VULCAN ENERGY

First commercial scale production of Vulcan's proprietary VULSORB® lithium extraction material

Key highlights

- First commercial scale production of Vulcan's proprietary lithium extraction adsorbent, VULSORB®, has commenced in Germany
- This marks the commencement of production for first fill volumes for the A-DLE lithium extraction columns ahead of Lionheart commissioning in H2 2028
- VULSORB®is the material used to selectively capture lithium from brine, and has been extensively validated through years of testing, including thousands of cycles at industrial demonstration scale
- VULSORB® is one of the only commercially bankable Adsorption-type Direct Lithium Extraction (A-DLE) technologies with western intellectual property and a fully ex-China supply chain
- A-DLE technologies have been deployed commercially for decades across the world, with China, the incumbent leader in A-DLE, now enforcing export restrictions on the technology
- VULSORB® will be deployed across Vulcan's Upper Rhine Valley Brine Field (URVBF), including its Project Lionheart, Project Ludwig and other growth projects, and also through select technology licencing arrangements with third-parties

Vulcan Energy (ASX: VUL, FSE: VUL), (Vulcan or the Company) is pleased to announce the commencement of commercial scale production of its proprietary lithium extraction adsorbent, VULSORB®, which is used to selectively capture lithium from brine. The production will supply Project Lionheart and follows years of technology development and validation through extensive laboratory testing to operation at industrial demonstration scale. VULSORB® has successfully completed thousands of operating cycles under real-world conditions achieving up to 95% lithium extraction efficiency.

VULSORB® encompasses the aluminate based adsorbent formulation (the 'recipe' to manufacture) as well as the method for manufacture. Importantly, VULSORB® provides Vulcan with an enduring competitive advantage – control over a proven western technology with a western manufacturing supply chain. This is particularly relevant given that the largest global provider of A-DLE technology and products, China, placed export controls and strict licencing arrangements on overseas shipments in early 2025.

Vulcan has successfully demonstrated VULSORB® production at multiple locations with a select group of European toll manufacturers. The last three years of product trials have produced highly pure lithium chloride and battery-grade lithium hydroxide from demonstration scale lithium extraction and lithium chemical plants, providing sufficient confidence to move to full scale production with the Company's local tolling partner. Importantly, this marks the commencement of production for the first fill volumes for the A-DLE lithium extraction columns ahead of Lionheart commissioning in H2 2028.

Located in the Upper Rhine Valley Brine Field between Germany and France, Lionheart - Vulcan's first phase of production - is a lighthouse project for Europe's energy and critical raw material resilience. Lionheart involves the construction of an integrated lithium and renewable energy project targeting production capacity of 24,000 tonnes of lithium hydroxide monohydrate (LHM), enough for ca. 500,000 electric vehicle batteries per annum, with a co-product of 275 GWh of renewable power and 560 GWh of heat per annum for local consumers, over an estimated 30-year project life[1].

Vulcan's Managing Director and CEO, Cris Moreno, commented:

"We are delighted to reach another key milestone with the commencement of commercial scale VULSORB® *production. This represents a significant technology, supply chain and execution de-risking achievement for the Lionheart Project ahead of first commercial lithium production.*

"A-DLE technology is increasingly being embraced by major companies as the industry's brine technology choice. VULSORB® is one of the very few commercially bankable adsorption-based DLE technologies supported by western intellectual property and a fully ex-China supply chain. At a time when access to critical mineral technologies is becoming increasingly strategic, this provides Vulcan with greater supply chain security, reduced geopolitical risk and enhanced project execution certainty.

"This achievement reinforces Vulcan's position as a leading western lithium technology company and establishes an important foundation not only for Lionheart, but also for future growth across the Upper Rhine Valley in Vulcan's 'design one, build many' approach."

Geopolitical context

VULSORB® sits at the core of Vulcan's lithium extraction process and is a key enabling technology for Lionheart.

The broader lithium industry remains highly dependent on Chinese technology providers for many forms of A-DLE technology and associated supply chains. In contrast, VULSORB® has been developed by Vulcan and is supported by Vulcan's western intellectual property and western manufacturing capability.

