

Pioneer Expands Strategic Uranium Footprint with Grant of Botsalano Uranium Project in Botswana

Highlights

- **Prospecting Licence PL0284/2025** granted for the Botsalano Uranium Project, covering 815 km² in southern Botswana, along the South Africa border.
- **Strategic landholding** within the Botsalano Ring Complex, a 40km-diameter structure in the Kaapvaal Craton, hosting Archaen granites, iron oxide-altered breccias, and leucogranites, ideal settings for uranium mineralisation akin to globally significant deposits like Namibia's Rössing Mine.
- **Multiple uranium targets identified, with three key styles supported by the geological setting::**
 - **Leucogranite-hosted** uranium, analogous to Rössing, Namibia.
 - **Breccia hosted IOCG-style uranium–copper along ring fractures.**
 - **Secondary roll-front or calcrete uranium** in neighbouring sandstones and paleochannels.
- **Proven Pedigree:** Previously held by UraMin Inc, acquired by Orano for £1.8 billion in 2007, the project's uranium potential is underscored by its geological similarities to world-class uranium assets.
- **Botswana ranks as Africa's most politically stable** with established infrastructure along the main North-South corridor, including rail, roads, power, and water supply. **Botsalano adds a third uranium jurisdiction to Pioneer's pipeline** (Namibia, USA, Botswana), aligning with the Company's global critical minerals strategy.

Pioneer Lithium Limited (ASX Code: **PLN**) ('Pioneer' or 'the Company') is pleased to announce it has been granted Prospecting License PL0284/2025 known as the Botsalano Project located in Southern Botswana. The project lays along the southern border between Botswana and South Africa with excellent access to infrastructure. The inferred ring structure and associated breccia structures intruded into a sandstone host is an ideal geological environment to host uranium mineralisation.

Commenting on the granted prospecting license, Pioneer CEO said:

"The addition of the Botsalano Project adds to the growing portfolio of Pioneer's uranium projects and reinforces Pioneer's goal to become a global provider of critical minerals required for the global transition to low carbon emission sustainable power supply.

The project's uranium potential is supported by its past ownership by UraMin Inc, which was acquired by Orano for £1.8 billion in 2007, reflecting strong historical confidence in the region's geological prospectivity. Multiple styles of uranium mineralisation are prospective including breccia hosted uranium

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mineralisation as seen elsewhere in brecciated iron oxide flooded environments and leucogranites like those found in Namibia at the Rossing Mine and Pioneers Warmbad assets.”

Botsalano Uranium Project Overview

The Botsalano Uranium Project is in Botswana, Africa along Botswana’s southern border with South Africa. The project Spans 815 km² and is located around the town of Lobatse which has main roads heading south into South Africa and main roads heading north to Gaborone.

With the close proximity to main roads throughout the project area there will be excellent access to water and power as required as well as a major rail system near the northern side of Botswana linked up by main roads from the project area

