Hawsons IRON
WORLD'S BEST IRON ORE PRODUCT

Hawsons delivers Mineral Resource upgrade

Key points

- **Total recovered magnetic fraction (DTR) Mineral Resource estimate increased by 21% from 400 Million tonnes (Mt) to 484 Mt**
- **Measured and Indicated Mineral Resource of DTR increased 87% from 132 to 247 Mt, comprised of 54 Mt in Measured category and 193 Mt in Indicated category**
- **Sufficient combined Measured and Indicated Resource to meet targeted 20 Million tonnes per annum (Mtpa) concentrate production**
- **Further Mineral Resource upgrade planned for the September 2022 quarter**
- **Conversion to Reserves scheduled for post Bankable Feasibility Study (BFS)**

	Mineral Resources Estimate 19 October, 2021			Mineral Resources Estimate 25 July, 2022		
Category	**Mt**	**DTR %**	**Concentrate Mt**	**Mt**	**DTR %**	**Concentrate Mt**
Measured	-	-	-	390	13.7	54
Indicated	960	13.7	132	1,600	12.0	193
Inferred	2100	12.9	268	1,960	12.2	239
Total	3060	13.1	400	3,950	12.2	484

Category	Fe %	SiO2 %	Al2O3 %	P %	S %	TiO2 %	LOI %
Measured	69.6	2.8	0.22	0.004	0.001	0.042	-3.0
Inferred	69.0	3.3	0.27	0.007	0.003	0.051	-2.8
Indicated	68.6	3.8	0.31	0.008	0.002	0.052	-2.9
Total	**68.9**	**3.5**	**0.29**	**0.007**	**0.002**	**0.051**	**-2.8**

Hawsons Iron Ltd (**Hawsons** or the **Company**) is pleased to announce a 21 per cent increase in the Hawsons Iron Project's Mineral Resource estimate to 484 million tonnes (Mt), including a maiden 54 Mt in the Measured category and 193 Mt in the Indicated category required to support future reserve estimation and debt financing. The increase in Mineral Resources is due to the infill drilling campaign completed in 2021-22.

Managing Director Bryan Granzien said "the combined Measured and Indicated Resource of 247 Mt sets up the BFS for the Ore Reserve estimation to satisfy project lenders that there is sufficient high-grade material to confidently meet targeted minimum concentrate production of 20 Mtpa".

"This upgrade is significant because having these Mineral Resources in the higher confidence Measured and Indicated categories is necessary for the BFS and finalising our project financing package," Mr Granzien said.

"We're absolutely delighted with the outcome which now sets the scene for getting on with the next stage of the BFS, including completion of our detailed mine design and engineering."

The key outcomes of the upgrade in the Mineral Resources are illustrated below:

• 21% increase in total Mineral Resources estimate from 400 Mt to 484 Mt
• Maiden Measured Resources of 54 Mt
• 46.2% increase in Indicated Resources from 132 Mt to 193 Mt
• 87% increase in Measured and Indicated Resources from 132 Mt to 247 Mt

Mr Granzien said "no further resource drilling was required to support the BFS and that any such additional work would be undertaken at Hawsons' discretion".

"This upgraded Mineral Resource estimate will now be used for discussions with potential project financiers and as the basis for all our ongoing technical work," he said.

"However, we also expect to announce a further Mineral Resource upgrade by the end of the September quarter to report on the results from the outstanding drilling samples which are being analysed by Bureau Veritas and added to the drillhole database," Mr Granzien said.

"Moreover, the process plant's expected performance and ability is projected to achieve a 70% Fe product," he said.

In addition to the Mineral Resource released today, the Exploration Target for the Hawsons Iron Project has been increased with a range of 5 to 18 billion tonnes at a DTR grade range of 7.5% to 34% and a concentrate Fe grade range of 65.3% to 70.6%. The approximated quantity and grade of this Exploration Target is conceptual in nature and there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

The updated Mineral Resources have been completed by independent geological experts - H&S Consultants ("H&SC"). The H&SC report is attached to this announcement and the Mineral Resources have been reported in accordance with the 2012 JORC Code and Guidelines.

Released by authority of the Board
Hawsons Iron Limited
26 July 2022

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About Hawsons Iron Ltd
Hawsons Iron Ltd (ASX: HIO) is an iron ore developer and producer listed on the Australian Securities Exchange. The company is focused on developing its flagship Hawsons Iron Project near Broken Hill into a premium provider of high-quality iron ore products for the global steel industry.

The Hawsons Iron Project is situated 60km southwest of Broken Hill, New South Wales, Australia in the emerging Braemar Iron Province. Prefeasibility Study (PFS) results for the Project, which was completed in 2017, showed that it is capable of producing the world's highest-grade iron product (70% Fe), making it the world's leading undeveloped high-quality iron ore concentrate and pellet feed project. Leading research firm Wood Mackenzie in Q2 FY 2019 rated the project one of the world's best high-grade iron ore development projects, excluding replacement or expansion projects owned by the established miners.

Resource Statements

The data in this report that relates to Exploration Results and Exploration Targets for the Hawsons Magnetite Project is based on information evaluated by Mr Wes Nichols who is a Member of the Australian Institute of Mining and Metallurgy 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 Nichols is a full-time employee of Hawsons Iron Ltd and he consents to the inclusion in the report of the Exploration Results in the form and context in which they appear.

The data in this report that relates to Mineral Resource estimates for the Hawsons Magnetite Project is based on information evaluated by Mr Simon Tear who is a Member of The Australasian Institute of Mining and Metallurgy (MAusIMM) 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 Tear is a director of H & S Consultants Pty Ltd and he consents to the inclusion in the report of the Mineral Resource in the form and context in which they appear.

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-ENDS-

25th July 2022

Wes Nichols
Hawsons Iron Ltd
(by email)

Updated Resource Estimates for the Hawsons Magnetite Project, Western NSW

H&S Consultants Pty Ltd ("H&SC") has completed updated Mineral Resource estimates for Hawsons Iron Ltd.'s ("HIO") Hawsons Magnetite Project in western New South Wales, where the target commodity is iron ore as magnetite. The new resource estimates are based on data from the original Carpentaria Exploration ("CAP") 2009/2010/2016 drilling and the recent HIO 2021/22 drilling in conjunction with improved geological understanding. The recent drilling comprised 67 reverse circulation (RC), diamond core and RC holes with diamond tails for 24,261m, as infill drilling over the Core & Fold deposits, in particular as detailed infill for the Core West structural zone. The estimates have been reported using the 2012 JORC Code and Guidelines and the author has the requisite experience to act as a Competent Person under the code. H&SC has completed three previous resource estimates for the deposit in 2011, 2014 and 2017, plus an update to the 2017 Mineral Resource in 2021. Additional details of the resource estimates are supplied in Appendix 1.

The Hawsons 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 relatively narrow, strike extensive magnetite-bearing siltstones with a moderate dip to the southwest (circa 45°). Large areas of the Hawsons prospective stratigraphy are concealed by transported ferricrete and other younger cover. The base of oxidation due to weathering of the prospective horizons is estimated to average 80m in depth. The airborne magnetic data clearly identifies the magnetite siltstones as a series of parallel, narrow, high amplitude magnetic anomalies. Mineralisation consists of fine grained disseminated magnetite with no obvious structural remobilisation or overprint. Sediment porosity as a function of sediment source and depositional environment is considered a major control to mineralisation and hence to grade continuity.

H&SC maintained a drillhole 'resource' database for the earlier 2009/2010/2016 drilling and has signed off on the Exploration Results for that work. HIO has supplied a drillhole database for the recent 2021/2022 drilling for the deposit, which H&SC has accepted in good faith as an accurate, reliable and complete representation of the available data. H&SC performed limited validation of the data and noted that only 33 of the 67 holes from the 2021/2022 drilling had complete assay datasets. Laboratory analyses are continuing and downhole geophysical measuring is still in progress. The unavailable data was a result of a combination of drilling delays due to bad weather, Covid-related health and safety issues, and bottlenecks at the laboratory. Other items noted by H&SC were unavailable downhole gyro surveys due to hole collapses, occasional inconsistent downhole geophysical calibrations for magnetic susceptibility and possibly density and a limited QAQC dataset. Whilst there is unavailability of data, its impact is partially limited by some of the data being peripheral to the main zones of mineralisation and thus having a limited effect on the Mineral Resources and some of the data can be estimated using a combination of regression equations and levelling of the data. With diligent data processing, it is possible to significantly reduce the impact of the unavailable data on the resource estimates. The H&SC drillhole database for Hawsons is satisfactory for resource estimation purposes; however responsibility for quality control for the recent HIO drilling resides solely with HIO. Data was supplied in MGA2020 coordinates which H&SC converted to an E-W orthogonal local grid.

The resource estimates for the Core & Fold areas were produced from a total of 140 holes for 45,542m with a predominance of surface RC relative to HQ/NQ diamond holes. Samples were field composited RC splits or sawn half/quarter core with a range of sample lengths from 4 to 8m (5m being the most common) for a total of 5,142 samples. Sample preparation involved crushing and pulverising samples to a nominal 80% passing 25 microns for a 38 micron grind. Assaying comprised measuring recovered magnetic fraction by the Davis Tube recovery method ("DTR") with multi-element XRF analysis of the magnetic concentrate plus XRF analysis of the head grades. New to the current drilling program was a more expansive program of sample collection from both the cover zone and the oxide/transition zones.

HIO have informed H&SC that the RC sample recovery was good with no bias and that there is no relationship between DTR grade and sample recovery.

For the subsequent grade interpolation, the entire drillhole database was composited to 5m intervals, with all residuals retained, for the DTR assays, the downhole geophysical data and the handheld magnetic susceptibility data. The composite files were split into 3 structural domains namely Core West, Core East & Fold based on interpreted, off-setting sub-vertical faults derived from the ground magnetic data. Each record for each domain was flagged by company i.e. CAP or HIO, and by oxidation level using the relevant surfaces i.e. cover, complete oxidation, partial oxide and fresh rock. The datasets were combined for each structural zone in order to identify gaps in the data, primarily for DTR and concentrate analyses. These gaps were the result of unavailable data i.e. sample analysis that is still in progress (HIO), original non-sampling, mainly by CAP, of the oxide/transition zone, and insufficient material for analysis due to low recovered magnetic fraction in the samples (CAP/HIO). There were also gaps in the downhole geophysical data due to hole collapse preventing the probe passage to the bottom of the hole (for both CAP and HIO) and some probe results are still being processed (HIO). Very minor gaps in the handheld magnetic susceptibility data were noted generally due to measurements not having been made for whatever reason (CAP/HIO).

Downhole magnetic susceptibility data from both slimline surveys and handheld instruments were used to supplement the unavailable DTR composite data via the use of regression equations for the different structural domains, different companies and different oxidation levels. A total of 8,918 5m composites were generated from the H&SC drillhole database and subsequent data processing, which were modelled for DTR, and the concentrate elements of Fe, Al_2O_3, P, S, SiO_2, TiO_2 and LOI, of which 4,315 composites were in fresh rock. Iron head grade was not modelled at this time due to significant amounts of unavailable data and no way of using regression equations to estimate the unavailable head grades. The unavailable head iron assays are currently being measured at the laboratory.

Grade interpolation of the composite data was completed with Ordinary Kriging using the H&SC in-house GS3M modelling software. Estimation within each structural domain (acting as hard boundaries) was unconstrained by any lithologic wireframes as the nature of the mineralisation boundaries is considered gradational throughout. A block size of 50m by 25m by 10m was considered appropriate based on the locally 100m spaced drilling at Core West. Within these domains separate search sub-domains were delineated to cater for changes in dip and strike of the sedimentary package. A total of 10 search sub-domains were used. A four pass search strategy was applied with an circular search rotated to the dip and strike of the host sediments within each of the search domains. Initial search radii of 150m (X) by 150m (Y) by 25m (Z) were applied and expanded in two increments to 450m by 450m by 75m. The maximum number of data for all passes was 24 with the minimum number of data for Passes 1 and 2 being 12, with a minimum of 4 octants, decreasing to a minimum of 6 data and 2 octants for Passes 3 and 4. The search radii and data requirements are in keeping with the strong stratigraphic control to mineralisation.

The estimated grades were loaded into a Surpac block model for further processing and resource reporting. Any estimated grades within the cover were removed as the accuracy of these estimates was more questionable considering the nature of the hosting material.

A total of 8,918 5m density composites were generated from the short-spaced density measurements from the downhole geophysics. This data was supplemented by the use of oxide/transition and fresh rock regression equations from the head iron assays generated for the 2017 Mineral Resource update. Due to unavailable Fe head data, it was also necessary to insert default density values appropriate to the level of oxidation. Validation work for the downhole density measurements comprised density measurements on a combined 350 core samples (weight in air/weight in water on 10-15cm long samples) indicated a correction of +5.2% was required for the CAP downhole data and +4.94% was required for the HIO data. The density values were interpolated in the same way as for the DTR grade interpolation. On the whole, no significant change in overall density was observed with the inclusion of the new drilling data, although some further checking on the 2021/2022 downhole calibration for some holes is required.

The estimation search pass categories were then viewed in conjunction with other aspects important for Mineral Resource classification and assigned a resource category. Features that were considered included geological understanding, the nature and controls to mineralisation, the data spacing i.e. drillhole spacing, impact of unavailable data and the minimisation methods employed, the density data, sample recoveries, sampling techniques and assay method, and the QAQC program and outcomes. Pass 1 was equated to Measured Mineral Resource, Pass 2 became Indicated and Passes 3 and 4 were Inferred.

A review of the resource categories showed ‘spotted dog’ issues (artifacts of the grade interpolation) with the Measured Resource. The solution was to have four Defined Shapes, two for part of Core West (structural domain 1), one for Core East (structural domain 2) and one for part of the Fold area (structural domain 3) which resulted in Measured Resource being retained in these four defined areas. Outside the Defined Shapes the Measured Resource material was reallocated to Indicated Resource.

The new Mineral Resource Estimates are reported at a 6% DTR cut-off grade, as advised by HIO, constrained by a pit shell supplied by HIO. This pit shell went to a maximum RL of -360m, approximately 550m below surface. The Mineral Resources include a modest amount of transition and oxide material, approximately 9% of the total Mineral Resources.

2022 Global Mineral Resources for the Hawsons Iron Deposit

Category	Mt	DTR %	Concentrate Mt	Density t/m³
Measured	390	13.7	54	3.09
Indicated	1,600	12.0	193	3.05
Inferred	1,960	12.2	239	3.16
Total	**3,950**	**12.2**	**484**	**3.11**

(minor rounding errors)

Concentrate Grades							
Category	Fe %	SiO_2 %	Al_2O_3 %	P %	S %	TiO_2 %	LOI %
Measured	69.6	2.8	0.22	0.004	0.001	0.042	-3.0
Indicated	69.0	3.3	0.27	0.007	0.003	0.051	-2.8
Inferred	68.6	3.8	0.31	0.008	0.002	0.052	-2.9
	68.9	**3.5**	**0.29**	**0.007**	**0.002**	**0.051**	**-2.8**

Comparison with the 2021 Mineral Resource update indicates a 29% increase in the size of the resource with a 21% increase in DTR tonnes. The increased resource was accompanied by a 6.5% drop in the DTR grade with a 1.3% drop in iron concentrate grade to 68.9%. The increase in size is due to the additional drilling that converted previous exploration potential to Mineral Resource, the inclusion of more lower grade oxidised material and the inclusion of the newly confirmed Unit 2 rollover extension in the NW of the deposit. Also of note is a marked increase in the silica grade of the concentrate product, up from 2.8% to 3.5%. This increase in grade has come from the recent HIO drilling of the Core East and particularly the Fold area. The change in grade is probably worth further inspection although HIO has informed H&SC that the change in grade is not significant to its product specifications. Measured and Indicated Resources increased by 108% in size with an 86% increase in DTR tonnes and a 10% drop in DTR grade, all due to the infill drilling.

Validation of the block model comprised a visual comparison between composite values and block grades, comparison with previous estimates and a range of statistical measures. Minor issues with the modelling were noted that are likely the result of some of the new data requiring additional review to confirm accuracy and the use of estimated grades from regression equations.

Exploration potential for the main Hawsons deposit is defined as an Exploration Target of 0.8 to 1.2Bt with a DTR grade range of 10 to 12.5% and concentrate grade ranges of 67.5-69.5% Fe, 0.2 to 0.4% Al_2O_3, 0.007 to 0.011% P, 0.001 to 0.002% S, 3.5 to 4.8% SiO_2, 0.04 to 0.065% TiO_2 and -2.5 to -3% LOI. The Exploration Target is based on material within the supplied pit shell not included in the Mineral Resource. This was the result of two additional search passes, Passes 5 & 6, which had search radii of 600m by 600m by 112.5m for a minimum of 6 and 3 data respectively and a minimum of 2 octants, at a cut-off grade of 6% DTR for all oxidation levels. 90% of the Exploration Target is fresh rock with the majority of it coming from the periphery to the current Mineral Resource.

The potential quantity and grade of the Exploration Target is conceptual in nature and there has been insufficient exploration to define a Mineral Resource. It is uncertain if further exploration will result in the determination of a Mineral Resource.

Further infill drilling is required to further increase the confidence of the resource estimates with potential for additional material to be discovered along strike and down dip around the Fold hinge area and for the SE Limb area.

It is recommended that a full database audit is completed for both the 2009/2010/2016 and 2021/2022 drilling campaigns. Also, validation of the calibration of the downhole geophysics needs to be completed on a hole by hole basis.

It is also recommended that a review of the sampling procedures is completed, which should include implementing improvements to the QAQC program.

Simon Tear
Director and Consulting Geologist
H&S Consultants Pty Ltd

Resource Statements

The data in this report that relates to Exploration Results for the Hawsons Magnetite Project is based on information evaluated by Mr Wes Nichols who is a Member of The Australasian Institute of Mining and Metallurgy (MAusIMM) 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 Nichols is a full-time employee of Hawsons Iron Ltd and he consents to the inclusion in the report of the Exploration Results in the form and context in which they appear.

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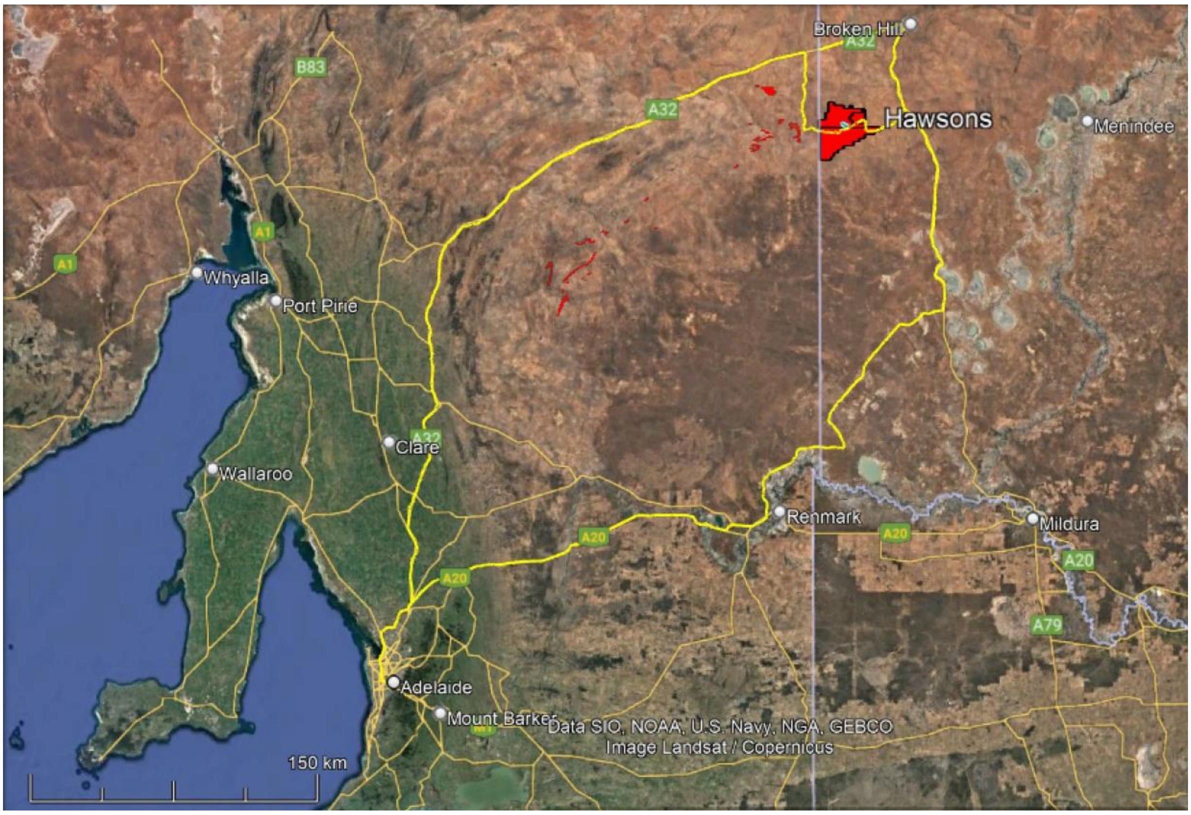
Appendix 1

Introduction

(italics = originally supplied by Carpentaria Exploration Ltd ("CAP"))

The Hawsons Iron Prospect is located approximately 60 km south-west of Broken Hill (NSW) within two contiguous Exploration Licences (EL6979 and EL 7208) and is owned and managed by Hawsons Iron Ltd ("HIO")). The deposit is approximately 30km from the Adelaide-Sydney railway line, a main highway and a power supply (Figure 1).

Figure 1 Location Map



(supplied by HIO)

Hellman & Schofield Pty Ltd completed maiden Inferred Mineral Resource estimates for the Core area of the Hawsons Magnetite project in December 2010. Revised Inferred Mineral Resource estimates were completed in March 2011 to include the Fold area. A further update to the resource estimates with the introduction of Indicated Resources, was completed by H&S Consultants Pty Ltd ("H&SC") in 2013 based on detailed mineralogical studies, an understanding of the sedimentology of the host rocks and an in-depth analysis of the downhole geophysics which all lead to the construction of a more detailed geological model. A further set of Mineral Resource estimates was completed by H&SC in 2017 following on from the 2016 drilling, which was updated by H&SC in 2021 based on subsequent mining studies.

Deposit Geology

The prospect lies within folded Neoproterozoic sediments of the Nackara Arc of the Adelaide Fold Belt. The rocks exposed at Hawsons contain diamictitic siltstones (tillites), quartz sandstones, calcareous siltstones, dolomite and magnetic ironstone units of the Braemar Ironstone Facies. The ironstones are examples of

H&SC

glaciomarine Raptian-Sturtian sedimentary iron-formation type which has a world-wide occurrence in the Neoproterozoic (Klein & Beukes, 1993 and Lottermoser & Ashley, 2000).

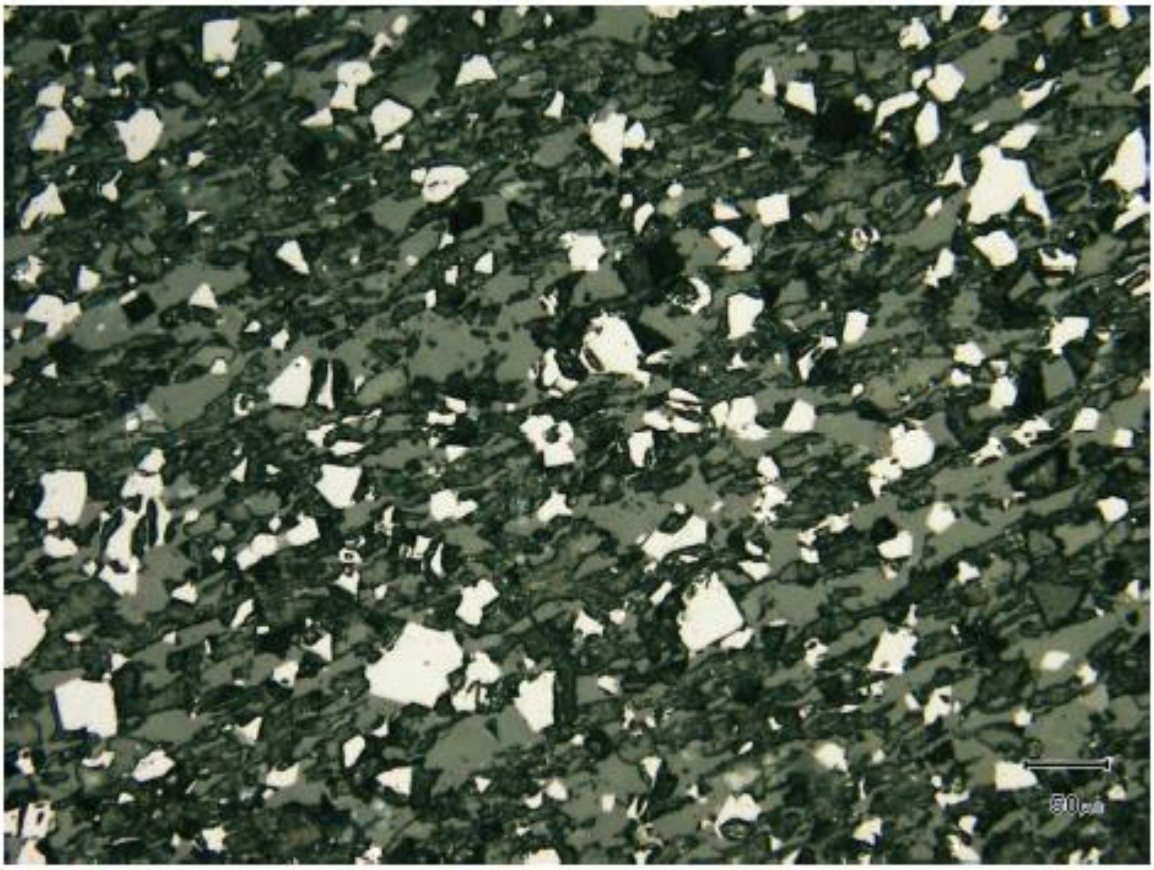
Exposure is limited to a window of folded, upper greenschist metamorphosed Neoproterozoic strata located on the southeast limb of the Hawsons' aeromagnetic anomaly. An irregularly exposed sequence of steep, west-northwest to south dipping strata that kinks in strike about a fold structure in the northern part of the exposure window is present at the prospect. The exposed geology at the prospect is also distinctive in satellite imagery and aerial photography.

