Preliminary Economic Assessment for the La Ventana Lithium Deposit Sonora, Mexico

(Pursuant to National Instrument 43-101 of the Canadian Securities Administrators)

Huasabas - Bacadehuachi Area
(Map Sheet H1209)
Sonora, México
centered at: 29^{o}46’29”N, 109^{o}6’14”W

For

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Dated: January 24, 2013.

Date and Signature Page

Date

Dated Effective: January 24, 2013.

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Table 1: Abbreviations used in this report

ASTM	American Standards for Testing Materials
^oC	Degrees Celsius
Fm	Geological formation
gm	gram
ha	Hectares
km	Kilometre/kilometres
LCE	Lithium Carbonate (Li_2CO_3) Equivalent: determined by multiplying Li value in percent by 5.324 to get an equivalent Li_2CO_3 value in percent
Li	Chemical symbol for the element lithium
m	Metre/Metres
mm	Millimetre/millimetres
M	Mega (million)
NAD	North American map Datum
NQ	A size of drill core 47.6 mm in diameter
OB	Overburden
ppm	Parts per million
QP	Qualified Person as defined by NI 43-101
ROM	Run-of-mine: material that is extracted from a mine and processed into a marketable commodity
S.A. de C.V.	Mexican legal term: Sociedad Anónima de Capital Variable or variable capital corporation, the common form for a corporate entity in Mexico
tn	Tonne or metric ton
µm	Micrometre. 1 micrometre = one-millionth of a metre

1.0 Summary

Bacanora Minerals Ltd.'s ("Bacanora" or the "Company"") La Ventana lithium deposit (the "Project") is covered by one 875 ha mining concession held by Bacanora's wholly-owned Mexican subsidiary: Minera Sonora Borax S.A. de C.V. The Project is contiguous with 3 other concessions held by Bacanora; all 4 concessions total 5,786 ha in area. The Project is situated 120 km northeast of Hermosillo and approximately 170 km south of the USA – Mexico border and is road accessible (Figure 1).

There are no records of exploration or mineral occurrences in the Project area prior to 1998 when other operators staked the area for borates; their claims were abandoned in 2001.

The Project 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 Miocene times that resulted in the development of a series of half-grabens. The half-grabens are locally filled with fluvial-lacustrine sediments and intercalated tuffs that contain lithium-bearing clay units. Quaternary basalt flows cover the basinal sediment-volcaniclastic succession.

Initial rock sampling and mapping in the Project by Bacanora relocated the lithium-bearing clay units. Drilling by Bacanora in 2010 and 2011 on the Project located two lithium-bearing clay units (upper and lower) that average 41 and 22 m in thickness, respectively, and that are separated by an ignimbrite unit varying from 1 to 45 m in thickness. The sedimentary-volcanic sequence dips at approximately 20^{o} to the east and crops out along 3.5 km of strike length. The exposures are in erosional windows looking through overlying basalt that covers much of the area.

The drilling results from the Project have been used to estimate an inferred resource for lithium (Verley et al, 2012). That estimate of inferred resources for the upper clay unit is 22,642,000 tonnes averaging 2,632 ppm Li (1.3% LCE). For the lower clay unit the inferred resource is estimated at 20,682,000 tonnes averaging 4,103 ppm Li (2.0% LCE). The inferred resource for both the upper and lower clay units is estimated to total 43,324,000 tonnes averaging 3,000 ppm Li (1.6% LCE) or 712,000 tonnes LCE (Table 2). Both the upper and lower clay units are open down-dip.

New inferred Li resources, additional to the above inferred resources are estimated for an up-dip portion of the lower clay unit. Readers are cautioned that mineral resources are not mineral reserves as they do not have demonstrated economic viability. These new inferred resources are estimated at 16,829,000 tonnes averaging 2,557 ppm Li (1.3%LCE) based on surface sampling, bringing the total estimated inferred resources for the combined clay units to 60 million tonnes averaging 3,000 ppm Li (1.6% LCE).

Table 2. Inferred Lithium Resource Estimate Summary – La Ventana Concession

		Average Grade		
Unit	**Tonnes**	**Li ppm**	**LCE %**	**LCE tonnes**
Upper Clay	22,642,000	2,632	1.3	292,000
Lower Clay	20,682,000	4,103	2.0	420,000
New resource disclosure: Lower Clay – up-dip	16,829,000	2,557	1.3	218,000
Total for Upper & Lower Clay	**60,153,000**	**3,000**	**1.6**	**930,000**

Based on the drilling and surface rock sampling results to date, the Qualified Person concludes that a significant lithium resource exists in the Project.

Initial metallurgical test work on drill core samples has indicated that lithium can be put into a solution from which it is highly probable that lithium carbonate can be produced.

Based on the disclosed inferred resources and the initial metallurgical test work; this report provides a positive, preliminary economic assessment of the Project. The preliminary assessment is preliminary in nature as it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary assessment will be realized. In order to make the preliminary economic assessment the Qualified Person has used forward looking information including, but not limited to assumptions concerning lithium commodity prices, cash flow forecasts, project capital and operating costs, commodity recoveries, mine life and production rates. Readers are cautioned that actual results, should they be realized, may vary from those presented. Further testing will be needed to be undertaken to confirm economic feasibility of the La Ventana Lithium Deposit. There have been no prior pre-feasibility or feasibility studies undertaken for the Project.

Highlights of a preliminary economic analysis (Table 3) of a potential lithium mining and production operation with an output of 35,000 tonnes battery grade lithium carbonate per annum over a 20 year open pit mine life suggest annual revenue of $US210 million for an IRR of 138% with a 1.9 year pay back. Capital costs are estimated at $US114 million and average operating costs at $US1,958/tonne. Net present value (NPV) of the Project, discounted at 8%, is $US848 million, assuming an average lithium carbonate price of $US6,000/tonne.

Table 3. Preliminary Financial Highlights

Open Pit Mine Production per annum	2,735,000	tonnes @ 0.3% Li
Lithiuum carbonate production per annum	35,000	tonnes
Revenue ($US6,000/tonne of lithium carbonate) per annum	$US210	million
NPV (8% Discount)	$US848	million
Internal rate of return (IRR)	138%	
Average Operating costs	$US1,958	per tonne
Total Initial Capital Costs	$US114	million
Expected Mine Life	20	years
Pay Back of Capital Costs	1.9	years

An exploration program designed to upgrade the resource category and to demonstrate that the clay units are amenable to a commercial lithium recovery process is recommended. The work should include detailed topographic control surveys, detailed geological mapping, bulk sampling of clay exposures on La Ventana in order to obtain sufficient material for beneficiation and recovery process tests, as well as in-fill drilling to up-grade the resource.

The estimated cost of this work is $US2,000,000.

Figure 1. Sonora Lithium Project Location Map

2.0 Introduction

This report was prepared at the request of Mr. Paul T. Conroy, President of Bacanora Minerals Ltd.

The purpose of the report is to provide disclosure of new inferred lithium resources and a preliminary economic assessment of the potential of the La Ventana lithium deposit based on NI 43-101 compliant inferred lithium resources disclosed in this report.

The mineral rights for the Property are currently owned by Bacanora.

Information contained in this report was sourced from Bacanora and involved a complete review and evaluation of all available survey data, drill logs, assay and analytical reports, Government of Mexico mineral titles data bases and topographic maps. General information concerning regional geology and deposits types was sourced from references cited herein and listed at the end of this report.

Mineral processing and metallurgical information and data were sourced from memoranda prepared by Mr John Fox, P.Eng. with data from analyses and test work performed by the Metallurgical Division of Inspectorate Exploration & Mining Services Ltd.

The lead author with overall responsibility for this report, Carl Verley, P.Geo., inspected the Project on June 10, 2012 and again on December 1 and 2, 2012. During this time he examined and verified the location of some of the diamond drill holes, examined the geology of the Project area in the field and examined the diamond drill core from the drilling program. In addition, he reviewed all analytical data generated from exploration on the Project including quality control and quality assurance protocols at the offices of Bacanora's Mexican subsidiary, Minera Sonora Borax S.A. de C.V., in Hermosillo, Mexico.

Mr. Martin Vidal, MSc, is responsible for managing the exploration program on the Project. Many of the historical reports and some of the academic geological articles used in the preparation of this Technical Report were authored by Martin F. Vidal, Lic.Geo., and Vice-President of Exploration for Bacanora. Mr. Vidal has provided valuable input and data for the sections on Geology, Deposit Types, Resources, Capital and Operating Costs, as well as the Economic Analysis (Items 7.0, 8, 14, 21 and 22).

3.0 Reliance on Other Experts

Complete reliance has been placed on information concerning the identification of clay mineral species found in the Project in disclosures made in reports by Zhou and Yeung of SGS Minerals (2011), as noted in Item 27 and summarized in Item 7.3.

Reliance has been placed on information concerning the interpretation of preliminary mineral processing and metallurgical test work in a report entitled: *Lithium test work preliminary report* written by Mr. John Fox, P.Eng. and dated January 8, 2013 as noted in Item 27. . All of the information found in Mr Fox's report is relied on and is summarized in Item 13.0

4.0 Property Description and Location

The La Ventana lithium deposit is located in the 875 hectare La Ventana mineral concession that is contiguous with three other concessions: El Sauz, San Gabriel and Fleur.

Together, the four concessions cover 5,786 ha and are held by Bacanora's Mexican subsidiary: Minera Sonora Borax S.A. de C.V. ("MSB"). The concessions are located approximately 190 km northeast of the city of Hermosillo, in Sonora State, Mexico, and are about 200 km south of the border with Arizona, USA. Table 4 lists the concession details. A map view of the concessions is shown in Figure 2.

Table 4: Concession Status, La Ventana Lithium Deposit

Concession Name	Title #	Record Date	Expiry Date	Area (ha)
La Ventana	235611	Jan. 22, 2010	Jan. 21, 2060	875
El Sauz	235614	Jan. 22, 2010	Jan. 21, 2060	1,025
San Gabriel	235816	Mar. 12, 2010	Mar. 11, 2060	1,500
Fleur	pending	Dec. 7, 2012	pending	2,386

The boundary of concession is located with reference to a monument (Punto de Partida) and the distances and directions from the monument are specified in the title document as issued by the Mexican Mining Authorities once the approval for a concession application has been granted. Concession applications have been approved for all the lots with the exception of the recently applied for Fleur property. As Fleur was only applied for in December of 2012 there has not been sufficient time for that application to be processed. Approval is expected imminently and it is believed that there is little risk that it will not be approved.

In order to retain the mineral rights to the Project Bacanora must comply with Mexican government regulations concerning semi-annual payment of property taxes which are based on the number of hectares held and the age of the concessions. In addition, on an annual basis, Bacanora must make prescribed minimum investments in exploration and development expenditures on the Project. The amounts required for minimum investments are provided in annual fee schedules released by the Mines Office. Title to mineral properties has inherent risks sometimes due to the difficulties of determining the validity of a title and at other times due to potential problems stemming from ambiguous conveyance history of some mineral properties. Bacanora has investigated title to all of its mineral properties and maintains them in compliance with Mexican Mining Law.

Bacanora, through MSB, acquired the La Ventana, El Sauz and San Gabriel concessions from their owner by paying an aggregate of 500,000 shares in Bacanora and $US40,000 to the owner for a 100% interest in those properties. Bacanora, again through MSB, has a 100% interest in Fleur.

Surface rights to the concession areas are divided amongst the Municipalities of Bacadehuachi, Granados and Huasabas, from whom permission to work must be received. In addition, permission to work must be received from individual landowners.

There are no known mineral reserves and mine workings, existing tailing ponds or waste deposits on the concession areas. Land use, by nature of the environment, is restricted to cattle grazing. There are no environmental liabilities to which the Project is subject.

Bacanora's Mexican subsidiary is required under Mexican Mining Law to file environmental impact assessment reports along with applications for drill permits. In addition, Bacanora must apply for Land Use permits with the Mexican authorities and the local land owners. To date, MSB has been able to obtain all of the permits and permissions required to conduct its exploration work on the claimed area. Reclamation of drill sites is required and was undertaken at the completion of each drill hole.

In the QP's opinion, there are no other significant factors or risks that may affect title or the right to perform work on the property. Access can be an issue during the July to September rainy season when flooding may temporarily block present access routes to La Ventana, thus affecting the ability to perform work there.

