TECHNICAL REPORT ON THE PRE-FEASIBILITY STUDY FOR THE SONORA LITHIUM PROJECT, MEXICO

April 2016

Prepared For

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Effective Date: April 12, 2016
Issue Date: April 15, 2016

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1 EXECUTIVE SUMMARY

1.1 Introduction

The Sonora Lithium Project (the "Project") is located in north-west Mexico, in the state of Sonora. The Project is located 170 km south of the USA – Mexico border and three hours' drive north east of the state capital of Hermosillo, a city of approximately 700,000 people.

Access to the site is by road from either Hermosillo or the US border town of Agua Prieta. The Project has access to significant support infrastructure including paved roads, process water and high voltage power.

The proposed Project consists of an open-pit mine and lithium carbonate processing facility with a design life of over 20 years. The nominal yearly output for the project will commence at 17,500 tonnes per year ("t/y") of battery-grade Li_2CO_3 (Stage 1), for the first two years of the project, followed by a proposed expansion, by duplicating the plant, to produce a total of 35,000 t/y (Stage 2). In addition, the Sonora Lithium Project has been designed to produce up to 50,000 t/y of Potassium Sulfate ("K_2SO_4"), for sale to the fertiliser industry.

A Technical Report on the Pre-Feasibility Study ("PFS") has been prepared for the Project 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) National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101").

Ausenco Canada Engineering Limited ("Ausenco"), SRK Consulting (UK) Limited ("SRK") and Independent Mining Consultants Inc. ("IMC") were commissioned by Bacanora Minerals Limited ("Bacanora" or the "Company") to produce the PFS of the Project.

1.2 Accessibility, Local Resources, Infrastructure and Physiography

The Project consists of seven exploration and mining concessions (the "concessions"). Within these concessions the 'La Ventana' part of the Project is owned 99.9% by Bacanora. The other concessions are held in joint venture with Rare Earth Minerals PLC ("REM"), comprising 70% ownership by Bacanora and 30% by REM.

The 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.

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. Rail, road and natural gas networks join Hermosillo to the United States of America and Mexico.

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 Bacadéhuachi. Bacanora has set up its local base of operations in this town and undertakes all core processing facilities from this location.

Access to the concessions from Bacadéhuachi is on secondary, dry-weather roads, crossing various privately owned ranches for approximately 11 km. Land owners have provided authorisation for the Company to access the concessions on these roads.

1.3 Geological Setting and Mineralisation

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 polylithionite 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 model of the deposit and faults has been created based on outcrop mapping, aerial photography and drilling.

1.4 Mineral Resource Estimation

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.

Refer to Table 1.1 for the Mineral Resource estimate, prepared by SRK with an effective date of 12 April 2016. The Mineral Resource estimate is based on exploration results from mapping drilling and trenching made available to SRK on the 19 October 2015. The Mineral Resource is stated inclusive of the Mineral Reserve.

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.

Table 1.1: SRK Mineral Resource Statement

Classification	Concession	Owner	Geological Unit	Clay Tonnes	Clay Grade		Contained Metal		
				Mt	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		Lower Clay	60	4,300	1.8	256	1,363	1,070
			Upper Clay	27	2,200	0.9	59	316	235
	El Sauz1		Lower Clay	4	4,000	1.7	15	80	65
			Upper Clay	1	2,200	0.8	2	10	5
Indicated Total			Combined	259	3,200	1.4	839	4,463	3,555
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		Lower Clay	20	4,300	1.8	86	458	360
			Upper Clay	5	2,800	1.0	14	74	50
	El Sauz1		Lower Clay	15	4,000	1.6	60	319	245
			Upper Clay	5	2,400	0.9	12	64	45
Inferred Total			Combined	160	3,200	1.3	515	2,740	2,130

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 Mineral Resource estimate 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 Mineral Resource estimate 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 1000 ppm Li (5,320 ppm Li_2CO_3).
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.

1.5 Mineral Reserve Estimation

Refer to Table 1.2 for the Mineral Reserve estimate which was prepared by IMC based on an open-pit operation using conventional truck/shovel mining methods. The Reserve estimate used a cut-off grade of 1200 ppm Li, ore recovery factor of 100% and a mining dilution rate of 10% at an average dilution grade of 0% Li.

Table 1.2: Open Pit Mineral Reserve

Area	Ore > = 1200 ppm Li				Waste kt	Total kt	Waste : Ore Ratio	% from La Ventana
	kt	Li ppm	LCE Kt	K (%)				
North Pit	91,471	3224	1,570	1.37	432,877	524,348	4.73	77.22%
South Pit	38,303	2516	513	1.06	202,646	240,949	5.29	0.00%
Total	129,774	3015	2,083	1.28	635,523	765,297	4.90	54.43%

Notes:
1. kt = tonnes x 1000
2. LCE = lithium carbonate equivalent

1.6 Mining Methods

Mining operations will be carried out with hydraulic excavators and haul trucks and an ancillary fleet of dozers, graders and water trucks.

The open pit designs are based on 10 m mining benches, 25 m wide haul roads (includes allowance for berms and ditches) and 42 degree inter-ramp slope angle on the hanging wall (east) side of the pits. The lithium clay beds dip to the east and there are no haul ramps on the east wall so the inter-ramp slope angle and overall slope angle are the same at 42° based based on geotechnical investigations.

The mine plan covers the first 20 years of production and there are additional mineral resources and reserves to extend mining and processing beyond 20 years. For the mining design a total of 50 Mt of ore at a diluted grade of 3,525 Li ppm and 1.49% K and a stripping ratio of 3.0:1 will be mined over the initial 20-year mine life. To maximise Net Present Value ("NPV") of the Project, the mine plan uses a cut-off grade of 1800 ppm Li in Years 1 to 7 and 1500 ppm Li in Years 8 to 21.

1.7 Metallurgical Testwork

Metallurgical testwork for the PFS was carried out at SGS Lakefield Laboratories in Canada ("SGS Testwork"). The 500 kg testwork sample was obtained from the Lower Clay ore type, which is the basis of the mine schedules. The feed grade of the testwork sample at 0.35% Li is representative of the life of mine feed grade at 0.35% Li.

During the development of the PFS, different flowsheet options were investigated for the recovery of lithium from the Sonora hectorite clays (i.e. acid pre-leaching of the ore, acid bake, atmospheric leaching, and potassium sulfate roasting). Gypsum roasting was selected based on testwork and preliminary economic evaluations.

The design criteria which were used to develop the mass balance are based on the SGS Testwork. The overall lithium recovery of 69.8% is based on 82.0% lithium recovery in beneficiation (Test F14) and 87.2% recovery in extraction (Test SR-T10-WL3). Overall potassium recovery is 57.2%. SGS Testwork included:

- Beneficiation:
    - scrubbing and screening to reject coarse (+ 6 mm) gangue (predominantly silica)
    - classification to directly recover the lithium bearing clays (-20 microns ("µm")) to concentrate
    - reverse flotation on the -300 µm +20 µm fraction to reject calcite while recovering lithium bearing clay to concentrate and reject coarse gangue.
- Extraction:
    - gypsum roasting using different reagents, temperatures and bed depths
    - leaching testwork using different densities and temperatures.
- Purification:
    - calcium removal using sodium carbonate
    - ion exchange to remove multi-valent ions (magnesium, calcium, aluminium)
    - evaporation testwork to increase the lithium concentration from 3 g/L Li up to 16 g/L Li.
- Precipitation:
    - Lithium carbonate precipitation using sodium carbonate and the bicarbonation process

1.8 Recovery Methods

Process engineering and design for the process plants and infrastructure was completed by Ausenco based on the SGS Testwork.

The process plant is proposed to be built in two stages. The Stage 1 design involves processing approximately 1.37 Mt/y of Run of Mine ("ROM") feed, at 0.39% Li and 1.68% K (first two years), to produce battery-grade Li_2CO_3 and potassium sulfate (K_2SO_4) for sale. The K_2SO_4 produced is expected to be sold as a high-quality Sulfate of Potash ("SOP") fertiliser. About 77,000 t/y of sodium sulfate is produced in Stage 1 however this is not expected to be saleable and is therefore stored in a lined tailings storage facility.

Stage 2, which is planned for start-up in Year 3, involves adding a duplicate 1.37 Mt/y train to treat a total of 2.74 Mt/y of ROM feed, at 0.35% Li and 1.49% K.

The operating schedule for the plant is a continuous 24 hour per day ("h/d") operation, using two 12 h shifts per day, 365 days per year ("d/y"). Design plant availabilities are typical at 90% (7,882 h/y) for the beneficiation plant and 83% (7,270 h/y) for the extraction and precipitation plants.

A summary of the selected flowsheet is:

- Beneficiation to recover lithium while rejecting gangue (calcite and silica) using scrubbing, hydrocyclone classification and reverse flotation.
- Gypsum roasting, which converts the lithium to water soluble lithium sulfate ("Li_2SO_4") at

1,000 degrees Celsius ("°C"), in the presence of gypsum and limestone.

- A hydrometallurgical section where the calcine is mixed with water in a slurry to form an impure Li_2SO_4 Pregnant Liquor Solution ("PLS"). Impurities are then removed from the PLS using precipitation and ion exchange prior to the evaporation and precipitation of battery-grade Li_2CO_3.
- Potassium sulfate is then recovered from the barren liquor using crystallisation and selective dissolution.
- The potassium sulfate filtrate is sent to the second Li_2CO_3 precipitation which uses bicarbonation to produce battery-grade Li_2CO_3.
- Sodium sulfate is recovered from the potassium sulfate barren liquor using crystallisation.

1.9 Project Infrastructure

Infrastructure proposed for the Project includes:

- Site Access Road: 18.4 km, gravel road with four concrete floodway crossings and one culvert crossing.
- Accommodation: modular, 'camp style' accommodation is proposed in the local town of Bacadéhuachi for 700 employees during the construction phase and 360 employees in the operational phase. The employees will be bussed to the mine site.
- Power Supply: a 12.8 km, 33 kV overhead power line connects the Project to the existing power line in close proximity to Bacadéhuachi. The total connected load is estimated to be 15 MW in Stage 1 and 29 MW in Stage 2. Sufficient power is available for Stage 1 with an upgrade proposed for Stage 2.
- Power Distribution: includes two 33/3.3 kV, 60 MVA transformers, high voltage and low voltage distribution, switchrooms, Motor Control Centres and 2.0 MW of emergency (diesel) power generation.
- Mine Infrastructure: hardstand, tyre change pad, vehicle washdown bay, diesel fuel storage and distribution, explosives magazine and mine workshop.
- Water Supply: two water wells, located 6 km north of the plant site, will pump raw water to the process plant.
- Buildings: administration building, process plant office, process plant workshop, warehouse, laboratory and gatehouse.
- Mobile equipment: includes light vehicles, front end loader, crane, forklifts, ambulance, fire truck and mine rescue vehicle.
- Tailings storage facility: a total of 1.9 Mt/y of tailings are estimated to be produced in Stage 1 and 3.8 Mt/y in Stage 2. Ninety five percent of the tailings are expected to be benign and are proposed to be filtered, loaded, hauled, dumped and spread in the tailings storage facility, which is located 1 km upstream of the process plant, between two proposed waste rock storage facilities. The water soluble tailings (sodium sulfate and impurity removal precipitate) are proposed to be stored in 50,000 m^3, double HDPE lined ponds with leak detection; additional cells will be installed each year.

1.10 Marketing Studies

Market 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.

The lithium carbonate price has seen a steady upward trend since the late 1990's, with increasing demand for portable electronics and more recently hybrid/electric vehicles. Demand for lithium products is anticipated to grow at 8 to 12% in coming years from 160,000 t Lithium Carbonate Equivalent ("LCE") in 2015, with a requirement for some 15,000 to 20,000 t/y of new LCE production each year over the next 5 years.

A flat rate price of $6,000 per tonne for battery-grade lithium carbonate has been assumed over the Life of Mine, although recent price increases have seen spot prices of Li_2CO_3 in Asia increase to above $6,000/t.

A flat rate price of $600 per tonne for commercial grade K_2SO_4 has been assumed, net of royalties, marketing fees and transport/packaging costs.

1.11 Environmental Studies

Environmental and social baseline studies, carried out by Grupo Onza, include protected natural areas, flora, fauna, surface water, ground water and social-economic activities. No significant environmental issues have been identified.

The baseline collection studies follow guidelines and plans established by the authorities in Mexico and "International Lending Institution Standards' to satisfy potential financing interests and requirements for the project.

The Manifestacion de Impacto Ambiental ("MIA") is being prepared and is scheduled to be issued to the local authorities in the third quarter of 2016 ("Q3 2016"). The approval process usually takes 12-18 months but can be achieved in 6 months with properly completed documentation.

1.12 Capital Cost Estimate

The capital cost estimate covers the design and construction of the mining equipment, process plant, together with on-site and off-site infrastructure to support the operation, including water and power supply and support services.

Refer to Table 1.3 for a summary of the Stage 1 and Stage 2 capital cost estimates which have an accuracy of ±25% and a base date of Q4 2015. All amounts expressed are in US dollars unless otherwise indicated.

Table 1.3: Estimated Capital Cost - Summary for the Two Stages

Area	Stage 1 $M	Stage 2 $M
Mining Equipment	19.0	9.6
Mining Infrastructure	3.7	0.0
Beneficiation Plant	20.5	18.1
Lithium Processing Plant	90.5	81.4
On-Site Infrastructure	15.9	9.6
Off-Site Infrastructure	16.8	5.9
EPCM/Owner's Costs/Indirects	45.6	30.0
Contingency	28.0	22.5
Total	240.0	177.1

1.13 Operating Cost Estimate

The mining and processing operating costs are for an operation achieving average annual production of approximately 17,500 t/y of battery-grade (99.5%) Li_2CO_3 in Stage 1, and 35,000 t/y in Stage 2. The operating cost estimate covers the mine, process plant and general and administration facilities. The average operating costs estimates, at an accuracy of ±25%, are summarised in Table 1.4.

Table 1.4: Operating Cost Estimate

Category	($/t Li_2CO_3)		
	Stage 1	Stage 2	LOM
Mining	642	538	543
Processing	2,037	1,930	1,934
G&A	446	212	221
Total	3,125	2,680	2,698

1.14 Financial Analysis

As shown in Table 1.5 the PFS demonstrates the financial viability of the Sonora Lithium Project at an initial production rate of 17,500 t/y of battery-grade Lithium Carbonate ("Li_2CO_3") in Stage 1 and expansion to 35,000 t/y in Year 3 (Stage 2).

The project is currently estimated to have a payback period of five years. Cash flows are based on a 100% equity funding basis and show the average annual revenue is $224M over the 20 years of operations. The economic analysis indicates a pre-tax NPV, discounted at 8%, of approximately $776M and an Internal Rate of Return ("IRR") of approximately 29%. Post tax the NPV is approximately $542M and IRR 25%.

A sensitivity analysis has shown the Project is most sensitive to the lithium price than it is to either CAPEX or OPEX. An increase of 30% in the average lithium carbonate price, from \$6,000 to \$7,800, increases the Post-Tax NPV from \$542M to \$944M and the Post-Tax IRR to 36%. A decrease of 30% in the average lithium carbonate price, from \$6,000 to \$4,200, decreases the Post-Tax NPV from \$542M to \$138 M and Post-Tax IRR to 13%.

Table 1.5: Sonora Lithium Project – Key Economic Parameters

Parameter	Unit	Value
Pre-tax NPV	\$M	776
Pre-tax IRR	%	29
Simple Payback	y	5
Initial Construction Capital Cost	\$M	240
Stage 2 Construction Capital Cost	\$M	177
Average Life of Mine ("LOM") operating costs	\$/t Li_2CO_3	2,698
Average LOM operating costs - net of K_2SO_4 credits	\$/t Li_2CO_3	2,100
Average yearly EBITDA with co-products	\$M/y	134
Post-tax NPV (at 8% discount)	\$M	542
Post-tax IRR	%	25
Nominal Yearly Li_2CO_3 production capacity (Years 1 and 2)	t/y	17,500
Nominal Yearly Li_2CO_3 production capacity (Years 3 to 20)	t/y	35,000
Nominal Yearly K_2SO_4 production capacity (Years 3 to 20)	t/y	50,000

1.15 Conclusions and Recommendations

Financial modelling carried out for the PFS demonstrates that the Sonora Lithium Project is financially viable. Further technical investigations are recommended for the Feasibility Study to confirm financial viability. The Feasibility Study budget is \$4.6M.

Benchscale testwork on representative samples are proposed to begin in April 2016 to optimise the flowsheet. Bacanora has begun pilot scale testwork at its 3 t/h pilot plant in Hermosillo to demonstrate the flowsheet, reduce plant ramp-up times and produce samples for marketing purposes.

Additional infill drilling is proposed to infill the Inferred Mineral Resource to increase the confidence to an Indicated level and to ensure five years of Proven Mineral Reserves.

Local environmental consulting groups are being used to prepare the MIA, which is scheduled to be issued to the appropriate local authorities in Q3 2016. In addition, Bacanora has designed an active programme to engage with the local communities living within the project area.

Additional hydrology and hydrogeological drilling and investigations are recommended during the Feasibility Study for the design of diversion channels and to confirm the design of the pit wall.

2 INTRODUCTION

2.1 Background

The Sonora Lithium Project consists of 7 exploration and mining concessions (the “concessions”). Within these concessions, the ‘La Ventana’ part of the project is owned 99.9% by Bacanora and the other concessions are owned jointly with Rare Earth Minerals PLC (REM), comprising 70% ownership by Bacanora and 30% by REM. Refer to Section 4.3 for further details of mineral tenure.

This Technical Report has been prepared for Bacanora and summarizes the PFS completed in March 2016.

2.2 Project Scope and Terms of Reference

The Project consists of an open pit mine and an associated processing facility along with on-site and off-site infrastructure to support the operation with a design life of over 20 years. The nominal yearly output for the project will commence at 17,500 tonnes per year (“t/y”) of battery-grade Li_2CO_3 (Stage 1), for the first two years of the project, followed by a proposed expansion, by duplicating the plant, to produce a total of 35,000 t/y (Stage 2). In addition, the Project has been designed to produce up to 50,000 t/y of Potassium Sulfate (“K_2SO_4”), for sale to the fertiliser industry.

This Technical Report has been prepared for Bacanora to provide information to determine the economic feasibility of developing the Sonora Lithium Project, and to determine whether to proceed to a definitive Feasibility Study (“FS”) and the requirements necessary to do so.

2.3 Study Participants

Ausenco was commissioned by Bacanora in August 2015 to prepare the PFS and NI 43-101 compliant technical report on the Project. SRK was engaged to prepare the Mineral Resource estimate and to supervise geology inputs. IMC was engaged for mine design, mine operating costs, mine capital and operating costing and economic modelling. Bacanora produced the economic model which Ausenco reviewed.

Environmental and social studies, carried out by Grupo Onza, include protected natural areas, flora, fauna, surface water, ground water and social-economic activities. As part of the ongoing permitting approval process, Grupo Onza are currently preparing a Manifestación de Impacto Ambiental (“MIA”) (Expression of Environmental Impact) to be submitted to local government authorities in Q3 2016.

A number of participants were involved in the compilation of this PFS. Table 2.1 provides an overview of the key participants and their area of responsibility.

Table 2.1: Study Participants

Area of Responsibility	Company
Geology and Mineral Resource Estimate	SRK
Mining	IMC
Testwork	SGS
Environmental and Social Impact Assessment	Grupo Onza
Flowsheet Development	Ausenco
Process Plant Design, Engineering, and Plant Layout	Ausenco
Capital Cost (Mining)	IMC
Capital Cost (Process and Overall Compilation)	Ausenco
Operating Cost (Mining)	IMC
Operating Cost (Process and Overall Compilation)	Ausenco
Tailings Storage Facility	Ausenco
Implementation and Execution Planning	Ausenco
Marketing	SignumBox–Bacanora
Financial Modelling	Bacanora

2.4 Site Visit

The site visit and inspection of the sample preparation facilities were undertaken between 24 and 27 March 2015 by Martin Pittuck. Martin is a full time employee of SRK and supervised the resource estimation process.

Joel Carrasco visited the site on 19 August 2015 to select the location for the Tailings Storage Facility ("TSF") and to inspect the site access road. Joel is a full time employee of Ausenco and supervised the tailings and water management and environmental scopes of work.

2.5 Frequently Used Abbreviations, Acronyms and Units of Measure

Where they are used in this report, abbreviations, acronyms, definitions and terms have the meaning shown in Table 2.2.

Table 2.2: Abbreviations, Acronyms and Units of Measure

Abbreviation	Description
A	Ampere
amsl	Above mean seal level
°C	degrees Celsius
cm	Centimetre
d	Day
DD	Detailed Design
d/y	Days per year
Datamine	Datamine Studio 3 software
DEM	Digital Elevation Model
EBITDA	Earnings before interest, taxes, depreciation and amortisation
EDTA	ethylenediaminetetraacetic acid
FEED	Front End Engineering and Design
FEL	Front End Loader
FS	Feasibility study
h	Hour
h/d	Hours per day
Ha	Hectare
ICP-MS	Inductively Coupled Plasma Mass Spectrometer
IDW	inverse-distance weighted algorithm
IRR	Internal rate of return
IX	Ion exchange
J	Joule (energy)
k	kilo or thousand
kg	Kilogram
km	kilometre
kt	Kilo tonne (thousand metric tonne)
kW	kilowatt (power)
kWh	kilowatt hour
L	Litre
LCE	Lithium Carbonate Equivalent
Leapfrog	Leapfrog geo software
LNG	liquefied natural gas
LOM	Life of Mine
m	Metre
M	Million
m^2	Square metre
m^3	Cubic metre

Abbreviation	Description
MCC	motor control centre
MIA	Manifestacion de Impacto Ambiental
mm	Millimetre
Mt	million tonnes (metric)
Mt/y	million tonnes per year
MOP	Muriate of Potash
MW	Megawatt
NPV	Net present value
OK	ordinary kriging
PEA	Preliminary Economic Assessment
PFS	Pre-Feasibility Study
PLC	Programmable Logic Controller
PLS	Pregnant Liquor Solution
QA–QC	Quality Assurance and Quality Control
ROM	run-of-mine
s	Second
SCADA	Supervisory Control and Data Acquisition
SOP	Sulfate of Potash
Supervisor	Supervisor software
t	Tonne (metric)
t/h	tonnes per hour
t/m^3	tonnes per cubic metre
t/y	tonnes per year
TSF	Tailings storage facility
µm	micrometre or micron
UTM	Universal Transverse Mercator conformal projection
V	volt
VAT	Value added tax

3 RELIANCE ON OTHER EXPERTS

This Technical Report has been prepared for Bacanora by SRK, IMC and Ausenco (the “Authors”) based on assumptions as identified throughout the text and upon information and data supplied discussed below.

SRK has relied upon Bacanora’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 upon Bacanora’s legal counsel for legal input to Section 4.

Ausenco is not an expert in the matters of pricing of lithium carbonate and potassium sulfate. For this information contained in Section 19 Ausenco has relied on a report entitled “PFS Marketing Report”, issued by SignumBOX Inteligencia de Mercados (“SignumBox”), Bacanora and its consultants, November 2015.

SignumBox is 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.

Lithium prices are mostly affected by the supply and demand balance. On the demand side the anticipated growth rate is estimated at 8 to 12% per year and the market is expected to expand from 160,000 t lithium carbonate equivalent (“LCE”) in 2015 to over 300,000 t by 2025. This is based on an increased use of lithium products in the rechargeable battery sector. If this market does not continue to grow at the recent rate then this is a risk.

On the supply side there are currently three main lithium carbonate producers supplying approximately 75% of the world’s production and only small number of large scale green-field development projects at the planning stage. It is understood that a new lithium project will need to be in construction by mid-2017 in order to start delivering initial production by end 2018 to meet the anticipated demand, and further projects will need to be developed to meet anticipated demand. If competing projects are developed simultaneously, there is a risk of over-supply into the lithium market.

Ausenco has verified that SignumBox determined the current pricing and demand for lithium through historical lithium carbonate pricing, which is publicly available information. Current lithium carbonate pricing supports the use of a long term average price of $6,000/t Li_2CO_3.

Bacanora carried out the financial modelling for the PFS, referenced in Section 22. Ausenco reviewed the financial model and concluded that it is reasonable for a pre-feasibility study.

4 PROJECT DESCRIPTION AND LOCATION

4.1 Property Area

As discussed in Section 4.3, the licence holding by the Company forms a continuous coverage over the Project area of 8,154 ha. 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.

4.2 Project Location

The Project is situated in the northwestern Mexican state of Sonora, some 11 km south of Bacadéhuachi which is 180 km northeast of Hermosillo and approximately 170 km south of the USA – Mexico border. Location plans are given in Figure 4.2 and Figure 4.4.

4.3 Mineral Tenure

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%).

The Sonora Lithium Project consists of 7 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 PFS. The concessions are owned by a number of REM-Bacanora subsidiaries:

- Within the Sonora Project:
  - Mexilit SA de CV ("Mexilit"), owned 70% by Bacanora
  - Minera Sonora Borax SA de CV ("MSB"), owned 99.9% by Bacanora.
- Outside the 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 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 Tubutana 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 Company's concessions can be seen in Figure 4.1.

Figure 4.1: Current Project Ownership Structure

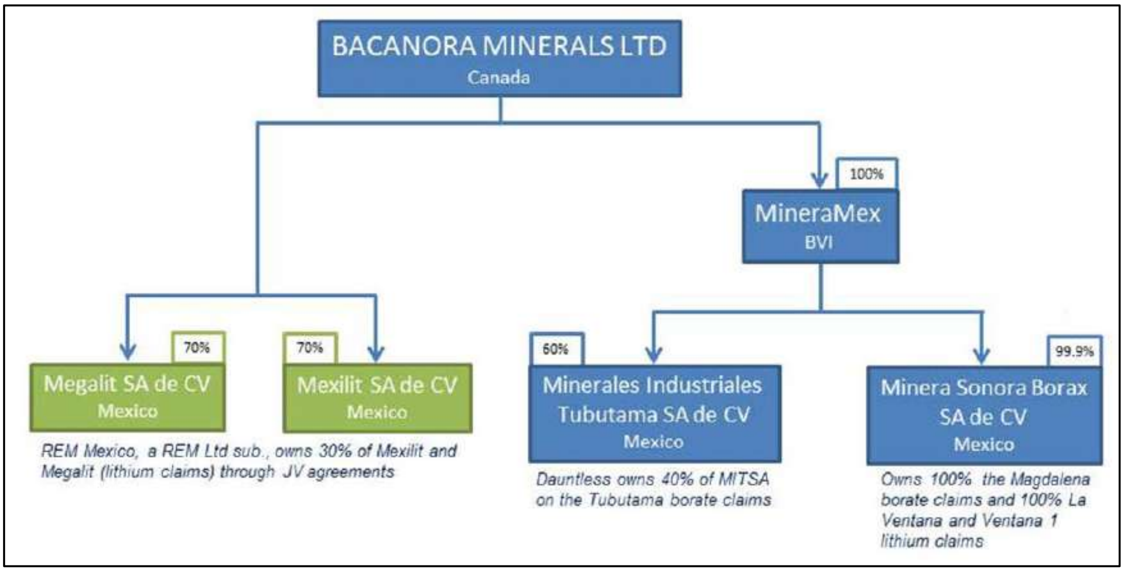


Table 4.1: Concessions of Bacanora Minerals Ltd

Company	Claim	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
Megalit	Buenavista	Huasabas	235613	649	22-May-10	21-May-60
Megalit	San Gabriel	Bacadehuachi	235816	1,500	12-Mar-10	11-Mar-60
Megalit	Megalit	Bacadehuachi		87,086	"Approved for title"	

Note:
Red indicates concessions outside the Sonora Project

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 to the Megalit 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
- 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.

4.4 Surface Rights

Surface rights sufficient for mining operations are obtainable from local landowners, should such activities develop on the concessions.

4.5 Royalties

Bacanora has advised that a 7.5% Mining Royalty tax is due based solely on the mining parts of the operations. In addition, there is a 3% royalty due on all product sales to Mr Colin Orr-Ewing, which has been included in the Life of Mine cashflows.

4.6 Environmental Liabilities

This is a greenfields site which has had exploration drilling carried out. No environmental liabilities are known to exist at the Project.

4.7 Permits

Federal and State permits include:

- The Preventative Notice (Informe Preventivo).
- The Environmental Impact Assessment (Manifestación de Impacto Ambiental) - refer to Section 20.1 for the details and schedule associated with the Manifestación de Impacto Ambiental.
- The Permit for Change of Land Use in Forested Area issued by the State Delegations of Secretary of the Environment, Natural Resources and Fisheries (SEMARNAT).
- A PPA (Accident Prevention Program).
- A water use permit (Comisión Nacional del Agua).
- An archaeological land liberation, based on authorization by the Instituto Nacional de, Antropología e Historia.
- Explosives Use Permit (SEDENA)
- A notice to the state and municipal authorities (i.e., local construction permits, land use change, etc.).

4.8 Site Access Risk Factors

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 Bacadéhuachi. Bacanora has set up its local base of operations in this town and undertakes all core processing facilities from this location.

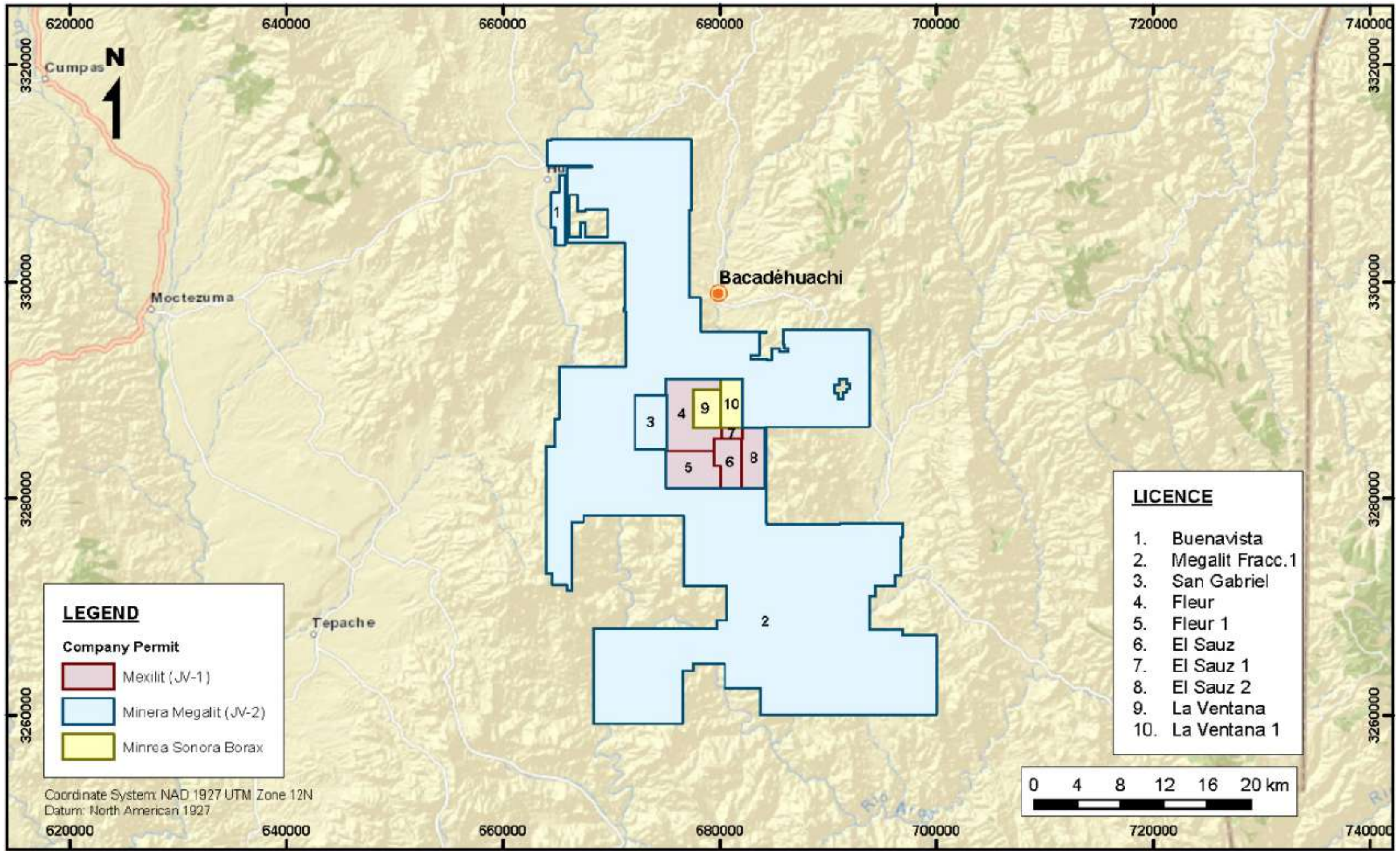
Access to the concessions from Bacadéhuachi is on secondary, dry-weather roads, crossing various privately owned ranches for approximately 11 km. There are two (2) crossing where during a large storm there will be significant water in the streams. These storms are high intensity and short duration storms and should not have negative impacts to the access to the site as the water level will drop typically within a few hours.

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 access to the concessions.

Land owners have provided authorisation for the Company to access the concessions on these roads. Permission to use and upgrade the access road for the Project should be confirmed in the FS.

Figure 4.2: Project Location Plan

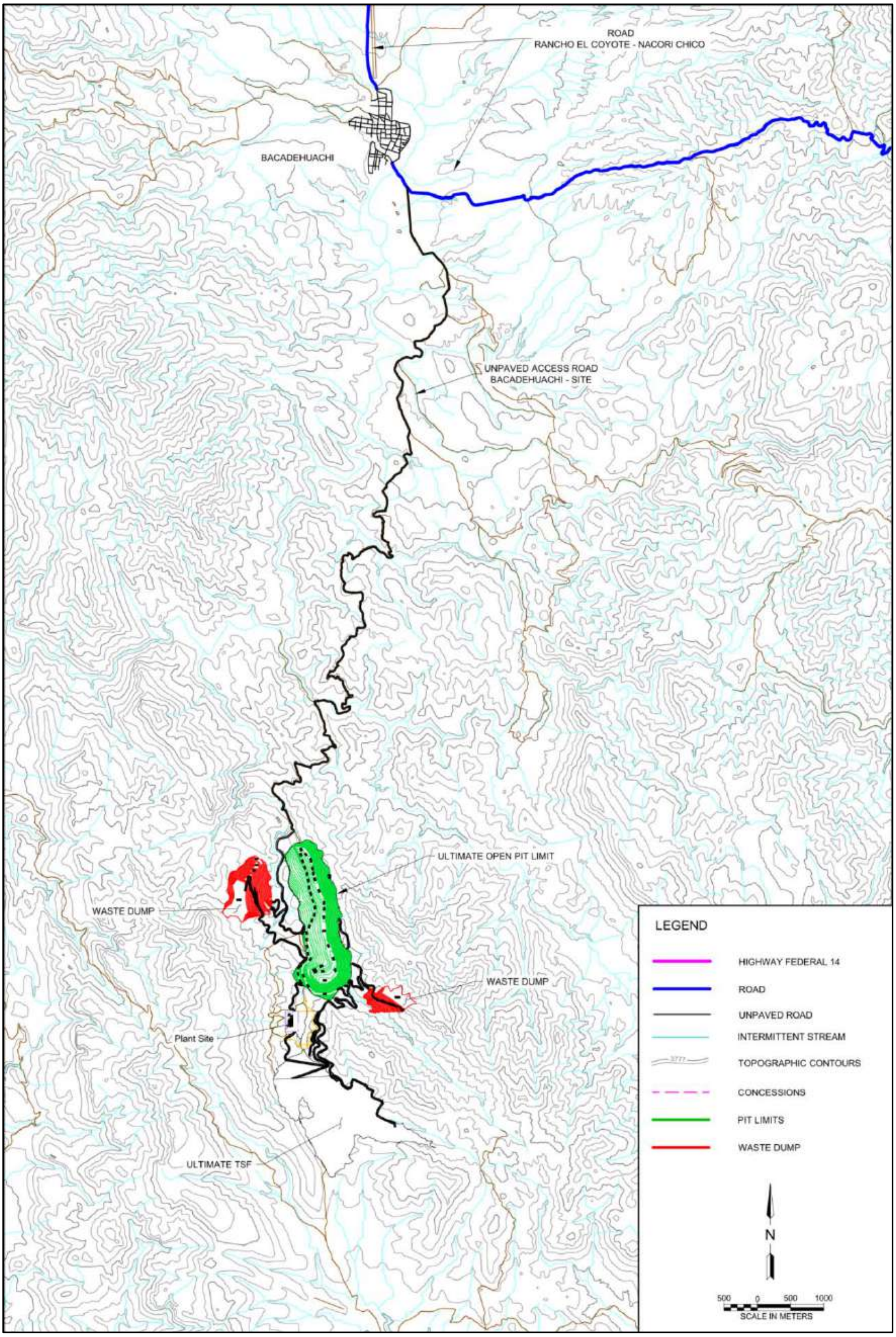
Figure 4.3: Location of the Concessions Owned by Bacanora and its Subsidiaries



Note:

1. Only Mexalit and MSB concessions are discussed in this report

Figure 4.4: Project Plan



5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Topography

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.

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

5.2 Site Access

The Sonora State lies on the geographic corridor connecting the central Mexican highlands (Mexico City) north into the USA along the Pacific Coast.

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 state has four airports in the cities of Hermosillo, Puerto Peñasco, Ciudad Obregón and Nogales. These airports connect the state with various locations within Mexico and internationally.

Railway lines mostly consist of those which lead into the USA.

Guaymas is a city located in the southwest part of the state of Sonora; it is the principal port for the state. Figure 4.2 shows the location of Guaymas in relation to the site. The port has road and rail access and container and bulk handling capabilities.

It is expected that the Port of Guaymas will be utilised for the export of products from the project to Asia. The Port of Guaymas will be accessed via the Federal Highway 14 and 15. Trucked product in containers will be taken from site to El Coyote, which is situated on Federal Highway 14, then south west to Hermosillo and then south to the Port of Guaymas via Federal Highway 15.

Product being delivered to North America would be trucked in containers to Hermosillo using Federal Highway 14 where they will be loaded onto trains and transported to the USA and Canada.

5.3 Proximity to Population Centres

Bacadéhuachi, approximately 11 km from the Project, is the closest town to the Project; it 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.

The Project is approximately three hours' drive north east of the state capital of Hermosillo, a city of approximately 700,000 people. Rail, road and natural gas networks join Hermosillo to the United States of America and Mexico.

5.4 Climate

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

The accumulated annual rainfall for the area is approximately 450 mm. The wet season or desert “monsoon” season occurs between the months of July and September. The Sonoran Desert, because of its seasonal rainfall pattern, hosts plants from the agave, palm, cactus and legume family, as well as many others.

5.5 Infrastructure

Refer to Section 5.2 for a discussion of the rail, road and port infrastructure available and Section 18 for the infrastructure proposed for the Project.

The closest electric power line to the mine site is approximately 10 km north of the mining concessions, passing in close proximity to Bacadéhuachi. The power line then heads toward Nácori Chico, the next village southeast from Bacadéhuachi.

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 Concessions prior to Bacanora commencing operations in 2010.

6.3 Previous Mineral Resource Estimation

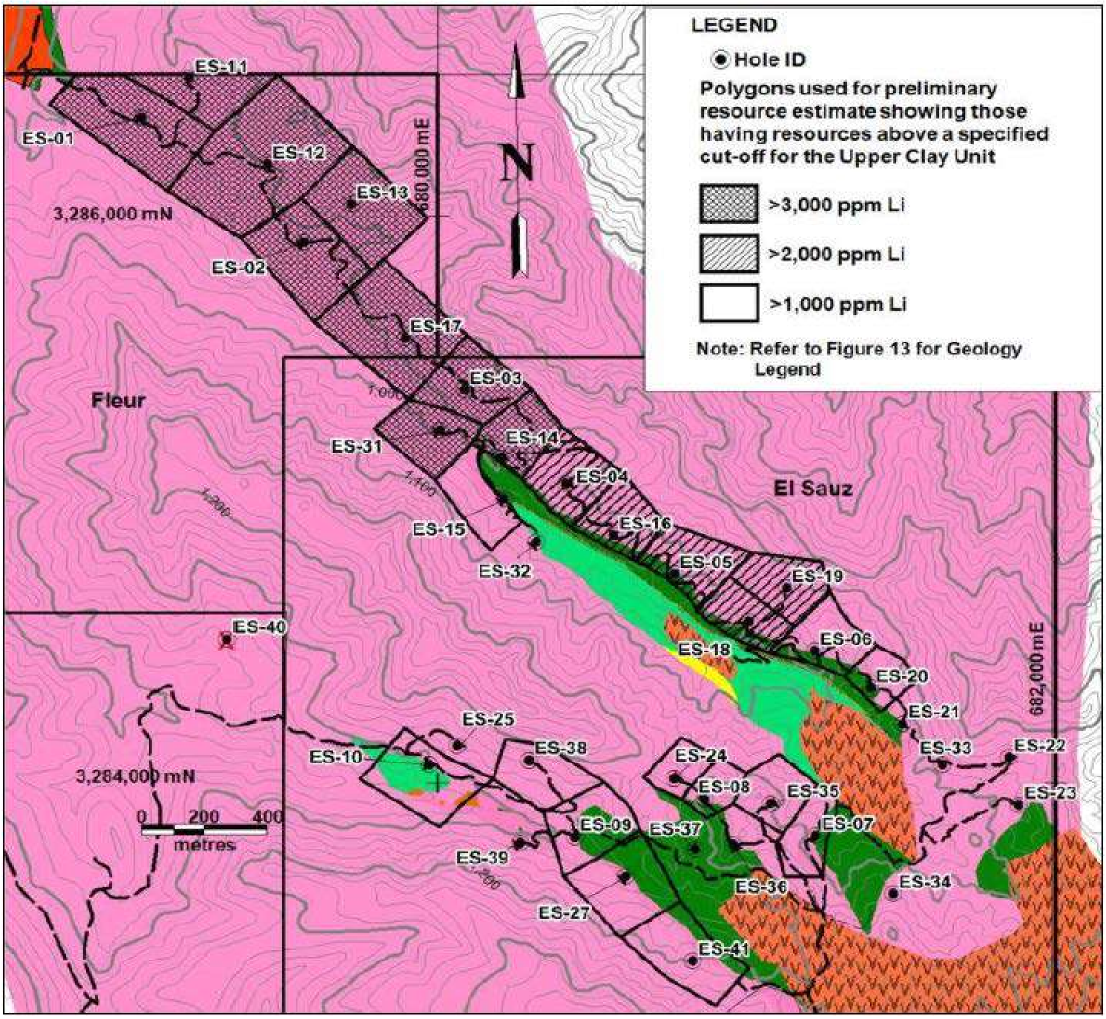
6.3.1 Amerlin Exploration Services 2014

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 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)[2]	Li (ppm)	LCE (%)[1]	LCE Tonnage (Kt)[2]
Upper	1000	97	1,657	0.88	856
	2000	47	2,222	1.18	560
	3000	18	3,773	2.01	369
Lower	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

[1]LCE = Lithium carbonate equivalent and assumes that all lithium can be converted to lithium carbonate with no recovery or processing losses.
[2] Dry bulk density = 2.38 t/m^3

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.

