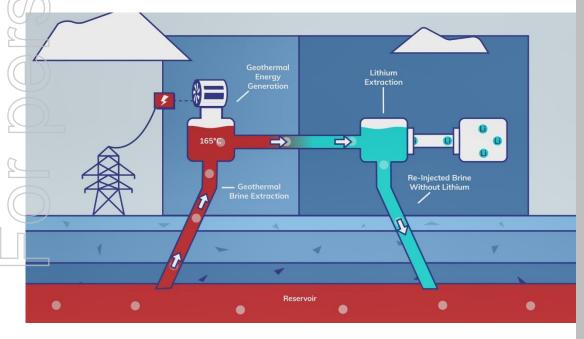


Quarterly Activities Report March 2020

Highlights

- Vulcan continued to lead the mining and resources industry with its unique
 Zero Carbon Lithium™ Project during the Quarter.
- Completion of Maiden Indicated Resource Estimate¹, of 722,000 t of contained Lithium Carbonate Equivalent (LCE), at the Insheim Licence with a lithium brine grade of 181 mg/l Li.
- Total global lithium resource estimate (Inferred & Indicated) grew to 13.95
 Mt LCE, the largest in Europe.
 - Positive completion of first of its kind Zero Carbon Lithium[™] Scoping Study at the Project².
- Scoping Study showed potential for a combined operation producing lithium hydroxide and renewable energy, with net zero carbon footprint.
- Successful completion of Vulcan Project Life Cycle Analysis: independent verification of Vulcan's Zero Carbon Lithium™ credentials.
- Discussions with offtake partners commenced.
- Vulcan is well-funded with cash at 31 March of ca. \$2.5m and continues its rapid project momentum, with minimal disruption due to COVID-19.



¹ Refer VUL ASX announcement, 20/01/2020.

ASX Release 23 April 2020 ASX: VUL FRA: 6KO

Highlights

Large, lithium-rich geothermal brine project, in the Upper Rhine Valley of Germany.

Europe's largest JORCcompliant lithium resource.

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

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

MoU agreement with German geothermal operator at a **producing power plant.**

Fast-track development of project under way towards production.

Corporate Directory

Managing Director Dr Francis Wedin

> Chairman Gavin Rezos

Executive Director Dr Horst Kreuter

CFO-Company Secretary Robert Ierace

Fast Facts

Issued Capital: 53,670,002 Market Cap (@19.5c): \$10.4m

Contact

Level 11, Brookfield Place 125 St Georges Terrace Perth WA 6000 Australia 08 6189 8767

Vulcan Energie Resourcen GmbH Baischstr. 8, 76133 Karlsruhe

www.v-er.com info@v-er.com

² Refer VUL ASX announcement, 21/02/2020



Activities During the Quarter

Maiden Inferred Resource

During the Quarter, Vulcan Energy Resources Ltd ("Vulcan", "VUL", "the Company") completed the maiden Indicated Mineral Resource Estimate³ within the Insheim license, in the Upper Rhine Valley of South-West Germany, which was compiled using the guidelines provided by the 2012 JORC Code. The Indicated Mineral Resource Estimate for the brine was calculated at 722,000 t of contained LCE, at a lithium brine grade of 181 mg/l Li, average porosity of 9 % and lower cut off of 100 mg/l Li. Combined with Vulcan's Inferred Li-Brine Resource Estimate at its 100 %-owned Ortenau license, comprising 13.22 Mt LCE at a brine grade of 181 mg/l Li, this provides a global Resource now estimated at 13.95 Mt LCE. This is the largest JORC-compliant lithium resource in Europe.

Table 1: Indicated Vulcan Li-Brine Resource Estimate of lithium-bearing brine within the Permo-Triassic strata aquifer domain at the Insheim Licence.

4	Category	Aquifer		Average		Total Contained	
7				Lithium		Elemental Li	Lithium Carbonate
긔		(km³)	(km³)	Concentration	Porosity	Resource	Equivalent (LCE)
				(mg/l Li)		Tonnes	Million Tonnes
	Indicated	8.322	0.749	181	9.00	136,000	0.722
4	(Insheim License)						

Table 2: Inferred Vulcan Li-Brine Resource Estimate of lithium-bearing brine within the Buntsandstein Group aquifer domain at the Ortenau Licence (see Vulcan's December 4, 2019 News Release for more information) and the Indicated Vulcan Li-Brine Resource Estimate at the Insheim Licence (see previous text) which combined provide a combined global Resource now estimated at 13.95 Mt LCE (Indicated & Inferred).

