

## ASX ANNOUNCEMENT

12 September 2023

### LITHIUM EXPLORATION ACCELERATING IN THE BLACK HILLS, SOUTH DAKOTA

- Patriot is accelerating its exploration program on its 100% owned Keystone and Tinton West Projects in the Black Hills of South Dakota and Wyoming.
- The mapping and sampling program follows Patriot's recently completed reconnaissance, which successfully identified areas of high prospectivity for pegmatite-hosted Li mineralisation.
- The current program will complete and extend sampling and mapping of pegmatites identified as potentially lithium fertile across Patriot's Keystone and Tinton West claims, with the aim of generating drill targets.
- Patriot's Keystone project is located 3.5km from the historic high-grade Etta Li mine<sup>1</sup> which recorded a head grade of up to ~6.0% Li<sub>2</sub>O and yielded up to >14m-long spodumene crystals<sup>2</sup>, the largest ever mined.

Patriot Lithium Limited ("**Patriot**", "**PAT**" or the "**Company**") is pleased to announce that exploration at the Company's 100% owned Black Hills Projects is now underway for the purpose of systematic sampling and mapping of pegmatites identified as potentially lithium fertile and with the aim of generating drill targets.

#### **Patriot CEO and MD Mr Nicholas Vickery commented:**

*"We are pleased to recommence our exploration program within our prospective Black Hills portfolio following the exciting identification of potentially fertile lithium-bearing pegmatites at Keystone, only 3.5km from the historic high-grade Etta, Edison and Hugo Li mines<sup>1</sup> and in the same region as Iris Metals' Beecher project. The historic Etta mine operated from 1898 to 1960, recording a head grade of up to ~6.0% Li<sub>2</sub>O and yielded up to >14m-long spodumene crystals, believed to be the largest ever mined.<sup>2</sup>*

*This program will systematically sample and map pegmatite intrusions identified as potentially lithium fertile across Patriot's Keystone and Tinton West claims.*

*This follow up program is designed to help generate drill targets across Patriot's Black Hills claims, particularly in areas where we have previously identified potentially Li-fertile pegmatite outcrops."*

<sup>1</sup> The claims over these historic mines are not owned by Patriot.

<sup>2</sup> Page et al. 1953 (USGS Professional Paper 247)

## Keystone Project

Prospecting conducted earlier this year identified outcrops of potentially lithium-bearing pegmatites within the Keystone Project (refer to ASX Announcement dated 25 August 2023) located to the northeast of and only kilometres from the historic Etta, Edison and Hugo mining operations, the largest and most significant historic Li producers in the Black Hills (Page et al. 1953: USGS Professional Paper 247).

PAT's priority at Keystone is to systematically map and sample the previously identified, potentially Li-bearing pegmatites, followed by additional exploration across the Keystone claim package to identify new outcrops not evident in satellite imagery. Given that many pegmatites are concealed beneath the forest canopy and/or covered by thick layers of lichens (e.g., New Find, Figure 1), traversing the area on foot is the only means of locating these hidden pegmatites.