A feature of the prospect is several large areas of an incompletely stripped, well-developed ferricrete duricrust/regolith surface of probable Tertiary age, overlain by recent unconsolidated sheet-wash and aeolian sands. Ferruginous regolith and recent sandy cover entirely obscure the amplitude peaks of the Hawsons' aeromagnetic anomaly. It is speculated that the ferruginous regolith has been preferentially developed and preserved over thicker and potentially higher magnetite content Neoproterozoic ironstone units responsible for the peak amplitudes within the Hawsons' aeromagnetic anomaly.

The Hawsons Prospect is pronounced in regional aeromagnetic data as a large, curvilinear, high amplitude magnetic anomaly interpreted to be a regional scale fold of magnetite-rich Braemar Ironstone.

Thin and polished section work has established that the magnetite is idioblastic (Figure 2), or at least semi-idioblastic, is not replacing any mineral, has rare hematite (or any other) inclusions and has limited hematite replacement. The grains are generally angular, potentially discounting a detrital origin unless original rounded grains have been recrystallised. In one thin section a note was made of rounded magnetite grains.

Figure 2 Core West Polished Section Example of Magnetite Mineralisation Drillhole 23



Sample CAP5751 Note the inclusion-free nature of the white magnetite grains.

H&SC

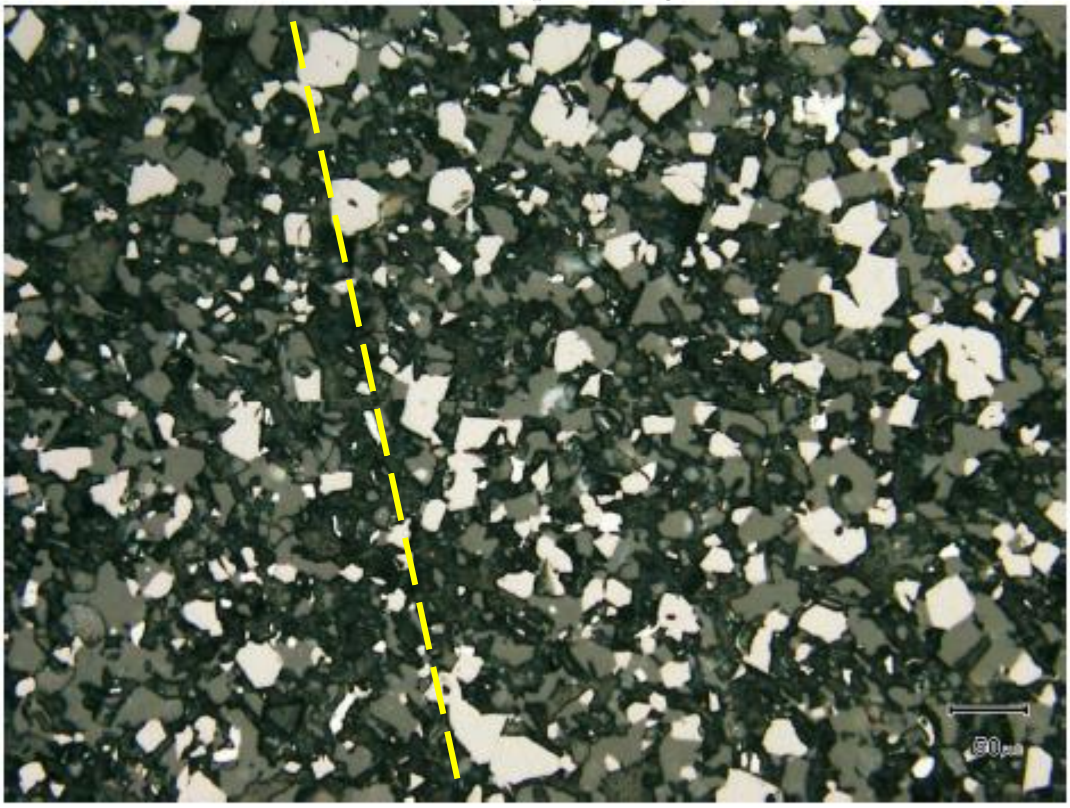
The metamorphic grade is greenschist with localised development of chlorite and biotite.

The thin section work occasionally invoked a shallow depositional environment. There were several instances in the thin section reports that coarser grained magnetite tended to occur with coarser grained clastic material. The last point might be used to invoke a detrital origin to the magnetite. Although the coarser grain size may be due to greater porosity associated with the coarser sediments to allow for bigger crystal growth during metamorphism (or diagenesis?).

The magnetite in the sediments consists of fine euhedral grains relatively evenly disseminated throughout the fine sand grains of the sediment. There are no veinlets or coarse blebs of magnetite that would imply some form of pervasive, structurally introduced mineral fluid(s). The primary origin of the magnetite is therefore believed to be detrital, but the euhedral grain morphology has been imparted by subsequent regional metamorphism of the sequence which has seen recrystallisation but no magnetite dissolution and movement.

Figure 3 shows abundant magnetite in one bed relative to another even though the grain size appears to be similar. Carbonate-dominant sections appear to have much reduced levels of magnetite.

Figure 3 Core West Polished Section Example of Magnetite Mineralisation Drillhole 23



Sample CAP5761 yellow line = bed boundary; white grains = magnetite

The overall implication is that the magnetite, however it may have got there, is related to bedding in the host siliciclastics (+carbonates). Therefore, establishing the deposition regime and linking bed sets etc. becomes an important part of understanding the grade continuity for magnetite.

Neudart's sedimentology report interprets the depositional environment for the Hawsons sediments as a relatively high energy trough situation possibly a graben, with the occurrence of turbidites in the lower part of the sequence. Sediment deposition has resulted from gravity flow incorporating debris flow sediments and mudflows in a rift setting.

The mine sequence begins with a basal footwall unit of variable, mainly low grade magnetite-bearing siltstones that pass conformably into the mineralised Unit1, which has limited drilling information. This unit is generally more sporadic in magnetite grades and is relatively poorly defined. It passes up into the Interbed Unit 1 which is weakly to moderately mineralised.

The main mine sequence follows with a series of units called diamictites which are interpreted as debris flows, with occasional interbedded finer grained sandstone/siltstone units and characterises mineral Unit 2. The sediments are considered part of a turbiditic sequence with the initial deposition of the diamictites potentially as fan conglomerates, associated with slope failure on a basin margin with the implication of reworked basin margin sediments.

Conformably overlying Unit 2 is an immature coarser grained sandstone (possibly a coarse grained turbidite) with deposition attributed by Neudert to gravity flow rather than any regressive sequence involving terrestrially sourced deposition e.g. a delta fan. The light grey sandstone unit is known as the Interbed Unit 2 and is 20-30m thick.

Sedimentation above the Interbed Unit 2 i.e. Unit 3, appears to be lower energy, as shelf sedimentation or as the sag phase to the rift, and comprises a series of grey/black massive/thinly bedded siltstones and fine grained sandstones with significant amounts of carbonate material.

Overlying this unit is another conformable fine grained siliciclastic unit, Hangingwall Unit 1 with low to moderate grade magnetite mineralisation which is overlain by Hangingwall Unit 2 which has a relative increase in magnetite mineralisation compared to the HW1 Unit. This unit generally marks the stratigraphic upper limit of the mineralised siltstones.

Data Validation & Interpretation

The original drilling database for the 2010/11 and 2016 drilling was supplied by CAP, which H&SC had accepted in good faith as an accurate, reliable and complete representation of the available data. The quality control procedures for assay and sampling used by CAP were reviewed by Keith Hannan, an independent geochemical consultant and H&SC in 2017 and are generally to industry standard. H&SC has further reviewed the data and completed a site visit in 2012 and is signing off on the Exploration Results.

HIO has supplied a drill hole database for the recent drilling of the deposit, which H&SC has accepted in good faith as an accurate, reliable and complete representation of the available data. H&SC performed some validation of the data that revealed that some data augmentation was required. This was mainly due to a significant amount of unavailable data caused by delays encountered with the drilling i.e. bad weather compounded by bottlenecks at the analytical laboratory. H&SC generated regressions for the unavailable DTR and DTR concentrate grades based on the downhole and handheld magnetic susceptibility measurements for the three structural domains. H&SC also completed a modest series of measures designed to clean up the data which included levelling some of the DTR values generated from the downhole magnetic susceptibility data. Whilst all data is not available yet, the drillhole database for the deposit is still useable for resource estimation purposes. However responsibility for quality control for the recent drilling by HIO resides solely with HIO. Details of the drilling are included in Table 1.

Table 1 Drillhole Information

Company	Year	Hole Type	No of Holes	Metres	DTR Analysis	DH Geophys
CRAE	1986	Perc	4	634.6	No	2 holes
	1988	DD	1	100.0	No	None
CAP	2009	RC	3	761.1	Yes	99% of drilling
	2010	DD	3	761.3	Yes	65% of drilling
	2010	RC	42	10,141.0	Yes	68% of drilling
	2010	DD Tails	17	3,068.5	Yes	40% of drilling
	2016	RC	20	5,963.0	Yes	88% of drilling
		Total	**73**	**21,429.5**		
Company	**Year**	**Hole Type**	**No of Holes**	**Metres**	**DTR Analysis**	**DH Geophys**
HIO	2021/22	RC	24	7,623.3	Yes	75% of drilling
	2021/22	DD	n/a			
	2021/22	DD Tails	n/a			
	2021/22	RC_DD	30	13,055.4	Yes	75% of drilling
	2021/22	Geotech	11	3,425.8	Yes	72% of drilling
	2021/22	Met	2	156.7	Yes	50% of drilling
		Total	**67**	**24,261.2**		

The resource estimates were produced from 140 holes for 45,542m, predominantly surface RC holes and a lesser amount of diamond drillholes (mixed HQ and NQ core sizes). Drillhole spacing ranges between 100m and 300m in both section and plan (Figure 4). RC drilling encountered predominantly dry samples; some samples were slightly damp but there were no reports of any significant groundwater inflow impacting sample collection. Significant water inflow impacted two holes which were immediately converted to diamond tails at their respective water intersection depths.

Drillhole collars have been located by a DGPS with an accuracy of +/-0.03m and all data have been compiled into an H&SC 'resource' Access database.

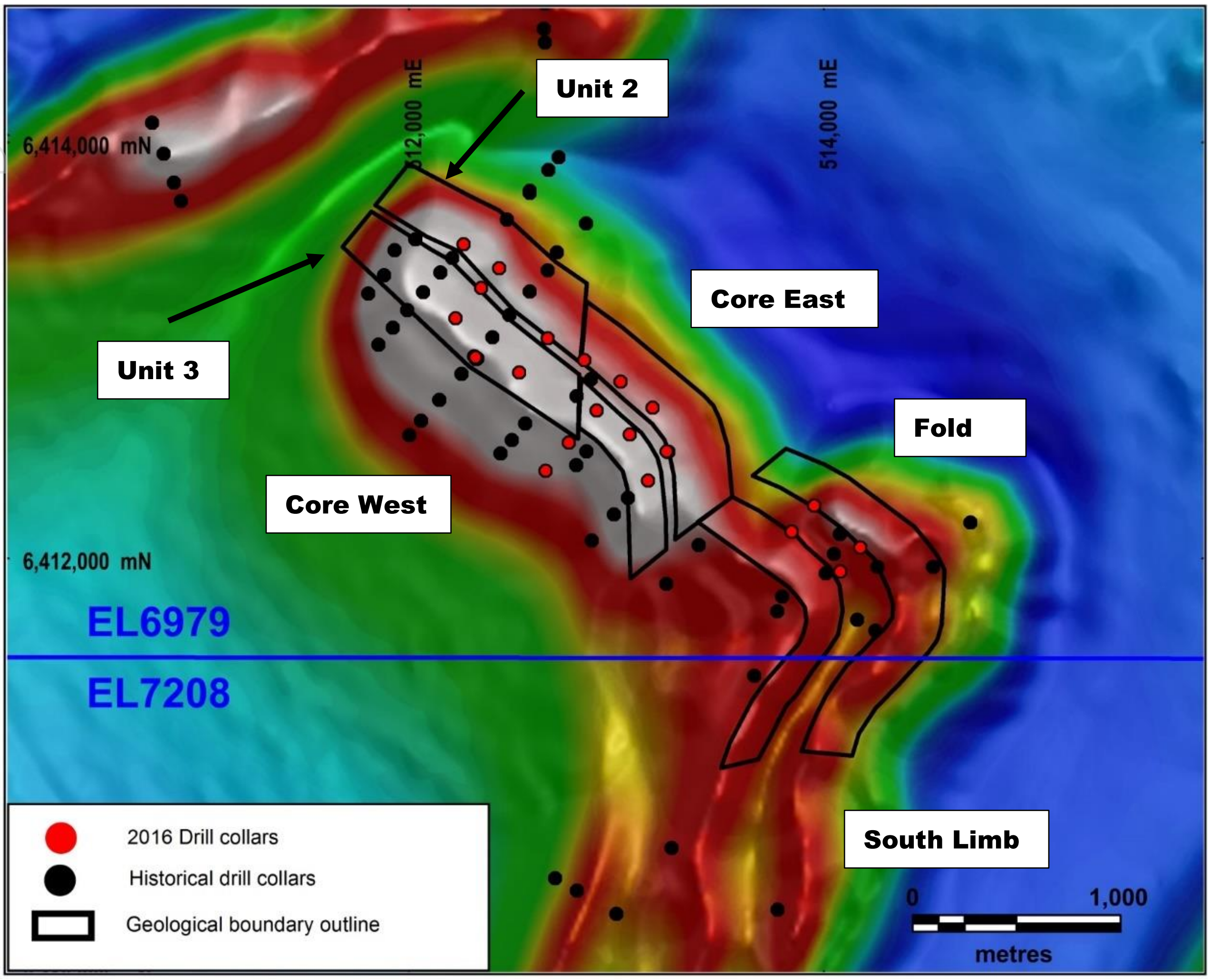
A LiDAR topographic surface with sub-1m accuracy was supplied in national grid coordinates and converted by H&SC to an E-W orthogonal local grid. All interpretation and modelling work was completed in the local grid, details of the conversion are included in Table 2.

Table 2 Local Grid Conversion Points

	MGA2020 Zone 54		Local Grid	
Point	**East**	**North**	**East**	**North**
1	511469.988	6413808.765	20000	5000
2	514534.166	6411237.615	24000	5000

Figure 4 is a representation of the 3 structural domains (divided by magnetic discontinuities), the two main mineral zones, i.e. Unit 2 and Unit 3 and the ground RTP magnetics in MGA94 national grid coordinates. The South Limb represents a possible extension of the Fold deposit.

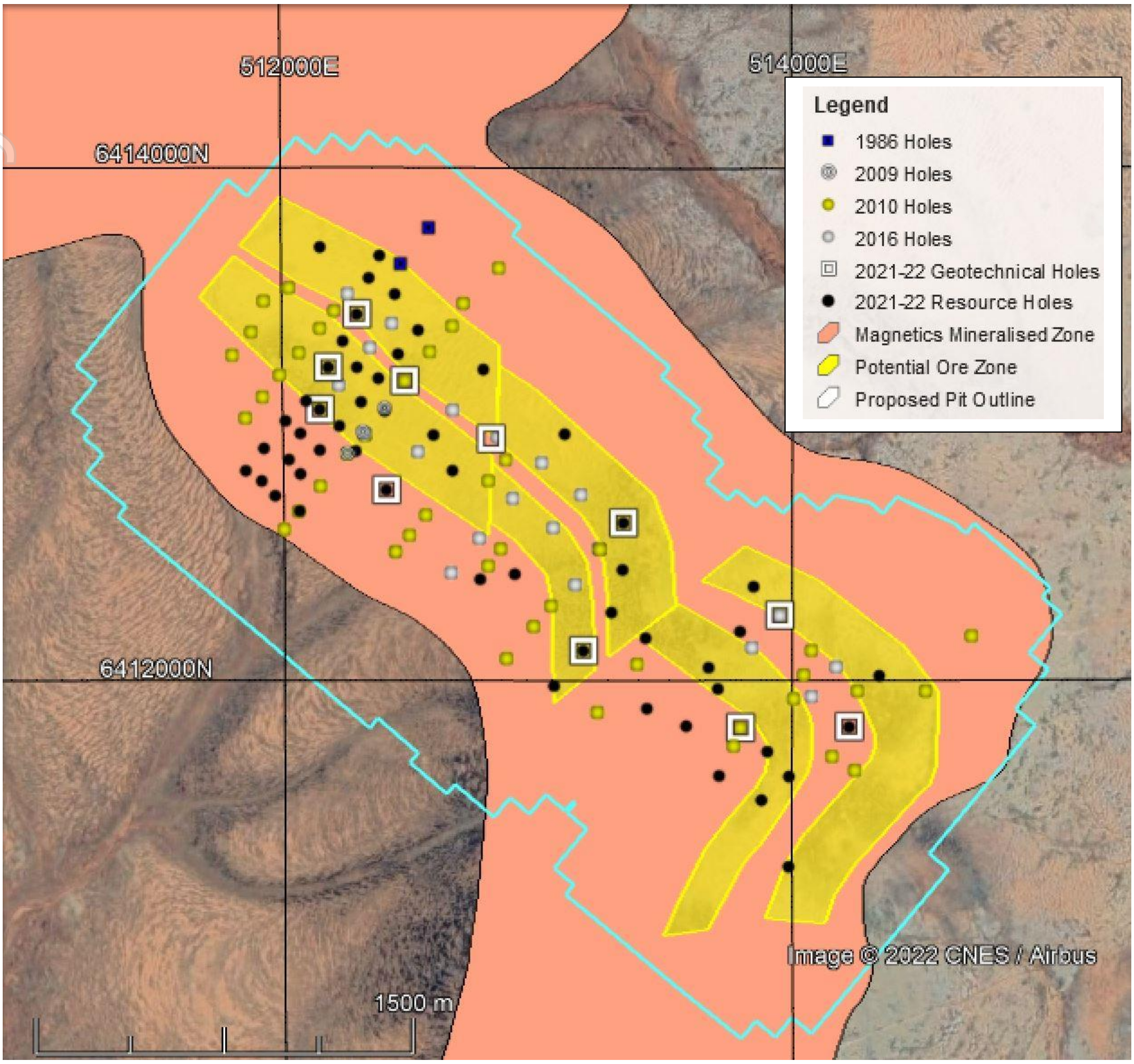
Figure 4 Core & Fold Targets Geology, Magnetics and pre-2021 Drilling



(supplied by CAP, 2017)

Figure 5 shows the location of the of the 2021/2022 HIO drilling in conjunction with the previous drilling. Yellow dots are previous drillholes

Figure 5 Core & Fold Targets Drillhole Plan



(supplied by HIO; cyan outline represents the 2021 Mineral Resource Pit Outline)

Downhole survey methods have been a mixture of north seeking gyro, single shot downhole camera and single downhole digital measurements for the CAP drilling. A north seeking gyro was used for the HIO drilling but several holes remain unsurveyed and estimated dip and azimuths were inserted by H&SC (16 full holes and 3 part holes). Downhole geophysical logging has been collected for a majority of drillholes and has provided downhole magnetic susceptibility, gamma and density readings on 0.01m (CAP only) and 0.1m intervals (CAP & HIO).

Check density work by CAP in 2010 was able to demonstrate that the downhole geophysically-derived density value was under-reported by 5.2% and the supplied data was corrected for this. Check density work by HIO in 2022 was able to demonstrate that the downhole density value was under-reported by 4.94% and the supplied data was corrected for this.

Core recovery is generally >95%. CAP recorded recovery observations for each RC metre and overall reported the RC recoveries as "very good". Wet samples constitute a very small minority of the samples and mainly occurred in the oxide/transition zone. An independent QAQC report by independent consultant Keith Hannan of Geochem Pacific concluded that there was no assay bias due to sample loss. A subset of weighed RC sample recovery data has indicated no obvious bias with the RC sampling for dry or wet/moist samples although there are uncertainties with some of the data. HIO completed recovery measurements for 24 holes and reported no relationship between sample recovery and DTR grade.

The Geochem Pacific QAQC report for the CAP drilling also concluded that a consistent bias is not evident in the length weighted recovered magnetic fraction ("DTR") averages for equivalent intervals of twinned RC and DD drill holes; that is the magnetite recovery of an individual sample is not systematically influenced by the drilling method or the sample type. Hole twinning was conducted at two separate sites each with one diamond hole and two generations of RC 'twins'. The hole twinning has indicated mixed results for the confidence in the short spaced recovered magnetic fraction grade continuity. Field duplicates for 2010 indicate no major issues with the original RC sampling but incorrect field duplicates were collected in 2016 and cannot be compared with the 2010 data. No twin holes were completed by HIO.

The HIO QAQC report concluded that there was no significant DTR bias in the sampling methods from the field duplicates. The type of field duplicates and the limited number of samples has introduced some ambiguity as to what exactly has been measured. The analysis of the head grade Certified Reference Material indicated an under-reporting bias of approximately 4% which was attributed to the small sample size of 50g. There is no high grade DTR standard with the HIO drilling.

At the time of this report the data flagged as being unavailable for the HIO drilling as supplied to H&SC is as follows:

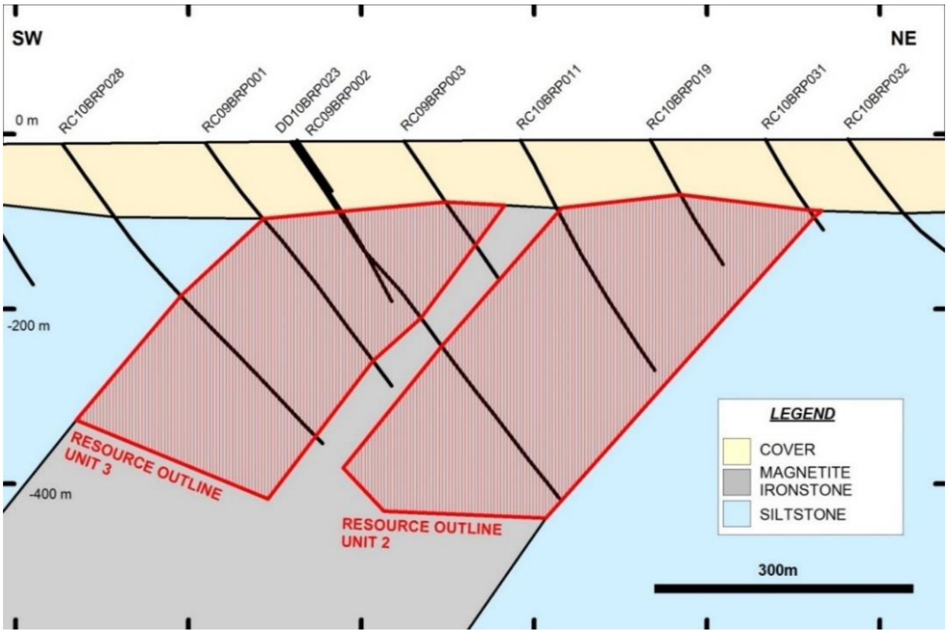
- Gyro data was unavailable for 16 full holes and 3 part holes (default values were inserted to the database by H&SC)
- 11 holes have unavailable lithology logging
- 17 holes have unavailable DTR grades (supplemented by estimated values from downhole magnetic susceptibility)
- 34 holes have unavailable DTR concentrate analyses (supplemented by estimated values from DTR grades)
- 18 holes have unavailable downhole geophysics.

The acquisition of this data is in progress.

The 2010 DTR data was based on a range of laboratory composite intervals from 4-15m of RC chip sampling and cut half core under geological control for magnetite mineralisation. The samples have been analysed by appropriate techniques using a 38 micron grind, at ALS laboratories, a commercial laboratory based in Perth, Western Australia. The 2016 sample compositing comprised uniform 5m samples collected in the field with the same sample prep procedure by the same laboratory. The 2021/2022 sample compositing comprised uniform 5m sample lengths with analysis of a 38 micron grind completed by Bureau Veritas in Adelaide.

From drilling intersections the magnetite mineralisation is interpreted to extend to a vertical depth of 550m below surface over a 4.3km strike length. A schematic cross section interpretation of the drilling from an earlier report is included as Figure 6. It shows the two substantial bodies of magnetite mineralisation (Units 2 and 3) with an interstitial lower grade zone known as the Interbed Unit 2. The magnetite mineralisation is considered open at depth.

Figure 6 Core Target Schematic Cross Section



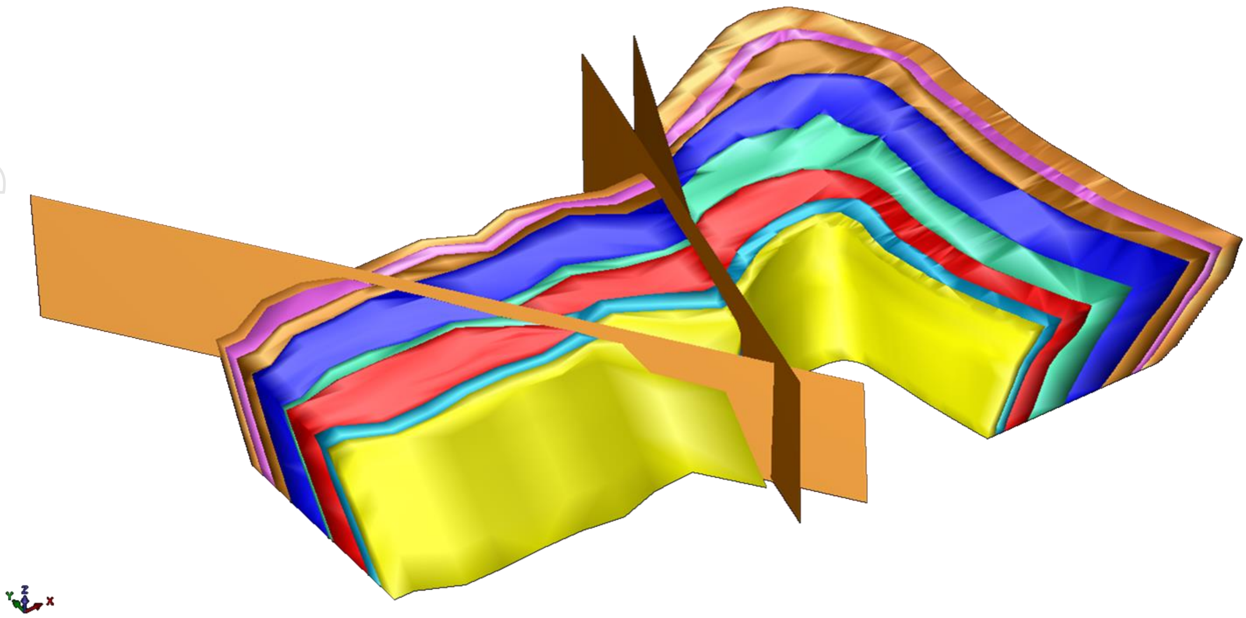
(Supplied by CAP, 2010)

Additional interpretation has delineated additional units within the overall magnetic package. As a result there is a now series of stratigraphic units which are listed from footwall to hangingwall. This list begins with the FW unit (FW1), overlain by Unit 1, which is a narrow but locally strongly magnetic stratigraphic unit with very variable magnetite grades. Overlying Unit 1 (U1) is the Interbed 1 unit (IBD1) followed by Unit 2 (U2), the Interbed 2 (IBD2) unit and Unit 3 (U3). Finally two units have been delineated in the hangingwall to Unit 3, the Upper unit 1 (HW1) and the Upper unit 2 (HW2); both units are moderately magnetic, the latterly slightly more so.

