Zenith Minerals Limited
ABN 96 119 397 938

2nd February 2017

Seismic Survey Confirms Prospective Basin Architecture at Wilson Salt Flat Lithium Brine Project – Arizona

- **Ongoing exploration at the 100% owned Wilson Salt Flat lithium brine project in Nevada, USA is providing encouraging results;**
- **Trial geophysical survey using passive seismic technique confirms structures and basin architecture consistent with lithium-bearing brine deposit models identified in the adjacent Clayton Valley lithium brine production area;**
- **Initial reconnaissance sampling by Zenith returned highly anomalous lithium in surface sediments - comparable to and higher than those from competitor lithium brine projects in the USA;**
- **Follow-up electrical geophysical survey now planned to detect presence of salt water aquifer capable of hosting lithium brine; and**
- **Following success of this initial geophysical trail at Wilson Salt Flat, similar surveys are in progress at Zenith's nearby 100% owned Spencer lithium brine project and at the Company's new Zacatecas lithium brine project in central Mexico.**

Zenith Minerals Limited ("Zenith" or "the Company") is very pleased to advise that a trial geophysical survey using the passive seismic technique confirms the initial interpretation of a deep sedimentary basin beneath the surface salt lake, where initial sampling by Zenith returned highly anomalous lithium values.

The Wilson Salt Flat Project is located in Nye County, Nevada 140km east from the lithium production area of Silver Peak- Clayton Valley. The Project is 100% owned by Zenolith and is located in the Railroad Basin (Figure 1). The property is comprised of 168 unpatented placer claims in a single claim block totalling 3,360 acres that were located in November 2016 to encompass highly anomalous lithium in surface sediment samples coincident with a salt lake and discrete gravity low interpreted to be a closed basin.

During December 2016 Zenith completed a passive seismic geophysical survey with the aim of confirming the sub-surface architecture of the basin beneath the surface salt lake at Wilson Salt Flat. Zenith's consultants - Resource Potentials have now completed processing of the data collected during the survey and in conjunction with Zenith's geologists have completed a geological interpretation which confirms the presence of a thick, sedimentary sequence bounded by basin margin faults (Figures 2 & 3). The geophysical modelling has identified structures and architecture that are consistent with the lithium-bearing brine deposit models identified in the adjacent Clayton Valley area.

Initial surface sediment samples taken from the salt lake surface by Zenolith are enriched in lithium up to 192ppm (ASX Release 16th December 2016) supporting the hypothesis of lithium brines being present in the sub-surface (Figure 3).

Corporate Details

ASX: ZNC

Issued Shares (ZNC)	174.0 m
Listed options (ZNCO)	21.0 m
Unlisted options	3.5 m
Mkt. Cap. ($0.10)	A$17.4 m
Cash 31st Dec16	A$0.6 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

Major Shareholders	
HSBC Custody. Nom.	7.2%
City Corp Nom	6.7%
Nada Granich	6.6%
Abingdon	4.5%
Miquilini	4.5%

Contact Details

Level 2/33 Ord Street
West Perth, WA, 6005

Mail: PO Box 1426
West Perth, WA, 6872
T: +61 8 9226 1110
F: +61 8 9481 0411
E: *info@zenithminerals.com.au*
W: www.zenithminerals.com.au

