



24<sup>th</sup> May 2017

## High-Grade Surface Lithium Results at Zacatecas Brine Project

- ◆ Highly anomalous results up to 1046ppm lithium from new surface sediment samples over an area 4 km by 2 km taken on salt pans in the Zacatecas Lithium Project in central Mexico;
- ◆ Results are from systematic, infill, surface geochemical sampling completed on all three Mexican lithium projects at Zacatecas (ASX Release 1<sup>st</sup> May 2017);
- ◆ The work was funded under the previously announced (ASX Release 7<sup>th</sup> March 2017) US\$5 million farm-in deal with a private company controlled by prominent UK investor Jim Mellon (Bradda Head Ltd);
- ◆ Zenith previously advised (17<sup>th</sup> January 2017) that lithium brines grading up to 2.1% lithium have been reported in regional water and surface sediment sampling by the Mexican Federal Government from solar evaporation ponds for salt production on an adjacent salt lake (10km west of the Zacatecas Lithium Project).
- ◆ These regional water results confirm lithium enriched source brines are present in the district, as well as demonstrating that concentration of lithium by traditional solar evaporation methods is possible: Four water samples returned 1.2%, 1.4%, 1.4% and 2.1% lithium, these very high-grade lithium brines are similar to post-concentration brine feedstock to lithium brine production facilities;
- ◆ First phase geophysical surveys using the passive seismic technique confirmed initial interpretation of a sedimentary basin beneath the surface salt lakes;
- ◆ Ground based electrical geophysical surveys are planned to commence shortly prior to drill testing later in 2017.

### Corporate Details

#### ASX: ZNC

Issued Shares (ZNC)	189 M
Listed options (ZNCO)	24 M
Unlisted options	3.5M
Mkt. Cap. (\$0.10)	A\$19 M
Cash	A\$2.2 M
Debt	Nil

### Directors

**Michael Clifford:**  
Managing Director

**Mike Joyce:**  
Non Exec Chairman

**Stan Macdonald:**  
Non Exec Director

**Julian Goldsworthy:**  
Non Exec Director

### Major Shareholders

HSBC Custody, Nom.	6.6%
City Corp Nom	6.2%
Nada Granich	6.1%
Abingdon	4.1%
Miquilini	4.1%

## New Results

Zenith Minerals Limited ("Zenith" or "the Company") is pleased to advise that results of the field programs in Mexico funded by Bradda Head have returned highly encouraging surface results up to 1046ppm lithium from new surface sediment samples taken on salt pans in the Zacatecas Lithium Project in central Mexico (Figure 1). The samples were collected as part of a systematic surface sampling program designed to assess lithium levels in sediments up to 1.0 metre below the surface of the salt pans. The program has outlined a large 4km by 2km strong lithium anomaly (values greater than 300ppm lithium) on the San Juan concession (Figure 2).

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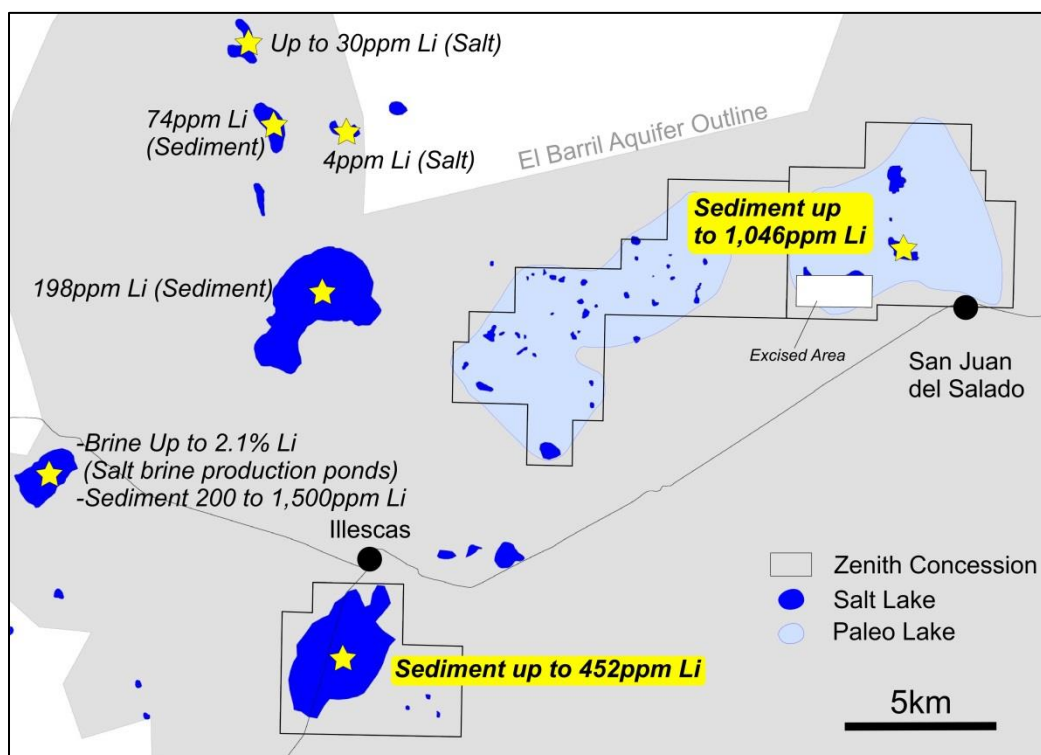