Figure 7 shows the 3D arrangement of the H&SC geological interpretation of the Core and Fold target areas from 2017. The figure contains the three main mineral zones, i.e. Units 1, 2 and 3, the Interbed Units and the hangingwall and footwall units along with the main faults. The recent 2021/2022 drilling has meant only minor changes to the lithology boundaries. A small change occurs at the NW end of the deposit where there seems to be some form of rollover of Unit 2 and below, associated with folding of the sediments. The northern extension of this flat lying zone is unknown due to a lack of drilling, but indications from the magnetic data is that its continuation is limited. There may be some importance to this rollover as it may offer a nearer surface source of mineralisation that coincides with the planned starter pit for Core West.

It is HIO's intention to mine the complete package of magnetite-bearing sediments.

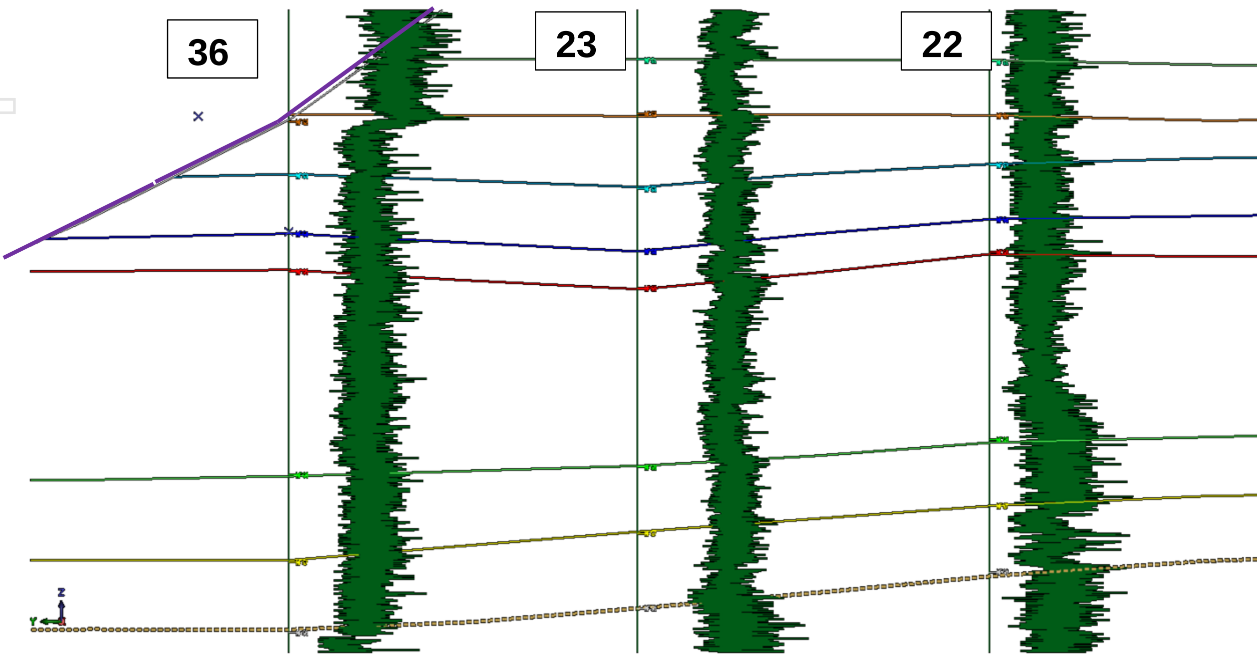
Figure 7 Core & Fold Target Areas 3D Geology



(view : looking down & to grid NE; pale brown = FW unit, purple = Unit 1, brown = interbed 1, blue = Unit 2, green = Interbed unit, red = Unit 3, cyan = Upper HW unit 1, yellow = upper HW unit 2; brown planes = fault surfaces)(from 2017 report)

In order to provide greater geological control to mineralisation a chronostratigraphic interpretation was undertaken in 2013 using the downhole gamma logs to identify a series of maximum flooding surfaces ("MFSs"). These are peak gamma values at the end of an increasing trail of gamma values representing increasing clay mineral content suggesting greater distance from the depositional source/shoreline. Subtle but consistent downhole trace patterns revealed a series of MFSs that are correlatable across multiple sections 200m apart. Figure 8 shows an example of the interpretation for Unit 3 in the Core West area across the three sections.

Figure 8 Core West Gamma Log Interpretation of Flooding Surfaces from Drillholes

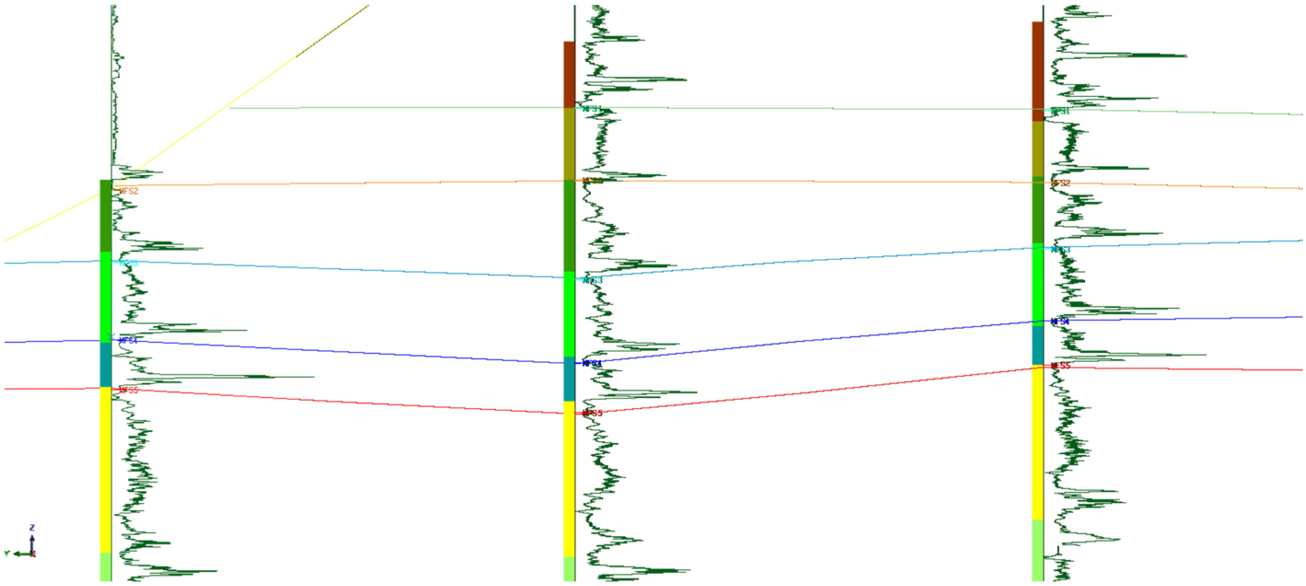


(section looking west) (purple cross cutting line = base of oxidation) (MFS 1 = turquoise; MFS2 = brown; MFS3 = cyan; MFS4 = blue; MFS5 = red; MFS6 = green; MFS7 = yellow; MFS8 = fawn dashed line) (from 2017 report)

Correlation patterns are also visible in the downhole density data that are parallel to the chronostratigraphic interpretation and confirm the sedimentological divisions recognised in the gamma logging. The density data is also a reflection of the composition of the sediment in particular the magnetite content and helps to reinforce the link between the sediment architecture and distribution of the mineralisation.

The downhole magnetic susceptibility data ("mag_sus") shows very clear signatures attributed to variably magnetic stratigraphy that are repeatable across the area under consideration (Figure 9). There is a strong relationship between DTR recovered magnetic fraction grade and downhole magnetic susceptibility, as would be expected. A CAP supplied downhole mag_sus interpretation showed a matching boundary pattern of the magnetic units to the MFSs.

Figure 9 Downhole Mag-sus Data with CAP Interpretation & MFS Interpretation



(from 2017 report)

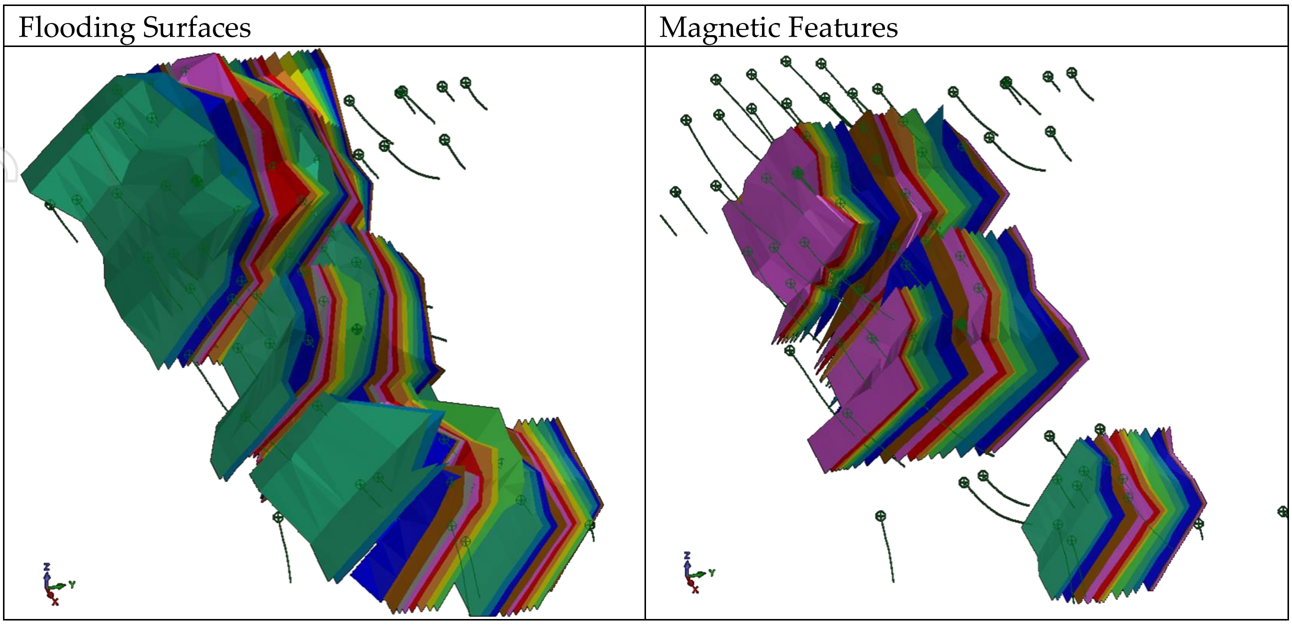
The conclusion from the sedimentological study was that the magnetite distribution is controlled by the sediment sequences that match the chronostratigraphic (flooding surfaces) interpretation. Comparison of the average DTR grades from 5m composites in individual holes bounded by the MFSs indicated a variation in grade of <10%. This is used to imply that there is reasonably good grade continuity within the bed sets as defined by the MFSs for distances in excess of 400m of strike. This was used to support the classification of Indicated Resources.

This study originally focussed on Unit 3 of the Core West area but was expanded in 2017 to include 14 sections, all 200m apart, across the Core deposit and the western part of the Fold area.

Figure 10 (left hand side) shows the interpretation of MFSs across the deposit and hence the geological/sedimentological framework for the deposit based on the downhole gamma logging information. The right hand figure shows the magnetic susceptibility interpretation from the downhole geophysical. There is a strong direct correlation between the two interpretations.

The interpretation consists of 22 units for which single DTR composite intervals were generated and analysed. Only samples in the fresh rock zone were used.

Figure 10 2017 Stratigraphic Interpretation from Geophysical Data

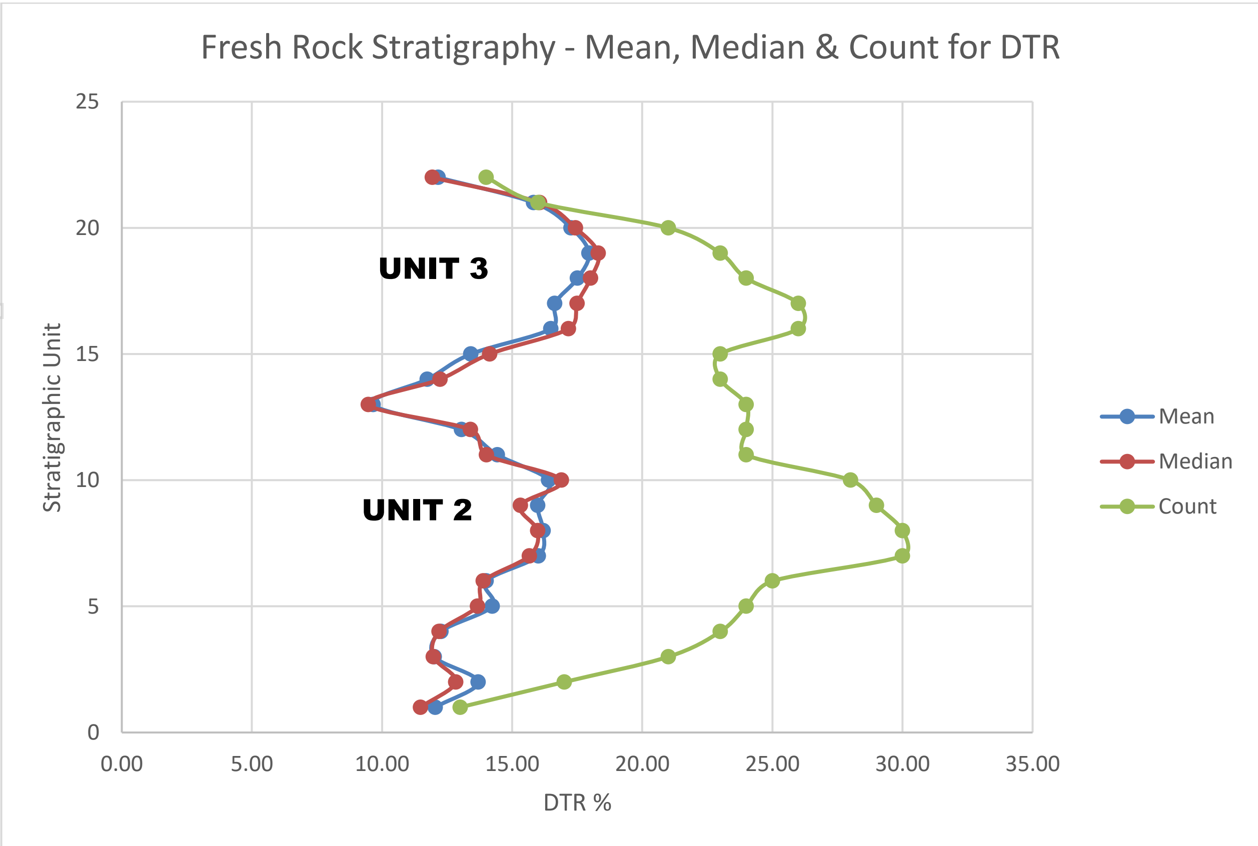


(from 2017 report)

The range in thickness of the stratigraphic units was from approximately 13m to 51m.

Figure 11 is a 'stratigraphic' representation of the magnetic grade going up-stratigraphy for the 22 units and indicates the gradational nature of the mineralisation.

Figure 11 Stratigraphic Representation of the DTR Grade associated with the MFSs



(The count values use the same numbers on the DTR X-axis)(from 2017 report)

Resource Estimation

The entire drillhole database was composited to 5m intervals, with all residuals retained, for the recovered magnetic fraction data, the downhole geophysics data and the handheld magnetic susceptibility data. The composite files were split into three structural domains and the records for each domain flagged by company i.e. CAP or HIO, and by oxidation level i.e. cover, BOCO, TOFR or fresh rock. The file datasets were combined for each structural zone in order to identify gaps in the data, primarily for DTR and concentrate analyses but also density. These gaps were the result of unavailable data i.e. lab sample analysis still in progress (HIO), original non-sampling, mainly by CAP of the oxide/transition zone, and insufficient sample for analysis generally due to low amounts of recovered magnetic fraction existing in samples (CAP/HIO). There were also gaps in the downhole geophysical data due to hole collapse preventing the probe reaching the bottom of the hole (for both CAP and HIO) and some probe results are still being processed (HIO). Very minor gaps in the handheld magnetic susceptibility data were noted generally due to measurements not having been made for whatever reason (CAP/HIO).

For each structural domain, the data was sorted by company and oxidation level which led to a total of 24 sub-divisions for the three domains. Summary statistics were generated for each sub-division. The purpose of the sub-division exercise was to allow for the creation of unavailable DTR results from the downhole geophysics (magnetic susceptibility) and if that latter data was unavailable, to use the handheld magnetic susceptibility data in its place. Generation of estimated DTR results used the Conditional Expectation technique to generate regression equations for DTR for each subdivision. The relationship between the two variables took the form of either a simple linear equation or a more complex logarithmic equation. In some instances, there was not enough data for the sub-division and a meaningful regression could not be generated. This generally occurred for the cover and BOCO zones and the TOFR equation was used in these instances to estimate DTR values.

In order to estimate iron concentrate grades a plot of original DTR against existing laboratory assayed XRF iron concentrate grades was used to generate a simple linear relationship between the two variables. The iron concentrate grades were then used to estimate, via simple linear regressions, the remaining unavailable concentrate grades for Al_2O_3, P, S, SiO_2, TiO_2 and Loss on Ignition (LOI). Technically this data processing and the DTR estimations would involve the generation of over 200 regression equations, however some of the sub-divisions had limited data and meaningful equations could not be created, thus reducing in part the number of equations required. The limited data was mainly for the cover/oxide/transition zones and this lack of data is reflected in the resource classification. Head grades for iron were not processed as a substantial amount of data was unavailable and there is no way of estimating unavailable iron head grades as there is no relationship between DTR grades and head iron assays for both fresh and oxide/transition zones.

A total of 8,918 5m composites were generated from the drillhole database. Table 3 shows the number of composite records for each element from each structural domain for both companies' work. It gives an indication of the amount of unavailable data. The "Total 5m" row represents the total number of 5m composite intervals that can be generated from the drilling for each domain, the subsequent "total" figures can be viewed in relation to the "Total 5m" values as an indication of the percentage of unavailable data.

Table 3 Composite Data Points for Structural Domains

	Domain 1			Domain 2			Domain 3		
Total 5m	5228			1851			1839		
	CAP	HIO	Total	CAP	HIO	Total	CAP	HIO	Total
All									
DTR	1450	1599	3049	775	490	1265	718	704	1422
Fe Head	1450	1305	2755	775	400	1175	718	232	950
Con Data	1400	1069	2469	728	287	1015	666	178	844
LOI	1396	850	2246	723	220	943	655	136	791
Fresh									
DTR	1314	1025	2339	719	293	1012	607	357	964
Fe Head	1314	850	2164	719	237	956	607	143	750
Con Data	1281	800	2081	688	227	915	580	138	718
LOI	1277	704	1981	685	196	881	572	124	696
TOFR									
DTR	122	568	690	50	103	153	109	129	238
Fe Head	122	450	572	50	92	142	109	10	119
Con Data	114	264	378	38	50	88	85	5	90
LOI	115	142	257	36	23	59	82	0	82

(Note: separate DTR results for BOCO & Cover are not reported)

Figure 12 shows the plan distribution of the drillholes for the two companies used in the resource estimates, HIO is green, and blue is CAP. *(zoom on the image for better resolution)*

Figure 13 shows the cross section view of the drilling coloured coded for oxidation level, i.e. yellow = cover, green = completely oxidised ("BOCO" zone), cyan = partially oxidised ("TOFR" zone) and blue = fresh rock.

