ASX Release

30 January 2024 **ASX:VUL | FSE:VUL**

Fast Facts **Issued Capital:** 172,073,008 **Market Cap** (@$2.16): $372m

VULCAN ENERGY
ZERO CARBON LITHIUM™

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Quarterly Activities Report for the Period ending 31 December 2023

During the Quarter, Vulcan Energy Resources Limited (Vulcan, ASX: VUL, FSE: VUL, the Company) has made significant progress towards execution of Phase One of Vulcan's ZERO CARBON LITHIUM™ Project. The Company has also commenced Phase One debt and project-level equity financing.

Highlights from the Quarter:

- ✓ Positive results from Vulcan's Bridging Engineering Study for Phase One, demonstrating the low operating cost and robust nature of the ZERO CARBON LITHIUM™ Project, by keeping target NPV materially the same, demonstrating the robustness of the Project despite volatile market conditions. The study delivered a reduction in CAPEX and OPEX despite the inflationary environment, with the same target production capacity, while also increasing project definition to a "Class II" estimate.
- ✓ Start of structured debt and project-level equity financing process, supported by BNP Paribas, following positive market sounding in 2023 from commercial banks, development banks, and government-backed export credit agencies. This included a A$200 million (~€120 million) non-binding Letter of Support from Export Finance Australia (EFA) during the Quarter, and indication of ECA support from Canada, Italy, and France during 2023.
- ✓ Positive decision by the Landau City Council in Germany to execute an agreement to allow Vulcan to begin construction of its integrated Geothermal and Lithium Extraction Plant (G-LEP) on the intended land located in the Landau region.
- ✓ Opening of Vulcan's Lithium Extraction and Optimisation Plant (LEOP) in Landau, Germany, attended by key investors, offtakers and politicians, signifying Europe's first plant for fully domestic lithium chemicals production, a step towards securing Europe's lithium supply chain for Electric Vehicle (EV) manufacturers.
- ✓ Completion of Environmental and Social Impact Assessment (ESIA) for Phase One, an important third-party validation of Vulcan's sustainability credentials, supporting the Company's efforts to raise sustainable or "green" debt finance.

Mr. Cris Moreno, Managing Director and CEO commented: "The last quarter of 2023 was pivotal for Vulcan, specifically achieving key milestones towards delivering Phase One of our ZERO CARBON LITHIUM™ Project.

"With the opening of Europe's first Lithium Extraction Optimisation Plant (LEOP), we are seeing the start of tangible actions towards securing a domestic, sustainable supply chain for lithium in Europe.

"Our core focus now and in the upcoming months is on producing the first tonnes of lithium chloride to specification in Q1, and we aim to be ready for lithium hydroxide production from our lithium hydroxide optimisation plant (CLEOP) in Q2.

"The debt and project-level equity financing process for Phase One will also ramp up throughout Q1 of 2024, which is currently progressing well despite challenging market conditions. In the meantime, we are focused on preserving our strong cash position to reach our target milestone of financial close for Phase One."

Health, safety, environment, and quality

- During the Quarter, the Company conducted the 2023 Health, Safety, Environment and Quality (HSEQ) review and implemented a scorecard reporting process for its 2024 targets. As part of this process, leading and lagging indicators were developed with a strong focus on injury prevention.
- Safety leadership rounds were introduced and HSEQ tours conducted by HSEQ professionals. Key Performance Indicators (KPIs) have been implemented to steer the Vulcan safety culture definition, focusing on company wide idea generation programs for improvement and training. Included is a Care Moments communication program and a site-wide "Last-Minute Risk Analysis" process for all operational onsite attendees to complete before the start of any activity on location.
- There were no recordable lost time injuries during the Quarter.

Renewable energy and lithium chemicals production

Geothermal operations

- Operations continued at Vulcan's Natürlich Insheim geothermal renewable energy wells and plant (figure 1), with production of 5.680 MWh of gross baseload, renewable power, at an average selling price of €0.252/kWh, for approx. €1.4 million gross revenue generated.
- During the Quarter, as part of the joint publicly and privately funded GEOSMART project to test the supply of renewable heat to local communities, the construction and commissioning of the components for district heating (heat exchangers, air-coolers, thermal energy storage, piping system, atomisation control) continued.
    - Finalisation is planned in Q3 2024 to test different modes of operation for flow and renewable heat supply.
    - District heating using renewable energy is planned for the Insheim community in Q4 2025 in collaboration with its local energy supplier and grid operator.

- Vulcan is a consortia member of GEOSMART, which aims to optimise and demonstrate innovations to improve the flexibility and efficiency of geothermal heat and power systems.

Figure 1 Vulcan's Natürlich Insheim geothermal renewable energy wells and plant

Lithium Extraction and Optimisation Plant (LEOP)

- Brine was successfully introduced into the plant in November to enable the lithium extraction process to begin.
- On 23 November Vulcan officially opened its LEOP in Landau Germany (figure 2-6), in a ceremony attended by local community, shareholders, politicians, strategic partners and industry.

For Europe, the opening of LEOP is significant because:

- It is Europe's first plant for fully domestic lithium chemicals production, a step towards securing Europe's lithium supply chain for Electric Vehicle (EV) manufacturers.
- It will produce lithium from the largest lithium resource in Europe, the Upper Rhine Valley Brine Field.

  - Representing a €40 million investment to date by Vulcan, LEOP allows for optimisation and operational training in a pre-commercial setting, and product qualification facility, to enable commercial operational readiness.

