

# SILVER CITY MINERALS LIMITED

# ASX ANNOUNCEMENT

15 August 2016

# **Exploration Update**

- > Grant of three new Exploration Licences prospective for lithium
- > Pegmatite sampling outlines new unexplored lead-zinc zone
- > Systematic pegmatite sampling continues with over 800 samples collected
- > Drilling is scheduled to commence at Razorback West early September
- > Electromagnetic surveys planned at Balaclava in September

Silver City Minerals Limited (ASX: SCI) ("Silver City" or "the Company") is pleased to announce that on 11 August 2016 it was informed by the NSW Department of Industry that it had been granted Exploration Licences 8453, 8454 and 8455 over ground considered to be prospective for lithium.

Field teams continue to sample pegmatites within granted licences at Broken Hill. The program is designed to discover lithium-bearing minerals such as spodumene and amblygonite with the view to assessing potential lithium resources. The Company has some 100 square kilometres of outcropping pegmatite on its tenements (ASX releases 11 May 2016 and 3 June 2016).

In addition, the Company has been making preparations to drill at its Razorback West zinclead-silver project and to undertake ground geophysical surveys at Balaclava. These projects are located on extensions of the Broken Hill line-of-lode to the north and south respectively (Figure 1).

### **Pegmatite Sampling**

To date over 800 pegmatite samples have been collected from granted licences. Of these, the Company has received approximately 280 analyses (Figure 2). A previous explorer provided 116 samples of drill chips for holes within EL8454, previously (ELA 5280). Surface sampling to date has been restricted to granted exploration tenure with access to ELA's pending formal grant by the NSW Department of Industry (June Quarterly Report 2016). With the recent grant of these tenements detailed exploration has commenced.

### Lithium

Analyses from pegmatite samples collected within granted exploration licences have returned low values ranging from 0.6 to 79 ppm. Until the grant of the new licences, sampling of lithium-prospective ELAs has been restricted to drill chips made available in Broken Hill by a previous explorer (from ELA 5280). These were reported to be anomalous with values up to 319ppm (June Quarterly Report 2016). This ELA (now EL8454) hosts the Waukeroo tin field and is considered likely to host lithium minerals. Pegmatite samples to the south within an adjacent granted EL also returned anomalous results (Figure 3).

On the grant of this tenement field teams began systematically sampling pegmatites and preliminary results are expected within four weeks.

### Lead-Zinc

An unexpected consequence of the pegmatite sampling program has been the delineation of a large lead-zinc anomaly within EL 8020 (Riddock). This is an area where no historic leadzinc mines or mineral occurrences are located. Similarly no previous exploration has identified base metal mineralisation.

Geological interpretation suggests this anomaly occurs within pegmatites hosted in the upper, highly prospective parts of the Broken Hill Group. SCI pegmatite sampling elsewhere shows elevated lead or zinc (or both) in close proximity to Broken Hill-type mineral occurrences, notably at the Allendale mine, Champion, Democrat and Stephens Trig South. The Riddock anomaly cannot be explained by the presence of mineral occurrences suggesting that some undiscovered, buried metal source occurs in the area. More detailed sampling and field evaluation is scheduled (Figures 4 and 5).

### Nature of Pegmatites

Pegmatites form by the melting of older rocks under conditions of high temperature and pressure. Some remain close to the place of melting and others are allochthonous and move along fractures as a melt to zones of lower temperature and pressure. In the case of Broken Hill these older rocks are largely sediments (with some volcanic components) of the Willyama Supergroup. This sequence, and in particular the Broken Hill Group, hosts the lead-zinc-silver ore bodies at Broken Hill. As a consequence of the melting process, pegmatite chemistry will largely reflect that of the older host rock. Pegmatites close to the Broken Hill ore zones commonly contain lead-enriched minerals; notably a green feldspar.

# Laser Ablation Breakdown Spectrometry (LIBS)

SCI has been utilising a hand-held laser ablation device calibrated for lithium in order to screen samples for laboratory analysis. The results of analyses of feldspars and micas have been highly variable and whilst there is a broad correlation between high lithium in LIBS and high lithium in laboratory rock analyses, the technique remains inconclusive. SCI has decided to forego the use of this machine in favour of rock analyses for the time being.

# Hyperspectral Data (HyMap<sup>™</sup> survey).

A large airborne spectrometry survey (HyMap  $^{TM}$ ) was conducted over the Broken Hill district in March 2002. Recent work by other companies exploring for lithium suggest there may be potential to use this survey to locate the lithium mineral spodumene within pegmatite bodies.

