ASX ANNOUNCEMENT

20 September 2023

Maiden Manganese Resource Supports CMX High Purity Strategy

- **Maiden Mineral Resource 13.1 Mt at 5.7% Mn established with recent drilling program**
- **Significant potential upside with ~70% of the identified Jamieson Tank strike awaiting further extensional drilling of high grade, near surface targets**
- **Testwork shows the shallow resource has excellent upgrade characteristics**
- **Experienced global engineering firm Wood appointed to lead internal scoping study on high purity manganese battery grade products**
- **Manganese raw material demand set to double in next three years[1]**

ChemX Materials (ASX:CMX) (ChemX or the Company), an Australian based high purity critical materials developer, is delighted to announce a maiden resource on its 100% Company-owned Jamieson Tank deposit, located 150km from the infrastructure rich Port of Whyalla, South Australia.

CEO Peter Lee commented:

"ChemX is pleased with the delivery of this maiden Mineral Resource Estimate (MRE) for the Jamieson Tank manganese deposit, the first of four manganese prospects within the South Australian 100%-owned tenements, and today represents a key milestone for the company's shareholders.

"Importantly, the company expects to grow the mineral resource in grade and scale following the planned summer 2023/24 drilling program.

"This Mineral Resource defines a solid foundation for further strategic project advancement including internal scoping studies and mine optimisation plans, supported by the development of high purity manganese sulphate products for the global battery market. These studies will be supported by Wood (internal scoping study) and CSA Global (mine optimisation plan)."

[1] Benchmark Mineral Intelligence – June 2023 Gigafactory Assessment

MAIDEN MINERAL RESOURCE ESTIMATE FOR NEAR SURFACE DEPOSIT

ChemX has worked closely with ERM Australia Consultants Pty Ltd (trading as CSA Global) to execute an extensive (+6,000m) infill Reverse Circulation (RC) program delivering the following maiden Mineral Resource Estimate (MRE), reported in accordance with the JORC 2012 Code.

JORC classification	Tonnes (Mt)	Mn (%)	Fe (%)	SiO_2 (%)	Al_2O_3 (%)	P (%)
Indicated	2.7	5.9	14.8	48.9	9.1	0.093
Inferred	10.4	5.6	14.8	48.7	10.2	0.095
Total	**13.1**	**5.7**	**14.8**	**48.7**	**10.0**	**0.094**

Table A: Mineral Resource estimate (MRE) summary, with applied grade cut-off 4%Mn

Testwork has demonstrated excellent upgradability through gravity and magnetic separation and ChemX is moving swiftly to execute a follow up drill program to bolster this maiden Mineral Resource Estimate.

Initial holes intersected high grade zones of +20% Mn in the following drill holes.

Hole ID	Metres	Av %Mn	From
JTRC218	2	32.3	13
JTRC239	3	24.5	15
JTRC256	2	20.4	57
JTRC267	2	23.4	24
JTRC269	3	20.0	27
JTRC270	4	23.0	17
JTRC283	2	25.2	33
JTRC290	4	20.0	30
JTRC291	5	21.4	32
JTRC294	3	20.4	30
JTRC296	4	22.1	18
JTRC299	2	23.5	12

Table 2 – High grade intersections (from a total of 94 RC drill holes for 6,173, see full assay data, ASX 9 May 23, 27 Apr 23, 17 Apr 23)

SOUTH AUSTRALIA - INFRASTUCTURE RICH

The project is well positioned to take advantage of world-class regional infrastructure including sealed roads, rail networks, port operations, grid-power and an emerging renewable energy hub in Whyalla. ChemX has commenced an internal scoping study for the evaluation of the full High Purity Manganese (HPM) project including a possible hydrometallurgical facility in Whyalla supported by a skilled residential workforce and associated infrastructure.

WORLD CLASS BATTERY DOWN-STREAM OPPORTUNITY FOR SOUTH AUSTRALIA

ChemX seeks to develop South Australian sourced Manganese into a world-class HPM product for use within global battery supply chains, particularly Electric Vehicle (EV) markets. This will require a Beneficiation Plant, likely to be located in the Central Eyre Peninsula region and also a Hydrometallurgical facility, currently proposed to be located in Whyalla. It is envisaged both operations will create significant employment within a burgeoning Critical Minerals and High Purity Materials industry in South Australia.

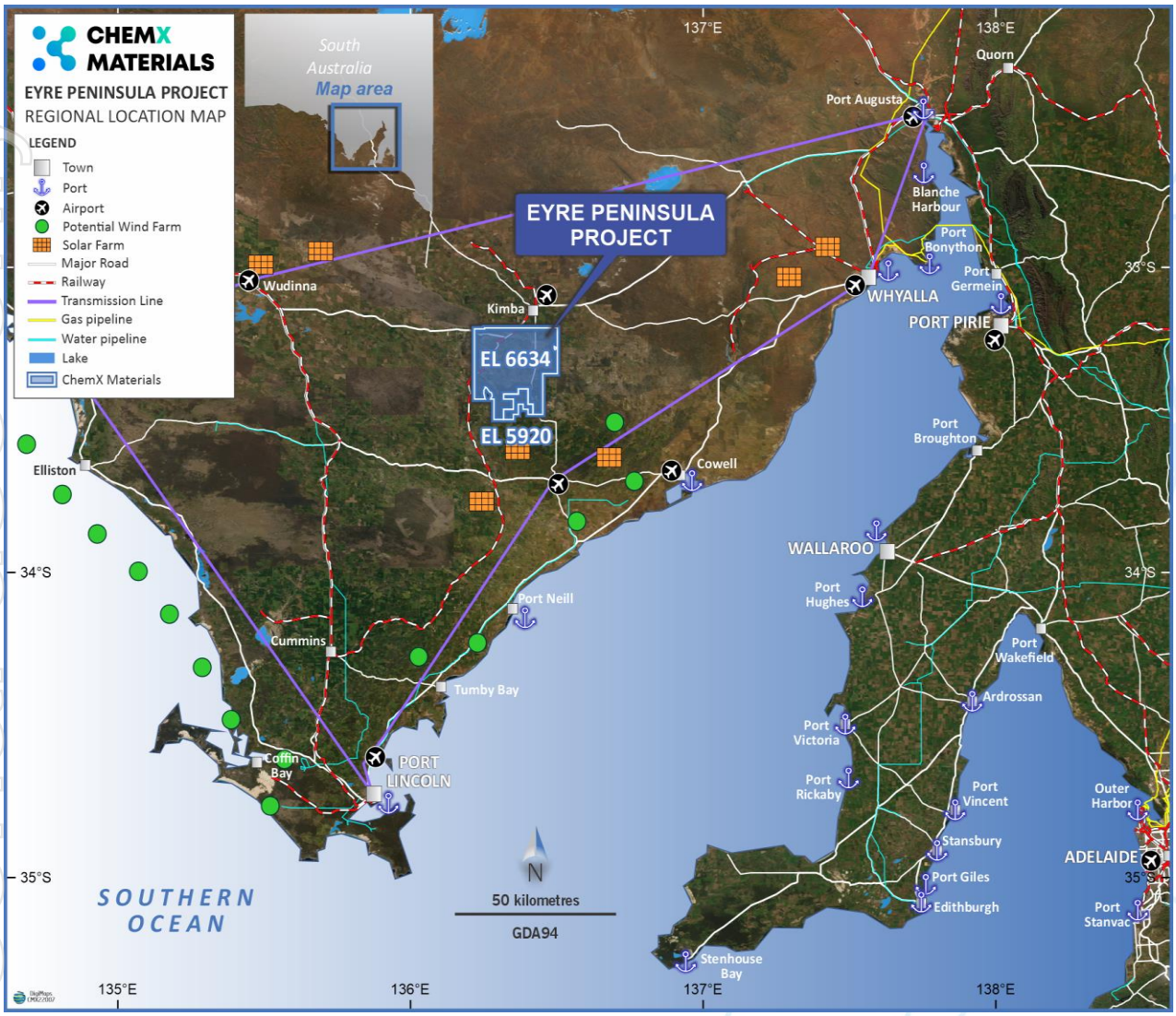


Figure 1 - Tenement regional location setting with major infrastructure

Mineralisation demonstrates near to surface and open at strike

Manganese mineralisation is exceptionally close to surface, extending down to approximately 70m and is defined within several cherty, banded iron formations. The sandy overburden thickness illustrated (Figure 2), ranges between 2m and 20m and is largely considered to be 'free-dig', requiring minimal use of drill and blast mining techniques, thereby envisaged to deliver mining costs towards the lower end of the spectrum.