- To extract lithium from brine, Vulcan is using Adsorption-type Direct Lithium Extraction ("A-DLE"), which is a highly efficient, highly sustainable commercially proven process, and accounts for 10% of global lithium production today (figure 7).
- Vulcan is using its proprietary sorbent VULSORB® as part of the lithium extraction process. During the piloting phases, VULSORB® demonstrated higher performance and lower water consumption for lithium extraction compared with commercially available sorbents tested by the Company.
- Once the lithium chloride is produced, it will travel to Vulcan's downstream Central Lithium Electrolysis Optimisation Plant (CLEOP) in the Industrial Park, Frankfurt-Hoechst where the lithium chloride will be converted into battery grade lithium hydroxide.

Figure 2 LEOP Opening on 23 November 2023 in Landau, Germany

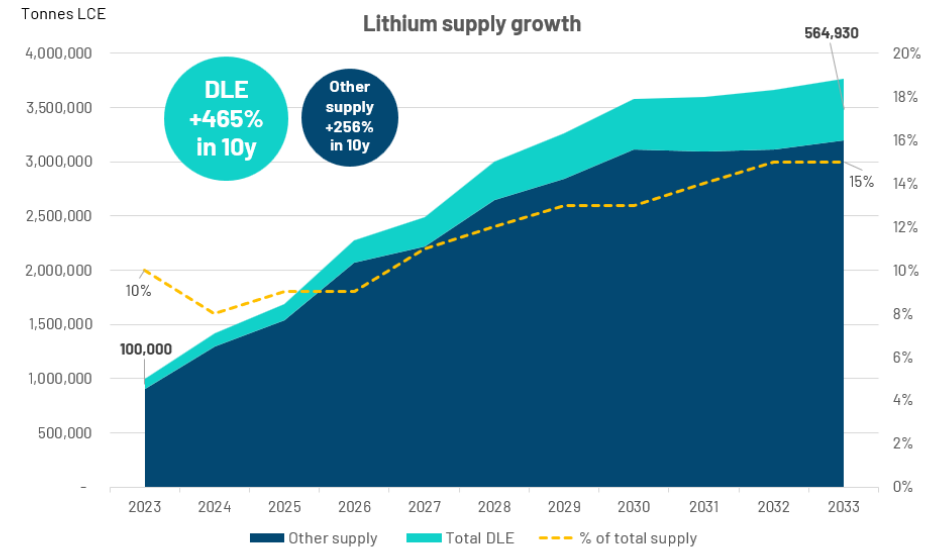
- Interest in the existing Vulcan pilot plants, in their third year of operation, remained high, with visits from the US Consul General, Norman Thatcher Scharpf, the Automotive Engineering Network (AEN), the University of Karlsruhe (KIT), the Chamber of Commerce, potential strategic investors, and related industry as well as several regional interest groups.

Figure 3 Inside the purification process room at Vulcan LEOP

Figure 4 Head of the Rhineland-Palatinate Mining Authority Andreas Tschauder (left), Founder and Executive Chair, Dr. Francis Wedin (middle) and CDO Thorsten Weimann (right) at Vulcan's LEOP opening.

Figures 5 and 6 Tours held at the LEOP opening: politicians, industry, and investment partners.

COMMERCIAL GROWTH OF DLE



Source: Fastmarkets

Fastmarkets is one of the most trusted cross-commodity price reporting agency (PRA) in the agriculture, forest products, metals and mining, and new generation energy markets.

LME An HKEX Company

Figure 7 Current commercial use of DLE technology and projected increase in use

Update on Central Lithium Electrolysis Optimisation Plant (CLEOP)

- During the Quarter, Vulcan completed ground works of its CLEOP at the Industrial Park, Frankfurt-Hoechst.
- Pre-commissioning of the main equipment has begun, continuing the Company's progress in delivering the first tonnes of carbon neutral lithium on project schedule.
- The CLEOP will focus on optimising operating conditions and training the production team, whilst the commercial Phase One Central Lithium Plant (CLP) is being constructed in the same Industrial Park.
- Within the CLEOP, the lithium chloride produced in Vulcan's LEOP will be converted into battery grade lithium hydroxide, which will be tested by Vulcan's lithium offtake partners Stellantis, Volkswagen, Renault, Umicore and LG Energy Solution.

Figure 8 Electrolyser Equipment - Flushing (side view)