Figure 1: Zacatecas Lithium Brine Project – Location Map

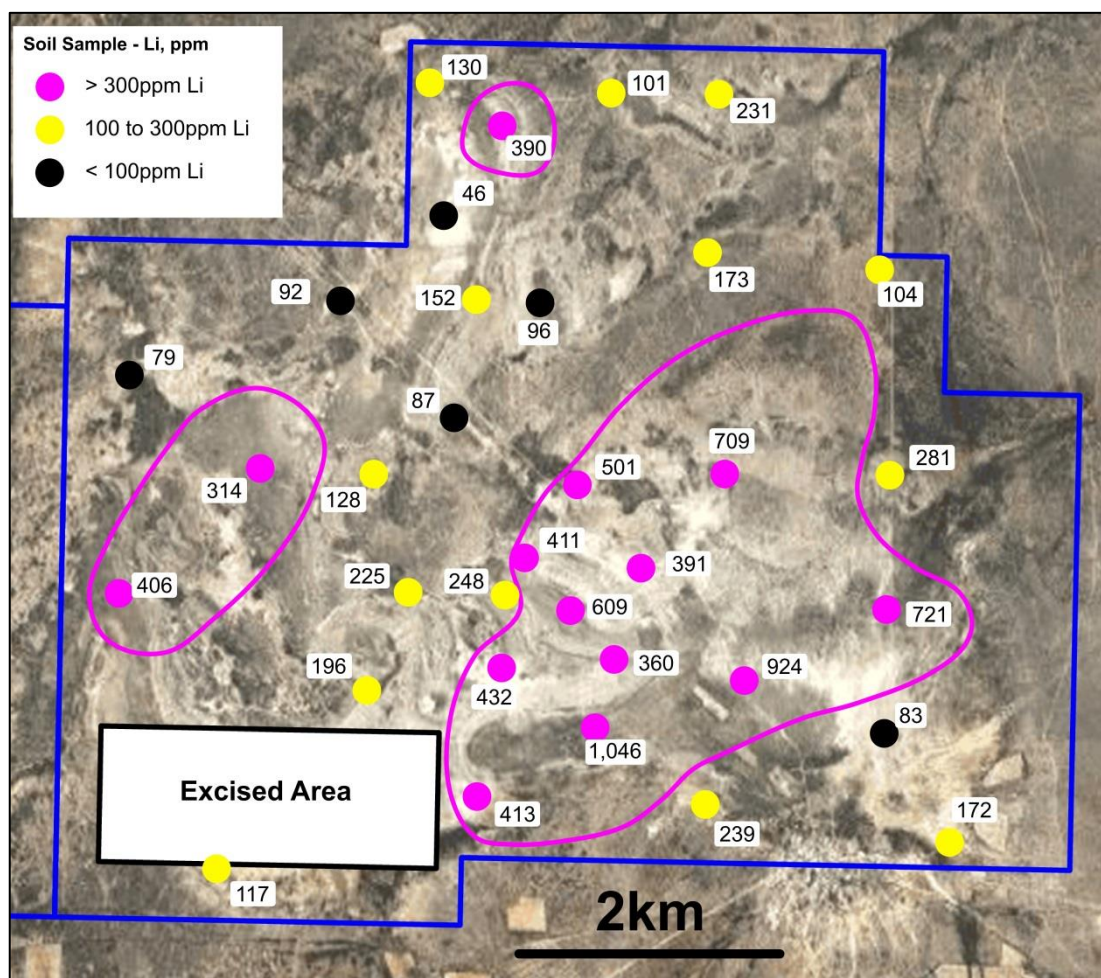


Figure 2: Surface Sampling Results on the San Juan Salt Lake System

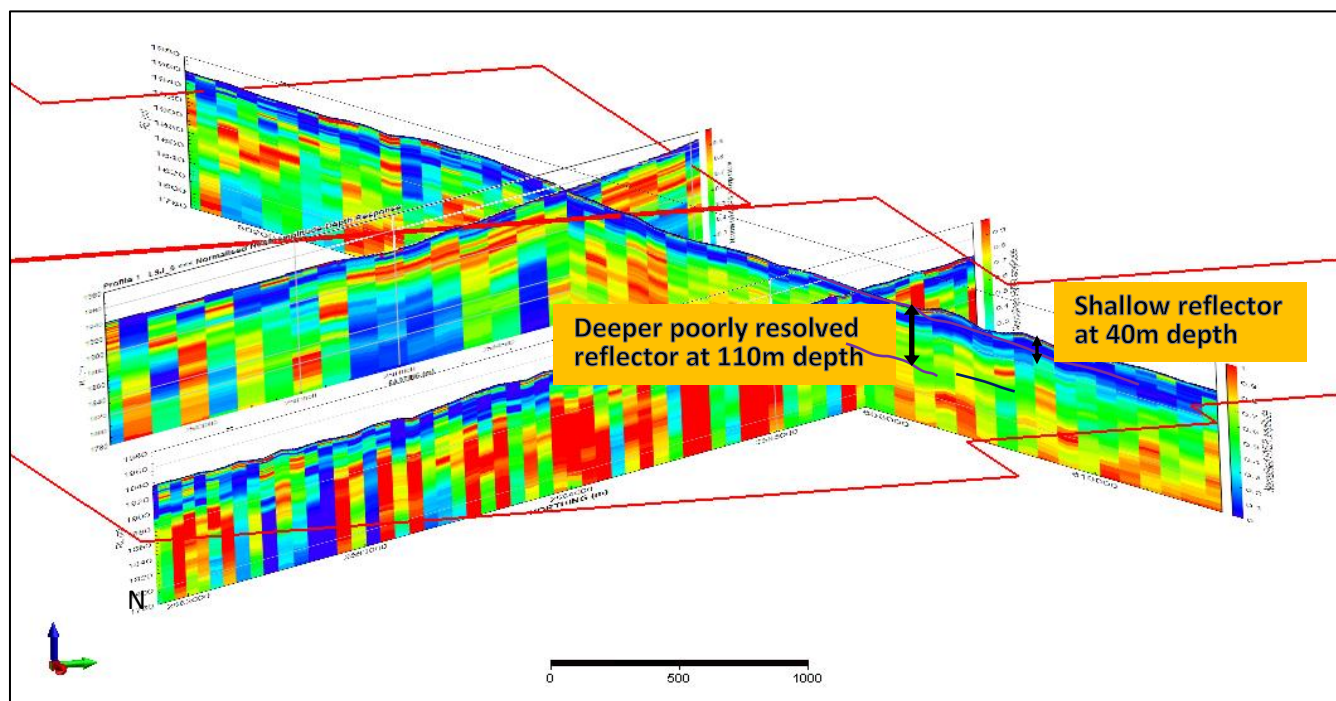


## Background on the Zacatecas Project Mexico

In late 2016 Zenith staked concessions over salt lake brine targets in the Zacatecas area of central Mexico. Three areas; San Juan, San Vicente and Illescas (covering a total of 26,440 acres) have been applied for, with Zenith to hold 100% interest through a Mexican subsidiary. Lithium brines to 2.1% lithium have been taken from small scale, salt production solar evaporation ponds on an adjacent salt lake located 10km west of Zenith's new tenure. The samples were taken as part of a water and surface sediment sampling program conducted by the Mexican Federal Government - Mineral Resource Council. These results confirm lithium enriched source brines are present in the Zacatecas district, as well as demonstrating that concentration of lithium by traditional solar evaporation methods is possible.

Initial reconnaissance surface sediment sampling by Zenith on the San Juan concession returned up to 524ppm lithium, 2<sup>nd</sup> phase orientation sampling returned 924ppm lithium whilst systematic infill sampling has now returned 1046ppm lithium, as detailed in this release (Figures 1 & 2). Further south on the Illescas concession similar high-grade surface results have now returned values up to 452ppm lithium. These results are comparable to and higher than those from many competitor lithium brine exploration projects in the USA and Mexico (Table 1). Local community members have advised Zenith's field team that hot springs were present up until recently on its Illescas concession whilst siliceous sinters (rocks indicative of ancient hot spring out-flow zones) have been recognised in field mapping on the San Juan concession.

A geophysical survey using the passive seismic technique was completed by Zenith over the Zacatecas concessions confirming the initial interpretation of a sedimentary basin beneath the surface salt lakes. A near surface layer 50 to locally 70m thick is resolved throughout all three concession areas. In addition flat lying to gently dipping reflectors (150 – 180m depth) are observed on several profiles; however they cannot be definitively modelled at this stage, but are likely to represent deeper sedimentary layers in the basin (Figure 4).