Work by SCI consultants indicates that spodumene is not readily detectable using this style of survey. However, amblygonite ((Li,Na)AIPO4(F,OH)) and topaz (AI2(SiO4)(F,OH)2), have more distinctive spectral signatures. The first is a lithium phosphate mineral and the second is a fluorine enriched aluminium silicate and both are reported to be associated with spodumene in the Euriowie tin field to the north of the SCI tenements. SCI has obtained specimens of this material and is currently acquiring spectral data under laboratory conditions so that it can be used when re-processing HyMap survey data.

The aim of this work is to use the old airborne data to rapidly identify lithium minerals within large areas of outcropping pegmatite.

## Drilling

A 350 metre diamond drill hole is scheduled to commence at Razorback West early in September. This hole is designed to test a lead-zinc geochemical anomaly (outlined by both rotary airblast (RAB) and reverse circulation drilling) which is coincident with electromagnetic anomalies.

The rocks in the project area are buried beneath a veneer of soil and alluvial cover however earlier SCI drilling has shown that they are equivalent to those which host the Broken Hill ore bodies located just 15 kilometres to the southwest. The rock sequence is considered to be the northern, fault-offset extension of the Broken Hill mine corridor and as such is highly prospective for Broken Hill-type zinc-lead-silver mineralisation (Figure 6).

# Geophysics

SCI will be commencing a ground electromagnetic (EM) survey at the Balaclava project located to south of Broken Hill in September (Figure 6). The survey is designed to follow-up and accurately locate a poorly georeferenced and untested Sirotem (electromagnetic) anomaly dating back to a survey conducted in the early 1990's.

New interpretation by SCI, which combines our recent drilling and historic drill data, suggests the presence of the upper parts of the Broken Hill Group stratigraphy located 400 to 500 metres to the north of our recent drilling. This part of the geological sequence hosts many of the significant ore shoots at Broken Hill. A poorly-located, late-time, fixed loop Sirotem anomaly in this area suggests the presence of sulphide at 100 to 150 metres depth. If the new EM survey defines a significant anomaly the Company would propose to immediately drill test it.

This project is a joint venture with CBH Resources Limited (SCI 75%, CBH 25%) whereby both parties contribute their share to exploration and development.

# SILVER CITY MINERALS LIMITED

Christopher Torrey Managing Director

#### ABOUT Silver City Minerals Limited

Silver City Minerals Limited (SCI) is a base and precious metal explorer with a strong focus on the Broken Hill District of western New South Wales, Australia. It takes its name from the famous Silver City of Broken Hill, home of the world's largest accumulation of silver, lead and zinc; the Broken Hill Deposit. SCI was established in May 2008 and has been exploring the District where it controls Exploration Licences through 100% ownership and various joint venture agreements. It has a portfolio of highly prospective projects with drill-ready targets focused on high grade silver, gold and basemetals, and a pipeline of prospects moving toward the drill assessment stage. The Company continues to seek out quality projects for exploration and development.

#### Caution Regarding Forward Looking Information.

This document contains forward looking statements concerning Silver City Minerals Limited. Forwardlooking statements are not statements of historical fact and actual events and results may differ materially from those described in the forward looking statements as a result of a variety of risks, uncertainties and other factors. Forward-looking statements are inherently subject to business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause the Company's actual results to differ materially from those expressed or implied in any forwardlooking information provided by the Company, or on behalf of, the Company. Such factors include, among other things, risks relating to additional funding requirements, metal prices, exploration, development and operating risks, competition, production risks, regulatory restrictions, including environmental regulation and liability and potential title disputes. Forward looking statements in this document are based on Silver City's beliefs, opinions and estimates of Silver City Minerals as of the dates the forward looking statements are made, and no obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future development.

#### **Competent Persons**

The information in this report that relates to Exploration Results is based on information compiled by Chris Torrey (BSc, MSc, RPGeo Mineral Exploration) who is a member of the Australian Institute of Geoscientists. Mr Torrey is the Managing Director, a shareholder and full time employee of Silver City Minerals Limited. Mr Torrey 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 by the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Torrey consents to the inclusion in this Report of the matters based on this information in the form and context in which it appears.

