

SECOND QUARTER ACTIVITIES REPORT

Cassius Mining Limited (“Cassius” or “the Company”) (ASX Code: CMD) is pleased to provide shareholders with the Company’s Activities Report for the quarter ending 31 December 2022.

CHENENE LITHIUM PROJECT, TANZANIA

The Company conducted its inaugural rock sampling programme during the quarter in Target 1 (PL 11921), as well as mapping pegmatites where outcrop allowed. The majority of the programme was conducted in Dulu and Nemazi areas where amphibolite gneiss outcrops permitted more frequent sampling opportunity.

Of particular interest for sampling was the Dulu area where recent, ongoing small scale mining activities of Lithium ore had been reported, and where known strikes implied that the pegmatites may continue into the Company’s area. Multiple pegmatites were confirmed¹ and mapped up to 970m long (Fig 1).

Sampling in the Nemazi area was more difficult with limited prior local activity and less accessible outcrop available. Nevertheless, several thin pegmatites were identified and mapped (Fig 1).

All rock samples were sent to the SGS laboratory in Tanzania for preparation, and thereafter to SGS South Africa for assay for Lithium along with a wide suite of other elements, including Rare Earth Elements (REE’s).

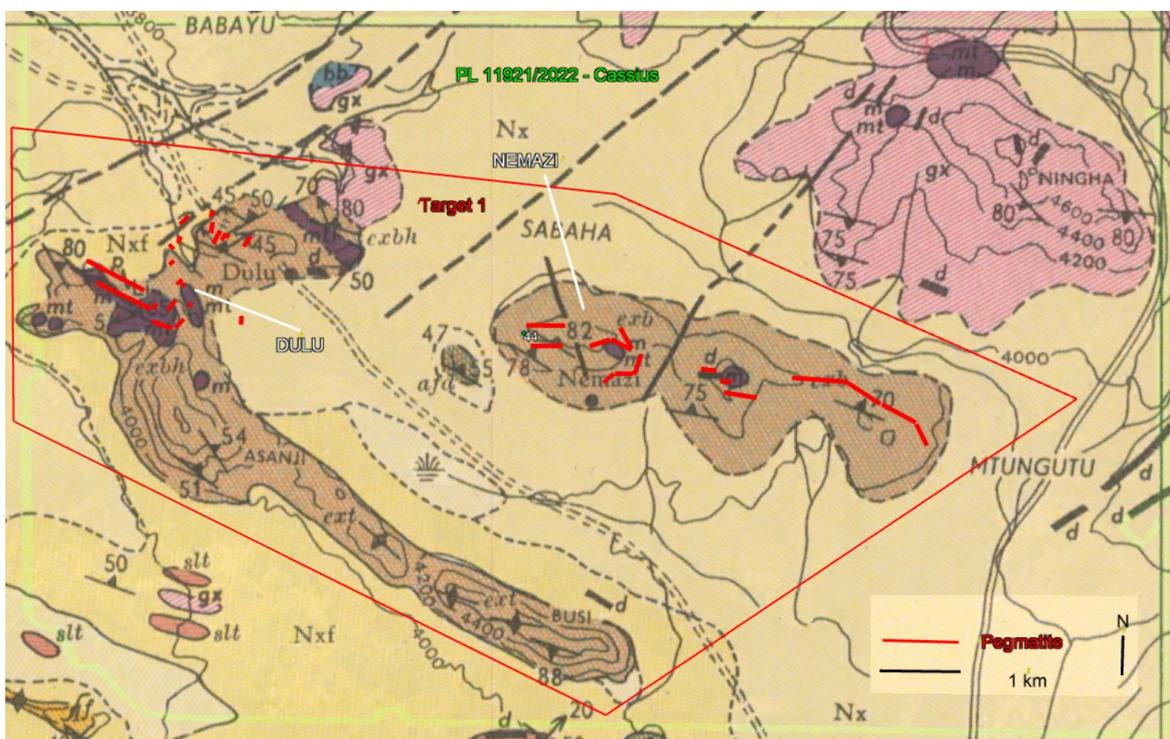


Fig 1 – Target 1 Pegmatite Swarms >7 kms in total length at Dulu and Nemazi
Brown units are quartz-feldspar gneiss. Dark purple units are metamorphosed ultramafic rocks

¹ ASX – “Pegmatite Swarms Mapped at Chenene Lithium Project” – 17 November 2022

About the CHENENE PROJECT

The Project area consists of 4 contiguous exploration licenses of ~300 km² in central Tanzania, ~40 kms N of Dodoma (capital city), accessible by major road and unaffected by the annual wet season further south.

