

5 April 2023 ASX : AX8

ACCELERATE ACHIEVES 99.9% HIGH PURITY MANGANESE SULPHATE IN INITIAL TEST WORK PROGRAM

HIGHLIGHTS

- Leach and purification results confirm Accelerate's Woodie Woodie North Manganese Project in WA has potential to produce High Purity Manganese Sulphate Monohydrate (HPMSM)
- High-grade Manganese Sulphate Monohydrate crystals produced from purified leach liquor achieved a purity exceeding **99.9%**
- HPMSM demand is forecast to increase dramatically in the coming years due to increased global demand from the electric vehicles sector
- Accelerate's High Purity Manganese Strategy will complement and run parallel to its development of DSO (Direct Shipping Ore) products for the steel industry



Figure 1: High purity manganese sulphate monohydrate crystals produced



Accelerate Resources Limited (ASX:**AX8**) ("**AX8**" or "**the Company**") is focused on developing the Woodie Woodie North Manganese Project as a future manganese producer and supplier to the steel and expanding electrification markets. AX8's Critical Minerals strategy seeks to generate additional value from the Woodie Woodie manganese resources through development of higher value products that deliver superior returns to the Company and shareholders.

One of the highest value manganese products is High Purity Manganese Sulphate Monohydrate (HPMSM), which is a key input material into Li-ion battery manufacturing. Current estimates for HPMSM indicate prices of around US\$900/tonne¹. Given HPMSM's Mn content is only 32.5% Mn, this represents Mn value of more than US\$2,500/tonne of contained manganese (Mn) or \$25/dmtu² representing a significant value premium relative to high-grade Mn concentrates.

As part of its Critical Mineral Strategy, AX8 intends to develop HPMSM from Woodie Woodie North feedstock, To that end, the Company has been developing appropriate processing flowsheets to assess the potential for converting ore from the Woodie Woodie project to HPMSM.

AX8 is pleased to announce that this HPMSM test work program has achieved results of 99.9% manganese sulphate purity using samples from Area 42 in the Woodie Woodie North Manganese Project.

AX8 Managing Director Yaxi Zhan commented,

"With the exponential growth in demand for electric vehicles, the need for High Purity Manganese Sulphate Monohydrate (HPMSM) is anticipated to soar.

"Our recent test work results are promising, and they set the stage for a comprehensive, value-adding, and vertically integrated business approach that generates multiple revenue streams. As we move forward, AX8 remains committed to leveraging our expertise in critical minerals to meet the demands of an ever-evolving industry and deliver significant value to our shareholders."

Summary of the Test Work Program

AX8's sighter metallurgical test program was designed to demonstrate the amenability of producing HPMSM from high-grade manganese oxide samples from the Woodie Woodie North Manganese Project. Test work included leaching, neutralisation, multistage precipitation, solvent extraction and crystallisation.

Sample Characterisation

The manganese oxide composite of high-grade surface samples was tested. The head assay of the composite sample is summarised in Table 1-1.

Analyte	Units	Value
Sample	-	T3088 BW-Surface-MN-
Description		081221
Sample ID	-	BRAE-0001-D01S
Mn	%	43.0
Al	%	0.92

Table 1-1 Head Assav

¹ Reference: SMM (Shanghai Metal Market) Manganese Pricing

² DMTU- Dry metric tonne unit. A metric tonne unit is equivalent to 1% of a metric tonne



Са	ppm	672
Со	ppm	205
Cr	ppm	365
Cu	ppm	43.4
Fe	%	14.2
К	%	1.32
Mg	ppm	315
Na	ppm	1,865
Ni	ppm	206
Si	%	4.12
Zn	ppm	128

XRD analysis was also performed on the sample and indicated that cryptomelane was the only manganese mineral present, with quartz and hematite the other two minerals detected.

Mineral	Formula	Concentration (%)
Cryptomelane	K0.4Mn4O8(H2)0.32	53
Quartz	SiO2	30
Hematite	Fe2O3	17

Table 1-2 Summary XRD results

Test Work

A total of three sighter leaches were completed using a standard SO₂ reductive leach. Manganese recovery varied between 67%-80%. The XRD results indicate that manganese is present as cryptomelane suggesting that high manganese extraction should be achievable if the mineral is liberated and test conditions, including grind size, reagent addition and temperature, are further optimised.

Pregnant leach liquor from the three tests were combined for purification, which included neutralisation, multistage precipitation and solvent extraction. Following purification, the liquor was subject to crystallisation to produce a HPMSM sample. The purified leach liquor impurity levels suggest that HPMSM suitable for the battery market can likely be produced.

