

ASX ANNOUNCEMENT

30 January 2024

Q2 ACTIVITIES – FY 2024

Cassius Mining Limited (“Cassius” or the “Company”) (ASX Code: CMD) is pleased to provide shareholders with the Company’s Activities Report and Appendix 5B for the quarter ending **31 December 2023**.

SOALARA LIMESTONE PROJECT, MADAGASCAR

The Soalara Project holds a JORC 2012 Resource estimate of 340-440 Mt of a high 97% Limestone purity (**Fig 1**), or 95-130 Mt of a very high 98.6% Limestone purity.



Fig 1 - HIGH purity Limestone (97% CaCO₃) from only 8m depth

A range of tonnage has been defined in the Resource, dependent on the mining method by conventional bulk quarrying in 5m high benches, or alternatively by much more cost effective selective mining (**Fig 2**) of specific grade with simultaneous cutting, crushing and loading in variable bench heights up to 1m depth to satisfy the requirements of high end use markets.



Fig 2 - Selective Miner – simultaneous Cutting, Crushing and Direct Loading of Limestone

Soalara's absolute coastal location and close proximity to port (~28 kms distant, **Fig 3**) assists any export of selectively mined very high quality Limestone, while demand from current and expected future cement production facilities in the region may also provide markets for lesser grade.

