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ASX ANNOUNCEMENT
17th October 2019

CARPENTARIA RESOURCES

Hawsons metallurgical results confirm ore body operational cost advantages

HIGHLIGHTS

- **Ore strength, grindability and abrasion testing confirms that the relevant prefeasibility study (PFS) design assumptions are appropriate or conservative**

- **Results confirm Hawsons ore processing characteristics show low ore variability across the deposit**

- **Low variability of ore gives greater flexibility to exploit cost saving opportunities and get better operational outcomes**

In a boost to project definition Carpentaria Resources Limited (ASX:CAP) announced today eighteen metallurgical samples from across the Hawsons iron resource returned results in line or better than expected.

The results further demonstrate the Hawsons ore is ideal for physical processing with low abrasion ore. An average of 0.09 Ai (Abrasion Index) was returned, 25% lower than the 0.12 used in the current design.

Additionally, rock strength and grindability tests show low variability in processing characteristics throughout the ore body.

This confirms that ore blending can likely be mostly avoided and mining and processing operations can focus on volume and cost reduction. This contrasts with other magnetite ore bodies where blending and mine scheduling of five or more ore types are required to maintain plant efficiency and product quality.

When combined with the near uniform product quality from across the deposit, the low variability means the deposit is ideally suited to exploit lower cost mining methods including in pit conveying or trolley assist trucking.

Managing Director Quentin Hill said, “Effectively confirming a single ore type across the deposit is a terrific result giving added confidence in the robust ore body and the PFS results.”

Test Work

Test work was designed to test confidence on low ore variability. Drill core samples were selected to represent the ore body in three dimensions. Test work was completed by the ALS Iron Ore Technical Centre in Perth. Sample locations in plan view are shown in Figure 1.

Geological controls on the sampling are shown in Figure 2, which is a schematic stratigraphic column that shows samples were taken from each of the identified rock types in the deposit and the results.

Rock strength (uniaxial compressive strength), Bond ball mill work index, Bond rod mill work index and Abrasion index testing were carried out.

Results

The low variability of the results provides confidence in the predictability of ore processing characteristics in three dimensions and is additional data supporting the unique nature of the Hawsons ore deposit.

Abrasion index results showed an average of 0.09Ai and a range of 0.02-0.2. An abrasion index of 0.12 was used to estimate grinding media wear in the PFS. Abrasion at 0.2-0.6Ai is more common in iron ore deposits.

Grindability, measured by Bond Ball mill work index results showed an average of 7.8 kWh/t and a range of 6.1 kWh/t to 9.5 kWh/t. Bond Ball mill work index results of 11- >20Kwh/t is more common in magnetite iron ore deposits.

Rock strength results in the fresh rock returned an average of 76MPa and a range of 39Mpa to 158Mpa.

Hawsons Project Technical Director Ray Koenig said, "The results show the expected ranges and plant design parameters are appropriate and design wear rates, particularly in relation to grinding media, are conservative. Crushing and grinding wear costs are the second highest process operating cost after energy costs providing an opportunity to improve design and lower cost estimates."

Further laboratory and pilot plant testing will occur during the bankability phase of the project to ensure the right design.

