

# QUARTERLY ACTIVITIES REPORT

## SEPTEMBER 2022

**European Metals Holdings Limited (ASX & AIM: EMH, OTCQX: EMHXY, ERPNF and EMHLF)** (“**European Metals**” or the “**Company**”) is pleased to provide an update on its activities during the three-month period ending 30 September 2022 highlighting the continued progress in the development of the globally significant Cinovec Lithium/Tin Project (“**the Project**” or “**Cinovec**”) in the Czech Republic.

Post the reporting period, the Company also made two very significant announcements.

Firstly, the Company announced that it had finalised a considerably simplified Lithium Chemical Plant (“**LCP**”) flowsheet with the initial six locked cycle test (“**LCTs**”) providing 99.99% pure Lithium Carbonate. The LCTs were completed at ALS Global in Perth and demonstrated overall lithium recoveries of 88-93%, (refer to the Company’s release dated 31 October 2022) (**Simplified Extraction Process delivers exceptionally clean battery grade lithium products with improved economics**).

The simplified flowsheet precipitates lithium phosphate directly from the polished PLS and then goes on to clean the lithium phosphate to enable precipitation of a much cleaner crude lithium carbonate. The final purification step of bicarbonation and re-precipitation is the same as in the earlier flowsheet, but the end-product is of even higher quality due to the input crude lithium carbonate being much cleaner. The simplification of the central section of the LCP flowsheet reduces the number of basic chemical engineering unit processes (after the initial roast/water leach) from 15 to 7. The revised process also results in the elimination of all energy-intensive cooling processes.

The Company has been advised by its principal hydrometallurgical adviser, Lithium Consultants Australasia (LCA), that the changes to the LCP noted above are expected to reduce both Capex and Opex in the LCP by 10-20%. The Capex reduction is based upon the fact that the simplified flowsheet requires the use of only two crystallisers vs the four crystallisers and 1 evaporator in the original flowsheet. The similar reduction on Opex is achieved through reduced power use resulting from not having to operate the additional equipment.

The Company expects that lower reagent use, and the elimination of all process cooling steps will change the environmental footprint of the project positively, reducing the chemicals and energy required in the LCP process.

The recently completed testwork for the re-engineered LCP flowsheet produced the following crude and battery-grade lithium carbonate products, compared with the published global standard specification, YS/T 582-2013 with the  $\text{Li}_2\text{CO}_3$  results highlighted in yellow:

**DIRECTORS AND MANAGEMENT****Keith Coughlan**  
EXECUTIVE CHAIRMAN**Richard Pavlik**  
EXECUTIVE DIRECTOR**Kiran Morzaria**  
NON-EXECUTIVE DIRECTOR**Lincoln Bloomfield**  
NON-EXECUTIVE DIRECTOR**David Koch**  
COMPANY SECRETARY**CORPORATE INFORMATION****ASX EMH****AIM EMH****OTCQX EMHXY, ERPNF and EMHLF****Frankfurt E861.F****CDIs/SHARES ON ISSUE 186.0M**

	$\text{Li}_2\text{CO}_3$ %	Na ppm	K ppm	Mg ppm	Ca ppm	Mn ppm	Fe ppm	Ni ppm	Cu ppm	Zn ppm	Al ppm	Si ppm	Pb ppm	$\text{SO}_4^{2-}$ ppm	Cl ppm
YS/T 582-2013	≥99.5	250	10	80	50	3	10	10	3	3	10	30	3	800	30
Crude LC	99.4	368	3	5	357	0	8	3.4	0.2	1.2	5.1	26	0	4860	NA
Battery-Grade LC	99.99	3	0.8	0.9	2	0.7	6.3	3.4	0.2	1.3	2.8	2.1	0.07	95	NA

As can be seen from the table, the crude lithium carbonate first precipitated (i.e., with no purification or re-precipitation steps) meets the battery-grade specification for 10 of the 14 impurity thresholds.

The battery-grade lithium carbonate recrystallised after a single bicarbonation step shows an exceptionally clean battery-grade material.

A provisional patent application covering the simplified flowsheet has been lodged by the Company on behalf of Geomet s.r.o. to protect what the Company believes to be a very valuable and simple process to produce battery grade lithium carbonate or hydroxide from any lithiferous ore.

Secondly, the Company announced the appointment of Luthardt Investment GmbH, ("**Luthardt**") a Berlin-based consultancy specialising in energy production and government relations support to large infrastructure projects internationally. Luthardt is led by Sven Luthardt, who has broad business experience supporting companies in Europe and the Middle East, particularly in the field of Government relations.