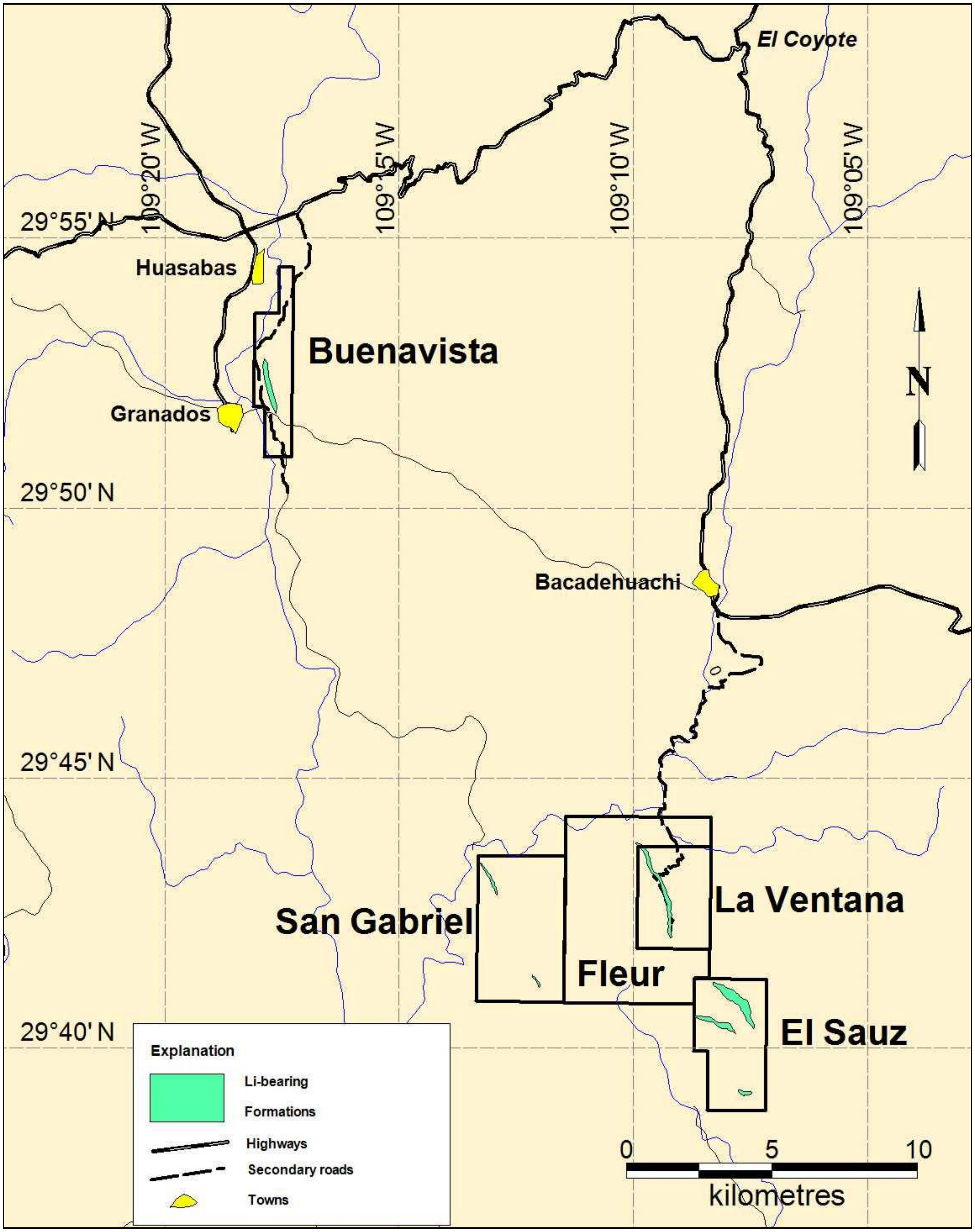

Figure 2. Location of the La Ventana Concession relative to other holdings of Bacanora

5.0 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Accessibility

Access to the Project area is by way of Federal Highway 14, a two-lane highway from Hermosillo, for 225 km east (passing through the towns of Ures, Mazocahui, Moctezuma and Huasabas), to the intersection known as “El Coyote”, then south from the intersection for 20 km on a recently paved, two-lane highway to the town of Bacadehuachi. The Company has set up its field camp in this town. Access to La Ventana, El Sauz and San Gabriel concessions is via secondary, unimproved, dry-weather roads south from Bacahehauchi, approximately 10-12 km, crossing various privately owned ranches of which land owners have granted permission for access to the concessions.

5.2 Climate and Physiography

The Project area is situated in the western portion of the “Sierra Madre Occidental” (SMO) physiographic province, within the Basin and Range subprovince, and lies between “Mesa de Enmedio”, “Rincon del Sauz” and “El Capulin” mountain ranges. Average elevation at La Ventana project is 900 m above sea level. The Project is surrounded by mountain peaks with elevations ranging up to 1440 metres above sea level.

The average ambient temperature is 21° C, with minimum and maximum temperatures of -5º C and 50º C, respectively, in the concession areas. Extreme high temperatures, upwards of 49º C, occur in summer, while winters, although short, are cool comparable with most of Mexico. The accumulated annual rainfall for the area is 450 millimetres. The wet season, or desert “monsoon” season, occurs between the months of July and September and heavy rainfall can temporarily hamper exploration at times. The Sonoran Desert, because of its bi-seasonal rainfall pattern, hosts plants from the agave, palm, cactus and legume family, as well as many others. The length of the operating season is 365 days a year.

5.3 Local Resources and Infrastructure

Bacadehuachi is a small farming and ranching community with basic services capable of supporting early stage exploration projects. Surface rights are obtainable from local landowners and are sufficient for mining operations, should these develop on any of the concessions.

The closest electric power line is about 10 km north of the Project area, passing very close to Bacadehuachi and then heading toward Nacori Chico, the next village east from Bacadehuachi.

All water for exploration and mining activities must be pumped from wells. Ranch owners have been supportive in supplying sufficient water for drilling programs. Availability of water for advanced exploration or mining has not been assessed.

Mexico has a skilled and mobile exploration and mining labor pool capable of meeting the needs of advanced projects or mining operations.

The Company has agreements with owners of surface rights that provide the Company with sufficient surface rights for mining operations, including potential tailings storage and potential waste disposal areas and potential processing plant sites.

6.0 History

There are no records of mineral exploration or mineral occurrences in the Project area prior to 1998, when other operators staked the area now covered by the Project for borates. The claimed area was released in 2001.

There are no historical mineral resource or mineral reserve estimates in the area of the concessions.

There has been no mineral production from any of the concessions.

7.0 Geological Setting and Mineralization

7.1 Regional Geology

The Project area is underlain by Oligocene to Miocene age rhyolitic tuffs, ignimbrites and breccias of the upper volcanic complex of the Sierra Madre Occidental (INEGI, 1982). This succession was subjected to Basin and Range extensional events during Miocene times that resulted in the development of a series of half-grabens. The half-grabens are locally filled with fluvial-lacustrine sediments and intercalated tuffs that contain lithium-bearing clays. Quaternary basalt flows cover the basinal sediment-volcaniclastic succession (Figure 3).

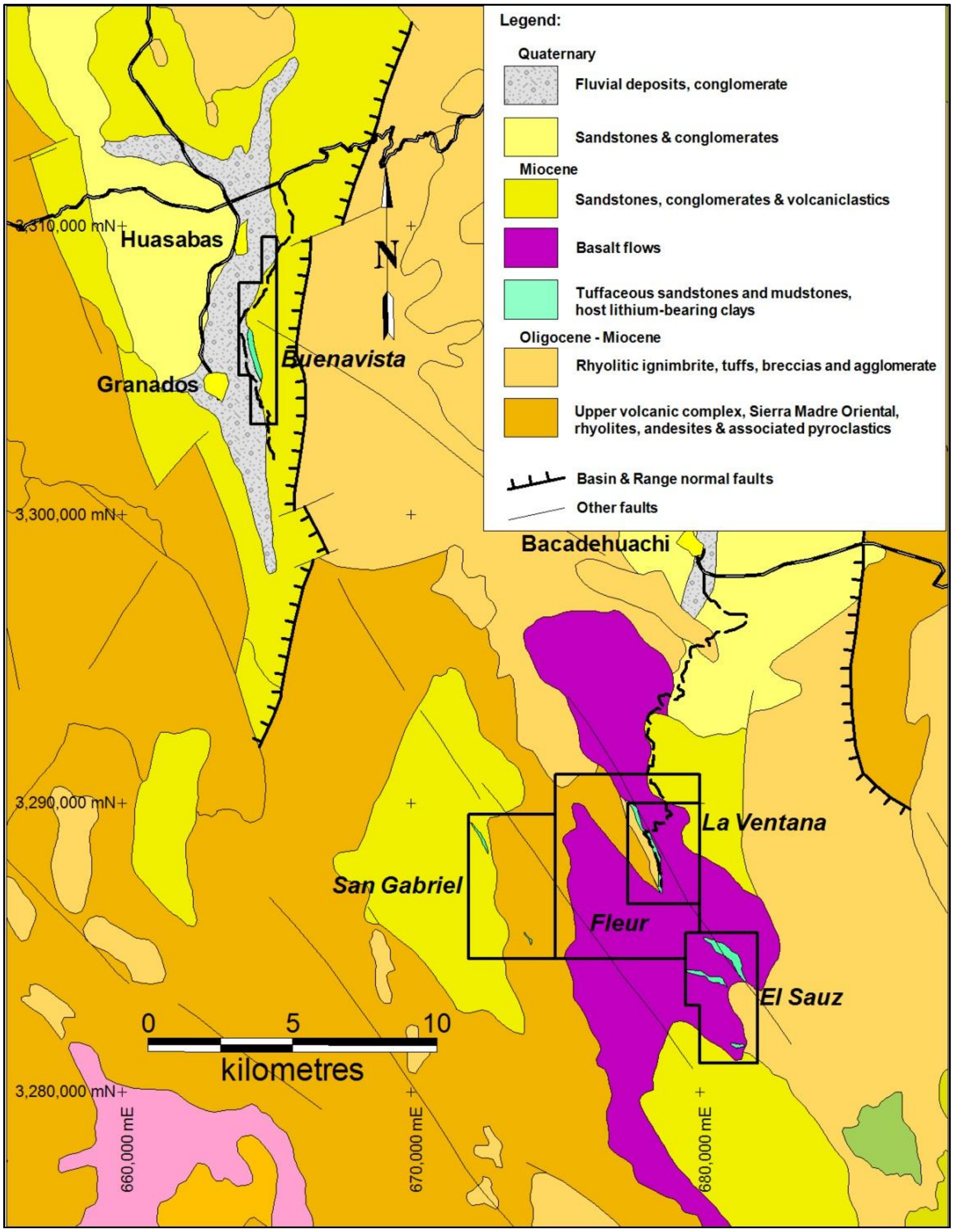

Figure 3. Regional Geology of the Sonora Lithium Project Area

7.2 Property Geology

Mapping and drilling by Bacanora on La Ventana concession has established the presence of two lithium-bearing sedimentary-volcaniclastic sequences ("clay units") separated by an ignimbrite sheet (Figure 4). Olivine basalt flows cap the upper clay unit. The upper clay is traceable along strike for 3.5 km on La Ventana (Figure 5). Drill intercepts of the upper clay unit vary from 24 to 85 m in length. The upper clay unit is underlain by an ignimbrite sheet that has drill intercepts varying from 1 to 45 metres in length. The ignimbrite is underlain by the lower clay unit that has intercepts in drill holes ranging from 4 to 40 m in length (Figure 6). The lithium-bearing sedimentary sequences are well defined and are distinct and easily distinguished in the field from the surrounding volcanics by their pale colour and fine to medium bedding. Based on information from drill core a stratigraphic succession for La Ventana concession has been proposed (Table 5) in which the clay units have been further divided into a series of subunits.

Structurally the volcanic-sedimentary succession dips to the east-northeast from approximately 20^o in the southern part of the Project with dips gradually increasing to 50^o in the northern part of the Project. At the south end of the Project a northwesterly striking fault which appears to have down-dropped the capping basalt with the result that the clay units are buried under the basalt immediately south of La Ventana. However, the gentle easterly dip allows the clay units to crop out again in an erosional window that cuts through the basalt approximately 1.2 km south of La Ventana on Bacanora's El Sauz concession.