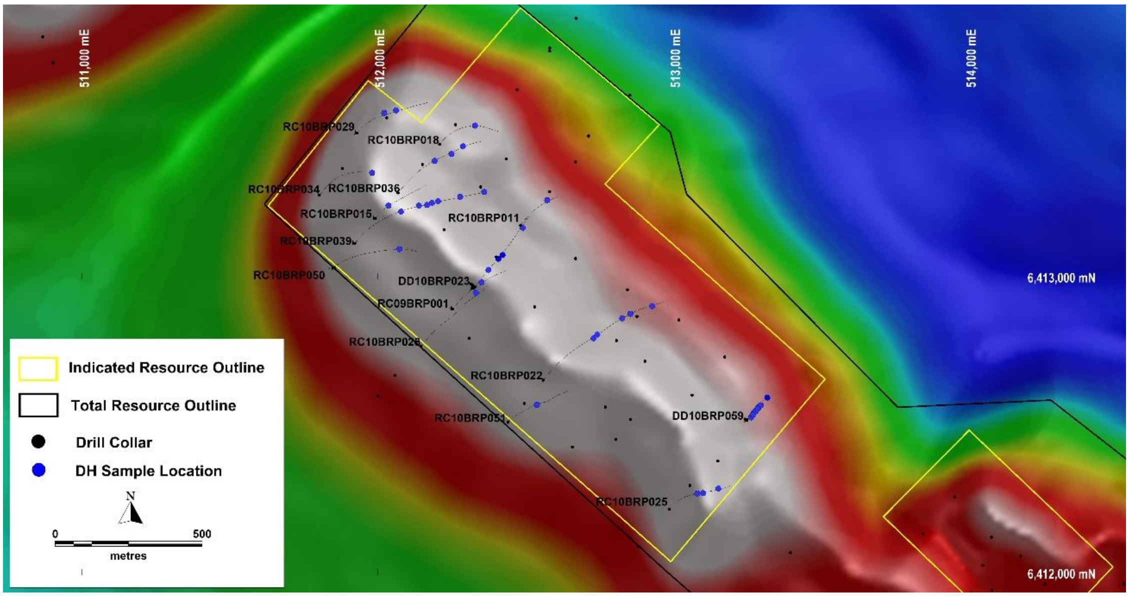


Figure 1 Sample location plan over magnetic image.

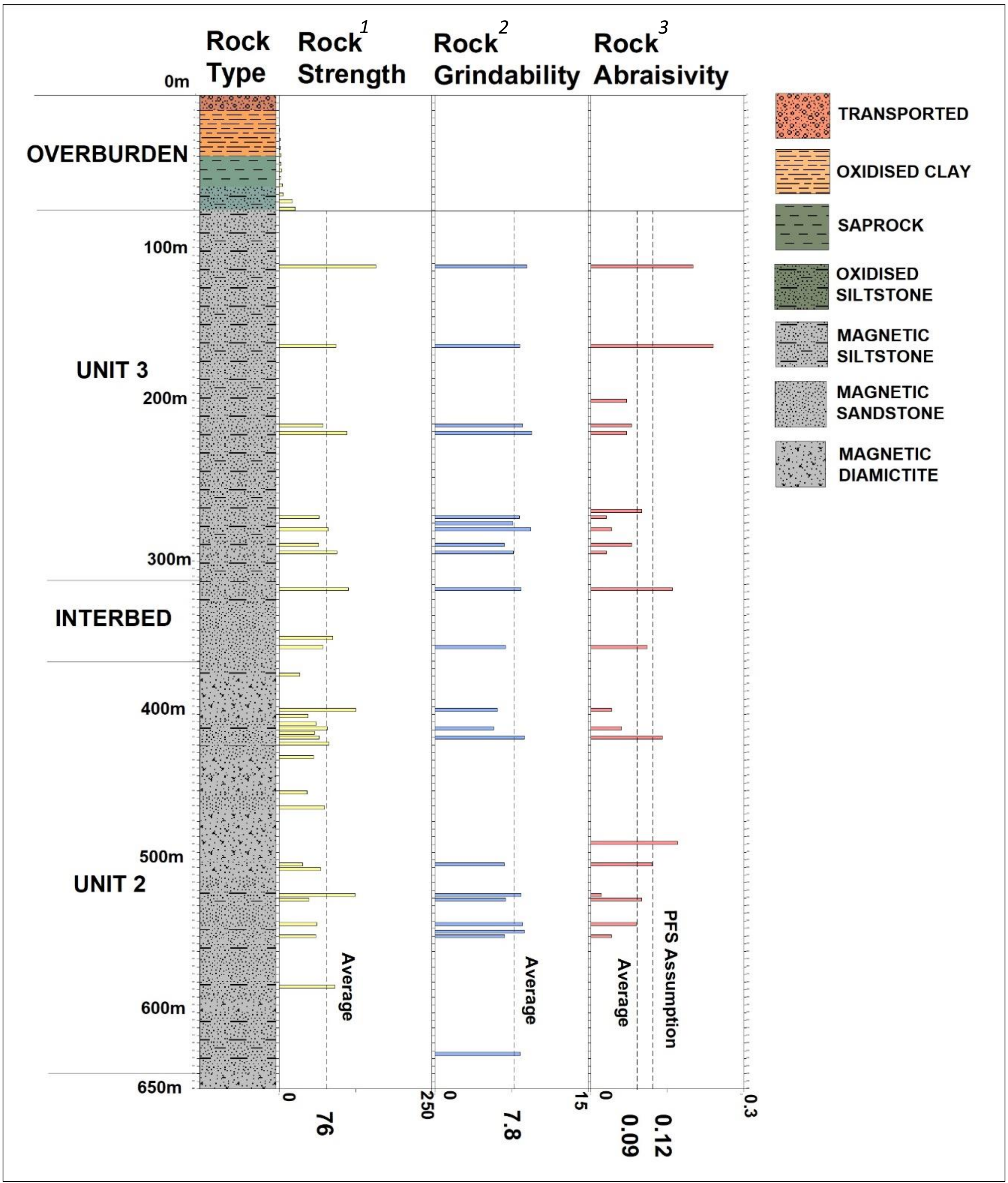
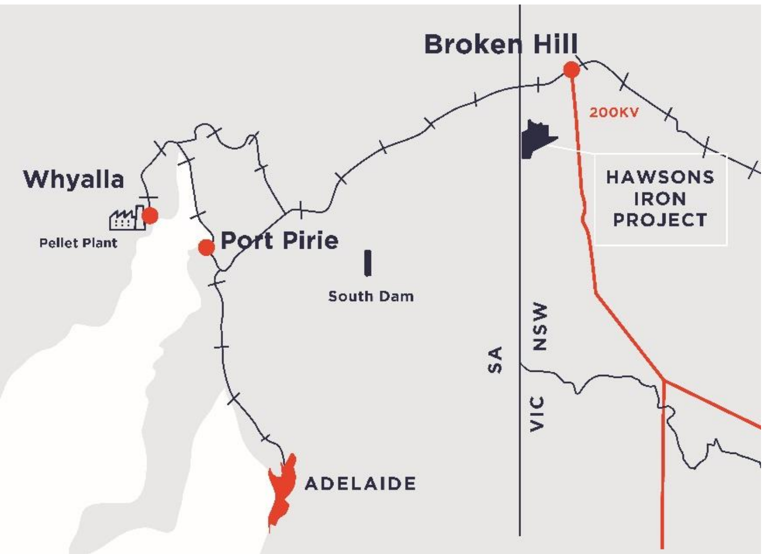