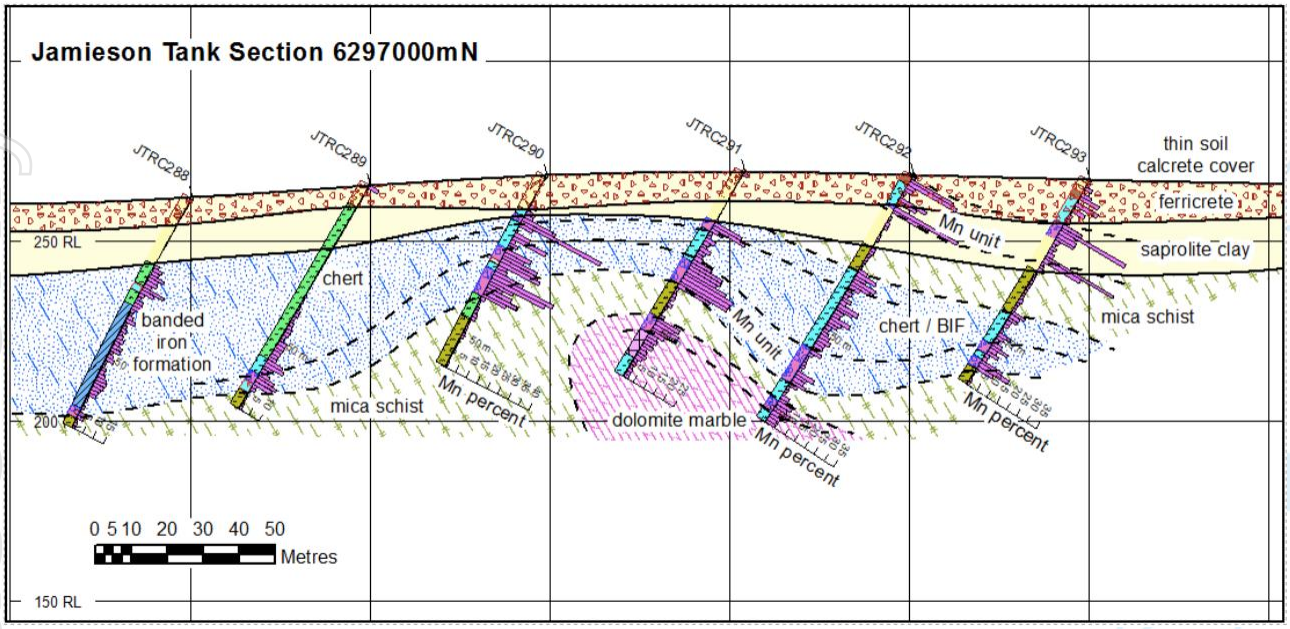


Figure 2: Jamieson Tank cross-section 6297000 mN, in the southern strike area

Extensive 2023 drilling on only the northern 2.2km (from a 6.6 km identified) strike has culminated in this maiden manganese Mineral Resource Estimate comprising 21% of the resource as Indicated, and 79% as Inferred classification.

The northern Eyre Peninsula basement was deeply weathered down to at least 75m below ground level during the Tertiary to form a deep saprolitic weathering profile (Figure 3).

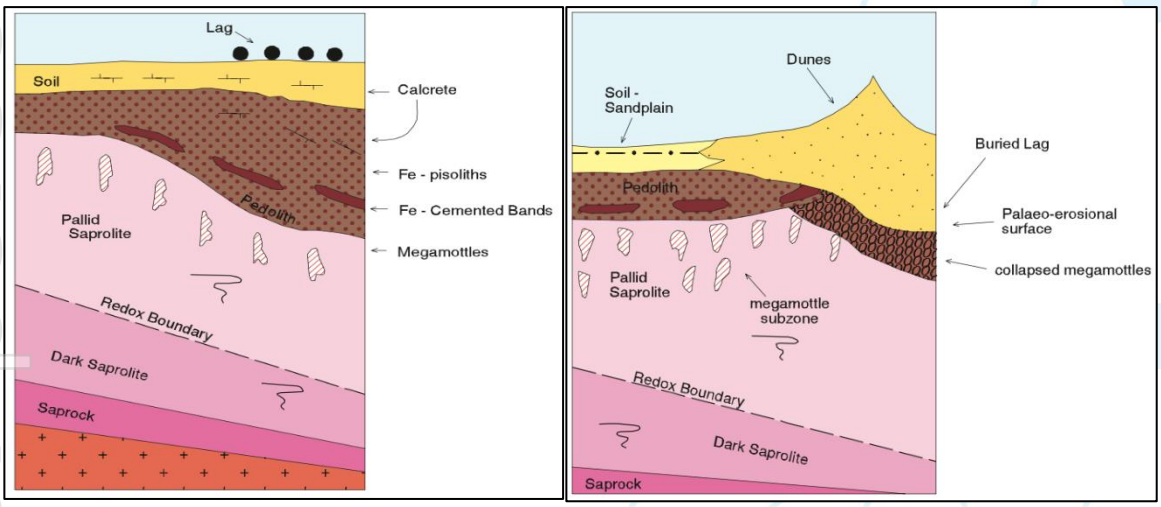


Figure 3 - Wudinna North area regolith landform map
Source: Dept Energy & Mining, South Australia (after Sheard, M.J., 2007)

2023 Drilling Program

Significant resource upside exists within this area (Figure 4) and the southern 4.4km of the identified 6.6km strike (inset), with higher grade (+20% Mn) domains to be targeted to potentially increase the resource in both tonnage and grade.

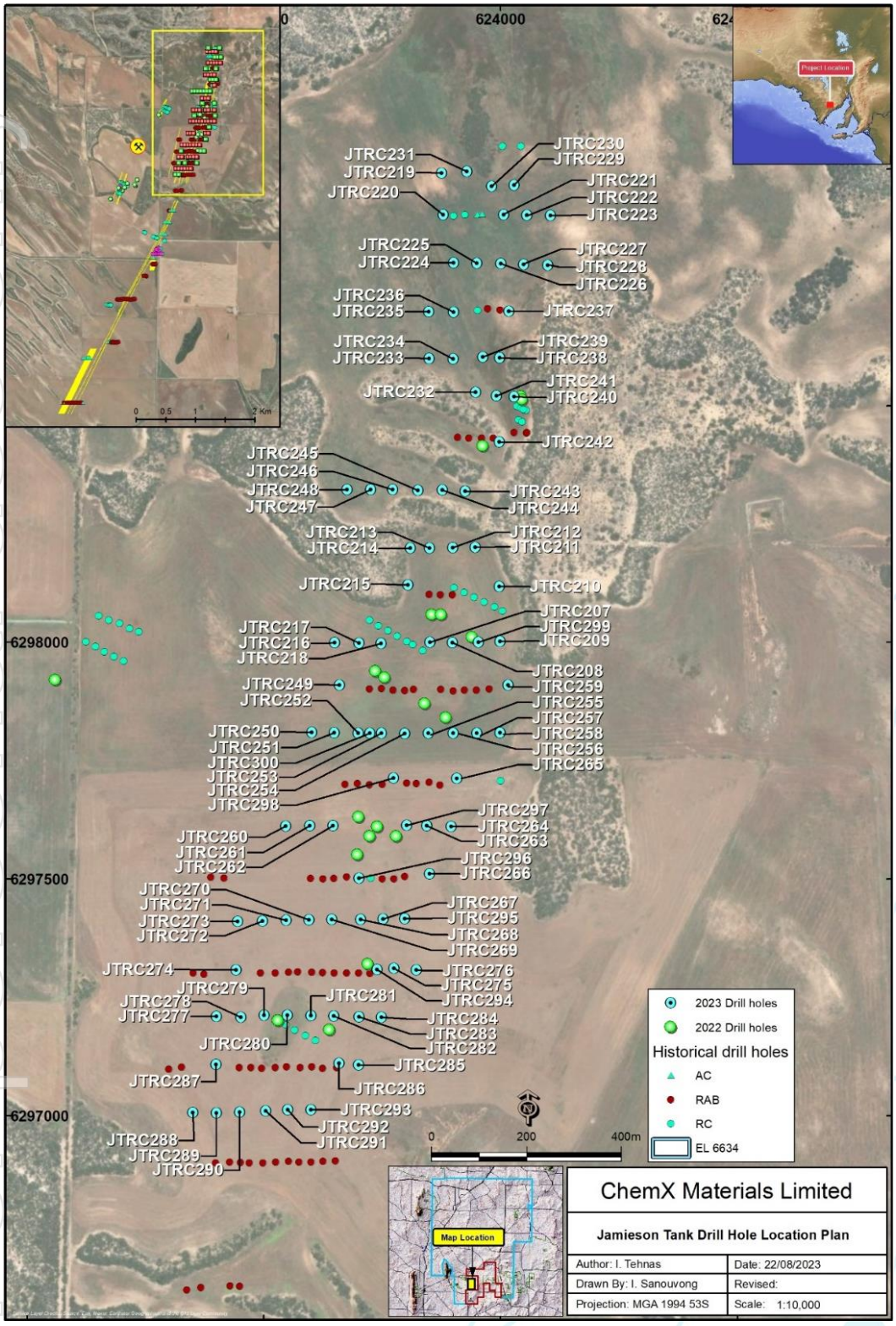
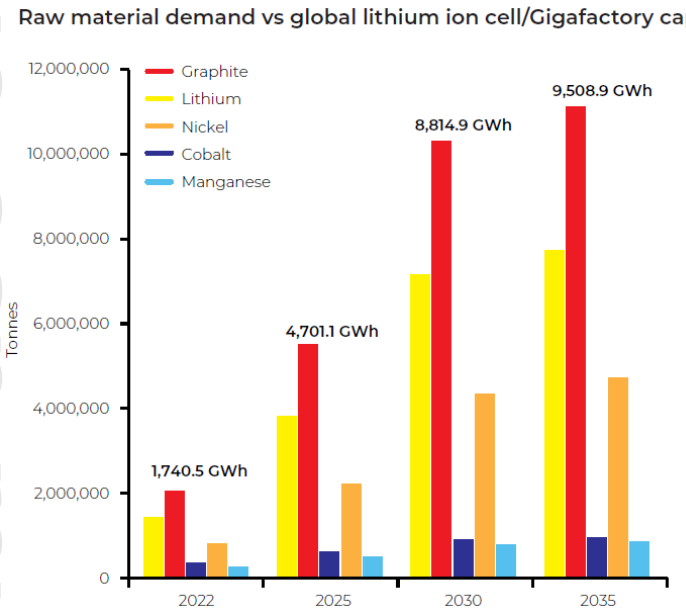


Figure 4 – Jamieson Tank drillhole location plan (inset the larger 6.6km strike)

The 'softer' nature of the Jamieson Tank manganese mineralisation responds favourably to gravity separation upgrading methods. Ongoing metallurgical testwork is underway with industry leaders Nagrom and BHM Metallurgy.