LISTED ON ASX

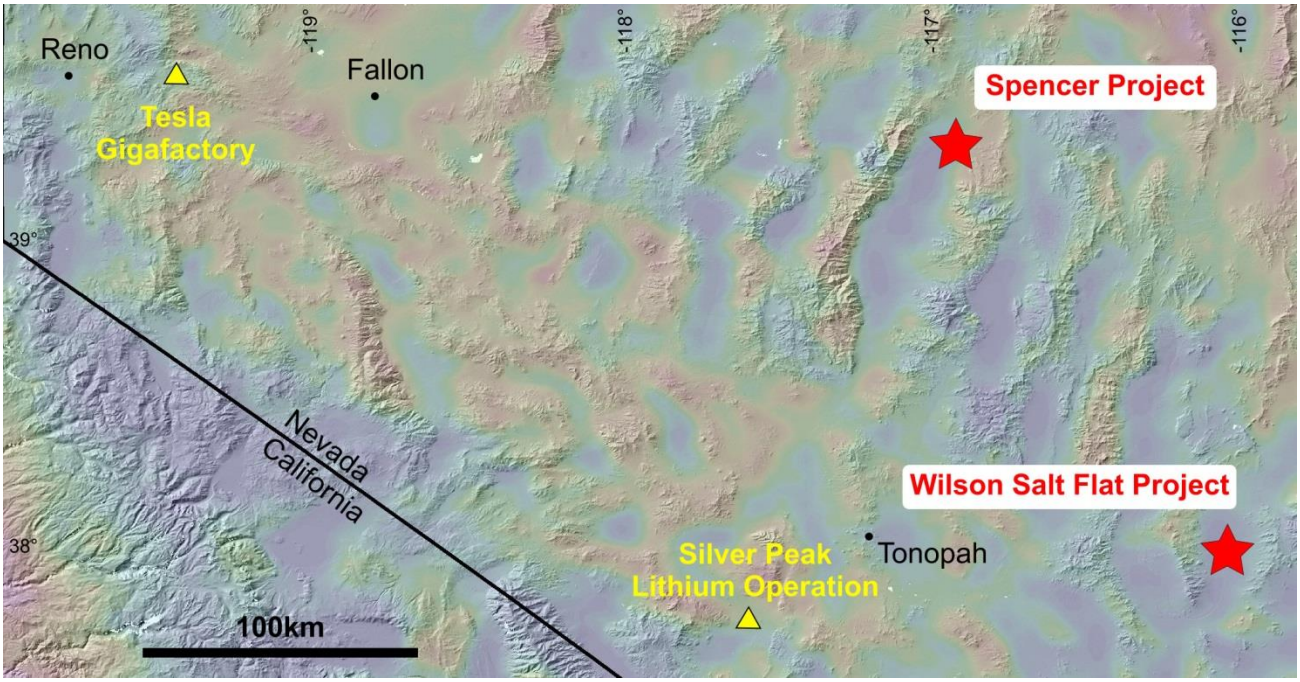

Figure 1: Wilson Salt Flat Lithium Brine Projects – Location Map

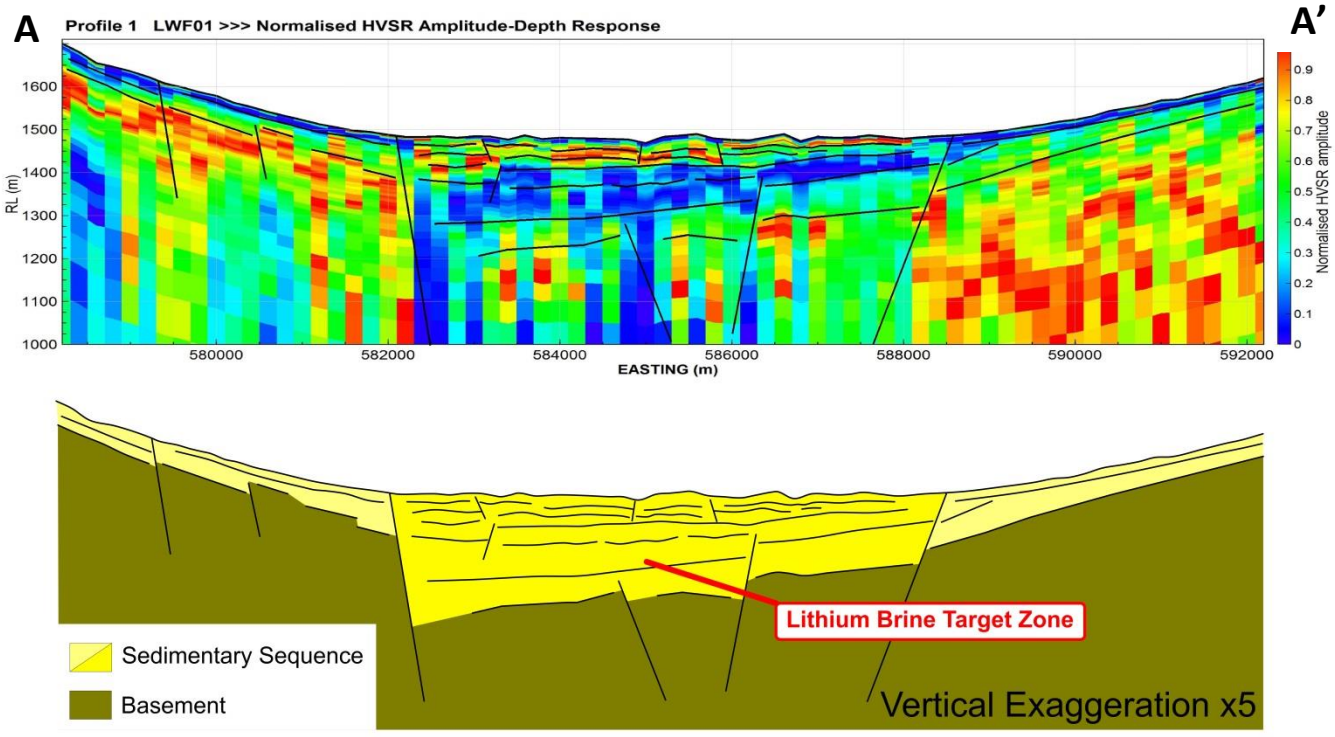

Figure 2: Wilson Salt Flat Passive Seismic Survey Normalised HVSR Amplitude Depth Response and Interpreted Geological Cross Section