Figure 2 Schematic stratigraphic column showing geological location of samples and results. Column is true thickness of orebody.

[1]*Uniaxial Compression Strength mPa – AS 4133.4.3.2 – 2013 Rock Testing methods*
[2]*Bond Ball Mill Work Index kWh/t – Standard Bond test with closing screen of 53um*
[3]*Abrasion Index – Standard Allis Chalmers test*

Managing Director Quentin Hill said the results are one successful step in increasing project definition and certainty, further results from geotechnical and tails management assessments are expected in coming weeks.

The Company confirms that all assumptions and technical parameters underpinning the Resource and Reserve estimates and all material assumptions underpinning the production target or the forecast financial information derived therefrom continue to apply and have not materially changed since first reported on 28 July 2017.



Location plan. The Hawsons Iron Project is located 60km south-west of Broken Hill, NSW and ideal location for mining operations with existing power rail and port

The Hawsons Iron Project is held as to 69.8% by the Company and 30.2% by Pure Metals Pty Ltd.

For further information please contact:

Quentin Hill
Managing Director
+61 7 3220 2022
info@capres.net.au

Competent Person Statement

The information in this report that relates to Exploration Results, Exploration Targets and Resources is based on information evaluated by Mr Q.S. Hill who is a member of the Australian Institute of Geoscientists (MAIG) and who has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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 (the "JORC Code"). Mr Hill is a Director of Carpentaria Resources Ltd and he consents to the inclusion in the report of the Exploration Results in the form and context in which they appear.

