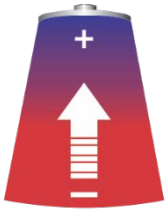
KOPPAR RESOURCES



ASX Release
26 August 2019
ASX: KRX

COMMENCEMENT OF ZERO CARBON LITHIUM SCOPING STUDY & APPOINTMENT OF HATCH

Highlights

- **Scoping Study Commenced, Targeting Zero Carbon Lithium Production from the Vulcan Lithium Project**
- **Engineering and Consulting company Hatch has been engaged to provide engineering services**

Koppar Resources Ltd. ("Koppar", "KRX", "the Company") is pleased to announce the **commencement of a Scoping Study at its Vulcan Lithium Project**, in the Upper Rhine Valley of Germany. This is part of the Company's strategic aim to become the world's first producer of **Zero Carbon Lithium.**

Hatch Ltd. ("Hatch") have been engaged to undertake engineering services and brings together global industry leading lithium and geothermal power expertise from over 9,000 staff in 70+ offices. The Scoping Study for the Project includes the design of an integrated geothermal and lithium extraction plant.

The Vulcan Lithium Project is aiming to be Europe's and the world's first **Zero Carbon Lithium** project. It aims to do achieve this by producing battery-grade lithium hydroxide from hot sub-surface geothermal brines pumped from wells, with a renewable energy by-product, without the need for hard-rock mining. The Company recently announced a substantial Exploration Target of 10.73 to 36.20 Mt of contained LCE (Lithium Carbonate Equivalent), at its Vulcan Lithium Project in the Upper Rhine Valley of Germany[1]. The Exploration Target's potential quantity and grade is conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource, and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

The Vulcan Lithium Project is **strategically located**, within a region well-serviced by local industrial activity, **at the heart of the European auto and lithium-ion battery manufacturing industry**, just 60km from Stuttgart. The burgeoning European battery manufacturing industry is forecast to be the **world's second largest**, with currently zero domestic supply of battery grade lithium products.

Highlights

Large geothermal brine field, uniquely rich in lithium in the Upper Rhine Valley.

Aiming to be the world's first **Zero Carbon Lithium** producer.

Strategically located at the heart of the EU auto & Li-ion battery industry.

Corporate Directory

Proposed MD
Dr Francis Wedin

Proposed Chairman
Gavin Rezos

In-Country Principal
Dr Horst Kreuter

Chairman
Patrick Burke

Non-Exec Director
Bill Oliver

Non-Exec Director
Rebecca Morgan

Fast Facts

Issued Capital: 39,083,335
Market Cap (@19.0): $7.4m

Contact

Suite 2, 1 Altona St,
West Perth
WA 6005 Australia
08 6559 1792
www.kopparresources.com
info@kopparresources.com
@kopparresources

[1] KRX ASX announcement 20/08/2019. All material assumptions and technical parameters underpinning the Exploration Target in the relevant announcement continue to apply and have not materially changed.

Vulcan Lithium Project Summary

The Vulcan Lithium Project is in the Upper Rhine Valley (URV) geothermal field in Germany, an area **uniquely endowed with lithium-rich, hot sub-surface brines**. These brines have been sampled extensively at multiple locations throughout the URV, **with lithium grades often above 150 mg/l Li and up to 210 mg/l Li**. These concentrations are similar to the Salton Sea brines in California which are being developed by a number of companies to produce power and lithium.

The aim will be to explore and develop the Vulcan Project to produce **battery-grade lithium hydroxide** from geothermal brines. Subject to confirmation in proposed study work, a **Direct Lithium Extraction (DLE) process** will be used for lithium processing which is **quicker and less water and carbon-intensive** relative to the evaporative method used in South American salars. The temperature of the brines is anticipated to be an advantage in the development of the processing method. As a by-product of the production process, renewable geothermal energy could be generated from dual-purpose wells that fully offsets energy consumed in lithium production & processing, providing a premium, **"Zero Carbon Lithium"** product for the EV market.

