

CHILALO COARSE FLAKE GRAPHITE DEMONSTRATES HIGH-VALUE FUEL CELL APPLICATIONS

Evolution Energy Minerals Limited (ASX:EV1, FSE:P77) (“EV1” or the “Company”) is pleased to announce results from its test work involving natural graphite originating from the Chilalo deposit in Tanzania. Fifty-eight percent of the material available at the resource contains coarse flakes, which was found to be of particular interest for value-added applications, including the manufacture of graphite separator plates, a key component of low-temperature fuel cells.

HIGHLIGHTS

- **High-value fuel-cell applications:** Chilalo coarse flake graphite offers potential in separator plates for data-centre power, fuel-cell electric vehicles, backup power and specialty applications.
- **Coarse and thick graphite flakes:** AETC identifies flake size, increased thickness, oxidation resistance and low halogen content as key attributes for these markets.
- **Concentrate-grade supply opportunity:** AETC’s assessment identifies **95–97 wt.% carbon concentrate** from the planned Chilalo concentrator as feedstock for the fuel-cell market.
- **A substantial coarse-flake product mix:** the previously announced DFS distribution contains **58.0% at +80 mesh and coarser**, including **31.1% at +50 mesh and coarser**.¹

DATA CENTRES, BACKUP POWER AND TRANSPORT

Fuel cells are used in advanced transportation, for back-up power supplies, and in defense systems. An emerging market for fuel cells in power supplies in data centers. In the United States, where coarse flake from Chilalo was processed and tested, the first Megawatt-scale fuel cell for use as a power supply in data centers was approved by the Department of Energy in 2024 under the project, which brought together Microsoft, Caterpillar and Ballard Power. Overall, Ballard Power installed 10MW of fuel-cell powered installations since 2025 with 15MW of additional installations under way.

FUEL-CELL ELECTRIC VEHICLES AND JAPAN

It is worth noting that some electric vehicle OEM companies have adopted PEM-type fuel cells to power electric vehicles. That in itself represents an attractive market opportunity. Vehicles of this type are available for sale in Japan and other countries. Japan represents an attractive target market for graphite from Chilalo because the geographic location of the Chilalo Resource is favorable for direct supplies of coarse flake concentrate from East Tanzanian ports into Tokyo, Japan, where PEM-type fuel cells for electric vehicles are manufactured. Importantly, the PEM-fuel cell market consumes concentrate-grade graphite, meaning that Chilalo can supply this market with a 95-97 wt.% C concentrate derived directly from the concentrator plant planned to be built at the site of the Chilalo Mine.

CHILALO GRAPHITE FOR FUEL-CELL SEPARATOR PLATES

Graphite separator plates employed in fuel cells are molded resin products: solid plates with engineered perforations and manufactured tracks for the passage of gases and liquids between the anode and cathode.



Figure 1. Toyota FCV PLUS concept vehicle displayed in Japan. Photograph supplied by Igor Barsukov, AETC. Illustrative of fuel-cell transport example..

There are strict requirements for producing a high-quality graphite part with enhanced durability. These include large flake size, thick graphite particles, and high material purity, including the lowest possible halogen content. Chilalo's 95% carbon concentrate-grade graphite was found to be an ideal candidate for making graphite separator plates for fuel cells, particularly because Chilalo flakes are very thick and resistant to oxidation. The report provided by EV1's technology partner, American Energy Technologies Company (AETC) of Wheeling, IL, identified that Chilalo flakes sized +50 mesh resist oxidation even when exposed to temperatures as high as 900 °C. Considering that the average operating temperature of a PEM-type fuel cell powering a data center is on the order of 70-80 °C, the material structure provides at least a ten-fold reserve, making separator plates manufactured from Chilalo graphite a robust solution that can benefit power supplies for data centers and a variety of other markets.

