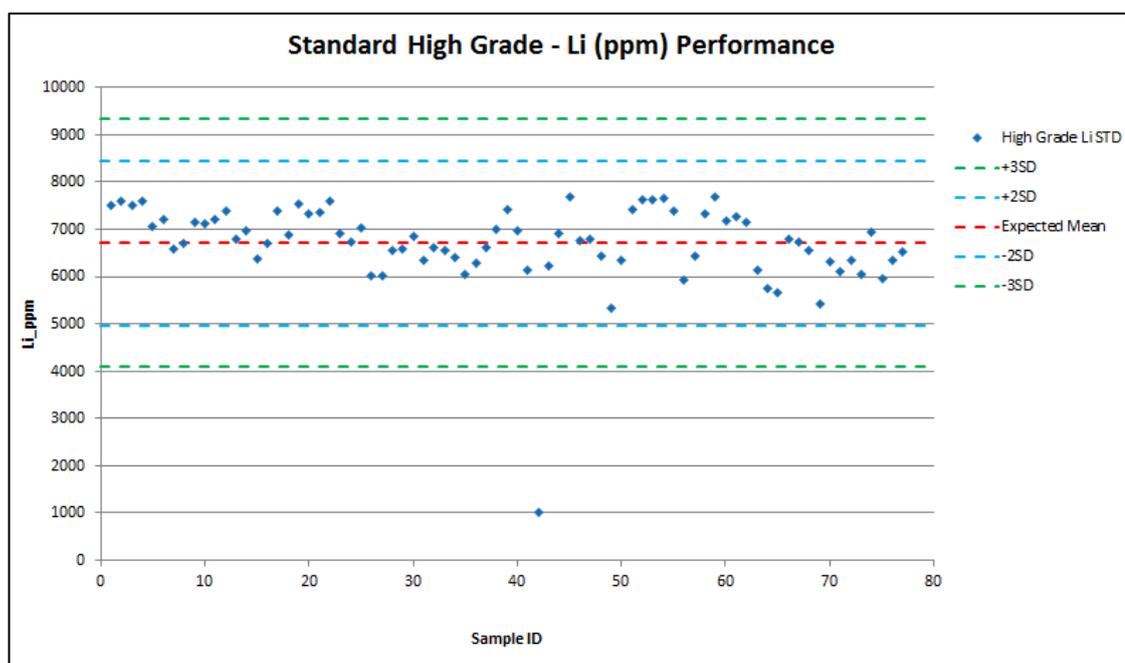


Figure 11-5: High grade lithium reference standard

### 11.3.3 Blanks

A total of 32 blanks were submitted as part of the QA/QC process by Bacanora during the most recent round of drilling. Prior to this, blank samples were not submitted as part of the QA/QC program. The overall performance of the blanks is considered to be acceptable; however, it must be noted that the blank samples submitted cover a very limited period of drilling and analysis. The insertion rate for blank samples in the most recent phase of drilling is approximately 1 in 20; this is considered to be in line industry best practice. Blank performance plots are presented in Figure 11-6 and with outliers removed in Figure 11-7.

SRK notes that almost all the samples fall above the analytical detection limit stated for lithium by ALS Chemex, with two samples falling well beyond the detection limit. This may be attributable to sample swapping or mislabelling. Bacanora uses a commercially available silica sand as blank material; however, this material is not certified and is pulverised in-house prior to submission to ALS Chemex. It is therefore not possible, without further testwork, to ascertain source of the lithium causing the overall trend for blank samples to exceed the detection limit. Despite this, SRK does not consider this very low level of potential contamination to significantly impact upon the data quality.

SRK recommends that the practice of submitting blank samples as part of the standard analytical submission sequence is maintained in further programs and that certified blank material is sourced.

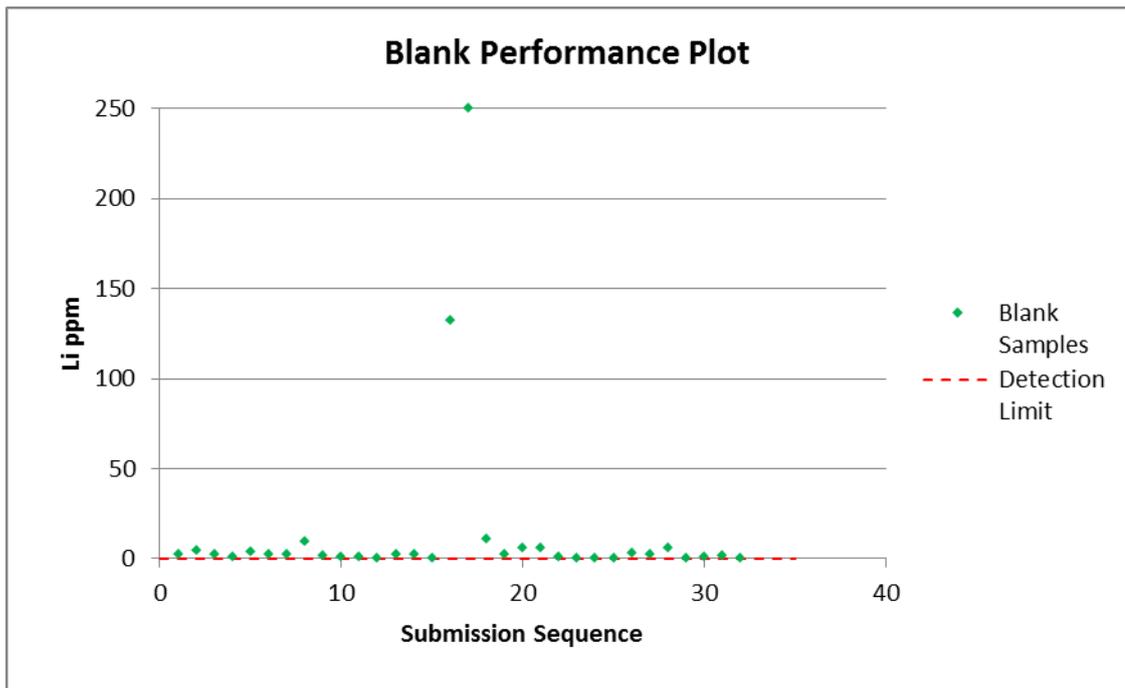


Figure 11-6: Blank performance plot

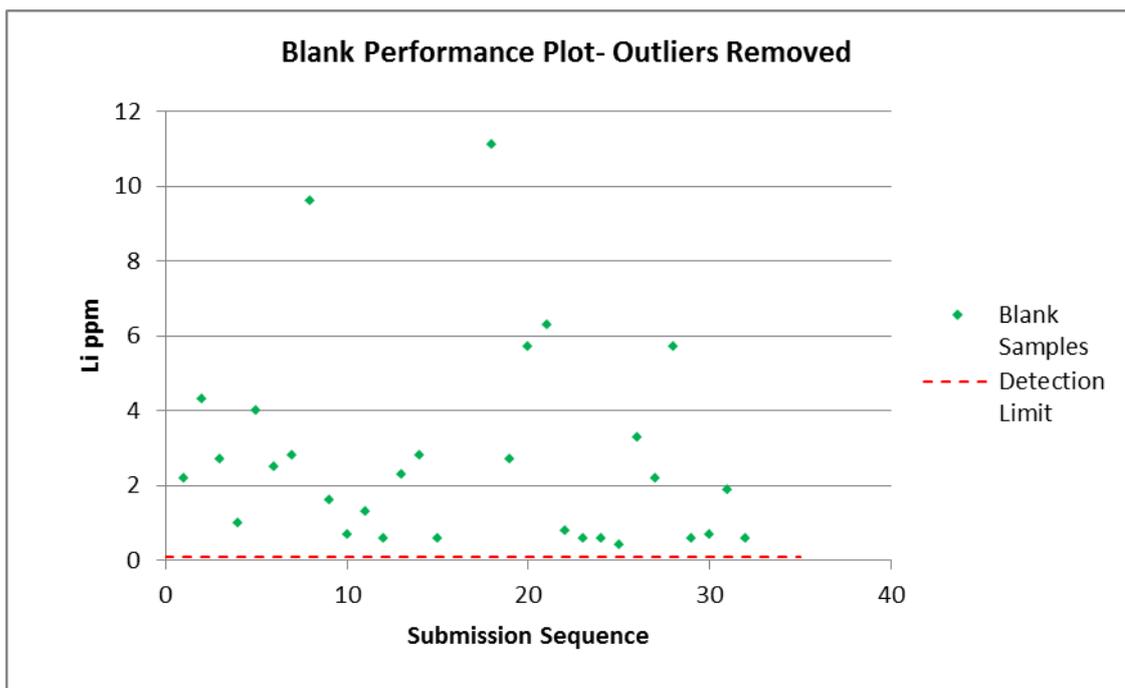


Figure 11-7: Blank performance plot with two outliers removed

### 11.3.4 Duplicates

A total of 14 quarter-core duplicate samples were submitted as part of the QA/QC process by Bacanora during the most recent round of drilling. Prior to this, duplicate samples were not submitted as part of the QA/QC program. The overall performance of the duplicates is considered to be acceptable as they show that there is little difference between the assays when one half core is compared to the other. The insertion rate for duplicate samples in the most recent phase of drilling is approximately 1 in 45; this is considered to be below industry best practice. Figure 11-8 shows a scatter plot of original versus duplicate samples highlighting a good correlation.

SRK recommends that the practice of submitting duplicate samples as part of the standard analytical submission sequence is maintained in further programs. SRK suggests that in future QA/QC programs an insertion rate of 1 in 20 should be attained.

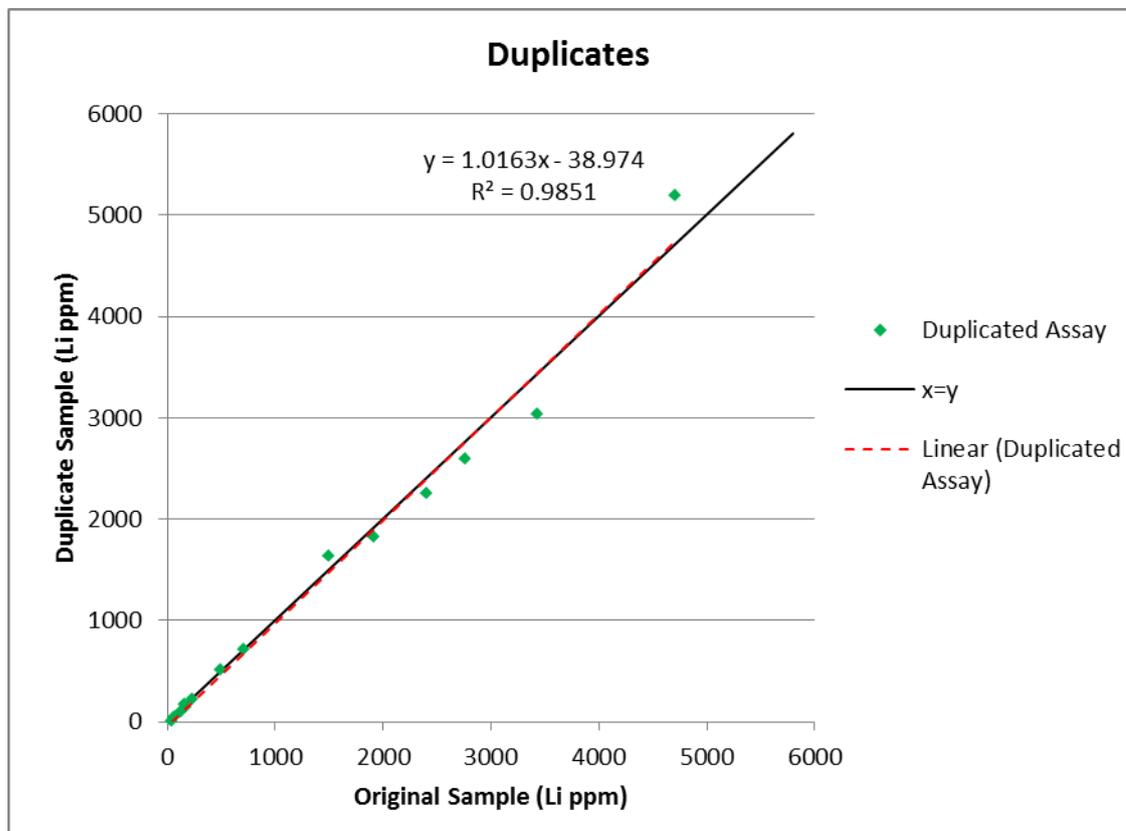


Figure 11-8: Duplicate assay comparison

### 11.3.5 Comparative Laboratory techniques

In addition to the ME-MS41 method, 280 samples were submitted as pulp duplicates for further analysis using the Li-OG63 analytical method at ALS Chemex Vancouver, using a 4-acid digest with an ICP finish. Figure 11-9 shows an excellent correlation between the two methods.

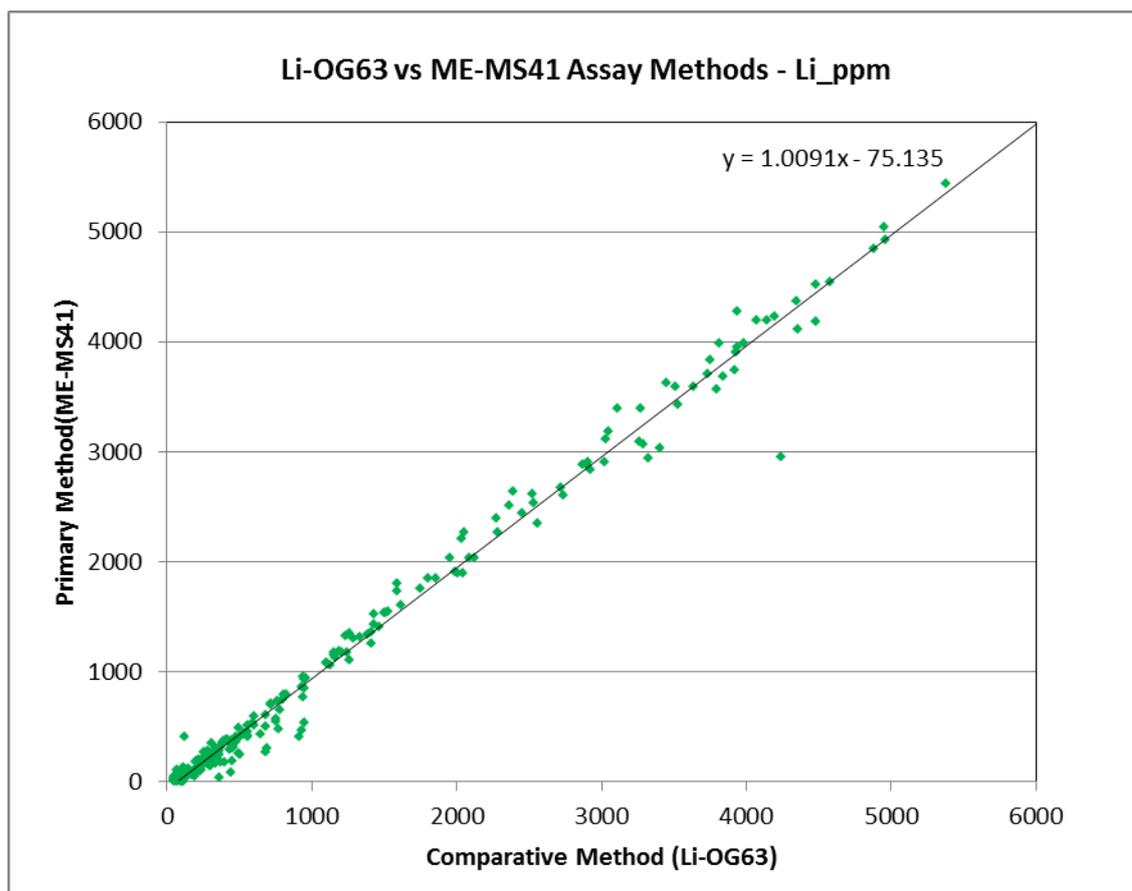
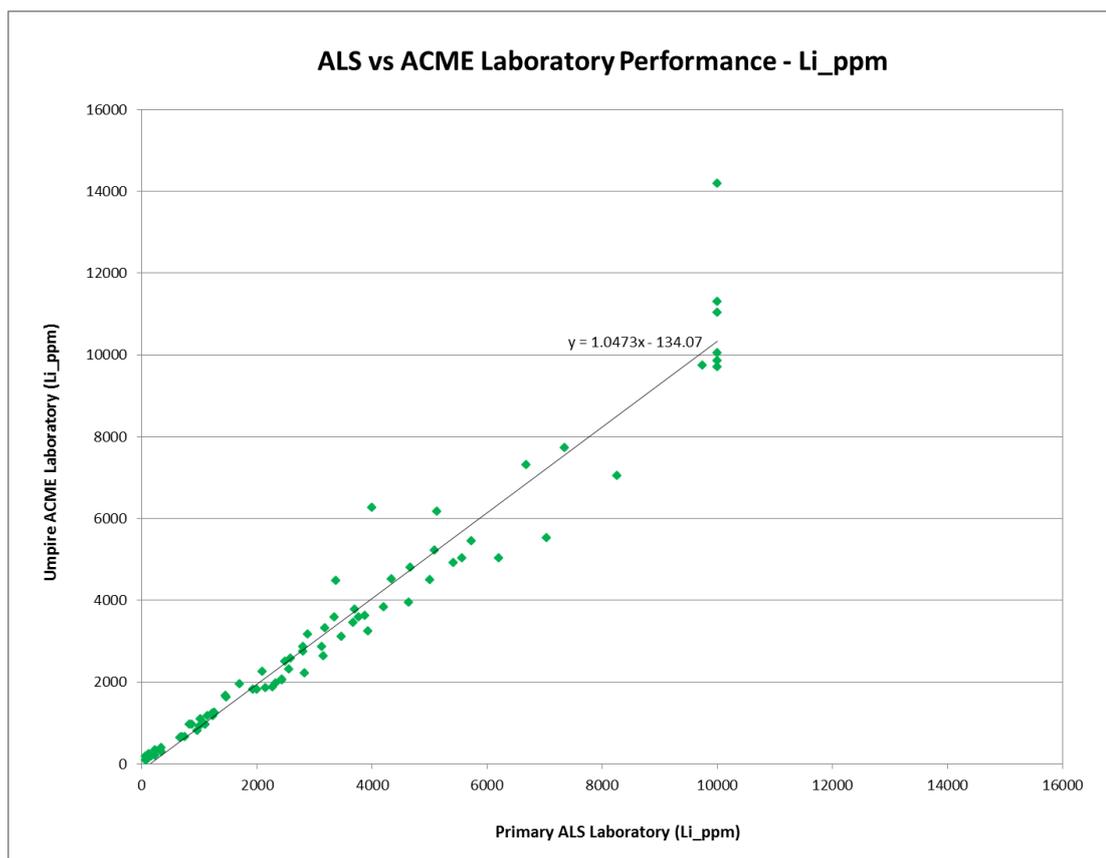


Figure 11-9: Duplicate sample method comparison

### 11.3.6 Umpire Laboratory

The work undertaken by C Verley to verify the original analytical results included submitting 82 duplicate samples derived from quarter core to an umpire laboratory (ACME Vancouver) which is 2% of the total sample population. A 4-acid digest analysis was undertaken by ACME Vancouver (method MA270) with an ICP-ES/ICP-MS finish. The results in Figure 11-10 show that there is a good correlation between the two laboratories over the range of grades found in the deposit. SRK recommends that in the future that at least 5% of the total sample population is routinely sent for verification at an umpire laboratory.



**Figure 11-10: Duplicate sample laboratory comparison**

## 11.4 Core Recovery Analysis

Core recovery for the sampled intervals averages greater than 95%, based on core measurements undertaken by the Company. The core recovery is not believed to negatively affect the reliability of the results. SRK notes that a small drop in recovery was observed in the summer 2015 drilling, although this is also not believed to negatively affect the reliability of the results.

## 11.5 QA/QC Summary

SRK has reviewed the QA/QC and is confident that the quality of the data is sufficient for use a Mineral Resource estimate. SRK recommends that during future exploration drilling programmes continue to submit a full suite of QA/QC samples for analysis including blanks, and duplicate samples at a rate of 1 per 20 samples and increasing the submission of samples to umpire laboratories to at least 5% of the total sample population. SRK also recommends creating more in-house standards which more closely represent the deposit grade and ensuring a more comprehensive round-robin process to establish mean grades and standard deviations between several laboratories and methods.

## 12 DATA VERIFICATION

As QP, Martin Pittuck has verified that the data provided by the Company appears to be correct and viable for use in a MRE. This involved viewing some drillholes at the core shed to check the quality of the logging, along with cross-checking assay certificates against the database. Further statistical validation of the database was undertaken upon final receipt.

### 12.1 Data Received

The Company has provided SRK with all requested technical information and data which SRK has taken in good faith as being accurate to the best of their knowledge.

SRK was provided with a package of electronic and paper based data by the Company. This included:

- raw drillhole data sheets in Microsoft Excel format covering the drillhole collars, associated assay results and geology;
- Preliminary Economic Model prepared by REM internally (Microsoft Excel);
- Mapinfo data files relating to:
  - topography;
  - licence tenure;
  - geological and structural interpretation;
- pdf documents relating to Resource Estimates including:
  - Initial Lithium Resource Estimate for the El Sauz and Fleur Concession, Sonora lithium project, C Verley, 11 October 2013; and
  - Updated and Reclassified Lithium Resources, Sonora lithium project, C Verley, 24 June 2013.

