VULCAN ENERGY
ZERO CARBON LITHIUM™

ASX Release 28 April 2023

ASX:VUL
FSE:VUL

Fast Facts

Issued Capital: 143,435,301
Market Cap (@$5.74): $823m

Quarterly Activities Report March 2023

Vulcan Energy Resources Limited (Vulcan; ASX: VUL, FSE: VUL, the Company) has commenced 2023 with rapid transformation from a development company to an integrated project development, execution, and operations company, prompted by the successful completion of Vulcan's Phase One integrated renewable energy and Zero Carbon Lithium™ Project Definitive Feasibility Study (DFS) in February, following two years of successful onsite piloting.

Highlights

- ✓ Ongoing renewable energy generation from existing operations, contributing to decarbonisation and energy security for Europe.
- ✓ Successful completion of two years' lithium extraction pilot plant operation on site, proving Vulcan's Zero Carbon Lithium™ Project process to produce lithium with zero fossils and net zero carbon footprint.
- ✓ After two years of sorbent testwork, Vulcan's internally developed VULSORB™ selected for Phase One commercial development as most optimal sorbent choice for lithium extraction, onshoring IP and supply chain in Europe.
- ✓ Successful completion of Phase One DFS for the Zero Carbon Lithium™ Project, with positive results proving that sustainable energy and lithium chemicals projects can be developed without compromising financial performance.
- ✓ Focus for the year ahead is now on execution and operational readiness, for the full Phase One commercial development to produce lithium for electric vehicles, as well as renewable energy, from Europe, for Europe.
- ✓ Launch of financing process for Phase One commercial development, with initial market sounding for debt financing providing positive feedback.
- ✓ Overall increase in the Upper Rhine Valley Brine Field (URVBF) lithium Resource to 26.6Mt LCE.
- ✓ Significant progress on optimisation plant construction, and significant growth in operations and execution teams, led by new VP Production.
- ✓ Bridging engineering phase commenced, towards planned start of ordering of commercial long lead items for Phase One in Q2. Discussions commenced with key suppliers and EPCM contractors.
- ✓ Significant cash position of EUR 112m being deployed towards initial CAPEX items for Phase One, including land acquisition, to maintain project momentum.

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Vulcan's CEO and Managing Director, Dr. Francis Wedin, and Deputy CEO Cris Moreno, jointly commented: "We kicked off a transformational year for Vulcan with a transformational Quarter. The DFS for Phase One of our commercial development, for the construction and operation of our integrated renewable energy and Zero Carbon Lithium ™Project, produced highly encouraging results.

"This was the culmination of years of development work, from 2018 when this project was initiated, and two years of successful lithium extraction piloting, where we have brought together commercially proven lithium extraction and renewable energy production processes to create our integrated, zero fossil fuels flow sheet. We would like to express our heartfelt gratitude to our team, who worked so hard to get us to this milestone, and our stakeholders, for their continued support towards realising our common vision: carbon neutral lithium and renewable energy production, from Europe, for Europe.

"This Phase One DFS has precipitated substantial changes at Vulcan. We are quickly building out and deploying our execution and operations capability, as Phase One is moved across from our development team to execution team, and as we start to create operational readiness for our targeted start of Phase One commercial production. Our development team will continue to work on the project pipeline for the next phases of development.

"We made good progress on the construction of our Lithium Extraction Optimisation Plant (LEOP), and Central Lithium Electrolysis Optimisation Plant (CLEOP), both of which are approaching mechanical completion. Both plants will serve as a training ground for our operators, in advance of the Phase One commercial LEP and CLP start-up.

"With the bridging engineering phase under way, we are sensibly deploying our cash position towards certain initial Phase One CAPEX items, such as land acquisition, and site preparation for production/re-injection well sites, so that we retain momentum during our full financing process. We have kicked off financing efforts, with BNP Paribas advising our debt financing, and multiple workstreams ongoing on the equity side. We have already had positive feedback from our market sounding exercise for debt financing, and we are expecting to be able to provide an update on project level, strategic equity investment discussions in the near future.