Battery Market Demand for Manganese

Demand for manganese-based battery chemistries is projected to double from 2022 to 2025 with existing and emerging battery chemistries requiring more manganese (Figure 5).



MATERIAL	2022	2025	2030	2035
LITHIUM	1,425,000	3,841,000	7,218,000	7,789,000
GRAPHITE ANODE	2,054,000	5,547,000	10,402,000	11,220,000
COBALT	336,000	616,000	909,000	954,000
NICKEL	805,000	2,217,000	4,365,000	4,759,000
MANGANESE	246,000	503,000	787,000	848,000
TOTAL GWh	1,740.5	4,701.1	8,814.9	9,508.9

Figure 5 – Projected raw battery material demand (Source: Benchmark Mineral Intelligence)

Emerging chemistries such as Lithium Manganese Iron Phosphate (LMFP) are targeting improved energy density upon lithium iron phosphate (LFP) chemistries, providing more affordability as a potential alternative to medium nickel NMC 532/622 chemistries.

ChemX is advancing its manganese program in rapid succession to support the global demand for electrification and seeks to provide downstream customers and users a superior Australian sourced and produced High Purity Manganese (HPM) with exceptional ESG credentials.

Material Information Summary

A summary of JORC Table 1 (included as Appendix A) is provided below for compliance with the Mineral Resource and in-line with requirements of ASX listing rule 5.8.1.

Geology and Mineralisation Interpretation

Host metasediments are part of the Palaeoproterozoic Hutchison Group and comprise massive to flaggy quartzite (Warrow Quartzite) that outcrops in the range of hills immediately west of Darke Peak, dolomitic marble (equivalent to Katunga Dolomite), cherty to jaspilitic banded iron formations (Middleback BIF equivalents) and quartz-feldspar-mica schist, graphitic schist and fine-grained metasediments. In the Jamieson Tank region, these have been metamorphosed to lower amphibolite facies, intruded by massive medium to coarse-grained megacrystic quartz-feldspar-biotite granite (Carappee Hill) and tightly folded during the Kimban Orogeny c. 1740–1700 Ma (Figure 6).

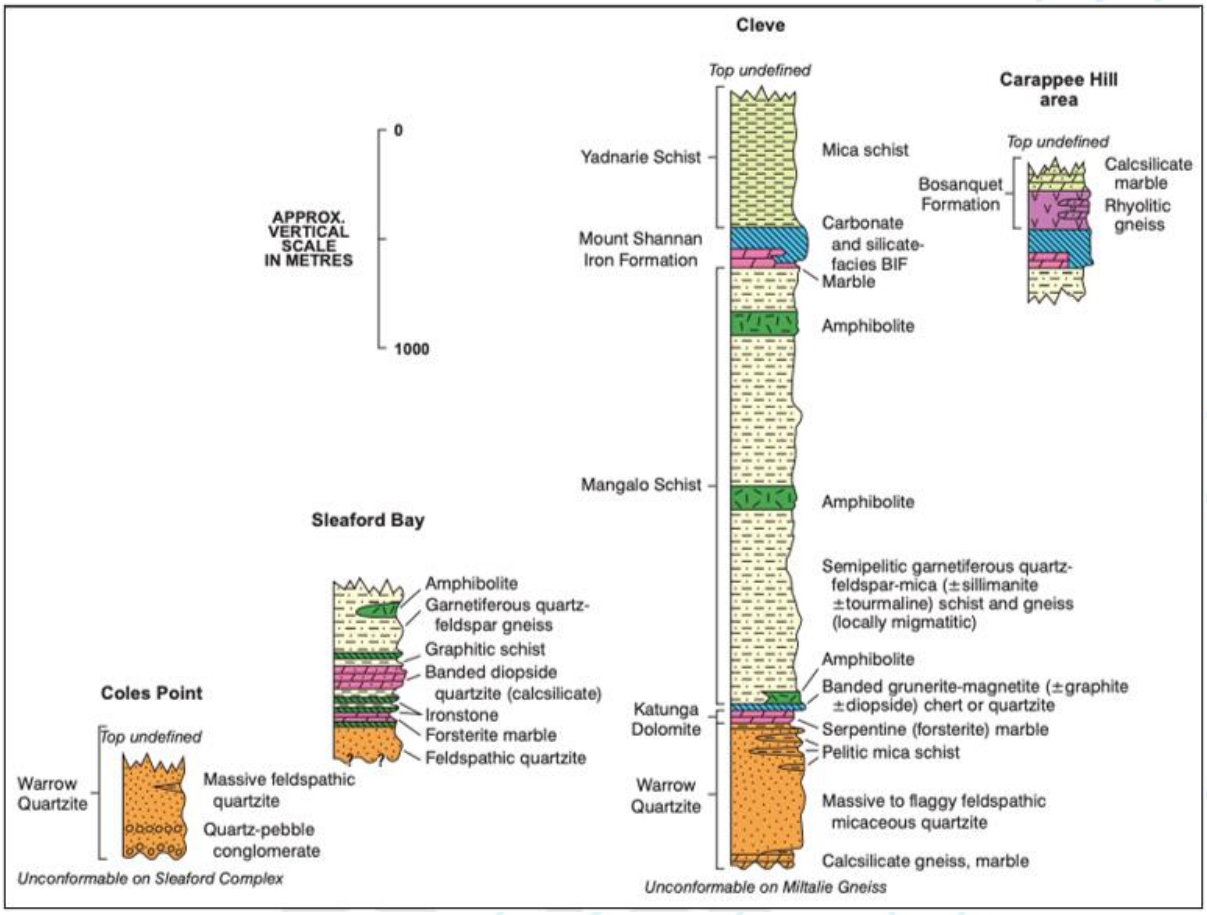


Figure 6 – Stratigraphic correlation of the Hutchison Group sequences on Eyre Peninsula (from DEM Bulletin 57-1)

In the northernmost part of the Project area (north of section 6298000 mN), surficial sediments comprise a relatively soft aeolian sand spread up to 5–7 m thick and locally calcareous ± calcrete nodules, overlying mottled red, white ferricrete which extends down to 10–20 m below ground level. Ferricrete grades into mottled pallid to dark saprolite/saprock which extends down to 20m – 30m below ground level.

In the southern Project area (south of 6298000 mN), there is only thin (generally <2m – 3m) sand and soil overlying hard calcrete and local hard laterite both of which subcrop on the low hills. They overlie mottled ferricrete and saprolite which together extend down to 20m – 30 m below ground level.

Within both the saprolite and ferricrete, primary banding/foliation within the weathered bedrock is generally preserved and measurable in the optical geophysical logs. Manganese is generally preserved in the ferricrete and saprolite zones but may not always be. Iron is elevated in the ferricrete zones (up to 50% Fe_2O_3) but depleted in saprolite. Below the saprolite/saprock, basement rocks are still strongly weathered and altered down to at least 50m below ground level.

The Jamieson Tank deposit comprises manganese mineralisation (Figure 7) predominantly hosted in a chert-rich banded iron formation (BIF) with variable grades between 5% and 25% Mn. The mineralisation is typically within 50m of the surface, interpreted to be moderately easterly dipping, and amenable to simple open pit mining, as illustrated in Figure 2. Mineralisation remains open in strike and breadth.

Figure 7 – Manganese mineralisation emerging from cyclone during drilling operations (JTRC288, 28m)

Drilling Techniques

The drilling underpinning the Jamieson Tank Mineral Resource estimate (MRE) was carried out between 2008 and 2023 with a total of 218 rotary air blast (RAB), aircore (AC) and reverse circulation percussion (RCP) drillholes for 12,575m completed. Only the 2023 drilling was used for the MRE*. Earlier drilling was used to guide the geological interpretation; however not used given known quality limitations.

The MRE included 94 RCP holes for a total of 6,173m, as shown below in Table B.