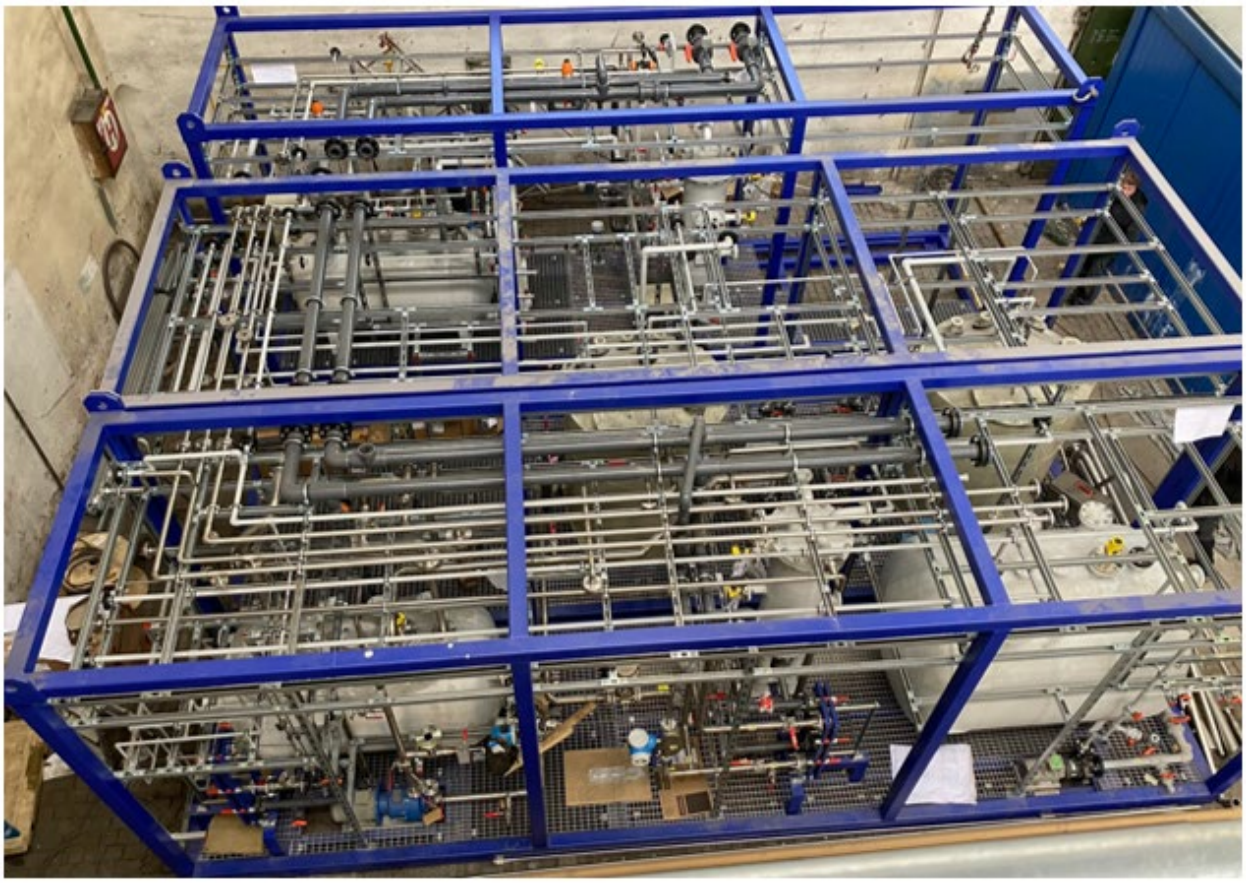


Figure 9 Electrolyser Equipment – Catholyte, Flushing & Anolyte

Positive City Council vote for Phase One Commercial Geothermal and Lithium Extraction Plant (G-LEP)

- During the Quarter, the Landau City Council made a positive decision to execute an agreement to allow Vulcan to begin construction of its G-LEP (figure 10) in Landau, Germany.
- The agreement enables Vulcan to construct the Phase One G-LEP on the intended land which is located within the planned Landau commercial park "Am Messegelände Südost". Completion of acquisition of this land is set to occur subsequently, following satisfaction of and consultation with agreed conditions and execution of the formal purchase agreement.
- Construction is anticipated to start in Q4 2024, subject to successful financing close.
- The positive vote is a signal of strong support by the City of Landau, given the Project's strong local, social, and environmental benefits. The regional engagement team have delivered a strong campaign in the Landau region to communicate and inform the local community of the benefits of Vulcan's ZERO CARBON LITHIUM™ Project.
- The prospective land acquisition will add to the site already secured at Industrial Park, Frankfurt Hoechst for the CLP.
- Lithium-rich brine and the hot industrial water will be piped to Vulcan's G-LEP facilities in the Landau commercial park. The hot industrial water will be used to provide carbon neutral heat, producing green energy to benefit the local community in Landau and the surrounding region. In the Lithium Extraction Plant, the lithium salts will be extracted from the brine before it is returned to the subsurface. The lithium chloride produced will be transported to the Industrial Park in Hoechst.
- The decision from the Landau City Council represents an important step forward for the execution of Phase One of Vulcan's ZERO CARBON LITHIUM™ Project and sends a strong signal to enabling a more sustainable end-to-end EV supply chain in Europe for Europe.

