ANNUAL REPORT

1 JULY TO 31 DECEMBER 2022

VULCAN ENERGY
ZERO CARBON LITHIUM™

ABN 38 624 223 132

CONTENTS

VULCAN'S ANNUAL REPORTING SUITE

1 JULY 2022 TO 31 DECEMBER 2022

This Annual Report (Report) forms part of the Company's Annual Reporting Suite for the period 1 July 2022 to 31 December 2022, which includes the Annual Report, Sustainability Report, Group Management Report (Konzernlagebericht), Taskforce on Climate related Financial Disclosure Report (TCFD) and Corporate Governance Statement. This Report covers Vulcan's operations, including those under exploration and development and those operated through subsidiaries as well as our strategic approach to sustainability.

Vulcan is dual listed on the Australian Securities Exchange (ASX), and the regulated market of the Frankfurt Stock Exchange (FSE), in the Prime Standard market segment. Consistent with the regulatory and reporting obligations of the FSE, Vulcan's annual reporting suite also includes the Group Management Report (Konzernlagebericht). The Konzernlagebericht has been prepared in accordance with the Deutscher Rechnungslegungs Standard Nr. 20 (DRS 20).

This Report incorporates our updated Sustainability Report for 1 July 2022 to 31 December 2022, developed with reference to industry standards including the Global Reporting Initiative (GRI) Standards and the recommendations of the TCFD. Vulcan is a signatory to the United Nations Global Compact (UNGC), and this Report outlines the Company's ongoing commitment to ensuring progress towards the ten principles of the UNGC.

All references to Vulcan Energy Resources, Vulcan, the Company, Vulcan Group, or the Group are in reference to Vulcan Energy Resources Ltd (ABN 38 624 223 132) and its subsidiaries. All information and references in this Report are related to the half financial year, 1 July 2022 to 31 December 2022, unless otherwise stated. The Materiality Assessment has been achieved with the assistance of global consultancy firm ERM. The TCFD component has been completed with the assistance of consultancy firm, Baringa. The sustainability data provided in this Report has not been externally assured. For any questions about Vulcan's sustainability approach, please contact info@v-er.eu or visit https://v-er.eu/.

MESSAGE FROM CHAIR

THE 6 MONTH PERIOD, 1 JULY TO 31 DECEMBER 2022, SAW YOUR COMPANY LED BY DR FRANCIS WEDIN TRANSITION FROM A DEVELOPMENT COMPANY TO AN INTEGRATED PROJECT EXECUTION COMPANY. VULCAN IS NOW FIRMLY IN THE PHASE TO LEAD THE DECARBONISATION OF TWO TRADITIONALLY CARBON INTENSIVE INDUSTRIES IN ENERGY AND BATTERY RAW MATERIALS.

GAVIN REZOS
Chair

Vulcan aims to be the first in the world to deliver carbon neutral, domestically sourced energy and lithium from Europe for Europe.

The new era for geothermal

During 2022, throughout Europe, there has been an increasing recognition and value placed on supporting geothermal energy production. In September 2022, the German Federal Ministry of Economic Affairs and Climate Action announced a boost for green district heating, the 'Federal Funding for Efficient Heating Networks' (BEW). Up to and including 2026, approximately €3 billion will be available for renewable heat generation, including geothermal energy and other heat network infrastructure. This subsidy targets investment to increase the share of renewable and climate-neutral heat sources to 25% by 2025 and 30% by 2030. Vulcan has a fully integrated drilling, development, and operations team in geothermal, including in house deep drill rigs, which makes us uniquely positioned to potentially benefit from such a funding program. At a state level, the government of Baden-Württemberg launched a 'Task Force' aimed at halving the planning and approval timeline for the commissioning of new renewable energy projects. This Task Force follows state governments in the Upper Rhine Valley voicing their support for regional geothermal-lithium project development. At a community level, support continues to grow for geothermal production.

The EV evolution

Europe is the fastest-growing electric vehicle manufacturing market in the world. Demand for lithium is expected to increase 57-fold by 2050, and the EU says it needs to produce at least 40% of its annual consumption to meet this demand. The Critical Raw Materials Act released in March 2023 aims to ensure Europe has access to the materials needed to meet its target of net zero greenhouse gas emissions by 2050. Automakers like Stellantis, Volkswagen and Renault saw this need early and have signed agreements with Vulcan that already see our first five years of production fully committed. These automakers are like others making the transition to an all electric fleet, with Volkswagen announcing an €180 billion investment to meet its 2035 all electric production and be a fully carbon neutral organisation by 2050.

Our Board

During the second half of 2022 our Board leveraged its leadership strength and experience across the lithium, geothermal, German chemical, renewable energy, battery supply chain and investment banking sectors to support Vulcan's transition to project execution mode, while ensuring focus is maintained on delivering long term shareholder value.

Our focus during FY22

This half year saw the continued focus on strengthening Vulcan's corporate governance framework.

- Vulcan established a Projects Oversight Committee consisting of three Directors highly experienced in project management and execution together with operational management who regularly review and monitor the status of nominated projects and applying appropriate corporate governance and risk management frameworks.
- There was further implementation of the Target Operating Model 360 (TOM 360).
- Deputy CEO Cris Moreno started with Vulcan. He will be based in Europe and focus on advancing Vulcan's Zero Carbon Lithium™ Project towards commercial production.

Focus for 2023

Our core focus at the beginning of 2023 was to successfully deliver our Definitive Feasibility Study (DFS) for Phase One of Vulcan's Zero Carbon Lithium™ Project. With its release, the Company has shifted swiftly into project execution mode, ready for commercial production.

Looking ahead, the Company is determined to deliver on the following:

- Demonstration plant: Demonstration scale production and commercial operation readiness training for the Vulcan team.
- Funding: Secure funding from a targeted mix of equity, debt and development grants.
- Permitting: In line with the 2023 project roadmap and beyond.
- Drilling: Of the new production and re-injection wells in the Phase One area.
- Execution: Build a project execution model and put an organisation in place to successfully deliver on the Phase One execution plan.

In parallel, we will stay focused to deliver our subsequent project phases, including the successful release of our Phase Two DFS later in 2023. Then for the longer term, our focus will be on innovation and growth while always maintaining sight of delivering on our sustainability commitments.

THANK YOU

On behalf of the board and everyone at Vulcan, I thank you all for your support, and I look forward to Vulcan delivering valuable returns for our shareholders in the coming years and into the future.

Gavin Rezos
Chair

MESSAGE FROM THE CEO

DEAR SHAREHOLDERS,

WELCOME TO OUR ANNUAL REPORT AND UPDATE FOR THE PERIOD 1 JULY TO 31 DECEMBER 2022. I AM IMMENSELY PROUD OF WHAT OUR TEAM, NOW MORE THAN 280 STRONG AND GROWING, HAVE ACHIEVED DURING THE 6 MONTH PERIOD, MOST NOTABLY IN PRODUCING ALL THE DATA REQUIRED FOR THE FINALISATION OF OUR PHASE ONE DEFINITIVE FEASIBILITY STUDY (DFS).

DR FRANCIS WEDIN
Managing Director and CEO

During the period, we passed 13,000 hours of pilot plant operation at our commercially operating geothermal wells and plant, demonstrating that the widely used commercial process of lithium sorption works very well, as expected, to extract the lithium from our brine. In November, we confirmed the highest grade, lowest impurity lithium hydroxide (LiOH) produced to date from our pilot plant. Since the heat used to drive this process is renewable and embodied within the brine, as opposed to existing commercial projects which use gas and large quantities of reagents, we are able to drive the lithium extraction and keep to the carbon neutral nature of our process. This means that, when our commercial plant is up and running, we will be actively decarbonising lithium supply for electric vehicles.

During the period, we announced the development of VULSORB™, our own in-house sorbent for lithium extraction. This is an alumina-based sorbent, belonging to the same family of lithium sorbents commercially used globally in the lithium industry that we have also tested and proved works on our brine, but we have refined and improved its performance with our in-house expertise. We have also agreed with a French toll manufacturing company to make the sorbent for us, which they have already done so for our commercial demonstration plant. In doing so:

- We have generated significant intellectual property for lithium extraction technology in-house at Vulcan, in contrast to some of our peers who outsource lithium extraction technology to "technology providers", and;
- We have on-shored one of the most important parts of our supply chain in Europe and reduced reliance on foreign supply chains, since most commercially available lithium sorbents are either manufactured in China or Russia.

In December, Vulcan received approval from the state authority in Rheinland-Pfalz, Germany, for the Operating Plan for Vulcan's lithium extraction Demonstration Plant (Demo Plant). The Demo Plant is on track to be completed mid-2023 and will train Vulcan's team in a pre-commercial setting prior to commercial start of production. This is critical to ensure a smooth ramp up when commercial operations begin. Encouragingly, we have seen multiple permit approvals for our project during the period including the Operating Plan for the Demo Plant, as well as a number of preliminary EIA approvals for our planned developments. These preliminary EIAs mean that, for these parts of our project, no full EIA is required, due to the extremely small footprint and environmentally benign nature of our projects. This is a testament to the environmental credentials of our project, which is core to who we are.

In addition to our Phase One Zero Carbon Lithium™ Project advancements throughout the year, we welcomed Cris Moreno who has joined Vulcan as Deputy CEO. Cris has a unique CV, having executed large LNG project developments before turning his attention to lithium hydroxide and battery cathode plants in Europe. His shared project discipline within both sectors and experience in delivering major projects in Europe like our integrated, renewable energy and lithium hydroxide project, is significant for Vulcan. In many ways, our project is like a simpler version of an integrated oil and gas project, minus the fossil fuels. Based in Europe, Cris will work with the team across Germany and Australia, supporting the transition to projection execution phase and delivery of our highly technical and globally unique project.

Vulcan finished the 6-month reporting period in a strong position with €134 million cash (A$209 million) on hand on 31 December 2022.

Reflections on the European Market

Lithium: Europe has zero local supply of the lithium hydroxide it needs for battery production. Predications from the EU are that Europe will see a 57-fold increase in lithium demand in the coming years. Currently nearly 80 per cent of lithium hydroxide comes from China. Lithium is the lifeblood of the European auto industry's present and future. As one of the largest industries in Europe, the situation is critical.

Geothermal: The Upper Rhine Valley Brine Field (URVBF) is one of the hottest geothermal resources in Europe, where Vulcan is already commercially producing renewable, baseload energy from its operations. Vulcan is one of the largest geothermal developers in Germany and is ramping up, aiming to supply a million households with renewable energy by 2030. In September 2022, the Federal Ministry of Economic Affairs and Climate Action announced a boost for green district heating, the 'Federal Funding for Efficient Heating Networks' (BEW)[1]. In the period up to and including 2026, approximately €3 billion will be made available for

[1] Boost for green district heating: Federal funding for efficient heat networks (BEW) begins. https://www.bmwk.de/Redaktion/EN/Pressemitteilungen/2022/09/20220915-boost-for-green-district-heating-federal-funding-for-efficient-heat-networks-bew-begins.html 15/09/2022

renewable heat generation like geothermal energy. This subsidy scheme will support the country's long-term energy transition, increasing the share of renewable and climate-neutral heat sources to 25% by 2025 and 30% by 2030. The German Federal Government wants to develop 100 new geothermal projects by 2030. Vulcan has a fully integrated geothermal drilling, development, and operations team in-house, including in-house rigs, which makes us uniquely positioned to benefit from this.

During the second half of 2022, we saw tangible action from Europe towards driving critical raw material independence. This resulted, in March 2023, the European Commission releasing two 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 Energy's Zero Carbon Lithium™ Project.

The Critical Raw Materials Act 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. Better access to financing will also be made available. Since Vulcan is developing the largest lithium resource in Europe, with sustainability and net zero carbon at our core, we believe we are uniquely positioned to benefit from this.

Under the **Net-Zero Industry Act** a "One Stop Shop" for permitting will be enabled with set time limits for permitting applications from submission, as per the CRMA. 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, so we expect to benefit from this as well, within our integrated renewable energy and lithium project development.

Focusing on the year ahead

Our DFS is the cornerstone framework for Vulcan's progress towards financing and project execution. It signifies our transition from a development company towards an integrated project execution and production company. We believe Vulcan's Zero Carbon Lithium™ Project is crucial for Europe, and will help to alleviate the energy crisis, lessen the climate emergency through decarbonisation of energy and lithium production, and mitigate the lithium supply issues for the electrification of the European auto industry.

2023 will be transformative for us. We have commenced the financing process for our commercial development, led by BNP Paribas, and will start to order commercial long lead items for the project to keep to our time schedule. We will be commissioning our commercial demonstration plants to train our team in a pre-commercial environment and will continue our permitting process in line with our development timeline for 2023 and beyond. To increase the current brine flow we have from the existing wells in the core of our Phase One development area, we will commence drilling of new production/re-injection wells with our in-house team. Whilst remaining disciplined on executing Phase One, we will make sure that we progress the next phase of development, so our project pipeline continues to grow.

As always, I would like to thank you and the entire Vulcan community for your continued support. We look forward to keeping you up to date with our latest developments throughout the year as we continue to methodically execute on our plan to deliver the world's first integrated renewable energy and Zero Carbon Lithium™ Project.

Dr Francis Wedin

Managing Director and CEO

WE ARE RAPIDLY TRANSFORMING TOWARDS BEING AN INTEGRATED PROJECT EXECUTION AND OPERATIONS COMPANY. WE HAVE AN EXCITING YEAR AHEAD OF US.

ABOUT VULCAN

FOUNDED IN 2018, VULCAN'S UNIQUE ZERO CARBON LITHIUM™ PROJECT AIMS TO DECARBONISE LITHIUM PRODUCTION BY DEVELOPING THE WORLD'S FIRST NET ZERO CARBON LITHIUM BUSINESS WITH THE CO-PRODUCTION OF RENEWABLE GEOTHERMAL ENERGY ON A MASS SCALE.

> VULCAN IS PLAYING ITS PART IN DISRUPTING AND DECARBONISING TWO TRADITIONALLY CARBON INTENSIVE INDUSTRIES, IN ENERGY AND BATTERY RAW MATERIALS.

Vulcan's combined geothermal energy and lithium resources represents the largest lithium Resource in Europe at 26.6 Mt LCE, with licence areas focused on the Upper Rhine Valley of Germany and France. 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 aims to meet 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 innovation, Vulcan has a unique, world-leading development, execution, and operations 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 industry disruptor, Vulcan will leverage its expert multidisciplinary team, leading technology, and position in the European electric vehicle (EV) supply chain in its aim to be the global leader in producing zero fossil fuel, carbon neutral lithium while aiming to be nature positive.

Vulcan aims to be the largest, most preferred, strategic producer and supplier of lithium chemicals and renewable power and heating from Europe for Europe, to empower a net zero carbon future.

Defining 'Zero Carbon'

Vulcan defines 'Zero Carbon' as net zero carbon emissions resulting from the activities undertaken to extract and process lithium from its combined lithium and geothermal brine resource located in the Upper Rhine Valley, Germany. Unlike existing lithium operations, Vulcan aims to not burn fossil fuels in the production and processing exercise. Instead, it will use its own geothermal renewable heat source to drive the process, whilst also selling its own geothermal heat and power to the grid, displacing fossil fuel generated energy. The carbon 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 energy, lithium production and processing impacts to prove and certify the validity of the carbon neutral nature of the Zero Carbon Lithium™ Project. Minviro's first ISO aligned LCA was conducted in 2021, with the latest LCA undertaken in 2023 (after the end of the reporting period). LCAs will be updated at regular intervals going forward.

In addition, Vulcan engaged Climate Active and South Pole to verify the GHG emissions of the whole Company, including its Australian and German operations respectively. The most recent carbon neutral certification of the organisation's emissions, which includes business travel, procurement of goods and services, waste usage and electricity usage, was undertaken in 2021. Climate Active completed the certification process for Australia, while South Pole certified Vulcan Energie Ressourcen GmbH, and its subsidiaries, Vulcan Energy Engineering GmbH and Vulcan Energy Subsurface Solutions GmbH (originally called Gec-co and Geo-T, respectively). South Pole's assessment did not include Vercana, Vulcan's electric drilling subsidiary, because it had been recently incorporated and was a shell company, or, the Natürlich Insheim plant as the acquisition of Natürlich Insheim occurred post certification. These entities will be included in the next assessment round currently being undertaken by Climate Active and will be reported on in Vulcan's next report. This assessment will include the development and construction activities associated with the build of the Company's Demo Plant following the successful completion of the DFS.

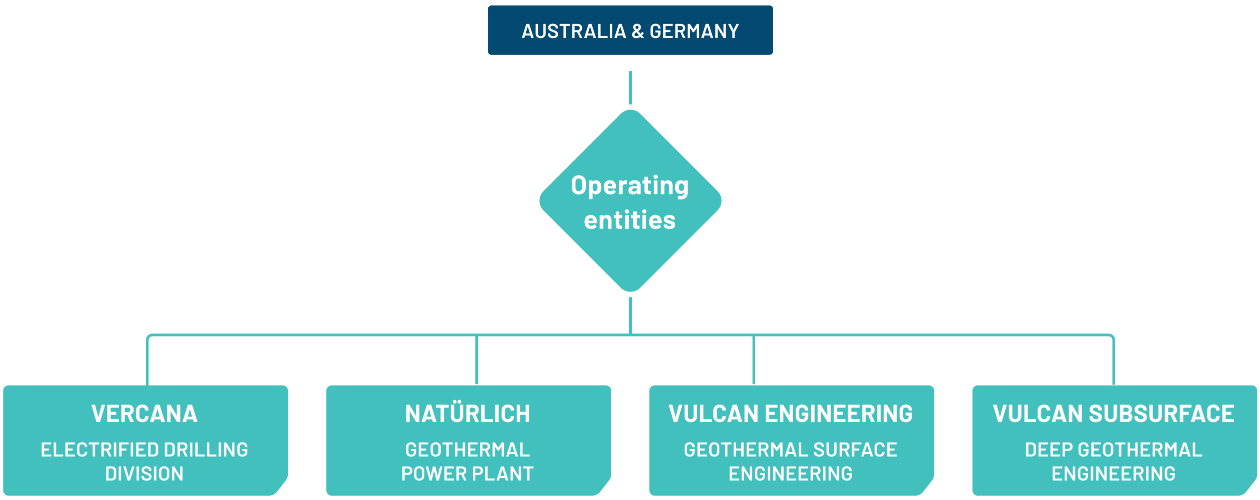
Following the Climate Active and South Pole reports, and in order to bring the minimal GHG emissions balance associated with the Australian and German operations to net zero, Vulcan purchased good quality carbon credits. Details of the Company's carbon emissions associated with the Zero Carbon Lithium™ Project were disclosed to the market in 2021 (Minviro LCA announcement 4 August 2021), GHG emissions associated with Vulcan's operations and carbon credits purchases for 2021 were reported in the FY22 Sustainability Report available via the website (httsp://v-er.eu). The GHG emissions associated with Vulcan's operations for 2022 are currently being updated and the updated Minviro LCA data was announced as part of the DFS on 13 February 2023. Vulcan expects to maintain its carbon neutral status for the period.

GROUP STRUCTURE

VULCAN IS A TEAM OF MORE THAN 280-STRONG AND GROWING, COMBINING MULTI-DISCIPLINARY, INTERNATIONAL SCIENTIFIC, ENGINEERING, PROJECT EXECUTION AND COMMERCIAL OPERATION EXPERTISE, PASSIONATELY DRIVEN BY THE DESIRE TO PROVIDE SUSTAINABLE DECARBONISED LITHIUM AND RENEWABLE ENERGY SUPPLY FROM EUROPE FOR EUROPE. THE COMPANY IS THE PARENT COMPANY OF VULCAN GROUP. THE FOLLOWING CHART SHOWS THE STRUCTURE OF VULCAN GROUP.

VULCAN OPERATING STRUCTURE[2]

VULCAN ENERGY
ZERO CARBON LITHIUM™



[2] Company Operating Structure does not include all holding companies. For further information, please refer to Note 27 in the Financial Statements

VULCAN'S PURPOSE

THE WORLD IS IN A RACE TO GET TO NET ZERO AND VULCAN IS PLAYING ITS PART IN DISRUPTING AND SUPPORTING THE DECARBONISATION OF THE ELECTRIC MOBILITY SUPPLY CHAIN, THROUGH THE COMPANY'S UNIQUE ZERO CARBON LITHIUM™ PROJECT INCLUDING RENEWABLE ENERGY AND HEAT PRODUCTION.

PURPOSE
To empower a net zero carbon future

STRATEGY
To be global leaders in the production of carbon neutral lithium while being nature positive

MISSION
To decarbonise the EV supply chain

ZERO CARBON RENEWABLE HEAT & ENERGY

ZERO CARBON LITHIUM™

TEAM
A world-leading scientific & commercial team in the fields of lithium & geothermal energy

INNOVATION
Adapting existing technologies to efficiently extract lithium from geothermal brine

SUPPLY CHAIN
Strategically placed in the heart of the European EV market to decarbonise the supply chain

BOARD OF DIRECTORS

VULCAN'S BOARD OF DIRECTORS HAVE DECADES OF LEADERSHIP EXPERIENCE AND EXPERTISE IN THE FIELDS OF LITHIUM, GEOLOGY, CHEMICALS, RENEWABLE ENERGY, BATTERY SUPPLY CHAIN, PROJECT EXECUTION AND INVESTMENT BANKING. THE EXPERTISE ON THIS BOARD WILL SUPPORT THE INTENDED TRANSITION OF VULCAN FROM A DEVELOPMENT COMPANY TO A PROJECT EXECUTION AND OPERATIONS COMPANY.

GAVIN REZOS
CHAIR

JOSEPHINE BUSH
INDEPENDENT NON-EXECUTIVE DIRECTOR

DR FRANCIS WEDIN
MANAGING DIRECTOR AND CEO

RANYA ALKADAMANI
INDEPENDENT NON-EXECUTIVE DIRECTOR

ANNIE LIU
INDEPENDENT NON-EXECUTIVE DIRECTOR

DR GÜNTER HILKEN
INDEPENDENT NON-EXECUTIVE DIRECTOR

DR HEIDI GRÖN
INDEPENDENT NON-EXECUTIVE DIRECTOR

MARK SKELTON
INDEPENDENT NON-EXECUTIVE DIRECTOR

Board advisors

DR HORST KREUTER
CO-FOUNDER AND BOARD ADVISOR

JULIA POLISCANOVA
SPECIAL ADVISOR

LEADERSHIP TEAM

PROJECT DEVELOPMENT, EXECUTION AND OPERATIONS

DURING 2023 VULCAN AIMS TO TRANSITION TO A PROJECT EXECUTION AND OPERATIONS COMPANY. BELOW IS THE LEADERSHIP TEAM ACROSS THESE AREAS, SUPPORTED BY MORE THAN 280 MULTI-DISCIPLINARY PERSONNEL, ALL PASSIONATELY DRIVEN BY THE DESIRE TO PROVIDE SUSTAINABLE, DECARBONISED LITHIUM AND RENEWABLE ENERGY SUPPLY FROM EUROPE FOR EUROPE.

DR FRANCIS WEDIN

MANAGING DIRECTOR AND CEO

CRIS MORENO

DEPUTY CEO

THORSTEN WEIMANN

CHIEF OPERATING OFFICER

DR STEPHEN HARRISON

CHIEF TECHNICAL OFFICER

CHRISTIAN TRAGUT

VICE PRESIDENT PRODUCTION

VINCENT LEDOUX-PEDAILLES

CHIEF COMMERCIAL OFFICER

DR HORST KREUTER

CEO - GERMANY

STORM TAYLOR

HEAD OF ESG

ANNABEL ROEDHAMMER

HEAD OF INVESTOR RELATIONS AND PR

ROBERT IERACE

CHIEF FINANCIAL OFFICER – VULCAN ENERGY RESOURCES LTD

MARKUS RITZAUER

CHIEF FINANCIAL OFFICER – VULCAN ENERGIE RESSOURCEN GMBH

DANIEL TYDDE

COMPANY SECRETARY AND IN-HOUSE LEGAL COUNSEL (AUSTRALIA)

DR MEINHARD GRODDE

IN-HOUSE LEGAL COUNSEL (GERMANY)

OPERATING AND FINANCIAL REVIEW

HEALTH AND SAFETY

VULCAN BELIEVES THAT NOTHING IS MORE IMPORTANT THAN THE SAFETY AND WELLBEING OF ITS EMPLOYEES, CONTRACTORS, STAKEHOLDERS AND COMMUNITIES.

The health and safety of Vulcan's employees, contractors, stakeholders and communities are of paramount importance. This is encapsulated by the Vulcan Value of *Leadership*, and the Company's commitment to work to the highest standards of safety, quality, and efficiency.

Compliance with health and safety regulations is a minimum standard set. The team have continued to advance health and safety procedures and culture during the period, including employment of a dedicated and full-time Health, Safety, Environment and Quality Manager and further development of process management systems, including implementation of a full contractor training framework. The Company is working towards ISO45001:2015, Occupational Health and Safety certification, to complement the already achieved ISO 14001 (environmental management) and 9001 certifications (quality management). During the period, Vulcan had zero lost time incidents (LTIs) and zero fatalities. There were two minor incidents reported, with no time away from work required.

Looking ahead, the Company is targeting zero health and safety incidents in 2023 and beyond. As Vulcan transforms towards being a project execution and operations company, specific, safety-focused key performance indicators (KPIs) have been introduced for the Leadership team including achieving zero LTIs across all operations annually.

RESERVES AND RESOURCES

EXPLORATION AND DEVELOPMENT

The Company has the largest lithium Resource, compliant with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ('the JORC Code'), in Europe[3]. Vulcan continues to expand its licence footprint in the Upper Rhine Valley Brine Field (URVBF) in response to supporting Europe's transition to critical raw materials independence and consumer demand.

> VULCAN HAS THE LARGEST KNOWN LITHIUM RESOURCE IN EUROPE

JORC RESOURCE STATEMENT

Vulcan's URVBF hosts a JORC 2012-compliant global resource estimation of 26.6 Mt lithium carbonate equivalent (LCE) at an average grade of 175mg/l Li in the Measured, Indicated, and Inferred categories as shown in Table 1. Vulcan's current Phase One Resource covers five of its 15 licences, specifically Taro, Kerner, Landau South, Insheim and Rift (North).

An overview of licence locations and details is provided in Figure 1. In addition to the Phase One group of licences, Vulcan also holds 10 additional licences in the URV, for a total secured licence area of 1,583km^2. The Company has also applied for an additional 155km^2 of licences in the same region. Vulcan has acquired the geothermal brine and lithium rights (licences) through direct application to the respective mining authorities of the German states of Rheinland-Pfalz, Baden-Württemberg, and Hessen. All exploration licences were in accordance with the German Federal Mining Act (Bundesberggesetz 'BBergG') for the purpose of commercial exploration of mining-free mineral resources: geothermal brine and lithium. Vulcan has also acquired the geothermal production licence at Insheim with 100% ownership.

[3] Based on public, JORC compliant data. Refer Vulcan Zero Carbon Lithium™ Project Phase One DFS results and Resources-Reserves update https://www.investi.com.au/api/announcements/vul/e617fca6-6d4.pdf 13/02/2023

FIGURE 1: OVERVIEW MAP OF VULCAN LICENSED AREAS IN THE UPPER RHINE VALLEY, SHOWING WELL AND SEISMIC SURVEYS

VULCAN'S COMBINED UPPER RHINE VALLEY PROJECT LI- BRINE MEASURED, INDICATED, AND INFERRED MINERAL RESOURCE ESTIMATES.

TABLE 1: VULCAN'S COMBINED URVBF LI- BRINE MEASURED, INDICATED AND INFERRED MINERAL RESOURCE ESTIMATES

Licence/ Area	Reservoir	Classification	GRV km^3	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
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. 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 used in the DFS 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.

- Total URVBF Resource: Inferred 16.5Mt LCE @ 172mg/l Li, Indicated 8.2 Mt LCE @ 178 mg/l Li, Measured 1.94 Mt LCE @ 181 mg/l Li.
- Total Phase One Resource (Measured and Indicated): 4.6 Mt LCE @ 181 mg/l Li.
- Total Resource (all classifications): 26.6 Mt LCE @ 175 mg/l Li.

COMPETENT PERSON STATEMENT

The information in this Report 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 ASX announcement made by Vulcan on 13 February 2023 ("Vulcan Zero Carbon Lithium™ Project Phase One DFS Results and Resources-Reserves Update"), which is available to view on Vulcan's website at https://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 Report:

- 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.

GEOTHERMAL AND RENEWABLE ENERGY OPERATIONS

FIGURE 2: AERIAL PHOTOGRAPH OF VULCAN'S NATÜRLICH INSHEIM GEOTHERMAL PLANT

Geothermal, renewable energy is at the heart of the Zero Carbon Lithium™ Project. During the period 1 July to 31 December 2022, the geothermal powerplant Natürlich Insheim operated by the Natürlich Insheim GmbH generated a total amount of 17,000,000 kWh of renewable electrical energy, saving approximately 5,000 tonnes of CO_2.

To underline Vulcan Energy's commitment to play a leading role in the German heat transition, Natürlich Insheim is currently being redesigned to be able to produce district heating in the future as well. This will allow the supply of CO_2 free district heating to nearby municipalities.

Natürlich Insheim (Figure 2), has the capacity to produce up to 4.8 MW of renewable power. There are two operating wells located at this plant, one for production of the 165°C hot brine and one for reinjection of cooled brine. The wells were drilled between 2009 and 2010. The plant has been in operation since 2012. There is a second geothermal plant in the region at Landau-South for which Vulcan has secured an offtake agreement for brine production with Geox GmbH (the operating company). The plant and wells have been in operation since 2007. Vulcan has entered into a 51:49 (in Vulcan's favour) joint venture agreement with the owners of the Landau-South licence to develop a new geothermal project in the same Landau-South licence area as the current Landau plant, which will also supply Vulcan's Phase One operations with brine for lithium extraction. Vulcan has an agreement to develop new geothermal projects on the research and development exploration licence in return for a production royalty. Vulcan plans to develop the licence areas in a phased approach. Phase One will be developed first, followed by Phase Two which will be a further development in stepped out areas. Subsequent phases are planned to follow to fully leverage the large licence area that Vulcan has secured. The Project plans for multiple central surface facilities for geothermal operations to be fed from multi-well pads.

FOCUS ON PHASE ONE EXECUTION

During the reporting period, the team moved into an expanded laboratory. With its state-of-the-art equipment for wet and solid-state analyses, including full in-house inductively coupled plasma optical emission spectrometry (ICP-OES) and ion chromatography (IC) analytical capability, the new laboratory has enabled Vulcan to expand its core competencies, centralise its proprietary lithium processes and deliver the required information for Vulcan's Phase One Definitive Feasibility Study.

A key element of Vulcan's strategy to de-risk its Zero Carbon Lithium™ Project is the design and construction of its demonstration plants. Vulcan's demonstration plants will consist of two parts: the lithium extraction plant (LEP) (Figures 3 and 4) and the lithium hydroxide production plant (Central Lithium Plant-Demo Plant) and will replicate the full process from sorption-direct lithium extraction to lithium hydroxide production including recycle streams. Importantly, technical and operations personnel will train in the plant to develop a comprehensive understanding of the process and its operation prior to the construction of the first commercial plant.

When it comes to expanding the Demo Plants to their commercial size, the sorption of lithium chloride at the commercial plant represents a very manageable scale-up factor of only 1:50 in terms of column size, as each lithium extraction plant (LEP) will be operating four trains of extraction units. Meanwhile, the commercial Central Lithium Plant (CLP) electrolysis cells will have a multiplication factor, not scale-up factor, as electrolysis cells are not scaled up further but multiplied. Initial commissioning of the lithium extraction Demo Plant is planned to commence in 2023. The commissioning of the Company's CLP-Demo Plant is due in late Q2 2023.

In November 2022 Vulcan successfully developed its own in-house lithium extraction sorbent, VULSORB™. Additionally, the team completed multi-cycle sorption tests on Upper Rhine Valley geothermal brine using multiple commercially available and in-house aluminate-based sorbents. Vulcan's VULSORB™ sorbent has demonstrated higher performance and lower water consumption for lithium extraction in Vulcan's pilot plant compared with commercially available sorbents tested by the Company.

FIGURES 3 AND 4: IN-HOUSE DESIGNED LITHIUM EXTRACTION DEMO PLANT, CURRENTLY UNDER CONSTRUCTION.

The team carried out test work on live brine from Vulcan's commercially operating geothermal renewable energy plant, Natürlich Insheim. The manufacturing process for VULSORB™ is environmentally friendly, with most of the reagents recycled and with opportunities for Vulcan to use its own produced lithium to manufacture future sorbent once in production, thus further reducing Vulcan's carbon footprint and operating costs while fulfilling the European Union's circular economy goals.

VULSORB™ is a variation of the type of lithium extraction sorbents originally developed 30 years ago and used commercially worldwide for lithium extraction from brine for the last 25 years. This Technology Readiness Level (TRL) 9 approach for lithium extraction can be used in most lithium-rich brines globally, provided salinity in the brine is high enough and there is sufficient heat to drive the process, with a brine pre-treatment step to increase sorbent durability that can be adjusted depending on local brine chemistry. Vulcan's VULSORB™ enables the lithium to be selectively extracted from the brine, providing a pure lithium chloride eluate which can then be electro-chemically converted to lithium hydroxide monohydrate for use in lithium-ion batteries in the European cathode, battery, and automaker industries.

This process is much faster and more efficient, with a lower carbon footprint, than the legacy industry method of using large-scale evaporation and large quantities of chemical reagents to extract the lithium and process the product into lithium hydroxide. Sorbent extraction happens in hours, rather than up to 18 months as is the case with legacy extraction routes.

Lithium extraction will be conducted in two stages, starting at geothermal facility-based LEPs and proceeding to a single facility near Frankfurt, being the CLP. Lithium hydroxide monohydrate (LHM) product will be produced and marketed from the CLP. The Phase One area is well located, close to existing road infrastructure and within relatively flat valley terrain. The Phase One area is mixed land use with rural, urban, agricultural, industrial, and park land. Vulcan has been diligent in ongoing planning development with consideration of existing land uses in consultation with local communities and landowners.

Vulcan is targeting start of operations by the end of 2025 and ramping up after that. Vulcan recognises the significant challenges ahead as a growing company. To this end, Vulcan is rapidly transforming into a project execution and operations company. The Project will be delivered under a single integrated project group, providing a consistent approach to delivery and overall accountability. During the first quarter of 2023, Phase One of the Project will move into a bridging engineering phase with Hatch Ltd.

Vulcan will continue to deliver according to the Company's contract strategy and delivery model and seek early engagement of key technology and equipment suppliers. Throughout this execution phase, Vulcan will continue to increase its extensive stakeholder engagement activities already implemented by Vulcan's communications and ESG team, including regular monitoring, multiple communication channels and local Info Centres run by local people. Vulcan sees this as essential to ensure the community comes along with Vulcan on this journey.

FURTHER PHASES OF DEVELOPMENT

A core focus during the reporting period was on the delivery of the Phase One DFS. In parallel, Vulcan remained focused on the future and subsequent phases which will include the delivery of the DFS for Phase Two later in 2023.

To that effect, 3D seismic survey works commenced on the ground in one of Vulcan's planned lithium and geothermal energy development areas, in the Mannheim district of the Upper Rhine Valley Brine Field (URVBF). Vulcan signed a renewable heat offtake agreement with MVV Energie AG (MVV), the utility for the city of Mannheim, in April 2022. These works follow earlier approval in 2022 of the main operating plans by the state directorate, after a thorough review process, which involved the relevant municipalities, technical agencies, and associations. This seismic survey is the first step in the development of new power plants, through which, from 2025 onwards, the aim is to supply up to 350,000 MWh of heat into the heating grid of Mannheim.

In November, Vulcan announced it was expanding its activities to the French side of the URVBF, which accounts for roughly one third of the Upper Rhine Graben, containing both geothermal energy and lithium-rich brine. Vulcan had previously collected a bulk (10,000 litres) brine sample from the French side of the border and conducted test work on it. Historical data and sampling coming from existing geothermal operations in the region indicate brine composition in Alsace is materially the same as the brine composition across the border at Vulcan's operations in Germany, meaning Vulcan's sustainable lithium production process is applicable across the whole field. Vulcan created a French entity, Vulcan Energie France SAS (VEF), registered in Strasbourg with offices in Haguenau, where Vulcan is growing an experienced French team. VEF applied for its first lithium exploration licence in the region, 'Les Cigognes'. The requested licence is $155km^2$ in size and located east of the city of Haguenau. The Company will look to access additional licence areas later in 2023. VEF is in discussions with local companies in Alsace to develop combined geothermal energy and lithium projects, and support industrials and municipalities to decarbonise their heating supply. The Company is focused on increasing engagement with local stakeholders to develop projects in full alignment with local communities, which is paramount to the ongoing success of Vulcan's activities.

OFFTAKE AGREEMENTS

As of the date of this Report, Vulcan has entered into binding lithium offtake agreements with five customers.

- In October 2021, Vulcan Group entered into a lithium offtake agreement with Umicore to sell between 28,000 metric tonnes and 42,000 metric tonnes of battery-grade LHM to Umicore over an initial five-year term with start of commercial delivery initially scheduled for 2025 (but postponed to 2026).

- In November 2021, Vulcan Group entered into lithium offtake agreements with Renault and Stellantis, to sell to Renault 29,000 to 49,000 metric tonnes of battery-grade LHM over an initial six-year term and to Stellantis between 222,000 metric tonnes and 272,000 metric tonnes of battery-grade LHM over a ten-year term. Commercial delivery is scheduled for 2027.

- In December 2021, Vulcan entered into a lithium offtake agreement with Volkswagen, to sell to Volkswagen between 34,000 to 42,000 metric tonnes of battery-grade LHM over an initial five-year term, with start of commercial delivery scheduled for 2027.

- In January 2022, Vulcan Group entered into a lithium offtake agreement with LG Energy to sell to LG Energy between 41,000 metric tonnes and 50,000 metric tonnes of battery-grade lithium with an initial term of five years and start of commercial delivery scheduled for 2026.

Together, the volumes of LHM to be delivered under these agreements correspond to the entire expected quantity of the first five years of production from Vulcan Group's Zero Carbon Lithium™ Project. Vulcan Group is also in discussions with other potential offtake partners that have demonstrated interest in securing LHM feed from potential additional phases of Vulcan Group's Zero Carbon Lithium™ Project. Overall, it is the Company's goal to have most volumes of battery-grade LHM produced in Vulcan's Zero Carbon Lithium™ Project committed under lithium offtake agreements with reputable counterparties.

The following table provides an overview of the binding lithium offtake agreements entered into by Vulcan Group as of the date of this report.

TABLE 2: VULCAN GROUP BINDING LITHIUM OFFTAKE AGREEMENTS

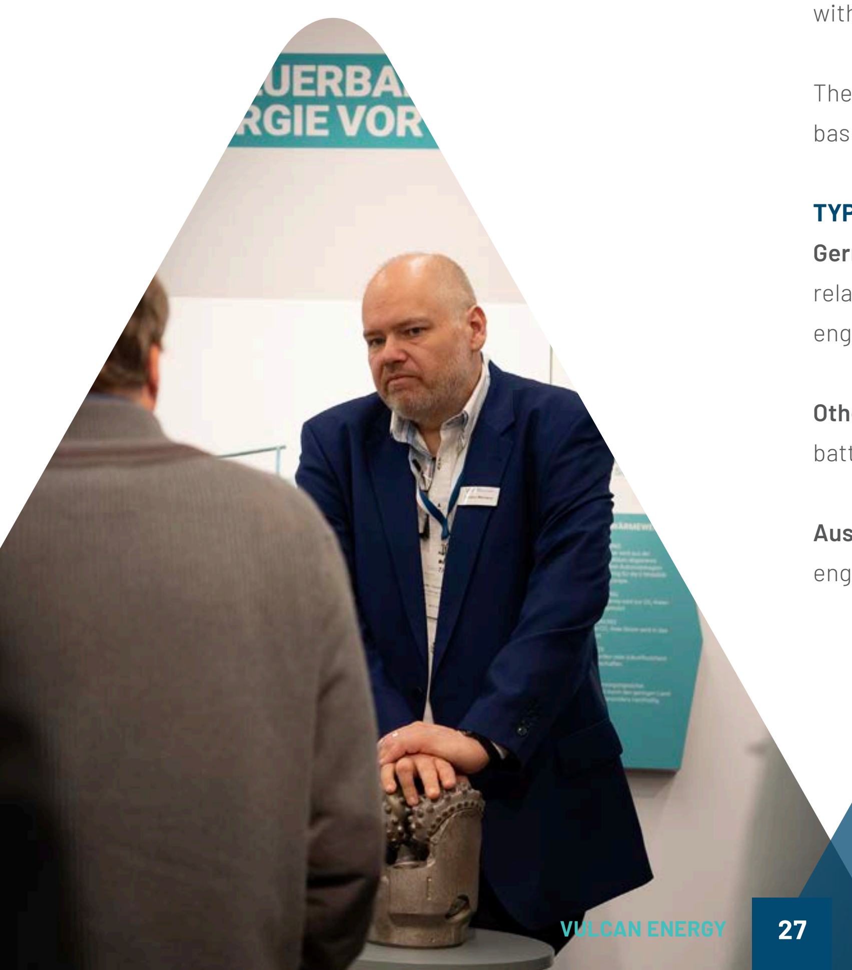
Partner	Category	Start & duration	Volume over the duration of the contract (t)
Umicore	Tier one cathode maker	2026 5 years	28,000 to 42,000
Renault Group	OEM	2027 6 years	29,000 to 49,000
Stellantis	OEM	2027 10 years	222,000 to 272,000
Volkswagen Group	OEM	2027 5 years	34,000 to 42,000
LG Energy Solutions	Tier one battery maker	2026 5 years	41,000 to 50,000

CORPORATE

VULCAN'S CORPORATE TEAM, SPANNING THE COMPANY'S AUSTRALIAN AND GERMAN OFFICES, ARE FAST TRANSITIONING FROM A DEVELOPMENT COMPANY TO AN INTEGRATED PROJECT EXECUTION AND PRODUCTION COMPANY.

TARGET OPERATING MODEL (TOM 360)

In Q1 2022 Vulcan completed a Target Operating Model (TOM 360) review, with the objective of developing a fit for purpose corporate structure for the next phase of project development and expansion. One key recommendation of the TOM 360 was the centralisation of backbone functions to ensure better governance and higher efficiency, which was implemented on 1 July 2022. By the end of 2022, the vast majority of TOM 360 measures had been implemented. One of the last key steps was the design of the project execution structure in late 2022, which will be implemented over the course of H1 2023.