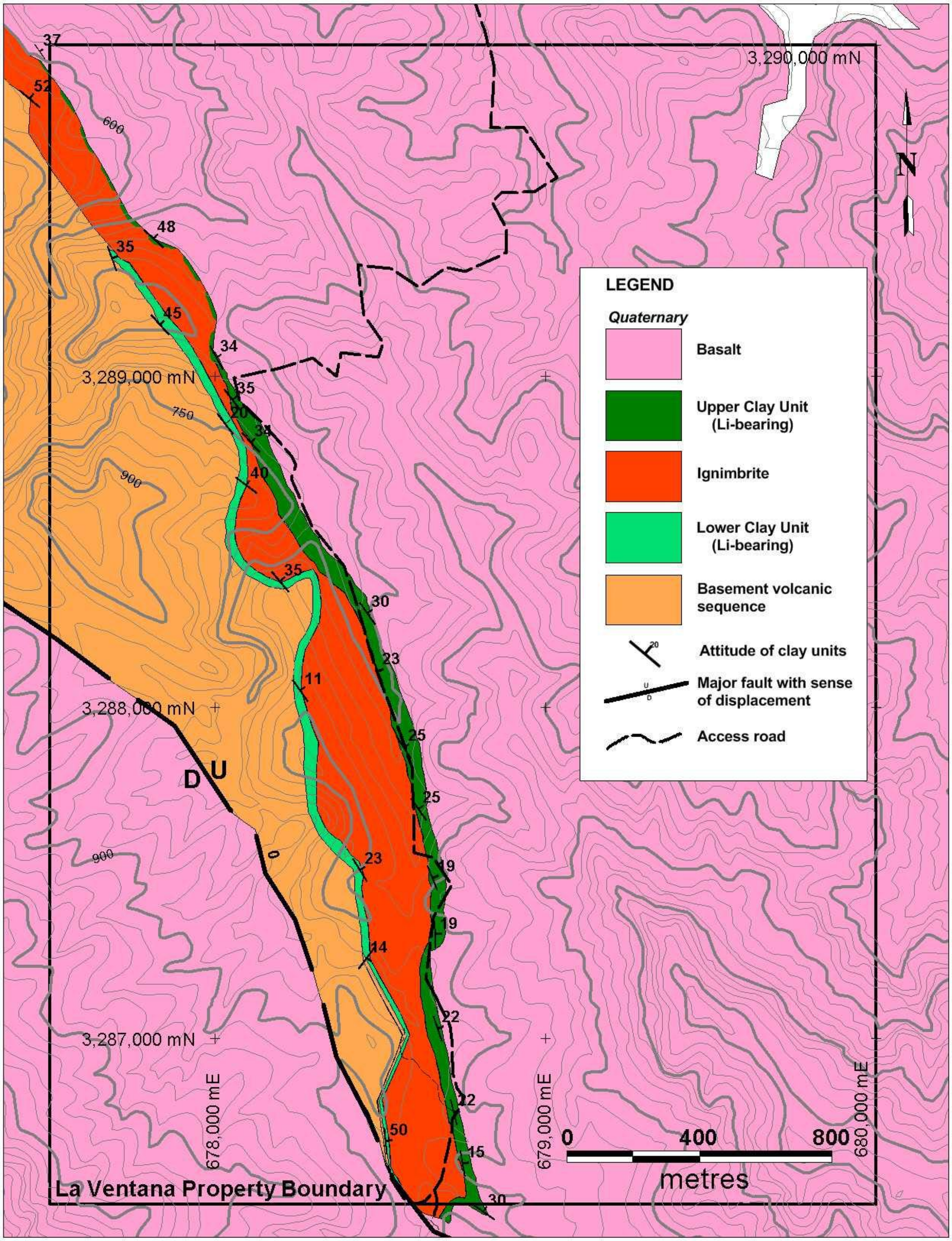

Figure 4. Geology of La Ventana concession

Figure 5. Upper Clay Unit - La Ventana Concession.
Li clays at sample point 12CGV539VT (2,600 ppm Li) – looking north

Figure 6. La Ventana Concession, Lithium-bearing Sequences.
(looking south from drill hole LV-09)

Table 5. La Ventana – Stratigraphy of Lithium-bearing Sequences.

Unit	Subunit	Description
Capping basalt	UBAS	Basalt. Contains greenish olivine crystals. Veinlets of kaolinite/alunite (White/greenish, powdery).
Upper clay unit	UPP_SS	Reddish medium-coarse grained sandstone. Contains moderate calcite in veinlets.
	UTC	Light gray tuffaceous claystone intercalated with reddish, sandy layers. Scarce FeOx layers (black).
	CALCLS	Dark gray slump brecciasConsisting of dark, fine clayey groundmass with tuffaceous fragments. Calcite in masses.
	WAXCLS	Green-yellowish silica nodules in a clayey waxy-tuffaceous matrix.
	BRSS	Brown sandstone. Poorly bedded. Highly calcareous. Reddish tuffaceous coarse grained sandstone. Clay matrix. Soft.
	HS	Light green-pinkish fine grained seq. of clays and silica nodules (Hot spring). Waxy in zones. Calcite in masses
Ignimbrite	IGNIM	Ignimbrite: orange colored, welded lapilli tuff. Locally brecciated.
Lower clay unit	LWR-TS	Light Gray reworked tuff with abundant lithium-bearing clayey zones.
	LART	Light green tuffaceous sediments. K-feldspar groundmass with quartz and biotite. Indurated. Contains lapilli tuff.
	LCGL	Polymitic conglomerate. Reddish matrix to the top and greenish to the bottom. Purple-greenish-white fragments. Occurs as a lens at the northern part of La Ventana.
Basement Volcanics	LBAS_AND	Dark green basalt, biotite-rich (black) in a fine grained groundmass. Andesitic tuff at the northern part of the concession

7.3 Mineralization

Mineralization in the Project consists of a series of lithium-bearing clay units that occur within and make up a substantial component of the volcanic-sedimentary sequence.

Lithium-bearing clays in the upper clay unit are believed to be predominantly hectorite ($Na_{0.3}(Mg, Li)_3Si_4O_{10}(OH)_2$). Drill intercepts of the Li-rich zone within the upper clay unit average 11.38 m in length. This is equivalent to a true thickness of 10.69 m based on the inclination of the unit (20^o) and that of the drill holes (90^o).

Preliminary studies of clays from four samples by Zhou and Yeung of SGS Minerals (2011) indicate that the lithium-bearing clay polylithionite ($KLi_2AlSi_4O_{10}F_2$) is a major component in some of the sediments in the lower clay unit. Drill intercepts of the Li-rich zone within the lower clay unit average 19 m in length. This is equivalent to a true thickness of 17.85 m based on the inclination of the unit (20^o) and that of the drill holes (90^o).

Analyses of rock samples collected from surface exposures of the upper clay unit range from 396 to 6,040 ppm Li (0.21% to 3.22% LCE). Samples from surface exposures of the lower clay unit range from 315 to 9,486 ppm Li (0.17% to 5.07% LCE). Lithium values from core samples from drill holes at La Ventana range from 0 to 10,000 ppm Li (0 to 5.3% LCE).

In addition, analyses of the drill core from La Ventana have elevated values in cesium that range from 8 to 2,650 ppm and average 421 ppm. Analyses for rare earth elements indicate that these commodities are negligible since maximum total rare earth oxide concentration is 0.07% at La Ventana.

8.0 Deposit Types

Lithium occurs in commercial concentrations in three types of mineral deposits:

1. Pegmatites
2. Brines
3. Clays

Pegmatites were traditionally the primary source of lithium from contained minerals: spodumene ($LiAlSi_2O_6$), lepidolite ($K(Li, Al)_3(Si, Al)_4O_{10}(F, OH)_2$ and petalite ($LiAlSi_4O_{10}$) (Cerny, 1991). Examples of productive lithium pegmatites are Kings Mountain – Bessemer City tin-spodumene belt in North Carolina (Broadhurst, 1956) or the Quebec Lithium Property of Canada Lithium Corp (Shannon et al. 2011).

Brines are the main source for lithium today. In brines, lithium occurs as lithium chlorides (LiCl) that are pumped from the evaporite lakes or salt pans (salars) into a processing facility to produce lithium carbonate (Li_2CO_3). Examples of productive brine fields are found in South America at the Salar de Atacama, Chile.

Clays such as jadarite ($LiNaB_3SiO_7(OH)$, hectorite ($Na_{0.3}(Mg, Li)_3Si4O_{19}(OH)_2$) and polylithionite ($KLi_2AlSi_4O_{10}F_2$) are some of the lithium bearing clay minerals that are potential sources for lithium. The lithium-bearing clays are the result of degradation of felsic volcaniclastic rocks and subsequent impoundment of the resulting clay minerals in lakes. It is also thought that hot-spring activity related to volcanism may also supply some of the lithium to the lake environment. An example of a potentially economic lithium deposit in clay is the Kings Valley Project in Nevada, USA, of Western Lithium Corp (Ajie et al., 2009).

Lithium mineralization in the concessions making up the Project is of the clay type.

Concepts from the geological model for lithium-bearing clay deposits that are applied to exploration of these deposits include:

1. Recognition of young sedimentary basins containing or having the potential to contain clays derived from felsic volcanic rocks,
2. Lithogeochemical sampling of clay units exposed in young sedimentary basins by means of surface sampling and/or drilling in order to determine lithium concentrations,
3. Recognition of clay species which have favourable metallurgical characteristics to allow for the recovery of lithium.

9.0 Exploration

Bacanora's initial exploration efforts were directed to surface rock sampling to identify lithium-bearing clay horizons on the Project.

9.1 Work in 2010

A series of six samples were collected by Bacanora at the southern end of the upper clay unit on La Ventana concession in 2010 (Figure 7). The samples were continuous chip samples taken perpendicular to the strike of the clay unit and along intervals between 1 and 1.5 m in length.

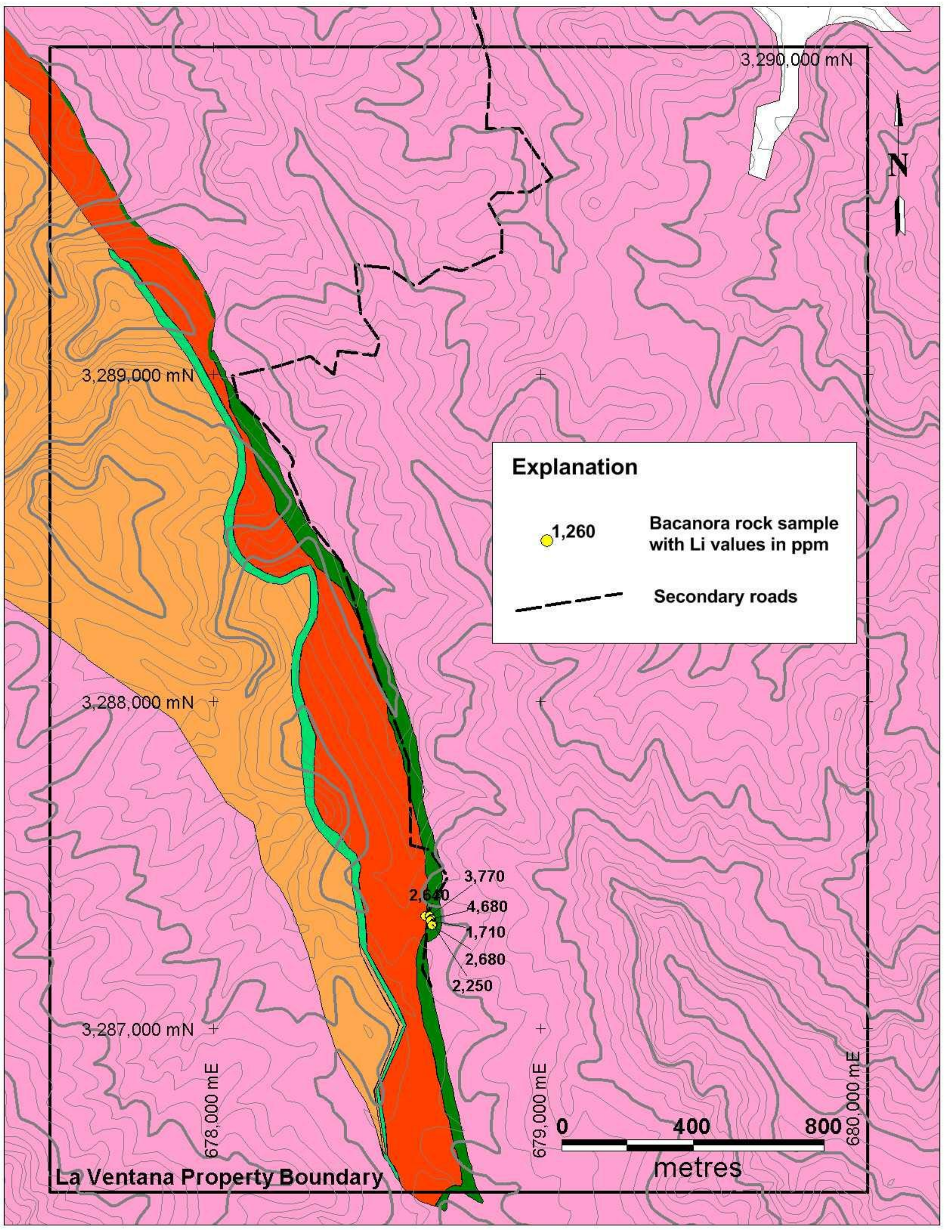

Figure 7. 2010 Rock Sample Location Plan - La Ventana Concession.