"It is no understatement to say that the next year will be a challenging, but exciting and truly transformational year for us, as our tireless and highly motivated team starts to build our ground-breaking Zero Carbon Lithium ™Project. We look forward to continuing to share the journey with our stakeholders."

Phase One, Definitive Feasibility Study

On the 13th of February, Vulcan announced the positive results of its Phase One DFS for its Zero Carbon Lithium™ Project. Vulcan is aiming to be the first integrated, renewable heat and power, lithium extraction and lithium hydroxide refining project, to supply the battery electric vehicle industry from Europe, for Europe.

Key DFS Highlights:

- Targeting 24Ktpa Lithium Hydroxide Monohydrate (LHM) p.a. production from EU, for EU.
- Targeting >300GWh/a renewable power, >250GWh/a renewable heat production p.a.
- >250% increase in estimated NPV8 relative to the Pre-Feasibility Study from 2021: €3.9Bn pre-tax, €2.6Bn post-tax.
- 34% estimated IRR pre-tax, 26% IRR post-tax.
- Targeted >€700Mpa estimated revenues. Targeted EBITDA margin of 84%.
- €1,496M estimated CAPEX, increase broadly in line with larger project and inflation.
- Low estimated OPEX of €4,359/t LHM.
- Targeted 3.5-year payback (Integrated Project). Target start of production end-2025.
- Net zero per tonne estimated per tonne LHM carbon footprint: a world first in lithium industry.
- Zero Scope One fossil fuels. Net water consumption very low.

- In line with the DFS Announcement, Vulcan increased its Phase One production target by 60% to 24tpa LHM per annum capacity. The increase in CAPEX from the Phase One Pre-Feasibility study is partly aligned to the increase in production capacity.
- Vulcan also confirmed an increase to the overall Phase One probable reserves to 0.54Mt LCE, centred around current production wells in core of the URVBF field. There was a decrease in Reserves in Taro sector, mainly due to shift in production plans to core Lionheart sector where there are operating production/re-injection wells.
- There was an overall increase in the URVBF lithium Resource to 26.6Mt LCE, the largest lithium Resource in Europe based on publicly available data.[1]
- Vulcan has now commenced the financing process of its Phase One Zero Carbon Lithium™ Project. BNP Paribas has been appointed as Financial Advisor. Vulcan will target funding from a mix of equity, debt, and grants.

Renewable energy operations

- Normal operations continued at Vulcan's Natürlich Insheim geothermal renewable energy wells and plant, with production of 6,300 MWh of gross baseload, renewable power, at an average selling price of €0.25.
- A workover of the geothermal pump in the production well has been brought forward to 28 March and is currently ongoing. A pump using correct materials is being installed by Vulcan's team,

[1] *Please see Annexure 1 for Vulcan's combined Zero Carbon Lithium™ Project Lithium (Li) brine Measured, Indicated and Inferred mineral resource estimates.*

which will correct an error in previous pump material type installation from 2019. It is expected that the plant will resume running by the end of April (Figure 1).

Figure 1: Natürlich Insheim - Pump replacement works.

Phase One integrated Zero Carbon Lithium™ and renewable energy project development

- Financing process for Phase One has been initiated, with debt discussions led by BNP Paribas. Vulcan is targeting a 65:35 debt: equity ratio and is in discussions to bring in strategic equity investors at the project level. Target completion date for the financing is Q1, 2024.
- Bridging engineering phase initiated together with Hatch Ltd., towards ordering commercial plant long lead items.
- Land acquisition and other project execution workstreams remain ongoing.
- Lithium Extraction Optimisation Plant (LEOP) and Central Lithium Electrolysis Optimisation Plant (CLEOP) are both approaching mechanical completion.
- Vulcan's LEOP in Landau remains on target for mid-year operations to commence. Brine lines (Figure 2) to the existing geothermal operation were successfully installed, the crystallizer arrived (Figure 3) as well as reagent preparation reactors which are complete and ready for commissioning. Final onsite construction is expected to significantly progress throughout April,

with electrical work also targeted to begin in April following the successful installation of the Electrical Control Centre (Figure 4).

