# Sampling underway targeting LCT pegmatites at Trident Lithium Project in NSW

#### **KEY POINTS:**

- Experienced field crew has been mobilised to the Trident lithium, tin, caesium, and tantalum (LCT) project to identify and expand ground for lithium geochemical sampling
- Multiple potential lithium pegmatite anomalies have been identified within the project area to date
- Very little of the tenement and known LCT pegmatites have been subject to systematic exploration or geochemical sampling
- A detailed review of public data including existing geophysical surveys is underway
- Historical geochemical sampling results within the tenement area include the following encouraging rock chip samples<sup>187</sup>:

Triumph Mine: 7.63% Li2O
Lady Don Mine: 4.45% Li2O
Trident Mine: 3.88% Li2O
Sceptre Mine: 1.56% Li2O
Esams No.2 Mine: 1.05% Li2O

#### Commenting on the start of the Trident sampling program, CEO Simon Phillips said:

"We are delighted to have our team on the ground at Trident and we are looking forward to investigating several high priority lithium and tin targets with this initial sampling program. This program has been specifically designed to define anomalous lithium, caesium and tantalum pegmatites, along with associated pathfinder elements, within these target areas.

Minimal historical work has been completed across this project, so this sampling program will significantly add to the geological knowledge of the greater tenement package. TSC has a busy pipeline of activity planned across its NSW and WA projects in the months to come and I look forward to updating our shareholders further in due course."

Twenty Seven Co. Limited (ASX: TSC) ("TSC" or "the Company") is pleased to report that it has expedited the commencement of the geochemical sampling program in light of the exciting new

**lithium and tin occurrences** recently confirmed by the Company based on a review of historical work undertaken on its 100% owned Trident Project in NSW ("**Project**").

As recently reported (see ASX release dated 16 September 2021), TSC's technical team has compiled extensive amounts of historical geochemical data from the NSW MinView geological database covering the Project, which has led to the identification of multiple new lithium and tin targets. These anomalies have coincidental lithium, caesium and tantalum, with ± niobium, ± tin – which suggest the presence of lithium, caesium, tantalum pegmatites (LCT pegmatites).

TSC's field crew will target these anomalies with a program of systematic sampling and geological mapping, with the program expected to take 2 weeks to complete.

The LCT pegmatites identified within the project area have been sampled by previous explorers and show that lithium occurs within amblygonite, and lesser spodumene which are both important minerals for lithium mining. Historically, sporadic tin mining occurred in the Euriowie Tin Field from the 1880's to 1970's, leaving the area littered with evidence of old workings.

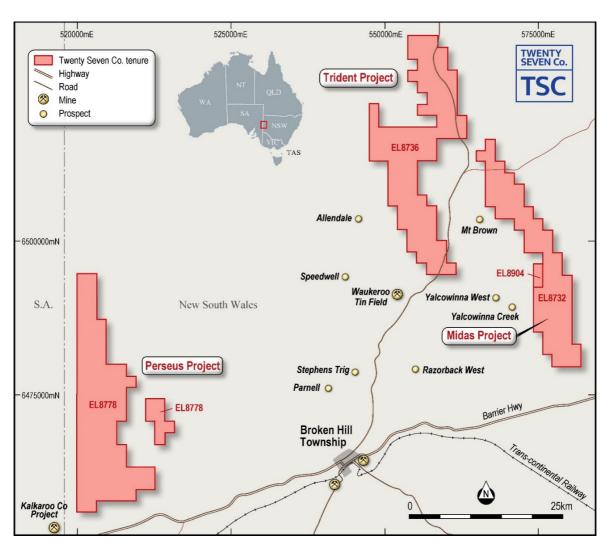


Figure 1: Location of TSC's Broken Hill tenements

#### **LCT Mineralisation Model**



Felsic pegmatites are igneous intrusive bodies of granitic composition with extremely coarse grainsize. LCT pegmatites are a subset of granitic pegmatites that consist mostly of quartz, potassium feldspar, albite, and muscovite. LCT pegmatites host the significant Greenbushes lithium deposit in Western Australia,  $(133.1 \text{Mt} \ @ \ 2.1\% \ \text{Li}_2\text{O})^2$  as well as other numerous significant lithium deposits.