Figure 12 Plan Distribution of Drillhole by Company

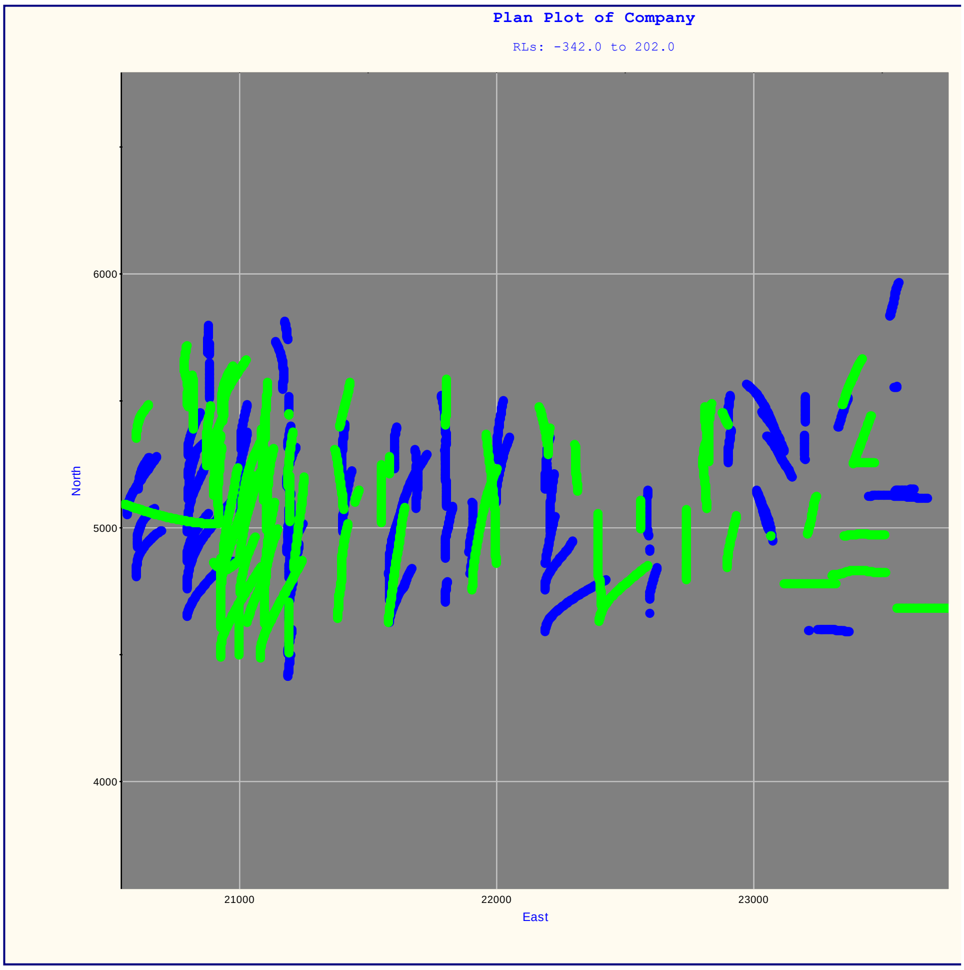


Figure 13 Cross Section View of Composites Colour Coded for Oxidation Levels

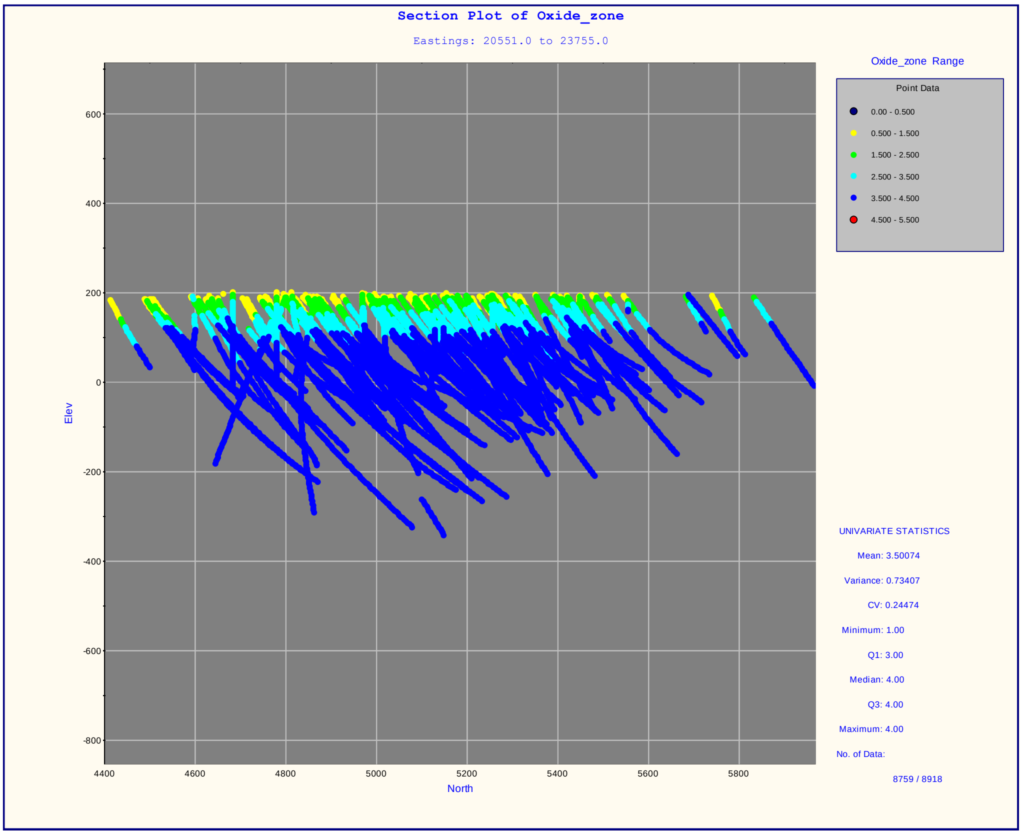
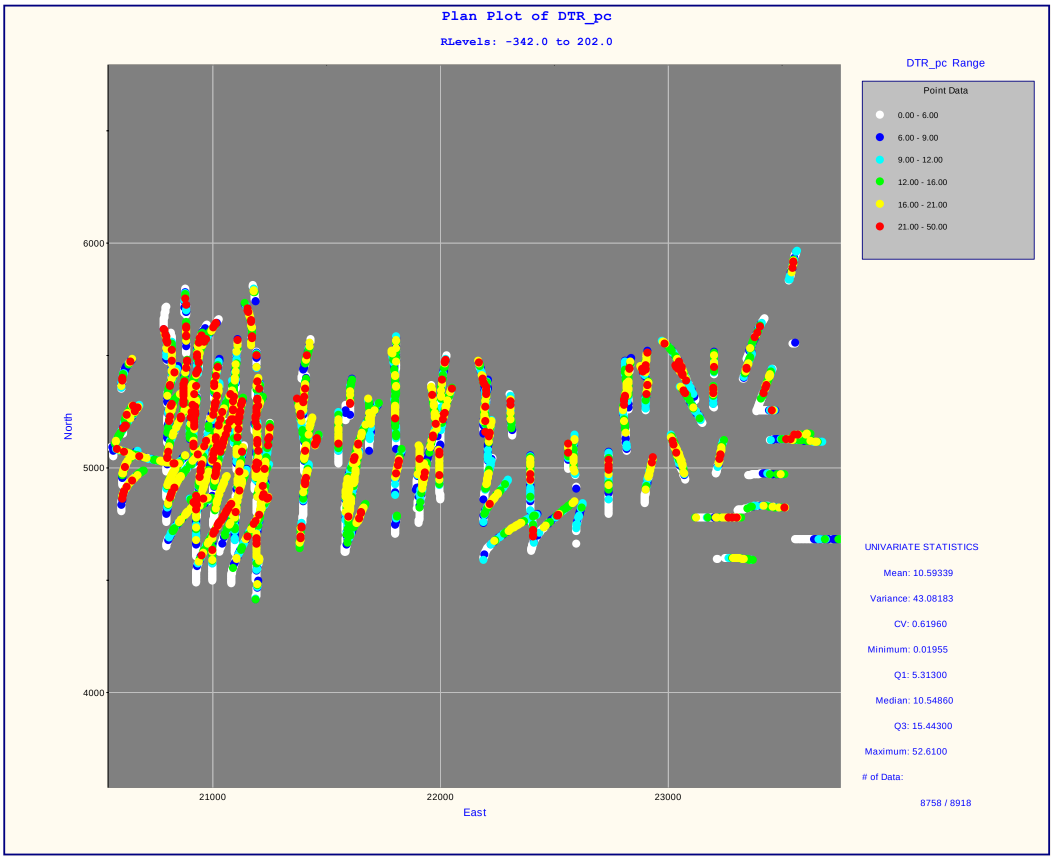
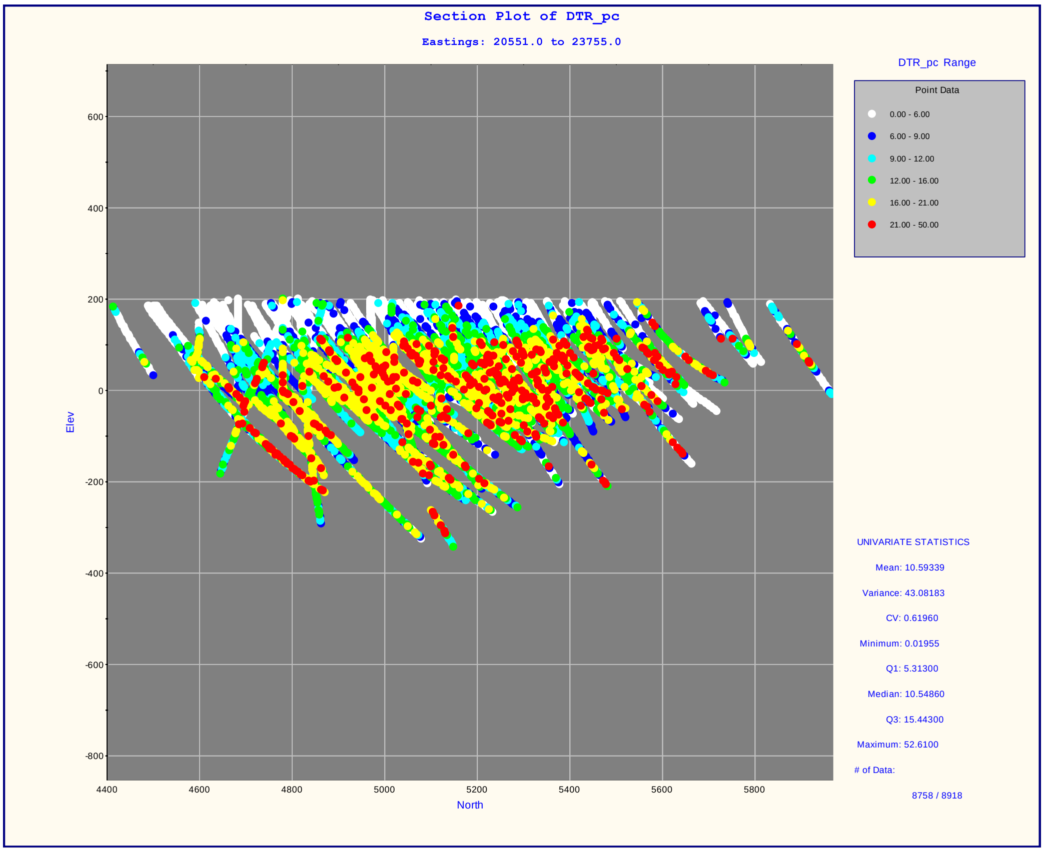


Figure 14 shows a plan and cross section of the DTR composites. There appears to be no obvious high grade trends within the data.

Figure 14 DTR Composites Plan and Cross Section





H&SC

Global summary statistics for all the DTR composites with concentrate grades, including estimated values, are included as Table 4. The main points to note are the relatively low coefficients of variation ("CV") for the elements (except the low value elements like P, S & TiO_2) and the slightly higher than expected SiO_2 value in the concentrate grade. This is due to higher SiO_2 values associated with Core East and the Fold deposits, a phenomenon not noted previously.

Table 4 Summary Statistics for All Composite Data

		Concentrate Grades							
All Data	***DTR_pc***	***Fe_pc***	***Al_2O_3_pc***	***P_pc***	***S_pc***	***SiO_2_pc***	***TiO_2_pc***	***LOI_pc***	***Density t/m³***
Mean	10.424	69.081	0.267	0.008	0.004	3.005	0.051	-2.543	2.955
Median	10.408	69.364	0.220	0.005	0.003	2.600	0.043	-2.944	3.010
Std Dev	6.691	1.725	0.244	0.009	0.007	1.797	0.067	0.857	0.416
Variance	44.768	2.975	0.060	0.000	0.000	3.230	0.004	0.735	0.173
CV	0.642	0.025	0.915	1.127	1.877	0.598	1.311	0.349	0.141
Range	75.167	25.650	3.806	0.103	0.365	20.402	1.125	9.372	3.700
Minimum	0.006	53.340	0.004	0.001	0.000	0.018	0.005	-4.188	0.516
Maximum	75.173	78.990	3.81	0.103	0.365	20.42	1.13	5.184	4.215
Count	8918	8918	8918	8918	8918	8918	8918	8918	8918

Table 5 has more detail on the summary statistics for DTR grades for the three structural domains and the three main oxidation levels.

Table 5 Summary Statistics for DTR Data by Domain, Company & Oxidation

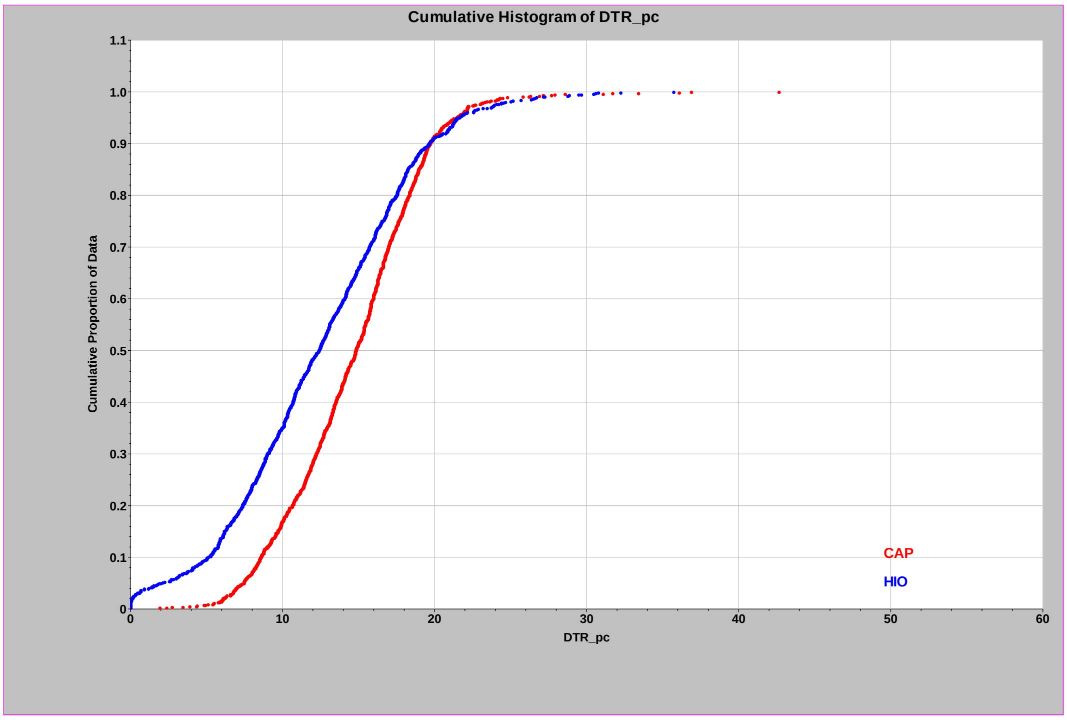
Domain	Company	Oxidation	Mean	Median	Std Dev	CV	Range	Min	Max	Count
1	CAP	Oxide	2.961	2.629	2.138	0.722	18.928	0.034	18.962	193
Core West	HIO	Oxide	3.436	2.543	3.792	1.104	18.945	0.04	18.985	283
	CAP	Transition	6.988	6.633	4.476	0.641	25.253	0.020	25.273	359
	HIO	Transition	6.837	6.726	4.814	0.704	30.128	0.048	30.176	430
	CAP	Fresh	14.173	14.486	5.158	0.364	47.181	0.205	47.386	1465
	HIO	Fresh	13.211	13.127	6.083	0.460	52.580	0.030	52.610	2247
2	CAP	Oxide	2.411	1.952	2.360	0.979	12.524	0.028	12.551	141
Core East	HIO	Oxide	1.692	0.299	2.339	1.383	11.454	0.04	11.494	74
	CAP	Transition	5.409	4.320	4.775	0.883	22.679	0.021	22.700	151
	HIO	Transition	4.544	3.612	4.462	0.982	15.905	0.043	15.948	110
	CAP	Fresh	13.201	13.559	4.591	0.348	25.529	0.281	25.810	731
	HIO	Fresh	11.226	10.592	5.892	0.525	28.385	0.084	28.469	506
3	CAP	Oxide	0.432	0.006	1.538	3.558	11.45	0.006	11.456	91
Fold	HIO	Oxide	2.469	1.905	2.630	1.065	11.231	0.041	11.272	84
	CAP	Transition	5.269	4.545	5.038	0.956	24.394	0.006	24.400	208
	HIO	Transition	7.046	4.641	6.947	0.986	75.131	0.042	75.173	265
	CAP	Fresh	13.181	12.868	5.076	0.385	37.225	0.137	37.362	610
	HIO	Fresh	12.021	11.529	5.802	0.483	33.342	0.171	33.513	503

The low CV for the majority of the DTR grades allows for Ordinary Kriging ("OK") as a valid modelling method.

No top cuts were applied to the data.

Figure 15 shows cumulative frequency curves for 2,336 DTR grades for the fresh rock in Domain 1, separated by company. It suggests that the HIO data is of a slightly lower average grade. Further investigation shows that this is in part due to a tendency to drill more peripheral, slightly lower grade areas. However, it is also noted that a direct comparison for the drilling DTR results within Unit 2, IBD2 and Unit 3 shows comparable results for Unit 2 and IBD2 but there is 3-4 % discrepancy for Unit 3. The reasons for this are uncertain but the impact on the Mineral Resources is considered minor but worthy of note.

Figure 15 Cumulative Frequency Curves for Fresh Rock DTR Results in Domain 1



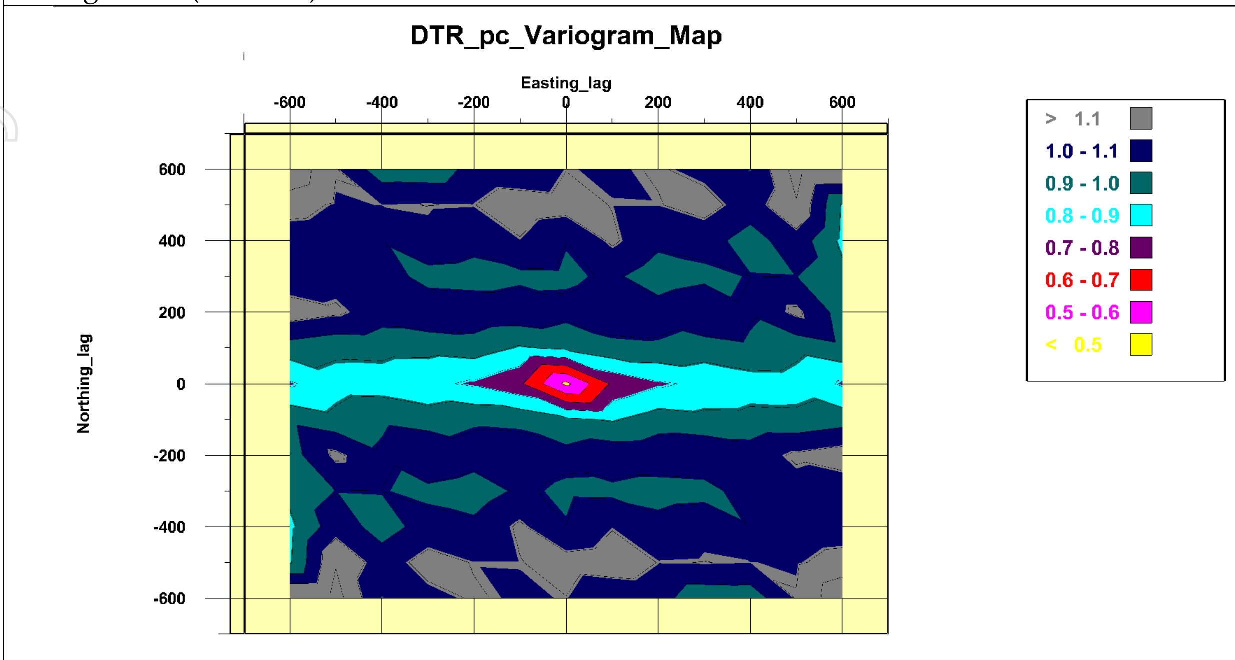
Variography was completed on the Domain 1 fresh rock data which includes the close spaced 100m drilling. Figure 16 shows variogram maps for the DTR composites for the three orthogonal directions, X, Y & Z.

The XY map indicates approximately 70% of the variance in the DTR data occurs within the first 100m of strike indicating a relatively short range strike continuity in a grid E-W direction. The map also indicates some longer range continuity that is consistent with the geological interpretation of the stratigraphy. Using either just the CAP or the HIO data on their own does not give the same level of continuity in the XY view, and this is used to support the need for 100m spaced drilling for Measured Resource. The YZ view again shows the limited short range grade continuity but overall shows some long range continuity at a 45° dip to the south that is consistent with the geological interpretation of stratigraphy. The XZ view suggests a rather ambiguous flat plunge to the mineralisation which would be consistent with the geological orientation of the sediment beds.

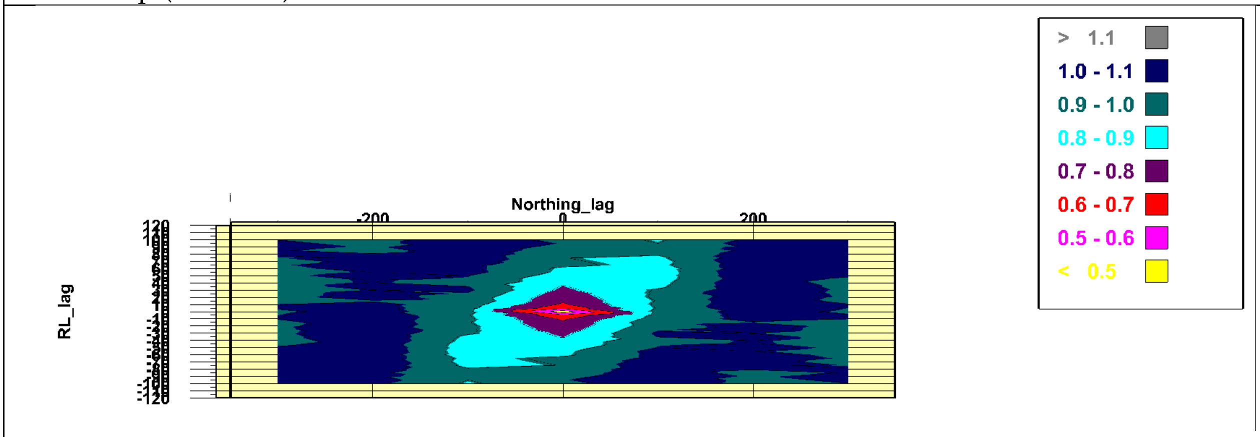
The legend for the maps represents the standardised percent of the total variance.

Figure 16 Variogram Maps for DTR Domain 1

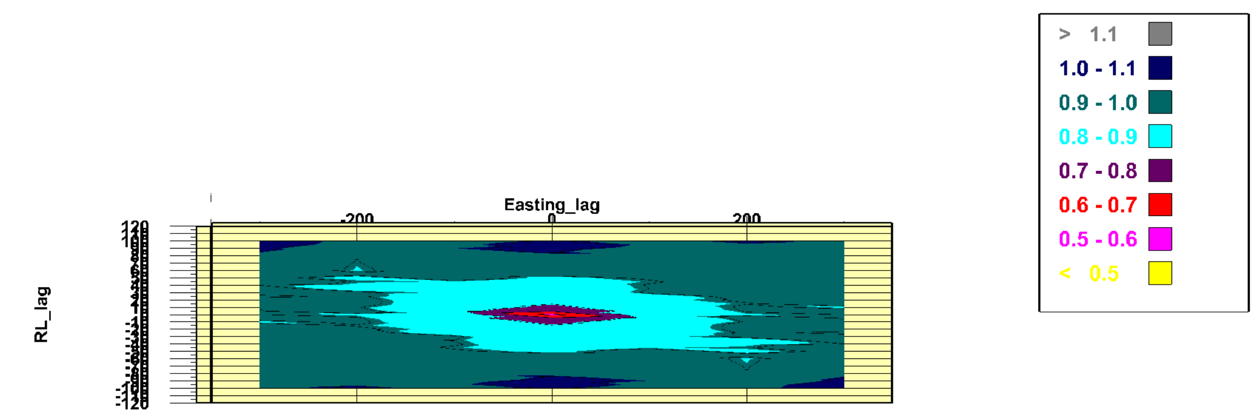
Along Strike (XY view)



Down Dip (YZ view)

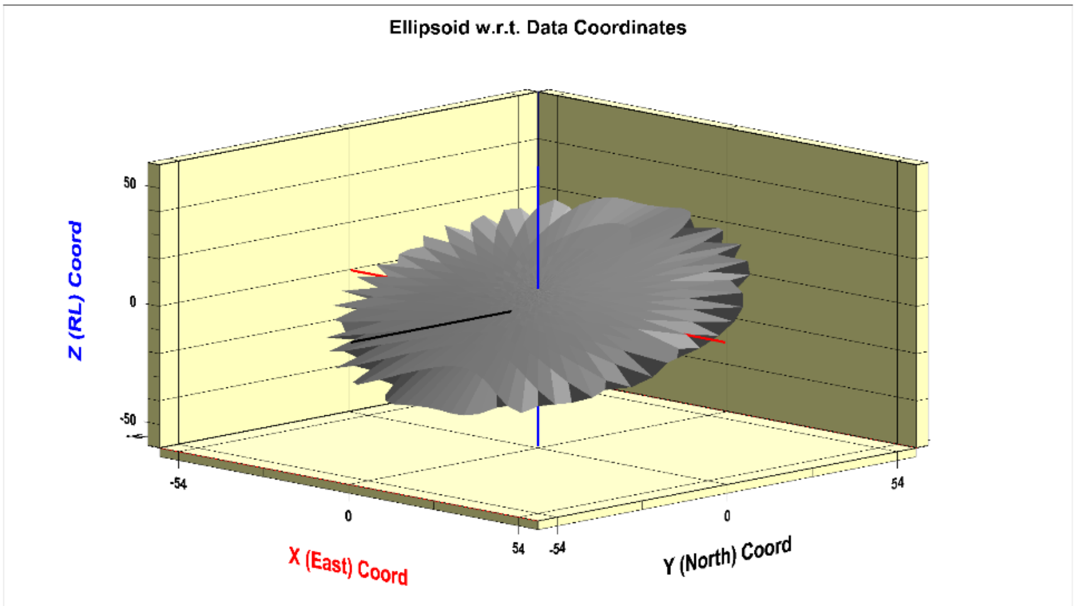


Long Section (XZ view)



An example of the variogram model for DTR for the fresh rock Domain 1 (search domain 11) material is included as Figure 17. A total of 10 variogram models were used.

Figure 17 Variogram Model for Domain 1 (Sub-domain 11)



Block model details are supplied in Table 6 with no sub-blocking. The resulting block model was loaded into Surpac software for block model validation, resource reporting and future mine planning purposes.

Table 6 Block Model Details

Type	Y	X	Z
Minimum Coordinates	3662.5	19900	-360
Maximum Coordinates	6487.5	24500	260
User Block Size	25	50	10
Min. Block Size	25	50	10
Rotation	0	0	0

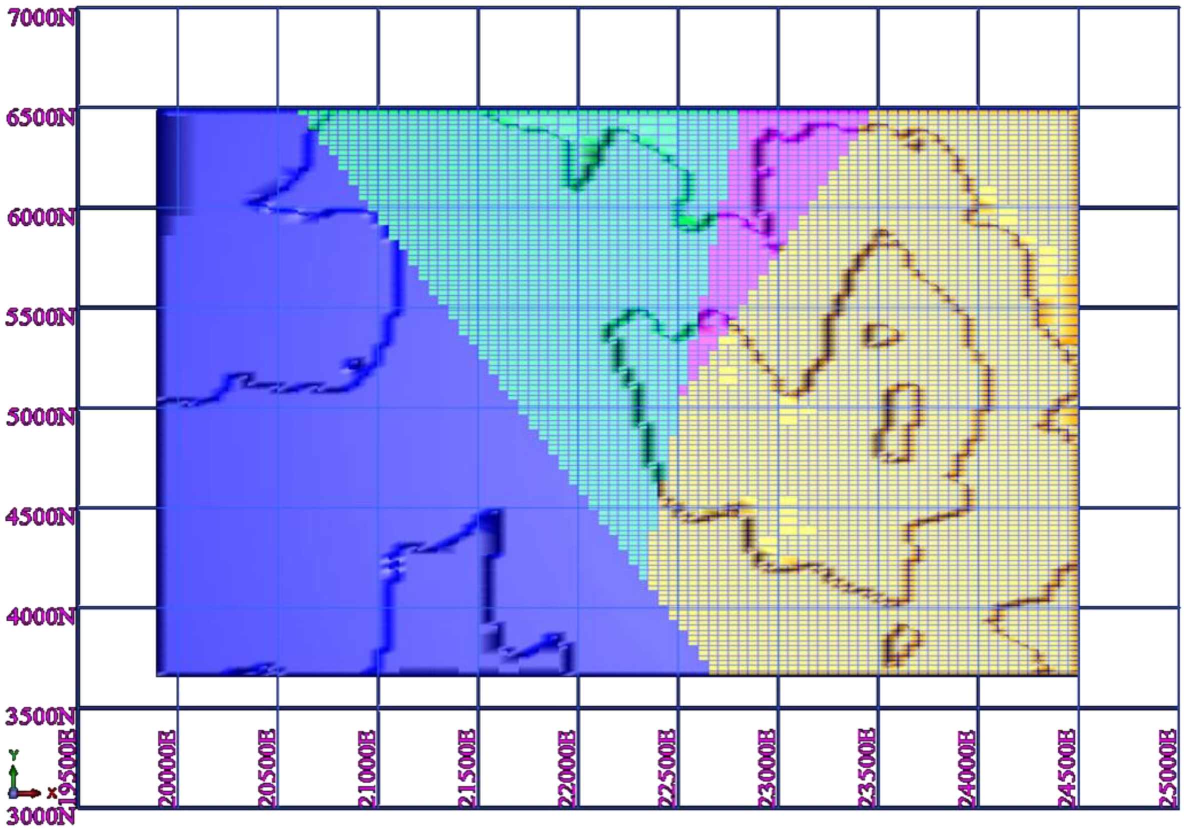
Oxidation domains were allocated to the block model from the H&SC interpreted surfaces (Table 7).

Table 7 Oxidation Domains

Location	Value Assigned
Cover	1
Above BOCO	2
Between BOCO and TOFR	3
Below TOFR	4

The Core and Fold target areas are interpreted to be cut by two significant faults creating three distinct fault block zones: Core West (domain 1), Core East (domain 2) and Fold (domain 3). These structural domains are shown in Figure 18. A fourth domain is included, shown in magenta colour, that is the result of a bifurcation of one of the faults, but contains no mineralisation.