SEGMENT INFORMATION

The consolidated entity is organised into three operating segments based on geographical location: in Germany, Other European and Australia. These operating segments are based on the internal reports that are reviewed and used by the Board of Directors (who are identified as the Chief Operating Decision Makers (CODM)) in assessing performance and in determining the allocation of resources. There is no aggregation of operating segments.

The CODM reviews EBITDA (earnings before interest, tax, depreciation, and amortisation). The accounting policies adopted for internal reporting to the CODM are consistent with those adopted in the financial statements.

The information reported to the CODM is on a monthly basis.

TYPES OF PRODUCTS AND SERVICES

Germany – the supply of geothermal energy, exploration relating to the Zero Carbon Lithium™ Project and engineering services.

Other European (France and Italy) – exploration relating to battery minerals and geothermal lithium.

Australia – ASX, corporate administration and DFS engineering costs.

CORPORATE PARTNERS

Vulcan has strategically built relationships with companies who share the same sustainability, environmental and cultural values and ambitions. Vulcan is committed to working with its partners as it aims 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.

GEOFIZYKA TOURUN S.A.

Geofizyka Toruń has been engaged by the Company to conduct 3D seismic surveys across Vulcan's project areas, where the Company does not already have existing 3D seismic data. Surveys will be interpreted and will further refine Vulcan's well design plan prior to production development drilling. In September 2022 Vulcan commenced 3D seismic surveys around its Insheim licence area where Vulcan has already been producing renewable energy on a commercial scale, and from which it plans to expand brine flow for renewable energy and lithium production.

GLJ LTD

GLJ Ltd is the Company's engineering consultant team responsible for the independent audit and sign-off of the geological engineering and production study, part of Vulcan's Phase One DFS, including Resources and Reserves.

GEF INGENIEUR AG

A local German business and independent experts in the field of heat supply for over 30 years, GEF Ingenieur AG (GEF) develops and accompanies upstream decision-making processes and offers consulting services to set up, develop and restructure a heat business. GEF is supporting the engineering of Vulcan's brine and hot water piping layout.

NOBIAN

In January 2022, Vulcan signed an MOU and term sheet with Nobian, a European leader in the production of essential chemicals. Nobian, formerly part of Akzo-Nobel, is the fourth largest chlor-alkali producer in Europe after Inovyn, Dow and Covestro, and has extensive electrolysis operational experience. Chlor-alkali uses an electrolysis process that is very similar to the final stage of Vulcan's flow sheet for lithium hydroxide production. Vulcan and Nobian are assessing the feasibility of a joint project for the development, construction, and operation of the Central Lithium Plant (CLP), including the electrochemical conversion process of lithium chloride to battery quality lithium hydroxide.

HATCH LTD

Vulcan's engineering consultant, Hatch Ltd (Hatch), was responsible for the lithium chemicals part of the DFS including the engineering and execution planning for the lithium extraction plants (LEPs) and CLP, in collaboration with Vulcan's in-house lithium chemicals and chemical engineering teams. Post the release of the Phase One DFS, Vulcan will enter into a two-month bridging phase towards ordering long lead commercial equipment.

MVV ENERGIE

Vulcan and MVV have signed a 20 year-long agreement, commencing in 2025, which includes the supply of a minimum of 240,000MWh per year to a maximum of 350,000Mwh per year to households in Mannheim. MVV is the largest municipal energy supplier in Germany, dedicated to making a lasting and sustainable contribution to the local community through the provision of renewable energy and heat to the City of Mannheim.

SUSTAINABILITY PARTNERS

CIRCULOR

Vulcan is working with Circulor and its full traceability and dynamic CO_2 measurement solution for Vulcan's carbon neutral lithium products across the European lithium-ion battery and electric vehicle supply chain. Circulor's system implementation enables reputational protection, proof of compliance with regulations and dynamic carbon tracking.

MINVIRO LTD

Vulcan has worked with London-based consultancy Minviro Ltd (Minviro) since 2020. In August 2021, Vulcan commissioned Minviro to update Vulcan's world-first, independent LCA. Vulcan's original LCA with Minviro represented the world's first LCA on lithium hydroxide production. In February 2023, Minviro updated the LCA with data from the DFS and will continue to update the LCA as required.

THE ERM INTERNATIONAL GROUP LTD

Vulcan is working with the largest global pure play sustainability consultancy, ERM International Group Ltd, on a number of sustainability projects, including conducting a Materiality Assessment, assisting with Equator Principles 4 alignment and EU Taxonomy assessment.

BARINGA

Vulcan is working with Baringa to align Vulcan's Sustainability Report with TCFD reporting disclosures to ensure compliance with the recommendations. Baringa has provided Vulcan with climate change modelling services.

SUSTAINABLE BUSINESS CONSULTANTS

Vulcan has worked with Sustainable Business Consultants since 2021 to complete the annual Climate Active certifications. Its expertise spans many strategic ESG projects, and the team have helped several Australian companies to achieve Climate Active carbon neutral certification including supporting credible carbon offset projects.

TAVISTOCK

Tavistock's strategic communication services combine a deep understanding of sustainability issues and cross-sector connections with practical knowledge of how to create change. The team assist Vulcan with sustainability messaging and ESG disclosure optimisation.

FINANCE PARTNERS

BNP PARIBAS

BNP Paribas has been appointed as Financial Advisor for the Zero Carbon Lithium™ Project. Following completion of the DFS, Vulcan will continue to work with BNP Paribas on the structuring and execution of debt financing of Phase One of Vulcan's Zero Carbon Lithium™ Project. The financing process for Phase One has commenced, working with BNP Paribas as debt advisor.

COMMERCIAL PARTNERS

STRATEGIC SUPPORT WITH LONG-TERM LITHIUM SUPPLY CONTRACTS

As of 31 December 2022, Vulcan has concluded five long-term lithium supply agreements, also referred to as offtakes, with five key players in the European lithium-ion battery supply chain. The contract terms are from five to ten years with some having flexibility to extend, take or pay, with a mixture of pricing mechanisms to provide stability while maintaining some exposure to upside in pricing[5]. The commercial partners are:

STELLANTIS, FRANCE

Binding lithium hydroxide offtake agreement, 10-year term.

A$76M (€50M) equity investment from Stellantis. This represents the world's first upstream investment in a listed lithium company by a top tier automaker. Stellantis is now Vulcan's second largest shareholder with ~8% shareholding.

RENAULT GROUP, FRANCE

Binding lithium hydroxide offtake agreement, initial 6-year term.

VOLKSWAGEN GROUP, GERMANY

Binding lithium hydroxide offtake agreement, initial 5-year term.

UMICORE, BELGIUM

Binding lithium hydroxide offtake agreement, initial 5-year term.

LG ENERGY SOLUTION, SOUTH KOREA

Binding lithium hydroxide offtake agreement, initial 5-year term.

[5] More details on these offtake agreements can be found on page 26

INDUSTRY ASSOCIATIONS

Vulcan is proud to partner with, support and contribute to the work of leading environmental societies and associations in the geothermal, renewable energy and lithium industries including:

- **Landesnaturschutzverband Baden-Württemberg (LNV)** - Nature Conservation Organisation of the State Baden-Württemberg.
- **Bundesverband Geothermie (BVG)** - German Geothermal Association.
- **European Geothermal Energy Council (EGEC)**.
- **GeoEnergy Celle** - Association of drilling and drilling service companies.
- **Bundesverband der Geowissenschaftler (BDG)** - Association of German Geoscientists.
- **Bundesverband Erdgas, Erdöl und GeoEnergie (BVEG)** - Germany's Association of Natural Gas, Oil and GeoEnergy.
- **Deutsche Gesellschaft für Geotechnik (DGGT)** - German Geotechnical Society.
- **International Geothermal Association (IGA).**
- **Bundesverband Erneuerbare Energien (BEE)** - the Renewable Energy Association of Germany.
- **Plattform Erneuerbare Energien (PEE)** - the state subdivision of the BEE in Baden-Württemberg.
- **Wirtschaftsrat der CDU** - the largest business association in Germany.
- **Bundesverband Mittelständische Wirtschaft (BVMW)** - the largest middle-sized business association in Germany.
- **Gesellschaft der Metallurgen und Bergleute (GDMB)** - Society of Metallurgists and Miners.
- **Kompetenznetzwerk Lithium Ionen Batterien (KLiB)** - German Association of Lithium-Ion Batteries.
- **Deutsche Wissenschaftliche Gesellschaft für nachhaltige Energieträger, Mobilität und Kohlenstoffkreisläufe (DGMK)** - German Society for Sustainable Energy Carriers, Mobility and Carbon Cycles.

To support local development and generate synergies, Vulcan is also an active member of the TechnologieRegion Karlsruhe GmbH (TRK). As Vulcan's German head office is based in the Karlsruhe Technology Region, it is important for the Company to connect with local authorities, chambers of commerce, scientific institutions, and other companies in the region and to promote new technologies; the partnership with TRK is an effective platform for these activities. Importantly, Vulcan also wants to leverage the network of TRK to accelerate the energy transition in the region.

Additionally, Vulcan is also active in another local development association, Metropolregion Rhein-Neckar, which aims to keep industrial excellence in the region around Mannheim.

SUSTAINABILITY REPORT

> "OUR BUSINESS EXISTS TO, ESSENTIALLY, MAKE THE WORLD A BETTER PLACE. WE AIM TO BE THE FIRST IN THE WORLD TO DELIVER CARBON NEUTRAL, DOMESTICALLY SOURCED LITHIUM FROM EUROPE TO EUROPE.

SUSTAINABILITY HIGHLIGHTS

Low ESG Risk Rating provided by Sustainalytics (January 2023). Ranked first amongst peers and in the 2nd quartile Chemicals Industry, i.e. the top 2%

Expansion of Vulcan's team to 184 full time employeess at 31 December 2022, up from 129 on 30 June 2022

Sustainability linked KPIs for the Leadership team including environmental, staff retention and procurement

Sustainability Steering Committee formed with 10 members

Completed first employee compensation and benefits assessment

United Nations Global Compact member (since February 2022)

100% of European team have completed all training modules on occupational health, safety and governance

Vulcan executed a binding term sheet with Stellantis for the first phase of a multiphase project aimed at decarbonising the energy mix of the Opel Rüsselsheim auto-manufacturing site in the Upper Rhine Valley, Germany

Partnership with Karlsruhe Zoo Foundation (Jan 2023) supporting local biodiversity projects, in line with aim to be nature positive, and in tandem with TNFD involvement.

9,5kt CO_2 avoided from renewable energy generated at Natürlich Insheim since acquisition in December 2021

Four Info Centres opened in Insheim, Landau, Karlsruhe, Mannheim and one mobile Info Centre for local community engagement

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Publication of third voluntary TCFD report, which includes Vulcan's first climate scenario modelling analysis

VULCAN'S APPROACH TO SUSTAINABILITY

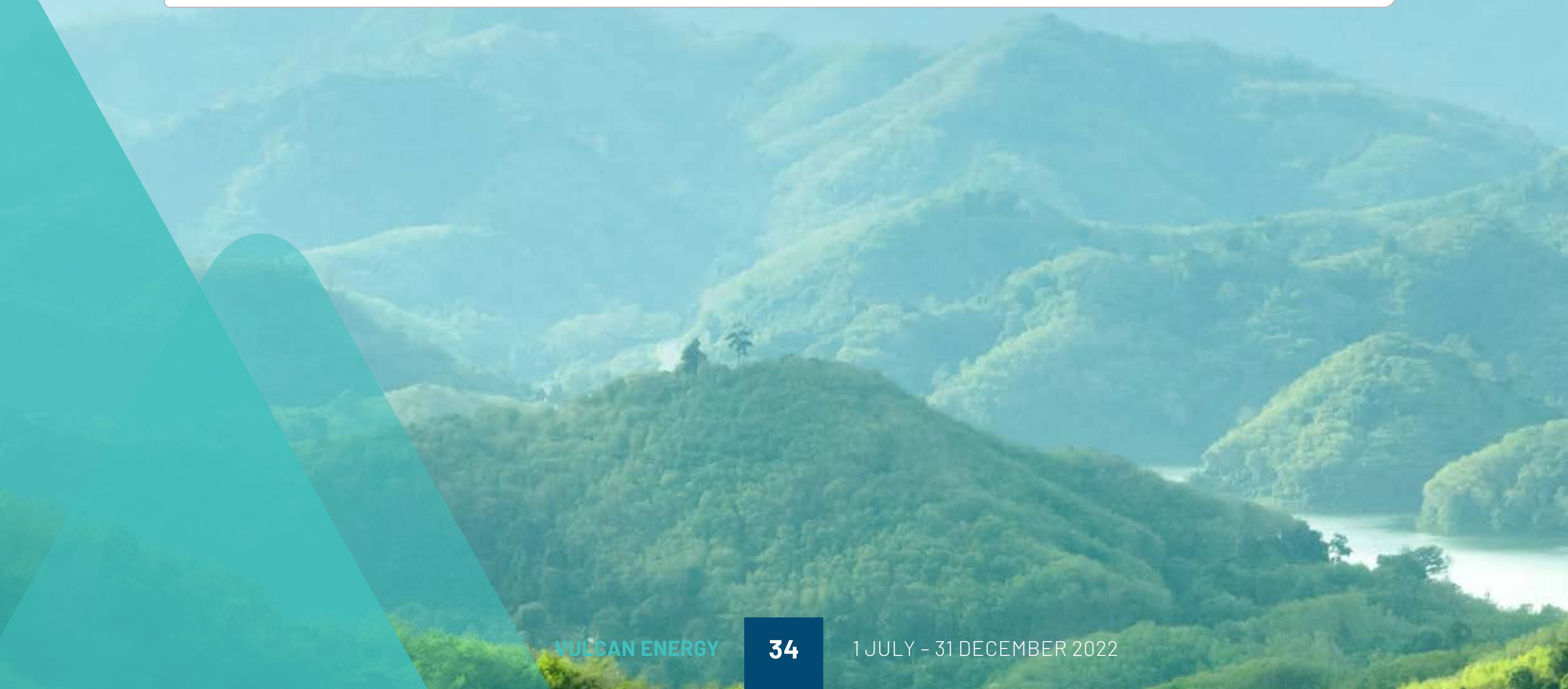
Sustainability is the cornerstone upon which Vulcan was founded. The Company's purpose is to empower a net zero carbon future and contribute to ensuring the livability of the planet for generations to come.

Vulcan's *raison d'être* is to be a leader in Sustainability and Environmental, Social and Governance (ESG) initiatives and reporting, ensuring sustainability goals are not merely aspirations but govern the way Vulcan operates in practice.

FIGURE 5: CORPORATE GOVERNANCE POLICIES

Vulcan is focused on developing a robust sustainability governance framework that integrates into its broader corporate governance framework. This report and the TCFD report set out our approach (available via the website). The Company's approach is supported by the development of corporate governance policies available for review in the Corporate Governance section of the website https://v-er.eu. Vulcan will continue to broaden the Company's suite of policies during the course of 2023.

- **Anti-Bribery and Anti-Corruption policy**
- **Community relations policy**
- **Conflict minerals policy**
- **Diversity policy**
- **Environmental management policy**
- **Sustainable supplier policy**



SUSTAINABILITY AND ESG FRAMEWORK

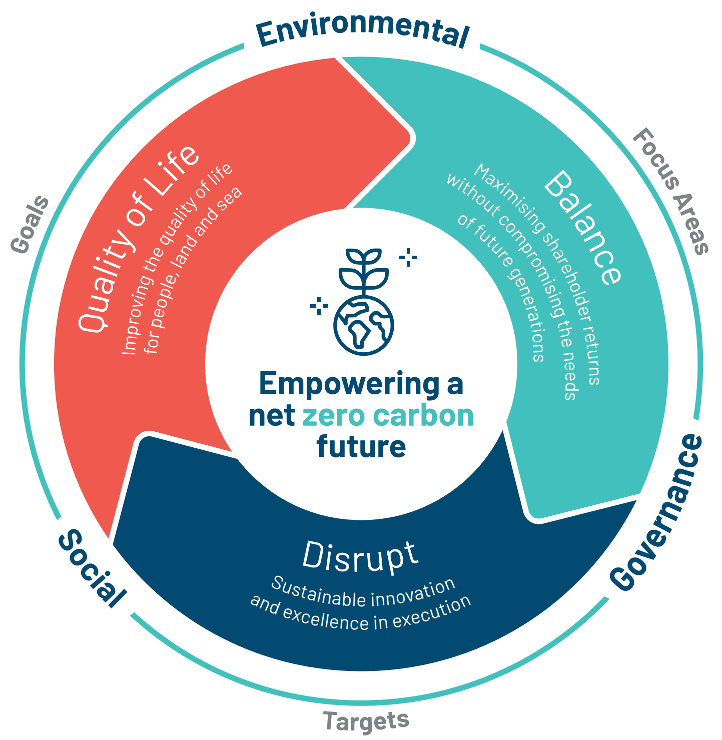
In 2022, Vulcan developed and adopted a Sustainability and ESG framework the purpose of which is to weave sustainable decision making into the Company's core strategy.

Vulcan's Sustainability and ESG Framework helps Vulcan implement its sustainability strategy. It guides sustainable decision making - binding purpose, mission, strategy and values. The Framework is underpinned by the Vulcan Compass that aims to guide the Company on three key themes:

- Quality of Life: improving the quality of life for people, land and sea;
- Balance: maximising shareholder returns without compromising the needs of future generations; and
- Positive Disruption: sustainable innovation and excellence in execution.

The Company executes on its strategy to be a global leader in the production of geothermal energy and heat and net zero lithium by utilising highly skilled experts, innovative technology, and by leveraging the Company's strategic position within the European EV supply chain. As the Company scales up, work will continue to further embed and implement sustainability and ESG into the organisation by further enhancing roles, responsibilities and accountabilities, as well as targets setting and reporting on performance and progress against targets.

FIGURE 6: VULCAN COMPASS



SUSTAINABILITY AND ESG GOVERNANCE STRUCTURE

Sustainability and ESG-related roles and responsibilities have been clearly defined and delegated across the leadership team to ensure accountability and clear reporting lines.

The diagram below gives an overview of Vulcan's Sustainability and ESG related governance.

SUSTAINABILITY AND ESG GOVERNANCE STRUCTURE

Board - Overall reponsibility for the Company's sustainability strategy

Audit, Risk and ESG Committee
Key responsibilities:

- Financial statements, accounting policies and financial reporting and disclosure practices **(including sustainability related and climate related reporting**).
- Compliance.
- Internal control processes and control framework **(including controls as it relates to sustainability and ESG integration**).
- Internal and external audit.
- Management and disclosure of business, ESG and economic risks.
- Risk management framework **(including climate related and broader sustainability related risks),** and management's performance.

Projects Oversights Committee
Key responsibilities:

- Regular reviews of the status of nominated projects.
- Apply appropriate corporate governance framework and risk management **(including climate related and broader sustainability related risks)**.
- Review and advise whether the projects have appropriate leadership and direction complimentary to maintaining an appropriate awareness of the strategic objectives of the Company.
- Review and advise whether the processes utilised in the governance and management of the projects align with complimentary processes used at the business and Company level e.g. risk management.

People and Performance Committee
Key responsibilities:

- Overall remuneration strategy.
- Short term and long term incentive plans, including **ESG related KPIs.**
- Performance management.
- Matters relating to recruitment, retention and termination policies.
- Diversity strategy and gender pay equity audits.

All committee Chairs report to the Board

Projects Execution Committee
Key responsibilities include providing a consistent approach to:

- Delivery (project execution, contract strategy, engineering standards, strategic sourcing).
- Integrating schedules and visibility of critical paths.
- Interfaces being effectively managed.
- Risks and opportunities defined and managed **(including sustainability related and ESG risks and opportunities)**.
- Control processes to give strategic management and insights.

Supply Chain Council
Key responsibilities include

- Business critical supply chain priorities.
- Approval of procurement strategies.
- Awarding of contracts and delegations.
- **Oversight of supply chain sustainability credentials.**

All committee Chairs report to the relevant Board committee

Sustainability Steering Committee
Consists of ten committee members from all departments across the Company

Key responsibilities include:

- **Establishes direction and operationalises implementation of the sustainability framework.**
- **Ambassadors of sustainability – ensures the culture of sustainability is integrated into the Company.**
- **Responsible for employee training and education.**

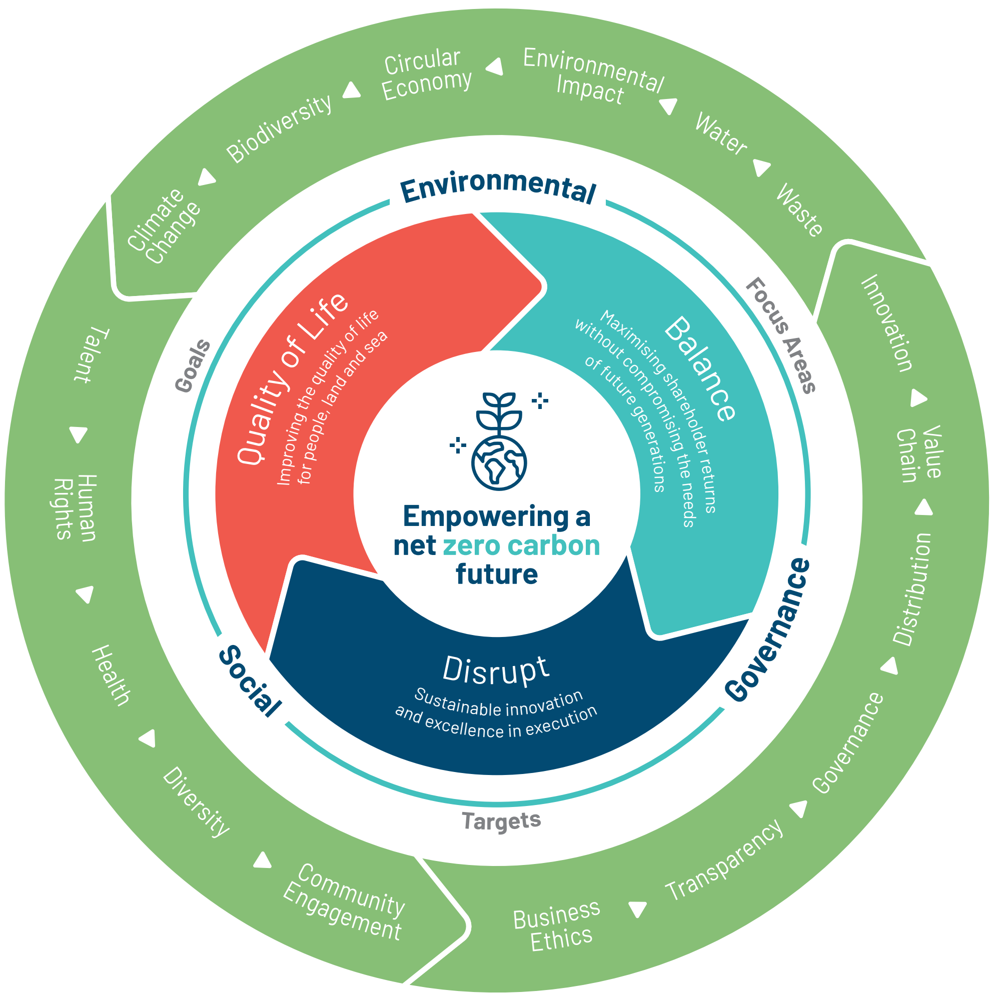
Committee Chair reports to the Audit, Risk and ESG committee

MATERIALITY

Vulcan completed a materiality assessment in mid 2022 with the assistance of ERM. This assessment will continue to be utilised until late 2025 (when the Company expects to enter the production phase of the Project) at which time an updated assessment will be undertaken to ensure a continuous feedback program. The Materiality Assessment was informed by many reference points including a review of current global industry trends, analysis of peers and sustainability leaders and, most importantly, from key stakeholders.

Vulcan identified 17 material topics (Figure 7), with climate change and energy, environmental impact, community engagement and governance scoring highest for both importance to stakeholders and importance to Vulcan. The material topics matrix and definitions are available in the Appendix of this Report. This is aligned with the key ESG initiatives identified in the Sustainability and ESG Framework and helps to prioritise focus in the near and long term.

FIGURE 7: VULCAN COMPASS LINKED TO MATERIAL TOPICS



THE MATERIALITY ASSESSMENT IDENTIFIED THE FOLLOWING CURRENT TRENDS, AND VULCAN UTILISES THESE WHEN CONSIDERING BUSINESS STRATEGY AND FINANCIAL DECISIONS.

1

NET POSITIVE

Increasingly, stakeholders expect companies to be more accountable for their impacts on biodiversity and society, with a focus on a 'net positive' impact that goes beyond just harm minimisation.

In December 2022, the United Nations Biodiversity Conference (COP15) adopted the Kunming-Montreal Global Biodiversity Framework (GBF) which aims to address biodiversity loss, restore ecosystems, and protect indigenous rights. The plan includes a pledge to protect 30% of the world's land and seas for nature by 2030.

Vulcan is a forum member of the Taskforce for Nature-Related Financial Disclosures (TNFD) and will report under that framework in the future. Vulcan is working with the Karlsruhe Species Conservation Foundation, amongst other experts, to support both local biodiversity programs and start planning for nature positive, rewilding initiatives within all operational sites.

2

SOCIAL LICENCE TO OPERATE

Addressing and reducing the risk of negative impacts on local communities and society is a key focus for investors. Sustainable, long-term success is dependent on companies like Vulcan building positive long-term relationships with all of its stakeholders, supporting local communities, and maintaining a positive citizenship status.

Vulcan is recruiting many team members from the local community, building local energy infrastructure and commerce, and aiming to provide important renewable geothermal heating to the city of Mannheim from 2025. The communications team has also been very active during the period, educating and consulting local communities.

3

DECARBONISATION

Decarbonisation continues to be a pivotal focus point amongst energy and resource sectors. Both from a regulatory point of view and investor perspective, greater emphasis is being placed on reducing a company's carbon footprint.

Vulcan was founded on the need to decarbonise the EV lithium battery industry. Legacy methods of lithium extraction and refining are environmentally damaging and/or high in fossil fuel usage. This issue, alongside the fact that Europe does not currently produce any of its own battery grade lithium hydroxide[6] and is entirely reliant on imports, means that innovative solutions are necessary to assist with climate change mitigation. Vulcan has been operating its lithium extraction pilot plant since April 2021 and is in the process of constructing its lithium extraction demo plant, which Vulcan is aiming to use to train its operations team in a pre-commercial setting prior to start of commercial production.

[6] Mining Journal https://www.mining-journal.com/project-finance/news/1367501/zero-hour-for-lithium-in-europe

4

GEOPOLITICS AND POLICY

The Russian invasion of Ukraine and trade tensions between China, the United States and Australia continues to create a turbulent geopolitical environment and markets visibly more volatile. Instability of energy supply and increasing shifts towards protectionist actions have pushed energy pricing in Europe to all-time highs while the US Inflation Reduction Act (IRA) is threatening geopolitical trade alliances.

Vulcan has worked to alleviate Europe's ensuing energy crisis, including signing a binding term sheet with Stellantis to assist with the decarbonisation of the energy mix of their Rüsselsheim manufacturing site in the Upper Rhine Valley in January 2023 and a binding heat offtake agreement with MVV for the city of Mannheim in April 2022. Importantly, Vulcan is a current, commercial producer of renewable energy, from its operational plant at Insheim. Additionally, Germany's €2.98 billion scheme to promote green district heating based on renewable energy alongside other policies to support renewable projects also act as enablers for Vulcan.

Favourable European policy, such as the Critical Raw Materials Act (2023) which seeks to significantly increase and diversify the European Union's critical raw materials supply, strengthen circularity and support research and innovation and the Carbon Border Adjustment Mechanism (CBAM), shows the EU's support for sustainably sourced local materials that are key in assisting decarbonisation efforts. Vulcan is strategically placed within Europe to benefit and, given the demand for lithium is expected to rise significantly in the coming years, has signed multiple offtake agreements aimed to ensure financial stability for the Company for a number of years once in commercial production.

5

SHIFTING REGULATORY ENVIRONMENT

Sustainability-focused regulation is being introduced globally, with the European Union (EU) introducing mandatory reporting under the EU Corporate Sustainability Reporting Directive (CSRD) and third-party sustainability data assurance requirements for all listed entities from 2023. In December, the Australian Government commenced consultations on whether to introduce mandated climate reporting requirements that would align with the International Sustainability Standards Board (ISSB).

Vulcan has been a first mover adopter in many instances. Vulcan believes that sustainability is at the heart of what drives success. The Company:

- Has voluntarily reported to the Taskforce for Climate-related Disclosures (TCFD) since 2021.
- Voluntarily sought certification as a carbon neutral company under the Climate Active and South Pole certifications.
- Is a signatory to the United Nations Global Compact (UNGC) and a forum member of the Taskforce for Nature-related Disclosures (TNFD).
- Is working towards comprehensively reporting to the Global Reporting Initiatives (GRI) framework.

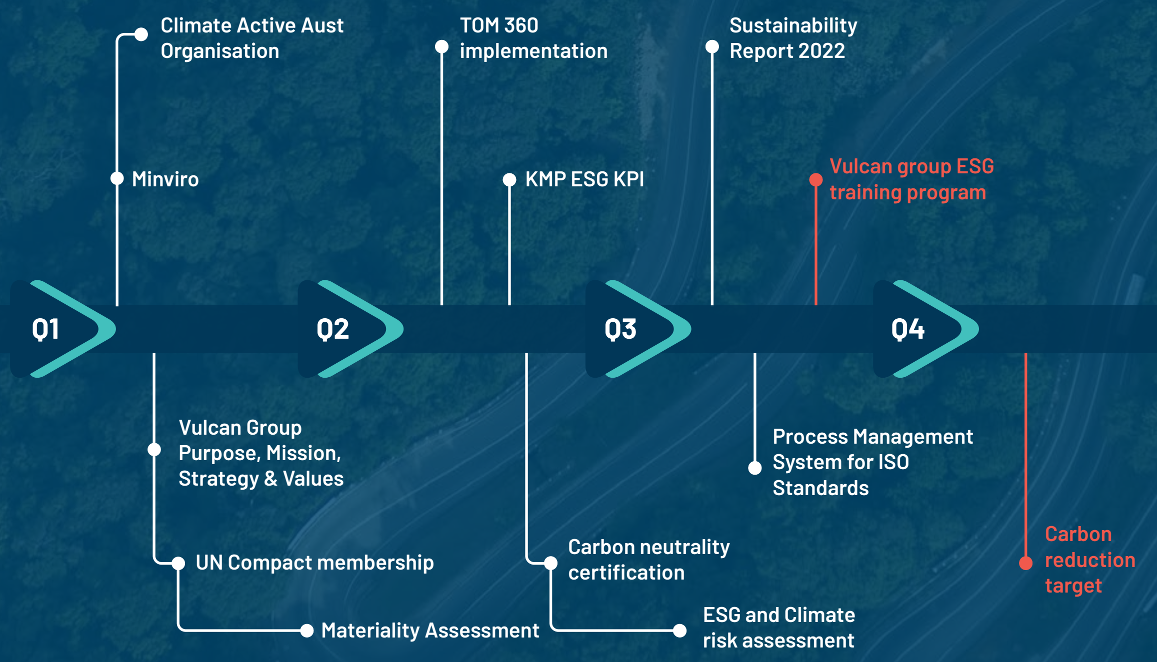
Cognisant that Vulcan is dual listed on the ASX and FSE, the team continues to work with experts in sustainability practices to continue being at the forefront of sustainability reporting.

ESG ROADMAP

1 JULY - 31 DECEMBER 2022

In ensuring Vulcan remains committed to the Company's sustainable purpose, Vulcan have devised and adopted an ESG specific Roadmap with key environmental, social and governance deliverables. The infographic illustrates key deliverables for 2022 and which of those were achieved during the reporting period. Vulcan are proud of the fact that the team achieved all but two of the 2022 deliverables and recorded many more ESG related achievements.

The two targets where initiatives are in progress: (1) the full ESG training program: Vulcan prioritised implementing an online occupational health & safety, and onboarding training program due to the necessity of this training for a fast growing team. Now fully implemented, Vulcan is focusing on expanding the training platform to include some ESG training modules, focused on raising awareness of sustainability matters impacting the business. (2) the carbon reduction target: Vulcan has instructed a third party to assess Company GHG emissions for the 2022 calendar year and is focused on ensuring robust systems are in place to capture, monitor and successfully implement reduction strategies. Vulcan will report on these targets in the next reporting period.



● Completed ● In Progress

ACHIEVEMENTS

1 JULY - 31 DECEMBER 2022

- Peer benchmarking completed under both the Materiality Assessment and Sustainalytics ESG Risk Rating (determined as having a low risk exposure, first amongst peers, and in the 2nd percentile for the Chemicals Industry).
- Third TCFD report now also including climate scenario modelling against Net Zero Emissions (NZE) and State Policies Scenario (STEPS).

- Completed five preliminary environmental impact assessments and species conservation assessments to 31 December 2022 on planned development areas, which are focused only on farmland or industrial land.
- Partnering with the Karlsruhe Species Conservation Foundation.

- Renewable energy producer since January 2022 with the acquisition of Natürlich Insheim and produced 31,500,00kWh of renewable energy, saving ~9,500 tonnes of CO_2.
- Signed offtake agreement with MVV for district heat supply to the City of Mannheim.

- Gender balanced board, a standout for the second year running within ASX300 mining companies[7].
- Completed first Company wide compensation and benefits assessment and set further employee wellbeing initiatives.
- In 2022 'One Vulcan, One Team' introduced a significant initiative with an increasing focus on culture within ESG.
- Fully integrated internal training and development program completed with implementation of SAM platform.
- Enhanced occupational health and safety management.

- United Nations Global Compact (UNGC) member.
- Centralised administrative functions after TOM 360 analysis.
- Completed 19 community roadshow events during the year to educate and inform local communities.
- Opened Info Centres in Insheim, Landau, Mannheim and Karlsruhe for local community engagement.
- Expanded the Zero Carbon Lithium™ project exploration license area with a licence application in France.
- Sustainability embedded in projects execution management.
- Formed the Vulcan Sustainability Steering Committee.
- Strengthened risk management processes.

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[7] Source https://www.miningnews.net/leadership/news/1449188/mnns-2023-gender-diversity-scorecard

ESG PERFORMANCE UPDATE

Environmental impact assessment

Corporate sustainable responsibility goes beyond emissions mitigation and reduction. It is only one part of the climate change solution. Biodiversity and nature positive impacts are fundamental, not only to our efforts to decrease emissions but also to our social welfare.

As part of Vulcan's permitting process, preliminary environmental impact assessments (EIA) and initial species conservation assessments have been completed over potential drilling sites within Vulcan's licensed areas. The information gathered within these reports is being used to inform our biodiversity strategy and nature positive impact targets.

The first EIAs have confirmed that no Natura 2000 sites, including bird protection areas and flora-fauna habitats, are or will be affected. We have specifically avoided environmentally sensitive areas, and are focused on using farmland or industrial land. As part of the EIA studies by the project development team, a catalogue of criteria was used to identify the most suitable locations for Vulcan activities, taking into account Natura 2000 sites, nature reserves, biotopes, infrastructure, geothermal potential, residential areas and necessary site size. Däs Institut für Näturkunde in Südwestdeutschländ in coordination with the Lower Nature Protection Authority assessed potential drill sites and noted that no clearing of trees would be required and that environmental impacts would be minimal.

Decarbonisation

Vulcan acquired an operational geothermal renewable energy power plant in December 2021 and renamed it Natürlich Insheim. Natürlich Insheim supplies approximately 6,500 households with power and, during the full year of 2022, generated 31,500 MWh and saved approximately 9,500 tonnes of CO_2. Vulcan also increased the number of employees to 12 full-time people. Natürlich Insheim is a key first step for Vulcan as the Company transitions into a project execution and operations company and scales up support for Europe achieving energy security and independence from fossil fuel reliance.

Climate change and energy

The value of *Future-focused* encompasses both awareness of the potential future risks from climate change to infrastructure and the supply chain, and also the opportunity to assist the German power grid to transition away from fossil fuel and Russian reliance and European lithium extraction to innovate to more sustainable methods.

Environmental Management

Driven by the Value of *Sustainability*, Vulcan has a dual aim of tackling climate change and decarbonisation through the production of lithium and geothermal heat and energy while working to be nature positive. Vulcan is a positive disruptor with a management approach designed to have minimal impacts on communities and the environment.

RESOURCE MANAGEMENT

Resource management is a crucial step towards understanding and minimising potential negative impacts. Vulcan will continue to develop and assess energy consumption, water usage and waste analysis as the Zero Carbon Lithium™ Project advances. Year-on-year comparisons are just one way Vulcan remains accountable and transparent.

Energy consumption and the burning of fossil fuels to generate electricity is deemed one of the biggest contributors to GHG emissions. Vulcan is a renewable geothermal energy producer and is committed to reducing reliance on grid electricity and heating where possible across the organisation. Some energy management initiatives already in place at Vulcan include the purchasing of renewable energy certificates, energy efficiency measures such as automatic lighting, and allowing staff flexible work from home options.

Water

Vulcan is working to manage and reduce the amount of water consumed through effective recycling and replenishment of withdrawn water. To protect this valuable resource, the Company will re-use water when feasible, test and treat water returned to the environment, and continue to advance understanding of potential risks – including the potential for increased water scarcity due to climate-related changes in precipitation in Western Europe.

Minviro has updated the Life Cycle Analysis (LCA) for water consumption for production of the lithium hydroxide product, utilising the updated DFS data that was published on 13 February 2023. The assessment is a cradle-to-gate study, including the extraction of geothermal brine, the processing of the lithium product into lithium hydroxide monohydrate (LHM), transportation of the lithium chloride concentrates from the geothermal plants to the CLP, and treatment of

TABLE 3: PROPOSED WATER USAGE PER TONNE OF LHM (SOURCE: MINVIRO 2023 LCA)

Location	Tonnes Water/LHM
Taro LEP	
Net freshwater input	0.58
Lionheart	
Net freshwater input	1.16
CLP	
Net freshwater input	0.08
Net high purity water input	1.89
Total Water Consumption	3.71
Water in Hydrochloride	1.92
Water in Lithium Hydroxide Monohydrate	0.43
Water in Products	**2.35**
Water Consumption Net of Products	**1.36**

wastewater effluent and solid waste by third parties. The LCA estimates that only 1.36 tonnes of water per tonne of LHM produced (Table 3), net of products, will be consumed due to recycling streams engineered into the process, which comparatively is an extremely small water footprint.[8]

Waste

Vulcan is committed to the effective management of waste including overall operational waste efficiency and recycling from lithium processing. As the team move towards execution and operation, waste management and recycling processes are being finalised. Below is the Company's organisational waste data for 2021 and 2022.