### 12.2 Database Validation

All available data has been validated through the production of histograms and scatterplots. All data was validated by an SRK geologist.

### 12.3 QA/QC

The quality control measures that have been put in place are discussed in the previous section. It is SRK's opinion that the procedures adopted have led to a reliable database and SRK is confident that the quality of the data is sufficient for use in an Indicated Mineral Resource.

## 13 MINERAL PROCESSING AND METALLURGICAL TESTING

Bacanora has a laboratory and metallurgical pilot scale test facility in Hermosillo which is being used to develop a flowsheet for production of lithium carbonate from the Sonora clays deposit. Bacanora plans to eventually produce battery grade lithium carbonate (99.5% pure  $\text{Li}_2\text{CO}_3$ ) which currently sells for approximately USD 6,500/t. Every unit of lithium metal is equivalent to 5.32 units of  $\text{Li}_2\text{CO}_3$ ; in the Mineral Resource statement the lithium metal content is also given as a lithium carbonate Equivalent (“LCE”).

The only comparable deposit currently being developed is Western Lithium Corp’s (“Western Lithium”) Kings Valley Lithium Project in Nevada. This deposit contains lithium rich phyllosilicate and smectite clays such as hectorite. The clays at Bacanora are from the same category, although they differ in species, with polyolithionite being the main clay identified to date.

Western Lithium published a Pre-Feasibility study in May 2014 which outlined their mineral processing flow sheet. This was based both of bench scale laboratory work and semi continuous work on the calcination (pyro-metallurgy) section of mineral processing. Subsequent to this, Western Lithium produced high purity lithium carbonate (99.8%) from its demonstration plant.

Bacanora’s mineral processing is similar to Western Lithium’s and the flowsheet involves a series of stages starting with beneficiation, followed by calcination, leaching, evaporation, filtering and precipitation. To date, Bacanora has produced in excess of 99.5% pure lithium carbonate at bench scale. It is currently optimising the process to produce process design criteria and mass energy balances.

Given the stage of development and continued optimisation of the process final processing costs and re-agent tonnages have not been finalised, however, they will be provided in a Pre-Feasibility study which is currently being prepared. SRK has been provided with updated recoveries and costs by Bacanora reflecting the current status of this study. The information provides SRK with the necessary comfort that there are reasonable prospects for the eventual economic extraction of lithium and by-product potassium from the Project.

As the Project advances and the process is further defined, these costs and recoveries may vary and may have an effect on the cut-off grade and consequently any subsequently published MRE.

## 14 MINERAL RESOURCE ESTIMATION

### 14.1 Introduction

The April 2016 MRE was completed by Oliver Jones (Consultant - Resource Geology) and Ben Lepley (Senior Consultant - Resource Geology) under the supervision of Martin Pittuck, CEng, MIMMM (Corporate Consultant - Mining Geology) who has some 20 years’ experience in generating and reviewing Mineral Resource estimates for a wide variety of deposit styles; meeting the definition of an “independent Qualified Person” as this term is defined in National Instrument 43-101.

The Effective Date of the Mineral Resource statement is 12 April 2016.

This section describes the Mineral Resource estimation methodology and parameters. The Mineral Resources have been reported in accordance with generally accepted CIM “Estimation of Mineral Resources and Mineral Reserves Best Practices” guidelines and National Instrument 43-101. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources will be converted to Mineral Reserves.

The database used to estimate the Mineral Resources was audited by SRK and SRK is of the opinion that the current drilling information is sufficiently reliable to support a Mineral Resource.

Leapfrog Geo Software (“Leapfrog”) was used to construct the geological model. Microsoft Excel was used to audit the drillhole database, and prepare assay data for geostatistical analysis. Supervisor Software (“Supervisor”) was used for geostatistical analysis and variography. Datamine Studio Version 3 (“Datamine”) was used to construct the block model, estimate grades and tabulate the resultant Mineral Resources.

## 14.2 Resource Estimation Procedure

The estimation methodology comprised:

- database verification and preparation for geological modelling (including compositing);
- discussions with client regarding geology and mineralisation;
- construction of geological model and wireframes;
- definition of fault blocks and resource domains;
- preparation of database for geostatistical analysis and variography;
- 2-D and 3-D Block modelling and grade interpolation;
- resource validation and classification;
- assessment of “reasonable prospects for economic extraction” and selection of appropriate cut-off grade; and
- preparation of a Mineral Resource Statement.

## 14.3 Resource Database

SRK was provided with a package of electronic and paper based data by the Company. This included:

- raw drillhole data sheets in Microsoft Excel format covering the drillhole collars, associated assay results and geology for each of the La Ventana and El Sauz / Fleur concessions independently;
- Mapinfo data files relating to:
  - topography;
  - licence tenure; and
  - geological and structural interpretation.

## 14.4 Topographic Survey

A detailed 1 m resolution topographic survey has been undertaken (Figure 14-1), covering the extent of the known lithium deposit included in this study. Topographic data was collected using LiDAR simultaneously with high resolution aerial photography.

Figure 14-1 and Figure 14-2 show the LiDAR imagery and aerial photography draped over the LiDAR Digital Elevation Model (“DEM”) which has allowed verification of the drillhole collars as well as adding increased definition to the mapped geological contacts between the clay and various other units.

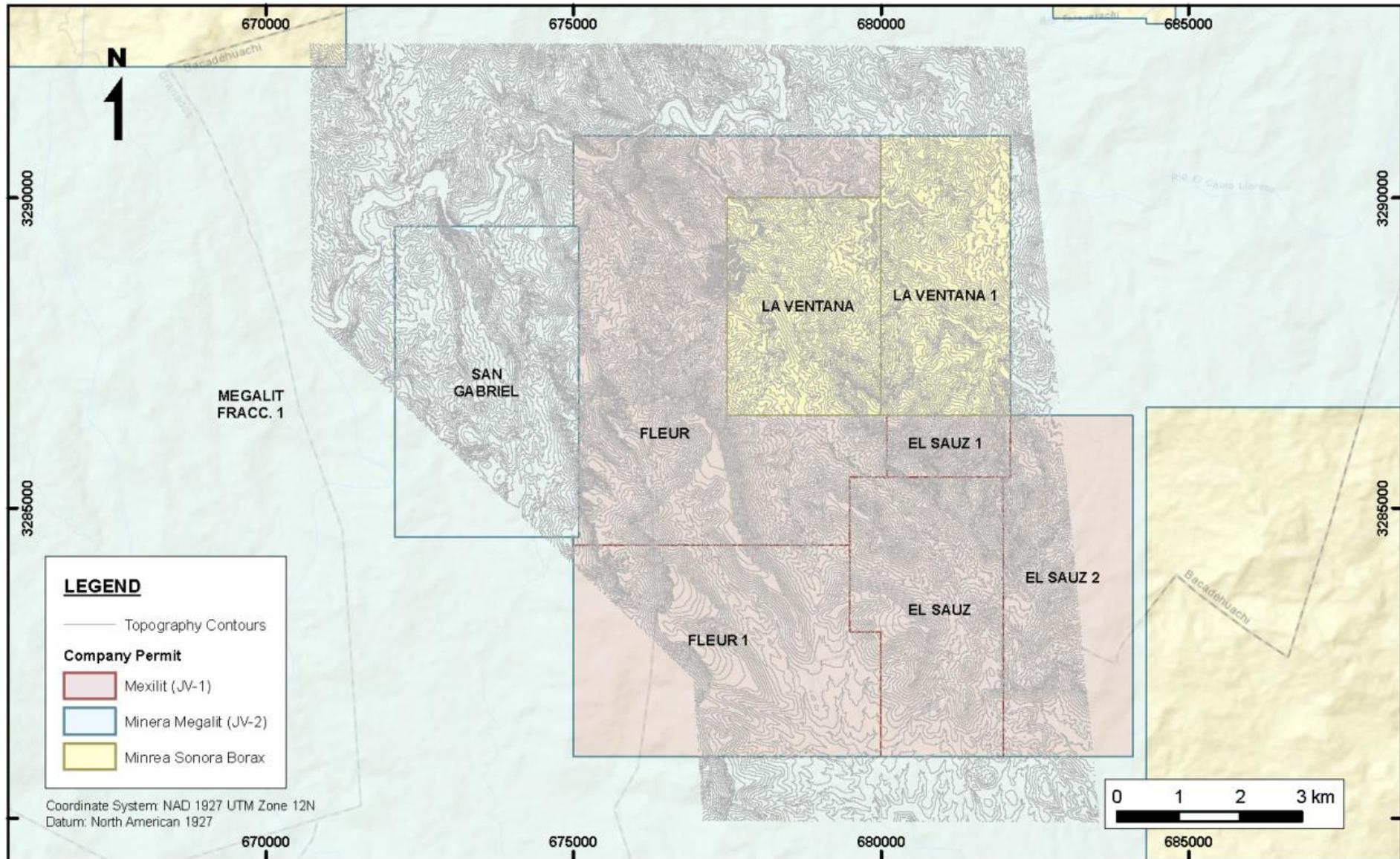
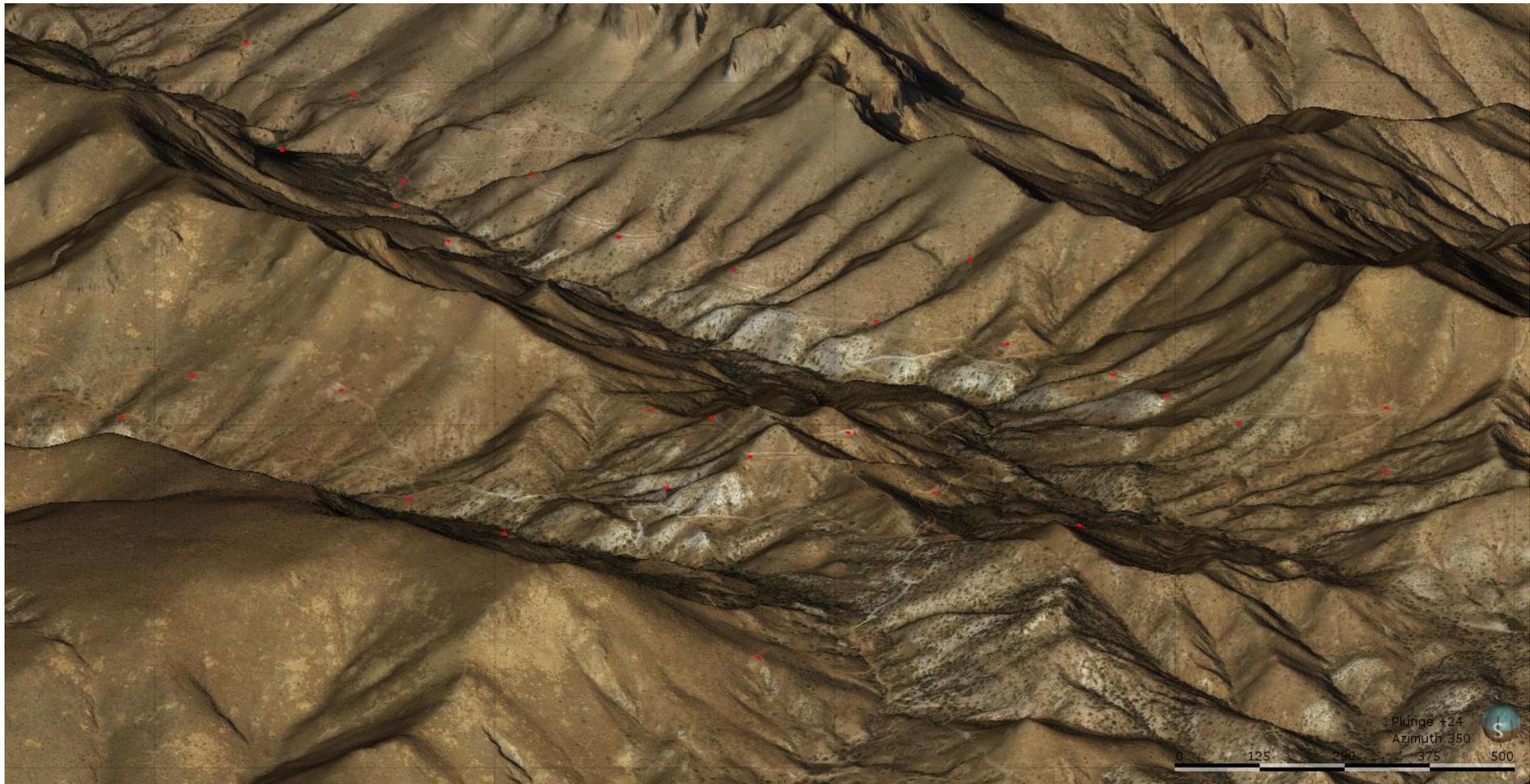


Figure 14-1: Area covered by available LiDAR imagery



**Figure 14-2: Aerial imagery draped over topographic mesh to validate drillhole locations (red)**

## 14.5 Geological Modelling

The MRE is based on a 7.2 km portion of a northwest-southeast regional trending lithium enriched clay unit. SRK has created a geological model constrained by the licence holdings of the company and based on the lithological logging, assay data, structural and interpretive sections provided by the company. The deposit has been modelled as three main geological domains. At the stratigraphic base of the clay bearing units is the “Lower Clay Unit”, this is typically well mineralised and up to 20 m thick, this is overlain by a weakly mineralised Ignimbrite sheet. At the top of the sequence is the “Upper Clay” which has been subdivided into a “High Grade Upper Clay” and an “Upper Clay” unit in the well drilled Fault Block 4 area of the deposit Section 14.8.1. The deposit has been subdivided into five fault blocks, described in further detail in Section 14.6.3.

## 14.6 2-D Modelling and Interpretation

In developing a 3-D model, SRK has created a series of 2-D representation to assess the deposit geometry and grade distribution for each clay unit, which has identified several features material to the estimation process; these are described in the following sections.

### 14.6.1 Elevation

Figure 14-3, Figure 14-4 and Figure 14-5 show the wireframed elevation of the footwall of the Upper, Upper High Grade and Lower Clay Units within the main northern fault block. The figures also show the thickness of the resulting wireframes. The elevation trend in each fault block is relatively consistent, showing the gentle dipping nature of each mineralised horizon.

### 14.6.2 Thickness

Figure 14-3, Figure 14-4 and Figure 14-5 also show the thickness of each clay unit. In the Lower Clay Unit, the thickness is greatest in the south east where it reaches 50 m; this reduces gradually to 20 m at the centre of the zone and towards the northern extents of the data. The Upper Clay and High Grade Upper Clay Units thickness is greatest at the northern end of the drilled area where it reaches 50 m and 20 m respectively; this reduces southwards varying gradually between 10 m and 30 m thick at the southern extent of the data.

### 14.6.3 Structure

A 3-D assessment of lithological drillhole logging and surface structural maps identify the presence of several faults which offset the mineralised horizons; these are shown in Figure 14-6. These structures have been used in the subsequent 3-D geometry and grade modelling processes as fault block domain boundaries.

### 14.6.4 Grade

Section 14.12.2 provides plan maps of the grade variation across the deposit. Although these trends are visible in the raw data, they are best visualised in the resultant estimated block model (as presented in the figures within Section 14.12.2). The figures demonstrate a strong trend towards grade zoning, resulting in a “bulls-eye” grade pattern with highest grades seen in the centre of the domains, gradually transitioning to towards lower grades at the margins. This effect is best observed in the northern fault block where the majority of the drilling has been undertaken.

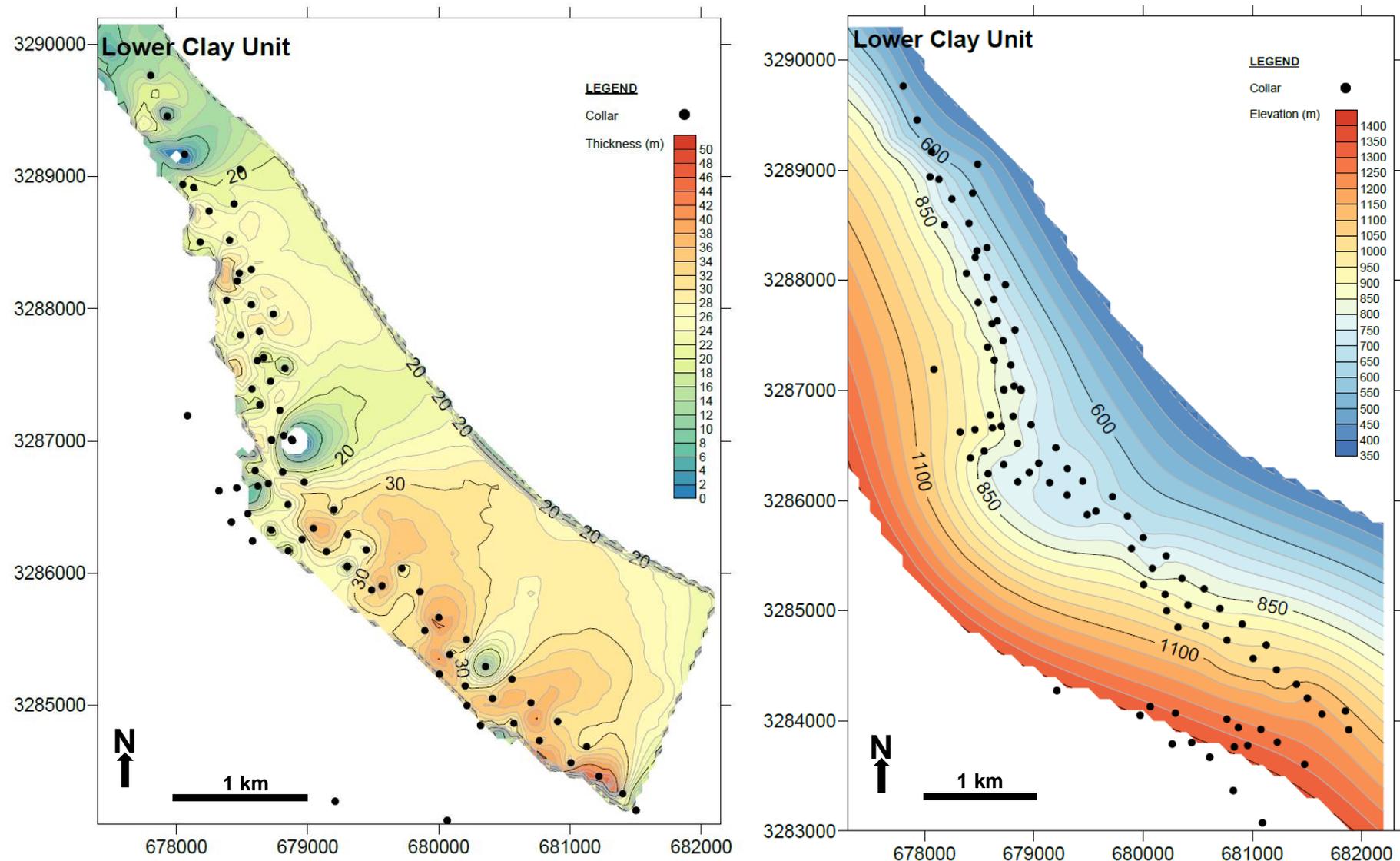


Figure 14-3: Thickness contour map (left) and elevation contour map (right) for the Lower Clay Unit

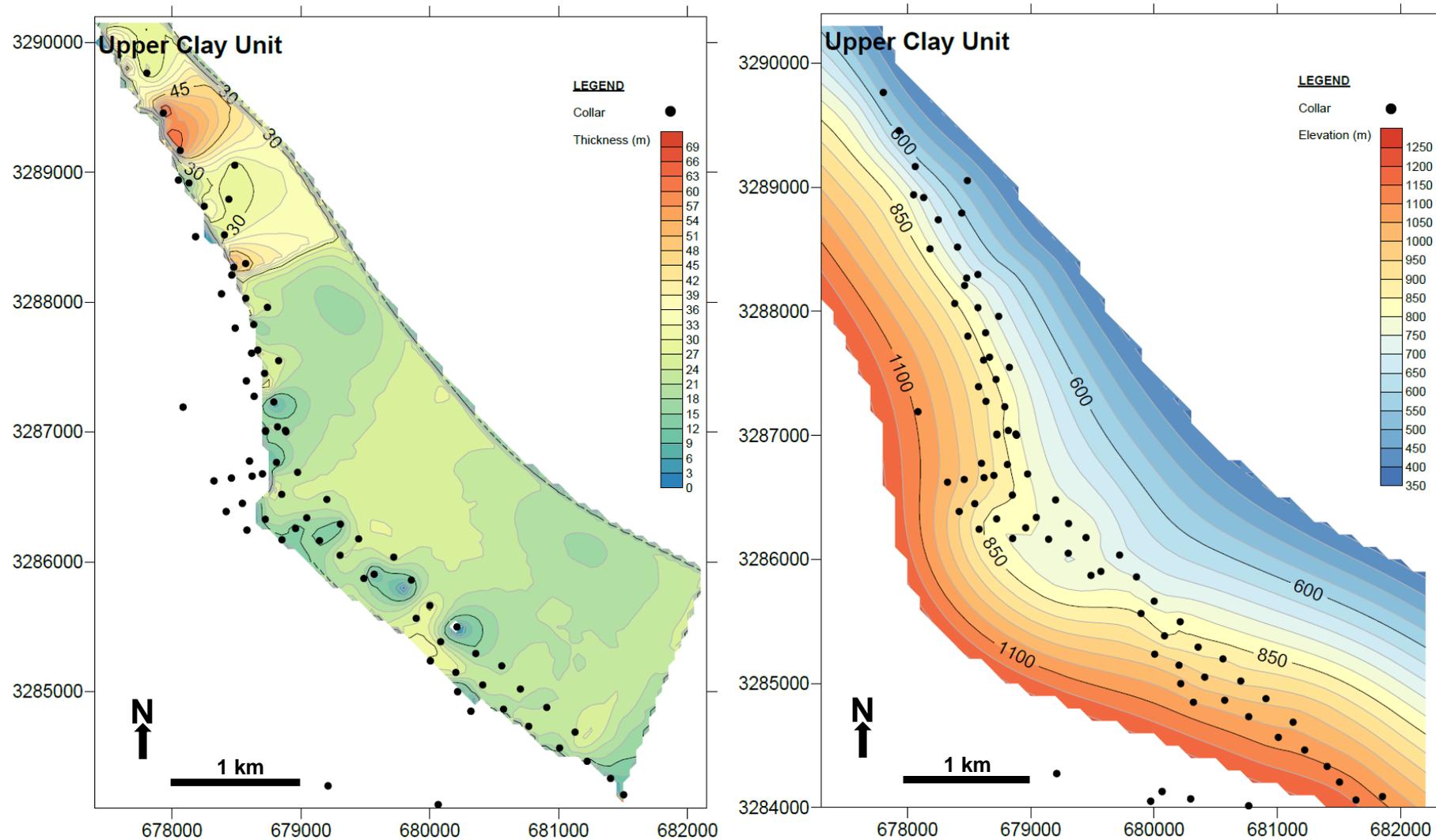


Figure 14-4: Thickness contour map (left) and elevation contour map (right) for the Upper Clay Unit

