



## ASX ANNOUNCEMENT

27 September 2016

### Exploration Update

- **Elevated lithium-caesium-tantalum (LCT) in pegmatites in Waukeroo tin field at Broken Hill**
- **Delineation of elevated silver, lead and zinc in pegmatite samples**
- **Potential for undiscovered buried lead-zinc-silver resources in Riddock and Willyama EL's.**
- **Heavy rains in western NSW have delayed planned drill programs at both Cobar and Broken Hill.**

**Silver City Minerals Limited (ASX: SCI) ("Silver City" or "the Company")** has completed an initial phase of sampling of pegmatites within its tenements at Broken Hill and has received all analytical results.

The program was 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.

Lithium minerals are known to occur in the Euriowie tin deposits north of SCI's tenure and the Company has been searching for these in its tenements with similar geology (Figure 1 and 2).

### **Results of Pegmatite Sampling**

The Company has received results for 1072 pegmatite samples which have been collected from its exploration licences at Broken Hill. Results show that the Waukeroo tin field hosts pegmatites with anomalous, but generally low level lithium and associated indicator elements. These are geologically distinctive in that they are quartz and muscovite (mica) enriched and occur in low grade metamorphic rocks.

Elsewhere in the SCI tenements, pegmatites contain abundant quartz and feldspar and are hosted on high grade metamorphic rocks. These pegmatite samples have outlined several areas of silver-lead-zinc anomalism which warrant detailed follow-up sampling.

### *Lithium*

The Waukeroo tin (and tungsten) field located within EL 8454 displays elevated lithium, caesium and tantalum; elements characteristic of lithium deposits worldwide and referred to as LCT pegmatites (Figures 2 to 5).

While lithium anomalism is apparent in a regional sense, sampling to date shows it to be at relatively low levels (maximum value is 319 ppm). The grades returned from samples to date are considered to be insufficient for potential mineral resources. The abundance of the micaceous mineral muscovite ( $\text{KAl}_2(\text{Si}_3\text{Al})\text{O}_{10}(\text{OH},\text{F})_2$ ) in this area, compared to the western and southern areas, suggests there may be a relationship between lithium content and muscovite.

A study of hyperspectral data from an historic drill hole within the tin field indicates the presence of small amounts of the lithium phosphate mineral amblygonite. The study also suggests that muscovite occurs as a late metasomatic replacement of amblygonite. As such elevated lithium within the muscovite would be expected.

In the northern Euriowie tin field, green muscovite in association with amblygonite has been reported to contain up to 0.65%  $\text{Li}_2\text{O}$ .

A similarly micaceous lithium-bearing mineral, lepidolite ( $\text{K}(\text{Li},\text{Al})_3(\text{Si},\text{Al})_4\text{O}_{10}(\text{F},\text{OH})_2$ ), which occurs in the Euriowie field, may also be the source of anomalism within the SCI Waukeroo tin field (within EL 8454). Further follow-up work will focus on this licence.

### *Silver-Lead-Zinc*

An unexpected consequence of the pegmatite sampling program has been the delineation of several silver-lead-zinc anomalies. In previous announcements the Company indicated the presence of the new Riddock anomaly. In addition to this, a number of anomalies, not directly related to known mineralisation, have been outlined in the southern part of the SCI licences.

The company considers there to be potential for undiscovered, buried metal sources associated with these. SCI proposes more work to further assess these, including soil sampling, RAB drilling and geological mapping (Figure 6).

### **Drilling**

Silver City has previously announced that it intends to drill two base-metal projects; one near Cobar (Wilga Downs) and one near Broken Hill (Razorback West). Heavy rains and flooding in western NSW have severely limited access to the ground. The Company has delayed all field operations until the weather has improved. All permits and funding are in place to commence work and a drill rig is available as soon as access is viable.

### **Previous reports related to this release**

ASX releases 11 May 2016, 3 June 2016, 15 August 2016, 19 August 2016, 30 August 2016, 6 September 2016, and 7 September 2016.