- Approval was received for Vulcan's preliminary EIA application for drilling further development wells in its core Insheim license, in the Phase One area covered by the DFS, where Vulcan has existing wells and a geothermal renewable energy plant already in production. The preliminary EIA approval states the authority concluded that the environmental impacts of the planned deep wells for geothermal energy and lithium are not significant in terms of their size, extent, and impact intensity, and therefore do not require a full EIA. This is the third preliminary EIA approval that Vulcan has received. Approvals are proceeding in line with Vulcan's development plan.
- Growth continued in the Production team, with Vice President of Production Christian Tragut joining Vulcan from BASF, where he was Vice President of Operations in Germany. From mid-2023, Christian will focus on training the Vulcan Production team on the Optimisation Plants (CLEOP and LEOP), targeting operational readiness prior to commercial scale production as part of Phase One start of production target for year-end 2025.

Figure 2: Brine line installation and construction progress at Vulcan's Lithium Extraction Demonstration Plant at Landau.

Figure 3: Crystallizer arrival and positioning

Figure 4: Electrical Control Centre successfully installed in April, enabling commencement of Electrical Workfront.

Phase two and future project pipeline

- On 17 January Vulcan announced an agreement had been entered into with Stellantis, aimed at developing, building, and operating geothermal renewable energy assets to help decarbonise Stellantis' energy supply in the Opel plant at Rüsselsheim, by providing renewable heat. The first phase of the project will include a Pre-Feasibility Study for the construction of geothermal assets for Stellantis' Rüsselsheim facility, carried out by Vulcan and based on existing data. The following phase, if the first phase is successful, will focus on drilling and more advanced studies and development. Stellantis will aim to source funding for 50% of the project development after the first phase. The planned Project will be at the northernmost extent of Vulcan's focus area in the Upper Rhine Valley.
- A comprehensive 3D seismic survey was successfully completed in and around the city of Mannheim by Vulcan. The results of the survey will be incorporated into Vulcan's next phases of lithium and renewable energy development plans. Vulcan has a heat offtake agreement with MVV, one of the largest municipal energy suppliers in Germany, to supply renewable heat to the city of Mannheim from 2025.

Environment, Social and Governance (ESG)

- Vulcan published its first full stand-alone Taskforce for Climate-related Financial Disclosures report (TCFD) which included Vulcan's first climate scenario modelling against two climate scenarios, Net Zero Emissions (NZE) and Stated Policies (STEPS). Vulcan's business strategy shows strong resilience under both scenarios and minimal physical risks exposure to operations. To view this report please go to https://v-er.eu.
- During the Quarter, Vulcan received a low ESG risk rating from Sustainalytics of 16.77, which placed Vulcan as first amongst peers and within the top 2% for ESG performance in the Chemicals Industry, as benchmarked against 543 companies. Vulcan is proud to have achieved such an excellent result for its first assessment and will continue to utilise such ratings to maintain focus on key ESG areas of improvement.
- By the end of the Quarter, Vulcan's team is approaching 300 in total, and growing as Vulcan delivers on its integrated project execution and operations model. Vulcan is principally hiring from the fossil fuel and chemicals industries, providing employment in the decarbonisation and renewable energy space, whilst contributing to the Just Transition.
- As part of Vulcan's membership to the United Nations Global Compact (UNGC), the Company completed its first Communication on Progress (CoP), accessible via the UNGC website. The UNGC is a voluntary initiative that provides a framework to guide all businesses regardless of size, complexity, or location to adopt sustainable and socially responsible policies. The annual CoP enables measurement and public demonstration of the Company's progress on the UNGCs Ten Principles and Sustainable Development Goals.