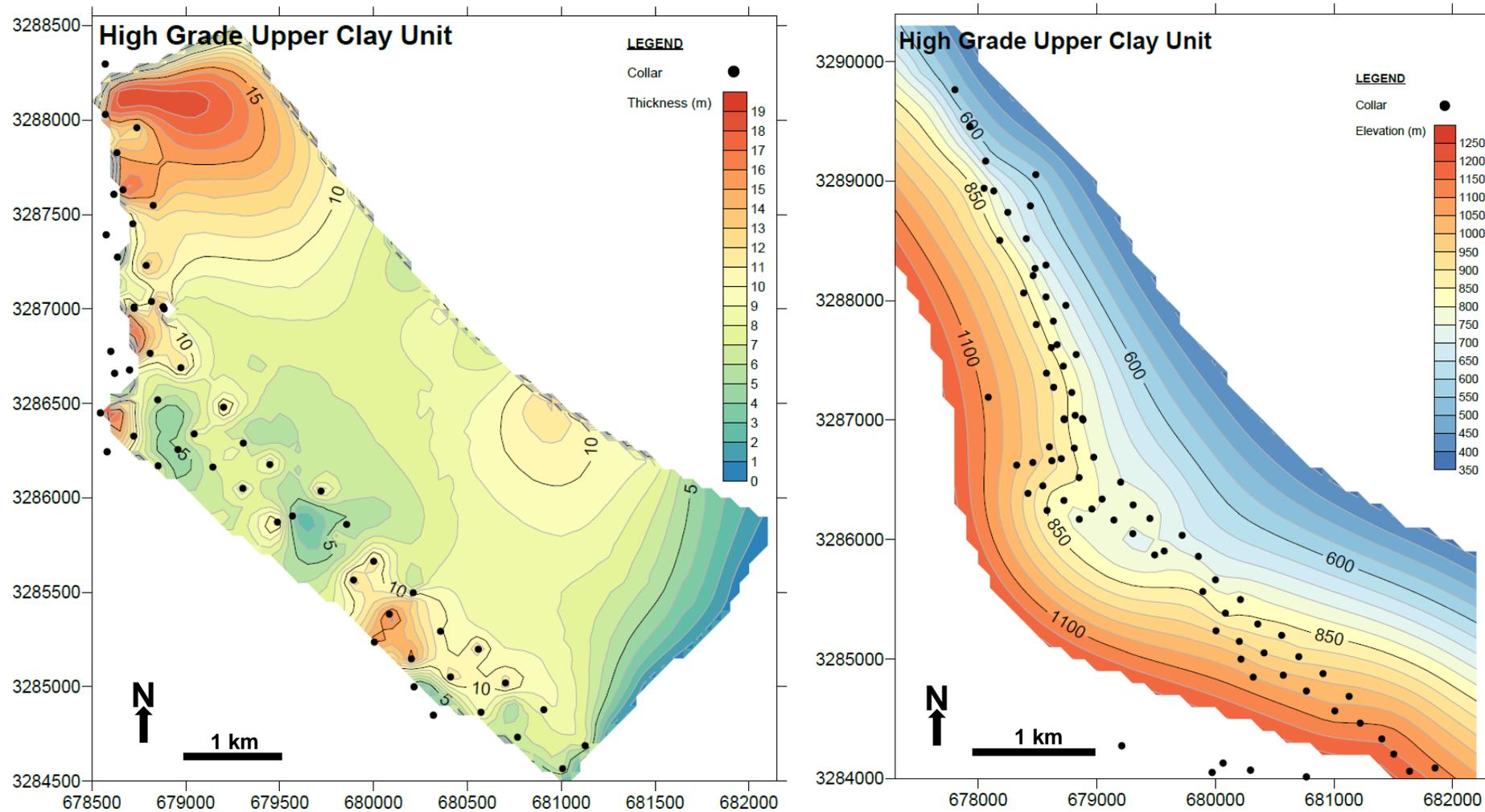


Figure 14-5: Thickness contour map (left) and elevation contour map (right) for the High Grade Upper Clay Unit

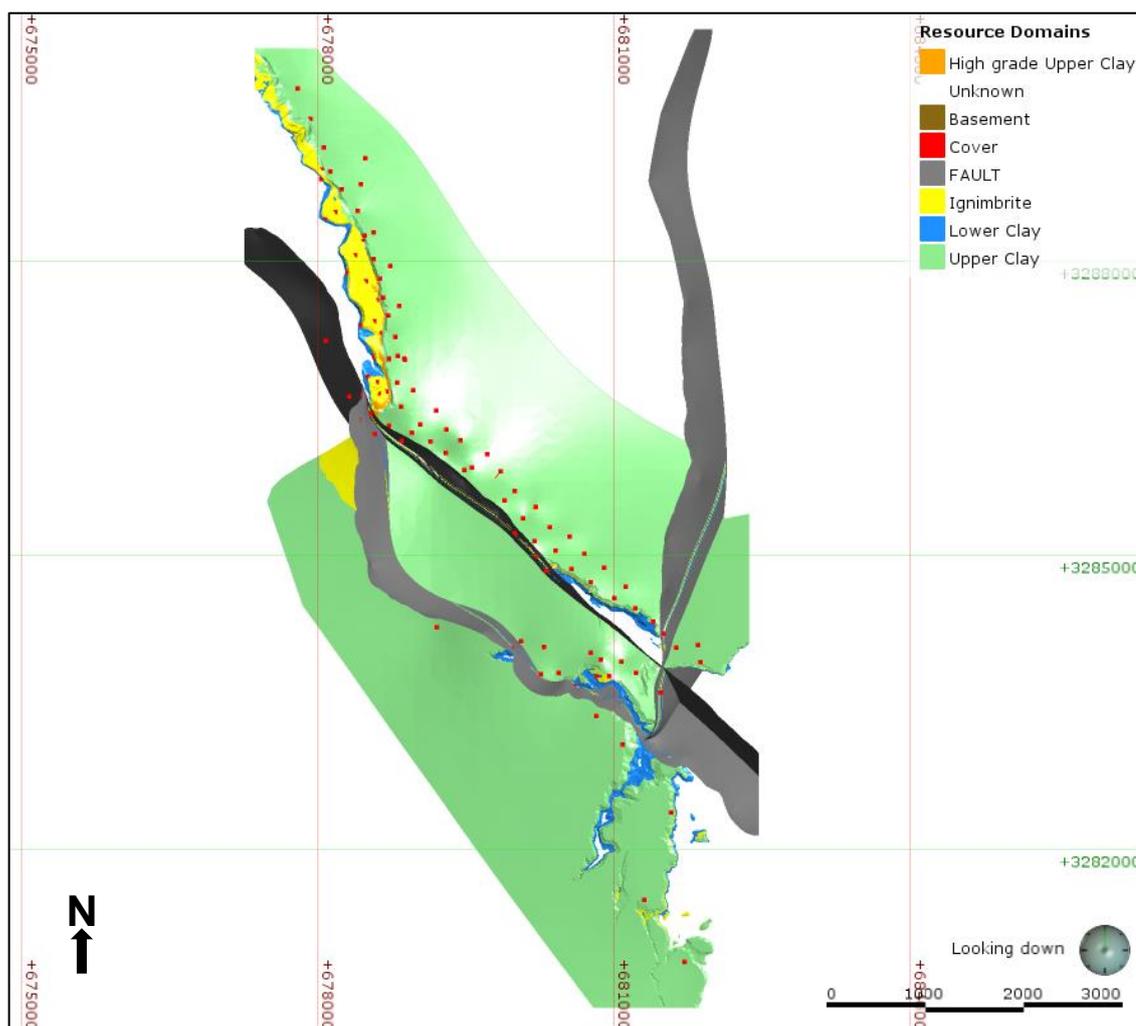


Figure 14-6: Fault model (black wireframes) shown with resource wireframes

## 14.7 3-D Geological Modelling

SRK has undertaken geological modelling of the Sonora Lithium Project to provide geological constraints for the MRE. These constraints are provided as wireframe models into which the final block models were created and domained. The geological model constructed for the Project has been used to differentiate between fault blocks and the Upper and Lower Clay Units, as well as the high and low grade sub domain within the northern Upper Clay Unit.

## 14.8 Deposit Modelling

The following section describes the methodology undertaken for modelling of the Project. All modelling was undertaken using Leapfrog Geo software into which cross sections from previous interpretations were imported for reference.

### 14.8.1 Geological Zone Modelling

The deposit modelling comprised the following:

- importing the collar, survey, assay, geology, and magnetic susceptibility data into Leapfrog to create a de-surveyed drillhole file);
- importing the topography data file;

- importing site generated interpretations, plan maps and cross sections; and
- creating the mineralisation wireframes based on the domain.

A number of fault surface wireframes were first modelled based on mapped traces, dip-strike field data and interpreted occurrence in drillholes. This process resulted in five fault blocks which materially impact the strike continuity of the lithium bearing clay units. To maintain this distinction, zone codes which are listed in Table 14-1 have been preceded with the numbers 1 to 5 to represent the fault block.

Geological zones were created by grouping the logged lithology codes then generating wireframes for each lithological unit linking between drillholes and outcrop, ensuring the stratigraphic sequence continued through the Project area. Each lithological wireframe has been clipped against the fault domain boundaries and topography.

Figure 14-7 shows the mineralisation wireframes produced by SRK in combination with interpretive cross sections provided by the client. Figure 14-8 provides a cross section showing all stratigraphic units which have been offset and controlled by generating differing fault blocks independently referenced to structural data collected on site.

Figure 14-9 shows the wireframes that were used to constrained the raw data and define the zone coding implemented during the creation of the block model. Table 14-1 references each of the Kriging zone codes applied representing both the clay unit and the respective fault domain.

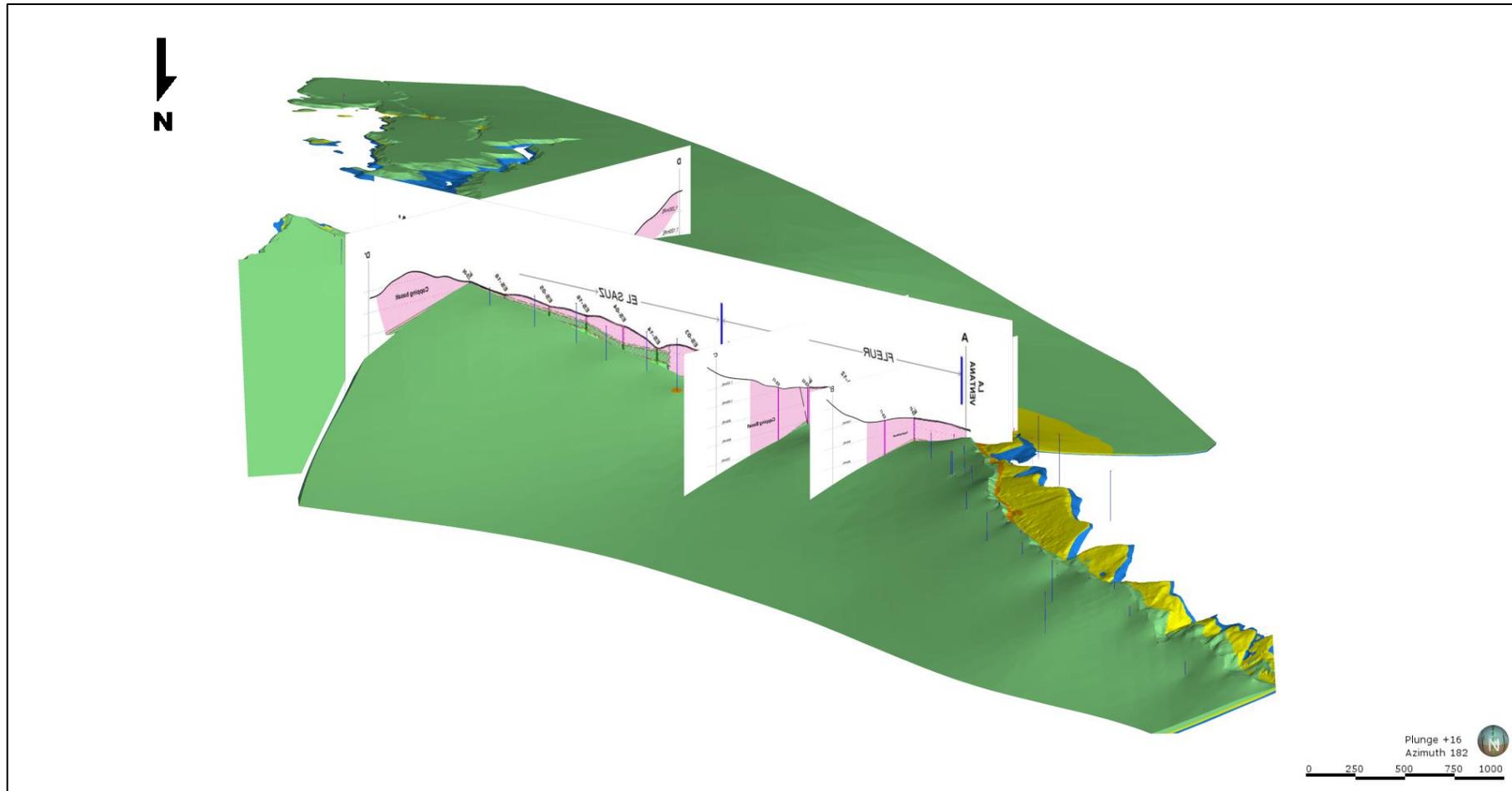
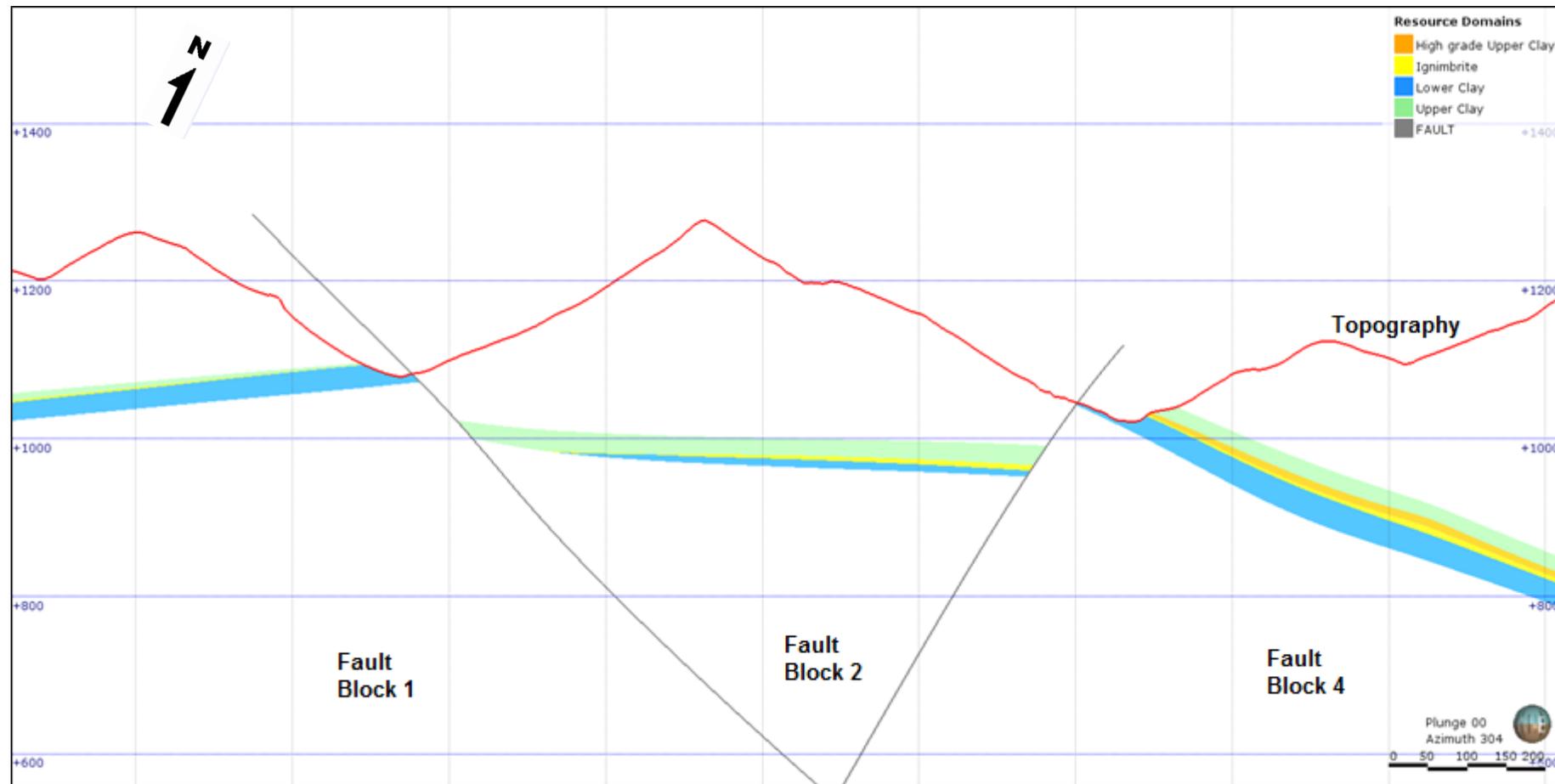


Figure 14-7: South facing isometric view of cross sections provided by the Company registered in 3-D space



**Figure 14-8: Northwest-looking cross section showing stratigraphic units and related fault structures**

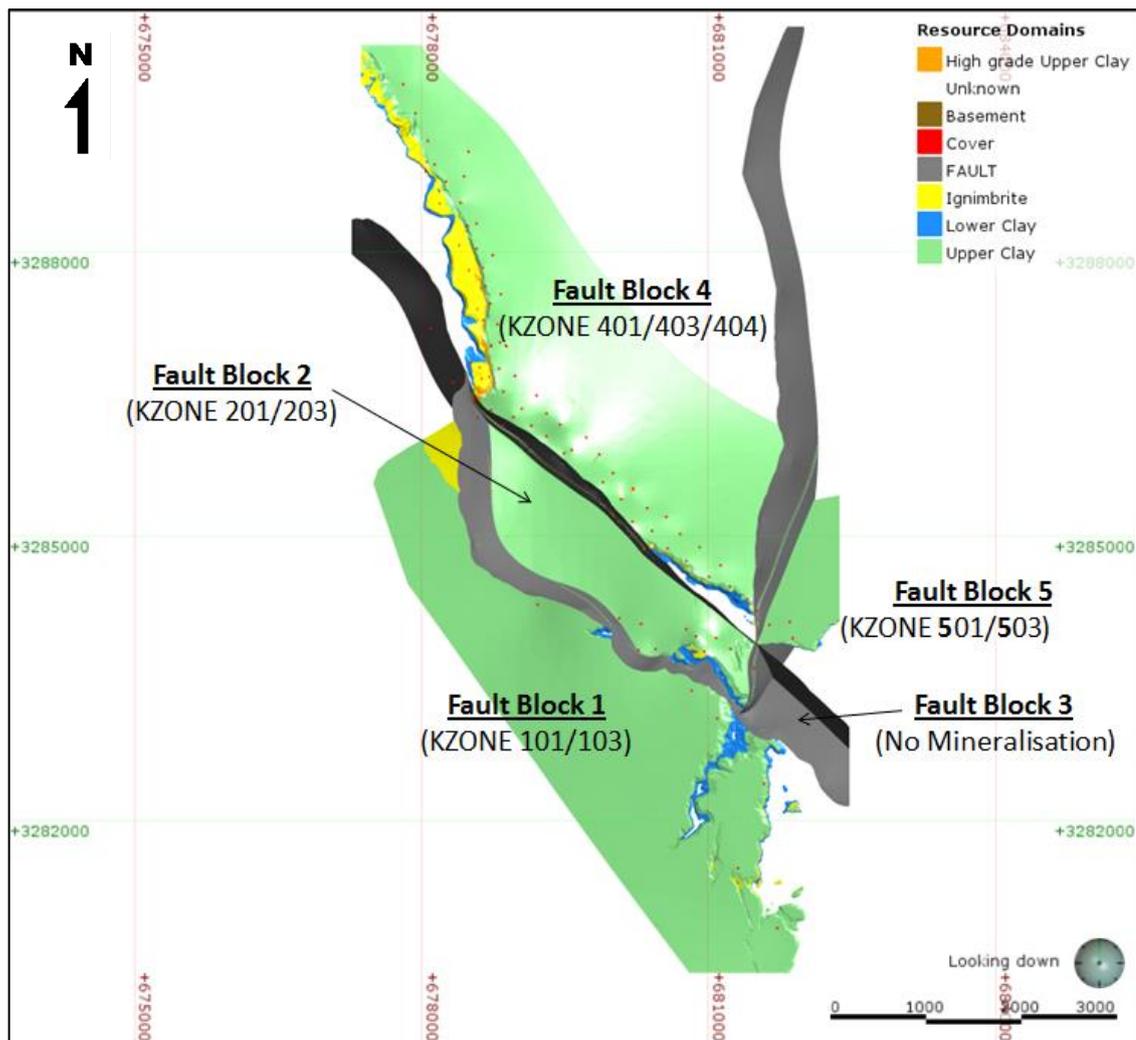


Figure 14-9: Wireframes in plan showing the zone code system applied

Table 14-1: Kriging Zone Codes (KZONES)

KZONE	Description
101	Lower Clay (Fault Block 1)
103	Upper Clay (Fault Block 1)
201	Lower Clay (Fault Block 2)
203	Upper Clay (Fault Block 2)
401	Lower Clay (Fault Block 4)
403	Upper Clay High Grade domain (Fault Block 4)
404	Upper Clay Low Grade domain (Fault Block 4)
501	Lower Clay (Fault Block 5)
502	Upper Clay (Fault Block 5)

### **14.8.2 Block Model Creation**

An empty block model was generated in Datamine Studio 3 software (“Datamine”). The block model includes zone codes for each of the mineralised clay units and ignimbrite wireframes in each of the fault blocks.