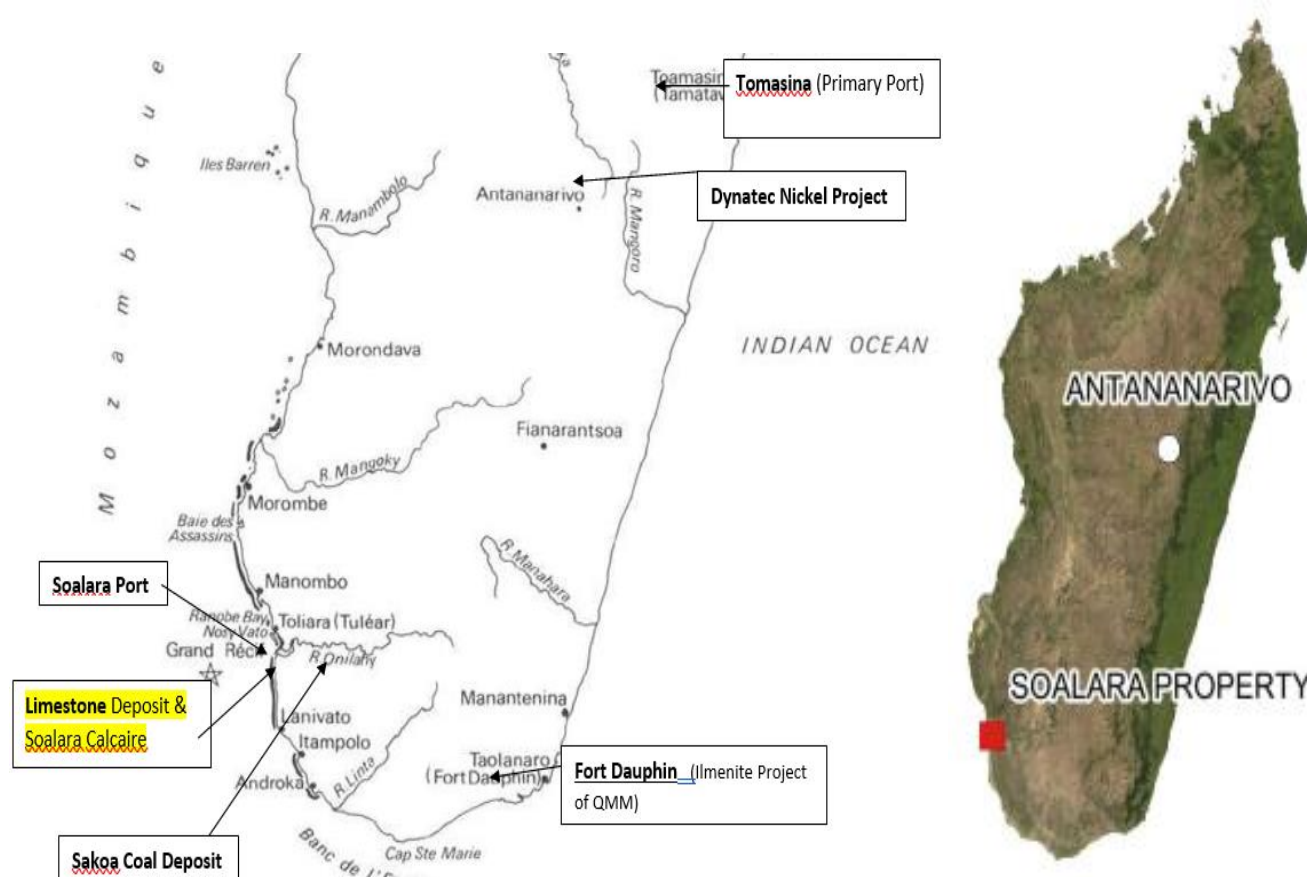


Fig 3 - Soalara: ~28kms south of Toliara and ~750 kms SW of the capital city Antananarivo

The Company is commissioning an updated valuation and marketing study of the Soalara Project, given the substantial size and quality of the JORC Resource, to inform such future operations in the most efficient manner. The study is expected to take ~3 months once the specialist service provider is selected in the very near future.

9 vertical holes to 100m have been cored to date on the project from a potential 26 hole grid (**Fig 4**), confirming the lateral Limestone continuity of purity and simple flat-bedded geology. The very shallow nature of the asset confirms high suitability to open pit mining from and immediately below surface.

Planning is simultaneously being put in place for a contingent further drilling programme after the valuation and marketing study is reviewed, of at least 3 more holes from the overall grid and adjacent to the existing drilled grid, which would target an increase in the tonnages within both the inferred and indicated categories of the current Resource estimate.

The outcome of the valuation and marketing study will help determine if further drilling would be beneficial, or whether a scoping or pre-feasibility study for mining the asset is the preferred way forward.

About the SOALARA LIMESTONE PROJECT

Soalara's deposit is a horizontal sequence of Limestones, overburden free and open at 100m in all 9 holes cored.



Fig 4: Soalara Phase 1 (red) and Phase 2 holes (green) with all-weather access in white

Soalara holds a JORC Mineral Resource of 340-440 Mt of Limestone with a purity of “High” to “Very High” (97-98.6% pure Limestone) in the Indicated and Inferred categories, depending on a bulk or selective mining application:

- 95-130 Mt of “Very High” 98.6% Limestone purity at 97.5% CaCO_3 cut-off (Calcium Carbonate), dependent on a bulk or selective mining application, with 25-40 Mt (Indicated) and 70-90 Mt (Inferred) or,
- 340-440 Mt of “High” 97% Limestone purity at 95.7-95.3% CaCO_3 cut-off (Calcium Carbonate), dependent on a bulk or selective mining application, with 100-130 Mt (Indicated) and 240-310 Mt (Inferred)

CHENENE LITHIUM PROJECT, TANZANIA

The Company continues to review forward plans at its 4 contiguous exploration licenses (**Fig 4**). The target at Dulu in PL 11921 hosts Lithium-bearing pegmatites, along with significant associated Caesium and Tantalum.