# **CONTACT DETAILS**

#### **Media Enquiries**

Matthew Wu matthew.wu@mcpartners.com.au

#### **Management and Directors**

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Bob Besley	Chairman
Chris Torrey	Managing Director
Greg Jones	Non-Executive Director
Ian Plimer	Non-Executive Director
Ian Hume	Non-Executive Director
Yanina Barila	Alternate Director
Ivo Polovineo	Company Secretary

#### **Registered Office**

Level 1, 80 Chandos Street, St Leonards, NSW 2065, Australia PO Box 956, Crows Nest, NSW 1585, Australia Ph: +61 2 9437 1737 Fax: +61 2 9906 5233 Email: info@silvercityminerals.com.au Web: www.silvercityminerals.com.au

# **Annexure 1 Figures**

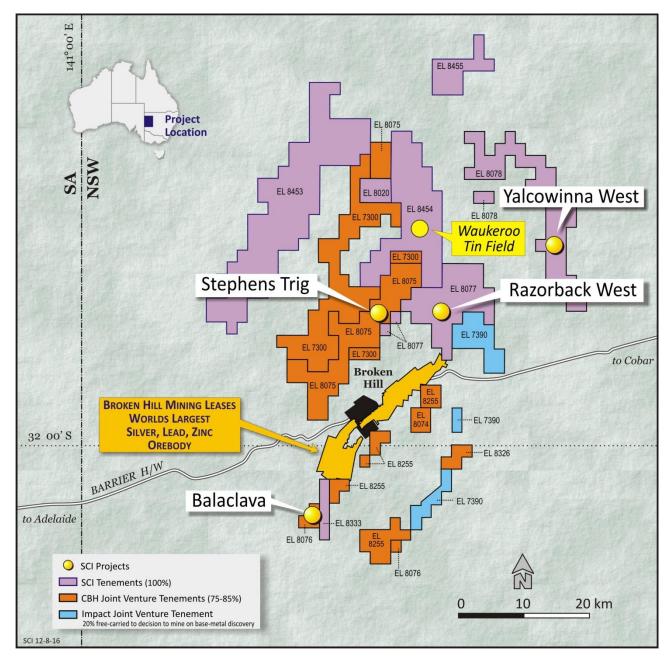


Figure 1. Silver City Minerals tenements

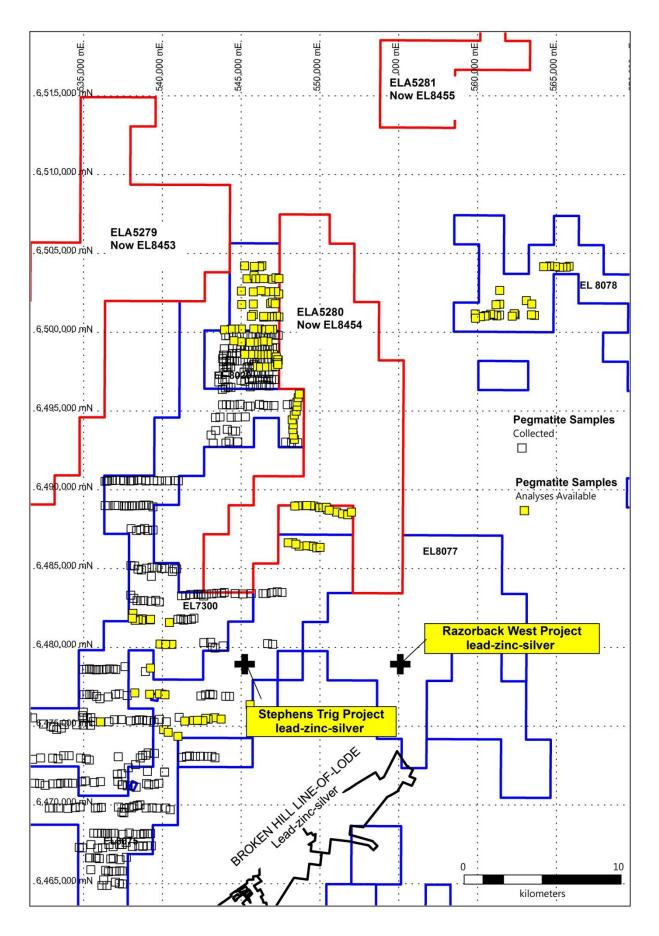


Figure 2 Silver City tenements at Broken Hill. Extent of sampling to date and samples for which analyses are available. EL=Granted Exploration Licence, ELA=Exploration Licence Application