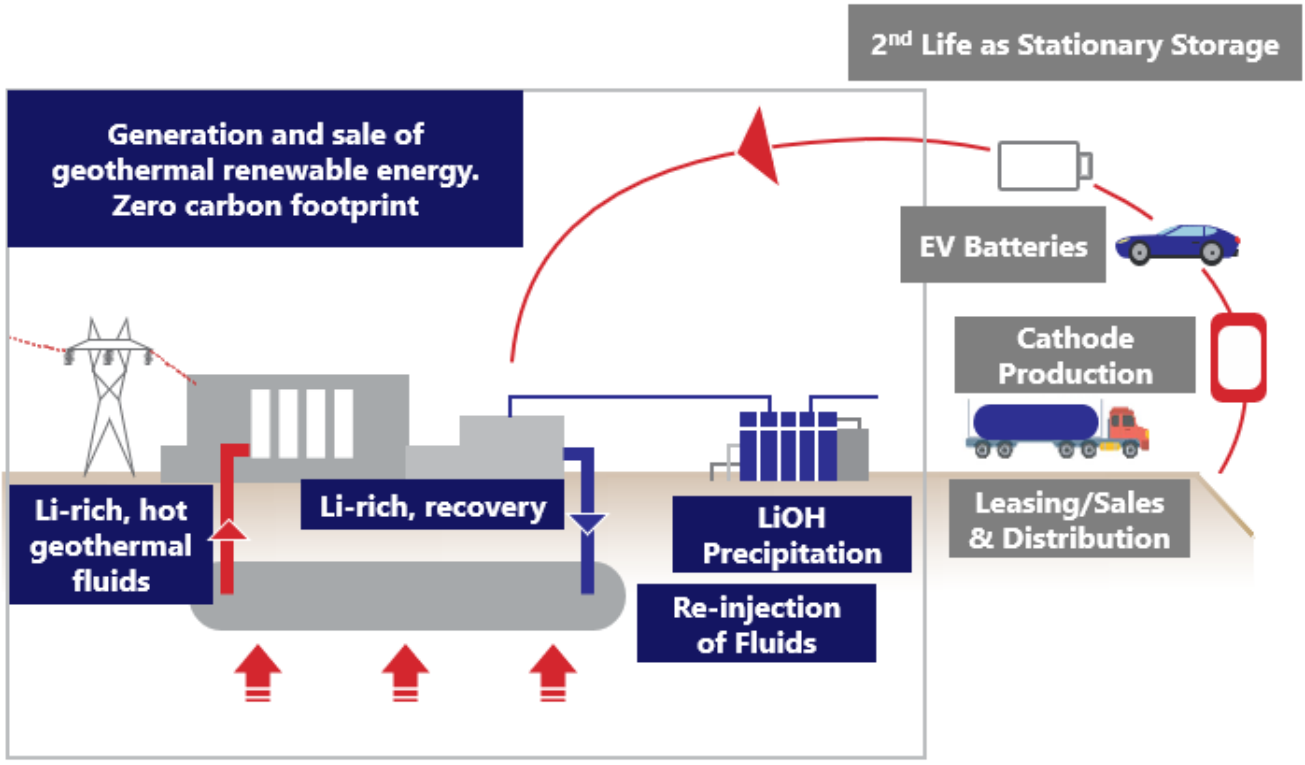


Figure 1: Planned process to produce Zero Carbon Lithium at the Vulcan Lithium Project

The project comprises two granted licenses and three license applications covering a total area of approximately 78,600ha. The Upper Rhine Valley brine field has been extensively studied due to its geological and geothermal characteristics, including exploration for oil and gas. As a consequence, the Company is acquiring a project in a very well understood brine field with considerable amounts of existing seismic and drilling data potentially available for exploration and resource evaluation.