The mineralisation modelled has a strike length of some 7.2 km. Deep drilling has demonstrated the existence of mineralisation some 500 m down dip from outcrop and SRK has extended the block modelled mineralisation a further 300 to 400 m down dip to ensure any potentially economic material below that already defined can be included in the Mineral Resource or identified as a drilling target. A waste model was also generated below the topography and outside of the mineralisation zones.

## **14.9 Classical Statistical Study**

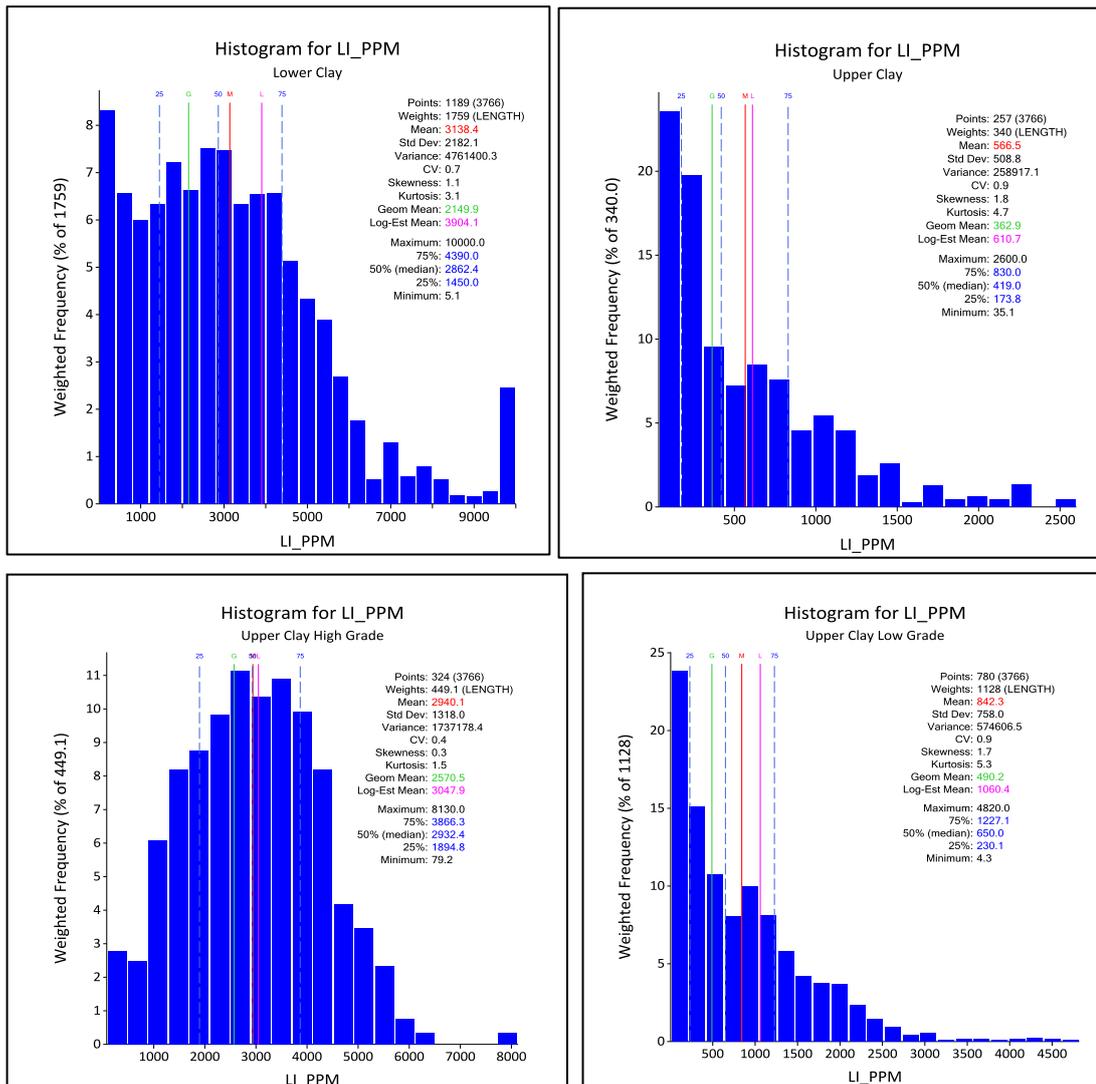
This section presents the results of the statistical studies undertaken on all the available assay and density data sets to determine their suitability for the estimation process and to derive appropriate estimation constraints.

### **14.9.1 Introduction**

The samples analysed typically comprise an approximate 1.5 m sample interval. A total of 3,546 raw drillhole assays are available for use in the modelling and MRE process.

### **14.9.2 Raw Statistics**

The domains described above have been used to distinguish the differing horizons and spatial relationships, based principally on the lithological logging and geological interpretation supported by Li grade. Figure 14-10 shows the key histograms for the upper and lower clay domains combined across fault blocks.



**Figure 14-10: Combined Histograms for Upper and Lower Clay Units as well as the Upper Clay high grade and low grade subdivisions**

Figure 14-10 shows a positive skew in both the Upper Clay and Upper Clay Low Grade domains. This distribution is likely to be related to the gradual transition in grade over the entire strike length of the deposit, resulting in a mixture of high and low grade samples rather than a specific grade population. SRK also notes that the maximum value of 10,000 ppm Li that can be returned by the laboratory and method employed terminates the distribution curve of the Lower Clay Unit unnaturally. This suggests that all samples currently in the database with a value of 10,000 ppm would have higher grades if they were submitted for assay using a different method with a higher detection limit. There are a total of twenty samples in the raw sample database that have been returned with the upper analytical detection limit of 10,000 ppm Li. All of these samples fall within the high grade core of the Lower Clay Unit in Block 4.

### 14.9.3 Data Compositing

Due to the relatively flat lying nature of the mineralisation and the large lateral extent compared with the vertical extent of each domain, a decision was made to undertake a 2-D grade estimate. Vertical grade variation is noted in places, but it has not been identified with sufficient continuity between drillholes to have been modelled as further subdomains or to have been reflected in the estimation process. The samples in each drillhole have therefore been composited to create one sample per unit as described below.

The average grade of the entire composite interval per domain is a length-weighted average of the sample grades. The drillholes are domained using wireframes based on lithological contacts prior to compositing. There is a separate composite for each drillhole intersection within each of the major lithological units:

- Lower-grade upper part of the upper clay;
- Higher-grade lower part of upper clay;
- Barren ignimbrite; and
- Lower clay.

This method assumes that there will be limited vertical selectivity in the mining method other than mining to lithological contacts, which is currently considered valid.

The statistics of the composited point data by KZONE are presented in Table 14-2. Refer to Table 14-1 for KZONE description.

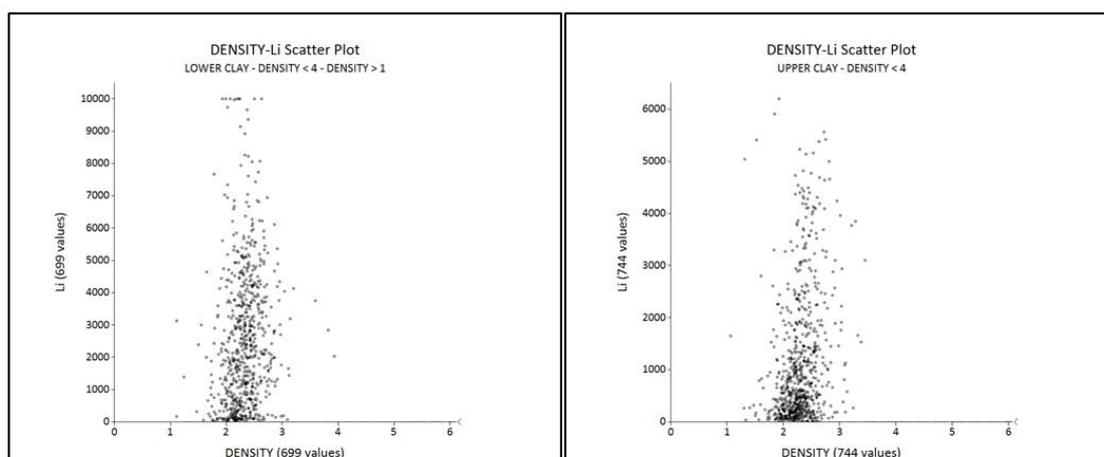
**Table 14-2: Composite Statistics by KZONE (weighted by Clay Unit thickness)**

Zone	Field	No Samples	Minimum	Maximum	Mean	Stand Dev	CoV
101	Li (ppm)	8	10	4503	1070	1374	1.3
201		8	555	1668	1224	381	0.3
401		60	107	5855	3521	1402	0.4
501		3	41	795	319	338	1.1
103	Li (ppm)	6	150	529	369	138	0.4
203		8	129	937	621	292	0.5
403		43	804	4523	2872	883	0.3
404		52	103	1658	861	340	0.4
503		3	167	552	411	173	0.4
101	K (%)	8	8	0.2	1.8	0.6	0.5
201		9	8	0.5	0.9	0.6	0.1
401		61	60	0.3	2.4	1.5	0.5
501		3	3	0.2	0.4	0.3	0.1
103	K (%)	6	6	0.2	0.4	0.3	0.1
203		8	8	0.3	0.6	0.5	0.1
403		45	43	0.4	1.5	1.0	0.3
404		54	52	0.2	0.8	0.5	0.1
503		3	3	0.3	0.4	0.4	0.0

## 14.9.4 Density Analysis

Bulk density measurements have been undertaken for all material types for the Sonora Lithium Project. In total, 2,040 samples have been analysed for bulk density from the identified stratigraphic horizons. No further density sampling has been conducted in the most recent drilling program in 2015; therefore, the density analysis remains unchanged since the May 2015 MRE. Figure 14-11 shows the relationship between lithium grade and density for samples within the upper and lower clay domains. As no strong relationship is apparent, an average density has been applied in the geological model for tonnage calculations.

Table 14-3 shows the average density values determined for each material type which has been applied into blocks where grade has been estimated. Material deemed as non-mineralised or waste has been given a constant density based on the dominant material type, the Capping Basalt.



**Figure 14-11: Grade density relationships for upper and lower clay units**

**Table 14-3: Average dry density used in block model**

Unit	Average Dry Density (g/cm3)
Upper Clay (including sub domains)	2.3
Lower Clay	2.3
Waste	2.7

In undertaking the density analysis, a number of measurements have been excluded based on bench marking against expected results. Sub populations within the dataset deemed to be not related to the target material have therefore been removed to prevent bias to the dominant sample population. Such populations have been derived through mislabelling of samples, poor analysis technique, and/or calculation errors.

## 14.10 Geostatistical Analysis and Variography

### 14.10.1 Introduction

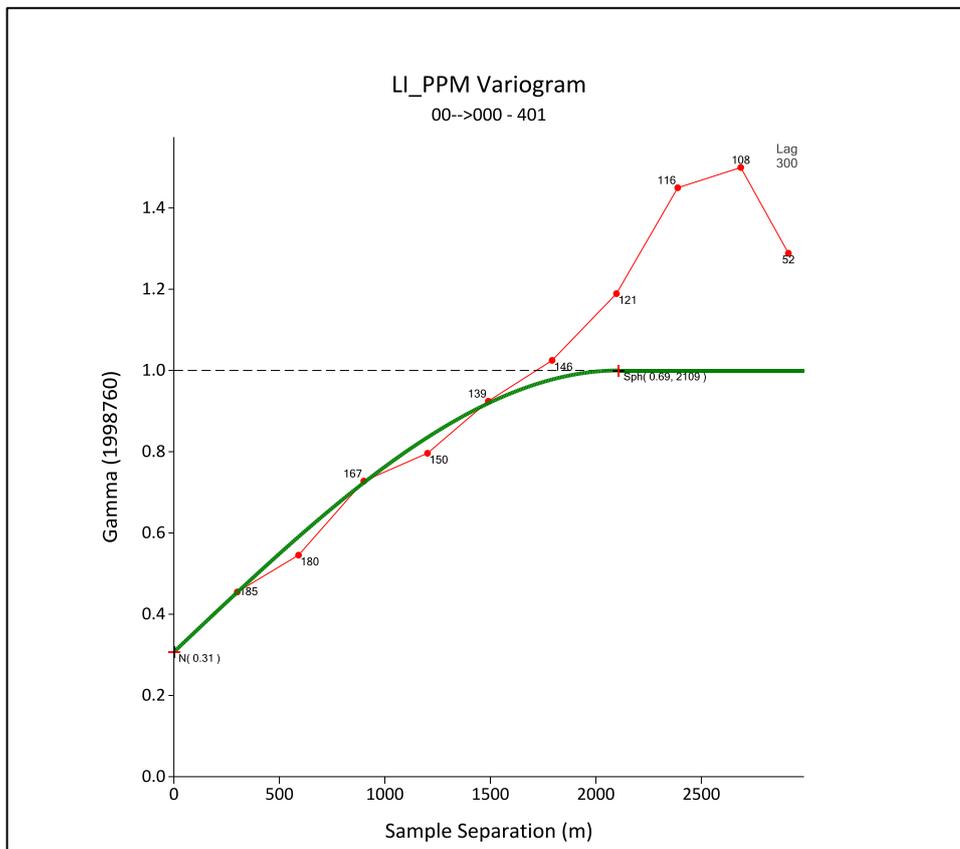
Variography was undertaken for Li and K in the zone 400 fault block for the 401, 403 and 404 domains where sufficient data to undertake a geostatistical study are present. Variography from the Lower Clay Unit was then applied to all other Lower Clay domains; similarly, the variography derived from the Upper Clay Unit (lower grade subdivision) was applied to all other Upper Clay domains.

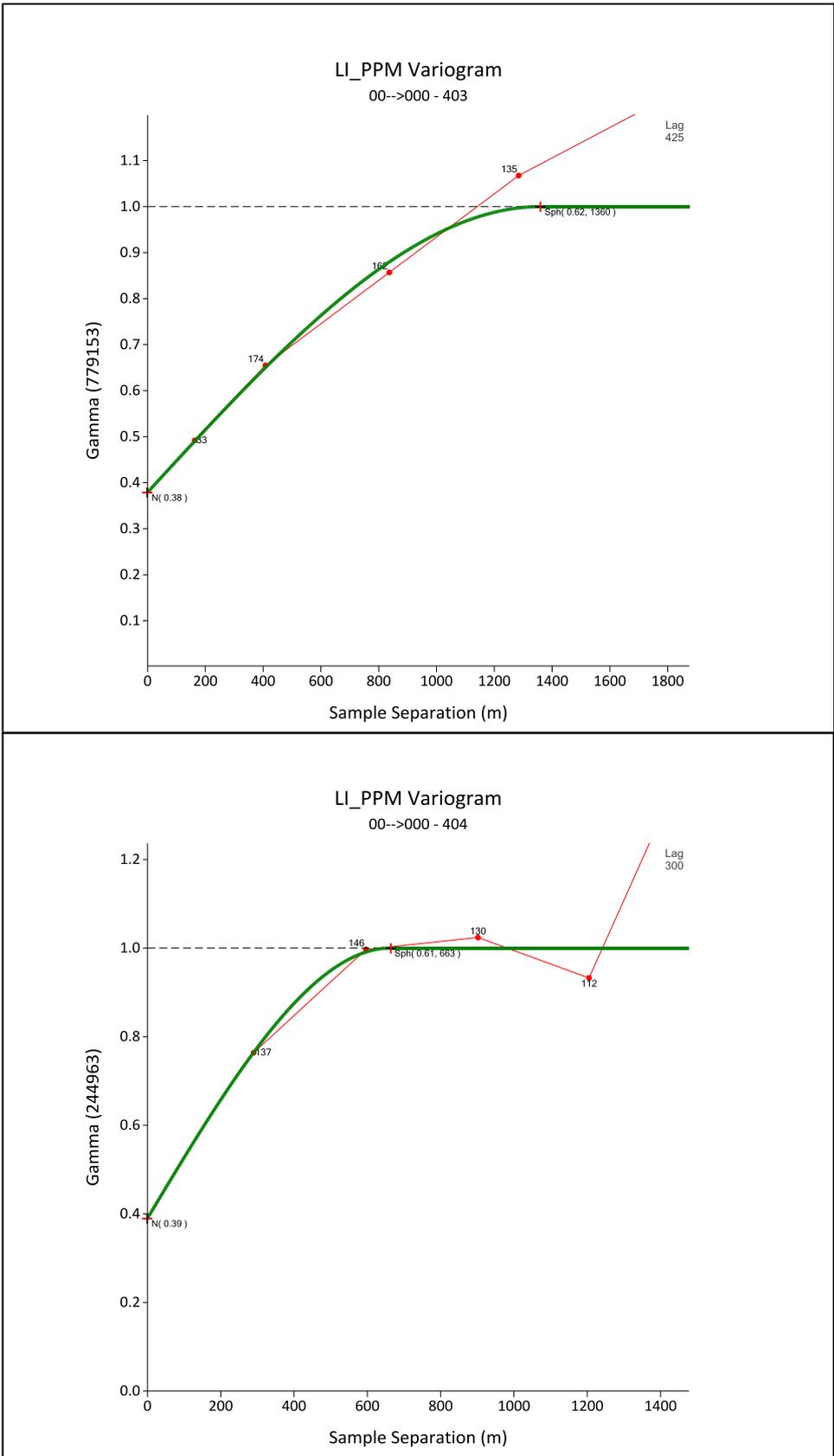
The drillhole database, flagged by modelled zones, was imported into Snowden Supervisor software for the geostatistical analysis.

For the each of the clay zones in the most densely drilled block 4, SRK undertook 2-D variography using the composited drillhole database. Experimental semi-variograms were produced for using a sensible lag to define the nugget effect, sill (variance) structures and ranges. Omni-directional semi-variograms were produced, which provided the most robust variogram structures.

Figure 14-12 shows the modelled variograms produced for the three clay units in Block 4 for Li. Variograms produced for K showed similar ranges and structures to Li.

All variograms show linear structures and likely drift, but allow reasonable spherical variogram models to be fitted and used for Kriging. The nugget and ranges are easily generated, providing an appropriate level of confidence in terms of both the short scale and longer range grade continuity.





**Figure 14-12: Lithium variography for Upper and Lower Clay Units (high and low grade sub domains) based on the composite point file**

## 14.10.2 Summary

Due to the volume of data available in fault block 4 relative to the other fault domains, the variogram models produced for fault block 4 were applied to all other fault blocks to generate suitably reliable interpolation parameters. The results of the variography were used in the interpolation to assign the appropriate weighting to the sample points utilised to calculate the block model grades.

The total ranges modelled are also incorporated to help define the optimum search parameters and the search ellipse radii dimensions used in the interpolation. Ideally, sample pairs that fall within the range of the variogram (where a strong covariance exists between the sample pairs) should be utilised if the data allows.

Table 14-4 shows the rounded total ranges of the Li variograms for the differing domains. As shown, the modelled ranges are greatly in excess of the drill spacing. The variograms for K showed similar ranges and sills to Li.