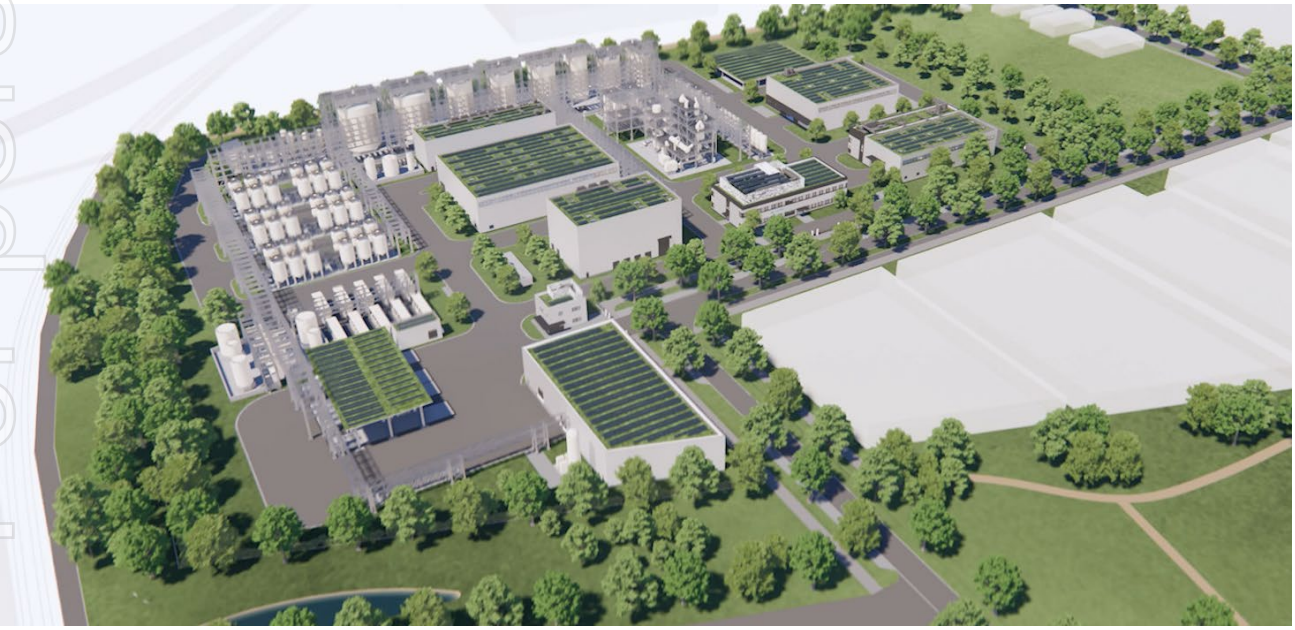


Figure 10 Vulcan's planned G-LEP design

Positive Bridging Engineering Study results

- During the Quarter, Vulcan announced the results of its Bridging Engineering Study for Phase One of its ZERO CARBON LITHIUM™ Project.
- The results of the Bridging Study confirmed the Company's existing Phase One plan, targeting approximately 24,000 tonnes lithium hydroxide production capacity[1, 2] per annum from Phase One, enough for ca. 500,000[3] EVs per annum.
- Phase One is targeting co-production of up to 560 GWh/a[4] of baseload renewable heat for local community district heating and internal consumption, as well as co-production of up to 275 GWh/a of baseload renewable power, to be sold to the grid at Feed-in Tariff rates.

- **Five key outcomes:**
  - **Reduced risk:** Streamlining into one core production area that is already commercially producing brine, with increased lithium reserves (see figure 11).
  - **CAPEX reduction:** ~€100 million reduction down to est. €1,399 million, combining assets, whilst moving to higher project definition.
  - **Low cost:** Further decline in OPEX to est. €4,022/t LHM, one of the lowest on the industry cost curve and despite inflation, while maintaining green credentials.
  - **Robust financials:** Maintained est. NPV at €3.9Bn (A$6.5Bn) pre-tax, €2.6Bn (A$4.3Bn) post-tax, €705 million target annual revenues and 4-year payback, despite lower lithium prices, showing robustness of the project business case.[5]
  - **Execution Ready:**
    - Class II cost estimate completed, ready to award key EPC(M) contracts.
    - 10,000s of hours of successful in-house A-DLE piloting completed.
    - Combined €50 million investment in Optimisation Plants starting up.
- With the completion of the Bridging Study, the Company has formally commenced its debt and project-level equity financing process for Phase One in November 2023.
- Debt financing is led by BNP Paribas and equity financing will be targeted at the project level.
- Vulcan has already and will continue to apply for public funding, to assist with the overall financing of Phase One.

[1] See Production Target Material Assumptions and Parameters on page 130 and "Ore Reserves" section 1.5.3 for assumptions: https://www.investi.com.au/api/announcements/vul/7e316105-420.pdf
[2] These are targets which may not be achieved.
[3] Based on Vulcan internal estimated average EV battery size and chemistry in Europe.
[4] To be read in conjunction with Production Target Material Assumptions and Parameters on page 130: https://www.investi.com.au/api/announcements/vul/7e316105-420.pdf
[5] See "Economic Analysis" section (section 1.12) for full list of assumptions and targets: https://www.investi.com.au/api/announcements/vul/7e316105-420.pdf