	Category	Aquifer	Brine	Average	Average	Total Contained	Total Contained
		Volume	Volume	Lithium	Effective	Elemental Li	Lithium Carbonate
7		(km³)	(km³)	Concentration	Porosity	Resource	Equivalent (LCE)
2				(mg/l Li)		Tonnes	Million Tonnes
	Indicated	8.322	0.749	181	9.00	136,000	0.722
	(Insheim License)						
)	Inferred (Ortenau	144.489	13.726	181	9.50	2,484,000	13.225
	License)						
	Total	152.811	14.475	181	9.47	2,620,000	13.95

Note 1: Mineral resources are not mineral 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 values percentages (rounded to the nearest 1,000 unit). Note 3: The volume and weights are estimated at average porosities of 9.0% and 9.5% for the insheim and Ortenau resources, respectively. Note 4: The Vulcan Li-brine Project estimation was completed and reported using a lower cut off of 100 mg/L Li. Note 5: In order to describe the resource in terms of industry standard, a conversion factor of 5.323 is used to convert elemental Li to Li2CO3, or Lithium Carbonate Equivalent (LCE). Note 6: The Indicated Resources at Insheim are subject to the terms of the MoU between Vulcan and Pfalzwerke geofuture as announced 26 November 2019.

³ Refer VUL ASX announcement, 20/01/2020. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.



Life Cycle Analysis: Independently Verified Zero Carbon Lithium™ Credentials

During the Quarter, a Life Cycle Assessment (LCA) from cradle-to-gate was carried out for the Vulcan Project and benchmarked with different lithium industry production routes that could supply the European market⁴.

The Vulcan Zero Carbon Lithium[™] Project is planned to be a combined geothermal energy and lithium hydroxide monohydrate production project. The results of the study indicate that Vulcan has the potential to be the **first negative carbon lithium project in the world**, **helping to decarbonize a highly CO₂-intensive product**. The Vulcan project has the potential to have the lowest impact, with a negative climate change impact due to CO₂ emissions being offset through the co-generation of geothermal energy along with LiOH·H₂O.

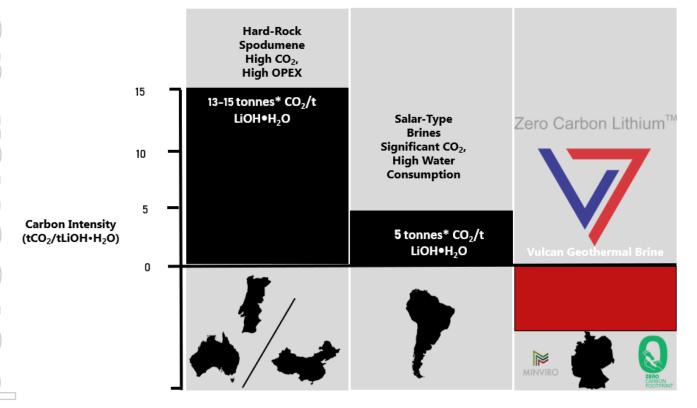


Figure 1: Climate change impact for the production of 1 tonne of battery quality lithium hydroxide monohydrate through five distinct production routes to Europe. Note, the graph compares projects in production or advanced stages of feasibility with the Vulcan Project, which is an early stage project.

⁴ The CO2 Impact of the 2020s Battery Quality Lithium Hydroxide Supply Chain, Dr. Robert Pell, Dr. David Deak, Alex Grant, ISO-compliant LCA.

 $https://static1.squarespace.com/static/5c9aa323c46f6d499a2ac1c5/t/5e1cf0d3a12a6a33c900c8ea/1578954965079/The + CO2 \\ + Impact + of + the + 2020s + Battery + Quality + Lithium + Hydroxide + Supply + Chain.pdf$



Scoping Study

During the Scoping Study, the following staging and configuration of wells, direct extraction and lithium plants were selected:

- Stage 1 Production Plant (Insheim License): direct extraction and lithium plant to be located at the Insheim geothermal power plant.
- Stage 2 Production Plants (Ortenau License):
 - Plant one: four well pads, four extraction and four injection wells, geothermal power plant, direct extraction and lithium plant
 - Plant two: six well pads, six extraction and six injection wells, geothermal power plant, direct extraction and trucking of lithium concentrated liquor to the Stage 2 lithium plant.

Based on a proposed staged ramp-up, with an initial Stage 1 comprising lithium hydroxide monohydrate production at an existing geothermal plant⁵, and a future Stage 2 adding considerably larger capacity, the Scoping Study demonstrated positive metrics at the Vulcan Zero Carbon Lithium™ Project. Possible premium pricing for the carbon savings associated with Vulcan's lithium hydroxide products were not factored in the outcomes and will be discussed in future studies. The study identified the required future work for the Pre-Feasibility Study which includes:

- Further definition of the geothermal brine resource and testing for pretreatment options to optimize lithium recovery.
- Bench-Scale and Pilot Plant test work to define engineering data and minimize process risk.
 - Amenability and optimization test work for direct extraction to provide confidence in the flowsheet design and target production of a small sample of high purity product.
 - Further development of engineering to a Pre-Feasibility Study level to better define the process flowsheet and site-specific infrastructure requirements.