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

The results of this work demonstrated that high lithium concentrations occur in the clay unit with values for the six samples ranging 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 4 holes were drilled as an initial test of the lithium-bearing clay units located there.

Details and significant results of the 2010 drilling are found in Item 10.0: *Drilling*.

9.2 Work in 2011

In 2011, a further 8 core holes were drilled into the clay units. Details and significant results of the 2011 drilling are also found in Item 10.0: *Drilling*.

9.3 Work in 2012

In 2012, a geological mapping and rock sampling campaign was undertaken in order to better define the location and extent of both the upper and lower clay units as well as sample the two units. Results of the geological mapping are described under Item 7.2 of this report and illustrated on Figure 4. Rock sampling was conducted using the same sampling procedures as in 2010. Samples were again analyzed for lithium at ALS Chemex. Analytical results for rock samples from the lower clay unit ranged from 315 to 9,480 ppm Li (0.17% to 5.07% LCE) and averaged 2,384 ppm Li (1.27% LCE); samples from the upper clay unit range from 396 to 6,040 ppm Li (0.21% to 3.22% LCE) and average 2,918 ppm Li (1.55% LCE, Figure 8). The samples from the lower clay unit were collected at, on average, 200 metres intervals along the entire, exposed strike length of the lower clay unit on the La Ventana concession at intervals of 1.5 m. The samples from the lower clay unit are considered to be representative of this unit. Fewer surface samples were taken across exposes of the upper clay unit. However, results of analyses of these samples agree very closely with what was obtained from drill core samples from that unit.

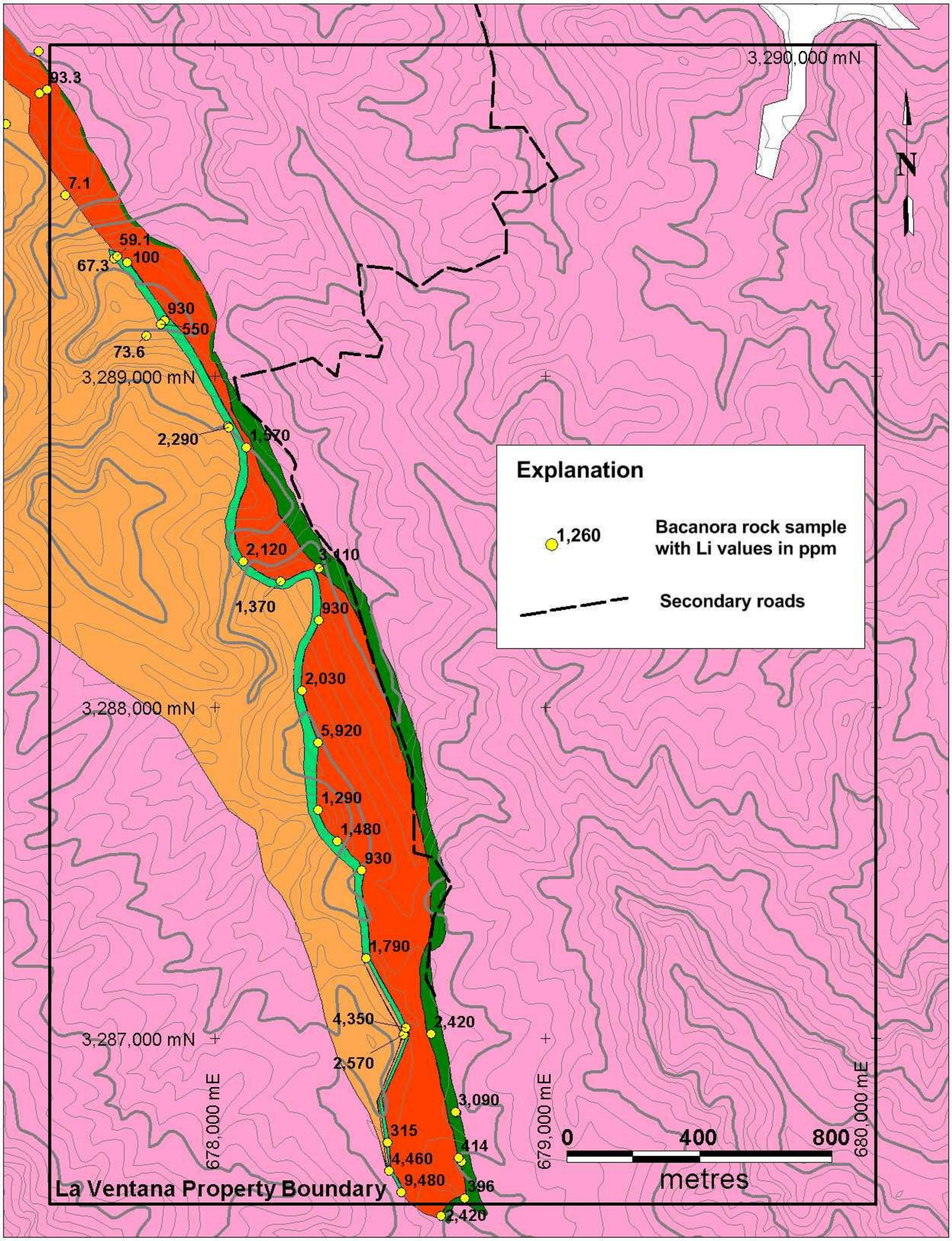

Figure 8. 2012 Rock Sample Location Plan - La Ventana Concession.

10.0 Drilling

All of the drilling conducted to date on the Project was undertaken by Perforaciones Godbe de Mexico SA de CV, a Mexican subsidiary of Godbe Drilling LLC, based in Montrose, Colorado, on behalf of MSB.

For each phase of drilling, drill core was moved from the drill sites by Bacanora personnel to a secure compound in Bacadehuachi where it was logged and split. 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, recovery-of-broken intervals and rock quality designations were measured. Drill-hole collar locations were located by hand-held GPS instrument.

The objective of the diamond drilling program was to intersect the down-dip extensions of the exposed lithium-bearing clay horizons and that objective was successfully met.

The relationship between sample length and the true thickness of the mineralization is approximately 94% of sample length, being equivalent to true thickness based on the observed average dip of 20^o for the clay units.

Drill-core recovery was very close to 100% for both the 2010 and 2011 drill programs. There are no sampling or recovery factors that could materially impact the accuracy of the results.

10.1 Drilling in 2010:

Bacanora´s first drilling campaign on the Project was conducted from May to September 2010.

A total of 458.4 m, using an NQ-core recovery diamond drilling technique, were drilled in four holes (Table 6). Drill sites were laid out in such a manner as to test a section of the lithium-bearing clays exposed at the south end of the Project with a fence of holes (Figure 9).

Table 6. La Ventana Concession - 2010 Diamond Drill-hole Locations

Hole	Easting*	Northing	Elevation (m)	Length (m)	Azimuth	Dip
LV-01	678732	3287009	898	39.93	0	-90
LV-02	678824	3287034	925	111.56	0	-90
LV-03	678890	3287000	954	153.01	0	-90
LV-04	678788	3287228	946	153.92	0	-90

* Map Datum: NAD 27, Zone 12.

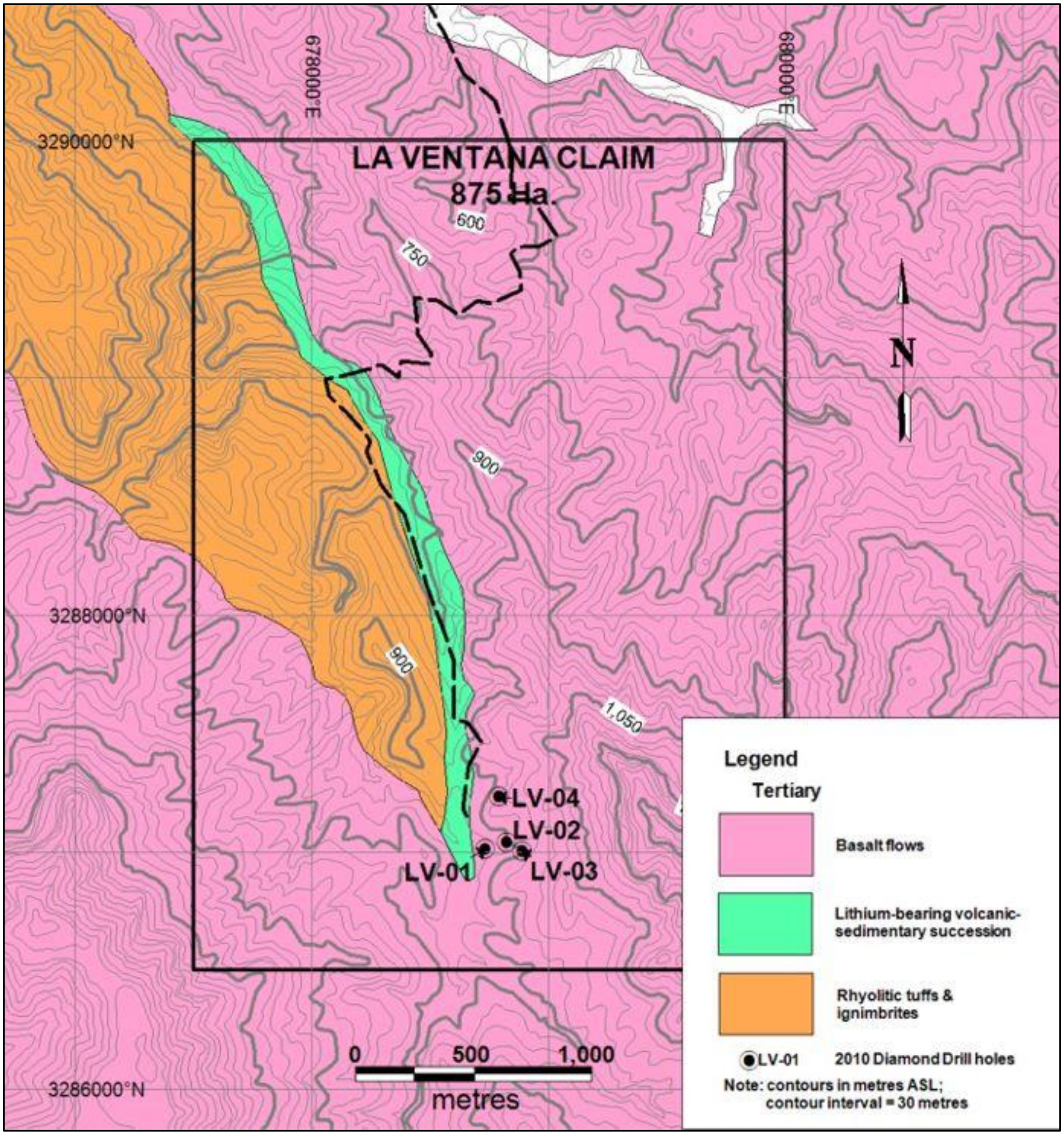

Figure 9. Location Plan of 2010 Drill Holes – La Ventana Concession.

10.2 Drilling in 2011:

A total of 1,453.6 m using an NQ-core recovery diamond drilling technique were drilled in eight holes (Table 7). Drill sites were laid out in such a manner as to test the exposed strike length of the clay horizons on the Project (Figures 10 & 11).

Significant Li intercepts for both the 2010 and 2011 programs are summarized in Table 8.