Other

- **Annual Reporting Suite:** Vulcan released its Annual Report for the period from 1 July to 31 December 2022. This report corresponds with the financial year change in 2022 to be aligned to Germany, being 1 January to 31 December. The Annual Report formed part of the Company's Annual Reporting Suite including the Annual Report, Sustainability Report, Group Management Report (Konzernlagebericht), Taskforce on Climate related Financial Disclosure Report (TCFD) and Corporate Governance Statement. To access and read our annual reporting suite please go to https://v-er.eu.
- **Industry:** in March 2023, the European Commission released complementary acts, the Critical Raw Materials Act and the Net-Zero Industry Act, which will form part of the broader Green Deal Industrial Plan designed to enhance Europe's net-zero industry and support the fast transition to climate neutrality by 2050. These Acts are likely to provide significant tailwinds for Vulcan's Zero Carbon Lithium™ Project.
  The Critical Raw Materials Act[2] focuses on strengthening EU capacities along all stages of the strategic raw materials value chain, including extraction, processing, and recycling. The Act will provide a "One-Stop Shop" for permitting, where each Member State must designate a single authority to process all permits for critical raw materials projects. Permitting will have fixed timeframes that cannot be exceeded. There will also be further acceleration for projects that are deemed "strategic", and priority will be placed on sustainable projects. Vulcan is developing the largest lithium resource in Europe, with sustainability and carbon neutral status at its core. Vulcan believes it is uniquely positioned to benefit from these acts. Under the ***Net-Zero Industry Act (NZIA)***[3] Projects identified as 'Strategic Projects' will gain access to financial support to address financing gaps in the form of guarantees to decrease borrowing costs, and off-take guarantees for technology made in Europe. The NZIA covers geothermal projects, therefore it is expected Vulcan will benefit from the NZIA also.
- **Operations:** On 4 January 2023, Vulcan acquired a drilling labour hire company, Comeback Personaldienstleistungen GmbH ("Comeback"), adding a further ca. 60 personnel to Vulcan's in-house development drilling team. Vulcan is targeting operational readiness for Phase One development drilling by mid-year, with rig refurbishment progressing well.

Subsequent to the Quarter

- **Agreement for strategic partnership for Central Lithium Plant including equity financing**[4]**:** On 27 April Vulcan signed a Term Sheet agreement, with Nobian GmbH (Nobian) for the formation of a 50/50 joint venture over, and equity financing of, Vulcan's Central Lithium Plant (CLP), which forms part of Vulcan's Zero Carbon Lithium™ Project. The strategic partnership is subject to the parties entering into definitive agreements, which are targeted to be completed within 10 weeks from the date of the term sheet.

[2] *Critical Raw Materials: ensuring secure and sustainable supply chains for EU's green and digital future, https://ec.europa.eu/commission/presscorner/detail/en/ip_23_1661*
[3] *Internal Market, Industry, Entrepreneurship and SME's: https://single-market-economy.ec.europa.eu/publications/net-zero-industry-act_en*
[4] *Refer to ASX Announcement: 27/04/2023*

- As part of its project financing, Vulcan has split Phase One of its integrated 24,000tpy Lithium Hydroxide Monohydrate (LHM) and renewable energy project into two separate Special Purpose Vehicles (SPVs):
    - SPV1 includes the plant and infrastructure associated with the production of renewable energy and lithium chloride (LiCl) and includes land, wells, pipelines, geothermal and lithium extraction plants. SPV1's output includes renewable energy and LiCl, the latter which is sold to SPV2.
    - SPV2 includes the CLP which converts LiCl into LHM, with a by-product of HCl. LHM will be sold to the Vulcan parent company which will then distribute it to Vulcan's offtakers.
- Through the proposed strategic partnership both parties seek to leverage both Nobian's deep and long-standing experience in industrial crystallization and electrolysis and operating chlor-alkali plants, as well Vulcan's Zero Carbon Lithium™ Project, which uses chlor-alkali type electrolysis cells to produce lithium hydroxide.
- Nobian has existing production sites in the Netherlands, Denmark and Germany, including at the same site as Vulcan's planned CLP, at the Hoechst Chemical Park, providing additional synergies.
- The Term Sheet builds on and reflects 15 months of collaboration between Nobian and Vulcan.
- The Term Sheet provides that, subject to execution of Definitive Agreements for the Transaction and the satisfaction of other conditions, Nobian shall contribute EUR 161 million in cash as equity to fund CAPEX for the CLP, to acquire 50% of the SPV2 Joint Venture, on the basis of an agreed pre-money valuation of EUR 322 million for the CLP SPV2.
- As per Vulcan's Definitive Feasibility Study (DFS) published in February 2023[5], SPV2's CAPEX requirement is estimated at EUR 322 million. It is expected that Nobian's equity contribution, alongside expected project debt finance to be obtained by the Company, which BNP Paribas, Vulcan's financial advisor, is assisting Vulcan on arranging, will fully cover the funding requirement for the CLP. The Company is targeting a debt-to-equity ratio of 65:35 for the overall funding of Phase One.
- Based on the DFS, SPV1's Net Present Value (NPV) represents 77% of Phase One total NPV whilst SPV2's NPV represents 23%.
- **Executive Team leadership Change:** Vulcan Energy is rapidly transitioning from a development company to an integrated project execution and production company. Building on a European-centric delivery model, on-the-ground leadership and in close collaboration with key technology and execution partners, Vulcan is on track to deliver its Phase One Zero Carbon Lithium™ Project on time and within budget.