Recommendations were included for further test work in later engineering stages, including test work for locked-cycle operation, vendor equipment and pilot or demonstration plant continuous operation. The Company commenced preparations for the Bench-Scale and Pilot Plant test work during the Quarter.

Note: The Scoping Study was based on the Mineral Resource Estimate for the Vulcan Project including the Insheim MoU area, comprising combined Indicated and Inferred Resources totalling 13.95 Mt of contained LCE. The entirety of Stage 1 is in the Indicated Mineral Resource category. At Stage 2 when both Stage 1 and 2 facilities will be operating concurrently, the majority is in the Inferred Mineral Resource category. Because of this, the Company was not able to provide forward-looking statements, such as production targets or forecast financial information, in the Scoping Study announcement. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of further Measured or Indicated Mineral Resources or that the Production Target or preliminary economic assessment will be realized.

⁵ Subject to VUL's MoU with Pfalzwerke geofuture, ASX announcement 26/11/2019

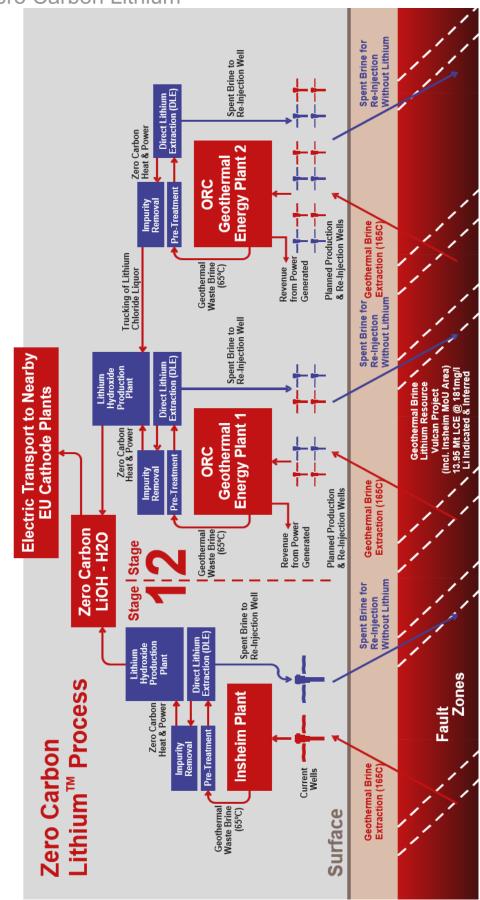


Figure 2: Simplified Flowsheet of Zero Carbon Lithium™ Process



Who Are We?

We're a mixture of Australian entrepreneurial spirit, German engineering excellence and a dash of North American tech brains. We have a strong background in the lithium space.

We're aiming to decarbonize the currently high carbon production footprint of lithium-ion batteries used in electric vehicles.

We plan to produce a world-first **Zero Carbon Lithium™** hydroxide product from our Vulcan geothermal lithium brine project.

It is the largest lithium resource in Europe and located in the heart of the EU.

We will use our proprietary **Zero Carbon Lithium™** process, married with our unique and very large lithium resource, to pump up hot lithium-rich brine to the surface, then use the renewable heat to drive lithium extraction, with renewable energy as a saleable by-product.

We will disrupt and lead the resources industry towards a Zero Carbon future.

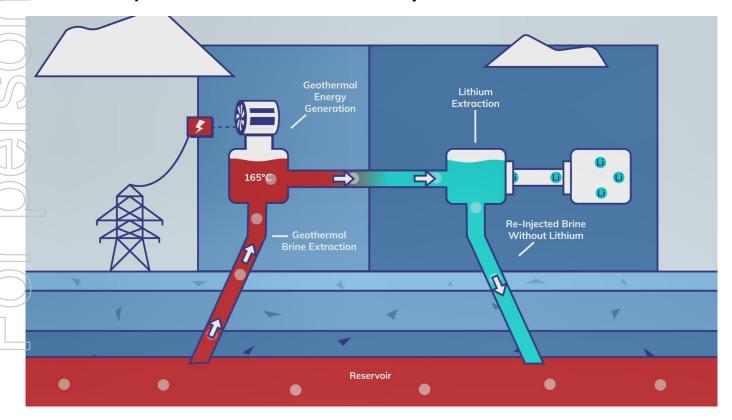


Figure 3: Schematic of the Zero Carbon Lithium TM process.



How Did We Get Here?

We started with a mission to create a Zero Carbon Lithium company.

We'd noticed European car manufacturers wanted to produce electric vehicles (EVs), with a zerocarbon production footprint:

> "(Battery raw materials) sustainability selection criteria on par with quality and price"

"Volkswagen's delivery promise: CO2-neutral (EV) production including supply chain"

EVs are a great idea. They have no tailpipe emissions, are quicker, quieter, more efficient and over their lifetime much greener than fossil fuel cars.

The transition to EVs is happening quickly.







But because of all the metals that go into the lithium-ion battery, they currently take a lot of carbon to produce.