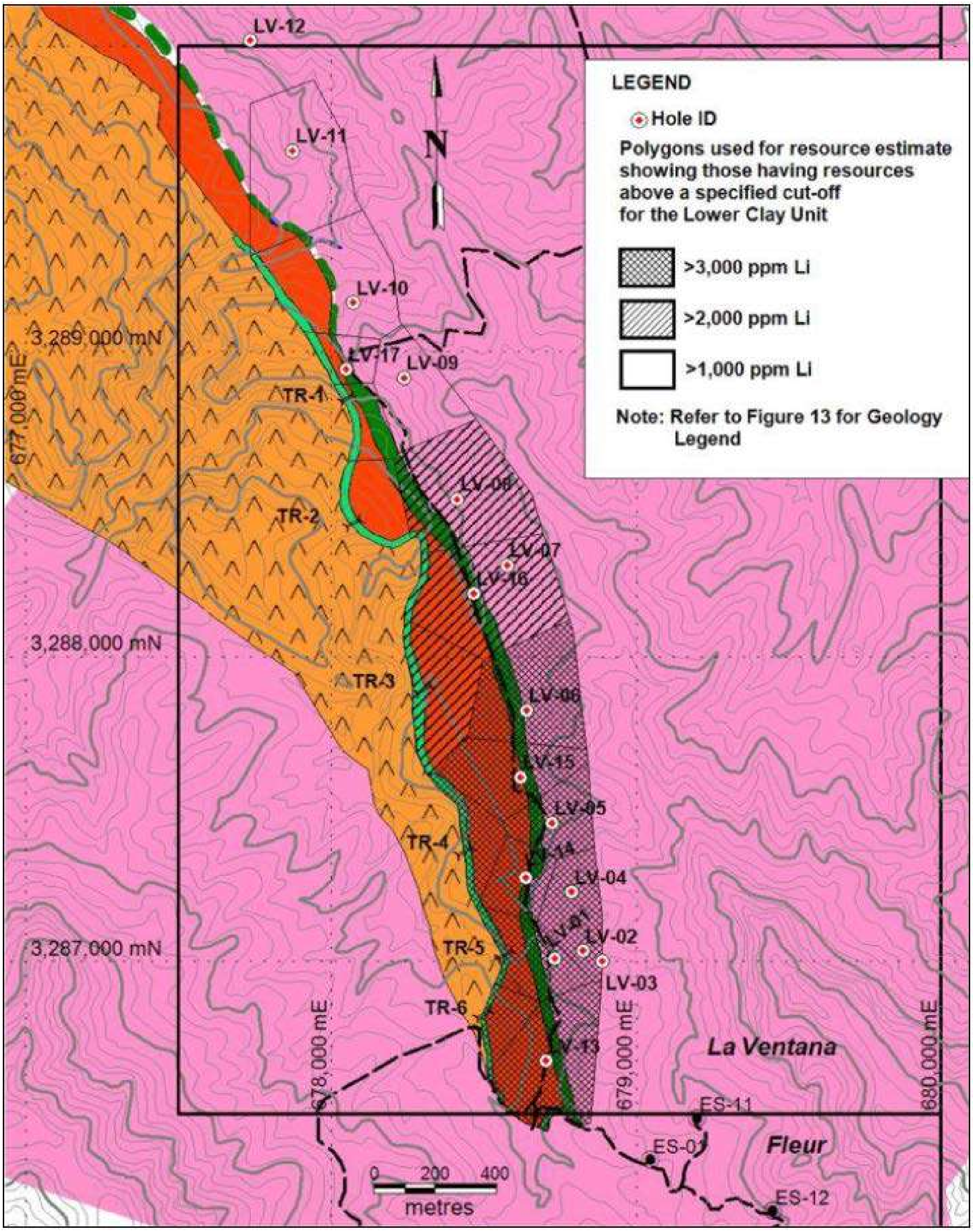
A total Indicated Mineral Resource, based on CIM Definition Standards for Mineral Resources and Reserves (2010), was estimated for each of the lithium-bearing units and is given in Table 6.2. Using a 2,000 ppm Li cut-off, an Indicated Mineral Resource for the Upper and Lower Clay Units of 75 Mt averaging 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)[2]	Li (ppm)	LCE (%)[1]	LCE Tonnage (kt)[2]
Upper	1000	31	1,824	0.97	289
	2000	21	2,256	1.2	258
	3000	10	3,186	1.7	170
Lower	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

[1]LCE = Lithium carbonate equivalent and assumes that all lithium can be converted to lithium carbonate with no recovery or processing losses.
[2] Dry bulk density = 2.38 t/m^3

Figure 6.2: Plan of Resource Polygons and Base Geological Map for La Ventana



6.3.2 SRK May 2015

SRK completed a Mineral Resource estimate 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
	Combined			95	2,200	220	1,140
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
	Combined			500	2,300	1,200	6,300

***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 Mineral Resource estimate 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 Mineral Resource estimate 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_2CO_3).
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)

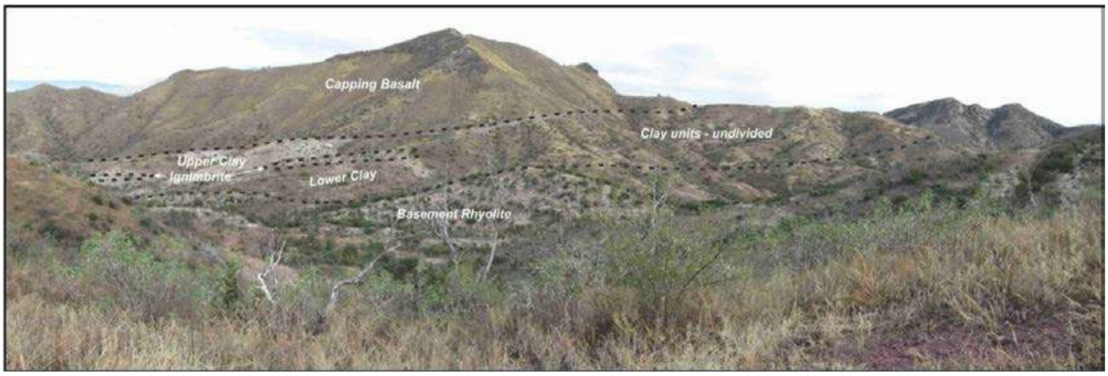
Unit	True Thickness (m)	Unit/Subunit Description
Capping basalt	Not determined	Basalt. Contains greenish olivine crystals. Veinlets of kaolinite/alunite (white/greenish, powdery).
Upper clay unit	28.0 (14.10 – 40.39)	Reddish, medium-coarse grained sandstone with calcite veinlets.
		Pale grey tuffaceaous 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 polylithionite 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 volcaniclastic 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 Mineria 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.

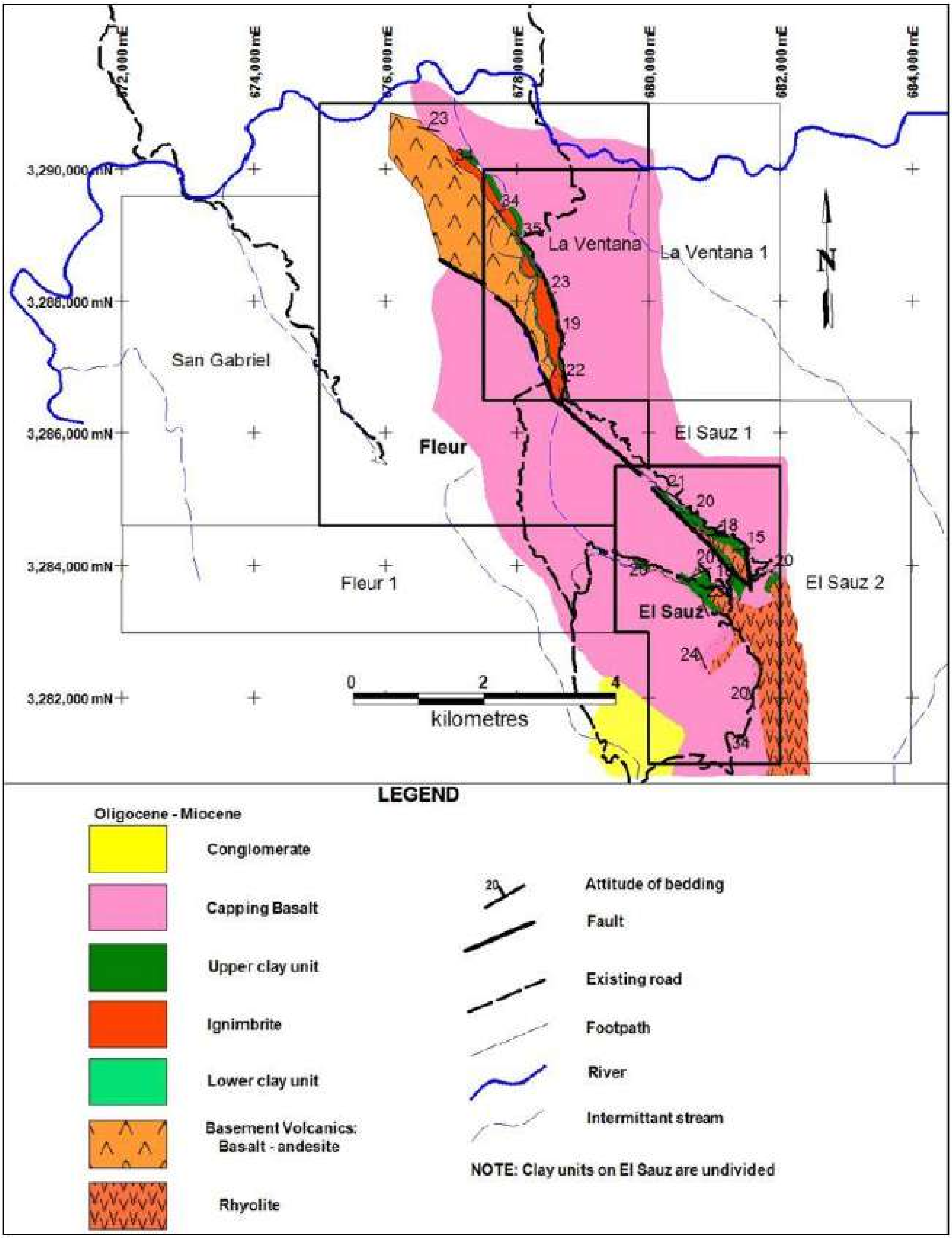
Results of analyses performed on the samples by ALS Chemex ranged from 49 to 7,220 ppm Li, with 39 samples greater than 1,000 ppm Li. The results indicated that significant lithium-bearing clay units occur on El Sauz.

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.

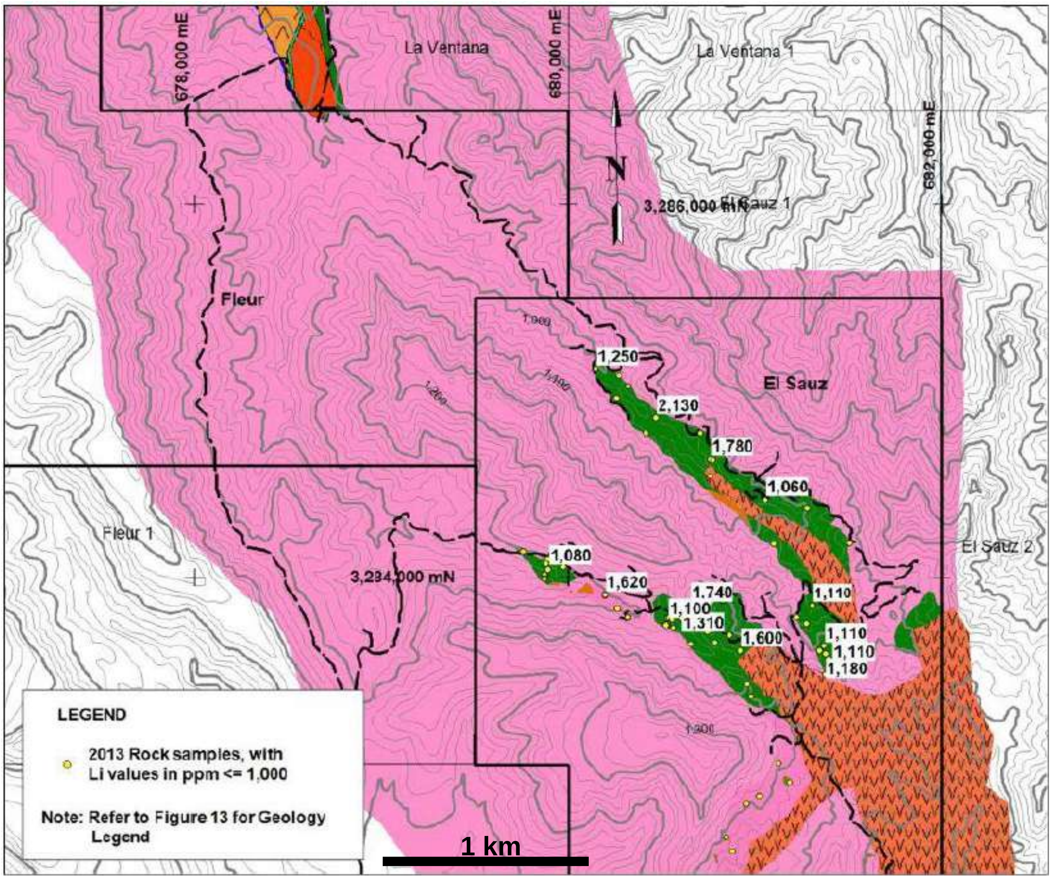
Figure 9.1: Initial Mapping Undertaken for the Sonora Lithium Project



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

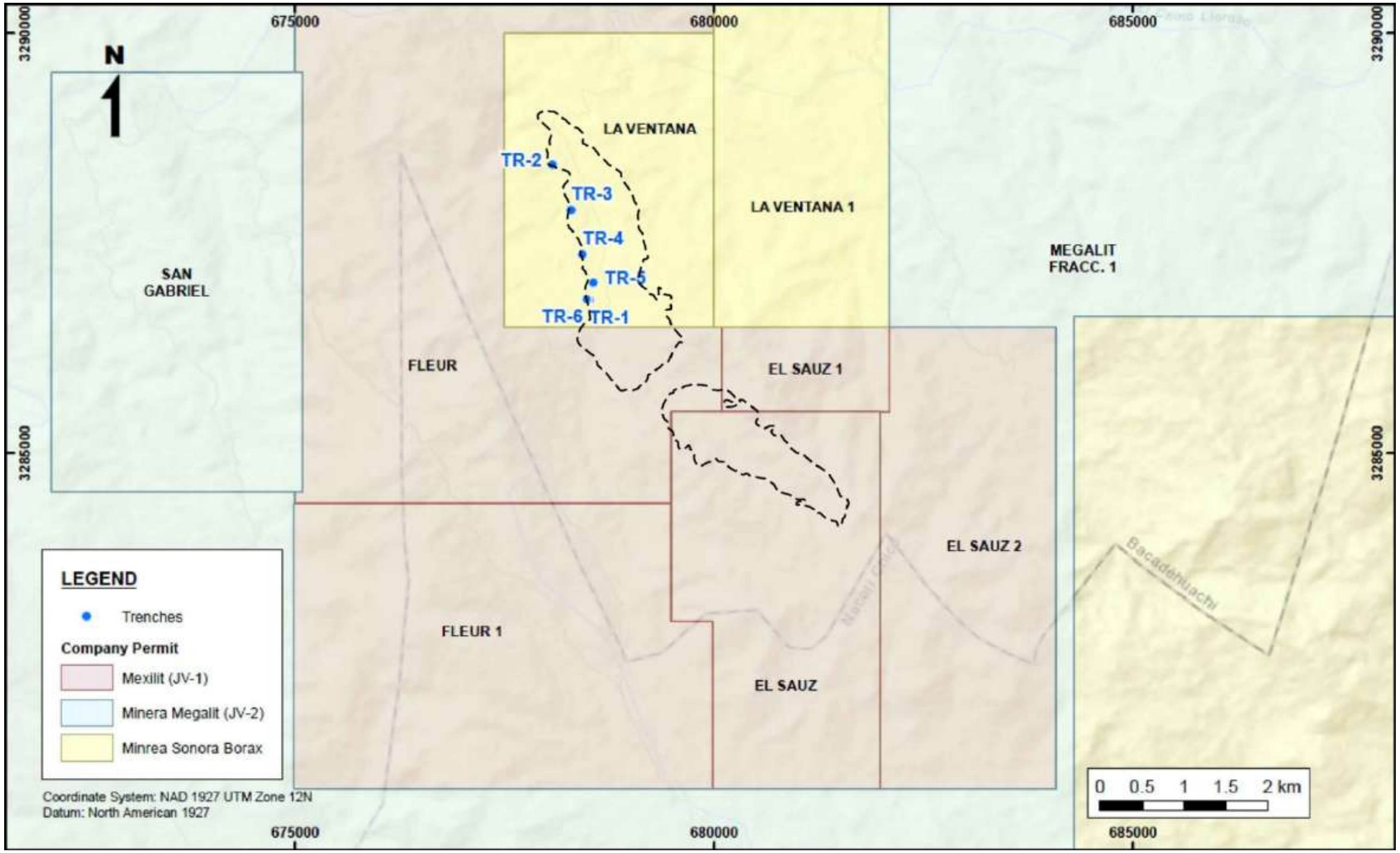
In early 2014, six trenches were excavated across exposures of the Lower Clay Unit on La Ventana to provide additional grade control. Continuous chip samples were taken at intervals averaging 1.5 m in length. Figure 9.2 shows TR-6 excavated across the Lower Clay Unit in La Ventana. Collar locations of 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 Global Positioning System 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 70º. None of the holes has been surveyed with down-hole survey or core orientation technology.

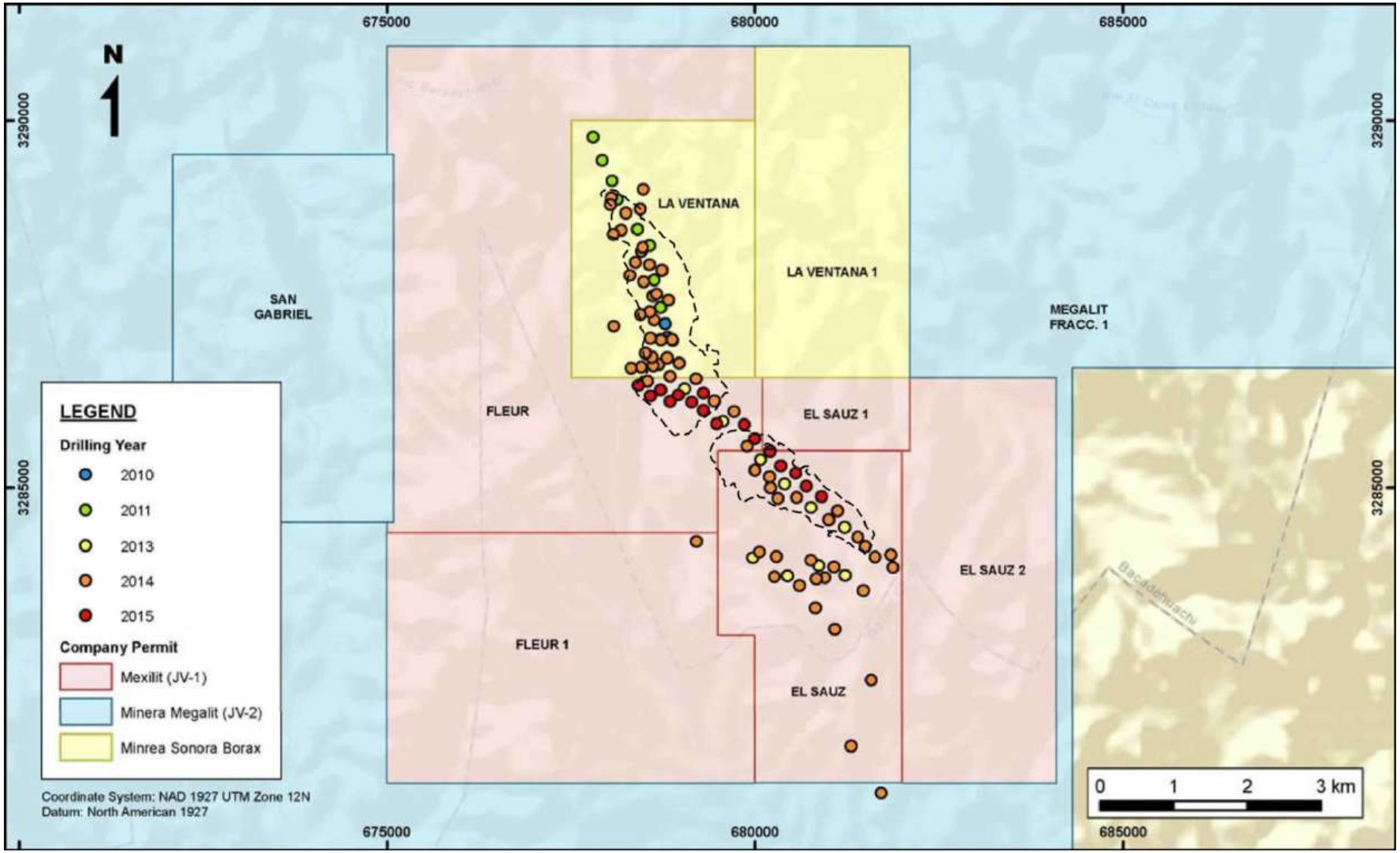
10.3 Summary of Drillhole Locations

Figure 10.2 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, Bacadéhuachi

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 ±1 g.

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

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 90º 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
Total Samples	159	4

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

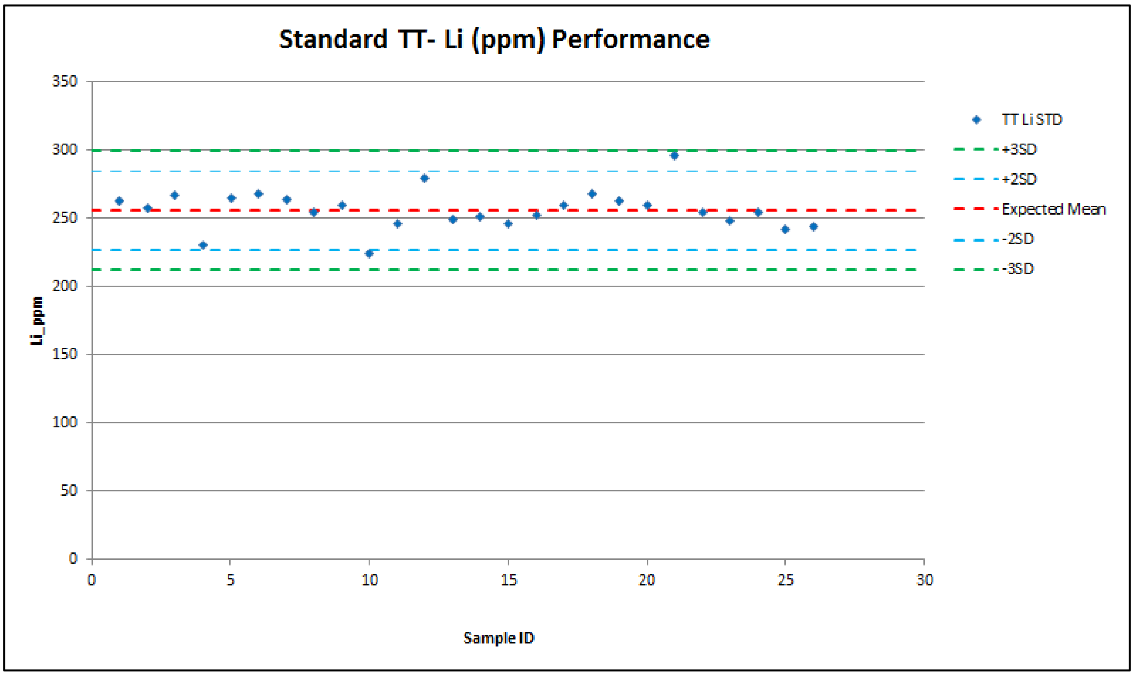


Figure 11.4: Low Grade Lithium Reference Standard MY-TT

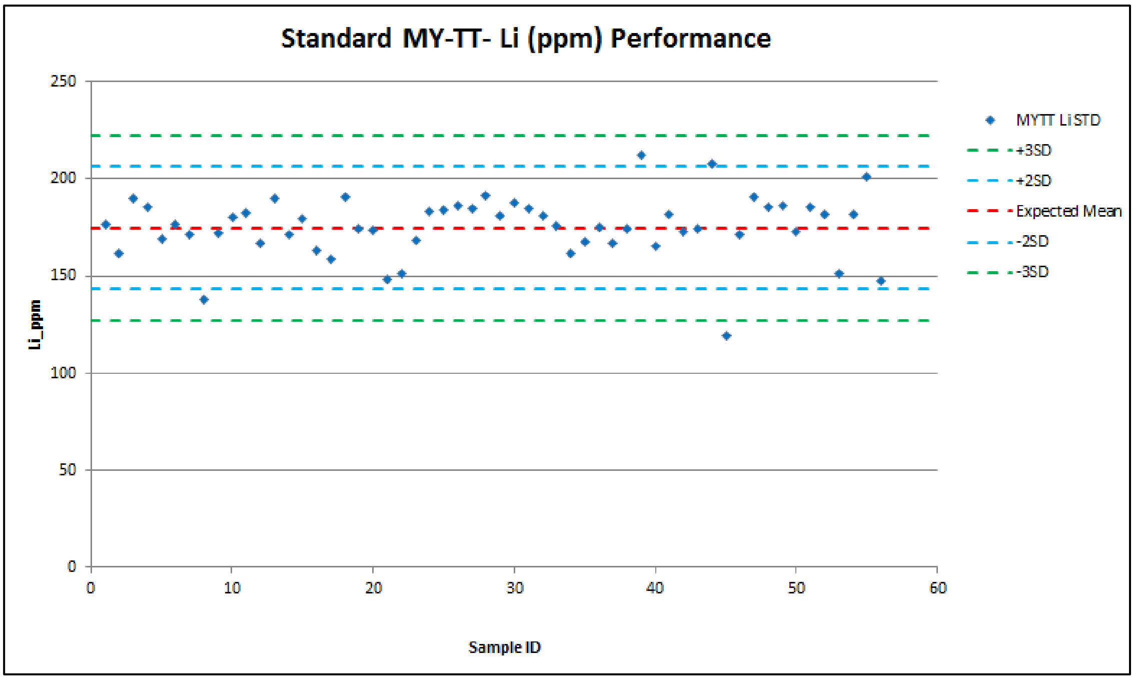
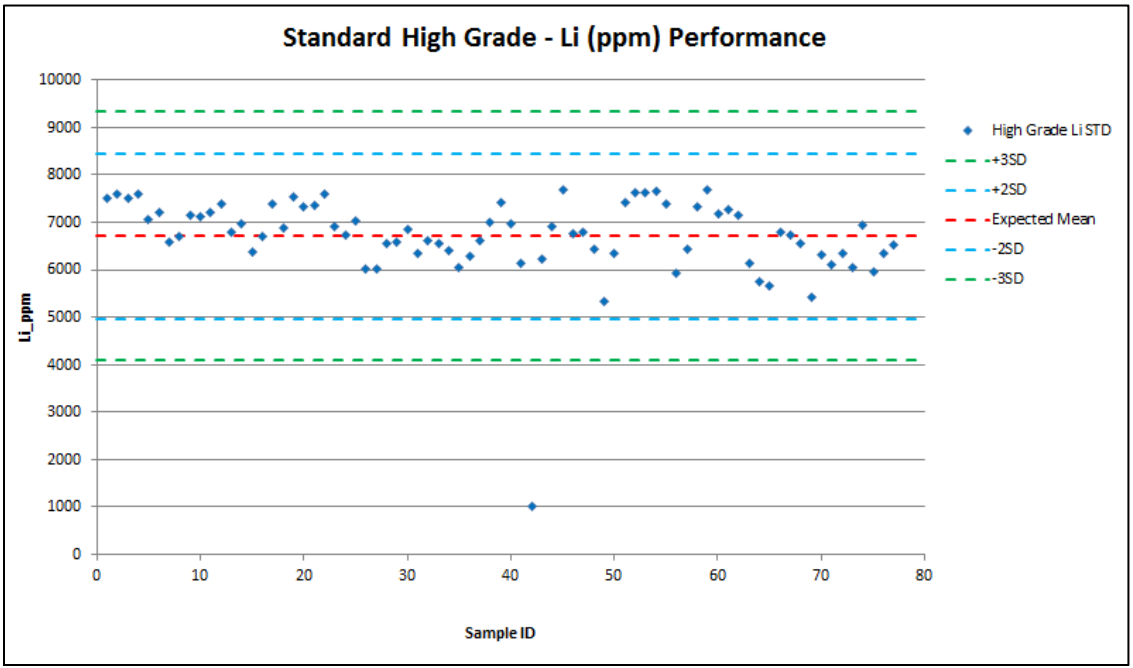


Figure 11.5: High Grade Lithium Reference Standard



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

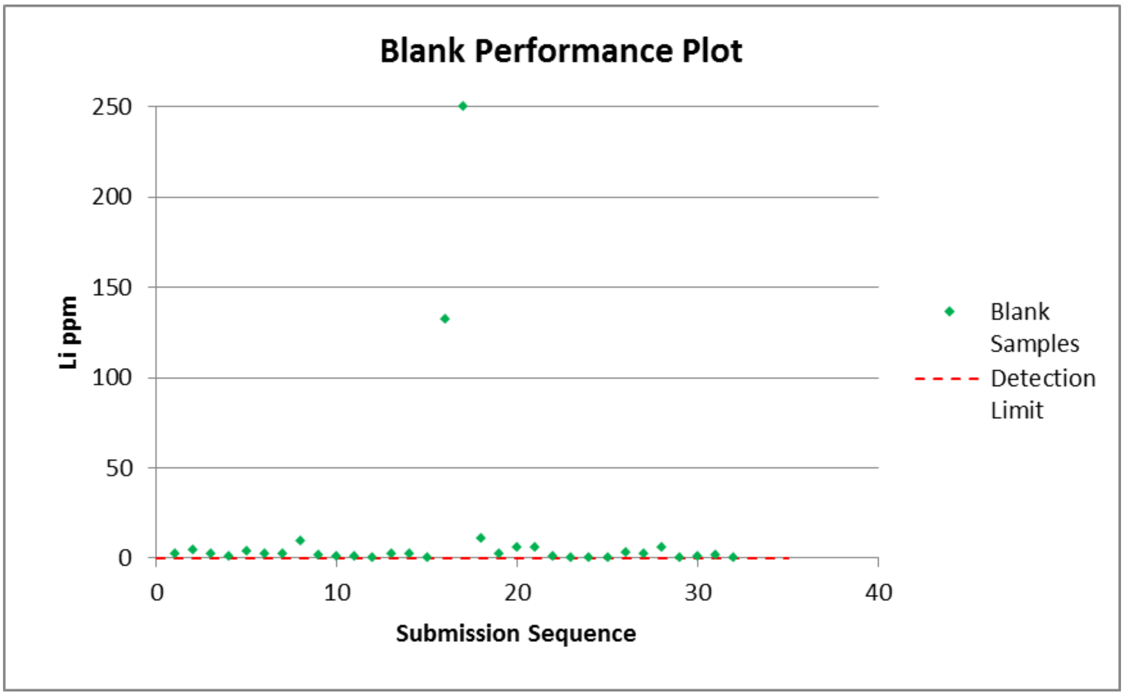
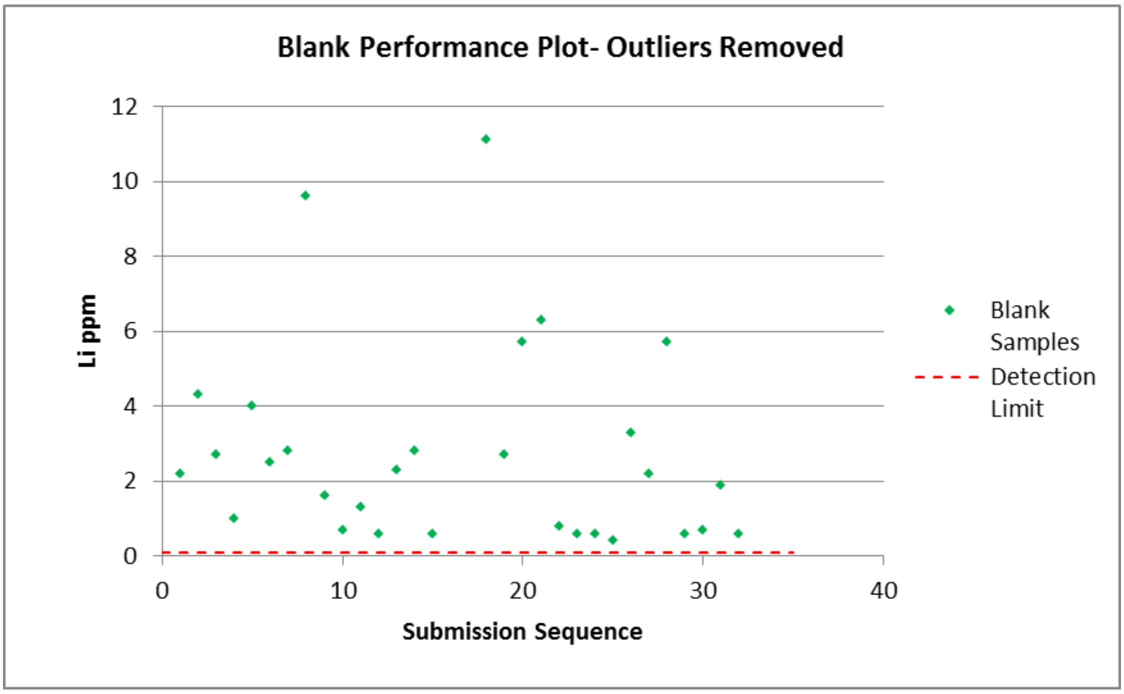


Figure 11.7: Blank Performance Plot with Two Outliers Removed

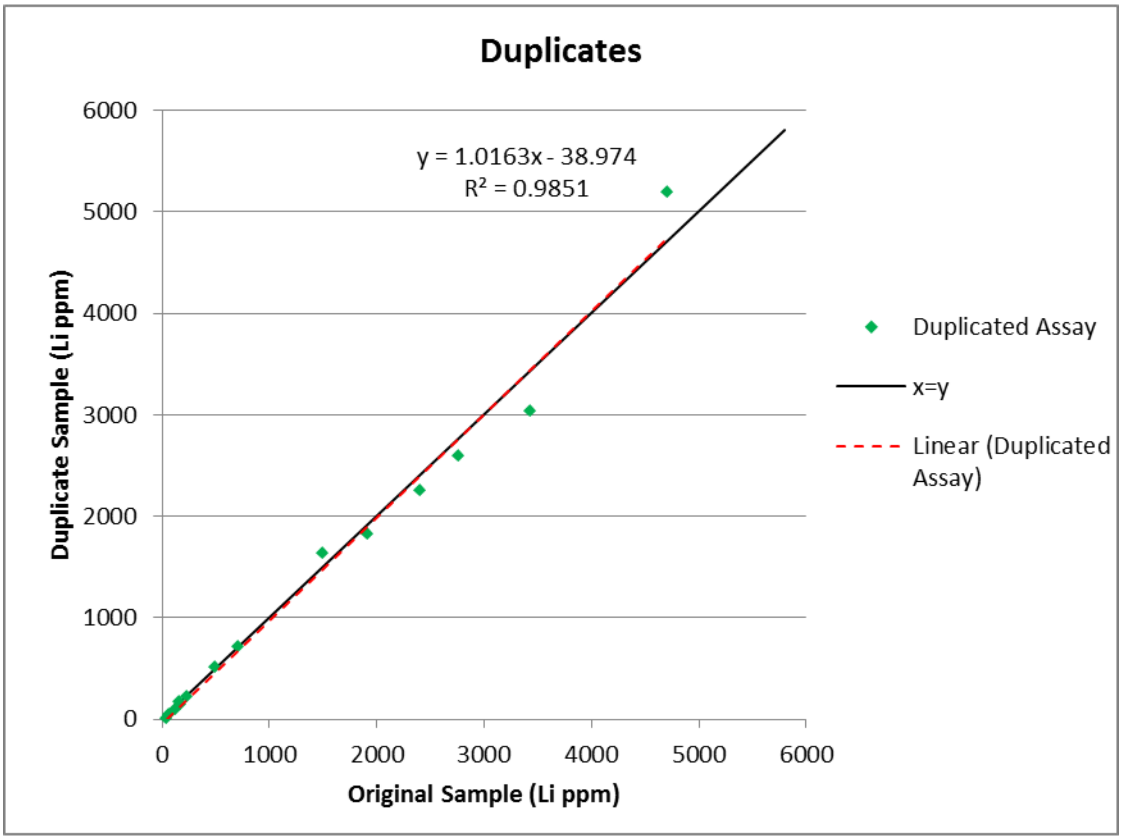


11.3.4 Duplicates

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.

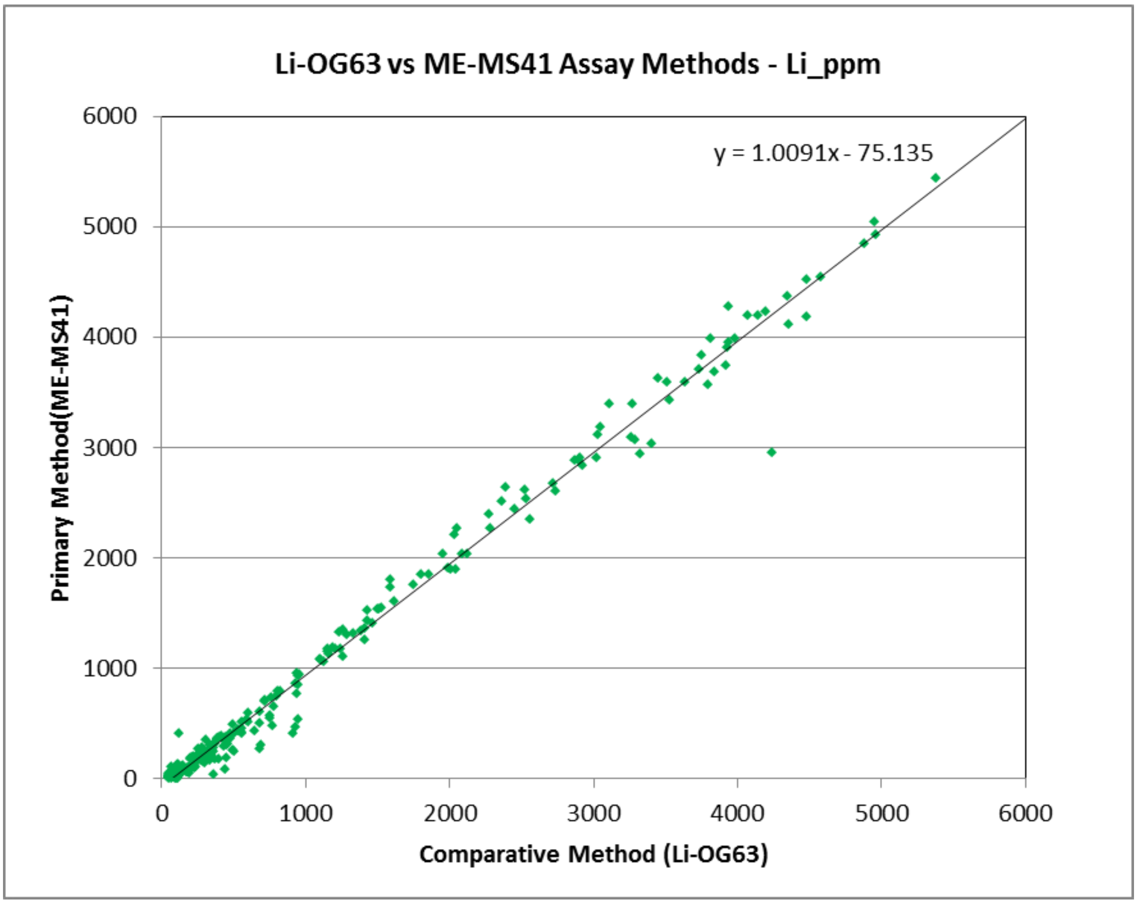
Figure 11.8: Duplicate Assay Comparison



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.

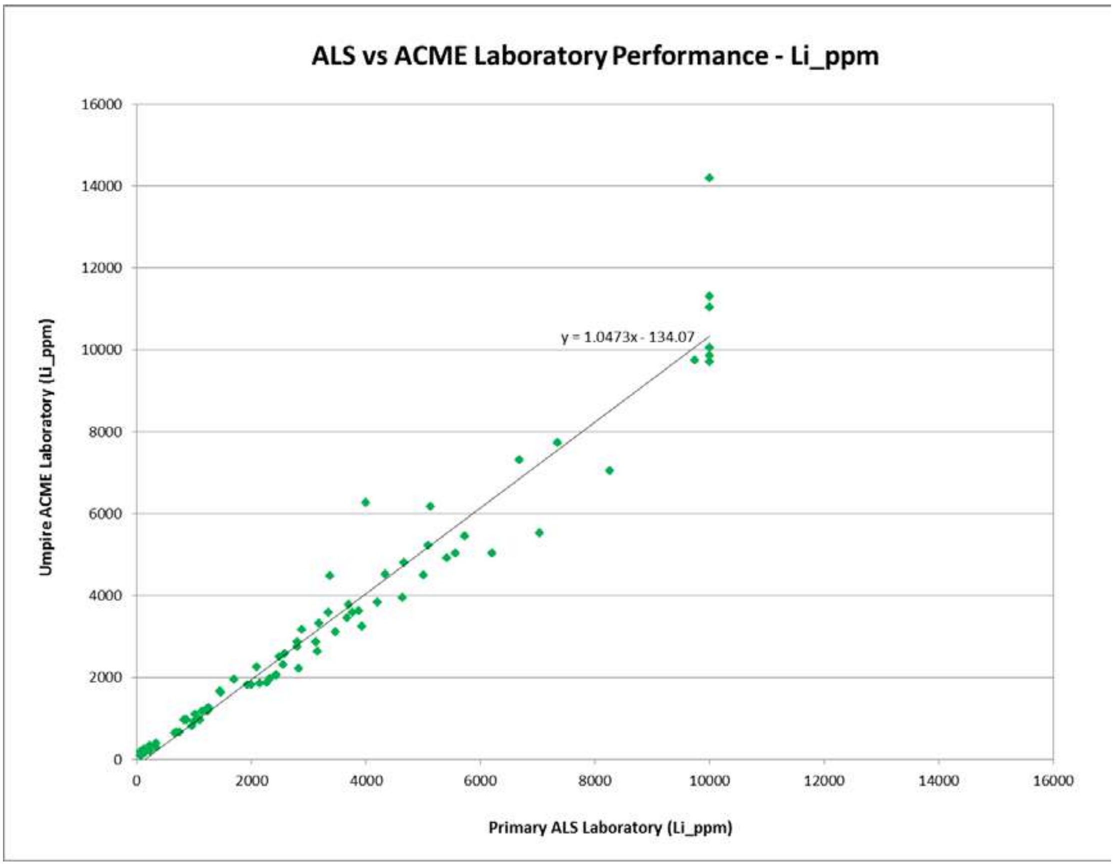
Figure 11.9: Duplicate Sample Method Comparison



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 Mineral Resource estimate. 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).
- Draft Preliminary Economic Assessment ("PEA") report, *Preliminary Economic Assessment for the El Sauz Concession, Sonora Lithium Project, C Verley, October 2014.*
- 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
  - 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 managed the PFS testwork program carried out at SGS laboratories in Lakefield, Canada ("SGS Testwork").

13.1 Introduction

Initial gypsum roasting testwork achieved relatively low lithium extractions (58%) while also requiring salt (NaCl) to increase extraction to 72%. There were concerns that the addition of NaCl would produce gaseous lithium chloride which would reduce Li_2CO_3 production.

Acid bake testwork increased lithium extraction to about 84% however the magnesium extraction was also relatively high at 72%. The high magnesium extraction made these flowsheets uneconomic due to the high operating costs associated with the sulphuric acid to leach the ore and caustic soda to precipitate the leached magnesium.

Subsequent gypsum roasting testwork showed that higher lithium extractions (i.e. 87%) could be achieved with the use of increased bed depths to maximize the uptake of sulphur dioxide and thereby reduce the consumption of reagents (gypsum). Gypsum roasting reduces the extraction of magnesium to about 0.01% which significantly reduces operating costs as compared to acid bake.

Testwork indicates that it is feasible to use the recovered potassium sulfate (K_2SO_4) in the roasting circuit to extract about 80% lithium while reducing gypsum consumption/operating costs. Marketing and financial modelling shows that the sale of K_2SO_4 is a significant by-product and therefore the base case flowsheet produces K_2SO_4 for sale.

The most important impurities that need to be managed for the production of battery-grade lithium carbonate are the sulfate, sodium and calcium levels. Magnesium, manganese, silica, aluminium and iron are removed by precipitation and ion exchange in impurity removal. Calcium is minimised by a combination of adding soda ash, ion exchange and the addition of EDTA, if required.

Sodium, potassium, sulfate and chloride are reduced by washing the lithium carbonate crystals to remove the contaminants on the surface.

The design criteria which were used to develop the mass balance are based on the SGS Testwork. The overall lithium recovery of 69.8% is based on 82.0% lithium recovery in beneficiation (Test F14) and 87.2% recovery in extraction (Test SR-T10-WL3). Refer to Table 17.1 for further details of the key process design criteria used for the design of the process plant.

13.2 Testwork Feed Grade

The initial objective of the testwork program was to conceptualise a beneficiation flowsheet for carbonate and silicate gangue rejection. The feed grade of the sample used for beneficiation testwork is summarised in Table 13.1.

Table 13.1: Head Sample Analysis

Species	%
Li	0.35
SiO_2	57.3
Al_2O_3	6.13
Fe_2O_3	0.93
MgO	3.48
CaO	11.9
Na_2O	0.74
K_2O	3.04
TiO_2	0.14
P_2O_5	0.01
MnO	0.05
Cr_2O_3	<0.01
V_2O_5	<0.01
LOI	14.18
Sum	97.8

The 500 kg sample was obtained from Trench 4 (TR-4), which as shown in Figure 9.4, is within the proposed pit. The mine schedules (refer to Section 16.2) show that the average life of mine grade is 0.35% Li and therefore the testwork sample is representative for lithium feed grade. The samples were obtained from the Lower Clay ore type which is the basis of the mine schedules.

Upper Clay at 0.17% Li is lower grade than the Lower Clays at 0.35% Li; Upper Clay is reporting to the mineralised waste stockpile. A future opportunity exists in that beneficiation and flotation testwork may be successful to enable this material to be plant feed.

The plant design is based on potassium feed grade at 2.5% K based on SGS Testwork. Resource and mine scheduling show that the plant feed is expected to average 1.7% K in Stage 1 and 1.5% is the life of mine average. Further evaluation of the lower potassium feed grades are recommended in the FS.