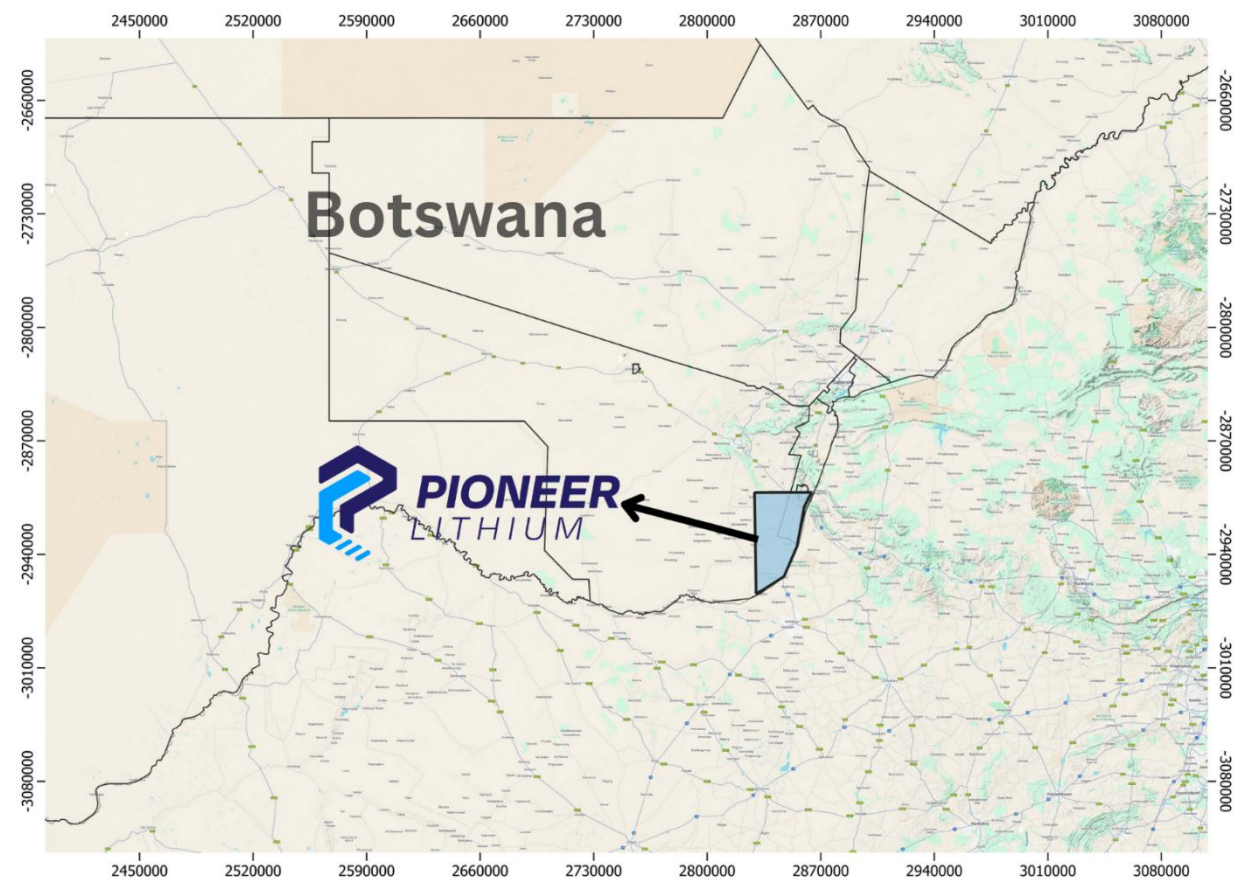


Figure 1: Regional map showing the location of the Botsalano Uranium Project along the boarder of Botswana and South Africa.

Botsalano Uranium Project Geology

The Botsalano Uranium Project is located in the Kaapvaal Craton which covers the south to central part of Botswana and covers roughly the top half of South Africa. The project area is located within a structure known as the Botsalano Ring Complex which straddles South Africa and Botswana. The Botsalano Ring Complex has a diameter of approximately 40km and is dominated by Archaen aged granites.

The oldest rocks in the region are the Archaen aged Kanye Formation. The Kanye Formation is represented by a black to purple fine to very fine-grained felsite rock with minor alkali feldspars.

The Kanye Formation is intruded by the Archaen aged Gaborone Granite which is dominated by the presence of mafic dykes creating a distinct magnetic pattern of closely spaced lineaments. The

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Gaborone Granite is the collective name for a range of varied granites from leucogranites, granophyres and microgranites.

Unconformably overlying the Gaborone Granite and Kanye Formations is the Proterozoic aged Transvaal Supergroup comprising a lower volcanic unit with mafic and felsic lavas and an upper sedimentary unit containing shales and quartzite rocks.

Covering around half of the project area is a Quaternary aged sand and soil cover concealing some of the Archaean aged rocks.