TABLE 4: 2022 ELECTRICITY, WATER AND WASTE CONSUMPTION

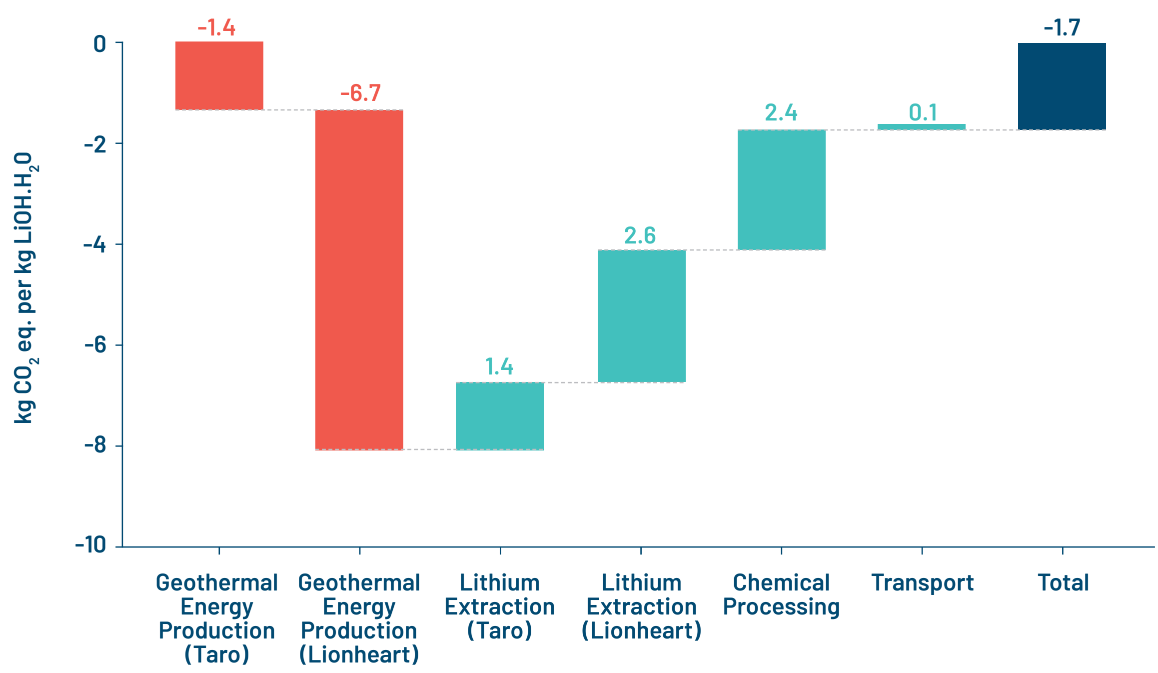
	2021	2022
Electricity consumption		
Grid electricity	44,574.54 kWh	419,000 kWh
Renewable electricity	0	66,198 kWh[9]
Heating	117,872 kWh	7,000 kWh
Fuel	928 ltr	5073 ltr
Water		
Consumption	227.7 m^3	828 m^3
Treatment	9842.4 kg	n/a[10]
Groundwater	0	0
Waste		
General	11,500 kg	5,981 kg
Wastewater	360 kg	n/a[10]
Hazardous waste	24 kg	n/a[10]
Waste recycled (paper, plastic and glass)	7,677 kg	6,201 kg

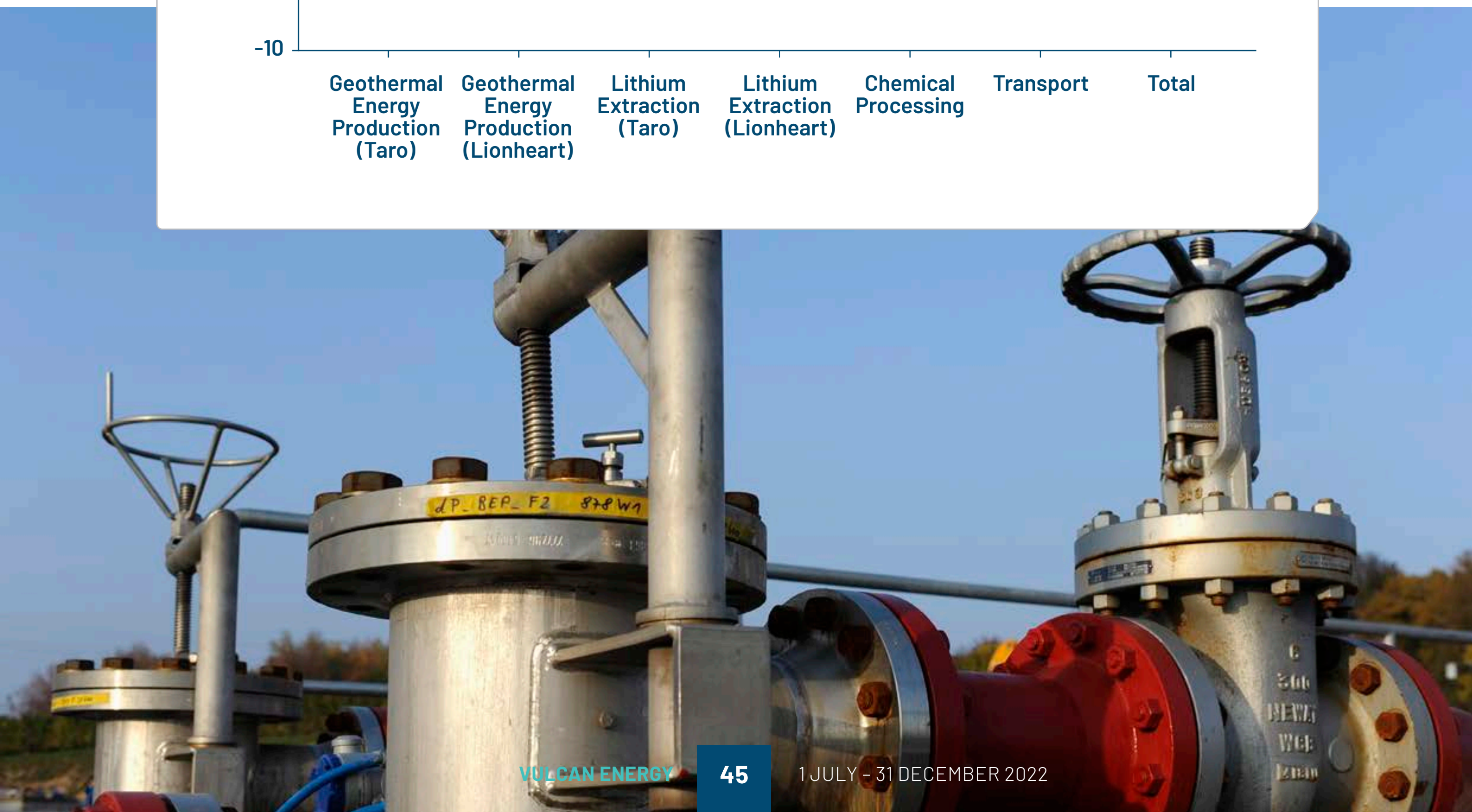
[8] Based on internal Vulcan figures and calculated together with the Hatch study as part of the DFS, then incorporated into the Minviro LCA Study 2023.
[9] GreenPower being utilised at three Vulcan sites and excludes electricity self-generated at Natürlich Insheim.
[10] It was not possible to separately quantify water treatment, wastewater and hazardous waste for 2022. Systems are being implemented to report this accurately.

LIFECYCLE ASSESSMENT

Vulcan commissioned Minviro Ltd, an independent consultancy, to undertake an ISO-aligned Life Cycle Assessment (LCA) of the integrated geothermal energy, lithium production and processing impacts to prove and certify the validity of the carbon neutral nature of the Zero Carbon Lithium™ Project. Minviro's first ISO-aligned LCA was conducted in 2021, with the latest LCA undertaken in 2023 (after the end of the reporting period). LCAs will be updated at regular intervals going forward.

FIGURE 8: CLIMATE CHANGE BY STAGE





EMISSIONS

VULCAN'S AUSTRALIAN ORGANISATION, COMPRISED OF A TEAM BASED IN PERTH, WESTERN AUSTRALIA HAS MAINTAINED CLIMATE ACTIVE CARBON NEUTRAL CERTIFICATION FOR 2020 AND 2021.

To complement the Australian carbon neutral certification for 2021, Vulcan engaged South Pole to certify the Vulcan German organisation, Vulcan Energie Ressourcen GmbH and its subsidiaries VEE and VES for 2021. As part of the certification process, 2,228 tCO_2e credible carbon offsets were purchased to bring the Group to a carbon neutral position[11]. These comprised of 598 tCO_2e supporting REDD+ Rimba Raya Biodiversity Project in Indonesia and 1,630 tCO_2e Sipansihaporas hydro power plant, North Sumatra.

Sustainable Business Consultants (SBC), who Vulcan currently utilise to assist with carbon neutral certification applications, is currently completing a combined assessment (for Australia and Germany) of the greenhouse gas (GHG) emissions inventory for the 2022 calendar year. This is the first step of the annual carbon neutral certification process. As the certification process is usually only completed by May of each year, the GHG emissions data has yet to be independently verified.

Final numbers will be included in Vulcan's next Sustainability Report. Good quality carbon offsets will be acquired as per prior years once numbers are finalised.

For further information on the process of carbon neutral certification for 2021, please refer to the FY22 Sustainability Report, available via the website https://v-er.eu.

[11] The extra 55 tCO_2e purchased was due to a last minute South Pole Scope 3 emissions recalculation that resulted in a slight decrease in the total after the offsets had been purchased

TCFD SUMMARY

VULCAN HAS PRODUCED, FOR THE FIRST TIME, A STANDALONE TASKFORCE FOR CLIMATE RELATED FINANCIAL DISCLOSURES (TCFD) REPORT AS PART OF THIS REPORTING SUITE. WHAT FOLLOWS BELOW IS A SUMMARY OF THE PROGRESS MADE IN THE PERIOD UNDER REVIEW. THE FULL REPORT IS ACCESSIBLE VIA THE WEBSITE (HTTPS://V-ER.EU).

Governance

Disclose the organisation's governance around climate related risks and opportunities

Recommended disclosures and disclosure level	Summary of progress in 2022	Standalone TCFD Report page reference
a) Describe the Board's oversight of climate related risks and opportunities	▶ Vulcan has a robust governance framework as set out in the TCFD report. It was enhanced with the formation of a Projects Oversight Committee, one key responsibility of which is the oversight of the risk management of projects, including climate related risks and opportunities.	Page 4 - 5
b) Describe management's role in assessing and managing climate related risks and opportunities	▶ A Projects Execution Committee and a Supply Chain Council were created in 2022 comprising members of management. The remit of the Committee and Council include oversight of climate related risks and responsibilities as it relates to project execution and the Company's supply chain. ▶ A Sustainability Steering Committee was formed to facilitate the implementation of Vulcan's Sustainability framework. This Committee comprises personnel from across the organisation.	Page 6 -7

Strategy

Disclose the actual and potential impacts of climate related risks and opportunities on the organisation's businesses, strategy and financial planning where such information is material.

Recommended disclosures and disclosure level	Summary of progress in 2022	Standalone TCFD Report page reference
a) Describe the climate related risks and opportunities the organisation has identified over the short, medium and long-term	▶ A Sustainability and ESG framework was adopted to ensure sustainability is woven into Vulcan's core strategy. ▶ The Company updated its risk matrix In Sept 2022 to include additional Climate related risks. No material risks were identified. ▶ Climate related opportunity is inherent in the Company's overall strategy.	Page 8 - 9 Page 15 - 18
b) Describe the impact of climate related risks and opportunities on the organisation's businesses, strategy, and financial planning	▶ The Board and senior management deliberated on the potential impacts of climate related risks during the enterprise risk management workshops conducted in Sept 2022. The outcome of this is captured in more detail in the TCFD report but no material risks were identified. ▶ Climate related opportunity is inherent in the Company's strategy and purpose.	Page 12 - 18
c) Describe the resilience of the organisation's strategy, taking into consideration different climate related scenarios, including a 2°C or lower scenario	▶ To stress test the organisation's strategy, the first climate scenario modelling was completed with the support of Baringa using the IEA's Stated Policies Scenario (STEPS) and Net Zero Emissions by 2050 Scenario (NZE). No material exposures were identified following this analysis.	Page 10 - 11

Risk management

Disclose how the organisation identifies, assesses, and manages climate related risks.

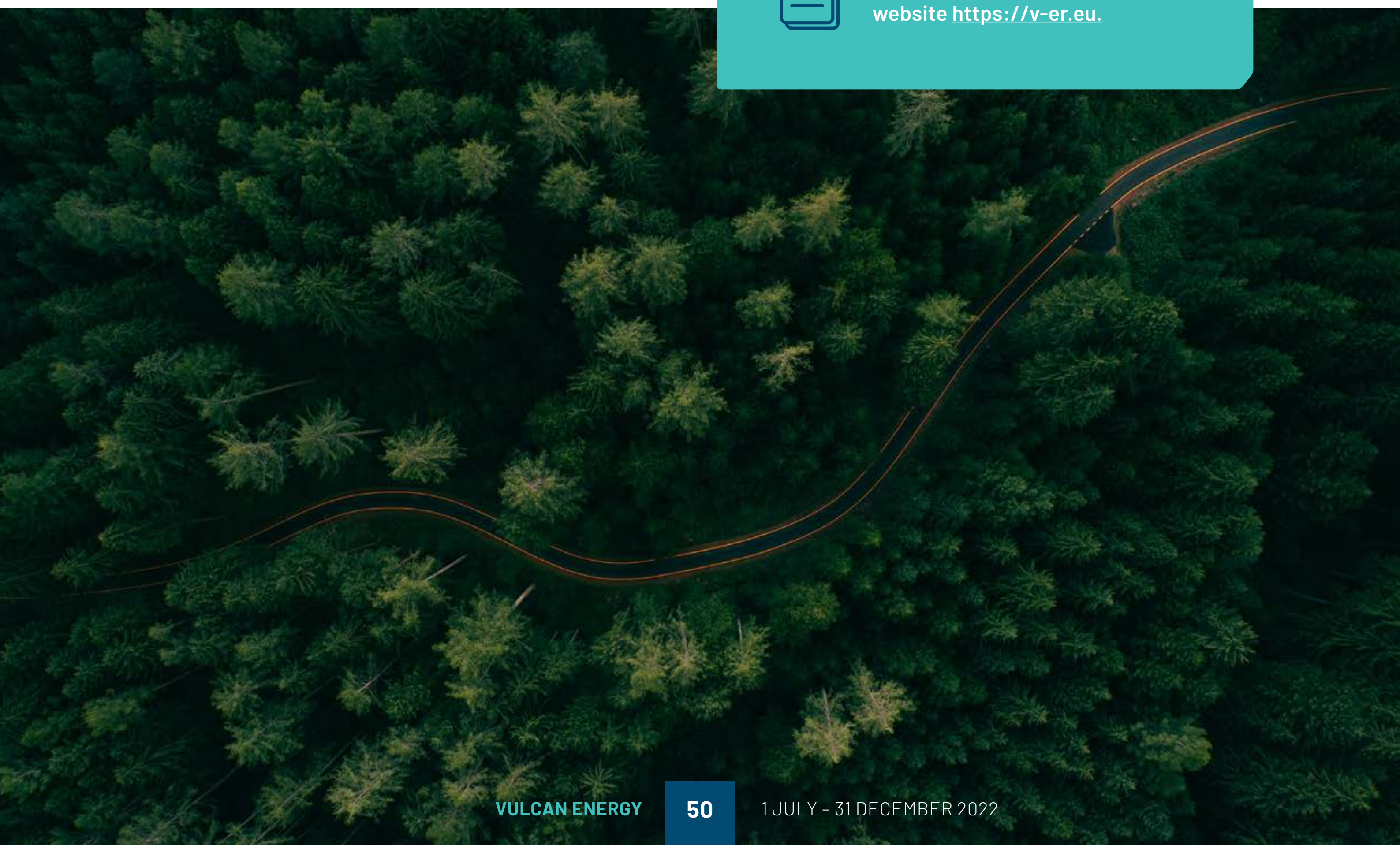
Recommended disclosures and disclosure level	Summary of progress in 2022	Standalone TCFD Report page reference
a) Describe the organisation's processes for identifying and assessing climate related risks	▸ The Company adopted the 2004 COSO Enterprise Risk Management – Integrated Framework as the principal mechanism to identify, assess and measure enterprise wide risks. ▸ 18 climate related risks identified over the short, medium and long term. No Material risks were identified. ▸ PwC were instructed to undertake a 360 Target Operating Model review resulting in recommendations on the enhancement of the legal corporate structure and governance framework.	Page 12 - 18
b) Describe the organisation's processes for managing climate related risks	▸ Through Executive and Board workshops using the COSO Enterprise Risk Management – Integrated Framework, Vulcan advanced its understanding of the climate related physical and transition risks. ▸ The development of new Committees within the governance framework. ▸ Allocation of roles and responsibilities for specific risks, and reporting lines on the management of risk.	Page 4 -7 Page 8 - 9 Page 12 - 18
c) Describe how processes for identifying, assessing, and managing climate related risks are integrated into the organisation's overall risk management	▸ Enhanced risk matrix developed following the Executive and Board risk management workshops. ▸ Executive incentivation linked to ESG-related KPIs introduced to embed sustainability into the business strategy and drive accountability and performance. ▸ Enhanced governance was introduced through the establishment of the Projects Oversight Committee, Projects Execution Committee, Sustainability Steering Committee and Supply Chain Council.	Page 4 – 7 Page 19

Targets and metrics

Disclose the metrics and targets used to assess and manage relevant climate related risks and opportunities where such information is material.

Recommended disclosures and disclosure level	Summary of progress in 2022	Standalone TCFD Report page reference
a) Disclose the metrics used by the organisation to assess climate related risks and opportunities in line with its strategy and risk management process	▸ Vulcan reports its GHG emissions and use of carbon offsets. ▸ Opportunity management is inherent in Vulcan's overall business strategy and purpose.	Page 19 - 21
b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 GHG emissions, and the related risks	▸ The GHG emission data is being updated and verified for 2022 and will be reported in the next issued report.	Page 19 - 21
c) Describe the targets used by the organisation to manage climate related risks and opportunities and performance against targets	▸ Executive incentivation linked to ESG-related KPIs introduced to embed sustainability into the business strategy. ▸ Key highlights are included in the TCFD report and the annual report.	Page 19 - 21

The full report is available on Vulcan's website https://v-er.eu.



OUR PEOPLE

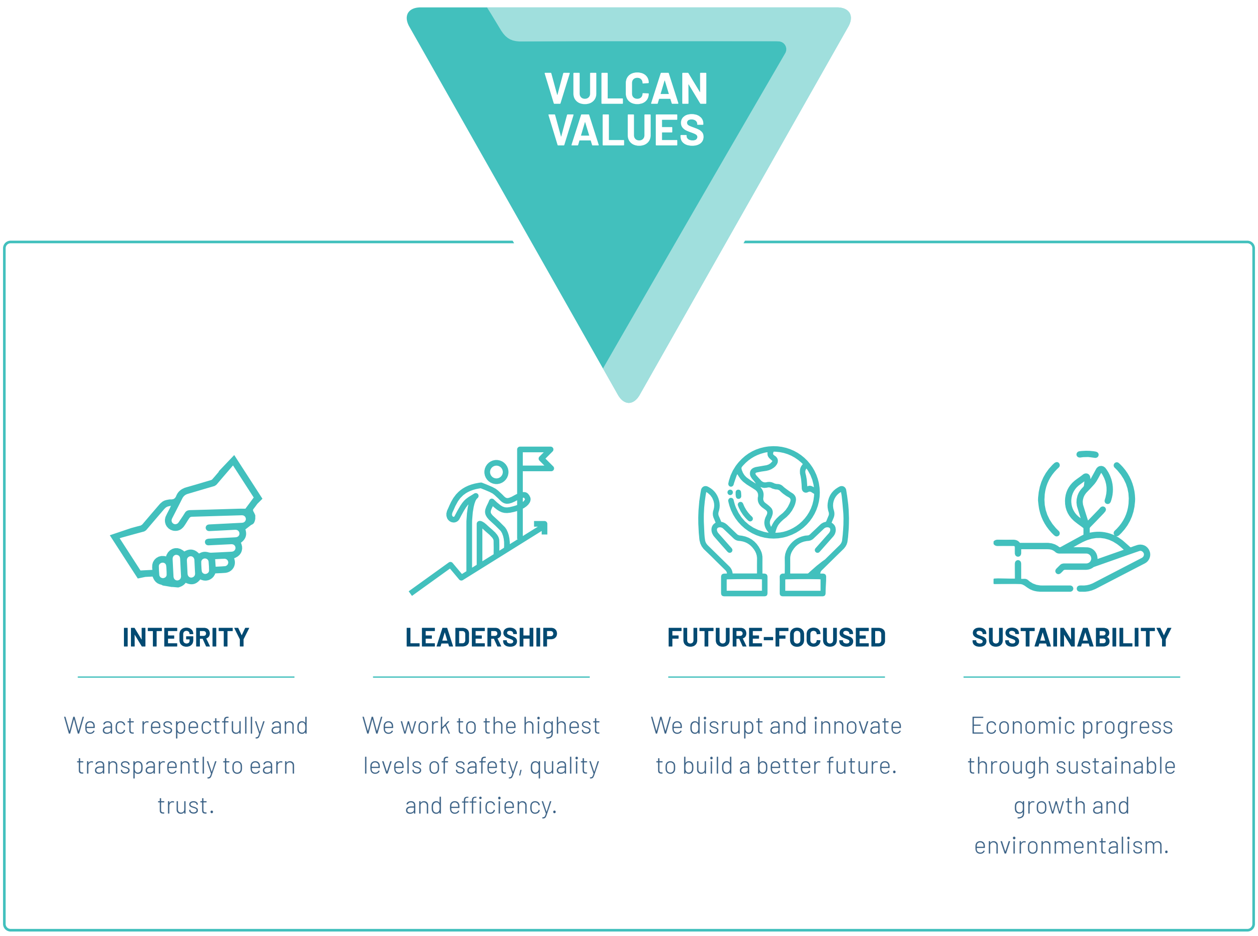
THE VULCAN VALUE OF *INTEGRITY* PROVIDES THE FOUNDATION FOR HOW THE TEAM INTERACT WITH EACH OTHER AND HOW THE COMPANY TREATS EMPLOYEES. VULCAN FOCUSES ON HAVING A POSITIVE SOCIAL IMPACT ON THE COMMUNITIES WITHIN WHICH IT OPERATES AND ON HELPING IMPROVE THE QUALITY OF LIFE FOR PEOPLE, LAND, AND SEA.

VULCAN VALUES

As part of the process to define Vulcan's purpose, vision and strategy, the Vulcan Values were finalised in March 2022 (Figure 9) after collaborative workshops with the Leadership team. Four key values were identified including *Integrity*, *Leadership*, *Future-focused* and *Sustainability*.

Considerations in defining the values were that their meaning was the same across languages and that they succinctly encapsulated the type of company Vulcan aspires to be. Work continues to bring these to life within the Company and make them a visible part of the culture.

FIGURE 9: VULCAN VALUES



ONE VULCAN, ONE TEAM

Vulcan has been ambitiously growing the team over the past few years to be able to deliver on the Zero Carbon Lithium™ Project with a strong recruitment strategy as well as through the acquisition of Vulcan Energy Engineering, Vulcan Energy Subsurface solutions, and Natürlich Insheim. A strong culture with a collaborative mindset is fundamental to driving the Company's success, and the team have focused on building the *Vulcan Way* to ensure every employee takes ownership and understands their individual importance within the Company. Some of the things implemented to build a collaborative culture include:

'One Vulcan, One Team' to bring people together from the different sectors of the business and convene around the Company purpose of empowering a net zero carbon future.

As part of the Target Operating Model (TOM 360), all administrative functions have been centralised and streamlined, with clarity around roles and responsibilities.

There has also been significant work in the Human Resources department to standardise compensation and benefits frameworks and enhance employee wellbeing and recruitment.

The Employee Wellbeing Project Manager has initiated a workstream to continue embedding and exemplifying the *Vulcan Values* across the Company.

TALENT ATTRACTION AND RETENTION

Vulcan is in a rapid scale-up and recruitment phase aiming to ensure employment of the best people to help deliver on the Zero Carbon Lithium™ Project. Through the Company's comprehensive recruitment process, a range of positions were filled during the period. Once someone becomes part of Team Vulcan, the Company focuses on providing opportunities for the employee to flourish within the Company and to be a team player who can exemplify the Vulcan Values. The Human Resources team has finalised a complete review of compensation and role descriptions and presented the results to the Board. This process included a review of over 150 job descriptions, preparation of salary bands and peer benchmarking. Areas that were identified were a benefits package to be included in salary considerations, personal development and training opportunities, and employee wellbeing incentives. Vulcan's compensation structure is based on the following considerations:

Via a uniform compensation structure...

... we are committed to equitable payment

... we are transparent

... we are fair

... we promote personal development

The Vulcan team continues to grow steadily and totalled 184 full-time employees (FTE) at 31 December 2022, up from 129 FTE at 30 June 2022. At the time of this report, this had increased to >280 FTE strong and still growing.

The Board has set measurable gender diversity objectives of 40% female representation on the Board, in senior executive positions, and across the entire workforce.

While working to meet diversity targets, it is encouraging to see 50% female representation on the Board, and that female representation increased 2% over the 6-month period across the entire company.

TABLE 5: EMPLOYEE NUMBERS, AGE AND DIVERSITY

Employees				Employees by age			Intern/ work students
	Total employees	Total full-time	% female	<30	30-50	>50	
Vulcan	193	184	34%	40	113	40	33

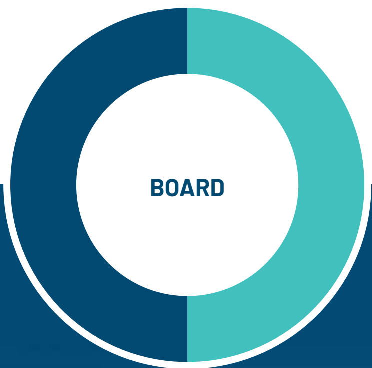
EMPLOYEE TRAINING

Although there are no employees covered under collective bargaining agreements (CBA) (a written contract between an employer and a union representing the employees that negotiates the terms and conditions of employment), the HR department has referenced CBA terms when finalising employment contracts and are in the process of standardising contracts across the Vulcan Group, in line with the compensation review.

Vulcan is proud to report that the Company pays on average 1.67 times higher than the basic salary in Germany, which is currently €12 per hour. The Company has also hired 22 executives from the local community and the ratio of CEO compensation to the median Vulcan salary is 3.40. The Company's current turnover rate (where the employee left voluntarily) is approximately 13.5% at the end of the period.

Utilising an online training platform alongside workshops, the Vulcan European team have completed a number of training programs including HSEQ onboarding, with the average number of hours of training completed per employee since implementation being six hours. Training is based on a mixture of Company-wide modules, followed by job or site-specific modules, and refresher courses are automatically applied depending on necessity. An IT awareness webinar was completed in October and skills upgrade training including finance, communications and Office 365 proficiency were also offered to the relevant team members. As of December, 100% of the German team have completed and passed all onboarding and occupational health and safety courses. With the training framework now in place, the Process Management team is looking to expand course offerings to include ESG specific training.

DIVERSITY, EQUITY, AND INCLUSION



50% Male / 50% Female

73% Male / 27% Female

68% Male / 32% Female

COMMUNITY ENGAGEMENT

Vulcan continues to engage and collaborate with local communities. The Company recognises that one of the most important stakeholder groups for the success of the Zero Carbon Lithium™ Project are the local decision-makers, and that the wellbeing of the communities in which Vulcan works is of paramount importance for mutually beneficial outcomes for stakeholders and the Company. The Vulcan communications team and strategy have grown commensurate to the increased engagement requirements as the Company advances through permitting and construction to commercial operation. Therefore, activities are developed and adjusted continuously to always be meaningful, focused, and timely. These efforts are centred around a toolbox that has been set up for each region in the Upper Rhine Valley and contains the following communication tools:

- Local website and regional social media to continuously inform local community groups about Project progression and to ensure the highest levels of transparency (e.g. https://natuerlich-kurpfalz.eu/).
- Strong activity with media including interviews, site visits, information events and news articles.
- A citizen telephone hotline so the team can provide local citizens with another channel of direct communication.
- Vulcan's Info Centres located in Karlsruhe, Landau, and Mannheim are a visible and tangible option for residents to learn more about the Zero Carbon Lithium™ Project alongside a Mobile Info Centre truck that is used for roadshows.
- Vulcan is active across multiple online platforms for local community groups to engage with the Company including via websites, social media, and enquiry emails.
- An emergency communication plan has been implemented to proactively react in the event of an incident. Vulcan has an internal procedure for the settlement of claims and a publicly available whistleblower process.

Vulcan continuously evaluates communication measures to ensure messaging is current, focused, effective, and efficient. Central measures include:

- Daily press and social media monitoring.
- A Regional Readiness Index.
- Regular communication team meetings and alignment workshops.
- Monthly evaluation of citizens' enquiries via phone, email and dialogue.
- Ad hoc evaluation of conversations and events with politicians, administrative decision-makers, journalists, and other multipliers.

Collaboration with local community is crucial for Vulcan to ensure acceptance for the Zero Carbon Lithium™ Project. The team is aware of the activities of citizens' initiatives in some regions and takes their concerns seriously, ensuring Vulcan provides numerous opportunities for dialogue and collaborative solutions. Vulcan's continuous communication feedback process aims to proactively inform local political decision-makers, public bodies, and opinion leaders about all important milestones. Some examples of these include the start of a 3D seismic survey, the start of drilling, and the construction of facilities. This is supplemented by face-to-face dialogue, resident communication, and community events such as those in Herxheim and Haßloch in 2022. A model participation process is currently being established in the Palatinate region which will be rolled out to other regions. Vulcan has demonstrated significant progress in public acceptance, with the City of Landau voting to support geothermal development in Vulcan's Phase One area, and eight out of nine councils in the region voting in favour of Vulcan's seismic survey during the period.

CORPORATE GOVERNANCE

OVERVIEW OF GOVERNANCE

As a sustainability-centric company, Vulcan continues to be committed to the highest standards of corporate governance and regulatory compliance. Underpinned by Vulcan's Value of Integrity, each team member endeavours to be respectful, authentic and trustworthy both to each other and to external groups.

Vulcan is also committed to ensuring its business activities are conducted fairly, honestly and with integrity in compliance with all applicable laws. To achieve this, Vulcan's Board of Directors has adopted a number of charters and policies which aim to create value, whilst ensuring it remains accountable, by implementing appropriate controls that are commensurate with the risks involved.

The Board believes that the Company's policies and practices comply with the recommendations of the ASX Corporate Governance Principles and Recommendations – 4th Edition and as Vulcan grows, the Company will regularly review its corporate governance policies, practices and controls so this compliance is not only maintained but enhanced.

PRACTICE AND COMPLIANCE

VULCAN IS COMMITTED TO THE HIGHEST STANDARDS OF CORPORATE GOVERNANCE PRACTICE AND REGULATORY COMPLIANCE. THIS IS REFLECTED IN THE VULCAN VALUES OF LEADERSHIP AND INTEGRITY AND IS EXEMPLIFIED IN THE COMPANY'S FIRST PUBLIC LOW ESG RISK RATING FROM SUSTAINALYTICS (JANUARY 2023).

PROJECT EXECUTION

The second half of 2022 saw the continued focus on strengthening Vulcan's corporate governance framework.

Vulcan is transitioning from a development company to an integrated project execution and operations company.

The appointment of Deputy CEO, Cris Moreno, will be instrumental in defining the project execution strategy and building out the team to achieve this, with projects to be delivered under a single integrated project group which will focus on advancing Vulcan's Zero Carbon Lithium™ Project towards commercial production.

> VULCAN IS COMMITTED TO ENSURING ALL OF ITS BUSINESS ACTIVITIES ARE CONDUCTED FAIRLY, HONESTLY AND WITH INTEGRITY IN COMPLIANCE WITH ALL APPLICABLE LAWS.

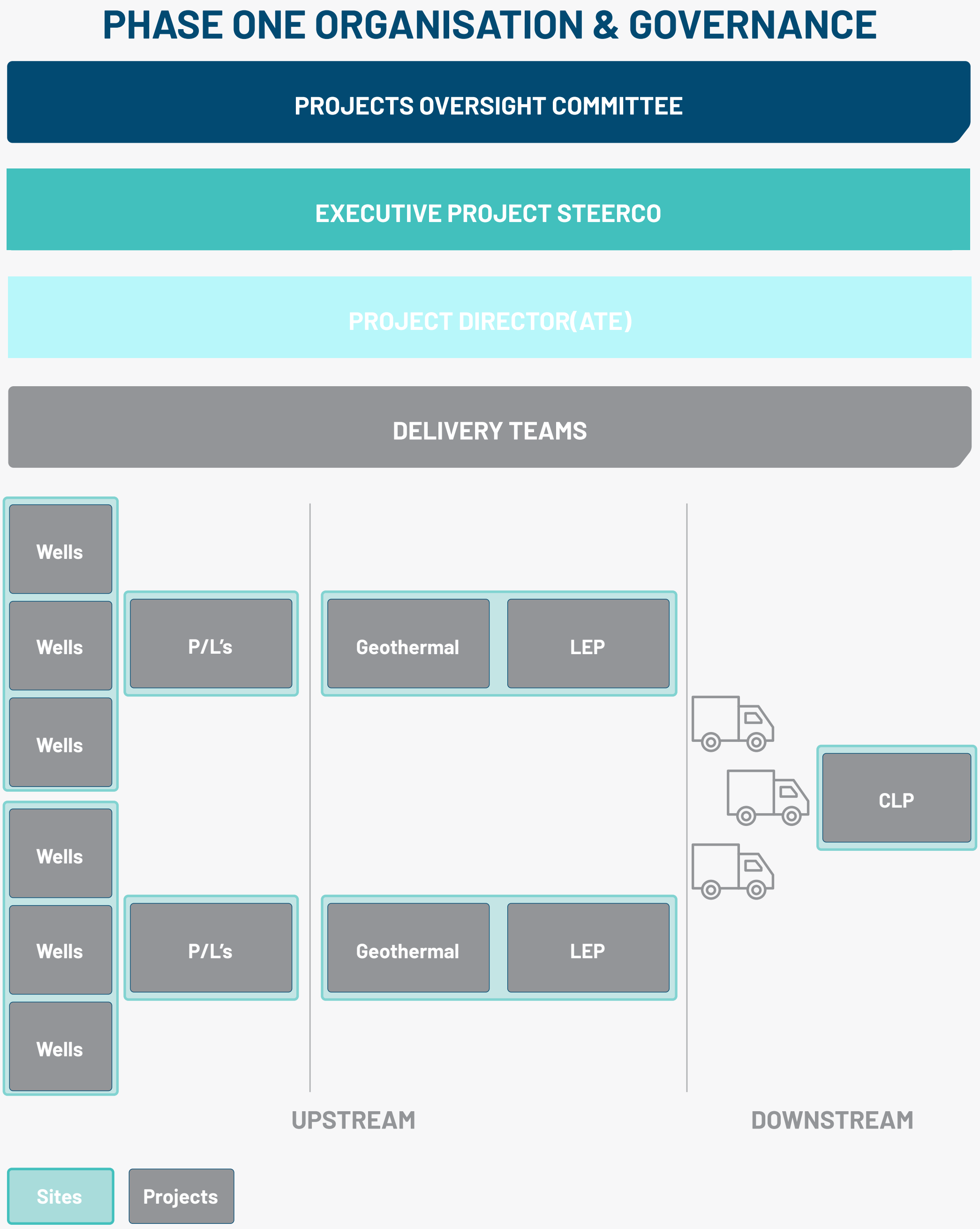
The matrix organisation provides a consistent approach to:

- Delivery defined by project execution, contract strategy, engineering standards and strategic sourcing.
- Integrating schedules and visibility of critical paths.
- Interfaces being effectively managed and clear lines of accountability.
- Risks and opportunities being defined and managed.
- Control processes to give strategic management and insights.

In addition, strong project governance is applied via a Project Oversights Committee and Project Directorate that oversee the project delivery teams.

The Projects Oversight Committee, comprising of three Directors highly experienced in project management and execution together with operational management are responsible for regularly reviewing the status of nominated projects and applying appropriate corporate governance and risk management frameworks.

FIGURE 10: PROJECT EXECUTION GOVERNANCE FRAMEWORK



One Nominated Project Sponsor will chair the Executive Project SteerCo which will govern, support, and steer the Project Directorate. The Project Sponsor will report Capital Project updates to the Vulcan Board and Projects Oversight Committee, while a dedicated Project Director will lead the Project Directorate and be the single point accountable for all Capital Projects until handover to production. The Head of ESG will sit within the Executive Project SteerCo and assist with reporting on sustainability aspects of project execution to the Board. The proposed strategy will deliver operational integrity, will maximise site synergies and will help deliver on cost competitiveness.

WHISTLEBLOWER REPORTING

Vulcan encourages a culture of 'speaking up' to raise concerns about possible unlawful, unethical, or socially irresponsible behaviour or other improprieties of or within the Company, without fear of retaliation or otherwise being disadvantaged as evidenced in our Whistleblower policy.

The Company provides a range of mechanisms to report suspected breaches of the Code of Conduct. These include:

- Training and education on Vulcan's Whistleblower Policy (publicly available on our website).
- Speaking with Vulcan's Whistleblower Protection and Investigation Officer (WPIO).
- Using the Company's independent and confidential reporting channel, externally managed by speeki.
- Encouraging employees to raise issues with their manager or a member of the HR team.

During 2022, no Whistleblower Hotline disclosures were reported and there were no matters of concern managed by the WPIO.

DIRECTORS' REPORT

> OUR TEAM, COMBINING MULTI-DISCIPLINARY, INTERNATIONAL, SCIENTIFIC, ENGINEERING AND COMMERCIAL EXPERTISE, ARE SUPPORTED BY A BOARD WITH DECADES OF INDUSTRY EXPERTISE AND LEADERSHIP.

The Directors of Vulcan Energy Resources Limited ('Vulcan' or 'the Company') present their report, together with the financial statements on the consolidated entity consisting of Vulcan Energy Resources Limited and its controlled entities (the 'Group') for the six months ended 31 December 2022.

DIRECTORS

The names of the Company's directors in office during the financial period and their date of appointment are as follows.

Mr Gavin Rezos: appointed 4 September 2019.

Dr Francis Wedin: appointed 4 September 2019.

Ms Ranya Alkadamani: appointed 29 April 2020.

Ms Annie Liu: appointed 18 March 2021.

Dr Heidi Grön: appointed 25 March 2021.

Ms Josephine Bush: appointed 16 April 2021.

Dr Günter Hilken: appointed 23 March 2022.

Mr Mark Skelton: appointed 19 April 2022.

INTEREST IN SHARES AND OTHER SECURITIES IN THE COMPANY

The following table sets out each current Director's relevant interest in shares and performance rights of the Company as at the date of this report.

Director	Ordinary Shares	Performance Rights
Mr Gavin Rezos	7,598,727	1,000,000
Dr Francis Wedin	16,458,561	142,000
Ms Ranya Alkadamani	276,000	-
Ms Annie Liu	77,379	8,597
Dr Heidi Grön	6,099	8,597
Ms Josephine Bush	13,698	8,597
Dr Günter Hilken	-	14,237
Mr Mark Skelton	900	14,237
Total	**24,431,364**	**1,196,265**

PRINCIPAL ACTIVITIES

The principal activities of the Company during the period were geothermal energy and lithium exploration in Europe.

INFORMATION ON DIRECTORS

THE NAMES AND PARTICULARS OF THE COMPANY'S DIRECTORS IN OFFICE DURING THE FINANCIAL PERIOD AND AT THE DATE OF THIS REPORT ARE AS FOLLOWS. DIRECTORS HELD OFFICE FOR THIS ENTIRE PERIOD UNLESS OTHERWISE STATED.

MR GAVIN REZOS

NON-EXECUTIVE CHAIRMAN

B.Juris, LLB, BA, Law, Economics, International Politics

Mr Rezos has many years of Australian and international corporate, project finance and investment banking experience and is both a former Head of Legal and Compliance across multiple countries for the HSBC Group and an investment banking Director of HSBC Group with regional roles during his career based in London, Sydney and Dubai. Mr Rezos has held chairman, board and CEO positions of companies in the materials, technology and resources sector in Australia, the United Kingdom, the United States and Singapore and was formerly a non-executive director of Iluka Resources and of Rowing Australia, the peak Olympics sports body for rowing in Australia. He is a principal of Viaticus Capital.

DR FRANCIS WEDIN

MANAGING DIRECTOR

PhD & BSc (Hons) Geology & Mineral Exploration, MBA in renewable energy

Dr Wedin is a battery raw materials industry executive, with a diverse career spanning four continents and multiple commodities. Dr Wedin co-founded Vulcan Group's Zero Carbon Lithium™ Project in Germany. Dr Wedin was previously Executive Director of successful ASX-listed Exore Resources Ltd (ASX:ERX). During this time, he discovered and defined two new JORC lithium resources, on two continents, in under a year. This included Lynas Find, which was bought by Pilbara Minerals to become part of its large Pilgangoora Lithium Project, now in production (ASX:PLS). Dr Wedin has a PhD and BSc (Hons) in geology and mineral exploration, and an MBA in renewable energy. He is a Fellow of the Geological Society, London, and a member of the Australasian Institute of Mining and Metallurgy.

MS RANYA ALKADAMANI

INDEPENDENT NON-EXECUTIVE DIRECTOR

BA Media, Communication, Media Studies, MA International Relations & Affairs, MA International Communications

Ms Alkadamani holds a Master of International Relations and International Communications and a Bachelor of Media from Macquarie University. Ms Alkadamani is currently Founder and CEO of Impact Group International, a strategic communications consultancy focused on advice to impact investors, philanthropists and innovative social impact programs. Ms Alkadamani works extensively in the impact investment space in Australia and internationally and has a strong network of clients and investors in the clean energy and renewables sector. She is also a Non-Executive Director of Australian Associated Press, Australia's only independent newswire, Director of the Impact Investment Summit, Asia Pacific and an advisory board member at Murdoch University. Ms Alkadamani was formerly Strategic Communications and External Affairs Director of Andrew Forrest's Minderoo Foundation and now Tatterang, Press Secretary to former Australian Prime Minister, Kevin Rudd during his time as Australian Foreign Minister and a spokesperson for the Australian Department of Foreign Affairs and Trade.

MS ANNIE LIU

INDEPENDENT NON-EXECUTIVE DIRECTOR

BEng Industrial Engineering & Operations Research

Ms Liu was the Executive Director at Ford (Model E) from 2022 to 2023. In this role, Liu applied her knowledge of global technology sourcing, especially tied to batteries and raw materials, as the business ramps to produce 2 million EVs globally by late 2026. Prior to her role at Ford, Liu was Head of Supply Chain, Battery and Energy at Tesla, from 2017 to 2020. At Tesla, Ms Liu oversaw multi-billion-dollar partnerships with battery cell and raw material suppliers to help meet the company's growth plan. Ms Liu led a global team of supply chain managers and engineers to support the battery and energy business.

Ms Liu joined Tesla after a 15-year career with Microsoft, holding various positions with Xbox, new product introductions and strategic sourcing for various products within the organisation. Ms Liu started her career with Sun Microsystems as a manufacturing engineer. She holds a Bachelor of Science in Engineering from the University of California, Berkeley.

DR HEIDI GRÖN

INDEPENDENT NON-EXECUTIVE DIRECTOR

PhD Chemical Process Engineering, Dip. Chemical Engineering

Dr Grön is a chemical engineer with more than 20 years' experience in the chemicals industry. Since 2007, Dr Grön has been a senior executive with Evonik, a specialty chemicals company. At Evonik, Dr Grön is currently responsible for Production, Technology and for Global product safety including impact assessment and development of solutions for the EU Chemicals Strategy for Sustainability as well as the management of Evonik's major investment volumes and production network.

MS JOSEPHINE BUSH

INDEPENDENT NON-EXECUTIVE DIRECTOR

CTA, MA (Hons) Law, CFA ESG investing, Sustainable Finance Certification

Ms Bush is a qualified solicitor and chartered tax advisor, as well as earning the CFA ESG investing qualification and a sustainable finance certification. She has an MA in Law from Cambridge University. Ms Bush was a senior partner at EY for 14 years specialising in the renewable energy sector. She built and led the UK and Ireland Renewables Tax Practice, led on market leading transactions such as structuring for the initial public offerings of several environmental yieldcos, and developed latterly the EY global renewables business plan. She was a member of the Ernst & Young Power and Utilities Board and UK&I Governance Board.

OUR BOARD IS COLLECTIVELY PASSIONATE ABOUT BUILDING A SUSTAINABLE FUTURE AND BRING LEADERSHIP AND EXPERIENCE ACROSS THE LITHIUM, GEOTHERMAL, GERMAN CHEMICAL, RENEWABLE ENERGY AND BATTERY SUPPLY CHAIN INDUSTRIES.

DR GÜNTER HILKEN

NON-EXECUTIVE DIRECTOR

PhD in Organic Chemistry, Master's Degree in Chemistry

Dr Hilken has over 35 years' experience in and a deep understanding of the German chemicals, renewables and infrastructure investment sectors and, through leading industry advocacy associations, the German Government at the state and federal level. Dr Hilken's experience and connections will help Vulcan ensure that geothermal energy becomes a foundation of Germany's supply of sustainable and secure renewable energy as Germany diversifies away from local carbon-based energy sources and Russian energy. Dr Hilken is also a Senior Advisor to Macquarie Asset Management, a Director of Currenta, a member of the Executive Board of the German Federation of Industrial Energy Consumers (VIK) as well as a Member of the Supervisory Board of Currenta. He was previously CEO of Currenta for nine years, held senior executive roles with Bayer in Germany, the US, Canada and Asia and was a Director of RWE Power AG.