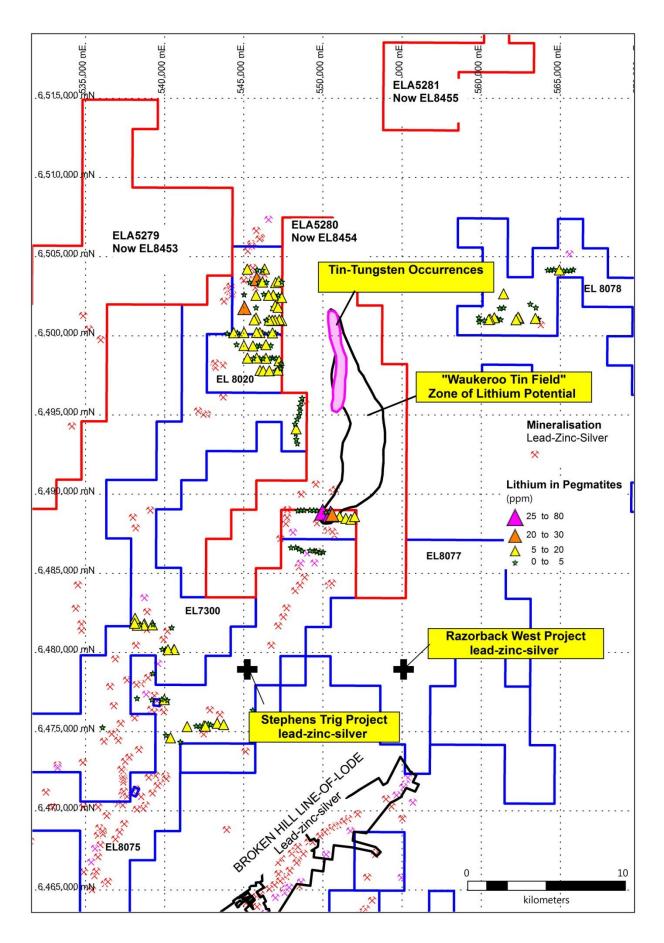


Figure 3. Pegmatite samples showing lithium content. Broken Hill-type base metal-silver mineralisation shown, as are zones of tin and tungsten mineralisation. Lithium is elevated in the southern part of the Waukeroo tin field and is likely to occur in the main part of the field.

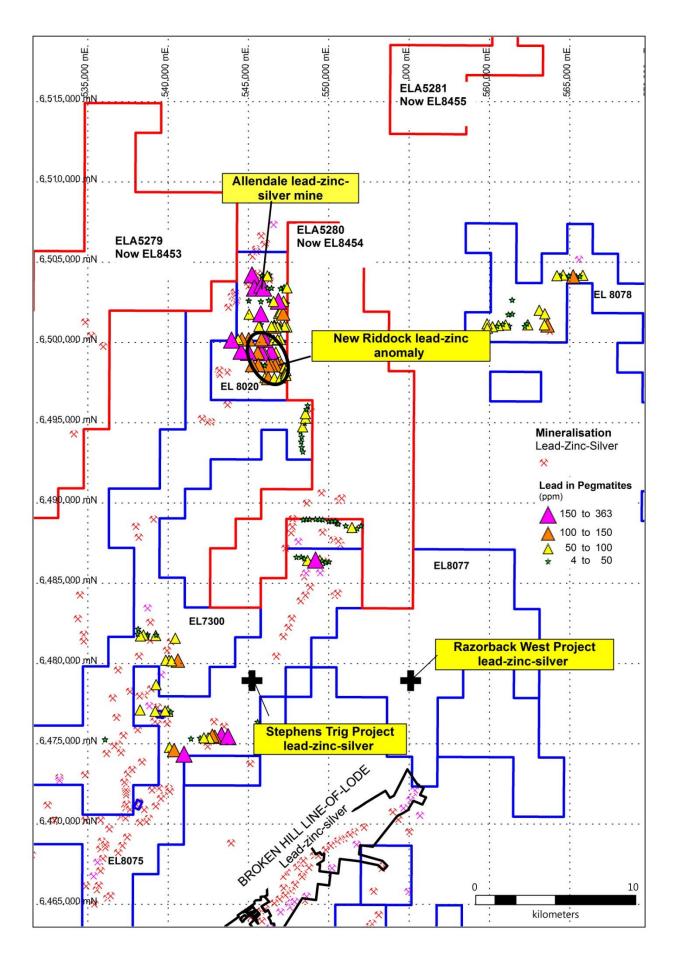


Figure 4 Pegmatite samples showing lead content and the location of the new, unexplored Riddock anomaly.