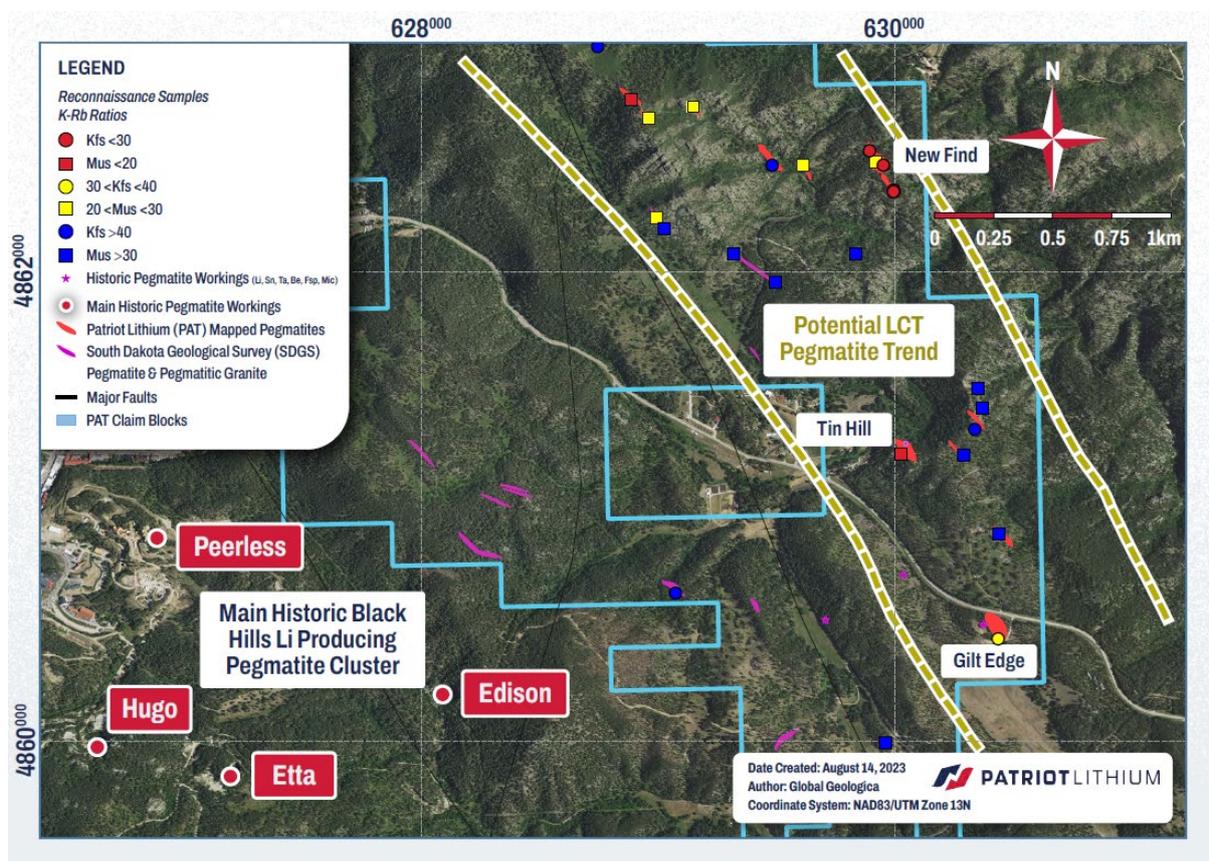


Figure 1 Initial area of interest in the Keystone project, where potentially lithium-bearing pegmatites have been mapped.