Year	Drill type	No. of holes	Minimum depth (m)	Maximum depth (m)	Average depth (m)	Total depth (m)
2010, 2022	AC	22	16	49	36	781
2010	RAB	72	23	86	56	4,066
2008, 2010, 2012, 2023	RCP	124	25	90	62	7,728
Total – Project		**218**	**16**	**90**	**58**	**12,575**
Jamieson Tank Resource*	RCP	94	30	90	66	6,173
Total – Resource		**94**	**30**	**90**	**66**	**6,173**

Table B - Jamieson Tank Project drilling summary

Sampling Techniques, Analysis and Quality Assurance

Drillholes from the 2023 drilling program were used to inform the MRE. The holes were drilled on approximate 200m spaced north-south lines at 50m spacing along drill lines. Drill samples were collected using industry-standard practices from a rig-mounted cyclone. Approximately 58% of samples were collected on a 1m interval, 42% composited over a 2m interval, 0.1% composited over a 3m interval, 0.1% composited over a 4m interval and 0.2% composited over a 5m interval. All holes were logged for lithology, sample colour, colour intensity, texture, weathering, lithology, and visual estimate of % Mn.

Ninety-four (94) RCP drillhole collars (all from 2023) were surveyed using a differential global positioning system (GPS) using the MGA 2020 Zone 53 coordinate datum, while 104 RCP holes were surveyed using a handheld GPS utilising the MGA 94 53S coordinate system. No survey method was recorded for the 20 AC holes drilled in 2022. A light detection and ranging (LiDAR) survey was flown to establish a highly accurate topographic control. Downhole surveys were taken at 30m intervals in 81 of the 2023 RCP drillholes using a north-seeking gyroscope. No downhole survey measurements were taken from the holes drilled before 2023.

The RCP samples were collected from the rig-mounted cyclone, each weighing between 2kg and 3kg. Field duplicates were collected every 25th sample by putting a calico bag on the second port of the cone splitter. Certified reference material (CRM) standards were inserted every 50th sample. A blank sample was inserted every 50th sample staggered 20 samples from the CRM standard. A 100g –200g quantity of blank material was placed in a calico bag. All samples coming from the cyclone were closely monitored for contamination.

All 2023 samples were prepared by Intertek Genalysis Adelaide. Assaying was completed using the lithium metaborate/tetraborate fusion method analysed by inductively coupled plasma-mass spectrometry (ICP-MS).

Mineral Resource Estimation Methodology

The Jamieson Tank deposit comprises six geological and mineralisation domains or ZONES (**Error! Reference source not found.**). The drill assay results and geological logging for all the drillholes were used to complete the sectional interpretations of the deposit. To establish an appropriate cut-off grade for the modelling of mineralisation domains CSA Global plotted a histogram of all the assays on the Jamieson Tank deposit and a modelling cut-off grade of 1% Mn was selected.

The cut-off grade was used to define domains 1, 2, 3 and 4 over the 23 sections. Domain 5 comprises the ferricrete zone interpreted from the lithological logging for the drillholes. Domain 6 is a low-grade background zone largely composed of assays below 1% Mn. The sectional interpretations were then linked to form solids or wireframe surfaces utilising Datamine Studio RM Version 1.13.202.0 software.

ZONE	Description
1	Mineralised manganese unit, located between 5 m and 35 m below surface
2	Mineralised manganese unit, located below ZONE 1
3	Mineralised manganese unit, located in the southern part of deposit
4	Mineralised manganese unit located in the western central part of the of deposit below ZONE 2
5	Ferricrete unit interpreted from lithological logging
6	Low grade background zone largely composed of assays below 1% Mn and separates the mineralised domains

Note: All manganese mineralised units are defined using a 1% Mn cut-off grade.

Table 3 - Jamieson Tank domain descriptions

Statistical analysis was completed for Mn, Fe_2O_3, SiO_2, Al_2O_3, and P_2O_5. A histogram of raw sample lengths was initially viewed for the data to be used in the Mineral Resource estimation to assist with the selection of an appropriate composite length. Approximately 73% of the sample data comprised 1m intervals, 26% are 2m intervals, 0.04% are 3m intervals, 0.02% are 4m intervals, and 0.04% are 5m intervals. The mean sample length is 1.27m and based on this result a 2m composite length was chosen.

Variography was completed for Mn, Fe_2O_3, SiO_2, Al_2O_3 and P_2O_5 for each domain using Supervisor software. The variogram models generally show long-range structures typical for deposits displaying good geological continuity. However, there is a limited number of points to confidently define the short-range structures. Infill drilling is recommended to improve the variograms especially for ZONES 3 and 4. The drillholes were generally spaced on 200m north-south sections and 50m apart on section, with samples composited over a 2m length. A parent cell dimension of 25m x 25m x 2m in northing, easting and elevation and sub-cells of 12.5m x 12.5m x 1.0m were used for block model generation. A smaller block size was chosen to give a better estimation of the volume of the deposit considering the wireframe boundaries and the variable domain widths.

Quantitative kriging neighbourhood analysis was undertaken to assess the effect of changing key kriging neighbourhood parameters on block grade estimates. Kriging efficiency and slope of regression were determined for a range of block sizes, minimum/maximum samples, search dimensions and discretisation grids. A three-pass search ellipse strategy was adopted whereby search ellipses were progressively increased if search criteria could not be met.

Dynamic anisotropy was adopted to enable the search ellipse to follow the orientation of the interpreted wireframes. Dynamic anisotropy is a process whereby a search ellipse is defined for each block, allowing the undulating nature of the mineralisation to be reflected in the modelling.

Ordinary kriging was adopted to interpolate grades into cells, with variogram rotations consistent with the search ellipse rotations. All interpolated grades variable utilise the search and sample selection plan obtained from the variograms of their respective domains. A minimum of four samples and a maximum number of samples between eight and 18 samples were used per estimate, with a maximum number of two samples per drillhole for all ZONES.

Density data was collected in 2023 using downhole gamma-gamma geophysical logging of drillholes. The data was collected at 10cm interval from 89 drillholes. The drillhole data was flagged with mineralisation domain and composited to 2m intervals. Variography was completed for the density of each domain using Supervisor software. Ordinary kriging was used to interpolate density within the domains. There is no density data collected using the Archimedes method and therefore no moisture values for the deposits have been checked. At this stage, it is assumed that the moisture content is minimum.

The block model was then validated by comparing block model grades with drillhole composites on sections throughout the deposit. Block grades were found to reasonably reflect the drillhole data, with a degree of smoothing evident in the block model, which is expected given the change in support. Mean global block model and drillhole composite grades were then compared for each domain. The block model generally reflected the tenor of the grades in the drillhole samples both globally and locally.

Mining and Metallurgical Factors

The Competent Persons deem that there are reasonable prospects for eventual economic extraction of mineralisation on the following basis:

- Mineralisation at Jamieson Tank is continuous and has been delineated by drilling over a portion (approximately 2.2km) of the identified larger (~6km) strike length and is near surface and therefore amenable to simple open pit mining.
- Access to Eyre Penisula road infrastructure and ports is unimpeded.
- Based on earlier reported testwork on Jamieson Tank mineralisation (ASX: 11 May 2022), the manganese mineralogy within the deposit has demonstrated a reasonable economic prospect for extraction and recovery. The earlier work on two composites of RCP drilling material produced a 43.8% Mn concentrate using gravity-based methods.
- This concentrate was processed through a simplified hydrometallurgical flowsheet and produced a manganese sulphate monohydrate of 99.7% purity.

Mineral Resource Classification

The Mineral Resources for Jamieson Tank has been classified in accordance with guidelines contained in the JORC Code. The classification applied reflects the Competent Person's view of the uncertainty that should be assigned to the Mineral Resources reported herein. Key criteria that have been considered when classifying the Mineral Resource are detailed in JORC Table 1 which is contained in Appendix A.

After considering data quality, data distribution, and geological and grade continuity, the following approach was adopted when classifying the Mineral Resources:

- Geological continuity was assessed, with domains reasonably continuous along and across the strike of the deposit.
- The Mineral Resource was classified Inferred where the drill spacing was on a 200m x 50m grid and the Indicated category was in areas where the drilling was approximately 100m x 50m in the northing and easting directions respectively (refer Figure 4).

Mineral Resource Estimate

The Jamieson Tank MRE is summarised in Table A: Mineral Resource estimate (MRE) summary, with applied grade cut-off 4%MnTable A. The variography showed long ranges confirming geological continuity along and across strike. Only the RCP holes drilled in 2023 with QAQC supporting quality control (QC) data have been used for the estimation.

The Mineral Resource Estimate was classified as Inferred where the drill spacing was on a 200m x 50m grid and an Indicated category in areas where the drilling was approximately 100m x 50m in the northing and easting directions, respectively.

Mineral Resources have been reported according to the following criteria:

- Indicated material (RESCAT = 2)
- Inferred material (RESCAT = 3)
- Blocks with Mn % grade > 4%
- Material from manganiferous units ZONE 1 to ZONE 4 (REP = 1).

JORC classification	Tonnes (Mt)	Mn (%)	Fe (%)	SiO_2 (%)	Al_2O_3 (%)	P (%)
Indicated	2.7	5.9	14.8	48.9	9.1	0.093
Inferred	10.4	5.6	14.8	48.7	10.2	0.095
Total	**13.1**	**5.7**	**14.8**	**48.7**	**10.0**	**0.094**

Table A: Mineral Resource estimate (MRE) summary, with applied grade cut-off 4%Mn

The MRE shown in Table A has been classified as Inferred and Indicated with pertaining notes below:

- Mineral Resources reported at a cut-off grade of 4% Mn.
- Fe_2O_3 converted to Fe% using a factor of 0.6994 calculated from atomic mass and molecular weight.
- P_2O_5 converted to P% using a factor of 0.4364 calculated from atomic mass and molecular weight.
- Due to the effects of rounding, the total may not represent the sum of all components.
- The entire Mineral Resource is above water table

A Grade tonnage curve for Zones 1 to 4 is included as Figure 8.

