ACCELERATE RESOURCES Ltd AX8

ASX Announcement

25 May 2022

ASX: AX8

Woodie Woodie North Manganese Demonstrates up to 48% Mn Premium Concentrate Potential

Highlights

- A review of 2010 Dense Media Separation (DMS) test results from RC Drilling at the Barramine prospect indicate manganese can be upgraded to **48% Mn** yielding a premium manganese concentrate
- 2010 preliminary Wilfley table results also confirmed the well liberated nature of the manganese material from Barramine
- 4,000m RC drilling exploration program set to start at Woodie Woodie North Manganese Project in the coming weeks
- Further metallurgical test work is planned to target the Project ability to generate battery-grade oxide materials.

Figure 1: Photo from the 2010 DMS beneficiation test work showing Mn concentrate

Market Data
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CONTACTS

Yaxi Zhan
Managing Director
Suite 4/16 Ord Street
West Perth, 6005, WA

T: 08 6248 9663
E: Yaxiz@Ax8.com.au
P: PO Box 938,
West Perth, WA 6005

BOARD

Richard Hill	Non-Executive Chairman
Yaxi Zhan	Managing Director
Grant Mooney	Non-Executive Director
Steve Bodon	Non-Executive Director
Deborah Ho	Company Secretary

Accelerate Resources Limited (ASX Code: AX8) is pleased to present the results of historical beneficiation test work from the Woodie Woodie North Manganese Project in Western Australia. The beneficiation test work was completed by Nagrom Laboratories between September and December 2010. Shaw River Manganese Limited initially released these results on 04/01/2011 (ASX: SRR) and have been reviewed and reinterpreted by Accelerate Resources.

The results were encouraging, demonstrating manganese product grades up to **48% Mn**. The test work indicated that industry standard, low cost, conventional gravity separation processes may be employed to produce economic grade manganese deliverable as premium product to market. The tests were preliminary in nature and form the baseline for product optimising in future programmes.

Managing Director Yaxi Zhan commented on the importance of this critical historical review "This review of preliminary beneficiation trials further supports the potential of the Woodie Woodie North Project area to produce high-grade manganese concentrate products, that are currently in high demand for the steel and battery markets. We are excited by this quality historic work and we look forward to our first major drill program commencing in the coming months."

Historical Metallurgical Test work Summary

In 2010, Shaw River Manganese Limited commissioned specialist metallurgical laboratory Nagrom to conduct preliminary manganese beneficiation test work on 12 composite samples from 8 RC drill holes (106 samples). The test work programs explored conventional-low-cost gravity processing techniques, including screening to remove natural fine clay minerals and dense medium separation (DMS) using cyclones, culminated in gravity separation of ultra-fines using a Wilfley Table.

Results after screening at 0.5 mm and DMS processing of the plus 0.5 mm are presented in Table 1.

Table 1 2010 Summary Screen and DMS Results

Sample Type	Sample Id	Head	Screen Undersize (<0.5mm)		DMS Performance (>0.5mm)		Summary Screen & Dense Media Separation			
		Grade	Distribution		Recovery		Overall Recovery		Concentrate Grade	
		% Mn	% Mass	% Mn	% Mass	% Mn	% Mass	% Mn	% Mn	% Fe
Interval	BRC112_46-48	17.6	38.5	33.0	41.7	69.0	25.7	46.3	31.6	19.5
Interval	BRC169	23.0	50.3	44.1	84.0	92.5	41.8	51.7	28.5	23.8
Interval	BRC224_43-48	7.4	44.5	32.5	9.1	40.9	5.0	27.6	40.7	2.7
Interval	BRC224_48-51	16.2	38.6	41.5	24.8	74.0	15.2	43.3	45.9	1.7
Interval	BRC248_57-62	26.5	29.5	28.3	48.4	86.4	34.1	61.9	48.1	4.5
Interval	BRC248_62-73	10.8	24.2	38.3	15.5	60.8	11.8	37.5	34.6	14.3
Interval	BRC250_10-13	37.6	52.2	45.7	81.6	91.6	39.0	49.8	48.0	10.4
Interval	BRC250_0-14	20.5	53.7	51.6	34.9	64.5	16.1	31.2	39.6	14.4
Hole Composite	BRC135_004-008	23.8	42.8	18.3	17.1	23.7	9.8	19.4	47.2	8.8
Hole Composite	BRC172_002-004	24.3	56.8	38.7	77.2	81.5	33.4	50.0	36.3	17.8
Hole Composite	BRC177_002-004	19.5	41.6	33.8	46.0	81.9	26.9	54.2	39.3	16.3
Hole Composite	BRC177_008-009	21.1	27.8	20.3	29.1	50.8	21.0	40.5	40.6	13.8

Screening processes revealed relatively high mass reporting to screen undersize which is not unexpected as RC drill methods tend to comminute the drill core. Consequently, an average of 35% of the manganese reported to the screen undersize resulting in lower overall recoveries than reality. Reverse Circulation drill chips are generally used for preliminary metallurgical investigations to ascertain concentrate specification and prove processing concepts before more comprehensive test work is conducted using diamond core or bulk sampling.