**Figure 4: Passive Seismic Pseudo-sections over the San Juan – San Vicente Salt Lake Systems**

The conceptual deposit model for the Zacatecas lithium brine project is adapted from the known deposits being exploited by other companies in the USA, Chile, Bolivia and Argentina. Water-bearing formations or aquifer types range from deep volcano-sedimentary units within the valley-fill sequence that are saturated in lithium-enriched brine such as at Albemarle's Clayton Valley operation in Nevada USA to near-surface salt lakes and ponds in the south American lithium operations. Amongst other important geological and hydrological criteria these lithium





districts generally contain active hot springs or there is evidence of past geothermal activity such as the presence of sinters (silica rich deposits that occur at hot spring out-flow zones). Existing lithium brine operations have lithium resource grades ranging from 102 milligrams per litre (mg/l) to 1409 mg/l this is roughly equivalent to 80 to 1100ppm lithium. In most cases the lithium brine is pumped into surface ponds and the lithium is concentrated to percent levels by solar evaporation before final treatment in a processing plant to produce lithium carbonate or similar products commonly used by battery manufacturers.

The Zacatecas lithium brine project within the closed El Barril aquifer, with its thick sequence of Tertiary, Cretaceous, and Quaternary age clastic sediments, ash beds and evaporite deposits is prospective for lithium brines. In addition, low average annual rainfall and very high average annual evaporation rates means that traditional methods of solar evaporation of brines are a viable production method. This is also evidenced in the many artisanal table salt production facilities that exploit the brines on several of the salt lakes within this district.

## **Next Steps**

The Zacatecas lithium brine project requires a groundwater exploration program designed to discover a reservoir of brine within the sedimentary host basin with economically viable concentrations of lithium. If warranted by brine presence and lithium concentration levels, additional more detailed studies will be necessary to determine the hydrogeological characteristics of the aquifer units for lithium production.

Electrical ground based geophysical surveying will be followed by drilling. Physical examination of the drill cuttings and laboratory analysis of water and sediments is the most cost effective way to determine the presence or absence of economic lithium deposits beneath the property. An initial drilling program of two to four holes will be designed to test specific structural and stratigraphic targets identified by the geophysical surveys. Given success with these preliminary exploratory drill holes in finding brine aquifers and anomalous lithium contents, additional holes would be placed to expand on the information relating to basin hydrogeology, leading to resource estimation.

## **Competitor Activity**

On the 15<sup>th</sup> May 2017 Alset Minerals Corp (TSX-V:ION) announced it had intersected brine in new wells at La Salada Salar, Zacatecas, Mexico. Alset advised that the current drilling program will generate data regarding the composition of both brines and soils that exist in the salar and the potential to recover lithium (and potentially byproducts such as potassium). La Salada is the first of seven salars that Alset plans to drill. These salars are covered by 11 mineral concessions in which Alset owns a 100-per-cent interest. In total, the seven salars cover an area of approximately 3,480 hectares (8,600 acres), the nearest Alset owned project is only 10km west of Zenith's San Vicente concession.



**Table 1: USA Lithium Brine Exploration Project Metrics.**

Count	Project	Owner	Estimated Maximum Depth of Valley Fill (m)	Area of Claims (acres)	Number of Samples	Surface Geochemistry		Reference
						Max Lithium in Surface Sediments (ppm)	Range Lithium in Surface Sediments (ppm)	
1	Silver Peak	Albermarle	1600			1171	350 - 1171	Source: Pure Energy 43-101 Technical Report 17 July 2015, Rockwood Holdings Annual Report 2014
2	Zacatecas - Mexico	Zenith Minerals Limited (ASX:ZNC)	?	26440		1046	9 - 1054	Zenith orientation surface sampling – March 2017
3	San Emidio Desert	Nevada Energy Metals (TSXV:BFF)	1800	3100	172	600	30 - 600	Nevada Energy Metals news release 27 Oct 2016
4	Spencer - North Big Smoky Valley	Zenith Minerals Limited (ASX:ZNC)	700 - 1200	2920	7	550	54 - 550	Zenith due diligence surface sampling
5	Black Rock Desert	LiCo Energy Metals (TSX:LIC)	1200	2560	170	520	83 - 520	LiCo Energy Metals news release 11 Nov 16 & Nevada Energy Metals Inc - website
6	Property B (undisclosed)	Iconic Minerals Ltd (TSXV:ICM)				510	60 - 510	Iconic Minerals news release 12 Oct 2016
7	North Big Smoky Valley - BSV	Nevada Energy Metals (TSXV:BFF)	1600	4000	170	500	10 samples > 200	<a href="https://nevadaenergymetals.com/bsv-lithium-project/">https://nevadaenergymetals.com/bsv-lithium-project/</a>
8	North Big Smoky Valley	1069934 BC Ltd purchased from Lithium Corp OTCQB: LTUM		3400		500		<a href="http://www.lithiumcorporation.com/portfolio/north-big-smoky/">http://www.lithiumcorporation.com/portfolio/north-big-smoky/</a>
9	Property A (undisclosed)	Iconic Minerals Ltd (TSXV:ICM)				470	110 - 470	Iconic Minerals news release 12 Oct 2016
10	Teels Marsh	Dajin Resources Corp (TSX:DJI)	2000	5853	74	460	55 - 460	Dajin Resources Corp news release 20 Oct 2016 & <a href="http://www.dajin.ca/en/teels-marsh">http://www.dajin.ca/en/teels-marsh</a>
11	Alkali Lake	Dajin Resources Corp (TSX:DJI)	1200	3851		382	73 - 382	<a href="http://www.dajin.ca/en/alkali-lake">http://www.dajin.ca/en/alkali-lake</a>
12	Lincoln - NW Clayton Valley	Noka Resources (TSXV:NX)		1600	24	380	87 - 380	<a href="http://nokaresources.com/index.php/investors-en/news-releases/159-noka-encounters-anomalous-lithium-mineralization-at-lincoln-property,-clayton-valley,-nevada">http://nokaresources.com/index.php/investors-en/news-releases/159-noka-encounters-anomalous-lithium-mineralization-at-lincoln-property,-clayton-valley,-nevada</a>
13	Bonnie Claire	Iconic Minerals Ltd (TSXV:ICM)	600-900	23700		340	50 - 340	Iconic Minerals Presentation April 2016 & news release 26 Sep 2016