Table 7. La Ventana Concession - 2011 Diamond Drill-hole Locations

Hole	Easting	Northing	Elevation (m)	Length (m)	Azimuth	Dip
LV-05	678723	3287455	877	83.82	0	-90
LV-06	678640	3287824	833	195.07	0	-90
LV-07	678577	3288300	870	76.2	0	-90
LV-08	678414	3288515	820	239.57	0	-90
LV-09	678240	3288913	829	203	0	-90
LV-10	678073	3289160	772	218.24	0	-90
LV-11	677874	3289657	679	228.6	0	-90
LV-12	677736	3290019	659	209.09	0	-90

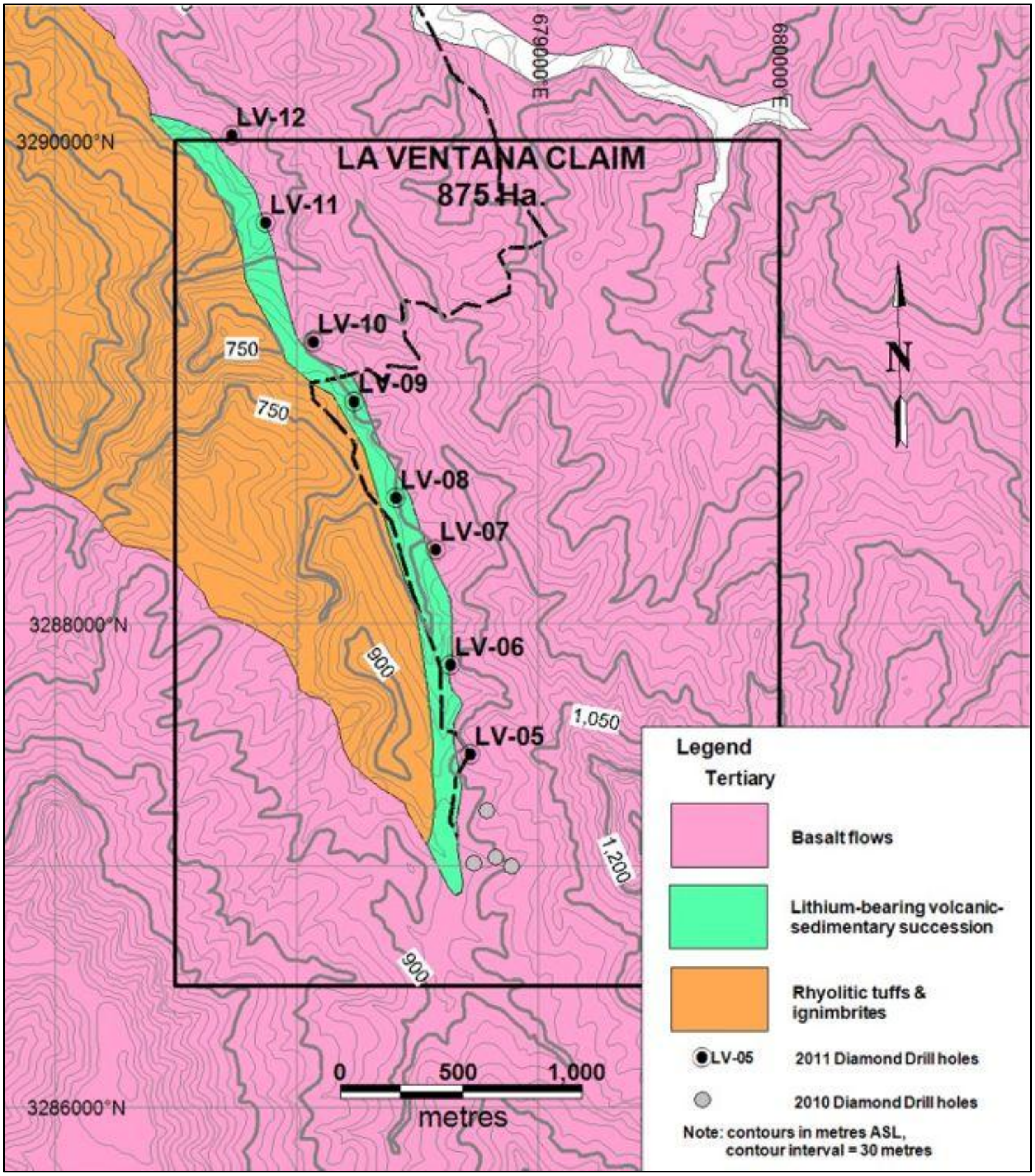

Figure 10. Location Plan of 2011 Drill Holes – La Ventana Concession.

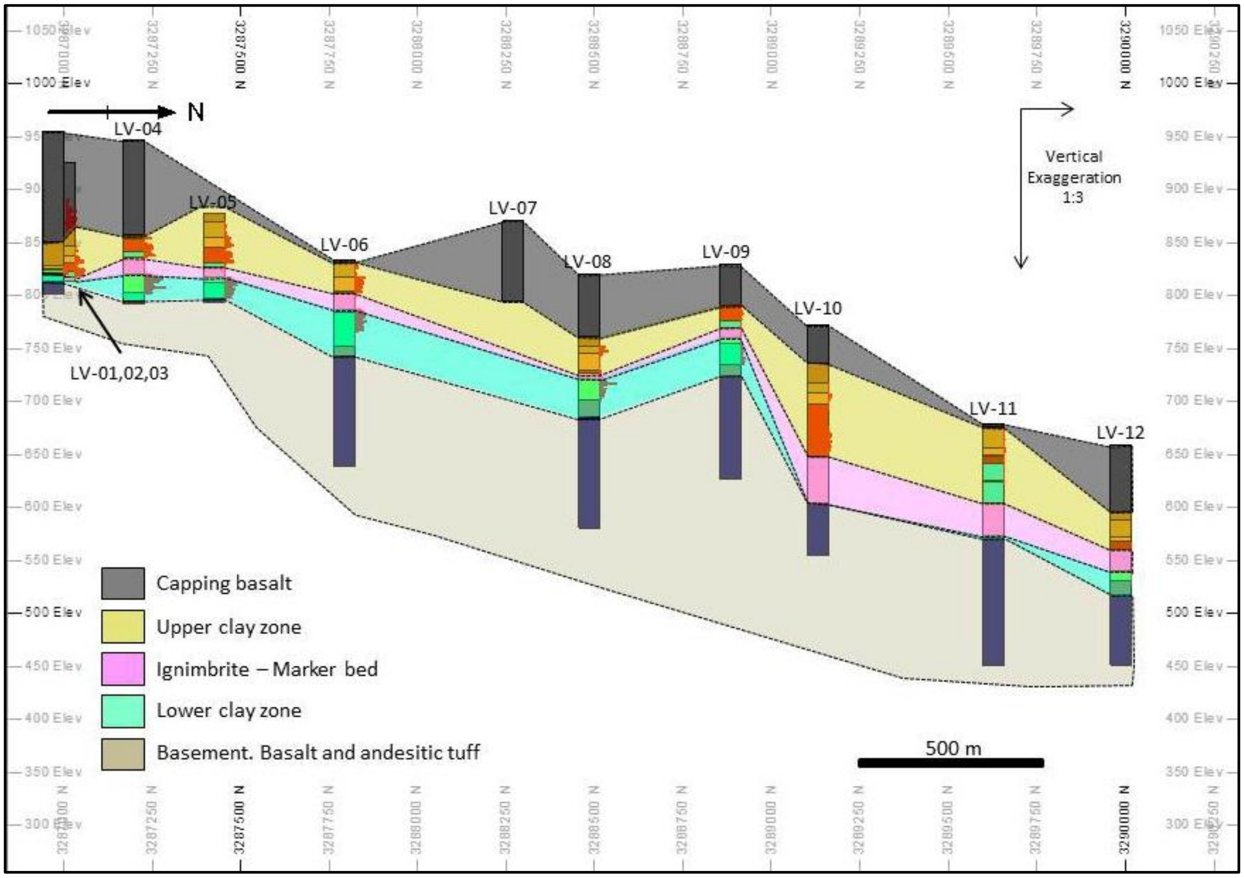

Figure 11. Geological Long Section through the 2011 Drill Holes.

Table 8. Significant Lithium Drill Intercepts - La Ventana Concession

Hole No	Unit*	From (m)	To (m)	Interval (m)	Li ppm	LCE %
LV-01	UCU	7.32	37.8	30.48	2,198	1.17
including	UCU	14.94	35.36	20.42	3,005	1.60
LV-02	UCU	78.94	110.03	31.09	1,728	0.92
including	UCU	88.57	106.98	18.41	2,573	1.37
LV-03	UCU	126.49	137.16	10.67	920	0.49
LV-04	UCU+LCU	91.44	144.17	54.25	2,667	1.42
including	UCU	96.62	110.57	13.95	3,062	1.63
including	LCU	126.49	145.69	19.2	4,940	2.63
LV-05	UCU+LCU	7.92	83.82	75.78	2,216	1.18
including	UCU	20.42	32	11.56	2,517	1.34
including	UCU	36.58	46.63	10.05	3,418	1.82
including	LCU	60.35	80.47	20.08	4,527	2.41

Table 8 continued. Significant Lithium Drill Intercepts - La Ventana Concession

Hole No	Unit*	From (m)	To (m)	Interval (m)	Li ppm	LCE %
LV-06	UCU+LCU	2.44	81.16	79.11	1,766	0.94
including	UCU	14.02	33.83	19.79	2,573	1.37
including	IGN+LCU	46.18	67.97	21.76	3,531	1.88
LV-08	UCU+LCU	67.89	119.26	51.78	1,484	0.79
including	UCU	67.89	77.11	9.2	2,179	1.16
including	LCU	97.23	116.74	19.46	2,686	1.43
LV-09	UCU+LCU	38.79	95.2	56.32	733	0.39
including	UCU	43.89	48.16	4.26	1,183	0.63
including	LCU	77.42	93.88	16.43	1,446	0.77
LV-10	UCU	55.17	123.34	51.35	695	0.37
including	UCU	101.5	118.26	16.73	1,146	0.61

*UCU = upper clay unit; LCU = lower clay unit; IGN = ignimbrite

11.0 Sample Preparation, Analyses and Security

A total of 345 samples were obtained from drill core from all of the drill holes on La Ventana. The samples were collected by splitting the core in half with a manual core splitter. One half was sent for assay and the remaining half was retained for future analysis. The samples have a standard length of 1.52 metres (5 feet), except on the geologic contacts where the length is adjusted to the contact. For the La Ventana drilling campaign, the average length of core was 1.50 m per sample and was obtained from a total of 514.48 m of core.

The samples were bagged and labeled with a sequential, unique sample identification number. Mr. Martin Vidal, Vice-President of Exploration for Bacanora, supervised the core sampling.

Factors that could materially impact the reliability and accuracy of results are: core recovery, sample size, and nature of the mineralization. Core recovery for the sampled intervals was estimated to be 100 %, based on core measurements. Therefore core recovery is not believed to be a significant factor affecting the reliability of the results in this case. Sample size (split NQ drill-core) is a factor if the mineralization is subject to nugget effects. The lithium-bearing clays are believed to be uniformly distributed throughout the sampled intervals and laterally from hole-to-hole. Consequently, sample size in this case is not considered to be a factor that would affect the reliability of the results.

The relatively undeformed and layered nature of the sedimentary rock succession that hosts the lithium mineralization, and the distinct clay-rich units which vary between 4 and 80 metres within the sediments, were the determining factors in establishing sample interval.

A list of relevant sample intervals is found in Section 10.2, Table 6.

Split drill-core samples were shipped to an ALS Chemex Laboratories sample preparation facility in Hermosillo, Mexico, for preparation. Prepared sample pulps were then shipped to ALS Chemex Laboratory in North Vancouver, Canada, 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.

Sample preparation was conducted according to the regular ALS Chemex commonly used rock, drill-core and chip-sampling procedures which consist of crushing the sample to - 5 mm sized material, splitting off 250 gm of that and pulverizing the split sample so that better than 85% passed through a 75 micron aperture screen (PREP-31).

For the first four drill holes, all core samples were analysed by inductively coupled plasma – mass spectrographic (ICP-MS) method, ME-MS41, 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, Tl, Ti, U, V, W, Y, Zn, Zr). In addition, samples were analysed for rare earth and trace elements using ICP-MS method ME-MS81.

For drill-core samples from holes LV-5 to LV-12, assays for Li were performed using a 4-acid digestion (Li-OG63). In addition, samples were analysed for rare earth and trace elements using ICP-MS method ME-MS81.

As part of an internal Quality Assurance/Quality Control ("QA/QC")protocol, an in-house prepared standard was inserted on average every 10th sample for samples from holes LV-5 to LV-12. The sample was collected from a tuffaceous clay horizon that has been used as a marker bed in the borate-bearing Tubutama basin in Sonora, Mexico, and is lithium deficient.

The standard was prepared at Laboratorio Técnico Metalurgico SA de CV ("LTM") in Hermosillo. A sample of approximately 50 kg was bulk milled to <100µm and homogenized in a single batch in a drum mixer for 24 hours. Then, 100 gram sub-samples were split from the standard and sealed in plastic bags, ready for insertion into sample batches.

Analytical ranges for the standard were determined from 3 laboratories with additional analytical data collected in other projects where the same standard was used in order to refine the precision of the standard.

In addition, duplicate analyses were performed by the laboratory as their own internal quality control.

From the QA/QC analysis it was determined that there were no issues with the analytical and assay data and it is therefore considered to be reliable.

The use of a second standard for high grade mineralization is highly recommended in further drilling campaigns, and sample repeats in other labs must be also included in order to maintain a better quality control.

In the QP's opinion, sample preparation, security and analytical procedures were adequate for this stage of exploration and comply with industry best practices.

12.0 Data Verification

The QP has reviewed the rock and drill-core sample data collected by Bacanora, checked the digital assay and analytical certificates of ALS Chemex, and checked, in the field, locations of the lithium-bearing clay sequences on the La Ventana concession, as well as at adjacent concessions. In addition, drill-hole locations and the locations of Punto de Partida (i.e. location monuments) for the La Ventana concession were checked and found to be in order.