DMS performance on the screen oversize was extremely encouraging, producing concentrate grades ranging from **31.6 to 48.1% Mn**. DMS performance was also encouraging with some manganese recoveries reported as high as **92%** (Table 1)**.**

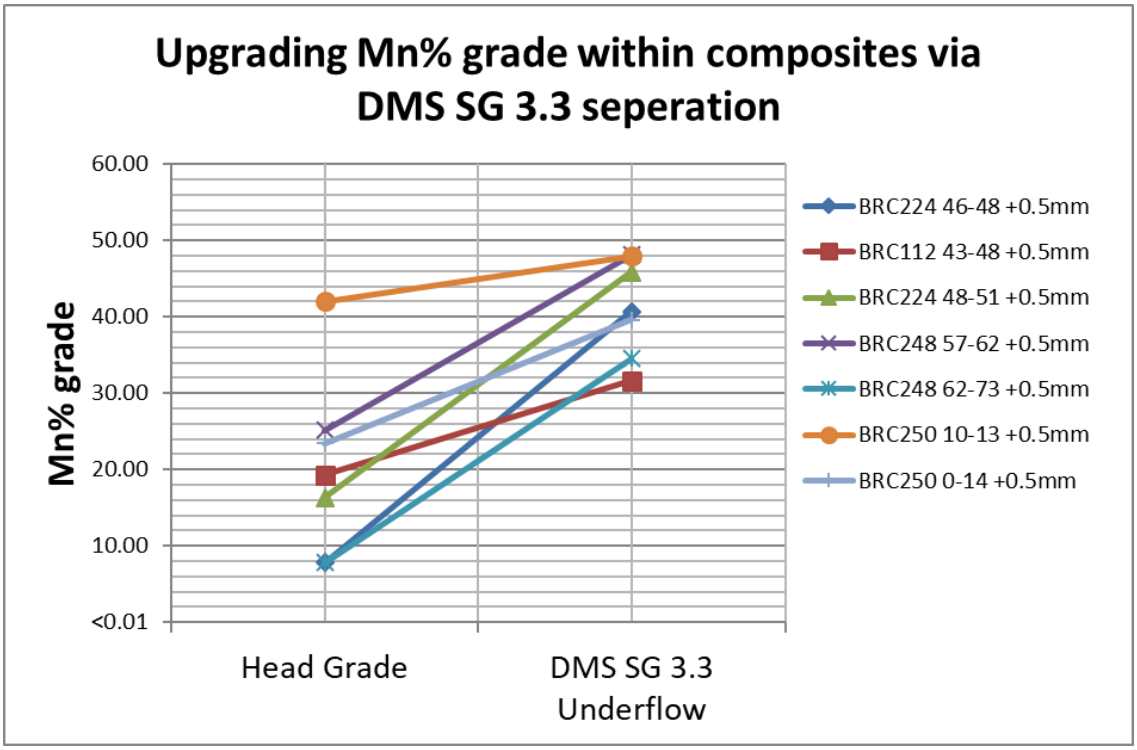

Figure 2: Chart showing upgrade of manganese composite samples by DMS from historical Test

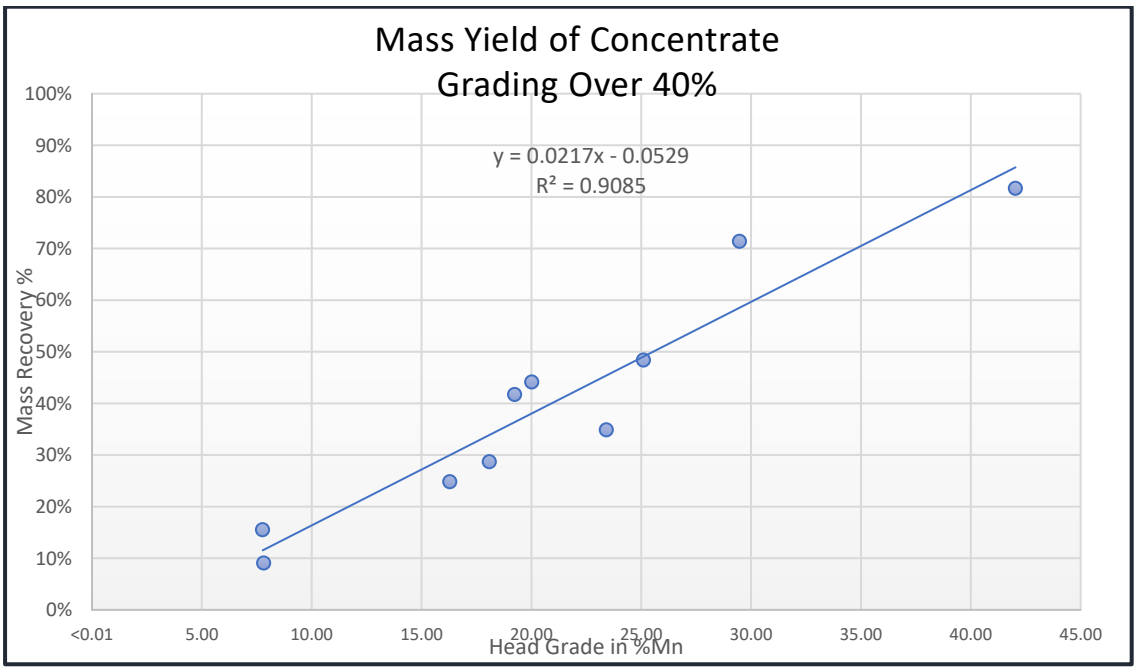

Figure 3: Mass yield of concentrate grading over 40%

A strong positive correlation exists in the majority of DMS data between Mass Recovery and Mn Feed grade (Figure 2 and Figure 3) showing that manganese material with low %Fe will upgrade to **~40 %Mn**. Even for low head grade feed of 7.4% Mn, the material can be upgraded to a **40.7% Mn** concentrate (Table 1).

DMS test work demonstrated that a premium-grade product is achievable with low levels of impurities such as sulphur (S average 0.005%) and phosphorous (P average 0.05%). (Appendix 2)

Results for the Wilfley Table separation test work carried out on 7 of the 12 samples are presented in the Table 2 below. Recoveries noted are expressed as incremental with respect to the feed sample.