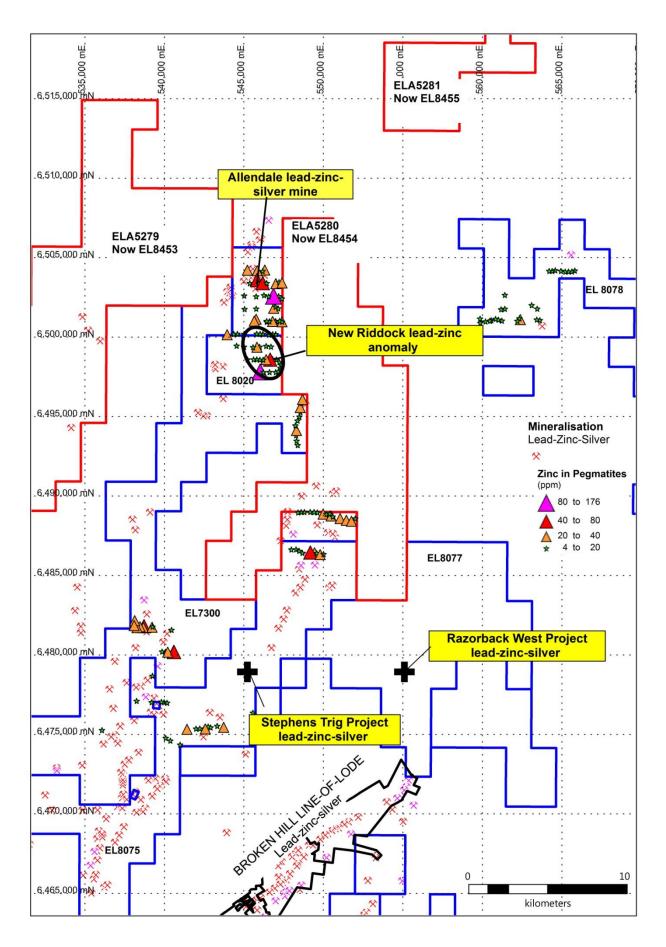


Figure 5 Pegmatite samples showing zinc content and the location of the new, unexplored Riddock anomaly.

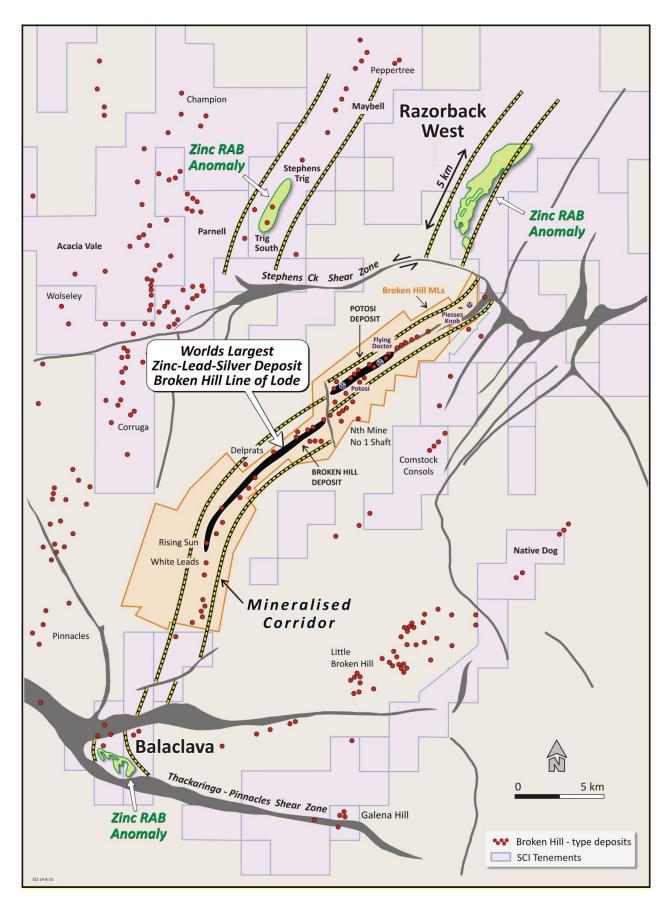


Figure 6. Location of the Razorback West and Balaclava projects in relation to Broken Hill

