



## Caldron's identifies Low Carbon Footprint for Scarce River Sand Commodity

### Highlights

- **Caldron commitment to net zero carbon extends to its investment in the world's largest bulk commodity – Sand;**
- **Caldron aims to limit its use of fuel powered equipment during exploration and any potential production phase in order to reduce its carbon footprint.**
- **The UN estimates that the world is consuming roughly 40 to 50 billion tonnes of sand on an annual basis.**
- **Recent reports state that the world is facing a shortage of sand — with climate scientists saying it constitutes one of the greatest sustainability challenges of the 21st century.**
- **The reports state that the global rate of use of sand, which has tripled over the last two decades partially as a result of surging urbanisation, far exceeds the natural rate at which sand is being replenished by the weathering of rocks by wind and water.**
- **Desert Sand, although globally plentiful, is too smooth and rounded to bind together for construction purposes.**
- **Sand that is more angular and can lock together is the type of sand needed for construction and it is typically sourced from seabeds, coastlines, quarries and rivers.**
- **However, increasingly, governments of the world are moving to ban the extraction & export of sea and river sand.**
- **The global balance of available construction sand is projected to be moving to deficit and shortages in Southern Asia presently are driving prices higher sufficient to sustain bulk sea-borne transport.**
- **Caldron's move to target the estuarine sand in three of Western Australia's largest river systems affords the potential of a low cost sand supply to target the premium seaborne export markets**
- **Reduced mining, handling and truck haulage invests less carbon into the product and reduces the carbon foot-print of sand supply.**

Caldron Energy Limited (**Caldron** or the **Company**) (ASX: CXU) is pleased to provide further commodity specific information on its river sand projects in relation to its commitment to achieving its net zero carbon emissions target (refer ASX announcement of 30 March 2021). The Company has specifically targeted a bulk commodity with projects close to transport infrastructure and in a market which is moving towards deficit.

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### Address

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### ASX Code

CXU

### Securities on Issue

451,999,512 shares  
6,833,395 Options (exercise price: \$0.03; expiry 31 Dec 2021)  
16,666,666 Options (exercise price: \$0.03; expiry 31 Mar 2022)  
10,000,000 Unlisted Options (exercise: \$0.03; expiry 16-Sep-22)  
6,000,000 Unlisted Options (exercise: \$0.05; expiry 16-Sep-23)  
45,354,839 Options (exercise price: \$0.05; expiry 30 Nov 2023)  
9,000,000 Performance Rights (expiring 10 August 2025)

### Board of Directors

Simon Youds  
Non-Executive Chairman

Jess Oram  
Executive Director & Chief Executive Officer

Qiu Derong  
Non-executive Director

Judy Li  
Non-executive Director

Chenchong Zhou  
Non-executive Director

Michael Fry  
Company Secretary

Cauldron is pleased to advise of the energy efficient nature of its projects along with the early steps it is taking to develop systems to reduce the carbon footprint of our operations, both during the exploration phase and any potential production phase.

The geological and physical characteristics of the Cauldron's sand projects is such that there is the potential to reduce the transport requirements of shipping and thus improve the economic fundamentals of the any mining process.

And the close proximity to shipping infrastructure gives Cauldron a head-start in minimising its carbon footprint. In addition, during the exploration phase, Cauldron is committed to limiting its use of fuel powered equipment, aimed at further reducing its carbon footprint.

It is to be noted that at this stage of development the Company's operations are exploratory in nature, but may involve production at some future stage, if the results of exploration prove favourable.

Cauldron CEO, Jess Oram said, "*the synergies of low cost of extraction and transport with a low carbon footprint deliver both an economic and environmental outcome and this positions the company perfectly for the coming trading environment*".

**A recent report titled "A sand shortage? The world is running out of a crucial – but under-appreciated – commodity" has shone a spotlight on the importance of sand and the decline in its availability.**

**Refer: <https://www.cnbc.com/2021/03/05/sand-shortage-the-world-is-running-out-of-a-crucial-commodity.html>**

The report highlights that sand is the world's most consumed raw material, after water, and an essential ingredient to everyday life; but yet the world is facing a shortage, which climate scientists claim constitutes one of the greatest sustainability challenges of the 21<sup>st</sup> century.

The report highlights that sand is the primary substance in the construction of roads and bridges, and the manufacture of glass, and used in a range of diverse applications including anything from high-speed trains to land regeneration projects to silicon chips.

The report states that despite sand being everywhere, the world is starting to run out of it. Construction alone uses roughly 40 to 50 billion tons of sand annually according to the UN.

The following has been extracted from the report:

*"The global rate of sand use — which has tripled over the last two decades partially as a result of surging urbanization — far exceeds the natural rate at which sand is being replenished by the weathering of rocks by wind and water.*

*Sand can be found on almost every country on Earth, blanketing deserts and lining coastlines around the world. But that is not to say that all sand is useful. Desert sand grains, eroded by the wind rather than water, is too smooth and rounded to bind together for construction purposes.*

*The sand that is highly sought after is more angular and can lock together. It is typically sourced and extracted from seabeds, coastlines, quarries and rivers around the world."*

### **Market Analysis**

A market analysis conducted by Cauldron (refer ASX announcement dated 22 December 2020) determined that sand used in concrete is between 10-15 billion tonnes world wide or ~3-4 times all the coal mined globally. This is dwarfed in comparison to the sand used in Reclamation ~25-30 billion tonnes per annum (refer Figure 1 of ASX announcement dated 22 December 2020). This information was sourced from various reliable organisations including the International Energy Agency (IEA) and the United Nations (UN).