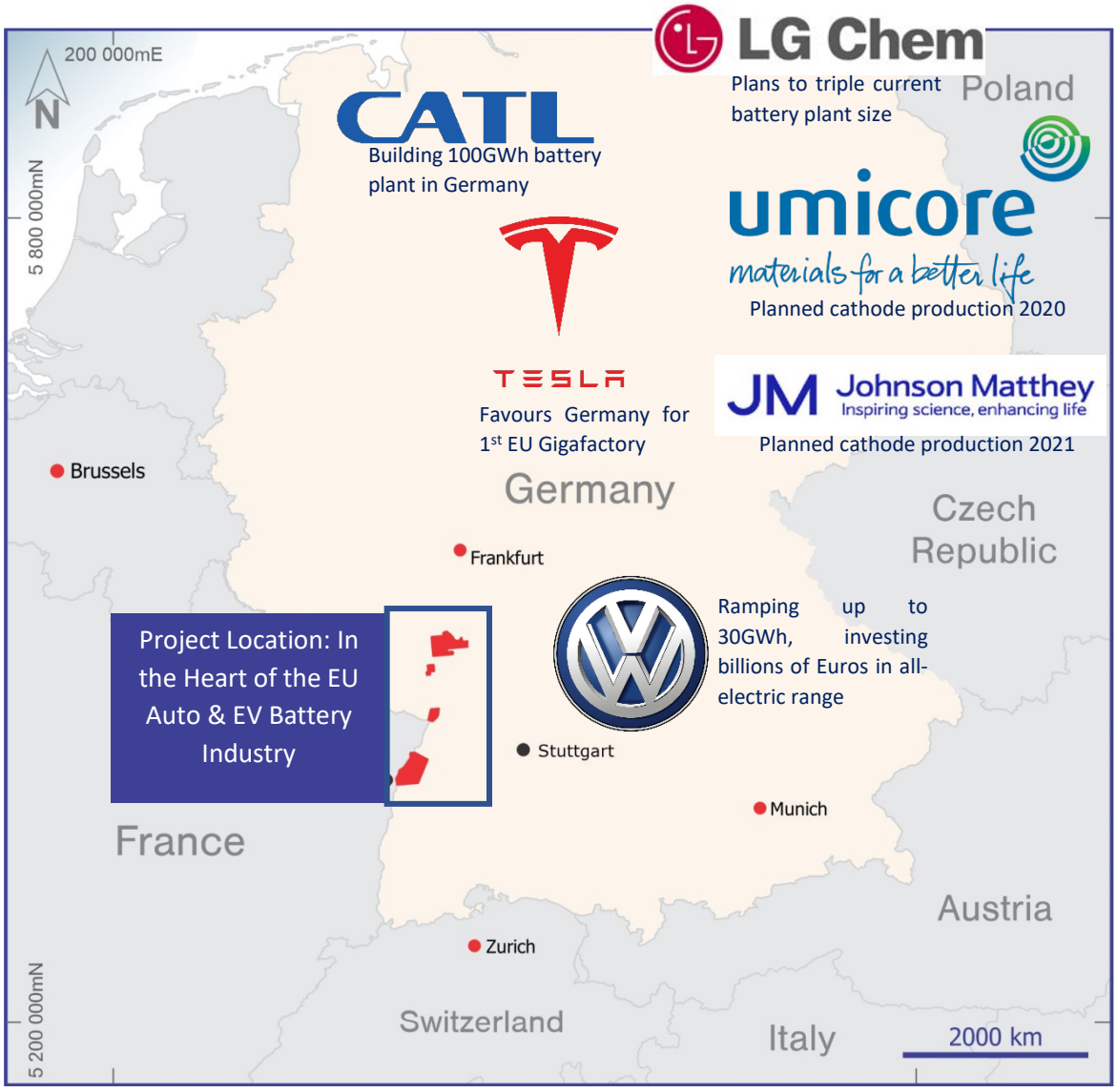


Figure 2: Vulcan project location, in the heart of European battery electric vehicle production