## 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 base-metals, 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. Forward-looking 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 forward-looking 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 Person**

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**

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Chris Torrey	Managing Director
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Ian Plimer	Non-Executive Director
Ian Hume	Non-Executive Director
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## Annexure 1 Figures

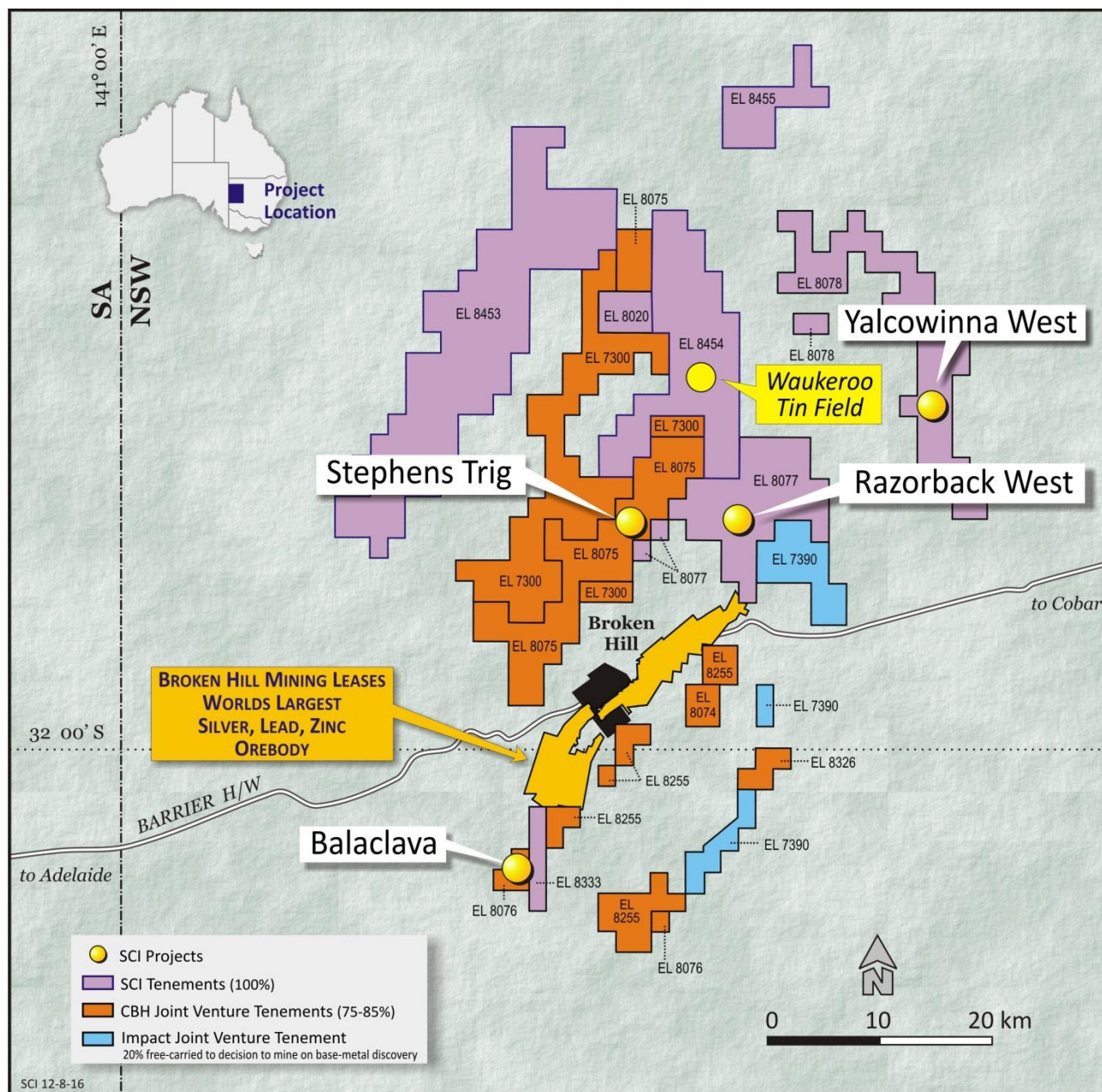


Figure 1. Silver City Minerals tenements



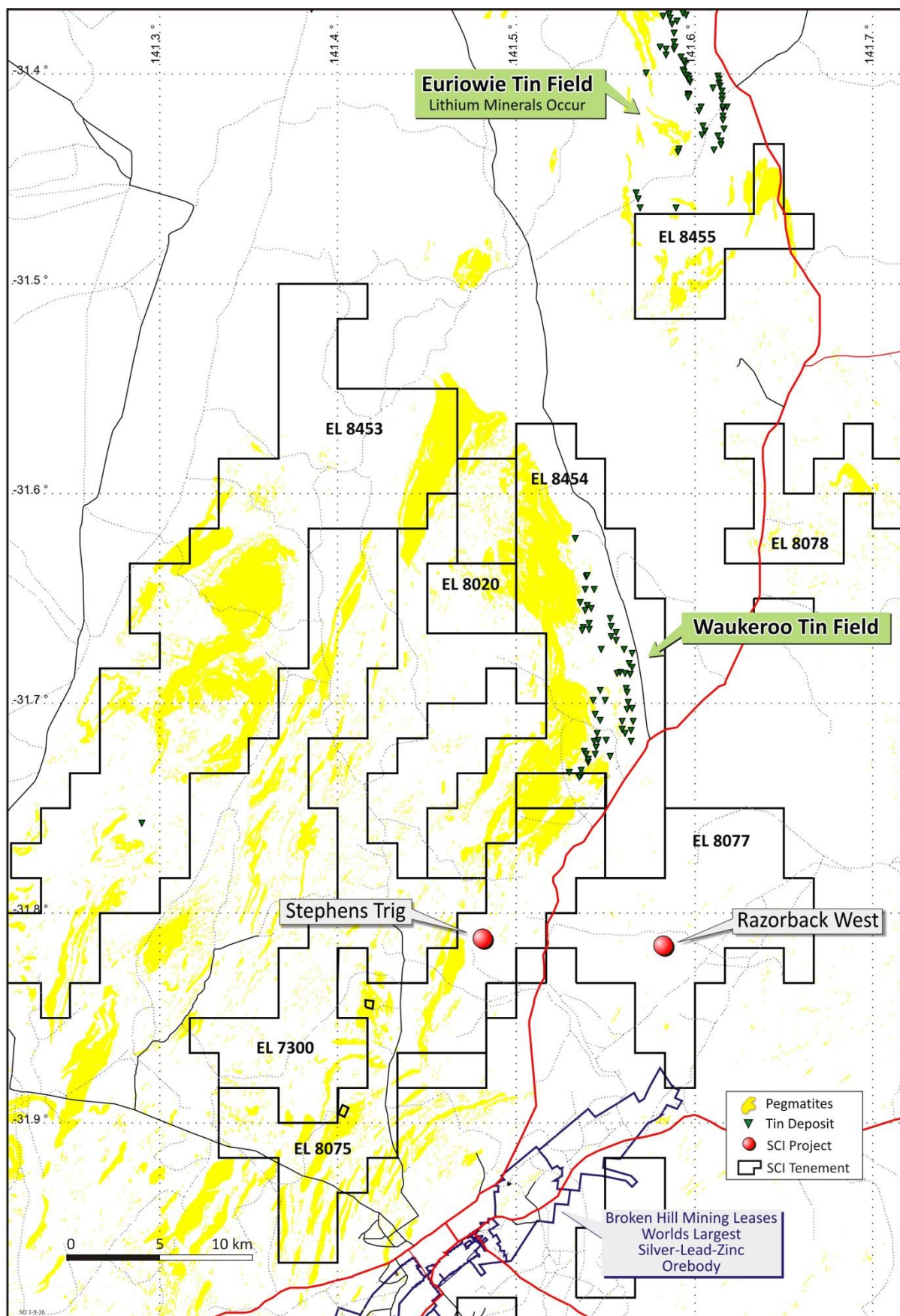


Figure 2. Silver City tenements at Broken Hill. Pegmatites and tin fields shown.