As much carbon by 2030 as the Netherlands emits, if we don't do something.

Successful companies are already trying to decarbonise:

6 DECEMBER 2019 NEWS

Alcoa-Rio Tinto JV sells first carbon-free aluminium to Apple

But there is no zero carbon or low carbon lithium, cobalt, nickel or graphite available for lithium-ion batteries ii iii iv. We can help fix that.



We Searched for the Right Project

Lithium is mostly sourced from salty fluids on the surface called "continental brines", but this takes a lot of energy and water to produce as they are not heated.

Hot, salty fluids deep in the sub-surface, called "geothermal brines", produce renewable power and heat, and sometimes contain lithium.

We had the lithium expertise to know that Zero Carbon Lithium production was possible using modern extraction methods, provided a deep geothermal brine reservoir could be found that had the following geological conditions:

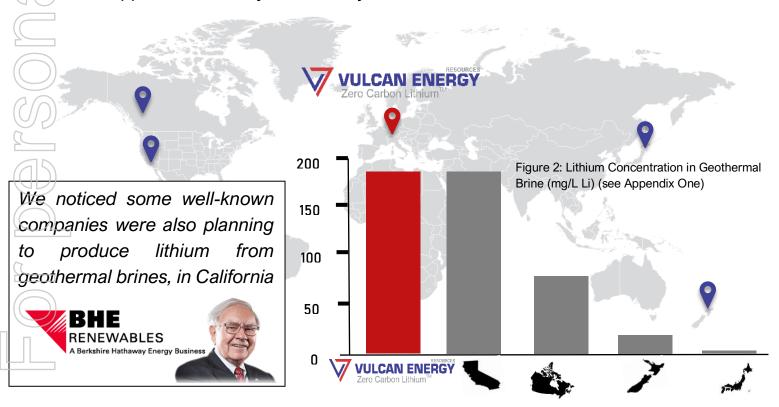
- 1. Renewable heat;
- 2. High lithium grades;
- 3. High brine flow rate.

We **scoured the globe** to find these conditions. Most geothermal brines don't have the required flow rate or lithium grade.



Our research showed that this could be done in just two places:

1. The Upper Rhine Valley in Germany, and 2. The Salton Sea in California.



We chose Germany and Europe, because we know it will be the fastest growing lithium market in the world in the 2020s, driven by EVs, and currently has zero domestic production of lithium hydroxide.





Birth of the Vulcan Project...

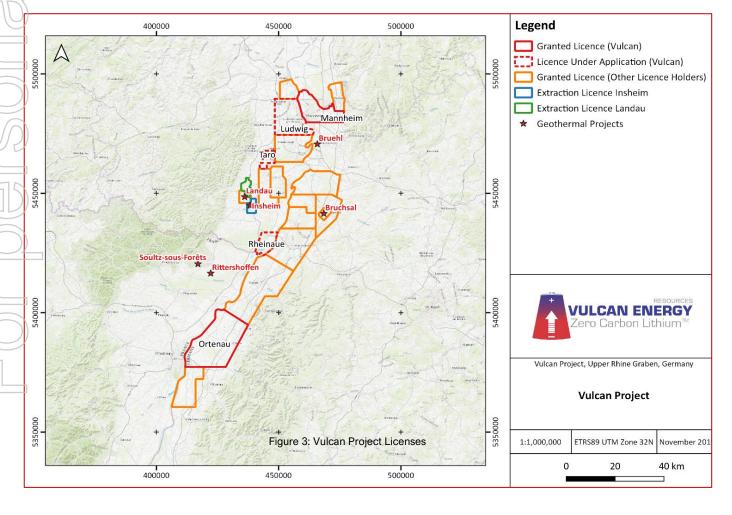
We used our geological expertise to pick out the best areas in the Upper Rhine Valley

for sub-surface lithium grade and potential flow rate.

We secured exclusive rights to these areas: a very large license package hundreds of square kilometres in size.

Underneath is the lithium, stored in the hot geothermal reservoir.







...and Growth to the Largest Resource in Europe

There's a treasure-trove of sub-surface data in the Upper Rhine Valley, including seismic and drilling data. Companies have been exploring for oil here for decades.

We gathered this data, generated our own data, analysed both, and defined the largest lithium resource in Europe^{vi} by far...