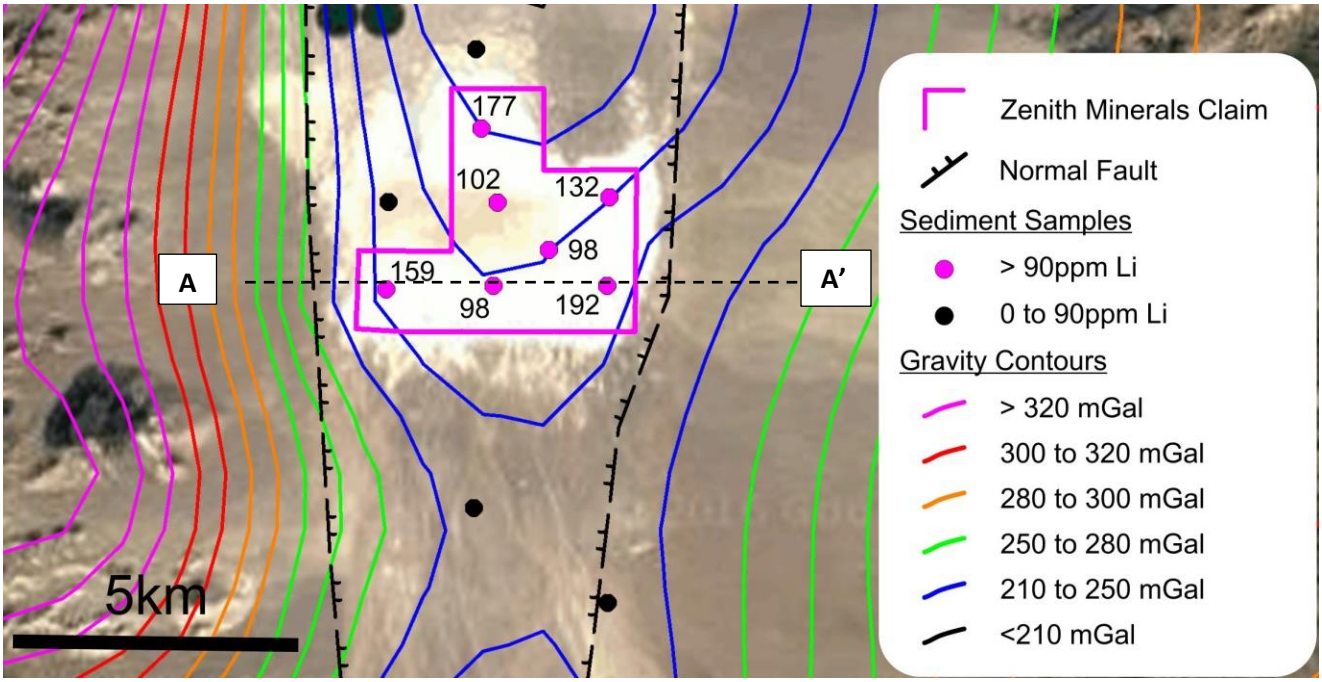

Figure 3: Wilson Salt Flat Project - Initial Surface Geochemical Results on Google Earth Image, overlain by Gravity Contours, Major Interpreted Fault Structures and Seismic Survey Line A-A'