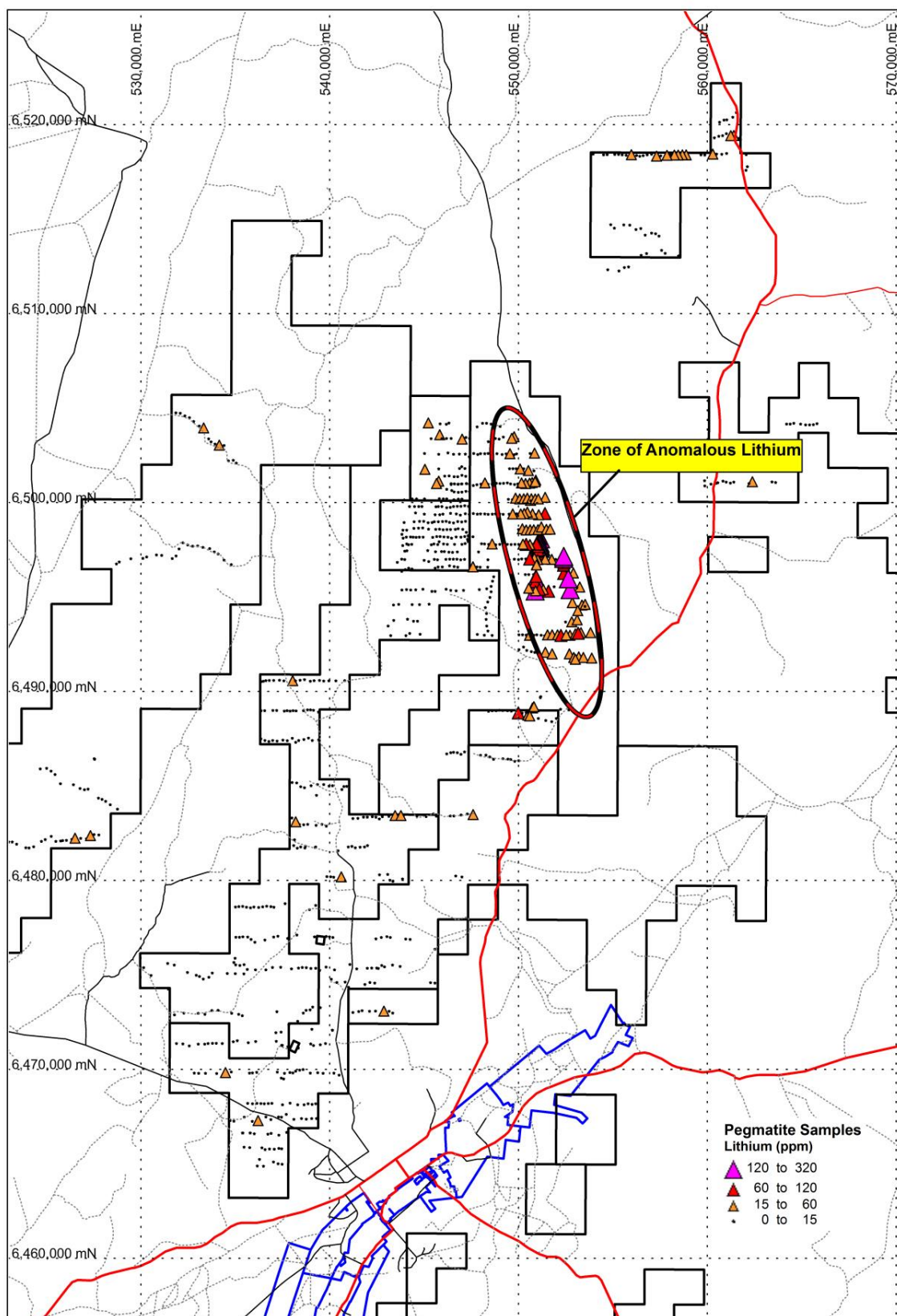


Figure 3. Pegmatite samples showing lithium content. Anomalous lithium is preferentially hosted in the Waukeroo tin field.



