

## ASX ANNOUNCEMENT

31 July 2023

### June 2023 Quarterly Activities Report

- **Manganese exploration campaign on Eyre Peninsula, South Australia delivers impressive results**
- **Assay results completed targeting Initial Maiden Mineral Resource**
- **Maiden Mineral Resource Estimate (MRe) which is being undertaken by ERM Australia Consultants Pty Ltd, trading as CSA Global with results pending.**
- **High Purity Alumina (HPA) resized pilot plant design approved**
- **Ongoing engagement with global electrical vehicle (EV) supply chain via USA and European roadshows.**

**ChemX Materials (ASX:CMX) (ChemX or the Company)**, an Australian based high purity critical materials business, is pleased to present its June 2023 quarterly report. The Company is developing a High Purity Manganese (HPM) Project on the Eyre Peninsula in South Australia along with its High Purity Alumina (HPA) Project in Perth, Western Australia.

#### Manganese Exploration

During the quarter, the Company received assay results from its manganese exploration campaign conducted at Jamieson Tank deposit. The campaign was focused on infill drilling the northern-most 2.2km of strike along the 6.6km strike of the exploration target (see ASX release dated 27 July 2022) which was delineated following the 2022 exploration campaign and analysis of the historical drilling result by previous tenement owners. In total, 94 Reverse Circulation (RC) holes were drilled for a total of 6,164 metres. Importantly, the campaign added significantly to the geological understanding of the manganese deposit.

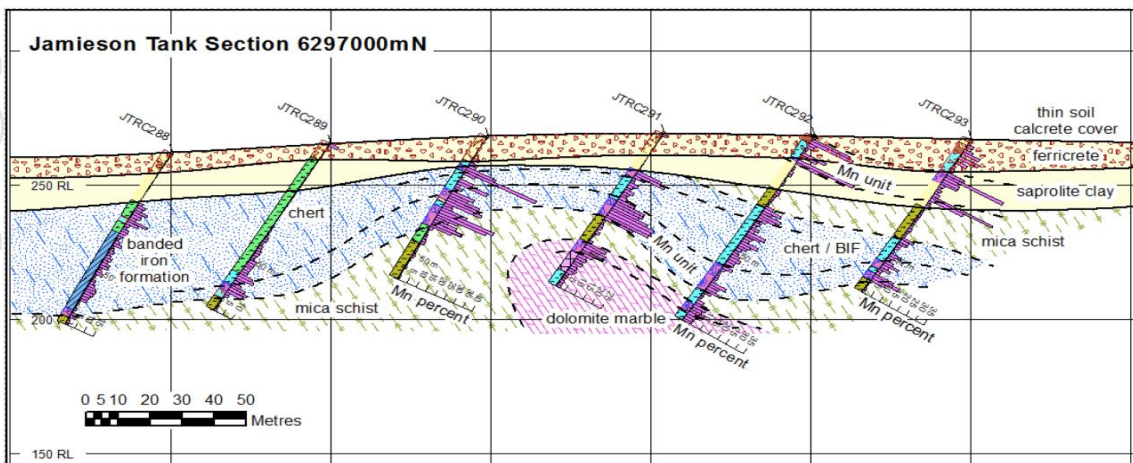


Figure 1: Jamieson Tank cross-section 6297000 mN, in the southern strike area



Observations in the field and geological logging identified the mineralisation as occurring as continuous bands in a relatively shallow sequence of banded iron formation (BIF), 200m wide and extending over 2km. Manganese mineralisation occurs across the entire 6km of strike, representing open opportunity for further exploration.