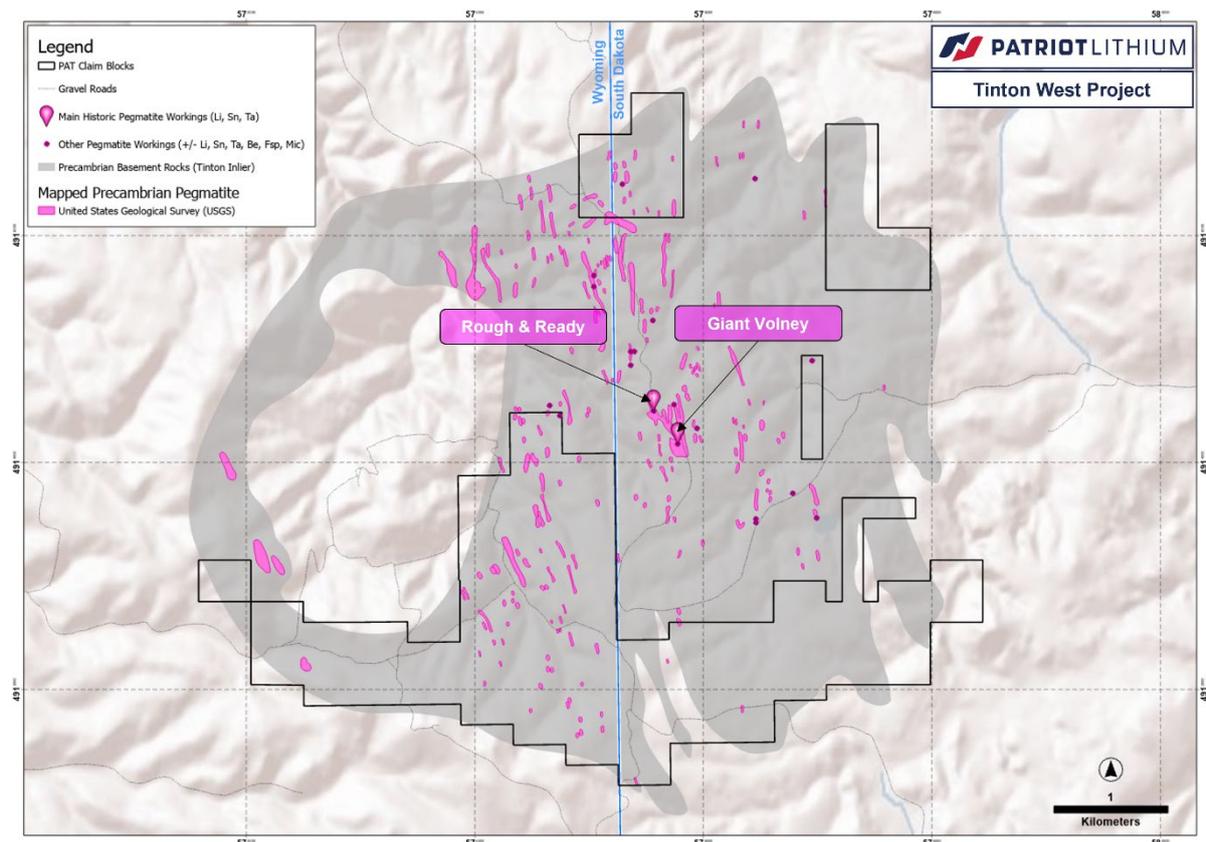
## Tinton West Project

Historical mapping of the Tinton district published by the United States Geological Survey in 1941<sup>3</sup> focused on tin-bearing pegmatites. The historic mapping identified several pegmatite outcrops that now sit within Patriot's claims to the southwest and north of the historic Giant

<sup>3</sup> Smith, W.C., and Page, L.R., 1941, Tin-bearing pegmatites of the Tinton district, Lawrence County, South Dakota, a preliminary report: United States Geological Survey, Bulletin 922-T

Volney tin, tantalum, lithium, niobium and feldspar mine. One of the outcrops was identified in 1941 to be 465m long and up to 50m wide.<sup>4</sup>

The current exploration program will initially focus on the historically identified outcrops (Figure 2) and then expand to attempt to locate new outcrops within PAT's claim blocks. Portable XRF and LIBS measurements will be used to assess samples in the field, and a batch of samples will be submitted for analysis by SGS in Burnaby, BC.



**Figure 2** Tinton West claim blocks, with outlines of pegmatites mapped by USGS and the location of the Giant Volney and Rough and Ready Sn-Ta-Li deposits. PAT is the largest LCT pegmatite-focused claim holder in the Tinton Inlier.

### Geological contractors

Geologists from Aurum Exploration Limited (Aurum) and Burgex Inc. (Burgex) have been engaged to execute the follow-up exploration program, which will be managed by Aurum.

Aurum is an international provider of contract field exploration services at all stages of exploration and mining. The company has experience across numerous commodities and mineral deposit types, including LCT pegmatite systems.

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<sup>4</sup>Note that tin-tantalum pegmatites of the kind sought to support the war effort in 1941 may not have been fully assessed at the time for their lithium potential.

Burgex is a US based contactor that provides comprehensive mining consulting services. With experience in LCT pegmatite systems and the Black Hills region, Burgex will assist the Aurum team to deliver the exploration program.

### **Next Steps**

The Keystone mapping and sampling program is scheduled for up to 4 weeks of field work, followed by an additional up to 2 weeks on the Tinton West tenements. Rock chip and soil samples collected will be sent for assaying. Laboratory turnaround remains variable but is currently expected to be no longer than 6 weeks.

Once assays are received, the program results will be assessed to define and prioritise drill targets.

This announcement is authorised for ASX release by Nicholas Vickery, Managing Director of the Company.