Table 2 2010 Wilfley Table Results

Sample Type	Sample Id	Head	Wilfley Table Separation(<0.5mm)			
		Grade	Concentrate Distribution		Concentrate Grade	
		% Mn	% Mass	% Mn	% Mn	% Fe
Interval	BRC112_46-48	17.6	0.7	1.4	37.2	20.3
Interval	BRC224_43-48	7.4	0.7	2.5	28.6	4.5
Interval	BRC224_48-51	16.2	5.4	13.2	39.2	2.4
Interval	BRC248_57-62	26.5	5.0	9.5	50.6	4.4
Interval	BRC248_62-73	10.8	1.3	5.1	43.7	11.6
Interval	BRC250_10-13	37.6	22.7	24.1	40.0	16.4
Interval	BRC250_0-14	20.5	10.0	18.2	37.2	16.0

The preliminary Wilfley Table results confirm the liberated nature of the manganese minerals producing concentrates **as high as 50.7% Mn**. The incremental recovery benefits of the treatment of ultrafine (<0.5mm) material will be investigated in future work programs to ascertain the true merits of the economical treatment and recovery.

Metallurgical Samples

In 2010, Shaw River Manganese Limited submitted 106 composite samples to Nagrom for manganese beneficiation test work. Sample locations are as per Figure 4 below. The 106 composite samples were selected from 8 RC drill holes from their 2010 drilling campaign. These samples are located within the target chert (yellow) and dolomite (blue) host rocks. The samples represent five prospect areas within the Barramine Prospect of the Woodie Woodie North Manganese Project.

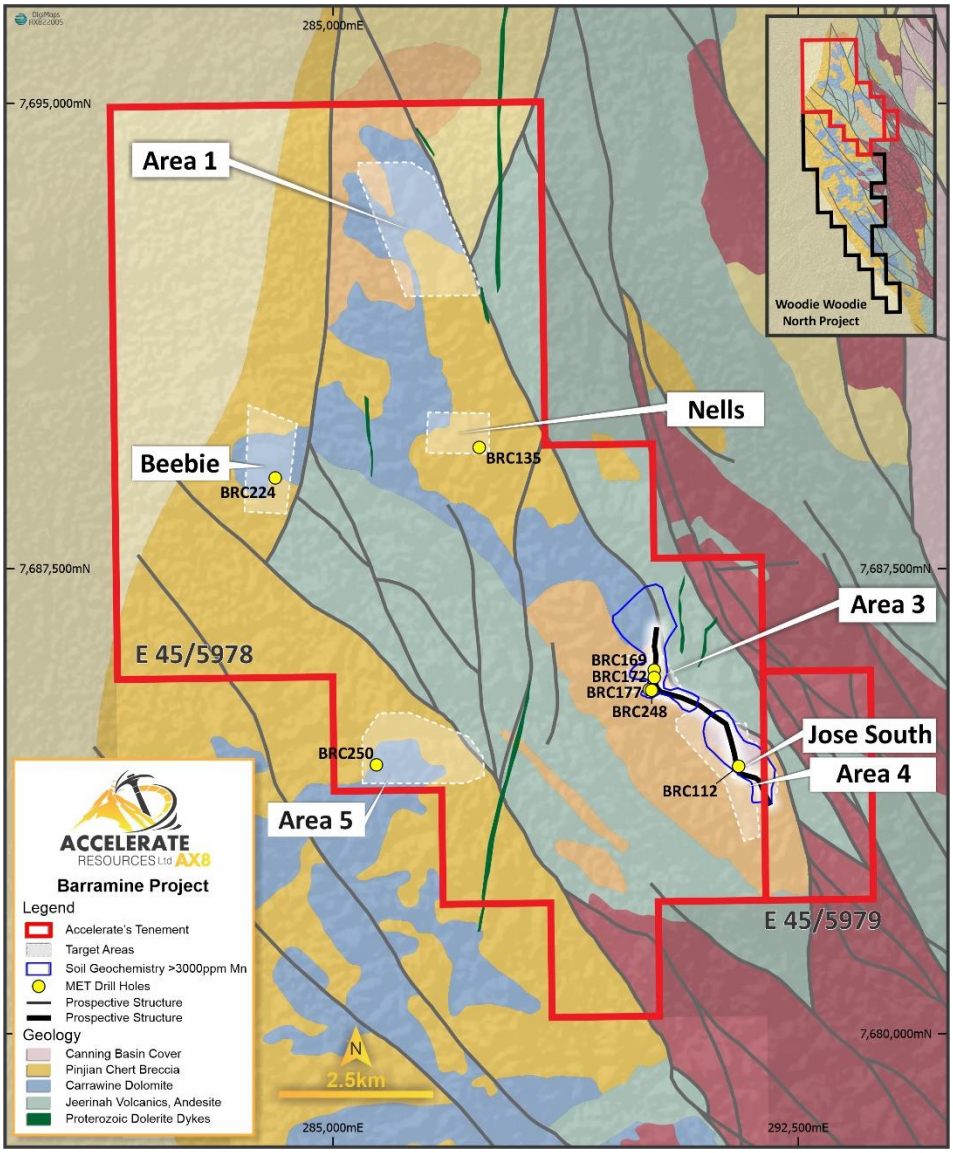

Figure 4: Historical metallurgical sampling sites at five prospects

A subset of 12 composite samples was created from the meterage samples (Table 3). The composites were homogenised and sub-sampled for assay and subsequent beneficiation test program.

Table 3: Sampled Drillhole and Head Grade

Hole ID		Prospect	Assayed Head Grade			
ID	From-To		Mn %	Fe %	SiO2 %	Al2O3%
BRC 112	BRC112_46-48	Area 4	17.3	12.4	50.0	0.7
BRC 135	BRC135_004-008	Nells	23.1	15.6	6.6	1.4
BRC169	BRC169_34-42	Area 3	21.7	24.0	19.7	4.4
BRC 172	BRC172_002-004	Area 3	24.3	21.3	22.9	0.7
BRC 177	BRC177_002-004	Area 3	20.5	16.0	36.5	1.2
BRC 177	BRC177_008-009	Area 4	20.2	4.7	57.5	1.1
BRC 224	BRC224_43-48	Beebie	6.7	2.5	75.2	5.3
BRC 224	BRC224_48-51	Beebie	15.5	2.3	68.4	1.0
BRC 248	BRC248_62-73	Area 3	10.9	9.4	60.1	0.6
BRC 248	BRC248_57-62	Area 3	26.8	6.0	40.9	0.6
BRC 250	BRC250_0-14	Area 5	20.2	12.3	38.5	3.7
BRC 250	BRC250_10-13	Area 5	36.3	13.7	11.2	3.4

Exploration Strategy and Program Planed

Accelerate aims to define economic manganese resources at Woodie Woodie North Manganese Project as a precursor to future commercial mining operations.