The mass balance is currently based on Ca, Mg, P and Na feed grades from SGS Testwork. Further work is required in the next phase of engineering to increase confidence in these feed grades as they drive operating conditions in the evaporation stage (Na) and operating costs (Ca and Mg in impurity removal).

13.3 Mineralogical Testwork

X-Ray Diffraction analysis showed that the sample consisted of major amounts of calcite, moderate quartz and K-feldspar and minor hectorite, montmorillonite, swinefordite, pyroxene, chlorite, mica and plagioclase.

Lithium occurs in a number of minerals. Hectorite contains the largest amounts of lithium at 0.9 to 1.8%. Clay and mica minerals show a wide range of lithium concentration from a few ppm to 0.52%. Carbonates and quartz can also carry some lithium although some of the lithium might be derived from associated clay minerals.

13.4 Beneficiation Testwork

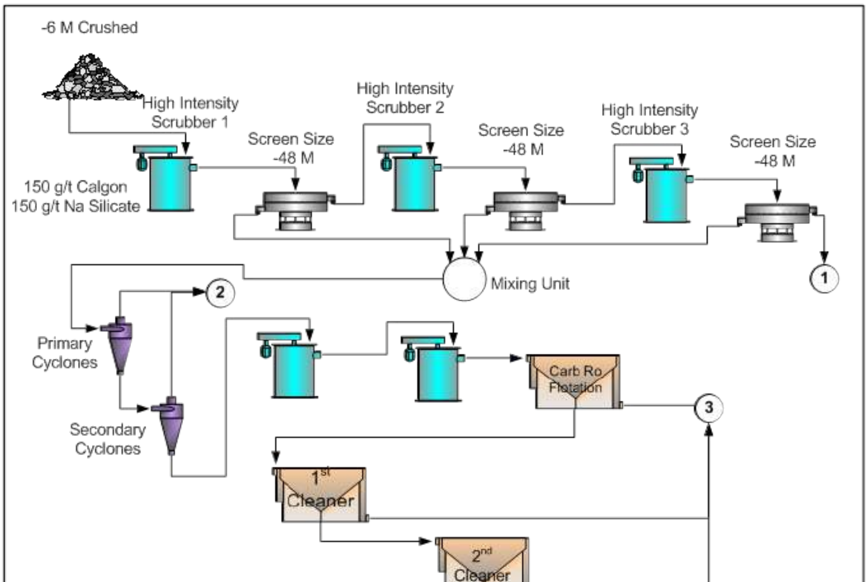
In order to prepare the sample for beneficiation testing, the crushed ore was scrubbed. After three stages of scrubbing, it was possible to reject a low grade coarse fraction (+300 µm) composed of mostly silicate and carbonate gangue minerals in approximately 23% of the mass. The undersize fraction was passed through a series of small diameter cyclones to target separation of fine particles smaller than 20 µm.

The majority of the lithium, approximately 70%, deported to this fines fraction along with 35% of the mass. The lithium assay of the fine fraction was upgraded from 0.35% Li to 0.65% Li. The cyclone underflow stream (i.e -300 µm + 20 µm) could be further processed by reverse flotation to reject carbonates.

The carbonate flotation 'sinks' was then recombined with the slimes as final lithium concentrate with 85% lithium recovery in 60% of the original mass. Due to the very fine nature of the -20 µm slimes, thickening of cyclone overflow was not efficient and presents a potential issue for plant operations. Further testwork is proposed in FS.

The beneficiation testwork flowsheet is depicted in Figure 13.1.

Figure 13.1: Testwork Beneficiation Flowsheet

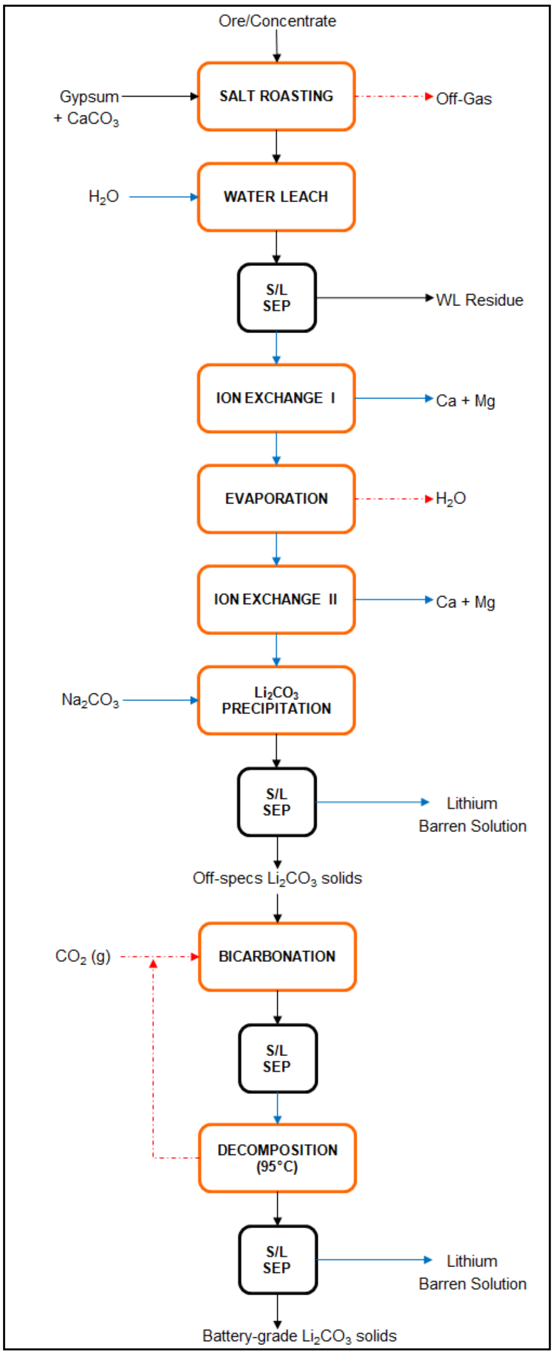


Product Legend	
1	+300 Micron Fraction (Real Tailings)
2	Cyclone Overflow (Li Concentrate)
3	Carb Flot Tailinings (Li Concentrate)
4	Carb 3rd Cl Conc. (Real Tailings)

13.5 Extraction Testwork

A bench-scale test program was conducted to develop the process chemistry for the production of battery-grade lithium carbonate based on the conceptual testwork flowsheet as shown in Figure 13.2.

Figure 13.2: Testwork Extraction and Precipitation Flowsheet



In the gypsum roasting and water leach testwork different combinations of reagents were tested as well as the effects of roasting temperature, water leach temperature and water leach pulp density.

Gypsum roasting was typically performed at a 5 ore : 1.5 gypsum : 0 limestone, for one hour at 1000°C, followed by water leach at 20% solids and 65 °C. A one hour leach retention time obtained lithium extractions of 87% to 94% depending on which ore/concentrate sample was used. With the exception of sodium and potassium other metals had low extractions.

Lithium tenors in the water leach solutions ranged between 1.0 g/L and 3.9 g/L mostly due to different water leach pulp densities. Sodium and potassium were the main impurities while there was negligible iron, aluminium, magnesium, or manganese in the water leach solutions; calcium tenors varied from 200 mg/L to 450 mg/L depending on water leach temperature.

Lithium extractions did not seem to be affected by the water leach temperature in the range tested (25°C to 85°C). Potassium extractions were similar regardless of temperature, while sodium extractions seemed to decrease at the higher temperatures tested. Calcium concentration in the water leach solutions reduced when the water leach temperature was increased going from 422 mg/L at 25°C to 203 mg/L at 85°C.

Lithium extractions slightly decreased from 94% to 91% when the water leach pulp density was increased from 20% solids to 40% solids. Potassium and sodium extractions followed a similar trend with lower extractions at higher water leach pulp densities. Lithium tenors increased considerably with the higher pulp densities, from 1590 mg/L Li at 20% to 3890 mg/L Li at 40%. A trade-off study is recommended to investigate whether higher lithium tenors justify the slight decrease of lithium extractions.

Ion exchange (“IX”) was used for the removal of calcium and magnesium from the water leach process solution. Purolite® (a registered trade mark of Bro-Tech Corporation, doing business as the Purolite Company) S-950 (a macroporous aminophosphonic acid chelating resin used with a feed rate of 10 BV/h) successfully removed approximately 100% of calcium and magnesium from the lithium solutions. Maximum loading was approximately 1.89 equiv/L.

Alternatively 96% of the calcium was removed from the leach solution using sodium carbonate.

Due to the low lithium tenors in the water leach solution a concentration step was needed. By boiling off 75% to 96% of the water in the leach solution the lithium tenors in the concentrated solutions of 11.3 g/L to 16.7 g/L were achieved; the more aggressive the evaporation the higher the lithium tenor in the concentrated solution.

Lithium carbonate precipitation was carried out in the concentrated solutions by the addition of a solution of 28% sodium carbonate at 102% stoichiometric ratio at 95°C and 30 minutes retention time. Lithium precipitation ranged between 52% and 75%, the higher lithium precipitation due to higher lithium tenor in the solution fed to lithium carbonate precipitation.

The precipitates did not initially meet the battery-grade specifications; maximum lithium carbonate grade was 99.2%; sodium, sulphur, calcium, magnesium, iron, potassium, and aluminium contents were above required limits. Sodium, potassium, and sulphur contents in the precipitate might be explained by sulfate salts crystallisation due to their high concentrations in the feed solution, or by inefficient washing of the lithium carbonate precipitate. Calcium and magnesium contents were above specification mostly due to their high concentrations in the feed solution and the lower-than-needed ethylenediaminetetraacetic acid ("EDTA") addition.

The lithium carbonate solids were subjected to a bi-carbonation process, which is included in the flowsheet, to produce battery-grade lithium carbonate. The lithium carbonate solids were combined and mixed with deionised water to a target pulp density of 5% solids. Temperature was set at 15°C. CO_2 gas was added at 1 L/min (at 20 psig) and the test was run for two hours. More than 99% of the solids were dissolved; lithium, sodium and potassium were dissolved completely while calcium (23%) and magnesium (61%) were partially dissolved. The lithium tenor in the bi-carbonate solution was 8.7 g/L.

The bicarbonate solution was subjected to decomposition in order to produce lithium carbonate solids; it was heated up to 95 °C and temperature was maintained for one hour. Due to the presence of calcium (1.2 mg/L) and magnesium (1.7 mg/L) in the feed solution EDTA (at 125% stoichiometric ratio with calcium and magnesium) was added in order to avoid calcium and magnesium co-precipitation. Lithium precipitation was 79%; the lithium carbonate precipitate did meet the battery-grade specifications; lithium carbonate content in the precipitate was calculated by SGS to be 99.96%.

Further testwork is recommended to test potassium and sulfate recovery from the battery-grade barren solutions and to determine whether EDTA is needed to obtain battery-grade lithium carbonate.

14 MINERAL RESOURCE ESTIMATION

14.1 Introduction

The March 2016 Mineral Resource estimate 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
- 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.
- Preliminary Economic Model prepared by REM internally (Microsoft Excel).
- Draft Preliminary Economic Assessment ("PEA") report, *Preliminary Economic Assessment for the El Sauz Concession, Sonora Lithium Project, C Verley, October 2014.*
- Mapinfo data files relating to:
  - topography
  - licence tenure
  - 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

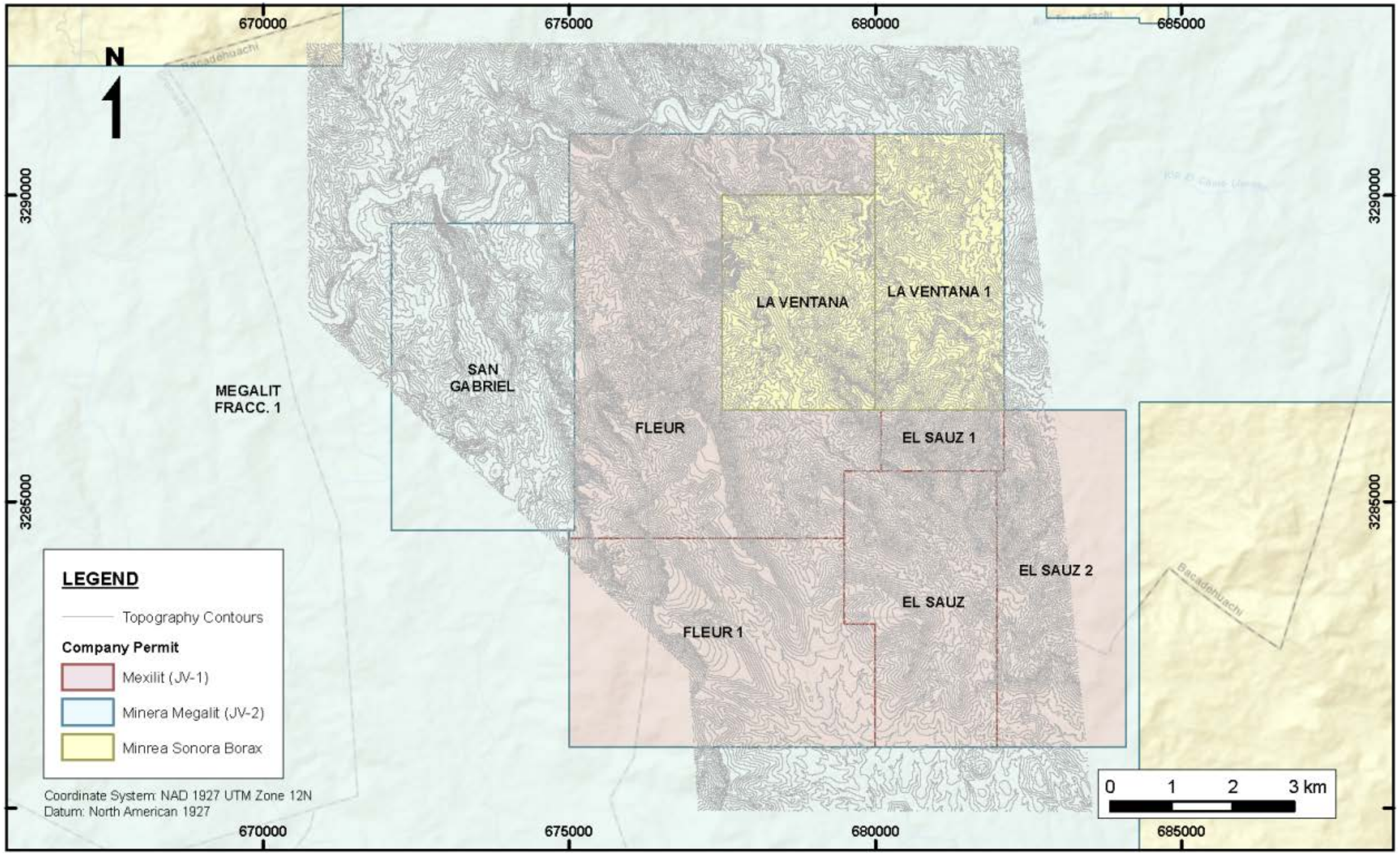
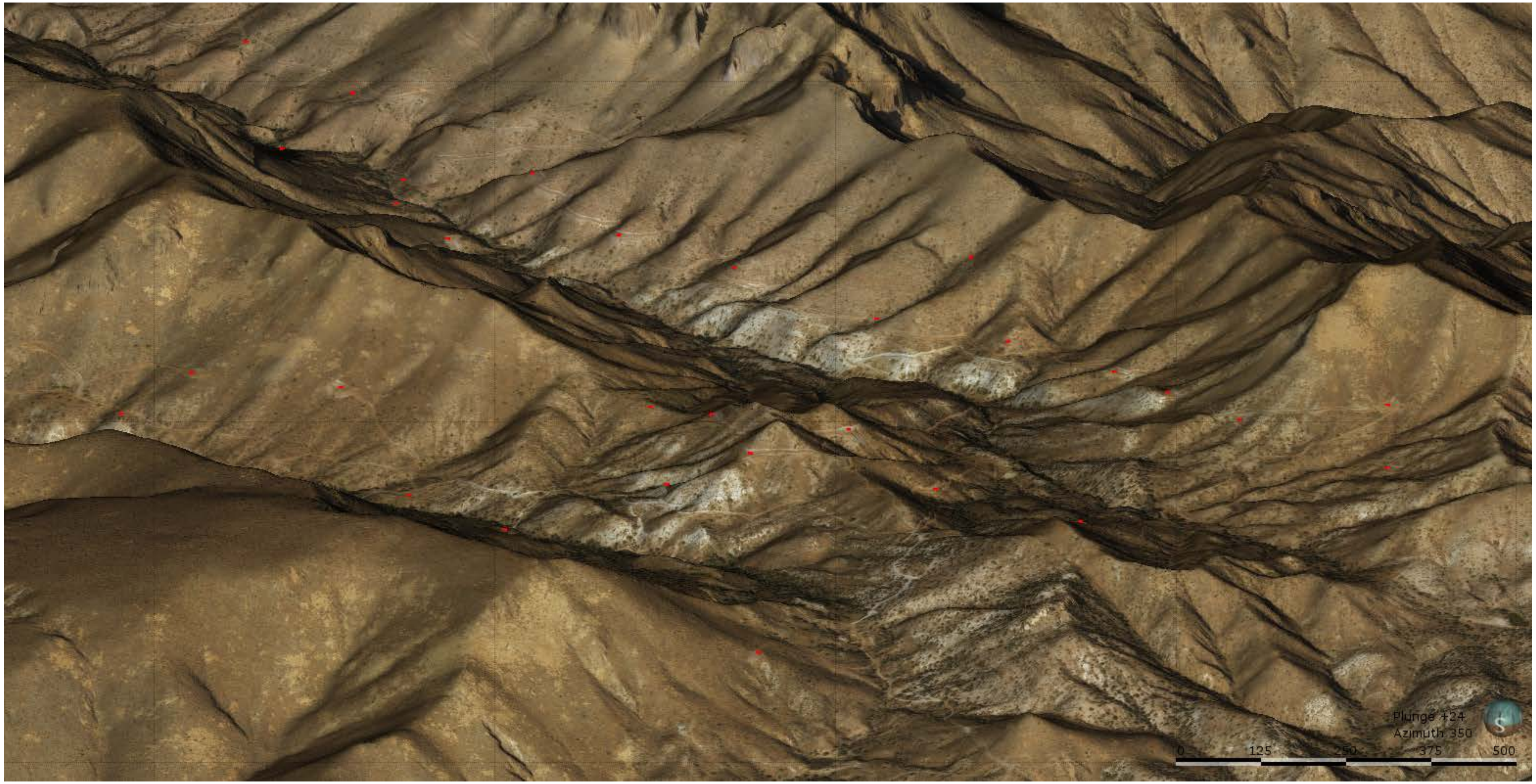


Figure 14.2: Aerial Imagery Draped over Topographic Mesh to Validate Drillhole Locations (red)



14.5 Geological Modelling

The Mineral Resource estimate 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

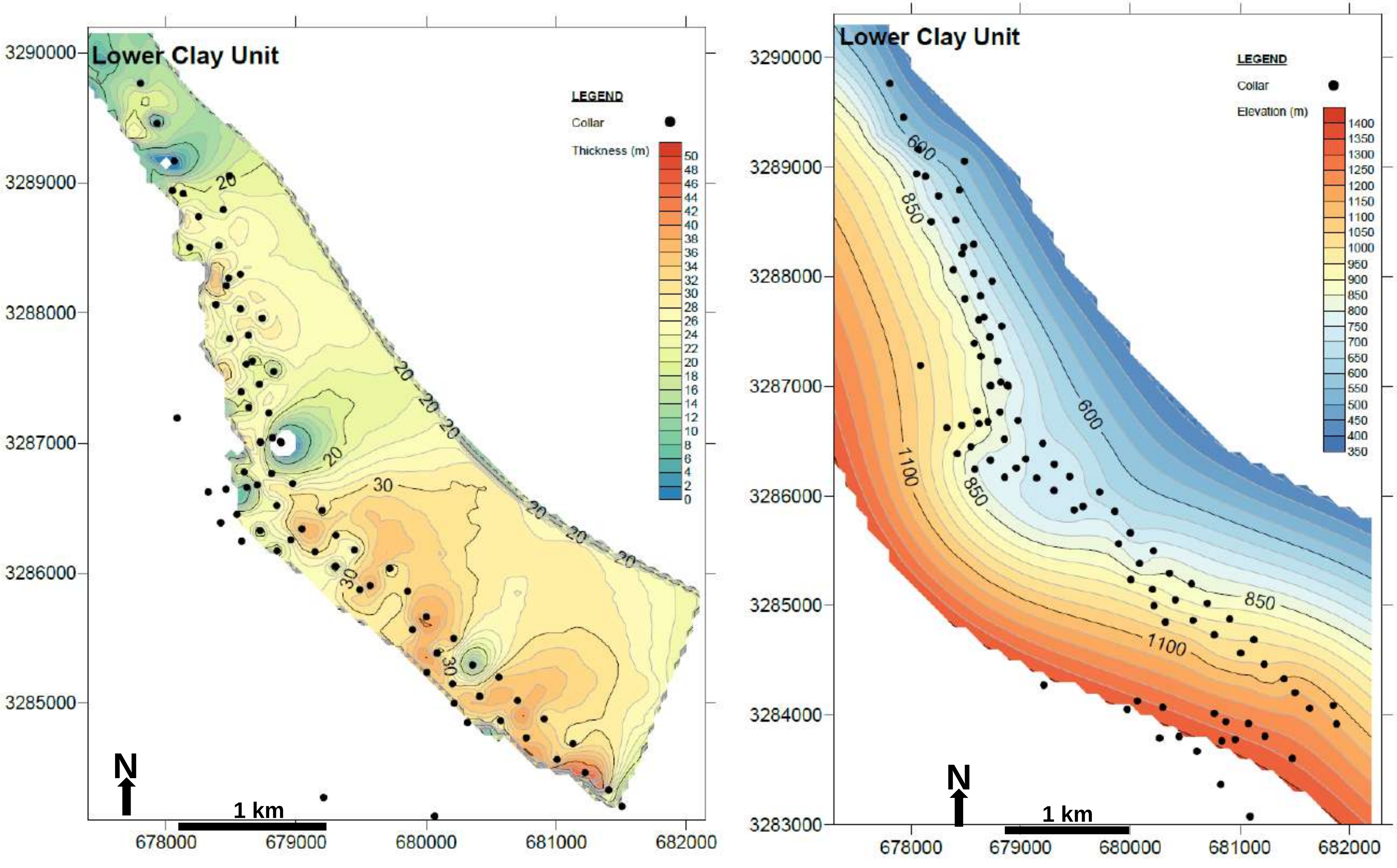


Figure 14.4: Thickness Contour Map (left) and Elevation Contour Map (right) for the Upper Clay Unit

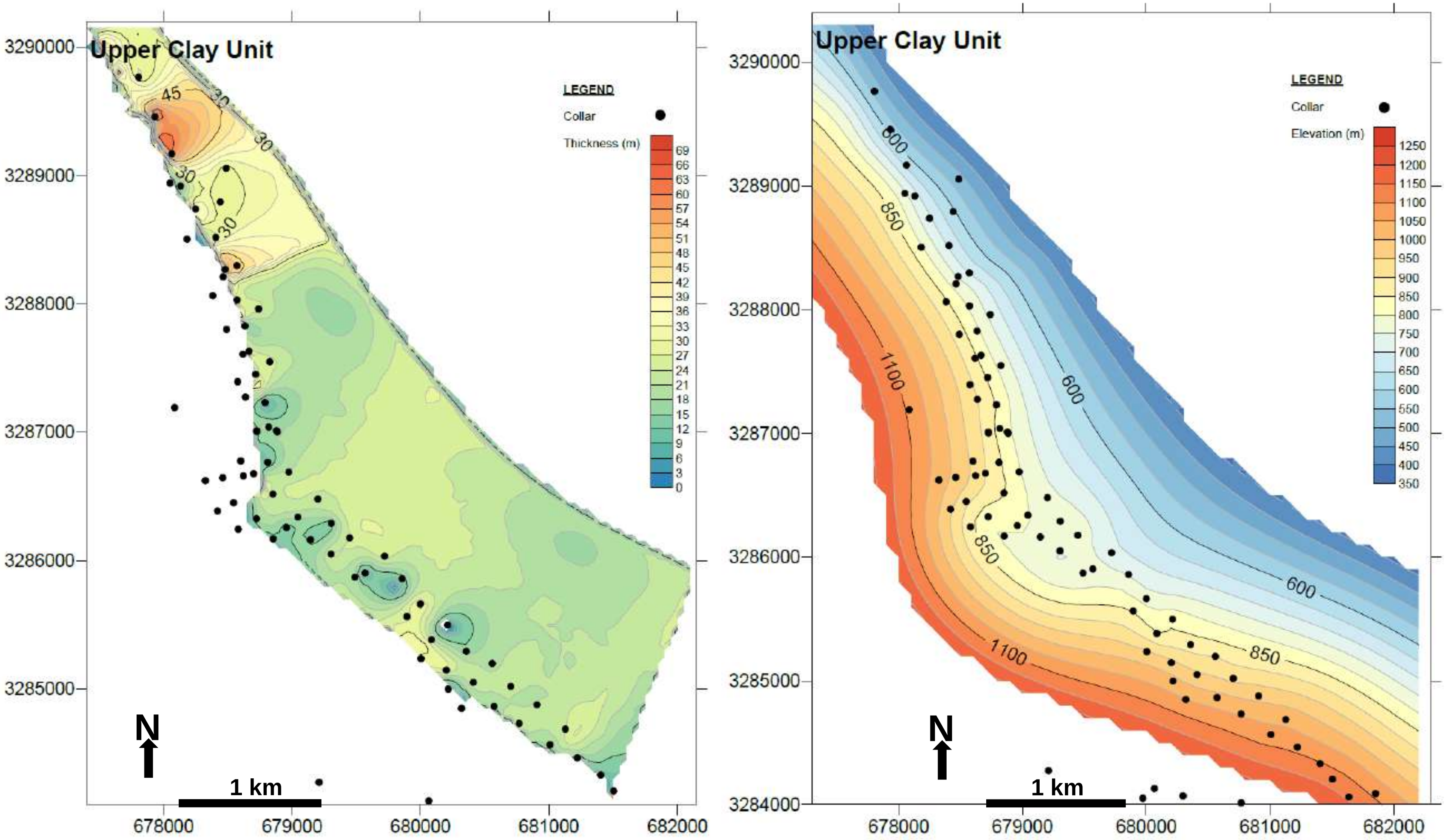


Figure 14.5: Thickness contour map (left) and elevation contour map (right) for the High Grade Upper Clay Unit

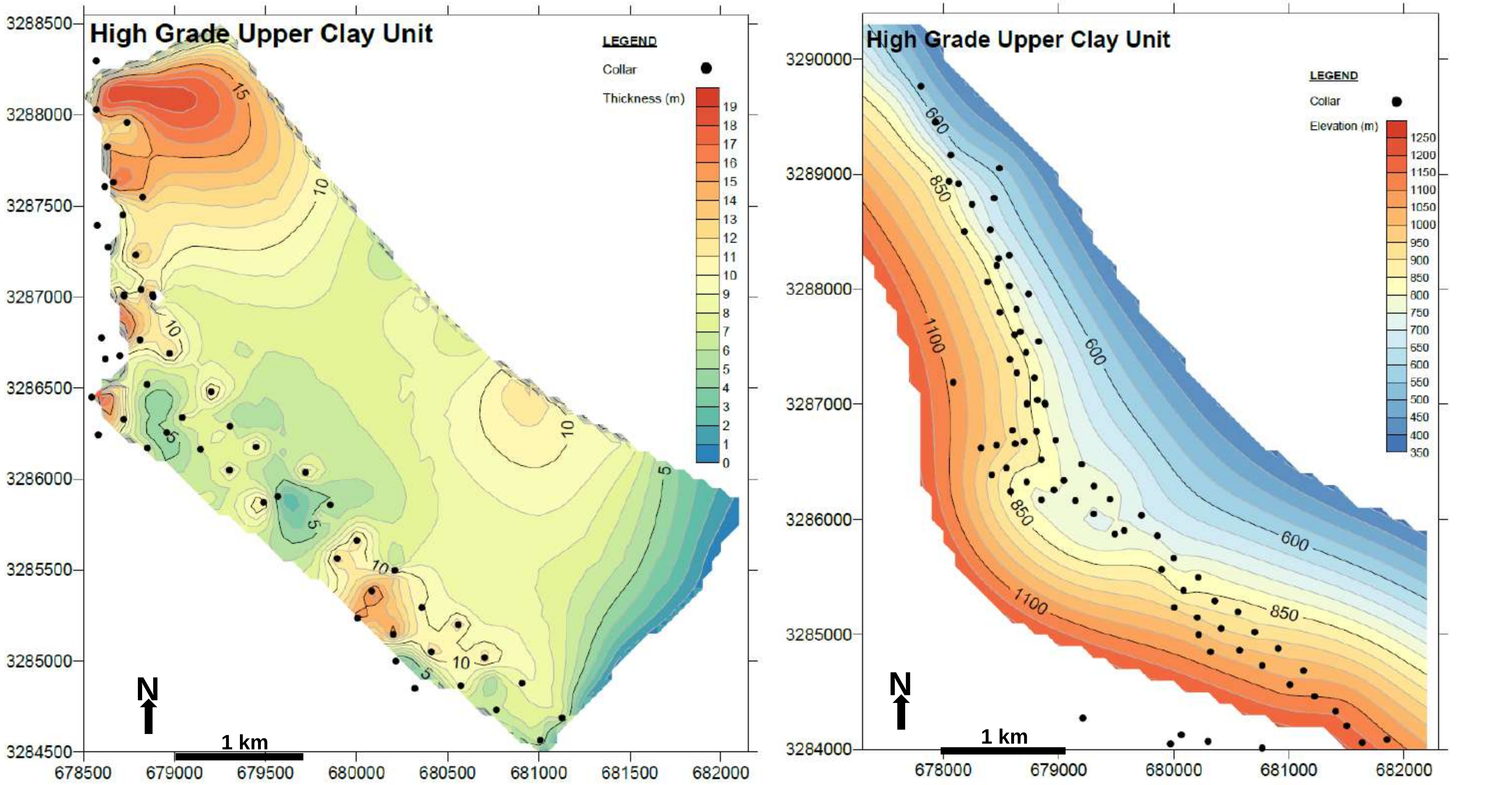
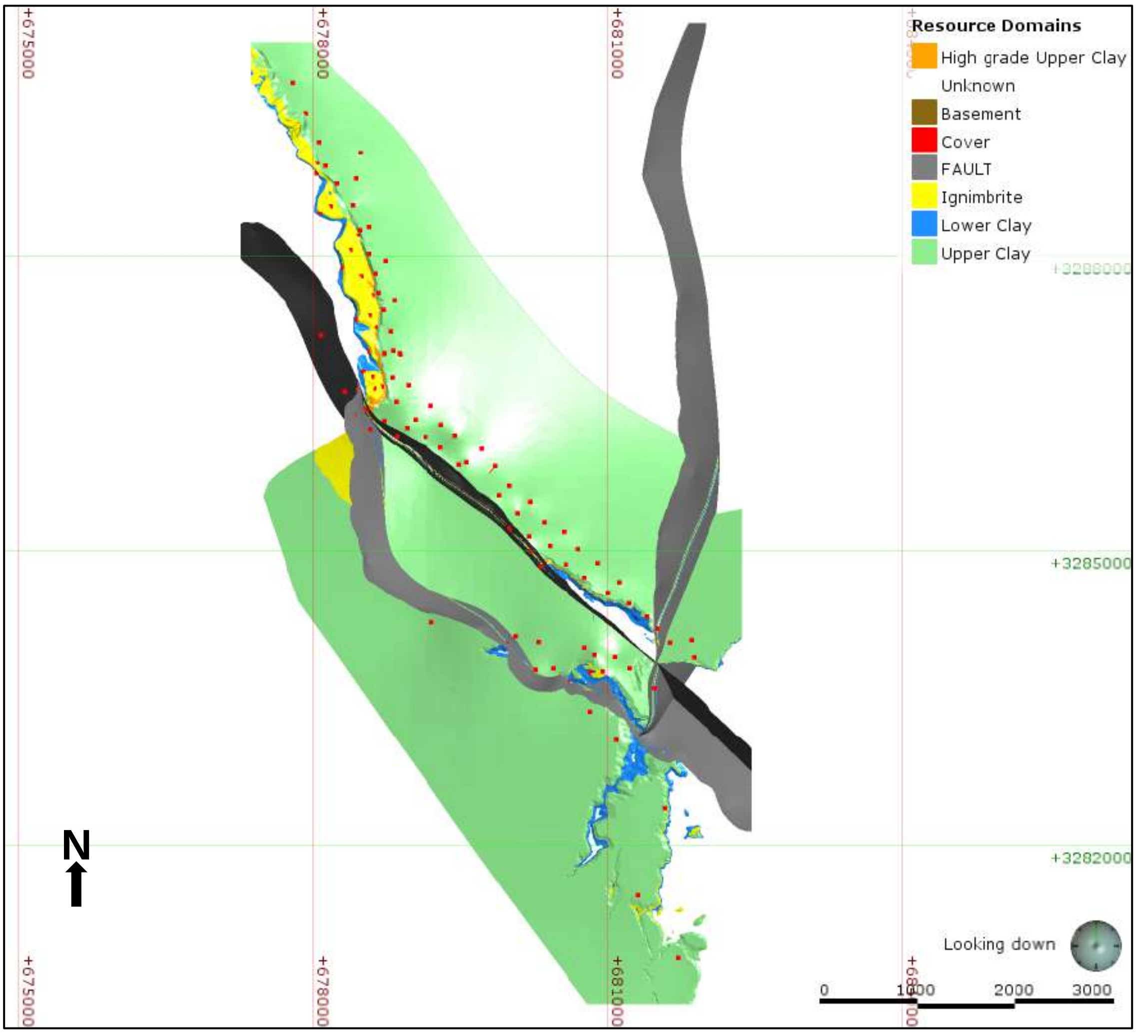


Figure 14.6: Fault Model (Black Wireframes) Shown with Resource Wireframes



14.7 3-D Geological Modelling

SRK has undertaken geological modelling of the Sonora Lithium Project to provide geological constraints for the Mineral Resource Estimate. 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
- 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 Bacanora Registered in 3-D Space

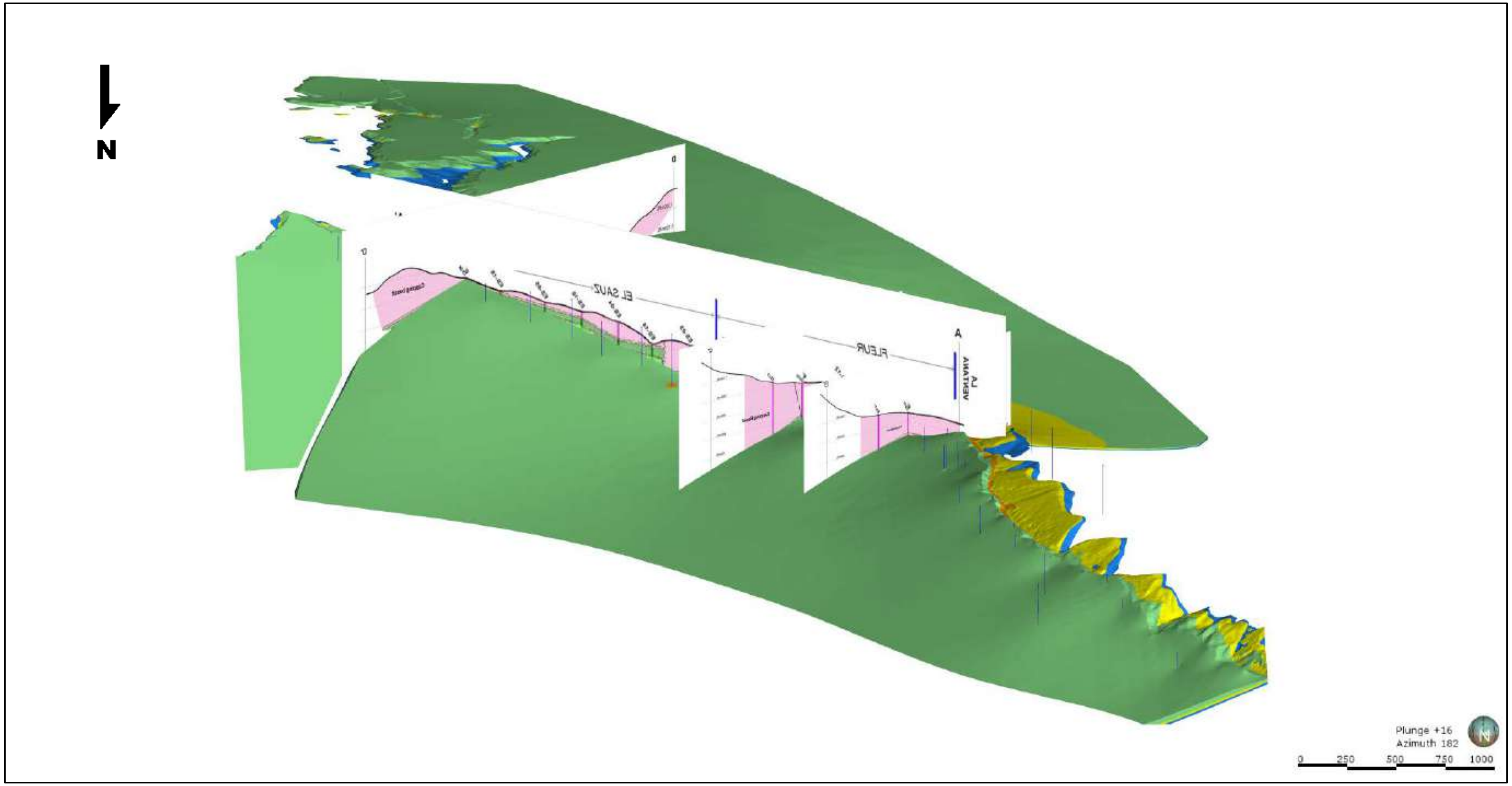


Figure 14.8: Northwest-Looking Cross Section Showing Stratigraphic Units and Related Fault Structures

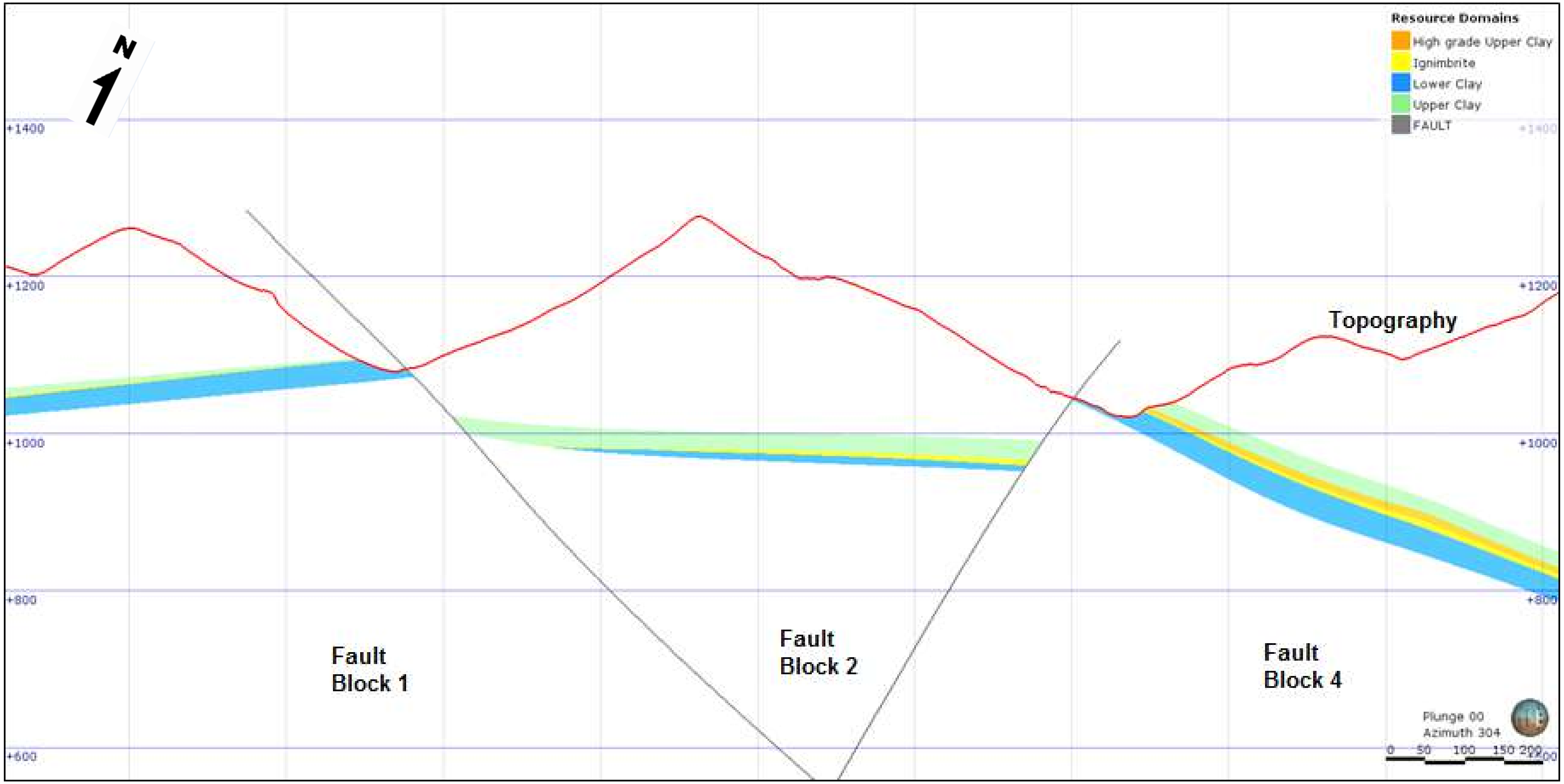


Figure 14.9: Wireframes in Plan Showing the Zone Code System Applied

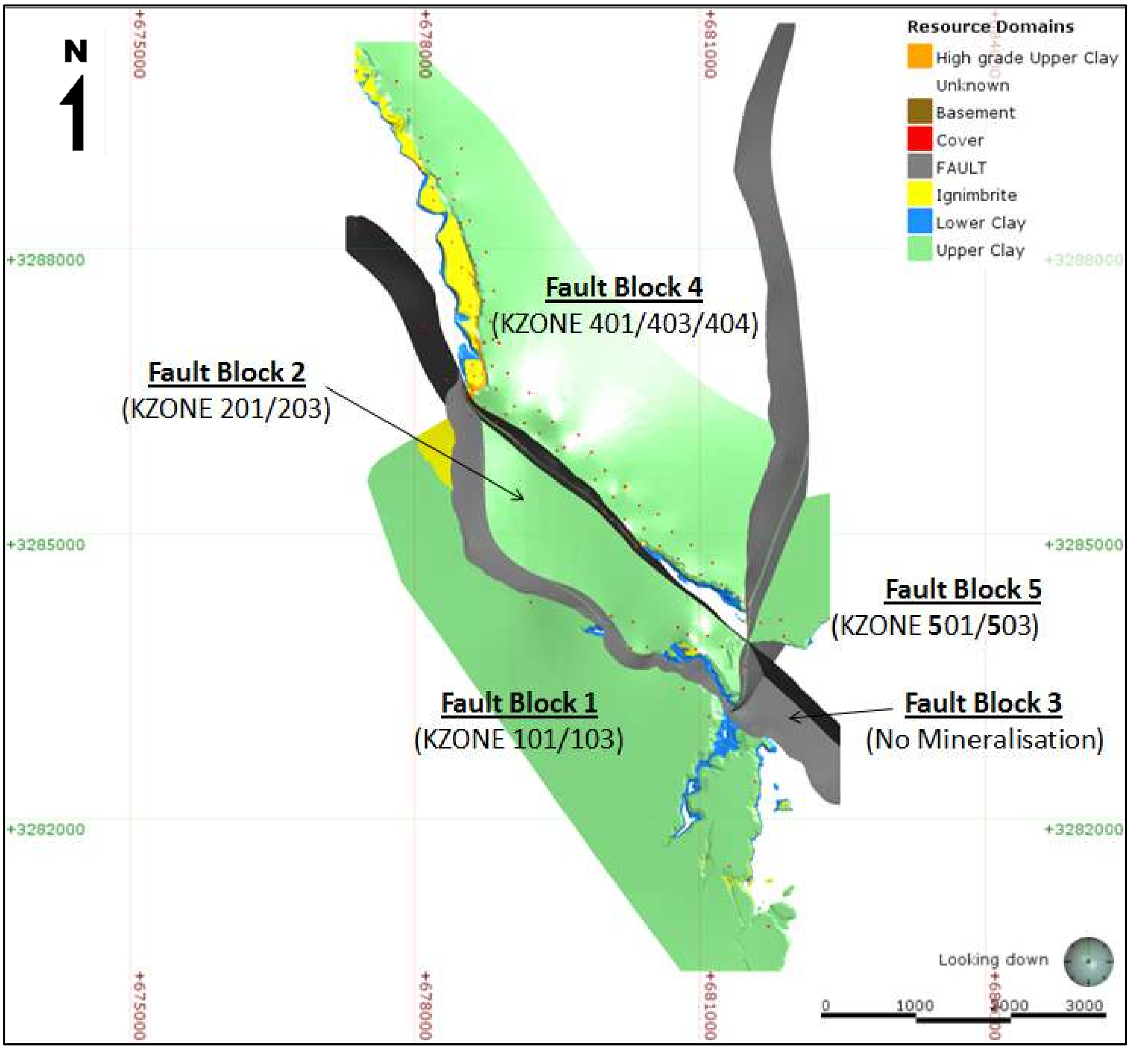


Table 14.1: Kriging Zone Codes (KZONES)

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. 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 Mineral Resource estimate 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

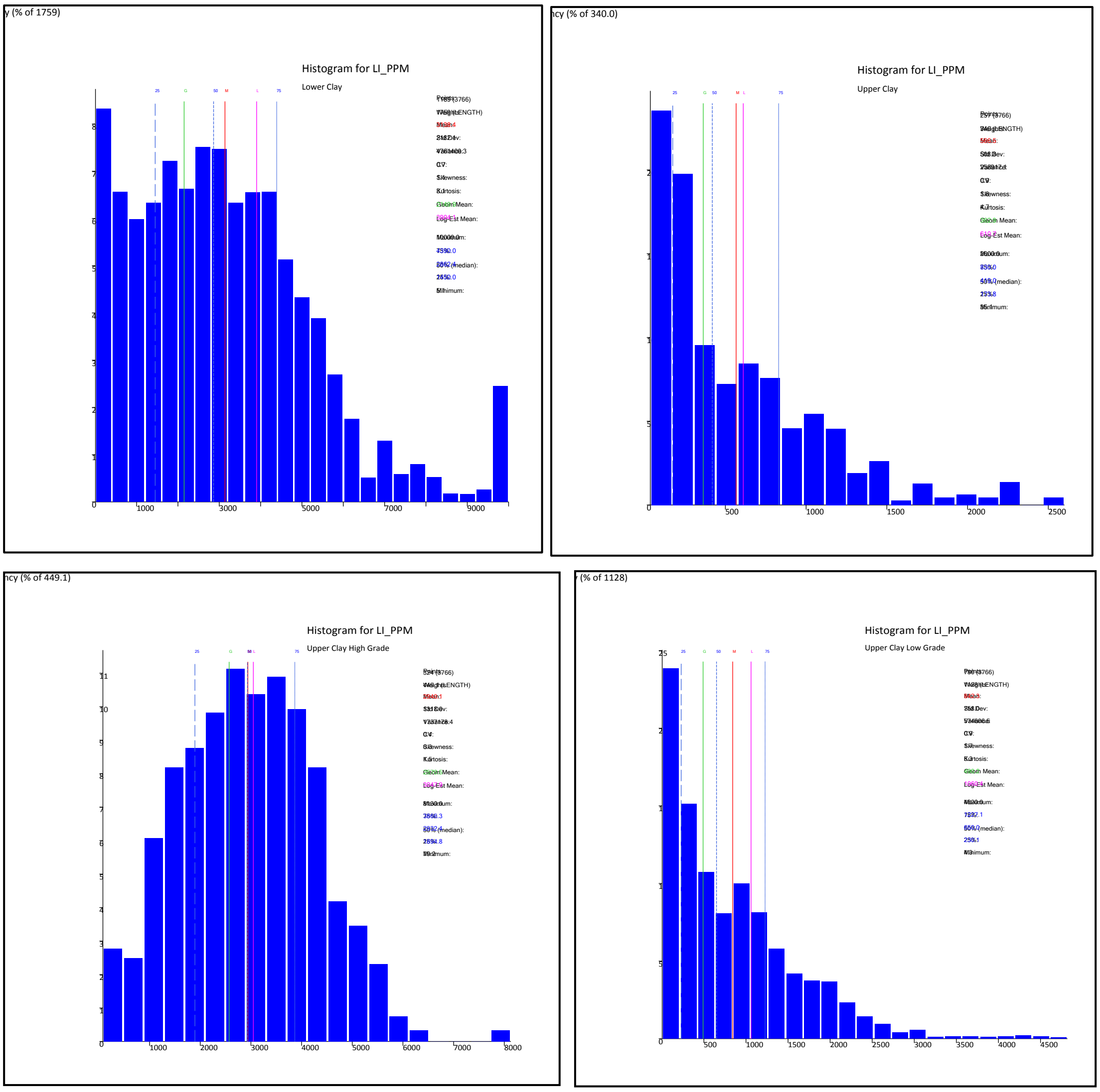


Figure 14.10 shows a positive skew in both the Upper Clay and Upper Clay Low Grade domains. This distribution is likely to be related to the gradual transition in grade over the entire strike length of the deposit, resulting in a mixture of high and low grade samples rather than a specific grade population. 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 in each of the clay units 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.