  To ensure the successful transition to this European-centric delivery model, Dr. Stefan Brand, Vulcan's current Deputy CTO and based in Germany local to the Zero Carbon Lithium™ Project area, will commence effective 30 June 2023 as Chief Technology Officer of Vulcan. Dr. Brand brings 25 years of extensive industry experience in speciality chemicals, knowledge and skills in process innovation and optimisation, sustainability, and commercial leadership. He comes to Vulcan most recently from Clariant, a world leading specialty and sustainable chemical solutions company. Dr. Brand is ideally suited to lead our lithium technical team, which provides technical capability and supports the execution and operation teams at Vulcan's Phase One Zero Carbon Lithium™ Project. Dr. Brand joins Mr. Christian Tragut on the executive team, who recently joined

[5] *See Vulcan Zero Carbon Lithium™ Project Phase One DFS results and Resources-Reserves update* https://www.investi.com.au/api/announcements/vul/e617fca6-6d4.pdf *and Annexure 2 for the Phase One Ore Reserves.*

Vulcan as VP Production from BASF, having had 30 years' experience in building and operating chlor-alkali plants, of a similar type that Vulcan is building for its lithium hydroxide conversion facility.

As part of this same EU-centric transition model, Dr. Stephen Harrison, who is based in California, will step down as CTO effective 30 June 2023. As a world-leading expert on lithium extraction and geothermal brines, Stephen has been instrumental in the development of Vulcan's in-house lithium chemicals team, and Vulcan's associated intellectual property development for lithium extraction and processing, from two years of successful piloting work. We sincerely thank Stephen for his dedicated service to Vulcan to date.

- **Vesting of performance rights:** The Company also advises that, pursuant to ASX Listing Rule 3.10.7, 60,000 performance rights have vested following the passing of 12 months from the successful listing of Vulcan on the regulated market of the Frankfurt Stock Exchange and the satisfaction of internal objectives relating to ESG and the long-business plan of Vulcan. The holders have until 1 December 2024 to exercise these rights.

Additional ASX Disclosure Information

ASX Listing Rule 5.3.1: Exploration and Evaluation expenditure during the Quarter was €6.6 million. Expenditure was on engineering studies towards the Phase One DFS for the Vulcan Zero Carbon Lithium™ Project, the successful completion of 3D seismic works in Phase One area, and interpretation of seismic data. Interpretation costs include capitalised costs from Vulcan Energy Subsurface (VES) where time was allocated to Vulcan license areas.

ASX Listing Rule 5.3.2: Development expenditure during the Quarter was €10.9 million. Expenditure related to construction of the Optimisation Plants and refurbishment costs for Vulcan's two electric drill rigs. Expenditure also related to design engineering costs which included capitalised costs from Vulcan Energy Engineering (VEE) where time was dedicated to Vulcan's Optimisation Plants.

ASX Listing Rule 5.3.3: During the Quarter Vulcan was granted the LiThermEx licence covering lithium exploration in the same geographic area as the Insheim geothermal production licence.