Exploration activities executed and completed:

- Acquisition of Braeside West Manganese Project: 25/10/2021
- Braeside West Surface Sampling and mapping: 15/11/2021
- High-Resolution Lidar Survey and new targeting at Braeside West: 9/2/2022
- Acquisition of Barramine: 16/2/2022
- Merging of the Braeside West and Barramine databases to maximise exploration potential and targeting: 16/3/2022
- Mapping, sampling and drill targeting at Woodie Woodie North: 16/3/2022
- Key tenements granted and Heritage Survey completed: 10/5/2022

Planned Exploration activities include:

- A 4,000m RC drilling program targeting maiden JORC (2012) resource at the Woodie Woodie North Manganese Project by end of the 2022 field season.
- IP and/or EM Survey to assist with additional target definition.
- Drill sampling to support further metallurgical beneficiation and High Purity Manganese test work.

Woodie Woodie North Manganese Project

The Woodie Woodie North Manganese Project contains two main prospects, Barramine (E45/5978, E45/5979) and Braeside West (E45/5854). Located 120km east of Marble Bar, 250km from Port Hedland, and approximately 70km North of the Woodie Woodie Manganese Mine, it is close to major road, rail gas pipeline and port infrastructure (Figure 2).

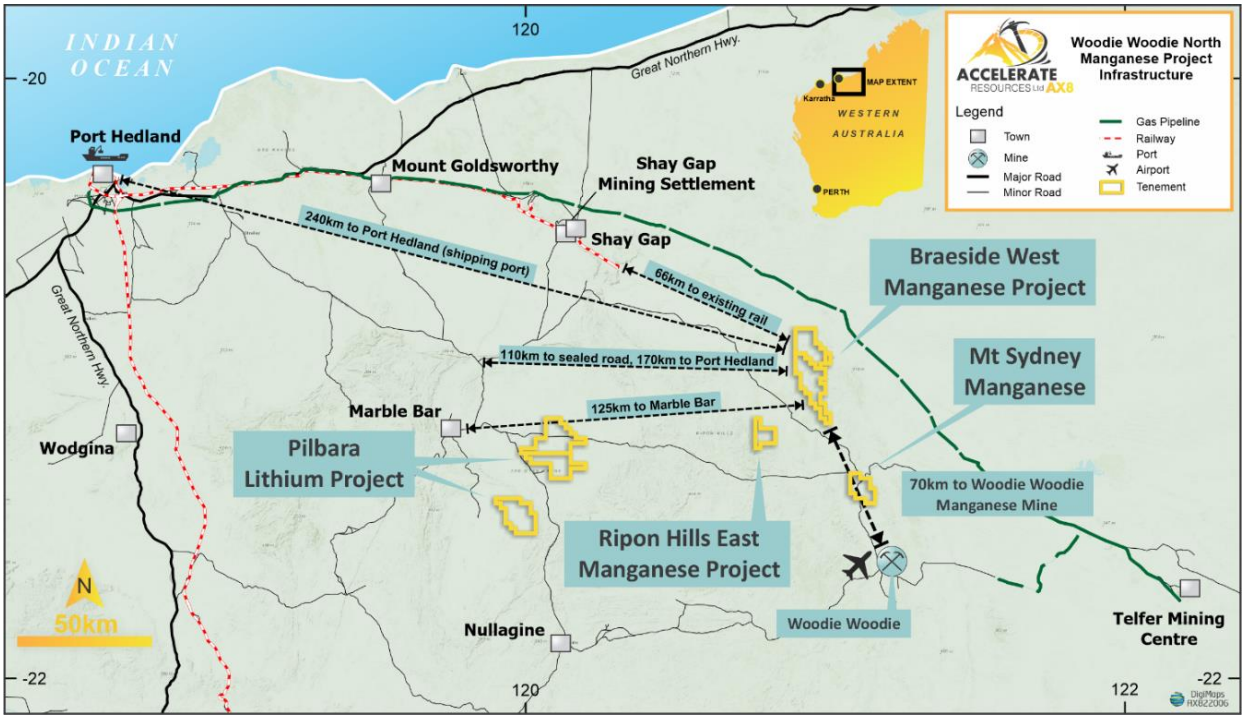

Figure 5: Location of Accelerate Resources projects

The Braeside West tenement (E45/5854) covers 139km^2 and has undergone several limited historical exploration phases, including geological mapping, rock chip sampling, VTEM geophysics and drilling. The recent collation of historical data has identified multiple manganese targets throughout the tenement (See ASX Announcement dated 25 October 2021).

The Barramine area covers an area of 101km^2, with prior exploration identifying widespread manganese occurrences in a similar geological setting to known manganese deposits elsewhere in the East Pilbara manganese province, particularly the Woodie Woodie Manganese Mine. These manganese deposits are located along the contact between the Carawine Dolomite and the Pinjian Chert Breccia, with more intense and larger scale mineralisation associated with major faults and shears. At Barramine, a number of such zones of intense manganese mineralisation were identified through rock chip sampling, soil sampling, mapping and exploration drilling, which will form the basis of more detailed exploration work.