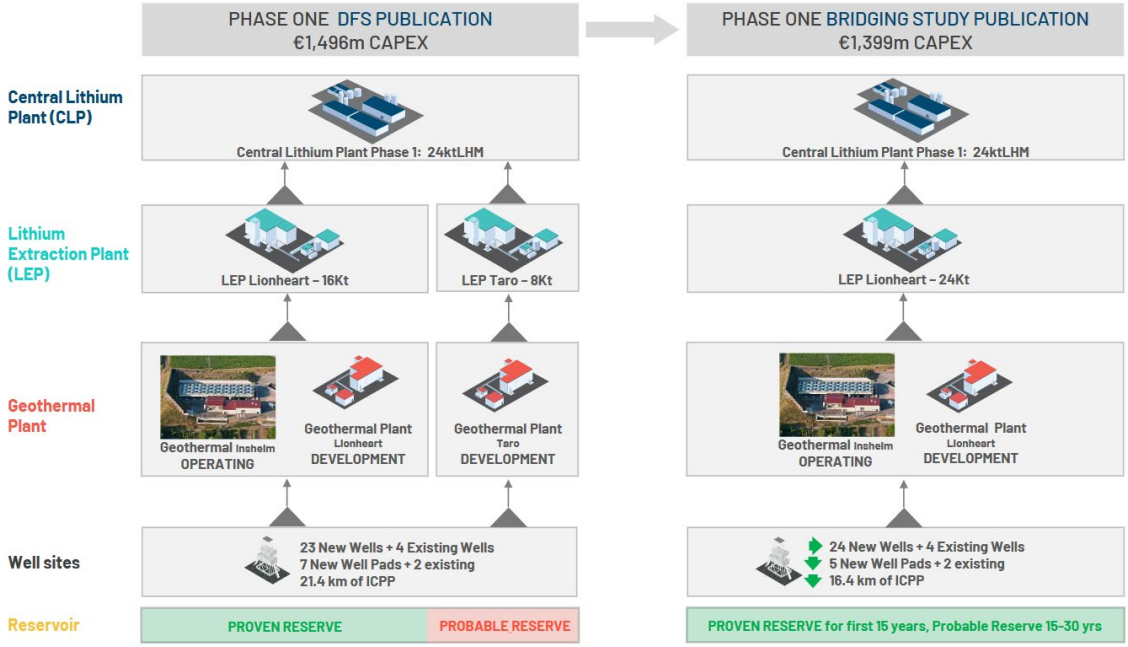


Figure11 Evolution of ZERO CARBON LITHIUM™ Project between DFS and Bridging Study, showing de-risking of Phase One project structure and reduction of CAPEX

Commercial: Letter of Support from Export Finance Australia (EFA)

- During the Quarter, Vulcan received a conditional, non-binding Letter of Support from Export Finance Australia (EFA) for up to $200 million (~€120 million) for the upcoming financing of Phase One of the ZERO CARBON LITHIUM™ Project.
- Vulcan has already secured substantial in-principle government-backed ECA support, subject to customary conditions, from Bpifrance Assurance Export, the French ECA, SACE, the Italian ECA, and EDC, the Canadian ECA.
- EFA's Letter of Support could be converted into a binding agreement following customary conditions and financing terms being met, including but not limited to a confirmed level of Australian content; legal, technical, market and environmental due diligence reports; and acceptable lender and other contracts in place.
- This signal of confidence strengthens Vulcan's position to successfully complete its financing.

Completion of Environmental and Social Impact Assessment (ESIA)

- Vulcan completed its Environmental and Social Impact Assessment (ESIA) for Phase One of its ZERO CARBON LITHIUM™ Project.
- The ESIA is a prerequisite to the raising of sustainable or "green" debt finance and is an important third-party validation of the Project's sustainability credentials.
- The environmental and social baseline, impact assessment, and cumulative impact assessment completed by ERM is in line with lenders' requirements to ensure a level of environmental performance prior to the furnishing of debt finance, e.g., the International Finance Corporation (IFC) Performance Standards on Environmental and Social Sustainability, and the Equator Principles (EP4).
- The assessment has shown that Vulcan's Phase One ZERO CARBON LITHIUM™ Project has no potential negative impact classed as greater than "minor" post mitigation action and has added further confirmation that the Project will provide numerous positive impacts, not only locally but also on a national scale.
- Completion of the ESIA marks a significant milestone in the advancement of Vulcan's Phase One project and has validated the world-leading sustainability and social benefits the integrated renewable energy and lithium project will deliver to stakeholders.

Figure 12 Stakeholder engagement at the ZERO CARBON LITHIUM™ Project

VERCANA – Vulcan's 100%-owned geothermal drilling company

- The V20 rig is now ready to mobilise and be commissioned after assembly at the well site. The rig transportation plan and the process of 3rd party rig intake with a final technical acceptance is in place.
- Vercana received approval from the mining authority for the V20 rig and its additional equipment at the end of the quarter. Pre-approval for the rig harness installation, also known as "height safety device" by the mining authority, has been received, with final approval expected imminently.
- The refurbishment of Vulcan's V10 rig remains ongoing. Currently, 80% of the work to completion is in progress. Completion of V10 is planned by the end of Q2 2024.
- The V20 and V10 drill rigs, owned by Vulcan are two from just seven licenced to operate across Germany. Both drill rigs are capable of running fully on electricity from the grid.

Figure 13 Aerial shot of Vercana operations at Nienhagen.

Vulcan Labs and VULSORB®

- Vulcan Labs continues to provide incremental improvements and optimisations to its proprietary VULSORB® and A-DLE process and will continue to do so during project execution and into the future operational phase of the Company.
- During the Quarter, the Company experienced increasing interest from lithium brine developers and producers to license its proprietary Adsorption-type Direct Lithium Extraction (A-DLE) technology and VULSORB®.

Figure 14 Vulcan Labs in operation: providing continuous improvement and optimisation

Additional ASX Disclosure Information

ASX Listing Rule 5.3.1: Exploration and Evaluation expenditure during the Quarter was €5.9 million. Expenditure related to well site preparation and planning for the upcoming Schleidberg well and interpretation costs. Interpretation costs include capitalised costs from Vulcan Energy Subsurface (VES) and Vulcan Energie Ressourcen GmbH staff costs where time was allocated to Vulcan licence areas.

ASX Listing Rule 5.3.2: Development expenditure during the Quarter was €24.1 million. Expenditure predominately related to construction of the Lithium Extraction Optimisation Plant (€5.7 million) and Central Lithium Electrolysis Optimisation Plant (€0.6 million), refurbishment costs for Vulcan's two electric drill rigs (€4.8 million), Bridging Engineering Study work undertaken by Hatch for Phase One (€2.7 million), payments for casing and critical spares relating to the upcoming brine field execution plan (€5.6 million) and an early works agreement payment relating to long lead items for a geothermal power plant (€2.5 million).