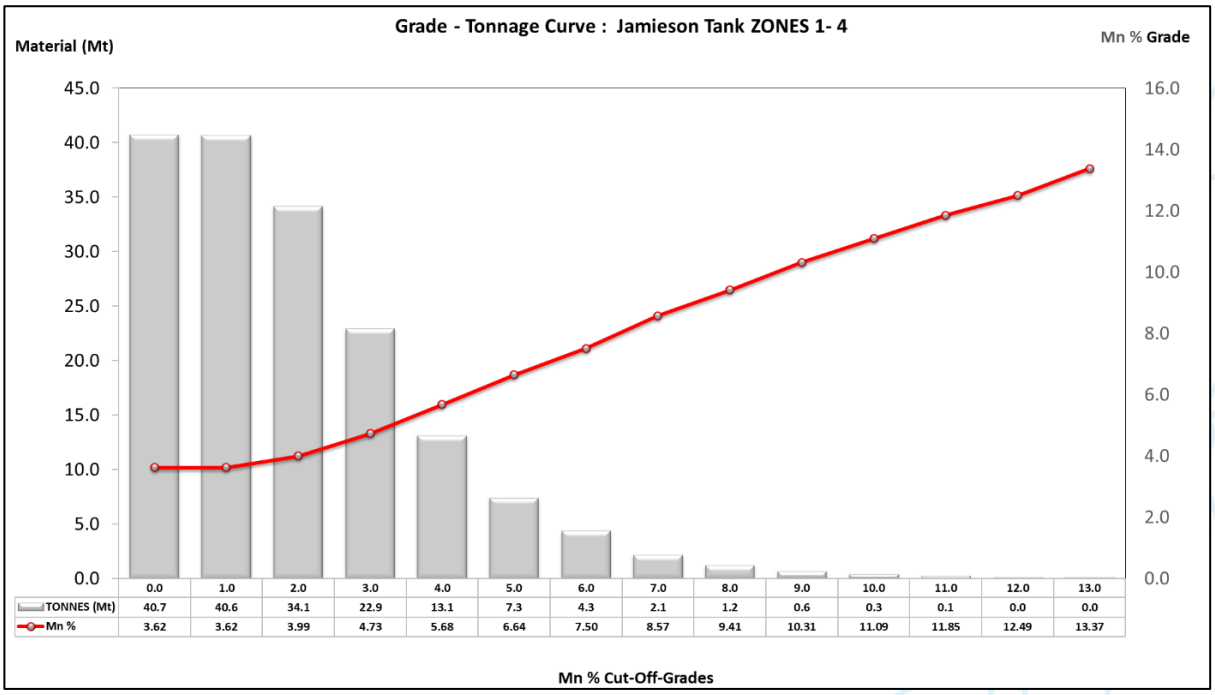


Figure 8 - Grade-tonnage curve for Jamieson Tank ZONES 1 to 4

Cut-off Grades

A 4% Mn reporting cut-off grade has been selected following preliminary high-level assessment of the likely mining and processing methods. The selected cut-off grade supports the subsequent beneficiation and refinement to achieve the targeted hydrometallurgical HPMSM product. CSA Global considers the Mineral Resource as reported fulfills the reasonable prospects for eventual economic extraction requirement for reporting Mineral Resources in accordance with the JORC Code.

Next Steps

An internal scoping study is to be commenced swiftly following this announcement to advance the project pathway.

The Company will begin planning the next phase of drilling to further enhance both tonnage and grades for the Jamieson Mineral Resource.

The Company has commenced discussions with relevant parties for local sourcing of chemical reagents required to produce battery grade Manganese Sulphate for the electric vehicle battery cathode market.

ENDS

This Announcement has been authorised for release by the Board.

For enquiries:

Peter Lee
Chief Executive Officer
ChemX Materials Ltd
Peter@chemxmaterials.com.au
+61 448 874 084

Stephen Strubel
Executive Director and Company Secretary
ChemX Materials Ltd
Stephen@chemxmaterials.com.au
+61 404 400 785

Reporting Confirmation

9 May 2023 Highest Grade Thick Intercepts of Manganese

27 April 2023 More Significant Manganese Assays

17 April 2023 Significant Manganese Assays

11 May 2022 ChemX Battery Materials Strategy Moves Forward

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

COMPETENT PERSON STATEMENT - Mineral Resources

The information in this report that relates to Mineral Resources is based on information compiled by Mr Mark Pudovskis and Mr Aaron Meakin. Mr Mark Pudovskis is a full-time employee of CSA Global and is a Member of the Australasian Institute of Mining and Metallurgy. Mr Aaron Meakin is a full-time employee of CSA Global and is a Member and Chartered Professional of the Australasian Institute of Mining and Metallurgy. Mr Mark Pudovskis and Mr Aaron Meakin have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code).

Mr Mark Pudovskis and Mr Aaron Meakin consent to the disclosure of the information in this report in the form and context in which it appears. Mr Mark Pudovskis assumes responsibility for matters related to Sections 1 and 2 of JORC Table 1, while Mr Aaron Meakin assumes responsibility for matters related to Section 3 of JORC Table 1.

About ChemX Materials (ASX: CMX)

ChemX is an advanced materials company focused on providing high purity critical materials for the battery industry. The Company's vision is to become a leading supplier of sustainable and ethically sourced critical materials to support the global energy transition.

ChemX is applying its high purity expertise to advance its Manganese project located on the Eyre Peninsula in South Australia. Metallurgical testwork has indicated the manganese ore is amendable to upgrade through beneficiation and being processed into a high purity manganese sulphate to supply the Lithium-ion battery industry.

Developed in-house, ChemX's HiPurA® process is capable of producing high purity alumina (HPA) and high purity aluminium cathode precursor salts for lithium-ion batteries. Initial testwork has indicated that the process is low costs and low in energy consumptions, compared to alternative methods. A key competitive advantage is that the HiPurA® process is modular, scalable and is not tied to mine production, with the feedstock being a widely available chemical.