Need for a European, Low-Carbon Lithium Supply Chain

Hard-rock lithium operations have a high carbon footprint from processing methods and distance to markets, as well as a significant surface impact from mining operations which makes new projects unpopular in Europe. There is a bottleneck of lithium mineral concentrate processing to downstream, battery-grade lithium chemicals which as a consequence has reduced spodumene prices. Salar lithium operations in South America, typically at over 3,000 m above sea level, use large quantities of soda ash mined in the USA that needs to be transported to remote locations, resulting in a substantial carbon footprint. Salar operations also use large amounts of water in some of the driest places on earth. The salar evaporation process takes a long time (up to 12 months) and is vulnerable to weather events.

Electric Vehicle (EV) battery raw material supply chains have a carbon footprint problem. OEMs are **actively trying to reduce the carbon footprint** of their battery supply chains to bolster the credibility of their EV offerings. For example, **Volkswagen is placing great importance on having a CO_2-neutral production supply chain** for its new EV line-up, with **its sustainability metric for suppliers planned to be on par with price** (Volkswagen ID Presentation, 2019).

Global lithium demand, driven by high annual compound growth in lithium-ion battery manufacture and usage in vehicles and stationary storage, is set to increase to 1.85 million tonnes LCE by 2028, from a present level of around 0.3 million tonnes (Benchmark Mineral Intelligence, 2019). New lithium processing supply capacity is estimated to be around 1.7 million tonnes by 2028 (Roskill, 2019), **indicating a significant shortage**. This also assumes that current stated plans for increased capacity will progress on track without technical ramp-up issues, something that has not occurred to date (Roskill, 2019).

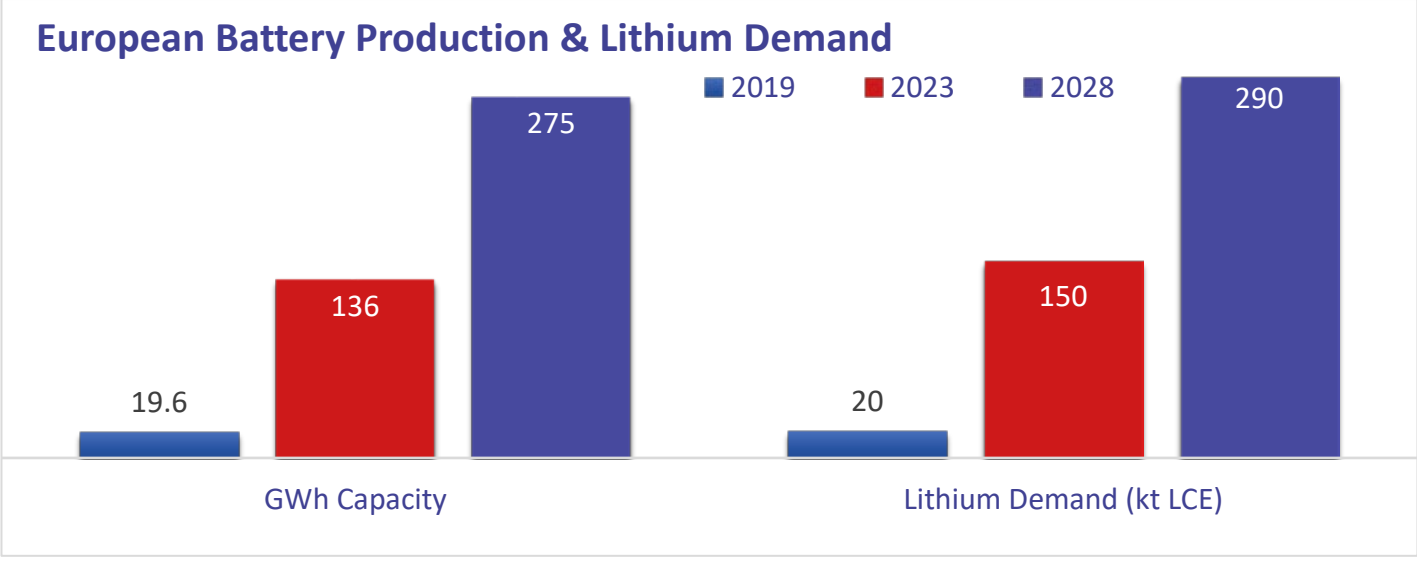


Figure 3: European forecast Li-ion production and associated lithium demand (Benchmark, 2019)