During the course of the QP's on-site examination, five samples of the lithium-bearing clays were collected from the La Ventana concession. These samples were taken by the QP to Acme Analytical Laboratories Ltd ("Acme") in Vancouver, BC, Canada, for analysis for Li as well as rare earth elements. Acme is a member of the Bureau Veritas Group of companies and has ISO 17025-2005 accreditation primarily for gold assaying for its facility in Vancouver.

The location of the samples collected by the QP is illustrated on Figure 12. The results of the analyses for the samples from the La Ventana concession range from 2,200 ppm and 2,600 ppm Li (1.17% to 1.38% LCE) for the upper clay unit and from 1,720 ppm to 9,831 ppm Li (0.92% to 5.23% LCE) for the lower clay unit. These results are consistent with sample results obtained by Bacanora and confirm that high Li concentrations occur in the clay-bearing sediments that make up the La Ventana Lithium Deposit.

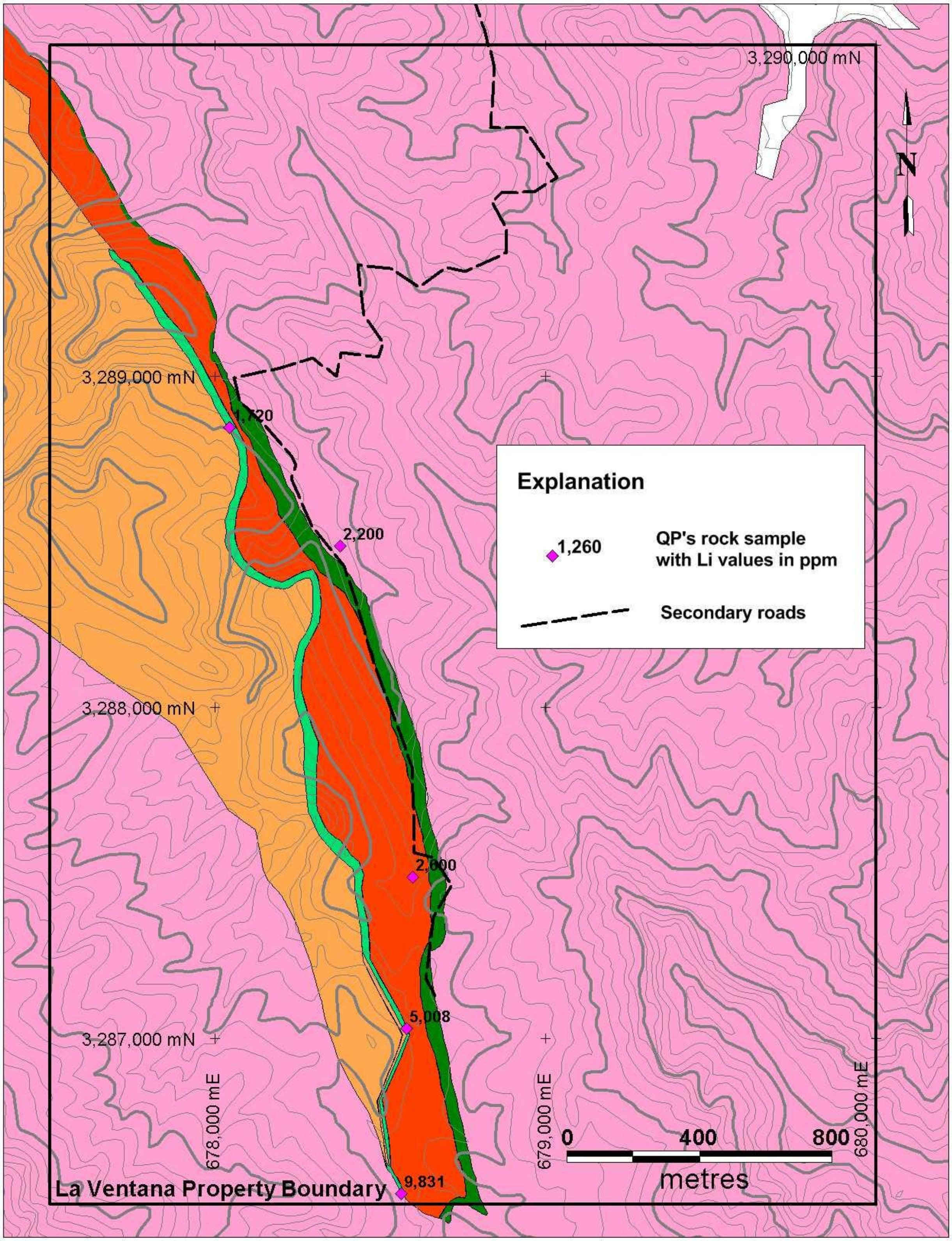

Figure 12. Location of QP's Samples - La Ventana Concession.

13.0 Mineral Processing and Metallurgical Testing

Preliminary bench-scale laboratory metallurgical test work was undertaken by Inspectorate Exploration & Mining Services Ltd. under the supervision of John Fox, P.Eng. Mr. Fox's report (Fox, 2013 as noted in Item 27.0) on this work is summarized below.

Composite samples, one for each of the upper and lower clay units were prepared from drill core samples (Tables 9 & 10). The preparation of each composite consisted of crushing and screening to -1/4 inch in order to remove lithic fragments of mainly silica or chert bands or other volcanic clasts, at LTM's facility in Hermosillo. A split drill core consisting of a total of 18 samples from 5 different drill holes were used for the composite sample for the upper clay unit. A total of 25 samples from 4 different drill holes were used for the composite for the lower clay unit. The composite samples are believed to be representative of both the upper and lower clay units. Head assays of the screened composite samples as reported by Inspectorate are also listed in Tables 8 & 9.

The upper clay composite averaged approximately 3,900 ppm Li prior to screening. The head assay for the upper clay after screening was 5,602 ppm Li indicating that the lithium content of the upper clay can be increased 1.4 times by a simple screening process.

The lower clay composite averaged approximately 5,200 ppm Li prior to screening. Average head assay for the lower clay after screening was 9,476 ppm Li indicating that the lithium content of the lower clay can be increased 1.8 times by a simple screening process.

Test work at Inspectorate was approached on 3 fronts:

1. simple dilute acid wash (sulphuric acid adjusted to pH 1.0),
2. Pugging with strong acid (sulphuric acid) and then curing under moderate temperature conditions (2 hours at 250^{o}C),
3. Full thermal treatments (i.e. roasting at 1,000^{o}C) using gypsum as the sole reagent and then a combination of gypsum and limestone as reagents, based on the flow sheet devised by the US Bureau of Mines (Crocker et al., 1988) and used by Western Lithium for treatment of hectorite-bearing clays from Nevada (Ajie et al., 2009).

Results of these tests showed that with,

1. dilute acid wash <5% Li was leached from the samples,
2. Pugging 87.7% to 89.3% Li was extracted in a 2 stage wash,
3. Gypsum roast followed by water leach, 51.7% to 64.5% Li was extracted.

Two potential flow sheets offer promise as a viable recovery method for lithium from the hectorite rich clays: the gypsum roast and strong acid pugging. Both show the potential of recovering over 80% of contained lithium values. Therefore further test work is warranted in order to optimize process flow sheets for maximum Li recovery in solution.

The recovery of purified lithium carbonate from the leach solutions has not yet been addressed by testing, but it is anticipated this will not present any particular difficulty. However both the gypsum roast and pugging are relatively expensive processes and preliminary cost estimates in the US$1000-US$2000/tonne LCE are anticipated. The tests so far are encouraging, but are preliminary tests and have only looked at conditions for putting lithium into solution.

To date there are no processing factors or deleterious elements identified that could have a significant impact on potential economic extraction.

Table 9. Drill core samples used for Upper Clay Unit Composite

Sample No.	Drill Hole	From (m)	To (m)	Thickness (m)	Li (ppm)
BM01119	LV-01-14	24.54	26.44	1.9	4290
BM01120	LV-01-15	26.44	27.74	1.3	4730
BM01121	LV-01-16	27.74	29.13	1.39	3100
BM01122	LV-01-17	29.13	30.78	1.65	3330
BM01123	LV-01-18	30.78	32.31	1.53	2250
BM01124	LV-01-19	32.31	33.53	1.22	3070
BM01125	LV-01-20	33.53	34.57	1.04	5160
BM01144	LV-02-16	99.97	101.19	1.22	4090
BM01145	LV-02-17	101.19	102.64	1.45	4400
BM01146	LV-02-18	102.64	103.94	1.3	3820
BM01163	LV-04-5	98.27	99.67	1.4	3710
BM01164	LV-04-6	99.67	101.19	1.52	4490
BM01165	LV-04-7	101.19	103.02	1.83	3930
BM02312	LV-05-12	22.66	24.38	1.73	3020
BM02316	LV-05-16	28.96	30.48	1.52	4240
BM02328	LV-05-27	45.42	46.63	1.22	4480
BM02363	LV-06-10	15.85	17.37	1.52	4580
BM02367	LV-06-13	20.42	22.25	1.83	4140
				Average	3935
			Head Assay		5602

Table 10. Drill core samples used for Lower Clay Unit Composite

Sample No.	Drill Hole	From (m)	To (m)	Thickness (m)	Li (ppm)
BM01182	LV-04-24	126.49	128.4	1.91	3600
BM01183	LV-04-25	128.4	129.74	1.34	4440
BM01184	LV-04-26	129.74	131.06	1.32	8920
BM01185	LV-04-27	131.06	132.59	1.53	5560
BM01186	LV-04-28	132.59	134.11	1.52	7040
BM01188	LV-04-30	135.64	137.16	1.52	4120
BM01189	LV-04-31	137.16	138.68	1.52	4890
BM01190	LV-04-32	138.68	139.9	1.22	10000
BM01191	LV-04-33	139.9	141.43	1.53	4030
BM02339	LV-05-37	61.87	63.70	1.83	4350
BM02340	LV-05-38	63.70	65.53	1.83	7990
BM02341	LV-05-39	65.53	67.06	1.52	5380
BM02342	LV-05-40	67.06	68.58	1.52	6190
BM02345	LV-05-42	70.10	71.63	1.52	4950
BM02346	LV-05-43	71.63	73.15	1.52	4480
BM02347	LV-05-44	73.15	74.68	1.52	3290
BM02348	LV-05-45	74.68	76.20	1.52	4200
BM02386	LV-06-31	47.85	49.55	1.70	3980
BM02388	LV-06-32	49.55	51.21	1.65	4960
BM02389	LV-06-33	51.21	52.73	1.52	3930
BM02390	LV-06-34	52.73	53.95	1.22	4880
BM02393	LV-06-37	57.00	58.52	1.52	5210
BM02399	LV-06-42	64.62	66.14	1.52	4070
BM02437	LV-08-25	103.02	104.55	1.52	7870
BM02438	LV-08-26	104.55	106.07	1.52	3730
				Average	5282
			Head assay		9476

14.0 Mineral Resource Estimates

A preliminarily resource estimate, using a polygonal method, was undertaken for the area drilled on La Ventana. Grade and thickness continuity were assumed in an area of influence around each drill such that: in the north-south direction the influence area is half of the distance between holes; and in the east-west direction a distance from outcrop and extending down dip for 300 metres was used. A specific gravity of 2.1 tonnes per cubic metre for the clay units was assumed for the estimate of tonnage. A cut-off of 2,000 ppm Li, or 1% LCE, was also used.

The lithium-bearing clays occur in two discreet units separated by an ignimbrite sheet: an upper clay unit, and a lower clay unit.

An inferred resource, based on diamond drilling, was estimated for each of the lithium-bearing units and is found in Table 11. This estimate was disclosed in late 2012 (Verley et al.). The resource estimate was made in compliance with *CIM Definition Standards on Mineral Resources and Mineral Reserves* (2004). Readers are cautioned that the use of lithium carbonate equivalent (LCE) in reporting resources assumes that all lithium can be recovered from the clays and converted to lithium carbonate with no recovery or processing losses. The inferred resource for the upper clay unit is estimated to be 22,642,000 tonnes averaging 2,450 ppm Li (1.3% LCE), and for the lower clay unit the inferred resource is 20,682,000 tonnes averaging 3,750 ppm Li (2.1% LCE), giving total inferred resources of 43,324,000 tonnes averaging 3,005 ppm Li (1.6% LCE). A plan view illustrating the area of the polygons used in the estimate is found in Figure 13.

Recent geological mapping and surface sampling of the lower clay unit has demonstrated a further Li resource potential, up-dip, as indicated by the 2.4 km long area marked out with left sloping hatches in Figure 16. A total of 19 surface samples collected at approximately 200 m intervals along the outcropping lower clay unit range from 315 to 9,480 ppm Li (0.17% to 5.05% LCE) and average 2,557 ppm Li (1.36% LCE). Based on the surface sample results, the area underlain by the up-dip portion of the lower clay unit, an assumed average thickness of 20 metres and a specific gravity of 2.1 tonnes/m^3 a new inferred resource, that is in addition to resources previously reported for the clay units is estimated for the up-dip portion of the lower clay unit. Readers are cautioned that mineral resources are not mineral reserves as they do not have demonstrated economic viability. The new inferred resource for the up-dip portion of the lower clay is 16.8 million tonnes averaging 2,557 ppm Li (1.3% LCE). The new resource combined with the prior estimated resource brings the total inferred Li resource for the Project to 60 million tonnes averaging 3,000 ppm Li (1.6% LCE or 930,000 tonnes LCE).