**Table 14-4: Summary of lithium 2-D semi-variogram parameters (normalised)**

KZONE	Rotation (X)	Rotation (Y)	Rotation (Z)	Nugget	Range Strike	Range Dip	Sill
401 (applied to 101, 201 and 501)	0	0	0	0.31	2100	2100	1
403	0	0	0	0.38	1360	1360	1
404 (applied to 103, 203 and 503)	0	0	0	0.39	663	663	1

## 14.11 Block Model and Grade Estimation

### 14.11.1 Block Model Set-Up

The geological wireframes were used to create a rotated 2-D block model with origins and dimensions described in Table 14-5. The 2-D block model was used for grade interpolation. A rotated 3-D block model with origins and dimensions described in Table 14-6 was also created. The 2-D interpolated block model was then converted into the 3-D block model. Both the 2-D and 3-D block models were rotated  $-45^\circ$ . Unique codes were developed for use in coding the block model and during estimation, as summarised in Table 14-7.

**Table 14-5: 2-D Block model origins and dimensions**

Dimension	Origin	Block Size	Number of Blocks
X	673,970	50	200
Y	3,287,560	50	105
Z	0	1700	1

**Table 14-6: 3-D Block model origins and dimensions**

Dimension	Origin	Block Size	Number of Blocks
X	673,970	50	200
Y	3,287,560	50	105
Z	400	10	105

**Table 14-7: Summary of fields used during estimation**

Field Name	Code	Description
KZONE	101	Lower Clay Zone Fault block 1
	103	Upper Clay Zone Fault block 1
	201	Lower Clay Zone Fault block 2
	203	Upper Clay Zone Fault block 2
	401	Lower Clay Zone Fault block 4
	403	Upper Clay Zone (high grade) Fault block 4
	404	Upper Clay Zone (low grade) Fault block 4
	501	Lower Clay Zone Fault block 5
	502	Upper Clay Zone Fault block 5
Grade	LI_PPM	Ordinary Kriged Lithium Grade
	K_PCT	Ordinary Kriged Potassium Grade
	MG_PCT	Inverse distance cubed Magnesium Grade
	CA_PCT	Inverse distance cubed Calcium Grade
Search Parameters	LI_SV	Search Volume
	LI_KV	Variance
	LI_NS	Number of Samples
Licence	La Ventana	La Ventana license
	La Ventana 1	La Ventana 1 license
	El Sauz	El Sauz license
	Fleur	Fleur license
	El Sauz 1	El Sauz 1 license
	El Sauz 2	El Sauz 2 license
	Fleur 2	Fleur 2 license
Class	2	Indicated
	3	Inferred
	4	Measured

### 14.11.2 Grade Interpolation

Ordinary kriging (“OK”) was used for grade interpolation into the 2-D block model for Li and K grades and inverse-distance weighted interpolation for Ca and Mg grades. All grades were interpolated into the 2-D block model honouring the geological contacts defined by the geological modelling process, and using the domains (KZONES) previously assigned. The same search parameters were used for all KZONES; these are summarised in Table 14-8. The second and third searches were expanded by a multiplier factor of 2 and 15 respectively; the latter ensured all blocks in the model were estimated. Following the interpolation of the 2-D block model, SRK converted the 2-D grade interpolation into the 3-D block model.

**Table 14-8: Search Parameters for interpolation**

KZONE	Search Dist (X, Y and Z)	Min Samp 1	Max Samp 1	Search Volume Factor 2	Min Samp 2	Max Samp 2	Search Volume Factor 3	Min Samp 3	Max Samp 3
101	500	4	6	2	4	6	15	2	8
201	500	4	6	2	4	6	15	2	8
401	500	4	6	2	4	6	15	2	8
501	500	4	6	2	4	6	15	2	8
103	500	4	6	2	4	6	15	2	8
203	500	4	6	2	4	6	15	2	8
403	500	4	6	2	4	6	15	2	8
404	500	4	6	2	4	6	15	2	8
503	500	4	6	2	4	6	15	2	8

## 14.12 Block Model Validation

### 14.12.1 Introduction

SRK has undertaken a number of validation checks to confirm that the modelled estimates of Li and K grades represent the input sample data on both local and global scales and to check that the estimate is not biased. Methods of validation used include:

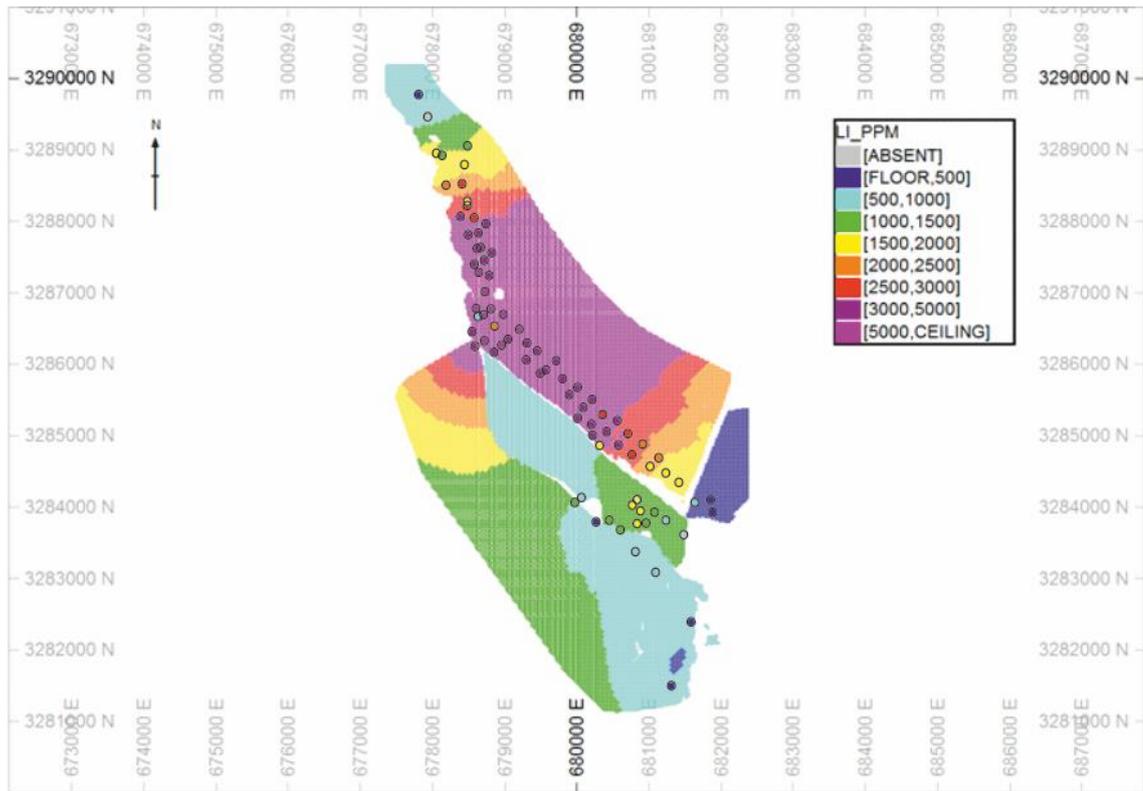
- visual inspection of block grades in comparison with drillhole data (in plan and cross section);
- estimating Li (ppm) grades using an inverse-distance weighted algorithm (“IDW”);
- swath/validation plots; and
- comparison of block model statistics.

Validation was undertaken on the 2-D block model prior to it being converted into a 3-D block model.

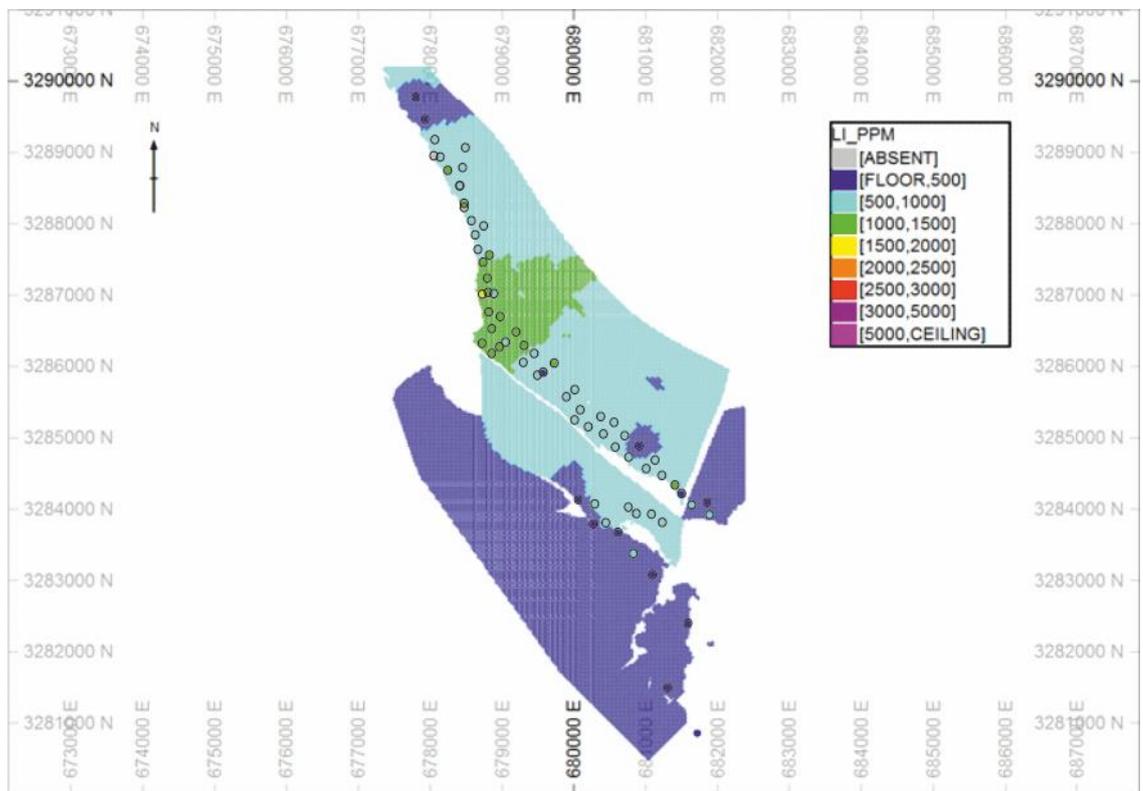
Based on the visual and statistical validation, SRK has accepted the grades in the 2-D and 3-D block models. The resultant block grade distribution is considered appropriate for the mineralisation style. In areas of limited sampling, the block grade estimates have been produced using expanded search ellipses. Localised comparisons of block grades to block estimates will be less accurate in these areas.

### 14.12.2 Visual Validation

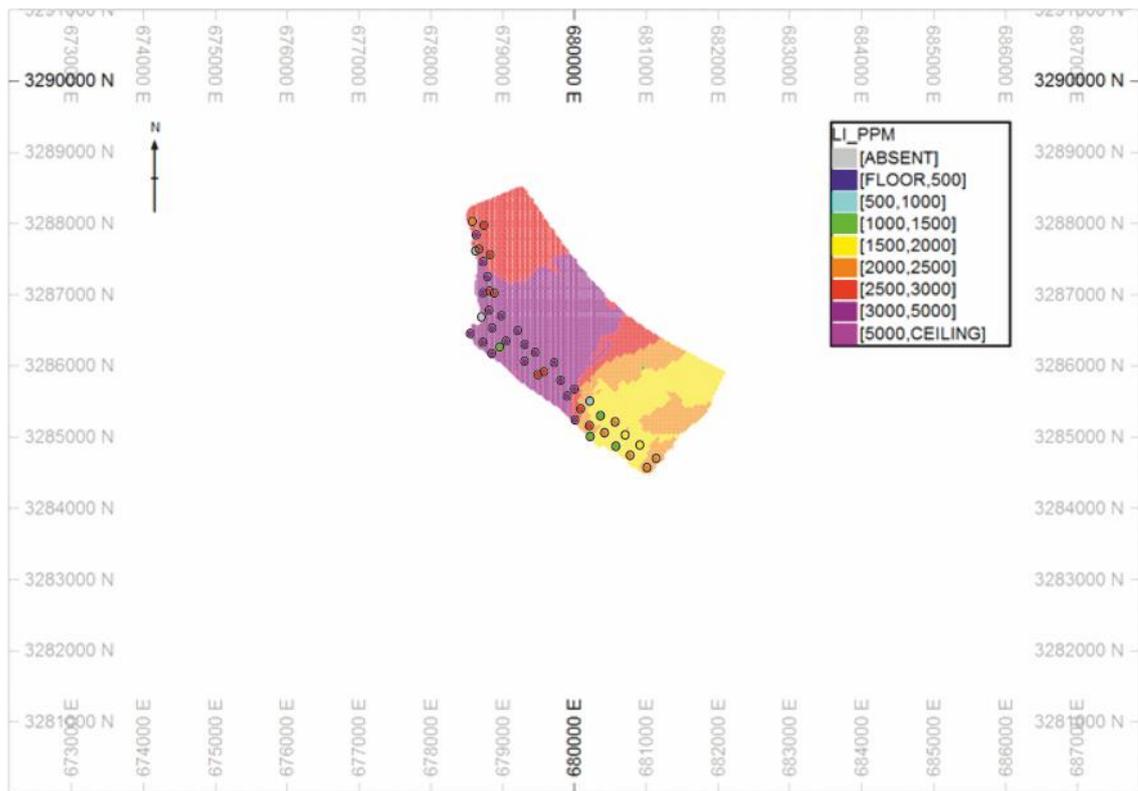
Visual validation provides a comparison of the interpolated block model on a local scale. A thorough visual inspection of cross-sections, and bench plans, comparing the sample grades with the block grades has been undertaken. This demonstrates a good comparison between local block estimates and nearby samples without excessive smoothing in the block model. Figure 14-13, Figure 14-14 and Figure 14-15 show the visual validation checks for Li for the Lower Clay, Upper Clay (including the Low grade Upper Clay zone) and the high grade Upper Clay zones. Validation of K grades produced similar results showing a good comparison between the sample and block grades.



**Figure 14-13: Li block model validated against composited drillhole data Lower Clay (KZONES 101, 201, 401 and 501)**



**Figure 14-14: Li block model validated against composited drillhole data Upper Clay (including low grade Upper Clay zone) (KZONES 103, 203, 404, 503)**



**Figure 14-15: Li block model validated against composited drillhole data Upper Clay high grade zone (KZONE 403)**

### 14.12.3 Swath Plots

Visual validation of composite samples grades against the interpolated 2-D block grades was undertaken to assess the performance of the estimation in the main fault block where sufficient data exists to conduct a useful assessment of estimation quality. The resultant swath plots for Li are presented in Figure 14-17 to Figure 14-20. Swath plots have been created using data from the rotated block model. This has been required due to the linear nature of the drilling where holes have been drilled along or near to the line of outcrop. By using the rotated model it is possible to allow the swath plot to look along the axis of the drilling. For this reason, only the swath plots for the X axis have been presented in this report. An image showing the rotated block model and X axis swath direction is shown in Figure 14-16.