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 €102,000. This is comprised of an allocation of the Managing Director remuneration of €20,000, Non-Executive Director fees of €77,000 as well as consulting fees of €5,000 to JRB Consulting, a company related to one of the Non-Executive Directors, in respect of a Board mandated review of the company's ESG reporting. Please see the Remuneration Report in the 2022 Annual Report for further details on Director's Remuneration.

Payments to related parties of the Company and their associates during the Quarter per Section 6.2 of the Appendix 5B total €81,000. 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 Director's Remuneration.

Vulcan Zero Carbon Lithium™ Project licence standing

NAME	STATE	RESOURCES APPLIED FOR	AREA (KM^2)	EXPIRY	OWNERSHIP AS AT 31 MARCH 2023	CHANGE IN OWNERSHIP	TYPE
Ried	Hessen	Geothermal, brine & lithium	289.92	07.2025	100 % VER GmbH	N/A	exploration license granted
Rift-Nord	RLP	Geothermal & lithium	61.83	06.2027	50 % VER GmbH, 50 % GET	N/A	exploration license granted
Waldnerturm	BW	Geothermal, brine & lithium	20.44	12.2024	100 % VER GmbH	N/A	exploration license granted
Lampertheim II	Hessen	Geothermal, brine & lithium	1.98	07.2024	100 % VER GmbH	N/A	exploration license granted
Ortenau II	BW	Geothermal, brine & lithium	374.1	06.2023	100 % VER GmbH	N/A	exploration license granted
Mannheim	BW	Geothermal, brine & lithium	144.49	06.2024	100 % VER Pty Ltd	N/A	Extension exploration license granted
Taro	RLP	Geothermal	32.68	08.2025	100% GGH (part of VER Group)	N/A	exploration license granted
Lisbeth	RLP	Lithium		09.2024	100 % VER GmbH	N/A	exploration license granted
Ludwig	RLP	Geothermal & lithium	96.34	12.2024	100 % VER GmbH	N/A	exploration license granted
Therese	RLP	Geothermal & lithium	81.12	12.2024	100 % VER GmbH	N/A	exploration license granted
Lampertheim	Hessen	Geothermal, brine & lithium	108.03	07.2024	100 % VER GmbH	N/A	exploration license granted
Kerner	RLP	Geothermal & lithium	72.26	12.2024	100 % VER GmbH	N/A	exploration license granted
Löwenherz	RLP	Geothermal & lithium	75.43	12.2024	100 % VER GmbH	N/A	exploration license granted
Flaggenturm	RLP	Geothermal	141.14	12.2024	100 % VER GmbH (before FINAP)	N/A	exploration license granted
Fuchsmantel	RLP	Lithium		07.2023	100 % VER GmbH (before FINAP)	N/A	exploration license granted
Landau-Süd	RLP	Geothermal	19.41	05.2034	brine offtake agreement Geox	N/A	Production license granted
Ilka	RLP	Lithium		11.2025	brine offtake agreement Geox	N/A	exploration license granted
Insheim	RLP	Geothermal	19	11.2037	VER GmbH	N/A	production license granted
LiThermEx	RLP	Lithium		03.2025	100 % VER GmbH	100%	exploration license granted
Cesano	Italy	Geothermal brine & lithium	11.46	01.2025	50% VER Ltd.	N/A	exploration license granted

Figure 5. Vulcan Energy Resources Licence overview as of 31 March 2023

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 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 strict 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 [6], 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 Integrity, Leadership, Future-focused and Sustainability, and united by a passion for environmentalism 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.

[6] *According to public, JORC-compliant data. See Phase One DFS announcement, 13 February 2023.*

Corporate Directory

Managing Director and CEO	Dr. Francis Wedin
Deputy CEO	Cris Moreno
Chairman	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
Executive Director, Germany	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 April 2023	March Quarterly
31 May	Annual General Meeting
28 July 2023	June Quarterly
15 September 2023	Half Year Report
27 October 2023	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.