The HPMSM sample was assayed for impurities and achieved a high purity of 99.9% HPMSM. The assay data was compared to standard HPMSM specifications, with only calcium, cobalt, and zinc above typical battery grade specifications.

Analysis of the crystals produced by XRD confirmed the production of Manganese Sulphate Monohydrate. Further test work to optimise the purification flowsheet, crystallisation and washing stages is expected to improve impurity rejection and attain full battery grade specification.

Sample Location

Multiple surface grab samples were collected over an area of approximately 4 hectares and composited into a single bulk sample representing outcropping surface manganese (Figure 2).



The results are very encouraging, demonstrating a DSO (Direct Ship Ore) Lump quality product with grades up to 40.9% Mn and 13.8% Fe.

The tests were preliminary in nature and form the baseline for product optimisation in future metallurgical programs.

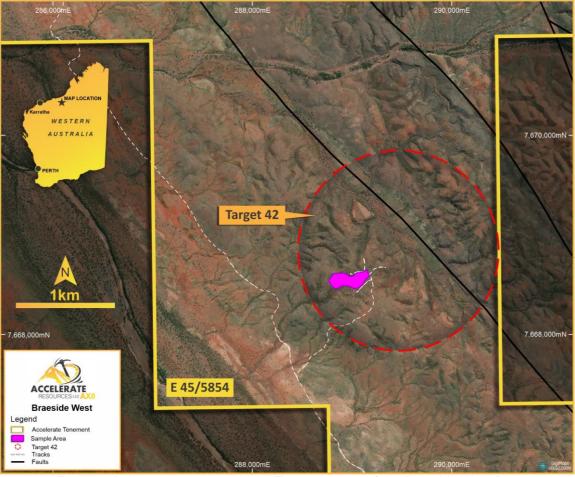


Figure 2: Bulk sample location in the Target 42 area of the Braeside West Prospect, Woodie Woodie North Manganese Project

For more information, please refer to ASX Announcement: <u>Woodie Woodie North Manganese Indicates</u> <u>DSO Potential.</u>

Work Program Planned

Accelerate intends to aggressively target Resources and generate new discoveries at Woodie Woodie North through its upcoming 2023 drilling campaign. Scoping of potential mining scenarios will also take place.

Parallel to this, AX8 will continue metallurgical test work on the manganese mineralisation from Woodie Woodie North to assess the potential for high value product beneficiation.

The Company's recent collaboration with RedoxBlox represents another step forward in its Critical Mineral and Value-add strategy. More information can be found in our ASX Announcement: <u>AX8</u> Partners with US Based Energy Storage Technology Group.

AX8 will continue to explore opportunities within the HPMSM space and to develop partnerships with various cross-sector groups.



Future HPMSM process flowsheet optimisation will include:

- Leach optimisation
- Sulphide precipitation optimisation
- Bulk processing of sample, followed by operation of a continuous solvent extraction pilot plant.

About the Woodie Woodie North Manganese Project

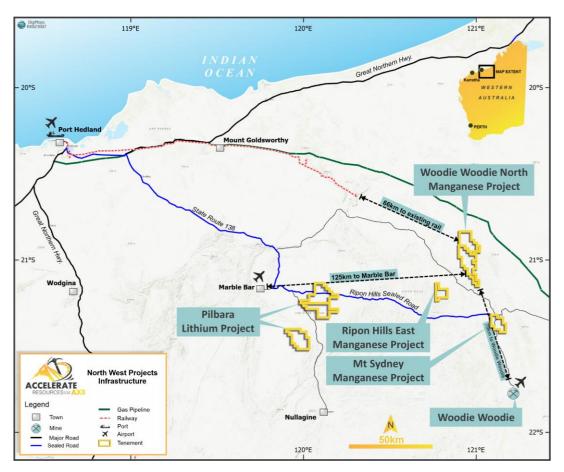


Figure 3 Woodie Woodie North Manganese Project Location Map

The Woodie Woodie North Manganese Project is located 250km east of Port Hedland and approximately 70km north of the world class Woodie Woodie manganese mine. The project is close to key infrastructure, such as roads, gas pipelines and water, and if developed would be one of the closest sources of manganese to Western Australia ports and potential markets. The project area (358km²) covers a 33km strike length within the Woodie Woodie Manganese Corridor, which is highly prospective for near-surface Direct Shipping Ore (DSO) manganese. AX8 is aggressively exploring this corridor with the discovery of high-grade manganese zones across the project area. For more information, please refer to the ASX Announcement: Regional-Scale Manganese Corridors confirmed.

-ENDS-

This announcement has been produced by the Company's published continuous disclosure policy and approved by the Board.