As governments and industry increasingly prioritise energy security and resilient critical minerals supply chains, VULSORB®provides Vulcan with a strategically important competitive advantage. This technology enhances supply chain independence, reduces geopolitical exposure and supports Europe's ambition to establish domestic critical raw materials production.

Next steps

In collaboration with its tolling partner, Vulcan will manufacture VULSORB® over the next 18-24 months to prepare for Project Lionheart commissioning in H2 2028.

Beyond Lionheart, VULSORB® provides a scalable platform for future expansion across Vulcan's URVBF resource base, consistent with the Company's strategy to leverage a single proven technology platform across multiple development phases. It also allows Vulcan to selectively licence the technology globally, through its VULTEC technology arm, to gain exposure to lithium brine fields in other jurisdictions. VULSORB® has been successfully tested on multiple brine types.

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1 Based on the Phase One Lionheart production target capacity of 24kt p.a. from Bridging Engineering Study ASX announcement 16th November 2023 and Vulcan internal estimated average EV battery size and chemistry in Europe; refer to the Competent Person Statement within this announcement. Refer to the Key Risks in Appendix 3 of the Investor Presentation dated 3 December 2025 regarding the risks associated with resource exploration and development projects

<ENDS>

For and on behalf of the Board

Daniel Tydde | Company Secretary

Further information

Jeremy McManus | Head of Investor Relations | jmcmanus@v-er.eu | +61 422 000 675

Judith Buchan | Head of Corporate Communications | jbuchan@v-er.eu | +61 411 597 326

Please contact Vulcan's Legal Counsel Germany, Dr Meinhard Grodde, for matters relating to the Frankfurt Stock Exchange listing on mgrodde@v-er.eu

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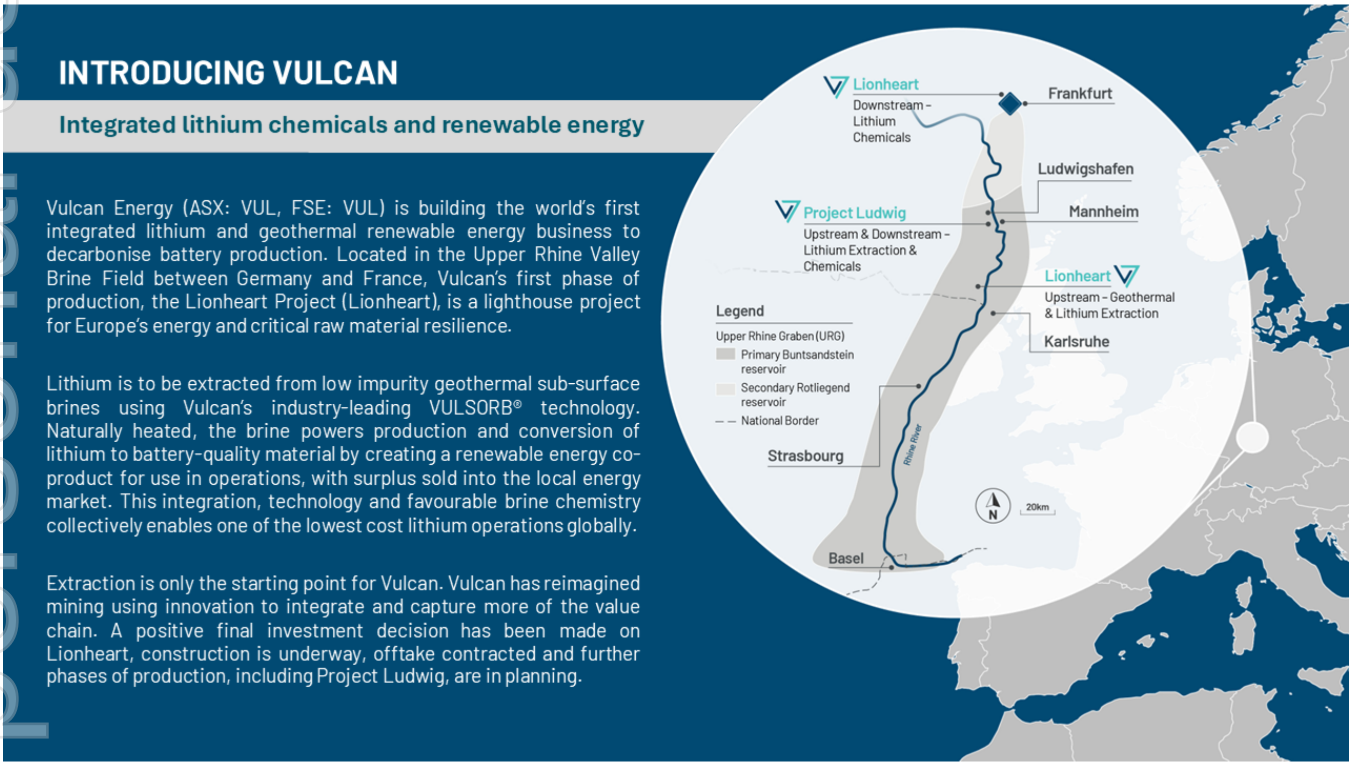