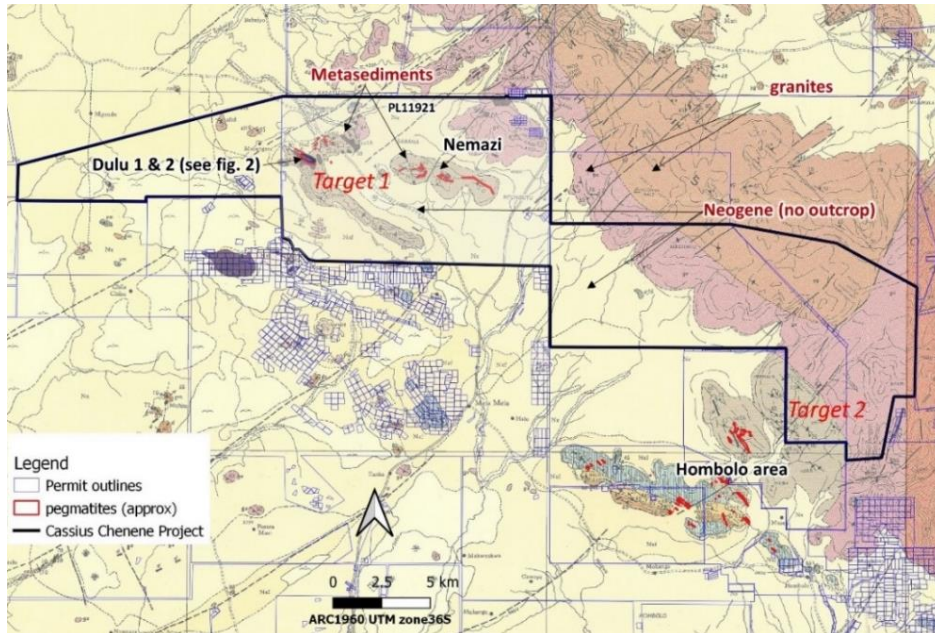


Fig 4: Targets 1 and 2 in the Chenene Lithium Project (300 km²), with pegmatites in red

A 950m long “Dulu 1” pegmatite (**Fig 5**) assayed to 1.08% Lithium (as Li₂O) in the Company’s PL 11921, where Caesium and Tantalum strongly correlated to an elevated 2,782 and 181 ppm respectively with elevated Lithium.

A 370m long “Dulu 2” pegmatite (**Fig 5**) in a tiny 0.14 km² 3rd party license (enclosed by PL 11921 at ~115 km²) assayed to 5.49% Li₂O from ~2m depth, with highly elevated 7,624 ppm Caesium and 4,970 ppm Tantalum.

Dulu 1 and 2 (**Fig 5**) are separated laterally by only ~160m, with a potential ESE extension of Dulu 2 possible sub-surface in PL 11921 (Dulu 2 is at surface only ~180m distant along strike to the Company’s PL border).

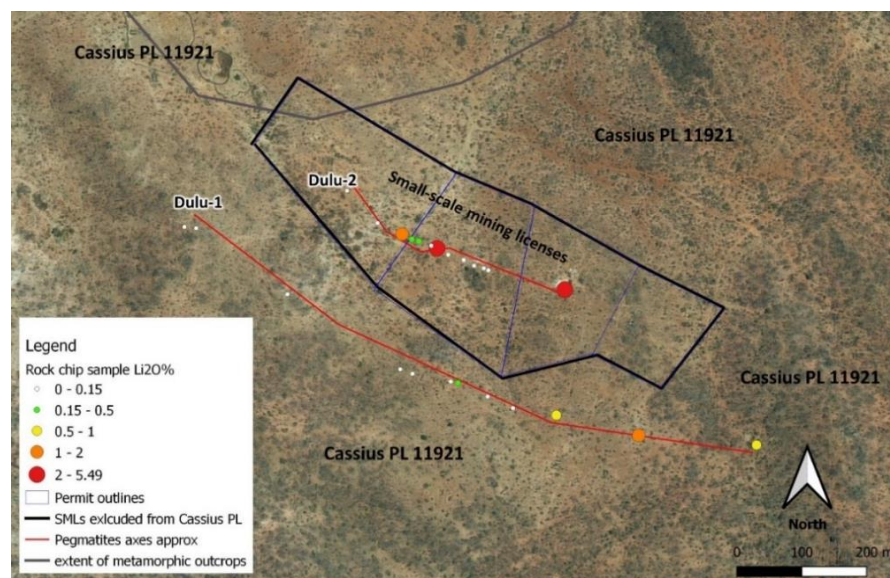


Fig 5: Dulu-1 and Dulu-2 pegmatites with Lithium (Li₂O%) rock sample results

About the CHENENE LITHIUM PROJECT

The Chenene Lithium Project consists of four contiguous Lithium exploration licenses totalling ~300 km² in central Tanzania, ~40 kms N of the capital city Dodoma (**Fig 7**), accessible by major road and unaffected by the annual wet season further south.

The main features are the NW-trending Chenene Hills of sheared granite within rolling plains formed mainly of eroded granitic soils. A belt of metamorphosed amphibolite schists and amphibolite gneiss rocks outcrops along the margins of the sheared granites within the Company's licenses, exposed intermittently above granitic soil plains. It is these metasediments that the Company is targeting in its Lithium exploration.



Fig 7: Chenene Lithium Project in Tanzania

Pegmatites are hosted in these metamorphosed rocks in the “Hombolo-Dulu-Msangani belt”, a NW-SE belt ~35 km long. Folding was deformed by NW shearing, with the pegmatites emplaced prior to shearing. Lithium pegmatites (lepidolite and spodumene), along with elevated Caesium and Tantalum, have also been identified.