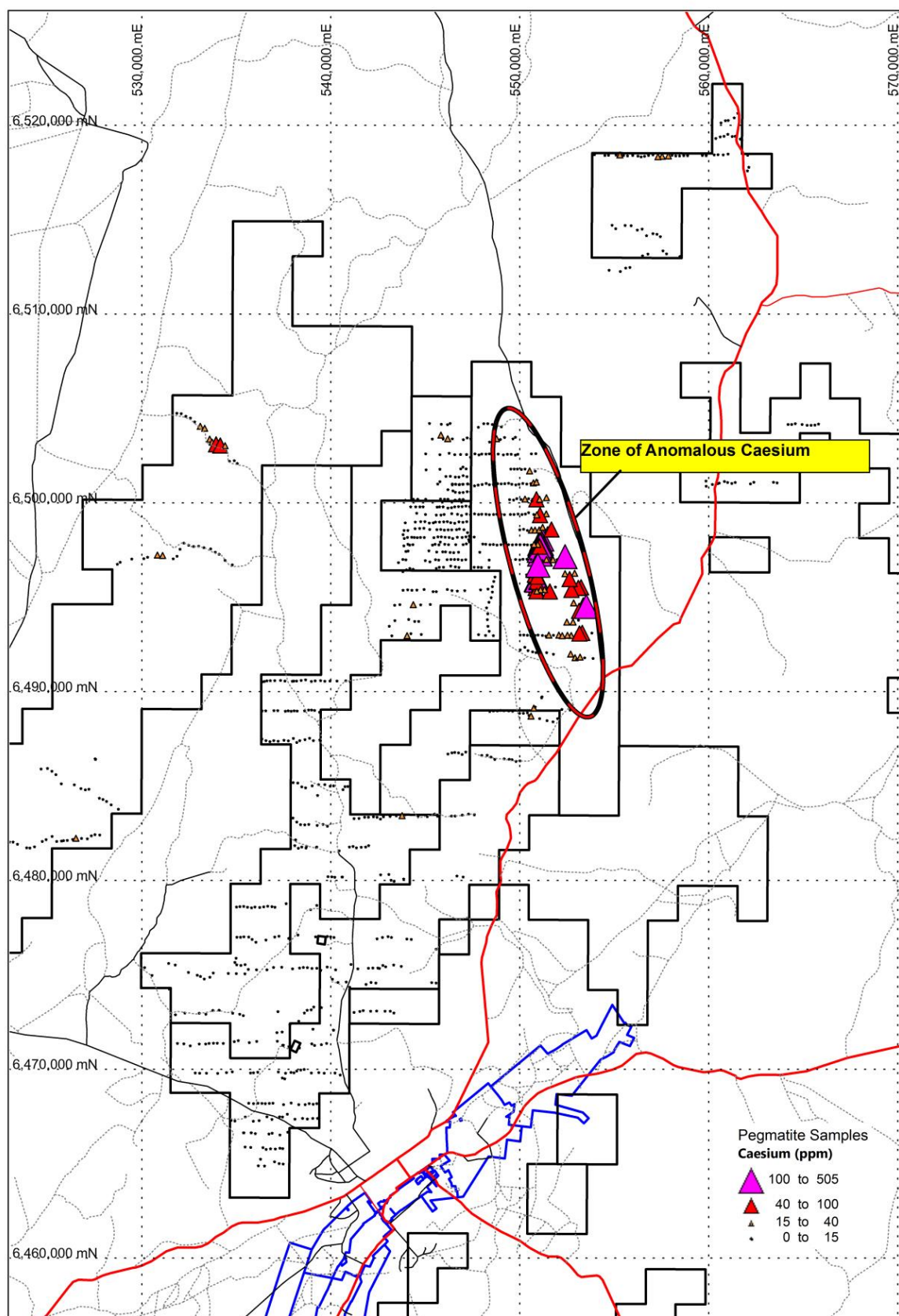


Figure 4. Pegmatite samples showing caesium content. Anomalous zones are located in the Waukeroo tin field.