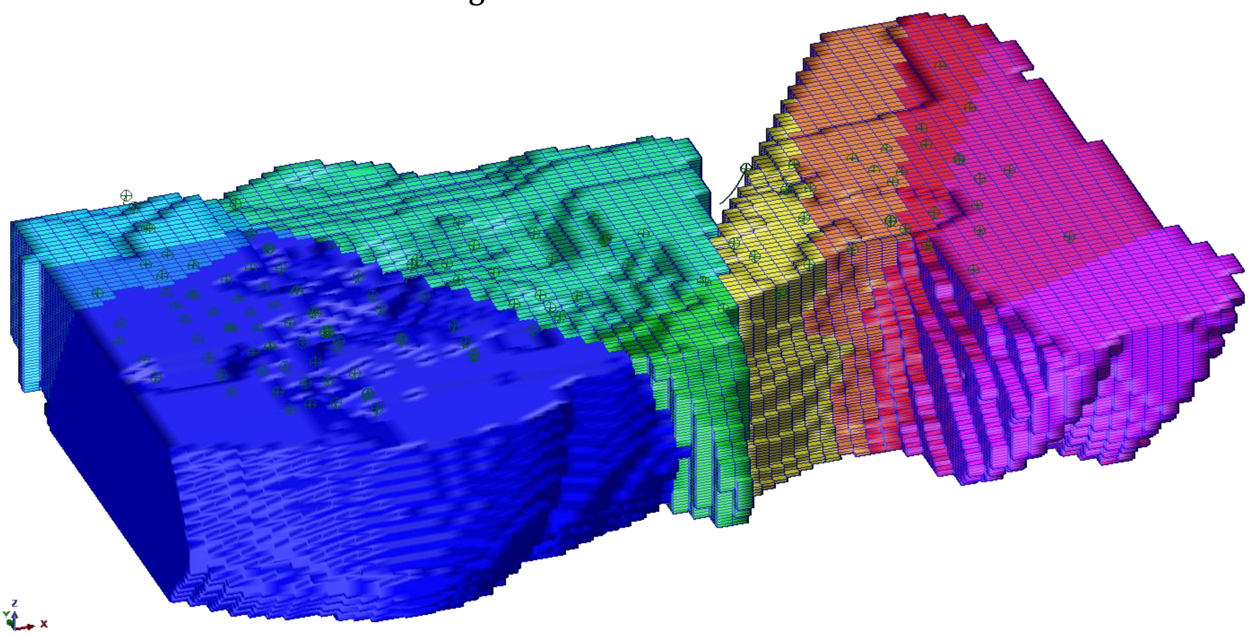
Figure 18 Structural Domains Plan View



Blue =1 = Core West; Green = 2= Core East; Yellow = 3 = Fold

A review of the geological interpretation and the variography was used to design a set of 10 search domains that reflected the main variations in dip and strike of the magnetite-bearing stratigraphy. Figure 19 is a representation of the search domains, numbered 11 to 13 for domain 1, 14 & 15 for domain 2 and 25 to 29 for domain 3.

Figure 19 Search Domains



(blue = 11, light blue = 12, cyan = 13, turquoise = 14, green = 15, yellow = 25, brown = 26, red = 27, cerise = 28, magenta = 29)

For the interpolation of DTR, density and concentrate Fe, Al_2O_3, P, S, SiO_2, TiO_2 and LOI grades the search ellipse and variogram axes were rotated parallel to the dip and strike of the lithological units as defined by the search domains. Table 8 displays the search axes rotations for the 10 search domains.

Table 8 Search Domain Rotations

Domain	X	Y	Z
11	45	0	-5
12	20	0	-5
13	5	0	-5
14	50	0	-5
15	50	0	-32
25	55	0	21
26	55	0	4
27	52	0	-37
28	0	-60	5
29	55	0	-68

(domain 28 also involved related changes to search axes) (trigonometric convention for rotations)

The OK modelling used a 4 pass search strategy with the 5m composites. The new search ellipses are very similar to those used for the previous H&SC work. A Pass 5 and Pass 6 search was used to provide information on the exploration potential. Details of the search parameters are included in Table 9.

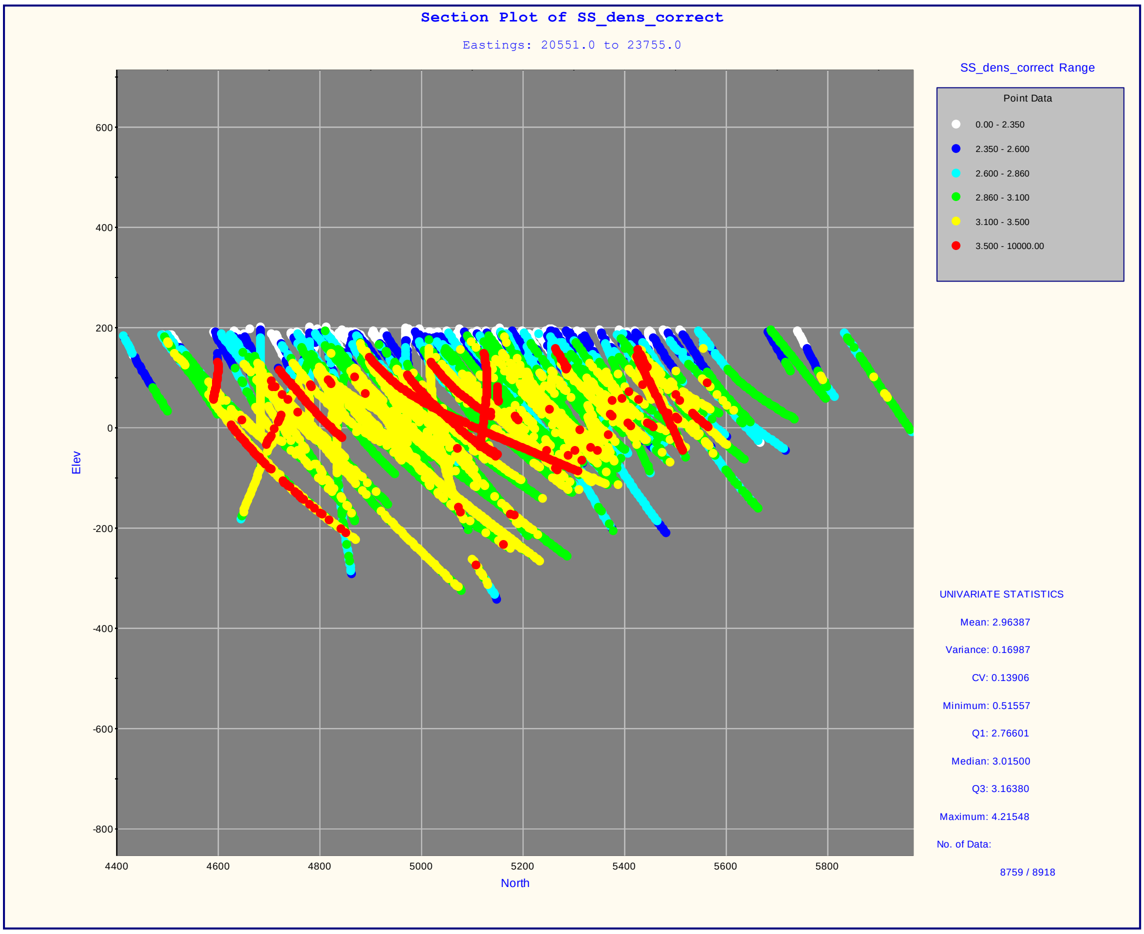
Table 9 Search Ellipse Parameters

Axis	Pass No 1	Pass No 2	Pass No 3	Pass No 4	Pass No 5	Pass No 6
Along Strike	150m	300m	300m	400m	600m	600m
Down Dip	150m	300m	300m	400m	600m	600m
Across Strike	25m	50m	50m	75m	112.5m	112.5m
Composite Data Requirements						
Min Data	12	12	6	6	6	3
Max Data	24	24	24	24	24	24
Octants	4	4	2	2	2	1

The cover data was included in the grade interpolation to act as buffer to the oxide/transition data but no interpolated grades for the cover were loaded into the block model.

A total of 8,918 5m density composites were generated from the short-spaced density data that was part of the downhole geophysics dataset. Gaps in the density composite data had values estimated for individual composites based on regression equations developed by H&SC in 2017. These equations utilised the head iron assays for both fresh rock and the oxide/transition zone. Attempts to generate density from the current DTR results indicated potential for significant overstatement of values and so was not used. However, there were still gaps in the data that were filled with default values based on best-guess numbers for rock types for relevant weathering levels. A cross section example of the density data is included as Figure 20. There is some suggestion that one or two of the drillholes may not be correctly calibrated for density. These suspect holes are represented in the figure as continuous lines of red dots.

Figure 20 Cross Section of the Density Composites for the Hawsons Deposit



(zoom on the image for better resolution)

Default densities were applied to the waste rock within the block model. These were 2.15t/m³ for the cover, 2.35t/m³ for the BOCO zone, 2.55t/m³ for the TOFR zone and 2.8t/m³ for the fresh rock.

Table 10 contains estimation results from the entire grade interpolation reported from the block model (all passes). Reporting constraints comprise a 6% DTR cut off, with a maximum depth of -360mRL. HIO has informed H&SC of the results of an earlier pit optimisation study for the Hawsons deposit which indicated that 6% DTR is a likely economic cut-off grade.

The main item of note is the reasonable consistency of DTR grade across the domains and the search passes. Other points to note are the higher SiO_2 grades associated with Core East and particularly the Fold area, the latter of which coincides with a marked increased density, particularly for the higher search passes and slightly lower iron concentrate grades. These two structural domains contain a higher proportion of estimated composites than the Core West domain 1.

Table 10 Global Search Pass Results

Domain	Pass No	Volume	Tonnes	DTR %	DTR Tonnes	Density t/m³
Core West	Pass 1	116,262,500	353,293,749	13.1	46,267,703	3.04
	Pass 2	196,162,500	590,969,499	12.8	75,426,028	3.01
	Pass 3	174,837,500	531,431,999	13.0	69,131,863	3.04
	Pass 4	105,925,000	317,428,250	12.6	39,885,494	3.00
	Pass 5	99,975,000	297,060,625	11.7	34,875,511	2.97
	Pass 6	91,662,500	263,491,747	12.6	33,092,719	2.87
Sub Total		**784,825,000**	**2,353,675,868**	**12.7**	**298,679,114**	**3.00**
Core East	Pass 1	35,500,000	109,174,250	12.4	13,549,616	3.08
	Pass 2	113,975,000	346,375,125	11.6	40,089,111	3.04
	Pass 3	106,025,000	320,754,125	11.7	37,426,874	3.03
	Pass 4	71,412,500	215,650,375	11.4	24,675,363	3.02
	Pass 5	77,912,500	233,655,750	11.0	25,746,761	3.00
	Pass 6	37,962,500	112,153,748	12.2	13,685,898	2.95
Sub Total		**442,787,500**	**1,337,763,372**	**11.6**	**155,173,862**	**3.02**
Fold	Pass 1	18,862,500	59,783,750	12.9	7,717,544	3.17
	Pass 2	105,425,000	333,592,500	11.4	38,090,926	3.16
	Pass 3	166,825,000	545,413,376	11.9	64,848,014	3.27
	Pass 4	125,137,500	418,450,376	11.5	48,206,320	3.34
	Pass 5	164,512,500	547,333,877	10.8	59,348,507	3.33
	Pass 6	143,312,500	490,140,253	11.9	58,210,037	3.42
Sub Total		**724,075,000**	**2,394,714,131**	**11.5**	**276,421,852**	**3.31**
Total		**1,951,687,500**	**6,086,153,372**	**12.0**	**730,277,543**	**3.12**

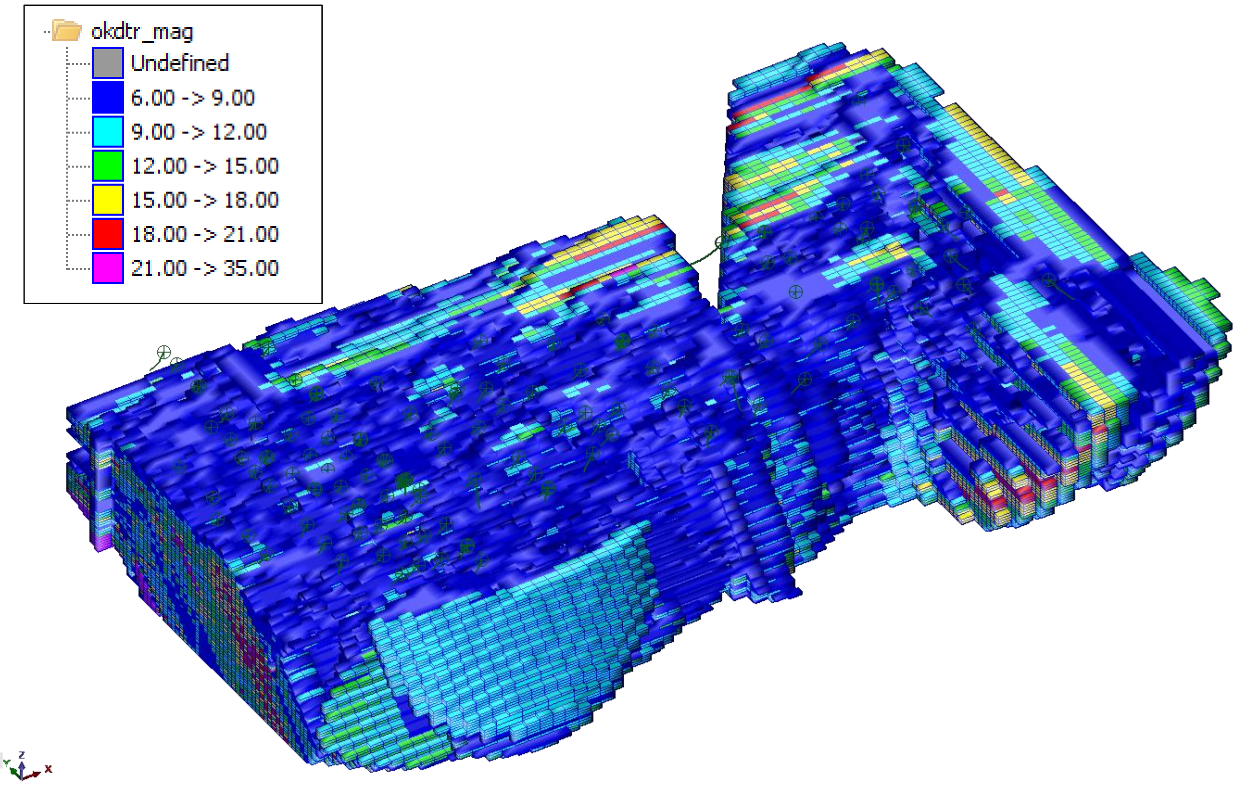
		Concentrate Grades						
Domain	**Pass No**	**Fe %**	**SiO_2 %**	**Al_2O_3 %**	**P %**	**S %**	**TiO_2 %**	**LoI %**
Core West	Pass 1	69.6	2.63	0.22	0.005	0.001	0.044	-2.84
	Pass 2	69.7	2.70	0.22	0.004	0.002	0.043	-2.92
	Pass 3	69.7	2.75	0.22	0.002	0.001	0.042	-3.04
	Pass 4	69.7	2.77	0.22	0.002	0.001	0.042	-3.03
	Pass 5	69.7	2.69	0.22	0.003	0.001	0.042	-2.95
	Pass 6	69.6	2.89	0.21	0.005	0.000	0.041	-2.97
Sub Total		**69.7**	**2.73**	**0.22**	**0.003**	**0.001**	**0.042**	**-2.96**
Core East	Pass 1	69.1	3.28	0.26	0.007	0.003	0.049	-2.90
	Pass 2	69.0	3.41	0.27	0.007	0.005	0.052	-2.89
	Pass 3	68.8	3.67	0.30	0.008	0.007	0.055	-2.96
	Pass 4	68.7	3.87	0.31	0.009	0.008	0.058	-3.01
	Pass 5	68.6	3.91	0.31	0.009	0.009	0.062	-3.00
	Pass 6	68.5	4.05	0.33	0.008	0.009	0.067	-2.98
Sub Total		**68.8**	**3.68**	**0.30**	**0.008**	**0.007**	**0.057**	**-2.95**
Fold	Pass 1	68.6	3.75	0.28	0.009	0.001	0.047	-2.63
	Pass 2	68.0	4.28	0.37	0.013	0.002	0.063	-2.46
	Pass 3	67.9	4.52	0.37	0.011	0.001	0.057	-2.71

	Pass 4	67.7	4.83	0.38	0.011	0.001	0.059	-2.76
	Pass 5	67.6	4.93	0.39	0.011	0.001	0.061	-2.73
	Pass 6	67.3	5.30	0.40	0.012	0.001	0.063	-2.79
Sub Total		**67.7**	**4.78**	**0.38**	**0.011**	**0.001**	**0.060**	**-2.70**
Total		**68.7**	**3.74**	**0.30**	**0.008**	**0.002**	**0.052**	**-2.86**

(the use of significant figures does not imply accuracy)

An example of the global DTR block grade distribution for all pass categories with a 6% DTR cut off is shown in Figure 21. The item to note is the lower grade material associated with the oxidised zones on the top of the model and that in some instances it looks as though higher grade mineralisation is quite close to surface especially in the eastern Core East and Fold areas (close to where there is outcropping magnetite -bearing siltstone).

Figure 21 DTR Block Grade Distribution All Passes 6% DTR Cut



Block Model Validation

Figure 22, Figure 23 and Figure 24 show DTR composite values in comparison with block grades. The first two images compare modelled block grades across two cross sections with 100m separation. Figure 22 shows the block grades and drillhole composite values in which the drilling is almost entirely from the recent HIO work, whilst Figure 23 shows the same features only this time virtually all the drilling was completed by CAP. The diagrams are used to show that the two drilling datasets are comparable and that it is reasonable to combine the composites from the two drilling campaigns. The figures also show how the dipping stratigraphy has been delineated based on the magnetite grade interpolation; this closely matches the geological interpretation of stratigraphy. Figure 24 shows a plan view of the DTR block grades for the 45mRL and shows how the grade interpolation has followed the strike of the stratigraphy. The comparisons are reasonable and indicate no major issues with the modelling. *(zoom on figures for better resolution).*

Figure 22 Cross Section 20905mE Core West Area DTR Grade (HIO Drilling)

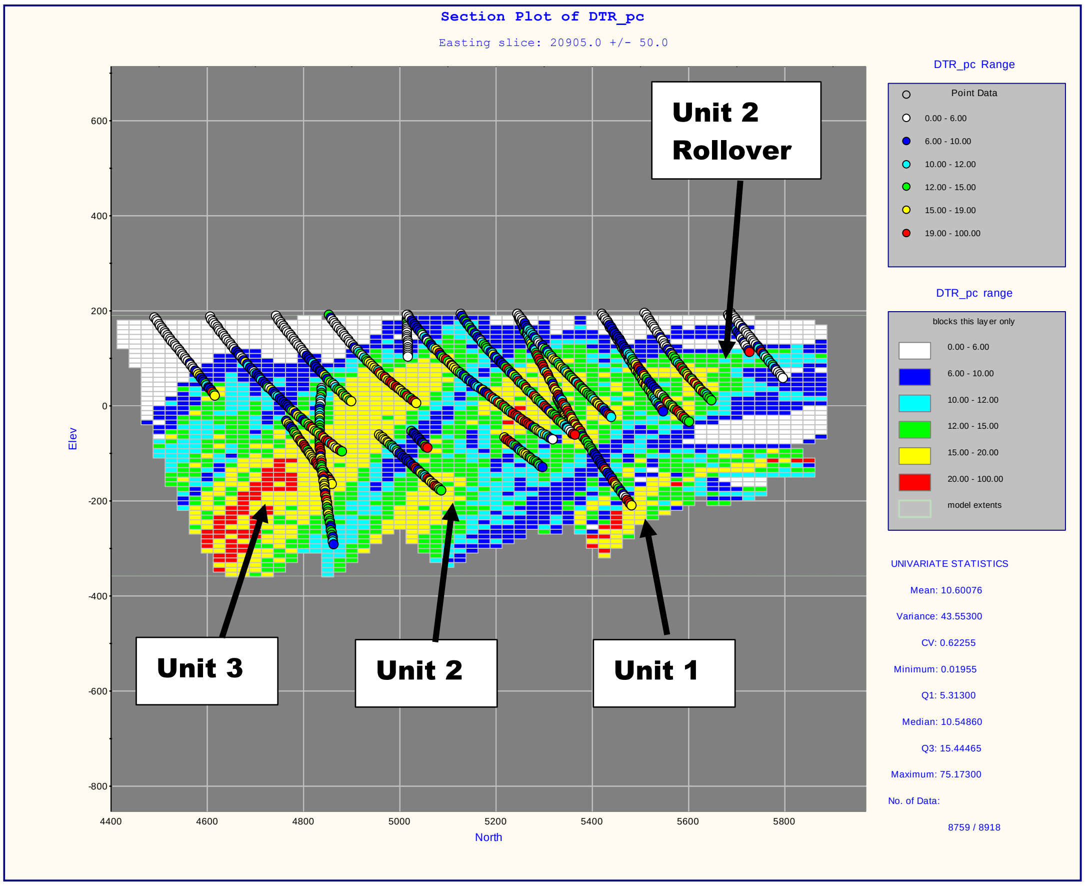


Figure 23 Cross Section 21005mE Core West Area DTR Grade (CAP Drilling)

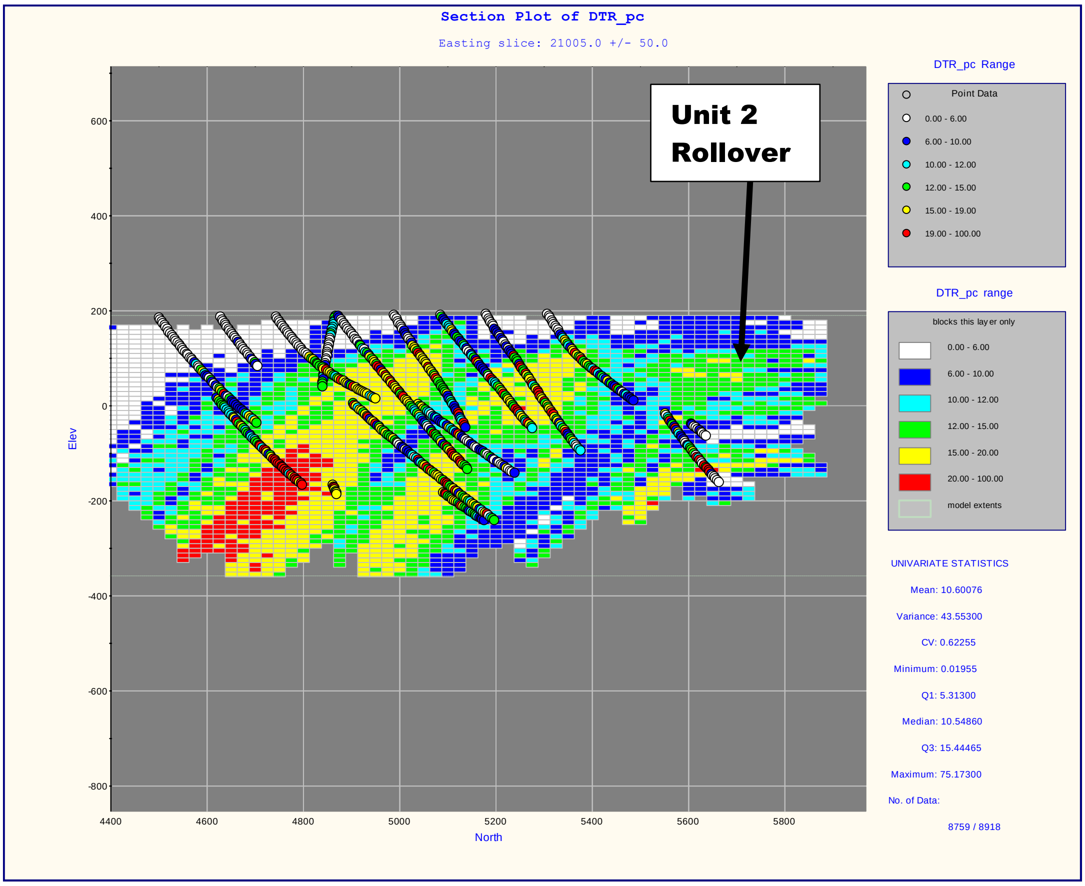


Figure 24 Level 45m RL

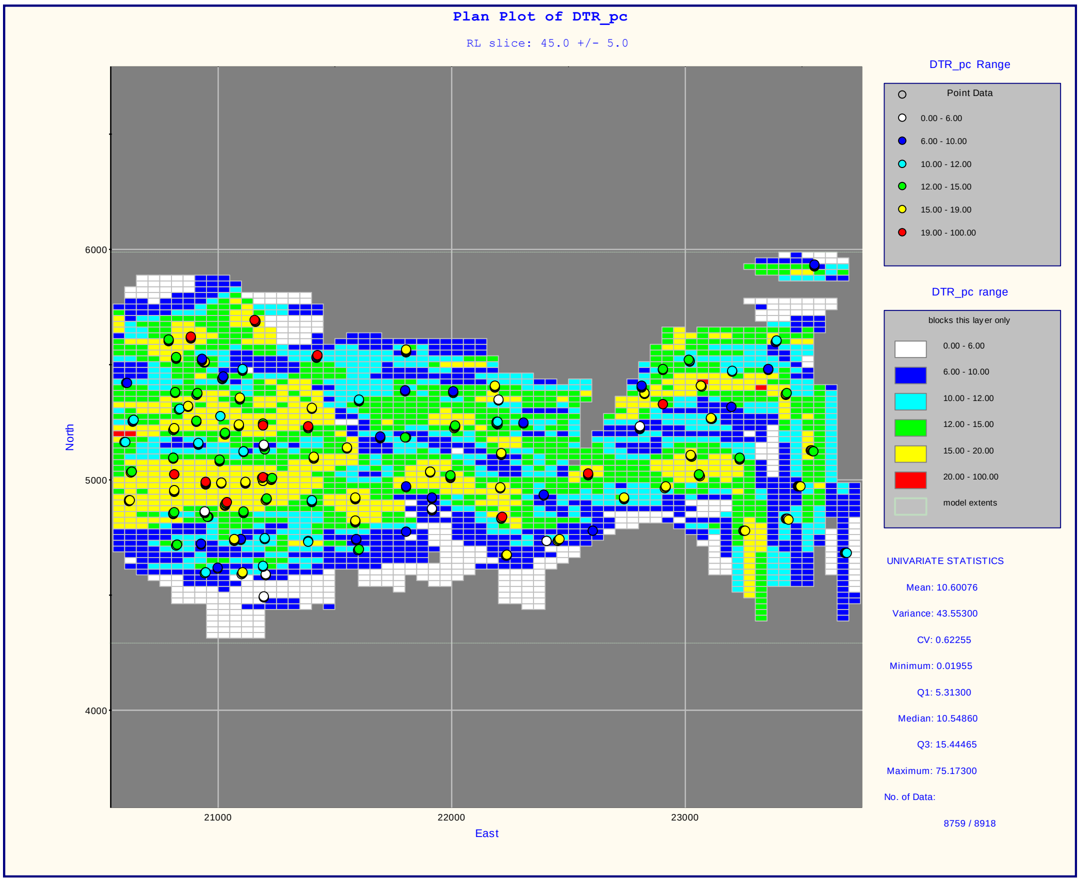


Figure 25 shows the global cumulative frequency curves for the DTR block grades against the 5m DTR composite values and indicates no issues with the modelling.