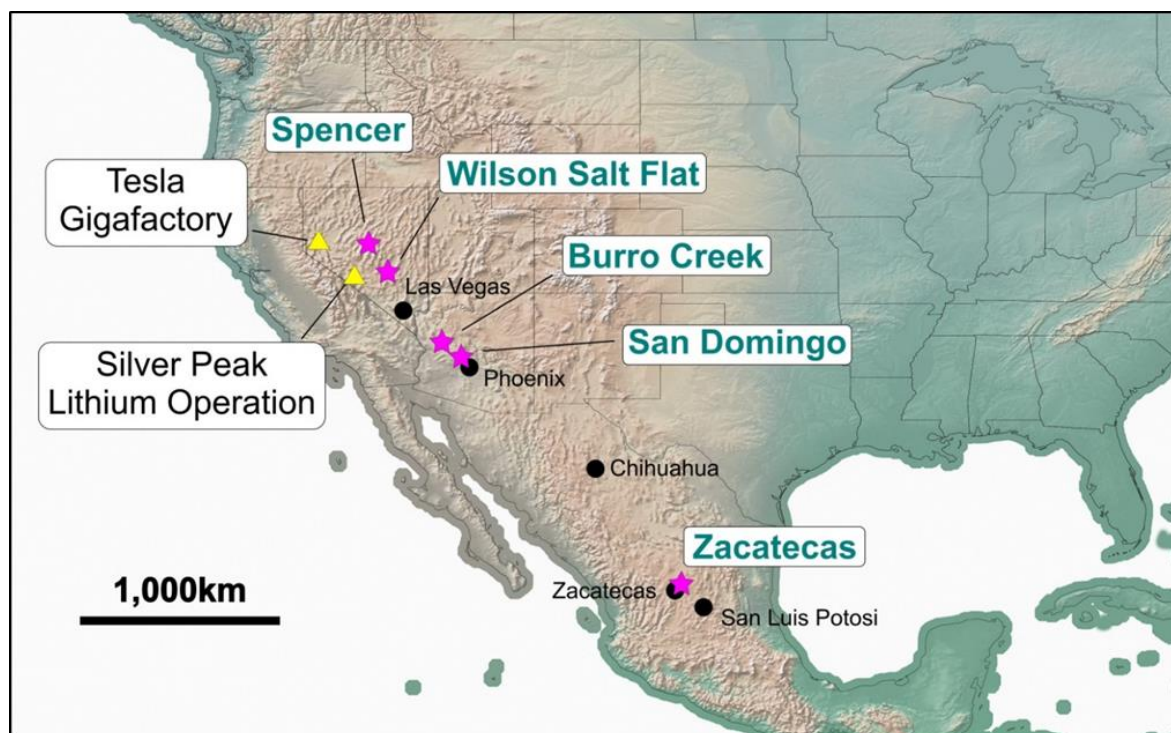


14	<b>Columbus</b>	Noka Resources (TSXV:NX)		1920	24	280	14-280	<a href="http://nokaresources.com/index.php/investors-en/news-releases/">http://nokaresources.com/index.php/investors-en/news-releases/</a>
15	<b>Wilson Salt Flat</b>	Zenith Minerals Limited (ASX:ZNC)		3360	7	192	98-192	Zenith due diligence surface sampling
16	<b>Jackson Wash</b>	Advantage Lithium Corp (TSX:AAL) earning 51% from Nevada Sunrise Gold Corp	400-600	3320	6	117	97-117	NI43-101 Tech report dated 27 July 2016 - RM Allender
17	<b>Clayton NE</b>	Advantage Lithium Corp (TSX:AAL) earning 51% from Nevada Sunrise Gold Corp		1000				Advantage Lithium news release 1st Nov 2016
18	<b>Teels Marsh West</b>	Nevada Energy Metals (TSXV:BFF)		2000	27	104	8.9 - 104	<a href="https://nevadaenergymetals.com/teels-marsh/">https://nevadaenergymetals.com/teels-marsh/</a>
19	<b>South Big Smoky Valley</b>	Ultra Lithium Inc (TSX:ULI)	2000-2500	12500	48	100	average 47	Ultra Lithium Inc news release 14th Mar16 & 7 July 16
20	<b>Moab - Big Smoky Valley</b>	Avarone Metals Inc(CSE:AVM)	2000-2500	3200	20	70	average 31.5	<a href="http://www.avarone.com/index.php/news/46-avarone-to-acquire-moab-lithium-brine-project-nevada">http://www.avarone.com/index.php/news/46-avarone-to-acquire-moab-lithium-brine-project-nevada</a>
21	<b>Lincoln - South Smoky Valley</b>	Millennial Lithium (TSXV:ML)		3200	12	39	9.7 - 39	<a href="http://www.millenniallithium.com/news/news-display/index.php?&amp;content_id=42">http://www.millenniallithium.com/news/news-display/index.php?&amp;content_id=42</a>
22	<b>Fish Lake Valley (North &amp; South Bowl Playas)</b>	American Lithium Corp (TSXV:Li) earning 80% from Lithium Corporation OTCQB: LTUM		18522				American Lithium Presentation Sep 2016
23	<b>San Emidio</b>	American Lithium Corp (TSXV:Li)		2240				American Lithium Presentation Sep 2016
24	<b>Clayton Valley BFF-1 Project</b>	American Lithium Corp (TSXV:Li) - earning 70% from BFF		1540				Nevada Energy Metals news release 20 Sep 2016 & American Lithium Presentation Sep 2016
25	<b>Dixie Valley</b>	Nevada Energy Metals (TSXV:BFF)	2000	7363				Nevada Energy Metals news release 27 Oct 2016
26	<b>Clayton Valley South</b>	Pure Energy Minerals (TSXV:PE)	1500	9000				Pure Energy Corp Presentation 14 Sep 2016