Within the Curnamona Province in the Broken Hill Block, pegmatites are largely conformable to stratigraphy and have similarities to sill complexes (Fitzherbert, 2015). Pegmatites within the region are hosted within Paleoproterozoic and Mesoproterozoic units with each affecting the composition and mineralisation type. The oldest rocks within the Thackaringa and Broken Hill Groups are metamorphosed to higher grade granulite and upper amphibolite facies and younger rocks within the Sundown and Paragon Groups are metamorphosed to lower amphibolite to greenschist facies (Figure 2).

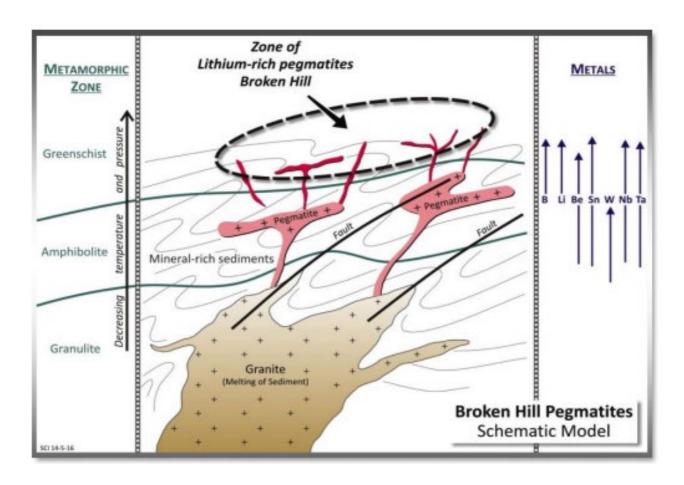


Figure 2: Pegmatite schematic model for the Broken Hill region showing sill development within different metamorphic facies present within the Euriowie tenure [EL8736] (Silver City Mining)<sup>4</sup>



Importantly, a recent study into the lithogeochemistry of pegmatites in the region highlighted that pegmatite hosted within lower amphibolite and greenschist facies of the Sundown and Paragon Groups contain tin, tungsten, lithium, niobium and tantalum, while pegmatites within higher grade metamorphic rocks host elevated lead-zinc-silver-manganese (Coianiz, 2018)<sup>3</sup>. The bulk of the LCT pegmatites in the Project area occur within the Paragon Group. The pegmatites can be divided into two prospectivity groups as shown below:

- Pegmatite hosted in lower amphibolite and greenschist facies of the Sundown and Paragon Groups are referred to the 'upper sill complex' (includes LCT - Waukeroo Type pegmatites); and
- 2. Pegmatites (and leucogranite) within the granulite and upper amphibolite facies of the Thackaringa and Broken Hill Groups can be described as a 'lower sill complex' as they form bodies which are largely strata bound (*Figure 3*).

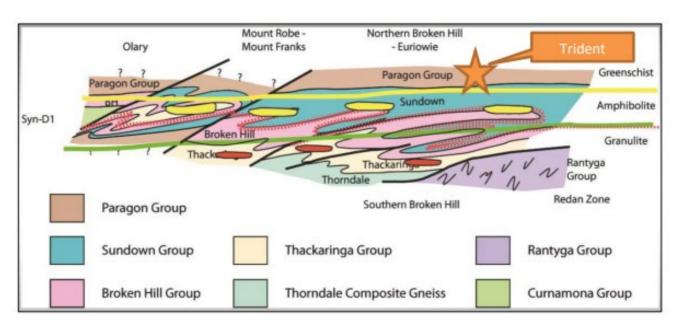


Figure 3: A conceptualisation of the Pegmatites in the Broken Hill Region showing sill development within the local stratigraphy of the Trident Project (After Stevens 2006) <sup>5&6</sup>