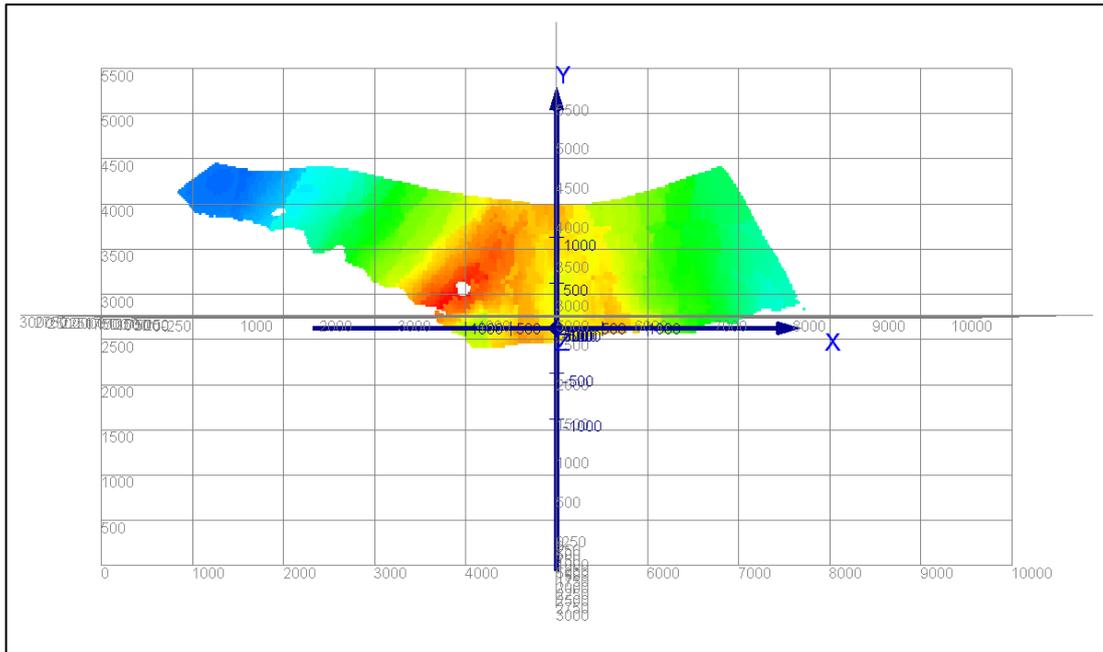


Figure 14-16: Swath plot orientations using rotated block model

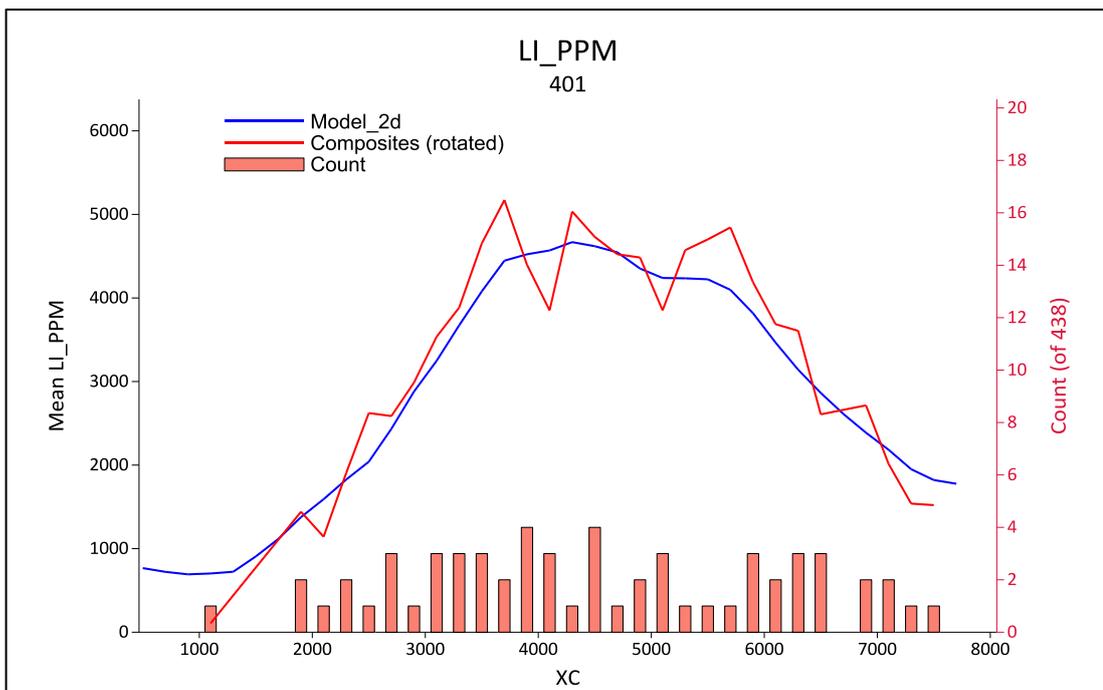


Figure 14-17: X swath plot for zone 401

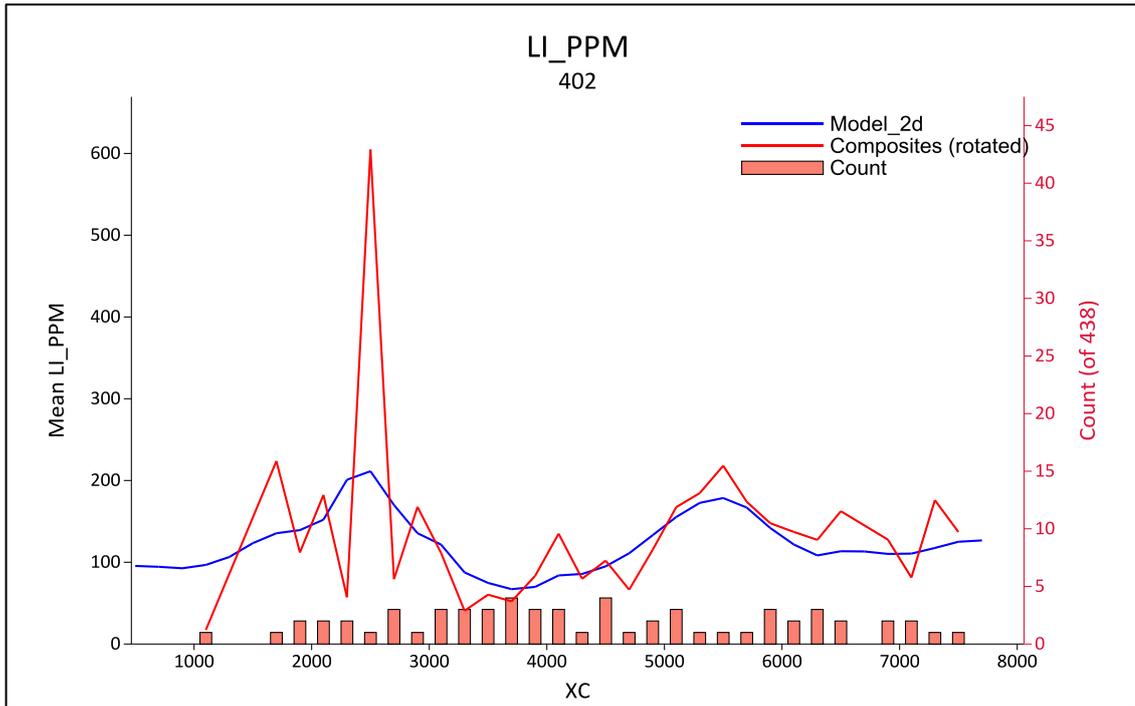


Figure 14-18: X swath plot for zone 402

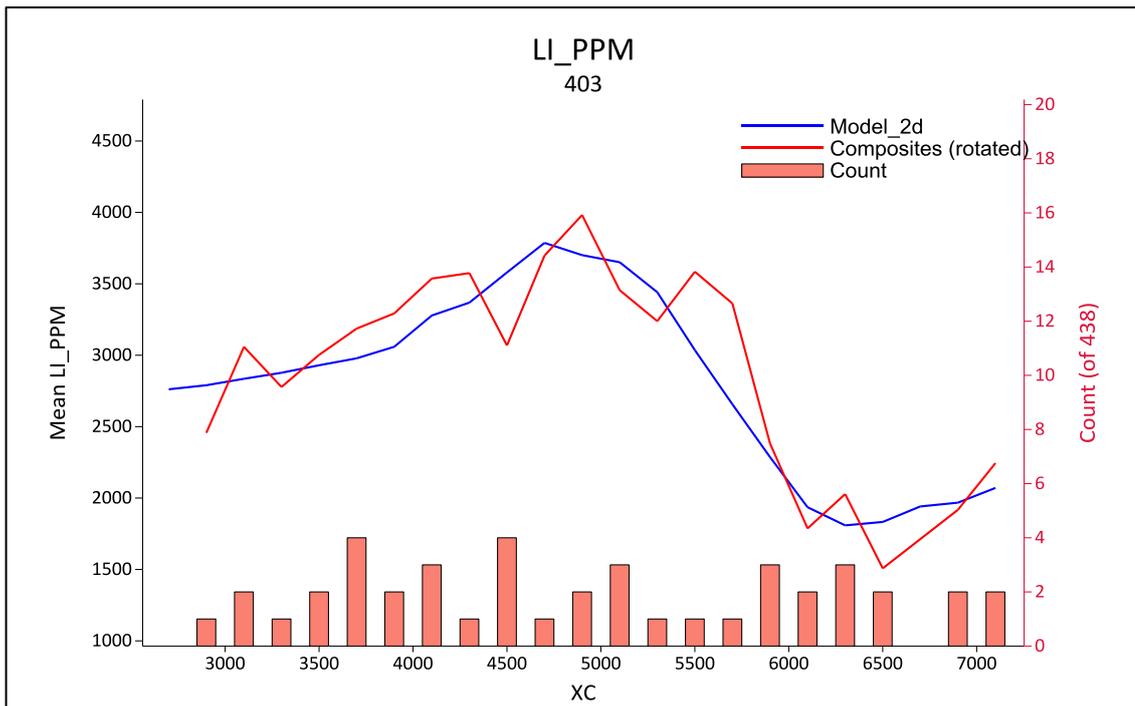


Figure 14-19: X swath plot for zone 403

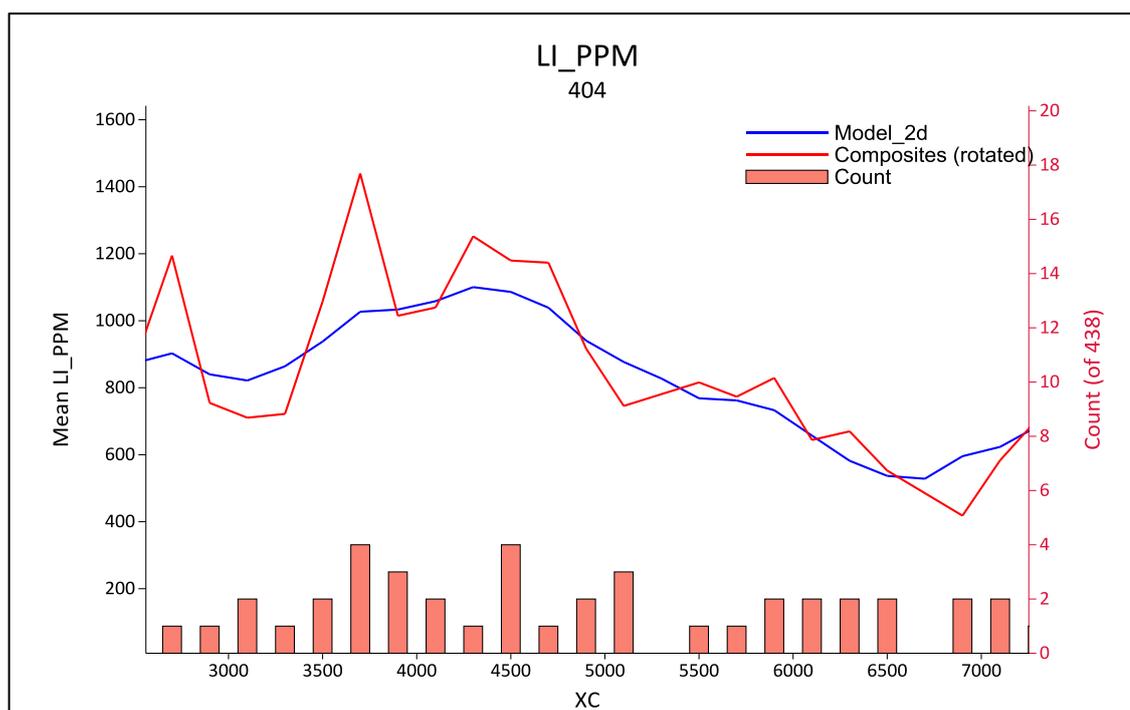


Figure 14-20: X swath plot for zone 404

#### 14.12.4 Statistical Validation

Classical statistics were calculated for the estimated 2-D and 3-D block grades and compared with the composited drillhole statistics used in the estimation process. The absolute difference in the composite and block model means was considered immaterial for all mineralised domains. The comparison between the composites and OK and IDW<sup>3</sup> interpolated 3-D block model statistics is shown in Table 14-9 for Li and Table 14-10 for K.

A further comparison showing the difference between the Ordinary Kriged and IDW interpolations is provided in Table 14-11. The difference in mean block grade between the OK and IDW interpolations is typically <10% and shows that the deposit is not significantly sensitive to estimation technique and that OK has not introduced a bias compared to the input composite sample data.

Table 14-9: Comparison statistics for Li composites versus 3-D block model grades

KZONE	Mean Li (ppm) composite grade	Mean Li (ppm) Block model grade (OK)	Mean Absolute Difference (%)	Mean Li (ppm) Block model grade (IDW)	Mean Absolute Difference (%)
101	1070	1132	6	1037	3
103	369	363	2	407	10
201	1224	1128	8	1174	4
203	621	622	0	598	4
401	3521	3380	4	3384	4
403	2872	2834	1	2830	1
404	861	826	4	806	6
501	319	305	5	276	13
503	411	413	1	365	11

**Table 14-10: Comparison statistics for K composites versus 3-D block model grade**

KZONE	Mean K (%) composite grade	Mean K (%) Block model grade (OK)	Mean Absolute Difference (%)
101	0.58	0.60	3%
103	0.34	0.34	-1%
201	0.65	0.65	1%
203	0.46	0.46	2%
401	1.53	1.46	-5%
403	1.04	1.01	-2%
404	0.47	0.43	-9%
501	0.28	0.28	-2%
503	0.36	0.37	1%

**Table 14-11: Comparison statistics for OK and IDW interpolations of Li grade**

KZONE	Mean Li (ppm) Block model grade (OK)	Mean Li (ppm) Block model grade (IDW)	Mean Absolute Difference (%)
101	1132	1037	9
103	363	407	11
201	1128	1174	4
203	622	598	4
401	3380	3384	0
403	2834	2830	0
404	826	806	2
501	305	276	10
503	413	365	13

## 14.13 Mineral Resource Classification

### 14.13.1 Introduction

Block model tonnage and grade estimates for the Project have been classified according to the terminology and definitions given in the CIM Definition Standards for Mineral Resources and Mineral Reserves (May 2014) by Martin Pittuck, CEng, MIMMM, who is a Qualified Person as defined by the Canadian National Instrument 43-101 and the companion policy 43-101CP.

Mineral Resource classification is a subjective concept, which considers the geological confidence in the geological continuity of the mineralised structures, the quality and quantity of exploration data supporting the estimates and the geostatistical confidence in the grade estimates.

SRK is satisfied that the geological modelling honours the current geological information and knowledge and extrapolates this reasonably. The location of the samples and the assay data are sufficiently reliable to support resource evaluation. The sampling information was acquired by diamond core drilling on sections spaced at approximately 200 m, and associated drill core samples on 1.5 m intervals. In many places, the drilling combined with satellite imagery and mapped outcrop gives high confidence in the geometry of the geological features controlling grade and the grade trends themselves.

SRK has also considered sampling quality, representivity and accuracy of historical and recent assaying and density determinations. The QA/QC results suggest an acceptable level of quality for the assays; in particular, the results from the quarter core submissions to an umpire laboratory support the accuracy of the assays at the primary laboratory based on numerous batches representing the major drill phases undertaken. The standards used to date have demonstrated reasonable consistency at the primary laboratory although the grade levels were too low or too high to represent the majority of samples in the model.

SRK considers that the number of density determinations and the method used gives an accurate estimate of dry in situ bulk density.

Overall, it is SRK's view that the recent data is of a sufficient quality for the quoting of Indicated and Inferred category of Mineral Resources. The areas excluded from resource are characterised by one or more of poor or no sample coverage and being too thin, deeply buried or low grade to be realistically mined by open pit.

#### **14.13.2 Geological and Grade Continuity**

The deposit has been modelled consistently throughout the Project area as a single stratigraphic package containing two units of lithium enriched clays separated by an ignimbrite unit. Within the eastern portion of the deposit in block 4, the Upper Clay Unit is observed to have a stratification of Li grade, with high grades at the base and lower grades in the upper portion. This grade distribution has been accounted for during the wireframing and estimation process. The clay units have also been offset in places by faults, dividing the deposit into five fault blocks, with majority of the modelled deposit falling in a strike extensive fault block tending northwest-southeast. The remaining fault blocks are less extensive on strike and are based on limited drilling at present, thus reducing the confidence in the modelling in these areas.

SRK considers there may be greater geological complexity than has been currently been interpreted particularly in less well drilled or/ mapped areas, specifically:

- there may be more faults than currently modelled;
- there is lower confidence in the geometry of faults in the southern area;
- thickness is thinner and more variable towards the north and south extents; and
- the dip and orientation of the deposit in the western fault blocks is less well defined.

Grades have been composited across the thickness of each clay unit which has resulted in very good grade continuity in the data used for the block model estimate.

Overall, it appears that the clay zones identified at the project are of a reasonably low geological complexity and the hanging wall and footwall contacts are easily defined. Localised complexities in the geology however arise in the narrow internal banding, as such, and, based on the current level of data supporting the geological model, the associated risk relating to the internal continuity of layers is considered to be low.

SRK is aware that the lithium deportment in the clay units is such that an initial screening beneficiation process is likely to be used to produce an upgraded product by removing relatively coarse boulders and cobbles of chert and calcite. These lumps and nodules have very low lithium grades other than the clay coating they may carry. The proportion of such coarse barren material in the clay units has not been studied in the drillhole data and it is an important variable that may be less continuous than the composited grades modelled to date.

### **14.13.3 Data Quality**

SRK considers the QA/QC protocols that have been put in place to monitor sample preparation quality and laboratory accuracy and precision to be sufficient to support Indicated and Inferred Mineral Resources.

There is a systematic process of sample preparation at the facilities on site. Regular submission of standards into the sample stream has tracked the performance of the primary laboratory over time albeit using grades which do not fully represent the clay units. Samples sent to an umpire laboratory have confirmed the accuracy of primary laboratory assays but this has not happened consistently through the duration of the programme to date.

SRK recommends these QA/QC protocols are brought in line with industry best practice by regularly submitting standards with representative grades in the range of 200 ppm to 2,000 ppm and regular submission of certified blank material to the sample preparation and assay process.

Validation checks of standards are broadly within acceptable reporting limits and duplicate field samples show a strong correlation to the original sample. Minor periodic drift has been recorded within the reference standard and SRK would recommend this is reported to the certified laboratory and monitored closely.

With respect to the density determinations, SRK considers that the current procedure provides a reasonably robust measure of the dry density. SRK notes, however, that the density measurements tends to be limited to competent material and that samples representing softer material types should be specifically studied. Further, the potential for clay samples to shrink when they dry should be specifically studied.

SRK recommends that these potential sources of error should be addressed to assess possible overestimation in the method used to date.

### **14.13.4 Results of the Geostatistical Analysis**

The data used in the geostatistical analysis resulted in suitably reliable variograms for all zones in Block 4 that allowed the nugget effects, sills and ranges to be determined. The variography allowed the determination of reasonable search distances to be used through the estimation process.

### **14.13.5 Quality of the Estimation**

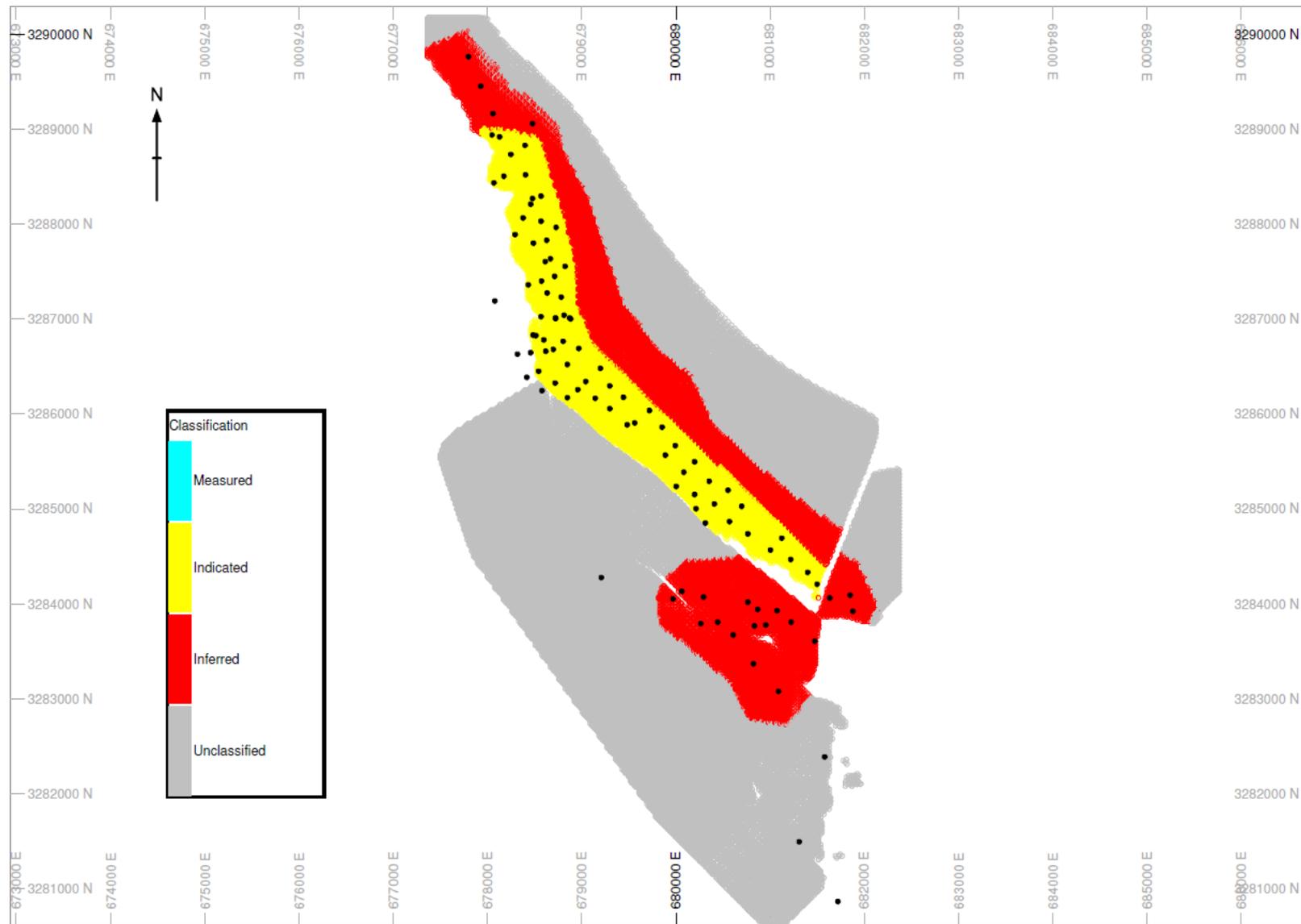
The validation tools utilised for the Project show that the input data used to estimate the model is replicated in the estimation. The block model grades are smoothed around the input composites and the mean grades of the block model and composites are comparable for all modelled zones.

#### 14.13.6 SRK Classification Approach

The Mineral Resources have been classified as Indicated and Inferred in the Upper and Lower clay units. The Indicated Mineral Resources have been limited to one broad area which was estimated in run one of the grade estimation routine and where on cross section, there are at least three points of geological evidence from mapping and drilling. The approximate drillhole spacing in areas classified as Indicated Mineral Resources is 200 m.

Inferred Mineral Resources have been limited to areas where there is a wider spacing of drilling and outcrop; these areas extend some 200 m beyond the deepest drillhole intersection.

SRK has not yet defined Measured Mineral Resources because there are no large areas where drilling or outcrop are sufficiently close spaced to demonstrate the 3-D geometry of faults and clay units at a short term mine planning scale. Further, it would be appropriate to implement SRK's recommendations to ensure regular QA/QC submissions using standards with representative grades and to improve confidence in the accuracy of density values determined to date. There are large areas of SRK's 3-D geological model that have been extrapolated beyond the Mineral Resource that remain unclassified, the intention being to facilitate drillhole planning should that be desirable in the future. Figure 14-21 shows the full classified model in terms of Indicated, Inferred and unclassified material.



**Figure 14-21: Plan view showing classification of the Sonora Lithium Project**

## 14.14 Mineral Resource Cut-Off Grade and Practical Limits

A Mineral Resource, according to the CIM Guidelines, should show 'reasonable prospects for economic extraction' which generally implies that the tonnage and grade estimates meet certain economic thresholds by reporting using an appropriate cut-off grade and to a practical depth below surface taking into account extraction scenarios and processing recoveries. In order to meet this requirement, SRK considers that portions of the Project are amenable for open pit extraction.

### 14.14.1 Lithium Price

The basis of the lithium price used for this Mineral Resource estimate is outlined in Section 19.2. SRK believes it is reasonable to expect prices, technology and costs in the future to be different from what they are today, more so in the long term than in the short term. The Mineral Resource is a long term / strategic assessment of a mineral asset and we believe a different approach to deriving cut-off grade for Mineral Resources (compared with that used for Ore Reserves) is justified given that conditions may become more favourable in the long term at which point it may make sense to develop the asset further.

There is additional merit in this case given the price increases forecast by SignumBox in the medium to long term and the potential to add a credit from Sulphate of Potassium.

In order to effect a lower cut-off grade for the Mineral Resource, SRK has used a battery grade lithium carbonate price of USD 8000 / t lithium carbonate (compared with USD 6000 / t which is being considered in the Pre-Feasibility study work). SRK's cut-off grade, when combined with cost and recovery information being considered in the Pre-Feasibility study work is 1000 ppm Li.

### 14.14.2 SRK Mineral Resource Pit Optimisation and Cut-off Grade Analysis

In addition to the Lithium price assumptions described above, SRK used a pit optimiser and mining and processing costs and efficiencies provided by Bacanora's PFS team to evaluate the Indicated and Inferred parts of the model that could be "reasonably expected" to be mined from an open pit (Figure 14-22). Revenue from potassium was not specifically taken into account but this opportunity is one of the long term assessment factors on which SRK's cut-off grade has been based.

As a result of the updated costs and efficiencies provided by the PFS team, along with the recently provided SignumBox report; the cut of grade is now higher (1,000 ppm Li) than that used in the May 2015 MRE.