Lithium/Tantalum-bearing pegmatites have previously been identified in the metamorphic belt, which outcrops in several locations along the base of the granitic NW-SE trending Chenene Hills.

The Company is targeting two priority areas covering a total of ~65 km² with amphibolite gneiss outcrops (similar to known host rocks for Lithium-bearing pegmatites within the local area).

SOALARA LIMESTONE PROJECT, MADAGASCAR

The Company had completed Phase 2 coring in the prior quarter, coring ~500m (5 vertical holes) adjacent to and on the same 500m grid as the 4 vertical Phase 1 holes (**Fig 2**), to ensure the integrity of the planned Mineral Resource Estimate ["MRE"].

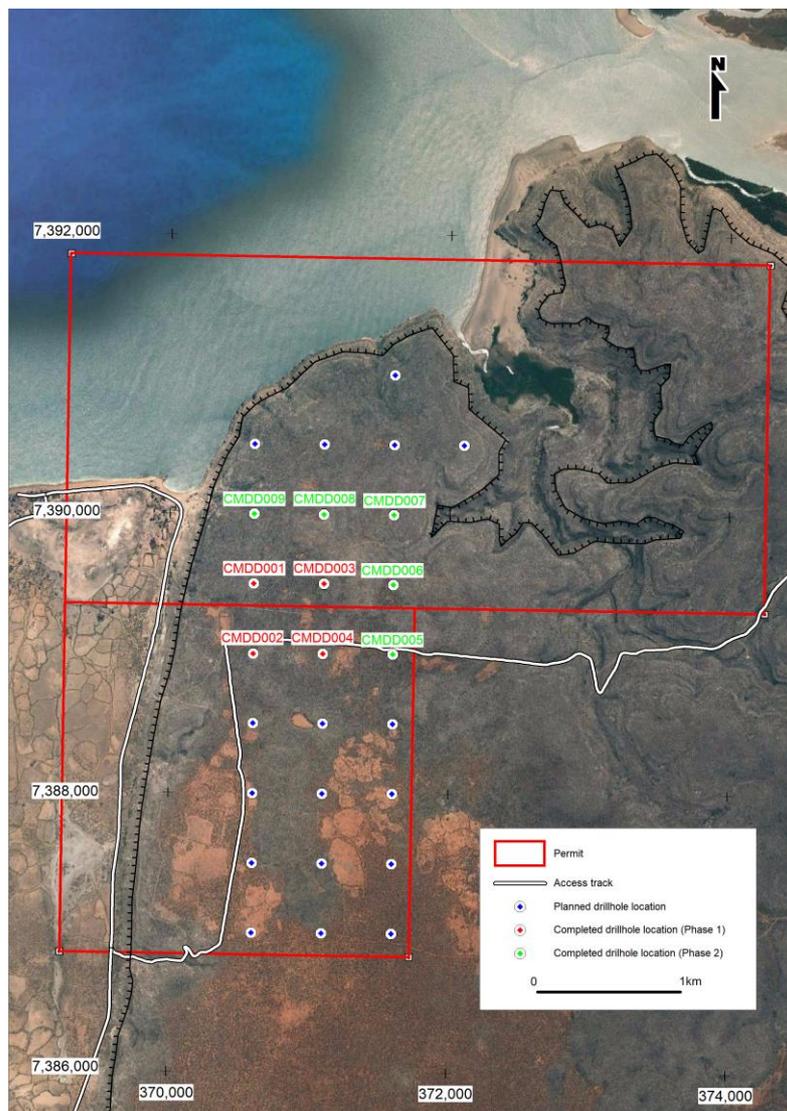


Fig 2: Phase 1 holes (red) and Phase 2 holes (green)

Phase 2 was successfully completed² with excellent 93.3% core recovery (Phase 1 was 92%). The core was then subject to geological evaluation, with samples transferred to the Omnis laboratory in Antananarivo, Madagascar (as with Phase 1 core) for preparation of pulps to be exported to the SGS assay laboratory in Perth, Western Australia.