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

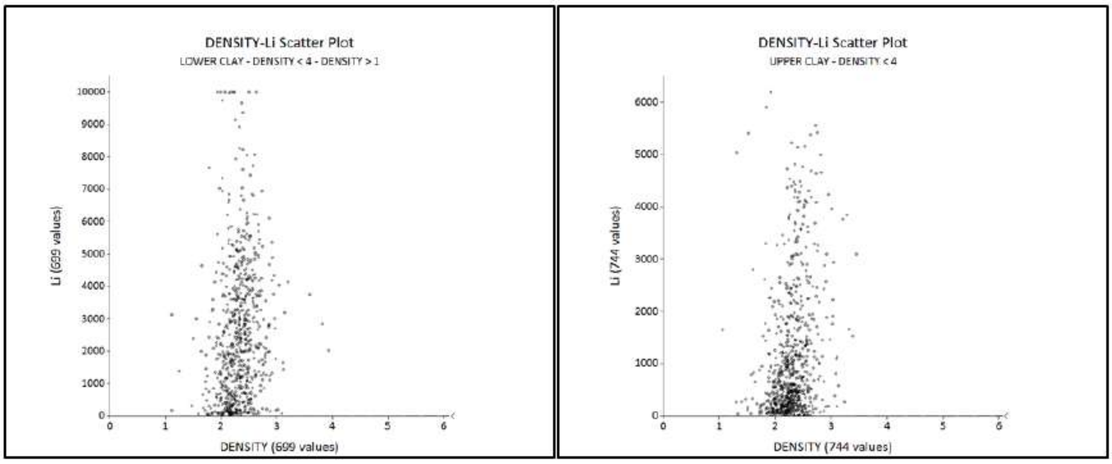


Table 14.3: Average Dry Density Used in Block Model

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.

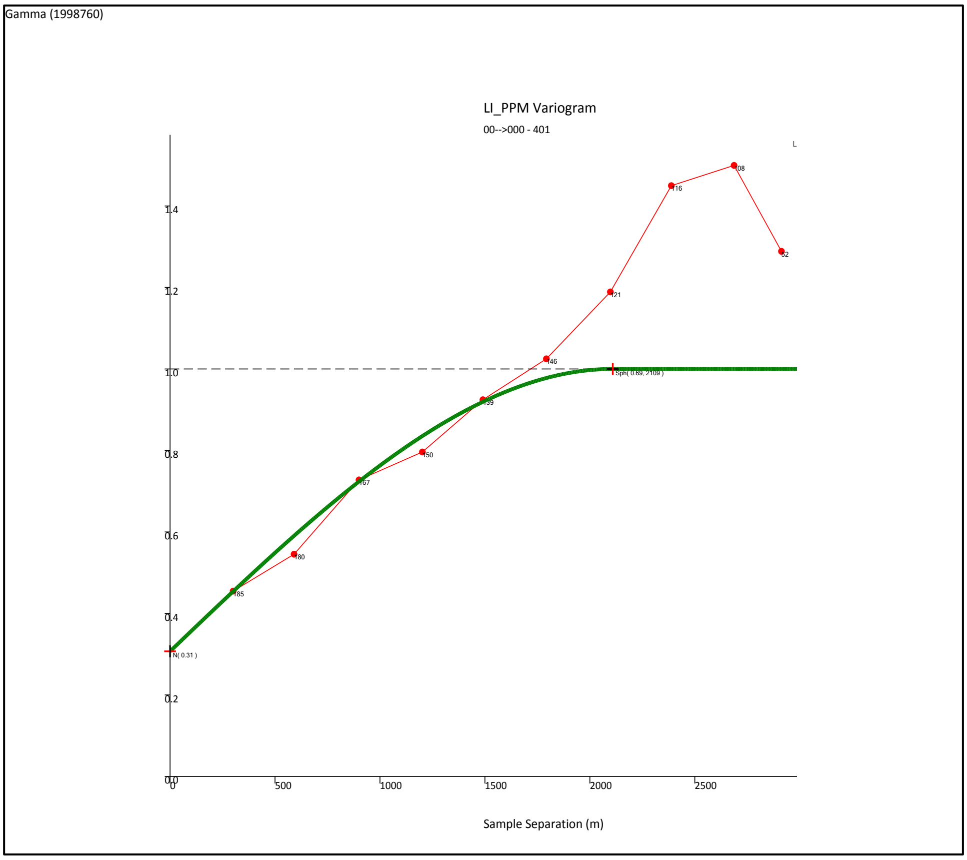
The drillhole database, flagged by modelled zones, was imported into Snowden Supervisor software for the geostatistical analysis.

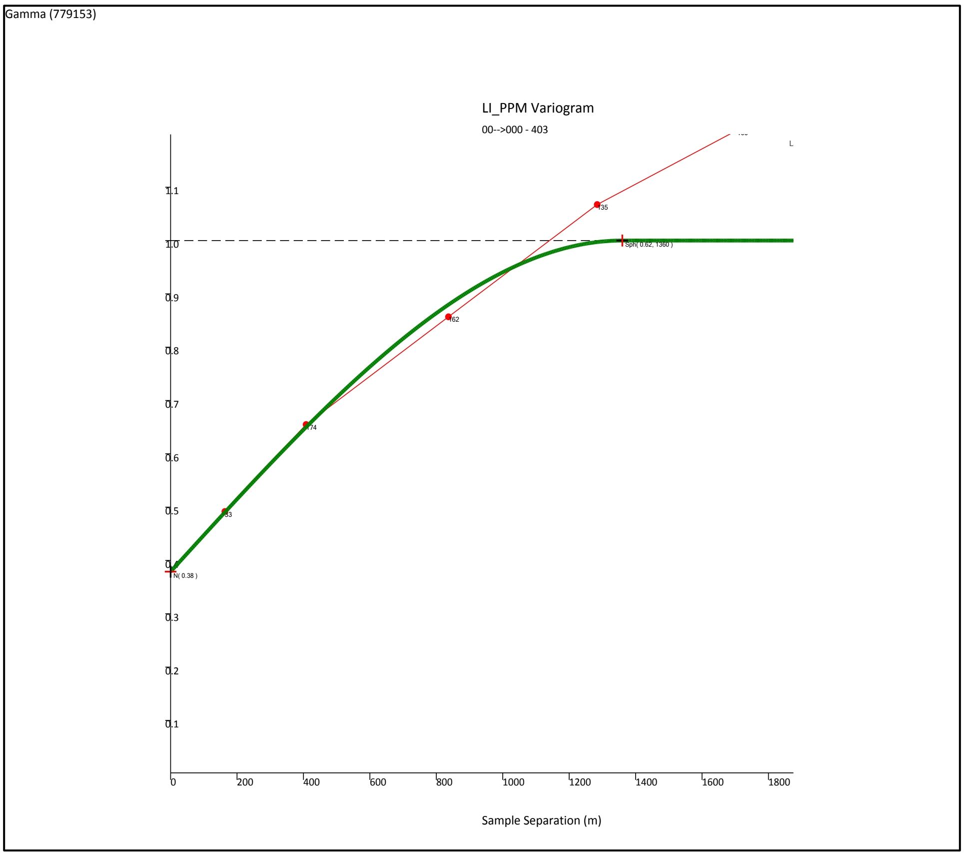
For the each of the clay zones in the most densely drilled block 4, SRK undertook 2-D variography using the composited drillhole database. Experimental semi-variograms were produced for using a sensible lag to define the nugget effect, sill (variance) structures and ranges. Omni-directional semi-variograms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

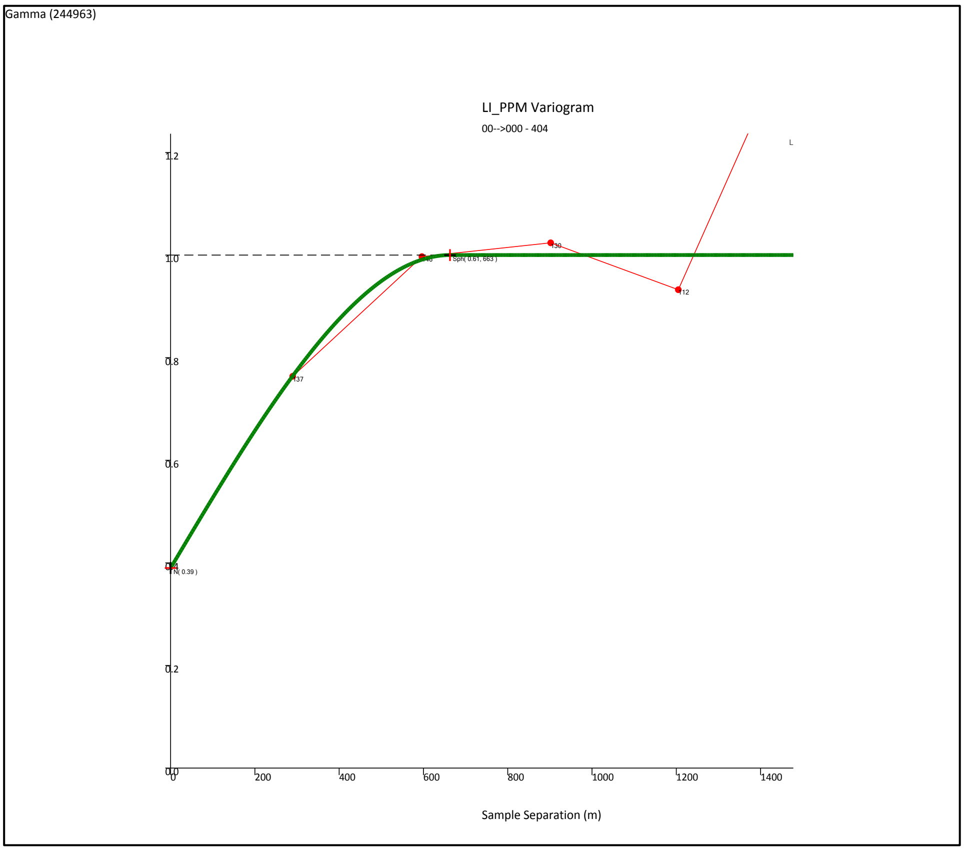
Figure 14.12 shows the modelled variograms produced for the three clay units in Block 4 for Li. Variograms produced for K showed similar ranges and structures to Li.

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




Gamma (779153)
LI_PPM Variogram
00-->000 - 403
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
135
162
174
33
N(0.38)
Sph(0.62, 1360)
L
0
200
400
600
800
1000
1200
1400
1600
1800
Sample Separation (m)


Gamma (244963)
LI_PPM Variogram
00-->000 - 404
1.2
1.0
0.8
0.6
0.4
0.2
0.0
130
137
112
N(0.39)
Sph(0.61, 663)
L
0
200
400
600
800
1000
1200
1400
Sample Separation (m)

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°. 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 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
- 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 to 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)

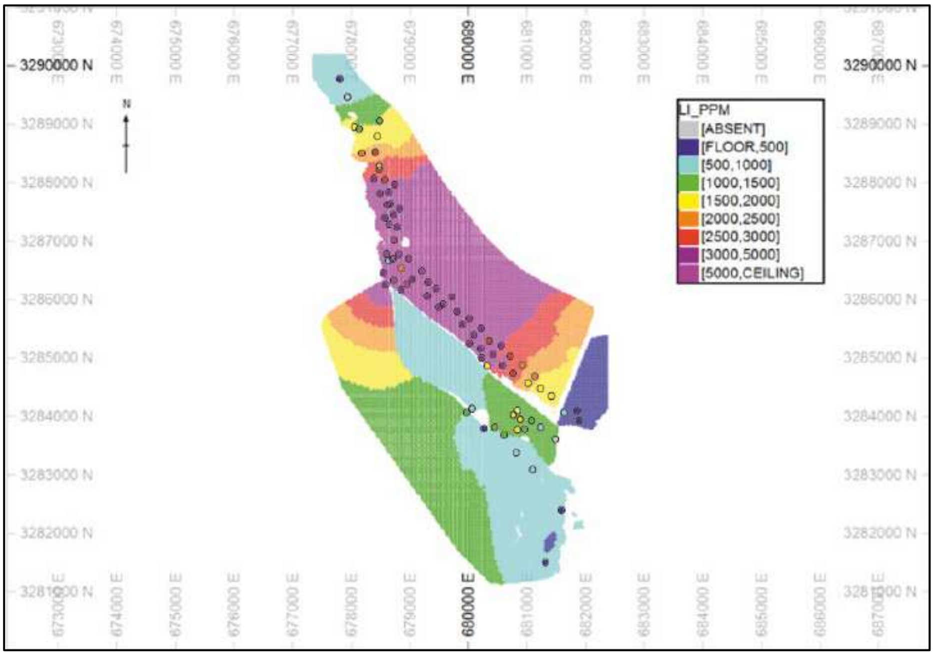


Figure 14.14: Li Block Model Validated Against Composited Drillhole Data Upper Clay (Including Low Grade Upper Clay Zone) (KZONES 103, 203, 404, 503)

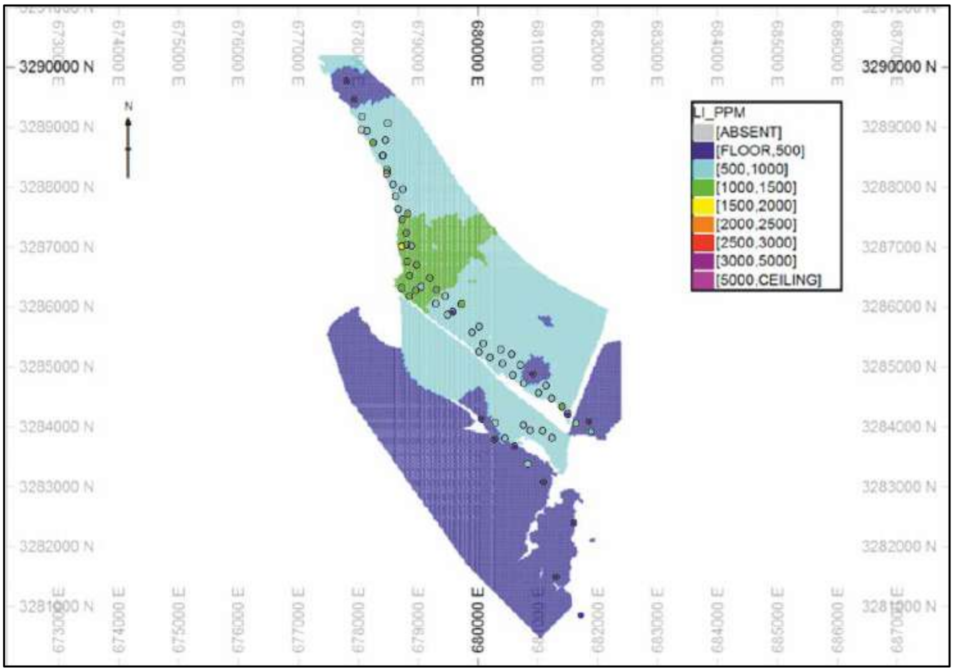
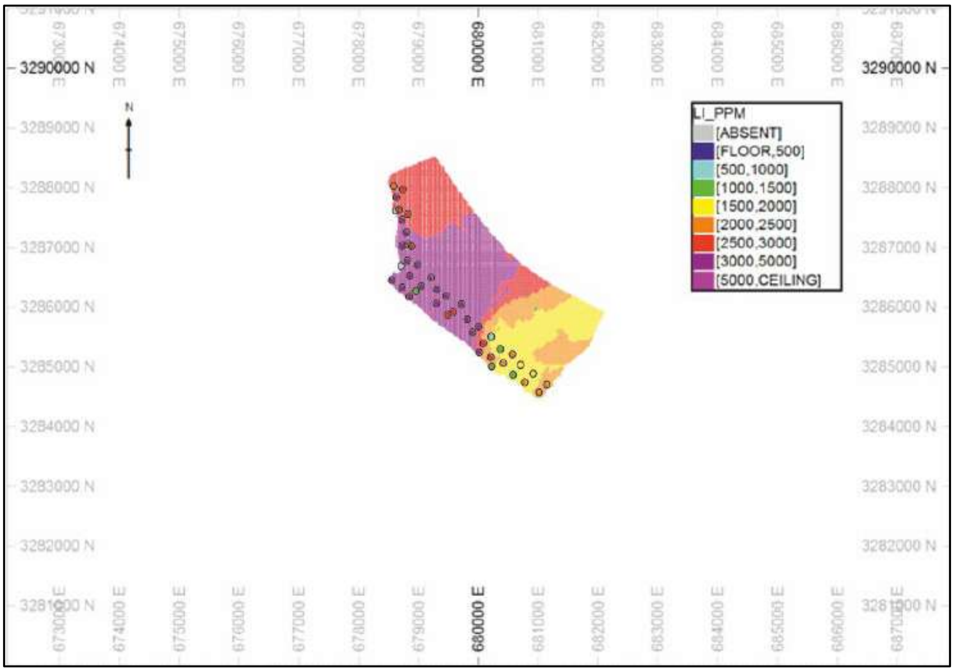


Figure 14.15: Li Block Model Validated Against Composited Drillhole Data Upper Clay High Grade Zone (KZONE 403)



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 were 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

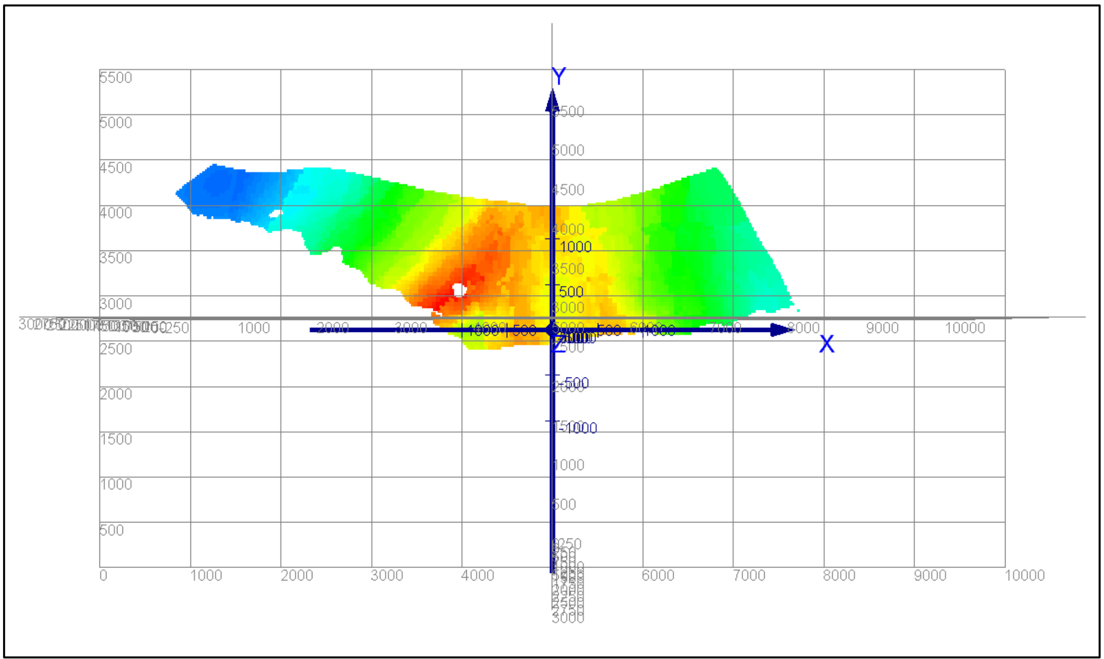


Figure 14.17: X Swath Plot for Zone 401

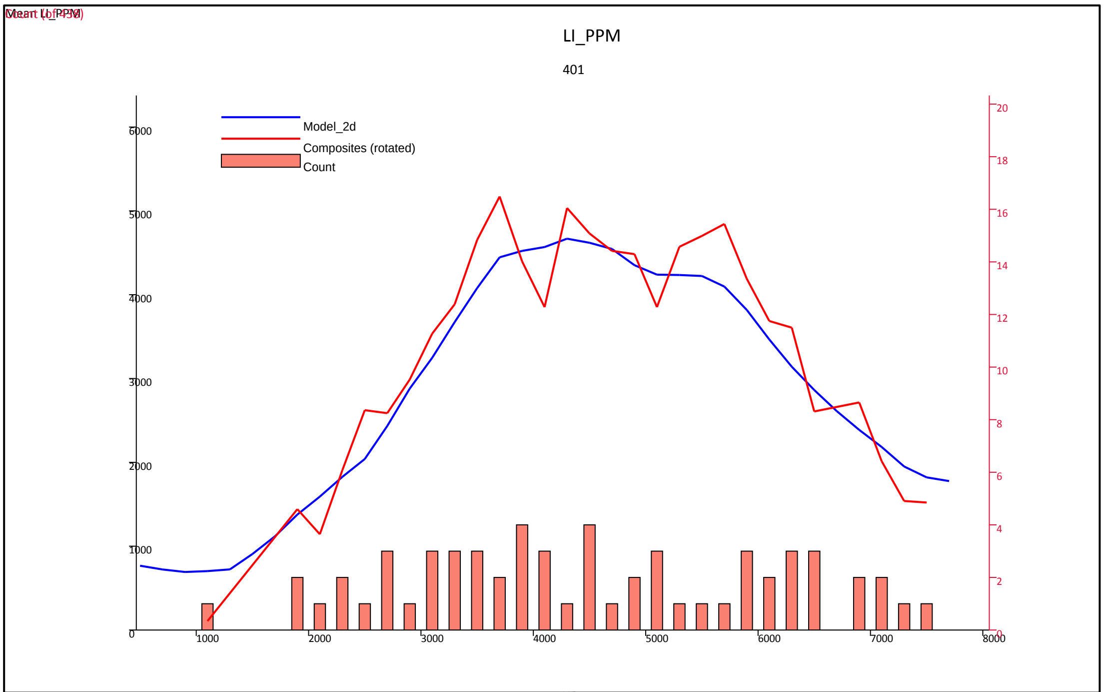


Figure 14.18: X Swath Plot for Zone 402

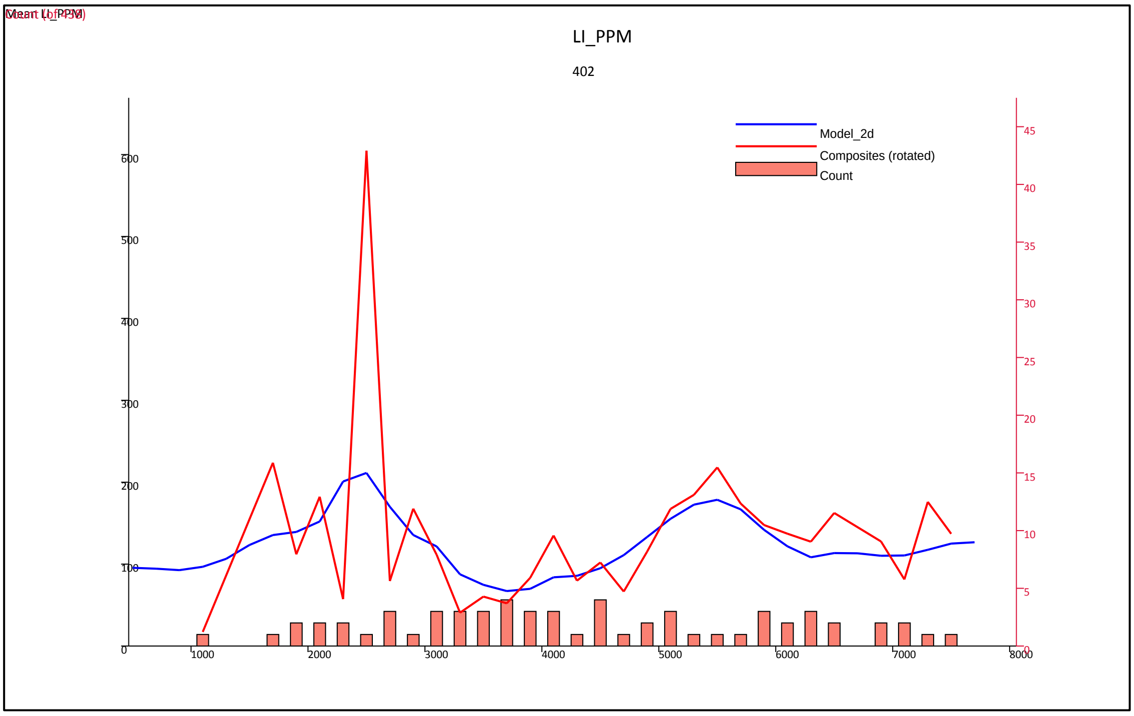


Figure 14.19: X Swath Plot for Zone 403

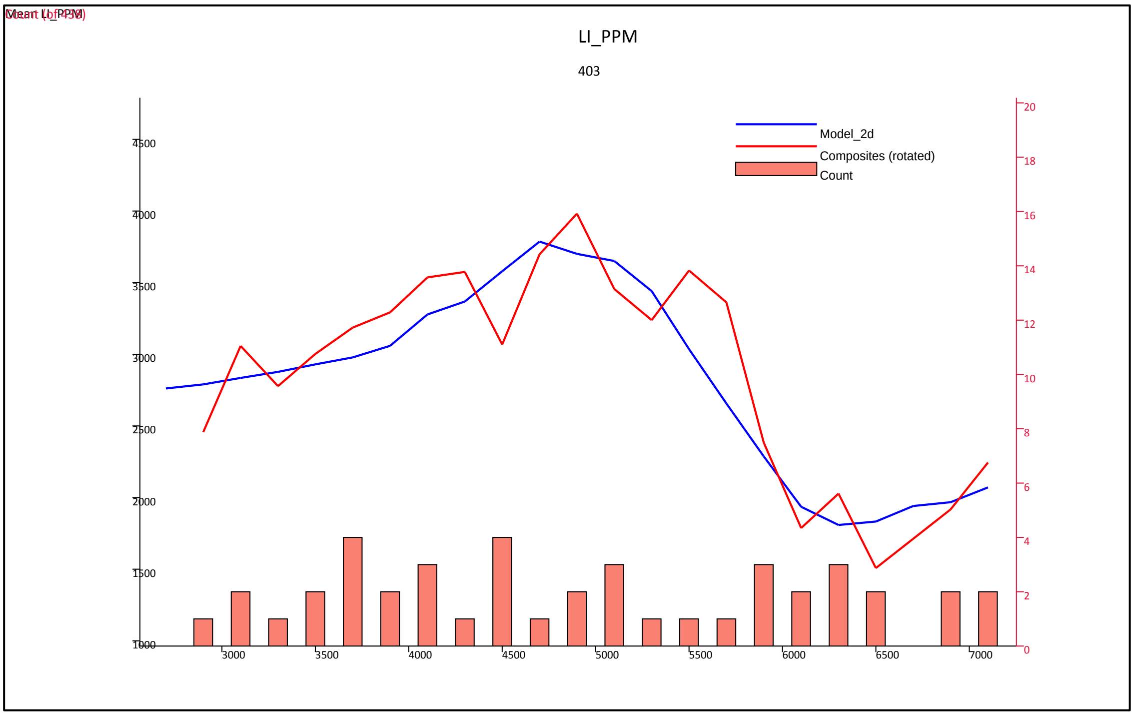
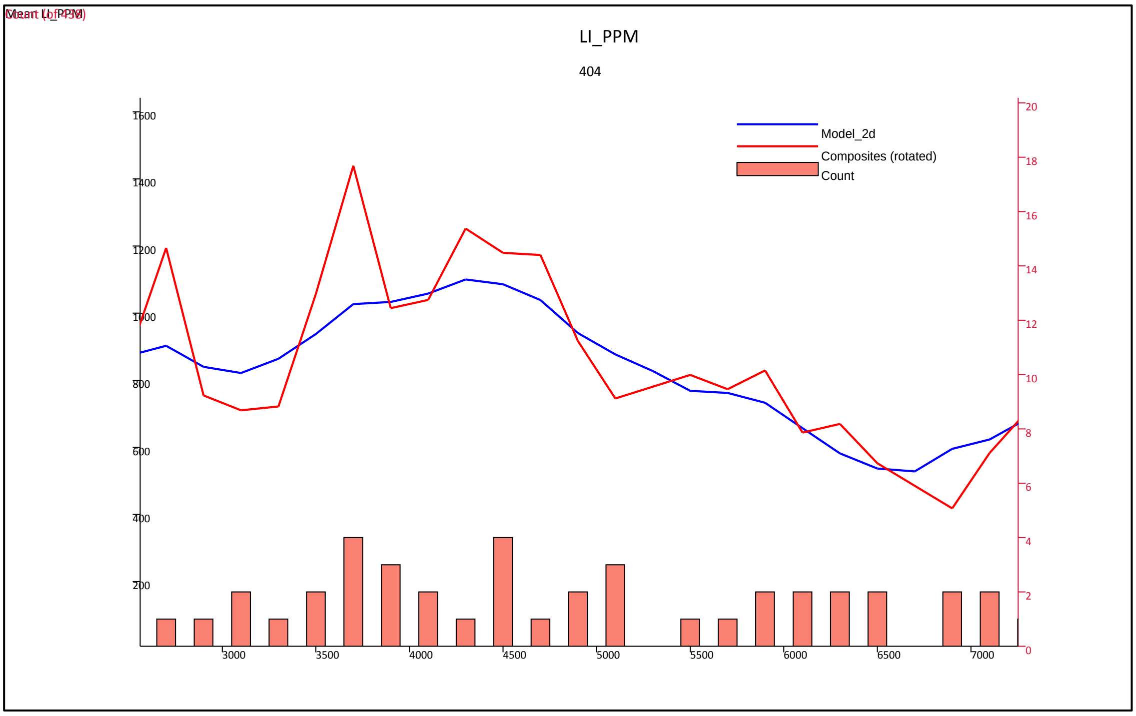


Figure 14.20: X Swath Plot for Zone 404



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^3 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
- 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 the 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.

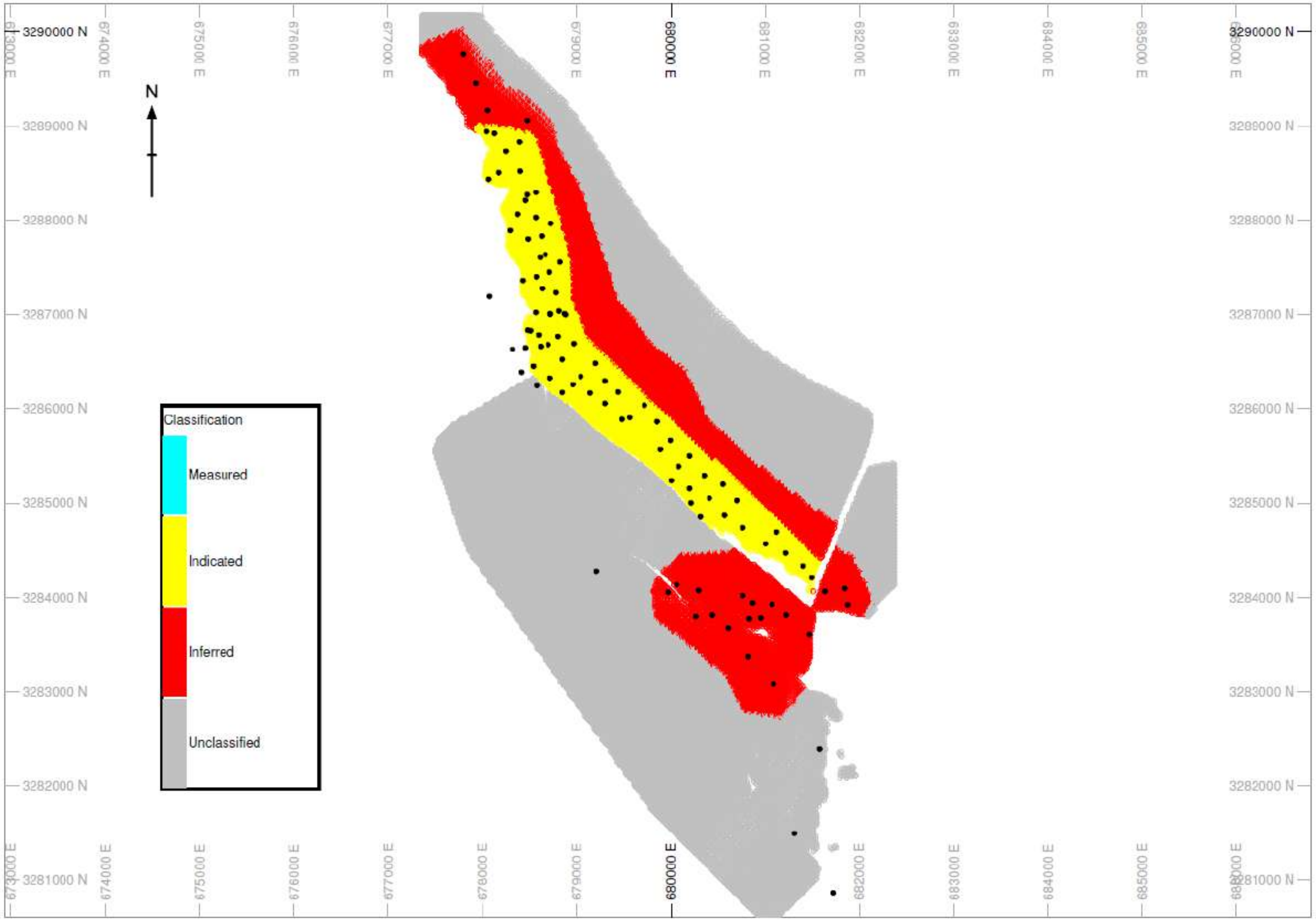
14.13.6 SRK Classification Approach

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

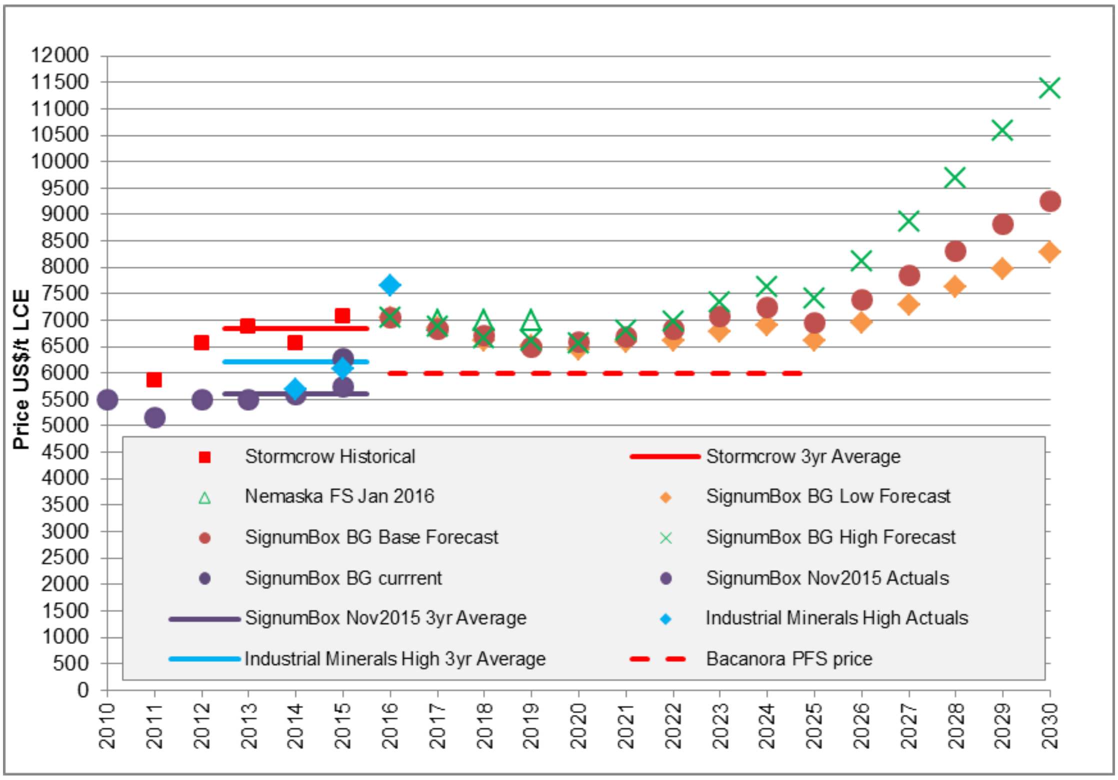
The basis of the lithium price used for this Mineral Resource estimate is outlined in this section.

A number of publically available sources report actual historical and current lithium carbonate selling prices; 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 (99.5%) lithium carbonate prices
- 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 $7000 / t battery grade lithium carbonate for their Whabouchi feasibility study
- 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
- SignumBox price forecasts of battery grade lithium carbonate and historical prices of lithium carbonate from their November 2015 report, as discussed in Section 19. It should be noted that SignumBox historical pricing is for technical and battery grade lithium carbonate; technical grade is a lower quality product with a lower realised price.

SignumBox is a Chilean based natural resources research and consulting company with a specific focus on the lithium industry. SignumBox note that the market is currently in balance resulting in the real terms forecast prices remaining in the range of $6000/t to $7000/t until after 2022 when they begin to rise in response to battery grade demand rising above supply. The forecast prices have been compiled by SRK and are shown as annualised summaries in Figure 14.22.

Figure 14.22: Summary of Prices for Battery Grade Lithium Carbonate



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 SRK believes 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 affect a lower cut-off grade for the Mineral Resource, SRK has used a battery grade lithium carbonate price of $8000/t lithium carbonate. The cut-off grade, when combined with cost and recovery information being considered in the prefeasibility 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 14.23). 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.

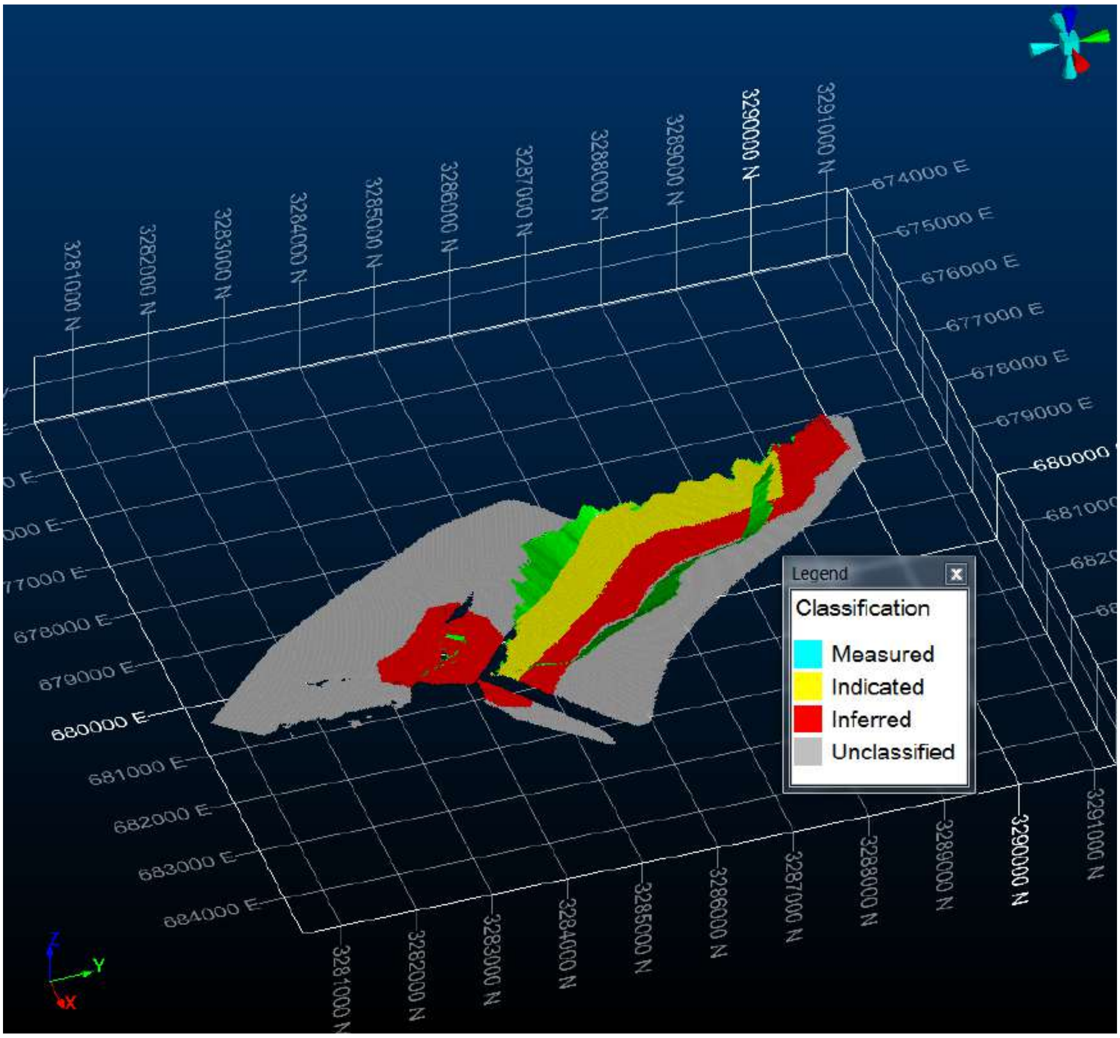
The reader is cautioned that the results from the pit optimisation are used solely for the purpose of testing the “reasonable prospects for economic extraction” by an open pit and do not represent Mineral Reserves.