Figure 25 Cumulative Frequency Curves for DTR Blocks and Composites

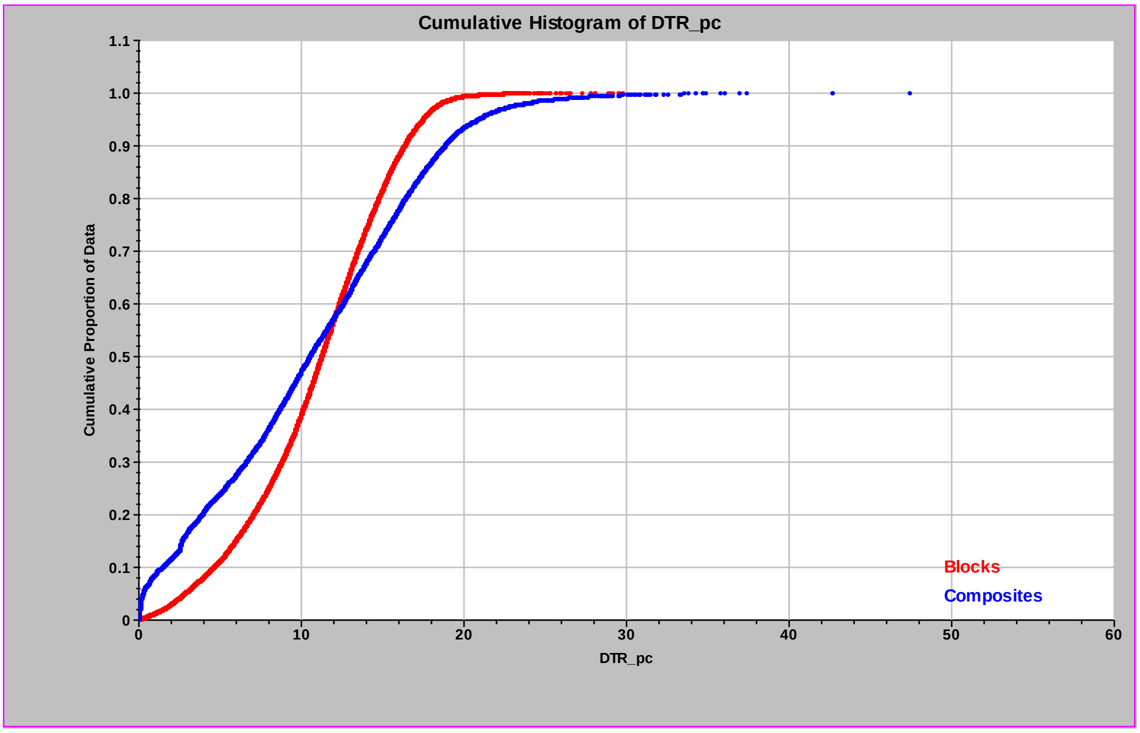


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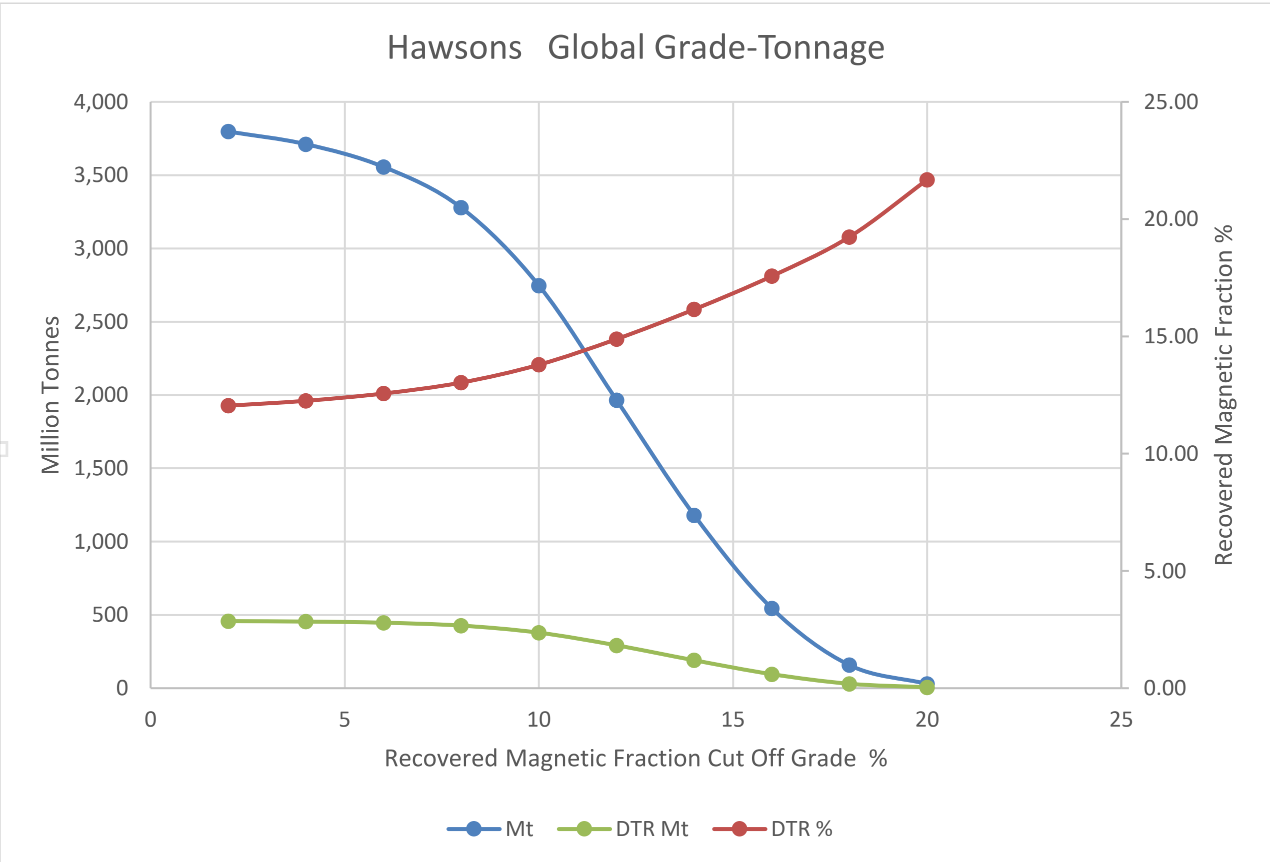
Table 11 shows the grade tonnage data for global resource estimates for fresh rock material for a range of cut off grades from within the supplied pit shell.

Table 11 Grade Tonnage Data

DTR cut off %	Mt	DTR %	Fe %	SiO_2 %	Al_2O_3 %	P %	S %	TiO_2 %	LoI %	DTR Mt
2	3,797	12.05	68.9	3.57	0.29	0.007	0.002	0.050	-2.88	457
4	3,711	12.25	68.9	3.57	0.29	0.007	0.002	0.050	-2.90	455
6	3,556	12.56	68.9	3.56	0.28	0.007	0.002	0.049	-2.92	447
8	3,278	13.03	68.9	3.55	0.28	0.006	0.002	0.049	-2.94	427
10	2,747	13.79	69.0	3.50	0.27	0.006	0.002	0.047	-2.95	379
12	1,966	14.88	69.1	3.41	0.26	0.006	0.001	0.045	-2.97	293
14	1,181	16.15	69.1	3.42	0.26	0.005	0.001	0.045	-2.97	191
16	545	17.57	69.0	3.54	0.26	0.006	0.001	0.046	-2.97	96
18	158	19.24	69.0	3.57	0.26	0.006	0.001	0.046	-2.98	30
20	30	21.68	69.9	2.62	0.20	0.001	0.001	0.037	-3.08	6

Figure 26 is a visual representation of the DTR grade-tonnage data for the global fresh rock resource estimates.

Figure 26 DTR Grade - Tonnage Curves



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Resource Classification

The classification of the resource estimates is primarily based on the pass category which in itself is a function of the data distribution i.e. the drillhole spacing. Other aspects that are taken into consideration include the style of mineralisation, the geological model, the quality of the supplied database, the QAQC programme and results and comparison with previous resource estimates. HIO has informed H&SC that the mining method will be a bulk mining method via an open pit operation and the resources have been classified according to this assumption. The allocation of Measured, Indicated and Inferred Resources in the block model from the pass categories is detailed in Table 12.

Table 12 Resource Classification

Search Pass	Classification
1	Measured
2	Indicated
3	Inferred
4	Inferred
5	Exploration Potential
6	Exploration Potential

Positive aspects for the resource classification include:

- Good understanding of the geological model and mineralisation style/nature, and thus the controls to mineralisation.
- Good drilling coverage for Indicated Resource at a nominal 200m spacing for the deposit with appropriate drilling methods i.e. RC & DD (inc DD tails).
- Accurate drillhole collar locations from using a DGPS.
- Downhole surveys were completed using appropriate downhole gyros to map out significant deviation in the holes.
- Infill HIO drilling that indicates a measure of the grade continuity, 70% variance in first 100-120m which is appropriate for Measured Resource.
- HIO analysis of the RC sample recoveries and DTR grade has been completed with no relationship noted. DD recoveries are very good.
- Ground magnetic data coincident with drilling DTR results allowing for definition of mineralisation limits.
- Appropriate analysis technique has been used i.e. Davis Tube Recovery and XRF analysis of the recovered magnetic fraction.
- QAQC data appears to indicate no bias issues with the sampling technique.
- Density data comprises 5m composites from short-spaced density measurements from the downhole geophysics that has been factored according to a suitable number of check measurements on diamond core samples.

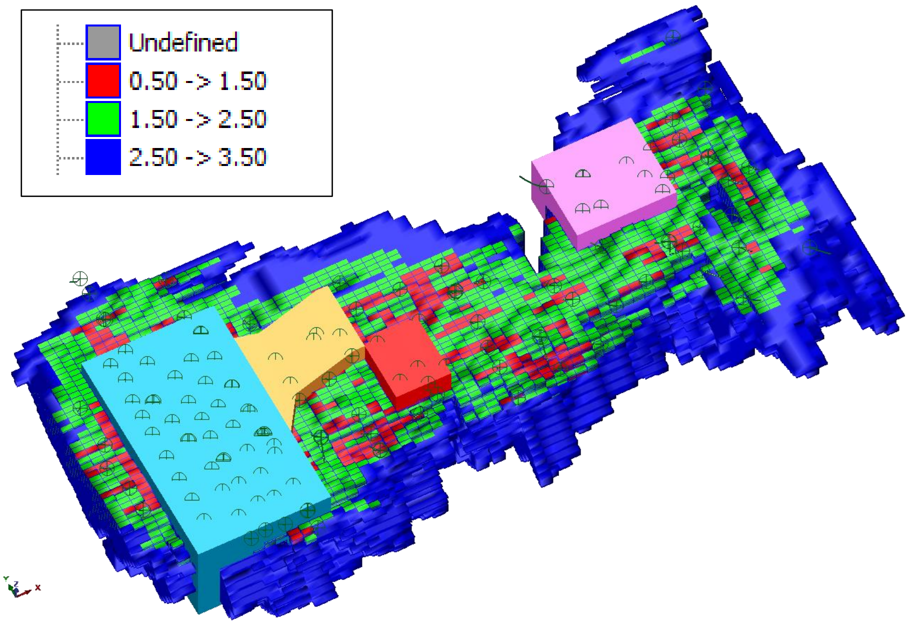
Negative aspects for the resource classification include:

- Wide drillhole spacing in a substantial part of the deposit.
- Approximately 25% of the HIO drillholes have no downhole surveys with default values used and therefore sample locations have some uncertainty.

- Approximately 30% of the HIO DTR data was unavailable necessitating use of regression equations with the downhole geophysics to estimate DTR and DTR concentrate grades.
- Some of the HIO downhole geophysics display unavailable data and anomalous data with the latter suggesting calibration issues. The issues impact on the regressions necessitating the use of handheld magnetic susceptibility data in some of the HIO holes.
- The oxide and transition zones had very limited sampling with the CAP drilling; regressions were used to estimate DTR grades, DTR concentrate grades and densities.
- The DTR head grade standard indicates under-reporting by approximately 4%. There are no high grade standard results. There are no standard results for the XRF analysis of the DTR concentrate.
- Concentrate silica assays for the Core East and Fold areas indicate a marked jump in average grade for the HIO fresh rock samples compared to the previous CAP work. This would suggest some issue with possibly the sample prep or the XRF silica analysis. If it is an issue with the sample prep that may affect the DTR grades and needs to be resolved.
- The sampling of drilled material across all drilling campaigns appears to have varied between spear sampling and free standing riffle splitting. Whilst the spear sampling appears to indicate no bias with the method some of the HIO QAQC sampling is rather inconclusive based on limited data. Spear sampling is not normally recommended by H&SC for resource estimation drilling.
- There were minor issues with the database that undermined confidence in the data, particularly inconsistent hole IDs and high grade below detection limit values for P, S and TiO_2.
- Comparison with previous estimates indicated significant changes in average DTR and DTR concentrate grades for the resource eg -6.6% for DTR, +26% SiO_2, +43% Al_2O_3.
- The QAQC programme is light on information in places, in particular there are no second lab checks, no lab 2nd pulp duplicates, no high grade standards.

A review of the Measured Resource block distribution highlighted modelling artefacts commonly referred to as the 'spotted dog' effect. The effect is multiple series of stripes of Measured blocks within Indicated blocks running along strike but separate to each other, sometimes wrapping around a single drillhole or sitting in between drillholes with no drillhole actually intersecting them. To deal with this H&SC created four Defined Shapes for the three structural domains. These shapes were used to maintain the Measured allocation of the blocks within them, but Measured blocks outside the shapes were reallocated to Indicated. Figure 27 shows the spotted dog effect and the Defined Shapes for fresh rock. The block colours are Measured (red), Indicated (green) and Inferred (blue)

Figure 27 Spotted Dog Effect & Defined Shapes for Measured Resource Material

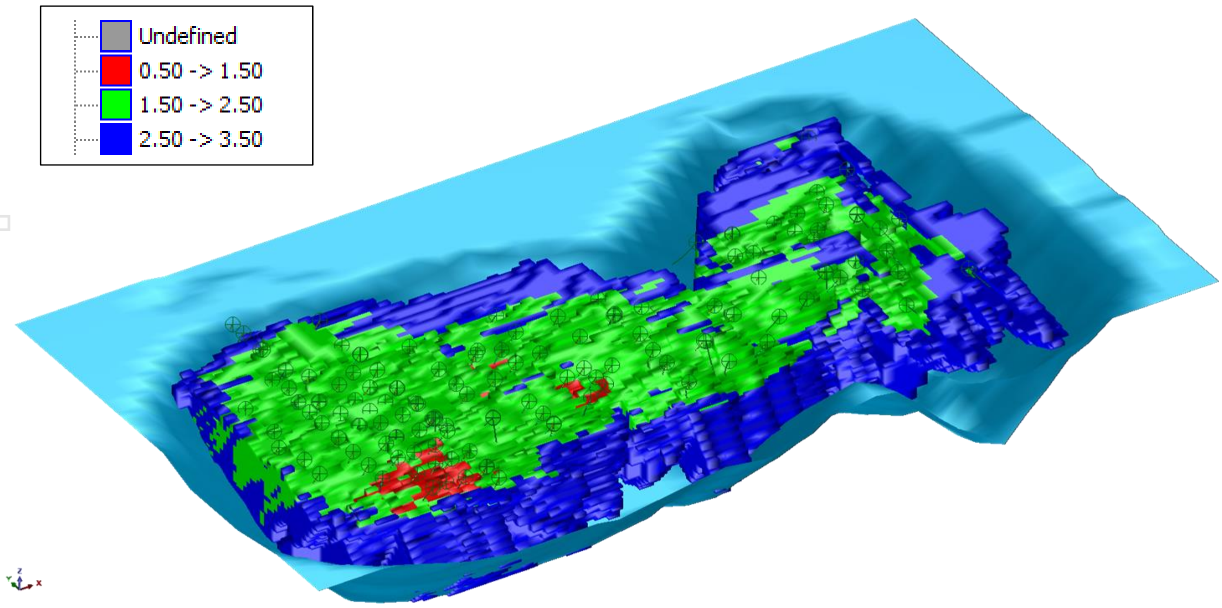


(green circles = drillhole collars)

In addition all Measured blocks within the oxide/transition zone were reclassified as Indicated due to the relative uncertainty of the data, the unavailable data and the use of estimated values for the 5m composites.

Figure 28 shows the classification of the Mineral Resources in relation to the supplied pit shell for all oxidation levels.

Figure 28 Mineral Resource Classification and the Supplied Pit Shell



As a result of the above classification Table 13 contains the new updated Mineral Resources for the Hawsons Magnetite Project. The estimates are reported for a 6% DTR cut off, as advised by HIO, including oxide/transition material above the supplied pit shell surface (Pit G).

Table 13 Hawsons 2022 Global Mineral Resources

Category	Mt	DTR %	DTR Concentrate Mt	Density t/m³
Measured	390	13.7	54	3.09
Indicated	1,600	12.0	193	3.05
Inferred	1,960	12.2	239	3.16
Total	**3,950**	**12.2**	**484**	**3.11**

(minor rounding errors)

Concentrate Grades							
Category	Fe %	SiO_2 %	Al_2O_3 %	P %	S %	TiO_2 %	LOI %
Measured	69.6	2.8	0.22	0.004	0.001	0.042	-3.0
Indicated	69.0	3.3	0.27	0.007	0.003	0.051	-2.8
Inferred	68.6	3.8	0.31	0.008	0.002	0.052	-2.9
	68.9	**3.5**	**0.29**	**0.007**	**0.002**	**0.051**	**-2.8**

Comparison with the 2021 Mineral Resource update indicates a 29% increase in the size of the resource with a 21% increase in DTR tonnes. The increased resource was accompanied by a 6.5% drop in the DTR grade with a 1.3% drop in iron concentrate grade to 68.9%. The increase in size is due to the additional drilling that converted previous exploration potential to Mineral Resource, the inclusion of more lower grade oxidised material and the inclusion of the newly confirmed Unit 2 rollover extension in the NW of the deposit. Also of note is a marked increase in the silica grade of the concentrate product, up from 2.8% to 3.5%. This increase in grade has come from the recent HIO drilling of the Core East and particularly the Fold area. The change in grade is probably worth further inspection although HIO has informed H&SC that the change in grade is not significant to its product specifications. Measured and Indicated Resources increased by 108% in size with an 86% increase in DTR tonnes and a 10% drop in DTR grade, all due to the infill drilling.

For a more direct comparison with earlier estimates Table 14 contains the Mineral Resources for the fresh rock material using the same reporting constraints.

Table 14 Hawsons 2022 Fresh Rock Global Mineral Resources

Category	Mt	DTR %	DTR Concentrate Mt	Density t/m³
Measured	390	13.7	54	3.09
Indicated	1,320	12.6	166	3.10
Inferred	1,840	12.3	227	3.17
Total	**3,550**	**12. 6**	**447**	**3.14**

(minor rounding errors)

Concentrate Grades							
Category	Fe %	SiO_2 %	Al_2O_3 %	P %	S %	TiO_2 %	LOI %
Measured	69.6	2.83	0.22	0.004	0.001	0.043	-3.0
Indicated	69.1	3.38	0.27	0.006	0.003	0.049	-2.9
Inferred	68.7	3.85	0.31	0.007	0.002	0.051	-2.9
Total	**68.9**	**3.56**	**0.28**	**0.007**	**0.002**	**0.049**	**-2.9**

Figure 29 shows the DTR block grade distribution for the fresh rock Mineral Resources at a 6% DTR cut off within the supplied pit shell.

Figure 29 Mineral Resource Estimates - DTR Block Grade Distribution Fresh Rock

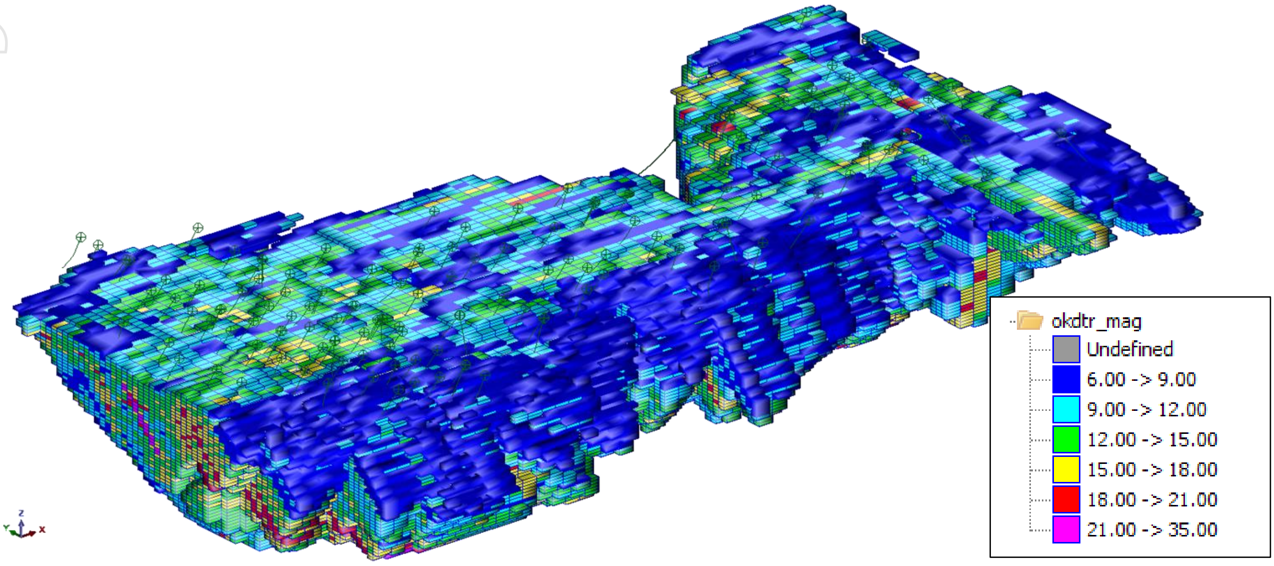
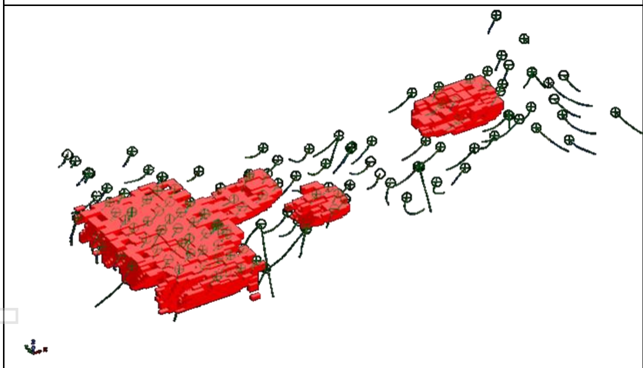
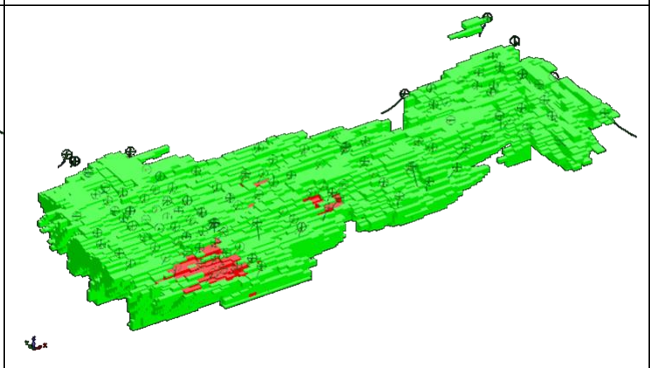
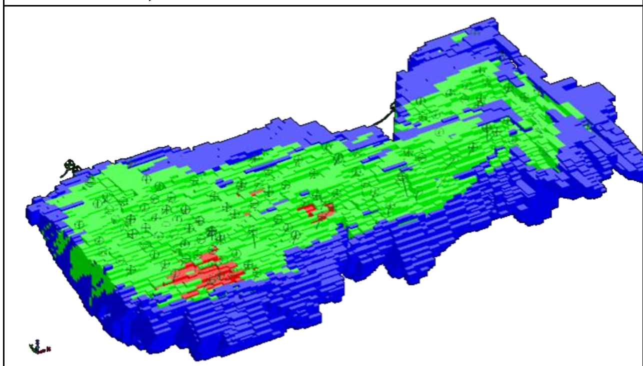
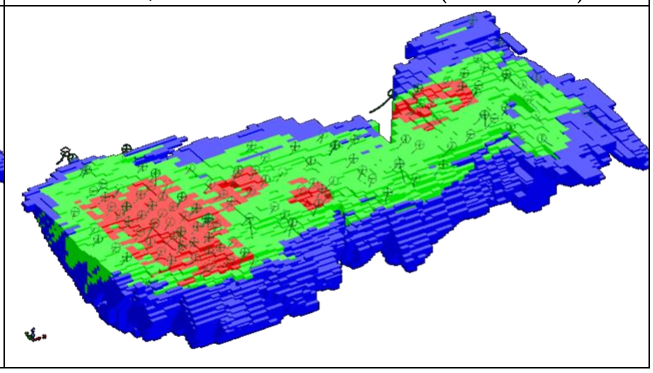


Figure 30 shows the distribution of the Mineral Resource classification.

Figure 30 Classification of the Resource Estimates

Measured	Measured & Indicated
	
Measured, Indicated & Inferred	Measured, Indicated & Inferred (fresh rock)
	

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The 2021 Mineral Resources are included in Table 15 for comparison with the new estimates. The 2021 estimates were reported from the June 2017 model for a 6% DTR cut-off grade, with no constraints for oxidation level or pit shell.

Table 15 2021 Global Mineral Resources

Category	Mt	DTR %	DTR Concentrate Mt	Density t/m³	Fe Head %
Indicated	960	13.7	132	3.03	17.3
Inferred	2,100	12.9	268	3.02	16.6
Total	**3,060**	**13.1**	**400**	**3.02**	**16.8**

	Concentrate Grades					
Category	**Fe %**	**SiO_2 %**	**Al_2O_3 %**	**S %**	**P %**	**LOI %**
Indicated	69.9	2.6	0.19	0.002	0.003	-3.0
Inferred	69.7	2.8	0.20	0.003	0.004	-3.1
Total	**69.8**	**2.8**	**0.20**	**0.003**	**0.004**	**-3.0**

The major difference with the 2022 estimates, apart from the increase in size of the latter, is the increase in the SiO_2 (and Al_2O_3) content of the concentrate material with the new estimates. The increases appear to be related to Core East and Fold areas and warrant further investigation.