MR MARK SKELTON

NON-EXECUTIVE DIRECTOR

Chartered Engineer (Institution Mechanical Engineers, UK) , BSc (Hons), Mechanical Engineering

Mr Skelton has more than 35 years' experience including a 29-year tenure at BP and then at Fortescue Metals Group in multiple Project Director and senior management roles. A senior leader and advisor with a proven record in delivering major projects, business transformation and developing organisational capability within the mining, energy and oil and gas industries, Mr Skelton has extensive project experience in Australia and internationally. Mr Skelton holds a Bachelor of Science (Honours), Mechanical Engineering from the University of Greenwich and is a Chartered Engineer registered by the Institute of Mechanical Engineers (UK). Currently a director of a private consulting company, Mr Skelton has been involved in delivering and providing strategic advice on Definitive Feasibility Study (DFS) and development stages of large-scale projects, including mineral resources, renewable energy and LHM plants in Western Australia. With a focus on excellence in project development and delivery, Mr Skelton has assisted with the execution of projects from feasibility phase to full sanction, including assisting with the award of major contracts.

BOARD SKILLS MATRIX

Vulcan's management of risk begins with our independently appointed Board who have been carefully selected to ensure relevant and diverse expertise.

The composition of the Board is to be reviewed regularly against the Company's Board skills matrix, which is prepared and maintained by the nominations committee, or, in its absence, the Board, to ensure the appropriate mix of skills and expertise is present to facilitate successful strategic direction and to manage and leverage new and emerging business and governance issues.

The following table sets out the composition of skills and experience of Vulcan's Board of Directors.

Experience	Knowledge and skills
Corporate leadership Successful experience in CEO and/or other senior corporate leadership roles.	**Strategic expertise** Experience setting and reviewing strategy and/or business development.
International experience Senior experience in multiple international locations.	**Marketing & communications** Media, stakeholder communication, investor relations, public relations.
Resources or technology industry experience Relevant industry (resources, energy, power ,mining, exploration, processing) experience.	**Risk and compliance** Risk management and mitigation experience.
Other Board level experience Membership of other listed entities (last 3 years).	**Capital markets** Capital raising, mergers and acquisitions.
Capital projects Major resources capital project development and management.	**Environmental** Proven experience with climate change policy, sustainability, carbon reduction.
	Social Positive human resource management.
	Governance Relevant exposure to controlling and operating organisational procedures and processes.

SPECIAL ADVISORS TO THE BOARD

MS JULIA POLISCANOVA

Julia is a senior director with the EU's Transport and Environment. She is instrumental in shaping policies around EU vehicle CO_2 standards and sustainable batteries. Julia previously worked for the Mayor of London as a senior EU policy officer. Julia is also on the steering committee for the Battery CO_2 Passport program of the Global Battery Alliance.

DR HORST KREUTER

Dr Horst Kreuter is a highly experienced businessman and engineering geologist, with an extensive and distinguished record of project development and consulting in the geothermal sector.

COMPANY SECRETARY

MR DANIEL TYDDE

Daniel is an experienced corporate lawyer with over 15 years' experience across a wide range of corporate, commercial and finance areas including corporate regulatory compliance; corporate governance; equity and debt capital raisings; asset and share sales and purchases; initial public offerings; corporate restructuring and re-organisations; and litigation. Most recently, Daniel held a senior position at Steinepreis Paganin and, prior to that, worked at Clayton Utz and Phillips Fox (now DLA Piper). Daniel holds a Bachelor of Laws and a Bachelor of Commerce from the University of Notre Dame Australia.

DIRECTORS' MEETINGS

The number of Directors' meetings held during the six months and the number of meetings attended by each Director during the time the Director held office are:

	Full Board			Audit, Risk and ESG			People and Performance Committee			Projects Oversight Committee		
	Attended	Eligible to attend	Held	Attended	Eligible to attend	Held	Attended	Eligible to attend	Held	Attended	Eligible to attend	Held
Gavin Rezos (Chair)	3	3	3	3	3	3	2	2	2	0	0	2
Dr Francis Wedin (Managing Director)	3	3	3	3	3	3	2	2	2	2	2	2
Ranya Alkadamani	3	3	3	0	0	3	2	2	2	0	0	2
Annie Liu	3	3	3	0	0	3	2	2	2	0	0	2
Dr Heidi Grön	2	3	3	3	3	3	0	0	2	2	2	2
Josephine Bush	3	3	3	3	3	3	0	0	2	0	0	2
Dr Günter Hilken	3	3	3	0	0	3	0	0	2	2	2	2
Mark Skelton	3	3	3	0	0	3	0	0	2	2	2	2

In addition to the scheduled Board meetings, Directors regularly communicate by telephone, email or other electronic means, and where necessary, circular resolutions are executed to effect decisions. For details of the function of the Board, refer to the Corporate Governance Statement.

CORPORATE FINANCIAL PERFORMANCE

The financial results of the Group for the six months ended 31 December 2022 and the financial year ended 30 June 2022 are:

	31 December 2022	30 June 2022
Cash and cash equivalents (€'000)	134,107	175,416
Net Assets (€'000)	233,161	247,323
Revenue from continuing operations (€'000)	3,622	3,799
Net loss after tax (€'000)	13,450	18,851
Loss per share (Euro per share)	(0.09)	(0.15)

DIVIDENDS

No dividend is recommended in respect of the current financial period.

SIGNIFICANT CHANGES IN THE STATE OF AFFAIRS

Highest grade lowest impurity LiOH produced to date

Vulcan produced the first battery quality lithium hydroxide monohydrate (LHM) from piloting operations. The plant sample exceeded traditional battery grade at 57.1% LiOH, easily exceeding the best-on-the-market battery grade specification of 56.5% LiOH required from offtake customers. Impurities were well below market specification minimums. The lithium chloride extracted by the sorbent in the pilot plant was recovered with water and sent off site, where it was purified and concentrated by third-party providers to prepare the lithium chloride for electrolysis to produce lithium hydroxide solution. The solution was then crystalised to produce battery grade lithium hydroxide monohydrate (LHM).

Environmental approvals

Vulcan received a positive result for its second preliminary EIA application (UVP-V) in its Taro licence, in the 'Taro Golf' project area, to drill wells for geothermal energy and lithium. This is the second positive environmental approval the Company has received, following the EIA for geothermal-lithium drilling in Taro in July 2022, in the 'Taro North' district. At the time of writing, Vulcan had also received a third preliminary EIA approval, in its Insheim licence, the other part of the Phase 1 development area.

3D seismic surveys commenced and completed

The Company has received strong support to carry out a 3D seismic survey from eight local councils in the German state of Rhineland-Palatinate. Vulcan mobilised 3D seismic survey teams around its Insheim licence area from which it is currently producing renewable energy on a commercial scale, towards an expanded geothermal and lithium project development. This survey, along with a survey in the Mannheim licence that represents a future phase of development, has been successfully completed.

Development of VULSORB™

Vulcan successfully developed, tested, and demonstrated its own in-house lithium extraction sorbent, VULSORB™, for sustainable lithium extraction from the Upper Rhine Valley Brine Field and Vulcan's Zero Carbon Lithium™ Project. This is part of Vulcan's onshoring of its supply chain to the European market. The technology also represents potentially significant future value for Vulcan, as it can potentially be used in other project areas.

Lithium extraction pilot and demonstration plants

Having tested its process in its pilot plants for two years, to provide engineering information for the DFS, a key element of Vulcan's strategy to train its operational team in a pre-commercial environment is the design, construction and operation of demonstration plants. Vulcan's demonstration plant consists of two parts: the Sorption-Demo Plant and the lithium hydroxide production plant (CLP-Demo Plant) and will replicate the full process from sorption-DLS to lithium hydroxide production including recycle streams. Importantly, technical and operations personnel will train in the plant to develop a comprehensive understanding of the process and its operation prior to the construction of the first commercial plant.

During the period, Vulcan received approval from the state authority in Rhineland-Pfalz, Germany, for the Operating Plan for Vulcan's lithium extraction Demo Plant.

Commencement of French strategic expansion

In November 2022, Vulcan Group started initiatives to expand its exploration licence areas into the Alsace Region of France, a natural extension of the Upper Rhine Valley geothermal-lithium brine field. For this purpose, Vulcan Group founded the French entity, Vulcan Energie France SAS (VEF). In late 2022, VEF applied for its first lithium exploration licence in the region, 'Les Cigognes'. A decision on the application is expected in 2023[9].

Appointment of Cris Moreno as Deputy Chief Executive Officer

Mr Moreno is an energy and chemicals industry executive with over 20 years' experience in successfully delivering major capital projects, including in the lithium chemicals, cathode and LNG sectors. In the LNG sector, Mr Moreno was successful in leadership roles at Santos, Woodside and Shell, including working on the Browse, Gorgon and Prelude LNG projects, with experience mainly in the execution phase and financially responsible for budgets well over USD 1 billion, leading teams of up to 1,000 personnel. Just prior to joining Vulcan, Mr Moreno was working in the lithium chemicals and battery cathode sector in Europe, as Senior Director Programs for Northvolt – Cathode Active Material (CAM) Business Unit, and Vice President - Engineering and Development for Aurora Lithium, Northvolt's lithium hydroxide refinery joint venture with Galp in Europe.

MATTERS SUBSEQUENT TO THE REPORTING PERIOD

VULCAN ZERO CARBON LITHIUM™ PROJECT PHASE ONE DFS RESULTS

On 13 February 2023, Vulcan announced the results of its DFS for Phase One of Vulcan's Zero Carbon Lithium™ Project[10]. More than 13,000 hrs of data have been gathered and analysed from Vulcan's lithium extraction pilot plant (PP1) operation, using brine from our commercial geothermal wells in the core of our Phase One area since April 2021. We have also been able to incorporate VULSORB™, Vulcan's newly developed high-performing in-house sorbent, into our DFS, as well as data from our newer, higher pressure lithium extraction pilot plant (P1A). The combined study has shown compelling financial results and world-leading environmental metrics.

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[9] https://www.investi.com.au/api/announcements/vul/6420a193-fb5.pdf https://www.investi.com.au/api/announcements/vul/6420a193-fb5.pdf 02/11/2022

[10] Vulcan Zero Carbon Lithium™ Project Phase One DFS results and Resources-Reserves update https://www.investi.com.au/api/announcements/vul/e617fca6-6d4.pdf 13/02/2023

Compelling financials

- 24ktpa lithium hydroxide monohydrate (LHM) p.a. production from EU, for EU.
- >300GWh/a renewable power, >250GWh/a renewable heat production p.a.
- >250% increase in NPV_8 compared to PFS: €3.9Bn pre-tax, €2.6Bn post-tax.
- Increased 34% IRR pre-tax, 26% IRR post-tax.
- >€700Mpa revenues. EBITDA margin of 84%.
- €1,496M CAPEX. This increase from the PDF is broadly similar to larger projects and reflects our increase in project size and inflation.
- A very low OPEX of €4,359/t LHM.
- 3.5-year payback (integrated Project). Target start of production end-2025.

A larger, sustainable project with a long-term pipeline.

- Vulcan has forecasted a 60% increase in Phase One production target to 24ktpa LHM per annum. Our increase in CAPEX mostly relates to developing a larger project and global inflation.
- The Upper Rhine Valley Brine Field (URVBF) lithium Resource increases to 26.6Mt LCE, the largest lithium Resource in the EU.
- There has been an increase in overall Phase One Proven and Probable Reserves to 0.54Mt LCE, centred around current production wells in the core of the URVBF field.
- Vulcan's Phase Two DFS is to follow, targeting an additional further modular 24ktpa production, as per the 2021 PFS study, updated for new engineering data from the Phase One DFS.

World-leading target environmental metrics.

- Net zero project Scope 1, 2 and 3 Greenhouse Gas Emissions per tonne LHM carbon footprint: a world-first in the lithium industry.
- Zero Scope 1 fossil fuels consumption in the lithium production process.
- Vulcan aims to be a net producer of renewable energy from Phase One.
- Low water consumption due to recycling: only 1.36 tonnes of water consumption per tonne of LHM, net of products: the lowest compared to current global production.

Vulcan is targeting start of production by the end-2025 and ramp up after that. The Project will be delivered under a single integrated projects group, providing a consistent approach to delivery and overall accountability. Phase One of the Project is now moving into bridging engineering with Hatch Ltd. Vulcan will continue to deliver according to its contract strategy and delivery model and seek early engagement of key technology and equipment suppliers.

For full details on Vulcan's Phase One DFS please refer to https://v-er.eu/.

GREEN ESG RISK RATING REPORT

Sustainalytics, a Morningstar Company that is a leading independent ESG and corporate governance research, ratings, and analytics firm, delivered Vulcan's first publicly available ESG Risk report in January 2023. It gave Vulcan an overall low ESG Risk Score of 16.8, which puts Vulcan in the top second percentile of all chemicals companies, and first among peers of equal market capital size, as assessed by Sustainalytics.

Key indicators that supported Vulcan's low ESG risk rating were:

- The quality and integrity of the Board and management teams due to relevant industry experience and strong governance policies in place.
- Strong stakeholder governance with board responsibility defined and clear, publicly accessible whistleblower programmes.
- Having executive compensation explicitly linked to the attainment of ESG targets.

Noting that Vulcan is currently a geothermal energy provider and will scale up to commercial lithium production, material ESG topics that will continue to be most notable to the Company are:

- Human capital and the recruitment and retention of highly skilled employees.
- Emissions, effluents, and waste due to the commercial production of energy, heat, and lithium.
- Business ethics as mandatory reporting and regulation increase.

The strong ESG governance that is currently in place demonstrates Vulcan's industry leading ESG management and performance and sets the Company up to continue delivering strong ESG credentials as it moves into being a project execution and operations company.

VULCAN AND STELLANTIS ENTER PHASED PROJECT AGREEMENT

On 17 January 2023, Vulcan and Stellantis announced they have entered into a phased project agreement, aimed at developing, building, and operating geothermal renewable energy assets to help decarbonise the Company's energy supply in Rüsselsheim, by providing renewable heat. Stellantis aims to be the auto industry champion in climate change mitigation, becoming carbon net zero by 2038, with a 50% reduction by 2030. This requires Stellantis to decarbonise and localise its energy supply across its manufacturing facilities. In the northern area of the Upper Rhine Valley in Rüsselsheim am Main, Stellantis maintains a large manufacturing facility in which the DS4 and Opel Astra models are produced, including the electrified variants. This facility in the German state of Hesse is also the traditional home of the Opel brand and the German headquarters of Stellantis. The planned Project will be at the northernmost extent of Vulcan's focus area in the Upper Rhine Valley. 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.

COMEBACK PERSONALDIENSTLEISTUNGEN GMBH

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.

LIKELY DEVELOPMENTS AND EXPECTED RESULTS

Over the next 12 months, the Group plans to complete construction and start operation of its Lithium Extraction Demo Plant and CLP Demo Plant, commence development drilling operations to expand existing brine production, carry out fundraising efforts to fund the capital expenditure for Phase One of the Project, and to commence ordering long lead items for commercial plant and equipment.

DIVERSITY

During the financial period, the Company had four female Directors and four male Directors. At 31 December 2022 the female representation on the Board was 50%, senior executives 25% and across the entire workforce was 34%.

INDEMNIFICATION AND INSURANCE OF OFFICERS AND AUDITORS

The Company has indemnified the Directors and Executives of the Company for costs incurred, in their capacity as a Director or Executive, for which they may be held personally liable, except where there is a lack of good faith.

During the six months, the Company paid a premium in respect of a contract to insure the Directors and Executives of the Company against a liability to the extent permitted by the Corporations Act 2001. The contract of insurance prohibits disclosure of the nature of the liability and the amount of the premium. The Company has not, during or since the end of the financial period, indemnified or agreed to indemnify the auditor of the Company or any related entity against a liability incurred by the auditor.

During the six months, the Company has not paid a premium in respect of a contract to insure the auditor of the Company or any related entity.

ENVIRONMENTAL REGULATIONS

The Directors have considered compliance with the National Greenhouse and Energy Reporting Act 2007 which requires entities to report annual greenhouse gas emissions and energy use. The Australian operations of the Company have been certified as carbon neutral under the Australian Climate Active initiative since 2020, the German operations, including VEE and VES have been certified carbon neutral under the South Pole label for 2021.

PROCEEDINGS ON BEHALF OF THE COMPANY

No person has applied to the Court under section 237 of the Corporations Act 2001 for leave to bring proceedings on behalf of the Company, or to intervene in any proceedings to which the Company is a party, for the purposes of taking responsibility on behalf of the Company for all or part of these proceedings.

OFFICERS OF THE COMPANY WHO ARE FORMER PARTNERS OF RSM AUSTRALIA PARTNERS

There are no officers of the Company who are former partners of RSM Australia Partners.

REMUNERATION REPORT

This Remuneration report for the six-month period 1 July to 31 December 2022 outlines the remuneration arrangements of the Group in accordance with the requirements of the Corporations Act 2001 (the Act) and its regulations. This information has been prepared in accordance with section 300A and audited as required by section 308(3C) of the Act.

The Remuneration Report is presented under the following sections:

1. Introduction
2. Remuneration Summary
3. Remuneration governance
4. Executive remuneration arrangements
5. Executive KMP remuneration outcomes
6. Looking forward to FY23
7. Executive KMP Contracts
8. Non-Executive Director remuneration arrangements
9. Additional disclosures relating to rights and shares
10. Other transactions and balances with key management personnel and their related parties

1. INTRODUCTION

The Remuneration Report details the remuneration arrangements for Key Management Personnel (KMP) who are defined as those persons having authority and responsibility for planning, directing, and controlling the major activities of the Company, directly or indirectly, including any director (whether executive or otherwise) of the Company.

Each KMP was appointed for the entire period 1 July to 31 December 2022, unless otherwise stated. For the purposes of this report, the term "Executive" includes the Managing Director and other Executive KMP of the Group.

(i) Non-Executive directors (NEDs)

Mr Gavin Rezos	Non-Executive Chair
Ms Ranya Alkadamani	Non-Executive Director
Dr Heidi Grön	Non-Executive Director
Ms Annie Liu	Non-Executive Director
Ms Josephine Bush	Non-Executive Director
Dr Günter Hilken	Non-Executive Director
Mr Mark Skelton	Non-Executive Director

(ii) Executive (Executive KMP)

Dr Francis Wedin	Managing Director
Dr Horst Kreuter	Executive Director (Germany) – (ceased 31 October 2022)
Mr Robert Ierace	Executive
Mr Vincent Ledoux Pedailles	Executive
Mr Cris Moreno	Deputy Chief Executive Officer – (appointed 1 November 2022)

With the appointment of Mr Cris Moreno as Deputy Chief Executive Officer (Deputy CEO) overseeing the daily operations of Vulcan's Zero Carbon Lithium™ Project in Germany, effective 1 November 2022, Dr Horst Kreuter's role is not considered to represent key management personnel from this date. There were no other changes to the KMP after the reporting date and before the date the financial report was authorised for issue.

2. REMUNERATION SUMMARY

As outlined in the Remuneration Report for the year ending 30 June 2022, an independent review of the executive remuneration framework was completed by external advisors, BDO, in the prior financial year. The People and Performance Committee (PPC), in conjunction with the Board, adopted these recommendations, which were detailed extensively in the 2022 Annual Report. The independent external review comprised a comprehensive assessment of Fixed Remuneration and the current STI and LTI Framework which included market benchmarking. The Board considered all aspects of remuneration to ensure alignment with the business requirements, relevant market practice and key stakeholder expectations including the ability to attract and retain global talent within a tight market. Following the review undertaken in the prior year, the following table provides the key remuneration highlights for the six-month period from 1 July 2022 to 31 December 2022:

FIXED REMUNERATION	Alignment of executive KMP to comparator group	Following an executive remuneration review whereby executive KMP were found to be remunerated considerably below the relevant comparator group, and considering individual performance, role complexity and internal parity, the following increases to executive KMP were adopted by the Board, effective 1 July 2022: ▶ MD's Total Fixed Remuneration (TFR) increased by 25% from A$512,600 (€337,752) to A$638,000 (€422,067), inclusive of superannuation. ▶ Other executive KMP received an average annual TFR increase of 19%.
ANNUAL DEFERRED INCENTIVE (ADI)	Annual Deferred Incentive (ADI) award introduced for executive KMP	Annual discretionary cash awards have been replaced with an annual award of Performance Rights (Rights) to executive KMP. Performance measures which have been aligned to evolving business imperatives and are assessed at the end of June 2023, plus an additional year of service to enhance executive retention and encourage greater equity ownership aligned with shareholder interests and performance assurance. No ADI outcomes between 1 July 2022 and 31 December 2022. Please refer to sections 4 and 5 for further detail.

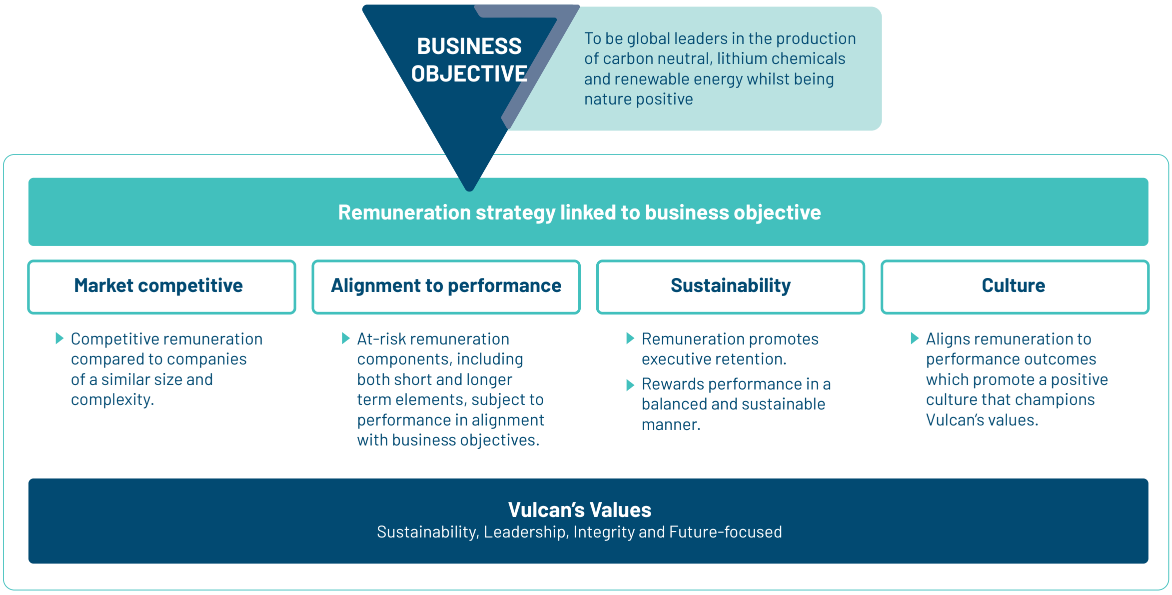
REMUNERATION SUMMARY (CONT'D)

LONG TERM INCENTIVE (LTI)	Performance Rights Issued to executive KMP	LTI vesting has been extended from 1-2 years to 4 years in line with evolving business operations. LTI performance measures include business, sustainability and shareholder return measures. No LTI vesting occurred between 1 July 2022 and 31 December 2022. Please refer to sections 4 and 5 for further detail.
NED REMUNERATION	Total aggregate remuneration pool increased to $950,000 (€628,470)	Shareholders approved, with 98.94% in favour, an increase in the total aggregate amount of fees payable to NEDs from $650,000 (€430,006) to $950,000 (€628,470) to allow for the potential appointment of additional directors and to be able to match future director fees with the size of operations and business complexity of the Company under current growth plans. The current fees for Non-Executive Directors (excluding the Chairman) include service based performance rights to the value of $35,000 (€23,154) per annum. Service based rights are granted to preserve cash while the Company is in the development stage.

3. REMUNERATION GOVERNANCE

Remuneration decision making

The following diagram represents the Group's remuneration decision making framework:



The People and Performance Committee (PPC) comprises three NEDs, of which two are independent, and meets regularly through the year. The Managing Director attends certain Committee meetings by invitation, where management input is required. The Managing Director is not involved in the final decision related to their own remuneration arrangements. Further information on the Committee's role, responsibilities and membership can be found on the Company's website at https://v-er.eu/.

Use of independent remuneration consultants

To ensure the Committee is fully informed when making remuneration decisions, it seeks external remuneration advice where required. Independent remuneration consultants are engaged by, and report directly to, the Committee. In selecting remuneration consultants, the Committee considers potential conflicts of interest and requires independence from the Company's KMP and other executives as part of their terms of engagement.

During the six-month period to 31 December 2022, the Committee did not engage a remuneration consultant. During the prior financial year, the Company engaged BDO Remuneration and Reward Pty Ltd to review its remuneration policies in respect to external market practice and provide recommendations on target executive remuneration structures. Please refer to the 2022 Annual Report for further details.

Remuneration report approval at 2022 AGM

The Remuneration Report for the year ending 30 June 2022 received positive shareholder support at the 2022 AGM with a vote of 98.98% in favour.

4. EXECUTIVE REMUNERATION ARRANGEMENTS

4A: Remuneration principles and strategy

Vulcan's executive remuneration strategy is designed to attract, retain and motivate the best people to create a positive culture that delivers the Company's business strategy and contributes to sustainable long-term returns.

The following diagram illustrates how the Company's remuneration strategy aligns with the strategic direction and links remuneration outcomes to performance.

Remuneration Component	Vehicle	Purpose	Link to performance
Fixed Remuneration	Base salary and statutory superannuation or equivalent	Attract and retain executives with the capability and experience to deliver Vulcan's strategy, based upon the competitive landscape among relevant peers.	Appropriately compensate Executives for driving a positive culture and delivering on the business strategy.
ADI	Performance Rights (ADI)	Reward for performance against KPIs aligned to annual business objectives, including ESG-linked objectives.	Strategic annual objectives are embedded in each Executive's personalised scorecard of performance measures.
LTI	Performance Rights (LTI)	Align long-term performance focus to drive shareholder returns. Encourage sustainable, long- term value creation through equity ownership.	Vesting subject to achievement of defined business and sustainability milestones and TSR over a four-year period.

4B: Approach to setting remuneration and details of incentive plans

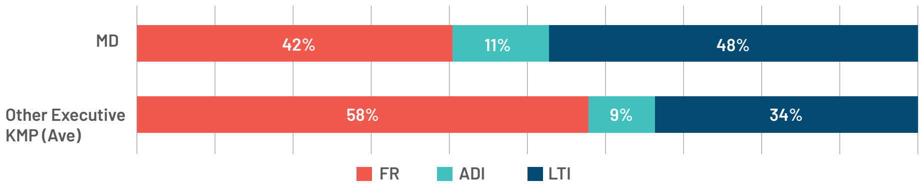
The executive remuneration framework consists of fixed remuneration and short and long- term incentives. The following diagrams set out the executive remuneration structure.

	Fixed Remuneration	ADI	LTI
		Unvested Rights subjects to forfeitures	
Year 1	Base Salary, Superannuation and Other benefits.	Annual award of Performance Rights under the ADI plan which vest subject to achievement of annual objectives plus an additional year of service.	Performance Rights which vest 100% after four years subject to the achievement of performance hurdles.
Year 2			
Year 4			

EXECUTIVE REMUNERATION ARRANGEMENTS (CONT'D)

Each component of the remuneration structure is further outlined below.

Overall remuneration level and mix	
How is overall remuneration and mix determined?	The overall remuneration mix reflects an appropriate balance of fixed and variable remuneration given the Company's size and business operations. The chart below summarises the Managing Director's and other Executive KMP's remuneration mix based on maximum ADI and LTI award opportunity.



Fixed remuneration and other benefits	
How are fixed remuneration and other benefits reviewed and approved?	Fixed remuneration and other benefits are reviewed annually from benchmarked remuneration data. Fixed remuneration changes for executives are subject to approval from the Board after considering recommendations from the Committee.

EXECUTIVE REMUNERATION ARRANGEMENTS (CONT'D)

Annual Deferred Incentive (ADI)	
What is the ADI plan?	The Company operates an Annual Deferred Incentive (ADI) program which is an award of Performance Rights which vest annually on achievement of defined performance measures, plus an additional year of service to enhance executive retention.
Opportunity	Managing Director: 25% of fixed remuneration. Other Executive KMP: 15-25% of fixed remuneration.
What are the performance criteria and how do they align with business performance?	Executive KMP are measured against the following performance criteria: 1. **Overarching company business plan and project milestones (30%):** KPIs cascaded from the business plan aligned to strategic imperatives. 2. **Individual Objectives (30%):** KPIs are individualised and linked to respective areas of responsibility to ensure accountability. 3. **Shared Objectives toward operational reputation (40%):** Drive sustainable business practices including social objectives, staff retention and satisfaction targets, zero carbon certification and a top tier ESG rating from a third-party provider. For further details, refer to Note 32.
How is ADI vesting determined?	On an annual basis, after consideration of actual performance against KPIs, the Board in line with their responsibilities, determine the portion of Rights (if any) to vest for each executive, seeking recommendations from the Committee and/or Managing Director as appropriate. Executive KMP must complete a year of service in addition to the performance period, for Rights to vest. For further details, refer to Note 32.
What happens if an executive leaves?	Where a participant ceases employment prior to their award vesting due to resignation or termination for cause, awards will be forfeited subject to Board discretion. Where a participant ceases employment due to a qualifying reason (death, total and permanent disability, retirement or redundancy), then vesting will be determined based on the amount of performance period remaining and subject to Board discretion.
Are executives eligible for dividends?	Executives are not eligible to receive dividends on unvested Rights.

EXECUTIVE REMUNERATION ARRANGEMENTS (CONT'D)

Long Term Incentive (LTI)	
What is the LTI plan?	Under the LTI plan, an annual grant of Rights is made to executives to align remuneration with creation of shareholder value over the long-term.
Opportunity	Managing Director: 110% Other Executive KMP: 70-90%
How is performance measured?	LTI Vesting is subject to the following performance criteria measured over the four-year vesting period:

1. **Business returns (55%):**
   - Based on successful ramp up to nameplate capacity for Phase One energy and lithium chemicals production, and achievement of corresponding revenue.
   - Achievement of obtaining a positive definitive feasibility study for Phase Two energy and lithium chemicals production, and achievement of corresponding revenue.
   - Achievement of obtaining project financing for completion of Phase Two capital expenditure.

2. **Sustainability returns (15%):** based on the Company achieving net zero carbon certification across all operations through each year in the four-year period and remaining in the lowest quartile for absolute GHG emissions (Scope 1, 2, 3).

3. **Total Shareholder returns (TSR) (30%):**

a. Absolute TSR (10%):

aTSR CAGR	% to Vest
Less than 7.5%	0%
Between 7.5% and 10%	50%
Between 10% and 12.5%	75%
Greater than 12.5%	100%

b. Relative TSR (20%)

rTSR Performance	% to Vest
Less than 50th percentile	0%
Between 50th percentile and 75th percentile	50%
Greater than 75th percentile	100%

For further details, refer to Note 32.

EXECUTIVE REMUNERATION ARRANGEMENTS (CONT'D)

Long Term Incentive (LTI) (cont'd)	
Which companies do Vulcan measure their TSR against?	For LTI grants made for the period commencing 1 July 2022 the customised peer group comprises the following companies: Syrah Resource, Chalice Mining, Lynas Rare Earth, 29 Metals, Novonix, AVZ Limited, Liontown, Sayona, Lake Resources, Core Lithium, Plibara Minerals, Ioneer, Piedmont Lithium, Galan Lithium, Leo Lithium.
When is performance measured?	The performance measures are tested at the end of the four-year performance period to determine the number of Rights that vest. There is no opportunity for re-testing. Rights will lapse if the performance measures are not met at the end of the performance period.
What happens if an executive leaves?	Where a participant ceases employment prior to their award vesting due to resignation or termination for cause, awards will be forfeited subject to Board discretion. Where a participant ceases employment due to a qualifying reason (death, total and permanent disability, retirement or redundancy), then vesting will be determined based on the amount of performance period remaining and subject to Board discretion.
What happens if there is a change of control?	In these circumstances, vesting is determined at the discretion of the Board.
Are executives eligible for dividends?	Executives are not eligible to receive dividends on unvested Rights.

5. EXECUTIVE KMP REMUNERATION OUTCOMES

Company performance

A summary of Company performance as measured by its earnings per share and share price for the five periods / years since incorporation to 31 December 2022, including disclosure required by the *Corporations Act 2001*, is outlined in the table below.

Measure	6 months ended 31 Dec 2022	30 June 2022	30 June 2021	30 June 2020	30 June 2019
Revenue from continuing operations (€'000)	3,622	3,799	-	-	-
Net Loss After Tax (NPAT) (€'000)	13,450	18,851	6,726	2,156	525
Loss per share (Euro cents)	9.52	15.12	7.71	4.47	1.66
Closing Vulcan security price ($)	6.33	5.42	7.70	0.57	0.18

ADI Outcomes

There were no ADI outcomes over the period 1 July 2022 to 31 December 2022. The ADI outcomes will be determined for the period ending 30 June 2023.

LTI Vesting

There was no LTI vesting over the period 1 July 2022 to 31 December 2022.

EXECUTIVE KMP REMUNERATION OUTCOMES (CONT'D)

Statutory Executive KMP remuneration

The following table sets out total remuneration for Executive KMP for the six-month period 1 July 2022 to 31 December 2022 (Dec22) and for the 12-month period 1 July 2021 to 30 June 2022 (Jun22), calculated in accordance with statutory accounting requirements and presented in Euro (€).

		Short-term benefits (€)			Post-employment Benefits (€)			
	Period	Cash Salary	Bonus[1]	Non-monetary[2]	Superannuation	Share-based payments (€)[3]	Total (€)	% Performance related
Executive KMP								
Dr Francis Wedin	Dec22	190,980	-	-	20,053	57,224	268,258	21%
	Jun22	259,323	115,438	-	25,932	-	400,693	29%
Dr Horst Kreuter[4]	Dec22	121,000	-	2,832	-	125,276	249,108	50%
	Jun22	187,500	9,741	8,496	-	710,488	916,225	78%
Mr Robert Ierace	Dec22	88,007	-	-	9,241	18,515	115,763	16%
	Jun22	143,721	9,580	-	14,372	25,361	193,034	18%
Mr Vincent Ledoux Pedailles	Dec22	135,000	-	-	-	(74,386)	60,614	(123)%
	Jun22	183,640	22,782	-	-	171,183	377,605	51%
Mr Cristobal Moreno	Dec22	44,103	-	-	4,631	8,942	57,676	16%
	Jun22	-	-	-	-	-	-	-
Totals	Dec22	579,090	-	2,832	33,925	135,571	751,418	
	Jun22	774,184	157,541	8,496	40,304	907,032	1,887,557	

[1] The FY22 STI was paid in cash in August 2022, after the end of the performance period.
[2] Dr Kreuter is provided a company car.
[3] Share-based payments are calculated in accordance with Australian Accounting Standards and are the amortised fair value of equity-related awards that have been granted to Executives. Refer to Note 32 for further details.
[4] Dr Kreuter ceased to be an Executive on 31 October 2022.

EXECUTIVE KMP REMUNERATION OUTCOMES (CONT'D)

The proportion of remuneration linked to performance and the fixed proportion are as follows:

	Fixed remuneration		At risk – ADI/STI[1]		At risk - LTI	
	31-Dec-22	30-Jun-22	31-Dec-22	30-Jun-22	31-Dec-22	30-Jun-22
EXECUTIVE KMP						
Dr Francis Wedin	79%	71%	7%	29%	15%	-
Dr Horst Kreuter	50%	21%	2%	1%	48%	78%
Mr Robert Ierace	84%	82%	6%	5%	10%	13%
Mr Vincent Ledoux Pedailles	223%	49%	11%	6%	-134%	45%
Mr Cristobal Moreno	84%	-	5%	-	11%	-

[1] ADI refers to ADI rights issued during the period ending 31 December 2022. STI refers to cash bonus issued in the year ending 30 June 2022.

6. LOOKING FORWARD TO FY23 (1 JANUARY TO 31 DECEMBER 2023)

The PPC in conjunction with the Board is confident that the changes made to the executive remuneration framework which have been detailed in this Report and effected from 1 July 2022 are aligned to Vulcan's remuneration philosophy and strategy and continue to seek a balance between rewarding and retaining our Executives and recognising the interests of shareholders.

To align performance and measurement periods with the Company's transition to a December financial year end, the following changes to incentives are planned for FY23 (1 January 2023 to 31 December 2023):

- Vesting of the FY23 ADI award (to be granted in July 2023) will be tested following an 18-month performance period to 31 December 2024, to align with the Company's transition to a December financial year end, with no additional ADI award to be made in FY24.

- Vesting of the FY23 LTI award (to be granted in July 2023) will be tested following a 3 year and 6-month period up to 31 December 2027, as part of the Company's transition to a December financial year end.

7. EXECUTIVE KMP CONTRACTS

Remuneration arrangements for Executive KMP are formalised in employment agreements. The following outlines the details of contracts with KMP:

Managing Director – Dr Francis Wedin

The Managing Director is employed under an ongoing contract which can be terminated with notice by either side.

Under the terms of the present contract:

- The Managing Director receives a base salary of $638,000 (€422,067) per annum inclusive of superannuation.
- With effect from 1 July 2022 base salary increased from $512,600 (€339,109) to $638,000 (€422,067) per annum inclusive of superannuation.
- The Managing Director is eligible to participate in Vulcan's ADI and LTI structure on terms determined by the Board, subject to receiving any required or appropriate shareholder approval.
- The Managing Director has notice periods of one month for termination with cause and three months for termination without cause or resignation.

EXECUTIVE KMP CONTRACTS (CONT'D)

Other Executive KMP

All Other Executive KMP are employed under ongoing contracts.

Deputy Chief Executive Officer - Cris Moreno

Under the terms of the present contract:

- The Deputy Chief Executive Officer receives a base salary of $442,000 (€292,404) per annum inclusive of superannuation.
- The Deputy Chief Executive Officer is eligible to participate in Vulcan's ADI and LTI structure on terms determined by the Board.
- The Deputy Chief Executive Officer has notice periods of one month for termination with cause and three months for termination without cause or resignation.

Executive Director Germany – Dr Horst Kreuter (to 31 October 2022)

Under the terms of the present contract:

- The Executive Director Germany receives a base salary of €363,000 per annum.
- With effect from 1 July 2022 base salary increased from €250,000 to €363,000 per annum.
- The Executive Director Germany is eligible to participate in Vulcan's ADI and LTI structure on terms determined by the Board.
- The Executive Director Germany has notice periods of one month for termination with cause and three months for termination without cause or resignation.
- Dr Kreuter is provided with a company car.

Chief Financial Officer – Robert Ierace

Under the terms of the present contract:

- The Chief Financial Officer receives a base salary of $294,000 (€194,496) per annum inclusive of superannuation.
- With effect from 1 July 2022 base salary increased from $262,900 (€173,920) to $294,000 (€194,496) per annum inclusive of superannuation.
- The Chief Financial Officer is eligible to participate in Vulcan's ADI and LTI structure on terms determined by the Board.
- The Chief Financial Officer has notice periods of one month for termination with cause and one month for termination without cause or resignation.

Chief Commercial Officer – Vincent Ledoux Pedailles

Under the terms of the present contract:

- The Chief Commercial Officer receives a base salary of €270,000 per annum.
- The Chief Commercial Officer is eligible to participate in Vulcan's ADI and LTI structure on terms determined by the Board.
- The Chief Commercial Officer has notice periods of one month for termination with cause and six months for termination without cause or resignation.

8. NON-EXECUTIVE DIRECTOR REMUNERATION ARRANGEMENTS

Policy

The Board seeks to set aggregate remuneration at a level that provides the Company with the ability to attract and retain directors of the highest calibre, at an acceptable cost to shareholders.

The fee structure is reviewed annually against fees paid to NEDs of comparable ASX listed companies with a similar market capitalisation to Vulcan, as well as similar sized industry comparators. The Board commissioned an independent review by BDO on NED Remuneration and considers advice from other independent external consultants when undertaking the annual review process.

The Company's constitution and the ASX listing rules specify that the NED fee pool shall be determined from time to time by a general meeting. The latest determination was at the annual general meeting (AGM) held in November 2022 when shareholders approved an aggregate fee pool of $950,000 (€628,470) per year.

Structure

The remuneration for NEDs consists of directors' fees, committee fees plus Rights. The payment of additional fees for serving on a committee recognises the additional time commitment required by NEDs to fulfil this role.

The table below summarises the current NED cash fee policy:

Board fees	
Chairman	$162,000 (€107,171)
Directors	$60,000 (€39,693)

Committee fees	
Committee Chair	$10,000 (€6,615)
Committee Members	$5,000 (€3,308)

NEDs do not receive retirement benefits.

NON-EXECUTIVE DIRECTOR REMUNERATION ARRANGEMENTS (CONT'D)

The remuneration of NEDs for the six-month period from 1 July 2022 up to 31 December 2022 and for the twelve-month period from 1 July 2021 up to 30 June 2022 is detailed below in Euro (€).

		Short-term benefits (€)	Post-employment benefits (€)		
	Period	Director Fees	Superannuation	Share Based Payments (€)	Total (€)
Non-Executive Directors					
Mr Gavin Rezos	Dec-22	56,894	-	96,651	153,545
	Jun-22	110,769	-	491,262	602,031
Ms Ranya Alkadamani	Dec-22	20,954	2,200	32,264	55,418
	Jun-22	40,982	4,098	139,074	184,154
Dr Heidi Grön	Dec-22	23,154	-	9,315	32,469
	Jun-22	42,397	-	39,226	81,623
Ms Annie Liu	Dec-22	21,500	-	9,315	30,815
	Jun-22	41,860	-	39,226	81,086
Ms Josephine Bush	Dec-22	23,154	-	9,315	32,469
	Jun-22	45,159	-	39,226	84,386
Dr Günter Hilken	Dec-22	21,500	-	3,720	25,220
	Jun-22	11,028	-	-	11,028
Mr Mark Skelton	Dec-22	20,954	2,200	3,720	26,874
	Jun-22	8,046	804		8,850
Totals	Dec-22	188,110	4,400	164,300	356,810
	Jun-22	300,241	4,902	748,014	1,053,157

NON-EXECUTIVE DIRECTOR REMUNERATION ARRANGEMENTS (CONT'D)

The proportion of remuneration linked to performance and the fixed proportion are as follows:

	Fixed remuneration		At risk – NED/STI[1]		At risk - LTI	
	31-Dec-22	30-Jun-22	31-Dec-22	30-Jun-22	31-Dec-22	30-Jun-22
Non Executive Directors						
Mr Gavin Rezos	37%	18%	-	-	63%	82%
Ms Ranya Alkadamani	42%	24%	-	-	58%	76%
Dr Heidi Grön	71%	52%	-	26%	29%	22%
Ms Annie Liu	70%	52%	-	26%	30%	22%
Ms Josephine Bush	71%	54%	-	25%	29%	21%
Dr Günter Hilken	85%	100%	8%	-	7%	-
Mr Mark Skelton	86%	100%	8%	-	6%	-

[1] NED refers to NED rights issued in the period ending 31 Dec 2022. STI refers to performance rights issued in the year ending 30 June 2022.