ASX Listing Rule 5.3.3: During the Quarter, no licences were granted or relinquished. As announced on 16 November 2023 as part of its Bridging Study results, Vulcan's Proved and Probable Ore Reserves in Lionheart increased to 0.57Mt Lithium Carbonate Equivalent (LCE) @181mg/l Li.

ASX Listing Rule 5.3.5: Payments to related parties of the Company and their associates during the Quarter per Section 6.1 of the Appendix 5B total €280,000. This is comprised of an allocation of the Managing Director remuneration of €21,000, Executive Chair remuneration of €100,000 and Non-Executive Director fees of €159,000. Payments to related parties of the Company and their associates during the Quarter per Section 6.2 of Appendix 5B total €85,000. This amount is an allocation of the Managing Director's remuneration for work done on exploration activities associated with the Vulcan Zero Carbon Lithium™ Project. Please see the Remuneration Report in the 2022 Annual Report for further details on Directors' Remuneration.

Vulcan's ZERO CARBON LITHIUM™ Project licence table

NAME	STATE	RESOURCES APPLIED FOR	AREA (KM^2)	EXPIRY	OWNERSHIP AS AT 30 JUNE 2023	CHANGE IN OWNERSHIP	TYPE
Ried	Hessen	Geothermal, brine & lithium	289.92	07.2025	100 % VER GmbH	N/A	exploration
Luftbrücke	Hessen	Geothermal, brine & lithium	207.25	9.2026	100 % VER GmbH	N/A	exploration
Rift-Nord (of Rift)	RLP	Geothermal & lithium	61.83	06.2027	50% interest in license, with 100% ownership of first new production project developed	N/A	exploration
Waldnerturm	BW	Geothermal, brine & lithium	20.43	12.2024	100 % VER GmbH	N/A	exploration
Lampertheim II	Hessen	Geothermal, brine & lithium	1.99	07.2024	100 % VER GmbH	N/A	exploration
Ortenau II	BW	Geothermal, brine & lithium	374.10	12.2025	100 % VER GmbH	N/A	exploration
Mannheim	BW	Geothermal, brine & lithium	144.49	06.2024	100 % VER Pty Ltd	N/A	exploration
Taro	RLP	Geothermal	32.68	08.2025	100% GGH (part of VER Group)	N/A	exploration
Lisbeth	RLP	Lithium		09.2024	100 % VER GmbH	N/A	exploration
Ludwig	RLP	Geothermal & lithium	96.34	12.2024	100 % VER GmbH	N/A	exploration
Therese	RLP	Geothermal & lithium	81.12	12.2024	100 % VER GmbH	N/A	exploration
Lampertheim	Hessen	Geothermal, brine & lithium	108.03	07.2024	100 % VER GmbH	N/A	exploration
Kerner	RLP	Geothermal & lithium	72.26	12.2024	100 % VER GmbH	N/A	exploration
Löwenherz	RLP	Geothermal & lithium	75.43	12.2024	100 % VER GmbH	N/A	exploration
Flaggenturm	RLP	Geothermal	166.75	12.2024	100 % VER GmbH	N/A	exploration
Fuchsmantel	RLP	Lithium		07.2023	100 % VER GmbH	N/A	exploration
Landau-Süd	RLP	Geothermal	19.41	05.2034	JV and brine offtake agreement Geox	N/A	production
Ilka	RLP	Lithium		11.2025	JV and brine offtake agreement Geox	N/A	exploration
Insheim	RLP	Geothermal	19.00	11.2037	100% Natürlich Insheim GmbH	N/A	production
LiThermEx	RLP	Lithium		03.2025	100% Natürlich Insheim GmbH	N/A	exploration
Cesano	Italy	Geothermal brine & lithium	11.46	01.2025	50 % VER Ltd., 50 % Enel Green Power	N/A	exploration

Mineral Resources and Ore Reserves updates during the Quarter

Vulcan's combined Zero Carbon Lithium™ Project Lithium (Li) brine Measured, Indicated and Inferred Mineral Resource estimates[6].

Licence/ Area	Reservoir	Classification	GRV km³	Avg. NTG %	Avg. Phie %	Avg. Li mg/L	Elemental Li t	LCE kt
Insheim	*MUS, BST, ROT, BM	Measured	13	69	9	181	151,823	808
Rift-North	*MUS, BST, ROT, BM	Measured	9.5	70	9	181	110,181	586
	*MUS, BST, ROT, BM	Indicated	29	71	9	181	355,443	1892
Landau South	*MUS, BST, ROT; BM	Measured	12	68	9	181	134,677	717
	*MUS, BST, ROT; BM	Indicated	2.7	69	9	181	29,620	158
Flaggenturm	BST	Indicated	7	90	10	181	115,215	613
	BST	Inferred	37	65	9	181	391,201	2,082
Kerner	BST	Indicated	5	90	10	181	76,242	406
	BST	Inferred	13	65	9	181	132,558	705
Kerner Ost	*MUS, BST, ROT	Indicated	4.3	73	8	181	66,708	355
Taro	*MUS, BST, ROT	Indicated	14.5	73	8	181	237,362	1,263
Ortenau	*MUS, BST, ROT	Indicated	57	73	8	181	659,013	3,507
	BST	Inferred	105	73	8	181	1,883,212	10,024
Mannheim	BST	Indicated	4	90	10	153	54,111	288
	BST	Inferred	32	65	9	153	290,312	1,545
Ludwig	BST	Indicated	7	90	10	153	93,220	496
	BST	Inferred	22	65	9	153	199,226	1,060
Therese	BST	Indicated	2	90	10	153	29,907	159
	BST	Inferred	22	65	9	153	200,708	1,068
						mg/L		**kt**
Total LCE		**Measured**				**181**		**2,112**
		Indicated				**178**		**9,137**
		Inferred				**172**		**16,484**