27	<b>Miller's Crossing - Big Smoky Valley</b>	Unity Energy Corp (TSXV:UTY) earning 100%		1920	15	Assays awaited		<a href="http://www.unityenergycorp.com/index.php/newsmedia/24-unity-finishes-sampling-program-at-miller-s-crossing">http://www.unityenergycorp.com/index.php/newsmedia/24-unity-finishes-sampling-program-at-miller-s-crossing</a>



## American Lithium Portfolio

Zenith has assembled an outstanding 100% owned lithium project portfolio over the past 6 - 12 months, including lithium brine, lithium pegmatite and lithium clay targets in the USA and Mexico.



Location Map - Zenith's USA & Mexico Lithium Projects

Lithium projects worldwide are of three types: brines, pegmatites and clays. The major lithium brine operations are located in South America (Chile, Argentina and Bolivia), China and Nevada, USA. Traditionally lithium brines are extracted from salt lakes into surface ponds where they are concentrated by solar evaporation and then fed into a processing facility with output as lithium carbonate for sale to battery manufacturers. Zenith's Mexican and Nevada lithium projects are lithium brine plays. Zenith's **Spencer** and **Wilson Salt Flat** brine projects in Nevada, USA are close to both Tesla's Gigafactory and to Albermarle Corporation's Silver Peak-Clayton Valley lithium brine operation, the only operational lithium project in the USA. Zenith's three new concessions: Illescas, San Juan and San Vicente make up the **Zacatecas** lithium brine project in the emerging lithium brine district of San Luis Potosi State, Mexico.

Lithium pegmatite projects are exploited as traditional hard rock open pit mines (eg Australia's Greenbushes Mine) where concentrates of the primary lithium mineral spodumene are sold to third party processors who convert the concentrates to lithium compounds suitable for use by battery manufacturers. Zenith's **San Domingo** project in Arizona contains abundant spodumene bearing lithium pegmatites over 9 km strike.

Zenith's **Burro Creek** lithium clay project in Arizona is comparable to other lithium clay projects in the USA and Mexico subject to resource and development studies (e.g: Sonora project (Banacora –TSX).

Zenith's Nevada, Arizona and Mexico lithium projects are perfectly positioned to provide future supply to the growing USA domestic lithium battery market. Tesla Corporation has commenced construction of its lithium battery manufacturing facility (Gigafactory) outside Reno Nevada, whilst Faraday has set aside land in the Las Vegas industrial park for its battery plant.