9. ADDITIONAL DISCLOSURES RELATING TO RIGHTS AND SHARES

Performance Rights awarded, vested and lapsed during the period

The table below discloses the number of performance rights granted to Executive KMP as remuneration during the six-month period ended 31 December 2022 as well as the number of performance rights that vested or lapsed during the period.

Performance rights do not carry any voting or dividend rights and can be exercised once the vesting conditions have been met until their expiry date.

Executive KMP

	Balance at start of period 1-Jul-22	Granted as remuneration	Performance rights exercised	Performance rights lapsed	Balance[1] at end of period 31-Dec-22	Number of performance rights vested
Executive KMP						
Dr Francis Wedin	-	142,000	-	-	142,000	-
Dr Horst Kreuter[2]	4,500,000	37,000	-	-	4,537,000	3,000,000
Mr Robert Ierace	310,909	39,000	-	-	349,909	310,909
Mr Vincent Ledoux Pedailles	580,909	41,000	(170,000)	(250,000)	201,909	160,909
Mr Cristobal Moreno	-	64,500	-	-	64,500	-
	5,391,818	**323,500**	**(170,000)**	**(250,000)**	**5,295,318**	**3,471,818**

[1] Includes Performance Rights held directly, indirectly and beneficially by Executive KMP.
[2] Performance rights were granted early in the Project when the share price was considerably lower. Vulcan was one of the fastest growing ASX stocks in the 2021 financial year. Rights were approved by shareholders at 2020 AGM.

There are no expired performance rights.

ADDITIONAL DISCLOSURES RELATING TO RIGHTS AND SHARES (CONT'D)

The table below discloses the number of performance rights granted to Non-Executive Directors as remuneration during the six-month period ended 31 December 2022 as well as the number of performance rights that vested or lapsed during the period.

Performance rights do not carry any voting or dividend rights and can be exercised once the vesting conditions have been met until their expiry date.

Non-Executive Directors

	Balance at start of period 1-Jul-22	Granted as remuneration	Performance rights exercised	Performance Rights lapsed	Balance at end of period 31-Dec-22	Number of performance rights vested
Non-Executive Directors						
Mr Gavin Rezos[1]	1,000,000	-	-	-	1,000,000	-
Ms Ranya Alkadamani[2]	100,000	-	(100,000)	-	-	-
Dr Heidi Grön[2]	12,896	-	(4,299)	-	8,597	-
Ms Annie Liu[2]	12,896	-	(4,299)	-	8,597	-
Ms Josephine[2] Bush	12,896	-	(4,299)	-	8,597	-
Dr Günter Hilken[2]	-	14,237	-	-	14,237	-
Mr Mark Skelton[2]	-	14,237	-	-	14,237	-
	1,138,688	**28,474**	**(112,897)**	**-**	**1,054,265**	**-**

[1] Performance rights were granted early in the Project when the share price was considerably lower. The Performance Rights milestone was announcement of a commercially viable DFS for the Project by September 2023. Subsequent to the end of the reporting period these rights vested as the Company announced a commercially viable DFS.

[2] These are service based performance rights which vest annually from the date of issue or shareholder approval received at a general meeting. Ms Alkadamani's rights were granted early in the Project when the share price was considerably lower. Vulcan was one of the fastest growing ASX stocks in the 2021 financial year. Ms Alkadamani's rights were approved by shareholders at November 2020 AGM.

There were no expired performance rights.

ADDITIONAL DISCLOSURES RELATING TO RIGHTS AND SHARES (CONT'D)

The terms and conditions of each grant of performance rights affecting remuneration of directors and other key management personnel in this financial period or future reporting years are as follows:

		Number of performance rights granted	Grant date	Vesting date	Expiry date	Exercise price	Fair value per performance right at grant date (€)
Non-Executive Directors							
Dr Günter Hilken	Tranche AC	4,746	29/11/2022	29/11/2023	31/12/2023	nil	4.76
	Tranche AC	4,746	29/11/2022	29/11/2024	31/12/2024	nil	4.76
	Tranche AC	4,746	29/11/2022	29/11/2025	31/12/2025	nil	4.76
Mr Mark Skelton	Tranche AC	4,746	29/11/2022	29/11/2023	31/12/2023	nil	4.76
	Tranche AC	4,746	29/11/2022	29/11/2024	31/12/2024	nil	4.76
	Tranche AC	4,746	29/11/2022	29/11/2025	31/12/2025	nil	4.76
Executive KMP							
Dr Francis Wedin	Tranche AA	26,000	29/11/2022	30/06/2024	30/06/2026	nil	4.52
	Tranche AB	81,200	29/11/2022	30/06/2026	30/06/2027	nil	4.52
	Tranche AB	11,600	29/11/2022	30/06/2026	30/06/2027	nil	3.46
	Tranche AB	23,200	29/11/2022	30/06/2026	30/06/2027	nil	3.69
Dr Horst Kreuter	Tranche AA	8,000	19/09/2022	30/06/2024	30/06/2026	nil	5.24
	Tranche AB	20,300	19/09/2022	30/06/2026	30/06/2027	nil	5.24
	Tranche AB	2,900	19/09/2022	30/06/2026	30/06/2027	nil	4.18
	Tranche AB	5,800	19/09/2022	30/06/2026	30/06/2027	nil	4.57
Mr Robert Ierace	Tranche AA	9,000	19/09/2022	30/06/2024	30/06/2026	nil	5.24
	Tranche AB	21,000	19/09/2022	30/06/2026	30/06/2027	nil	5.24
	Tranche AB	3,000	19/09/2022	30/06/2026	30/06/2027	nil	4.18
	Tranche AB	6,000	19/09/2022	30/06/2026	30/06/2027	nil	4.57
Mr Vincent Ledoux Pedailles	Tranche AA	9,000	19/09/2022	30/06/2024	30/06/2026	nil	5.24
	Tranche AB	22,400	19/09/2022	30/06/2026	30/06/2027	nil	5.24
	Tranche AB	3,200	19/09/2022	30/06/2026	30/06/2027	nil	4.18
	Tranche AB	6,400	19/09/2022	30/06/2026	30/06/2027	nil	4.57
Mr Cristobal Moreno	Tranche AA	11,000	13/12/2022	30/06/2024	30/06/2026	nil	4.30
	Tranche AB	37,450	13/12/2022	30/06/2026	30/06/2027	nil	4.30
	Tranche AB	5,350	13/12/2022	30/06/2026	30/06/2027	nil	3.24
	Tranche AB	10,700	13/12/2022	30/06/2026	30/06/2027	nil	3.50

ADDITIONAL DISCLOSURES RELATING TO RIGHTS AND SHARES (CONT'D)

Performance rights granted carry no dividend or voting rights.

All performance rights were granted over unissued fully paid ordinary shares in the company. The number of performance rights granted was determined having regard to the satisfaction of performance measures and weightings as described in note 32. Performance rights vest based on the provision of service over the vesting period or satisfaction of performance measures, whereby the executive and non executive becomes beneficially entitled to the performance rights on vesting date. There has not been any alteration to the terms or conditions of the grant since the grant date. There are no amounts paid or payable by the recipient in relation to the granting of such performance rights other than on their potential exercise.

Values of performance rights over ordinary shares granted, exercised and lapsed for directors and other key management personnel as part of compensation during the period ended 31 December 2022 are set out below:

	Value of performance rights granted during the period (€)	Value of performance rights exercised during the period (€)	Value of performance rights lapsed during the period (€)	Remuneration consisting of performance rights for the period (%)
Non Executive Directors				
Mr Gavin Rezos	-	-	-	63%
Ms Ranya Alkadamani	-	(157,448)	-	58%
Dr Heidi Grön	-	(22,183)	-	29%
Ms Annie Liu	-	(22,183)	-	30%
Ms Josephine Bush	-	(22,183)	-	29%
Dr Günter Hilken	67,746	-	-	15%
Mr Mark Skelton	67,746	-	-	14%
Executive KMP				
Dr Francis Wedin	610,288	-	-	21%
Dr Horst Kreuter	186,920	-	-	50%
Mr Robert Ierace	197,160	-	-	16%
Mr Vincent Ledoux Pedailles	207,160	(101,217)	148,848	-123%
Mr Cristobal Moreno	263,119	-	-	16%

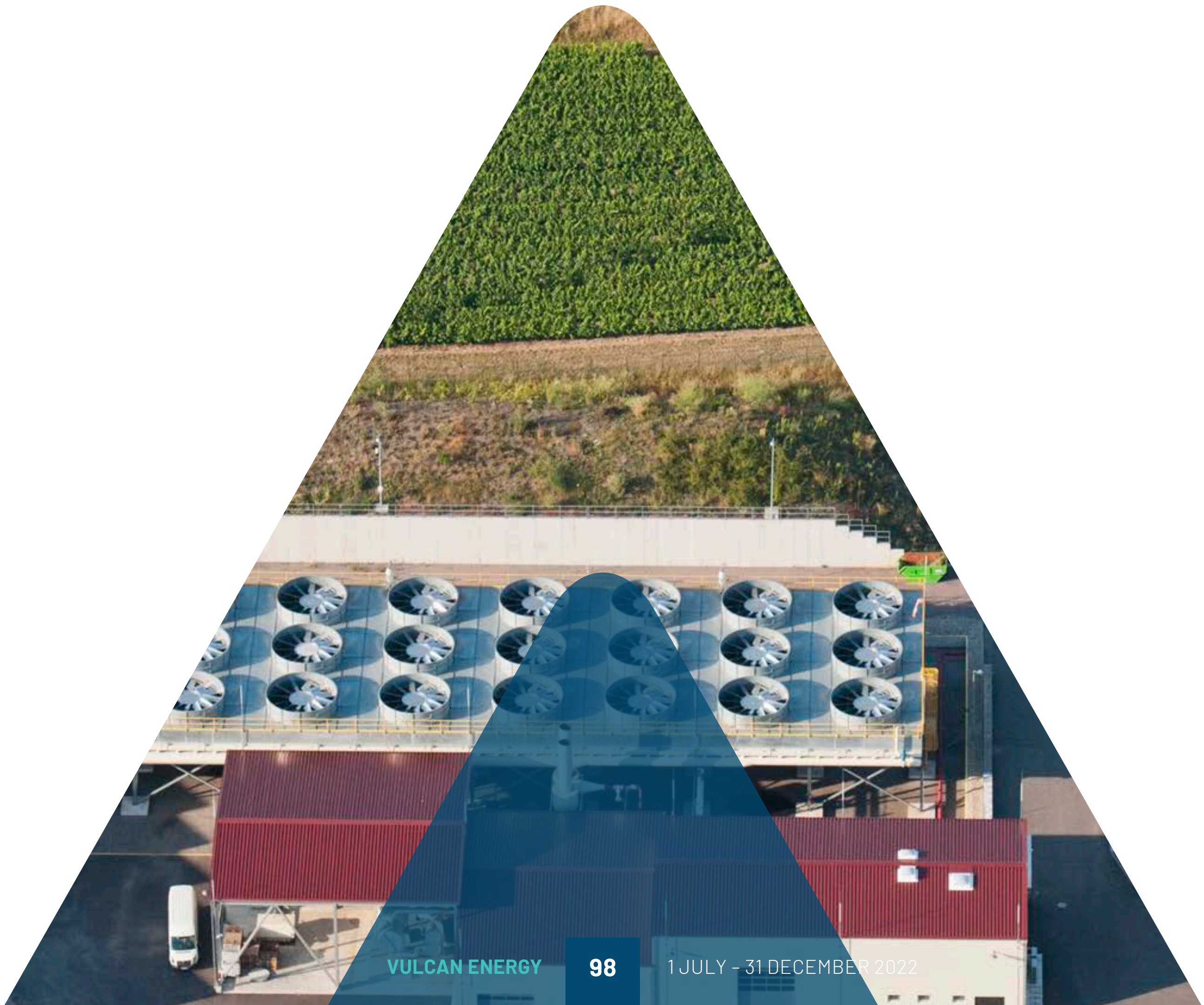
ADDITIONAL DISCLOSURES RELATING TO RIGHTS AND SHARES (CONT'D)

Vendor Deferred Consideration Performance Shares

The table below details the number of vendor performance shares held by KMP and the movement during the six-month period ended 31 December 2022. These were issued in 2021 as deferred consideration for the sale of Global Geothermal Holding UG.

	Balance at start of period 1-Jul-22	Performance Shares Granted	Performance Shares exercised	Performance Shares lapsed	Balance at end of period 31-Dec-22	Number of Performance Shares vested
Executive						
Dr Horst Kreuter	45,587	-	-	-	45,587	-
Totals	**45,587**	**-**	**-**	**-**	**45,587**	**-**

There are no expired performance shares.



ADDITIONAL DISCLOSURES RELATING TO RIGHTS AND SHARES (CONT'D)

Shareholdings

The table below details the number of shares held in Vulcan and the movement during the six-month period ended 31 December 2022.

	Class of shares	Balance at start of period 1-Jul-22	Exercise of Performance Rights	Net change Other	Balance at end of period 31-Dec-22
Non-Executive Directors					
Mr Gavin Rezos	Ordinary	7,598,727	-	-	7,598,727
Ms Ranya Alkadamani	Ordinary	176,000	100,000	-	276,000
Dr Heidi Grön	Ordinary	1,800	4,299	-	6,099
Ms Annie Liu	Ordinary	73,080	4,299	-	77,379
Ms Josephine Bush	Ordinary	9,399	4,299	-	13,698
Dr Günter Hilken	Ordinary	-	-	-	-
Mr Mark Skelton	Ordinary	900	-	-	900
Executive KMP					
Dr Francis Wedin	Ordinary	16,458,561	-	-	16,458,561
Dr Horst Kreuter	Ordinary	171,758	-	-	171,758
Mr Robert Ierace	Ordinary	-	-	-	-
Mr Vincent Ledoux Pedailles	Ordinary	-	170,000	(170,000)	-
MrCristobal Moreno	Ordinary	-	-	-	-
Totals		**24,490,225**	**282,897**	**(170,000)**	**24,603,122**

10. OTHER TRANSACTIONS AND BALANCES WITH KEY MANAGEMENT PERSONNEL AND THEIR RELATED PARTIES

During the six month period ending 31 December 2022 payments for consultancy fees of €28,089 (30 June 2022: €33,968) were made to JRB Consulting Ltd, a related party of Ms Josephine Bush, in respect of expert advice on ESG reporting. There were no amounts outstanding as at 31 December 2022 to JRB Consulting Ltd (30 June 2022: €8,709) . There was €4,954 outstanding as at 31 December 2022 (30 June 2022: €nil) to Sustineri Strategy Ltd, a related party to Ms Josephine Bush in relation to ESG consulting provided.

On the 8th of September 2022 Vulcan entered into a contract with Dr Horst Kreuter to rent a flat at the rate of €1,810 per month and €418 operating costs monthly. The contract is a short-term lease. No amount was paid from inception of the contract and until 31 October 2022. The amount of €2,715 was outstanding as at 31 October 2022 and nil was outstanding as at 31 December 2022.

During the previous financial year, the Company issued 5,698 shares and 45,587 performance shares to Dr Horst Kreuter for the security consideration for the acquisition of Global Geothermal Holding UG (GGH, a company incorporated under the laws of Germany) on 6 July 2021, following shareholder approval at an EGM held in June 2021. Dr Kreuter was a shareholder of Global Geothermal Holding UG, which held geothermal and lithium exploration licenses applied for by GGH prior to Dr Kreuter joining Vulcan, that were sold to Vulcan as part of the transaction.

The Company also completed the acquisition of GeoThermal Engineering GmbH (GeoT), a geothermal engineering consultancy business, on 2 July 2021 for €1. Dr Kreuter is the sole shareholder of GeoT. Dr Kreuter will also receive 50% of any payments received from certain debtors to GeoT, if these payments are made to GeoT within 18 months of completion of the acquisition. GeoT owes a debt of approximately €140,000 (plus a nominal amount of interest) to Dr Kreuter, 50% of which will be paid within three months of completion of the acquisition, with the remaining 50% to be paid by no later than 31 December 2021.

During the previous financial year payments for consultancy fees of €52,834 were made to Alto Group Inc., a related party of Ms Annie Liu. There was no outstanding balance as at 30 June 2022.

OTHER TRANSACTIONS AND BALANCES WITH KEY MANAGEMENT PERSONNEL AND THEIR RELATED PARTIES

LOANS TO/FROM KEY MANAGEMENT PERSONNEL AND THEIR RELATED PARTIES

There were no transactions with key management personnel and their related parties during the period ended 31 December 2022 (30 June 2022 nil).

TERMS AND CONDITIONS

All transactions were made on normal commercial terms and conditions and at market rates.

End of Remuneration Report

This concludes the remuneration report, which has been audited.

SHARES UNDER PERFORMANCE RIGHTS AND PERFORMANCE SHARES

At the date of this report there were the following unissued ordinary shares for which performance rights and performance shares are outstanding:

Performance rights	Number	Expiry Date	Exercise Price
Class G	250,000	1/12/2023	Nil
Class H	472,727	1/12/2023	Nil
Class I	910,909	1/12/2023	Nil
Class J	2,500,000	16/9/2023	Nil
Class M	1,500,000	1/12/2023	Nil
Class N	1,500,000	1/12/2023	Nil
Class S	25,791	30/6/2025	Nil
Class T	260,000	1/12/2024	Nil
Class U	250,000	1/12/2024	Nil
Class V	110,000	1/12/2024	Nil
Class W	100,000	1/12/2024	Nil
Class Y	60,000	1/12/2024	Nil
Class Z	50,000	1/12/2024	Nil
Class AA	90,700	30/6/2026	Nil
Class AB	274,200	30/6/2027	Nil
Class AC	28,474	29/11/2026	Nil

Performance shares	Number	Expiry Date	Exercise Price
Class D	91,174	24/6/2024	Nil

Performance rights and performance shares holders do not have any rights to participate in any issues of shares or other interests of the company or any other entity.

SHARES ISSUED ON THE EXERCISE OF PERFORMANCE RIGHTS AND PERFORMANCE SHARES

Ordinary shares of Vulcan Energy Resources Ltd were issued during the six months ended 31 December 2022 and up to the date of this report on the exercise of 282,897 performance rights.

AUDITOR'S INDEPENDENCE DECLARATION

The lead auditor's independence declaration for the six months ended 31 December 2022 as required under section 307C of the Corporations Act 2001 has been received and included within these financial statements.

AUDITOR

RSM Australia Partners continues in office in accordance with section 327 of the Corporations Act 2001.

NON-AUDIT SERVICES

Details of the amounts paid or payable to the auditor for non-audit services provided during the period by the auditor are outlined in Note 36 to the financial statements.

The Board of Directors has considered the position and is satisfied that the provision of the non-audit services is compatible with the general standard of independence for auditors imposed by the Corporations Act 2001. The Directors are satisfied that the provision of non-audit services by the auditors, as set out below, did not compromise the auditor independent requirements of the Corporations Act 2001 for the following reasons:

- All non-audit services have been reviewed by the Board of Directors to ensure they do not impact the impartiality and objectivity of the auditor; and

- None of the services undermine the general principles relating to the auditor independence as set out in APES 110 Code of Ethics for Professional Accountants.

This report is signed in accordance with a resolution of Board of Directors, pursuant to section 298(2)(a) of the Corporations Act 2001.

Gavin Rezos
Chairman
27 March 2023

RSM Australia Partners

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AUDITOR'S INDEPENDENCE DECLARATION

As lead auditor for the audit of the financial report of Vulcan Energy Resources Limited for the period 1 July 2022 to 31 December 2022, I declare that, to the best of my knowledge and belief, there have been no contraventions of:

(i) the auditor independence requirements of the *Corporations Act 2001* in relation to the audit; and

(ii) any applicable code of professional conduct in relation to the audit.

RSM

RSM AUSTRALIA PARTNERS

AIK KONG TING
Partner

Perth, WA
Dated: 27 March 2023

FINANCIAL STATEMENTS

Consolidated Statement Of Comprehensive Income

For the Period Ended 31 December 2022

	Note	6-months 31 Dec 2022 €'000	12-months 30 June 2022 €'000
Revenue from continuing operations	**4**	3,622	3,799
Other income	**5**	213	317
Finance income	**6**	615	350
Gain on deconsolidation		-	1,975
Loss from equity accounted investments	**25**	(249)	(495)
Other own work capitalised	**5**	3,489	3,696
Raw materials and purchased services		(3,119)	(2,512)
Finance cost	**6**	(177)	(155)
Administrative expenses	**7**	(2,127)	(3,790)
Compliance and regulatory expenses		(304)	(729)
Consulting and legal fees	**7**	(1,362)	(4,099)
Depreciation and amortisation expenses	**7**	(2,299)	(2,629)
Employee benefit expenses	**7**	(8,097)	(7,793)
Investor relations expenses		(231)	(615)
Impairment expenses		-	(36)
Loss on disposal of financial assets		-	(745)
Occupancy costs		(1,265)	(498)
Share-based payments expense	**32**	(711)	(3,637)
Other expenses		(1,446)	(1,175)
Foreign currency (loss)/gain		(105)	285
Loss before income tax expense		**(13,553)**	**(18,486)**
Income tax benefit/(expense)	**8**	103	(365)
Loss after income tax for the period		**(13,450)**	**(18,851)**
Other comprehensive income			
Items that may be reclassified subsequently to profit or loss			
Exchange differences on translation of foreign operations		**(1,648)**	**6,990**
Total comprehensive loss for the period (net of tax)		**(15,098)**	**(11,861)**
Total comprehensive loss for the period attributable to the owners of Vulcan Energy Resources Limited		**(15,098)**	**(11,861)**
Loss per share for the year attributable to the members Vulcan Energy Resources Limited:		**€**	**€**
Basic loss per share	**9**	(0.09)	(0.15)
Diluted loss per share	**9**	(0.09)	(0.15)

The Consolidated Statement of Comprehensive Income should be read in conjunction with the notes to the financial statements.

Consolidated Statement of Financial Position

As at 31 December 2022

	Note	6-months 31 Dec 2022 €'000	12-months 30 June 2022 €'000
Assets			
Current assets			
Cash and cash equivalents	**10**	134,107	175,416
Trade and other receivables	**11**	6,316	4,030
Contract assets	**12**	42	79
Inventories	**13**	155	138
Total current assets		140,620	179,663
Non-current assets			
Investments accounted for using equity method	**25**	974	1,214
Exploration and evaluation expenditure	**14**	30,135	20,440
Property, plant and equipment	**15**	70,280	51,490
Right-of-use	**16**	3,377	2,990
Intangible assets	**17**	3,068	3,633
Deferred tax assets	**18**	1,681	1,710
Total non-current assets		109,515	81,477
Total Assets		**250,135**	**261,140**
Liabilities			
Current liabilities			
Trade and other payables	**19**	9,418	8,354
Lease liabilities	**16**	646	439
Income tax liabilities	**8(d)**	91	332
Deferred income	**20**	132	-
Provisions	**21**	752	608
Total Current liabilities		11,039	9,733
Non-current liabilities			
Lease liabilities	**16**	2,670	2,566
Provisions	**21**	110	55
Deferred income	**20**	1,453	-
Deferred tax liabilities	**22**	1,702	1,463
Total non-current liabilities		5,935	4,084
Total Liabilities		**16,974**	**13,817**
Net Assets		**233,161**	**247,323**
Equity			
Share capital	**23**	259,158	258,933
Reserves	**24**	15,875	16,812
Accumulated losses	**37**	(41,872)	(28,422)
Total Equity		**233,161**	**247,323**

The Consolidated Statement of Financial Position should be read in conjunction with the notes to the financial statements.

Consolidated Statement of Changes in Equity

For the Period Ended 31 December 2022

Consolidated	Issued Capital	Reserves	Foreign Currency Reserve	Accumulated Losses	Total
	€'000	€'000	€'000	€'000	€'000
At 1 July 2022	**258,933**	**8,995**	**7,817**	**(28,422)**	**247,323**
Loss for the period	-	-	-	(13,450)	(13,450)
Other comprehensive loss	-	-	(1,648)	-	(1,648)
Total comprehensive loss for the period after tax	-	-	(1,648)	(13,450)	(15,098)
Transactions with owners in their capacity as owners:					
Issue of share capital	225	-	-	-	225
Share issue costs	-	-	-	-	-
Share-based payments	-	711	-	-	711
Balance at 31 December 2022	**259,158**	**9,706**	**6,169**	**(41,872)**	**233,161**

Consolidated	Issued Capital	Reserves	Foreign Currency Reserve	Accumulated Losses	Total
	€'000	€'000	€'000	€'000	€'000
At 1 July 2021	**85,272**	**4,995**	**827**	**(9,571)**	**81,523**
Loss for the period	-	-	-	(18,851)	(18,851)
Other comprehensive income	-	-	6,990	-	6,990
Total comprehensive loss for the period after tax	-	-	6,990	(18,851)	(11,861)
Transactions with owners in their capacity as owners:					
Issue of share capital	178,040	-	-	-	178,040
Share issue costs	(4,379)	-	-	-	(4,379)
Share-based payments	-	4,000	-	-	4,000
Balance at 30 June 2022	**258,933**	**8,995**	**7,817**	**(28,422)**	**247,323**

The Consolidated Statement of Changes in Equity should be read in conjunction with the notes to the financial statements.

Consolidated Statement of Cash Flows

For the Period Ended 31 December 2022

	Note	6-months 31 Dec 2022 €'000	12-months 30 June 2022 €'000
Cash flows from operating activities			
Receipts from customers		3,496	3,799
Payments to suppliers and employees		(12,941)	(15,400)
Interest received		468	228
Other income		1,798	317
Interest paid		(239)	(291)
Net cash used in operating activities	**10**	(7,418)	(11,347)
Cash flows from investing activities			
Payments for exploration and evaluation expenditure		(10,429)	(9,384)
Payment for plant and equipment		(20,094)	(22,793)
Payment to acquire subsidiary		-	(32,685)
Cash acquired upon acquisition of subsidiary		-	1,230
Payments to acquire financial assets		(1,245)	(30,008)
Proceeds from disposal of financial assets		-	29,282
Net cash used in investing activities		(31,768)	(64,358)
Cash flows from financing activities			
Proceeds from issue of shares		-	176,208
Share issue costs		-	(4,378)
Lease repayments		(462)	(185)
Repayment of loan to Associate		-	409
Net cash used in/from financing activities		(462)	172,054
Net increase/(decrease) in cash and cash equivalents		(39,648)	96,349
Cash and cash equivalents at beginning of the period/year		175,416	72,494
Effect of exchange rate fluctuations		(1,661)	6,573
Cash and cash equivalents at end of the period/year		134,107	175,416

The Consolidated Statement of Cash Flows should be read in conjunction with the notes to the financial statements.

Notes to the Consolidated Financial Statements

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The principal accounting policies adopted in the preparation of the financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

(a) Reporting Entity

Vulcan Energy Resources Limited (referred to as "Vulcan" or the "Company") is a company domiciled in Australia The address of the Company's registered office and principal place of business is Level 11, Brookfield Place, 125 St Georges Terrace, Perth WA 6000. The consolidated financial statements of the Company as at and for the period ended 31 December 2022 comprise the Company and its subsidiaries (together referred to as the "consolidated entity" or the "Group"). The principal activity of the Group is geothermal energy and lithium exploration and production.

(b) Basis of Preparation

Statement of compliance
The consolidated financial statements are general purpose financial statements which have been prepared in accordance with Australian Accounting Standards and Interpretations issued by the Australian Accounting Standards Board ("AASB") and the Corporations Act 2001. The consolidated financial statements comply with International Financial Reporting Standards ("IFRS") adopted by the International Accounting Standards Board ("IASB"). Vulcan Energy Resources Limited is a for-profit entity for the purpose of preparing the financial statements.

The annual report was authorised for issue by the Board of Directors on 27 March 2023.

Comparatives
The consolidated entity's current accounting period is the 6-months ended 31 December 2022, and the comparative is 12-month period due to the consolidated entity changing its accounting year end to a 31 December balance date.

Functional and presentation currency
Items included in the financial statements of each of the consolidated entities are measured using the currency of the primary economic environment in which the entity operates ("functional currency"). The consolidated financial statements are presented in Euro, which is Vulcan Energy Resources Limited's presentation currency.

Basis of measurement
The consolidated financial statements have been prepared on a going concern basis in accordance with the historical cost convention, unless otherwise stated.

Parent entity information
In accordance with the Corporations Act 2001, these financial statements present the results of the consolidated entity only. Supplementary information about the parent entity is disclosed in Note 38.

Rounding of amounts
The company is of a kind referred to in Corporations Instrument 2016/191, issued by the Australian Securities and Investments Commission, relating to 'rounding-off'. Amounts in this report have been rounded off in accordance with that Corporations Instrument to the nearest thousand Euro, unless otherwise stated.

New or amended Accounting Standards and Interpretations adopted
The consolidated entity has adopted all of the new or amended Accounting Standards and Interpretations issued by the Australian Accounting Standards Board ('AASB') that are mandatory for the current reporting period.

Any new or amended Accounting Standards or Interpretations that are not yet mandatory have not been early adopted.

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT.)

Current and non-current classification
Assets and liabilities are presented in the statement of financial position based on current and non-current classification.

An asset is classified as current when: it is either expected to be realised or intended to be sold or consumed in the consolidated entity's normal operating cycle; it is held primarily for the purpose of trading; it is expected to be realised within 12 months after the reporting period; or the asset is cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least 12 months after the reporting period. All other assets are classified as non-current.

A liability is classified as current when: it is either expected to be settled in the consolidated entity's normal operating cycle; it is held primarily for the purpose of trading; it is due to be settled within 12 months after the reporting period; or there is no unconditional right to defer the settlement of the liability for at least 12 months after the reporting period. All other liabilities are classified as non-current.

Deferred tax assets and liabilities are always classified as non-current.

New standards and interpretations not yet mandatory or early adopted

Australian Accounting Standards and Interpretations relevant to the Group that have recently been issued or amended but are not yet mandatory, have not been adopted by the Group for the annual reporting period ended 31 December 2022. The Group has not yet assessed the impact of these new or amended Accounting Standards and Interpretations but does not expect it to have a significant impact on the Group's results.

Significant Judgements and Estimates

The preparation of financial statements requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the consolidated entity's accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed in Note 2.

(c) Principles of Consolidation

Subsidiaries

The consolidated financial statements incorporate the assets and liabilities of all subsidiaries of Vulcan Energy Resources Limited ('Company' or 'parent entity') as at 31 December 2022 and the results of all subsidiaries for the 6 month period then ended.

Subsidiaries are all entities (including special purpose entities) over which the consolidated entity has the power to govern the financial and operating policies, generally accompanying a shareholding of more than one-half of the voting rights. The existence and effect of potential voting rights that are currently exercisable or convertible are considered when assessing whether the consolidated entity controls another entity.

Subsidiaries are fully consolidated from the date on which control is transferred to the consolidated entity. They are de-consolidated from the date that control ceases.

Intercompany transactions, balances, and unrealised gains on transactions between consolidated entity companies are eliminated. Unrealised losses are also eliminated unless the transaction provides evidence of the impairment of the asset transferred. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the consolidated entity.

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONT.)

Subsidiaries (cont.)

The acquisition method of accounting is used to account for business combinations by the consolidated entity. A change in ownership interest, without the loss of control, is accounted for as an equity transaction, where the difference between the consideration transferred and the book value of the share of the non-controlling interest acquired is recognised directly in equity attributable to the parent.

Non-controlling interests in the results and equity of subsidiaries are shown separately in the consolidated statement of comprehensive income, statement of changes in equity and statement of financial position respectively.

Where the consolidated entity loses control over the subsidiary, it derecognises the assets including goodwill, liabilities and non-controlling interest in the subsidiary together with any cumulative transaction differences recognised in equity. The consolidated entity recognises the fair value of the consideration received and the fair value of any investment retained together with any gain or loss on profit or loss.

(d) Foreign Currency Transactions

Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at period end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in profit or loss.

(e) Entity Functional Currency Different From Group Presentational Currency

The assets and liabilities of entities with functional currency different from group presentational currency are translated into Euro using the exchange rates at the reporting date. The revenues and expenses of entities with functional currency different from group presentational currency are translated into Euro using the average exchange rates, which approximate the rates at the dates of the transactions, for the period. All resulting foreign exchange differences are recognised in other comprehensive income through the foreign currency reserve in equity.

NOTE 2 CRITICAL ACCOUNTING ESTIMATES, JUDGEMENTS AND ASSUMPTIONS

The preparation of the financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts in the financial statements. Management continually evaluates its judgements and estimates in relation to assets, liabilities, contingent liabilities, revenue and expenses.

Management bases its judgements, estimates and assumptions on historical experience and on other various factors, including expectations of future events, management believes to be reasonable under the circumstances. The resulting accounting judgements and estimates will seldom equal the related actual results. The judgements, estimates and assumptions in these financial statements that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial period are disclosed below.

Exploration and evaluation expenditure

Exploration and evaluation costs have been capitalised on the basis that the consolidated entity will commence commercial production in the future, from which time the costs will be amortised in proportion to the depletion of the mineral resources. Key judgements are applied in considering costs to be capitalised which includes determining expenditures directly related to these activities and allocating overheads between those that are expensed and capitalised. In addition, costs are only capitalised that are expected to be recovered either through successful development or sale of the relevant mining interest. Factors that could impact the future commercial production at the mine include the level of reserves and resources, future technology changes, which could impact the cost of mining, future legal changes and changes in commodity prices. To the extent that capitalised costs are determined not to be recoverable in the future, they will be written off in the period in which this determination is made.

NOTE 2 CRITICAL ACCOUNTING ESTIMATES, JUDGEMENTS AND ASSUMPTIONS (CONT.)

Share-based payments
The Group measures the cost of equity settled transactions with Directors, employees and consultants, where applicable, by reference to the fair value of equity instruments at the date at which they are granted. The fair value is determined using an appropriate valuation model taking into account the terms and conditions upon which the instruments were granted. The accounting estimates and assumptions relating to equity-settled shared-based payments would have no impact on the carrying amounts of assets and liabilities within the next annual reporting period but may impact profit or loss and equity.

Estimation of useful lives of assets
The consolidated entity determines the estimated useful lives and related depreciation and amortisation charges for its plant and equipment. The useful lives could change significantly as a result of technical innovations or some other event. The depreciation and amortisation charge will increase where the useful lives are less than previously estimated lives, or technically obsolete or non-strategic assets that have been abandoned or sold will be written off or written down.

Goodwill and other indefinite life intangible assets
The consolidated entity tests annually, or more frequently if events or changes in circumstances indicate impairment, whether goodwill and other indefinite life intangible assets have suffered any impairment, in accordance with the accounting policy stated in note 1. The recoverable amounts of cash-generating units have been determined based on value-in-use calculations. These calculations require the use of assumptions, including estimated discount rates based on the current cost of capital and growth rates of the estimated future cash flows. Refer to note 17 for further information.

Impairment of non-financial assets other than goodwill and other indefinite life intangible assets
The consolidated entity assesses impairment of non-financial assets other than goodwill and other indefinite life intangible assets at each reporting date by evaluating conditions specific to the consolidated entity and to the particular asset that may lead to impairment. If an impairment trigger exists, the recoverable amount of the asset is determined. This involves fair value less costs of disposal or value-in-use calculations, which incorporate a number of key estimates and assumptions.

Income tax
The consolidated entity is subject to income taxes in the jurisdictions in which it operates. Significant judgement is required in determining the provision for income tax. There are many transactions and calculations undertaken during the ordinary course of business for which the ultimate tax determination is uncertain. The consolidated entity recognises liabilities for anticipated tax audit issues based on the consolidated entity's current understanding of the tax law. Where the final tax outcome of these matters is different from the carrying amounts, such differences will impact the current and deferred tax provisions in the period in which such determination is made.

Recovery of deferred tax assets
Deferred tax assets are recognised for deductible temporary differences only if the consolidated entity considers it is probable that future taxable amounts will be available to utilise those temporary differences and losses.

Lease term
The lease term is a significant component in the measurement of both the right-of-use asset and lease liability. Judgement is exercised in determining whether there is reasonable certainty that an option to extend the lease or purchase the underlying asset will be exercised, or an option to terminate the lease will not be exercised, when ascertaining the periods to be included in the lease term. In determining the lease term, all facts and circumstances that create an economical incentive to exercise an extension option, or not to exercise a termination option, are considered at the lease commencement date. Factors considered may include the importance of the asset to the consolidated entity's operations; comparison of terms and conditions to prevailing market rates; incurrence of significant penalties; existence of significant leasehold improvements; and the costs and disruption to replace the asset. The consolidated entity reassesses whether it is reasonably certain to exercise an extension option, or not exercise a termination option, if there is a significant event or significant change in circumstances.

NOTE 2 CRITICAL ACCOUNTING ESTIMATES, JUDGEMENTS AND ASSUMPTIONS (CONT.)

Incremental borrowing rate
Where the interest rate implicit in a lease cannot be readily determined, an incremental borrowing rate is estimated to discount future lease payments to measure the present value of the lease liability at the lease commencement date. Such a rate is based on what the consolidated entity estimates it would have to pay a third party to borrow the funds necessary to obtain an asset of a similar value to the right-of-use asset, with similar terms, security and economic environment.

NOTE 3 SEGMENT INFORMATION

Accounting Policy

Segment Reporting
Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision maker. The chief operating decision maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the Board. Management has determined that based on the report reviewed by the Board and used to make strategic decisions, that the consolidated entity has three reportable segments.

Identification of reportable operating segments
The consolidated entity is organised into three operating segments based on geographical location: Germany, Other European (comprised of France, Norway and Italy) and Australia. These operating segments are based on the internal reports that are reviewed and used by the Board of Directors (who are identified as the Chief Operating Decision Makers (CODM)) in assessing performance and in determining the allocation of resources. There is no aggregation of operating segments.

The CODM reviews EBITDA (earnings before interest, tax, depreciation and amortisation). The accounting policies adopted for internal reporting to the CODM are consistent with those adopted in the financial statements.

The information reported to the CODM is on a monthly basis.

Types of products and services
Germany – the supply of geothermal energy, exploration relating to the Zero Carbon Lithium™ Project and engineering services
Other European (France and Italy) – exploration relating to battery minerals and geothermal lithium.
Australia – administration and Definitive Feasibility Study ("DFS") ongoing costs.

Intersegment transactions
Intersegment transactions were made at market rates. Engineering services have been provided within the German segment. All intersegment receivables and payables, including the profit margin, are eliminated on consolidation.

Major customers
During the period ended 31 December 2022, approximately €3.2m (30 June 2022: €3.0m) of the consolidated entity's external revenue was derived from sales to Pfalzwerke.

NOTE 3 SEGMENT INFORMATION (CONT.)

For the 6 months ended 31 December 2022

Segment performance	**Germany**	**Other European**	**Administration Australia**	**Total**
31/12/2022	**€'000**	**€'000**	**€'000**	**€'000**
Revenue				
Sales to external customers	3,622	-	-	3,622
Intersegment sales - Other own work capitalised	3,489	-	-	3,489
Other income	213	-	-	213
Finance income	155	-	460	615
Loss from equity accounted investment	-	-	(249)	(249)
Total segment revenue	7,479	-	211	7,690
				-
EBITDA	(6,941)	-	(4,751)	(11,692)
Depreciation and amortisation	(2,285)	-	(14)	(2,299)
Finance expense	(62)	-	(115)	(177)
Finance income	155	-	460	615
Loss before income tax expense	(9,133)	-	(4,420)	(13,553)
Income tax expense	103	-	-	103
Loss after income tax expense	(9,030)	-	(4,420)	(13,450)
Material items include:				
Employee benefit expense	(7,334)	-	(763)	(8,097)
Share based payments expense	-	-	(711)	(711)

NOTE 3 SEGMENT INFORMATION (CONT.)

For the 6 months ended 31 December 2022 (CONT.)

	Germany	Other European	Administration Australia	Total
Assets				
Segment assets	164,779	195	425,784	590,758
Intersegment eliminations	-	-	-	(340,623)
Total assets	-	-	-	250,135
Total assets include:				
Investments accounted for using equity method	-	-	974	974
Exploration and evaluation expenditure additions	4,463	32	5,675	10,170
Capital additions	20,304	-	-	20,304
Liabilities				
Segment liabilities	21,881	103	176,578	198,562
Intersegment eliminations	-	-	-	(181,588)
Total Liabilities	-	-	-	16,974

NOTE 3 SEGMENT INFORMATION (CONT.)

For the year ended 30 June 2022

Segment performance	**Germany**	**Other European**	**Australia**	**Total**
30/06/2022	**€'000**	**€'000**	**€'000**	**€'000**
Revenue				
Sales to external customers	3,799	-	-	3,799
Intersegment sales – Other own work capitalised	3,696	-	-	3,696
Other income	317	-	-	317
Finance income	199	-	151	350
Gain on deconsolidation	-	-	1,975	1,975
Loss from equity accounted investment	-	-	(495)	(495)
Total segment revenue	8,011	-	1,631	9,642
EBITDA	(7,192)	-	(8,860)	(16,052)
Depreciation and amortisation	(2,629)	-	-	(2,629)
Finance expense	(33)		(122)	(155)
Finance income	199	-	151	350
Loss before income tax expense	(9,655)	-	(8,831)	(18,486)
Income tax expense	(365)	-	-	(365)
Loss after income tax expense	(10,020)	-	(8,831)	(18,851)
Material items include:				
Employee benefit expense	(6,784)	-	(1,009)	(7,793)
Share based payments expense	-	-	(3,637)	(3,637)

	Germany	**Other European**	**Administration Australia**	**Total**
Assets				
Segment assets	115,874	160	263,218	379,252
Intersegment eliminations	-	-	-	(118,112)
Total assets	-	-	-	261,140
Total assets include:				
Investments accounted for using equity method	-	-	1,214	1,214
Exploration and evaluation expenditure additions	3,656	33	7,735	11,424
Capital additions	24,149	-	-	24,149

Notes to the Consolidated Financial Statements

NOTE 3 SEGMENT INFORMATION (CONT.)