This presents an imminent problem for the lithium-ion battery industry, and thus the electric vehicle and stationary storage industries, who are committing multibillion-dollar CAPEX investments to achieve a total of 1.7 TWh battery production capacity by 2028 (Benchmark, 2019). The EU production of battery-grade lithium hydroxide or lithium carbonate is currently nil, yet the EU will require **150 kt per annum of LCE by 2023, and 290 kt by 2028** (Benchmark, 2019). The **majority of lithium supply** is controlled by just five companies, all of which are **non-EU** (SQM, Albemarle, Livent, Tianqi, Ganfeng, Source: Bloomberg).

Auto-**manufacturers require security of lithium supply** in the 21st Century for the transition to EVs, instead of relying solely on South American and Chinese production. The Vulcan Lithium Project presents a potential solution to this problem. Situated in a geothermal field of operational geothermal plants currently producing stable baseload, renewable energy, the URV field is one of the only heated brines globally that is uniquely enriched in lithium.

Subject to entry into an offtake or joint venture agreement with a geothermal power producer, the Vulcan Lithium Project aims to:

- **utilise dual-purpose geothermal energy and lithium-production wells to produce battery-grade lithium hydroxide,** in the heartland of EU battery EV manufacture, and
- produce more renewable energy than it consumes during lithium processing, which would effectively render it the first **zero-carbon lithium** project in the world (Figure 3).

Lithium in Geothermal Brines

Globally, geothermal brines are relatively common, but the fluids are rarely lithium rich. Typical geothermal brine fields have lithium values in the order of 1-10mg/l Li. The Upper Rhine Valley geothermal brine field, in which the Vulcan Lithium Project is located, exhibits lithium values one to two orders of magnitude greater: **up to 210 mg/l Li,** and often over 150 mg/l Li from geothermal fluids sampled over extended periods of time from multiple locations (Sanjuan et al, 2016; Pauwels & Fouillac, 1993; refer KRX announcement 10/07/2019). The Vulcan Lithium Project includes a commanding land position in the brine field of over 78,600 ha of exploration licenses, of which over 51,000 ha is already granted. The overall brine field is well understood due to historical petroleum exploration, with considerable amounts of existing seismic and drilling data potentially available for purchase, exploration and resource evaluation.

Work Program

Koppar plans to rapidly advance the Vulcan Lithium Project to a completed Scoping Study over the next 12 months. Work programmes will commence with acquisition of all available seismic and geochemical data from the region, as well as a confirmatory geochemical sampling programme from available well locations, to confirm lithium grades, and engineering studies surrounding a combined geothermal and Direct Lithium Extraction (DLE) plant. The company will also commence lithium extraction processing test work on brine samples taken from existing wells within the Upper Rhine Valley.