## Activities on the American Lithium Portfolio

Field programs in Mexico and Arizona funded by Bradda Head are underway, and the JV will shortly start lithium exploration activities in Nevada. Initial activities on the projects include:



- Electrical geophysical surveys at San Vicente and San Juan lithium brine projects at Zacatecas in Mexico, as prerequisites to drill testing, along with preparation for drilling, including community and landholder liaison;
- Ongoing sighter metallurgical testwork at Burro Creek lithium clay project in Arizona, which has shown encouraging initial results. Further more definitive work is in progress to determine the options for the extraction of lithium & potassium;
- Burro Creek state lease permitting for trenching & drilling and associated state lease renewal – as prerequisites to planned trenching & resource drilling; and
- An electrical geophysical survey at the Wilson Salt Flat lithium brine project in Nevada to determine the presence of brine and its depth, as a prerequisite to drill testing.

The aim of these initial work programs is to advance four of the lithium projects to drill ready status by end June 2017.

## Transaction Overview

The American lithium transaction with Bradda Head included a cash refund of Zenith's historic expenditure of US\$500,000 (~A\$660,000), US\$5 million (A\$6.6 million) in exploration expenditures over 3 years by Bradda Head to earn 55% project interest, a one off right for Zenith to contribute at 45%, or be free carried at 30% to the end of pre-feasibility studies on two projects. Bradda Head must spend a minimum of US\$500,000 on exploration on the projects and drill at least one project before it can withdraw.

In addition, Jim Mellon and other sophisticated investors completed a concurrent share placement of A\$1.5 million (ASX Release 15th March 2017) comprising 15 million ZNC ordinary shares @ 10c plus one free attaching ZNCO listed option for every 5 shares issued.

Key Zenith personnel will initially dedicate up to 25% of their time to the advancement of the American lithium projects at cost, to ensure seamless progression of the projects and allow transfer of the technical knowledge base. The partners have also agreed to collaborate on any additional lithium projects that either party acquires within the same jurisdictions.

The transaction brings together the financial strength and market contacts of Bradda Head with the strong technical knowledge of the Zenith team and its USA and Mexican associates to advance these exciting lithium projects.

The Board of Zenith will also continue to consider whether shareholders' interests might be best served by the possible future spin out of this now well-funded lithium portfolio, once the projects are more advanced.

## Competent Persons Statement

*The information in this report that relates to Exploration Results is based on information compiled by Mr Michael Clifford, who is a Member of the Australian Institute of Geoscientists and an employee of Zenith Minerals Limited. Mr Clifford has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Clifford consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

**24<sup>th</sup> May 2017**

### For further information contact:

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***Zenith is advancing its project portfolio of high-quality, gold, lithium and base metal projects:***

**Kavaklitepe Gold Project, Turkey (ZNC 30%, Teck 70%)**

- Recent (2013) grass roots gold discovery in Tethyan Belt
- Continuous rock chip sampling to: 54m @ 3.33g/t gold, including 21.5m @ 7.2 g/t gold
- Initial 2016 drill results include: 9 m @ 5.2 g/t Au from surface, 7.8 m @ 7.3 g/t Au from 3.3 m and 16.4m @ 4.7 g/t Au from 82.1m depth

**American Lithium Projects (Bradda Head earning initial 55%)**

**Zacatecas Lithium Brine Project, Mexico**

- New tenure (26,000 acres) staked over extensive system of salt lakes within an emerging lithium brine district at Zacatecas in central Mexico
- Lithium brines to 2.1% lithium reported in sampling conducted by the Mexican Government from solar evaporation ponds for salt production (10km west of Zenith's new tenure).
- Electrical Geophysical surveys planned

**San Domingo Lithium, Arizona USA**

- 9km x 1.5km lithium pegmatite field, initial surface sampling returned: 5m @ 1.97%Li<sub>2</sub>O including 2.4m @ 2.49% Li<sub>2</sub>O - Surface sampling and mapping prior to drill testing

**Spencer & Wilson Salt Flat Lithium Brine Projects, Nevada USA**

- Two lithium brine targets in producing lithium region - Geophysical surveys and infill sampling prior to drill testing

**Burro Creek Lithium, Arizona USA (ZNC option to acquire 100%)**

- Large scale lithium (Li) clay target under exclusive option - Metallurgical testwork to assess ease of extracting lithium, permitting for trenching and drilling in progress

**Australian Projects**

**Develin Creek Copper-Zinc-Silver-Gold, QLD (ZNC 100%)**

- 3 known VHMS massive sulphide deposits - JORC resources, 50km of strike of host rocks.
- 2011 drilling: 13.2m @ 3.3% copper, 4.0% zinc, 30g/t silver & 0.4g/t gold - Drilling planned to extend known deposits, geophysics, geochemistry to detect new targets