Vulcan does not undertake any obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events. No representation or warranty, express or implied, is made as to the fairness, accuracy, completeness or correctness of the information, opinions or conclusions contained in this announcement. To the maximum extent permitted by law, none of Vulcan, its Directors, employees, advisors or agents, nor any other person, accepts any liability for any loss arising from the use of the information contained in this announcement. You are cautioned not to place undue reliance on any forward-looking statement. The forward-looking statements in this announcement reflect views held only as at the date of this announcement.

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Vulcan has so far only carried out a pre-feasibility study (the results of which were announced to the ASX in the announcement "Positive PFS & Maiden JORC Ore Reserve: Zero Carbon Lithium™ Project" dated 15 January 2020) ('PFS') and a definitive feasibility study for Phase One of its Zero Carbon Lithium™ Project ('Project') (the results of which were announced to the ASX in the announcement "Zero Carbon Lithium Project Phase 1 DFS Results" dated 13 February 2023) ('DFS'), ('DFS Announcement'). Vulcan has not yet carried out a definitive feasibility study for Phase Two of its Project. This announcement includes certain information relating to both the PFS and DFS. Investors should not rely on the results of the PFS as Vulcan considers that the material assumptions underpinning that study are no longer correct in light of the additional studies undertaken in preparing the DFS.

The DFS is based on the material assumptions outlined elsewhere in the DFS Announcement. 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 of that the range of outcomes indicated by the DFS will be achieved.

Competent Person Statement:
The information in this announcement that relates to Mineral Resources and Ore Reserves, and any Exploration Results and Production Targets, of Vulcan's Zero Carbon Lithium™ Project is extracted from the DFS Announcement, which is available to view on Vulcan's website at www.v-er.eu. Vulcan confirms that in respect of estimates of Mineral Resources and Ore Reserves, and any Exploration Results and Production Targets, included in this announcement:

- 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;

- the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement; and
- all material assumptions underpinning any production targets (and any forecast financial information derived from such production targets) included in this announcement continue to apply and have not materially changed.

Annexure 1 - Vulcan's combined Zero Carbon Lithium™ Project Lithium (Li) brine Measured, Indicated and Inferred mineral resource estimates. Phase One licences indicated in orange highlight.

Licence/ Area	**Reservoir**	**Classification**	**GRV** km³	**Avg. NTG** %	**Avg. Phie** %	**Avg. Li** mg/L	**Elemental Li** t	**LCE** kt
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
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
Landau South	*MUS, BST, ROT	Measured	7.4	73	8	181	102,383	545
	BST	Indicated	1.2	90	11	181	22,220	118
Insheim	*MUS, BST, ROT	Measured	9	73	8	181	127,779	680
Rift-North	*MUS, BST, ROT	Measured	10.1	73	8	181	134,132	714
	*MUS, BST, ROT	Indicated	11.9	73	8	181	178,000	946
Ortenau	*MUS, BST, ROT	Indicated	57	73	8	181	659,013	3,507
	BST	Inferred	105	73	8	181	1,883,212	10,024
						mg/L		**kt**
Total LCE		**Measured**				**181**		**1,939**
		Indicated				**178**		**8,151**
		Inferred				**172**		**16,484**

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.
Note 4: To describe the resource in terms of industry standard, a conversion factor of 5.323 is used to convert elemental Li to Li_2CO_3, or Lithium Carbonate Equivalent (LCE).
Note 5: NTG and Phie averages have been weighted to the thickness of the reservoir.
Note 6: GRV refers to gross rock volume, also known as the aquifer volume.
Note 7: Mineral Resources are considered to have reasonable prospects for eventual economic extraction under current and forecast lithium market pricing used in the DFS with application of Vulcan's DLS processing.

Annexure 2 - Phase One Ore Reserves.

Lionheart: INS, LAN, RND		
Reserves Classification	Lithium grade	Economic Reserves Volume at Wellhead Reference Point
	mg/l Li	tonnes LCE
Proved	181	196,353
Probable	181	153,546
TAR-KER		
		tonnes LCE
Probable	181	189,070

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