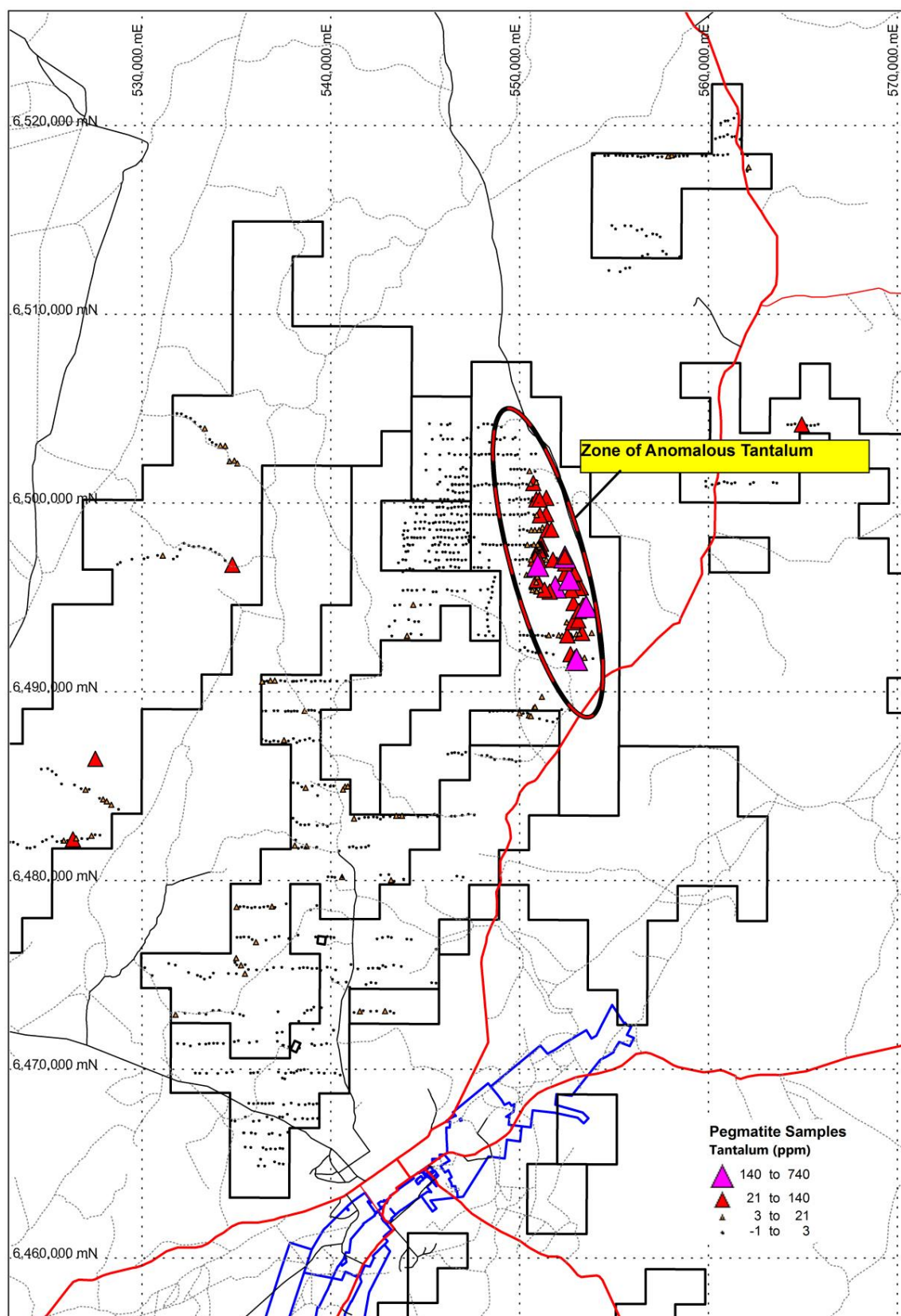


Figure 5. Pegmatite samples showing tantalum content. Anomalous zones are located in the Waukeroo tin field.