Appendix 1 Sample location and results

HoleID	From_m	To_m	Interval_m	Sample No.	Uniaxial Compression Strength mPa	Bond Ball Mill Index kWh/t	Bond Rod Mill Index kWh/t	Abrasion Index	Year
DD10BRP023	133	137	4	CAP33502	71.9	8.57		0.08	2019
DD10BRP023	244	248.9	4.9	CAP33504	112.9	8.44	15.07	0.16	2019
DD10BRP023	436	444	8	CAP33505	124.3	8.45		0.02	2019
RC09BRP001	210	218	8	CAP33507	110.6	9.5		0.07	2019
RC10BRP011	252	260	8	CAP33508	61.8	8.6		0.09	2019
RC10BRP015	119.4	128	8.6	CAP33509	92.9	8.30	15.11	0.24	2019
RC10BRP018	216	224	8	CAP33510	48.6	6.90		0.10	2019
RC10BRP022	474	482	8	CAP33511	38.5	6.80	15.78	0.12	2019
RC10BRP028	394	402	8	CAP33512	94.7	7.67		0.03	2019
RC10BRP029	176.1	185	8.9	CAP33513	72.1	6.90	13.35	0.11	2019
RC10BRP029	229	239	10	CAP33514	64.9	8.78	12.26	0.14	2019
RC10BRP034	312	320	8	CAP33515	64.5	6.78		0.08	2019
RC10BRP036	256	264	8	CAP33516	78.9	5.77	13.97	0.06	2019
RC10BRP036	392	400	8	CAP33517	59.7	6.84		0.04	2019
RC10BRP039	308	316	8	CAP33518	79.9	9.38		0.04	2019
RC10BRP039	446	454	8	CAP33519	125.1	6.11		0.04	2019
RC10BRP050	392	400	8	CAP33520	65.4	8.28	16.48	0.03	2019
RC10BRP051	226	234	8	CAP33521	158.2	8.99		0.20	2019
DD10BRP059	21.71	21.96	0.25	CAP5780	0.955	-		-	2010
DD10BRP059	27.83	28.04	0.21	CAP5781	1.46	-		-	2010
DD10BRP059	33.3	33.54	0.24	CAP5782	1.48	-		-	2010
DD10BRP059	38.3	38.57	0.27	CAP5783	2.65	-		-	2010
DD10BRP059	43.94	44.16	0.22	CAP5784	3.04	-		-	2010
DD10BRP059	48.1	48.32	0.22	CAP5785	3.77	-		-	2010
DD10BRP059	53.05	53.34	0.29	CAP5786	2.09	-		-	2010
DD10BRP059	57.84	58.14	0.3	CAP5787	5.07	-		-	2010
DD10BRP059	63.9	64.19	0.29	CAP5788	6.55	-		-	2010
DD10BRP059	68.56	68.84	0.28	CAP5789	21.5	-		-	2010
DD10BRP059	73.36	73.66	0.3	CAP5790	25.9	-		-	2010
DD10BRP059	88.88	89.13	0.25	CAP5791	12.9	-		-	2010
DD10BRP059	100.74	101.07	0.33	CAP5792	47.1	-		-	2010
DD10BRP059	115.46	115.72	0.26	CAP5793	60.9	-		-	2010
DD10BRP059	125.31	125.6	0.29	CAP5794	81.4	-		-	2010
DD10BRP059	163.61	163.88	0.27	CAP5796	46.1	-		-	2010
DD10BRP059	174.72	174.99	0.27	CAP5797	74.5	-		-	2010
RC10BRP022	332.4	332.67	0.27	CAP5763	87.5	-		-	2010
RC10BRP022	347.98	348.25	0.27	CAP5764	33.9	-		-	2010
RC10BRP039	401.95	402.2	0.25	CAP5765	57.6	-		-	2010
RC10BRP039	473.1	473.43	0.33	CAP5766	56	-		-	2010
RC10BRP039	554.4	554.69	0.29	CAP5767	67.3	-		-	2010
RC10BRP039	647.59	647.86	0.27	CAP5768	91.5	-		-	2010
RC10BRP025	222	230	8	CAP9760	-	-		0.07	2010
RC10BRP025	302	310	8	CAP9761	-	-		0.10	2010
RC10BRP036	336	344	8	CAP9762	-	-		0.17	2010
DD10BRP023	204	207	3	CAP3443	-	7.62		-	2010
RC10BRP022	520	530	10	CAP5798	-	8.76		-	2010
RC10BRP022	607	617	10	CAP5799	-	8.34		-	2010