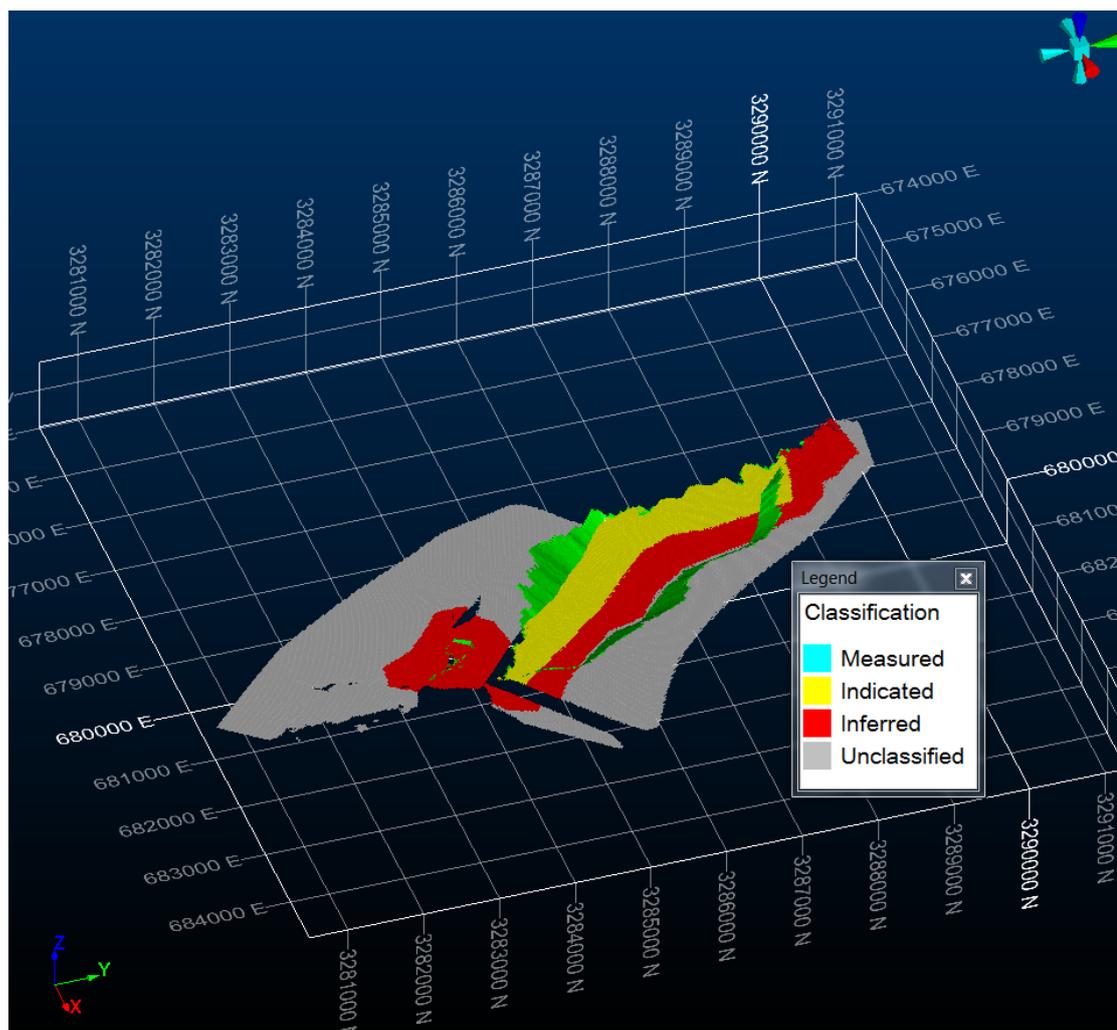
The reader is cautioned that the results from the pit optimisation are used solely for the purpose of testing the "reasonable prospects for economic extraction" by an open pit and do not represent Mineral Reserves.

The optimisation parameters are given in Table 14-12. The resultant pit shell used to limit the resource is shown in green in Figure 14-22.

**Table 14-12: Pit Optimisation and Cut-off Grade Parameters**

Parameters	Units	Value
<b>Pit Slope</b>		
Footwall	(Deg)	42
Hangingwall	(Deg)	42
<b>Mining Factors</b>		
Dilution	(%)	10.0
Recovery	(%)	100.0
<b>Processing</b>		
Recovery Li	(%)	70
<b>Operating Costs</b>		
Mining Cost	(USD/t <sub>rock</sub> )	1.76
Processing, G&A and rehandling	(USD/t <sub>milled</sub> )	29.14
Selling Cost (Royalty)	(%)	3
<b>Metal Price*</b>		
Lithium Carbonate	(USD/t (Li <sub>2</sub> CO <sub>3</sub> ))	8,000
<b>Cut-Off Grade</b>		
MCOG (in situ)	(ppm Li) rounded	1,000

\* Every 1 unit of lithium metal is equivalent to 5.32 units of Li<sub>2</sub>CO<sub>3</sub> (lithium carbonate)



**Figure 14-22: Oblique view showing classified material within the resource pit shell**

## 14.15 Mineral Resource Statement

The Mineral Resource is based on exploration results from mapping drilling and trenching made available to SRK on the 19 October 2015 and technical economic inputs received from the Bacanora team during April 2016.

Every 1 unit of lithium metal is equivalent to 5.32 units of  $\text{Li}_2\text{CO}_3$  (lithium carbonate) in the Mineral Resource statement the lithium metal content is also given as a Lithium Carbonate Equivalent (“LCE”).

The Mineral Resource is the total for the Project; in respect of the total metal in the Indicated and Inferred Mineral Resources some 81% and 86% respectively is attributable to Bacanora.

The Mineral Resource statement represents the material which SRK considers has reasonable prospects for eventual economic extraction taking into account cut-off grade and stripping ratio by means of a pit optimisation. Table 14-13 shows the resulting Mineral Resource Statement for the Sonora project. The statement has been classified in accordance with the terminology, definitions and guidelines given in the Canadian Institute of Mining, Metallurgy and Petroleum Definition Standards for Mineral Resources and Mineral Reserves (May, 2014) and has been reported in accordance with NI 43-101, by the Qualified Person, Mr Martin Pittuck (MSc., CEng., MIMMM). Mr Pittuck is a consultant who is independent of Bacanora.

A cut-off grade of 1,000 ppm for lithium has been applied for reporting the Sonora Mineral Resource.

SRK is not aware of any additional factors (environmental, legal, title, taxation, socio-economic, marketing, political, or other relevant factors) that have materially affected the Mineral Resource estimate.

The tonnage and grade of Inferred Mineral Resources are uncertain and there has been insufficient exploration to define these Inferred Mineral Resources as an Indicated or Measured Mineral Resource. It is reasonable to expect that the majority of Inferred Resources could be upgraded to Indicated with continued exploration.

**Table 14-13: SRK Mineral Resource Statement as of 12 April 2016**

Classification	Concession	Owner	Geological Unit	Clay Tonnes (Mt)	Clay Grade		Contained Metal		
					Li ppm	K %	Kt Li	Kt LCE	Kt K
Indicated	La Ventana	Minera Sonora Borax (99.9% Bacanora)	Lower Clay	64	3,700	1.7	235	1,252	1,055
			Upper Clay	32	2,100	0.9	68	363	280
	El Sauz	Mexilit (JV-1) (70% Bacanora)	Lower Clay	58	3,000	1.3	174	928	735
			Upper Clay	14	2,100	0.8	28	151	110
	Fleur	Mexilit (JV-1) (70% Bacanora)	Lower Clay	60	4,300	1.8	256	1,363	1,070
			Upper Clay	27	2,200	0.9	59	316	235
	El Sauz1	Mexilit (JV-1) (70% Bacanora)	Lower Clay	4	4,000	1.7	15	80	65
			Upper Clay	1	2,200	0.8	2	10	5
<b>Indicated Total</b>			<b>Combined</b>	<b>259</b>	<b>3,200</b>	<b>1.4</b>	<b>839</b>	<b>4,463</b>	<b>3,555</b>
Inferred	La Ventana	Minera Sonora Borax (99.9% Bacanora)	Lower Clay	45	4,300	1.8	194	1,029	820
			Upper Clay	45	2,000	0.8	90	479	360
	El Sauz	Mexilit (JV-1) (70% Bacanora)	Lower Clay	20	2,500	1.0	50	266	210
			Upper Clay	5	1,900	0.8	10	51	40
	Fleur	Mexilit (JV-1) (70% Bacanora)	Lower Clay	20	4,300	1.8	86	458	360
			Upper Clay	5	2,800	1.0	14	74	50
	El Sauz1	Mexilit (JV-1) (70% Bacanora)	Lower Clay	15	4,000	1.6	60	319	245
			Upper Clay	5	2,400	0.9	12	64	45
<b>Inferred Total</b>			<b>Combined</b>	<b>160</b>	<b>3,200</b>	<b>1.3</b>	<b>515</b>	<b>2,740</b>	<b>2,130</b>

**Notes:**

- Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimate and have been used to derive sub-totals, totals and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, SRK does not consider them to be material.
- The reporting standard adopted for the reporting of the MRE uses the terminology, definitions and guidelines given in the CIM Standards on Mineral Resources and Mineral Reserves (May 2014) as required by NI 43-101.
- The MRE is reported on 100 percent basis for all project areas.
- SRK assumes the Sonora Lithium deposit to be amenable to surface mining methods. Using results from initial metallurgical test work, suitable surface mining and processing costs, and forecast LCE price SRK has reported the Mineral Resource at a cut-off 1,000 ppm Li (5,320 ppm Li<sub>2</sub>CO<sub>3</sub>).
- SRK completed a site inspection of the deposit by Mr. Martin Pittuck, MSc, CEng, MIMMM, an appropriate "independent qualified person" as such term is defined in NI 43-101.
- LCE is the industry standard terminology for, and is equivalent to, Li<sub>2</sub>CO<sub>3</sub>. 1 ppm Li metal is equivalent to 5.32 ppm LCE / Li<sub>2</sub>CO<sub>3</sub>. Use of LCE is to provide data comparable with industry reports and assumes complete conversion of lithium in clays with no recovery or process losses.

## 14.16 Comparison with Previous Estimate

The previous MRE undertaken by SRK in May 2015 is detailed in Section 6.3.2.

The infill drilling has increased the proportion and the quantum of the resource classified as Indicated. The total Mineral Resource statement contains overall 20% less contained metal with 40% fewer tonnes at a 40% higher grade, which reflects the higher cut-off grade now applied and the shallower resource pit constraint following updated costs and price assumptions used in the pit optimisation and cut-off grade analysis.

## 14.17 Grade Sensitivity Analysis

SRK has completed a number of check block model estimates on the deposit using a variety of parameters and the resultant models produced similar estimates.

The Mineral Resources stated in this report is sensitive to the selection of the reporting cut-off grade. To illustrate this sensitivity, the block model quantities and grade estimates within the conceptual pit used to constrain the Mineral Resources are presented in Figure 14-23 and Figure 14-24.

These figures are only presented to show the sensitivity of the block model estimates to the selection of cut-off grade.

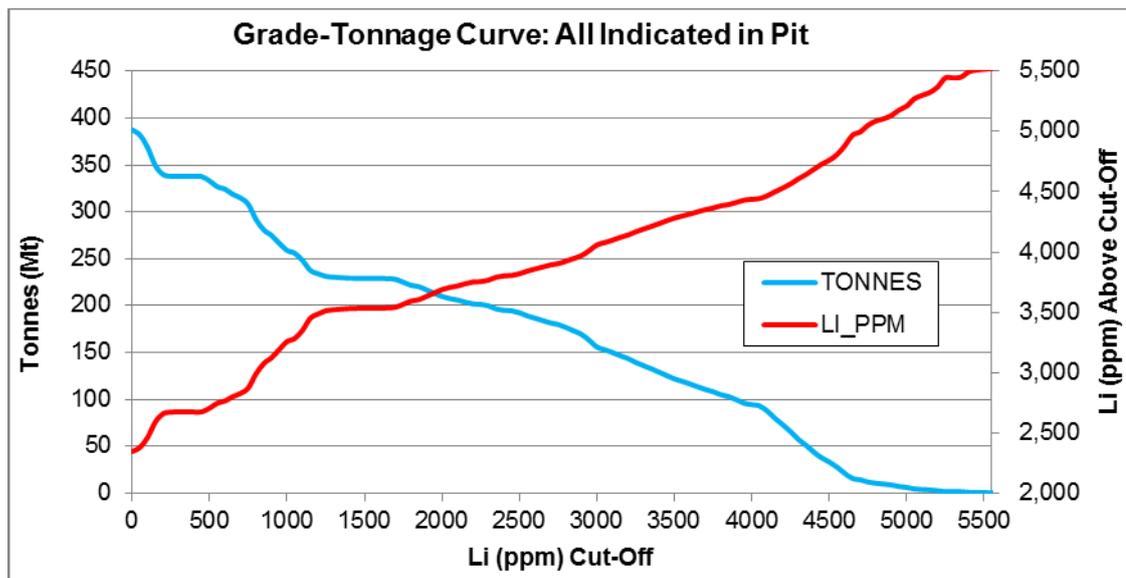


Figure 14-23: Grade-Tonnage Curve for Li (Indicated material)

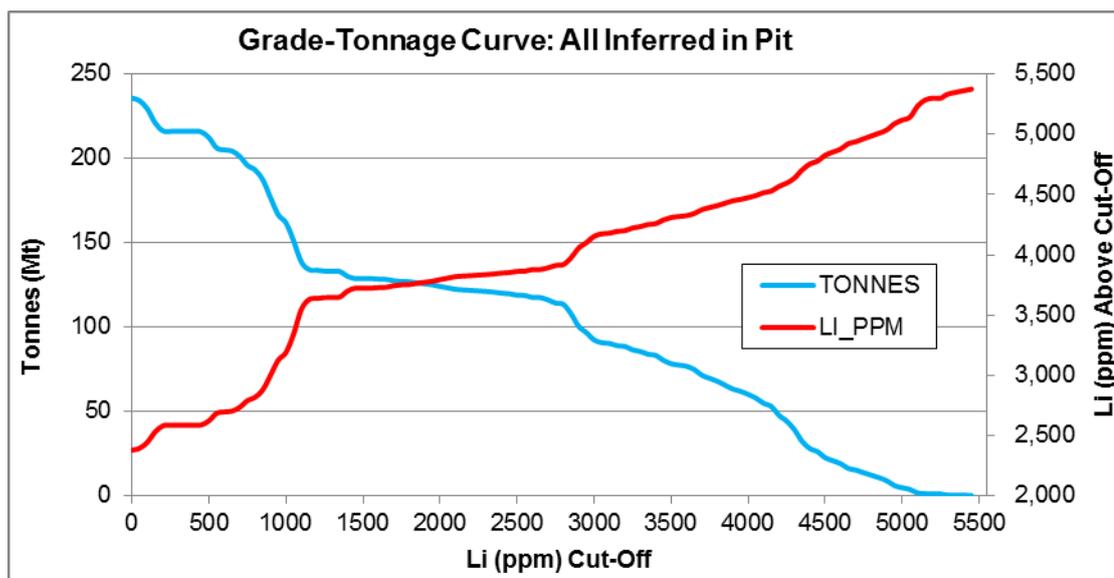


Figure 14-24: Grade-Tonnage Curve for Li (Inferred material)

## 15 MINERAL RESERVE ESTIMATES

No Mineral Reserve estimate has been declared for the Project at this time. The Mineral Reserves are being prepared by a third party consultancy and will be discussed as part of the Pre-Feasibility Study report in April 2016.

## 16 MINING METHODS

Information on mining methods is being prepared by a third party consultancy and will be discussed as part of the Pre-Feasibility Study report in April 2016.

## 17 RECOVERY METHODS

Information on recovery methods is being prepared by a third party consultancy and will be discussed as part of the Pre-Feasibility Study report in April 2016.

## 18 PROJECT INFRASTRUCTURE

Information on project infrastructure is being prepared by a third party consultancy and will be discussed as part of the Pre-Feasibility Study report in April 2016.

## 19 MARKET STUDIES AND CONTRACTS

### 19.1 Lithium Carbonate Market and Historic Prices

The following information has been provided by Bacanora and SignumBox, a Chilean based natural resources research and consulting company with a specific focus on the lithium industry.

Demand for lithium products is anticipated to grow from 160,000 t in 2015 to 300,000 t lithium carbonate by 2025, resulting primarily from the increased use of lithium products in the rechargeable battery sector, both in portable electronics and electric vehicles. Lithium carbonate is typically traded as a high purity compound, either 99% pure (technical grade) or >99.5% pure (battery grade).

There are currently three main lithium carbonate producers (SQM, Rockwood and FMC) supplying approximately 75% of the world's lithium carbonate production from potash/lithium brine operations in Chile and Argentina. In Australia, the Talison hard rock mine supplies approximately 75% of the world's spodumene,  $\text{LiAl}(\text{SiO}_3)_2$ , concentrates.

As seen over the past five years, there will continue to be limited production expansions from the existing Chilean and Argentinian producers. And currently there is only one new project entering the production stage, the new Orocobre brine resource in Argentina. Orocobre's project is scheduled to reach 10,000-15,000 t/y of capacity in late 2016.

As market demand is estimated to grow at 8 to 12% each year, there will be a requirement for some 15,000 to 20,000 t/y of new lithium carbonate production each year, over the next 5 years. With the expected project delivery times of 12 to 18 months for hard rock projects and 18 to 36 months for brine evaporation projects, the next project needs to be in construction by mid-2017 in order to start delivering initial production by end 2018 at the earliest.

At present there are eight main exploration and development projects that fit the above criteria based on information that is generally available in the public domain, including the Sonora Lithium Project. These projects have potential production capacities of 10,000-25,000 t/y.

## 19.2 Lithium Carbonate Price Forecast

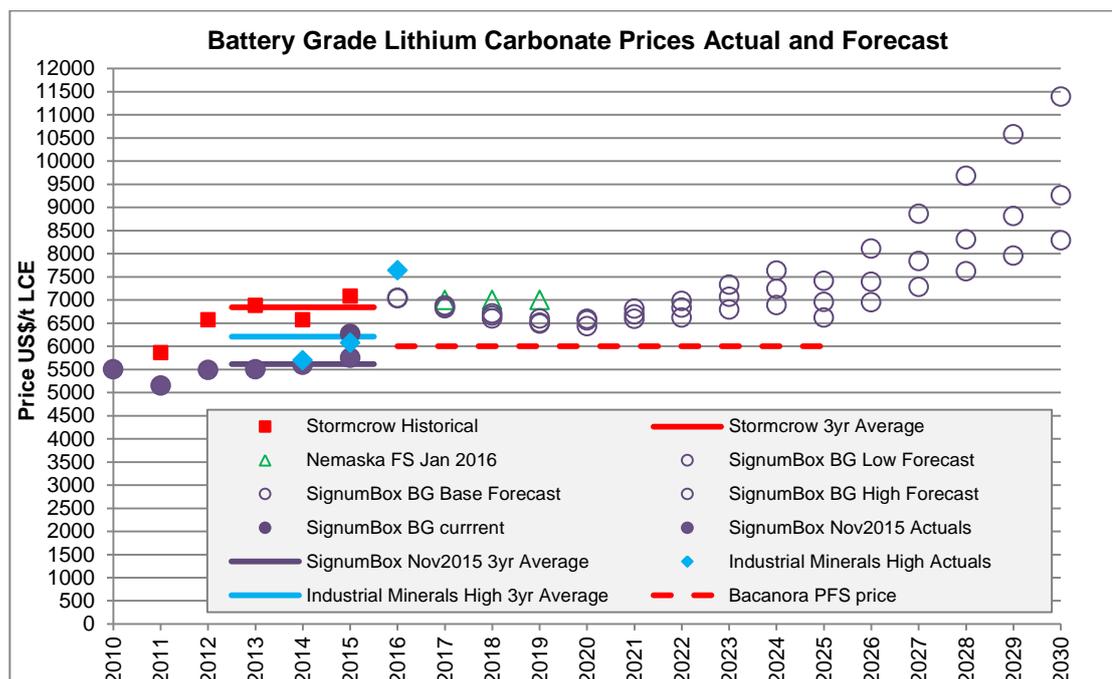
SRK has been informed by the Bacanora Pre-Feasibility study team that battery grade lithium carbonate can be produced by the batch testwork and development work in the Pre-Feasibility Study; therefore this is considered to be a reasonable basis on which to assess lithium revenue to the project.

A number of publically available sources report actual historical and current selling price; these have been reviewed and compiled by SRK for use in determining a long-term price for considering 'reasonable prospects for eventual economic extraction':

- Stormcrow Industry Report // Lithium: available to registered users, which provides a 5 year history of battery grade lithium carbonate prices;
- Industrial Minerals subscription service which records high and low prices for lithium carbonate (minimum 99.0 to 99.5% purity) on a weekly basis covering mid June 2014 to 2016. SRK interprets the high price to reflect battery grade price and the low price to reflect technical grade price;
- A recent press release by Nemaska Lithium Inc (OTCQX:NMKEF) dated 4 April 2016 provides some support for lithium battery grade pricing in the industry generally, they use a price of USD 7000 / t battery grade lithium carbonate for their Whabouchi feasibility study; and
- SignumBox real term price forecasts of battery grade lithium carbonate and historical prices of lithium carbonate from their November 2015 report.

According to these sources, historical prices have typically been in the range of USD 6000 / t to USD 7000 / t lithium carbonate in the last three years. SignumBox note that the market is currently in balance resulting in the real terms forecast prices remaining in this range until after 2022 when they begin to rise in response to battery grade demand rising above supply at that time as it increase to nearly triple current demand by 2030.

The historical prices and SignumBox forecast prices have been compiled by SRK and are shown as annualised summaries in Figure 19-1.



**Figure 19-1: Summary of Prices for Battery Grade Lithium Carbonate**

### 19.3 Potassium Sulphate

Sulphate of Potash (“SOP”), also known as potassium sulphate ( $K_2SO_4$ ), has significant advantages as a fertilizer product in terms of soil chemistry, plant nutrients and crop yields. It is particularly advantageous for chlorine sensitive crops as it has no chlorine which tends to build up in the soil with sustained usage. It also has advantages for improved crop yields on a range of higher value crops such as fruits, vegetables, coffee beans, nuts, potatoes and tobacco. SOP is useful for certain crops and essential for others.

As well as lithium, SRK has modelled potassium in the block model for the Pre-Feasibility study and understands that the Pre-Feasibility study team expects that a 10-15% by-product credit may be possible to supplement revenue from lithium carbonate.