The previous exploration included 27,478m of RC drilling (totalling 343 drill holes), 2,233 rock chips and 5,140 soil samples. Historic drilling results returned grades up to 46.4% Mn and include:

- *15m at 24.3% Mn from 37m (BRC 290) & 7m at 26.2% Mn from 67m including 3m @ 39.3% Mn*
- *18m at 21.4% Mn from 73m (BRC 241) including 3m at 36.1% Mn from 86m*
- *8m at 22.4% Mn from 34m (BRC 169) including 2m at 36.2% Mn from 36m*
- *7m at 22.3% Mn from 37m (BRC 332) including 1m at 29.3% Mn from 40m*
- *10m at 19.3% Mn from 91m (BRC 266) including 2m at 35.3% Mn from 93m*
- *10m at 19.4% Mn from 10m (BRC 318) including 6m at 23.6% Mn from 12m*

Detailed geological mapping and geophysics were also completed, including gravity, dipole-dipole induced polarisation, heliborne XTEM-TEM and magnetic surveys.

Accelerate's Critical Element strategy

Manganese is a critical element used in steel production. The steel industry is poised to continue growing, providing a steady source of demand for manganese. New demand is arising from clean-energy applications. High Purity manganese (HPM) is used as a cheaper substitute for cobalt in nickel-cobalt-manganese (NCM) battery cathodes.

Manganese is increasingly a critical link in the lithium-ion battery supply chain and has been added to the Strategic Minerals stockpile along with cobalt, chrome and molybdenum. It is believed that there is a high probability of supply disruption from South African production and the winding down of the dominant Groote Eylandt Manganese Operations in the Northern Territory of Australia.

—ENDS—

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

For further information, please contact

Yaxi Zhan
Managing Director

E: Yaxiz@AX8.com.au I P: +61 8 6248 9663 I W: www.AX8.com.au

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 Person Statement

Information in this release that relates to historical results and future exploration work was prepared by Adriaan du Toit, who is a member of the Australian Institute of Mining and Metallurgy (AusIMM) and is currently an independent consultant to AX8. Mr du Toit is the Director and Principal Geologist of AEMCO Pty Ltd. He has over 30 years of exploration and mining experience in various mineral deposits and styles. Mr du Toit was the exploration manager for Shaw River Manganese (ASX: SRR delisted) and explored the Barramine project from May 2010 to November 2012. Mr du Toit has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and the activity he is undertaking to qualify as a Competent Person as defined by the 2012 JORC Edition. The information from Mr du Toit was prepared under the JORC Code 2012 Edition. Mr du Toit consents to the inclusion in this release of the matters based on this information in the form and context it appears

Appendix 1. Historical RC Drilling Details

Hole ID	Easting MGA94 Z51	Northing MGA94 Z51	RL(m)	Azi.	Dip	Depth (m)
BRC 250	285761	7684271	200	090	-50	72
BRC 248	290198	7685475	259	0	-90	84
BRC 224	284130	7688900	209	180	-50	60
BRC 112	291600	7684250	244	0	-90	97
BRC 135	287418	7689391	224	0	-90	78
BRC 169	290240	7685800	235	090	-50	66
BRC 172	290240	7685680	241	090	-50	66
BRC 177	290160	7685485	250	0	-90	78

Appendix 2: Head Assays

		Weight kg	Mn %	Fe %	SiO_2 %	Al_2O_3 %	CaO %	MgO%	TiO_2 %	PbO %	BaO%	K_2O%	Na_2O%	S %	P %	LOI %
Head Assays	Metreage															
BRC 112	46-48	55.0	17.34	12.40	49.99	0.75	0.24	0.28	0.03	0.002	<0.001	0.52	0.195	0.004	0.030	6.63
BRC 224	0-1	10.0	3.67	10.82	64.75	1.14	5.19	0.48	0.07	<0.001	0.017	0.20	<0.001	0.008	0.015	7.13
BRC 224	1-2	6.0	9.48	11.92	43.45	0.78	7.33	4.14	0.04	0.001	0.061	0.24	0.030	0.013	0.027	14.17
BRC 224	2-3	4.0	4.98	8.24	72.62	1.71	1.25	0.32	0.07	<0.001	0.025	0.22	0.010	0.011	0.023	4.41
BRC 224	3-4	3.0	7.99	12.01	61.77	1.27	1.70	0.49	0.07	0.002	0.052	0.29	0.043	0.017	0.027	6.10
BRC 224	4-5	4.0	5.31	11.53	57.63	0.92	4.59	3.20	0.05	<0.001	0.022	0.14	0.023	0.016	0.023	10.08
BRC 224	5-6	2.0	2.70	9.32	68.83	0.88	2.74	2.17	0.03	<0.001	0.018	0.20	1.906	0.030	0.017	6.73
BRC 224	6-7	5.0	4.09	6.20	69.37	0.74	4.05	3.12	0.03	0.001	0.037	0.26	0.060	0.018	0.016	8.68
BRC 224	7-8	5.0	9.26	3.15	69.49	1.11	2.64	2.20	0.03	0.002	0.073	0.61	0.086	0.018	0.020	7.06
BRC 224	8-9	5.0	7.21	3.35	72.53	0.87	2.82	2.20	0.04	0.001	0.101	0.40	0.040	0.009	0.023	7.07
BRC 224	9-10	8.0	3.36	2.80	79.19	0.56	3.01	2.32	0.03	<0.001	0.080	0.20	0.012	0.006	0.014	6.39
BRC 224	42-43	13.0	2.83	5.12	56.13	18.62	1.06	2.02	0.22	<0.001	0.172	0.50	0.033	<0.001	0.007	9.97
BRC 224	43-44	15.0	8.10	2.62	69.19	7.44	0.50	0.97	0.10	0.002	0.300	0.95	0.021	<0.001	0.012	5.45
BRC 224	44-45	16.0	9.66	2.82	68.89	5.88	0.39	0.93	0.09	0.001	0.263	1.10	0.036	0.002	0.033	4.94
BRC 224	45-46	16.0	2.57	1.00	90.90	1.77	0.17	0.29	0.03	<0.001	0.064	0.21	<0.001	<0.001	0.008	1.80
BRC 224	46-47	19.0	6.20	3.41	71.94	6.69	0.45	1.04	0.11	0.001	0.229	0.49	0.007	<0.001	0.014	5.41
BRC 224	47-48	8.0	7.46	2.65	75.51	3.72	0.53	1.10	0.07	0.001	0.275	0.56	0.006	<0.001	0.015	4.13
BRC 224	48-49	16.0	13.23	1.11	74.01	1.13	0.16	0.62	0.02	0.002	0.150	0.55	0.031	<0.001	0.012	3.35
BRC 224	49-50	12.0	23.25	1.49	57.28	0.79	0.19	0.67	0.02	0.003	0.178	0.76	0.053	<0.001	0.019	5.23
BRC 224	50-51	16.0	12.01	4.20	71.07	1.16	0.17	1.54	0.07	0.002	0.074	0.33	0.009	<0.001	0.017	3.52
BRC 224	51-52	14.0	3.26	1.60	89.49	0.58	0.14	0.75	0.02	<0.001	0.026	0.10	<0.001	<0.001	0.006	1.42
BRC 224	52-53	8.0	3.30	2.00	78.63	1.74	2.89	3.12	0.05	<0.001	0.053	0.14	0.004	<0.001	0.009	6.27
BRC 248	21-22	7.0	3.22	30.82	37.69	4.04	0.22	0.40	0.03	<0.001	0.022	0.23	0.042	0.032	0.127	8.62
BRC 248	22-23	8.0	5.11	23.86	44.34	3.82	0.18	0.40	0.03	0.002	0.054	0.33	1.761	0.057	0.105	7.96
BRC 248	23-24	8.0	5.83	15.66	53.02	7.36	0.19	0.42	0.03	0.002	0.051	0.15	0.076	0.029	0.070	8.60
BRC 248	24-25	8.0	3.10	17.72	63.28	1.52	0.31	0.51	0.02	<0.001	0.034	0.11	0.031	0.016	0.107	4.90
BRC 248	25-26	9.0	3.69	27.57	44.85	1.52	0.30	1.03	0.05	<0.001	0.028	0.13	0.038	0.021	0.202	6.97
BRC 248	26-27	8.0	5.34	24.61	47.85	1.33	0.21	0.90	0.05	<0.001	0.082	0.21	0.057	0.020	0.170	6.76
BRC 248	27-28	10.0	3.73	35.09	35.53	0.80	0.17	0.51	0.03	<0.001	0.049	0.10	0.033	0.019	0.205	7.87