Disclaimer

Some of the statements appearing in this announcement may be in the nature of forward-looking statements. You should be aware that such statements are only predictions and are subject to inherent risks and uncertainties. Those risks and uncertainties include factors and risks specific to the industries in which Vulcan operates and proposes to operate as well as general economic conditions, prevailing exchange rates and interest rates and conditions in the financial markets, among other things. Actual events or results may differ materially from the events or results expressed or implied in any forward-looking statement. No forward-looking statement is a guarantee or representation as to future performance or any other future matters, which will be influenced by a number of factors and subject to various uncertainties and contingencies, many of which will be outside Vulcan's control.

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Competent Person Statement

The information in this announcement that relates to: (i) Mineral Resources and Geothermal Resources in relation to Project Ludwig is extracted from the "Positive Preliminary Feasibility Study (PFS) outlines Vulcan's second German project showcasing repeatable development growth strategy" announcement on 3 September 2026 (Project Ludwig PFS Announcement); (ii) Mineral Resources and Ore Resources in relation to Project Lionheart and the Future Phases projects is extracted from the "Bridging Engineering Study Results" announcement on 16 November 2023 (Bridging Engineering Study Announcement) and the "Future Phase Pipeline - Mannheim Resources Growth" announcement on 9 July 2025 (Mannheim Resources Growth Announcement)[2]; and (iii) Exploration Results is extracted from the "Successful production test results from first new Lionheart well: announcement dated 21 January 2026, and the "Positive start to Phase One Lionheart Project field development" announcement on 19 November 2025, all of which are available to view on Vulcan's website at https://v-er.eu.

Vulcan confirms that, in respect of: (i) Mineral Resources and Geothermal Resources in relation to Project Ludwig; (ii) Mineral Resources and Ore Reserves in relation to Project Lionheart and the Future Phases projects; and (iii) Exploration Results, included in this document:

a) it is not aware of any new information or data that materially affects the information included in the original market announcement;

b) all material assumptions and technical parameters underpinning the estimates in the original market announcement continue to apply and have not materially changed; and

c) the form and context in which the Competent Persons' findings are presented in this announcement have not been materially modified from the original market announcement.

Production Targets

The information in this announcement that relates to production targets for: (i) Project Ludwig is extracted from the Project Ludwig PFS Announcement; and (ii) Project Lionheart is extracted from the Bridging Engineering Study Announcement. These announcements are available to view on Vulcan's website at https://v-er.eu. Vulcan confirms that all material assumptions underpinning the production targets included in these announcements continue to apply and have not materially changed.

[2] The Mannheim Resources Growth Announcement relates solely to the lithium brine Resource estimation for the Mannheim sector.

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Forecast Financial Information

This announcement contains forecast financial information, including forecast financial information derived from the Company's production targets. This forecast financial information is based on the material assumptions set out, or referred to: (i) in the case of Project Ludwig - the Project Ludwig PFS Announcement; and (ii) in the case of Project Lionheart - the Independent Expert Report included as section 17 to the "Information Memorandum" announcement on 11 December 2024 and the "Financing and FID presentation" announcement on 3 December 2025. These announcements are available to view on Vulcan's website at https://v-er.eu. Vulcan confirms that the assumptions set out in these announcements continue to apply and have not materially changed. The Company believes that it has a reasonable basis for making the forward-looking statements in this announcement (including with respect to forecast financial information).