	Germany	Other European	Administration Australia	Total
Liabilities				
Segment liabilities	16,796	160	3,527	20,483
Intersegment eliminations	-	-	-	(6,666)
Total Liabilities	-	-	-	13,817

NOTE 4 REVENUE

	6-months 31 Dec 2022 €'000	12-months 30 June 2022 €'000
Revenue from contract with customers		
Sale of goods	3,128	2,977
Rendering of services	494	822
	3,622	3,799
Revenue from continuing operations	3,622	3,799

	Electricity sales		Engineering Services		Total	
	6-months 31 Dec 2022 €'000	12-months 30 June 2022 €'000	6-months 31 Dec 2022 €'000	12-months 30 June 2022 €'000	6-months 31 Dec 2022 €'000	12-months 30 June 2022 €'000
Timing of revenue recognition						
Goods transferred at a point in time	3,128	2,977	-	-	3,128	2,977
Services transferred over time	-	-	494	822	494	822
	3,128	2,977	494	822	3,622	3,799

All revenues are derived from Germany.

NOTE 4 REVENUE (CONT.)

Accounting Policy

The consolidated entity recognises revenue as follows:

Revenue from contracts with customers
Revenue is recognised at an amount that reflects the consideration to which the consolidated entity is expected to be entitled in exchange for transferring goods or services to a customer. For each contract with a customer, the consolidated entity: identifies the contract with a customer; identifies the performance obligations in the contract; determines the transaction price which takes into account estimates of variable consideration and the time value of money; allocates the transaction price to the separate performance obligation on the basis of the relative stand-alone selling price of each distinct good or service to be delivered ; and recognises revenue when or as each performance obligation is satisfied in a manner that depicts the transfer to the customer of the goods and services promised.

Variable consideration within the transaction price, if any, reflects concessions provided to the customer such as discounts, rebates and refunds, any potential bonuses receivable from the customer and any other contingent events. Such estimates are determined using either the 'expected value' or 'most likely amount' method. The measurement of variable consideration is subject to a constraining principle whereby revenue will only be recognised to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognised will not occur. The measurement constraint continues until the uncertainty associated with the variable consideration is subsequently resolved. Amounts received that are subject to the constraining principle are recognised as a refund liability.

Sale of goods
Revenue from the sale of goods is recognised at the point in time when the customer obtains control of the goods, which is generally at the time of delivery.

Rendering of services
Revenue from a contract to provide services is recognised over time as the services are rendered based on either a fixed price or an hourly rate.

NOTE 5 OTHER INCOME

	6-months 31 Dec 2022 €'000	12-months 30 June 2022 €'000
Government grants	151	317
Other income	37	-
Reversal of provision for expected credit losses	25	-
	213	317

	6-months 31 Dec 2022 €'000	12-months 30 June 2022 €'000
Other own work capitalised	3,489	3,696
	3,489	3,696

NOTE 5 OTHER INCOME (CONT.)

Accounting Policy

Other revenue
Other revenue is recognised when it is received or when the right to receive payment is established.

Other own work capitalised
Vulcan Energy Engineering GmbH and Vulcan Energy Subsurface Solutions GmbH provide services to Vulcan Energie Ressourcen GmbH, a wholly owned subsidiary of Vulcan Energy Resources Limited which have been capitalised to exploration and evaluation expenditure and property, plant and equipment. These services are disclosed in the statement of profit or loss and other comprehensive income as other own work capitalised. The expenses incurred by Vulcan Energy Engineering GmbH and Vulcan Energy Subsurface Solutions GmbH to provide these services are disclosed in the statement of profit or loss and other comprehensive income as employee benefit expenses. Other own work capitalised also includes the capitalisation of Vercana GmbH staff costs relating to the refurbishment of electric drill rigs. Other own work capitalised does not relate to any external revenue or any profit margin charge to intercompany transactions.

NOTE 6 FINANCE INCOME/(COST)

Finance Income

	6-months 31 Dec 2022 €'000	12-months 30 June 2022 €'000
Interest income	615	350
	615	350

Accounting Policy

Interest
Interest revenue is recognised as interest accrues.

Finance cost

	6-months 31 Dec 2022 €'000	12-months 30 June 2022 €'000
Interest expense- cash at bank and deposits	(115)	(122)
Interest expense- lease liabilities	(62)	(33)
	(177)	(155)

Accounting Policy

Finance costs
Finance costs attributable to qualifying assets are capitalised as part of the asset. All other finance costs are expensed in the period in which they are incurred.

NOTE 7 EXPENSES

	6-months 31 Dec 2022 €'000	12-months 30 June 2022 €'000
(a) Administrative expenses		
Accounting, audit and company secretarial fees	89	311
Travel expenses	362	372
General expenses	1,676	3,107
	2,127	3,790
(b) Consultancy and legal expenses		
Corporate advisory fees	88	286
Consulting fees	816	1,573
Legal fees	458	2,240
	1,362	4,099
(c) Employee benefit expense		
Wages and salaries	6,514	6,640
Other benefits	1,583	1,153
	8,097	7,793
(d) Depreciation and amortisation expenses		
Software	21	10
Property, plant and Equipment	1,284	1,897
Land and Buildings	44	43
Right of use assets	385	200
Intangible assets	565	479
	2,299	2,629

Notes to the Consolidated Financial Statements

NOTE 8 INCOME TAX

	6-months 31 Dec 2022 €'000	12-months 30 June 2022 €'000
(a) The components of tax expense/(benefit) comprise:		
Current tax	(369)	462
Deferred tax	266	(97)
Income tax expense reported in the of profit or loss and other comprehensive income	(103)	365
(b) The prima facie tax on loss from ordinary activities before income tax is reconciled to the income tax as follows:		
Loss before income tax expense	(13,553)	(18,486)
Prima facie tax benefit on loss before income tax at 30% (30 June 2022: 30%)	(4,066)	(5,546)
Tax effect of amounts that are not deductible/taxable in calculating taxable income		
Non-deductible expense	323	682
Tax losses and temporary differences not brought to account	2,394	3,688
Foreign corporate rate differential	1,246	1,541
Income tax (benefit)/expense	(103)	365
(c) Deferred tax assets/(liabilities) not brought to accounts are:		
Accruals	104	136
Prepayments	74	(107)
Other	1,837	2,308
Tax losses	5,122	2,461
Total deferred tax balances not brought to account	7,137	4,798

(d) As at 31 December 2022, the consolidated entity has income tax payable of €91,000 (30 June 2022:€332,000).

Except for the deferred tax assets (note 18) and deferred tax liabilities (note 22) recognised in the subsidiary, Natürlich Insheim GmbH, potential deferred tax assets attributable to tax losses and other temporary differences have not been brought to account at 31 December 2022 because the directors do not believe it is appropriate to regard realisation of the deferred tax assets as probable at this point in time. These benefits will only be obtained if:

- the consolidated entity derives future assessable income of a nature and of an amount sufficient to enable the benefit from the deductions for the expenditure to be realised; and
- no changes in tax legislation adversely affect the consolidated entity in realising the benefit from the deductions for the expenditure.

NOTE 8 INCOME TAX (CONTINUED)

Accounting Policy

The income tax expense (revenue) for the year comprises current income tax expense (income) and deferred tax expense (income).

Current Tax
Current income tax expense charged to the profit or loss is the tax payable on taxable income calculated using applicable income tax rates enacted, or substantially enacted, as at the end of the reporting period. Current tax liabilities (assets) are therefore measured at the amounts expected to be paid to (recovered from) the relevant taxation authority.

Deferred Tax
Deferred tax expense reflects movements in deferred tax asset and deferred tax liability balances during the year as well as unused tax losses.

Current and deferred income tax expense (income) is charged or credited directly to equity instead of the profit or loss when the tax relates to items that are credited or charged directly to equity.

Deferred tax assets and liabilities are ascertained based on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements. Deferred tax assets also result where amounts have been fully expensed but future tax deductions are available. No deferred income tax will be recognised from the initial recognition of an asset or liability, excluding a business combination, where there is no effect on accounting or taxable profit or loss.

Deferred tax assets and liabilities are calculated at the tax rates that are expected to apply to the period when the asset is realised or the liability is settled, based on tax rates enacted or substantively enacted at the end of the reporting period. Their measurement also reflects the manner in which management expects to recover or settle the carrying amount of the related asset or liability.

Deferred tax assets relating to temporary differences and unused tax losses are recognised only to the extent that it is probable that future taxable profit will be available against which the benefits of the deferred tax asset can be utilised.

Where temporary differences exist in relation to investments in subsidiaries, branches, associates, and joint ventures, deferred tax assets and liabilities are not recognised where the timing of the reversal of the temporary difference can be controlled and it is not probable that the reversal will occur in the foreseeable future.

Current tax assets and liabilities are offset where a legally enforceable right of set-off exists and it is intended that net settlement or simultaneous realisation and settlement of the respective asset and liability will occur. Deferred tax assets and liabilities are offset where a legally enforceable right of set-off exists, the deferred tax assets and liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities where it is intended that net settlement or simultaneous realisation and settlement of the respective asset and liability will occur in future periods in which significant amounts of deferred tax assets or liabilities are expected to be recovered or settled.

NOTE 9 LOSS PER SHARE

	6-months 31 Dec 2022	12-months 30 June 2022
Net loss for the period/year in €'000	(13,450)	(18,851)
Weighted average number of ordinary shares for basic and diluted loss per share.	143,332,764	124,671,203
Basic and diluted loss per share €	(0.09)	(0.15)

Accounting Policy

Basic Loss Per Share
Basic loss per share is determined by dividing net profit or loss after income tax attributable to members of the Company, excluding any costs of servicing equity other than ordinary shares, by the weighted average number of ordinary shares outstanding during the financial year, adjusted for bonus elements in ordinary shares issued during the year.

Diluted Loss Per Share
Diluted loss per share adjusts the figures used in the determination of basic earnings per share to take into account the after-income tax effect of interest and other financing costs associated with dilutive potential ordinary shares and the weighted average number of shares assumed to have been issued for no consideration in relation to dilutive potential ordinary shares.

NOTE 10 CASH AND CASH EQUIVALENTS

	6-months 31 Dec 2022 €'000	12-months 30 June 2022 €'000
Cash at bank and in hand	12,515	150,378
Short-term deposits	121,592	25,038
	134,107	175,416

Reconciliation of net loss after tax to net cash flows from operations.

	6-months 31 Dec 2022 €'000	12-months 30 June 2022 €'000
Loss for the financial period/year	**(13,450)**	**(18,851)**
Share based payment expense	711	3,637
Impairment expenses	-	36
Depreciation and amortisation expenses	2,299	2,629
Share issued in exchange for services	225	478
Gain on deconsolidation	-	(1,975)
Loss from equity accounted investments	249	495
Foreign exchange differences	394	105
Changes in assets		
Trade and other receivables	(1,041)	(697)
Trade and other payables	3,339	2,249
Movement in provisions	(144)	547
Net cash used in operating activities	**(7,418)**	**(11,347)**

NOTE 10 CASH AND CASH EQUIVALENTS (CONT.)

Accounting Policy

Cash and cash equivalents
Cash at bank earns interest at floating rates based on daily deposit rates. Short-term deposits are made in varying periods between one day and three months, depending on the immediate cash requirements of the Group and earn interest at the respective short-term deposit rates.

NOTE 11 TRADE AND OTHER RECEIVABLES

	31 Dec 2022 €'000	30 June 2022 €'000
Trade receivables	1,296	655
Allowance for expected credit losses	(34)	(43)
Prepayments	1,033	331
Other receivables	2,776	2,967
Other - bank guarantees	1,245	120
	6,316	4,030

	Expected credit loss rate		Carrying amount		Allowance for ECL	
	31 Dec 2022	30 June 2022	31 Dec 2022	30 June 2022	31 Dec 2022	30 June 2022
Consolidated	%	%	€'000	€'000	€'000	€'000
not overdue	0%	0%	1,228	569	-	-
overdue	50%	50%	68	86	34	43
			1,296	655	34	43

Allowance for expected credit loss

Trade receivables are non-interesting bearing and are generally on terms of 30 days. A provision for €35,000 (30 June 2022: €43,000) has been recorded to cover expected credit loss.

Notes to the Consolidated Financial Statements

Accounting Policy

Trade and other receivables
Trade and other receivables include amounts due from customers for goods sold and services performed in the ordinary course of business. Trade and other receivables are initially recognised at fair value and subsequently measured at amortised cost using effective interest method less any allowance for expected credit loss. Receivables expected to be collected within 12 months of the end of the reporting period are classified as current assets.

Goods and Services Tax ('GST')
Revenues, expenses and assets are recognised net of the amount of GST, except where the amount of GST incurred is not recoverable from the Australian Taxation Office. In these circumstances, the GST is recognised as part of the cost of acquisition of the asset of the assets or part of the expense.

Receivables and payables are stated inclusive of the amount of GST receivable or payable. The net amount of GST recoverable from, or payable to, the taxation authority is included as a current asset or liability in the Consolidated statement of financial position.

Commitments and contingencies are disclosed net of the amount of GST recoverable from, or payable to, the tax authority. Cash flows are presented in the statement of cash flows on a gross basis, except for the GST on investing and financial activities, which are disclosed as operating cash flows.

Value Added Tax ("VAT")
Revenues expenses and assets are recognised net of VAT, except where the amount of VAT incurred is not recoverable from the German tax authority. In these circumstances the VAT is recognised as part of the cost of acquisition or parts of the expense. Receivables and payables are stated inclusive of the amount of VAT receivable or payable. The net amount of VAT recoverable from, or payable to, the taxation authority is included as a current asset or liability in the Consolidated statement of financial position. Cash flows are presented in the statement of cash flows on a gross basis, except for the VAT on investing and financial activities, which are disclosed as operating cash flows.

Investments and other financial assets
Investments and other financial assets are initially measured at fair value. Transaction costs are included as part of the initial measurement, except for financial assets at fair value through profit or loss. Such assets are subsequently measured at either amortised cost or fair value depending on their classification. Classification is determined based on both the business model within which such assets are held and the contractual cash flow characteristics of the financial asset unless an accounting mismatch is being avoided.

Financial assets are derecognised when the rights to receive cash flows have expired or have been transferred and the consolidated entity has transferred substantially all the risks and rewards of ownership. When there is no reasonable expectation of recovering part or all of a financial asset its carrying value is written off.

NOTE 11 TRADE AND OTHER RECEIVABLES (CONT.)

Financial assets at fair value through profit or loss
Financial assets not measured at amortised cost or at fair value through other comprehensive income are classified as financial assets at fair value through profit or loss. Typically, such financial assets will be either: (i) held for trading, where they are acquired for the purpose of selling in the short-term with an intention of making a profit, or a derivative; or (ii) designated as such upon initial recognition where permitted. Fair value movements are recognised in profit or loss.

Financial assets at fair value through other comprehensive income
Financial assets at fair value through other comprehensive income include equity investments which the consolidated entity intends to hold for the foreseeable future and has irrevocably elected to classify them as such upon initial recognition.

Impairment of financial assets
The consolidated entity recognises a loss allowance for expected credit losses on financial assets which are either measured at amortised cost or fair value through other comprehensive income. The measurement of the loss allowance depends upon the consolidated entity's assessment at the end of each reporting period as to whether the financial instrument's credit risk has increased significantly since initial recognition, based on reasonable and supportable information that is available, without undue cost or effort to obtain.

Where there has not been a significant increase in exposure to credit risk since initial recognition, a 12-month expected credit loss allowance is estimated. This represents a portion of the asset's lifetime expected credit losses that is attributable to a default event that is possible within the next 12 months. Where a financial asset has become credit impaired or where it is determined that credit risk has increased significantly, the loss allowance is based on the asset's lifetime expected credit losses. The amount of expected credit loss recognised is measured on the basis of the probability weighted present value of anticipated cash shortfalls over the life of the instrument discounted at the original effective interest rate.

NOTE 12 CONTRACT ASSETS

	31 Dec 2022 €'000	30 June 2022 €'000
Contract assets	42	79
	42	79

Reconciliation

Reconciliation of the written down values at the beginning and end of the current and previous financial period/year are set out below

	31 Dec 2022 €'000	30 June 2022 €'000
Opening balance	79	-
transfer (to)/from inventory	(37)	79
Closing balance	42	79

Accounting policy

Contract assets
Contract assets are recognised when the consolidated entity has transferred goods and services to the customer but where the consolidated entity is yet to establish an unconditional right to consideration. Contract assets are treated as financial assets for impairment purposes.

NOTE 13 INVENTORIES

	31 Dec 2022 €'000	30 June 2022 €'000
Spare parts	155	138
	155	138

Accounting policy

Inventories
Raw materials, work in progress and finished goods are stated at the lower of cost and net realisable value on a "first in first out" basis. Cost comprises of direct materials and delivery costs, direct labour, import duties and other taxes, an appropriate proportion of variable d fixed overhead expenditure based on normal operating capacity, and, where applicable transfers from cash flow hedging reserves in equity. Costs of purchased inventory re determined after deducting rebates and discounts received or receivable.

NOTE 14 EXPLORATION AND EVALUATION EXPENDITURE

	31 Dec 2022 €'000	30 June 2022 €'000
Carrying amount of exploration and evaluation expenditure	30,135	20,440
At the beginning of the period/year	20,440	8,722
Exploration expenditure incurred	10,400	11,273
Performance shares issued upon acquisition of GGH	-	363
Deconsolidation of Kuniko Ltd	-	(335)
Foreign exchange (Loss)/Gain	(705)	417
At the end of the period/year	30,135	20,440

Accounting Policy

Exploration and evaluation expenditure
Acquisition, exploration, and evaluation costs associated with mining tenements are accumulated in respect of each identifiable area of interest. These costs are only carried forward to the extent that the rights of tenure to that area of interest are current and that the costs are expected to be recouped through the successful commercial development or sale of the area or where activities in the area have not yet reached a stage that permits reasonable assessment of the existence of economically recoverable reserves.

Costs in relation to an abandoned area are written off in full against profit in the period in which the decision to abandon the area is made.

Each area of interest is also reviewed annually, and acquisition costs written off to the extent that they will not be recoverable in the future.

NOTE 15 PROPERTY, PLANT AND EQUIPMENT

	31 Dec 2022 €'000	30 June 2022 €'000
Software	383	267
Plant & Equipment	27,411	26,859
Land & Buildings	1,536	1,580
Assets under Construction	40,950	22,784
	70,280	51,490

Movement in carrying amounts of property, plant and equipment for the financial period ended 31 December 2022

	Software €'000	Plant and equipment €'000	Asset under construction €'000	Land and Building €'000	Total €'000
Cost					
At 1 July 2022	280	28,817	22,784	1,623	53,504
Additions	137	2,001	18,166	-	20,304
Disposals	-	(195)	-	-	(195)
At 31 December 2022	417	30,623	40,950	1,623	73,613
Accumulated Depreciation					
At 1 July 2022	(13)	(1,958)	-	(43)	(2,014)
Depreciation for the period	(21)	(1,284)	-	(44)	(1,349)
Depreciation eliminated on disposal	-	30	-	-	30
	(34)	(3,212)	-	(87)	(3,333)
Carrying amount					
At 1 July 2022	**267**	**26,859**	**22,784**	**1,580**	**51,490**
At 31 December 2022	**383**	**27,411**	**40,950**	**1,536**	**70,280**

NOTE 15 PROPERTY, PLANT AND EQUIPMENT (CONT.)

Movement in carrying amounts of property, plant and equipment for year ended 30 June 2022

	Software €'000	Plant and equipment €'000	Asset under construction €'000	Land and Building €'000	Total €'000
Cost					
At 1 July 2021	112	417	470	-	999
Acquired in business combinations	34	26,508	191	1,623	28,356
Additions	134	1,892	22,123	-	24,149
At 30 June 2022	280	28,817	22,784	1,623	53,504
Accumulated Depreciation					
At 1 July 2021	(3)	(61)	-	-	(64)
Depreciation for the year	(10)	(1,897)	-	(43)	(1,950)
		-	-	-	-
	(13)	(1,958)	-	(43)	(2,014)
Carrying amount					
At 1 July 2021	**109**	**356**	**470**	**-**	**935**
At 30 June 2022	**267**	**26,859**	**22,784**	**1,580**	**51,490**

Accounting Policy

Property, plant and equipment
Property, plant and equipment is stated at historical cost less accumulated depreciation and impairment. Historical cost includes expenditure that is directly attributable to the acquisition of the items

Once assets are available for use, depreciation is calculated using the straight-line method to allocate asset costs over their estimated useful lives, as follows:

Software	3 -5 years
Plant & Equipment	2-20 years
Buildings	20 years

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each balance date. An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

NOTE 16 LEASE LIABILITIES & RIGHT OF USE

Right-of-use asset	Buildings	Vehicles	Hardware and Software	Technical Equipment	Land	Total
	€'000	€'000	€'000	€'000	€'000	€'000
Cost						
At 1 July 2022	2,908	261	21	-	-	3,190
Additions	492	251	-	14	23	780
At 31 December 2022	3,400	512	21	14	23	3,970
Accumulated Depreciation						
At 1 July 2022	(107)	(83)	(10)	-	-	(200)
Depreciation for the period	(307)	(65)	(5)	(3)	(5)	(385)
Foreign Exchange Gain/(Loss)	(8)	-	-	-	-	(8)
	(422)	(148)	(15)	(3)	(5)	(593)
Carrying amount						
At 1 July 2022	**2,801**	**178**	**11**	**-**	**-**	**2,990**
At 31 December 2022	**2,978**	**364**	**6**	**11**	**18**	**3,377**

NOTE 16 LEASE LIABILITIES & RIGHT OF USE (CONT.)

Right-of-use asset	Buildings	Vehicles	Hardware and Software	Total
	€'000	€'000	€'000	€'000
Cost				
At 1 July 2021	334	38	-	372
Additions	2,908	261	21	3,190
Leases relinquished	(334)	(38)	-	(372)
At 30 June 2022	2,908	261	21	3,190
Accumulated Depreciation				
At 1 July 2021	10	4	-	14
Depreciation for the year	(107)	(83)	(10)	(200)
Eliminated upon relinquishment	(10)	(4)	-	(14)
	(107)	(83)	(10)	(200)
Carrying amount				
At 1 July 2021	**324**	**34**	**-**	**358**
At 30 June 2022	**2,801**	**178**	**11**	**2,990**

Lease Liabilities	Buildings	Vehicles	Hardware and Software	Technical Equipment	Land	Total
	€'000	€'000	€'000	€'000	€'000	€'000
At 1 July 2022	**2,804**	**190**	**11**	**-**	**-**	**3,005**
New lease liabilities entered during the period	492	248	-	13	23	776
Add: Interest	56	6	-	-	-	62
Less: Payment	(329)	(181)	(5)	(4)	(5)	(524)
Foreign Exchange Gain/(Loss)	(3)	-	-	-	-	(3)
Closing Balance	**3,020**	**263**	**6**	**9**	**18**	**3,316**
Represented by:						
Current lease liabilities	506	115	6	8	11	646
Non-current lease liabilities	2,512	150	-	1	7	2,670
	3,018	**265**	**6**	**9**	**18**	**3,316**

NOTE 16 LEASE LIABILITIES & RIGHT OF USE (CONT.)

Lease liabilities	Buildings	Vehicles	Hardware and Software	Total
	€'000	€'000	€'000	€'000
At 1 July 2021	**325**	**28**	**-**	**353**
New lease liabilities entered during the period	2,908	262	21	3,191
Leases relinquished	(325)	(28)	-	(353)
Add: Interest	27	6	-	33
Less: Payment	(131)	(78)	(10)	(219)
Closing Balance	**2,804**	**190**	**11**	**3,005**
Represented by:				
Current lease liabilities	326	104	9	439
Non-current lease liabilities	2,478	86	2	2,566
	2,804	**190**	**11**	**3,005**

Accounting Policy

Right-of-use assets:
A right-of-use asset is recognised at the commencement date of a lease. The right-of-use asset is measured at cost, which comprises the initial amount of the lease liability, adjusted for, as applicable, any lease payments made at or before the commencement date net of any lease incentives received, any initial direct costs incurred, and, except where included in the cost of inventories, an estimate of costs expected to be incurred for dismantling and removing the underlying asset, and restoring the site or asset.

Right-of-use assets are depreciated on a straight-line basis over the unexpired period of the lease or the estimated useful life of the asset, whichever is the shorter. Where the consolidated entity expects to obtain ownership of the leased asset at the end of the lease term, the depreciation is over its estimated useful life. Right-of use assets are subject to impairment or adjusted for any remeasurement of lease liabilities.

The consolidated entity has elected not to recognise a right-of-use asset and corresponding lease liability for short-term leases with terms of 12 months or less and leases of low-value assets. Lease payments on these assets are expensed to profit or loss as incurred.

NOTE 16 LEASE LIABILITIES & RIGHT OF USE (CONT.)

Lease liabilities

A lease liability is recognised at the commencement date of a lease. The lease liability is initially recognised at the present value of the lease payments to be made over the term of the lease, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the consolidated entity's incremental borrowing rate. Lease payments comprise of fixed payments less any lease incentives receivable, variable lease payments that depend on an index or a rate, amounts expected to be paid under residual value guarantees, exercise price of a purchase option when the exercise of the option is reasonably certain to occur, and any anticipated termination penalties. The variable lease payments that do not depend on an index or a rate are expensed in the period in which they are incurred.

Lease liabilities are measured at amortised cost using the effective interest method. The carrying amounts are remeasured if there is a change in the following: future lease payments arising from a change in an index or a rate used; residual guarantee; lease term; certainty of a purchase option and termination penalties. When a lease liability is remeasured, an adjustment is made to the corresponding right-of use asset, or to profit or loss if the carrying amount of the right-of-use asset is fully written down.

The Group leases office space, a laboratory, vehicles and land through its German subsidiary Vulcan Energie Ressourcen GmbH as well as the subsidiaries of the German operating Company.

NOTE 17 INTANGIBLE ASSETS

	31 Dec 2022 €'000	30 June 2022 €'000
Goodwill	1,076	1,076
Less: Impairment	(36)	(36)
	1,040	1,040
Customer contracts – at cost	1,526	1,526
Less: Accumulated amortisation	(904)	(386)
	622	1,140
Order backlog – at cost	46	46
Less: Accumulated amortisation	(46)	(46)
	-	-
Operating permit - at cost	1,500	1,500
Less: Accumulated amortisation	(94)	(47)
	1,406	1,453
Total Intangible Assets	3,068	3,633

NOTE 17 INTANGIBLE ASSETS (CONT.)

Reconciliation of the written down values at the beginning and the end of the current and previous financial year are set out below:

	Customer Contracts €'000	Order backlog €'000	Operating Permit €'000	Goodwill €'000	TOTAL €'000
Balance at 1 July 2021	-	-	-	-	-
Acquired through business combinations	1,526	46	1,500	1,076	4,148
Less: amortisation	(386)	(46)	(47)	-	(479)
Less: Impairment	-	-	-	(36)	(36)
Balance at 30 June 2022	1,140	-	1,453	1,040	3,633
Less: amortisation	(518)	-	(47)	-	(565)
Balance at 31 December 2022	622	-	1,406	1,040	3,068

Impairment testing

Goodwill impairment test is conducted annually. The last goodwill impairment testing was performed on 30 June 2022. There are no indicators of impairment as at 31 December 2022.

Goodwill has been allocated to the following cash-generating units:

	€'000
Global Engineering & Consulting-Company GmbH (Gec-co) - renamed to Vulcan Energy Engineering GmbH	1,040
	1,040

The consolidated entity impaired the goodwill related to Insheim and GeoT as at 30 June 2022 amounted to €36,000.

The recoverable amount of the consolidated entity's goodwill has been determined by a value-in-use calculation using a discounted cash flow model, based on a 5 year projection period approved by management, together with terminal value.

The following key assumptions were used in the discounted cash flow model:

- 13.2% pre-tax discount rate
- 18% average per annum projected EBITDA

The discount rate of 13.2% pre-tax reflects management's estimate of the time value of money and Gec-co's weighted average cost of capital.

NOTE 17 INTANGIBLE ASSETS (CONT.)

Sensitivity

As disclosed in note 2, the directors have made judgements and estimates in respect of impairment testing of goodwill. Should these judgements and estimates not occur the resulting goodwill carrying amount may decrease. The sensitivities are as follows:

- Pre-tax discount rate would be required to increase to 28.2% for goodwill to be impaired, with all other assumptions remaining constant.
- EBITDA would be required to decrease to 9% for goodwill to be impaired, with all other assumptions remaining constant.

Management believes that other reasonable changes in the key assumptions on which the recoverable amount of the engineering is based would not cause the cash-generating unit's carrying amount to exceed its recoverable amount.

If there are any negative changes in the key assumptions on which the recoverable amount of goodwill is based, this would result in further impairment charge for the engineering division's goodwill.

Accounting Policy

Goodwill and other indefinite life intangible assets
The consolidated entity tests annually, or more frequently if events or changes in circumstances indicate impairment, whether goodwill and other indefinite life intangible assets have suffered any impairment, in accordance with the accounting policy stated in note 1. The recoverable amounts of cash-generating units have been determined based on value-in-use calculations. These calculations require the use of assumptions, including estimated discount rates based on the current cost of capital and growth rates of the estimated future cash flows.

Intangible assets acquired as part of a business combination, other than goodwill, are initially measured at their fair value at the date of the acquisition. Intangible assets acquired separately are initially recognised at cost. Indefinite life intangible assets are not amortised and are subsequently measured at cost less any impairment. Finite life intangible assets are subsequently measured at cost less amortisation and any impairment. The gains or losses recognised in profit and loss arising from the derecognition of intangible assets are measured as the difference between the net disposal proceeds and the carrying amount of the intangible asset. The method and useful lives of finite life intangible assets are reviewed annually. Changes in the expected pattern of consumption or useful life are accounted for prospectively by changing the amortisation method or period.

Impairment of non-financial assets other than goodwill and other indefinite life intangible assets
The consolidated entity assesses impairment of non-financial assets other than goodwill and other indefinite life intangible assets at each reporting date by evaluating conditions specific to the consolidated entity and to the particular asset that may lead to impairment. If an impairment trigger exists, the recoverable amount of the asset is determined. This involves fair value less costs of disposal or value-in-use calculations, which incorporate a number of key estimates and assumptions.

Recoverable amount is the higher of an asset's fair value less costs of disposal and value-in-use. The value-in-use is the present value of the estimated future cash flows relating to the asset using a pre-tax discount rate specific to the asset or cash-generating unit to which the asset belongs. Assets that do not have independent cash flows are grouped together to form a cash-generating unit.

NOTE 18 DEFERRED TAX ASSETS

	31 Dec 2022 €'000	30 June 2022 €'000
Deferred tax asset comprises temporary differences attributable to:		
Other	47	18
Property, plant and equipment	1,634	1,692
Deferred tax asset	**1,681**	**1,710**
Movements:		
Opening balance	1,710	-
Additions through business combinations	-	1,768
Charged to income statement	(29)	(58)
Closing balance	**1,681**	**1,710**

NOTE 19 TRADE AND OTHER PAYABLES

	31 Dec 2022 €'000	30 June 2022 €'000
Trade payables [(i)]	6,479	6,183
Accrued expenses	1,190	802
Other payables	1,466	866
VAT Payable	283	503
	9,418	8,354

(i) Trade payables are non-interest bearing and are normally settled on 30-day terms.

Due to the short-term nature of these payables, their carrying value is assumed to be the same as their fair value.

Accounting Policy

Trade and other payables
Trade payables and other payables represent liabilities for goods and services provided to the Group prior to the end of the financial year which are unpaid. The amounts are unsecured and are usually paid within 30 days of recognition.

NOTE 20 DEFERRED INCOME

	31 Dec 2022 €'000	30 June 2022 €'000
Current	132	-
Government grants	132	-
Non-current	1,453	-
Government grants	1,453	-

Accounting Policy

Government grants
Government grants are not recognised until there is a reasonable assurance that the Group will comply with the conditions attached to them and that the grants will be received.

The assistance from the European Union aims to support the Group in testing, development and optimisations in production of geothermal energy. Unfulfilled conditions relate to the spend requirements as part of the grant acquittal processes which will be validated by the European Union at the next reporting period, 31 December 2023 for the income showing as current deferred income, and in November 2024 for the remaining balance.

NOTE 21 PROVISIONS

Current:

	31 Dec 2022 €'000	30 June 2022 €'000
Annual leave provision	752	608
	752	608

Non-Current:

	31 Dec 2022 €'000	30 June 2022 €'000
Other provisions	110	55
	110	55

Amounts not expected to be settled within the next 12 months
The current provision for employee benefits includes all unconditional entitlements where employees have completed the required period of service and also those where employees are entitled to pro-rata payments in certain circumstances. The entire amount is presented as current, since the consolidated entity does not have an unconditional right to defer settlement. However, based on past experience, the consolidated entity does not expect all employees to take the full amount of accrued leave or require payment within the next 12 months.

Accounting Policy

Provisions
Provisions are recognised when the consolidated entity has a present (legal or constructive) obligation as a result of a past event, it is probable the consolidated entity will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation. The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the reporting date, taking into account the risks and uncertainties surrounding the obligation. If the time value of money is material, provisions are discounted using a current pre-tax rate specific to the liability. The increase in the provision resulting from the passage of time is recognised as a finance cost.

NOTE 21 PROVISIONS (CONT.)

Employee benefits

Defined contribution superannuation expenses
Contributions to defined contribution superannuation plans are expensed in the period in which they are incurred.

Short-term employee benefits
Liabilities for wages and salaries, including non-monetary benefits, annual leave and long service leave expected to be settled wholly within 12 months of the reporting date are measured at the amounts expected to be paid when the liabilities are settled.

Other long-term employee benefits
The liability for annual leave and long service leave not expected to be settled within 12 months of the reporting date are measured at the present value of expected future payments to be made in respect of services provided by employees up to the reporting date using the projected unit credit method. Consideration is given to expected future wage and salary levels, experience of employee departures and periods of service. Expected future payments are discounted using market yields at the reporting date on corporate bonds with terms to maturity and currency that match, as closely as possible, the estimated future cash outflows.

NOTE 22 DEFERRED TAX LIABILITIES

	31 Dec 2022 €'000	30 June 2022 €'000
Deferred tax liability comprises temporary differences attributable to:		
Other	6	2
Property, plant and equipment	1,696	1,461
Deferred tax liabilities	1,702	1,463
Movements:		
Opening balance	1,463	-
Additions through business combinations	-	1,618
Charged to income statement	239	(155)
Closing balance	1,702	1,463

NOTE 23 CONTRIBUTED EQUITY

	31 Dec 22		30 Jun 22	
	No'000	€'000	No.'000	€'000
Fully paid ordinary shares	**143,435**	**259,158**	**143,094**	**258,933**

Ordinary shares
Ordinary shares entitle the holder to participate in the dividends and the proceeds on winding up in proportion to the number of and amounts paid on the shares held.

At shareholders meetings, each ordinary share is entitled to one vote when a poll is called, otherwise each shareholder has one vote on a show of hands.

Share buy-back
There is no current on-market share buy-back.

	Date	Number	Issue Price €	€'000
At 1 July 2022		143,094,049		258,933
Exercise of Class S performance rights	7/07/2022	12,897	-	-
Exercise of Class H performance rights	7/07/2022	80,909	-	-
Exercise of Class I performance rights	7/07/2022	89,091	-	-
Shares issued for services rendered	9/07/2022	58,355	3.86	225
Exercise of Class R performance rights	20/12/2022	100,000	-	-
At 31 December 2022		**143,435,301**	**-**	**259,158**

	Date	Number	Issue Price €	€'000
At 1 July 2021		108,422,717		85,272
Shares issued as consideration for acquisition of Gec-co.	6/07/2021	325,000	5.04	1,637
Shares issued as consideration for acquisition of GGH	6/07/2021	11,396	5.04	57
Shares issued for services rendered	19/08/2021	32,251	7.84	253
Placement	22/09/2021	14,814,815	8.35	123,680
Share Purchase Plan	18/10/2021	228,434	8.65	1,975
Exercise of warrants	1/12/2021	521,304	-	-
Placement	17/12/2021	65,317	8.47	553
Exercise of performance shares	17/12/2021	4,400,000	-	-
Exercise of performance rights	17/12/2021	2,786,364	-	-
Shares issued for services rendered	8/02/2022	37,492	6.00	225
Shares issued to Stellantis	27/06/2022	11,448,959	4.34	49,660
Less capital raising costs				(4,379)
At 30 June 2022		**143,094,049**		**258,933**

NOTE 23 CONTRIBUTED EQUITY (CONT.)

Accounting Policy

Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of new shares or options are shown in equity as a deduction, net of tax, from the proceeds. Incremental costs directly attributable to the issue of new shares or options for the acquisition of a business are not included in the cost of the acquisition as part of the purchase consideration.

If the entity reacquires its own equity instruments, for example, as a result of a share buy-back, those instruments are deducted from equity and the associated shares are cancelled. No gain or loss is recognised in the profit or loss and the consideration paid including any directly attributable incremental costs (net of income taxes) is recognised directly in equity.

NOTE 24 RESERVES

	31 Dec 2022 €'000	30 June 2022 €'000
Share-based payment reserve	9,706	8,995
Foreign currency translation reserve	6,169	7,817
Total	15,875	16,812

Movement reconciliation	**Number of Warrants**	**Number of Performance Shares**	**Number of Performance Rights**	**€'000**
On issue at 1 July 2022	**-**	**91,174**	**8,656,324**	**8,995**
Issue of performance rights during the year	-	-	393,374	-
Exercise of Performance Rights during the year	-	-	(282,897)	-
Recognition of share - based payment expense for performance rights issued to Directors, staff & consultants (Note 32)	-	-	-	711
Performance rights cancelled	-	-	(24,000)	-
Performance rights lapsed	-	-	(360,000)	-
On issue at 31 December 2022	**-**	**91,174**	**8,382,801**	**9,706**

NOTE 24 RESERVES (CONT.)

Movement reconciliation	Number of Warrants	Number of Performance Shares	Number of Performance Rights	€'000
On issue at 1 July 2021	**512,447**	**4,400,000**	**11,238,688**	**4,995**
Issue of performance rights during the year	-	-	204,000	-
Recognition of share - based payment expense for performance rights issued to Directors, staff & consultants (Note 32)	-	-	-	3,289
Performance shares issued upon purchase of GGH	-	91,174	-	363
Recognition of share - based payment expense for performance rights issued to Vendors on Acquisition (Note 32)	-	-	-	218
Issue of unlisted options during the year	-	-	-	-
Exercise of unlisted options during the year	-	-	-	-
Exercise of Performance rights during the year	-	-	(2,786,364)	-
Issue of warrants during the year	8,857	-	-	-
Warrants exercised during the year	(521,304)	-	-	-
Recognition of shared based payment expense for warrants	-	-	-	130
Exercise of Performance Shares during the year	-	(4,400,000)	-	-
On issue at 30 June 2022	**-**	**91,174**	**8,656,324**	**8,995**

NOTE 24 RESERVES (CONT.)

The share-based payment reserve is used to record the value of share-based payments provided to outside parties, and share-based remuneration provided to employees and directors.

Foreign Currency Translation Reserve

	31 Dec 2022 €'000	30 June 2022 €'000
Balance at the beginning of the period/year	7,817	827
Movement during the period/year	(1,648)	6,990
Balance at the end of the period/year	6,169	7,817

The foreign currency translation reserve is used to recognise exchange differences arising from the translation of the financial statements of foreign operations to Euro.

NOTE 25 INVESTMENT IN ASSOCIATE

The Company's interest in Kuniko Limited is recognised as an investment in associate accounted for using the equity method. Subsequent to the deconsolidation, the Company's share of Kuniko Limited's loss for the period was offset against the investment resulting in the amount recognised as investment in associate as follows:

	31 Dec 2022 €'000	30 June 2022 €'000
Opening carrying value	1,214	1,709
Share of loss - associate	(249)	(474)
Share of other comprehensive income/(loss) - associate	9	(21)
Investment in associate	974	1,214

NOTE 25 INVESTMENT IN ASSOCIATE (CONT.)

Interests in associates are accounted for using the equity method of accounting. Information relating to associates that are material to the consolidated entity are set out below:

		Ownership interest	
		31 December 2022	30 June 2022
Name	Principal place of business / Country of incorporation	%	%
Kuniko Ltd	Australia	21.15%	21.15%

	Kuniko Ltd	
	31 Dec 2022 €'000	30 June 2022 €'000
Summarised statement of financial position		
Current assets	4,921	6,985
Non-current assets	3,016	2,665
Total assets	7,937	9,650
Current liabilities	(241)	(678)
Non-current liabilities	-	-
Total liabilities	(241)	(678)
Net assets/(liabilities)	7,696	8,972

	6-months 31 Dec 2022 €'000	12-months 30 June 2022 €'000
Summarised statement of profit or loss and other comprehensive income		
Revenue	-	-
Expenses	(1,177)	(1,391)
Loss before income tax	(1,177)	(1,391)
Income tax expense	-	-
Loss after income tax	(1,177)	(1,391)
Other comprehensive loss	42	(115)
Total comprehensive loss	(1,135)	(1,506)

NOTE 25 INVESTMENT IN ASSOCIATE (CONT.)

Accounting policy

Associates
Associates are entities over which the consolidated entity has significant influence but not control or joint control. Investments in associates are accounted for using the equity method. Under the equity method, the share of the profits or losses of the associate is recognised in profit or loss and the share of the movements in equity is recognised in other comprehensive income. Investments in associates are carried in the statement of financial position at cost plus post-acquisition changes in the consolidated entity's share of net assets of the associate. Goodwill relating to the associate is included in the carrying amount of the investment and is neither amortised nor individually tested for impairment. Dividends received or receivable from associates reduce the carrying amount of the investment.

When the consolidated entity’s share of losses in an associate equals or exceeds its interest in the associate, including any unsecured long-term receivables, the consolidated entity does not recognise further losses, unless it has incurred obligations or made payments on behalf of the associate.

The consolidated entity discontinues the use of the equity method upon the loss of significant influence over the associate and recognises any retained investment at its fair value. Any difference between the associate’s carrying amount, fair value of the retained investment and proceeds from disposal is recognised in profit or loss.