MANAGING DIRECTOR COMMENT

"Chilalo's value extends well beyond battery anodes. With 58% of the DFS concentrate mix in the coarse-flake sizes, identifying applications that reward the quality of those flakes is central to capturing the value of the project.

"AETC's assessment connects Chilalo's thick flakes and low halogen content with the requirements of graphite-based fuel-cell plates. Data-centre power and hydrogen transport offer compelling markets to pursue alongside our battery-materials programme. Our objective is to turn those natural advantages into products that customers value."

Craig Moulton, Managing Director

AETC COMMENT

Emily Schmidt, Business Development and Project Manager of AETC, was quoted as saying, "We at American Energy Technologies Company are very excited about the results obtained from testing Chilalo graphite. Many deposits around the world lack coarse flakes, which have utility in advanced fuel cell applications for use as back-up power supplies, UPS, electric vehicles, and specialty applications. The fact that Chilalo flake is not only coarse but also contains very thick particles provides an additional benefit that leads to greatly enhanced oxidation resistance in this graphite. That, in turn, facilitates the durability of fuel cell products that use these flakes in the construction of fuel cells. We look forward to testing the benefits of thick flake from Chilalo in fuel cell separator plates as well as other value-added markets."

SUPPORTING MATERIAL CHARACTERISTICS

Supporting microscopy recorded selected +80 mesh Chilalo flakes approximately **50–75 µm thick**. Total-solids analysis of three coarse fractions recorded **fluorine below 10 ppm** and **chlorine of 50–70 ppm**. These measurements provide additional detail on the flake thickness and halogen characteristics identified in AETC’s assessment.²

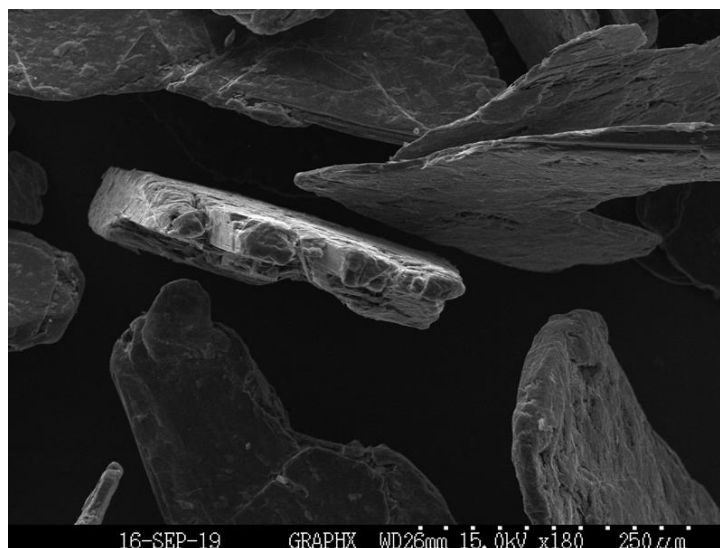


Figure 1. Chilalo +80 mesh concentrate before intercalation (GN190904003). Original AETC SEM image, CC1953-001

ADDITIONAL INDUSTRY AND EV1 CONTEXT

Ballard’s June 2023 announcement on graphite bipolar plates identified durability, re-use and power density as advantages for its heavy-duty mobility applications. The data-centre opportunity is also illustrated by the **1.5 MW Microsoft/Caterpillar/Ballard demonstration** reported in January 2024 and the **400 kW Ballard/Vertiv UPS system** described in February 2025. The US DOE’s 2025 progress summary records over **500 MW of backup-power fuel cells deployed** across the wider market.^{3,4,5}

In June 2026, Ballard announced a further **15 MW stationary-power order**, following a similar order in 2024. These industry examples illustrate the market for fuel-cell technologies; they do not represent customer relationships or offtake commitments with EV1.⁶

On **30 July 2026**, EV1 announced production by AETC of **280 kg of Chilalo graphite at 99.99 wt.% carbon**, from concentrate supplied at **95.7% TGC**, within the EU-funded STREAMS programme. This battery-materials work complements the value-added opportunities for Chilalo’s coarse flakes.⁷