**ENDS**

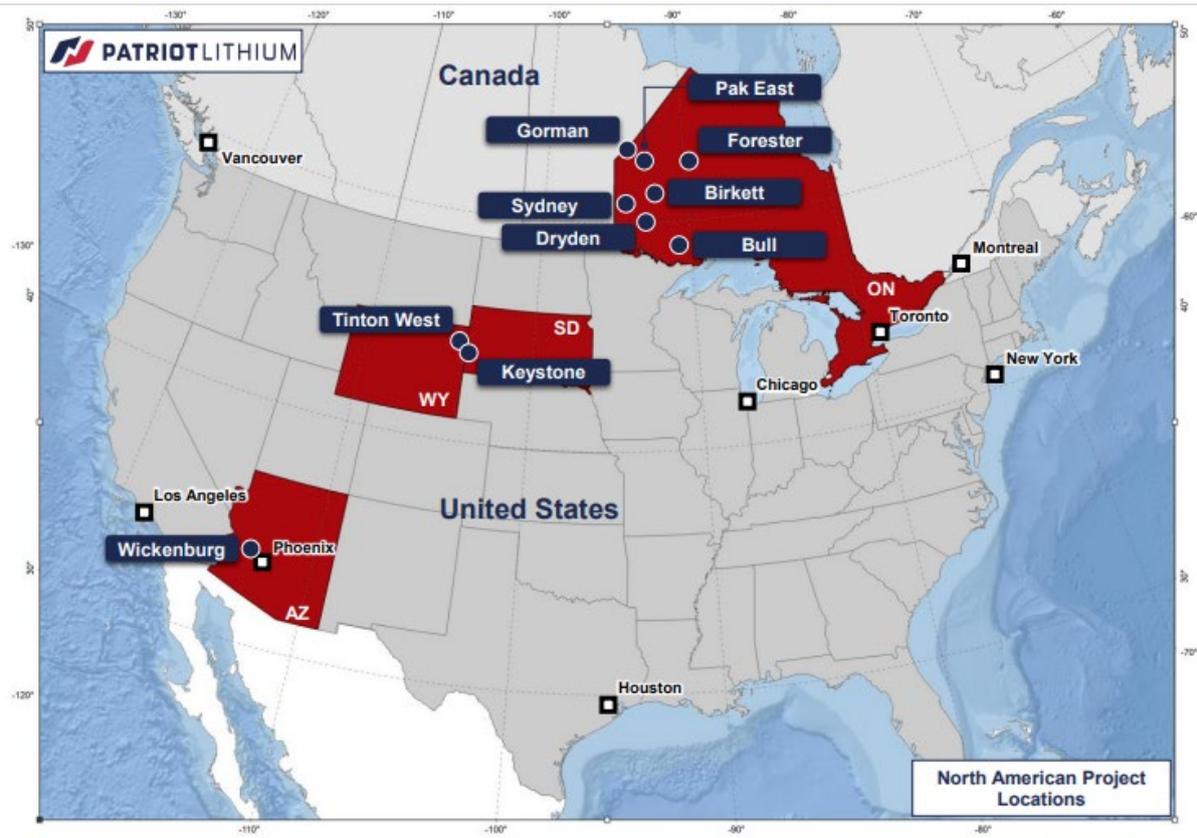
**For more information, please contact:**

**Nicholas Vickery**  
**Patriot Lithium Limited**  
**+61 8 9322 7600**

**Jonathan van Hazel**  
**Citadel-MAGNUS**  
**+61 411 564 969**

## ABOUT PATRIOT LITHIUM LIMITED

Patriot Lithium Limited is primarily focused on the exploration of high-grade, hard rock lithium projects located in the prolific Black Hills lithium district of South Dakota and Wyoming and the Pegmatite Belt of Arizona, United States of America, as well as highly prospective Archean Greenstone Belts in northwest Ontario, Canada. The Company intends to build the size and scale of these properties by staking additional lithium prospective ground and through pragmatic assessment of potential acquisition opportunities. Patriot is working with US-based exploration, generative and land management teams to progress exploration and project development.



### Competent Person's Statement

The information in this announcement that relates to Exploration Results is based on information compiled and conclusions derived by Mr David Johnson and Dr Oliver Kreuzer.

Mr Johnson is a Member (#4358) of the Australian Institute of Geoscientists (AIG). Mr Johnson is an employee of Patriot Lithium Limited and holds securities in the Company. Mr Johnson has sufficient experience which is relevant to the style of mineralisation and types of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Johnson consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Dr Kreuzer is a Member (#2762) and Registered Professional Geologist (RPGeo #10073) of the Australian Institute of Geoscientists (AIG) and a Member (#208656) of the Australasian Institute of Mining and Metallurgy (AusIMM). Dr Kreuzer is an employee of Patriot Lithium Limited and holds securities in the Company. Dr Kreuzer has sufficient experience which is relevant to the style of mineralisation and types of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Kreuzer consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

### **Forward Looking Statements**

Some statements in this announcement regarding estimates or future events are forward-looking statements. Forward-looking statements include, but are not limited to, statements preceded by words such as "planned", "expected", "projected", "estimated", "may", "scheduled", "intends", "anticipates", "believes", "potential", "could", "nominal", "conceptual" and similar expressions. Forward-looking statements, opinions and estimates included in this announcement are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Statements regarding plans with respect to the Company's mineral properties may also contain forward looking statements.

Forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. Forward-looking statements may be affected by a range of variables that could cause actual results to differ from estimated results expressed or implied by such forward-looking statements. These risks and uncertainties include but are not limited to liabilities inherent in exploration and development activities, geological, mining, processing and technical problems, the inability to obtain exploration and mine licenses, permits and other regulatory approvals required in connection with operations, competition for among other things, capital, undeveloped lands and skilled personnel; incorrect assessments of prospectivity and the value of acquisitions; the inability to identify further mineralisation at the Company's tenements, changes in commodity prices and exchange rates; currency and interest rate fluctuations; various events which could disrupt exploration and development activities, operations and/or the transportation of mineral products, including labour stoppages and severe weather conditions; the demand for and availability of transportation services; the ability to secure adequate financing and management's ability to anticipate and manage the foregoing factors and risks and various other risks. There can be no assurance that forward-looking statements will prove to be correct.