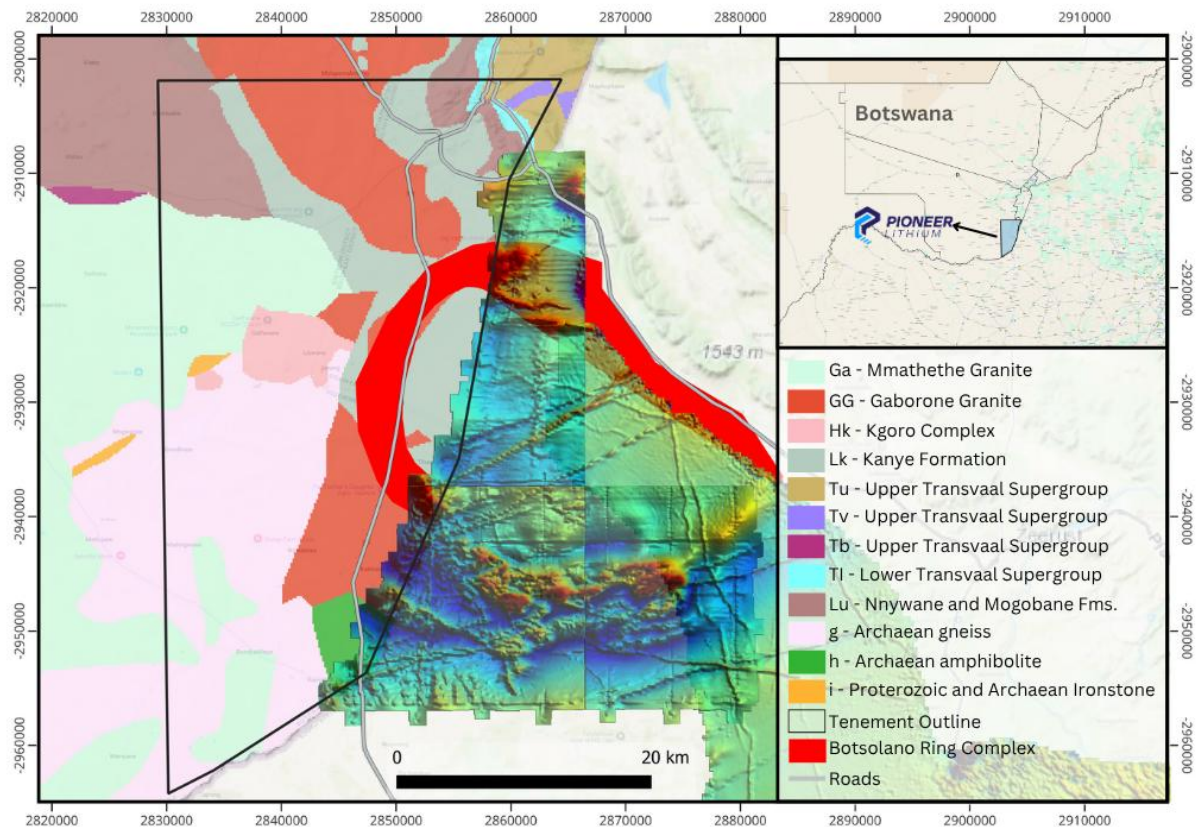


Figure 2: Geological map of Botswana basement geology showing the inferred location of the Botsalano Ring Complex inferred from Magnetic data from the South African side of the border¹.

Potential Mineralisation Styles at Botsalano

Leucogranite-hosted uranium (alaskite type) - The red leucocratic granite phase is silica-rich, depleted in mafic minerals and belongs to the A-type affinity that commonly concentrates uranium, thorium and fluorine during late-stage magmatic differentiation. It is analogous to the Rössing deposit in Namibia where disseminated uraninite occurs in sheeted alaskite dykes hosted by an anorogenic granite dome; Petrographic similarities between Rössing alaskite and leucogranite granites of the Botsalano Ring Complex support the conceptual idea that bulk-tonnage disseminated uranium could reside in Botsalano's leucogranite cupolas.