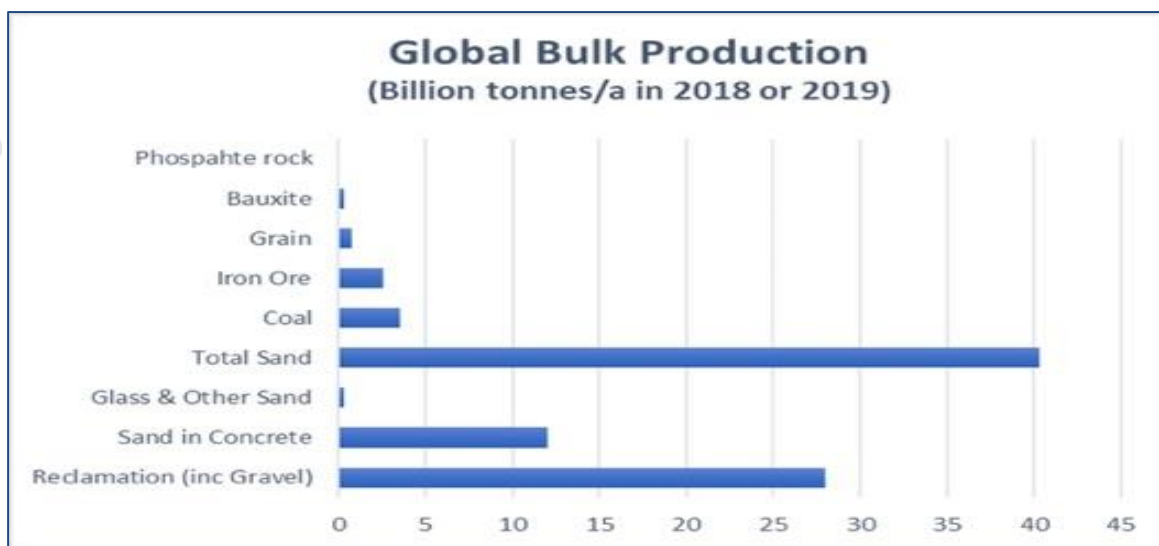


Figure 1: Estimated Global Annual Bulk Commodity Production in billion tonnes (2018/2019)[Source CXU]

In terms of reclamation, China, Singapore and Hong Kong continue to carry out large reclamation programs.

The market analysis has defined an industry that historically has been largely hidden from scrutiny due to no market or global regulation like other resource categories. The more recent issues with sourcing supply across international boundaries as the price has increased sufficient to allow bulk seaborne transport, has changed this. It has highlighted the environmental damage caused by unregulated mining of sand resources in sensitive environmental areas without protection. The international sand customers like Singapore are now requiring full environmental and national approvals to avoid the charge from neighbouring nations of illegal mining. Cauldron’s activities and Australian regulation provide that necessary protection. The use of seaborne transport and Cauldron’s involvement should it be successful in entering production can be expected to bring a level of regulation to the Company’s international supply and contribute to the lowering of the carbon footprint that the movement of material represents around the globe.

### Western Australian Sands Projects – Project Acquisition

In December 2020, Cauldron entered into an agreement to acquire a 100% interest in the WA Sands Project, comprising a number of river sand leases located at the mouths of the Carnarvon, Onslow and Derby rivers in Western Australia, collectively covering an area of approximately 482 square kilometres.

The agreement is subject to a number of conditions precedent, including shareholder approval (which was gained post period end on 29 January 2021 at the Company’s Annual General Meeting) and which triggered the issue to the Project vendor of a total of 4,000,000 fully paid shares on 1 February 2021.

Cauldron notes that one of the Tenements being acquired, being Mining Lease Application 09/150, is listed as “dead” on the register maintained by the Department of Mines, Industry Regulation and Safety of Western Australia. Cauldron identified this fact as part of its due diligence conducted prior to entering into the agreement. The recording of MLA09/150 as “dead” follows a decision in the Western Australian Supreme Court in the case *Onslow Resources Ltd v The Minister for Mines and Petroleum* [2020] WASC 310, in which the Justice determined that the application for ML09/150 was invalid. Onslow Resources Limited is presently appealing this decision, as is its right. As at the date of this report a decision is yet to be handed down.

In addition, Cauldron notes that with respect to Mining Lease 08/487, that on 22 January 2021 proceedings were commenced against Quarry Park Pty Ltd, the Mining Registrar, the WA Minister for Mines and Petroleum and the Company in relation to the validity of ML08/487, and further, an interim injunction was heard on 27 January 2021 to prevent Quarry Park Pty Ltd and Cauldron from executing or lodging a transfer of ML08/487. Following the hearing an interim injunction was ordered which restricts the transfer of the tenement pending a decision on the injunction being handed down. As at the date of this report a decision is yet to be handed down.

Neither MLA09/150 or ML08/487 is considered material to the overall transaction and Cauldron will proceed with the acquisition of the remaining Tenements whether or not each, or both, are ultimately included. If either is excluded the parties are agreed that they will consider an adjustment to the consideration to be paid, or a replacement of either of the tenements.

As at the date of this report, the acquisition has not yet been finalised. Satisfaction of the remaining conditions precedent will trigger the issue of up to a further 16,000,000 fully paid shares and a right to royalties and production according to the terms of the agreement, subject to any adjustment agreed between the parties should either of MLA09/150 and ML08/487 be excluded, as referred to above.

**END**

Authorised for release by Mr Jess Oram, Executive Director and Chief Executive Officer.

For further information please contact:

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### Competent Person Statements

The information in this report that relates to exploration results for the Western Australian Sands Project is based on information compiled by Mr Jess Oram, Executive Director of Cauldron Energy Limited. Mr Oram is a Member of the Australasian Institute of Geoscientists.

Mr Oram has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Oram consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

### Forward Looking Statements

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.