Luthardt will advise the Company as well as the project company, Geomet, on EU and national government-level relations, with the aim of promoting official support of the Cinovec Project. In consideration for the engagement, the Company will issue Luthardt a total of 2 million unlisted options to acquire fully paid ordinary shares, exercisable at AU\$0.80 on or before 30 December 2023, which shall vest in two equal tranches, subject to milestones tied to achievement of downstream partnerships and policy support for the project in Germany being met, (refer to the Company's release dated 28 October 2022). (**Engagement of German strategic energy investment adviser**)

Otherwise, the quarter was marked by continued progress by the Company towards finalisation of the Definitive Feasibility Study ("**DFS**") together with ongoing discussions with prospective offtakers and Project Finance participants. From a macro perspective, the price for lithium remains extremely strong with Lithium Carbonate setting all time high prices in October and the expectation of continuing strong demand within the European Union for lithium resulting from the announcement of Gigafactory production capacities of up to 124 GWh to be achieved in the course of 2022. By 2025, this is expected to quadruple to over 500 GWh, and by 2030 even tenfold to up to 1.5 TWh.

There were also significant macro events within Europe for the period that are likely to have a positive effect on the demand for lithium and the support of the Cinovec Project. Amongst these was the announcement of the European Critical Raw Materials Act by European Commission President Ursula von der Leyen in September which is aimed at securing a sustainable EU supply of critical raw materials for Europe and lessening European dependency on certain other suppliers.

The timeline for the completion of the DFS is under review with an announcement in this regard expected imminently. Whilst the work on the DFS is proceeding well, there have been delays in the DFS process caused in part by COVID-19 issues in laboratories, the dramatic upturn in the workload of laboratories and associated reduction in laboratory availability resulting from the increase in demand in the lithium space, and logistical issues caused by the Ukrainian situation. It is not expected that this will delay the critical path of the Project, as during this time the Company will be in the process of finalising permitting and Project Finance matters.

During the reporting period, European Metals was pleased to announce the appointment of Panmure Gordon as the Company's Joint Broker in the United Kingdom, alongside WH Ireland, who will retain their role as NOMAD. Panmure Gordon are a UK based investment bank providing a full range of services including Capital Raising, Corporate Advisory, Corporate Broking, Investor Relations, Research, Sales and Execution with distribution to the UK, Europe and the US. (refer to the Company's ASX release dated 16 August 2022) (**Appointment of Panmure Gordon as Joint UK Broker**).

## CORPORATE AND ADMINISTRATION

### QUARTERLY CASHFLOW REPORT

In accordance with the ASX Listing Rules, the Company will also today lodge its cashflow report for the quarter ended 30 September 2022. Included in those cashflows are cash receipts from Geomet of \$551k and cash outflow for Cinovec associated costs of \$115k in respect of the Company's investment in the Cinovec Lithium Exploration Project in the Czech Republic ("the Project").

The Company's total cash is in excess of AUD 18 million.

### PAYMENTS TO RELATED PARTIES

As outlined in the attached Appendix 5B (section 6.1), during the quarter approximately \$302k in payments were made to related parties and their associates for director salaries, consultancy fees, superannuation, and other related costs. A portion of these expenses are to be reimbursed directly from Geomet.

### PERFORMANCE RIGHTS

As at 30 September 2022 the company had on issue 6,550,000 performance rights.

### GEOMET TENEMENT SCHEDULE

Table 2: Geomet Tenements

Permit	Code	Deposit	Interest at beginning of Quarter	Acquired / Disposed	Interest at end of Quarter
Exploration Area	Cinovec	N/A	100%	N/A	100%
	Cinovec II		100%	N/A	100%
	Cinovec III		100%	N/A	100%
	Cinovec IV		100%	N/A	100%
Preliminary Mining Permit	Cinovec II	Cinovec South	100%	N/A	100%
	Cinovec III	Cinovec East	100%	N/A	100%
	Cinovec IV	Cinovec NorthWest	100%	N/A	100%

**This announcement has been approved for release by the Board.**

## BACKGROUND INFORMATION ON CINOVEC

### PROJECT OVERVIEW

#### Cinovec Lithium/Tin Project

Geomet s.r.o. controls the mineral exploration licenses awarded by the Czech State over the Cinovec Lithium/Tin Project. Geomet has been granted a preliminary mining permit by the Ministry of Environment and the Ministry of Industry. The company is owned 49% by EMH and 51% by CEZ a.s. through its wholly owned subsidiary, SDAS. Cinovec hosts a globally significant hard rock lithium deposit with a total Measured Mineral Resource of 53.3Mt at 0.48% Li<sub>2</sub>O and 0.08% Sn, Indicated Mineral Resource of 360.2Mt at 0.44% Li<sub>2</sub>O and 0.05% Sn and an Inferred Mineral Resource of 294.7Mt at 0.39% Li<sub>2</sub>O and 0.05% Sn containing a combined 7.39 million tonnes Lithium Carbonate Equivalent and 335.1kt of tin (refer to the Company's ASX release dated 13 October 2021) (**Resource Upgrade at Cinovec Lithium Project**).