However there have been significant delays in exporting the samples due to new regulatory requirements in obtaining an export permit. That new process is now near completion. Once the pulps are successfully exported, the assay results would be expected ~5 weeks later.

About the SOALARA PROJECT

The Soalara deposit is a horizontal sequence of Eocene limestones of ~70-100m thickness, overburden free. It currently has a JORC Exploration Target of 491 to 818 Mt of Limestone with a purity of high to very high³.

The current coring programme is designed to quantify lateral and vertical purity, and continuity of the limestone sequence for possible future open pit mining. The programme is targeting a potential upgrade to a JORC Mineral Resource. The potential quantity and grade of the defined Exploration Target is conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

CORPORATE

Annual General Meeting

The Annual General Meeting of the company was held on 25 November 2022 with all resolutions being passed.

Payments to related parties of the Company.

The company paid non-executive directors' fees, statutory superannuation and consulting fees of \$30,000 for the quarter.

OTHER OPPORTUNITIES

The Company continues to review opportunities to expand its portfolio where a significant benefit can be identified for its shareholders.

This announcement is authorised for release to the ASX by the Board.

FURTHER INFORMATION

James Arkoudis (Director)

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² ASX 20 October 2022 "Soalara Phase 2 Coring Completed"

³ "Soalara High Grade Limestone Project – Independent Technical Review" – ASX 19 May 2016.

SCHEDULE OF TENEMENTS AS AT 31 DECEMBER 2022

Location		Tenement / Mining Lease Number / Special Licence Number					
Madagascar		R14542 – 100%, R14960 – 100%					
Permit	Company	Int (%)	Type	Expiry date	Grant date	Area (sq. km)	Commodity
14542	Soalara Calcaire SARLU	100	Exploitation (Mining)	03 Nov 2055	04 Nov 15	12.50	Limestone
14960	Soalara Calcaire SARLU	100	Exploitation (Mining)	03 Nov 2055	04 Nov 15	6.25	Limestone

The Licence Permits are held by wholly owned subsidiary Soalara Calcaire SARLU

Location		Tenement / Exploration Lease Number / Special Licence Number					
Tanzania		11720/2021 – 100%, 11721/2021 – 100%, 11920/2022 – 100%, 11921/2022 – 100%					
Permit	Company	Int (%)	Type	Expiry date	Grant date	Area (sq. km)	Commodity
11720	Cassius Mining (T) Limited	100	Prospecting (Exploration)	03 Oct 2025	29 March 22	92.63	Lithium
11721	Cassius Mining (T) Limited	100	Prospecting (Exploration)	03 Oct 2025	29 March 22	45.55	Lithium
11920	Cassius Mining (T) Limited	100	Prospecting (Exploration)	12 May 2026	13 May 22	47.00	Lithium
11921	Cassius Mining (T) Limited	100	Prospecting (Exploration)	12 May 2026	13 May 22	115.40	Lithium

The Licence Permits are held by wholly owned subsidiary Cassius Mining (T) Ltd

Competent Person Statement - Soalara

The information in Report that relates to Exploration Targets and Exploration Results is based on information compiled by Dr David Jefferson who is a Member of the Institute of Materials, Minerals and Mining, a ‘Recognized Professional Organization’ (RPO) including in the list promulgated by the ASX from time to time. Dr Jefferson is a consultant working for SRK Exploration Services Ltd and has been engaged by Gulf Industrials Ltd to prepare documentation for the Soalara Limestone Property. He has sufficient experience which is related to the style of mineralization and type of deposit under consideration and to the activity which has been undertaken, to qualify as Competent Person as define by the 2012 edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”, Dr. Jefferson consents to the report being issued in the form and context in which it appears.

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