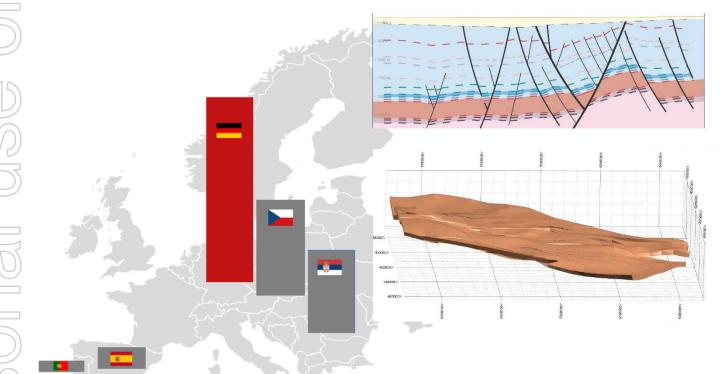
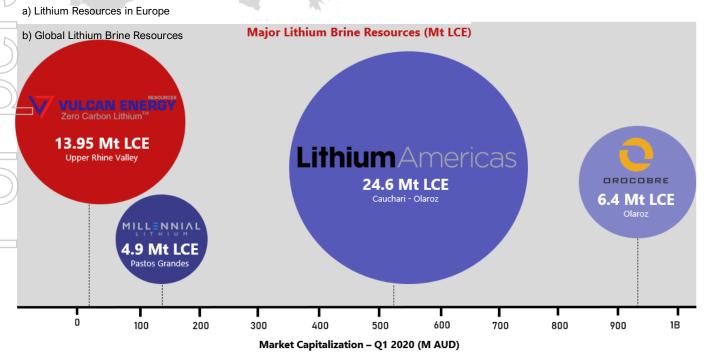


Figure 4: Vulcan Resource Size and;

...and one of the largest in the world.





We Designed our Zero Carbon Lithium™ Process[™]

We will use **renewable heat** derived from the geothermal brine to drive the lithium extraction process, with **no fossil fuel consumption**.

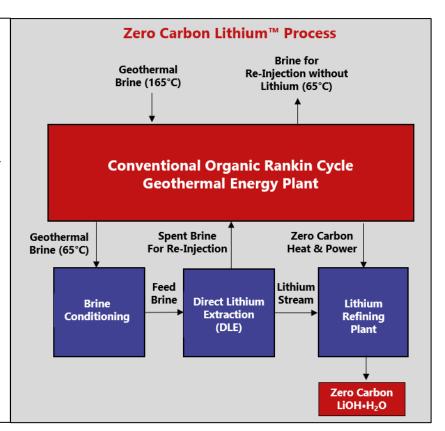
We will produce a surplus of renewable electricity, actually **decarbonising** the grid.

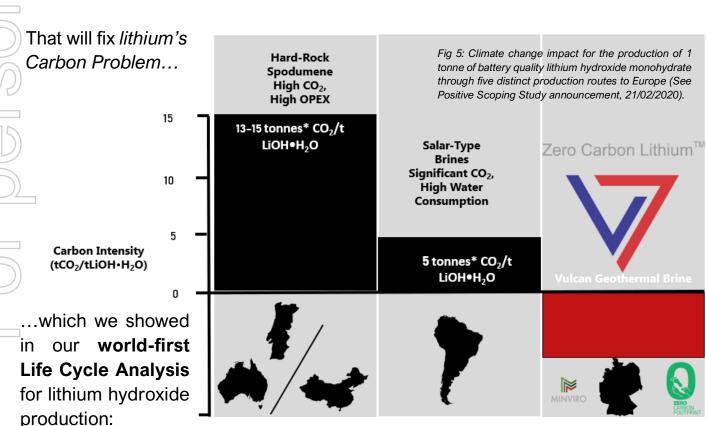
We will produce a unique, premium, battery-quality

Zero Carbon Lithium™

hydroxide product for EVs.

The spent brine then gets reinjected.







No Evaporation, Mining or Fossil Fuels Required

Lithium extraction in South America evaporates large quantities of water in the second driest place on earth. This stresses the environment and local communities.



Europe doesn't want hard rock mines for lithium. Once you mine it, the rock has to be roasted with fossil fuels to produce lithium hydroxide. This is very CO₂-intensive.



And this is our solution: lithium from geothermal plants in the Upper Rhine Valley.

In harmony with the environment.

Lithium production from, and powered by, a renewable energy source: the Zero Carbon Lithium™ process.

No evaporation, mining or fossil fuels required.



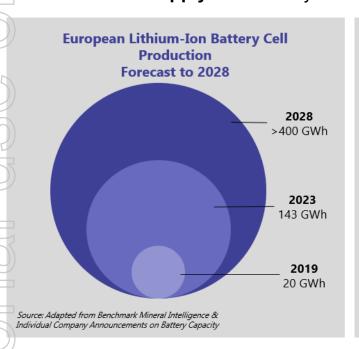


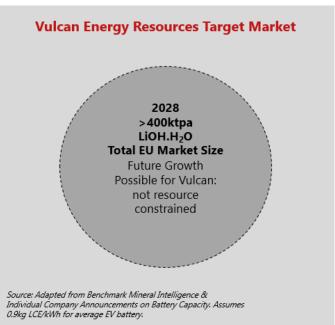
What's Our Target Market Like?

Europe is the world's fastest growing market^{viii} for lithium hydroxide, driven by a massive growth in production of lithium-ion batteries for EVs.

It needs more lithium hydroxide by 2028 than the entire world consumes today.