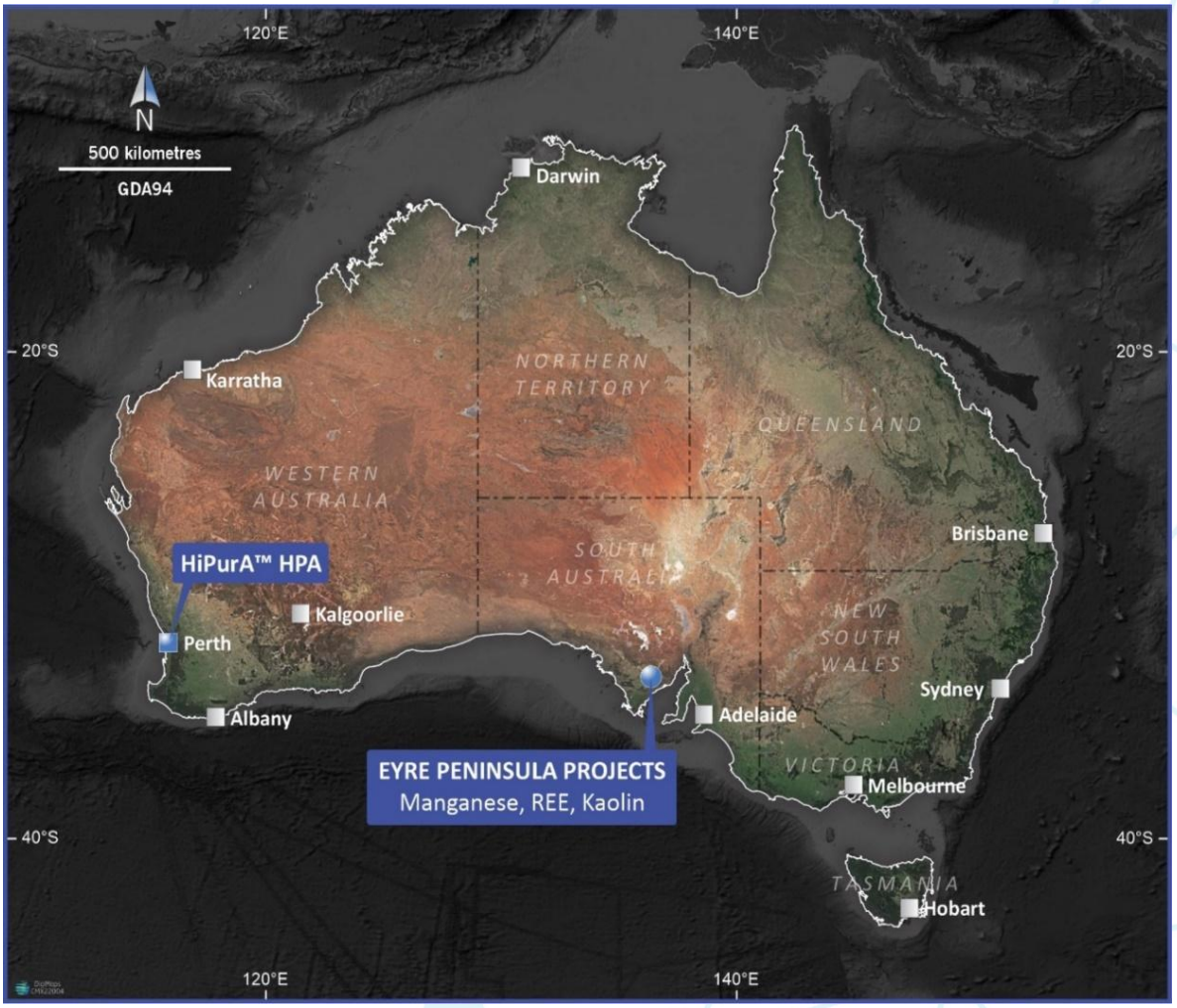


Figure 9: ChemX Project Locations

www.chemxmaterials.com.au LinkedIn

Appendix A JORC Code (2012 Edition) Table 1 – Jamieson Tank Manganese Project

Section 1: Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	*Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g., "RC drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay"). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.*	The drill samples used for the Mineral Resource estimate (MRE) were obtained through reverse circulation percussion (RCP) methods. **2023 Drill program (ChemX)** • One metre RCP samples were collected from the rig mounted cyclone each weighing between 2 kg and 3 kg. The sample weight was closely monitored and the aperture for the sample split from the cone was adjusted to obtain the optimum size range. • Samples coming from the cyclone were monitored for contamination. If detected, the cyclone was cleaned to ensure sample integrity. • Geophysical downhole logging was conducted in each hole for gamma, magnetic susceptibility, deviation, induced polarisation (on select drillholes), and long spaced density with three-arm calliper. The historical work summarised in this JORC Code (2012 Edition) Table 1 was used to guide the drill program completed in 2023. **Historical work, 2005 to 2013 (Monax Mining)** • The RCP drilling material was collected in green sample bags off a cyclone through a three-stage splitter on 1 m intervals. A sample of each metre was sieved and washed, and the chips were placed out on hessian for geological logging and collection in chip trays. • Composite samples were collected by taking representative grab samples from individual metres. The Competent Person (CP) considers that the sample techniques adopted by ChemX, and previous explorers are appropriate for the style of mineralisation, and for reporting exploration results and a MRE.
Drilling techniques	*Drill type (e.g., core, RC, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	**2023 Drill program (ChemX)** • The drilling was completed by Durock Drilling with an RCP drill rig equipped with 5.625" face sampling hammer and 4.5" drill rods. • The drillholes were uncased, and angle drilled at -60° on a nominal 270° azimuth, except for JTRC207 that was drilled vertically. **Historical work, 2005 to 2013 (Monax Mining)**

Criteria	JORC Code explanation	Commentary
		• All references are to most holes were drilled as rotary air blast (RAB) with a smaller number as aircore (AC) drilling. The CP considers the drilling techniques adopted by ChemX and previous explorers are appropriate for the style of mineralisation, and for reporting a MRE.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.* *Measures taken to maximise sample recovery and ensure representative nature of the samples.* *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	**2023 Drill program (ChemX)** • Sample recoveries were not quantitatively recorded, although a site visit by the CP revealed that the sample volumes in each green bag were consistent and likely of good recovery. Continual visual observations were made by the drilling geologist to ensure a consistent recovery. • Sample conditions were reported in the field geologist logging comments. Apart from a few samples logged as moist or wet, a majority were dry. • There were no water table intersects or sub-terrain ephemerals. • There is no evidence to suggest any bias sample recovery and grade. **Historical work, 2005 to 2013 (Monax Mining)** • The recovery of the historical drilling was not reported. The CP considers the sample recovery techniques adopted by ChemX are appropriate for the style of mineralisation, and for reporting a MRE.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* *The total length and percentage of the relevant intersections logged.*	**2023 Drill program (ChemX)** • The 1 m intervals were logged as drilled based upon the samples laid-out in rows in the plastic bags. • All logged intervals were representatively sampled and stored in chip tray, recording Hole ID and respective metres. • The intervals were logged according to lithology, sample colour, colour intensity, texture, weathering, lithology and visual estimate of % Mn. • All intervals were logged broadly based on qualitative and quantitative characteristics. **Historical work, 2005 to 2013 (Monax Mining)** • The RCP chip samples were logged in a qualitative and quantitative manner, to a level of detail appropriate for preparing an interpretation to support a MRE. The CP considers the logging techniques adopted by ChemX are appropriate for the style of mineralisation, and for reporting a MRE.
Subsampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	**2023 Drill program (ChemX)**

Criteria	JORC Code explanation	Commentary
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry. *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* *Quality control procedures adopted for all subsampling stages to maximise representivity of samples.* *Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.* *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• The 1 m RCP samples were collected from the rig mounted cyclone each weighing between 2 kg and 3 kg. The sample weight was closely monitored and the aperture for the sample split from the cone was adjusted to obtain the optimum size range. • Field duplicates were collected every 25th sample by putting a calico bag on the second port of the cone splitter. The samples were between 2 kg and 3 kg in weight. • Certified reference material (CRM) standards were inserted as every 50th sample. • A blank sample was inserted as every 50th sample staggered 20 samples from the CRM standard. • Given the styles of drilling used, and the resultant range of fineness within the cyclone, there is no evidence the sample sizes are inadequate or inappropriate for subsampling using the techniques adopted. The CP does not consider there is any bias in the ChemX sampling process. **Historical work, 2005 to 2013 (Monax Mining)** • No internal QAQC procedures were adopted and the sample representivity is unknown, although no issues were reported in any of the Monax Annual Technical Reports. The CP considers the subsampling techniques adopted by ChemX are appropriate for the style of mineralisation, and for reporting a MRE. The appropriateness of the historical work is unknown.

Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*
	For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.
	Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.
		2023 Drill program (ChemX)
		• All samples were prepared and assayed by Intertek Genalysis Adelaide for an extended suite (45) of elements and oxides.
		• Sample preparation consisted of a lithium metaborate/tetraborate fusion analysed by inductively coupled plasma-mass spectrometry (ICP-MS).
		• Downhole geophysical logging was completed by Borehole Wireline using the following logging suite:
		  ○ R1: Dummy probe.
		  ○ R2: Gamma-3 Arm Caliper-Induction (Conductivity).
		  ○ R3: Gamma-Mag. Deviation & Vectors-Mag. Susceptibility.
		  ○ R4: Gamma Density.
		  ○ R5: Spectral Gamma-IP.
		• Intertek Genalysis Adelaide completed internal quality assurance/quality control (QAQC) assay procedures comprising appropriate blanks and standards. No material issues were identified in the laboratory QAQC.

Criteria	JORC Code explanation	Commentary
		• Handheld x-ray fluorescence (XRF) was used only to assist geological interpretation and selection of samples from compositing prior to analysis. No handheld XRF data are being reported. **Historical work, 2005 to 2013 (Monax Mining)** • Geochemical analysis of the 2009 RCP drill samples was completed by Genalysis Laboratory Services. Sample preparation done in Adelaide includes drying and jaw crushing, followed by a single-stage mix and grind in a chrome-steel bowl. Samples are sent to Perth for digestion which included four-acid digest [AT/] for base metals and multi-elements, fusion for iron ore using simultaneous XRF [Fus/], and 25 g fire assay digest [FA25/] for gold. Analytical methods include: o AT/MS: Multi-acid digest including hydrofluoric, nitric, perchloric and hydrochloric acids in Teflon Tubes. Analysed by ICP-MS. o Fus/XRFm: Sample fused with lithium borate flux and poured into a mould to obtain a homogenous glass disk. Major element oxides and trace elements by simultaneous XRF. o FA25/SAAS: 25 g Lead collection fire assay. Elements by solvent extraction and flame atomic absorption spectrometry. The CP considers that a reasonable level of confidence can be placed in the accuracy and precision of the assay data used in the preparation of the MRE.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.* *The use of twinned holes.* *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* *Discuss any adjustment to assay data.*	**2023 Drill program (ChemX)** • The verification of sampling was completed on site by the CP during January 2023. • Twin drilling is not relevant as a verification of sampling of manganese. • Primary data is stored securely by ChemX and mining consultants CSA Global. The data entry protocols were developed by the CP and CSA Global. The control protocols were managed on site by ChemX with support from the CP and CSA Global. • There has been no adjustment to the primary assay data. **Historical work 2005 to 2013 (Monax Mining)** • No verification or adjustments to the assays have been made. • Twinning is not appropriate for the style of mineralisation. The CP considers the verification of sampling and assaying are appropriate for reporting a MRE.