Table 11. Inferred Resource Estimate - La Ventana Concession.

Hole No.	From (m)	To (m)	Interval (m)	Li ppm	LCE %	Polygon area (m^2)	Volume (m^3)	Tonnes	Tonnes LCE
Upper Clay Unit – based on diamond drilling									
LV-01	24.74	34.57	9.83	3,704	1.97	27,652	271,819	570,820	11,245
LV-02	99.97	106.98	7.01	3,722	1.98	14,905	104,484	219,417	4,344
LV-04	98.27	109.12	10.85	3,562	1.89	67,797	735,597	1,544,755	29,196
LV-05	21.64	32.00	10.36	2,697	1.44	90,591	938,523	1,970,898	28,381
LV-05	36.58	46.63	10.06	3,418	1.82	90,591	911,345	1,913,825	34,832
LV-06	15.85	30.78	14.94	3,120	1.66	182,452	2,725,833	5,724,249	95,023
LV-08	67.89	74.07	6.17	2,676	1.43	180,350	1,112,760	2,336,795	33,416
LV-09	77.42	93.98	16.46	1,443	0.77	96,176	1,583,057	3,324,420	25,598
LV-10	101.50	118.26	16.76	1,148	0.61	143,124	2,398,758	5,037,392	30,728
		average	**11.38**	**2,632**	**1.3**		**Total**	**22,642,000**	**292,000**
Lower Clay Unit – based on diamond drilling									
LV-04	126.49	145.69	19.20	4,940	2.63	67,797	1,301,702	2,733,575	74,080
LV-05	60.35	80.47	20.12	4,520	2.41	90,591	1,822,691	3,827,651	92,246
LV-06	46.18	67.97	21.79	3,538	1.89	182,452	3,975,629	8,348,821	157,793
LV-08	98.45	113.69	15.24	3,131	1.67	180,350	2,748,534	5,771,921	96,391
		average	**19.08**	**4,103**	**2.0**		**Total**	**20,682,000**	**420,000**
New Resource: Lower Clay Unit – up-dip portion, based on surface sampling									
		average	**20**	**2,557**	**1.3**	**400,700**	**8,014,000**	**16,829,000**	**218,000**
Combined Total for Upper and Lower Clay Units									
			average	**3,000**	**1.6**			**60,153,000**	**930,000**

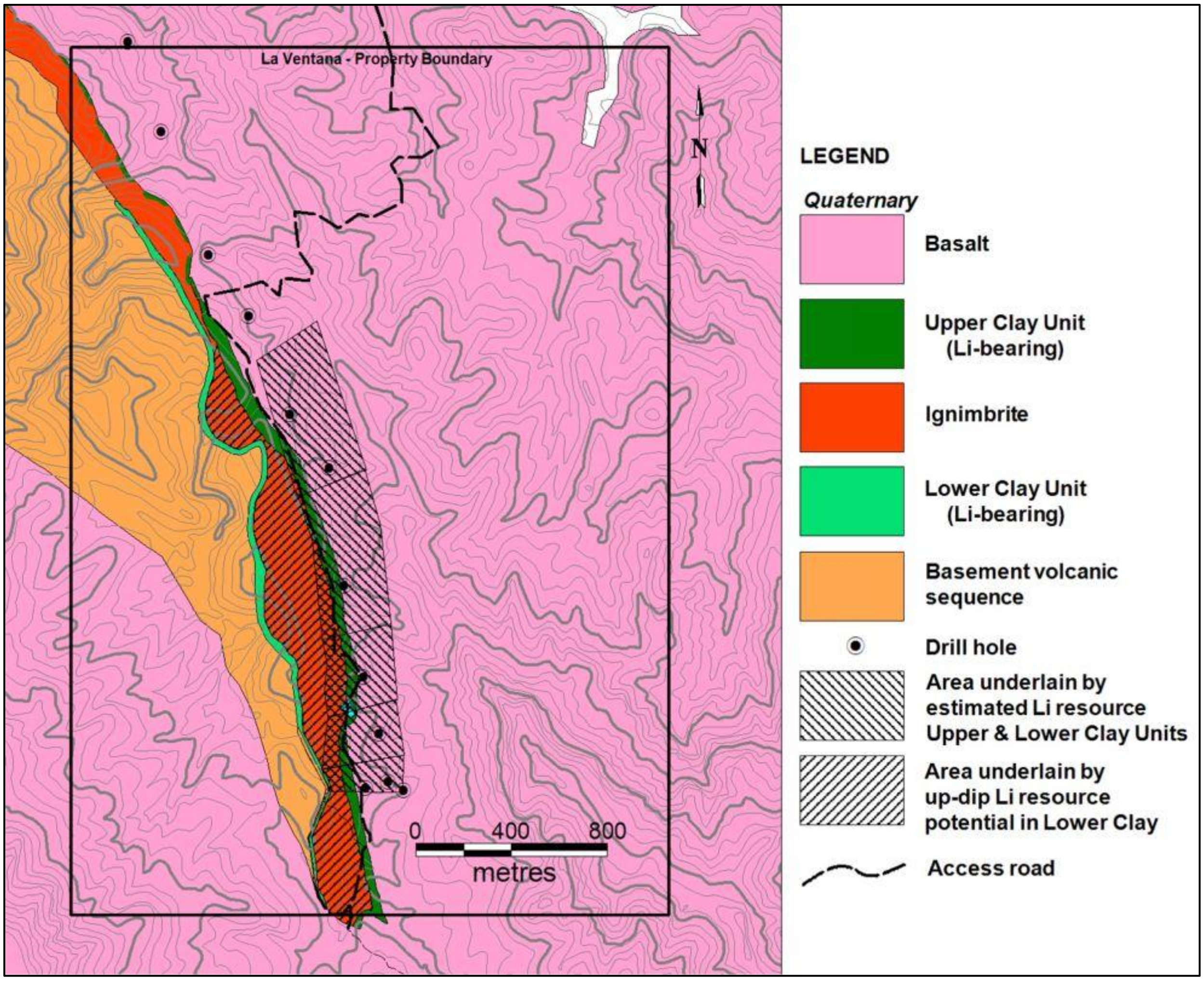

Figure 13. Plan of Polygons used in La Ventana Inferred Resource Estimate

The estimated mineral resources are not subject to any environmental, permitting, legal, title, taxation, socio-economic, marketing, and political or other factors that could impact on their successful economic development as far as can be determined at this time. Permitting, socio-economic, marketing and political issues may change in the future consequently it is difficult to ascertain what these changes could be and what their impact on the future development of the project might be.

15.0 Mineral Reserve Estimates

There are no mineral reserve estimates for the Sonora Lithium Project.

16.0 Mining Methods

The proposed mining method for the La Ventana lithium deposit is by open pit methods, for near surface gently dipping clay units. Down dip extensions of the clay units may be developed by underground block caving methods in the later years of a proposed mining scenario. Life of mine for open pit operations is estimated at 20 years at an average mining rate of 11.3 million tonnes per year for run-of-mine material (ROM) and waste. Mining all of the clay units will proceed to a maximum depth of approximately 120 m in 3 metre high benches. The area covered by the entire project is about 2,300 by 400 metres (92 ha). Mine dilution factor is 15% with the stripping ratio increasing by 0.3 per year. This preliminary economic assessment is based only on the open pit mining scenario.

Mining is envisaged to be conducted by contractors using conventional open pit mining methods utilizing standard mining equipment. Lithium bearing clay units will be mined in blocks exposed during mining along benches designed for that purpose. Mine blocks in the benches will be blasted with explosives to break up the lithium-bearing clay units such that the ROM can be easily excavated and loaded into trucks for transport to an on-site concentration facility consisting of a trommel and screening plant designed to remove lithic fragments from ROM. Resulting clay concentrate will then be trucked to a processing plant for extraction of lithium from the clays and recovery of marketable lithium compounds.

The mining operation is proposed to begin with the mining of the lower clay unit then shift to the upper clay unit.

Equipment anticipated to be used in mining of the clays will consist of the items listed in Table 12. Mining equipment is standard operating gear for medium size mining operations and does not requiring special orders from manufacturers.

Table 12. Anticipated Mining Equipment

Quantity	Item
3	Caterpillar D9 bulldozers
2	Caterpillar 938 H loaders
6	60 tonne haul trucks (77G)
2	Caterpillar 450E Excavator
1	Track-mounted blast hole drill, Cat MD 50-50
1	Caterpillar 140M grader
2	Water tank truck

17.0 Recovery Methods

Clay concentrate from the mine concentrator will be processed such that lithium will be put into solution. The lithium-bearing solution will then be treated to precipitate lithium carbonate or other lithium compounds.

The exact details of the clay-to-lithium solution process are still under investigation. Preliminary metallurgical test work suggests that there are at least 2 possible process routes:

1. Roasting of a gypsum(±limestone)-clay feed, followed by washing to produce the Li-bearing solution or,
2. Forming a clay-acid pug; followed by heat treatment, then washing of that material to yield a Li-bearing solution

The roasting method has been well studied and documented by the US Bureau of Mines (Crocker, op. cit.). Further work to optimize the process for treating material from the Project is required.

The method of pugging has achieved the best extraction rates for putting Li into solution for the Project composite samples tested.

From the preliminary test work it is estimated that costs for either the roasting or pugging will range from approximately $US1,000 to $2,000 per tonne of lithium carbonate produced. For the preliminary economic assessment only the pugging method was used.

Test work so far has only investigated dissolution of lithium from the clays. Once in solution it is believed that the recovery lithium carbonate can be achieved by standard industry procedures such as are currently used in the recovery of lithium carbonate from brine solutions. However, the next phase of metallurgical test work should include testing to produce a marketable lithium carbonate in order to estimate, in detail, costs for this part of the process as well as to investigate the possibility of producing samples for evaluation by end users.

18.0 Project Infrastructure

The infrastructure in the region consists of the following:

1. A high tension power-line crosses within 1 km of the northern portion of the Project,
2. Paved all season highway is located 10 km north of the deposit, passing through the town of Bacadehauchi.
3. Rail sidings are located at the town of Nacozari 100 km to the northwest of the Project.
4. Natural gas pipeline goes through the town of Nacozari and may provide a possible location for a processing plant.

Process water is available from the Bavispe river. Alternatively, wells could be drilled onsite for process water.

There is an adequate labour pool in the area that can support new mining projects.

The proposed mine plan envisages waste dumps to be located immediately to the west of the open pit. There is adequate level ground in this area to safely store mine waste. The concentrating plant will also be located immediately to the west of the open pit. There is adequate level ground in this area to safely impound process tailings.

Contracts for mining, plant construction, labour, material, power, transportation and water procurement have not been negotiated yet.

19.0 Market Studies and Contracts

According to studies by Roskill Information Services (2009), the production of lithium ion batteries has grown by 20% per year from 2000 to 2009, overtaking nickel cadmium type batteries in the market. Demand for lithium compounds, such as lithium carbonate or lithium hydroxide, from the lithium ion battery industry is forecasted to grow at a rate of 30% per year between 2010 and 2020 driven by electric vehicles, electric bicycles and grid storage increasing to 42,000 tonnes in 2020 (Roskill op cit.). In addition, the market for lithium compounds from all applications is expected to grow to in excess of 100,000 tonnes by 2020 (Roskill op cit). The price of battery grade lithium compounds in 2010 and 2011 ranged from US $5,500 - $8,000/tn. During 2012, the price increased to US $8,500/tn and Roskill has projected prices to stabilize in 2013 around US $6,000/tn, increasing to US $7,250/tn by 2020.

The QP has reviewed the available information that the Company has concerning potential markets and pricing and is of the opinion that these support the assumptions in this report and warrant further detailed studies to confirm the feasibility of the proposed project.

Bacanora has not entered into any material commercial agreements with suppliers or purchasers of lithium products.

20.0 Environmental Studies, Permitting and Social or Community Impact

Bacanora has not conducted any environmental studies or contracted such work to be undertaken on the Project area as of the effective date of this report. There are no known environmental liabilities or issues in the Project area that could materially impact Bacanora's ability to further develop the mineral resources identified to date. The Project area does not lie within any known protected area. All permissions and applications required in accordance with the exploration process are being performed in accordance with the applicable Mexican Official Standards (Normas Oficiales Mexicanas). No other permits are required at this stage of exploration.