JORC Code, 2012 Edition – Table 1 Hawsons Magnetite 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 (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 submarine nodules) may warrant disclosure of detailed information.*	• Samples were taken from drillholes with a mixture of: ○ Reverse Circulation (RC) from surface to total depth (TD). ○ RC to max drill depth and diamond tails to TD. ○ Fully cored diamond from surface (DD) to TD. • Previous drilling includes a total of 73 drillholes for 21,429.5m that occurred in two main phases in 2010 (RC & DD) and 2016 (RC). ○ For the 2010 RC drilling, sampling comprised 2m to 10m 3kg composite samples. ○ The 2016 sampling comprised 5m composites generating 6kg of sample. All samples were pulverized to produce 150g aliquot for X-Ray Fluorescence (XRF) and Davis Tube Recovery (DTR) analysis. ○ Diamond core sampling (predominantly NQ core) involved sawing half core samples to produce an 8m composite sample which was pulverized to produce a 150g aliquot for XRF and DTR analysis. ○ Geophysical logging was completed for a majority of holes and consisted of natural gamma, magnetic susceptibility, density and calliper readings • During the 2021-22 drilling program a further 67 holes were drilled for 25,094.17m of RC spoil and core. Full assay data sets for 33 of these drillholes were received by the cut-off date of 15th June 2022 for this Resource update. ○ The RC components of the drillholes were used to obtain 1m bulk samples. ○ The 1m bulk samples were sub-sampled via spear sampling into 5m composites of approximately 5kg in order to obtain manageable sample sizes for laboratory sample prep and assaying. ○ QAQC riffled samples were taken from a selection of holes across the site to verify the validity of the spear-sampling method (McMahon, 2022). See Appendix 2 in the Report on Exploration Results attached to this document. ○ Diamond core (all HQ3) were sampled by sawing the core into half and then one half into half again to give quarter core samples.

Criteria	JORC Code explanation	Commentary
		These quarter core samples were used to produce 5m composite samples which were then pulverized at the laboratory to produce a 150g aliquot for XRF and DTR analysis. • Holes were drilled as perpendicular to bedding as possible to obtain as representative samples as possible. • Geophysical logging was completed for a majority of holes presented in this data set, including logs of natural gamma, magnetic susceptibility, density and calliper data. • Consistency of sampling method was maintained. • The sampling technique is considered appropriate for a deposit type with all sampling to industry standard practice.
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, etc).*	• The RC drilling for 2010 was carried out using a truck mounted Schramm and truck mounted KWL 1600H. Both rigs used 4.5" rods and 5.5" face bits. • PD and DD drilling was carried out using a truck mounted UDR650 using NQ2 and standard HQ diameters. Core orientation used the Ace Core orientation tool. • For the 2016 drilling (all RC drilling) truck-mounted Sandvik DE 840 (UDR1200), UDR1000 and Metzke rigs were used. All rigs used 4.5" rods with 5.5" face bits. • The RC drilling for 2021-2022 was carried out using the following truck mounted drill rigs: o Sandvik UDR 1200HC o Sandvik UDR 1000 o Both rigs used 4.5" rods and 5-5/8" face bits. • The DD drilling was carried out using a range of truck-mounted drill rigs, including: o Two x Sandvik UDR 1000 o Sandvik UDR 1200 o Bournedrill L1000THD o Boart Longyear KWL 1600. • All core drilled was HQ3 diameter. A range of core orientation tools were used on geotechnical core, they include: o Reflex Act III o Boart Longyear TruCore o Boart Longyear TruShot

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.*	• Sample recoveries were recorded for the 2021/2022 RC program for an investigation of RC recovery versus DTR grade indicated no sampling bias of significance. • Core recoveries were recorded by measuring the length of core recovered in each drill run divided by the drilled length of the individual core runs.
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.*	• Geological logging of chips/core/rock samples is qualitative by nature. • For the 2021-22 program, every RC and DD drillhole was lithologically logged by a geologist and entered into iGloo, a tablet-based geological logging program recording; recovery, moisture, oxidation state, colour, magnetite %, hematite %, martite %, vein composition and %, gangue min, sulphide min. Data was validated against a company lithological dictionary and uploaded to a SharePoint cloud-based file storage facility. This data was then loaded into the proprietry Lab-In database software system. • Geological and defect logging was completed on all core holes drilled and is considered of appropriate detail to be utilised in future studies. • RC drill chips were wet sieved from each one-meter sample and geologically logged and codes digitally recorded onsite. Washed drill chips from one-meter intervals are stored in chip trays. • Processing of drillcore included core orientation (Geotechnical and minimal resource definition core), half meter marking, magnetic susceptibility measurements (every 0.1m), core recoveries, rock quality designation (RQD). All drill core was photographed wet and dry after logging and before cutting, these images represent quantitative records. • Handheld magnetic susceptibility was recorded using a CormaGeo RT-1 Magnetic Susceptibility Meter with inbuild data logger. Three measurements were recorded on each RC sample bag (top, middle & base), then averaged to give a single 1m quantitative measurement. • Handheld magnetic susceptibility measurements were taken at 10cm intervals along core (see the magnetic susceptibility data in the lithology log in Appendix 1, Table 3 in the Report on Exploration Results attached to this document).
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.*	• The 2010 RC samples were composited using geological control via the spear sampling method of the 1m bulk sample bags. The spear method was concluded by CAP to be adequate based on the results of a handheld XRF orientation exercise. The green plastic bags were

Criteria	JORC Code explanation	Commentary
	• *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.*	speared from a range of angles to the bottom of the bag to ensure a representative sample. The compositing produced a 2m to 10m 3kg sample for laboratory analysis at ALS Labs in Perth. • The 2016 RC samples were split using a riffle splitter (no details of type used) that produced a 1/16th split taken from the rig every metre and then composited to 5m intervals by splitting again using a 50/50 splitter to give a 6-7kg sample. • The 2010 work employed field duplicates (23 x 5m samples) using the spear sampling technique which on analysis produced acceptable results. • The 2016 work had a much more comprehensive QAQC programme which included 87 field pairs (not actual duplicates unfortunately) at an insertion rate of 1 in 10, 111 lab duplicates and 39 blanks (river sand) at an insertion rate of 1 in 20, 58 2nd lab checks (Intertek Labs in Perth), pulp duplicates for XRF analysis and sample prep checks. • The 2021/2022 RC samples were split using a 1/8th-7/8th riffle splitter placed under the rig cyclone every metre and then composited in 5m intervals using the spear sampling method implemented in 2010. • DD core was cut perpendicular at start and end of sample interval and cut longitudinally in quarter for geochemical sampling. Where a hole is to be utilised for metallurgical work, it is drilled HQ diameter and then quartered, with a quarter core interval submitted for assay, and half core submitted for metallurgical work. • Sample Prep was completed at Bureau Veritas Laboratories Adelaide • Crush the sample to 100% below 3.35 mm. • A 150 g sub-sample for pulverizing in a C125 ring pulveriser (record weight) – DTR SAMPLE. • Initially pulverize the 150 g sample for nominal 30 seconds – the sample is unusually soft for a ferro-silicate rock. • Wet screen the DTR sample at 38 micron pressure filter and dry, screen at 1 mm to de-clump and re-homogenize. • Record the oversize weights – if less than approximately 20 g is oversize, stop the procedure – failure. • If failure - select another 150 g DTR Sample and reduce the initial pulverization time by 5 secs, repeat until initial grind pass returns greater than approximately 20 g oversize. Once achieved retain the –38 micron undersize. • Regrind only the oversize for 4 seconds of every 5 g weight of oversize.

Criteria	JORC Code explanation	Commentary
		• Repeat the wet screening, drying, de-clumping & weighing stages until less than 5g above 38micron remains. • Ensure the remaining < 5 g oversize is returned back into the previously retained -38 micron product. • Report the times and weights for each grind pass phase. • Combine and homogenize all retained -38 micron aliquots and <5 g oversize –final pulverized product. Sub-sample the final pulverized product to give a 20 g feed sample for DTR work and a ~10 g sample for HEAD analysis via XRF fusion.
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 laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• Field duplicates defining total precision / primary sampling error outcomes showed relative precision and bias which were acceptable compared with the limits defined for Davis Tube Recovery Magnetics% (DTR Mags%) and Head Iron % (Head Fe%). • Field pairs defining field halving precision / primary sampling error outcomes showed relative precision and bias which were acceptable compared with the limits defined for DTR Mags% and Head Fe%. • The OREAS 700 Certified Reference Materials (CRM's) defining analytical precision / analytical error outcomes showed relative precision and bias which were acceptable compared with the limits defined for Head Fe%. • The OREAS 700 Certified Reference Materials (CRM's) defining analytical precision / analytical error outcomes showed relative precision which was acceptable compared with the limits defined for DTR Mags%. • The OREAS 700 Certified Reference Materials (CRM's) defining analytical precision / analytical error outcomes showed relative bias which was not acceptable compared with the limits defined for DTR Mags%. • The absolute bias was calculated at -0.5%. That is, 0.5% lower DTR outcomes. • The testing laboratory was made aware of this difficulty early in testing via data processing checks and maintained that the outcomes were due to the supplied OREAS 700 mass of 50 grams being lower than the DTR test mass requirement of 150 grams. • Hawsons will investigate further including supplied sample mass requirements and effects for future programs. • The OREAS 700 CRM testing on testing of the Head Sample (ore) for elemental oxides and elements of SiO_2, Al_2O_3, P, S, TiO_2 and LOI

Criteria	JORC Code explanation	Commentary
		(Loss on Ignition) either had precision and bias outcomes or control limits met jointly or in at least one instance. • Laboratory duplicates were tested for Head Iron (Fe%) for the measurement component (XRF measuring device) were from the same prepared sample and were found to be in accord with required analytical precision limits. • Blanks were found to be in keeping with ranges observed in the 2016 program for DTR Mags% and Head Fe%.
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.*	• For the 2021-22 exploration program, a file based database system was used "Lab-In" which utilised import and export tools that also validated and formatted the data. Data inputs for lithology, geochemistry and geophysics were utilised. Heading checks on each file were enacted via the software and once flagged corrections made in the input forms to ensure correct allocation of outcomes. Data was verified maximum / minimum value checks, sample advice to report reconciliation, dictionary checks and text value checks. Clean validated files once available were automatically uploaded to the database.
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.*	• For the 2010 and 2016 programs, drillhole collars were surveyed by a local accredited surveyor using a Differential GPS with accuracy to less than 1 metre. • Coordinates were supplied in GDA 94 – MGA Zone 54. H&SC used a local grid conversion which involved rotating the drilling data 320o in a clockwise direction to give an orthogonal E-W strike to the mineralisation. • Down hole surveys for the 2010 drilling were initially recorded as single shot digital displays and were then recorded using a gyroscope due to the highly magnetic nature of the deposit. All the 2016 drillholes had downhole surveys measured using a gyroscope. • It is noted that the downhole surveys in the database for the 2010 drilling consisted of 30 to 60m spaced single shot camera surveys and not the gyro data due to limitations with the gyro data as result of hole collapse and reluctance of the contractor to send the probe to the full hole depths. • For the 2021-22 exploration program, drillhole collars were surveyed by a local accredited surveyor using ALTUS APS-3 RTK (Real Time Kinematic) GPS units in differential mode, which provided an accuracy of some 2 to 3 centimetres in horizontal and vertical measurements. • Current GDA94 coordinates of existing permanent control point HK1 at the exploration site were utilised as a basis for the surveys.

Criteria	JORC Code explanation	Commentary
		• Coordinates were supplied in both GDA94 – MGA Zone 54 and GDA2020 – MGA Zone 54. HIO is now operating in GDA2020 – MGA Zone 54 and is using this as standard. • Due to the highly magnetic nature of the mineralisation, down hole surveys for the 2021-22 drilling were measured using a gyroscope where possible. • Due to hole conditions (wall cave) in 4 drillholes, a multi shot downhole camera survey was utilised because gyro surveys were not feasible. Difficulty with getting the tool down the hole because of hole cave meant that some holes could not be logged along their entire length. • A 3D check plot of five holes indicated minimal deviation for the common downhole lengths between the single shot and gyro data. Hole deviation appeared to increase at significant distances but this is associated with a 'run over' projection of the gyro data. • Because of the cut-off date for this round of geology model update, several holes had not yet been logged and gyro data sets were not available for these. • Topographic control was maintained using data control points set out by an accredited local surveyor. In 2021, a LiDAR survey was conducted to better constrain the local topography. • The DGPS location methods used to determine accuracy of drillhole collars are considered appropriate.
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 200m in section and plan, and extends to 400m on the periphery of the drilled area within the proposed pitshell • In 2021-22, closer spaced drilling on approximately 100m centres was completed within the Core West area and the drill spacing was deemed adequate for the interpretation of geological and grade continuity for the stratigraphic homogeneity associated with the style of mineralization along strike. • The data spacing is deemed appropriate for Mineral Resources and their classification. • The 2021/22 RC and DD samples were composited to 5m intervals along the hole length.
Orientation of data in relation to	• *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*	• In the Core East and Core West portions of the deposit, angled drilling commenced at -55° dip and a hole azimuth of 040 degrees True. This was targeted to intersect geological strike and bedding dip of the sediment-hosted ore body as close to perpendicular as possible.

Criteria	JORC Code explanation	Commentary
geological structure	*sampling bias, this should be assessed and reported if material.*	• In the Fold portion of the deposit, the strike of the ore bedding is controlled by folding of the sedimentary sequence. The azimuth of drillholes was altered accordingly with the varying strike of the ore body, again to intersect bedding as close to right angles as possible.. • Locally, holes suffered directional deviation to the east with depth. Deviation in inclination was also observed, typically causing shallowing of the drillhole and this increased with depth. The affect was more pronounced the lower part of Unit 2 more than in the upper part of Unit 3. • Drilling orientations are considered appropriate and display no bias. • The drilling dip and azimuths made it challenging to intersect the cross-cutting fault structures as the drilling was often sub-parallel to these features. One drillhole was designed to intersect the NW magnetically inferred fault. It has provided a preliminary assessment of the impact that local fault systems have on magnetite grade through zones of structural deformation and penetrative oxidation. • An Excel spreadsheet containing identified fault intersections in a number of holes has been made available to the geotechnical engineers and hydrogeologist for further design work.
Sample security	• *The measures taken to ensure sample security.*	• All samples were bagged using industry standard UV resistant thermoplastic Samplex bags and stored on site under the supervision of an HIO representative. Samples were combined into polyweave bags and were dispatched to the HIO yard in Broken Hill on a weekly basis and were accompanied by a manifest. • The polyweave bags of samples were then loaded onto a hardwood pallet and pallet wrapped and secured to ensure no loose material could shift, these were then transported to the laboratory via a trusted freighting network company. • Chain-of-custody documentation was utilised to track the transport of all samples to the BV Adelaide laboratory.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• An audit on sample tracking/arrival, sample preparation and analysis procedures was conducted by Wes Nichols on 01/12/2021 at the Bureau Veritas Laboratory at Wingfield in Adelaide. While the equipment and procedures were observed for XRF analysis during this audit visit, no samples were ready to be analysed via XRF at that date. • The lab procedures observed were considered to be appropriate and followed the applicable standards. • Chris McMahon (McMahon Resources) completed a review of the sampling and assaying for the 2021-22 drilling program data. An

Criteria	JORC Code explanation	Commentary
		excerpt from his report is included in Appendix 2 in the Report on Exploration Results attached to this document..

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 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 wholly owned by Hawsons Iron Ltd (HIO). HIO currently manage the project. • The project area is entirely within Exploration Licences (ELs) 6979, 7208 & 7504. Hawsons is the sole tenure holder of these ELs. • Licence conditions for all ELs have been met and are in good standing. • An application for a Mining Lease (ML) was lodged with the NSW Trade & Investment Department in October 2013 and HIO is not aware of any impediments to obtaining a mining lease. MLA460 remains in force.
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. • in 1984, CRAE completed five holes within EL 6979 seeking gold mineralisation in a second-order linear magnetic low. This 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. • Carpentaria Resources (CAP) completed drilling programs in 2009, 2010 and 2016.
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}), primarily to the south west. 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

Criteria	JORC Code explanation	Commentary
		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. Mineral Resources 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 magnetite is believed to be due to one or more of a range of possible processes including in situ recrystallisation of 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. Sediment composition and grain size appear to be the main controlling factors of mineralisation. There is no evidence of 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 southeast and dip between 45° and 65° to the southwest. 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.*	• Appropriate tabulations of drill results are available as Excel spreadsheets and examples are included in Appendix 1 in the Report on Exploration Results attached to this document. • Because of the potential for mineralisation in the upper oxidised zone, the entire hole length was considered to be the intercept interval.

Criteria	JORC Code explanation	Commentary
	• *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.*	
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 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.*	• All RC samples were collected on 1m intervals • Each 1m interval was carefully speared and then aggregated into 5m intervals. • ¼ core samples were aggregated into 5m intervals • 1cm downhole density logs were aggregated over the length of each sample that was used to determine a relationship with specific gravity. This was then extrapolated down the hole lengths to estimate gravity from geophysical logs.
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').*	• Drilling is predominantly NE steeply dipping, perpendicular to the SW steeply dipping nature of sedimentary beds. Drilling is SE steeply dipping, perpendicular to the NW dipping nature of beds in the SE limb of the "Fold" zone. • Mineralisation exists from the surface for the full length of drillholes and this constituted the intercept lengths. See Appendix 1, Table 1 in the Report on Exploration Results attached to this document.
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.*	• Appropriate plans and tabulations are included as an attachement.
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.*	• Comprehensive reporting is not practicable. • Examples of data are included in the Appendices.
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.*	• A geotechnical report was furnished by Gutteridge Haskins and Davey (GHD) in 2019 titled "Carpentaria-Hawsons Iron Ore project 2017 Prefeasibility Study Geotechnical Assessment." This study was completed via a staged approach in order to progressively improve the level of Geotechnical understanding for the PFS and to identify gaps that needed to be addressed. • In the 2021-2022 exploration program, Pells, Sullivan & Meynink (PSM) are undertaking the geotechnical design study for pitwall stability and to fill the gaps outlined in the GHD report. This report is not yet at hand. • 11 cored holes were nominated by PSM to generate the data for

Criteria	JORC Code explanation	Commentary
		geotechnical analysis that will feed into mine design. Of these holes, 3 were fully cored and the remainder were cored from depths nominated by PSM to total depth. • A specialist PSM geotechnical geologist logged and sampled the core and the samples were transported to Trilab in Brisbane for testing. • The majority of samples were analysed for Uniaxial Compressive Strength (UCS), Young's Modulus and Poisson's Ratio. Selected samples were submitted for shear box testing. • A substantial amount of downhole geophysics data was logged throughout the 2021/2022 drilling program, comprising magnetic susceptibility, natural gamma, density and resistivity data. This has been utilised to define the magnetic (and density related) stratigraphy that is coincident with a chronostratigraphic interpretation. Sonic velocity and acoustic televiewer data was also collected to aid in structural interpretation necessary for pit wall stability investigation. • Acoustic Televeiwer (ATV) logs were run for holes where hole cave and other geological conditions did not compromise logging. • Analysis of geotechnical results/findings is in progress and the results will be reported when they come to hand. • PSM performed a preliminary desktop study on terrain assessment in December 2021 and then proposed a geotechnical test pitting program to cater for construction of civil infrastructure. Several of these test pits have been cleared for excavation works and sampling and this program is expected to proceed in the second half of 2022.
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.*	• Drilling in the 2022-23 period is being considered to determine extents of the ore body outside of the current main drilling pattern. • Geophysical surveys are being considered to help identify structural features and the lateral extents of the mineralized zone. • Sterilisation holes are being planned to positively identify that ore potential doesn't exist under planned infrastructure. • Test pits have been planned to determine the geomechanical properties of the surface material to determine what is required to support infrastructure.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, 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.* • *Data validation procedures used.*	• Independently customised 2016 Access database by GR-FX Pty Ltd for CAP was supplied to H&S Consultants (H&SC). • Validation of CAP database was undertaken by Keith Hannan of Geochem Pacific Pty Ltd, an independent consultant. Additional validation completed by H&SC in 2017. • Database for new HIO data was compiled by independent database manager Chris McMahon of McMahon Resources.An Excel based database system (Lab-In) was used by HIO which utilised import and export tools that also validated and formatted the data. Data inputs for lithology, geochemistry and geophysics were utilised. Heading checks on each file were enacted via the software and once flagged corrections made in the input forms to ensure correct allocation of outcomes. Data was verified maximum / minimum value checks, sample advice to report reconciliation, dictionary checks and text value checks. Clean validated files once available were automatically uploaded to the database. • H&SC completed some independent validation of the new data to ensure the drill hole database is internally consistent. Validation included checking that no assays, density measurements or geological logs occur beyond the end of hole and that all drilled intervals have been geologically logged (not the case). The minimum and maximum values of assays and density measurements were checked to ensure values are within expected ranges (some density and magnetic susceptibility data was suspect). Further checks include testing for duplicate samples and overlapping sampling or logging intervals • H&SC takes responsibility for the accuracy and reliability of the CAP data used in the Mineral Resource estimates. • HIO takes responsibility for the accuracy and reliability of the HIO data used in the Mineral Resource estimates. • H&SC created a local E-W orthogonal grid for all interpretation and modelling work. • The deadline date for HIO to report the Mineral Resources meant that a significant amount of data for the new drilling was not available. This will be addressed in an updated Mineral Resource estimate in

Criteria	JORC Code explanation	Commentary
		September 2022.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• Regular site visits were completed by HIO's Competent Person for Exploration Results throughout the 2020/2021 exploration program. • Regular site visits were completed by CAP's Competent Person for Exploration Results for the period 2009 to 2017. • A site visit was undertaken in 2012 by Simon Tear of H&SC, Competent Person for the CAP Exploration Results and the reporting of the new Mineral Resources. The visit included geological logging of diamond drillhole DD10BRP023 covering over 500m of stratigraphy and an inspection of drill sites and outcropping mineralisation.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The broad geological interpretation of the Hawsons deposit is relatively straightforward and reasonably well constrained by drilling and the high amplitude airborne and ground magnetic anomalies. • The mineralisation is stratabound as disseminated grains of magnetite associated with interstitial porosity of the clastic sediments with no obvious structural remobilisation or overprint. Mineralisation exhibits relatively poor downhole continuity with zones of variable magnetite grade (a function of the clastic grain size and composition) but in most instances the contacts between higher and lower grade mineralisation are gradational and precludes the use of hard boundaries as stratigraphic controls to mineral grade interpolation. • The downhole geophysical data, gamma and magnetic susceptibility, has been used in conjunction with DTR recovered magnetic fraction grades to produce a detailed geological interpretation and to the generation of a set of 3D wireframes representing variously mineralised units that provide a stratigraphic framework to the deposit. • The consistency of the geophysical patterns for the sediments provides for a high level of confidence in the stratigraphic interpretation. • Two main cross faults, possibly a conjugate pair, have been interpreted and are believed to have caused small offsets in the mineral-bearing stratigraphy. The faults have been used to delineate three structural domains. The exact orientation of the faults is unknown with the interpretation based on magnetic anomaly discontinuities. • H&SC used the geological logs of the drill holes to create a wireframe surface representing the base of colluvium. • H&SC also used the geological logs of the drill holes to create wireframe surfaces representing the base of complete oxidation (BOCO) and the top of fresh rock (TOFR). The new drilling has indicated that magnetite mineralisation can extend up into the

Criteria	JORC Code explanation	Commentary
		oxide/transition zones as remnant mineralisation. As a result the Cover, BOCO and TOFR surfaces were not treated as hard boundaries in the grade interpolation. • Any additional faulting in the deposit is assumed to be insignificant relative to the resource estimation. • H&SC is aware that alternative interpretations of the mineralised zones and faults are possible but consider the wireframes to adequately approximate the locations of the mineralised zones for the purposes of resource estimation. Alternative interpretations may have a limited impact on the resource estimates.
Dimensions	• *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.*	• The Mineral Resources have a strike length of around 3.3km in a south easterly direction. The plan width of the resource varies from 700m to 1.9km with an average of around 1.1km (noting the relatively moderate dip angle of the beds). The upper limit of the mineralisation is exposed in the SE of the deposit with the fresh rock generally occurring between 25 and 80m below surface (average 65m) and the lower limit of the Mineral Resource extends to an approximate depth of 550m below surface (-360mRL). • The lower limit to the Mineral Resource is a direct function of the depth limitations to the drilling in conjunction with the search parameters. The mineralisation is open at depth and to the south beyond the Fold area (Limb).
Estimation and modelling techniques	• *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.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.*	• The drilling data was transposed to an E-W orthogonal local grid to facilitate geological interpretation and grade interpolation. • Ordinary Kriging with multiple search domains was used to complete the estimation using H&SC's in-house GS3M modelling software. The geological interpretation and block model creation and validation was completed in the Surpac mining software. H&SC considers Ordinary Kriging to be an appropriate estimation technique for the type of mineralisation and extent of data available from the Core and Fold prospects. All data have low coefficients of variation, generally <1. • Two main cross faults have been interpreted to have caused small offsets in the mineral-bearing stratigraphy. These faults were treated as hard boundaries during estimation allowing for the creation of 3 structural domains so that data from within a particular fault block were only used to estimate blocks in that fault block. • Regression equations via Conditional Expectation, based on downhole surveyed magnetic susceptibility data were used to estimate missing DTR values for the different structural domains, company drilling

Criteria	JORC Code explanation	Commentary
	• *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	campaigns and levels of oxidation. Regression equations based on the handheld magnetic susceptibility data was used to estimate the DTR values where downhole magnetic susceptibility was not available. Missing Fe concentrate grades were calculated using regression equations based on the DTR grades for the structural domains, different companies and oxidation levels and the remaining concentrate elements were calculated using regressions based on the iron concentrate grade. The use of regression equations has been historically a small part of the Hawsons project and while not ideal the subsequent drilling has indicated no immediate issue with the use of generated estimated values for DTR and DTR concentrates in the Mineral Resources. • A total of 8,918 unconstrained 5m composites, including residuals, were generated from the drillhole database and modelled for Davis Tube recovered magnetic fraction ("DTR") and the concentrate elements of Fe, Al_2O_3, P, S, SiO_2, TiO_2 and LOI. • Grade interpolation was unconstrained, except by the search parameters and the variography, due to the gradational nature to changes in sediment composition and grain size of the host sediments. Comparison of block grades with the interpretation of stratigraphic sub-units showed a good match with the block grades except in the basal stratigraphy where there was a notable lack of drilling control i.e. around mineralised Unit 1. • In prior estimates the TOFR surface was found to coincide with a marked difference in density and DTR but the hardness of the boundary has softened with the new drilling (and substantially more oxide/transition data) such that the surface was not treated as a hard boundary for density or DTR grade interpolation. • The cover data was used in the grade interpolation to act as a buffer to the oxide/transition data. No modelled data was loaded into the cover zone in the block model. • No recovery of any by-products has been considered in the resource estimates as no products beyond iron are considered to exist in economic concentrations. • No top-cutting was applied as extreme values were not present and top-cutting was considered by H&SC to be unnecessary. • No check estimate was carried out though the estimates were in line with previous estimates. Hellman & Schofield, the predecessor to H&SC, estimated the Mineral Resources for Hawsons in 2010 and updated in 2011. The resource estimates were further updated in 2013

Criteria	JORC Code explanation	Commentary
		by H&SC following an in-depth analysis and interpretation of downhole geophysical data resulting in the delineation of Indicated Resources. The 2017 Mineral Resources showed a modest increase in size at the same grade. but contained considerably more Indicated Resource due to extra drilling. The extra Mineral Resources were primarily from peripheral areas in the Core and the Fold areas. The marked lowering of the cut off grade used for reporting the 2021 Mineral Resources had resulted in a substantial increase in size with a nominal 10% drop in DTR grade. The new updated estimates (2022) show a modest increase in size with a modest drop in DTR grade. The major changes are the appearance of Measured Resources and a significant increase in the amount of Indicated Resources, all in line with the expectations for the infill drilling completed in 2021/22. • Block dimensions are 50m x 25m x 10m (Local E, N, RL respectively) with no sub-blocking. The east dimension was chosen as it is around half to a third of the nominal drillhole distances in the detailed drilled area of structural Domain 1. The north dimension was chosen partly on the drillhole spacing but also taking into account the geometry of the mineralisation with its moderately grid south-dipping stratigraphy. The vertical dimension was chosen to reflect the sample spacing and possible mining bench heights and to allow for flexibility in potential mining scenarios. • All elements were modelled as a combined dataset for each structural domain as each had the same number of composites for that domain and all values were inter-related. Six search passes were employed with progressively larger radii or decreasing search criteria. The Pass 1 used radii of 150x150x25m, Passes 2 and 3 used 300x300x50m, the fourth pass used 400x400x75m (along strike, down dip and across mineralisation respectively). The first and second passes required a maximum of 24 data and a minimum of 12 data points from 4 octants whereas the third and fourth passes required a minimum of 6 data points from at least 2 octants. A fifth and sixth search pass (for exploration potential) used search dimensions of 600m by 600m by 112.5m with 6 and 3 minimum data respectively and 2 octants. • The maximum extrapolation for the Mineral Resources was in the order of 300m down dip and 400m along strike to the SW and 100m along strike to the NW. The rollover zone in the NW of the deposit was limited to 400m of extrapolation. The across strike and dip extent was 75m.