NOTE 26 ACQUISITION OF SUBSIDIARY

No acquisitions occurred in the period ending 31 December 2022.

In the prior year, the following acquisitions occurred:

Global Geothermal Holding UG

On 2 July 2021 Vulcan Energie Ressourcen GmbH, a subsidiary of Vulcan Energy Resources Limited, acquired 100% of the shares in Global Geothermal Holding UG ('**GGH**') with an effective date on 2 July 2021 (closing-date). Dr Horst Kreuter, CEO of Vulcan Energie Ressourcen GmbH, and a related party of Vulcan Energy Resources Limited, and Mr Thorsten Weimann, Chief Operating Officer and a related party of Vulcan Energy Resources Limited were the sole shareholders of GGH.

With a share price at closing date of €5.04 (AUD7.90), the agreed purchase price for 11,396 ordinary shares amounted to €57,411.

Additionally, 91,174 performance shares with a fair value €363,307 have been recognised as deferred consideration, based on management's assessment of the probability of achieving the performance milestones. The performance shares were issued in equal number to Dr Horst Kreuter and Mr Thorsten Weimann. Milestones as follows:

The Performance Shares will convert into Shares upon achievement of any of the following in relation to any of the licenses held by GGH:

(a) the Company (or any of its subsidiaries) obtaining a positive approval for geothermal brine production from the relevant governmental authority following a provisional environmental impact assessment;

(b) the Company (or any of its subsidiaries) obtaining approval for the construction and operation of a main operating plant under Germany's Federal Mining Act (BBergG);

(c) the Company (or any of its subsidiaries) obtaining the first approval for a special operating plan in accordance with BBergG;

(d) the Company (or any of its subsidiaries) the first approval or pre-approval from the relevant governmental authority for the construction of a geothermal plant; or

(e) the Company (or any of its subsidiaries) obtaining the first approval or pre-approval from the relevant governmental authority for the construction of a direct lithium extraction (lithium conveying) plant.

NOTE 26 ACQUISITION OF SUBSIDIARY (CONT.)

Purchase Consideration:	€
Shares issued	57,411
Performance shares issued (refer to note 14)	363,307
Net consideration	**420,718**

Net Assets Acquired:	€
Fair value of net liabilities acquired	(1,193)
Exploration and evaluation expenditure	421,911
Net assets acquired	**420,718**

Management has determined that the acquisitions do not meet the definition of a business within AASB 3 Business Combinations. The transactions have been accounted for as an asset acquisition.

Since GGH is an entity which holds exploration licences including Taro where the majority of the indicated resources is generated from, the acquisition of GGH is considered an asset acquisition rather than a business combination.

Accounting Policy

Asset Acquisition not constituting a Business

When an asset acquisition does not constitute a business combination, the assets and liabilities are assigned a carrying amount based on their relative fair values in an asset purchase transaction and no deferred tax will arise in relation to the acquired assets and assumed liabilities as the initial recognition exemption for deferred tax under AASB 112 applies. No goodwill will arise on the acquisition and transaction costs of the acquisition will be included in the capitalised cost of the asset.

NOTE 27 INTERESTS IN SUBSIDIARIES

The consolidated financial statements incorporate assets, liabilities and results of the following wholly owned subsidiaries in accordance with the accounting policy described in note 1

Entity	Location	Primary activity	Date of foundation or acquisition	Ownership Interest 31 December 2022 (%)	Ownership Interest 30 June 2022 (%)
Vulcan Energie Ressourcen GmbH	Karlsruhe	Operating entity	September 26, 2019	100	100
Vulcan Energy Europe Pty Limited	Perth	Operating entity	October 11, 2019	100	100
Global Geothermal Holding UG*	Karlsruhe	Group holding	July 2, 2021	100	100
Vulcan Energy Subsurface Solutions GmbH	Karlsruhe	Operating entity	July 2, 2021	100	100
Vulcan Energy Engineering GmbH	Augsburg	Operating entity	July 2, 2021	100	100
Vulcan Geothermal GmbH	Karlsruhe	Group holding	July 09, 2021	100	100
VER GEO LIO GmbH	Karlsruhe	Group holding	July 12, 2021	100	100
Vercana GmbH	Karlsruhe	Operating entity	December 09, 2021	100	100
Natürlich Insheim GmbH	Karlsruhe (previously: Ludwigshafen)	Operating entity	December 31, 2021	100	100
Vulcan Energy Italy Pty Limited	Perth	Operating entity	July 5, 2021	100	100
Vulcan Energie France SAS	France	Operating entity	June 22, 2022	100	100

*Global Geothermal Holding UG merged with Vulcan Energie Ressourcen GmbH. Subsequently the entity was deregistered on 28 February 2023.

NOTE 28 BUSINESS COMBINATIONS

No business combinations occurred in the period ending 31 December 2022. In the prior year, the following business combinations occurred:

Natürlich Insheim GmbH (previously: Pfalzwerke Geofuture GmbH)

VER GEO LIO GmbH, an indirect subsidiary of Vulcan Energy Resources Limited, acquired 100% shares in Natürlich Insheim GmbH ('**Natürlich Insheim**'), in accordance with the Share Purchase Agreement, with an effective date on 31 December 2021 (closing-date).

The preliminary purchase price for the acquisition of Natürlich Insheim amounted to €32,684,814 and was paid in cash. The preliminary purchase price has been adjusted by €1,410,417 based on the purchase price adjustments stated in the Share Purchase Agreement. Therefore, the adjusted purchase price amounts to €31,274,397 and is now final.

The acquired business contributed revenues of €2,976,987 and a loss after tax of €105,243 to the consolidated entity for the period 1 January 2022 to 30 June 2022. If the acquisition occurred on 1 July 2021 the full year contributions would have been revenues of €5,953,974, a loss after tax of €210,486 and EBITDA of €1,352,836.

Natürlich Insheim owns and operates a geothermal power plant in Insheim, Germany.

The values identified in relation to the acquisition of Insheim are final as at 30 June 2022.

Details of the acquisition are as follows:

	€'000
Cash	922
Trade and other receivables	754
Inventory	138
Property, plant & equipment	28,313
Deferred tax asset	1,747
Trade and other payables	(894)
Other provisions	(50)
Fair value of net assets acquired	30,930
Goodwill	35
Operating permit	1,500
Intangibles acquired on acquisition	1,535
Deferred tax liabilities arising on acquisition	(1,191)
Acquisition-date fair value of total consideration	**31,274**

Representing:

	€'000
Cash paid	**32,685**
Loan repayment to Pfalzwerke Geofuture GmbH	(1,300)
Profit transfer adjustment	(111)
Total consideration	**31,274**

NOTE 28 BUSINESS COMBINATIONS (CONT.)

Gec-co Global Engineering & Consulting-Company GmbH

Vulcan Energie Ressourcen GmbH, a subsidiary of Vulcan Energy Resources Limited, acquired 100% of geothermal surface consultancy company, Global Engineering and Consulting - Company GmbH ('**Gec-co**'), in accordance with the Share Purchase Agreement, with an effective date on 2 July 2021 (closing-date). Mr Thorsten Weimann, Chief Operating Officer of Vulcan Energy Resources Limited is the sole shareholder of Gec-co.

325,000 fully paid ordinary shares of Vulcan Energy Resources Limited were issued, totalling to €1,627,720 based on a share price at closing date of €5.01 (AUD7.93).

This is an engineering business and operates in the renewables sector. The goodwill of €1.040m represents the expected synergies from merging this business with the other entities and reducing external consultancy costs. The acquired business contributed revenues (including other own works capitalised) of €2,979,154 for sale of services and loss after tax of €900,073 to the consolidated entity for the period from 2 July 2021 to 30 June 2022. As the acquisition occurred on 2 July 2022, the full year contribution is the same as above.

Additionally, a cash payment of €862,750 linked to project development milestones of the Vulcan Zero Carbon Lithium™ Project has been recognised as deferred consideration, based on management's assessment of the probability of achieving the milestones. Milestones as follows:

(a) The first building permit for the construction of an ORC (geothermal) plant is granted.

(b) The first building permit or approval pursuant to the German Federal Immission Control Act (BImSchG) for the construction of a DLE (lithium extraction) plant is granted.

The values identified in relation to the acquisition of Gec-co are final as at 30 June 2022.

Details of the acquisition are as follows:

	€'000
Cash	246
Trade and other receivables	557
Contract assets	192
Other assets	122
Trade and other payables	(372)
Loans and borrowings	(348)
Fair value of net assets acquired	397
Customer relationships	1,393
Order backlog	46
Goodwill	1,040
Intangibles acquired on acquisition	2,479
Deferred tax liabilities arising on acquisition	(386)
Acquisition-date fair value of total consideration	**2,490**

Representing:

	€'000
Shares issued	1,628
Deferred consideration	862
Total consideration	**2,490**

NOTE 28 BUSINESS COMBINATIONS (CONT.)

GeoThermal Engineering GmbH

Vulcan Energie Ressourcen GmbH, a subsidiary of Vulcan Energy Resources Limited, acquired 100% of the shares in GeoThermal Engineering GmbH ('GeoT') in accordance with the Share Purchase Agreement, with effective date on 2 July 2021 (closing-date). Dr Horst Kreuter, CEO of Vulcan Energie Ressourcen GmbH, and a related party of Vulcan Energy Resources Limited, was the sole shareholder of GeoT.

The acquisition costs for 100% of the shares in GeoT were payable in cash. The agreed purchase price was €1.

GeoT is an independent planning and consulting company for the development of deep geothermal projects worldwide. In cooperation with partners and investors, GeoT develops national and international projects in regions that offer favourable conditions for a sustainable heat and/or power production from geothermal energy. Furthermore, GeoT designs optimally adapted exploration programs for each project by individual composing of the different exploration methods.

The acquired business contributed revenues (including other own work capitalised) of €1,469,495 for sale of services and loss after tax of €263,250 to the consolidated entity for the period from 2 July 2021 to 30 June 2022. As the acquisition occurred on 2 July 2022, the full year contribution is the same as above.

The values identified in relation to the acquisition of GeoT are final as at 30 June 2022.

Details of the acquisition are as follows:

	€
Cash	62,150
Trade and other receivables	151,854
Other assets	134,223
Trade and other payables	(156,342)
Loans and borrowings	(285,330)
Fair value of net liabilities acquired	(93,445)
Customer relationships	133,316
Goodwill	1,298
Intangiles acquired on acquisition	134,614
Deferred tax liabilities arising on acquisition	(41,168)
Acquisition-date fair value of total consideration	**1**

Representing:

	€
Cash paid or payable to vendor	1
Total consideration	**1**

NOTE 28 BUSINESS COMBINATIONS (CONT.)

Accounting policy

Business combinations
The acquisition method of accounting is used to account for business combinations regardless of whether equity instruments or other assets are acquired.

The consideration transferred is the sum of the acquisition-date fair values of the assets transferred, equity instruments issued, or liabilities incurred by the acquirer to former owners of the acquiree and the amount of any non-controlling interest in the acquiree. For each business combination, the non-controlling interest in the acquiree is measured at either fair value or at the proportionate share of the acquiree's identifiable net assets. All acquisition costs are expensed as incurred to profit or loss.

On the acquisition of a business, the consolidated entity assesses the financial assets acquired and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic conditions, the consolidated entity's operating or accounting policies and other pertinent conditions in existence at the acquisition-date.

Where the business combination is achieved in stages, the consolidated entity remeasures its previously held equity interest in the acquiree at the acquisition-date fair value and the difference between the fair value and the previous carrying amount is recognised in profit or loss.

Contingent consideration to be transferred by the acquirer is recognised at the acquisition-date fair value. Subsequent changes in the fair value of the contingent consideration classified as an asset or liability is recognised in profit or loss. Contingent consideration classified as equity is not remeasured and its subsequent settlement is accounted for within equity.

The difference between the acquisition-date fair value of assets acquired, liabilities assumed and any non-controlling interest in the acquiree and the fair value of the consideration transferred and the fair value of any pre-existing investment in the acquiree is recognised as goodwill. If the consideration transferred and the pre-existing fair value is less than the fair value of the identifiable net assets acquired, being a bargain purchase to the acquirer, the difference is recognised as a gain directly in profit or loss by the acquirer on the acquisition-date, but only after a reassessment of the identification and measurement of the net assets acquired, the non-controlling interest in the acquiree, if any, the consideration transferred and the acquirer's previously held equity interest in the acquiree.

NOTE 29 FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES

The Group's activities expose it to a variety of financial risks: market risk (including foreign exchange risk and interest rate risk), credit risk, liquidity risk and price risk. The Group's overall risk management programme focuses on the unpredictability of the financial markets and seeks to minimise potential adverse effects on the financial performance of the Group. The Group uses different methods to measure and manage different types of risks to which it is exposed.

These include monitoring levels of exposure to interest rate and foreign exchange risk and assessments of market forecasts for interest rate and foreign exchange prices. Ageing analysis and monitoring of specific credit allowances are undertaken to manage credit risk. Liquidity risk is monitored through the development of future cash flow forecasts.

Risk management is carried out by Management and overseen by the Board of Directors with assistance from suitably qualified external advisors.

The main risks arising for the Group are foreign exchange risk, interest rate risk, credit risk and liquidity risk. The Board reviews and agrees policies for managing each of these risks and they are summarised below.

The carrying values of the Group's financial instruments are as follows:

	31 Dec 2022 €'000	30 June 2022 €'000
Financial Assets		
Cash and cash equivalents	134,107	175,416
Trade and other receivables	6,316	4,030
	140,423	179,446
Financial Liabilities		
Trade and other payables	9,418	8,354
Lease liabilities	3,316	3,005
	12,734	11,359

(a) Market risk

(i.) Foreign exchange risk

The Group's exposure to foreign currency risk at the end of the reporting period, was as follows:

	31 Dec 22 €'000	30 Jun 22 €'000
Trade payables	(1,312)	(1,430)
Cash and cash equivalent	35,358	87,421
	34,046	85,991

NOTE 29 FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES (CONT.)

The aggregate net foreign exchange gains/(losses) recognised in the P&L were:

	31 December 2022 €'000	30 June 2022 €'000
Net foreign exchange gains/(losses) recognised in the P&L:	(105)	285

Sensitivity

As shown in the table above, the group is primarily exposed to changes in EUR/AUD exchange rates. The sensitivity of profit or loss to changes in the exchange rates is:

	Impact on post-tax profit	
	6 months	12 months
	31 December 2022 €'000	30 June 2022 €'000
EUR/AUD exchange rate - increase 5% *	(1,773)	(4,390)
EUR/AUD exchange rate – decrease 5%*	1,773	4,390
EUR/USD exchange rate – increase 5% *	(64)	(53)
EUR/USD exchange rate – decrease 5% *	64	53

*Holding all other variables constant

(ii.) Interest rate risk

The Group is exposed to interest rate risk, which is the risk that a financial instrument's value will fluctuate as a result of changes in the market interest rates on interest bearing financial instruments. The Group's exposure to this risk relates primarily to the Group's cash and any cash on deposit. The Group does not use derivatives to mitigate these exposures. The Group manages its exposure to interest rate risk by holding certain amounts of cash in fixed and floating interest rate facilities. At the reporting date, the interest rate profile of the Group's interest-bearing financial instruments was:

	31 December 2022		30 June 2022	
	Weighted average interest rate	Balance €'000	Weighted average interest rate	Balance €'000
Cash and cash equivalents	1.53%	101,687	0.25%	103,558

Sensitivity

Within the analysis, consideration is given to potential renewals of existing positions and the mix of fixed and variable interest rates. The following sensitivity analysis is based on the interest rate risk exposures in existence at the reporting date. The 1% increase and 1% decrease in rates is based on reasonably expected possible changes over a financial year.

At 31 December 2022, if interest rates had moved, as illustrated in the table below, with all other variables held constant, losses and equity would have been affected as follows:

NOTE 29 FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES (CONT.)

	Profit higher/(lower) 31 December 2022	Profit higher/(lower) 30 June 2022
	€	€
+ 1.0% (100 basis points)	1,016,867	1,035,576
- 1.0% (100 basis points)	(1,016,867)	(1,035,576)

(b) Credit risk

Credit risk arises from the financial assets of the Group, which comprise cash and cash equivalents, trade and other receivables and other financial assets. The Group's exposure to credit risk arises from potential default of the counterparty, with maximum exposure equal to the carrying amount of the financial assets.

The Group's policy is to trade only with recognised, creditworthy third parties. It is the Group's policy that all customers who wish to trade on credit terms will be subject to credit verification procedures.

In addition, receivable balances are monitored on an ongoing basis with the result that the Group's exposure to bad debts is not significant. There are no significant concentrations of credit risk within the Group except for cash and cash equivalents.

(c) Liquidity risk

Liquidity risk is the risk that the Group will not be able to meet its financial obligations as they fall due. The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to its reputation.

The Group manages liquidity risk by maintaining adequate cash reserves from funds raised in the market and by continuously monitoring forecast and actual cash flows. The Group does not have any external borrowings. The following are the contractual maturities of financial liabilities:

	1 year or less	1-5 years	> 5 years	Total
31 Dec 22	€'000	€'000	€'000	€'000
Trade and other payables	9,418	-	-	9,418
Lease Liabilities	646	1,801	869	3,316
30 Jun 22				
Trade and other payables	8,354	-	-	8,354
Lease Liabilities	439	838	1,728	3,005

NOTE 29 FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES (CONT.)

(d) Price risk

The Group is exposed to the commodity price risk, as its energy sales are predominantly subject to prevailing market prices. The contract with Pfalzwerke guarantees a minimum price of €0.25 per kWh. During the six months ending 31 December 2022 Vulcan sold 10,409 MWh at an average price of €0.32 per kWh.

At 50% of the upward movement in the price for Mwh, the Group's loss would decrease by €2.0m. At 100% upward price movement the loss would decrease by €3.7m.

(e) Capital risk management

The Group's objectives when managing capital are to:

- Safeguard their ability to continue as a going concern, so that it can continue to provide returns for shareholders and benefits for other stakeholders; and
- Maintain an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, the Group may adjust the number of dividends paid to shareholders, return capital to shareholders, issue new shares or sell assets to reduce debt.

Given the stage of the Company's development there are no formal targets set for return on capital. The Company is not subject to externally imposed capital requirements. The net equity of the Company is equivalent to capital. Net capital is obtained through capital raisings on the Australian Securities Exchange ("ASX").

NOTE 30 CHANGES IN LIABILITIES ARISING FROM FINANCING ACTIVITIES

	Lease liabilities €'000	Total €'000
Balance at 1 July 2021	353	353
Net cash used in financing activities	(185)	(185)
Additions to leases	3,190	3,190
Other changes	(353)	(353)
Balance at 1 July 2022	3,005	3,005
Net cash used in financing activities	(462)	(462)
Additions to leases	776	776
Other changes	(3)	(3)
Balance at 31 December 2022	3,316	3,316

NOTE 31 NON-CASH INVESTING AND FINANCING ACTIVITIES

	6-months 31 Dec 2022 €'000	12-months 30 June 2022 €'000
Additions to the right of use assets	776	3,190
Performance shares issued for consideration of acquisition	-	363
Shares issued for consideration of acquisition	-	1,685
	776	5,238

NOTE 32 SHARE-BASED PAYMENTS

	6-months 31 Dec 2022 €'000	12-months 30 June 2022 €'000
Recognised share-based payment transactions		
Performance rights issued to Directors, staff and consultants (i)	153	520
Performance rights issued to Directors & staff in prior periods (ii)	558	2,769
Performance shares issued to Vendors of Acquisition	-	218
Performance shares issues as consideration for acquisition of subsidiary GGH	-	363
Shares issued for consideration of services (Note 23)	225	478
Warrants	-	130
	936	4,478

Represented by		
Shared-based payment expense	711	3,637
Investor relations expense	225	478
Capitalised exploration assets	-	363
	936	4,478

(i) Details of new performance rights issued during the period:

Under the Company's Incentive Award plan, the Company issued the following incentives:

- an annual deferred incentive (ADI), designed to reward creation of of exceptional short-term shareholder value as evidenced by the performance hurdles. Issued in three Tranches as Class AA
- a long-term incentive (LTI), deigned to reward creation of exceptional long-term shareholder value as evidenced by performance hurdles. Issued in seven tranches as Class AB

The incentives were issued on the following dates:

- on the 19th of September 52,000 ADIs and 102,000 LTIs were issued to the Executives.
- on the 13th of December 12,700 ADIs and 56,200 LTIs were issued to the Executives.
- On the 29th of November 26,000 ADI's and 116,000 LTI's were issued to the Managing Director.

NOTE 32 SHARE-BASED PAYMENTS (CONT.)

Details of the ADIs for Executives:

Item	**Executive Rights - ADI**					
	Tranche 1		Tranche 2		Tranche 3	
Grant date	19/09/2022	13/12/2022	19/09/2022	13/12/2022	19/09/2022	13/12/2022
Fair value of each right (EUR)	5.24	4.30	5.24	4.30	5.24	4.30
Commencement of performance period	1/07/2022	1/11/2022 & 14/11/2022	1/07/2022	1/11/2022 & 14/11/2022	1/07/2022	1/11/2022 & 14/11/2022
Performance measurement date	30/06/2022	30/06/2022	30/06/2022	30/06/2022	30/06/2022	30/06/2022
Vesting date	30/06/2024	30/06/2024	30/06/2024	30/06/2024	30/06/2024	30/06/2024
Expiry date	30/06/2026	30/06/2026	30/06/2026	30/06/2026	30/06/2026	30/06/2026
Volatility	n/a	n/a	n/a	n/a	n/a	n/a
Risk-fee rate	n/a	n/a	n/a	n/a	n/a	n/a
Dividend yield	nil	nil	nil	nil	nil	nil
Number of Rigts	15,600	3,810	15,600	3,810	20,800	5,080
Price at grant (EUR)	5.24	4.30	5.24	4.30	5.24	4.30
Valuation per Tranche (EUR)	81,744	16,383	81,744	16,383	108,992	21,844

Share based payment expense (EUR)	10,116	808	10,116	808	18,882	1,509

Item	**Managing Director's Rights - ADI**		
	Tranche 1	Tranche 2	Tranche 3
Grant date	29/11/2022	29/11/2022	29/11/2022
Fair value of each right (EUR)	4.52	4.52	4.52
Commencement of performance period	1/07/2022	1/07/2022	1/07/2022
Performance measurement date	30/06/2023	30/06/2023	30/06/2023
Vesting date	30/06/2024	30/06/2024	30/06/2024
Expiry date	30/06/2026	30/06/2026	30/06/2026
Volatility	n/a	n/a	n/a
Risk-fee rate	n/a	n/a	n/a
Dividend yield	nil	nil	nil
Number of Rigts	7,800	7,800	10,400
Price at grant (EUR)	4.52	4.52	4.52
Valuation per Tranche (EUR)	35,228	35,228	46,971

Share based payment expense (EUR)	4,527	4,527	8,451

NOTE 32 SHARE-BASED PAYMENTS (CONT.)

Details of ADI performance rights vesting conditions:

Tranche 1:

The Tranche 1 will vest subject to the obtaining sufficient funding in order to allow for completion of the first plant that will be able to produce lithium on a commercial scale and/or the first new commercial geothermal heating plant, in accordance with Vulcan's business plan (First Plant) by 30 June 2023.

Tranche 2:

The Tranche 2 will vest subject to the achievement of various individual and business KPIs. The STI targets reflect a balance of individual and organisational goals impacting overall STI. Individual goals in the assessment of the STI include items such as sustainability, cost performance, funding, approval of drilling permits, drilling activity, compliance and governance, growth and safety. Individual executive goals are all clearly defined and specifically measurable.

Tranche 3

The tranche 3 will vest subject to the achievement of the shared objectives as follows:

People:
a) >80% retention rate for agreed critical roles at all levels of the organisation for FY 23 onwards; and
b) increased employee satisfaction rate based on previous annual internal employee satisfaction survey.

Environment:
a) obtain an ESG rating from a recognised third party ESG provider that is above 50%;
b) obtain a carbon neutral emission certification from a recognised third-party issuer where the Group's carbon emissions footprint is measured and offset by supporting credible carbon offset projects and verified across all business units by 30 June 2023; and
c) reporting of climate related impacts, risks and opportunities management by the Group according to the Taskforce for Climate-Related Financial Disclosures (TCFD) guidelines and/or report according to the Taskforce for Nature-Related Financial Disclosures (TNFD).

Social:
a) all exploration/production licenses to be in good standing as at 30 June 2023; and
b) release an announcement on the ASX that it has commenced drilling in the Upper Rhine Valley.

The above ADI performance rights are subject to continuous service until the vesting date.

NOTE 32 SHARE-BASED PAYMENTS (CONT.)

Details of the LTIs for Executives:

Item		Grant date	Fair value of each right (EUR)	Expiry date	Volatility	Risk-fee rate	Number of Rights	Price at grant (EUR)	Valuation per Tranche (EUR)	Share based payment expense (EUR)
Executive Rights	Tranche 1	19/09/2022	5.24	30/06/2027	n/a	n/a	30,600	5.24	160,344	9,921
		13/12/2022	4.30	30/06/2027	n/a	n/a	16,860	4.30	72,498	1,659
	Tranche 2	19/09/2022	5.24	30/06/2027	n/a	n/a	15,300	5.24	80,172	4,961
		13/12/2022	4.30	30/06/2027	n/a	n/a	8,430	4.30	36,249	829
	Tranche 3	19/09/2022	5.24	30/06/2027	n/a	n/a	10,200	5.24	53,448	3,307
		13/12/2022	4.30	30/06/2027	n/a	n/a	5,620	4.30	24,166	553
	Tranche 4	19/09/2022	5.24	30/06/2027	n/a	n/a	7,650	5.24	40,086	2,480
		13/12/2022	4.30	30/06/2027	n/a	n/a	4,215	4.30	18,125	415
	Tranche 5	19/09/2022	5.24	30/06/2027	n/a	n/a	7,650	5.24	40,086	2,480
		13/12/2022	4.30	30/06/2027	n/a	n/a	4,215	4.30	18,125	415
	ATSR Rights	19/09/2022	4.18	30/06/2027	75%	3.405%	10,200	5.24	42,636	5,267
		13/12/2022	3.24	30/06/2027	75%	3.115%	5,620	4.30	18,209	837
	RTSR Rights	19/09/2022	4.57	30/06/2027	75%	3.405%	20,400	5.24	93,228	11,518
		13/12/2022	3.50	30/06/2027	75%	3.115%	11,240	4.30	39,340	1,673

Item		Grant date	Fair value of each right (EUR)	Expiry date	Volatility	Risk-fee rate	Number of Rights	Price at grant (EUR)	Valuation per Tranche (EUR)	Share based payment expense (EUR)
MD Rights	Tranche 1	29/11/2022	4.52	30/06/2027	n/a	n/a	34,800	4.52	157,296	10,100
	Tranche 2	29/11/2022	4.52	30/06/2027	n/a	n/a	17,400	4.52	78,648	5,050
	Tranche 3	29/11/2022	4.52	30/06/2027	n/a	n/a	11,600	4.52	52,432	3,367
	Tranche 4	29/11/2022	4.52	30/06/2027	n/a	n/a	8,700	4.52	39,324	2,525
	Tranche 5	29/11/2022	4.52	30/06/2027	n/a	n/a	8,700	4.52	39,324	2,525
	ATSR Rights	29/11/2022	3.46	30/06/2027	75%	3.235%	11,600	4.52	40,136	5,164
	RTSR Rights	29/11/2022	3.69	30/06/2027	75%	3.235%	23,200	4.52	85,608	10,988

NOTE 32 SHARE-BASED PAYMENTS (CONT.)

Details of LTI performance rights vesting conditions:

Tranche 1:

The Tranche 1 Rights will vest subject to the achievement of the successful ramp up to nameplate capacity for Phase 1 energy and lithium chemicals production, and achievement of corresponding revenue.

Tranche 2:

The Tranche 2 Rights will vest subject to the achievement of obtaining a positive definitive feasibility study for Phase 2 energy and lithium chemicals production, and achievement of corresponding revenue.

Tranche 3:

The Tranche 3 Rights will vest subject to the achievement of obtaining project financing for completion of Phase 2 capital expenditure.

Tranche 4:

The Tranche 4 Rights will vest subject to the achievement of carbon neutral emission certification across all operations through each year in the four-year period commencing 30 June 2022.

Tranche 5:

The Tranche 5 Rights will vest subject to the achievement of lowest quartile absolute greenhouse gas (GHG) emissions.

ATSR Rights:

The number of RTSR Rights that vest is based on the TSR of Vulcan over the performance period, relative to the returns of the Peer Group. The RTSR Rights will vest according to the following schedule:

Company's TSR performance	**Percentage of ATSR Rights eligible to vest**
Company's TSR < 7.5%	Nil
7.5% < Company's TSR <10%	50% to 75% on a pro-rata basis
10% < Company's TSR < 12.5%	75% to 100% on a pro-rata basis
Company's TSR > 12.5%	100%

RTSR Rights:

The number of RTSR Rights that vest is based on the TSR of Vulcan over the performance period, relative to the returns of the Peer Group. The RTSR Rights will vest according to the following schedule.

Company's TSR performance relative to the Peer Group	**Percentage of RTSR Rights eligible to vest**
50th percentile	50%
Between 50th percentile and 75th percentile	Pro-rata
75th percentile	100%

NOTE 32 SHARE-BASED PAYMENTS (CONT.)

On the 29th of November the Company issued Performance rights to Non-Executive Directors (NED Service Rights). Dr Günter Hilken and Mark Skelton each received 14,237 performance rights valued at EUR 67,746. Issued in three tranches as class AC

Performance rights vest as follows:

- 1/3 vesting 12 months from the date of 2022 AGM;
- 1/3 vesting 24 months from the date of 2022 AGM; and
- 1/3 vesting 36 months from the date of 2022 AGM.

Type	Grant date	Number of Rights	Vesting date	Total value of Rights (EUR)	Share based payment expense (EUR)
Tranche 1	29/11/2022	9,491	29/11/2023	45,164	4,060
Tranche 2	29/11/2022	9,491	29/11/2024	45,164	2,027
Tranche 3	29/11/2022	9,491	29/11/2025	45,164	1,352

NOTE 32 SHARE-BASED PAYMENTS (CONT.)

(ii) Details of performance rights issued in prior years:

Type	Fair value of each right (EUR)	Expected volatility	Grant date	Price at grant date (EUR)	Expiry date	Vesting hurdle (5-day VWAP)	Interest rate	Number of Rights	Total value of Rights (EUR)	Share based payment expense (EUR)
Class J	0.55	70%	10/09/2020	0.55	16/09/2023	1.84	0.26%	2,500,000	1,368,598	241,631
Class P	0.55 & 4.67 & 7.54	N/A	15/09/2020 & 29/06/2021 & 16/12/2021	0.55 & 4.67 & 7.54	1/12/2023	N/A	N/A	250,000 & 60,000 & 58,000	855,020	(441,746)
Class R	1.47	N/A	25/11/2020	1.47	27/11/2022	N/A	N/A	100,000	147,060	32,264
Class S	4.95	N/A	24/06/2021	4.95	30/06/2025	N/A	N/A	38,688	191,561	27,944
Class T	4.82 & 7.54	N/A	29/06/2021 & 16/12/2021	4.82 & 7.54	1/12/2024	N/A	N/A	250,000 & 18,000	1,341,080	147,585
Class U	4.82	N/A	29/06/2021	4.82	1/12/2024	N/A	N/A	250,000	1,205,360	175,530
Class V	4.82 & 7.54	N/A	29/06/2021 & 16/12/2021	4.82 & 7.54	1/12/2024	N/A	N/A	100,000 & 18,000	617,864	69,513
Class W	4.82	N/A	29/06/2021	4.82	1/12/2024	N/A	N/A	100,000	482,144	52,488
Class Y	7.54	N/A	16/12/2021	7.54	1/12/2024	N/A	N/A	60,000	452,400	204,326
Class Z	7.54	N/A	16/12/2021	7.54	1/12/2024	N/A	N/A	50,000	377,000	48,417

Details of Performance Rights vesting conditions:

Class J
- the Company announcing, within 36 months from the date of issue, a positive (JORC-Compliant) Definitive Feasibility Study in relation to the Project confirming it is commercially viable; and
- the VWAP for Shares as traded on ASX over 20 consecutive trading days is equal to or greater than 225% of the VWAP for Shares for the last 5 trading days up to but not including the date of the Meeting (the Reference Price).

NOTE 32 SHARE-BASED PAYMENTS (CONT.)

Class P
- the Company announcing before 31 December 2022 a positive Definitive Feasibility Study in relation to the Project confirming it is commercially viable. Performance rights lapsed as the vesting condition had not been satisfied within the intended timeframe.

Class R
- Vesting on issue and converting to shares on a one for one basis on the date that is 24 months from the date of issue.

Class S
- one third vesting 12 months from the date of the 24 June 2021 General Meeting (EGM), one third vesting 24 months from EGM, one third vesting 36 months from EGM.

Class T
- the Company being issued a building permit for the first geothermal power plant or, in the case of a pure heating project with no electricity production, the transfer station, on or before the Expiry Date of 1st December 2024.

Class U
– the Company being issued a building permit for the first Direct Lithium Extraction system, on or before the Expiry Date of 1st December 2024.

Class V
- the Company being granted a permit according to BImSchG for the first lithium refinery, on or before the Expiry Date of 1st December 2024.

Class W
- the Company announcing commissioning of the first commercial lithium extraction plant, on or before the Expiry Date of 1st December 2024.

Class Y:
The Company announcing successful listing of Vulcan Energy on the regulated market of the Frankfurt Stock Exchange on or before the expiry date of 1 December 2024.

Class Z:

Performance Rights will vest upon the Company obtaining project finance for the first commercial plant, on or before the Expiry Date of 1 December 2024.

NOTE 32 SHARE-BASED PAYMENTS (CONT.)

Set out below are summaries of performance rights granted and exercised:

	As at 1 July 2022	Granted	Exercised	Cancelled	Lapsed	As at 31 December 2022	Exercisable performance rights
Class G	250,000	-	-	-	-	250,000	250,000
Class H	553,636	-	(80,909)	-	-	472,727	472,727
Class I	1,000,000	-	(89,091)	-	-	910,909	910,909
Class J	2,500,000	-	-	-	-	2,500,000	-
Class M	1,500,000	-	-	-	-	1,500,000	1,500,000
Class N	1,500,000	-	-	-	-	1,500,000	1,500,000
Class P	368,000	-	-	(8,000)	(360,000)	-	-
Class R	100,000	-	(100,000)	-	-	-	-
Class S	38,688	-	(12,897)	-	-	25,791	-
Class T	268,000	-	-	(8,000)	-	260,000	-
Class U	250,000	-	-	-	-	250,000	-
Class V	118,000	-	-	(8,000)	-	110,000	-
Class W	100,000	-	-	-	-	100,000	-
Class Y	60,000	-	-	-	-	60,000	-
Class Z	50,000	-	-	-	-	50,000	-
Class AA (ADI)	-	90,700	-	-	-	90,700	-
Class AB (LTI)	-	274,200	-	-	-	274,200	-
Class AC (NED)	-	28,474	-	-	-	28,474	-
	8,656,324	**393,374**	**(282,897)**	**(24,000)**	**(360,000)**	**8,382,801**	**4,633,636**

NOTE 32 SHARE-BASED PAYMENTS (CONT.)

No performance rights expired during the period. Vested conditions of performance rights exercisable at 31 December 2022:

Class G
- Will vest upon the holder completing six months continuous employment with the Company, with an expiry date of 1 December 2023.;

Class H
- the Company announcing, on or before 18 May 2022, a positive Pre-Feasibility Study in relation to the Company's Zero Carbon Lithium™ Project confirming it is commercially viable.

Class I:
-Will vest upon the Company announcing that it has secured either an off-take agreement representing a minimum of 30% of production volume over a three-year term, or a downstream lithium chemicals joint venture partner with a minimum EUR 6,000,000 investment in relation to the Vulcan Lithium Project within three years of issue of the Performance Rights, with an expiry date of 1 December 2023.

Class M:
- the Company announcing, on or before 21 May 2021, a positive Pre-Feasibility Study in relation to the Company's Zero Carbon Lithium™ Project confirming it is commercially viable.

Class N:
-the Company announcing, on or before 21 May 2022, that it has secured either an off-take agreement representing a minimum of 30% of production volume over a three-year term, or a downstream lithium chemicals joint venture partner with a minimum of EUR 6,000,000 investment in relation to the Project.

NOTE 32 SHARE-BASED PAYMENTS (CONT.)

Set out below are summaries of performance rights granted and exercised.

	As at 1 July 2021	Granted	Exercised	Cancelled, Lapsed or Expired	As at 30 June 2022	Exercisable performance rights
Class F	1,250,000	-	(1,250,000)	-	-	-
Class G	250,000	-	-	-	250,000	250,000
Class H	990,000	-	(436,364)	-	553,636	553,636
Class I	1,000,000	-	-	-	1,000,000	1,000,000
Class J	2,500,000	-	-	-	2,500,000	-
Class L	1,000,000	-	(1,000,000)	-	-	-
Class M	1,500,000	-	-	-	1,500,000	-
Class N	1,500,000	-	-	-	1,500,000	-
Class P	310,000	58,000	-	-	368,000	-
Class Q	100,000	-	(100,000)	-	-	-
Class R	100,000	-	-	-	100,000	-
Class S	38,688	-	-	-	38,688	12,897
Class T	250,000	18,000	-	-	268,000	-
Class U	250,000	-	-	-	250,000	-
Class V	100,000	18,000	-	-	118,000	-
Class W	100,000	-	-	-	100,000	-
Class Y	-	60,000	-	-	60,000	-
Class Z	-	50,000	-	-	50,000	-
	11,238,688	**204,000**	**(2,786,364)**	**-**	**8,656,324**	**1,816,533**

Set out below are summaries of performance shares granted and exercised.

	As at 1 July 2022	Issued	Exercised	Cancelled, Lapsed or Expired	As at 31 December 2022	Exercisable performance shares
Class D	91,174	-	-	-	91,174	-
	91,174	**-**	**-**	**-**	**91,174**	**-**

	As at 1 July 2021	Issued	Exercised	Cancelled, Lapsed or Expired	As at 30 June 2022	Exercisable performance shares
Class C	4,400,000	-	(4,400,000)	-	-	-
Class D	-	91,174	-	-	91,174	-
	4,400,000	**91,174**	**(4,400,000)**	**-**	**91,174**	**-**

NOTE 32 SHARE-BASED PAYMENTS (CONT.)

Accounting Policy

Share-based payments
Equity-settled and cash-settled share-based compensation benefits are provided to Key Management Personnel and employees.

Equity-settled transactions are awards of shares, or options over shares, which are provided to employees in exchange for the rendering of services. Cash-settled transactions are awards of cash for the exchange of services, where the amount of cash is determined by reference to the share price.

The cost of equity-settled transactions are measured at fair value on grant date. Fair value is independently determined using an appropriate valuation model that takes into account the exercise price, the term of the option, the impact of dilution, the share price at grant date and expected price volatility of the underlying share, the expected dividend yield and the risk free interest rate for the term of the option, together with non-vesting conditions that do not determine whether the consolidated entity receives the services that entitle the employees to receive payment. No account is taken of any other vesting conditions.

The cost of equity-settled transactions are recognised as an expense with a corresponding increase in equity over the vesting period. The cumulative charge to profit or loss is calculated based on the grant date fair value of the award, the best estimate of the number of awards that are likely to vest and the expired portion of the vesting period. The amount recognised in profit or loss for the period is the cumulative amount calculated at each reporting date less amounts already recognised in previous periods.

The cost of cash-settled transactions is initially, and at each reporting date until vested, determined by applying an appropriate valuation model, taking into consideration the terms and conditions on which the award was granted. The cumulative charge to profit or loss until settlement of the liability is calculated as follows:

a. During the vesting period, the liability at each reporting date is the fair value of the award at that date multiplied by the expired portion of the vesting period.
b. From the end of the vesting period until settlement of the award, the liability is the full fair value of the liability at the reporting date.

All changes in the liability are recognised in profit or loss. The ultimate cost of cash-settled transactions is the cash paid to settle the liability.

Market conditions are taken into consideration in determining fair value. Therefore, any awards subject to market conditions are considered to vest irrespective of whether or not that market condition has been met, provided all other conditions are satisfied.

If equity-settled awards are modified, as a minimum an expense is recognised as if the modification has not been made. An additional expense is recognised, over the remaining vesting period, for any modification that increases the total fair value of the share-based compensation benefit as at the date of modification.

If the non-vesting condition is within the control of the consolidated entity or employee, the failure to satisfy the condition is treated as a cancellation. If the condition is not within the control of the consolidated entity or employee and is not satisfied during the vesting period, any remaining expense for the award is recognised over the remaining vesting period, unless the award is forfeited.

If equity-settled awards are cancelled, it is treated as if it has vested on the date of cancellation, and any remaining expense is recognised immediately. If a new replacement award is substituted for the cancelled award, the cancelled and new award is treated as if they were a modification.

NOTE 33 RELATED PARTY DISCLOSURE

Parent entity
Vulcan Energy Resources Limited is the parent entity.

Subsidiaries
Interests in subsidiaries are set out in note 27.

Associates
Interests in associates are set out in note 25.

The aggregate compensation made to directors and other members of key management personnel of the consolidated entity is set out below.

	6 months	12 months
	31-Dec-22	30-Jun-22
	€	€
Short-term benefits	770,032	1,240,462
Post-employment benefits	38,325	45,206
Share-based payments	299,871	1,655,046
	1,108,228	2,940,714

(a) Transactions with associates

Loans to or from associates
There were no loans to or from associates at 31 December 2022 (30 June 2022: nil).

(b) Transactions with related parties

During the six month period ending 31 December 2022 payments for consultancy fees of €28,089 (30 June 2022: €33,968) were made to JRB Consulting Ltd, a related party of Ms Josephine Bush, in respect of expert advice on ESG reporting. There were no amounts outstanding as at 31 December 2022 to JRB Consulting Ltd (30 June 2022: €8,709) . There was €4,954 outstanding as at 31 December 2022 (30 June 2022: €nil) to Sustineri Strategy Ltd, a related party to Ms Josephine Bush in relation to ESG consulting provided.

On the 8th of September 2022 Vulcan entered into a contract with Dr Horst Kreuter to rent a flat at the rate of €1,810 per month and €418 operating costs monthly. The contract is a short-term lease. No amount was paid from inception of the contract and until 31 October 2022. The amount of €2,715 was outstanding as at 31 October 2022 and nil was outstanding as at 31 December 2022.