The optimisation parameters are given in Table 14.12. The resultant pit shell used to limit the resource is shown in green in Figure 14.23.

Table 14.12: Resource Pit Optimisation Parameters

Parameters	Units	Value
Pit Slope		
Footwall	(Deg)	42
Hangingwall	(Deg)	42
Mining Factors		
Dilution	(%)	10.0
Recovery	(%)	100.0
Processing		
Recovery Li	(%)	70
Operating Costs		
Mining Cost	($/$t_{rock}$)	1.76
Processing, G&A and rehandling	($/$t_{milled}$)	29.14
Selling Cost (Royalty)	(%)	3
Metal Price		
Lithium Carbonate (Li_2CO_3)	($/t ($Li_2CO_3$)	8,000
Cut-Off Grade%		
Cut-off grade (in situ)	(ppm Li) rounded	1,000

Figure 14.23:Oblique View Showing Classified Material within the Resource Pit Shell (Green Wireframe)



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. The Mineral Resource is stated inclusive of the Mineral Reserve.

Every 1 unit of lithium metal is equivalent to 5.32 units of Li_2CO_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.

Bacanora and SRK are 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, given the results of the pit optimisation, 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		Lower Clay	60	4,300	1.8	256	1,363	1,070
			Upper Clay	27	2,200	0.9	59	316	235
	El Sauz1		Lower Clay	4	4,000	1.7	15	80	65
			Upper Clay	1	2,200	0.8	2	10	5
Indicated Total			Combined	259	3,200	1.4	839	4,463	3,555
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		Lower Clay	20	4,300	1.8	86	458	360
			Upper Clay	5	2,800	1.0	14	74	50
	El Sauz1		Lower Clay	15	4,000	1.6	60	319	245
			Upper Clay	5	2,400	0.9	12	64	45
Inferred Total			Combined	160	3,200	1.3	515	2,740	2,130

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 Mineral Resource estimate 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.
3. The Mineral Resource estimate 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_2CO_3).
5. 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.
6. LCE is the industry standard terminology for, and is equivalent to, Li_2CO_3. 1 ppm Li metal is equivalent to 5.32 ppm LCE / Li_2CO_3. 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 Mineral Resource estimate 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 are 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 14.24 to Figure 14.25.

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

Figure 14.24: Grade-Tonnage Curve for Li (Indicated Material)

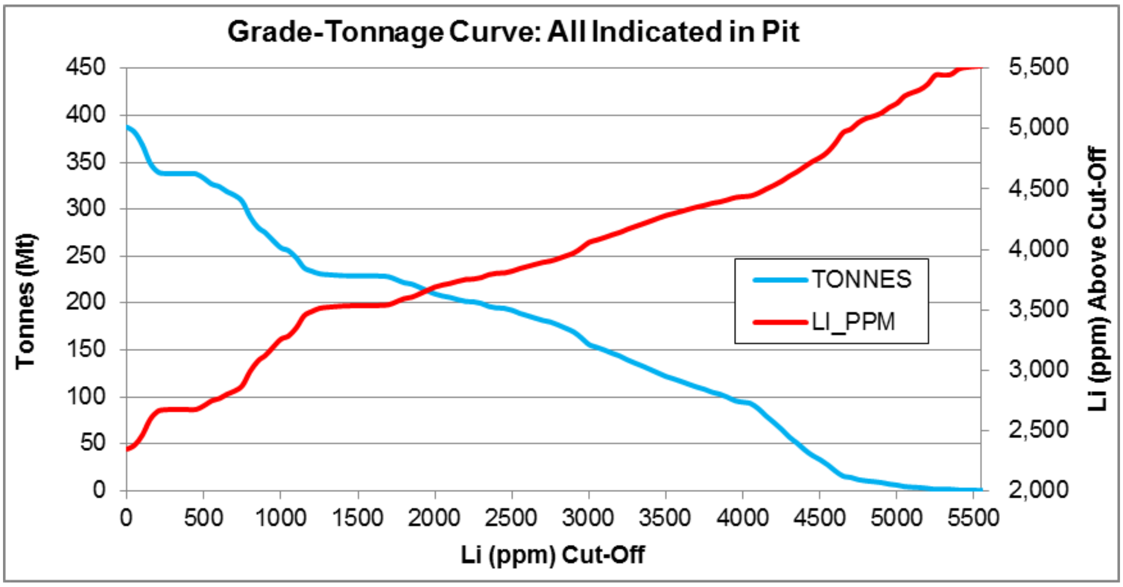
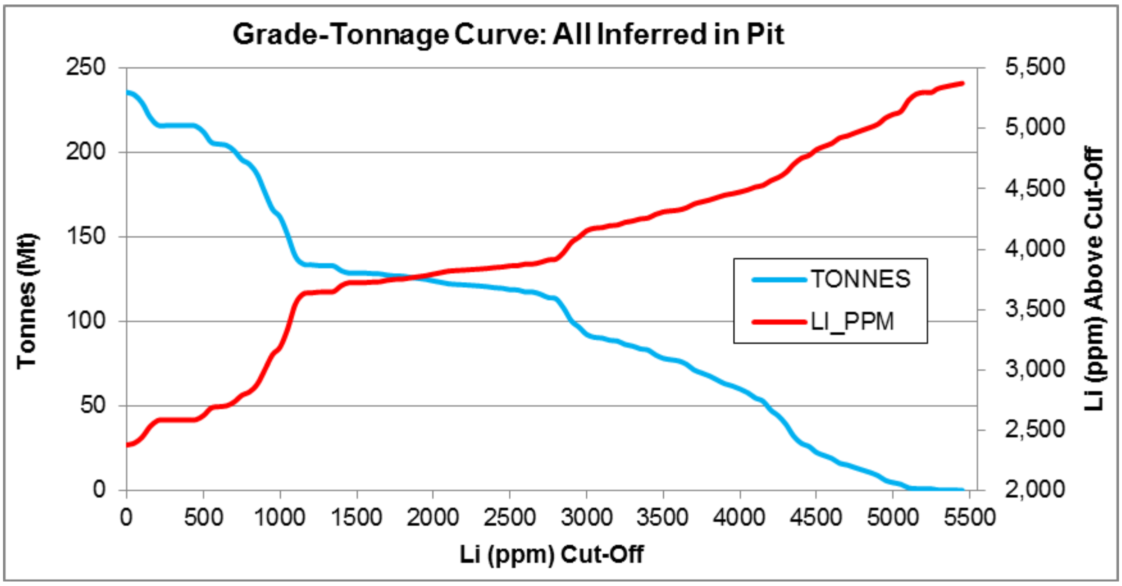


Figure 14.25: Grade-Tonnage Curve for Li (Inferred Material)



15 MINERAL RESERVE ESTIMATION

15.1 Introduction

The mineral reserves for the Sonora Lithium project are contained within open pit designs based on the current knowledge of the deposit, geotechnical information, operating costs, recoveries and the selling price of the lithium carbonate (Li_2CO_3). All of the reserves are within the probable classification based on the classifications assigned to the resource model described in previous sections of this report. The mineral resource is within two open pits, one in the north and one in the south. Mineralization is present between the two pits, but does not become part of the mineral reserve based on the inputs in Table 15.2. Table 15.1 is a summary of the mineral reserve at a 1200 ppm lithium cutoff grade. The mineral reserves are the diluted mineral reserves based on an average of 10% dilution of the lithium clay seams with adjacent horizons which for the dilution calculation have zero lithium grade. The mineral reserves use the terminology, definitions and guidelines given in the CIM Standards on Mineral Resource and Mineral Reserves (May2014). Herb Welhener, vice president of Independent Mining Consultants, Inc. (IMC) is the qualified person for the mineral reserve reporting.

Table 15.1: Open Pit Mineral Reserve

Area	Ore > = 1200 ppm Li				Waste kt	Total kt	Waste : Ore Ratio	% from La Ventana
	kt	Li ppm	LCE Kt	K (%)				
North Pit	91,471	3224	1,570	1.37	432,877	524,348	4.73	77.22%
South Pit	38,303	2516	513	1.06	202,646	240,949	5.29	0.00%
Total	129,774	3015	2,083	1.28	635,523	765,297	4.90	54.43%

Notes
kt = tonnes x 1000
LCE = lithium carbonate equivalent

15.2 Inputs to Mineral Reserve

The inputs for defining the mineral reserve pits are shown in Table 15.2 and were provided by SRK, Ausenco, Tomas Fernando Villegas Barba (Professor Department of Civil Engineering and Mines of the University of Sonora), Bacanora Minerals and IMC. The resource block model was developed by SRK and is described in previous report sections. The process and G&A costs, plant recovery and selling price of lithium carbonate were provided by Ausenco and Bacanora Minerals. The process and G&A costs were given as cost per tonne of lithium carbonate assuming a production rate of 35,000 t/y of lithium carbonate. The geotechnical study and the recommended pit wall slope angles were completed in August 2015 by Dr. Barba. The mining costs were provided by IMC based on similar size projects in Mexico.

Table 15.2: Inputs for Definition of Mineral Reserve Pits

Parameter	Units	Amount
Process Operating Cost	\$/t Li_2CO_3	\$1,977
G&A Operating Cost	\$/t Li_2CO_3	\$149
Total Operating Cost	\$/t Li_2CO_3	\$2,126
Sales Price	\$/t Li_2CO_3	\$6,000
Li Recovery:		
Beneficiation	%	85.0
Calcining	%	87.0
Hydromet	%	95.0
Total	%	70.3
Lithium % of Li_2CO_3	%	18.79
Royalty	%	3
Mining Recovery Factor	%	90.0
Mining Cost	\$/t	2.50
Additional mining cost below 900 elevation	\$/t per 10 m bench	0.02
Ore stockpile re-handle cost	\$/t ore	\$0.50
Discount rate	% per 10 m bench	1
Overall Slope Angle	Degrees	42

15.3 Net Value Calculation

A net value per tonne of mill feed for each block with a lithium grade in the resource mode was calculated based on the costs and recoveries shown in Table 15.2. The higher the lithium grade is, the more product per tonne of mill feed can be made and a lower cost or higher net value per tonne of mill feed is achieved. The net value per tonne of mill feed was assigned to the blocks in the model and used with a floating cone algorithm to determine the mineral reserve pit limits. Table 15.3 shows the net value calculation for a range of lithium grades.

Table 15.3: Net Value Calculation

Parameter	4000 ppm Li	3000 ppm Li	2000 ppm Li	1800 ppm Li	1200 ppm Li
Sale Price Lithium Carbonate	$6000	$6000	$6000	$6000	$6000
Royalty	3%	3%	3%	3%	3%
Sale Price after royalty deduction	$5820	$5820	$5820	$5820	$5820
Process + G&A Cost/t Li_2CO_3	$2126	$2126	$2126	$2126	$2126
Realized price/t Li_2CO_3 sold	$3694	$3694	$3694	$3694	$3694
Tonnes Li_2CO_3 recovered /t mill feed ((Li x 0.632)/1000000)/0.1879	0.01346	0.01009	0.00673	0.00606	0.00404
Net Value / mill feed (before mining costs), $/t	$49.72	$37.29	$24.86	$18.65	$12.43

15.4 Pit Design

The open pit designs are based on 10 m mining benches, 25 m wide haul roads (includes allowance for berms and ditches) and 42 degree inter-ramp slope angle on the hanging wall (east) side of the pits. The lithium clay beds dip to the east and there are no haul ramps on the east wall so the inter-ramp slope angle and overall slope angle are the same at 42° based on the wall height and recommendations in Dr. Barba’s report.

The slope recommendations vary with wall height: 200 – 250 m at 42°, 150 – 200 at 45°, 100 – 150 m at 50° and less than 100 m at 55°. The majority of the east walls have wall heights greater than 200 m, the north and south ends of the pits are somewhat lower in height and the west walls follow the dip of the lower clay bed. To simplify the pit design at the PFS level, 42° pit wall slope was used for all walls except the west where the dip of the lower clay was followed. Further geotechnical investigations will be done during the Feasibility Study to further define the inter-ramp and overall pit slope angles.

Table 15.4 and Table 15.5 present the open pit diluted mineral reserves by the major lithology units. The dilution is from the adjacent units, for example the lower clay dilution would come from the ignimbrite and the basement unit at zero grade. The 1200 ppm Li cutoff is before the dilution is calculated. Figure 15.1 illustrates the reserve pit geometries.

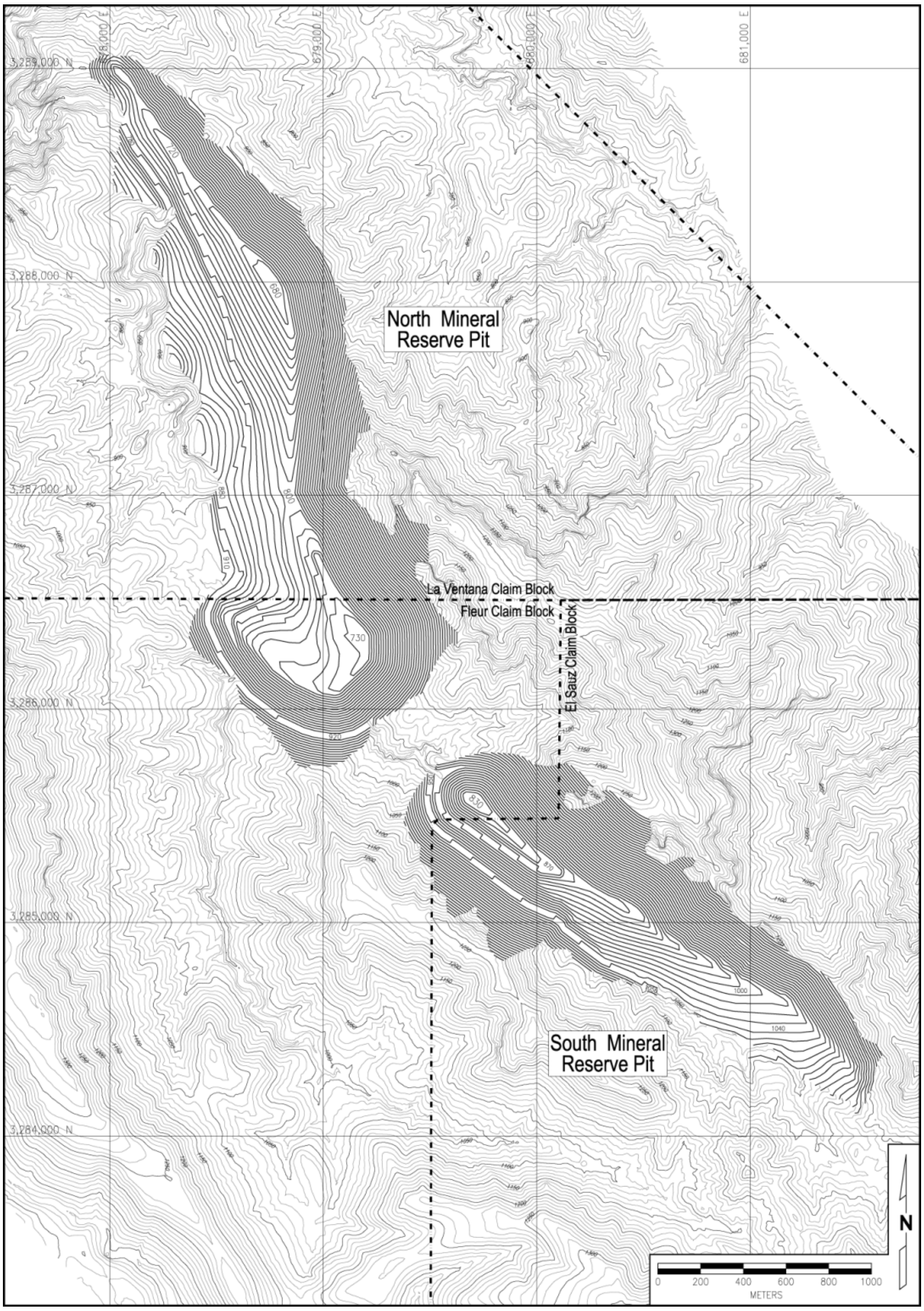
Table 15.4: North Pit Diluted Mineral Reserve by Clay Unit

Lithology	Ore > = 1200 ppm Li				Waste kt	Total kt
	kt	Li ppm	LCE kt	K (%)		
Basalt	0				373,399	373,399
Upper Clay, low grade	5,401	1151	33	0.60	28,149	33,550
Upper Clay, high grade	17,760	2859	270	1.02	0	17,760
Ignimbrite	0				24,940	24,940
Lower Clay	68,310	3484	1,267	1.53	0	68,310
Basement & Undefined	0				6,389	6,389
Total	91,471	3224	1,570	1.37	432,877	524,348

Table 15.5: South Pit Diluted Mineral Reserve by Clay Unit

Lithology	Ore > = 1200 ppm Li				Waste (kt)	Total (kt)
	kt	Li ppm	LCE kt	K (%)		
Basalt	0				180,836	180,836
Upper Clay, low grade	0				17,609	17,609
Upper Clay, high grade	6,334	2047	69	0.80	0	6,334
Ignimbrite	0				2,419	2,419
Lower Clay	31,969	2609	444	1.12	0	31,969
Basement & Undefined	0				1,782	1,782
Total	38,303	2516	513	1.06	202,646	240,949

Figure 15.1: North and South Mineral Reserve Pits



16 MINING METHODS

16.1 Introduction

The mine production for a targeted 20 year schedule comes from three mining phases in the north pit and the sum of them is smaller than the potential reserve pit design. A summary of the tonnage and grade for the phases at 1500 ppm Li cutoff (minimum cutoff for the production schedule) and 1200 ppm Li (pit reserve cutoff) is shown in Table 16.1. The cutoffs are applied to the model undiluted block grades and then diluted for tabulation.

Phase 1 is located on the west side of the pit and the ore comes primarily from the higher grade lower clay seam. Phase 2 begins the stripping of the basalt waste on the east side of the pit and deepens the pit bottom. A stream diversion is included in the southwest wall of Phase 2 which intercepts the arroyo at the south end of the pit and connects to an existing drainage on the west side. The north end of the pit stays south of this drainage as it crosses over the clay seams north of the pit design. Phase 3 completes the 20 year production pit. Figure 16.1 through to Figure 16.3 illustrate the north pit phase designs.

Table 16.1: North Pit Phases for Production Schedule

Mining Phase	Ore kt	Li ppm	LCE kt	K (%)	Waste kt	Total kt
	Ore > = 1500 ppm Li					
Phase 1	11,421	3408	207	1.58	6,359	17,780
Phase 2	18,160	3662	354	1.52	34,283	52,443
Phase 3	22,186	3473	410	1.42	116,724	138,910
Total	51,767	3525	971	1.49	157,366	209,133
	Ore > = 1200 ppm Li					
Phase 1	11,424	3407	207	1.58	6,356	17,780
Phase 2	20,711	3356	370	1.41	31,732	52,443
Phase 3	24,643	3240	425	1.34	114,267	138,910
Total	56,778	3316	1,002	1.41	152,355	209,133

Figure 16.1: North Pit – Phase 1

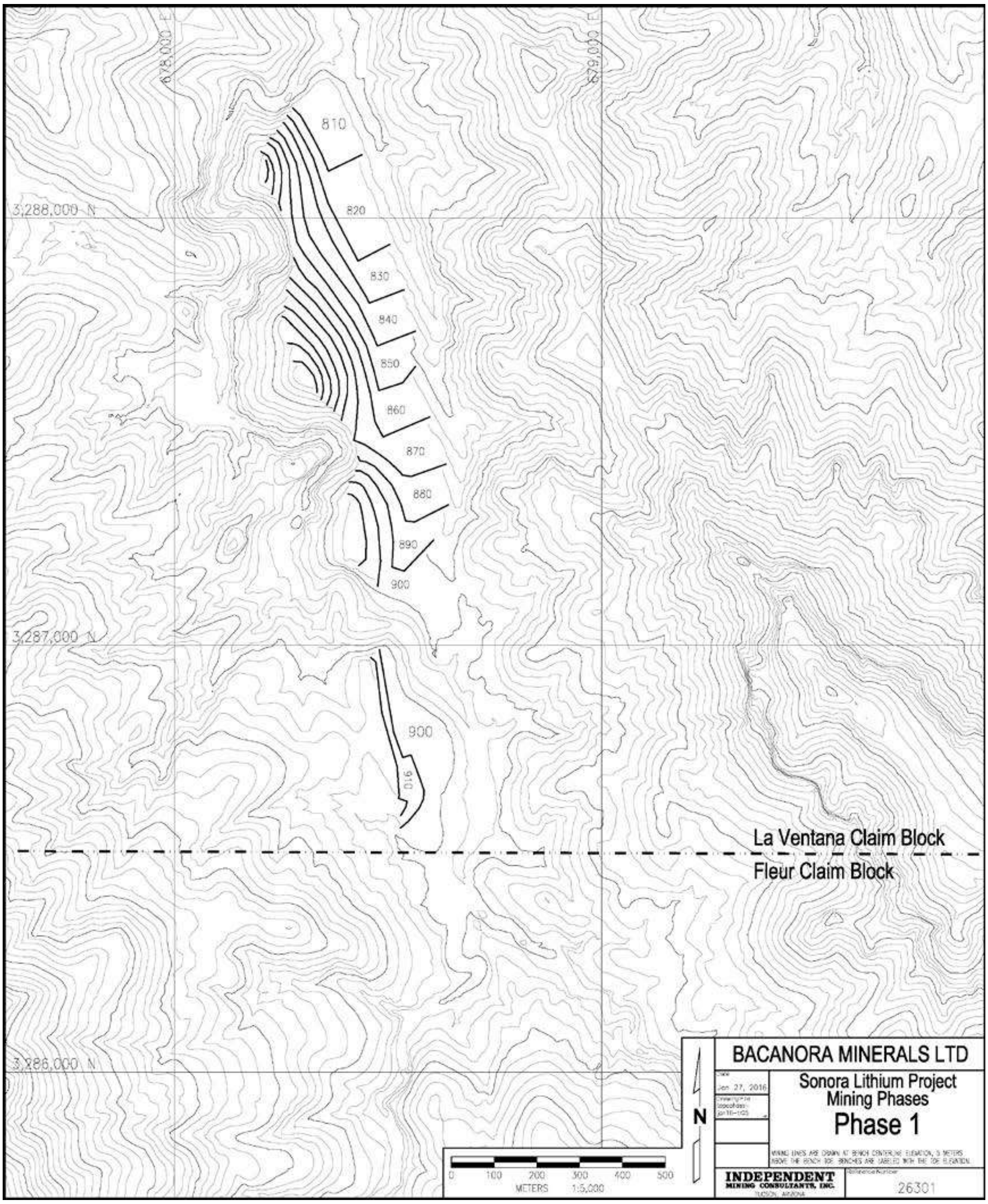


Figure 16.2: North Pit – Phase 2

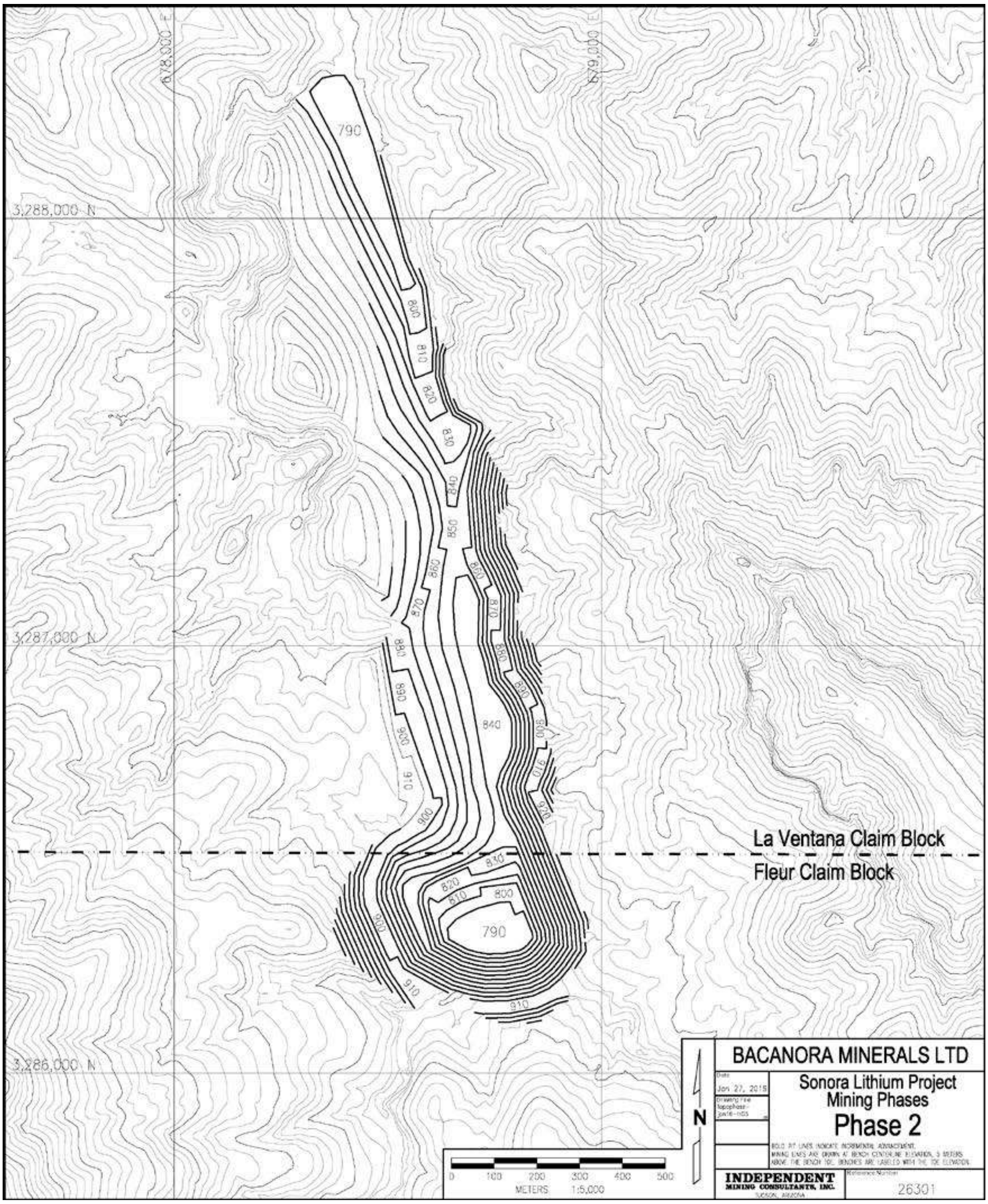
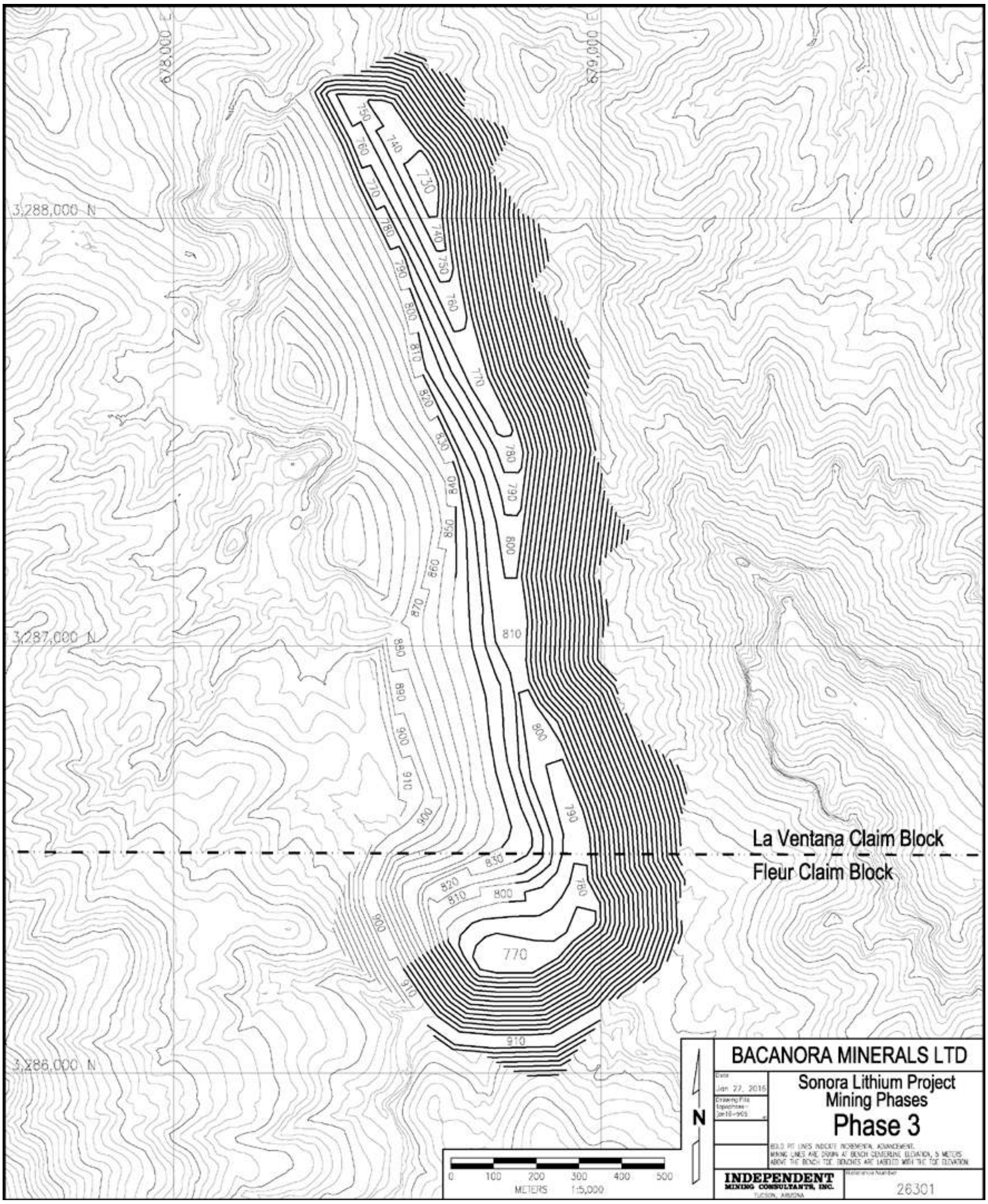


Figure 16.3: North Pit – Phase 3



16.2 Mine Production Schedule

The basis of the mine production schedule is the production of 35,000 t of lithium carbonate each year after a ramp up period during years 1 and 2. The target lithium carbonate production in year 1 is 13,000 t and in year 2, 17,000 t for the mine schedule. The production schedule lasts 20.5 years and there is reserve to extend it beyond that time period.

Table 16.2 is a summary of the mine production schedule by year and includes the percent of the ore coming from the La Ventana claim block which is 100% owned by Bacanora Minerals.

The balance of the mine production comes from the Fleur claim block of which Bacanora has a 70% interest.

The higher mine production schedule cutoffs (above the 1200 ppm Li cutoff used for the mineral reserve) removes the upper clay low grade material from the plant feed stream. Over the 20 year production schedule this tonnage is 4,555 kt at an undiluted grade of 1269 ppm Li and 0.66% K. This material is of low value and could be stockpiled for later processing or blending, but is currently not part of the plant feed schedule.

Table 16.2: Mine Production Schedule

Year	Diluted Feed to Plant					Waste (Dilution Removed) (kt)	Total Movement (kt)	Waste : Ore Ratio	Percent of Plant Feed from La Ventana Claims
	Li Cutoff Grade (ppm)	(kt)	Li Head Grade (ppm)	Contained Li_2CO_3	K Head Grade (%)				
1	1800	1,150	3921	23,998	1.68	981	2,131	0.9	100.0%
2	1800	1,183	3926	24,718	1.69	941	2,124	0.8	100.0%
3	1800	2,486	3781	50,028	1.67	2,513	4,999	1.0	100.0%
4	1800	2,796	3363	50,049	1.58	9,204	12,000	3.3	99.9%
5	1800	2,706	3474	50,042	1.52	9,294	12,000	3.4	96.1%
6	1800	2,805	3354	50,072	1.49	9,195	12,000	3.3	95.5%
7	1800	2,778	3387	50,077	1.46	15,222	18,000	5.5	94.2%
8	1500	2,398	3925	50,098	1.58	15,602	18,000	6.5	87.7%
9	1500	2,376	3960	50,075	1.61	15,624	18,000	6.6	83.1%
10	1500	2,426	3875	50,029	1.59	15,574	18,000	6.4	75.1%
11	1500	2,736	3441	50,099	1.45	15,264	18,000	5.6	54.6%
12	1500	2,937	3206	50,105	1.35	14,988	17,925	5.1	71.1%
13	1500	2,904	3242	50,105	1.41	5,256	8,160	1.8	76.1%
14	1500	2,470	3811	50,094	1.50	7,452	9,922	3.0	95.6%
15	1500	2,470	3806	50,024	1.50	5,464	7,934	2.2	91.9%
16	1500	2,514	3739	50,022	1.47	4,165	6,679	1.7	82.9%
17	1500	2,613	3599	50,054	1.43	3,506	6,119	1.3	74.2%
18	1500	2,684	3510	50,138	1.42	2,651	5,335	1.0	65.2%
19	1500	2,800	3361	50,078	1.43	1,807	4,607	0.6	61.4%
20	1500	3,058	3073	50,018	1.37	2,031	5,089	0.7	80.7%
21	1500	1,483	2690	21,231	1.28	626	2,109	0.4	100.0%
Total		51,773	3525	971,152	1.49	157,360	209,133	3.0	83.6%

Mining begins in phase 1 after a short pre-production period during which the haul roads are constructed and any clearing of the phase 1 pit area is completed. It is assumed that these activities will take about 3 months to complete. No pre-stripping of phase 1 is required as the lower clay unit is exposed just below the ignimbrite layer. A small amount of dozing off of the ignimbrite layer will expose the lower clay for mining. Mining is confined to phase 1 during years 1 and 2 and phase 1 stays out of the arroyo bottom so no water diversion is required during the early years. Ore production from phase 1 continues through year 7.

The mining begins during year 3 in phase 2 with stripping of the basalt cap. By year 4, the total material rate has increased to 12,000 kt/y with the peak stripping in phase 2 being in years 4 and 5. Phase 2 provides ore from years 5 through 13. A water course diversion is included in the southwest wall of phase 2 to divert water during the west season around the pit to the west and return it to a natural drainage on the west side of the pit. The haul road exiting the pit will have to cross this diversion.

Stripping in phase 3 begins in year 5 with the peak being during years 7 through 12 when the total tonnage rate steps up to 18,000 kt/y. Steady ore production from phase 3 is during years 11 through 21. The west and southwest portions of the water diversion remain the same as phase 3 mines down through the 910 bench elevation, but the south side is moved further south as part of phase 3 in year 8.

Table 16.3 shows the ore and waste tonnage by year by mining phase.

Table 16.3: Mine Production by Mining Phase

Year	Phase 1		Phase 2		Phase 3		Total		
	Ore (kt)	Waste (kt)	Ore (kt)	Waste (kt)	Ore (kt)	Waste (kt)	Ore (kt)	Waste (kt)	Total (kt)
1	1,150	981					1,150	981	2,131
2	1,183	941					1,183	941	2,124
3	2,486	1,614		899			2,486	2,513	4,999
4	2,794	1,335	2	7,869			2,796	9,204	12,000
5	1,305	530	1,401	8,045		719	2,706	9,294	12,000
6	1,430	587	1,375	3,927		4,681	2,805	9,195	12,000
7	1,076	368	1,702	2,735		12,119	2,778	15,222	18,000
8			2,398	2,948		12,654	2,398	15,602	18,000
9			2,376	2,229		13,395	2,376	15,624	18,000
10			2,426	2,023		13,551	2,426	15,574	18,000
11			2,629	2,313	107	12,951	2,736	15,264	18,000
12			1,927	849	1,010	14,139	2,937	14,988	17,925
13			1,924	446	980	4,810	2,904	5,256	8,160
14					2,470	7,452	2,470	7,452	9,922
15					2,470	5,464	2,470	5,464	7,934

Year	Phase 1		Phase 2		Phase 3		Total		
16					2,514	4,165	2,514	4,165	6,679
17					2,613	3,506	2,613	3,506	6,119
18					2,684	2,651	2,684	2,651	5,335
19					2,800	1,807	2,800	1,807	4,607
20					3,058	2,031	3,058	2,031	5,089
21					1,483	626	1,483	626	2,109
Total	11,424	6,356	18,160	34,283	22,189	116,721	51,773	157,360	209,133

16.3 Waste Storage Facilities

Waste Storage Facilities (“WSF”) are designed to hold the waste presented in Table 16.4. The WSF are located in three locations: one to the northwest of the pit, one to the southeast and one south of the pit and plant area which incorporates the dry tailings storage along with waste storage. All of the WSF are designed with a 2.5 (horizontal) to 1.0 (vertical) slope angle for any open faces of the WSF. This will allow for concurrent reclamation. All WSF are built from the bottom up with access ramps on the open face. A 30% swell is assumed for the WSF volume calculations: 40% swell from the pit in place volume to the trucks and then 10% compaction in the WSF for a final 30% swell volume. Table 16.4 is a summary of the waste tonnage delivered to each of the three WSF. Figure 16.4 through to Figure 16.12 illustrate the pit progress and WSF advances at the end of years 1, 2, 3, 4, 5, 7, 10, 15, and year 21 (end of mine schedule).

Table 16.4: Waste Tonnage to Storage Facilities

Year	Northwest Dump (kt)	Southeast Dump (kt)	South Dump Storage with Dry Tailings (kt)	
			Waste Rock	Tailings
1			981	1,328
2	175		766	1,366
3	2,513			2,871
4	9,204			3,229
5	8,575	719		3,125
6	957	4,681	3,557	3,240
7	3,103	6,192	5,927	3,209
8	2,948		12,654	2,770
9	2,229		13,395	2,744
10	2,023		13,551	2,802
11	13,310		1,954	3,160
12	2,227		12,761	3,392
13			5,256	3,354
14			7,452	2,853
15			5,464	2,853
16			4,165	2,904
17			3,506	3,018
18			2,651	3,100
19			1,807	3,234
20			2,031	3,532
21			626	1,713
Total	47,264	11,592	98,504	59,797