BRC 248	28-29	7.0	5.41	40.86	22.04	0.46	0.28	0.49	0.02	<0.001	0.068	0.17	0.006	0.018	0.249	9.47
BRC 248	29-30	2.0	14.41	28.11	28.04	0.76	0.39	0.60	0.03	0.002	0.105	0.38	0.067	0.025	0.180	9.40
BRC 248	30-31	6.0	8.52	21.98	46.46	1.79	0.52	1.08	0.03	0.003	0.045	0.16	0.046	0.018	0.132	7.32
BRC 248	31-32	4.0	5.29	15.40	63.66	1.71	0.49	1.49	0.05	0.002	0.031	0.18	0.029	0.011	0.073	5.10
BRC 248	32-33	7.0	11.66	10.89	60.80	0.99	0.40	0.80	0.03	0.003	0.048	0.20	0.009	0.009	0.064	5.43
BRC 248	56-57	5.0	4.56	7.69	59.35	0.94	5.80	4.90	0.05	<0.001	0.051	0.19	<0.001	<0.001	0.023	11.87
BRC 248	57-58	9.0	28.86	4.35	41.45	0.42	1.29	1.08	0.02	0.004	0.141	0.38	0.009	0.001	0.054	8.59
BRC 248	58-59	5.0	28.91	8.54	35.41	0.67	1.09	1.04	0.03	0.004	0.151	0.37	<0.001	0.002	0.055	9.29
BRC 248	59-60	5.0	26.02	4.31	45.64	0.49	1.28	1.11	0.02	0.002	0.117	0.31	<0.001	<0.001	0.046	8.11
BRC 135	51-52	5	20.04	16.21	5.8	0.96	9.93	8.64	0.03	0	0.13	0.77	0.14	0	0.103	22.95
BRC 135	52-53	17	22.77	14.85	6.45	1.18	8.78	8.11	0.04	0	0.16	0.92	0.25	0	0.03	21.87
BRC 135	53-54	10	16.55	12.57	7.47	1.85	12.5	10.77	0.05	0	0.1	0.65	0.12	0	0.02	25.77
BRC 135	54-55	1.8	30.36	19	5.78	1.63	2.05	3.84	0.05	0.01	0.27	1.26	0.29	0	0.03	15.73
BRC 135	55-56	3.4	26.17	15.35	7.45	1.48	6.11	6.5	0.07	0	0.22	1.1	0.26	0	0.02	19.36
BRC 135	56-57	9	12.88	12.55	12.83	1.5	12.9	11.02	0.07	0	0.09	0.55	0.08	0	0.02	25.52
BRC 169	34-35	16	13.21	15.74	50.01	1.78	0.17	0.21	0.08	0	0	0.41	0.02	0	0.06	6.74
BRC 169	35-36	27	24.55	31.56	6.67	1.84	0.16	0.14	0.08	0	0.02	0.3	0	0	0.12	12
BRC 169	36-37	24	35.1	19.83	8.18	1.74	0.21	0.16	0.1	0.01	0.12	0.42	0.06	0	0.1	11.97
BRC 169	37-38	23	29.88	11.93	28.01	2.43	0.14	0.1	0.13	0.01	0.17	0.62	0.12	0	0.05	9.37
BRC 169	38-39	24	18.12	31.7	14.05	3.47	0.15	0.18	0.2	0	0.04	0.68	0.15	0	0.12	10.99
BRC 169	39-40	22	14.42	33.4	12.45	7.25	0.18	0.26	0.42	0.01	0.02	0.94	0.11	0.01	0.18	11.05
BRC 169	40-41	22	18.62	22.04	16.7	12.62	0.2	0.4	0.56	0.01	0	1.16	0.18	0.01	0.07	10.72
BRC 169	41-42	8	18.81	24.29	18.55	9.78	0.17	0.19	0.47	0.01	0.01	0.56	0.13	0.01	0.05	9.69
BRC 172	25-26	19	12.87	8.57	58.02	3.54	0.17	0.23	0.13	0	0.01	0.15	0.08	0.01	0.03	5.78
BRC 172	26-27	12	21.25	16.44	33.75	2.56	0.25	0.33	0.13	0.01	0	0.18	0.27	0.01	0.05	9.18
BRC 172	27-28	22	30.58	23.42	10.58	0.63	0.23	0.21	0.01	0	0	0.3	0.07	0.01	0.07	11.34
BRC 172	28-29	14	21.06	24.14	24.48	0.95	0.26	0.4	0.02	0	0.01	0.5	0.14	0.01	0.08	9.76
BRC 172	29-30	6	7.25	35.3	26.79	0.98	0.12	0.41	0.01	0	0	0.09	0.01	0.01	0.13	9
BRC 172	30-31	19	13.96	17.19	46.58	1.29	0.22	0.39	0.04	0	0	0.12	0.08	0.01	0.06	7.35
BRC 172	31-32	13	4.59	11.98	71.25	1.39	0.11	0.46	0.03	0	0	0.07	0.04	0.01	0.04	3.87
BRC 172	32-33	16	11.13	14.19	57.32	0.91	0.19	0.35	0.04	0	0	0.12	0.06	0.01	0.04	5.88
BRC 172	33-34	18	13.59	18.09	46.26	1.41	0.26	0.39	0.05	0	0	0.21	0.1	0.01	0.04	7.35
BRC 172	34-35	16	10.55	8.85	67.11	0.59	0.22	0.25	0.02	0.01	0	0.22	0.08	0.01	0.02	4.49
BRC 172	35-36	9	14.87	7.9	62.36	0.55	0.2	0.22	0.02	0.01	0	0.16	0.06	0.01	0.02	5.09
BRC 177	17-18	9	13.63	30.05	26.97	0.9	0.13	0.53	0.03	0	0.12	0.44	0	0	0.19	8.89
BRC 177	18-19	4	20.56	16.25	38.08	1.45	0.19	0.5	0.05	0	0.12	0.41	0.02	0.01	0.1	7.91
BRC 177	19-20	4	24.33	19.58	26.1	1.11	0.22	0.42	0.06	0	0.1	0.25	0.01	0.01	0.12	9.73
BRC 177	20-21	4	16.51	12.26	45.25	1.16	2.04	1.87	0.04	0	0.08	0.2	0.03	0.01	0.08	9.28
BRC 177	21-22	14	9.64	11.53	57.16	1.22	1.92	1.9	0.04	0	0.06	0.18	0.02	0.01	0.07	7.55
BRC 177	22-23	10	14.2	8.75	61.08	1.01	0.21	0.55	0.04	0	0.12	0.49	0.02	0.01	0.05	5.05