Wilson Salt Flat – Lithium Brine Exploration Model

The nearby Silver Peak operation in Clayton Valley is currently the only operational USA lithium project. Production by Albemarle Corporation formerly Rockwood Lithium, is facilitated through an extraction system that pumps groundwater enriched in lithium to surface solar evaporation ponds on the property. Evaporation of fluid from the ponds over a period of 12 to 18 months increases the lithium concentration prior to transfer of the concentrated brine to a processing plant for final product development. Tesla's lithium ion battery production facility (Gigafactory) is under construction nearby, also in Nevada.

The conceptual deposit model for Zenith's Wilson Salt Flat Project is adapted from the known deposits being exploited by Albemarle Corporation. Six different water-bearing formations or aquifer types have been identified in Clayton Valley. These are specific volcano-sedimentary units within the valley-fill sequence that are either saturated in lithium-enriched brine or contain salt or clay minerals with anomalously high concentrations of lithium. In addition, recent lithium brine drilling success by Pure Energy Minerals (TSX-V:PE) in the south of Clayton Valley provides an additional lithium brine host architecture model, whereby basin margin faults along the eastern boundary have a strong control on the host sequences and entrained lithium brines.

The geologic setting within the closed Great Basin, with its thick sequence of Quaternary age clastic sediments, ash beds and evaporate deposits is prospective for lithium brines. The geologic formations that compose the surrounding mountain ranges, specifically certain Tertiary-age volcanic formations, contain anomalous concentrations of lithium and are considered one likely source of lithium in brines and sedimentary layers similar to those in the Clayton Valley area.

Next Steps

The Wilson Salt Flat 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.

Geological, geochemical and geophysical similarities between Wilson Salt Flat and the Silver Peak- Clayton Valley lithium deposits being exploited by Albemarle as well as lithium brines recently intersected in nearby 2016 exploration drilling programs by TSX listed companies Pure Energy Minerals and Advantage Lithium Corporation present an attractive exploration target at both Spencer and Wilson Salt Flat.

Infill surface sampling along with ground based electrical geophysical surveying followed by drilling is the next steps in exploration of the Wilson Salt Flat project. 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 is likely and will require permits through the United States Bureau of Land Management (USBLM) and the State of Nevada. The first two 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.

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.

2nd February 2017

For further information contact:

Zenith Minerals Limited

Directors Michael Clifford or Mike Joyce

E: mick@zenithminerals.com.au

Phone +61 8 9226 1110

Media and Broker Enquiries

Andrew Rowell

E: arowell@canningspurple.com.au

Phone +61 8 6314 6300

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

Kavaklitepe Gold Project, Turkey (Teck 70%)

- Recent (2013) grass roots gold discovery in Tethyan Belt
- Large, high order gold soil / IP anomaly >1km strike
- Continuous rock chip sampling to: 54m @ 3.33g/t gold, including 21.5m @ 7.2 g/t gold
- Initial 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
    - 24 drill holes completed in 2016 drill campaign

Zacatecas Lithium Brine Project, Mexico (100%)

- 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 regional water and surface sediment sampling program conducted by the Mexican Federal Government from solar evaporation ponds for salt production on adjacent salt lake (10km west of Zenith's new tenure).
    - Geophysical surveys and infill sampling in progress

Split Rocks Lithium & Gold, WA (100%)

- New 100% owned applications covering 500km^2 in emerging Forrestania lithium district - Review of previous work and surface sampling to preceded drill testing

San Domingo Lithium, Arizona USA (ZNC 100%)

- 9km x 1.5km lithium pegmatite field, initial surface sampling returned: 5m @ 1.97%Li2O including 2.4m @ 2.49% Li2O - Surface sampling and mapping in progress prior to drill testing

Spencer & Wilson Salt Flat Lithium Brine Projects, Nevada USA (ZNC 100%)

- 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

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

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

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