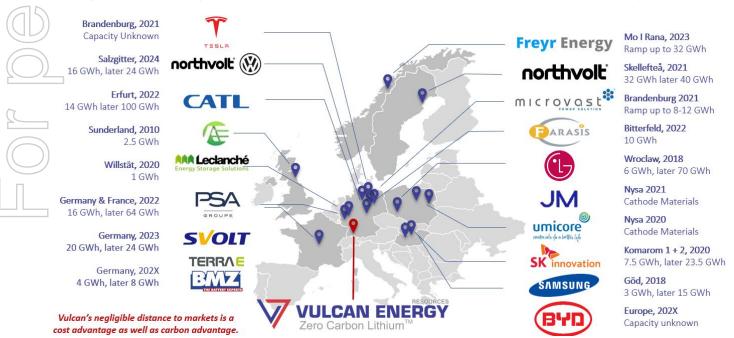
It has **zero local supply** of lithium hydroxide. 80% of global supply is from China.





Here's where we sit in relation to that market: at the very centre.

No high-carbon, high-cost transport from thousands of km away. Security of supply.





Cost: Advantage Geothermal Lithium Brine

If you're producing battery-quality lithium hydroxide chemicals, the price environment is strong. Lithium hydroxide is currently selling for around US\$13,000/t. It is widely tipped to rise even from here due to looming deficits.

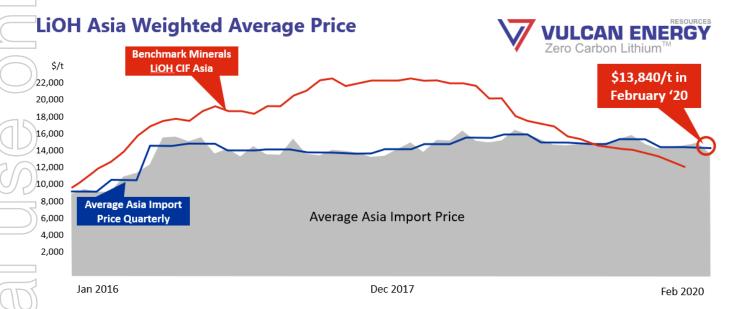


Fig 7: Weighted prices average from lithium hydroxide imports into Japan and South Korea from Chile, China, and the US. This represents 75% of the global LiOH trade and is mostly used in cathodes. Source: Infinity Lithium.

Brine projects are the lowest cost method of lithium hydroxide production, typically around US\$5-7,000/t (Source: Canaccord).

We have the added advantages of free heat to drive our process, short distance to market, a premium product, and most importantly, we also sell energy.

Germany has a fixed price of €0.25c/kWh for the renewable electricity we can produce. We plan to have **two revenue streams**: lithium and electricity.

They de-risk and complement each other.





Lithium Revenue

Energy Revenue



Where to From Here?

We just completed our **Scoping Study** in just six months, using our in-house team and world-renowned consultants. It was **highly positive**^{ix}.

Next, we'll be commencing our Pre-Feasibility Study (PFS).

We've just started bench-scale processing test work as part of this.

We'll then be constructing our own pilot plant to demonstrate and de-risk.

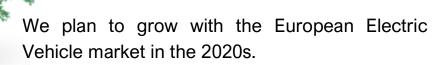
We expect to maintain our rapid momentum and get this done this year.

In 2021 we want to complete our Definitive Feasibility Study (**DFS**). We can take that to the bank.

We then plan a sensible scale-up, with our first, small commercial plant to be built at an existing geothermal operation, saving CAPEX: **Stage 1**.

Stage 2 will be much larger and would involve our own wells and geothermal plant construction.





We have a very large resource. If we want to produce more lithium, we can just drill more wells.



Local Partnerships^x

We have a Memorandum of Understanding (MoU) with a highly respected local geothermal plant operator.

This gives us access to live brine for processing test work.

It also contemplates us processing the plant's waste brine to product our first commercial Zero Carbon Lithium™ hydroxide, in a "win-win".



This could potentially be a shortcut to commercial development.



A Note on Geothermal Lithium

Geothermal brines contain natural CO₂ in solution.

In Germany, this stays in solution and is re-injected. In some other parts of the world, this is de-pressurised and released to the atmosphere.

Not all geothermal lithium projects are the same.

Choose a Zero Carbon Lithium product.



A Note on our Process

We use Direct Lithium Extraction (DLE) as part of our overall flowsheet. It involves lithium extraction from brine without evaporation ponds.

The lithium industry is shifting to DLE processes, because:

- Lithium extraction in hours instead of months.
- 2. Not weather-dependent like evaporation, in increasingly unstable climate.
- 3. Ability to produce consistent product for battery industry.
- 4. Spent brine water re-injected into reservoir with no evaporation losses.



This term has been used to describe a number of very different methods, at very different stages of development.

This ranges from bench-scale R&D, to full-scale commercial plants in South American and China.