BRC 177	23-24		1.6	13.13	5.81	68.16	0.56	0.18	0.36	0.03	0		0.13	0.54	0.01	0.01	0.03	3.92
BRC 177	24-25		2.1	18.47	4.56	60.14	1.34	0.2	0.82	0.05	0		0.19	0.75	0.04	0.01	0.03	4.82
BRC 177	25-26		2.1	21.96	4.78	54.85	0.79	0.2	0.48	0.05	0		0.14	0.49	0.02	0.01	0.03	5.6
BRC 177	26-27		0.8	14.03	8.92	57.5	2.33	0.17	1.7	0.09	0		0.07	0.38	0.08	0.03	0.04	5.56
BRC 177	27-28		2.4	15.45	13.37	49.45	1.61	0.17	1.48	0.09	0		0.07	0.44	0.05	0.03	0.06	6.88
BRC 177	28-29		0.8	14.7	17.49	40.46	1.52	1.26	1.83	0.08	0		0.06	0.46	0.08	0.04	0.07	9.34
BRC 177	29-30		1.5	12.04	11.27	43.95	1.82	4.75	4.32	0.06	0		0.06	0.33	0.07	0.03	0.05	12.47

Appendix 3

JORC (2012) - TABLE 1 (Section 1: Sampling Techniques and Data) – First time reporting under JORC 2012

CRITERIA	JORC REQUIREMENT	EXPLANATION
Sampling techniques	• *Nature and quality of sampling (eg 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 (eg 'reverse circulation 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 (eg*	RC samples. One metre samples were collected using a face sampling RC hammer into a plastic mining bag. Bags were transported to Nagrom where a 2kg split was taken and analysed before a 2 kg sample was split out and screened at 0.5 mm. Both size fractions were assayed. Weights of received samples, head split and met split were recorded. Subsequently +0.5mm and -0.5mm weights were recorded on the met split material. 106 samples were selected for metallurgical test work across 8 drillholes.(appendix 1)

CRITERIA	JORC REQUIREMENT	EXPLANATION
	submarine nodules) may warrant disclosure of detailed information.	
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).*	Reverse circulation drilling was used. Drilling is advanced using a face sampling air hammer bit. Sample return via duo-tube. Sample collection via cyclone.
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.*	Samples are collected, per meter, in plastic bags from the rig cyclone.
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.*	Samples are geologically logged on site. Basic colour, mineralization, mineralogy and lithology recorded for each 1m interval. A 25 g reference sample is kept in a chip tray.