An initial Probable Ore Reserve of 34.5Mt at 0.65% Li<sub>2</sub>O and 0.09% Sn reported 4 July 2017 (**Cinovec Maiden Ore Reserve – Further Information**) has been declared to cover the first 20 years mining at an output of 22,500tpa of lithium carbonate (refer to the Company's ASX release dated 11 July 2018) (**Cinovec Production Modelled to Increase to 22,500tpa of Lithium Carbonate**).

This makes Cinovec the largest hard rock lithium deposit in Europe, the fifth largest non-brine deposit in the world and a globally significant tin resource.

The deposit has previously had over 400,000 tonnes of ore mined as a trial sub-level open stope underground mining operation.

On 19 January 2022, EMH provided an update to the 2019 PFS Update, conducted by specialist independent consultants which, based upon the production of 29,386tpa of lithium hydroxide, indicates a post-tax NPV of USD1.938B and a post-tax IRR of 36.3% and confirmed that the Cinovec Project is a potential low operating cost producer of battery-grade lithium hydroxide or battery grade lithium carbonate as markets demand. It confirmed the deposit is amenable to bulk underground mining (refer to the Company's ASX release dated 19 January 2022) (**PFS Update delivers outstanding results**). Metallurgical test-work has produced both battery-grade lithium hydroxide and battery-grade lithium carbonate in addition to high-grade tin concentrate at excellent recoveries. Cinovec is centrally located for European end-users and is well serviced by infrastructure, with a sealed road adjacent to the deposit, rail lines located 5 km north and 8 km south of the deposit, and an active 22 kV transmission line running to the historic mine. As the deposit lies in an active mining region, it has strong community support.

The economic viability of Cinovec has been enhanced by the recent strong increase in demand for lithium globally, and within Europe specifically.

There are no other material changes to the original information and all the material assumptions continue to apply to the forecasts.

## BACKGROUND INFORMATION ON CEZ

Headquartered in the Czech Republic, CEZ a.s. is an established, integrated energy group with operations in a number of Central and South-eastern European countries and Turkey. CEZ's core business is the generation, distribution, trade in, and sales of electricity and heat, trade in and sales of natural gas, and coal extraction. CEZ Group is one of the ten largest energy companies in Europe, has 28,000 employees and annual revenue of approximately EUR 9.97 billion.

The largest shareholder of its parent company, CEZ a.s., is the Czech Republic with a stake of approximately 70%. The shares of CEZ a.s. are traded on the Prague and Warsaw stock exchanges and included in the PX and WIG-CEE exchange indices. CEZ's market capitalization is approximately EUR 17.7 billion.

As one of the leading Central European power companies, CEZ intends to develop several projects in areas of energy storage and battery manufacturing in the Czech Republic and in Central Europe.

CEZ is also a market leader for E-mobility in the region and has installed and operates a network of EV charging stations throughout Czech Republic. The automotive industry in the Czech Republic is a significant contributor to GDP, and the number of EV's in the country is expected to grow significantly in the coming years.

## **CONTACT**

For further information on this update or the Company generally, please visit our website at [www.europeanmet.com](http://www.europeanmet.com) or see full contact details at the end of this release.

## **COMPETENT PERSON**

Information in this announcement relating to the FECAB metallurgical testwork is based on technical data compiled or supervised by Mr Walter Mädel, a full-time consultant to Geomet s.r.o the Cinovec project company. Mr Mädel is a member of the Australasian Institute of Mining and Metallurgy (AUSIMM) and a mineral processing professional with over 27 years of experience in metallurgical process and project development, process design, project implementation and operations. Of his experience, at least 5 years have been specifically focused on hard rock pegmatite Lithium processing development. Mr Mädel consents to the inclusion in the announcement of the matters based on this information in the form and context in which it appears. Mr Mädel is a participant in the long-term incentive plan of the Company.

Information in this release that relates to exploration results is based on information compiled by Dr Vojtech Sesulka. Dr Sesulka is a Certified Professional Geologist (certified by the European Federation of Geologists), a member of the Czech Association of Economic Geologist, and a Competent Person as defined in the JORC Code 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Sesulka has provided his prior written consent to the inclusion in this report of the matters based on his information in the form and context in which it appears. Dr Sesulka is an independent consultant with more than 10 years working for the EMH or Geomet companies. Dr Sesulka does not own any shares in the Company and is not a participant in any short- or long-term incentive plans of the Company.