Appendix 2 Drill hole collar locations

HoleID	Easting_m	Northing_m	Datum	Zone	RL_m	Azimuth degrees	dip degrees	Total Depth_m
DD10BRP023	512323	6412958	GDA94	54	191	40	-55	513.5
DD10BRP059	513249	6412512	GDA94	54	201	40	-60	177.3
RC09BRP001	512254	6412888	GDA94	54	190	40	-55	357.1
RC10BRP011	512483	6413171	GDA94	54	193	40	-60	309.5
RC10BRP015	511993	6413194	GDA94	54	194	40	-60	358.5
RC10BRP018	512209	6413444	GDA94	54	196	40	-60	339.6
RC10BRP022	512561	6412648	GDA94	54	187	40	-60	678.7
RC10BRP025	512987	6412212	GDA94	54	193	40	-60	365.2
RC10BRP028	512147	6412762	GDA94	54	189	40	-55	459.3
RC10BRP029	511931	6413483	GDA94	54	194	40	-55	384.2
RC10BRP034	511803	6413273	GDA94	54	192	40	-55	335.7
RC10BRP036	512069	6413281	GDA94	54	195	40	-60	472.8
RC10BRP039	511923	6413110	GDA94	54	192	40	-55	663.5
RC10BRP050	511853	6413028	GDA94	54	192	40	-65	481.1
RC10BRP051	512441	6412505	GDA94	54	185	40	-65	406.3

JORC Code, 2012 Edition – Table 1 Hawsons Iron Project

Section 1 Sampling Techniques and Data

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. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.*	• Metallurgical samples: Comminution testwork consisting of Uniaxial Compression Strength (UCS), Bond Ball Mill Work Indices (BBWi), Bond Rod Mill Work Indices (BRWi) and Abrasion Indices (Ai) were conducted on 47 samples, (18 in October 2019 and 29 in 2010). • All 2019 samples were quarter drill core and 2010 samples full drill core. • Sample were sourced from continuous core intervals weighing approximately 0.5 kg for UCS and 10kg for BBWi, BRWi and Ai testwork. • Sample intervals were selected to represent each unit and rock type down dip, along and across strike with in the 2017 prefeasibility early mine plan. Carpentaria is confident the entire stratigraphy a cross the deposit is well represented. • All 2019 metallurgical samples were prepared at Carpentaria's core storage facility in Broken Hill and dispatched to ALS Iron Ore Technical Centre in Perth. 2010 samples were prepared in Broken Hill and dispatched to CSIRO QCAT, Metso Australia and JK Tech.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, 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.).*	• 2010 PD and DD drilling was carried out using a truck mounted UDR650 using NQ2 and standard HQ diameters. When orientated the ACE Core orientation tool was used

Criteria	JORC Code explanation	Commentary
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.*	• Core recoveries were recorded by measuring the length of core recovered in each run divided by the drilled length of the individual core runs; average recovery >97%.
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.*	• Every DD/PD drill hole was logged by a geologist & entered into Excel spread sheets recording; Recovery, Moisture content, Magnetic susceptibility, Oxidation state, Colour, % of Magnetite, Gangue Min, Sulphide Min, Veins and Structure. Data was uploaded to a customised Access database. • Logging used a mixture of qualitative and quantitative codes • All drill core was photographed wet and dry after logging and before cutting. • All relevant intersections were logged • Geological logging was of sufficient detail to allow the creation of a geological model.
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.*	• DD half core was cut into quarter core using a brick saw and diamond blade.

Criteria	JORC Code explanation	Commentary
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	
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.*	• ALS Iron Ore Technical Centre Perth, CSIRO QCAT, JK Tech and Metso Minerals Australia conducted the comminution testwork using industry standards. Uniaxial Compression Strength mPa – AS 4133.4.3.2 – 2013 Rock Testing methods, Bond Ball Mill and Rod Mill Work Index kWh/t – Standard Bond test with closing screen of 53um and Abrasion Index – Standard Allis Chalmers test

Criteria	JORC Code explanation	Commentary
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.*	• Exploration results not being reported
Location of	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations*	• All drill holes collars were located by a local surveyor using a Differential GPS with accuracy to less than one metre.

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Criteria	JORC Code explanation	Commentary
data points	*used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Coordinates were supplied in GDA 94 – MGA Zone 54. • Down hole surveys were recorded using a gyroscope due to the highly magnetic nature of the deposit.
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.*	• The deposit is drilled at a nominal spacing of 150m to 400m in section and plan. • The drill spacing was deemed adequate for the interpretation of geological and grade continuity noting the homogeneity of the style of mineralisation.
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.*	• Drilling was completed at -60^{o}, generally sub-perpendicular to the bedding, which is the primary control to the magnetite mineralisation. • Different azimuths were used to reflect the changing strike of the beds associated with folding of the sediments and were designed to maintain the steep angle to the bedding
Sample security	• *The measures taken to ensure sample security.*	• All samples were stored on site under CAP personnel supervision until transporting to the CAP Broken Hill office
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Sample procedures and results were systematically reviewed by CAP personnel. • Competent person considers the sampling and testwork were conducted to industry standards.