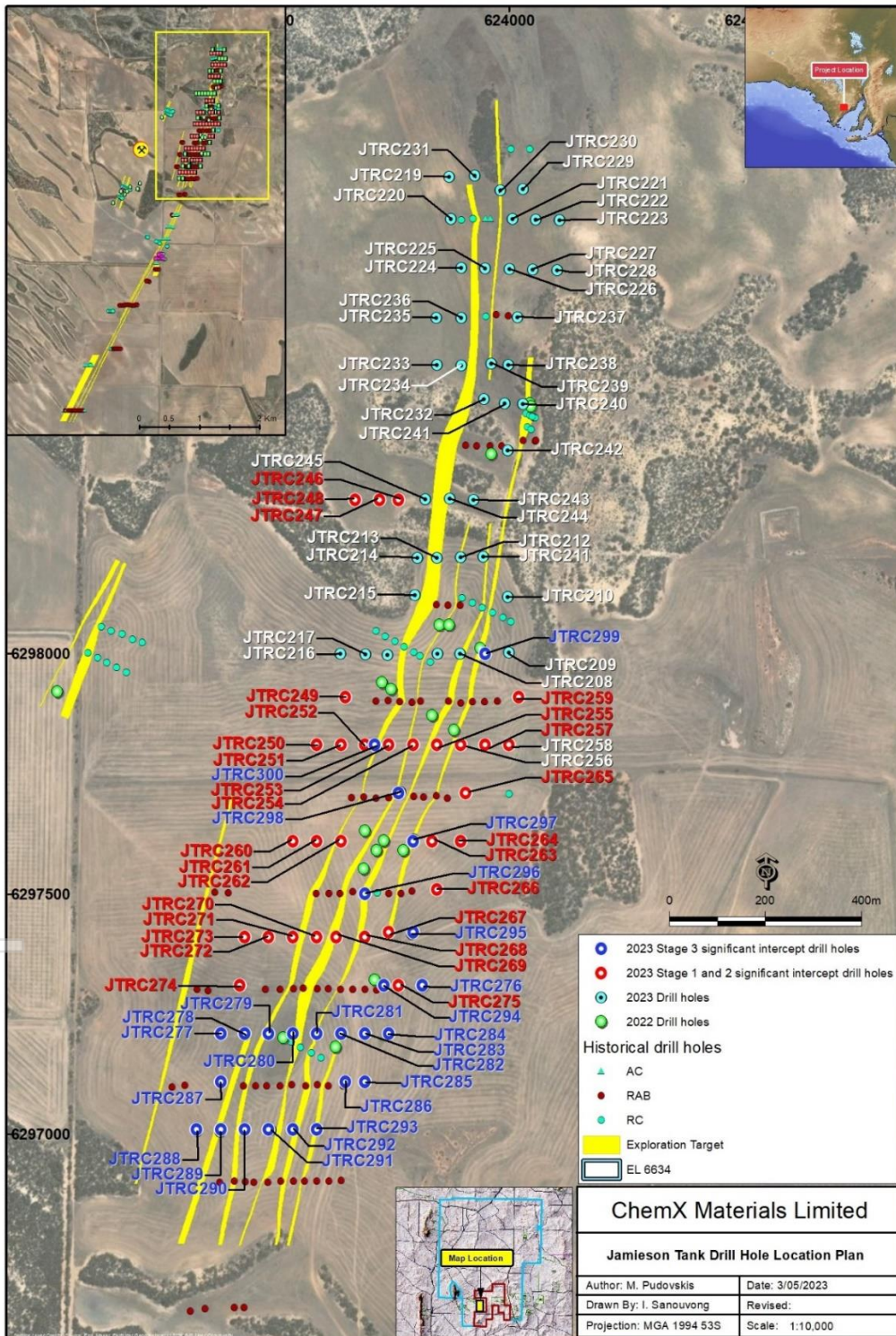


Figure 2: Jamieson Tank drill hole and Exploration Target location plan



This third and final round of assay results revealed significant manganese intercepts near surface and extending to depth, as displayed in table A and illustrated in Figure 1 (refer ASX release dated 9 May 2023).

Hole ID	Metres (thickness)	Average %Mn	From (Metres)
JTRC280	32	8.2	24
JTRC290	25	12.1	13
JTRC282	20	8.8	10
JTRC294	18	10.2	17
JTRC296	16	17.9	17
JTRC283	16	12.7	55
JTRC286	16	8.4	8
JTRC292	11	11.3	1
JTRC291	9	18.0	28
JTRC293	2	26.3	24

**Table A. Significant manganese Assays**

Previous beneficiation and metallurgical testwork has demonstrated the ore is highly amenable to beneficiation and conversion to High Purity Manganese Sulphate (refer ASX release dated 11 May 2022).

Industry standard geophysical density and QAQC practices were employed, to underpin the estimation of a maiden Mineral Resource.

The Mineral Resource estimation will support future preliminary mine optimisation plans and provide confidence in the quality and quantity of the feedstock, for the beneficiation of the manganese ore, ultimately destined for the global battery grade manganese market.

In addition to the Jamieson Tank project, ChemX has identified further manganese prospects at Bunora West, Hodgins, Windyzell, Francis and Polinga. These prospects present additional opportunities to explore and offer future discovery potential and feed options for the proposed future High Purity Manganese Sulphate Production plant (refer ASX release dated 27 July 2022).