We selected our preferred method using very strict criteria:

- 1. It must be commercially proven and already used on brines.
- 2. It must have a low CAPEX and OPEX.
- 3. It must be suitable for hot geothermal brines.
- 4. It must not involve solvents or reagents that could harm the environment.

Just like any resources project, we need to do processing test work to de-risk our geochemistry as we scale up.

We have strictly adhered to our policy of choosing process methods that are already commercially used on brines, which gives us confidence in our Zero Carbon Lithium™ flow sheet.



A Reminder of What Makes Us Special

World's 1st & Only Zero-Carbon Lithium™ Process.

A premium product and unique IP.

Zero Carbon Lithium™

Positive Scoping Study.

Global Experts. Robust basis for further work.



Dual Revenue Potential.

Lithium and geothermal energy revenue de-risks project.



Size & Quality: Europe's Largest Lithium Resource.

Not constrained by size, can grow with the market.



Location, Location, Location.

Centre of Europe, the world's fastest growing lithium market.



Local Partners & Infrastructure Access

Potential for fast track to production.



The Right Team for the Job

Lithium, geothermal and finance expertise.



Rapidly Advancing Lithium Project

With sensible path to growth.





Update on Norwegian Projects

During the winter months, the Company continued to review its extensive copper-zinc mineral exploration portfolio located in the Trøndelag region of Norway. Vulcan is reviewing options to best extract value for shareholders for these projects.

For and on behalf of the Board

Robert lerace

Chief Financial Officer - Company Secretary For further information visit www.v-er.com

Zero Carbon Lithium[™]

Disclaimer

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

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

Competent Person Statement:

The information in this report that relates to Mineral Resources for the Vulcan Geothermal-Lithium Project is extracted from the ASX announcements "maiden JORC (2012) Mineral Resource Estimate for its Ortenau licence" and "Maiden Indicated Resource Insheim Vulcan Zero Carbon Lithium" released on the 4th of December 2019 and 20th of January 2020, and the information in this report that relates to Vulcan's Scoping Study is extracted from the ASX announcement "Positive Scoping Study" released on the 21st of February 2020, which are available on www.v-er.com. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.



Appendix One: References and Footnotes

See ASX releases 4th of December 2019 and 20th of January 2020. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

Uolkswagen ID presentation, 2019

http://www3.weforum.org/docs/WEF A Vision for a Sustainable Battery Value Chain in 2030 Report.pdf https://www.mining-technology.com/news/alcoa-rio-tinto-carbon-free-aluminium/

[√] Elders, W., Cohen, L., (1983) The Salton Sea Geothermal Field, California, Technical Report. Institute of Geophysics and Planetary Physics, University of California

GeORG (2013) Projektteam Geopotenziale des tieferen Untergrundes im Oberrheingraben Fachlich-Technischer Abschlussbericht des INTERREG-Projekts GeORG. Teil 2: Geologische Ergebnisse und Nutzungsmöglichkeiten Pauwels, H., Fouillac, C., Brach M. (1989) Secondary production from geothermal fluids processes for Lithium recovery 2nd progress report. Bureau de Recherches Geologiques et Minieres Service Geologique National

Pauwels, H. and Fouillac, C. (1993) Chemistry and isotopes of deep geothermal saline fluids in the Upper Rhine Graben: Origin of compounds and water-rock interactions. Geochimica et Cosmochimica Acro Vol. 51, pp. 2737-2749 Sanjuan, B., Millot, R., Innocent, C., Dezayes, C., Scheiber, J., Brach, M., (2016) Major geochemical characteristics of geothermal brines from the Upper Rhine Graben granitic basement with constraints on temperature and circulation. Chemical Geology 428 (2016) 27–47

The Company is not aware of any new information or data that materially affects the information contained in the above sources or the data contained in this announcement

^{yi} European Peer Comparison Data

_aropean i	001 0011	ipanicon Bata								
Company	Code	Project	Stage	Resource Category	Resource Tonnes	Resource Grade (Li2O)	Contained LCE Tonnes	Information Source		
European Metals	ASX: EMH	Cinovec	PFS Complete	Indicated & Inferred	695.9	0.42	7.17	Corporate Presentation Released 20 November 2018		
Rio Tinto	ASX: RIO	Jadar	PFS Underway	Indicated & Inferred	135.7	1.86	6.24	Corporate Presentation Released 21 March 2018		
infinity Lithium	ASX: INF	San Jose	PFS Complete	Indicated & Inferred	111.3	0.61	1.68	ASX Announcement Released 22 August 2019		
Savannah Resources	AIM: SAV	Barroso	DFS Underway	Measured, Indicated & Inferred	27.0	1.00	0.71	Corporate Presentation Released May 2019		
European Lithium	ASX: EUR	Wolfsburg	PFS Complete	Measured, Indicated & Inferred	10.98	1.00%	0.27	Corporate Presentation Released 22 March 2019		