Criteria	JORC Code explanation	Commentary
Location of data points	*Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* *Specification of the grid system used.* *Quality and adequacy of topographic control.*	**2023 Drill program (ChemX)** • Pegging of drillholes were measured using a handheld Garmin global positioning system (GPS) unit in coordinate system MGA 94 53S. All RCP drillholes were angled at -60° on a nominal magnetic azimuth of approximately 270°, except for one hole (JTRC207) that was drilled vertically. • Final collar coordinates and elevations were surveyed by MG Surveys based on GNSS (GPS) observations. All drillholes were measured at ground level, centre of PVC tubing. Height datum: AHD. Coordinated datum: MGA GDA2020, Zone 53. Horizontal and vertical survey datum based on AUSPOS Online GPS Post Processing. • Multi-shot readings were taken at the collar and generally every 30 m downhole and at the bottom of hole by the driller using a north-seeking gyro. • Downhole surveying of the drillholes was also included as part of the geophysical logging. • A light detection and ranging (LiDAR) survey was flown to establish a highly accurate topographic control. **Historical work, 2005 to 2013 (Monax Mining)** • Drill collar positioning coordinates were measured using a handheld Garmin GPS unit in coordinate system MGA 94 53S. The CP considers the accuracy of the surveying adopted by ChemX as appropriate for reporting a MRE. The historical surveying is considered appropriate for reporting exploration results and fit for purpose for use in a MRE, based on the very strong correlation between handheld GPS and differential GPS survey positioning of ChemX's 2023 drilling.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.* *Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* *Whether sample compositing has been applied.*	**2023 Drill program (ChemX)** • The Jamieson Tank Exploration Results were based on a variable 200 m x 20 m drill grid spacing, for the purpose of infilling and lateral testing of the historical drilling. • 2 m sample compositing was applied based on where there was no visual identification of manganese in the RCP drill chips and where the handheld XRF did not return any anomalous manganese readings. The compositing was completed by Intertek Adelaide within the laboratory to ensure good control practices were maintained. **Historical work, 2005 to 2013 (Monax Mining)** • The Jamieson Tank drill lines were on a variable and approximate 200 m apart spacing. • No compositing was applied.

Criteria	JORC Code explanation	Commentary
		The drill spacings are not considered relevant or a material risk by the CP for the reporting a MRE.
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	**2023 Drill program (ChemX)** • The Jamieson Tank mineralisation is believed to be confined within corridors trending 040° where previous drilling identified both flat lying and high angle, discontinuous, pods or lenses of mineralisation, dipping to the southeast. • Except for one hole (JTRC207) that was drilled vertically, all other RCP holes were inclined at -60° and drilled on a nominal 270° azimuth to test the possible shape and orientation of the lenses or pods. • The relationship between the drilling orientation and orientation of key mineralised structures is not considered to have introduced a sampling bias. **Historical work, 2005 to 2013 (Monax Mining)** • Most of the drillholes were inclined at an angle of 60° to the west, to enhance the identification of the stratigraphic context and true thickness of manganese mineralisation (2009 ATR). The CP considers the orientation of the data appropriate for reporting a MRE.
Sample security	*The measures taken to ensure sample security.*	**2023 Drill program (ChemX)** • Samples as captured from the drill rig were aligned in rows and immediately folded over to prevent ingress of moisture or foreign matter. • Based on pXRF readings, the samples were sorted into two categories, that being those with manganese mineralisation and those without mineralisation. Mineralised samples were collected in dedicated clean intermediate bulk containers (IBCs), for each respective hole, with logging of each IBC's inventory noted on the outside and held in a centralised register. • IBCs once loaded were taken from the field and transported to the exploration laydown area located on a private property within EL6634. The exploration laydown area is within 200 m of the homestead/outbuildings and is secure. • Assay results (as received) have also been catalogued against retained mineralised samples to ensure accurate representation of stored mineralised materials. • Non-mineralised materials were returned to the hole, capped and remediated. **Historical work, 2005 to 2013 (Monax Mining)** • All residual sample material was stored securely.

Criteria	JORC Code explanation	Commentary
		The CP considers the sample security does not pose any risk for the reporting a MRE.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	A site visit review of the sampling technique, drilling methodology and geological logging was undertaken by the CP in mid-January 2023. No concerns were identified.

Section 2: Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	The Project comprises licences EL6634 and EL5920, colloquially named Carappee Hill. EL6634 is located approximately 20 km south-southwest of Kimba (Legal Area 664 km^2), and EL5920 approximately 60 km northwest of Cowell (Legal Area 54 km^2), with the tenements being held 100% by ChemX Materials Limited. No Native Title has been registered. There are two small Conservation Parks within EL6634 (Malgra and Lacroma) and one, Caralue Bluff, excised from EL6634. Several Heritage Vegetation areas have also been identified within the tenements. Within the tenements are MPL150 (within EL5920) and MPL151 (within both EL6634 and EL5020). These are registered to Pirie Resources Pty Ltd as part of their Campoona graphite project. EML6324, covering 5.6 ha, is a private mine registered for sand production within EL6634. The Company is duly bound under a Mineral Rights Agreement with Pirie Resources from conducting exploration for, mining or processing graphite within the Wilclo South excluded area, contained within the Tenements (Wilclo South Excluded Area). Other Minerals, noted as Excluded Minerals, ChemX holds eligibility with respect to exploration, mining and processing.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	The earliest recorded exploration across EL6634 and EL5920 dates from 1967 and has been subjected to numerous phases of mineral exploration by various companies. The main targets have been uranium, base metals or gold, aluminium, diamonds, silver and iron ore. The most meaningful manganese focused exploration was completed by Monax Mining between 2005 and 2013. Work included airborne and ground geophysical surveys, surface soil and rock chip sampling and drilling, targeting predominantly manganese with minor focus on base metals, uranium and iron.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
Between 2014 and 2019, Pirie Resources Pty Ltd (Archer Exploration Ltd) comprised exploration for graphite and assessment for other “green” elements, including manganese, lithium and kaolin.

In 2022, ChemX completed a maiden drill program and preliminary sighter metallurgical testwork targeting high purity manganese sulphate monohydrate (HPMSM).

In 2023, ChemX completed a 94 RCP drillhole program for 6,173 m on the Jamieson Tank Manganese Project.

The full drill summary is presented below.
<table>
<tr><th>Year</th><th>Drill type</th><th>No. of holes</th><th>Min. depth (m)</th><th>Max. depth (m)</th><th>Ave. depth (m)</th><th>Total depth (m)</th></tr>
<tr><td>2010, 2022</td><td>AC</td><td>22</td><td>16</td><td>49</td><td>36</td><td>781</td></tr>
<tr><td>2010</td><td>RAB</td><td>72</td><td>23</td><td>86</td><td>56</td><td>4,066</td></tr>
<tr><td>2008, 2010, 2012, 2023</td><td>RCP</td><td>124</td><td>25</td><td>90</td><td>62</td><td>7,728</td></tr>
<tr><td>Total – Project</td><td></td><td>218</td><td>16</td><td>90</td><td>58</td><td>12,575</td></tr>
<tr><td>Jamieson Tank Resource*</td><td>RCP</td><td>94</td><td>30</td><td>90</td><td>66</td><td>6,173</td></tr>
<tr><td>Total – Resource</td><td></td><td>94</td><td>30</td><td>90</td><td>66</td><td>6,173</td></tr>
</table>
*Used for the MRE.
</td></tr>
<tr><td>Geology</td><td>Deposit type, geological setting and style of mineralisation.</td><td>
The tenements fall within the Cleve Domain which is dominated by basinal sediments of the c. 2000–1850 Ma Palaeoproterozoic Hutchison Group unconformably overlying late Archaean (c. 2400 Ma) inliers of para and orthogneiss. The Warrow Quartzite forms the basal unit of the Hutchison Group and unconformably overlies the Miltalie Gneiss in the Plug Range area.

The manganese along with the iron mineralisation are hosted in banded iron formation (BIF) metasediments of the c. 2000–1850 Ma Palaeoproterozoic Hutchison Group. The mineralisation is stratigraphically bound with elevated levels of barium.

The geology of the exploration licence has been described in detail in the various Annual Technical Reports by Monax Mining Limited (Monax).
</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
Drillhole information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:* • *Easting and northing of the drillhole collar* • *Elevation or RL (Reduced Level – Elevation above sea level in metres) of the drillhole collar* • *Dip and azimuth of the hole* • *Downhole length and interception depth* • *Hole length.* *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	Details of the drillholes completed in 2023 and significant intercepts within them have been previously published in ASX releases dated 17 April 2023, 27 April 2023 and 9 May 2023. Exploration Results are not being reported.
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated.* *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	Exploration Results are not being reported.
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.* *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., "downhole length, true width not known").*	Exploration Results are not being reported. Drilling Jamieson Tank intersected the mineralisation at a relatively high angle.

Criteria	JORC Code explanation	Commentary
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.*	A significant discovery is not being reported.
Balanced reporting	*Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	Exploration Results are not being reported.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	ChemX completed preliminary sighter metallurgical testwork on two composite RCP samples of head grades 12.2% Mn and 25.5% Mn, achieving a 99.7% HPMSM. ChemX has not completed any other substantive exploration. Historical exploration data was completed originally by Monax, primarily between 2005 and 2012.
Further work	*The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).* *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Ongoing metallurgical work is in progress to examine the potential of the Jamieson Tank prospect to produce a HPMSM product. The Project also remains prospective for rare earth elements and kaolin. Focused exploration is warranted to examine the tenement's full potential to host critical materials required for electrification and decarbonisation.