The Company continued to advance its beneficiation testwork on further representative samples of manganese ore from Jamieson Tank, in addition to development of the high purity manganese flow sheet. The work remains in progress with completion subject to laboratory schedules.

Manganese is emerging as an ever-increasing focus of battery producers. Emerging battery chemistries such as with Lithium Manganese Iron Phosphate (LMFP) offer a bridge between high nickel content chemistries and Lithium Iron Phosphate chemistries. In addition, battery producers are looking to diversify supply chains and seek manganese supply from IRA compliant projects. ChemX believes it is well positioned to take advantage of changes in battery chemistry and the need of producers to seek new sources of supply from tier one jurisdictions.

### High Purity Alumina (HPA) Resized Pilot Plant design Approved

During the Quarter, the Company continued to optimise the HiPurA® HPA Micro Plant under continuous conditions. As a result of the data obtained, the Company was able to make modifications to the original flow sheet which have been captured within the detailed design program. Due to improvements made and feedback from potential customers, the Company resized the full scale HPA Pilot Plant from the original 50tp/a as described in the successful Feasibility Study completed by Primero Group in August 2022. Working with Fremantle Metallurgy, a metallurgical processing business specialising in flowsheet development and process design, the Company reduced the CAPEX cost of the Pilot Plant to \$600,000, from the original \$2.5m estimate.

Construction of the Pilot Plant is forecast to take approximately 16 weeks after commencement of works. Following ramp-up and commissioning, the Pilot Plant will run in intensive campaigns to produce the required volumes of HPA to meet customer qualification requirements and demonstrate 24/7 operation. The Pilot Plant is also expected to produce other products, such as aluminium salts, which are highly desired by industry. Once the Pilot Plant is operational, the Micro Plant will be reconfigured in order to allow investigation of the production of products of higher purity, the initial target being 5N HPA.



Figure 3 - Indicative design of HPA Plant Circuit, supplied by Fremantle Metallurgy.

The HPA market is expected to undergo significant growth in the future, driven by supply chain disruption and the growth of the electric vehicle market.



The HiPurA® process is significantly different to the currently used Alkoxide method and other known technologies that produce HPA, including those that remain under development. Importantly, CMX's HiPurA® process is independent of dedicated mining operation, thus avoiding any mine development timeframes or associated operational risks. Production facilities can be positioned in multiple locations close to prospective end users, with the HiPurA® process utilising a relatively low cost and globally plentiful feedstock due to the unique nature of the technology, a Patent Application was lodged on 7th July 2022 to globally protect the IP that is 100% owned by ChemX.

### **Global engagement strategy**

During the quarter, engagement with the global electrical vehicle and OEM supply chains remain in progress and are expected to ramp up over the coming year as the Company looks to strategic partners for development of the HPM and HPA projects.

The roadshows included site visits to Europe and C4V in the US. In addition, engagement with commercial parties throughout the key markets of USA, Europe, Southeast Asia continued.

### **ASX Compliance**

In accordance with ASX Listing Rule 5.3.1, the Company did not conduct any exploration during the quarter as it completed a drilling campaign in prior period and was awaiting further assay results. Details of the Company's activities for the quarter, including any material developments or material changes in those activities and a summary of the expenditure incurred on those activities is detailed in the preceding sections and in Table B below.

With respect to Listing Rule 5.3.2, the Company confirms that there was no mine production or mine development activities for the quarter.

In accordance with Listing Rule 5.3.3, the Company provides the following information in relation to its mining tenements in Table A. No mining tenements were acquired or disposed of during the quarter. The Company is a party to a mineral rights agreement with Pirie Resources Pty Ltd to explore for, and if warranted, develop mining operations exclusively for graphite.

**Table A - Tenements**

Tenement	Registered Holder	Beneficial Interest	Location	Status
EL 6634	ChemX Materials Ltd	100%	South Australia	Live
EL 5920	ChemX Materials Ltd	100%	South Australia	Live

For the purposes of Listing rule 5.3.4, the Company provides that following comparison in Table B of actual expenditure during the quarter against the use of funds following the issue of securities pursuant to the Prospectus, together with an explanation of any material variances.