[6] Phase One licences indicated in orange highlight. Note: see Competent Person Statement at the end of this document

Note 1: Mineral Resources are not Ore Reserves and do not have demonstrated economic viability.
Note 2: The weights are reported in metric tonnes (1,000 kg or 2,204.6 lbs). Numbers may not add up due to rounding of the resource value percentages.
Note 3: Reservoir abbreviations: MUS – Muschelkalk Formation, BST – Buntsandstein Group; ROT – Rotliegend Group; BM - Variscan Basement.
Note 4: To describe the resource in terms of industry standard, a conversion factor of 5.323 is used to convert elemental Li to Li2CO3, or Lithium Carbonate Equivalent (LCE).
Note 5: NTG and Phie averages have been weighted to the thickness of the reservoir. These averages are consolidations of multiple local zones and therefore multiplied together will not equate to the global elemental lithium values presented. The elemental lithium values presented are determined separately using detailed data for each zone and then summed together to show a total value for the purposes of this summary table.
Note 6: GRV refers to gross rock volume, also known as the aquifer volume. GRV values presented in this table are rounded to the first significant figure for presentation purposes. The elemental lithium values presented are calculated using GRV values that have not been rounded.
Note 7: Mineral Resources are considered to have reasonable prospects for eventual economic extraction under current and forecast lithium market pricing with application of Vulcan's DLS processing.
Note 8: The values shown are an approximation and with globalised rounding of values in the presented summary table as per JORC guidelines, cannot be multiplied through to achieve the Mineral Resource estimated volumes shown above

Phase One Ore Reserves[7]

INSHEIM, LANDAU SOUTH, AND RIFT NORTH		
Reserves Classification	**Lithium grade**	**Economic Reserves Quantity at Wellhead Reference Point**
	mg/l Li	kt LCE
Proved	181	318
Probable	181	252

[7] See Competent Person Statement at the end of this document

Defining 'zero carbon'

Given Vulcan's trademarked logo includes the wording 'Zero Carbon Lithium' it is important the Company clarifies the usage of the term. Vulcan defines 'Zero Carbon' as "net zero carbon equivalent emissions", the legal definition of which states that net zero emissions refers to achieving a balance between the amount of greenhouse gas equivalent emissions produced and the amount removed or reduced[8] . This is specifically related to the activities undertaken to extract and process the final lithium hydroxide monohydrate product from its combined lithium and geothermal energy brine resource located in the Upper Rhine Valley. Unlike existing lithium operations, Vulcan aims to not burn fossil fuels in the lithium production and processing exercise. Instead, it will use its renewable energy source to drive the lithium production process, whilst also selling its own geothermal heat and power to the grid, displacing fossil fuel generated energy. The greenhouse gas (GHG) emissions avoided as a result of the displaced fossil fuel-generated energy allows Vulcan to define the project as net zero, or "Zero Carbon" per the Project's trademarked nomenclature, the 'Zero Carbon Lithium™ Project'.

Vulcan commissioned Minviro Ltd, an independent consultancy, to undertake an ISO-aligned Life Cycle Assessment (LCA) of the integrated geothermal renewable energy, lithium production and processing impacts to prove the validity of the carbon neutral nature of the Zero Carbon Lithium™ Project. Minviro's LCA assessments are a cradle-to-gate study and include the extraction of the raw lithium product, the geothermal plant, the brine handling, the purification, electrolysis and crystallisation and the transport of the product from well sites through to the final processing plant. Minviro's first ISO aligned LCA was conducted in 2021, one of the first such studies conducted on the lithium hydroxide supply chain globally, with the latest LCA update undertaken in 2023.

In addition, Vulcan engages Climate Active to verify the GHG emissions of Vulcan's Australian organisation annually, which began in calendar year 2020. The latest carbon neutral certification covers the corporate team's day-to-day emissions from 2022 across Scopes 1, 2 and 3, as defined by the GHG Protocol. Because Climate Active is an Australian based carbon neutral certification in partnership with the Australian Government and does not cover other jurisdictions, Vulcan certifies its German subsidiaries against European carbon neutral certifications. For baseline calendar year 2021, Vulcan certified against South Pole's carbon neutral organisation label. For 2022, Vulcan used Climate Impact Partner's carbon neutral label, which covered business as usual emissions, in line with the Australian Climate Active certification, for Vulcan Energie Ressourcen GmbH, its engineering subsidiaries Vulcan Energy Engineering GmbH, Vulcan Energy Subsurface Solutions GmbH, the geothermal renewable energy operator Natürlich Insheim, and Vercana, Vulcan's electric geothermal drilling subsidiary.