Mr Grant Harman (B.Sc Chem Eng, B.Com) is an independent consultant with in excess of 7 years of lithium chemicals experience. Mr Harman supervised and reviewed the metallurgical test work and the process design criteria and flow sheets in relation to the LCP. Mr Harman is a participant in the long-term incentive plan of the Company.

The information in this release that relates to Mineral Resources and Exploration Targets is based on, and fairly reflects, information and supporting documentation prepared by Mr Lynn Widenbar. Mr Widenbar, who is a Member of the Australasian Institute of Mining and Metallurgy and a Member of the Australasian Institute of Geoscientists, is a full-time employee of Widenbar and Associates and produced the estimate based on data and geological information supplied by European Metals. Mr Widenbar has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the JORC Code 2012 Edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Mr Widenbar has provided his prior written consent to the



inclusion in this report of the matters based on his information in the form and context that the information appears. Mr Widenbar does not own any shares in the Company and is not a participant in any short- or long-term incentive plans of the Company.

The information in this report is extracted from ASX announcements made by EMH on 11 July 2018 "Cinovec Production Modelled to Increase to 22,500tpa of Lithium Carbonate", 13 October 2021 "Resource Upgrade at Cinovec Lithium Project" and 19 January 2022 "PFS Update delivers outstanding results" which are available to view on the Company's website: europeanmet.com. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources or Ore Reserves, 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 announcement.

### **CAUTION REGARDING FORWARD LOOKING STATEMENTS**

The Company has concluded that it has a reasonable basis for providing the forward-looking statements and the forecast financial information included in this ASX release. While the Company considers the assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by LCA will be achieved. This ASX release has been prepared in compliance with the current JORC Code (2012) and the ASX Listing Rules.

Information included in this release constitutes forward-looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as "may", "will", "expect", "intend", "plan", "estimate", "anticipate", "continue", and "guidance", or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs.

Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the company's actual results, performance, and achievements to differ materially from any future results, performance, or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licences and permits and diminishing quantities or grades of reserves, political and social risks, changes to the regulatory framework within which the company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation.

Forward looking statements are based on the company and its management's good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the company's business and operations in the future. The company does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that the company's business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by the company or management or beyond the company's control.

Although the company attempts and has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements or events not to be as anticipated, estimated or intended, and many events are beyond the reasonable control of the company. Accordingly, readers are cautioned not to place undue reliance on forward looking

statements. Forward looking statements in these materials speak only at the date of issue. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, in providing this information the company does not undertake any obligation to publicly update or revise any of the forward looking statements or to advise of any change in events, conditions or circumstances on which any such statement is based.

## LITHIUM CLASSIFICATION AND CONVERSION FACTORS

Lithium grades are normally presented in percentages or parts per million (ppm). Grades of deposits are also expressed as lithium compounds in percentages, for example as a percent lithium oxide ( $\text{Li}_2\text{O}$ ) content or percent lithium carbonate ( $\text{Li}_2\text{CO}_3$ ) content.

Lithium carbonate equivalent ("LCE") is the industry standard terminology for, and is equivalent to,  $\text{Li}_2\text{CO}_3$ . Use of LCE is to provide data comparable with industry reports and is the total equivalent amount of lithium carbonate, assuming the lithium content in the deposit is converted to lithium carbonate, using the conversion rates in the table included below to get an equivalent  $\text{Li}_2\text{CO}_3$  value in percent. Use of LCE assumes 100% recovery and no process losses in the extraction of  $\text{Li}_2\text{CO}_3$  from the deposit.

Lithium resources and reserves are usually presented in tonnes of LCE or Li.

The standard conversion factors are set out in the table 4 below:

**Table 3: Conversion Factors for Lithium Compounds and Minerals**

Convert from		Convert to Li	Convert to $\text{Li}_2\text{O}$	Convert $\text{Li}_2\text{CO}_3$ to	Convert to $\text{LiOH.H}_2\text{O}$
Lithium	Li	1.000	2.153	5.325	6.048
Lithium Oxide	$\text{Li}_2\text{O}$	0.464	1.000	2.473	2.809
Lithium Carbonate	$\text{Li}_2\text{CO}_3$	0.188	0.404	1.000	1.136
Lithium Hydroxide	$\text{LiOH.H}_2\text{O}$	0.165	0.356	0.880	1.000
Lithium Fluoride	LiF	0.268	0.576	1.424	1.618

## WEBSITE

A copy of this announcement is available from the Company's website at [www.europeanmet.com](http://www.europeanmet.com).

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The information contained within this announcement is considered to be inside information, for the purposes of Article 7 of EU Regulation 596/2014, prior to its release. The person who authorised for the release of this announcement on behalf of the Company was Keith Coughlan, Executive Chairman.