Section 3: Estimation and Reporting of Mineral Resources

(Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code explanation	Commentary
Database integrity	*Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	Logging data was collected in Microsoft Excel with in-built validation checks and loaded into a Geobank database. Assay data was loaded directly into the database. All current and historical drilling data was imported into Micromine software and reviewed in 3D to check for spatial errors. Any errors found were corrected using the original field data. A selection of assay results from the database were compared original laboratory certificates and no significant issues were found. Primary data is stored securely by ChemX and CSA Global. The data entry protocols were developed by the CP and CSA Global Database Team.
	Data validation procedures used.	CSA Global completed numerous checks on the data. Absent collar data, multiple collar entries, suspect downhole survey results, absent survey data, overlapping intervals, negative sample lengths and sample intervals which extended beyond the hole depth defined in the collar table were reviewed. Any inconsistences found were corrected.
Site visits	*Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	The CP (Mark Pudovskis) visited the Jamieson Tank Project site during the RCP drill program in mid-January 2023.
	If no site visits have been undertaken indicate why this is the case.	Not applicable.
Geological interpretation	*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	The detailed geological interpretation was completed by ChemX geologist using historical logging, assays, and geophysics. Internal technical reports and field mapping reports were also used to support the geological interpretation.
	Nature of the data used and of any assumptions made.	The geological interpretation used the current and historical logging, RCP chips trays for the 2023 drilling program, assays from the current and historical logging, geophysical and field mapping data. The drillhole data is available in the database.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	The geological interpretation is based on geology, balanced by geophysics; field mapping, previous reports, and assay data. No other interpretation was considered.
	The use of geology in guiding and controlling Mineral Resource estimation. *The factors affecting continuity both of grade and geology.*	Integrated geology and drill assays were the primary driver for guiding the MRE. All historical RCP, RAB and AC holes were logged.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Dimensions</td><td>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</td><td>Delta is approximately 2.2 km in strike and 350 m across strike. The depth of the mineralised units range from 2 m to 60 m. ZONE 1 and ZONE 2 are the main mineralised zones.</td></tr>
<tr><td>Estimation and modelling techniques</td><td>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</td><td>The MRE has been completed using the approach described below.

Top cuts were selected following statistical analysis. The point at which the number of samples supporting the high-grade tail diminishes was the primary method. The selected top cuts are shown below.
<table>
<tr><th>ZONE</th><th>Mn %</th><th>Fe_2O_3 %</th><th>SiO_2 %</th><th>Al_2O_3 %</th><th>P_2O_5 %</th></tr>
<tr><td>1</td><td>14</td><td>55</td><td>80</td><td>23</td><td>1.00</td></tr>
<tr><td>2</td><td>15</td><td>47</td><td>70</td><td>20</td><td>0.85</td></tr>
<tr><td>3</td><td>6</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>4</td><td>6</td><td>-</td><td>-</td><td>-</td><td>0.94</td></tr>
<tr><td>5</td><td>0.7</td><td>-</td><td>-</td><td>-</td><td>0.60</td></tr>
<tr><td>6</td><td>3</td><td>24</td><td>75</td><td>24</td><td>1.50</td></tr>
</table>
Quantitative kriging neighbourhood analysis was undertaken to assess the effect of changing key kriging neighbourhood parameters on block grade estimates. Kriging efficiency and slope of regression were determined for a range of block sizes, minimum/maximum samples, search dimensions and discretisation grids.

A three-pass search ellipse strategy was adopted whereby search ellipses were progressively increased if search criteria could not be met.

Dynamic anisotropy was used to ensure undulation in the mineralisation relating to the folded nature of the stratigraphy was captured by the search ellipses (i.e., rotating search ellipses).

Ordinary kriging was adopted to interpolate grades into cells, with variogram rotations consistent with the search ellipse rotations.

All interpolated grades variable utilise the search and sample selection plan obtained from the variograms of their respective domains. A minimum of four samples was used and the maximum of samples ranged between eight and 18 samples per estimate, with a maximum number of samples per drillhole of two for all ZONES.</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	No mine production records were available.
	The assumptions made regarding recovery of by-products.	No assumptions have been made regarding the recovery of by-products.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g., sulphur for acid mine drainage characterisation).	Al_2O_3, P_2O_5 and SiO_2 were estimated. There is no indication of elevated sulphur.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	A 25 m(E) x 25 m(N) x 2 m(RL) parent cell size was used to honour wireframe boundaries. The drillhole data spacing is variable throughout the deposit but most of the area has a spacing approximating 200 m along strike by 50 m across strike. Sampling has been completed on 1 m (58%), 2 m (42%), 3 m (0.1%), 4 m (0.1%), and 5 m (0.2%) intervals. The block size therefore represents approximately half the drillhole spacing in easting and northing.
	Any assumptions behind modelling of selective mining units.	No assumptions were made regarding selective mining units.
	Any assumptions about correlation between variables	No assumptions have been made regarding correlation between variables.
	Description of how the geological interpretation was used to control the resource estimates.	The logging and assaying were used to create a cross-sectional interpretation of the deposits at Jamieson Tank. To establish an appropriate cut-off grade for the modelling of mineralisation domains, CSA Global plotted a histogram of all the assays on the Jamieson Tank deposit and a cut-off grade of 1% Mn was selected. The cut-off of 1% Mn was used to create ZONES 1, 2, 3 and 4. Domain 1 comprising the ferricrete lithology was interpreted using the lithological logging from the drillholes. Domain 6 is a low grade background zone largely composed of assays below 1%. Dynamic anisotropy was used to ensure undulation in the mineralisation domains was captured by the search ellipses during grade interpolation. Estimation was confined to geological domains.

Criteria	JORC Code explanation	Commentary
	Discussion of basis for using or not using grade cutting or capping.	Grade capping was applied to all grade variables prior to grade interpolation. Histograms and log-probability plots were reviewed for to understand the distribution of grades and assess the requirement for grade capping for each estimation domain. Selection of no top cut can lead to significant grade over-estimation and bias in the block model if extreme grades outliers are within the grade population variables.
	The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	Drillhole grades were initially visually compared with cell model grades. Domain drillhole and block model statistics were compared. Swath plots were then created to compare drillhole grades with block model grades for easting, northing and elevation slices throughout the deposit. The block model generally reflected the tenor of the grades in the drillhole samples both globally and locally. ZONE 1 shows some overestimation of the block model grades possibly due to smearing during estimation. Some low-grade manganese values have been included in the domain.
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	All tonnages have been estimated on an in-situ dry basis. Downhole geophysical logging has been used to determine the density of the deposit. There is no density data collected using the Archimedes method and therefore no moisture values for the deposits have been checked. At this stage, it is assumed that the moisture content is minimum.
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	A reporting cut-off grade of 4% Mn was selected following preliminary high-level assessment of the likely mining and processing methods. CSA Global considers that the Mineral Resource as reported fulfills the reasonable prospects for eventual economic extraction requirement for reporting Mineral Resources in accordance with the JORC Code.
Mining factors or assumptions	*Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	The cut-off grade assumes that open pit mining methods would be applied.

Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	*The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	In 2022, ChemX completed a maiden drill program and preliminary sighter metallurgical testwork targeting HPMSM. The testwork was completed on two composite RCP samples of head grades 12.2% Mn and 25.5% Mn, achieving a 99.7% HPMSM. Ongoing metallurgical work is in progress to examine to potential of the Jamieson Tank prospect to produce a HPMSM product.
Environmental factors or assumptions	*Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	Environmental considerations have not been considered. It is therefore assumed that waste could be disposed in accordance with a site-specific mine and rehabilitation plan.
Bulk density	*Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*	Density data was collected in 2023 using downhole gamma-gamma geophysical logging of drillholes. The data was collected at 10 cm interval from 89 drillholes. The drillhole data was flagged with mineralisation domain and composited to 2 m interval. Variography was completed for density for each domain using Supervisor software. Ordinary kriging was used to interpolate density within the respective domains.

Criteria	JORC Code explanation	Commentary
	The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.	Not applicable.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	Density data was collected in 2023 using downhole gamma-gamma geophysical logging of drillholes. Ordinary kriging was used to interpolate density within the respective domains.
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.*	The Mineral Resource was classified Inferred where the drill spacing was on a 200 m x 50 m grid and the Indicated category was in areas where the drilling was approximately 100 m x 50 m in the northing and easting directions respectively. The variography showed long ranges, confirming geological continuity along and across strike. Only the drillholes drilled in 2023 with QAQC have been used for the estimation.
	Whether appropriate account has been taken of all relevant factors (i.e., relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	Appropriate account has been taken of all relevant criteria including data integrity, data quantity, geological continuity, and grade continuity.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The MRE appropriately reflects the CP's views of the deposit.
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	The current model has not been audited by an independent third party but has been subject to CSA Global's internal peer review processes.
Discussion of relative accuracy/ confidence	*Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*	The Mineral Resource accuracy is communicated through the classification assigned to this Mineral Resource. The MRE has been classified in accordance with the JORC Code (2012 Edition) using a qualitative approach. All factors that have been considered have been adequately communicated in Section 1 and Section 3 of this Table.

Criteria	JORC Code explanation	Commentary
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	The Mineral Resource statement relates to a global tonnage and grade estimate. Grade estimates have been made for each block in the block model.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	No production data is available.