Emissions associated with scale up and construction of the Zero Carbon Lithium™ Project are not included in the carbon neutral certifications because they are not part of the day-to-day operations. Instead, these emissions will be disclosed to the market on an annual basis and will be included in future LCA calculations. As part of the carbon neutral certifications, and to bring the minimal GHG emissions balance associated with the Australian and German operations to net zero, Vulcan purchased good quality carbon credits through reputable suppliers, covered under the VERRA Verified Carbon Standard. Mitigation measures as part of the

[8] Definition taken from The Institute for Government UK website.

carbon neutral certificates include implementing energy efficiency measures within the offices and purchasing renewable energy certificates (RECs) to increase the mix of renewable energy in the electricity grid. Details of the Company's estimated future carbon emissions associated with the life cycle of the planned Zero Carbon Lithium™ Project were disclosed to the market in 2021 (Minviro LCA announcement 4 August 2021) , a breakdown of the GHG emissions categories associated with Vulcan's operations and how they were calculated as well as information about the carbon credits purchased for 2021 were reported in the FY22 Sustainability Report available via the website (https://v-er. eu/). The GHG emissions associated with Vulcan's operations for 2022 will be reported in full in the 2023 Sustainability Report. Updated Minviro LCA data was announced as part of Vulcan's Phase One Definitive Feasibility Study (DFS) on 13 February 2023 and will continue to be reviewed at key Project milestones such as completion of the Bridging Study, and the start of commercial production. Vulcan expects to maintain its carbon neutral status for this period.

About Vulcan

Founded in 2018, Vulcan's unique **Zero Carbon Lithium**™ Project aims to decarbonise lithium production, through developing the world's first net carbon neutral lithium business, with the co-production of renewable geothermal energy on a mass scale. By adapting existing technologies to efficiently extract lithium from geothermal brine, Vulcan aims to deliver a local source of sustainable lithium for Europe, built around a net zero carbon strategy with exclusion of fossil fuels. Already an operational renewable energy producer, Vulcan will also provide renewable electricity and heat to local communities. Vulcan's combined geothermal energy and lithium resource is the largest in Europe[9], with license areas focused on the Upper Rhine Valley, Germany. Strategically placed in the heart of the European electric vehicle market to decarbonise the supply chain, Vulcan is rapidly advancing the Zero Carbon Lithium™ Project to target timely market entry, with the ability to expand to meet the unprecedented demand that is building in the European markets. Guided by our **Values of Climate Champion, Determined and Inspiring**, and united by a passion for the environment and leveraging scientific solutions, Vulcan has a unique, world-leading scientific and commercial team in the fields of lithium chemicals and geothermal renewable energy. Vulcan is committed to partnering with organisations that share its decarbonisation ambitions and has binding lithium offtake agreements with some of the largest cathode, battery, and automakers in the world. As a motivated disruptor, Vulcan aims to leverage its multidisciplinary expert team, leading geothermal technology and position in the European EV supply chain to be a global leader in producing zero fossil fuel, net carbon neutral lithium while being nature positive. Vulcan aims to be the largest, most preferred, strategic supplier of lithium chemicals and renewable power and heating from Europe, for Europe; to empower a net zero carbon future.

[9] According to public, JORC-compliant data. See Upgrade of Zero Carbon Lithium™ Project Resources, 29 September 2023

Corporate Directory

Executive Chair	Dr. Francis Wedin
Managing Director and CEO	Cris Moreno
Deputy Chair	Gavin Rezos
Non-Executive Director	Ranya Alkadamani
Non-Executive Director	Annie Liu
Non-Executive Director	Dr. Heidi Grön
Non-Executive Director	Josephine Bush
Non-Executive Director	Dr. Günter Hilken
Non-Executive Director	Mark Skelton – *retiring as of 1 February 2024*
Chief Representative GER	Dr. Horst Kreuter
Company Secretary	Daniel Tydde

For and on behalf of the Board

Daniel Tydde | Company Secretary

Media and Investor Relations contact

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

Reporting calendar

28 March 2024	Annual Report
29 April 2024	March Quarterly
29 July 2024	June Quarterly
12 September 2024	Half Year Report
29 October 2024	September Quarterly

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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Vulcan has carried out a definitive feasibility study ("DFS") and bridging engineering study ("Bridging Study") for Phase One of its Zero Carbon Lithium™ Project ("Project"), the results of which were announced to the ASX in the announcements "Zero Carbon Lithium Project Phase 1 DFS Results" dated 13 February 2023 ("DFS Announcement") and "Positive Zero Carbon Lithium™ Project Bridging Study Results" on 16 November 2023 ("Bridging Study Announcement"). This announcement may include certain information relating to the DFS and the Bridging Study. The DFS and Bridging Study are based on the material assumptions and parameters outlined in their respective announcements. While Vulcan considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Bridging Study or DFS will be achieved. This presentation may also include certain information relating to Phase 2 of its Project, Vulcan has not yet carried out a definitive feasibility study for Phase Two of its Project.

Competent Person Statement

The information in this announcement that relates to estimates of Mineral Resources and Ore Reserves is extracted from the Bridging Study Announcement which is available to view on Vulcan's website at www.v-er.eu. Vulcan confirms, that in respect of the estimates of Mineral Resources and Ore Reserves included in this announcement:

a) it is not aware of any new information or data that materially affects the information included in the original market announcement, and that all material assumptions and technical parameters underpinning the estimates in the original market announcement continue to apply and have not materially changed;

b) 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; and

c) all material assumptions underpinning the production targets (and the forecast financial information derived from such production targets) included in this announcement continue to apply and have not materially changed.