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Forward Looking Statements

Statements contained in this release, particularly those regarding possible or assumed future performance, costs, dividends, production levels or rates, prices, resources, reserves or potential growth of Accelerate Resources Limited, are, or may be, forward looking statements. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. Actual results and developments may differ materially from those expressed or implied by these forward-looking statements depending on various factors.

Competent Persons Statement – Metallurgy Dave Pass

The information in this release that relates to metallurgical testwork results is based on information reviewed by Mr David Pass, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Pass is an employee of BatteryLimits and consultant to Accelerate Resources Limited. Mr Pass has sufficient experience relevant to the mineralogy and type of deposit under consideration and the typical beneficiation thereof to qualify as a Competent Person as defined by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2012 Edition). Mr Pass consents to the inclusion in the report of the matters based on the reviewed information in the form and context in which it appears.

Competent Person Statement

Information in this release related to Exploration Results is based on information compiled by Dr. Joseph Drake-Brockman. He is a qualified geologist and a Fellow of the Australian Institute of Mining and Metallurgy (AusIMM). Dr. Drake-Brockman has sufficient experience, which is relevant to the style of mineralization and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources, and Ore Reserves. Dr Drake-Brockman consents to the inclusion in this release of the matters based on his information in the form and context in which it appears.



PPENDIX 1

JORC Code, 2012 Edition, Table 1 Exploration Results

Section 1 – Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling	Nature and quality of sampling (e.g. cut	A 200kg bulk sample of outcropping Mn-ore was compiled by compositing 2-5
Techniques	channels, random chips, or specific specialized	kg pieces of Mn-ore collected randomly from several Mn-mineralised surface
	industry standard measurement tools appropriate	outcrops over an area of 200mx200m.
	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	The samples were collected randomly from outcrops based on a visual
	sample representivity and the appropriate	judgment of representative spacings for the collected material.
	calibration of any measurement tools or systems	
	used.	
	Aspects of the determination of mineralization	It was recognized that this material is liable to be surface (supergene) enriched
	that are Material to the Public Report.	compared with the sub-surface mineralization.
Drilling Techniques	Drill type (e.g. core, reverse circulation, open-	No drilling undertaken as part of this program
	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.).	
Drill Sample	Method of recording and assessing core and chip	No drilling undertaken as part of this program
Recovery	sample recoveries and results assessed.	
	Measures taken to maximize 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.	



Criteria	JORC Code Explanation	Commentary
Logging	Whether core and chip samples have been	No drilling undertaken as part of this program
	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.	
Sub-Sampling	If core, whether cut or sawn and whether quarter,	The sample sizes are considered appropriate to correctly represent the surface
Techniques and	half or all core taken.	manganese mineralisation.
Sample Preparation	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 sub-	
	sampling stages to maximize 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.	
Quality of Assay	The nature, quality and appropriateness of the	The assay method was X-Ray Fluorescence Spectrometry. This considered a total
Data and Laboratory	assaying and laboratory procedures used and	technique.
Tests	whether the technique is considered partial or total.	



Criteria	JORC Code Explanation	Commentary
		X-Ray Diffraction was used to determine the mineralogy. This is an industry standard
		technique for determination of gross mineralogy.
	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.	Laboratory checks and samples containing standards were included in the analyses.
Verification of Sampling and Assaying	The verification of significant intersections by either independent or alternative company personnel.	No drilling undertaken in this program.
	The use of twinned holes.	
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	
Location of Data	Discuss any adjustment to assay data. Accuracy and quality of surveys used to locate	Locations were recorded with a handheld GPS and is considered appropriate for
Points	drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	this level of sampling. The bulk sample was collected between the co-ordinates 289065 E / 7668685 N and 289160 E / 7668585 N.
	Specification of the grid system used.	Grid projection used for the project area is MGA-GDA2020, Zone 51.
	Quality and adequacy of topographic control.	No work has been completed on topographic control.
Data Spacing and Distribution	Data spacing for reporting of Exploration Results.	Data spacing was defined by observation. Outcrops were sampled to develop a preliminary understanding of the Mn mineralisation
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral	No Mineral Resource or Ore Reserve estimations have been applied.



Criteria	JORC Code Explanation	Commentary
	Resource and Ore Reserve estimation	
	procedure(s) and classifications applied.	
	Whether sample compositing has been applied.	
	Whether the orientation of sampling achieves	No drilling undertaken in this program, so the relationship of samples collected
	unbiased sampling of possible structures and the	to geological structures is not known.
	extent to which this is known, considering the	
	deposit type.	
	If the relationship between the drilling orientation	
	and the orientation of key mineralized structures	
	is considered to have introduced a sampling	
	bias, this should be assessed and reported if	
	material.	
Sample Security	The measures taken to ensure sample security.	The samples collected were placed in poly-weave bags and transported to the
		relevant Perth laboratory by courier.
		Sample security was not considered a significant risk.
Audits or Reviews	The results of any audits or reviews of sampling	
	techniques and data.	