**Split Rocks Lithium & Gold, WA (ZNC 100%)**

- New 100% owned exploration licences covering 500km<sup>2</sup> in emerging Forrestania lithium district - Surface sampling to precede drill testing

**Earaheedy Manganese Project, WA (ZNC 100%)**

- New manganese province discovered by ZNC, potential DSO drill intersections (+40%Mn)

**Mt Alexander Iron Ore, WA (ZNC 100%)**

- JORC magnetite Resource 566 Mt @ 30.0% Fe close to West Pilbara coast, 50% of target untested - Seeking development partner/ buyer for iron project



## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i>	Samples were collected by hand, using a post hole shovel to depth of about 1m from in-situ clay or sand.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	Samples are believed to be representative of the layers they are derived from.
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</i>	1 to 2kg sand/clay samples were collected by a geologist. Samples were dried, crushed in the laboratory and then pulverised before analysis.
Drilling techniques	<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</i>	No drilling results reported



Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	No drilling results reported
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	No drilling results reported
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	No drilling results reported
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	Samples were geologically described
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Each sample was described in details
	The total length and percentage of the relevant intersections logged.	No drilling results reported
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	No drilling results reported
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	No drilling results reported
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Samples were sent to SGS, Durango, the samples were crushed and assayed by ICP-OES after two acid (Aqua Regia) digest.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	No standard was included in the sample batch sent to the laboratory apart from internal laboratory QC samples. Samples were collected as infill samples at a similar locations and depth as a previous Phase I samples and Phase 2 orientation sampling. Results correlate well from all 3 sampling phases using two different laboratories.

Sub-sampling techniques and sample preparation - continued	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	Samples are considered to be representative of the intervals sampled. No field duplicate was sampled
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	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Each sample was about 1 to 2kg in weight and selected to be representative of the selected column of material.
Quality of assay data and laboratory tests	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	The samples were crushed and assayed by ICP-OES after 2 acid (Aqua Regia) digest
	<i>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>	No geophysical handheld tools used
	<i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i>	No standard was included in the sample batch apart from laboratory QC samples
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	An independent contractor has observed the assayed samples.
	<i>The use of twinned holes.</i>	No drilling results reported
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Field data were all recorded on hardcopies and then entered into an electronic database
	<i>Discuss any adjustment to assay data.</i>	No adjustments were made.
Location of data points	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	Sample coordinates were recorded using a handheld GPS with plus/minus 3m accuracy
	<i>Specification of the grid system used.</i>	The grid system used was UTM WGS 84 – Zones 13 & 14

Location of data points - continued	<i>Quality and adequacy of topographic control.</i>	Topography control is limited for these samples, as elevation data from GPS are reliable to plus minus 10m.
Data spacing and distribution	<i>Data spacing for reporting of Exploration Results.</i>	Samples were collected across the project area at several locations approximately 1km apart.
	<i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation</i>	These data alone will not be used to estimate mineral resource or ore reserve





	<i>procedure(s) and classifications applied.</i>	
	<i>Whether sample compositing has been applied.</i>	No compositing applied
<i>Orientation of data in relation to geological structure</i>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	No bias is expected from sampling
	<i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	No drilling results reported
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	Samples were kept in numbered bags until delivered to the laboratory
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	Sampling techniques are consistent with industry standards



## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership 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.	The Zacatecas project is located in San Luis Potosi State Central Mexico. 3 concessions comprise the project which is 100% beneficially owned by Zenith owned
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The concessions are mining leases but any exploitation of mineral resources is subject to state and federal permitting.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No historical work is known to have occurred over the claim area
Geology	Deposit type, geological setting and style of mineralisation.	Clayton Valley-style lithium brine deposit
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:	No drilling results reported
	o easting and northing of the drill hole collar	
	o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar	
	o dip and azimuth of the hole	
	o down hole length and interception depth	
	o hole length.	
Data aggregation methods	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	No cut-off was applied to the data.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should	No aggregation used



	<i>be shown in detail.</i>	
<i>Data aggregation methods - continued</i>	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	No metal equivalents used.
<i>Relationship between mineralisation widths and intercept lengths</i>	<i>These relationships are particularly important in the reporting of Exploration Results.</i>	No drilling results reported
	<i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i>	No drilling results reported
	<i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</i>	No drilling results reported
<i>Diagrams</i>	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	Refer to descriptions and diagrams in body of text
<i>Balanced reporting</i>	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	Results included in maps in the body of text
<i>Other substantive exploration data</i>	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	A passive seismic survey composed of 7 lines across the three concessions was completed in January 2017
<i>Further work</i>	<i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	Geophysical methods (AMT) will be used to define basin architecture and depth of potential brines. Drilling will test for the presence of brine
	<i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	Refer to diagrams in body of text