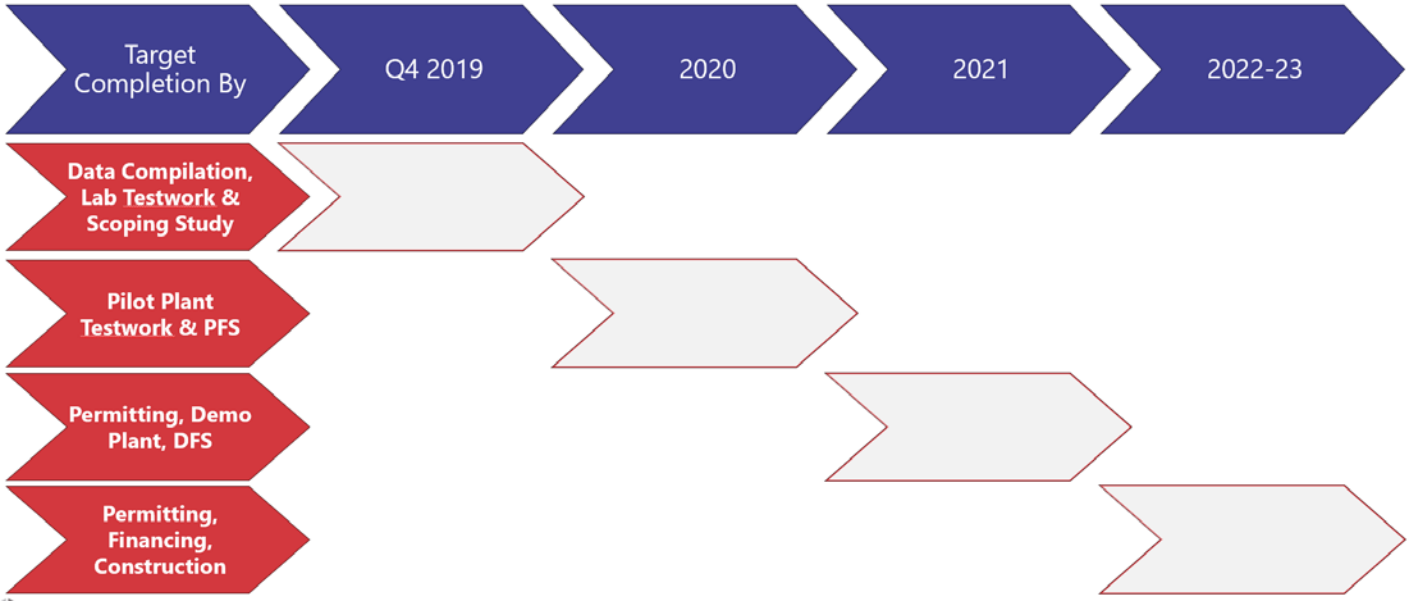


Figure 4: Planned work programme for Vulcan Lithium Project, pending exploration success at each stage.

About Koppar

Koppar is a junior exploration company established with the purpose of exploring and developing copper, zinc and other mineral opportunities. The Company owns mineral exploration projects located in the Trøndelag region of Norway, namely the Tverrfjellet Project, Grimsdal Project, Vangrøfta Project, and Undal Project. The Projects are located in a historic mining area, and mining has been previously carried out on several of the projects. Koppar has recently entered into a binding agreement to acquire Vulcan Energy Resources Pty Ltd., the owner of the Vulcan Lithium Project.

For further information visit www.kopparresources.com

Competent Person Statement:

The information in this report that relates to the Exploration Targets are based on, and fairly reflects, information compiled by Mr. Roy Eccles P. Geol. and Mr. Steven Nicholls MAIG, who are both full time employees of APEX Geoscience Ltd. and deemed to be both a 'Competent Person'. Both Mr. Eccles and Mr. Nicholls have sufficient experience relevant to the style of mineralization and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australian Code for the Reporting of Exploration Results, Mineral Resources, and Ore Reserves (JORC Code). Mr. Eccles has reported to the scientific community, and as a geological consultant on exploration and resource related lithium-brine work, since 2010, specializing in confined, subsurface lithium-brine deposits in the Western Canada Sedimentary Basin, and the southern United States. Mr. Eccles and Mr. Nicholls consent to the disclosure of information in this report in the form and context in which it appears.

Disclaimer

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

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

This announcement is not an offer, invitation or recommendation to subscribe for, or purchase securities by Koppar. Nor does this announcement constitute investment or financial product advice (nor tax, accounting or legal advice) and is not intended to be used for the basis of making an investment decision. Investors should obtain their own advice before making any investment decision.