GHANA – INTERNATIONAL ARBITRATION

On 3 February 2023, the wholly-owned Ghanaian subsidiary (Cassius Mining Ltd, the “company”) commenced international arbitration against the Government of the Republic of Ghana (“Ghana”) seeking damages in excess of USD 275 million as a consequence of Ghana's breaches of the Large Scale Prospecting License Agreement entered into with the company. The latest update in the International Arbitration is as follows:

- | | |
|----------------------|--|
| 10 May 2023 | The company files and serves an amended Notice of Arbitration (“NOA”) and appoints its party-nominated arbitrator to the Tribunal. |
| 31 July 2023 | Ghana appoints its party-nominated arbitrator to the Tribunal. |
| 9 Oct 2023 | The Chairperson is appointed by the two (2) co-arbitrators, formally constituting the three (3) person Tribunal for the international arbitration. |
| 3 Nov - 1 Dec | The preliminary issues (being the Tribunal's jurisdiction, the seat of the arbitration and which rules will administer the arbitration) were submitted to the Tribunal in written form by both parties under a strict timetable. |
| 4 Dec | Following final written submissions, a virtual hearing was conducted on the preliminary issues in front of the Tribunal by the lawyers from both parties. |
| Next Steps | Third Party Funding - The Tribunal's decision on the preliminary issues is expected to be delivered in the near future. The Company will then seek to finalise appropriate third party funding arrangements. |

CORPORATE

The Company held its Annual General Meeting on 24 November 2023 with all resolutions being passed.

Following shareholder approval the Company issued 5,882,352 shares at \$0.017 raising \$100,000.

The Company paid Director's consulting fees and non-executive Director's fees and statutory superannuation of \$50,000 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)

e: james@cassiusmining.com

SCHEDULE OF TENEMENTS AT 31 DECEMBER 2023

Location		Tenement / Mining Lease Number / Special Licence Number					
Madagascar		R14542 – 100%, R14960 – 100%					
Permit	Company	Int (%)	Type	Expiry date	Grant date	Area (km ²)	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
Tanzania		11720/2021 – 100%, 11721/2021 – 100%, 11920/2022 – 100%, 11921/2022 – 100%					
Permit	Company	Int (%)	Type	Expiry date	Grant date	Area (km ²)	Commodity
11720	Cassius Mining (T) Limited	100	Prospecting (Exploration)	03 Oct 2025	29 Mar 22	92.63	Lithium
11721	Cassius Mining (T) Limited	100	Prospecting (Exploration)	03 Oct 2025	29 Mar 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

License Permits are held by wholly owned subsidiary "Soalara Calcaire SARLU" in Madagascar and "Cassius Mining (T) Ltd" in Tanzania

Competent Person Statement - Chenene

Information in this "ASX Announcement" relating to Exploration Targets, Exploration Results and Mineral Resources has been reviewed by Mr. Andrew Pedley who is a member in good standing with the South African Council for Natural Scientific Professions (SACNASP). Mr. Pedley has sufficient experience that is relevant to the types of deposits being explored for and qualifies as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC Code 2012 Edition). Mr. Pedley consents to the inclusion in this document of the matters based on the information in the form and context in which it appears. The market announcement is based on, and fairly represents, information and supporting documentation prepared by the Competent Person. Mr. Pedley is not an employee of the Company; he is a Senior Associate with the MSA Group of Johannesburg who are providing consulting services to Cassius Mining Ltd.

Competent Person Statement - Soalara

The information in this statement that relates to Exploration Targets and Exploration Results is based on information compiled by Mr Jannie Leeuwner – BSc (Hons) Pr.Sci.Nat. MGSSA and is a full-time employee of Vato Consulting LLC. Mr. Leeuwner is a registered Professional Natural Scientist (Pr.Sci.Nat. - 400155/13) with the South African Council for Natural Scientific Professions (SACNASP). Mr. Leeuwner has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and the activity being undertaken to qualify as a Competent Person as defined in the Note for Mining Oil & Gas Companies, June 2009, of the London Stock Exchange and the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code). Mr. Leeuwner consents to the inclusion of the information in this release in the form and context in which it appears.

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