**Table B – Comparison of actual expenditure versus estimated expenditure.**

Use of Funds	Estimate for the first 2 years after ASX admission	Actual use June 2023 Quarter	Actual use Jan 22 to Jun 23	Balance Remaining
Exploration at Eyre Peninsula Project	1,043,000	191,809	1,853,746	(810,746)
HPA Test Work	650,000	572,750	1,490,068	(840,068)
HPA Pilot Plant	2,500,000	0	162,935	2,337,065
Product Development	1,000,000	19,971	323,857	676,143
Expenses of the Offer	875,715		703,654	172,061*
Administration & Working Capital	2,431,285	486,486	2,897,587	(466,302)
<b>Total</b>	<b>\$8,500,000</b>	<b>1,271,016</b>	<b>7,431,847</b>	<b>1,068,153</b>

\*Amount remaining relates to timing of payments made prior to the March quarter 2022 and after the release of the Prospectus.

In accordance with Listing Rule 5.3.5, the Company confirms payments totalling \$175,000 were made to directors for employment costs as well as to associates and related parties of the Company, for services rendered up to 30 June 2023.

Differences between estimated expenditure and actual expenditure primarily relate to increased expenditure on manganese exploration designed to estimate a maiden mineral resource in based on previous exploration success and new exploration target (27 July 2022) and investment in the High Purity Alumina project.

### Deferred Consideration Shares

In relation to the acquisition of HiPurA Pty Ltd which was completed on 31 December 2021:

1. The number of Deferred Consideration Shares pending issue (on issue) is 2,500,000.
2. The terms of and conditions for the issue of Deferred Consideration Shares;
  - a. Commissioning of HPA Pilot Plant
3. During the quarter no Deferred Consideration shares were issued or cancelled.
4. There were no further milestones met during the quarter.

### Confirmations

1. 11 May 2022 ChemX Battery Materials Strategy Moves Forward
2. 27 July 2022 Jamieson Tank Manganese & HPMSM Project Update
3. 17 April 2023 Significant Manganese Assays
4. 27 April 2023 More Significant Manganese Assays
5. 9 May 2023 Highest Grade Thick Intercepts of Manganese

The Company confirms that it is not aware of any new information or data that materially affects the information included in the above market announcements.



**During the March 2023 Quarter the following ASX Announcements were made:**

1. 15 June 2023 ChemX USA Roadshow Presentation
2. 5 June 2023 ChemX Approves Construction of Resized HPA Pilot Plant
3. 9 May 2023 Highest Grade Thick Intercepts of Manganese
4. 4 May 2023 ChemX Investor Presentation
5. 27 April 2023 More Significant Manganese Assays
6. 24 April 2023 Quarterly Activities Report
7. 24 April 2023 Quarterly Appendix 5B Cash Flow
8. 17 April 2023 Significant Manganese Assays

*This Announcement has been authorised for release by the Board*

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**About ChemX Materials (ASX: CMX)**

ChemX is a materials technology company focused on providing critical materials required for electrification and decarbonisation. The Company's vision is to support the energy transition with materials and technology that provide real solutions to lowering carbon emissions. The Company is developing a High Purity Manganese (HPM) Project on the Eyre Peninsula in South Australia along with its High Purity Alumina Project in Perth, Western Australia.

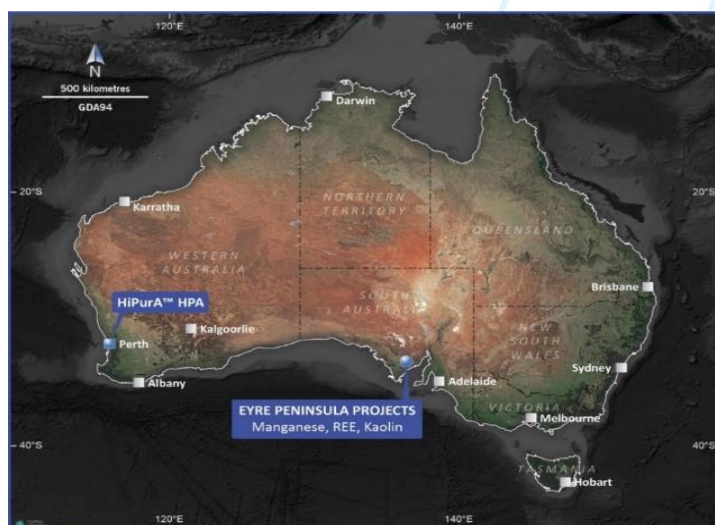


Figure 4 - ChemX Project Locations

[www.chemxmaterials.com.au](http://www.chemxmaterials.com.au)

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