During the previous financial year, the Company issued 5,698 shares and 45,587 performance shares to Dr Horst Kreuter for the security consideration for the acquisition of Global Geothermal Holding UG (GGH, a company incorporated under the laws of Germany) on 6 July 2021, following shareholder approval at an EGM held in June 2021. Dr Kreuter was a shareholder of Global Geothermal Holding UG, which held geothermal and lithium exploration licenses applied for by GGH prior to Dr. Kreuter joining Vulcan, that were sold to Vulcan as part of the transaction.

The Company also completed the acquisition of GeoThermal Engineering GmbH (GeoT), a geothermal engineering consultancy business, on 2 July 2021 for €1. Dr Kreuter is the sole shareholder of GeoT. Dr. Kreuter will also receive 50% of any payments received from certain debtors to GeoT, if these payments are made to GeoT within

NOTE 33 RELATED PARTY DISCLOSURE (CONT.)

(c) Transactions with related parties (cont.)

18 months of completion of the acquisition. GeoT owes a debt of approximately €140,000 (plus a nominal amount of interest) to Dr. Kreuter, 50% of which will be paid within three months of completion of the acquisition, with the remaining 50% to be paid by no later than 31 December 2021.

During the previous financial year payments for consultancy fees of €52,834 were made to Alto Group Inc., a related party of Ms Annie Liu. There was no outstanding balance as at 30 June 2022.

Loans to/from related parties
There were no loans to or from related parties at the 31 December 2022 (30 June 2022: nil).

Other than the above, there were no other transactions with related parties during the period ended 31 December 2022.

Terms and conditions
All transactions were made on normal commercial terms and conditions and at market rates.

NOTE 34 COMMITMENTS

Below are the commitments in relation to its exploration and evaluation assets:

	31 Dec 2022 €'000	30 June 2022 €'000
Within one year	5,482	3,422
One to five years	4,708	6,293
	10,190	9,715

Below are the commitments in relation to capital expenditure:

	31 Dec 2022 €'000	30 June 2022 €'000
Within one year	30,383	18,362
One to five years	1,917	3,600
	32,300	21,962

NOTE 35 CONTINGENCIES

The Group has given bank guarantees as at 31 December 2022 of €1,245,000 (30 June 2022: €120,000)

The Group has no contingent assets and liabilities as at 31 December 2022 (30 June 2022 : nil).

NOTE 36 AUDITOR'S REMUNERATION

	31 Dec 2022 €'000	30 June 2022 €'000
Amounts received or due and receivable by RSM Australia Partners for:		
Audit or review of the annual financial report	73	109
Amounts received or due and receivable by RSM GmbH for:		
Audit or review of the annual financial report	95	88
Other services - RSM Australia Pty Ltd for:		
– Comfort letter in relation to listing prospectus	-	79
	168	276

NOTE 37 ACCUMULATED LOSSES

	6 months 31 Dec 22 €'000	12 months 30 Jun 22 €'000
Balance at beginning of the period/year	(28,422)	(9,571)
Loss after income tax for the period/year	(13,450)	(18,851)
Balance at end of the period/year	(41,872)	(28,422)

NOTE 38 PARENT ENTITY

	31 Dec 22 €'000	30 Jun 22 €'000
Statement of Financial Position		
ASSETS		
Current Assets	64,912	117,542
Non-Current Assets	169,934	133,308
Total Assets	234,846	250,850
LIABILITIES		
Current Liabilities	1,618	3,527
Non-Current Liabilities	68	-
Total Liabilities	1,686	3,527
EQUITY		
Issued Capital	259,158	258,933
Reserves	12,984	19,689
Accumulated losses	(38,981)	(31,299)
Total Equity	233,161	247,323
Statement of Profit or Loss and other comprehensive income		
Loss for the period/year	(7,682)	(21,479)
Total Comprehensive Loss	(7,682)	(21,479)

NOTE 38 PARENT ENTITY (CONT.)

Contingent liabilities
Other than disclosed at Note 35, the parent entity has no other contingent assets or contingent liabilities as at 30 June 2022 and 31 December 2022.

Capital commitments - Property, plant and equipment
The parent entity had no capital commitments for property, plant and equipment as at 30 June 2022 and 31 December 2022.

Exploration commitments
The parent entity has no exploration commitments as at 30 June 2022 and 31 December 2022.

Significant accounting policies
The accounting policies of the parent entity are consistent with those of the consolidated entity, as disclosed in the financial statements, except for the following:

(i.) Investments in subsidiaries are accounted for at cost, less any impairment, in the parent entity.

NOTE 39 DIVIDENDS

No dividend has been declared or paid during the period ended 31 December 2022 (30 June 2022: nil), and the Directors do not recommend the payment of a dividend in respect of the period ended 31 December 2022

Accounting Policy

Dividends
Dividends are recognised when declared during the financial period and no longer at the discretion of the Company.

NOTE 40 EVENTS AFTER THE REPORTING DATE

- On January 4, 2023, Vulcan signed a share purchase agreement to acquire Comeback Personaldienstleistungen GmbH, a company which provides skilled workforce in the drilling industry. The transaction was closed on 31 January 2023. Total consideration for the acquisition was €278,000 comprised of a €150,000 cash component as well as a qualified purchase price component of €128,000. The identifiable net assets and intangibles of the business totalled €296,000. The final purchase price allocation will be determined over the twelve-month period from completion.
- Sustainalytics, a Morningstar Company that is a leading independent ESG and corporate governance research, ratings and analytics firm, delivered Vulcan's first publicly available ESG Risk report in January, giving Vulcan an overall low ESG Risk Score of 16.8.
- Vulcan recently signed a Binding Term Sheet with Stellantis for the first phase of a multiphase project aimed at decarbonising the energy mix of the Rüsselsheim auto manufacturing site in the Upper Rhine Valley, Germany, through the development of new geothermal projects.
- On 13 February 2023, the Company announced the Zero Carbon Lithium™ Project's Phase One definitive feasibility study results. Key highlights were:
    - 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 NPV: €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 LHM carbon footprint.
    - Zero Scope 1 fossil fuels. Net water consumption very low. Increase in Resources and Reserves relative to Integrated Phase One PFS

Apart from the above, no other matter or circumstance has arisen since 31 December 2022 that has significantly affected, or may significantly affect the consolidated entity's operations, the results of those operations, or the consolidated entity's state of affairs in future financial years.

Directors’ Declaration

In the Directors’ opinion:

a) The financial statements and accompanying notes are in accordance with the Corporations Act 2001, including:
   i) complying with Australian Accounting Standards, the Corporations Regulations 2001 and other mandatory professional reporting requirements; and
   ii) giving a true and fair view of the consolidated entity’s financial position as at 31 December 2022 and of its performance for the six months ended on that date.

b) The financial statements and notes comply with International Financial Reporting Standards.

c) There are reasonable grounds to believe that the Company will be able to pay its debts as and when they become due and payable.

The Directors have been given the declarations required by section 295A of the Corporations Act 2001.

This declaration is made in accordance with a resolution of the Board of Directors made pursuant to section 295(5)(a) of the Corporations Act 2001 and is signed for and on behalf of the Directors by:

Gavin Rezos
Chairman

27 March 2023

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INDEPENDENT AUDITOR'S REPORT
TO THE MEMBERS OF
VULCAN ENERGY RESOURCES LIMITED

Opinion

We have audited the financial report of Vulcan Energy Resources Limited (the Company) and its subsidiaries (the Group), which comprises the consolidated statement of financial position as at 31 December 2022, the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the period 1 July 2022 to 31 December 2022, and notes to the financial statements, including a summary of significant accounting policies, and the directors' declaration.

In our opinion, the accompanying financial report of the Group is in accordance with the Corporations Act 2001, including:

(i) Giving a true and fair view of the Group's financial position as at 31 December 2022 and of its financial performance for the period 1 July 2022 to 31 December 2022; and

(ii) Complying with Australian Accounting Standards and the *Corporations Regulations 2001*.

Basis for Opinion

We conducted our audit in accordance with Australian Auditing Standards. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Report* section of our report. We are independent of the Group in accordance with the auditor independence requirements of the *Corporations Act 2001* and the ethical requirements of the Accounting Professional and Ethical Standards Board's APES 110 Code of Ethics for Professional Accountants (the Code) that are relevant to our audit of the financial report in Australia. We have also fulfilled our other ethical responsibilities in accordance with the Code.

We confirm that the independence declaration required by the *Corporations Act 2001*, which has been given to the directors of the Company, would be in the same terms if given to the directors as at the time of this auditor's report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial report of the current period. These matters were addressed in the context of our audit of the financial report as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key Audit Matter	How our audit addressed this matter
Exploration and Evaluation Expenditure Refer to Note 14 in the financial statements	
The Group has capitalised exploration and evaluation expenditure with a carrying value of €30,135,000 as at 31 December 2022. We considered this to be a key audit matter due to the significant management judgments involved in assessing the carrying value of the asset including: • Determination of whether the exploration and evaluation expenditure can be associated with finding specific mineral resources and the basis on which that expenditure is allocated to an area of interest; • Assessing whether exploration activities have reached a stage at which the existence of economically recoverable reserves may be determined; and • Assessing whether any indicators of impairment are present and if so, judgement applied to determine and quantify any impairment loss.	Our audit procedures included: • Assessing the Group's accounting policy for compliance with Australian Accounting Standards; • Obtaining a schedule of the areas of interest held by the Group and testing on a sample basis that the right to tenure of each relevant area of interest remained current at reporting date; • Testing a sample of additions to supporting documentation and ensuring the amounts capitalised for the period 1 July 2022 to 31 December 2022 are in compliance with the Group's accounting policy and relate to the area of interest; • Enquiring with management and reading budgets and other documentation as evidence that active and significant operations in, or relation to, the area of interest will be continued in the future; • Assessing and evaluating management's determination that exploration activities have not yet progressed to the stage where the existence or otherwise of economically recoverable reserves may be determined; • Assessing and evaluating management's assessment of whether indicators of impairment existed; and • Assessing the appropriateness of disclosures in the financial statements.

Key Audit Matter	How our audit addressed this matter
Share-based payments Refer to Note 32 in the financial statements	
During the period, the Group issued performance rights and shares to key management personnel, employees, consultants and vendors. Management has accounted for these instruments in accordance with AASB 2 *Share-Based Payment*. We have considered this to be a key audit matter because: • The complexity of the accounting associated with recording these instruments and management estimation in determining the fair value of instruments granted; • Management judgement is required to determine the probability of vesting conditions of these instruments and the inputs used in the valuation model to value these instruments; and • The recognition of the share-based payment expense is complex due to the variety of vesting conditions attached to these instruments.	Our audit procedures included: • Assessing the Group's accounting policy for compliance with Australian Accounting Standards; • Obtaining an understanding of the terms and conditions of these instruments granted; • Assessing the completeness of the instruments granted/expired/lapsed at reporting date; • Assessing the appropriateness of management's valuation methodology used to determine the fair value of these instruments granted; • Testing the key inputs used in the valuation model for each instrument granted; • Critically assessing management's determination of the vesting probability of each instrument; • Recalculating the amount of share-based payment expense recognised for the period 1 July 2022 to 31 December 2022 and reserve balance for accuracy and in accordance with the vesting conditions; and • Assessing the appropriateness of disclosures in the financial statements.

Other Information

The directors are responsible for the other information. The other information comprises the information included in the Group's annual report for the period 1 July 2022 to 31 December 2022 but does not include the financial report and the auditor's report thereon.

Our opinion on the financial report does not cover the other information and accordingly we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial report, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial report or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Directors for the Financial Report

The directors of the Company are responsible for the preparation of the financial report that gives a true and fair view in accordance with Australian Accounting Standards and the *Corporations Act 2001* and for such internal control as the directors determine is necessary to enable the preparation of the financial report that gives a true and fair view and is free from material misstatement, whether due to fraud or error.

In preparing the financial report, the directors are responsible for assessing the ability of the Group to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Report

Our objectives are to obtain reasonable assurance about whether the financial report as a whole is free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the Australian Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of this financial report.

A further description of our responsibilities for the audit of the financial report is located at the Auditing and Assurance Standards Board website at: https://www.auasb.gov.au/admin/file/content102/c3/ar1_2020.pdf This description forms part of our auditor's report.

Report on the Remuneration Report

Opinion on the Remuneration Report

We have audited the Remuneration Report included in the directors' report for the period 1 July 2022 to 31 December 2022.

In our opinion, the Remuneration Report of Vulcan Energy Resources Limited, for the period 1 July 2022 to 31 December 2022, complies with section 300A of the *Corporations Act 2001*.

Responsibilities

The directors of the Company are responsible for the preparation and presentation of the Remuneration Report in accordance with section 300A of the *Corporations Act 2001*. Our responsibility is to express an opinion on the Remuneration Report, based on our audit conducted in accordance with Australian Auditing Standards.

RSM

RSM AUSTRALIA PARTNERS

Perth, WA
Dated: 27 March 2023

AIK KONG TING
Partner

ASX ADDITIONAL INFORMATION

Additional information required by the Australian Securities Exchange and not shown elsewhere in this Annual Report is as follows. The information is current as of 13 March 2023.

1. Fully paid ordinary shares

- There is a total of 143,435,301 fully paid ordinary shares on issue which are listed on the ASX.
- The number of holders of fully paid ordinary shares is 31,891.
- Holders of fully paid ordinary shares are entitled to participate in dividends and the proceeds on winding up of the Company.
- There are no preference shares on issue.

2. Distribution of fully paid ordinary shareholders is as follows:

Range	Number of holders	Number of shares	% of Issued Capital
1 - 1,000	24,049	7,770,772	5.42
1,001 - 5,000	6,113	14,001,733	9.76
5,001 - 10,000	956	7,093,250	4.95
10,001 - 100,000	710	18,166,351	12.67
100,001 Over	63	96,403,195	67.21
Total	**31,891**	**143,435,301**	**100.00**

3. Holders of non-marketable parcels

Holders of non-marketable parcels are deemed to be those whose shareholding is valued at less than $500.

There are 4,871 shareholders who hold less than a marketable parcel of shares, amount to 0.19% of issued capital based on a price per Share of $6.00.

4. Substantial shareholders of ordinary fully paid shares

The names of substantial shareholders who have notified the Company in accordance with section 671B of the Corporations Act 2001 are:

	Holding Balance	% of Issued Capital
Mr Francis Edward Barnabas Wedin and related parties	16,458,561	11.47
PSA Automobiles S.A	11,448,959	7.98
Vivien Enterprises Pte Ltd	7,598,727	5.29
Mrs Georgina Hope Rinehart and Hancock Prospecting Pty Ltd (HPPL) and subsidiaries of HPPL	7,424,534	5.18

5. Share buy-backs

There is currently no on-market buyback program for any of Vulcan Energy Resources' listed securities.

6. Voting rights of Shareholders

All fully paid ordinary shareholders are entitled to vote at any meeting of the members of the Company and their voting rights are on:

- Show of hands – one vote per shareholders; and
- Poll – one vote per fully paid ordinary share.

7. Major Shareholders

Twenty largest shareholders

Rank	Shareholders	Number Held	Percentage (%)
1	BNP PARIBAS NOMINEES PTY LTD ACF CLEARSTREAM	23,253,674	16.21%
2	PSA AUTOMOBILES SA	11,448,959	7.98%
3	HSBC CUSTODY NOMINEES (AUSTRALIA) LIMITED	11,265,765	7.85%
4	MR FRANCIS EDWARD BARNABAS WEDIN[1]	6,096,667	4.25%
4	MR FRANCIS EDWARD BARNABAS WEDIN[1]	6,096,667	4.25%
5	MR JOHN LANGLEY HANCOCK	4,688,000	3.27%
6	BNP PARIBAS NOMS PTY LTD	4,625,381	3.22%
7	CITICORP NOMINEES PTY LIMITED	4,264,038	2.97%
8	MR FRANCIS EDWARD BARNABAS WEDIN[1]	3,452,727	2.41%
9	J P MORGAN NOMINEES AUSTRALIA PTY LIMITED	2,791,220	1.95%
10	MONSLIT PTY LTD <ANTHONY TORRESAN A/C>[2]	1,600,000	1.12%
11	HSBC CUSTODY NOMINEES (AUSTRALIA) LIMITED	1,295,352	0.90%
12	LHO LA PTY LTD <ACME FOUNDATION A/C>	1,018,559	0.71%
13	SNOWBALL 3 PTY LTD <ANTONIO TORRESAN SUPER A/C>[2]	937,000	0.65%
14	BNP PARIBAS NOMINEES PTY LTD <IB AU NOMS RETAILCLIENT DRP>DRP>	846,099	0.59%
15	MAGNI ASSOCIATES PTY LTD[1]	812,500	0.57%
16	RHODIUM CAPITAL PTY LTD <RHODIUM INVESTMENT A/C>	750,000	0.52%
17	ALDOVALE PTY LIMITED	636,684	0.44%
18	PULA HOLDINGS PTY LTD <HERATH SUPER FUND A/C>	627,800	0.44%
19	M & E EARTHMOVING PTY LTD	544,791	0.38%
20	KIC INNOENERGY SE	521,304	0.36%
	TOTAL	**87,248,194**	**60.83%**

[1] Dr Francis Edward Barnabas Wedin and his related parties hold a total of 16,458,561 Shares (11.5%)

[2] Part of the Torresan Group which holds a total of 2,537,000 Shares (1.77%)

8. Options

There are no listed or unlisted options on issue as at 13 March 2023.

9. Tax Status

The Company is treated as a public company for taxation purposes.

10. Franking Credits

The Company has no franking credits.

11. Business Objectives

Vulcan Energy Resources Limited has used its cash and cash equivalents held at the time of listing in a way consistent with its stated business objectives.

12. Tenement Schedule

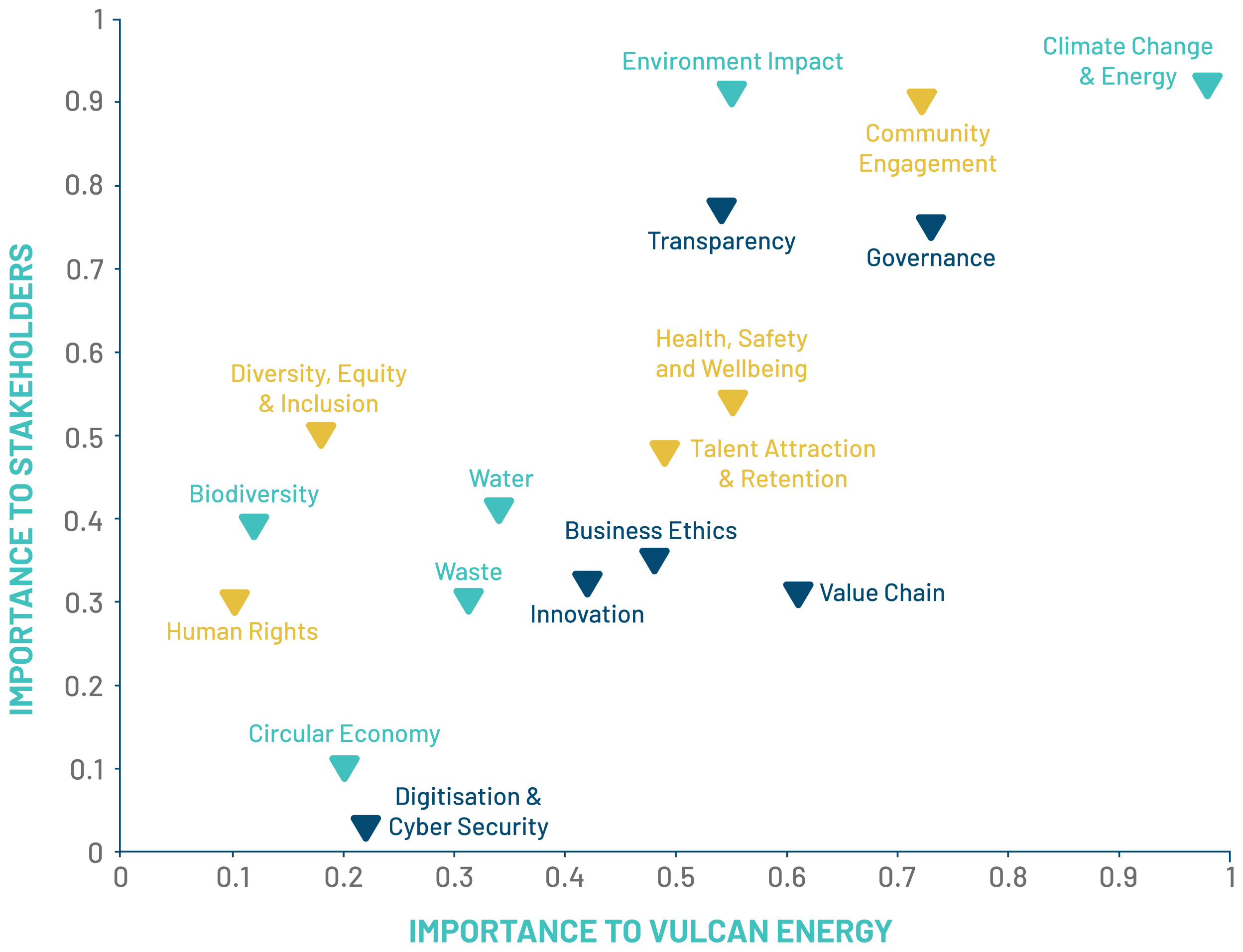
The following table sets out the tenement information as required by ASX Listing Rule 5.3.3.

Name	State	Area (ha)	Area (km^2)	Type	Expiry Date (MM/YYYY)	Ownership at 31 December 2022	Change in ownership
Upper Rhine Valley Geothermal-Lithium Brine Field							
Insheim	Rhineland-Palatinate	1,900	19 .00	Production License	11/2037	100%	N/A
Ortenau	Baden-Württemberg	37,410	374.10	Exploration License	06/2023	100%	N/A
Mannheim	Baden-Württemberg	14,449	144.49	Exploration License	06/2024	100%	N/A
Lampertheim	Hesse	10,803	108.03	Exploration License	07/2024	100%	N/A
Lampertheim II	Hesse	198	1.98	Exploration License	07/2024	100%	N/A
Waldnerturm	Baden-Württemberg	2,044	20.44	Exploration License	12/2024	100%	N/A
Taro/Lisbeth	Baden-Württemberg	3,268	32.68	Exploration License	TAR 08/2025 LIS 09/2024	100%	N/A
Ludwig	Rhineland-Palatinate	9,634	96.34	Exploration License	12/2024	100%	N/A
Therese	Rhineland-Palatinate	8,112	81.12	Exploration License	12/2024	100%	N/A
Kerner	Rhineland-Palatinate	7,226	72.26	Exploration License	12/2024	100%	N/A
Lionheart	Rhineland-Palatinate	7,543	75.43	Exploration License	12/2024	100%	N/A
Landau-Sued/ Ilka	Rhineland-Palatinate	1,941	19.41	Production License Geothermal/ Exploration License Lithium	LAN 05/2034 ILK 11/2025	Brine offtake agreement with owner/operator for existing operation. 51:49% JV (VUL – 51%) set up for the development of a new project in the license.	
Flaggenturm/ Fuchsmantel	Rhineland-Palatinate	14,114	141.14	Exploration License	FLA 12/2024 FUC 07/2023	100%	N/A
Ried	Hesse	28,992	289.92	Exploration License	07/2025	100%	100%
Rift-North	Rhineland-Palatinate	6,183	61.83	Exploration License	06/2027	50:50 co-owned by VUL and GET (officially confirmed by the Mining Authority); contractually agreed with GET that VUL will have 100% ownership of first new production project developed and associated royalty payments to GET.	
Cesano Field							
Cesano	Italy	1,146	11.46	Research Permit	01/2025	50:50 co-owned by VUL and EGP	

APPENDIX

Material Topics Matrix and Definitions

The Materiality Assessment process was conducted in accordance with GRI Standards and involved reviewing global industry trends, benchmarking key peers and leaders, as well as interviews with our key external and internal stakeholders, including Vulcan's Board of Directors and members of our executive team. Results from the assessment were then categorised into a matrix to give a grade of importance to each of our identified material topics as they relate to stakeholders and Vulcan.



Material Issue Definitions	
Biodiversity	Impacts on natural habitats and ecosystems across Vulcan Energy's value chain; including operational impacts on biodiversity, pollinator protection, soil health and land stewardship practices.
Climate change and energy	Mitigation of and adaptation to climate change across Vulcan Energy's value chain; including renewable energy generation, energy use and efficiency, risks to the business from climate change effects (including supply chain resilience and impacts to infrastructure).
Circular economy	Enabling a circular battery value chain.
Environmental impact	Minimising all environmental impacts, including seismic activity linked to geothermal drilling, by utilising best practices and remaining compliant with all regulations.
Waste	Management of waste, including overall operational waste efficiency and recycling from lithium processing.
Water	Minimising the amount of water consumed through effective recycling and replenishment of withdrawn water and effectively mitigating impacts to groundwater.
Community engagement	Effective engagement with the communities in which Vulcan Energy operates. Contributing to local communities as a business partner (e.g., job creation and tax payments) and community partner (e.g., understanding and meeting community needs); effectively considering environmental and social concerns in business policies, decisions and operations.
Diversity, equity and inclusion	An inclusive culture, employee diversity, board and leadership diversity.
Health, safety and wellbeing	Culture around work-life balance, employee well-being and mental health, as well as compliance with worker health and safety requirements.
Human Rights	Human rights within the Vulcan Energy's value chain, including supply chain and lithium offtakers.
Talent attraction and retention	Attracting and retaining world-class talent and providing opportunities for ongoing skills training and professional development.
Business ethics	Adhering to the Vulcan Values and policies set out for our company to behave ethically, including compliance with laws, anti-corruption and bribery; anti-competitive behaviour; paying fair share of local, regional and national taxes; and conducting political engagement/lobbying transparently.
Digitisation and cyber security	Company digitisation and digital efficiency. Protection of the company and its stakeholders' (suppliers, customers, employees and others) data. Guarding against threats to data, such as protecting data from loss, corruption, or unauthorized access, and governing how data, specifically personal data, is legitimately used and disclosed.
Governance	Executive governance of Vulcan Energy, including the execution and oversight of ESG strategy, Board composition, executive remuneration, shareholder rights and enterprise risk management.
Innovation	Executing current innovation while continually updating the company's technology and systems to maximise efficiency and ESG performance.
Value chain	Taking responsibility for human rights and environmental performance across the company's value chain and ensuring that workers are treated fairly and supported in meeting the ethical standards set out by our company.
Transparency	Transparently reporting Vulcan Energy's positive and negative impacts on society and the environment, including the company's progress on its goals and strategic objectives.

GRI Content Index

Statement of use	GRI 1 used
Vulcan Energy Resources has reported the information cited in this GRI content index for the period July 1 - 31 December 2023 with reference to the GRI Standards.	GRI 1: Foundation 2021

GRI STANDARD	DISCLOSURE	LOCATION
Organisational Profile		
GRI 2: General Disclosures 2021	2-1 Organizational details	p.3 Vulcan's Annual Reporting Suite
	2-2 Entities included in the organization's sustainability reporting	p.3 Vulcan's Annual Reporting Suite p.12 Group Structure
	2-3 Reporting period, frequency and contact point	p.3 Vulcan's Annual Reporting Suite
	2-4 Restatements of information	There are no restatements of information in this report.
	2-5 External assurance	Data in this report has not been externally assured.
	2-6 Activities, value chain and other business relationships	p.13 Vulcan's Purpose p.18 Reserves and Resources p.28 - 31 Partnerships
	2-7 Employees	p.53 - 54 Talent attraction and retention
	2-8 Workers who are not employees	Vulcan Group uses subcontractors, but does not have systems to track the total number. Vulcan Group is considering this for future reporting.
	2-9 Governance structure and composition	p.14-15 Board of Directors and Leadership team Corporate directory https://v-er.eu/corporate-directory-and-governance/
	2-10 Nomination and selection of the highest governance body	p.2 Company website: 2022 Corporate Governance Statement
	2-11 Chair of the highest governance body	p.14 Board of Directors
	2-12 Role of the highest governance body in overseeing the management of impacts	p.36 Sustainability and ESG Governance Structure
	2-13 Delegation of responsibility for managing impacts	p.4 Governance, 2022 TCFD Report
	2-14 Role of the highest governance body in sustainability reporting	p.4 Governance, 2022 TCFD Report

GRI STANDARD	DISCLOSURE	LOCATION
	2-15 Conflicts of interest	p.3 Company website: Corporate Code of Conduct and Ethics Company website: https://v-er.eu/wp-content/uploads/2022/06/POL_UPDATED-Code-of-Conduct-Ethics.pdf
	2-16 Communication of critical concerns	Corporate Code of Conduct and Ethics p 3 Company website: https://v-er.eu/wp-content/uploads/2022/06/POL_UPDATED-Code-of-Conduct-Ethics.pdf
	2-17 Collective knowledge of the highest governance body	Company website: Corporate Governance 2022 Corporate Governance Statement
	2-18 Evaluation of the performance of the highest governance body	Company website: Corporate Governance 2021 Corporate Governance Statement
	2-19 Remuneration policies	p.75 - 102 Remuneration report
	2-20 Process to determine remuneration	Prospectus February 2022 p 144 - 146 Remuneration Policy https://www.investi.com.au/api/announcements/vul/7f0e696c-923.pdf (29/08/22)
	2-21 Annual total compensation ratio	p.54 Employee training
	2-22 Statement on sustainable development strategy	p. 34 Vulcan's approach to Sustainability,
	2-23 Policy commitments	p. 4 Governance, 2022 TCFD Report p. 40 - 41 ESG Roadmap and achievements
	2-24 Embedding policy commitments	p. 4 Governance, 2022 TCFD Report
	2-25 Processes to remediate negative impacts	p. 55 Community engagement p.56 - 60 Corporate Governance
	2-26 Mechanisms for seeking advice and raising concerns	Vulcan Energy Whistleblower Protection Policy: https://vulcan.co/wp-content/uploads/2021/10/Vulcan-Whistleblower-Policy.pdf

GRI STANDARD	DISCLOSURE	LOCATION
	2-27 Compliance with laws and regulations	p. 56 Corporate Governance
	2-28 Membership associations	p.28 - 31 Partnerships
	2-29 Approach to stakeholder engagement	p.54 Community Engagement
	2-30 Collective bargaining agreements	0% of employees utilise collective bargaining agreements.
Materiality Assessment		
GRI 3: Material Topics 2021	3-1 Process to determine material topics	p.37 - 39 Materiality Assessment,
	3-2 List of material topics	p. 182 - 183 Material topics matrix and definitions
	3-3 Management of material topics	p. 32 - 55 Sustainability report 2022 TCFD Report
Economic Topics		
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	p. 69 Corporate financial performance
	201-2 Financial implications and other risks and opportunities due to climate change	2022 TCFD Report
	201-3 Defined benefit plan obligations and other retirement plans	Vulcan Group does not currently report this confidential data but is considering reporting this in future years.
	201-4 Financial assistance received from government	Vulcan Group does not currently report this data.
GRI 202: Market Presence 2016	202-1 Ratios of standard entry level wage by gender compared to local minimum wage	p. 54 Diversity, equity and inclusion
	202-2 Proportion of senior management hired from the local community	p. 54 Diversity, equity and inclusion
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	p.143 - 152 Note 25 - note 29
	203-2 Significant indirect economic impacts	p.10 About Vulcan
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	Vulcan Group does not currently report this data but is considering reporting this in future years.
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	Vulcan Group does not currently report this data.
	205-2 Communication and training about anti-corruption policies and procedures	Vulcan Group does not currently report on communication and training about anti-corruption policies and procedures but is considering reporting this in future years.
	205-3 Confirmed incidents of corruption and actions taken	No confirmed incidents for corruption during this reporting period.

GRI STANDARD	DISCLOSURE	LOCATION
GRI 206: Anti-competitive Behavior 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Vulcan Group does not currently report this data.
GRI 207: Tax 2019	207-1 Approach to tax	p.77 Annual Report
	207-2 Tax governance, control, and risk management	p.24-25 Risk Management, Sustainability Report 2022
	207-3 Stakeholder engagement and management of concerns related to tax	p.13 Stakeholder Engagement p.58 Material Issue Topic Definitions
	207-4 Country-by-country reporting	p.25 Market Disclosures, Corporate Governance 2022
Environmental Topics		
GRI 302: Energy 2016	302-1 Energy consumption within the organization	Vulcan Group does not currently report this data but is considering reporting this data in future reports.
	302-2 Energy consumption outside of the organization	Vulcan Group does not currently report this data but is considering reporting this data in future reports.
	302-3 Energy intensity	Vulcan Group does not currently report this data but is considering reporting this data in future reports.
	302-4 Reduction of energy consumption	Vulcan Group does not currently report this data but is considering reporting this data in future reports.
	302-5 Reductions in energy requirements of products and services	Vulcan Group does not currently report this data but is considering reporting this data in future reports.
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	p.29 Water, Sustainability Report 2022
	303-2 Management of water discharge-related impacts	p.29 Water, Sustainability Report 2022
	303-3 Water withdrawal	p.29 Water, Sustainability Report 2022
	303-4 Water discharge	p.29 Water, Sustainability Report 2022
	303-5 Water consumption	p.29 Water, Sustainability Report 2022
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	p.29 Biodiversity, Sustainability Report 2022
	304-2 Significant impacts of activities, products and services on biodiversity	p.29 Biodiversity, Sustainability Report 2022
	304-3 Habitats protected or restored	p.29 Biodiversity, Sustainability Report 2022
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	Vulcan Group does not currently report this data but is considering reporting this in future years.

GRI STANDARD	DISCLOSURE	LOCATION
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	p.46 Emissions
	305-2 Energy indirect (Scope 2) GHG emissions	p.46 Emissions
	305-3 Other indirect (Scope 3) GHG emissions	p.46 Emissions
	305-4 GHG emissions intensity	p.46 Emissions
	305-5 Reduction of GHG emissions	2022 TCFD Report
	305-6 Emissions of ozone-depleting substances (ODS)	Vulcan Group does not currently report this data.
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Vulcan Group does not currently report this data.
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	p.44 Waste
	306-2 Management of significant waste-related impacts	p.43 Resource management
	306-3 Waste generated	p.44 Waste
	306-4 Waste diverted from disposal	p.44 Waste
	306-5 Waste directed to disposal	p.44 Waste
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	Vulcan Group does not currently report this data but is considering reporting this in future years.
	308-2 Negative environmental impacts in the supply chain and actions taken	Vulcan Group does not currently report this data but is considering reporting this in future years.
Social Topics		
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	p.53 Talent attraction and retention
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	Vulcan Group does not currently report this data but is considering reporting this in future years.
	401-3 Parental leave	Vulcan Group does not currently report this data but is considering reporting this in future years.
GRI 402: Labor/Management Relations 2016	402-1 Minimum notice periods regarding operational changes	Vulcan Group does not currently report this data but is considering reporting this in future years.

GRI STANDARD	DISCLOSURE	LOCATION
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	p.30-31 Health, Safety & Wellbeing, Sustainability Report 2022
	403-2 Hazard identification, risk assessment, and incident investigation	p.30-31 Health, Safety & Wellbeing, Sustainability Report 2022
	403-3 Occupational health services	p.30-31 Health, Safety & Wellbeing, Sustainability Report 2022
	403-4 Worker participation, consultation, and communication on occupational health and safety	p.30-31 Health, Safety & Wellbeing, Sustainability Report 2022
	403-5 Worker training on occupational health and safety	p.54 Employee training
	403-6 Promotion of worker health	p.53 Talent attraction and retention
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	p.30 Health, Safety & Wellbeing, Sustainability Report 2022
	403-8 Workers covered by an occupational health and safety management system	p.29-30 Health, Safety & Wellbeing, Sustainability Report 2022
	403-9 Work-related injuries	p.17 Health and safety
	403-10 Work-related ill health	p.30 Health, Safety & Wellbeing, Sustainability Report 2022
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	p. 54 Employee training
	404-2 Programs for upgrading employee skills and transition assistance programs	p. 53 Talent attraction and retention
	404-3 Percentage of employees receiving regular performance and career development reviews	Vulcan Group does not currently report this data but is considering reporting this in future years.
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	p.54 Diversity, equity and inclusion
	405-2 Ratio of basic salary and remuneration of women to men	Vulcan Group does not currently report this confidential data but is considering reporting this in future years.
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	Vulcan Group does not currently report this data but is considering reporting this in future years.
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Vulcan Group does not currently report this data but is considering reporting this in future years.

GRI STANDARD	DISCLOSURE	LOCATION
GRI 408: Child Labor 2016	408-1 Operations and suppliers at significant risk for incidents of child labor	Vulcan Group does not currently report this data but is considering reporting this in future years.
GRI 409: Forced or Compulsory Labor 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	Vulcan Group does not currently report this data but is considering reporting this in future years.
GRI 410: Security Practices 2016	410-1 Security personnel trained in human rights policies or procedures	Vulcan Group does not currently report this data because we do not utilise security personnel but will consider reporting this in future years if applicable.
GRI 411: Rights of Indigenous Peoples 2016	411-1 Incidents of violations involving rights of indigenous peoples	Vulcan Group does not currently report this data because we do not operate in at risk areas but will consider reporting this in future years if applicable
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	p. 37 Materiality p. 55 Community engagement p. 182 Material topics matrix and definitions
	413-2 Operations with significant actual and potential negative impacts on local communities	p.37 Materiality
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	Vulcan Group does not currently report this data but is considering reporting this in future years.
	414-2 Negative social impacts in the supply chain and actions taken	Vulcan Group does not currently report this data but is considering reporting this in future years.
GRI 415: Public Policy 2016	415-1 Political contributions	p.50 Business Ethics, Sustainability Report 2022
GRI 417: Marketing and Labeling 2016	417-1 Requirements for product and service information and labeling	Vulcan Group does not currently report this data because we do not sell retail products.
	417-2 Incidents of non-compliance concerning product and service information and labeling	Vulcan Group does not currently report this data because we do not sell retail products or services but will consider reporting this in future years if applicable.
	417-3 Incidents of non-compliance concerning marketing communications	Vulcan Group does not currently report this data because we have not had any non-compliance incident but will consider reporting this in future years if applicable
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	p.54 Digitisation and Cyber Security, Sustainability Report 2022

United Nations Guiding Principles Initial Assessment

This table represents our initial assessment of the UN Global Compact Ten Principles

Human Rights	
Businesses should support and respect the protection of internationally proclaimed human rights Businesses should ensure that they are not complicit in human rights abuses	Vulcan Group has developed a Diversity Policy. Our Corporate Code of Conduct and Ethics and Sustainable Supplier Policy addresses risks associated with human rights. No significant human rights-related issues were identified in this reporting period.
Labour	
Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining Businesses should uphold the elimination of forced or compulsory labour Businesses should uphold the effective abolition of child labour Businesses should uphold the elimination of discrimination in respect of employment and occupation	The diverse nature of our business means we have a mix of collective and individually regulated employment arrangements. Whatever the nature of those arrangements, we recognise the right of our employees to freely associate and join trade unions. Vulcan Group consults with its employee's unions as required and recognises and supports the rights of trade unions to enter the workplace to hold discussions and investigate alleged breaches as per Fair Work Act 2009. Vulcan is not aware of any business activities activities which are at risk from forced/compulsory labour and child labour issues. Assessments of our supply chain labour risks are undertaken through our Sustainable Supplier Policy. Vulcan Group meets its obligations under anti-discrimination legislation, which is supported by our policies regarding the making of complaints via our Whistlebower Protection Policy, Corporate Code of Conduct and Ethics, People and Performance Committee Charter, and Diversity Policy. Vulcans' remuneration strategy and practices do not differentiate based on gender.
Environment	
Businesses should support a precautionary approach to environmental challenges Businesses should undertake initiatives to promote greater environmental responsibility Businesses should encourage the development and diffusion of environmentally friendly technologies	Vulcan Group has developed an Environmental Management Policy and Sustainability and ESG Framework which outlines our commitment to the environmental in which we operate. Embedding risk management processes into all our critical business systems allows us to adopt a precautionary approach to business management that is based on valid data and sound science. Vulcan Group's environmental innovation approaches include showcasing environmental best practices across the business continually updating the company's technology and systems to maximise efficiency and Sustainability and ESG performance, and working towards reduced water usage and consumption, through recycling as much water as possible during the lithium extraction process.
Anti-Corruption	
Businesses should work against all forms of corruption, including extortion and bribery	Vulcan Group has a Corporate Code of Conduct and Ethics, Anti-Bribery and Anti-Corruption Policy and associated training and engagement, Whistleblower Protection Policy, and Continuous Disclosure Policy with a focus on continuous disclosure compliance. Vulcan Group will not make political contributions in cash or in-kind and will not participate directly in the activities of political parties.

CORPORATE DIRECTORY

Board of Directors

MR GAVIN REZOS
Non-Executive Chairman

DR FRANCIS WEDIN
Managing Director

MS RANYA ALKADAMANI
Non-Executive Director

MS ANNIE LIU
Non-Executive Director

DR HEIDI GRÖN
Non-Executive Director

MS JOSEPHINE BUSH
Non-Executive Director

DR GÜNTER HILKEN
Non-Executive Director

MR MARK SKELTON
Non-Executive Director

Board Advisors

MS JULIA POLISCANOVA
Board Advisor

DR HORST KREUTER
Board Advisor and CEO Germany

Company Secretary

MR DANIEL TYDDE
(appointed 15 June 2021)

Registered Office

Level 11, Brookfield Place
125 St Georges Terrace
Perth WA 6005
Australia

Telephone: 08 6189 8767
Website: https://v-er.eu

Stock Exchange Listing

Listed on the Australian Securities Exchange
(ASX Code: VUL)

Listed on Prime Standard of Frankfurt Stock Exchange
(FSE Code: VUL)

Auditors

RSM AUSTRALIA PARTNERS
Level 32, 2 the Esplanade
Perth WA 6000

Solicitors

ASHURST
Brookfield Place Tower II
Level 10 and 11 St Georges Terrace
Perth WA 6000

Bankers

WESTPAC BANKING CORPORATION
Level 4, Brookfield Place, Tower Two
123 St Georges Terrace
Perth WA 6000

Share Registry

AUTOMIC SHARE REGISTRY
Level 2, 267 St Georges Terrace
Perth WA 6000
Telephone: 1300 288 664


IDECO
360

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