CRITERIA	JORC REQUIREMENT	EXPLANATION
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *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 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 samples received by Nagrom for metallurgical test work were logged, weighed and subsampled. Twelve composites were made using subsamples by combined several 1m intervals from each of the eight drill holes. Each of the twelve composites created and sized at 0.5mm to create a DMS feed sample. Screen oversize was sent for dense media separation tests carried out using an SG cut point of 3.3. Seven of the minus 0.5mm fractions on various samples were wet tabled to produce a super con, con, middlings and tail fraction. During the RC drilling a sub-sample (2-4 kg) for assay was collected using a riffle splitter. The splitter is cleaned between samples using compressed air. Samples are kept dry whenever possible. Given that Mn is a bulk commodity the sample weight and sub-sampling method is appropriate, and no special measures are needed to ensure representative samples. Drill cuttings range 0.01-15 mm in size are adequately sampled with a 1.5 kg sample (P. Gy, 1956 in Field Geologists Manual – AusIMM).
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 (eg standards, blanks, duplicates, external*	For drilling, rock chip and geochemical samples commercial Industry standard duplicate assays and standards were routinely used. There is no evidence that the samples were not professionally handled and analysed. Niton soil sampling: both a Thermo-Scientific Niton XL3T hand-held XRF analyser (60 second count) and a Niton XL3T GOLDD+ hand-held XRF analyser (30 second count) were used. A 1:40 blank was routinely used to test for contamination. A system check and a test on a blank and a Mn-reference standard were done before each session.

CRITERIA	JORC REQUIREMENT	EXPLANATION
	laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	
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.*	In general: significant intersections are verified by inspection of the reference samples in chip trays. Data is initially recorded on paper and then transferred to Excel templates. It is then uploaded into a corporate database. No assay data has been re-set or adjusted. However, these procedures cannot be specifically confirmed for this report as the project was abandoned by Shaw River Manganese Ltd in March 2014.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	Both the surface sampling and the drill hole locations were recorded by hand held GPS units. Accuracy is of the order of 5 m. Co-ordinates are in MGA94-Z50. Drill hole RLs were estimated from topographic contours to an accuracy of about 2-5 m. From BRC001-120 only compass and inclinometer collar readings were taken for hole orientation. From BRC121 onwards, holes greater than 50 m planned depth were surveyed downhole for declination and azimuth with a gyroscope method. Holes from BRC258 onwards were surveyed using a Camteq Multi-shot probe.
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.*	Detailed prospects; Areas 1, 3-5 were drilled on a nominal 40 m spacings, though this is varied due to access and success in hitting mineralization. This is adequate to establish the geological framework and the mineralization envelope. Elsewhere, spacings are usually 40 m but widening to 80-120 m in the search for mineralization. These are typical spacings for scout drilling. No sample compositing was done.

CRITERIA	JORC REQUIREMENT	EXPLANATION
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.*	Mineralization occurs in irregularly shaped disseminations within altered breccia zones. Therefore, it is considered unlikely that the mineralization will be bound to a specific orientation and that no sampling bias exists.
Sample security	• *The measures taken to ensure sample security.*	Company personnel collect samples. The samples are packed into polyweave bags for dispatch. The samples are delivered to the nearest freight centre by company staff. They are then delivered to the contracted laboratory using commercial transport operators. The lab holds the samples in secure premises until sample preparation is done. Samples received are checked against samples dispatched for any irregularities. Sample security is not seen as a significant risk.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	As the projects are at either initial exploration or pre-resource drilling stages no reviews have been carried out.

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 Barramine tenements (*E45/5978 & E45/5879)* are held under 'pending' 100% by ATTSTAR Pty Ltd. • The tenements are located within crown land and are subject to pastoral leases. • There are no known impediments to the granting of tenements under application. 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)* • *Aboriginal Affairs Planning Authority Act 1972 (WA)* *Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Commonwealth)*
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Explored for Mn by surface sampling, mapping, ground and airborne geophysical surveys and drilling between the years 2008-2014. Three main mineralized Mn prospects found.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Hydrothermal massive and/or disseminated Mn replacement mineralization within altered dolomite and chert.

Criteria	JORC Code explanation	Commentary

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole 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.*
		• This information is listed in ASX:AX8 announcement dated 16-Feb-2022 "AX8 Acquires the High Grade Barramine Manganese Project" - Appendix 1 for all mineralized holes and in Appendix 4 for all holes
		• A total of 343 holes were drilled at Barramine. Of these, 39 returned an intersection of 5m or more with an average Mn grade better than 10%. These are these are reported in the appendix 1. The maximum down hole Mn assay for each hole is shown on Figure 3. As a guide, 47 holes returned a maximum assay result greater than or equal to 20% and 86 holes between 10-20%

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg 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*	• Drill hole summary data presented in Appendix 1. For Average Mn % Intersections presented in this report the following aggregation method was used: minimum 5m >10% intersection, 3m of internal dilution >5% allowed and shoulder values to 7.5% allowed. All assays equal 1m down hole. Intersections noted under Highlights were calculated as simple Mn % averages over the quoted intervals. Maximum Mn values presented in Appendix 4 are simple 1m maximum assay values for each hole.

Criteria	JORC Code explanation	Commentary
	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 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 drill hole 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 (eg 'down hole length, true width not known').*	• Detailed drilling at Barramine has been orientated perpendicular to the nominal mineralized structures. All drill hole intersections have been reported as down hole. There is insufficient data to estimate true widths
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 drill hole collar locations and appropriate sectional views.*	• See figures bound in the report
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.*	All known exploration data has been presented and reported without bias

Criteria	JORC Code explanation	Commentary
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.*	• Appendix 2 lists all works and surveys undertaken
Further work	• *The nature and scale of planned further work (eg 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.*	• Generalized proposed work is listed under Highlights. Specific details have not yet been established.