Figure 16.4: Mine Plan at End of Year 1

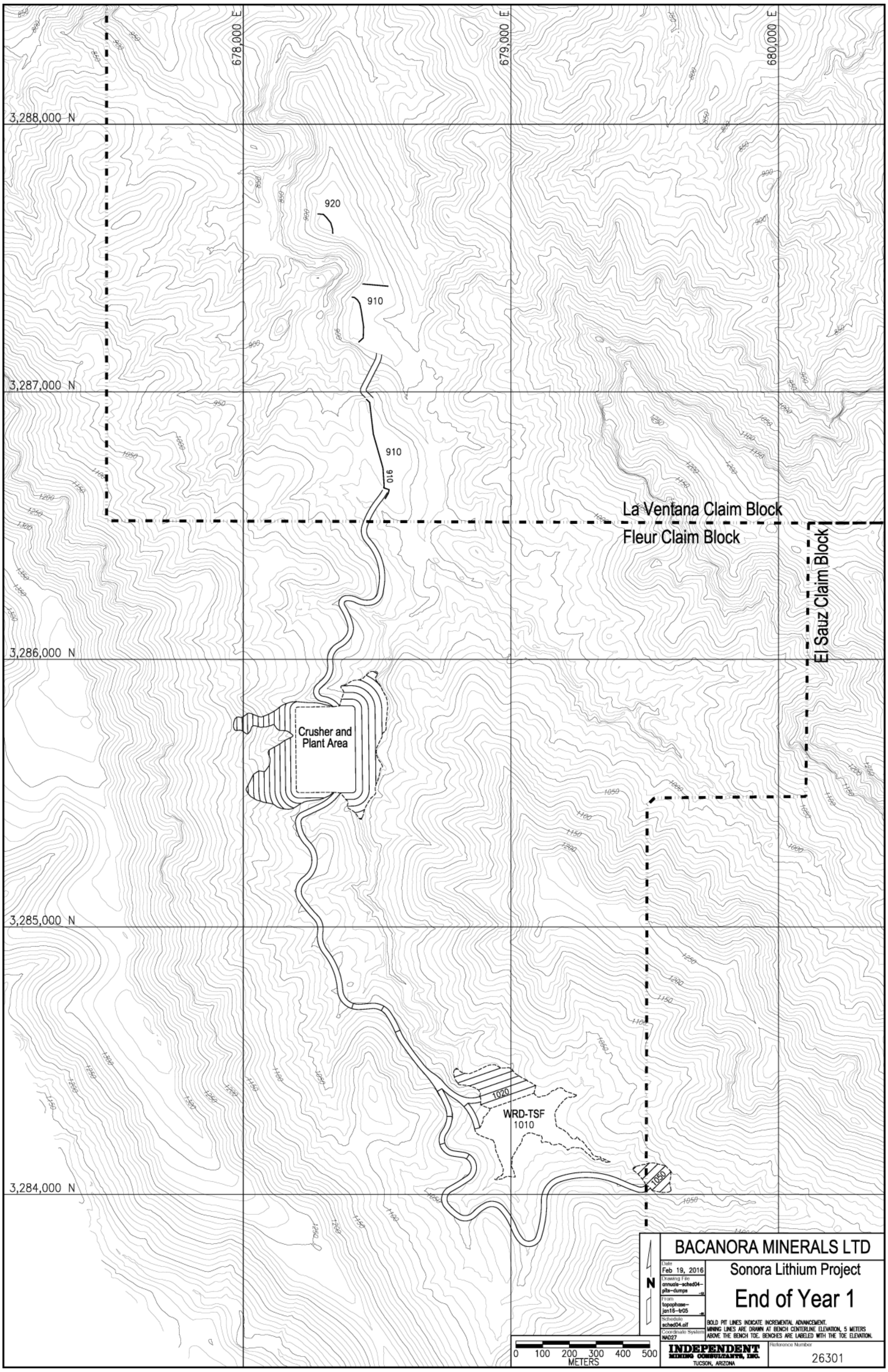


Figure 16.5: Mine Plan at End of Year 2

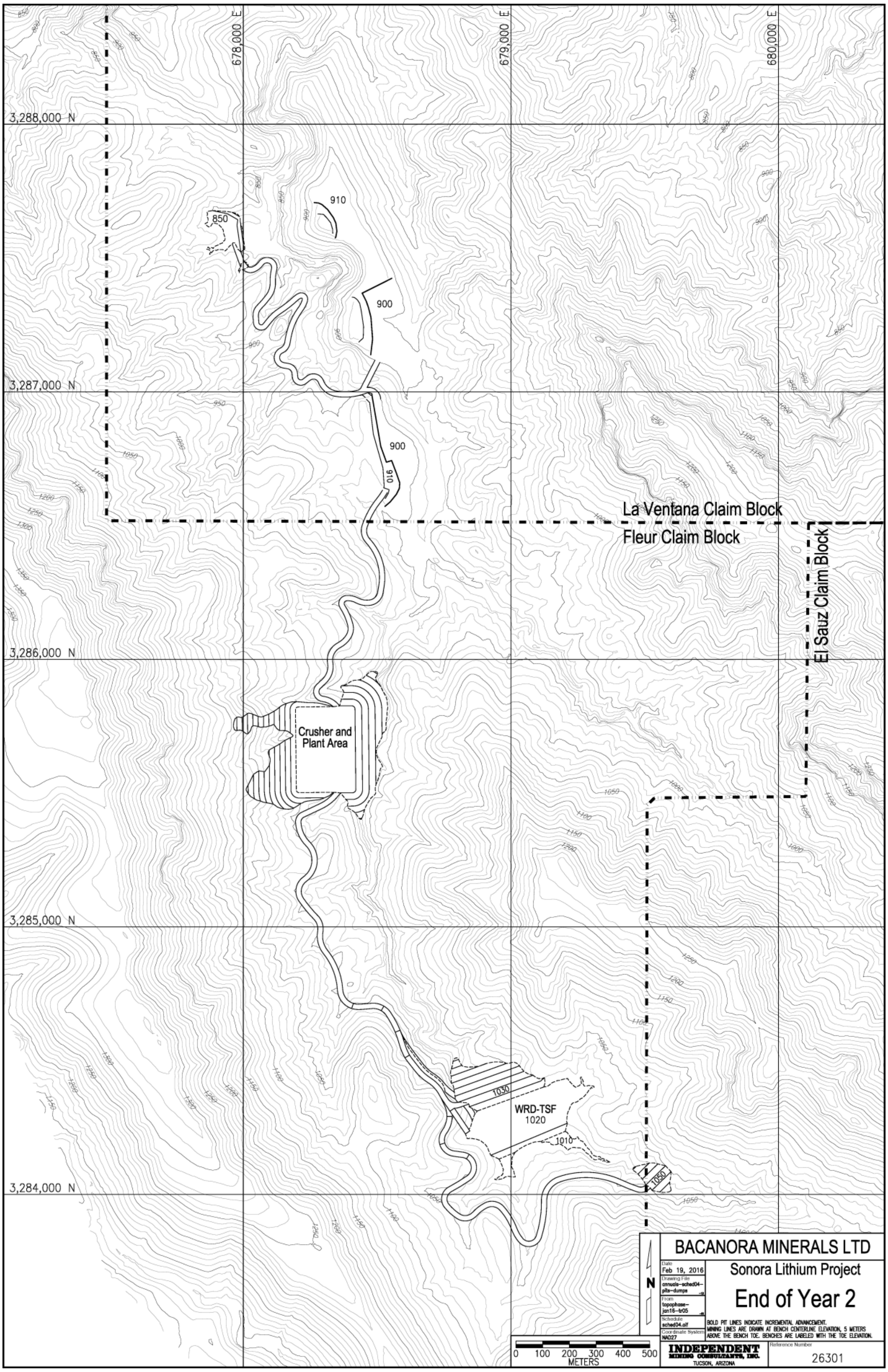


Figure 16.6: Mine Plan at End of Year 3

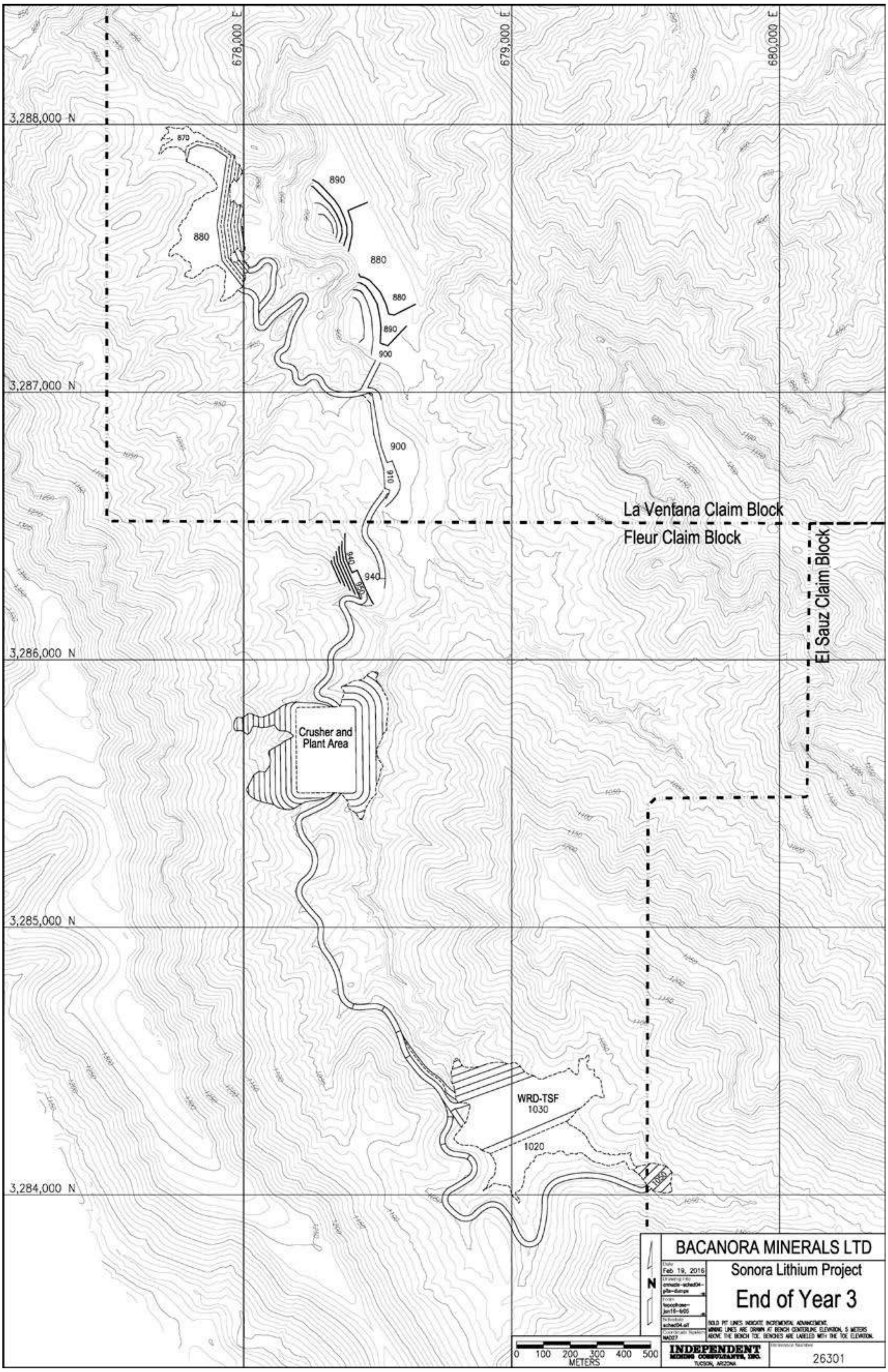


Figure 16.7: Mine Plan at End of Year 4

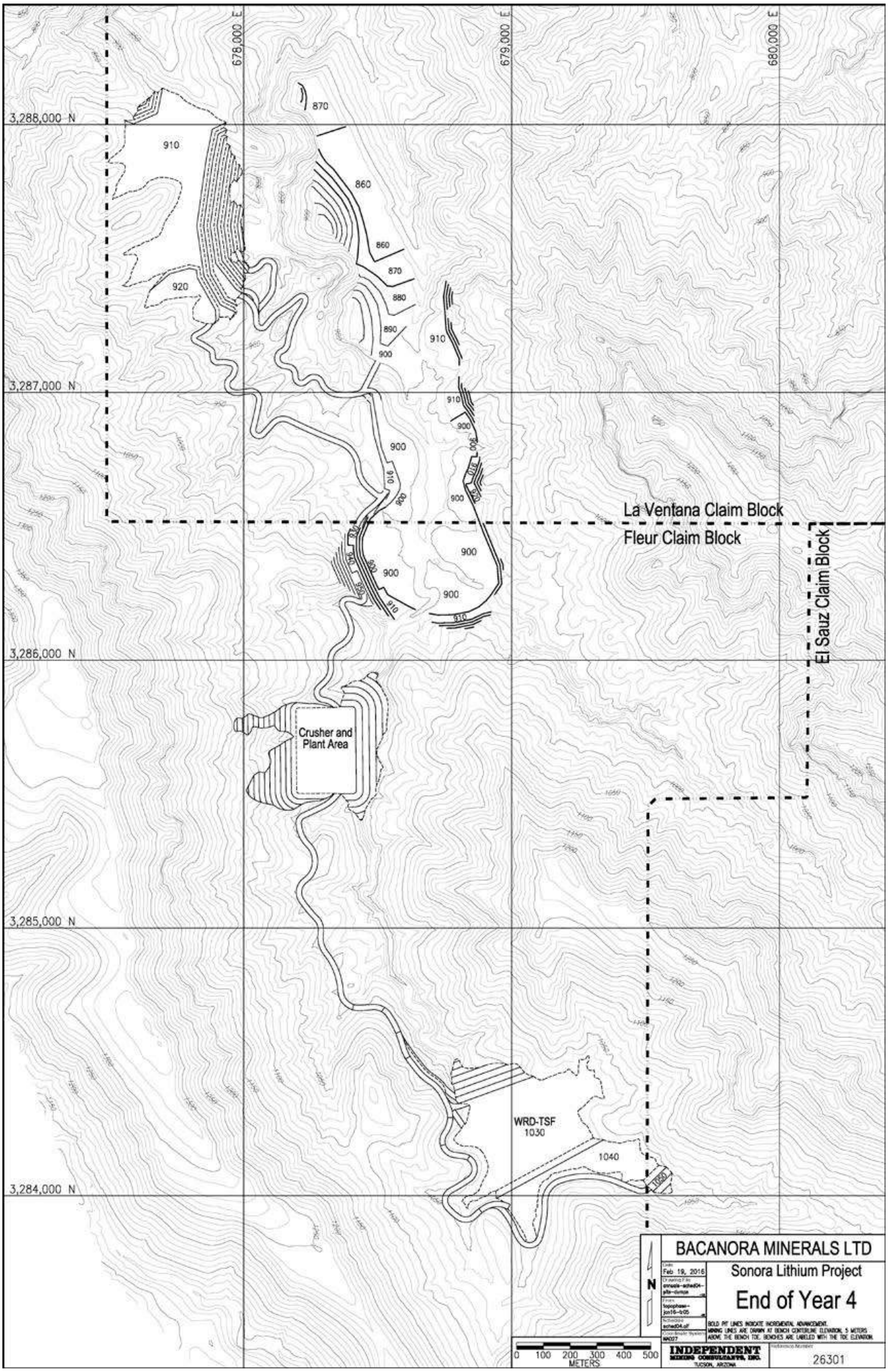


Figure 16.8: Mine Plan at End of Year 5

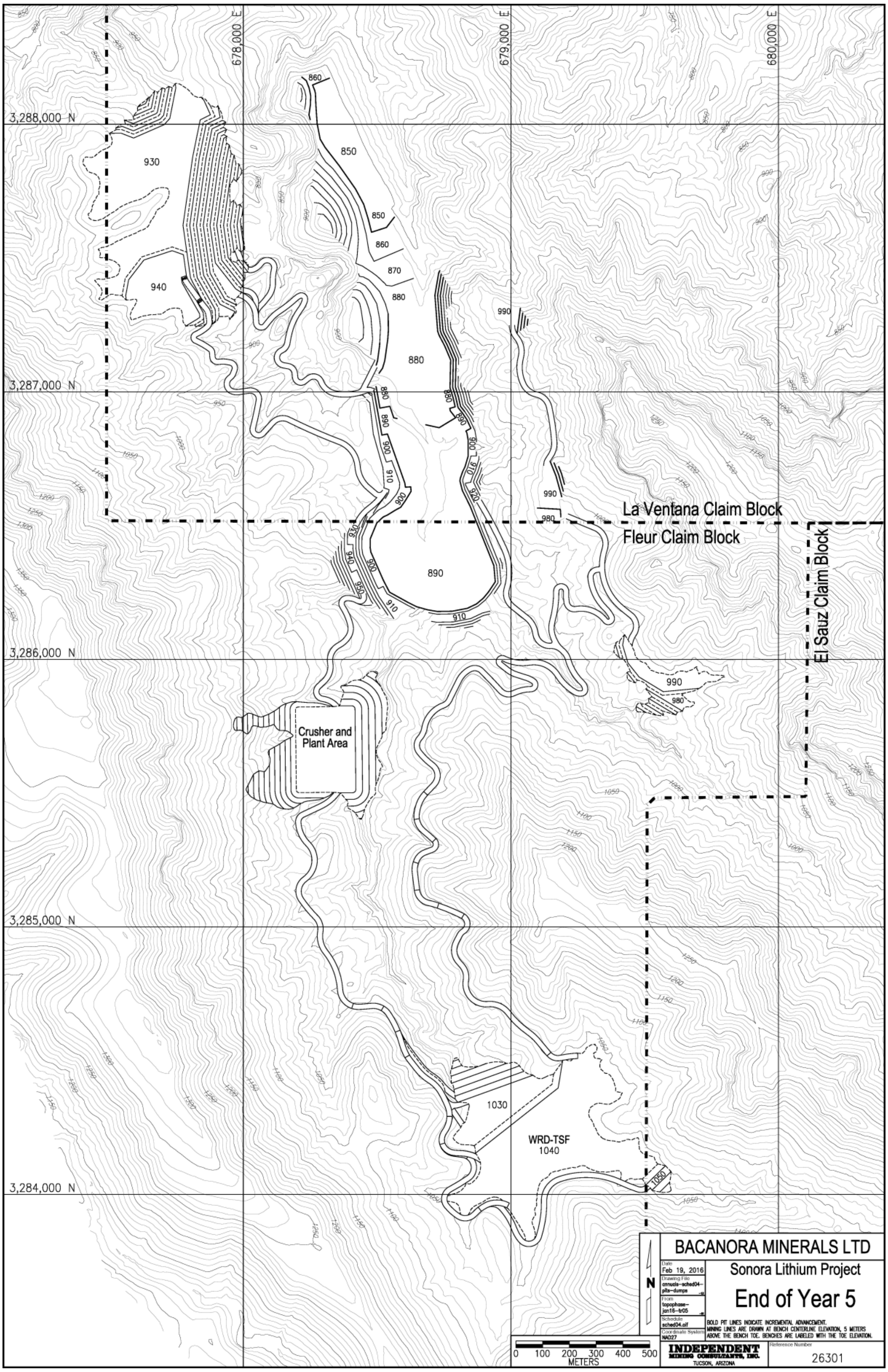


Figure 16.9: Mine Plan at End of Year 7

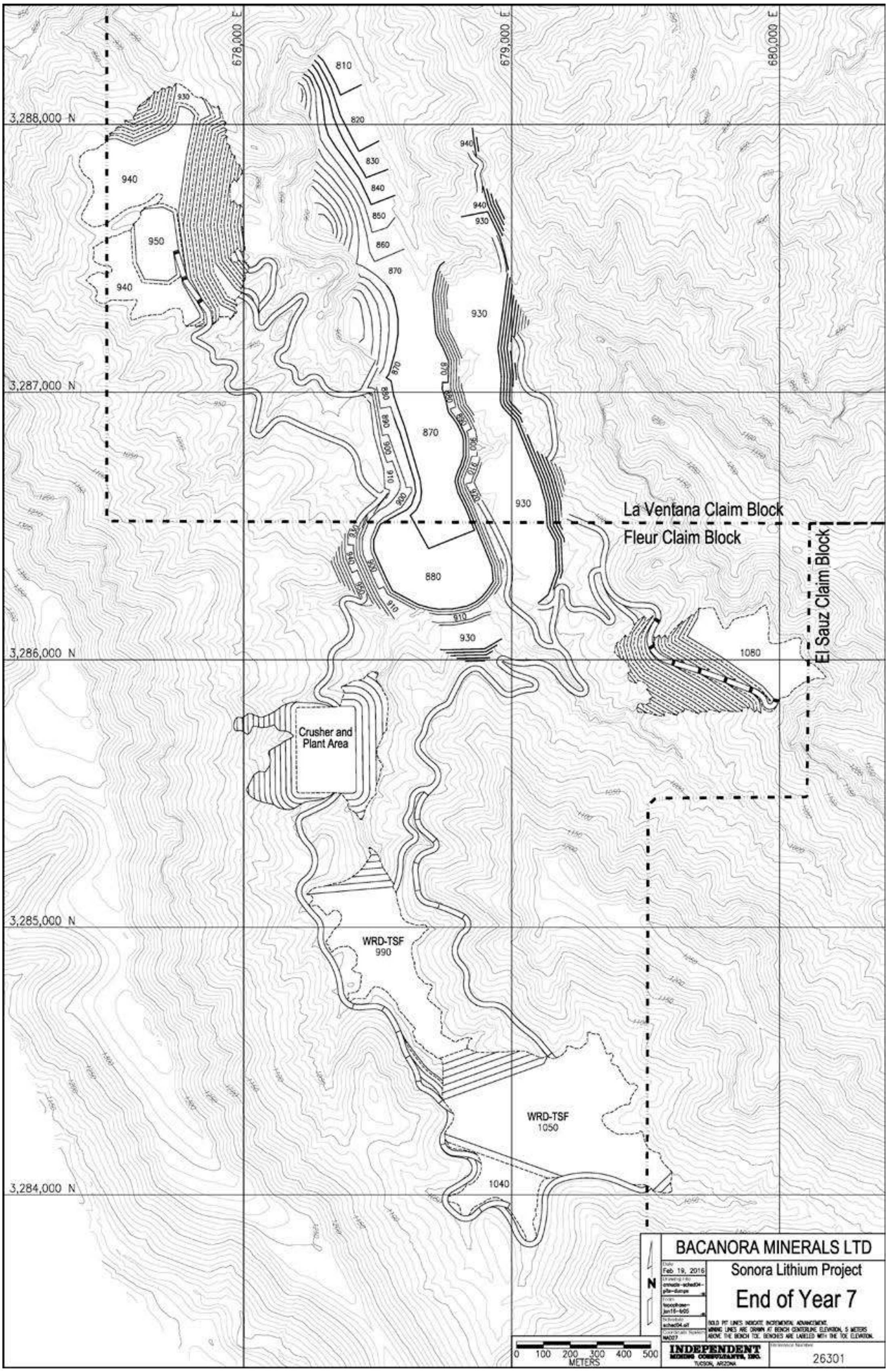


Figure 16.10: Mine Plan at End of Year 10

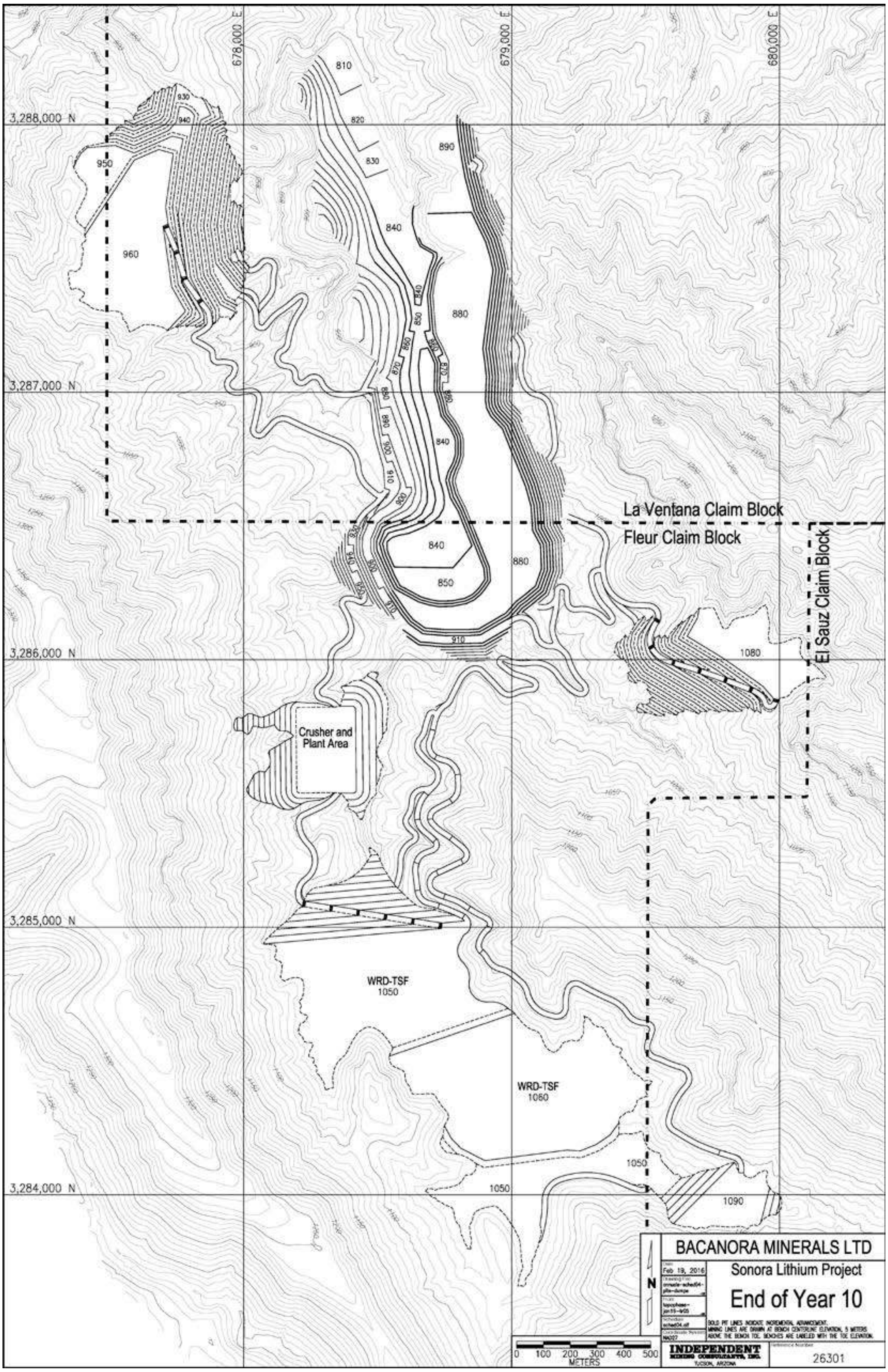


Figure 16.11: Mine Plan at End of Year 15

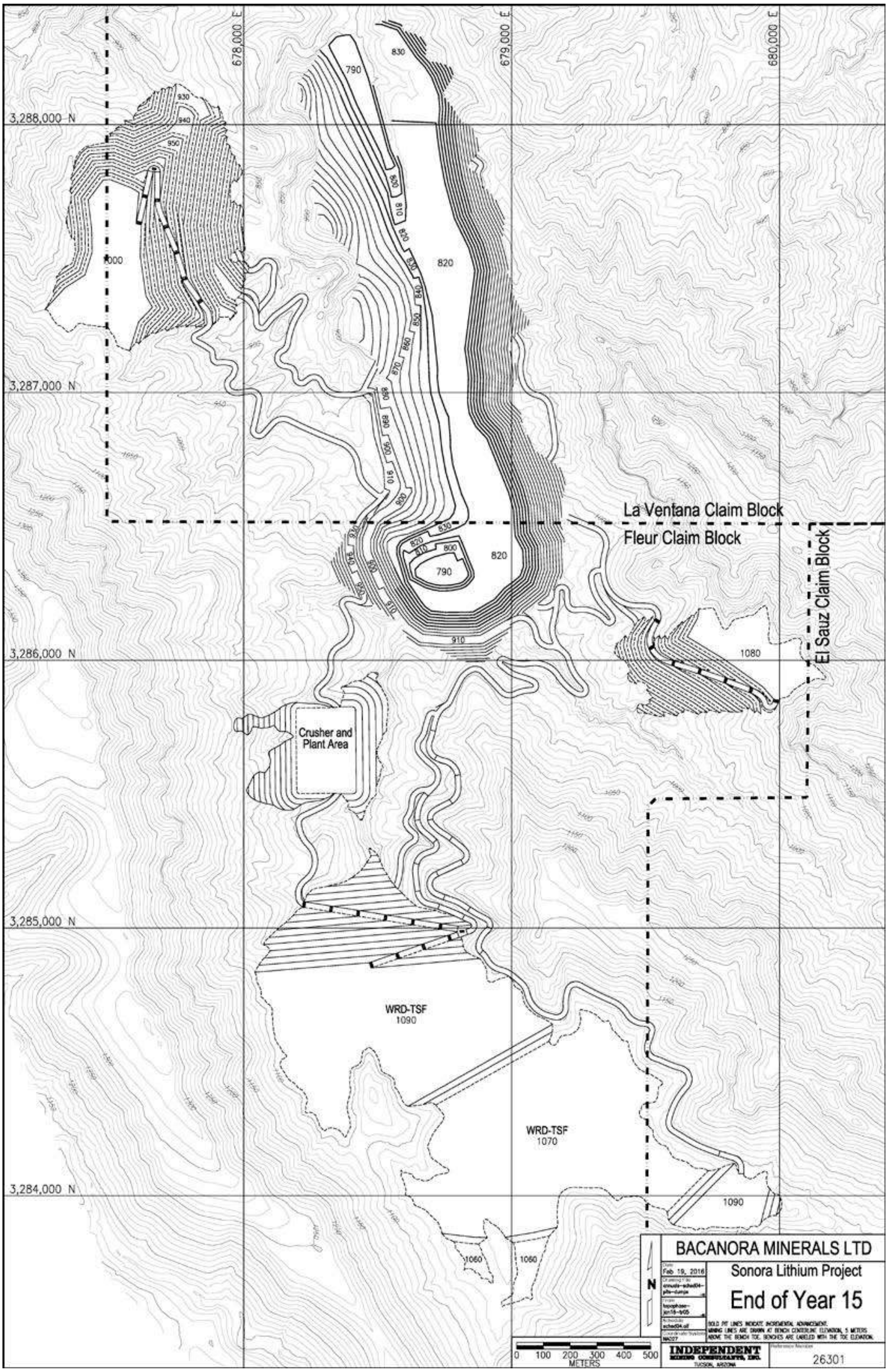
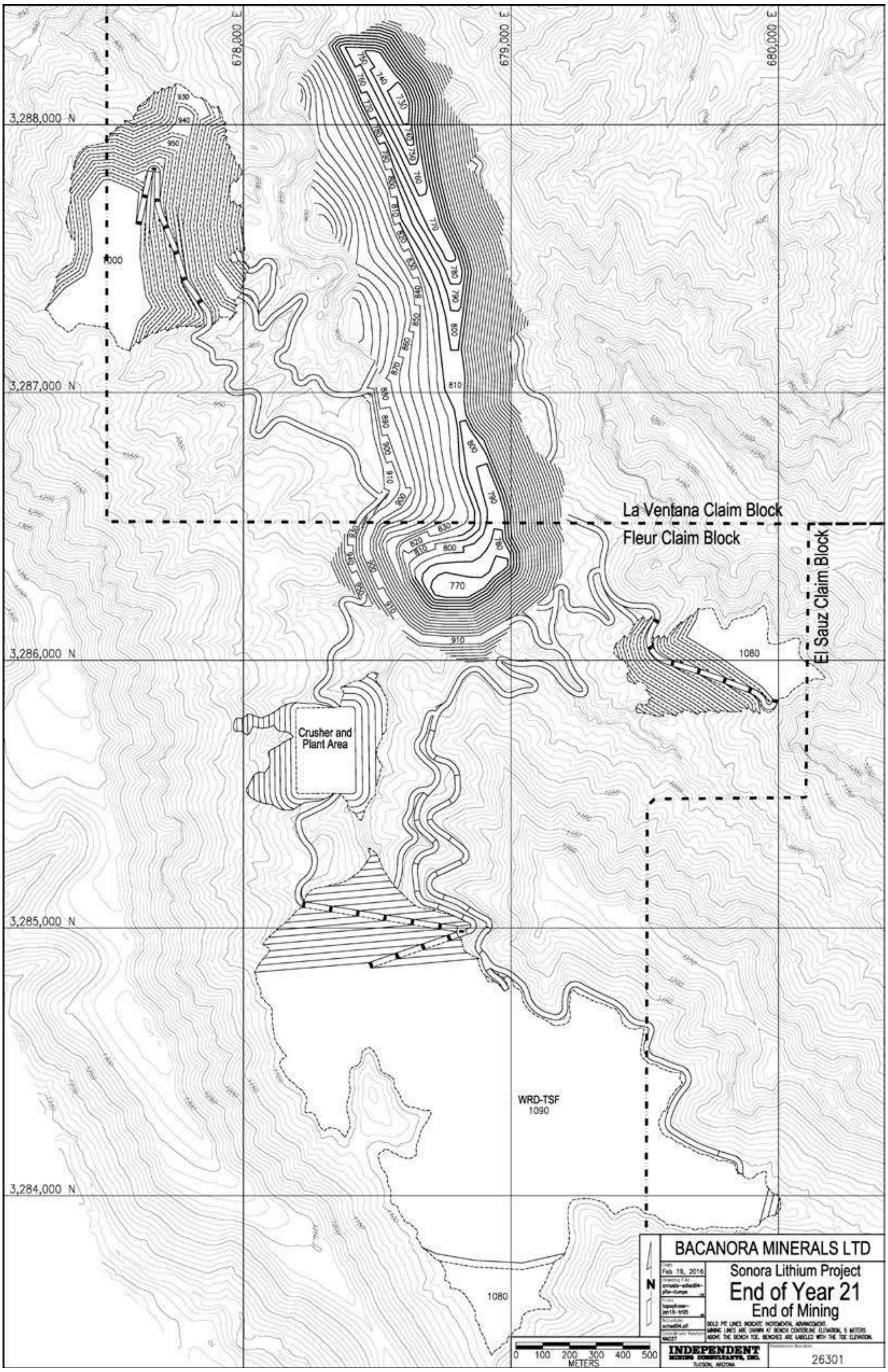


Figure 16.12: Mine Plan at End of Year 21 (End of Production Schedule)



17 RECOVERY METHODS

17.1 Summary Flowsheet

During the development of the PFS, different flowsheet options were investigated for the recovery of lithium from the Sonora hectorite clays (i.e. acid pre-leaching of the ore, acid bake, atmospheric leaching, and potassium sulfate roasting). Gypsum roasting was selected based on testwork and preliminary economic evaluations.

The Sonora Lithium Plant is proposed to be built in two stages. The Stage 1 design involves processing approximately 1.37 Mt/y of Run of Mine ("ROM") feed, at 0.39% Li and 1.68% K (first two years), to produce battery-grade Li_2CO_3 and potassium sulfate (K_2SO_4) for sale. The K_2SO_4 produced is expected to be sold as a high-quality Sulfate of Potash ("SOP") fertiliser. About 77,000 t/y of sodium sulfate is produced in Stage 1 however this is not expected to be saleable and is therefore stored in a lined tailings storage facility.

Stage 2, which is planned for start-up in Year 3, involves adding a duplicate 1.37 Mt/y train to treat a total of 2.74 Mt/y of ROM feed, at 0.35% Li and 1.49% K.

The operating schedule for the plant is a continuous 24 hour per day ("h/d") operation, using two 12 h shifts per day, 365 days per year ("d/y"). Design plant availabilities are typical at 90% (7,882 h/y) for the beneficiation plant and 83% (7,270 h/y) for the extraction and precipitation plants.

Refer to Figure 17.1 for the summary flowsheet which consists of:

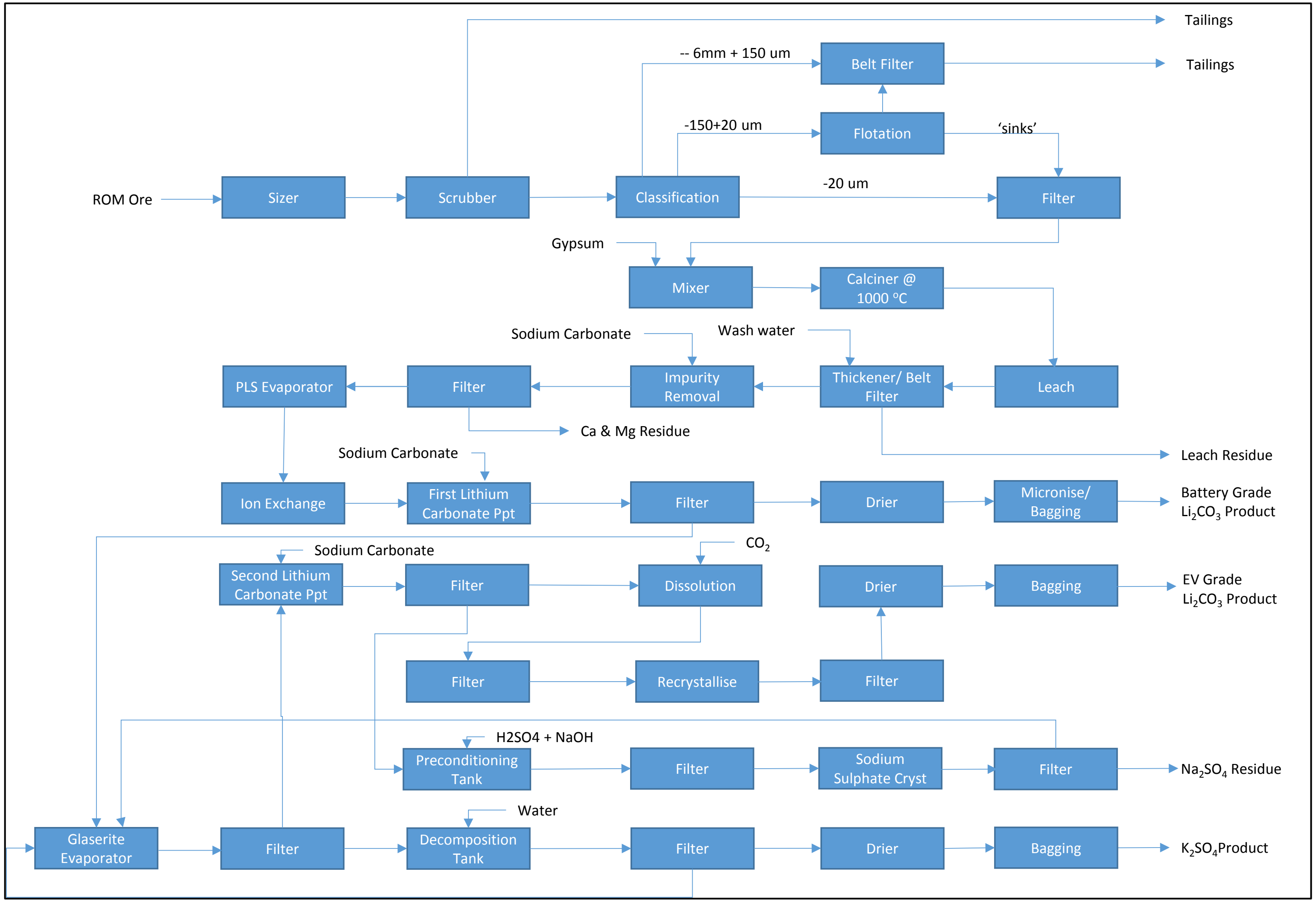
- Beneficiation to recover lithium while rejecting gangue (calcite and silica) using scrubbing, hydrocyclone classification and reverse flotation.
- Gypsum roasting, which converts the lithium to water soluble lithium sulfate ("Li_2SO_4") at 1,000 degrees Celsius ("°C"), in the presence of gypsum and limestone.
- A hydrometallurgical section where the calcine is mixed with water in a slurry to form an impure Li_2SO_4 Pregnant Liquor Solution ("PLS"). Impurities are then removed from the PLS using precipitation and ion exchange prior to the evaporation and precipitation of battery-grade Li_2CO_3.
- Potassium sulfate is then recovered from the barren liquor using crystallisation and selective dissolution. The filtrate is sent to the second Li_2CO_3 precipitation which uses bicarbonation to produce battery-grade Li_2CO_3.

Refer to Table 17.1 for the key process design criteria. Most of these criteria have been derived from the metallurgical testwork program undertaken by SGS and Bacanora, which were used in developing the mass balance that forms the basis for the sizing of process plant equipment.

Table 17.1: Key Process Design Criteria

Description	Units	Value
Overall Lithium Recovery	%	69.8
Overall Potassium Recovery	%	57.2
Beneficiation		
Beneficiation feed rate	t/h	174
Design feed grade	% Li	0.39
Flotation feed size fraction	microns	-150 + 20
Mass recovery	%	50
Lithium recovery	%	82
Filtered concentrate moisture content	wt %	20
Extraction		
Gypsum addition ratio to ore	-	0.16 : 1
Kiln temperature	°C	1,000
Lithium extraction	%	87.2
Leach density	% w/w	50
Target temperature	°C	70
Leach Residue Filtration		
Wash efficiency	%	98.5
Wash ratio	m^3/t	1.0
Cake discharge moisture content	% w/w	20
Purification		
Na_2CO_3 addition (300 g/L solution)	kg/m^3	1.61
Calcium in IX discharge	ppm	<5
PLS Evaporation		
Target total sulfates concentration	g/L	350
First Lithium Carbonate Precipitation		
Operating temperature	°C	95
Sodium carbonate addition	mol/mol	1.1
Target product grade	%	>99.5
Potassium Recovery		
Evaporation temperature	°C	100
Second Lithium Carbonate Precipitation		
Sodium carbonate addition	mol/mol	1.1
Bicarbonation Dissolution temperature	°C	25
Bicarbonation Crystallisation temp.	°C	95
Target product grade	%	>99.6
Sodium Sulfate Crystalliser		
Target Na_2SO_4 concentration	wt %	30
Evaporator discharge temperature	°C	85

Figure 17.1: Summary Flowsheet



17.2 Beneficiation Circuit

The purpose of beneficiation is to reject as much of the non-lithium bearing minerals (gangue) while maximising lithium recovery. Initial testwork has shown that it is possible to reject about 70% of the feed mass (calcite and silica) while recovering 60% of the lithium into the -20 µm fraction using wet screening and classification.

As shown in Figure 17.1 the larger particles (mostly quartz) in the ore are initially rejected via wet scrubbing and screening. Additional gangue (mostly calcite) is then rejected using hydrocyclones with finer calcite subsequently being removed using reverse flotation (i.e. the carbonate gangue floats while the lithium bearing clays 'sink').

The key considerations in the development of the beneficiation flowsheet were:

- Testwork showed improved beneficiation performance when the ore is treated wet rather than dry. Operational performance is also expected to be better for wet beneficiation when the ore is received wet and possibly sticky. However, dry beneficiation represents a potential opportunity which could reduce capital and operating costs as the beneficiated clay would not need to be dried prior to roasting.
- Sufficient liberation of valuable minerals is expected using a scrubber while ensuring that power input is minimized. If more aggressive, high energy, grinding operations are used (e.g. a ball mill), the gangue will be ground further and thus reduce the beneficiation plant product grade and recovery.
- Screening is not used as a high number of screens would be required; hydrocyclones were selected for this relatively fine cut size and to reduce capital cost.
- The combined concentrate, consisting of fines and flotation 'sinks' are proposed to be dewatered using conventional high rate thickening, pressure filtration and atmospheric drying prior to roasting.

17.2.1 Ore Preparation and Classification

ROM ore is delivered by Front End Loader ("FEL") to the Mineral Sizer which reduces the particle size to -150 mm. The Mineral Sizer product is discharged onto the Scrubber Feed Conveyor. This material, together with water, is fed to the Drum Scrubber in which the agglomerates and clay lumps are broken up and form slurry.

The Drum Scrubber has a 15 mm aperture inner screen and 6 mm outer screen. The +6 mm oversize is mostly calcite and quartz and is discarded. The scrubber product (-6 mm) is pumped to the Classification Circuit which consists of primary, secondary and scavenger hydro-cyclones. The clay slurry clay is separated into three fractions:

- +150 µm: which is fed to the tailings belt filter
- -150 + 20 µm: which is fed to the reverse flotation circuit
- -20 µm: the fines fraction which is fed to the Concentrate Thickener.

17.2.2 Flotation and Dewatering

The -150 + 20 µm slurry undergoes reverse flotation where the "floats" contain the waste stream with a high percentage of quartz and calcite, and the "sinks" contain the concentrate stream with a high amount of lithium.

The flotation circuit consists of:

- Rougher Flotation
- 1st Cleaner Flotation
- 2nd Cleaner Flotation

Each flotation circuit includes conditioning tanks as well as flotation tank cells. The rougher circuit comprises a dilution tank to add water to achieve 50% solids and four 20 m^3 tank cells. Each cleaner circuit includes two 20 m^3 tank cells. Flotation reagents include collector, soda ash for pH adjustment and sodium silicate as a dispersant. The sinks from each of the flotation cells reports to the concentrate thickener.

The classified overflow product along with the flotation concentrate is thickened in the Concentrate Thickener and filtered by plate and frame Concentrate Filters. Flocculant is added to aid settling in the thickener.

The concentrate filter cake is stacked and stockpiled, which allows for drying and a decoupling between the upstream beneficiation plant and downstream extraction plant.

The primary cyclone underflow and flotation tailings ('floats'), at 60% solids, are pumped to a 66 m^2 belt filter. The filter cake, at 20% moisture, is conveyed and then stacked prior to transport to the Tailings Storage Facility using FEL and trucks.

17.3 Extraction and Precipitation Circuit

Testwork showed that lithium extractions of 87% could be achieved with optimised ratio of reagents to maximize the uptake of sulphur dioxide and thereby reduce the consumption of gypsum. Testwork indicates that it is feasible to use the recovered K_2SO_4 in the roasting circuit to reduce gypsum consumption; the base case flowsheet produces K_2SO_4 for sale.

The most important impurities that need to be managed for the production of battery-grade Li_2CO_3 is sodium and calcium sulfate. Magnesium, manganese, silica, aluminium and iron are removed by precipitation and ion exchange in impurity removal. Calcium is minimised by a combination of adding soda ash and ion exchange.

Sodium, potassium, sulfate and chloride are reduced by washing the lithium carbonate crystals to remove the contaminants on the surface.

17.3.1 Roasting

The beneficiation concentrate, along with gypsum, are reclaimed from stockpiles using variable speed belt feeders and transferred to the Paddle Mixer which blends the concentrate and gypsum. The combined feed is introduced to the roasting kiln where the reaction of lithium and calcium sulfate (gypsum) occurs to form lithium sulfate (Li_2SO_4).

Initially chemically bound water is released as the feed is preheated on its way to the higher temperature zone. Calcite ($CaCO_3$) and gypsum are calcined to lime. Once the optimum roasting temperature of 1000°C is achieved, a one hour residence time is required in the hot zone due to the slow kinetics of the reactions involved.

Heat input and off-gas volumes are carefully optimized in order to reduce gas velocity and thus decrease the dust load carried to off-gas cleaning systems. Reduced gas velocities decrease the dust load carried to cleaning systems and their associated capital and operating costs.

The product calcine exiting the kiln is cooled with preheated fresh air. The cooled calcine is transferred to Calcine Leaching for the recovery of the water soluble lithium sulfate.

17.3.2 Leaching, Thickening and Filtration

The calcine is mixed with recycled PLS filtrate and regenerated IX solutions to achieve 50% w/w solids in a 200 m^3 Calcine Leach Tank. The Li_2SO_4, along with any metal sulfate impurities of iron, magnesium, calcium, aluminium, sodium, and potassium are water soluble and leach into solution. The leach tank temperature is controlled to a target of 70°C with a water cooling coil. The leached slurry is pumped to the Leach Thickener.

The leached slurry is separated into a lithium rich PLS and a clay residue, which contains little lithium, using a high rate thickener and belt filters. The Leach Thickener is a 20 m diameter high rate thickener which thickens the slurry to 65% w/w prior to pumping it to the Leach Filter Feed Tank. The thickener overflow (PLS) flows by gravity to Purification for impurity removal.

Two parallel 150 m^2 vacuum belt filters produce a washed filter cake with less than 20% w/w moisture. The filter cake is conveyed to a stockpile for transport to the Tailings Storage Facility using a FEL and trucks.

17.3.3 Purification and Evaporation

The Purification area consists of two tanks in which sodium carbonate solution is added to the PLS to precipitate calcium as $CaCO_3$. The precipitated $CaCO_3$ is removed via a 30 m^2 horizontal plate and frame filter and discharged into a bunker for transport to the lined Sodium Sulfate Pond. The filtered solids will be washed with fresh water to maximise the recovery of residual soluble lithium.

The filtrate is collected and pumped to the Polishing Filter to remove any residual solids prior to evaporation.

The Evaporator uses forced circulation by mechanical vapour recompression to increase the PLS lithium concentration from 5.5 g/L to 14.3 g/L to maximise the amount of lithium carbonate precipitated as battery-grade lithium carbonate.

17.3.4 Ion Exchange

The purpose of the ion exchange circuit is to remove any multi-valent cations in solution (i.e. calcium, magnesium, manganese, aluminium). The IX package consists of three IX columns in a lead–lag–regeneration configuration to enable continuous operation. The regenerated solution is recycled to the Leach Tank to be used as dilution water. The purified PLS is then pumped to Precipitation.

17.3.5 First Lithium Carbonate Precipitation, Filtration, Washing and Drying

The First Battery-Grade ("BG") Lithium Carbonate Precipitation circuit consists of four agitated tanks operated in batch mode, with three tanks in operation at any time. Sodium carbonate (Na_2CO_3) solution is pumped into the precipitation tanks in a 1.1: 1 stoichiometric mole ratio for conversion of the Li_2SO_4 into Li_2CO_3.

The temperature in the precipitation tanks is maintained at 95°C by indirect steam heating via immersed heating coils. Any vapour produced in a precipitation tank is cooled in the condenser and the condensate returned to the precipitation tank. At the end of the batch, the precipitate is allowed to settle and the slurry is then pumped to the 1st Precipitation Centrifuge.

The 1st Precipitation Centrifuge dewaters the slurry and washes it with hot demineralised water. The 1st Precipitation centrate is collected and pumped to glaserite evaporation. The Li_2CO_3 centrifuge cake, at 8% w/w moisture, is discharged to the 1st BG Product Dryer Feed Bin.

The BG Dryer uses indirect heating provided by LNG to reduce the moisture to <0.1%. The dryer off-gas is filtered in the BG Dryer Baghouse. The dryer discharge along with the captured dust is transported to the BG Product Silo via bucket elevator.

17.3.6 First Battery-Grade Product Handling

The First BG Li_2CO_3 is transported in one tonne bulk bags. If the product is to be micronised, it is transferred to the BG Microniser by rotary valve and screw conveyor. The BG Microniser reduces the particle size from P_{90} 100 µm to 5 µm.

A cyclone and baghouse capture any dust. A screwfeeder then transfers the microniser discharge and captured dust to the First BG Bagging and Palletising Package. One tonne bulk bags are semi-automatically filled and placed onto pallets. A forklift then transfers the loaded bags on pallets into a 20 ft shipping container.