Breccia hosted uranium - The ring-fault architecture and evidence for caldera collapse imply zones of intense brecciation that could have channelled mineralising fluids. Uranium ore in collapsed or diatreme breccias. The research paper titled "*The Botsalano Ring Complex in the Gaborone-Kanye Igneous Terrane: Possibilities for Olympic Dam-type (Fe-Cu-U-Au-REE) and Epithermal Au Deposits*" explores

¹ Council for Geoscience South Africa

the mineralization potential of the Botsalano Ring Complex (BRC) within Botswana's Gaborone-Kanye Igneous Terrane. It draws comparisons to the Olympic Dam deposit in South Australia, suggesting that the BRC may host similar Iron Oxide Copper-Gold (IOCG) and epithermal gold mineralization systems.

Secondary uranium mineralisation-The weathering of uranium-bearing granites releases uranium into groundwater. In arid terrains this uranium is either trapped in near-surface calcrete horizons, as at Langer Heinrich in Namibia, or reduced at redox fronts within permeable sandstones to form roll-front ore bands. Botswana's own Letlhakane deposit, a shallow calcrete-sandstone system grading about 0.017 per cent U_3O_8 , confirms the regional efficacy of this model².

Historic Exploration

- An independent geologist contracted by Pioneer spend 3 days at the Botswana Geoscience Institute and the Department of Mines seeking historic exploration reports pertaining to uranium exploration. The only reports available pertaining to diamond exploration and are summarised below.
- PAM Botswana explored the area referred to as the Lobatse Project for Kimberlite Pipes, this included surface mapping of duricrust, aeromagnetic interpretation and surface sampling for heavy minerals was completed over identified targets. No exploration for uranium mineralisation was completed.
- Anglo American Prospecting Services prospected the Lobatse are in July 1988 for heavy minerals which included surface trenching and lag sampling. No exploration for Uranium was completed.

Next Steps

Bostalano Uranium Project (Botswana, Africa):

The initial focus for Pioneer will be to compile all available historical exploration and geophysical data relevant to the project area and surrounds. This includes analysis of the section of the Bostalano Ring Complex in South Africa.

- **Obtain and review** original historical exploration data from the South African Council for Geoscience as well as the Botswana Geoscience Institute to inform exploration efforts.

Field Program

- **Identify Uranium Mineralisation:** A targeted field program will focus on identifying and confirming uranium-bearing strata through systematic sampling transects in areas across the project area.
- **Sampling Methodology:**
 - Geologists to be equipped with gamma ray scintillometers or spectrometers to conduct real-time identification of radioactive material to guide sampling.
 - Rock chip and grab samples will be collected and analysed using multi-element methodologies at an accredited laboratory.

Exploratory Geological Program:

- Based on the results of initial fieldwork, a detailed geological investigation will aim to delineate the strike length and thickness of favourable horizons and identify the target geological models.
- An exploratory drilling plan will be developed to test the significance of any uranium mineralisation to define the project's potential.

² World Nuclear Association 2023

For further information on Pioneer: www.pioneerlithium.com.au.

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Investors:

Michael Beven
Chief Executive Officer
Pioneer Lithium Ltd
Phone: 0452 177 769
E: Michael.Beven@pioneerlithium.com.au

Media:

Kelly-Jo Fry
Pioneer Lithium Ltd
Phone: (08) 9465 1044
E: kjfry@pioneerlithium.com.au

Competent Persons Statement

The information in this report that relates to exploration results for the Gaobis project in Namibia is based on, and fairly represents, information and supporting documentation compiled and evaluated by Michael Beven, the CEO to the Company and a Member of the Australian Institute of Geoscientists (AIG). Mr. Beven has sufficient experience relevant to the style of mineralisation, type of deposit under consideration, and the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australian Code for Reporting of Exploration Results, Mineral Resources, and Ore Reserves (JORC Code). Mr. Beven consents to the inclusion of the information in the form and context in which it appears. The information in the market announcement is an accurate representation of the available data and studies for the Warmbad project in Namibia.

Forward-looking statements

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