If the Project advances to the development stage the Company will require several Federal and State permits including:

1. The Preventative Notice (Informe Preventivo);
2. The Environmental Impact Assessment (Manifestación de Impacto Ambiental);
3. The Risk Study (Estudio de Riesgo);
4. 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);
5. A PPA (Accident Prevention Program),
6. An Explosive use permit (Secretaría de la Defensa Nacional);
7. A water use permit (Comisión Nacional del Agua);
8. An archaeological land „liberation", based on authorization by the Instituto Nacional de, Antropología e Historia and;

9. A notice to the state and municipal authorities (i.e., local construction permits, land use change, etc.).

Detailed plans for waste and tailings disposal, site monitoring and water management during both operations and post mine closure have not been defined by Bacanora at the present time.

Bacanora proposes to maintain a constant monitoring of the areas in and around the Project site that might generate and/or develop any environmental risk. A mine closure plan (remediation and reclamation) is being developed for implementation during the last two years of the projected mine life. The estimated cost of mine closure is $US5 million. Mine closure will essentially consist of slope stabilization, re-contouring and seeding waste piles, stabilizing and monitoring tailings disposal sites, as well as removal of mine and plant buildings and infrastructure.

In order to maintain good community relationships, most of the labour contracted will be local. Health, safety, environmental and community training programs will be implemented before, during and after the project development.

21.0 Capital and Operating Costs

Key assumptions used to estimate operating and capital costs are tabulated below. These are designed around mine and processing plant with capabilities to deliver 35,000 tonnes of lithium carbonate per year. In this analysis the processing method used is acid pugging of the clays followed by a washing to recover lithium in solution from which lithium carbonate is then precipitated. It is believed that this method may in fact be a higher cost process method. Investigations are ongoing into gypsum roast methods and their costs. Plant efficiency for processing to recover Li form clays and convert it into Li_2CO_3 is estimated at 90%. Mining assumes a waste to ore strip ratio of 0.3 that increases by 0.3 each year. ROM will be concentrated in Bacadehuachi; the concentrate will then be trucked to a processing plant in Hermosillo for processing and conversion into lithium carbonate.

Table 13. Key Operating Cost Assumptions

ITEM	ASSUMPTION	$US Cost/tonne of Li_2CO_3
Electricity	1,000 kwh are need to produce 1 tonne of Li_2CO_3 at a base cost of $US0.12/kwh	148.58
Natural gas	250 m^3 are needed to produce 1 ton of Li_2CO_3	59.52
Water	35K tons of water to produce 35K tons of Li_2CO_3	0.96
Fuel	1,000 tons of diesel to produce 35K tons of Li_2CO_3	22.86
Labor	85 employees (including management)	54.56
Mining @ $US2.50/tn	ROM at 2,735,000 tonnes/year	807.80
Shipping/storage	FOB to Guaymas	125.03
Sulphuric acid	For pugging	678.57
Other reagents	pH controllers	57.14
Surface rights	Access and holding taxes	2.86
Transportation	to Hermosillo	125.03
Total		**$US1,957.88**

Capital requirements to build the mine and processing plant as well as supply sustaining capital and funding for mine closure are estimated at US$114 million (Table 14). Of this amount US$46 million is required to build and support the mine, US$57 million to build and support the processing plant, US$ 1 million for feasibility studies, US$5 million for working capital and US$5 million for closing.

Table 14. Development Capital Requirements

Capital Costs - La Ventana Li Deposit	
Mine	US$
Equipment/Contracted	35,000,000
Infrastructure	10,000,000
Support	1,000,000
Processing plant	
Washing/Roasting Plant	50,000,000
Infrastructure	5,000,000
Support	2,000,000
Feasibility study	1,000,000
Working capital	5,000,000
Closing	5,000,000
Total	**$US114,000,000**

Mining cost is estimated at US$2.50 per tonne of material (lithium-bearing clays and waste) with an average of 14.7 million tonnes of material mined per year. Processing costs are estimated at US$1,139 per tonne of product. Table 15 summarizes the operating costs for mining and processing.

Table 15. Estimated Average Annual Mining and Processing Costs

Operating Costs/year		
Plant	US$/tonne Li_2CO_3	US$/year
Water	0.96	33,600
Electricity	148.58	5,200,440
Natural gas	59.52	2,083,200
Storage/Shipping	125.03	4,376,000
Other reagents	57.14	2,000,000
Sulphuric acid	678.57	23,750,000
Fuel	22.86	800,000
Labour		1,145,664
Subtotal	**1,139**	**39,388,904**
Mine		
ROM@ US$2.50/tonne		6,837,500
Waste@ US$2.50/tonne		21,435,562
Labour		572,832
Subtotal	**824**	**28,845,894**
Administration		
Salary & wages		190,944
Surface rights	2.86	100,000
Subtotal	**8**	**290,944**
Total	**$US1,958**	**$US68,525,742**

22.0 Economic Analysis

Based on the disclosed inferred resources and the initial metallurgical test work a preliminary economic assessment has been undertaken for the Project. The preliminary assessment is preliminary in nature as it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary assessment will be realized. In order to make the preliminary economic assessment the Qualified Person has used forward looking information including, but not limited to assumptions concerning lithium commodity prices, cash flow forecasts, project capital and operating costs, commodity recoveries, mine life and production rates. Readers are cautioned that actual results, should they be realized, may vary from those presented. Further testing will be needed to be undertaken to confirm economic feasibility of the La Ventana Lithium Deposit. There have been no prior pre-feasibility or feasibility studies undertaken for the Project.

Preliminary economic analysis of the project is based on an annual production rate of 35,000 tonnes of lithium carbonate, with a mine life of 20 years and run-of-mine feed to the processing plant averaging 0.3% Li. The project is subjected to an annual royalty of 3% of net profits and a government taxation rate of 34%.

Potential project cash flows, net present values at various discount rates and internal rate of return are listed in Table 16 for the life of the project and based on lithium carbonate prices of $US5,000 and $US7,000 per tonne. The net cash flow ranges from $US1,309 million to $US2,190 million; net present values ranges from $US631 million to $US1,064 million at an 8% discount rate; internal rate of return for the project ranges from 106% to 170%. Project pay-back time is estimated at 1.9 to 3.6 years depending on product prices.

Table 16. Cash Flow and Net Present Value Analysis Projected Over Life of Mine

Lithium Carbonate Price Senario		$US5,000/tn	$US6,000/tn	$US7,000/tn
Cashflow Summary		US$ million	US$ million	US$ million
Revenue		3,500	4,200	4,900
Operating Costs		1,370	1,371	1,371
Royalty		105	126	147
Capital Costs		114	114	114
Taxation		601	839	1,077
Net Cash flow		1,309	1,750	2,190
Net Present Value	Discount rate	NPV US$ Million	NPV US$ Million	NPV US$ Million
	10%	542	730	917
	9%	584	785	987
	8%	**631**	**848**	**1,064**
	7%	684	917	1,150
Internal Rate of Return		106%	138%	170%
Cost Cover Ratio		2.55	3.06	3.57
		39%	33%	28%

23.0 Adjacent Properties

Bacanora has a 100% interest in three concessions contiguous with the Project as previously illustrated in Figure 2. Initial reconnaissance mapping and sampling of these concessions has located additional exposures of lithium-bearing clay units.

23.1 El Sauz

The QP has examined and sampled clay units on the El Sauz concession in December 2012. Clay samples were found to range from 766 ppm to 7,236 ppm Li (0.41% to 3.85% LCE) and a 4.5 m interval averaged 5,537 ppm Li (2.95% LCE, Figure 14). Sampling at El Sauz by Bacanora in 2011 produced a range of results with 39 samples analyzing greater than 1,000 ppm Li (Verley et al., op. cit.)

Figure 14. El Sauz concession Li-bearing clay unit

23.2 Buenavista

The Buenavista concession is another property owned by Bacanora. It is located to the northwest of the Project and immediately east of the towns of Granados and Huasabas, and is reached by a similar secondary road system as the other concessions. Reconnaissance mapping and sampling by Bacanora has located clay units on this property that dip gently to the east. Samples collected by the QP in June 2012 on this property analysed 300 and 600 ppm Li (Verley et al., op.cit.)

24.0 Other Relevant Data and Information

There is no other relevant data or information concerning the La Ventana Lithium Project.

25.0 Interpretation and Conclusions

The La Ventana Lithium Deposit contains a significant lithium resource. Readers are cautioned that mineral resources are not mineral reserves as they do not have demonstrated economic viability.

Drill results were used to estimate previously disclosed inferred resources for the upper clay unit of 22,642,000 tonnes averaging 2,632 ppm Li (1.3% LCE), and 20,682,000 tonnes averaging 4,103 ppm Li (2.0% LCE) for the lower clay unit.

Surface sampling and geology allowed for estimation of further new inferred resources of 16,829,000 tonnes averaging 2,557 ppm Li (1.3% LCE) for an up-dip portion of the lower clay unit. Readers are cautioned that mineral resources are not mineral reserves as they do not have demonstrated economic viability.

The total inferred resources for the combined clay units are approximately 60 million tonnes averaging 3,000 ppm Li (1.6% LCE for 930,000 tn LCE).

Based on the disclosed inferred resources and the initial metallurgical test work it is concluded that the preliminary economic assessment for the Project is positive. The preliminary assessment is preliminary in nature as it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary assessment will be realized. In order to make the preliminary economic assessment the Qualified Person has used forward looking information including, but not limited to assumptions concerning lithium commodity prices, cash flow forecasts, project capital and operating costs, commodity recoveries, mine life and production rates. Readers are cautioned that actual results, should they be realized, may vary from those presented. Further testing will be needed to be undertaken to confirm economic feasibility of the La Ventana Lithium Deposit. There have been no prior pre-feasibility or feasibility studies undertaken for the Project.

The preliminary economic analysis indicates that the Project could have a favorable internal rate of return in the order of 106% to 170% based on a production operation with an output of 35,000 tonnes battery grade lithium carbonate per annum over a 20 year open pit mine life.

Results of the exploration and preliminary economic analysis are sufficiently encouraging as to warrant advancing the Project through pre-feasibility/feasibility work.

On the La Ventana concession, the clays are situated in two units that dip gently to the east and crop out over a strike length of 3.5 km.

A total of 12 diamond drill holes tested La Ventana in 2010 and 2011. Significant drill-intercept results from these holes ranged from a low in the upper clay unit (hole LV-10) of 695 ppm Li over 51.33 m, to a high (hole LV-04) in the lower clay unit of 4,940 ppm Li over 19.2 m.

The estimated resources for the upper and lower clay units on La Ventana are classified as Inferred, based on the spacing of the available data and the level of confidence on the geological continuity of the mineralization, the confidence on the sampling techniques and assaying procedures.

The data density, while widely spaced, is adequate for this stage of exploration. Based on the QP's examination of the data, it is his opinion that it is reliable and meets or exceeds industry standards for such data.

In the QP's opinion, the work conducted by Bacanora on the Project met the original objective of estimating a preliminary inferred lithium resource and providing data and information sufficient for a preliminary economic analysis.

26.0 Recommendations

Further work on the Project should consist of:

1. Acquiring high quality topographic control, preferably through airborne LIDAR survey of the concession areas;
2. Detailed geological mapping to define the survey extents of the favorable lithium-bearing clay units on all of the concessions;
3. Acquisition of large surface samples of both the upper and lower clay units from La Ventana for comprehensive mineral processing and metallurgical test work;
4. Additional drill testing of La Ventana in order to expand and upgrade the Li resources.

The estimated cost of the recommended program is in the order of $US2,000,000.

A detailed breakdown of the recommended program costs are found in Table 17 below.

Contingent upon the success of the recommended program, additional work will be required to further evaluate the Project concessions. At this juncture, it would be premature to propose a second phase program or budget prior to an assessment of the results of the above recommended program.

Table 17. Estimated Cost of Recommended Exploration Program

Expense Category	Days	/units	Budgeted Cost
WAGES & SALARIES			
Consultant, QP	20	days	$16,000
Project Manager	180	days	$90,000
Project Geologist	180	days	$72,000
Field technicians, 2	180	days	$36,000
Local labor	100	days	$5,000
FIELD EXPENSE:			
Field supplies, consumables			$40,000
Lodging			$50,000
Water			$15,000
TECHNICAL SERVICES/			
SUBCONTRACTORS			
Assay & analysis, incl standards	4500	samples	$112,500
Diamond Drilling			
Mob/demob			$10,000
Moves			$58,000
10,000 meters of NQWL			$800,000
Core boxes & mud, fuel			$80,000
Bulldozer & water truck rental			$40,000
Excavator trenching & bulk sampling			$28,500
Metallurgical testing			$500,000
Surveying (LIDAR and ground control)			$47,000
TOTAL			**$2,000,000**

27.0 References

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