17.3.7 Glaserite Evaporation

The solution from the First Lithium Carbonate Precipitation, the recycled sodium sulfate filtrate and the Decomposition Filter centrate are sent to the Glaserite Evaporator Feed pond. Sulphuric acid is added to convert any Li_2CO_3 to Li_2SO_4 to prevent it crystallising out of solution. The solution is evaporated at 100°C to form glaserite crystals ($Na.3K(SO_4)_2$).

The glaserite is then separated from the solution via a semi-batch operation of the Glaserite Filter. The glaserite filter cake is sent to the Decomposition Tank. The filtrate is pumped to Second Lithium Carbonate Precipitation.

17.3.8 Second Lithium Carbonate Precipitation, Filtration and Washing

Second lithium carbonate precipitation consists of three agitated tanks operated in batch mode with each tank at a different stage of operation to achieve pseudo-continuous operation. This process is otherwise identical to the First Lithium Carbonate Precipitation circuit and includes precipitation, filtration by centrifuge, and washing.

The Li_2CO_3 cake with 8% w/w moisture is further processed in the bi-carbonation circuit to produce Second BG lithium carbonate.

17.3.9 Bi-carbonation Circuit, including Filtration, Drying and Packaging

Lithium carbonate cake from Second Precipitation is fed to the bi-carbonation circuit for further purification to produce BG lithium carbonate. The Li_2CO_3 is batch fed into the Bicarb Dissolution Tank and is re-slurried with recycled centrate.

The dissolution process is maintained at 25°C to maximise the concentration of lithium in solution. The bi-carbonation centrate is pre-cooled via heat exchanger and immersed cooling coil utilising chilled water as necessary.

Carbon dioxide gas is bubbled into the bi-carbonation dissolution tank to convert lithium carbonate to more soluble lithium bicarbonate ($LiHCO_3$). Off-gas produced in the Bicarb Dissolution Tank is cooled in a condenser and the condensate returned to the tank. The excess CO_2 is collected and recycled to the Bicarbonate Process through a CO_2 Blower.

The Bicarb Dissolution Tank solution is pumped to the Bicarb Crystallisation Tank and filtered to remove any residual insoluble impurities left over from the dissolution process. In the Bicarb Crystallisation Tank the solution is heated to 95°C to re-crystallise the Li_2CO_3.

The Li_2CO_3 solution then is filtered and washed with mineralized water similar to the First Lithium Carbonate Precipitation circuit. The Li_2CO_3 cake is discharged to the 2nd BG Product Dryer Feed Bin.

Similar to the earlier circuit, the 2nd BG Dryer reduces the moisture to <0.1% and the dryer discharge along with dust is transported to the BG Product Silo via bucket elevator.

A similar product handling system to the First Lithium Carbonate packages the product in one tonne bulk bags on pallets in 20 ft shipping containers.

17.3.10 Potassium Sulfate Processing

The Glaserite Filter cake is dissolved in the Decomposition Tank with just enough process water to dissolve the sodium sulfate while re-crystallising the K_2SO_4. The slurry is pumped to the Decomposition Filter where the filtrate is recycled and the filter cake is transferred to the Potassium Sulfate Dryer using a screw feeder.

The Potassium Sulfate Dryer uses indirect heating to reduce the moisture to <0.1%. The dryer off-gas is filtered in the Potassium Sulfate Dryer Baghouse. The dryer discharge along with the captured dust is transported to the Potassium Sulfate Product Silo via bucket elevator.

17.3.11 Sodium Sulfate Crystallisation

The Second Precipitation circuit spent liquor is pumped to two preconditioning tanks. In the first tank sulphuric acid is added to convert the Li_2CO_3 to Li_2SO_4 to prevent it crystallising out with the sodium sulfate. Caustic soda is added to the second tank to maintain the pH around 7 which minimises scaling and corrosion.

The solution is then pumped to the Sodium Sulfate Crystalliser which is a forced circulation evaporative crystalliser operating at 100°C. Mechanical vapour recompression is used to recompress flash vapour to provide the heating source in the heat exchanger.

The Sodium Sulfate Crystalliser slurry is pumped to the Sodium Sulfate Filter. The filtrate from Sodium Sulfate Filter is recycled to the Glaserite Evaporator. The solids cake from Sodium Sulfate Filter is discharged to a bunker where it is transported to the lined Sodium Sulfate Pond using a FEL and trucks.

17.4 Services

17.4.1 Reagents

Reagents used in the process have been described above and include:

- Sulphuric Acid (H_2SO_4) received at 98% w/w concentration by bulk road tanker and stored in a tank.
- Sodium Carbonate (Na_2CO_3) received by bulk road tanker and stored in a silo.
- Caustic Soda (NaOH) delivered to site as solution in bulk.
- Gypsum (CaSO4) dumped from 20 t trucks onto a pad.
- Carbon dioxide (CO_2) supplied as liquid by bulk road tanker and stored in the Carbon Dioxide Bullet.
- Flotation Reagents including NBC-4 collector supplied as a liquid in ISO containers.
- Superfloc MF-345 flocculant in the concentrate and leach thickeners. It is supplied as a powder in 800 kg bulk bags.
- Cooling Water Reagents such as Biocide, algaecide and hypochlorite.

17.4.2 Water

Water used in the Process Plant includes:

- Raw water and fire water pumped from the bore fields to the Raw Water Tank, with the lower section dedicated to the storage of water for fire suppression.
- Demineralised Water produced in an on-site reverse osmosis plant for centrifuge washing, clean re-pulping, chiller make-up water and water to the boiler.
- Cooling water.
- Gland seal water.
- Potable water produced from filtered raw water dosed with hypochlorite and ultra violet light.
- Chilled water closed loop water chiller for the Bi-carbonation Dissolution Tank.
- Condensate and waste water from cooling tower and bolier blow down demineralisation plant waste stream and bi-carbonation bleed.

17.4.3 Plant Air

All the compressed air is dried using refrigerated driers and stored in a receiver for use throughout the process plant including instrument air requirements.

17.4.4 Liquefied Natural Gas

Liquefied Natural Gas (LNG) is supplied to the plant by tanker and stored in bullets to be provided by the supplier.

17.4.5 Steam

Steam is produced in a natural gas fired Steam Boiler Package to meet the various steam demands throughout the plant.

18 PROJECT INFRASTRUCTURE

18.1 Site Access Road

The access road from Bacadéhuachi to the site requires upgrading to allow the expected construction and operational traffic to use the road. The upgraded road will remain as an unpaved gravel road, follow the existing track and includes widening the existing track. The length of the access road is 18.4 km shown in Figure 4.4. The access road from Bacadéhuachi to the site will also include in the upgrade installation of four concrete floodway crossings and one culvert crossing.

18.2 Secondary Roads

The project will require the construction of secondary roads on-site. In general these roads are of short length (<2 km), unidirectional and developed to a lesser standard than the main site access road such that they can still safely handle the lower volume of traffic. Such roads include:

- borefield access roads
- tailings storage facility access road
- open pit access roads
- mine waste dump access roads
- pit dewatering bores access roads
- mine administration and workshops access road.

18.3 Accommodation

It is currently assumed that accommodation for the employees will be provided in the local town of Bacadéhuachi. The accommodation would consist of “camp site” type accommodation for the employees. It is not expected that any accommodation will be required at the mine site. The employees will be bussed to the mine site.

It is assumed that the construction accommodation in Bacadéhuachi will be converted to accommodation for the operational phase of the project. The suitability and acceptance of this by the town, along with the services available, such as land access, capacity of potable water supply, sewage treatment and power, needs to be investigated further in the FS. Investigations should also include the type of accommodation being provided to the various levels of personnel.

For the PFS it has been assumed that modular accommodation will be provided to allow for ease of transport, layout and servicing. The modules will come complete with air conditioning, hot water systems, plumbing and full electrics such that upon delivery the units only require connection of water, power and sewer for the units to be ready for use. There will be two levels of room accommodation: a single occupancy self-contained unit and a shared unit with two bedrooms and a shared bathroom.

A modular dining hall and kitchen as well as a recreation room would be provided.

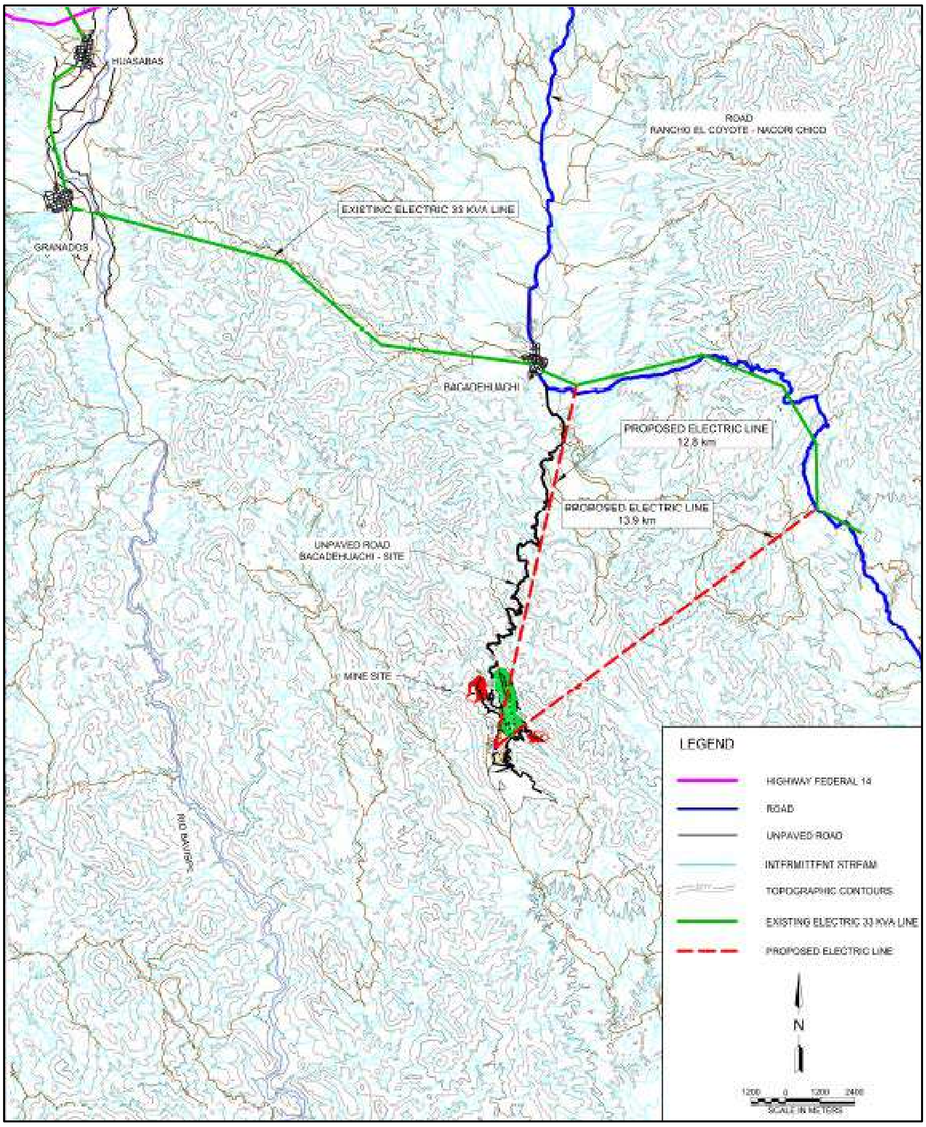
18.4 Power

The closest electric power line to the mine site is a 33 kV transmission line which passes approximately 10 km north of the mining concessions, passing in close proximity to Bacadéhuachi. The power line then heads toward Nácori Chico, the next village southeast from Bacadéhuachi. It has been determined that sufficient power is available from this power line for the Stage 1. The total connected load for Stage 1 is approximately 15 MW while demand will be 10 MW.

The power supply to this line is planned to be upgraded and should have sufficient power for the Stage 2 plant. The total connected load for Stage 2 is approximately 29 MW while expected demand will be 20 MW.

A 33 kV overhead line will be provided from a tie-in point to the northeast on the existing line and routed to site. Two routes have been proposed, one running 12.8 km and the other 13.9 km, as shown in Figure 18.1, and the best routing will be investigated as part of the FS.

Figure 18.1: Power Supply to Site



Power distribution at site for the Project includes two 33/3.3 kV, 60 MVA transformers (with full redundancy), High Voltage and Low Voltage distribution, switchrooms and Motor Control Centres, protection and metering, lightning protection and a 2.0 MW emergency diesel generator.

The site power distribution system will be 3.3 kV transmission lines which will extend power supply to the water borefield and mine dewatering pumps.

All Electrical switchrooms have been assumed to be modular for ease of site installation and with bottom cable entry to minimise dust ingress. They will be full contained pressurised units with dust control, reverse-cycle air-conditioning, fire indication panel, and facilities.

Backup power is provided by a 2.0 MW emergency diesel generator. The equipment to be provided back-up power will be further refined in the next phase but is expected to include the following:

- thickener rake system
- potable water pump
- emergency shower water pump
- emergency lighting
- nominated units within the Extraction Plant to prevent major product loss.

18.5 Control Systems

The control-system architecture considered is based on a Programmable Logic Controller ("PLC") system with a supervisory control and data acquisition ("SCADA") system. Typical design is based on Modicon PLCs and a Citect SCADA system.

The communication between SCADA servers, computers and PLCs is via a fully-redundant high-speed Ethernet using single-mode fibre optic cable. Communication between PLCs is also via Ethernet. Communication to devices such as motor overload relays, protection relays and variable speed drives is via Profibus.

The Main Process Plant Control Room includes a control station area suitable for up to four screens, basic kitchen facilities, a supervisor's office and two toilets. It is located in an elevated position in a central position in the plant with a good view of the process plant and easy access to the walkways. Allowances are included for standard computers located in small portable control rooms with access to the SCADA system.

Generally, vendor packages such as flotation cells exclude control panels and control logic so that logic is included in the main plant PLC and motor starters included in the main plant switch room. Where vendor packages specifically need PLCs due to an integrated skid arrangement, efforts will be made to standardise equipment where practical. These PLCs typically will communicate back to the main plant PLC via Ethernet on fibre optic cable.

18.6 Mine Infrastructure

18.6.1 Introduction

The following mining infrastructure is proposed:

- hardstand area (unsealed)
- tyre change pad
- vehicle washdown area
- electric power supply
- potable water supply
- sewage pump station and pipeline to return sewage to the main process plant sewage treatment system
- diesel fuel supply with day tank and high volume bowser
- explosives magazine
- workshop shed with cribroom, ablution, offices.

18.6.2 Mine Workshop

The majority of routine maintenance required for the mine fleet will be performed in the mine pit using a mobile workshop and service truck. Major heavy vehicle maintenance will be performed in the mine workshop which consists of a lightweight structure constructed from 40 ft containers and a stretch membrane for the roof.

The workshop consists of three large service bays that can accommodate up to 240 t mine haul trucks (Cat 793) and a tyre and tools storage area. Each service bay has a concrete apron in front to allow maintenance to take place immediately outside the building as needed.

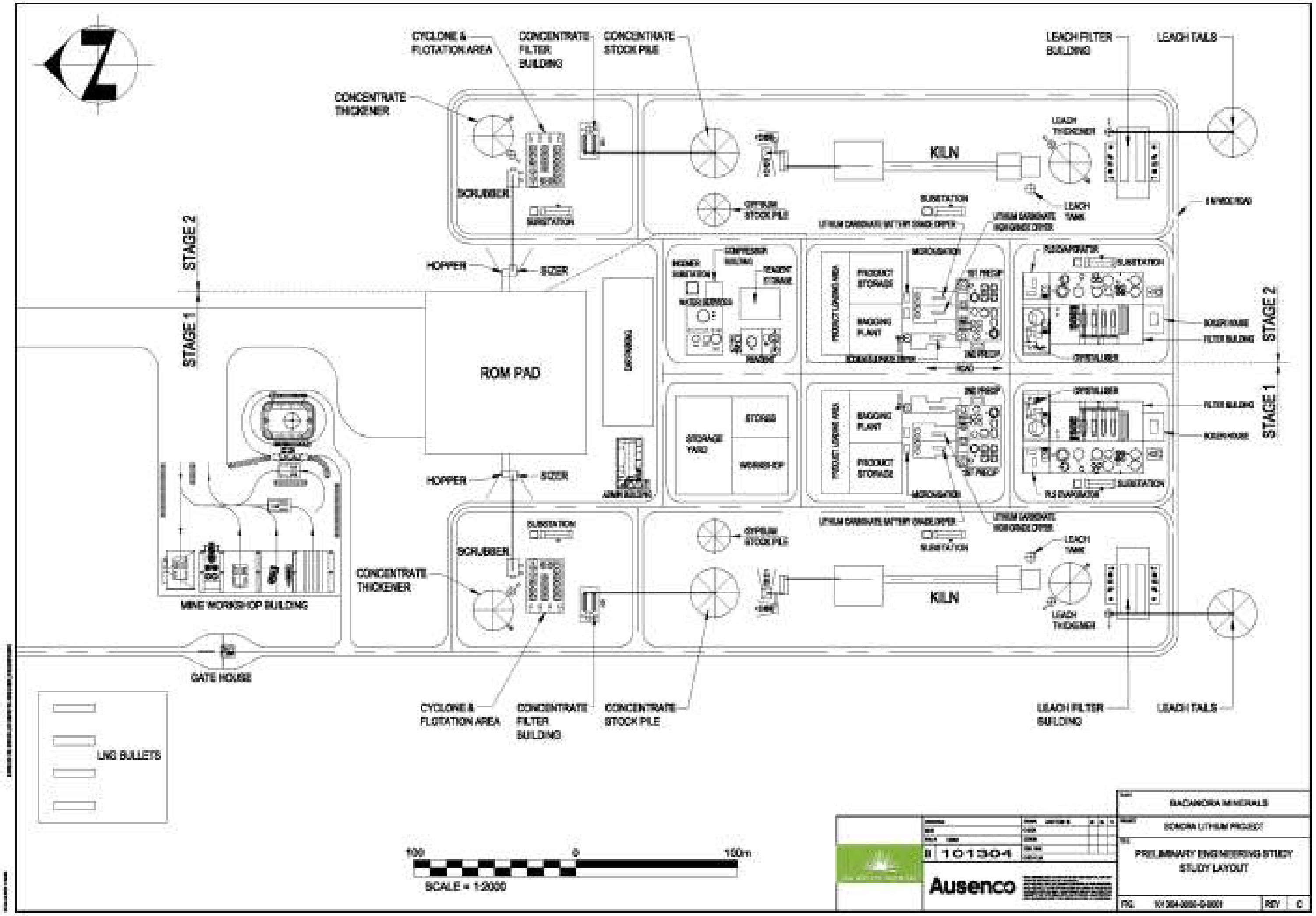
One of the bays has rails cast into the concrete slab to allow tracked equipment to be maintained without damaging the concrete surface. The building also includes a tyre maintenance area for storing tyres and replacing tyres onto rims. A tyre handler will be used to replace tyres in each of the service bays.

A mobile crane will be used in the event that the tray needs to be removed from the truck. The building is equipped with specialised tools for mine equipment maintenance and day tanks with hose reels for various fluids, including motor oil, hydraulic fluid, coolant and water.

18.6.3 Fuel Storage and Distribution

Diesel fuel is stored on site for mining heavy equipment and other mobile equipment including light vehicles. It is planned to have one diesel storage area at the Mine Workshop Area near the process plant as shown in Figure 18.2. Refuelling facilities are provided in the heavy equipment workshop area for the vehicles belonging to the mining operation while diesel will also be piped to bowsers away from the Mine Workshop Area for refuelling of the light vehicles and process plant mobile equipment. This will limit the interaction between light vehicles and the mining fleet.

Figure 18.2: Plant Layout



18.7 Water Supply

Two water wells, located 6 km north of the plant site, will pump raw water to the raw water tank in the process plant. The raw water is then distributed throughout the process plant and to the mining and administration departments.

Raw water is drawn from the raw water tank and passes through treatment consisting of ultra-filtration followed by chlorination and UV sterilisation. The treated water is then stored in a plastic-lined and roofed potable water tank. Pumps and pipelines distribute potable water to all demand points, including the mining department's facilities.

18.8 Waste Water and Sewage Treatment

A modular wastewater treatment plant is located in the process plant. The wastewater treatment plant consists of sewage treatment facilities fed by drainage systems. The packaged, containerised domestic wastewater treatment plant is designed to treat all raw effluent at a central location.

18.9 Buildings

Prefabricated, modular buildings are proposed for the administration, process plant office, process plant control room, laboratory and gatehouse.

18.9.1 Administration Building

The Administration Building provides offices and workstations for the Administration and Mining Departments. The 450 m^2 building includes a reception area, enclosed offices, a conference/training room, open plan office area for junior staff, photocopy and printer area, first aid and recovery room, kitchen and ablutions.

18.9.2 Process Plant Office

The Process Plant Office is approximately 200 m^2 and is intended to house process staff with enclosed offices for senior process staff and an open area for junior staff. The office includes a meeting/training room and a photocopy/printer area.

18.9.3 Process Plant Workshop-Warehouse

Steel-framed and cladded type construction was included for the plant workshop–warehouse. The workshop includes a 10 t overhead gantry crane and air compressors, workshop tools, workshop equipment, warehouse racking and shelving. The plant workshop–warehouse is approximately 500 m^2 and includes provision of 7 offices for maintenance supervisors, planners and warehouse staff.

18.9.4 Laboratory

A fully-functioning sample preparation and assay laboratory is provided with a nominal capacity of 200 samples per day. The number of process plant samples is estimated to be 136 per day which allows 64 samples per day for mine grade control purposes. Environmental samples will be sent offsite for analysis.

The 300 m^2 onsite laboratory will be a modular type and includes areas for sample receipt, storage, sample preparation, balance room, instrument rooms and three enclosed offices.

It is assumed that the laboratory equipment from the pilot plant in Hermosillo will be relocated to the plant site. Further investigation is recommended during the FS.

18.9.5 Gatehouse

The 40 m^2 gatehouse has an office, turnstile and boom gate, a drug/alcohol testing area, kitchen/meals area and two toilets.

18.10 Mobile Equipment

A list of mobile equipment for the process and administration for the operations around the process plant and the site is included in Table 18.1.

Table 18.1: Mobile Equipment List

Department	Vehicle	Number
Process General	Pick up, dual cab 4WD, diesel	9
	FEL	1
	Forklift – 2.5 tonne	1
	Forklift – 10 tonne	1
	Forklift – 30 tonne	1
	Skid Steer Loader	1
	Trailer Mounted Pumps	1
	Yard Crane, 25 tonne	1
	Crane Truck, 10 tonne HIAB	1
	HDPE Welding Machine	1
	Mobile Generating Set	1
	Portable Light Plant	1
Finance & Admin	Light Vehicle, executive 4WD	1
	Pick up, dual cab 4WD, diesel	1
	45 Seater Bus	2
	Sewage Pump Out Truck	1
	Tip Truck	1
	Pallet Jacks	1
	Ware house Forklift	1
	Forklift – 10 tonne	1
HR & HSEC	Pick up, dual cab 4WD, diesel	3
	Ambulance	1
	Fire Truck	1
	Mine Rescue Vehicle	1
TOTAL		35

18.11 Communications

It is envisaged that the site will have telecommunications via a microwave link connecting the site to the regional communications network.

Mine site radio communications will be established to provide dedicated radio channels for the respective departments (e.g. mining, process plant, emergency response).

18.12 Tailings Storage Facility

Table 18.2 summarises the (wet) quantities of tailings which will be produced for Stage 1 and Stage 2 when the plant is ramped up to full production.

Table 18.2: Stage 1 and Stage 2 Tailings – Design Production (Mt/y)

Description	Stage 1	Stage 2
Scrubber Oversize	0.19	0.38
Tailings Filter Cake	0.61	1.22
Leach Filter Cake	1.03	2.06
Sub-total	1.83	3.67
Sodium sulfate	0.08	0.15
Impurity removal precipitate	0.00	0.00
Sub-total	0.08	0.15
TOTAL	1.92	3.82

The impurity removal precipitate and sodium sulfate are expected to be water soluble and will therefore be stored in 50,000 m^3 double HDPE lined ponds with leak detection. It is proposed that additional cells (ponds) are installed each year.

The scrubber oversize, tailings filter cake (filtered beneficiation oversize and flotation tailings) and leach filter cake comprise 95% of the tailings to be produced and are currently expected to be benign. A contractor is currently proposed to load, haul, dump and spread these filtered tailings in the tailings storage facility. Further evaluation of overland conveying and stacking is recommended during the FS.

If future testwork shows that the geochemistry of the filtered tailings is of concern, a composite liner (geomembrane and geosynthetic clay liner), with an under-drainage system, can be included underneath the tailings storage facility.

Trade-off studies were carried out to select the location of the tailings storage facility and the method of tailings disposal. Dry stack tailings was selected due to lower capital and operating costs.

The selected location of the tailings storage facility was largely due to being located in the same watershed as the proposed mine infrastructure which reduces environmental impact and is located nearest to the plant site, reducing operating costs. Further investigations are proposed during the FS.

As shown in Figure 4.4 the tailings storage facility is located 1 km upstream of the plant, between two proposed waste rock dump facilities.

The tailings storage facility includes two compacted, 10 m high, waste rock berms located at the northwest and southeast of the facility. The filtered tailings will be stacked at an overall slope of 2.5H:1V. In addition, the design of the tailings storage facility also includes two diversion channels, one on the east and one of the west side, to re-route any upstream run-off around the facility. These diversion channels can be extended when the upstream waste dump is constructed.

Based on the current mine operational parameters, the total filtered tailings production during the 20 year mine life is estimated to be 76.3 Mt or 50.9 Mm^3 of tailings at an assumed tailings dry density of 1.5 t/m^3.

19 MARKET STUDIES AND CONTRACTS

19.1 Lithium Carbonate Market

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 LCE in 2015 to 300,000 t by 2025, resulting primarily from the increased use of lithium products in the rechargeable battery sector, both in portable electronics and electric vehicles.

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, $LiAl(SiO_3)_2$, 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.

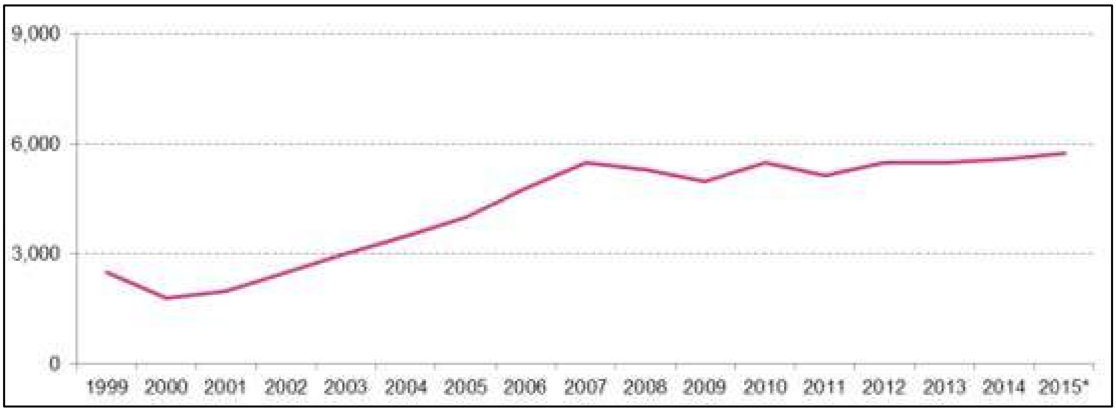
As market demand is estimated to grow at 8 to 12% each year, there will be a requirement for some 15,000 to 20,000 t/y of new LCE production each year, over the next 5 years. With the expected project delivery times of 12 to 18 months for hard rock projects and 18 to 36 months for brine evaporation projects, 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.

The lithium carbonate price has seen a steady upward trend since the late 1990's, with increasing demand for portable electronics and more recently hybrid/electric vehicles. During the second half of 2015, termed contracts for lithium carbonate delivery into Asia were in the range of $5,500/t to $5,750/t.

The price trend over the past 15 years is shown Figure 19.1 which illustrates consistent pricing between $5,000/t to $5,750/t since 2007. This graph provides the average price for Li_2CO_3, including technical and battery grades. Technical grade is a lower quality product than battery grade with a lower realised price.

Figure 19.1: Historical Lithium Carbonate Pricing



19.2 Lithium Carbonate Price Forecast

SignumBox expects battery grade lithium carbonate prices to be above $6000/t in 2016 based on continued demand pressure with prices remaining in the range of $6000/t to $7000/t until after 2022. SignumBox forecasts battery grade prices will begin to steadily rise after 2020 in response to demand.

For the purposes of the PFS with regards to the Mineral Reserve estimate and financial modelling, a long term average price of $6,000/t Li_2CO_3 has been used based on the information received from SignumBox.

19.3 Potassium Sulfate

Sulfate of Potash ("SOP"), also known as Potassium Sulfate (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.

It is expected that SOP will have a 5% annual growth in demand from 2015 to 2020. China, which is the largest consumer of SOP accounts for more than 45% of global demand. With a population of 1.3 billion, it is the world's largest producer of tobacco, fruits and vegetables – premium crops that are better suited to SOP. Over the past 20 years, the demand for SOP in China has experienced significant growth, growing from approximately 0.5 Mt/y in the early 1990s to 2.1 Mt in 2013.

Bacanora reviewed historical and forecast SOP pricing from a number of sources including GreenMarkets, CRU and other independent sources and has developed a five year price summary for the period 2011 to 2017 based on analysis of these forecasts. This is summarised in Figure 19.2.

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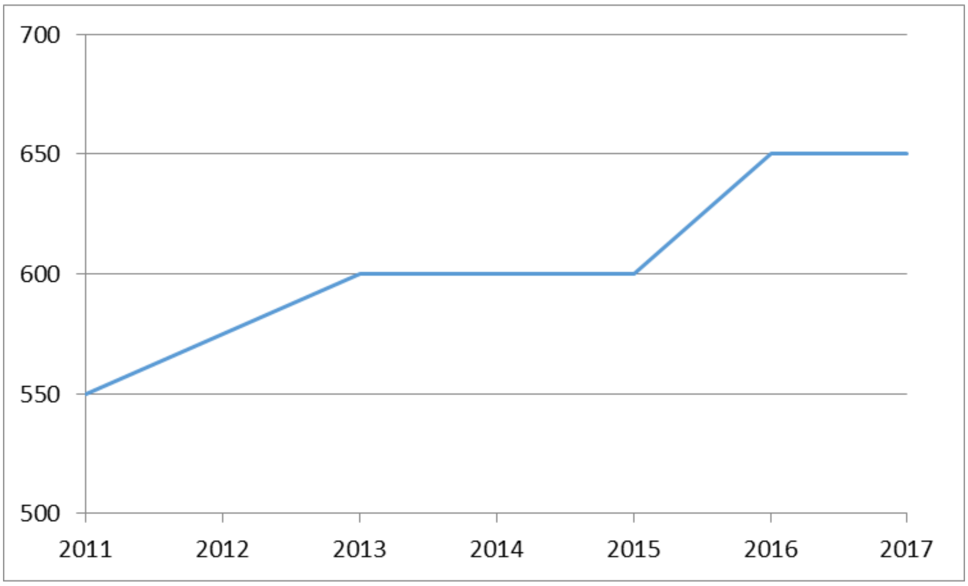
Figure 19.2: SOP Price Forecasts ($/t)



Based on market research and available information in the public domain the long term SOP price of $600/t used in financial modelling is reasonable.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL IMPACT

20.1 Introduction

Environmental and social studies, carried out by Grupo Onza, are based upon the Sonora Lithium Project being located within the La Ventana basin which is a sub-basin of the Rio Bavispe Bajo. Investigations conducted include protected natural areas, flora, fauna, surface water, ground water and social-economic activities.

Environmental baseline data collection and reporting has been initiated for the mine site, processing area with no significant environmental issues being identified. The environmental baseline work includes a survey of biological, cultural, socio-economic resources and water quality.

The collection of environmental baseline data will be required to support permitting efforts and project design. Baseline collection activities will follow guidelines and study plans established by the authorities in Mexico and "International Lending Institution Standards' to satisfy potential financing interests and requirements for the project.

Listed below is a summary of the individual baseline condition(s) and needs for the Project.

20.2 Environmental Impact Manifest (MIA)

Local environmental consulting groups are being used to prepare the Manifestacion de Impacto Ambiental ("MIA"), which is scheduled to be issued to the appropriate local authorities in Q3 2016. The general requirements for a MIA include general description of the project and the responsibilities for the environmental studies. The MIA incorporates monitoring systems for the regulated facilities and closure requirements. Methodologies for monitoring and reporting requirements will be detailed out in the MIA along with the responsible parties. Preventative measures and mitigation of environmental impacts for each facility are incorporated into the environmental study.

The schedule of the administrative procedure consists mainly of the agency evaluation and public comment period. After that period resolution process will take place for addressing any gaps or comments received during the initial evaluation period. This process usually takes no more than 12-18 months but can be achieved in 6 months with a properly complete submittal to the agencies. New powerline and road must also go through the required permitting procedures. Local environmental consulting groups are being used to prepare the MIA, which is scheduled to be lodged with the appropriate local authorities in Q3 2016.

Environmental liabilities associated with mines typically fall within the following categories:

- Acid Mine Drainage
- Heavy Metal Contamination
- Processing Pollution
- Erosion and Sedimentation

The MIA will identify specific environmental liabilities that will need to be addressed during the final design of the facilities. One important component to address the liabilities above is the mine closure. A properly closed mine with contain a specific plan for each liability for long term management.

The areas of the Project that have potential environmental liabilities in order of rank:

- Tailings Storage Facility: if required based on geochemical testing will be a lined facility to reduce any possible contamination with groundwater.
- Open Pit: slope stability is designed to reduce any risks of slope failures.
- Waste Dumps: have water management components to reduce any erosion and sedimentation.
- Plant Site: has containment systems within to avoid any pollution into the environment and contingency plans.

A Risk Analysis may be required if determined by the MIA when there are reportable hazardous materials handled during the mine operation. In this study all environmental risks are identified and evaluated in order to establish methods for prevention, responding and control of risks.

20.3 Surface Water and Management

There are no storage surface water bodies which have been identified in the influence project area which can be affected by contaminant discharges derived during project construction or operations.

The current location of the Project reduces the impacts on the Bacadéhuachi River and the Papigochic or Aros basin.

Surface water investigations have not identified any impediments for construction of the Project. The guidelines required by Secretaría del Medio Ambiente y Recursos Naturales ("SEMARNAT") will be met in terms of alteration to the riverbeds and streams. Corresponding permits for use, channelling, and/or storage of surface waters must be requested. Downstream ecological flow calculations of planned works must be performed in case SEMARNAT requires it.

Surface water harvesting is not currently proposed. If surface water is required for mine operations, available volume shall be obtained from Comisión Nacional del Agua ("CONAGUA"), Organismo de Cuenca Noroeaste; if the volume is not available, third party rights in the basin Río Yaqui 1 will need to be obtained.

Ausenco initiated baseline water quality work this year. Prior to the collection of laboratory samples, surface water flow measurements and field water quality parameters were collected. Water quality results obtained as part of this study were tabulated and compared to applicable Mexican water quality standards and regulations. All samples taken to date are within the limits identified in the Mexican water quality standards.

Surface water runoff will be managed primarily with diversion channels diverting water to natural drainages. Water surface runoff within the facilities will be managed internally and used for processed water or stored using best management practise procedures. During closure water falling on the tailings facility will be managed in the facility with minimal runoff.

20.4 Ground Water

In terms of groundwater, as indicated by Acuerdo General (published in the Diario Oficial de la Federacioón, April5 2013), request mechanisms for grants, allowances and authorizations from CONAGUA must be followed in case drilling for groundwater use is required. This process must be performed but it is not expected to represent an impediment to the performance of the work.

No groundwater information is currently available and will need to be evaluated in the FS.

20.5 Protected Areas

The Project is located outside federal, state and municipality protected natural areas. The closest protected natural area “Campo Verde” is located 47.5 km from the Project.

The Project is also not within the limits of Importance Areas for Birds (Areas de Importancia para las aves – AICAS). The closest AICAS is called “Sistema de Sierras de las Sierra Madre Occidental” and is located 17 km west from the project polygon. The next closest AICA is called “Bacerac – Sierra Tabaco – Río Bavispe”, located 22 km east of the Project.

20.6 Flora

Three catalogued species of flora were found within the property limits; in two different categories in the NOM-059-SEMARNAT-2010. Non-endemic coniferous treelike species Sabal uresana Trel (white palm) and Cupressus lusitanica Mill (cypress) were found in the higher parts of the property and both are under the category of Special protection. Elements of Agave parviflora Torr. (Sóbari), a non-endemic species categorized as endangered, were also found spread out within different environments in the property.

The presence of these species in the project area will require performing a flora recovery of the specimens that are under any endangered category according to NOM-059-SEMARNAT-2010 prior to clearing and once the project has obtained all the permitting. With regards to the vegetation types that are within the area of interest, the following were found: oak forest, thorn scrub and subtropical grasslands. These types of vegetation are widespread throughout the state of Sonora and are not endangered. Flora species that are under protected categories according to the Mexican regulations and the ones with slow growth like cacti must be rescued before initiating any project works. Rescue works must be included in the mitigation measures of the project.

During sampling performed in October of 2015, 12 species were found in the Project area to be under the category of protected. These species must be relocated before operation. The existence of these species is compatible with the Project due to the fact that the habitat surrounding the area can be used for relocation.

20.7 Social

With regards to the socio-economic aspect, the towns in the area (Bacadéhuachi, Nacori, Chico, Huasabas and Granados) have similar characteristics in terms of economic activities. Main activities are agriculture and livestock. The average education is to high school level. In every town there are one or two medical centres and at least one doctor per town. Due to minimal employment sources and low development, perception towards new job employment is positive.

During the visits performed in the Project site and the surrounding towns, contact has been made with the inhabitants and the feedback about the project has been positive. This is due to the perception the inhabitants have about the project as an employment source and therefore an improvement of the living conditions in these towns.

21 CAPITAL AND OPERATING COSTS

21.1 Capital Costs

The overall capital cost estimate for Stage 1 and Stage 2 is summarised by area in Table 21.1.The estimate has a base date of the fourth quarter 2015 (Q4 2015) and an accuracy range of ±25%.

The capital cost estimate has been compiled by Ausenco, with input from IMC for mining capital costs and Bacanora for Owner's costs.

Table 21.1: Estimated Capital Cost - Summary for the Two Stages

Area	Stage 1 $M	Stage 2 $M
Mining Equipment	19.0	9.6
Mining Infrastructure	3.7	0.0
Beneficiation Plant	20.5	18.1
Lithium Processing Plant	90.5	81.4
On-Site Infrastructure	15.9	9.6
Off-Site Infrastructure	16.8	5.9
EPCM/Owner's Costs/Indirects	45.6	30.0
Contingency	28.0	22.5
Total	240.0	177.1

21.1.1 Mining Capital Costs

The initial mining capital costs at $22.7M include:

- an initial fleet comprising a 12 cubic metre backhoe excavator and three 90-tonne haul trucks. In addition, there is an ancillary mobile fleet including dozers, graders and front end loaders. The initial capital cost of the equipment is estimated to be $19M.
- mining infrastructure (workshop, store, offices, crib room, change room and wash down bay) were estimated by Ausenco at $3.7M.

The Stage 2 capital cost estimate of $9.6M is to purchase additional mobile equipment required for the increase in production associated with the process plant expansion in Year 3.

The estimated pre-production mining costs are $0.7M, covering three months of operation of the mining fleet, prior to the process plant commencing operations.

21.1.2 Direct Capital Costs (Process Plant and Infrastructure)

21.1.2.1 Process Plant Capital Costs

The capital cost estimates for process plant is shown in Table 21.2 and Table 21.3. The process plant (beneficiation and lithium extraction plant) capital cost estimate is based on an on-site processing plant comprising all new equipment, to produce battery-grade lithium carbonate.

Table 21.2: Beneficiation Plant Capital Cost Estimate

Cost Area	Stage 1 ($M)	Stage 2 ($M)
Scrubbing	3.77	3.73
Classification	0.85	0.84
Flotation	4.75	4.76
Concentrate Thickening and Filtration	7.20	7.20
Reagents	0.86	0.58
Utilities and Services	3.09	0.98
TOTAL BENEFICIATION PLANT	20.52	18.09

Table 21.3: Lithium Extraction Plant Capital Cost Estimate

Cost Area	Stage 1 ($M)	Stage 2 ($M)
Agglomeration	2.27	2.26
Roasting and Leaching	16.68	15.40
Thickening and Filtration	10.90	10.67
Purification, PLS Filtration and Evaporation	9.63	9.63
Ion Exchange	0.86	0.86
Lithium Precipitation and Product Handling	7.60	7.60
Sodium Sulfate Crystallisation	8.70	8.70
Potassium Sulfate Filtration, Drying and Bagging	3.51	3.51
Glaserite Evaporation	13.54	13.54
Reagents	1.59	0.37
Utilities and Services	8.03	5.87
Plant Site Preparation	7.19	3.00
TOTAL LITHIUM EXTRACTION PLANT	90.50	81.40

21.1.2.2 On-Site Infrastructure Capital Costs

Onsite infrastructure includes power distribution, emergency power generation, buildings, mobile equipment and a weighbridge and is shown below in Table 21.4.

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Table 21.4: On-Site Infrastructure Capital Cost Estimate

Cost Area	Stage 1 ($M)	Stage 2 ($M)
Electrical Infrastructure	7.89	7.73
Emergency Power Generation	0.56	0.28
Workshop Store Building	1.50	-
Laboratory	1.39	-
Administration Building	0.70	-
Gate House and Weighbridge	0.26	-
Reagents Store and Crib Room	0.99	-
Ablutions Building	0.65	0.65
Mobile Equipment (second hand)	1.96	0.92
TOTAL ON-SITE INFRASTRUCTURE	15.90	9.58

21.1.2.3 Off-Site Infrastructure Capital Costs

Offsite infrastructure includes the site access road, power line, borefield, water supply, tailings storage facility and the accommodation camp in Bacadéhuachi and is shown in Table 21.5.

Table 21.5: Off-Site Infrastructure Capital Cost Estimate

Cost Area	Stage 1 ($M)	Stage 2 ($M)
Main Access Road	6.86	-
Power Line	0.95	-
Bore Field	1.28	0.49
Water Pipeline	1.43	0.11
Tailings Dam	1.00	-
Accommodation Camp	5.26	5.26
TOTAL OFF-SITE INFRASTRUCTURE	16.77	5.86

21.1.2.4 Direct Cost Development

Generally, the direct costs have been developed from the mechanical equipment list including freight and installation, with most other disciplines factored by way of a percentage of the installed mechanical cost for each facility and area.

Direct costs include:

- supply of permanent materials and fixed equipment
- labour to undertake and manage the construction activities, small tools, consumables and construction equipment. This includes wages and salaries, with loadings for site labour, supervision and management, including associated expenses such as home and/or

satellite office management expenses

- contractors' and suppliers' recurring preliminaries, mark-up and profit
- transport costs for permanent and temporary equipment and materials.

The mechanical equipment list was developed from the process flowsheets and inquiries were issued to local and international suppliers for most of the mechanical equipment. The value of equipment priced from inquiries or recent database pricing represents 75% of the total equipment supply value. The remaining 25% was escalated from Ausenco's historical database or allowances were used based upon estimates of mechanical package component equipment costs.

A freight allowance has been added to all mechanical equipment items as a percentage of the ex-works cost of mechanical equipment and 10% has been used.

The installation man-hours for mechanical equipment were based on Ausenco's historical man-hour data from the installation of similar process equipment. The gang rate and productivity factor information from a recent Mexican study have been applied to the installation hours to develop the total installation cost.

The gang rate applied to the direct man hours is $35/h with a productivity factor of 2.5. Contractor indirect costs which include indirect labour, supervision, construction equipment, consumables and maintenance are included in the gang rate. Additional allowances for heavy lift cranes and site scaffolding are included in the temporary construction facilities factored cost.

Process plant earthworks and concrete costs were calculated based on quantity take-offs with rates applied according to those received from local subcontractors.

A growth allowance has been allocated to each element of the direct costs to reflect the level of definition. The purpose of the growth allowance is to allow for uncertain elements of the cost estimate such as accuracy of equipment pricing, labour rates and quantity take-offs.

21.1.3 Indirect Capital Costs

Indirects includes temporary construction facilities, spares, first fills, EPCM, commissioning, owner's costs and contingency and is shown in Table 21.6.

Table 21.6: Indirect Capital Cost Estimate

Cost Element	Stage 1 ($M)	Stage 2 ($M)
Construction Facilities	2.74	2.36
Spares	4.77	1.54
First Fills	2.53	1.18
EPCM	27.02	18.69
Commissioning	3.07	2.36
Owners Costs	5.51	3.90
Contingency	28.04	22.49
TOTAL INDIRECT COSTS	73.68	52.50

The cost for spares was factored from the process plant cost, using a percentage established from previous experience. For Stage 1 the following percentages have been applied.

- Commissioning Spares - 0.6% of the total process plant equipment cost and freight.
- Capital and Operating Spares– 4.0% of the total process plant equipment cost and freight.
- Insurance Spares - 4.0% of the total process plant equipment cost and freight.