AUTHORISED FOR RELEASE BY THE BOARD OF EVOLUTION ENERGY MINERALS LIMITED

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FORWARD-LOOKING STATEMENTS

This release includes forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning the Company’s planned testwork, development activities and other statements that are not historical facts. When used in this release, words such as “could”, “plan”, “estimate”, “expect”, “anticipate”, “intend”, “may”, “potential”, “should”, “might” and similar expressions are forward-looking statements. Although the Company believes that the expectations reflected in these statements are

reasonable, they involve known and unknown risks and uncertainties and are subject to factors outside the Company's control. Accordingly, no assurance can be given that actual results will be consistent with these forward-looking statements.

The Company cautions that downstream processing outcomes, qualification pathways and development timelines are subject to a range of risks and uncertainties, including technical scale-up, repeatability, product specifications, customer requirements, funding availability, permitting, equipment delivery, commissioning and operating performance. Actual outcomes may differ materially from those stated. Shareholders should not place undue reliance on forward-looking statements, which are based on current expectations and assumptions.

ABOUT EVOLUTION ENERGY MINERALS (ASX: EV1)

Evolution Energy Minerals is an **Australian-listed minerals company** focused on the exploration and development of critical metals in **Tanzania**.

The Company's flagship asset is the **Chilalo Graphite Project**, supported by extensive metallurgical testwork, product qualification programmes and downstream engagement with potential end-users. EV1 is progressing a staged development strategy for Chilalo and is targeting first graphite concentrate production in **October 2027**, subject to funding, approvals and execution risks.

EV1 is also advancing the **Chikundo Copper Project** within its Tanzanian tenure. The Company's strategy is to **responsibly develop long-life assets** that support the global energy transition while collaborating with host governments, local communities and strategic partners to deliver sustainable long-term value for shareholders.

ABOUT AETC

AETC, based in Wheeling, Illinois, is EV1's US graphite technology partner and a participant in the STREAMS battery-materials programme.⁷

SOURCE NOTES

1. EV1, 20 March 2023 ASX DFS announcement, Table 15, PDF p.47: 0.7% +20, 9.8% +32, 20.6% +50 and 26.9% +80 total 58.0%; the first three fractions total 31.1%.

2. AETC article and correspondence supplied to EV1; supporting 2019 reports CC1941-001 (concentrate testing) and CC1953-001 (expandable and expanded graphite); AETC's earlier coarse-flake applications draft.

3. Caterpillar, 19 January 2024, Microsoft data-centre hydrogen fuel-cell demonstration; US DOE, Progress in Hydrogen and Fuel Cells, 2025 (supplied).

4. Ballard, 3 February 2025, Ballard/Vertiv data-centre UPS system.

5. Ballard, 12 June 2023, Next-generation graphite bipolar plates.

6. Ballard, 16 June 2026, 15 MW stationary-power order.

7. EV1 ASX announcement, 30 July 2026, EV1 – Key Partner in EU-Funded STREAMS Battery Materials / Chilalo Delivers Programme's First Graphite Purification Result (supplied).



EVOLUTION ENERGY MINERALS (ASX: EV1)

Evolution Energy Minerals is an Australian-listed critical minerals company focussed on the exploration and development of critical metals in Tanzania.

Chilalo Graphite Project

- One of the world's largest and highest-quality flake graphite development projects
- Extensive metallurgical test work
- Product qualification & downstream engagement.

Chikundo Copper Project

- Advancing exploration for high-grade, copper-dominant ores
- Drill-ready hydrothermal copper targets

RESPONSIBLE DEVELOPMENT STRATEGY

- Responsibly develop large-scale, long-life assets to support the global energy transition.
- Collaborate with host governments and local communities
- Deliver sustainable long-term value for shareholders

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