# ANNEXURE 2

# JORC Code, 2012 Edition – Table 1

# Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	<ul> <li>Rock samples are designed to test a representative pegmatite at the sample site. Grab samples of material of between 2 and 3 kg was selected over outcropping areas of up to 20 square metres.</li> <li>Representivity was achieved by visual selection of material at the sample site.</li> <li>Assays determined are Material to this Public Report</li> </ul>
Drilling techniques	No drilling was undertaken
Drill sample recovery	No drilling was undertaken
Logging	Detailed documentation and description of the sample, including site and rock photography was undertaken
Sub-sampling techniques and sample	<ul> <li>Subsampling was undertaken to obtain a duplicate for follow-up work and potential re- assay.</li> </ul>
preparation	Visual quality control of the sub-sample was undertaken by a geologist.
	• The size of the sample is appropriate to the grain size of the rock sampled.
Quality of assay data and laboratory tests	<ul> <li>Sample preparation was by ALS method PUL-23 whereby the sample was crushed to 70% nominal 6mm, then was riffle-split to a maximum of 3kg then pulverized to 85% passing 75 microns</li> </ul>
	<ul> <li>Four acid digest, multi element ICP-MS analyses for 48 elements. ALS Global method ME- MS61(alsglobal.com).</li> </ul>
	<ul> <li>The nature and quality of the analytical methods are appropriate to style of mineralisation anticipated at this stage in the project and are of industry standard.</li> </ul>
	No duplicates or standards were analysed.
	<ul><li>The laboratory has its own QAQC of systematic standard, repeats and duplicates.</li><li>No geophysical tools were used</li></ul>
	<ul> <li>No external laboratory checks were undertaken and are not appropriate at this early stage of exploration.</li> </ul>
Verification of sampling and assaying	No drilling was undertaken
	<ul> <li>All recorded rock data were recorded manually then entered into an onsite digital data system.</li> </ul>
	No adjustments have been made to data.
Location of data points	<ul> <li>Rock chip sample locations (GDA94 MGA Zone 54) were determined by handheld GPS with an accuracy of +/- 5 metres which is considered an appropriate level of accuracy for regional, early stage target assessments</li> </ul>
Data spacing and distribution	<ul> <li>Pegmatite samples have been collected on east-west oriented sample lines between 400 and 1600 metres apart. Nominal sample spacing along each line varies from 200 to 400 metres depending on the location of the pegmatite outcrop.</li> </ul>
	<ul> <li>Data spacing is sufficient for the nature of a regional assessment survey as outlined but is not sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s).</li> </ul>
	No compositing has been applied

Criteria	Commentary
Orientation of data in relation to geological structure	<ul> <li>Sample orientation is not considered important in the nature of this survey. Extent of bias is unknown</li> <li>No drilling has been conducted</li> </ul>
Sample security	<ul> <li>All samples were assembled in a secure sample facility in Broken Hill before being dispatched to the laboratory by a freight forwarding company.</li> </ul>
Audits or reviews	No audits or reviews have been undertaken

# Section 2 Reporting of Exploration Results

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

Criteria	Commentary
Mineral tenement and land tenure status	<ul> <li>Rock chip sampling has been undertaken on ELs 7300, 8020, 8333, 8078 and 8075. 8075 and 7300. Els 7300 and 8075 are subject to a joint venture agreement with CBH Resources. EL 8020, 8333 and 8078 are 100% SCI. Access agreements are in place for all and no Native Title applies.</li> <li>Three Exploration Licence applications have recently (9 August 2016) been granted (EL 8453 replaces ELA 5279, EL 8454 replaces ELA 5280 and EL 8455 replaces ELA 5281). These are 100% SCI.</li> <li>No impediments to operate are known.</li> </ul>
Exploration done by other parties	<ul> <li>Extensive exploration for base metals, precious metal, tin and tungsten has been conducted on all of the above tenure and is of a high quality.</li> <li>No exploration for lithium has ever been undertaken.</li> </ul>
Geology	BHT zinc-lead-silver deposits and lithium-bearing pegmatites
Drill hole Information	No drilling was undertaken
Data aggregation methods	<ul> <li>No weight averaging has been undertaken in this report.</li> <li>No short lengths have been aggregated</li> <li>No metal equivalent has been reported.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>No drilling has been undertaken</li> </ul>
Diagrams	See Annexure 1
Balanced reporting	<ul> <li>It is impractical to provide all analytical data. Instead samples values for specific elements are depicted as ranges on the accompanying thematic maps.</li> </ul>
Other substantive exploration data	All available information of significance has been included in this or previous reports
Further work	• The program of pegmatite sampling outlined in the report is ongoing. Insufficient results are available at this stage to make any conclusions as to the nature of future work