Section 2 – Reporting of Exploration Results

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 tenement E45/5854 is held by Pardoo Resources Pty Ltd. Accelerate Resources owns the 100% Mn and Fe rights. Accelerate have an absolute caveat over E45/5854. The tenement is located on crown land. All tenements are in good standing. Exploration of the tenements is subject to granting of access and permits under the following acts: Mining Act 1978 (WA) Petroleum and Geothermal Energy Resources Act 1967 (WA) Aboriginal Heritage Act 1972 (WA) Native Title Act 1993 (Commonwealth) Aboriginal Communities Act 1979 (WA)



Criteria	JORC Code Explanation	Commentary
		 Aboriginal Affairs Planning Authority Act 1972 (WA) Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Commonwealth).
	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.	At the time of reporting, there are no known impediments to operate an exploration program in the area.
Exploration Done by Other Parties	Acknowledgment and appraisal of exploration by other parties.	Activity with E45/5088 started with The Broken Hill Proprietary Co. Ltd drilling RC holes in 1979. A8782. No assay results have been found for these holes. CRA Exploration completed a stream sediment project in 1984. A15932 Activity within E45/5854 started with Valiant completing 380 anomaly logs with occasional rock chip sampling within their exploration Lease E45/1337, which they held between 1996 & 1997. In March 1996, Valiant drilled 80 RAB holes totalling 867 metres with 186 assay samples at various intervals. A50605 & A57720. 40 of these RAB holes are on the current tenement E45/5854 Pilbara Manganese drilled 5 RC holes in 2015 totalling 579 metres. A108909 Geochemical exploration was conducted by Pilbara Manganese, Jupiter Mines and Fortescue Metals Group at various dates between 2009 and 2015
Geology	Deposit type, geological setting and style of mineralization.	Manganese mineralisation is within the prospective Pijian Chert and Carawine Dolomite
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	No drilling undertaken in this program.



Criteria	JORC Code Explanation	Commentary
	down hole length and interception depth hole	
	length.	
Data Aggregation	In reporting Exploration Results, weighting	No drilling undertaken in this program.
Methods	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.	
Relationship	If the geometry of the mineralization with	
Between	respect to the drillhole angle is known, its	
Mineralisation	nature should be reported.	
Widths and Intercept	,	
Lengths		
Diagrams	Appropriate maps and sections (with scales)	Maps have been included in the body of this release.
	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.	
Balanced Reporting	Where comprehensive reporting of all	All assays are reported in the appendix,
	Exploration Results is not practicable,	
	representative reporting of both low and high	
	grades and/or widths should be practiced to	



Criteria	JORC Code Explanation	Commentary
	avoid misleading reporting of Exploration Results.	
Other Substantive Exploration Data		 Historical exploration results are available in WAMEX reports: A8782 Temporary Reserve 7139H, Bunmardie Creek WA. The Broken Hill Proprietary Company Limited. October 1979. A15932 Final Report on Exploration Completed Within Licences 45/63, 45/64, 45/65. CRA Exploration Pty Limited. March 1985 A50605 Year 4 Partial Surrender E45/1337 Gingarrigan Well. Valiant Consolidated Limited. February 1997 A57720 Annual and Final Report E45/1337 Gingarrigan Well. Consolidated Minerals Limited. March 1999 A64433 Annual Report 2001 for C26/2000. Consolidated Minerals Limited. March 2002 A87453 Annual Report Oakover Mn Project 2009-2010. Jupiter Mines Limited. September 2010 A90762 Annual Report Oakover Mn Project 2010-2011. Jupiter Mines Limited. September 2011
		A98580 Annual Report Oakover Mn Project 2012-2013. Jupiter Mines Limited. July 2013
		A101644 Combined Annual Report for C62/2005 2013. Pilbara Manganese Pty Ltd. March 2013
		A105240 Combined Annual Report for C62/2005 2014-2015. Pilbara Manganese Pty Ltd. March 2015
		A108908 Surrender Report for E45/2369 2009-2016. Pilbara Manganese Pty Ltd. May 2015



Criteria	JORC Code Explanation	Commentary
		A108909 Combined Surrender Report for C62/2005 2002-2016. Pilbara Manganese Pty Ltd. May 2016
		A118288 Annual Report E45/4720 Oakover River 2017-2018. FMG Pilbara Pty Ltd. November 2018
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).	Drilling and sampling are planned to confirm and add to the body of knowledge around the mineralization.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not	
	commercially sensitive.	