Global Peer Comparison Data

Company	Code	Project	Stage	Resource Category	Brine M³	Resource Grade (mg/l Li)	Contained LCE Tonnes	Information Source
Orocobre	ASX:ORE	Salar de Olaroz	Production	Measured & Indicated	1.8 x 10 ⁹	690	6.4	Company Presentation 5 May 2014
Lithium Americas	NYSE:LAC	Cauchari- Olaroz, Chile (50% ownership. Thacker Pass not Included)	DFS Complete, Construction Underway	Measured, Indicated & Inferred	7.8 x 10 ⁹	592	24.6	Resource Statement 7 May 2019
Millennial Lithium	CVE:ML	Pastos Grandes, Argentina	FS Complete	Measured, Indicated & Inferred	2.2 x 10 ⁹	428	4.9	Resource Statement 31 May 2019

The Company is not aware of any new information or data that materially affects the information contained in the above sources or the data contained in this announcement

Minviro Independent ISO 14044 Study. Figures for peer data are quoted in: https://static1.squarespace.com/static/5c9aa323c46f6d499a2ac1c5/t/5e1cf0d3a12a6a33c900c8ea/1578954965079/
The+CO2+Impact+of+the+2020s+Battery+Quality+Lithium+Hydroxide+Supply+Chain.pdf

Adapted from Benchmark Mineral Intelligence and Individual Lithium-Ion Battery Manufacturing Company Announcements from Tesla, Northvolt, CATL, Leclanche, PSA, SVolt, TerraE, BMZ, Freyr Energy, Microvast, Farasis, LG Chem, Johnson Matthey, Umicore, SK Innovation, Samsung, BYD.

See Scoping Study ASX announcement, 21/02/2020

* See ASX announcement, 26/11/2020

Appendix Two: Vulcan Zero Carbon Lithium™ Project License Summary

	Name	Area (ha)	Status	Date Granted / Applied for	Ownership	
)	Ortenau	37,360	Granted	03/2019	100%	
	Mannheim	14,427	Granted	06/2019	100%	
	Taro	3,268	Application	03/2019	Earn-in to 80%	
	Ludwig	17,716	Application	04/2019	Earn-in to 80%	
	Rheinaue	5,848	Application	04/2019	Earn-in to 80%	
	Insheim (held by Pfalzwerke geofuture)	1,900	Granted		MoU to earn in to 80% after formation of formal JV	



Appendix Three: Norwegian Projects License Summary

	Name	Area (km2)	Status	Date Granted	Permit Type	Ownership at Start of Quarter	Change in Ownership
	Nygruva	9.14	Granted	7/07/2017	Exploration	100%	-100%
	Grimsdalen	9.86	Granted	7/07/2017	Exploration	100%	N/A
_[Tverrfjellet	9.99	Granted	7/07/2017	Exploration	100%	N/A
	Undal 101	10.0	Granted	5/07/2018	Exploration	100%	N/A
))	Undal 102	10.0	Granted	5/07/2018	Exploration	100%	N/A
	Nyberget 101	10.0	Granted	5/07/2018	Exploration	100%	N/A
	Nyberget 102	10.0	Granted	5/07/2018	Exploration	100%	N/A
))	Innerdalen 101	10.0	Granted	5/07/2018	Exploration	100%	-100%
))	Innerdalen 102	10.0	Granted	5/07/2018	Exploration	100%	-100%
3	Innerdalen 103	10.0	Granted	5/07/2018	Exploration	100%	-100%
	Innerdalen 104	10.0	Granted	5/07/2018	Exploration	100%	N/A
	Vangrofta 101	10.0	Granted	27/08/2018	Exploration	100%	-100%
7	Vangrofta 102	9.8	Granted	27/08/2018	Exploration	100%	N/A
))	Tverrfjellet 101	9.4	Granted	27/08/2018	Exploration	100%	-100%
	Tverrfjellet 102	10.0	Granted	27/08/2018	Exploration	100%	N/A
)	Tverrfjellet 103	9.02	Granted	23/01/2019	Exploration	100%	N/A
	Grimsdalen 101	9.0	Granted	5/03/2019	Exploration	100%	N/A
ツ コ	Grimsdalen 102	10.0	Granted	7/09/2018	Exploration	100%	N/A
	Grimsdalen 103	8.8	Granted	7/09/2018	Exploration	100%	-100%
	Grimsdalen 104	8.8	Granted	7/09/2018	Exploration	100%	-100%
<i>)</i>]	Grimsdalen 105	10.0	Granted	7/09/2018	Exploration	100%	-100%
	Grimsdalen 106	8.0	Granted	7/09/2018	Exploration	100%	-100%
)	Grimsdalen 107	10.0	Granted	7/09/2018	Exploration	100%	-100%
ノ	Grimsdalen 108	9.0	Granted	7/09/2018	Exploration	100%	-100%
	Grimsdalen 109	9.0	Granted	7/09/2018	Exploration	100%	-100%