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 Hawsons Magnetite project is located in Western NSW, 60 km southwest of Broken Hill. The deposit is 30km from the Adelaide-Sydney railway line, a main highway and a power supply. • The project is under a Joint Venture between Carpentaria Resources Ltd (CAP) and Pure Metals Pty Ltd where CAP holds 70% and Pure Metals 30% equity in the project. CAP currently manage the project. • The project area is wholly within Exploration Licences (ELs) 6979, 7208 & 7504 which are 100% owned by CAP. • Licence conditions for all ELs have been met and are in good standing. • An application for a Mining Lease (ML 0460) was lodged with the NSW Trade & Investment Department in October 2013.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• In 1960 Enterprise Exploration Company (the exploration arm of Consolidated Zinc) outlined a number of track-like exposures of Neoproterozoic magnetite ironstone (+/- hematite) which returned a maximum result of 6m at 49.1% Fe from a cross-strike channel sample. No drilling was undertaken by Enterprise. • CRAE completed five holes within EL 6979 seeking gold mineralisation in a second-order linear magnetic low interpreted to be a concealed faulted iron formation within the hinge of the curvilinear Hawsons' aeromagnetic anomaly. CRAE's program failed to locate significant gold or base metal mineralisation but the drilling intersected concealed broad magnetite ironstone units interbedded with diamictite adjacent to the then untested peak of the highest amplitude segment of the Hawsons aeromagnetic anomaly.

Criteria	JORC Code explanation	Commentary
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Hawsons Magnetite Project is situated within folded, upper greenschist facies Neoproterozoic rocks of the Adelaide Fold Belt. The Braemar Facies magnetite ironstone is the host stratigraphy and comprises a series of strike extensive magnetite-bearing siltstones generally with a moderate dip (circa -55^{o}). The airborne magnetic data clearly indicates the magnetite siltstones as a series of parallel, high amplitude magnetic anomalies. Large areas of the Hawsons prospective stratigraphy are concealed by transported ferricrete and other younger cover. The base of oxidation due to weathering over the prospective horizons is estimated to average 80m from surface. • The Hawsons project comprises a number of prospects including the Core, Fold, T-Limb, South Limb and Wonga deposits. Resource Estimates have been generated for the Core and Fold areas which are contiguous. • The depositional environment for the Braemar Iron Formation is believed to be a subsiding basin, with initial rapid subsidence related to rifting possibly in a graben setting as indicated by the occurrence of diamictites in the lower part of the sequence (Unit 2). A possible sag phase of cyclical subsidence followed with deposition of finer grained sediments with more consistent, as compared to the diamictite units, bed thicknesses, style and clast composition (Unit 3). The top of the Interbed Unit marks the transition from high (Unit 2) to lower (Unit 3) energy sediment deposition • The distribution of disseminated, inclusion-free magnetite in the Braemar Iron Formation at Hawsons is related to the composition and nature of the sedimentary beds. The idioblastic nature of the of the magnetite is believed due to one or more of a range of possible processes including in situ recrystallisation of

Criteria	JORC Code explanation	Commentary
		primary detrital grains, chemical precipitation from seawater, permeation of iron-rich metamorphic fluids associated with regional greenschist metamorphism. Grain size generally ranges from 10microns to 0.2mm but tends to average around the 40microns. The sediment composition and grain size appear to provide the main control on the mineralisation. There is no evidence for structural control in the form of veins or veinlets coupled with the lack of a strong structural fabric. • In the majority of the Core and Fold deposits the units strike south east and dip between 45 and 65˚ to the south west. The eastern part of the Fold deposit comprises a relatively tight, synclinal fold structure resulting in a 90^{o} strike rotation.
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.*	• See report body
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 not being reported
Relationship between mineralisation widths and	• *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.*	• Exploration results not being reported

Criteria	JORC Code explanation	Commentary
intercept lengths	• *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	
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 report body
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 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.*	• Exploration results not being reported
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.*	• Exploration results not being reported