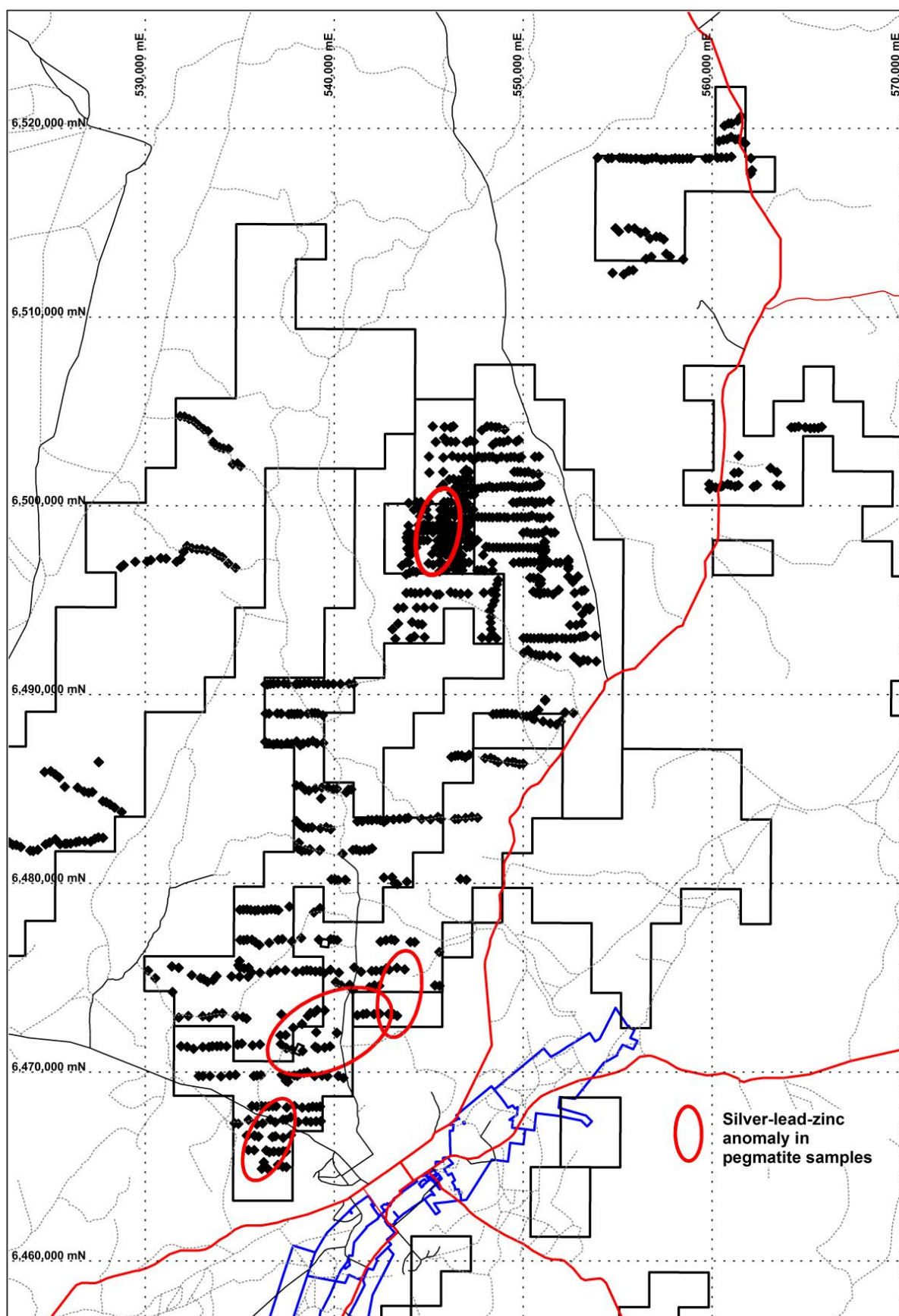


Figure 6 Pegmatite samples showing areas of silver-lead-zinc anomalism.

## ANNEXURE 2

## JORC Code, 2012 Edition – Table 1

## Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	<ul style="list-style-type: none"> <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	<ul style="list-style-type: none"> <li>No drilling was undertaken</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>No drilling was undertaken</li> </ul>
Logging	<ul style="list-style-type: none"> <li>Detailed documentation and description of the sample, including site and rock photography was undertaken</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>Subsampling was undertaken to obtain a duplicate for follow-up work and potential re-assay.</li> <li>Visual quality control of the sub-sample was undertaken by a geologist.</li> <li>The size of the sample is appropriate to the grain size of the rock sampled.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <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> <li>Four acid digest, multi element ICP-MS analyses for 48 elements. ALS Global method ME-MS61(alsglobal.com).</li> <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> <li>No duplicates or standards were analysed.</li> <li>The laboratory has its own QAQC of systematic standard, repeats and duplicates.</li> <li>No geophysical tools were used</li> <li>No external laboratory checks were undertaken and are not appropriate at this early stage of exploration.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>No drilling was undertaken</li> <li>All rock data were recorded manually then entered into an onsite digital data system.</li> <li>No adjustments have been made to data.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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> <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> <li>No compositing has been applied</li> </ul>
Orientation of	<ul style="list-style-type: none"> <li>Sample orientation is not considered important in the nature of this survey. Extent of bias is</li> </ul>

Criteria	Commentary
data in relation to geological structure	<ul style="list-style-type: none"> <li>unknown</li> <li>No drilling has been conducted</li> </ul>
Sample security	<ul style="list-style-type: none"> <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	<ul style="list-style-type: none"> <li>No audits or reviews have been undertaken</li> </ul>

## 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 style="list-style-type: none"> <li>Rock chip sampling has been undertaken on ELs 8453, 8454, 8455, 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, 8453, 8455, 8454 and 8078 are 100% SCI. Access agreements are in place for all and no Native Title applies.</li> <li>No impediments to operate are known.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <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	<ul style="list-style-type: none"> <li>BHT zinc-lead-silver deposits and lithium-bearing pegmatites</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <li>No drilling was undertaken</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>No drilling has been undertaken</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>See Annexure 1</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <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	<ul style="list-style-type: none"> <li>All available information of significance has been included in this or previous reports</li> </ul>
Further work	<ul style="list-style-type: none"> <li>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</li> </ul>