For Stage 2, Capital Spares were reduced to 2% and Insurance Spares were reduced to 0%.

First fills have been estimated from operating costs for reagents and fuel.

Engineering, project management, project controls, procurement and contracting, and site construction management (EPCM) labour costs have been factored based on projects of a similar size and complexity. The factor used was 16% of the Total Installed Cost excluding mining equipment, EPCM and contingency.

Commissioning costs have been factored from the direct costs using a factor of 2%, based on experience from similar sized and similar complexity level installations.

Owner’s Costs include field staffing, travel, general expenses, office costs, legal costs and insurance. In addition allowances have been made for pre-production camp operating costs and start-up operations labour.

Contingency refers to costs that will probably occur based on past experience, but with some uncertainty in regards to precisely how and where it will be spent. These uncertainties are risks to the project that are often referred to as "known-unknowns". A cost contingency of 15% has been applied in this estimate to everything except mining equipment and owner’s costs.

21.1.4 Exclusions

The following items are specifically excluded from the estimate at this level of study:

- GST, VAT, import duties and all other taxes
- allowances for special incentives (schedule, safety or others)
- cost changes due to currency fluctuation and escalation
- force majeure issues
- Owner's Costs prior to project approval
- finance charges and interest during construction
- sunk costs
- future scope changes
- mine closure and rehabilitation costs
- costs for community relations and services
- relocation or preservation costs, delays and redesign work associated with any antiquities and sacred sites
- costs associated with weather delays including flooding or resulting construction labour stand-down costs.

21.1.5 Sustaining Capital Costs

The Life of Mine ("LOM") sustaining mining and processing capital requirement is estimated at approximately $111M. The mining fleet is progressively built up to its peak in Year 12, consistent with the mining rate.

21.2 Operating Costs

The operating cost estimate uses prices obtained in Q4 2015 and is considered to have an accuracy of ±25%.

The estimate includes all site-related operating costs associated with the production of battery-grade lithium carbonate and potassium sulfate for sale as a Sulfate of Potash fertiliser.

The mining operating costs were developed by IMC while the process plant and administration operating costs were developed by Ausenco, in conjunction with Bacanora.

Table 21.7 summarises the overall Stage 1 (Years 1 and 2), Stage 2 (Years 3 onwards) and LOM operating costs. Costs reduce in Stage 2 due to the progression of the plant ramp-up.

Table 21.7: Overall Operating Costs (\$/t Li_2CO_3)

Category	Stage 1	Stage 2	LOM
Mining	642	538	543
Processing	2,037	1,930	1,934
General and Administration	446	212	221
Total	**3,125**	**2,680**	**2,698**

Table 21.8 summarises the Stage 1 and Stage 2 fixed and variable operating costs. Fixed costs comprise labour, maintenance materials, general and administration costs. Variable costs comprise reagents, operating consumables and power. The fixed and variable operating costs were entered into the financial model.

Table 21.8: Stage 1 and Stage 2 Fixed and Variable Operating Costs Summary

Cost Item	Yearly Costs \$M/y	
	Stage 1	Stage 2
MINING		
Fixed Cost	2.26	3.82
Variable Cost	6.58	18.14
Mining Sub Total	8.85	21.96
PROCESS PLANT		
Fixed Cost	7.39	13.23
Variable Cost	30.15	56.53
Process Plant Sub Total	37.54	69.76
ADMINISTRATION		
Fixed Cost	5.35	6.56
Variable Cost	-	-
Administration Sub Total	5.35	6.56
TOTAL	51.74	98.28

21.2.1 Mining Operating Costs

The mining operating costs are based on an owner operated fleet of newly purchased equipment to accomplish the mine production schedule, including maintaining haul roads and work areas, re-handle ore from the temporary stockpiles and maintaining the equipment. The mining costs are summarized below in Table 21.9.

Table 21.9: Mine Operating Costs

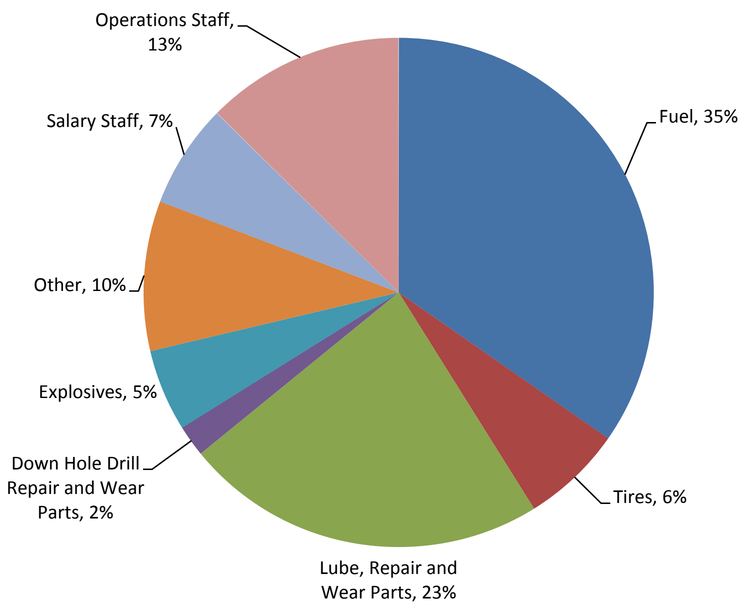
Year	Tonnes Mined (Mt)	$/t Mined									TOTAL ($M)
		Drill	Blast	Load	Haul	Auxiliary	General	Maint.	G&A	TOTAL	
1	2.13	0.00	0.00	0.84	0.70	1.61	0.30	0.12	0.60	4.17	8.88
2	2.12	0.00	0.00	0.84	0.66	1.62	0.30	0.12	0.60	4.15	8.81
3	5.00	0.05	0.03	0.51	0.51	0.61	0.18	0.08	0.27	2.24	11.22
4	12.00	0.14	0.10	0.24	0.39	0.26	0.11	0.06	0.12	1.42	17.09
5	12.00	0.11	0.08	0.24	0.37	0.30	0.11	0.06	0.12	1.40	16.74
6	12.00	0.13	0.10	0.24	0.50	0.29	0.11	0.06	0.12	1.55	18.61
7	18.00	0.17	0.12	0.24	0.48	0.20	0.10	0.05	0.08	1.44	25.96
8	18.00	0.18	0.13	0.24	0.48	0.18	0.10	0.05	0.08	1.44	25.85
9	18.00	0.18	0.13	0.24	0.49	0.18	0.10	0.05	0.08	1.45	26.16
10	18.00	0.18	0.13	0.24	0.68	0.18	0.11	0.05	0.09	1.65	29.68
11	18.00	0.16	0.12	0.24	0.67	0.20	0.11	0.05	0.09	1.63	29.36
12	17.93	0.15	0.11	0.24	0.67	0.21	0.11	0.05	0.09	1.62	29.03
13	8.16	0.10	0.07	0.25	0.86	0.40	0.15	0.07	0.17	2.07	16.89
14	9.92	0.11	0.08	0.25	0.90	0.33	0.14	0.06	0.15	2.02	20.00
15	7.93	0.09	0.06	0.25	0.94	0.40	0.16	0.07	0.18	2.15	17.07
16	6.68	0.08	0.05	0.25	0.90	0.47	0.16	0.07	0.21	2.20	14.68
17	6.12	0.06	0.04	0.26	0.85	0.51	0.17	0.07	0.23	2.20	13.45
18	5.34	0.05	0.03	0.26	0.73	0.58	0.17	0.08	0.26	2.17	11.59
19	4.61	0.04	0.02	0.27	0.77	0.67	0.20	0.08	0.30	2.35	10.82
20	5.09	0.02	0.01	0.27	0.73	0.64	0.16	0.08	0.14	2.05	10.45
21	2.11	0.02	0.01	0.28	0.72	0.82	0.18	0.10	0.17	2.30	4.86
TOTAL	209.1	0.13	0.09	0.26	0.62	0.32	0.12	0.06	0.14	1.76	367.9

Mining costs are summarised by category in Figure 21.1. Fuel is the largest mining operating cost followed by lube, repair and wear parts.

The operating consumables cost estimate is based on the following input parameters:

- diesel fuel at $0.80/L based on quotations received
- equipment operating costs per hour from recent projects using similar equipment
- tyres, lubricants and spare parts based on recent costs on similar projects.

Figure 21.1: Mining Operating Costs by Category



The labour cost estimate is based on labour rates and rosters which were developed by IMC in conjunction with Bacanora. Mining labour cost estimate is based on:

- Shift workers work 12 h shift, 14 day rotation.
- Day workers work 10 h shifts, 5 days on 2 days off.
- Burdens included at 46% of the base salary, which include coverage for overtime and leave, sick leave, annual leave, public holidays and payroll taxes. Messing, bussing and accommodation are included in the mine general and administration costs.
- All workers are based in Mexico. No allowances are included for expatriate staff and travel to and from their country of origin.

Table 21.10 summarises the number of mine workers in Stage 1 and Stage 2.

Table 21.10: Stage 1 and Stage 2 Mining Labour

Labour Type	Stage 1	Stage 2
Management	20	25
Operations	47	87
Maintenance	37	64
Sub-total	104	176

21.2.2 Process Plant Operating Costs

Table 21.11 summarises the Stage 1 and Stage 2 process plant operating costs.

Reagents and consumables are the key cost category representing 59% of the process plant costs in Stage 1 and 58% in Stage 2.

Table 21.11: Operating Cost Summary – Process Plant

Cost Centre	Stage 1 $M/y	Stage 2 $M/y
Labour	2.95	3.81
Power	8.01	16.07
Maintenance Materials	1.15	4.29
Reagents & Consumables	22.13	40.46
General & Administration	3.30	5.13
Total	37.54	69.76

21.2.2.1 Process Plant Labour Costs

The labour cost estimate is based on labour rates and rosters which were developed by IMC Consulting in conjunction with Bacanora. Mining labour cost estimate is based on:

- Shift workers work 12 h shift, 2 days, 2 nights, 4 off.
- Day workers work 10 h shifts, 5 days on 2 days off.
- Burdens included at 35% of the base salary, which include coverage for overtime and leave, sick leave, annual leave, public holidays and payroll taxes. Messing, bussing and accommodation are included in general and administration costs.
- All workers are based in Mexico. No allowances are included for expatriate staff and travel to and from their country of origin.

Table 21.12 summarizes the process plant labour cost estimate for Stage 1 and Stage 2.

Table 21.12: Stage 1 and Stage 2 Process Plant Labour Summary

Labour Type	Stage 1		Stage 2	
	Numbers	Yearly Costs ($M/y)	Numbers	Yearly Costs ($M/y)
Management and Technical Services	20	0.96	29	1.11
Operations	66	1.10	90	1.42
Maintenance	38	0.89	51	1.28
Total	124	2.95	170	3.81

21.2.2.2 Process Plant Power Costs

The power consumption has been calculated for the beneficiation and extraction plants based on the installed equipment (i.e. excluding standby equipment) multiplied by the load factor in the mechanical equipment list.

The unit power cost used was $0.11/kWh as advised by Bacanora. Table 21.13 summarizes the power cost estimates for the Stage 1 and Stage 2.

Table 21.13: Process Plant Power Cost Summary

Area	Stage 1		Stage 2	
	Operating Power (MWh/y)	Yearly Costs ($M/y)	Operating Power (MWh/y)	Yearly Costs ($M/y)
Beneficiation Plant	14,850	1.63	30,280	3.33
Extraction Plant	57,934	6.37	115,797	12.74
TOTAL	72,785	8.01	146,077	16.07

21.2.2.3 Process Plant Maintenance Material Costs

The annual cost of maintenance materials for each plant area has been calculated by applying a factor to the area's installed mechanical costs. The factor is based on actual data from similar sized plants and is between 1 to 4%.

21.2.2.4 Process Plant Reagent and Consumable Costs

Reagent consumption is based on testwork consumption rates, where available. Where reagent usage data is not available from testwork, consumption rates from Ausenco's database have been used.

Table 21.14 summarizes of the Stage 1 reagents and consumables operating cost estimate.

Table 21.14: Stage 1 Yearly Reagent and Consumables Operating Cost Estimate

Description	Yearly Usage	Units	Unit Cost	Cost ($M/y)
Gypsum	83,715	t	35	2.93
Flotation Collector	340	t	3,000	1.02
LNG	1,958,891	GJ	3.00	5.88
Sulphuric Acid	13,837	t	50.00	0.69
Product Packaging	32,984	ea.	36	0.85
Sodium Carbonate	54,944	t	175	9.62
Miscellaneous				1.13
TOTAL				22.13

21.2.2.5 Process Plant G&A Costs

The general and administration cost for the Process Plant covers items such as software licenses, training, consultants, mobile equipment and light vehicles.

21.2.3 General and Administration Operating Costs

General and Administration include finance, human resources, health, safety and environment staff and general costs as itemized below, as well as a small power component.

Table 21.15 summarizes the Administration labour cost estimate.

Table 21.15: Stage 1 and Stage 2 Administration Labour Summary

Department	Labour Numbers	Yearly Costs ($M/y)
Finance, Administration and Management	35	0.87
Human Resources, Health, Safety and Environment	11	0.32
Sub-total	46	1.19

The power consumption for offices is based on an allowance of 80 kW which results in an annual power cost of $0.07M/y.

Table 21.16 summarises the site General costs associated with operating the mine and process plant.

Table 21.16: General Cost Summary

Item	Stage 1	Stage 2
	$M/y	$M/y
Rostered Travel, National	0.14	0.14
Training costs	0.02	0.02
Admin operating supplies	0.01	0.01
Computing Software	0.02	0.02
Medical Supplies	0.03	0.03
Recruitment	0.02	0.02
Permits, Legal, Licences, Insurances	1.02	1.02
Communications	0.15	0.15
Community Support	0.20	0.20
Visitor Allowance	0.06	0.06
Camp Costs	0.97	1.18
Li_2CO_3 product transport cost to port	0.48	0.87
K_2SO_4 product transport cost to port	0.62	1.25
Vehicles	0.32	0.32
TOTAL	4.08	5.30

22 ECONOMIC ANALYSIS

An analysis of the projected capital expenditures, revenues net of royalties, operating expenses and corporate taxes was prepared on an annual basis to determine the estimated pre and post-tax cashflows from the project.

The economic analysis assumes the Project is 100% equity financed. The economic analysis includes the entire project life, comprising two years of detailed engineering and construction followed by approximately 20 years of operation.

Corporate sunk costs up to the project commencement, including costs for exploration, technical studies, and permitting are not included in this economic analysis.

The key inputs to the economic analysis are shown in Table 22.1.

Table 22.1: Key Inputs for Economic Analysis

Category	Units	Value
Li_2CO_3 Price	$/t	6000
K_2SO_4 Price	$/t	600
Li_2CO_3 Process Recovery (Year 1)	%	55
Li_2CO_3 Process Recovery (Year 2 to 20)	%	70
K_2SO_4 Process Recovery	%	57
Royalty – Colin Orr-Ewing	% of Li_2CO_3	3.0%
Marketing	%	0%
Mining Royalty Tax	%	7.5%
Corporate Tax Rate	%	30%

The Project annual cash flow is shown in Table 22.2.

The average annual revenue is $224M over the 20 years of operations. Average annual earnings before interest, taxes, depreciation and amortisation ("EBITDA") estimated at $134M.

Mexican federal income tax depreciation and percentage depletion rules were applied to the appropriate capital assets and income categories to calculate the regular corporation tax burdens. A basic corporation tax rate of 30% has been assumed together with a 7.5% Mining Royalty tax due based solely on the mining parts of the operations. No withholding taxes have been assumed.

In addition, there is a 3% royalty due on all product sales to Mr Colin Orr-Ewing, which has been included in the Life of Mine cashflows, with initial optimisation to assist in repayment schedules during initial funding and debt repayments.

The project is currently estimated to have a payback period of five years. The economic analysis indicates a pre-tax Net Present Value (NPV), discounted at 8%, of approximately $776M with an Internal Rate of Return (IRR) of approximately 29%. The post-tax NPV is approximately $542M and the post-tax IRR is 25%.

Table 22.2: Project Annual Cashflow Summary

Category	Units	Year 0 Construction	Year 1 Stage 1	Year 2 Stage 1	Year 3 Stage 2	Year 4 Stage 2	Year 5 Stage 2	Year 6-21 Long Term	Total Life of Mine
Li_2CO_3	t	-	9,900	17,700	26,500	34,200	35,700	544,000	668,000
K_2SO_4	t		12,000	25,000	36,000	49,000	52,000	780,000	954,000
Net Revenue	$M	-	66.3	121.2	180.7	234.5	239.1	3,635	4,477
Operating Costs	$M	(0.7)	(37.1)	(48.9)	(73.3)	(91.1)	(93.1)	(1,459)	(1,803)
Capital Costs	$M	(202.8)	(37.6)	(145.0)	(32.1)	(7.2)	(4.3)	(100)	(529)
Pre-tax Cashflow	$M	(203.5)	(8.4)	(72.7)	75.4	136.2	141.7	2,076	2,145
Pre-tax NPV (8%)	$M	(203.5)	(7.8)	(62.3)	59.8	100.1	96.4	793	776
Post-tax Cashflow	$M	(203.5)	(8.4)	(72.9)	75.2	121.4	115.0	1,518	1,545
Post-tax NPV (8%)	$M	(203.5)	(7.8)	(62.5)	59.7	89.2	78.3	589	542

A sensitivity analysis on the base case NPV at different discount rates is shown in Table 22.3.

Table 22.3: Sensitivity Analysis – Discount Rate Impact

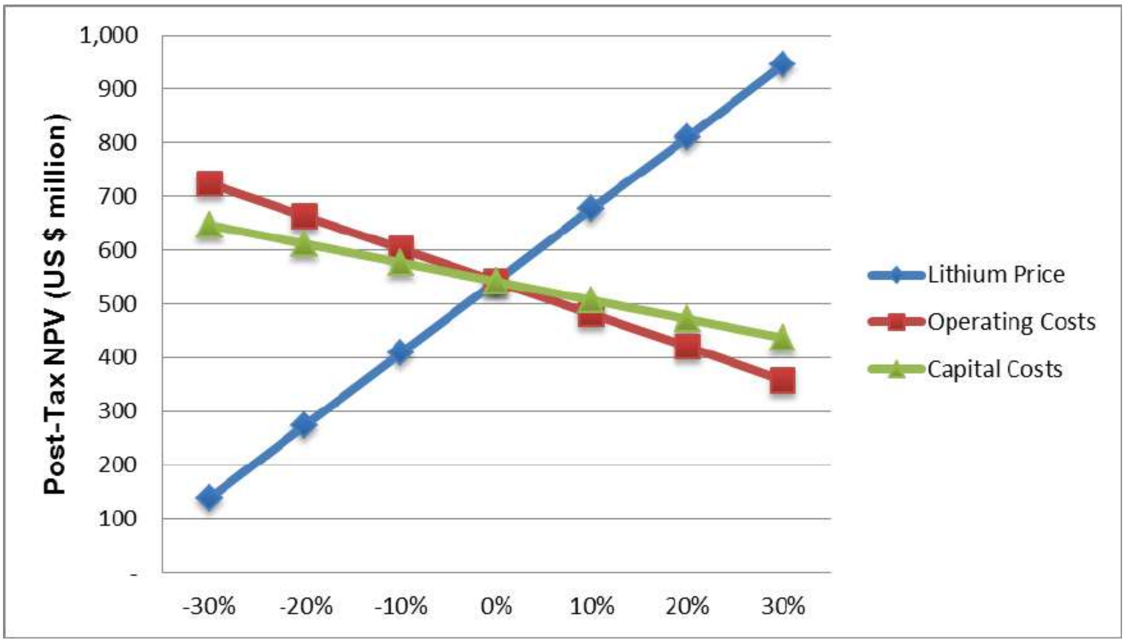
Discount Rate	Base Case Pre-tax NPV	Base Case Post-Tax NPV
0%	2,145	1,545
2%	1,647	1,182
4%	1,275	910
6%	993	702
8%	776	542
10%	607	417

A sensitivity analysis has been conducted to determine the effect on post-tax $NPV_{8\%}$ of $542 million and IRR of 25% from the base Li_2CO_3 price, operating cost and capital costs. Variations from +30% to -30% for each have been used in modelling. The analysis show the Project is most sensitive to the lithium price than it is to CAPEX or OPEX. As shown in Table 22.4 and Figure 22.1 an increase of 30% in the average lithium carbonate price, from $6,000 to $7,800, increases the Post-Tax NPV from $542M to $944M.

Table 22.4: Sensitivity Analysis – Post-Tax NPV8% ($ million)

Difference	Lithium Price	Operating Costs	Capital Costs
-30%	138	724	646
-20%	273	664	611
-10%	408	603	577
Base	542	542	542
10%	676	481	507
20%	810	419	472
30%	944	358	436

Figure 22.1: Sensitivity Analysis on Post-Tax NPV



A decrease of 30% in the average lithium carbonate price, from $6,000 to $4,200, decreases the Post-Tax NPV from $542M to $138 M

As shown in Table 22.5, an increase of 30% in the lithium carbonate price to $7,800, increases the Post-Tax IRR to 36%, while a decrease of 30% in the lithium carbonate price to $4,200 decreases the Post-Tax IRR to 13%.

Table 22.5: Sensitivity Analysis – Post-Tax IRR (%)

Difference	Lithium Price	Operating Costs	Capital Costs
-30%	13%	30%	35%
-20%	17%	28%	31%
-10%	21%	27%	27%
Base	25%	25%	25%
10%	28%	23%	23%
20%	32%	21%	21%
30%	36%	19%	19%

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

24.1 Implementation Schedule

Local environmental consulting groups are being used to prepare the Manifestacion de Impacto Ambiental, which is scheduled to be lodged with the appropriate local authorities in Q3 2016. In addition, the Company has designed an active programme to engage with the local communities living within the project area.

Over the next 18 months the Bacanora will continue to progress the Sonora Lithium Project through the project development stages, with the intention of completing a FS by Q1 2017. The following preliminary indicative timetable is proposed:

- Q1 2016: file NI 43-101, PFS
- Q3 2016: complete pilot plant trials, distribute lithium samples to potential offtakers
- Q1 2017: finalise NI 43-101, FS
- Q2 2017: commence detailed design and site preparation works
- Q4 2018: commence commissioning

A 'fast track' approach underpins the execution schedule which was developed during the PFS assuming:

- Testwork activity runs in parallel to the FS and interpreted results are available by October 2016. This involves an element of risk as the assumptions driving the FS are only confirmed at the end of the Feasibility Study, during the compilation of the capital estimate compilation.
- Pilot plant testwork has commenced in March 2016. Discipline engineering activities to start during April 2016.
- The FS will be used to identify likely suppliers of long lead equipment, principally the evaporator and crystalliser package, and prioritise advancement of engineering to facilitate placement of purchase orders soon after the completion of the FS.
- The conclusion of the FS is immediately followed by the commencement of some form of front end engineering and design ("FEED") or detailed design ("DD"). This will likely require Bacanora to make a decision to release funds to continue project advancement while full project funding is finalised and a final investment decision is deliberated.
- Commencement of long lead order activity occurs soon after FEED/DD has commenced. This may necessitate Bacanora accepting risks associated with cancelled or modified orders.

Table 24.1 summarises the manufacturing durations of the long lead items identified during this PFS.

Table 24.1: Manufacturing Durations of the Long Lead Items

Package	Manufacturing Duration (wks)
Evaporator and crystalliser	60
Vacuum belt filters	40
Microniser	36
Thickeners	35

24.2 Ramp-up Schedule

The Sonora ramp-up curve was based on evaluation of the McNulty curves as detailed in the paper – 'Minimisation of Delays in Plant Startups', Plant Operator's Forum 2004, Terry P. McNulty. There are four curves representing the plant throughput as a percentage of the annualised design over a period of time. The different curves represent different metallurgical, process design and project execution considerations.

To determine the ramp-up curve applicable to the Sonora Project, the future project characteristics including development of the technology, bench scale and piloting testwork, process design, flowsheet development and project development were reviewed against the four ramp-up curve types.

Figure 24.1: Stage 1 and Stage 2 Production Ramp-up Schedules

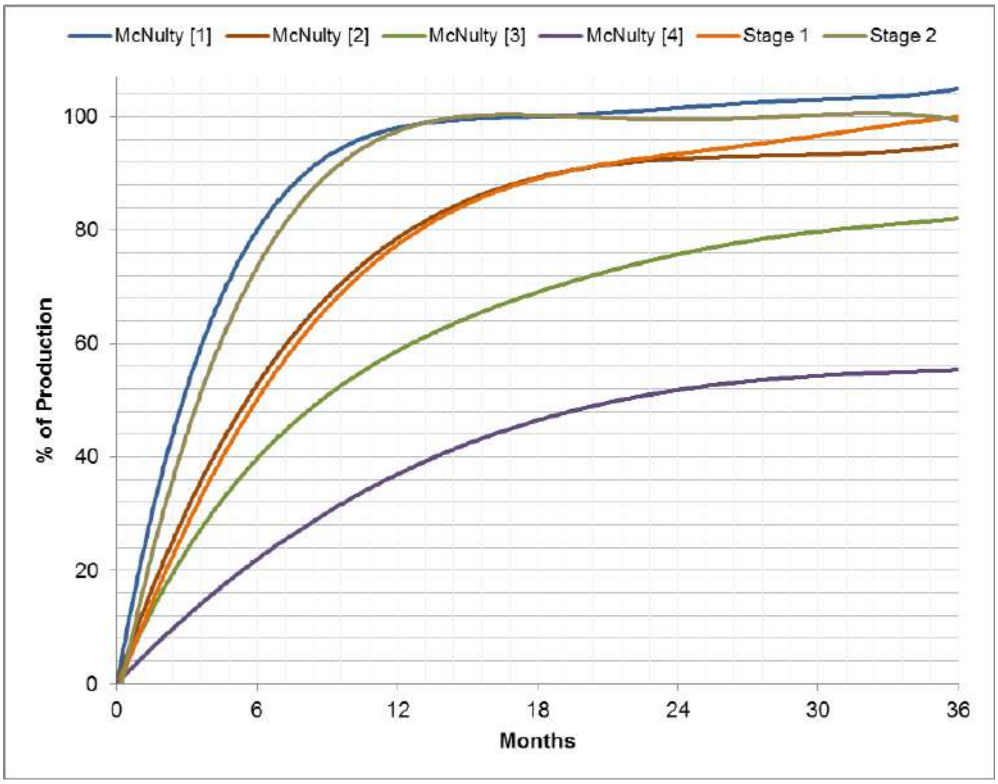


Figure 24.1 shows the proposed Stage 1 and Stage 2 ramp-up schedules as compared to the four McNulty curves.

The proposed Stage 1 curve for the first 18 months is a Type 2 curve, with 100% capacity assumed to be achieved in month 36.

Stage 2 is a duplication of the Stage 1 process plant and therefore it is expected that the Stage 2 plant will ramp-up faster than Stage 1.

The ramp-up curve assumes that there is no interruption of feed ore to the Process Plant and there is no reduction in the plant operation due to a lower market product demand.

25 INTERPRETATION AND CONCLUSIONS

The following are the key interpretations and conclusions as well as risks and opportunities identified in the PFS that need to be investigated further in the FS.

25.1 Geology

- Continued drilling to infill the Inferred and Indicated Mineral Resource to increase the confidence allow for Measured Mineral Resources to be declared.
- 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.

25.2 Mining

- Infill drilling to ensure 5 years of Proven Mineral Reserves
- Geotechnical testwork and update pit wall slope recommendations
- Detailed proposals for potential contract mining operations
- Evaluate the waste storage locations and plant location to minimize haul distances

25.3 Process Plant and Infrastructure

- **Upper Clay:** Upper Clay at 0.17% Li is lower grade than the Lower Clays at 0.35% Li; Upper Clay is reporting to the mineralised waste stockpile. Future beneficiation and flotation testwork may be successful to enable this ore to be plant feed.
- **Flotation:** additional testwork is recommended which may show improved rejection of silica while minimising lithium losses.
- **Kiln:** the clay–gypsum mixture is not expected to have good thermal conductive properties and testwork is required to confirm the LNG consumption and length of the kiln. The kiln may need to be longer than currently specified which would increase capital and operating costs.
- **Pilot Plant:** operation of the Hermosillo lithium carbonate pilot plant on a continuous basis during Q2 2016 to optimise the proposed metallurgical flow sheet and produce lithium carbonate samples for testing by potential off-takers.
- **Plant Site Location and Liquefied Natural Gas Transport:** the location for the process plant was reviewed at a high level during the PFS. The major factors are ore transport, tailings storage and reagent transport. For the kiln operations, up to 600 m^3/d of liquefied natural gas is estimated to be required for Stage 2. This should be balanced against ore treatment at 2.7 Mt/y and tailings storage of 3.8 Mt/y (wet) in Stage 2. During the FS,

further investigations are required for the plant location study, considering such sites as Bacadéhuachi or Nacozari de Garcia.

- **Liquefied Natural Gas Price:** preliminary pricing from the Hermosillo LNG provider was received at $6.00 to $8.00/GJ as compared to $2.00/GJ at the US border. A Mexican law was passed in 2015 which enables gas supplies to be obtained from USA which is expected to significantly reduce the LNG price in Mexico. It is assumed that LNG could be purchased at the border for $2.00/GJ and transported to site for $1.00/GJ. The operating cost estimate assumes a delivered LNG price of $3.00/GJ. Further evaluation of the LNG price is required in the next phase of engineering as the price of gas has a large impact on the project economics.
- **Sodium Carbonate Price:** soda ash is the key reagent at $9.6M/y which represents 19% of the Stage 1 project's operating costs. Bacanora received a soda ash price of $175/t with prices of up to $400/t received. There are risks that during the next phase of engineering, negotiations with suppliers could result in higher prices which may reduce project economics.
- **Gypsum:** preliminary testwork on ROM ore indicates 1 ore: 0.1 gypsum:0.0 limestone up to 1 ore : 0.3 gypsum : 0.3 limestone. The operating cost is based on 1 ore : 0.13 gypsum : 0.0 limestone. Roasting testwork on beneficiated ore is ongoing to confirm the consumption of reagents.
- **Dewatering and Washing of Leach Residue:** benchmarked parameters have been used to size the leach residue thickener and vacuum belt filters. Testwork may show that the wash water ratio needs to be higher than 1.0 m^3/t which would increase the size (increase capital and operating costs) of the downstream evaporators and crystallisers.
- **Potassium Sulfate Recovery:** the potassium sulfate recovery circuit is based on benchmarking of similar operations and literature. Testwork is required to confirm the preliminary design.
- **Sodium Sulfate:** it is currently unknown if the sodium sulfate is saleable and therefore it is stored in a lined facility. Additional revenue may be realised if the sodium sulfate is saleable.

26 RECOMMENDATIONS

Financial modelling carried out for the PFS demonstrates that the Sonora Lithium Project is financially viable. Further technical investigations are recommended in the FS to be completed in Q1 2017 to confirm financial viability.

Benchscale testwork on representative samples are proposed to begin in April 2016 to optimise the flowsheet. Bacanora has begun pilot scale testwork at its 3 t/h pilot plant in Hermosillo to demonstrate the flowsheet, reduce plant ramp-up times and produce samples for marketing purposes.

Additional infill drilling is proposed to infill the Indicated Mineral Resource to increase the confidence to a Measured Mineral Resource level and to ensure five years of Proven Mineral Reserves. Further exploration may be planned following the results of this drilling; however, no further exploration programmes have currently been planned for the project.

Local environmental consulting groups are being used to prepare the Manifestacion de Impacto Ambiental, which is scheduled to be lodged with the appropriate local authorities in Q3 2016. In addition, Bacanora has designed an active programme to engage with the local communities living within the project area.

Additional geotechnical, hydrology and hydrogeological drilling and investigations are planned during the FS for the design of diversion channels and to confirm the design of the pit wall.

The budgeted costs for the next phase of work, the Feasibility Study, are shown in Table 26.1.

Table 26.1: Budget Costs for Recommended Work Program

Activity	Cost ($'000)
Infill drilling and resource modelling	1,000
Pilot plant metallurgical testwork, (Hermosillo)	1,000
Vendor process engineering testwork	300
Process engineering and design	1,000
Infrastructure	500
TMF, hydrology, geotechnical, etc	500
Mine design and geotechnical	300
Total	**4,600**

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 ("SS") report: "Scoping Study of the El Sauz and Fleur Concessions, Sonora Lithium Project, C. Verley, December 2014"

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

Dr. Barba report: "Diseno del Talud General del Proyecto Litio de Sonora", August 2015

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

"PFS Marketing Report", SignumBOX Inteligencia de Mercados et al, November 2016.

APPENDIX 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 5th Floor, Churchill House, Churchill Way, Cardiff CF10 2HH.
2. This certificate applies to the technical report titled "Technical Report on the Pre-Feasibility Study 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 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 24th and 27th March, 2015.
7. I am co-author and reviewer of this report and have specific responsibility for the Mineral Resource estimate and Sections 2.1, 4.1, 4.3, 4.4, 6, 7, 8, 9, 10, 11, 12, 14, 23 and parts of 1, 2, 2.3, 3, 25, 26 and 27 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 15th day of April, 2016.

Martin Frank Pittuck, MSc. C.Eng, MIMMM

CERTIFICATE OF QUALIFIED PERSON

I, Kevin C. Scott, P. Eng, do hereby certify that:

1. I am Manager, Process and Studies for Ausenco Solutions Canada Inc. 855 Homer Street, Vancouver, BC V6B 2W2, Canada.
2. This certificate applies to the technical report titled "Technical Report on the Pre-Feasibility Study 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 April 2016.
4. I am a graduate of University of British Columbia, Vancouver, Canada with a Bachelor of Applied Science degree in Metals and Materials Engineering. I have worked as a Metallurgist continuously for a total of 25 years since my graduation from University. My relevant experience for the purpose of the Technical Report is:
    - Senior metallurgical engineer or Study Manager working for multi-national engineering and construction companies on feasibility studies and engineering design of mineral processing plants;
    - Process engineer at three Canadian mineral processing operations;
    - Senior Process Manager for process design and engineering for a metallurgical processing plant in South America.
5. I am registered as a Professional Engineer in the Province of British Columbia (Licence # 24314) and the Province of Ontario (Licence # 90443342).
6. 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.
7. I am responsible for the overall Technical Report and specifically for Sections 2.2, 2.4, 2.5, 4.2, 4.5, 5.2, 5.3, 5.5, 13, 17, 18, 19, 21, 22, 24 and parts of 1, 2, 3, 25, 26 and 27.
8. I have not visited the property.
9. I am independent of Bacanora applying all of the tests in section 1.5 of NI 43-101.
10. I have not had prior involvement with the property that is the subject of the Technical Report.
11. 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.
12. 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 15th day of April 2016.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
K.C. SCOTT
25314

Kevin C. Scott, P. Eng

CERTIFICATE OF QUALIFIED PERSON

I, Herbert E. Welhener do hereby certify that:

12. I am a Vice President of Independent Mining Consultants, Inc. located at 3560 E. Gas Road, Tucson, Arizona, USA;
13. This certificate applies to the technical report titled "Technical Report on the Pre-Feasibility Study for the Sonora Lithium Project, Mexico, April 2016" (the "Technical Report"), prepared for Bacanora Minerals Limited;
14. The Effective Date of the Technical Report is 12 April 2016;
15. I am a graduate with a Bachelor of Science in Geology from the University of Arizona in 1973 and I have practiced my profession continuously since that time. Since graduating I have worked as a consultant on a wide range of mineral projects, specializing in precious, base and industrial metals. I have undertaken many mineral resource estimations, mine evaluation technical studies and due diligence reports in a variety of settings around the world. I am a registered member of the Society of Mining, Metallurgy and Exploration, Inc. (SME RM # 3434330).
16. 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.
17. I visited the Sonora Lithium property between the 10th and 12th of September, 2015.
18. I am co-author and reviewer of this report and have specific responsibility for the Mineral Reserve estimate and Sections 15, 16, 21.1.1 and 21.2.1 and parts of 1, 2, 3, 25, 26 and 27 in the Technical Report.
19. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101.
20. I have not had prior involvement with the property that is the subject of the Technical Report.
21. 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.
22. 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 15th day of April, 2016.

Herbert E Welhener

Herbert E. Welhener, SME RM

SME
Society for Mining, Metallurgy & Exploration
Herbert E. Welhener
SME Registered Member No. 3434330
Signature HWelhener
Date Signed 4/15/16
Expiration date 12/31/16

CERTIFICATE OF QUALIFIED PERSON

I, Joel A. Carrasco, P.E., do hereby certify that:

13. I am a Project Manager, Environmental and Sustainability Ausenco Engineering USA South Inc. 5613 DTC Parkway Ste. 300, Denver, Colorado, USA.
14. This certificate applies to the technical report titled “Technical Report on the Pre-Feasibility Study for the Sonora Lithium Project, Mexico, April 2016” (the “Technical Report”), prepared for Bacanora Minerals Limited.
15. The Effective Date of the Technical Report is 12 April 2016.
16. I am a graduate of Texas Tech University, Texas with a Bachelor of Science degree in Civil Engineering. I have worked as a Civil Engineer continuously for a total of 15 years since my graduation from University. My relevant experience has been working as Project Manager for multi-national engineering companies on feasibility studies and engineering designs of tailings facilities;
17. I am registered as a Professional Engineer in the State of Arizona (Licence # 52000).
18. 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.
19. I am responsible for Sections 4.6, 4.7, 4.8, 5.1, 5.4, 20 and parts of 1, 2, 3, 25, 26 and 27.
20. I visited the Sonora property on the 19th August, 2015.
21. I am independent of Bacanora applying all of the tests in section 1.5 of NI 43-101.
22. I have not had prior involvement with the property that is the subject of the Technical Report.
23. 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.
24. 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 15th day of April, 2016.

Joel A Carrasco, P.E.

APPENDIX B

SUMMARY OF MAJOR LITHIUM INTERCEPTS

DRILL HOLE ID	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)	158.50	183.34	899	0.3
ES-04	Lower Clay	140.42	171.75	3595	1.4
	Upper Clay (High Grade)	120.70	132.47	2336	0.9
	Upper Clay (Low Grade)	96.44	120.70	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	75.90	1539	0.7
	Upper Clay (Low Grade)	9.75	27.74	708	0.4
ES-07	Lower Clay	36.00	69.49	808	0.9
	Upper Clay (Low Grade)	0.00	32.00	842	0.4
ES-08	Lower Clay	49.38	73.76	1551	0.7
	Upper Clay (Low Grade)	19.20	45.11	670	0.5
ES-09	Lower Clay	51.97	81.99	1163	0.6
	Upper Clay (Low Grade)	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)	305.10	315.35	4523	1.3
	Upper Clay (Low Grade)	278.16	305.10	1017	0.4
ES-14	Lower Clay	65.53	95.10	4733	1.8

DRILL HOLE ID	UNIT	FROM (m)	TO (m)	Li (ppm)	K (%)
	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	43.10	73.15	1720	0.8
	Upper Clay (High Grade)	31.70	38.71	2175	0.8
	Upper Clay (Low Grade)	13.41	31.70	637	0.3
ES-19	Lower Clay	129.33	157.58	2308	1.0
	Upper Clay (High Grade)	117.50	124.97	2314	0.8
	Upper Clay (Low Grade)	93.88	117.50	530	0.4
ES-20	Lower Clay	12.07	41.76	1521	0.8
	Upper Clay (Low Grade)	0.00	8.84	1428	0.6
ES-21	Upper Clay (Low Grade)	14.33	26.21	464	0.4
ES-22	Lower Clay	153.59	158.62	41	0.2
	Upper Clay (Low Grade)	130.45	152.00	167	0.4
ES-23	Lower Clay	29.29	34.75	121	0.3
	Upper Clay (Low Grade)	13.38	27.10	513	0.3
ES-24	Lower Clay	66.39	92.71	1593	0.8
	Upper Clay (Low Grade)	48.46	61.14	820	0.5
ES-25	Lower Clay	168.37	177.39	555	0.5
	Upper Clay (Low Grade)	156.67	168.35	157	0.4
ES-26	Lower Clay	48.23	66.14	745	0.4
	Upper Clay (Low Grade)	16.43	44.81	482	0.4
ES-27	Lower Clay	24.38	49.48	1225	0.6
	Upper Clay (Low Grade)	7.62	18.17	477	0.4
ES-28	Lower Clay	22.86	32.31	86	0.3
	Upper Clay (Low Grade)	0.00	18.59	327	0.4
ES-29	Lower Clay	24.90	29.87	64	0.3

DRILL HOLE ID	UNIT	FROM (m)	TO (m)	Li (ppm)	K (%)
	Upper Clay (Low Grade)	11.28	20.12	249	0.2
ES-30	Upper Clay (Low Grade)	28.35	39.93	150	0.2
ES-31	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
ES-32	Lower Clay	32.00	35.36	1739	1.8
ES-33	Lower Clay	147.83	150.57	795	0.4
	Upper Clay (Low Grade)	121.13	144.78	552	0.4
ES-35	Lower Clay	106.68	129.03	1446	0.6
	Upper Clay (Low Grade)	78.33	100.89	808	0.4
ES-36	Lower Clay	23.26	44.68	1009	0.5
ES-37	Lower Clay	0.00	23.35	1668	0.7
ES-38	Upper Clay (Low Grade)	109.42	141.12	937	0.6
ES-39	Lower Clay	40.23	44.81	10	0.2
	Upper Clay (Low Grade)	35.60	40.23	129	0.3
ES-41	Lower Clay	70.10	95.83	774	0.5
	Upper Clay (Low Grade)	34.14	64.31	529	0.4
ES-42	Lower Clay	39.32	64.60	4241	1.7
	Upper Clay (High Grade)	16.15	23.35	3069	1.1
ES-44	Lower Clay	118.11	133.20	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
ES-45	Lower Clay	125.73	140.51	4503	1.8
ES-46	Lower Clay	162.46	178.92	4604	1.8
	Upper Clay (High Grade)	147.22	154.38	3371	1.4
	Upper Clay (Low Grade)	133.20	147.22	1350	0.7
ES-47	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	228.60	3651	1.2

DRILL HOLE ID	UNIT	FROM (m)	TO (m)	Li (ppm)	K (%)
	Upper Clay (Low Grade)	193.85	218.39	863	0.5
ES-51	Lower Clay	238.66	267.31	4400	1.7
	Upper Clay (High Grade)	218.39	230.12	2860	1.1
	Upper Clay (Low Grade)	197.05	218.39	942	0.5
ES-52	Lower Clay	275.84	302.51	4572	1.7
	Upper Clay (High Grade)	263.04	269.60	3239	1.0
ES-53	Lower Clay	345.95	381.91	4844	1.9
	Upper Clay (High Grade)	318.82	330.10	3362	1.1
	Upper Clay (Low Grade)	286.59	318.82	773	0.3
ES-54	Lower Clay	288.80	326.44	3802	1.7
	Upper Clay (High Grade)	274.78	280.87	804	0.4
ES-55	Lower Clay	236.68	243.69	2639	1.2
	Upper Clay (High Grade)	221.13	230.89	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	209.40	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	243.54	1818	0.8
	Upper Clay (Low Grade)	206.96	231.65	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

DRILL HOLE ID	UNIT	FROM (m)	TO (m)	Li (ppm)	K (%)
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	95.20	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	98.60	103	0.2
LV-13	Lower Clay	13.26	34.59	5434	2.1
LV-14	Lower Clay	14.17	32.00	5809	2.4
LV-15	Lower Clay	18.29	42.11	3739	1.7
LV-16	Lower Clay	17.68	42.52	2844	1.4
LV-17	Lower Clay	23.16	41.76	1555	0.9
LV-18	Lower Clay	260.30	279.50	1143	0.8
	Upper Clay (Low Grade)	218.24	245.67	577	0.3
LV-19	Upper Clay (Low Grade)	11.89	48.77	1033	0.5
LV-20	Lower Clay	268.41	291.39	1622	0.9
	Upper Clay (Low Grade)	219.52	247.19	653	0.4
LV-21	Lower Clay	72.24	92.96	1759	1.0
	Upper Clay (Low Grade)	8.93	59.74	1194	0.6
LV-22	Lower Clay	75.86	96.35	2988	1.5
	Upper Clay (High Grade)	44.50	60.35	2457	1.0
	Upper Clay (Low Grade)	18.38	44.50	755	0.4
LV-23	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
LV-24	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
LV-25	Upper Clay (High Grade)	143.66	155.75	2744	1.4
	Upper Clay (Low Grade)	127.71	143.66	695	0.3

DRILL HOLE ID	UNIT	FROM (m)	TO (m)	Li (ppm)	K (%)
LV-26	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
LV-27	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
LV-28	Lower Clay	179.83	203.30	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
LV-29	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
LV-31	Lower Clay	203.70	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
LV-34	Lower Clay	3.05	7.92	516	0.4
LV-35	Lower Clay	12.37	33.41	5786	2.3
LV-36	Lower Clay	15.33	35.36	4372	1.8
LV-37	Lower Clay	14.84	36.88	3942	1.9
LV-38	Lower Clay	13.96	37.49	3157	1.7
LV-39	Lower Clay	4.88	27.31	2188	1.3