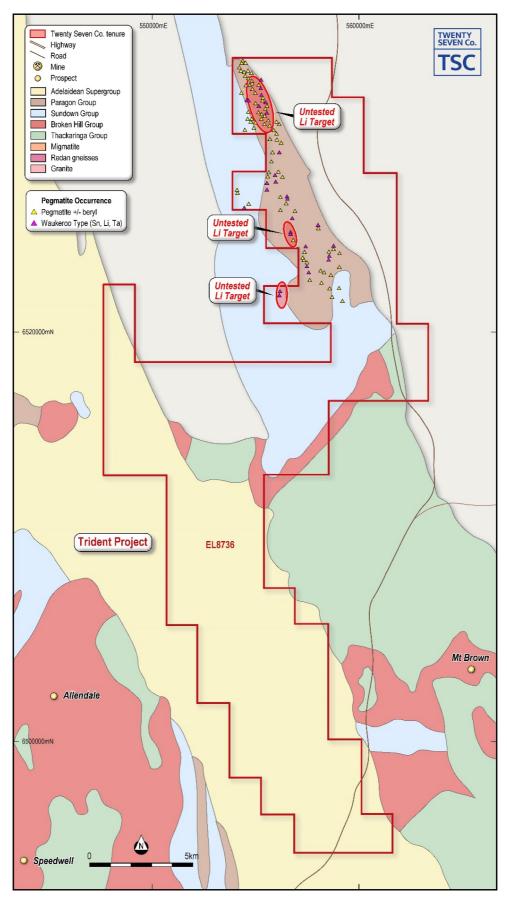


Figure 4: Location of pegmatite occurrences and lithium targets within Trident



## **Next Steps**

TSC's planned operational activities over the coming months include the following:

- Analysis and interpretation of assay results from Trident programme which will establish the base for next steps,
- Commence drilling key anomalies at the Rover Project in WA; and
- Commence geochemical sampling along the Edale shear at Rover.

The Board of Twenty Seven Co. Limited authorised the release of this announcement to the ASX.

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#### **References**

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- 2. BDA Independent Technical Report for Greenbushes Lithium Operation, March 2020; Mineral Resources are inclusive of Ore Reserves. The estimate has not been depleted for mining after 31 March 2018.
- 3. Coianiz, Glenn & Torrey, Chris. (2018). Lithogeochemistry of Pegmatites at Broken Hill: An Exploration Vector to Mineralisation. ASEG Extended Abstracts. 2018. 1. 10.1071/ASEG2018abM1\_2D.
- 4. Silver City Minerals Proactive investor presentations (5-6 July 2016)
- 5. Stevens, B.P.J. & Burton, G.R. (1998). The early to late Proterozoic Broken Hill Province, New South Wales. 17. 75-86
- 6. Nile Exploration Information memorandum: Overview of Lithium potential of the Trident Project in NSW (EL8736) unpublished report
- 7. Refer to ASX announcement dated 16<sup>th</sup> September 2021: Lithium and Tin Targets Identified at Trident Project, NSW



### **Competent Person's Statement**

The information in this report relates to historical mineral exploration results and is based on work reviewed and compiled by Mr. Stephen F Pearson, a Competent Person and Member of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Pearson is a beneficiary of a trust which is a shareholder of TSC. Mr. Pearson is a Senior Geologist for GEKO-Co Pty Ltd and contracted to the Company as Exploration Manager and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity that 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. Pearson consents to the inclusion in this report of the information in the form and context in which it appears. The Australian Securities Exchange has not reviewed and does not accept responsibility for the accuracy or adequacy of this release.

## **About Twenty Seven Co. Limited**

Twenty Seven Co. (ASX: TSC) is an ASX-listed explorer. TSC's Australian assets comprise two tenure groupings detailed briefly as follows:

#### WA Archaean Gold assets:

- Mt Dimer Project: is made up of mining lease M77/515 and exploration license E77/2383. The project is highly prospective for Archean gold. The recent soil geochemical sampling undertaken over the exploration license to the west of the MDML shows the potential for further mineralisation to be defined within the greater project area.
- Yarbu Project: This project is located on the Marda Greenstone belt ~ 80km to the northwest of the Mt Dimer Project. Yarbu consists of three exploration licenses (E77/2442, E77/2540 and E77/2539) which cover approximately 223sq km and are highly prospective for Archean gold deposits.
- Rover Project: TSC's 100% owned Rover project is located near Sandstone in a base metals and gold mineral rich area associated with Archean greenstone belts. The Rover Project is a large 460sqkm tenure package covering two linear Archean greenstones, with a combined length of around 160km. Historically the area is underexplored and is currently undergoing a resurgence in exploration.

#### NSW Iron Oxide-Copper-Gold and Lithium assets:

- The **Midas Project** is prospective for iron oxide copper gold (IOCG) and is located 40km NE of Broken Hill.
- The **Perseus Project** is prospective for iron oxide copper gold (IOCG) and historically has been underexplored and is located ~50km west of Broken Hill.
- The **Trident Project** is prospective for iron oxide copper gold (IOCG) tin and lithium pegmatites and is located ~35km north-east of Broken Hill.