## 20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL IMPACT

Information on environmental studies is being prepared by a third party consultancy and will be discussed as part of the Pre-Feasibility Study report in April 2016.

## 21 CAPITAL AND OPERATING COSTS

Information on capital and operating costs is being prepared by a third party consultancy and will be discussed as part of the Pre-Feasibility Study report in April 2016.

## 22 ECONOMIC ANALYSIS

An economic analysis is being prepared by a third party consultancy and will be discussed as part of the Pre-Feasibility Study report in April 2016.

## 23 ADJACENT PROPERTIES

No reference has been made to adjacent properties; the Sonora Lithium Project is the first such project to be developed in the area.

## 24 OTHER RELEVANT DATA AND INFORMATION

A Pre-Feasibility Study is currently underway and is due to be finalised in April 2016. The results of this MRE will be included in the PFS report.

## 25 INTERPRETATION AND CONCLUSIONS

The Sonora Lithium Project is substantial in size, with potential to produce several millions of tonnes of lithium carbonate product; it has a robust average grade compared with the cut-off grade which suggests there is potential to operate with a good profit margin. The Mineral Resource comprises an Indicated portion estimated as 259 Mt, averaging 3,200 ppm Li, for 4.5 Mt of LCE, in addition there is an Inferred portion estimated at 160 Mt averaging 3,200 ppm Li, for 2.7 Mt of LCE. The Mineral Resource is reported above a cut-off grade of 1,000 ppm lithium based on reasonably assumed technical and economic parameters and is constrained to an open pit shell which limits the resource to the near surface areas which have the best potential for economic extraction.

The mineral processing testwork is on-going; and at present the flow sheet and estimates of reagent consumptions, operating costs and overall process recovery are evolving; however, it is clear there is potential to process the lithium clays using beneficiation, followed by calcination, leaching, evaporation, filtering and precipitation. Further testwork on mineral processing as well as complimentary mining, infrastructure, environmental and market studies are currently underway as part of a Pre-Feasibility study, which is due to be completed in April 2016.

## 26 RECOMMENDATIONS

SRK recommends that the quality control procedures should be improved so that the grades of the standard reference materials are more representative of the deposit grades. The standards should be more thoroughly tested during the initial determination of mean grade and standard deviation (for both Li and K grades) using several laboratories and methods. Some aspects of the density determination require further study to confirm the accuracy of the density determination method which currently assumed no core shrinkage upon drying.

The laboratory method used to date has a maximum detection limit of 10,000 ppm Li; several samples have returned this grade. SRK recommends resubmitting all high grade samples to the laboratory, employing a method with a higher upper detection limit; this may result in a minor increase in the resource grade.

## 26.1 Exploration Plan

In March 2016, SRK and Bacanora devised an exploration infill drilling plan with the aim of upgrading portions of the current Mineral Resource into the Measured category. The La Ventana area and northern El Sauz area were selected as the main targets for infill drilling, where the high-grade lower clay units outcrop at surface and are likely to be mined first. In addition, a number of holes have been planned to provide additional geotechnical and hydrogeological information for the potential open pit mine wall.

In total, 30 diamond core drillholes for 4,150 m were designed, including 2,850 m for infill drilling and 1,300 m for geotechnical drilling. The budget for this exploration plan is shown in Table 26-1. The budget is based on real cost information from the 2015 exploration drilling in the La Ventana area.

Further exploration may be planned following the results of this drilling; however, no further exploration programmes have currently been planned.

**Table 26-1: Summer 2016 Exploration Plan Budget**

Item	Cost per Metre (USD)	Infill Drilling Cost (2,850 m)	Geotech Drilling Cost (1,300 m)
Drilling (inc. consumables and moving)	144	411,097	187,518
Support Vehicles (bulldozers, water trucks inc. mobilisation)	11	31,365	14,307
Drilling Staff (inc. accommodation)	7	19,064	8,696
Permitting and Taxes	4	12,481	5,693
Assaying	9	26,775	12,213
Sub-total	176	500,781	228,426
VAT (16%)	28	80,125	36,548
<b>GRAND TOTAL</b>	<b>204</b>	<b>580,906</b>	<b>264,975</b>

## 27 REFERENCES

Preliminary Economic Assessment (“PEA”) report: “Preliminary Economic Assessment for the La Ventana Lithium Deposit, Sonora Lithium Project, C. Verley and M. Vidal, January 2013.”

Scoping Study report: “Scoping Study of the El Sauz and Fleur Concessions, Sonora Lithium Project, C. Verley, December 2014”

May 2015 Stormcrow Capital Ltd lithium price forecast report: “Industry Report – Lithium. Initiating sector coverage. Lithium – Gets Stronger and Stronger. 29 May 2015”

May 2015 SRK MRE report: “NI 43-101 Mineral Resource estimate for the Sonora Lithium Project, Mexico, May 2015”.

November 2015 Lithium Price Summary, SignumBox.

December 2015 SRK MRE report: “Mineral Resource estimate Update for the Sonora Lithium Project, Mexico, December 2015”.

April 2016 Lithium Price Forecast 2016-2030, SignumBox.

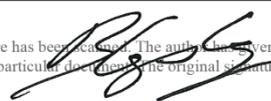
### For and on behalf of SRK Consulting (UK) Limited

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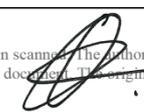
Martin Pittuck, C.Eng, MIMMM,  
Corporate Consultant  
(Mining Geology),  
**Project Director,**  
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Oliver Jones,  
Consultant (Resource Geology)  
SRK Consulting (UK) Limited

## **APPENDIX A**

### **A QUALIFIED PERSONS CERTIFICATE**

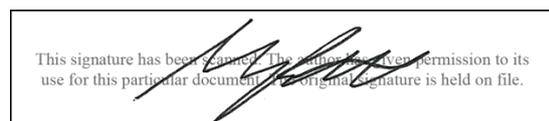
**CERTIFICATE OF QUALIFIED PERSON**

I, Martin Frank Pittuck, MSc., C.Eng, MIMMM do hereby certify that:

1. I am a Corporate Consultant (Mining Geology) of SRK Consulting (UK) Ltd with an office at 5<sup>th</sup> Floor, Churchill House, Churchill Way, Cardiff CF10 2HH;
2. This certificate applies to the technical report titled “Amended Mineral Resource Estimate Update for the Sonora Lithium Project, Mexico, April 2016” (the “Technical Report”), prepared for Bacanora Minerals Limited;
3. The Effective Date of the Technical Report is 12<sup>th</sup> April 2016;
4. I am a graduate with a Master of Science in Mineral Resources gained from Cardiff College, University of Wales in 1996 and I have practised my profession continuously since that time. Since graduating I have worked as a consultant at SRK on a wide range of mineral projects, specializing in precious and rare metals. I have undertaken many geological investigations, resource estimations, mine evaluation technical studies and due diligence reports. I am a member of the Institution of Materials Mining and Metallurgy (Membership Number 49186) and I am a Chartered Engineer;
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 fulfil the requirements to be a “Qualified Person” for the purposes of NI 43-101.
6. I visited the Sonora property between 24 and 27 March, 2015.
7. I am co-author and reviewer of this report and have overall responsibility for the Mineral Resource estimate and all of the sections in the Technical Report.
8. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101.
9. I have not had prior involvement with the property that is the subject of the Technical Report.
10. I have read NI 43-101 and Form 43-101F1; the sections of the Technical Report I am responsible for have been prepared in compliance with that instrument and form.
11. As of the aforementioned Effective Date, to the best of my knowledge, information and belief, the sections of the Technical Report I am responsible for contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 15<sup>th</sup> April, 2016.

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Martin Frank Pittuck, MSc. C.Eng, MIMMM  
Corporate Consultant (Mining Geology)

## **APPENDIX B**

### **B SUMMARY OF MAJOR LITHIUM AND POTASSIUM INTERCEPTS**

Drillhole ID	Domain/Unit	From (m)	To (m)	Li (ppm)	K (%)
ES-01	Lower Clay	156.06	193.55	3966	1.7
	Upper Clay (High Grade)	135.33	143.41	4043	1.4
	Upper Clay (Low Grade)	116.13	135.33	950	0.5
ES-02	Lower Clay	203.55	244.45	3079	1.5
	Upper Clay (High Grade)	193.55	197.39	2984	1.2
	Upper Clay (Low Grade)	190.41	193.55	278	0.3
ES-03	Lower Clay	210.92	239.57	3901	1.6
	Upper Clay (High Grade)	183.34	199.85	2721	1.0
	Upper Clay (Low Grade)	158.5	183.34	899	0.3
ES-04	Lower Clay	140.42	171.75	3595	1.4
	Upper Clay (High Grade)	120.7	132.47	2336	0.9
	Upper Clay (Low Grade)	96.44	120.7	671	0.4
ES-05	Lower Clay	59.83	93.57	2948	1.2
	Upper Clay (High Grade)	47.55	54.56	2107	0.9
	Upper Clay (Low Grade)	23.16	47.55	558	0.3
ES-06	Lower Clay	33.48	75.9	1539	0.7
	Upper Clay (Low Grade)	9.75	27.74	708	0.4
ES-07	Lower Clay	36	69.49	808	0.9
	Upper Clay	0	32	842	0.4
ES-08	Lower Clay	49.38	73.76	1551	0.7
	Upper Clay	19.2	45.11	670	0.5
ES-09	Lower Clay	51.97	81.99	1163	0.6
	Upper Clay	14.94	46.79	602	0.5
ES-10	Lower Clay	3.96	28.35	1156	0.6
ES-11	Lower Clay	231.34	257.25	5206	2.2
	Upper Clay (High Grade)	207.47	218.69	3376	1.2
	Upper Clay (Low Grade)	183.74	207.47	1234	0.7
ES-12	Lower Clay	233.66	240.49	4052	2.0
	Upper Clay (High Grade)	211.76	221.77	4312	1.5
	Upper Clay (Low Grade)	188.06	211.76	971	0.5
ES-13	Lower Clay	322.48	349.61	4077	1.6
	Upper Clay (High Grade)	305.1	315.35	4523	1.3
	Upper Clay (Low Grade)	278.16	305.1	1017	0.4
ES-14	Lower Clay	65.53	95.1	4733	1.8
	Upper Clay (High Grade)	41.15	56.69	2549	1.0
	Upper Clay (Low Grade)	13.72	41.15	770	0.4
ES-15	Lower Clay	32.31	66.14	4087	1.6
	Upper Clay (High Grade)	18.59	21.95	1260	0.5
ES-16	Lower Clay	69.37	96.93	3312	1.3
	Upper Clay (High Grade)	52.65	62.18	1198	0.6
	Upper Clay (Low Grade)	34.23	52.65	584	0.3
ES-17	Lower Clay	190.07	221.59	4701	1.8
	Upper Clay (High Grade)	166.88	179.53	3585	1.2
	Upper Clay (Low Grade)	141.67	166.88	816	0.4
ES-18	Lower Clay	43.1	73.15	1720	0.8
	Upper Clay (High Grade)	31.7	38.71	2175	0.8
	Upper Clay (Low Grade)	13.41	31.7	637	0.3
ES-19	Lower Clay	129.33	157.58	2308	1.0

	Upper Clay (High Grade)	117.5	124.97	2314	0.8
	Upper Clay (Low Grade)	93.88	117.5	530	0.4
<b>ES-20</b>	Lower Clay	12.07	41.76	1521	0.8
	Upper Clay (Low Grade)	0	8.84	1428	0.6
<b>ES-21</b>	Upper Clay (Low Grade)	14.33	26.21	464	0.4
<b>ES-22</b>	Lower Clay	153.59	158.62	41	0.2
	Upper Clay	130.45	152	167	0.4
<b>ES-23</b>	Lower Clay	29.29	34.75	121	0.3
	Upper Clay	13.38	27.1	513	0.3
<b>ES-24</b>	Lower Clay	66.39	92.71	1593	0.8
	Upper Clay	48.46	61.14	820	0.5
<b>ES-25</b>	Lower Clay	168.37	177.39	555	0.5
	Upper Clay	156.67	168.35	157	0.4
<b>ES-26</b>	Lower Clay	48.23	66.14	745	0.4
	Upper Clay	16.43	44.81	482	0.4
<b>ES-27</b>	Lower Clay	24.38	49.48	1225	0.6
	Upper Clay	7.62	18.17	477	0.4
<b>ES-28</b>	Lower Clay	22.86	32.31	86	0.3
	Upper Clay	0	18.59	327	0.4
<b>ES-29</b>	Lower Clay	24.9	29.87	64	0.3
	Upper Clay	11.28	20.12	249	0.2
<b>ES-30</b>	Upper Clay	28.35	39.93	150	0.2
<b>ES-31</b>	Lower Clay	69.49	104.85	4864	1.9
	Upper Clay (High Grade)	43.89	59.13	3623	1.3
	Upper Clay (Low Grade)	15.12	43.89	760	0.4
<b>ES-32</b>	Lower Clay	32	35.36	1739	1.8
<b>ES-33</b>	Lower Clay	147.83	150.57	795	0.4
	Upper Clay	121.13	144.78	552	0.4
<b>ES-35</b>	Lower Clay	106.68	129.03	1446	0.6
	Upper Clay	78.33	100.89	808	0.4
<b>ES-36</b>	Lower Clay	23.26	44.68	1009	0.5
<b>ES-37</b>	Lower Clay	0	23.35	1668	0.7
<b>ES-38</b>	Upper Clay	109.42	141.12	937	0.6
<b>ES-39</b>	Lower Clay	40.23	44.81	10	0.2
	Upper Clay	35.6	40.23	129	0.3
<b>ES-41</b>	Lower Clay	70.1	95.83	774	0.5
	Upper Clay	34.14	64.31	529	0.4
<b>ES-42</b>	Lower Clay	39.32	64.6	4241	1.7
	Upper Clay (High Grade)	16.15	23.35	3069	1.1
<b>ES-44</b>	Lower Clay	118.11	133.2	5034	2.0
	Upper Clay (High Grade)	93.88	105.31	3575	1.3
	Upper Clay (Low Grade)	74.68	93.88	1252	0.7
<b>ES-45</b>	Lower Clay	125.73	140.51	4503	1.8
<b>ES-46</b>	Lower Clay	162.46	178.92	4604	1.8
	Upper Clay (High Grade)	147.22	154.38	3371	1.4
	Upper Clay (Low Grade)	133.2	147.22	1350	0.7
<b>ES-47</b>	Lower Clay	124.66	150.11	5146	2.1
	Upper Clay (High Grade)	105.77	111.56	1483	0.5
	Upper Clay (Low Grade)	94.79	105.77	1185	0.6

ES-48	Lower Clay	215.65	244.45	4523	1.9
	Upper Clay (High Grade)	195.38	203.25	3698	1.2
	Upper Clay (Low Grade)	182.58	195.38	1173	0.6
ES-50	Lower Clay	240.18	254.81	4916	2.1
	Upper Clay (High Grade)	218.39	228.6	3651	1.2
	Upper Clay (Low Grade)	193.85	218.39	863	0.5
ES-51	Lower Clay	238.66	267.3096	4400	1.7
	Upper Clay (High Grade)	218.39	230.124	2860	1.1
	Upper Clay (Low Grade)	197.0532	218.39	942	0.5
ES-52	Lower Clay	275.844	302.51	4572	1.7
	Upper Clay (High Grade)	263.0424	269.5956	3239	1.0
ES-53	Lower Clay	345.95	381.91	4844	1.9
	Upper Clay (High Grade)	318.8208	330.1	3362	1.1
	Upper Clay (Low Grade)	286.59	318.82	773	0.3
ES-54	Lower Clay	288.8	326.44	3802	1.7
	Upper Clay (High Grade)	274.78	280.87	804	0.4
ES-55	Lower Clay	236.68	243.6876	2639	1.2
	Upper Clay (High Grade)	221.1324	230.886	1026	0.6
	Upper Clay (Low Grade)	204.83	221.13	518	0.3
ES-56	Lower Clay	217.93	253.29	3140	1.3
	Upper Clay (High Grade)	197.21	209.4	2486	0.9
	Upper Clay (Low Grade)	179.53	197.21	669	0.4
ES-57	Lower Clay	251.03	284.07	2770	1.2
	Upper Clay (High Grade)	231.65	243.5352	1818	0.8
	Upper Clay (Low Grade)	206.96	231.648	522	0.4
ES-58	Lower Clay	195.38	227.99	2482	1.0
	Upper Clay (High Grade)	183.49	191.72	1727	0.6
	Upper Clay (Low Grade)	161.85	183.49	278	0.3
LV-01	Upper Clay (High Grade)	24.54	35.36	3508	1.1
	Upper Clay (Low Grade)	7.32	24.54	1658	0.8
LV-02	Upper Clay (High Grade)	98.45	108.51	2882	1.0
	Upper Clay (Low Grade)	78.94	98.45	1269	0.7
LV-03	Upper Clay (Low Grade)	126.49	141.73	921	0.5
LV-04	Lower Clay	126.49	150.88	4949	2.0
	Upper Clay (High Grade)	96.62	110.57	3059	1.0
	Upper Clay (Low Grade)	91.44	96.62	1221	0.6
LV-05	Lower Clay	60.35	80.47	4028	1.7
	Upper Clay (High Grade)	36.58	46.63	3234	1.0
	Upper Clay (Low Grade)	7.92	36.58	1102	0.6
LV-06	Lower Clay	46.18	67.97	3574	1.6
	Upper Clay (High Grade)	15.85	30.78	3161	1.1
	Upper Clay (Low Grade)	2.44	15.85	666	0.4
LV-08	Lower Clay	98.45	118.26	2623	1.1
	Upper Clay (Low Grade)	67.89	94.18	870	0.5
LV-09	Lower Clay	77.42	95.2	1329	0.7
	Upper Clay (Low Grade)	38.79	52.43	765	0.3
LV-10	Upper Clay (Low Grade)	55.17	118.26	689	0.5
LV-11	Upper Clay (Low Grade)	5.18	74.98	196	0.2
LV-12	Lower Clay	118.41	129.24	107	0.3

	Upper Clay (Low Grade)	71.32	98.6	103	0.2
<b>LV-13</b>	Lower Clay	13.26	34.59	5434	2.1
<b>LV-14</b>	Lower Clay	14.17	32	5809	2.4
<b>LV-15</b>	Lower Clay	18.29	42.11	3739	1.7
<b>LV-16</b>	Lower Clay	17.68	42.52	2844	1.4
<b>LV-17</b>	Lower Clay	23.16	41.76	1555	0.9
<b>LV-18</b>	Lower Clay	260.3	279.5	1143	0.8
	Upper Clay (Low Grade)	218.24	245.67	577	0.3
<b>LV-19</b>	Upper Clay (Low Grade)	11.89	48.77	1033	0.5
<b>LV-20</b>	Lower Clay	268.41	291.39	1622	0.9
	Upper Clay (Low Grade)	219.52	247.19	653	0.4
<b>LV-21</b>	Lower Clay	72.24	92.96	1759	1.0
	Upper Clay (Low Grade)	8.93	59.74	1194	0.6
<b>LV-22</b>	Lower Clay	75.86	96.35	2988	1.5
	Upper Clay (High Grade)	44.5	60.35	2457	1.0
	Upper Clay (Low Grade)	18.38	44.5	755	0.4
<b>LV-23</b>	Lower Clay	69.68	87.48	3547	1.6
	Upper Clay (High Grade)	38.56	56.69	2778	1.0
	Upper Clay (Low Grade)	15.97	38.56	722	0.6
<b>LV-24</b>	Lower Clay	145.27	158.88	4124	1.7
	Upper Clay (High Grade)	116.43	130.06	2771	0.9
	Upper Clay (Low Grade)	90.53	116.43	1012	0.5
<b>LV-25</b>	Upper Clay (High Grade)	143.66	155.75	2744	1.4
	Upper Clay (Low Grade)	127.71	143.66	695	0.3
<b>LV-26</b>	Lower Clay	53.95	76.05	2087	0.9
	Upper Clay (High Grade)	42.52	48.77	3233	1.2
	Upper Clay (Low Grade)	22.86	42.52	1042	0.5
<b>LV-27</b>	Lower Clay	78.03	98.33	5855	2.4
	Upper Clay (High Grade)	54.86	66.14	3842	1.4
	Upper Clay (Low Grade)	43.16	54.86	1428	0.8
<b>LV-28</b>	Lower Clay	179.83	203.3	5228	1.9
	Upper Clay (High Grade)	153.62	165.93	4309	1.4
	Upper Clay (Low Grade)	131.73	153.62	1037	0.5
<b>LV-29</b>	Lower Clay	51.82	74.68	5394	2.2
	Upper Clay (High Grade)	24.69	35.66	3297	1.1
	Upper Clay (Low Grade)	8.23	24.69	1609	0.7
<b>LV-31</b>	Lower Clay	203.7	226.04	3092	1.4
	Upper Clay (High Grade)	173.61	185.56	2956	1.1
	Upper Clay (Low Grade)	147.83	173.61	755	0.4
<b>LV-34</b>	Lower Clay	3.05	7.92	516	0.4
<b>LV-35</b>	Lower Clay	12.37	33.41	5786	2.3
<b>LV-36</b>	Lower Clay	15.33	35.36	4372	1.8
<b>LV-37</b>	Lower Clay	14.84	36.88	3942	1.9
<b>LV-38</b>	Lower Clay	13.96	37.49	3157	1.7
<b>LV-39</b>	Lower Clay	4.88	27.31	2188	1.3