Criteria	JORC Code explanation	Commentary
		• The new block model was reviewed visually by H&SC and it was concluded that the block model fairly represents the grades observed in the drill holes. H&SC also validated the block model using a variety of summary statistics and cumulative frequency plots. No issues were noted.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages of the Mineral Resources are estimated on a dry weight basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The resources are reported at a cut-off of 6% DTR based on the outcome of a recently completed pit optimisation study by independent consultants KPS Innovation of Brisbane. All oxidation levels were included in the Mineral Resources except the cover sequence. • A pit shell created by KPS was used to constrain the resource estimates; no other wireframe constraint was used. This pit had a base at -360mRL. • The cut-off grade at which the resource is quoted reflects the intended bulk-mining approach.
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 Mineral Resources were estimated on the assumption that the material is to be mined by open pit using a bulk mining method. • Minimum mining dimensions are envisioned to be around 25m x 10m x 10m (strike, across strike, vertical respectively). The block size is significantly larger than the likely minimum mining dimensions. • The resource estimation includes internal mining dilution. • The proposed mining method would use a combination of In-Pit crushing and conveying as well as truck and shovel operations • Mine design and production is targeting production of a 69% iron product at 20Mtpa.
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.*	• The idioblastic nature of the magnetite lends itself to relatively easy liberation. • The ROM material is considered relatively soft for a magnetite deposit with a bond work index much lower than typical Banded Iron Formation deposits. • Liberation of the magnetite grains is a function of crushing to fine size. Tests have been conducted that show crushing the ore to -38 microns gives a P80 of 25 microns. • XRF analysis from metallurgical testwork on the recovered magnetic fraction shows that a 69-70% iron product is feasible.Liberation of the magnetite grains is a function of crushing to fine size. Tests have been conducted that show crushing the ore to -38 microns gives a P80 of 25 microns.

Criteria	JORC Code explanation	Commentary
		• XRF analysis and other shows that a 70% iron product is feasible. • Design of a processing plant is underway and is being undertaken by Stantec in cooperation with Worley who are providing expert metallurgical advice.
Environmen-tal 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.*	• The deposit lies within flat, open country typical of Western NSW. • Predominantly scrub vegetation that allows for sheep grazing. • There are large flat areas for waste and tailings disposal. • Small number of creeks with only seasonal flows. • The host sediments have relatively low sulphur contents, generally <<0.5% pyrite • Baseline data collection of a variety of environmental parameters is in progress e.g. dust monitoring, surface water, weather records • SLR Consulting have been commissioned to complete a Review of Environmental Factors for the site. The draft report is imminent and the work that has been conducted to date indicates that there are no significant impediments to mining. • The preliminary environmental assessments conducted on the mine site showed there are no significant impediments to the development of a mine, subsequently the NSW government released the SEAR's for the project to progress to the development assessment phase. There are reasonable prospects of eventual economic extraction of the Resource.
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.* • *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.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• The short-spaced density (SSD) data from the downhole geophysics was used for the density of the Mineral Resources. Data consisted of averaged 1cm data points for 10cm intervals. • The CAP SSD data was collected using a FDS50 down hole tool containing a 3500CO radioactive source. • The HIO SSD data was collected using a Robertson Geo Sidewall Density with BRD and Temperature, (Part No I002016) down hole tool containing an iOS Cs137 125 milli-curie radioactive source. • The CAP data had a correction factor of +5.2% applied based on comparative testwork completed on 194 10-15cm NQ core samples using the immersion-in-water weight in air/weight in water (Archimedes) method. • The HIO data had a correction factor of +4.94% applied based on testwork completed on 166 10 to 15cm HQ core samples using the immersion-in-water weight in air/weight in water (Archimedes) method. • No moisture determinations were made.

Criteria	JORC Code explanation	Commentary
		• The siltstones show no vughs and porosity as observed from polished and thin section work is occluded. There is no characteristic alteration associated with the mineralisation. • The density data was composited to 5m prior to modelling. Missing values were generated from regression equations derived in 2017 from Fe head assays for fresh rock and oxide/transition zones. Any remaining missing data had default grades inserted relevant to the oxidation level. A total 8918 5m composite samples were used. • The density at Hawsons was estimated using Ordinary Kriging in the same manner to the methodology used for the DTR grades.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie 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).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The classification of the resource estimates is based on the data point distribution which is a function of the drillhole spacing. • The 100m spaced infill drilling in Domain 1 has indicated much improved grade continuity as demonstrated by the variogram maps; 60-70% of the variance between samples occurs within a 100-120m range. This forms the basis for Measured Resources. • Other aspects have been considered in the classification including, the style of mineralisation, the geological model, sampling method and recovery, missing data and estimated grades, coherency of the downhole geophysics including density, the QAQC programme and results and comparison with previous resource estimates. • The initial pass categories were reviewed and in 4 specific areas Pass 1 blocks occurred in clusters, due to closer spaced drilling (circa 100m), that were delineated using Defined Shapes to retain the Pass 1 category as Measured Resource. Elsewhere more isolated Pass 1 blocks and all Pass 2 blocks were classed as Indicated Resource (removal of the 'spotted dog' effect) and Passes 3 and 4 were classed as Inferred Resources. • A 2017 detailed sedimentological review using gamma and magnetic susceptibility downhole data had demonstrated strong stratigraphic continuity of the DTR grades with the sediment packages. Current resource reporting deadline did not allow time for updating the interpretation. • H&SC believes the confidence in tonnage and grade estimates, the continuity of geology and grade, and the distribution of the data reflect Measured, Indicated and Inferred categorisation. The estimates appropriately reflect the Competent Person's view of the deposit. H&SC has assessed the reliability of the input data and takes responsibility for the accuracy and reliability of the CAP data used to estimate the

Criteria	JORC Code explanation	Commentary
		Mineral Resources. HIO takes responsibility for the recent 2021/2022 drilling data used to estimate the Mineral Resources.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The estimation procedure was reviewed as part of an internal H&SC peer review. • Mining Associates Limited ("MA") completed a technical review in 2016 on the 2014 Indicated and Inferred Resources. MA concluded that the model is a good global representation of the magnetite resource and considers Ordinary Kriging to be an appropriate estimating technique for the type of mineralisation with very low coefficients of variation. • In a follow up report in 2020 MA concluded that for the 2017 Mineral Resources: "Following [a] review of the geology, MRE and Reserve, MA does not consider the current approach to the geology model and MRE suitable. A much higher level of detail needs to be incorporated into the Geological Model and MRE" and strongly proposed its own methodology of using implicit modelling "with much smaller blocks" incorporating upwards of 20+ stratigraphic boundaries, as being more suitable. • Behre Dolbear Australia ("BDA") completed a technical review for CAP in 2010 based on a GHD study. BDA considered that the broad geology and geological controls on mineralisation, the sampling methodology and the geological database were generally adequately defined for estimation of Inferred [2010] Resources
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 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.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• No statistical or geostatistical procedures were used to quantify the relative accuracy of the resource. The global Mineral Resource estimates of the Hawsons deposit are moderately sensitive to higher cut-off grades but does not vary significantly at lower cut-offs. • The relative accuracy and confidence level in the Mineral Resource estimates are considered to be in line with the generally accepted accuracy and confidence of the nominated Mineral Resource categories. This has been determined on a qualitative, rather than quantitative, basis, and is based on the Competent Person's experience with similar deposits and geology • The Mineral Resource estimates are considered to be accurate globally, but there is some uncertainty in the local estimates due to the current drillhole spacing, a lack of geological definition in certain places eg fault zones, and some ambiguity with the absence of assay data and the QAQC procedures and outcomes. • No mining of the deposit has taken place, so no production data is available for comparison.

Hawsons Iron Exploration Results 2021-22 Program

Report Date: 25/07/2022

This report outlines the sampling techniques used and data taken at Hawsons Magnetite Project in western New South Wales (NSW). It also covers the reporting of exploration results for the 2021-22 exploration drilling program.

Location

The Hawsons magnetite project is about 60km south-west of Broken Hill in western NSW (see Figure 1). The deposit is 30km from the Adelaide-Sydney railway line, a main highway and a power supply.

Terrain is generally flat and the red soil ground surface is covered in short shrubby vegetation (mainly salt bush & blue bush). It is approximately 1.5 hours drive to the site from Broken Hill. The project area lies within the Hawsons Exloration Licence areas EL6979, EL7208 and EL7504.

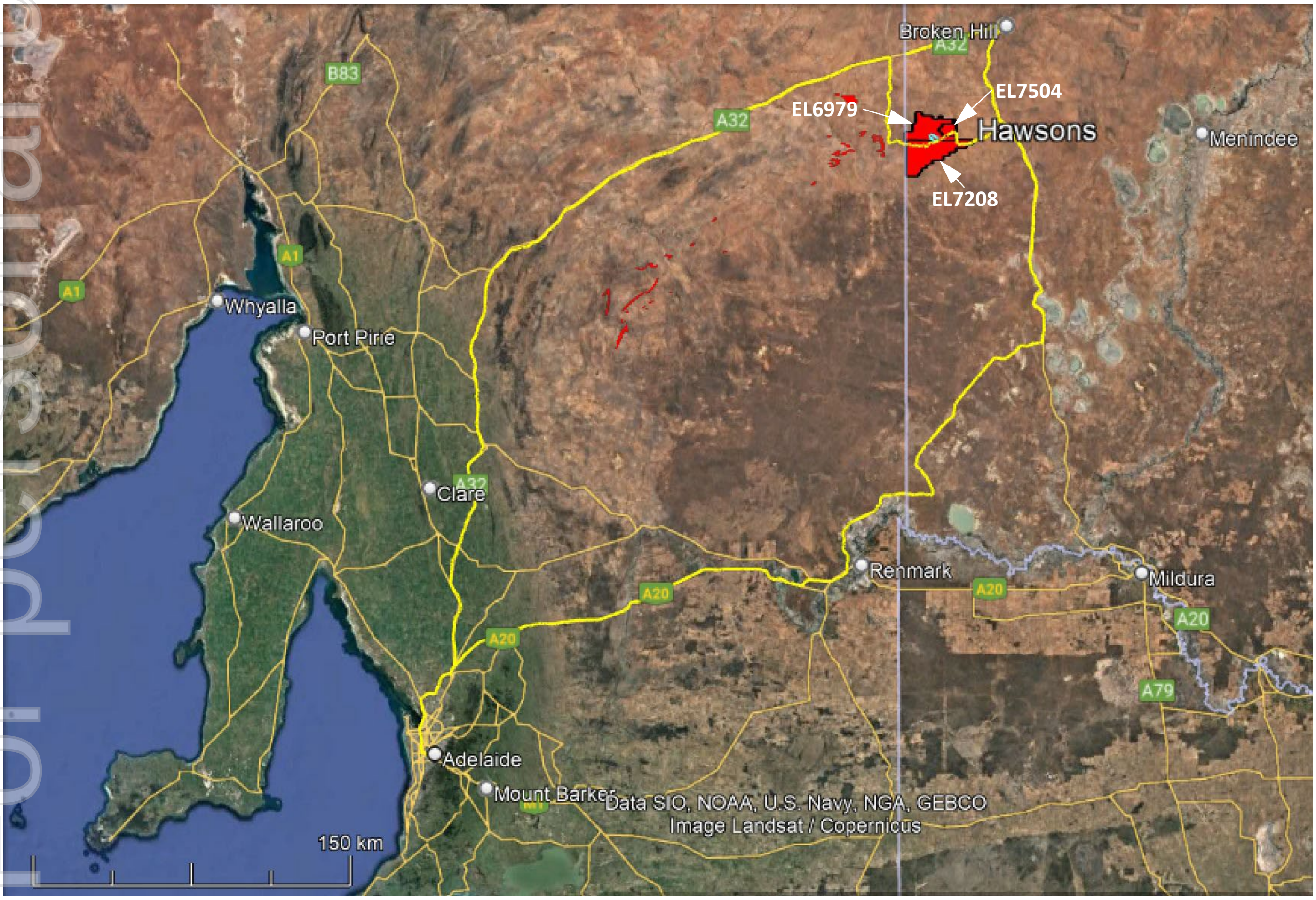

Figure 1: Hawsons magnetite project location and Exploration Licences.

Figures 2a-2d show the location of holes drilled in the 2021-22 exploration program. Table 1 in the Appendix provides information on collar, depth, orientation and other locational data. Table 2 shows the data that was available for modelling as at 15/06/2022.

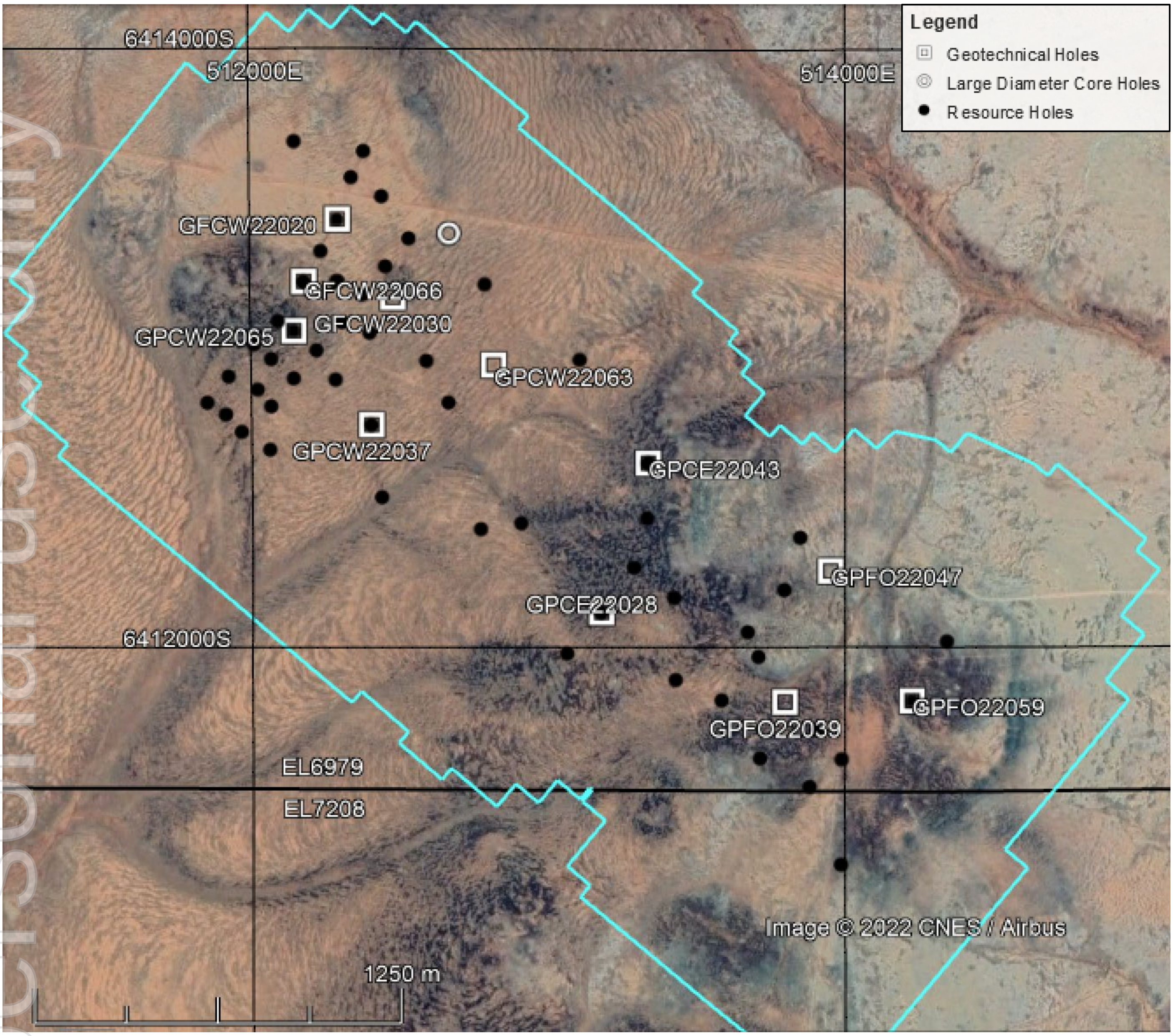

Figure 2a: 2021-22 exploration program drilling showing all holes (geotechnical drillholes numbered).

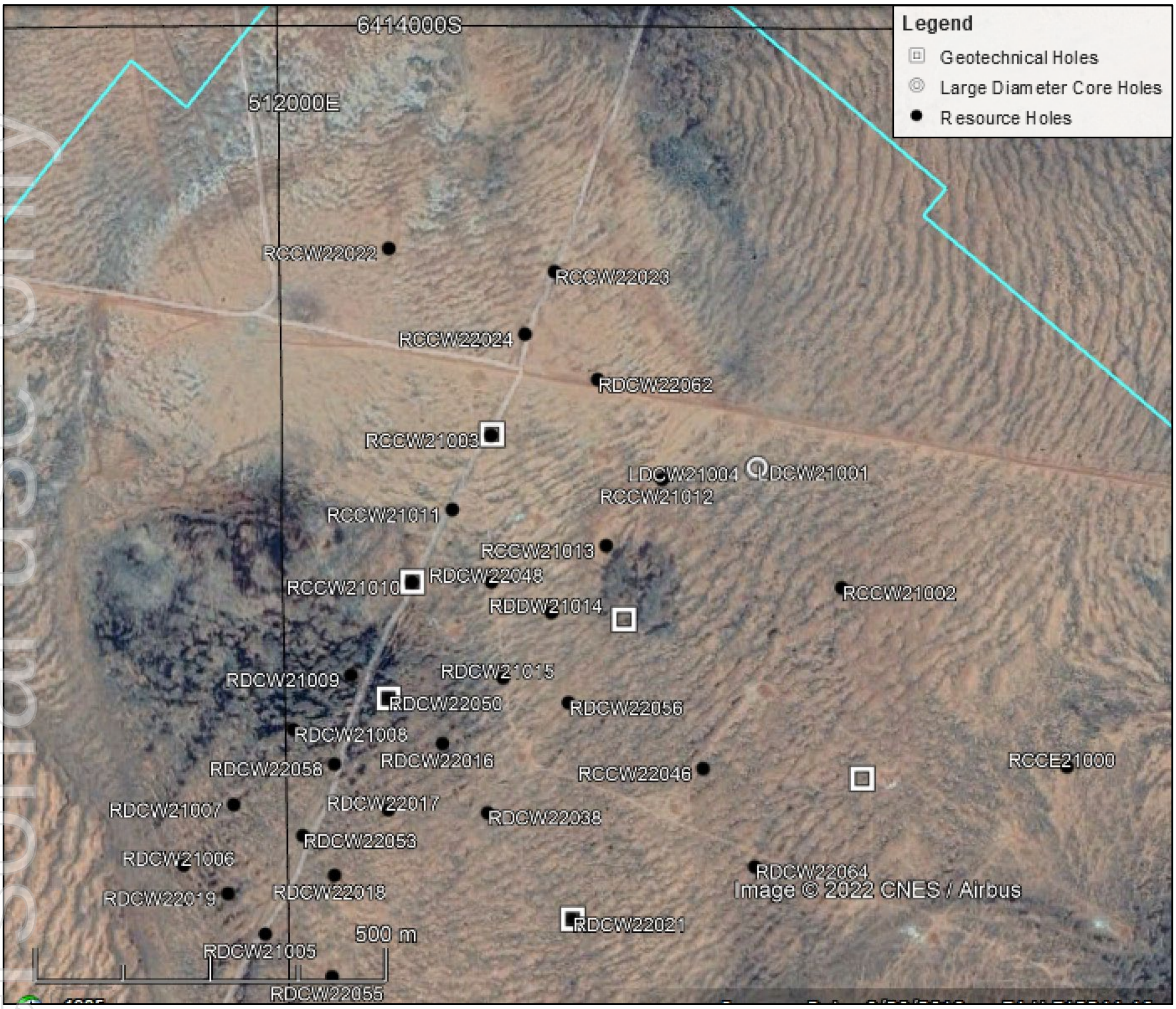

Figure 2b: 2021-22 exploration program drilling showing resource drillholes (Core West).

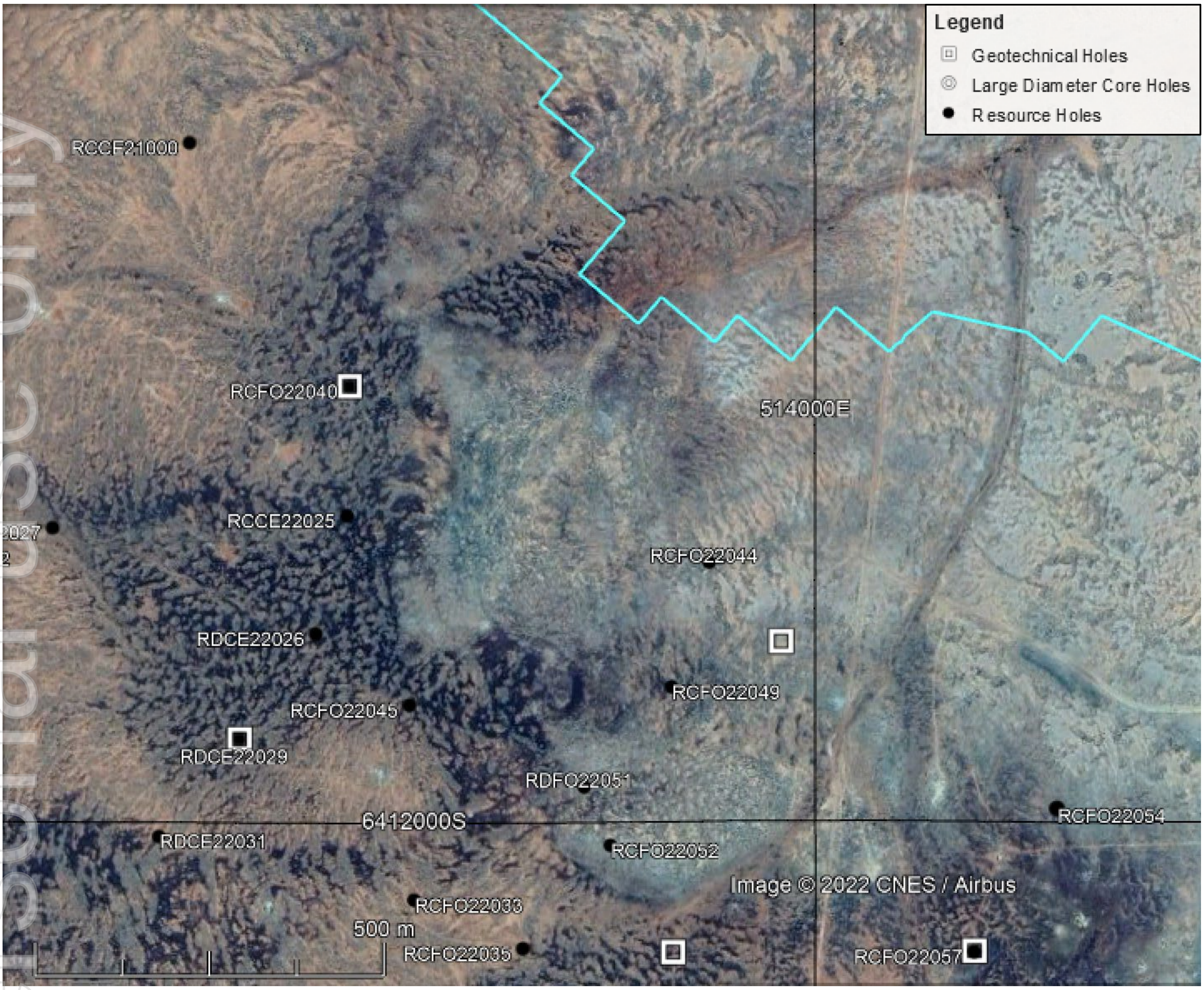

Figure 2c: 2021-22 exploration program drilling showing resource drillholes (Core East/Fold).

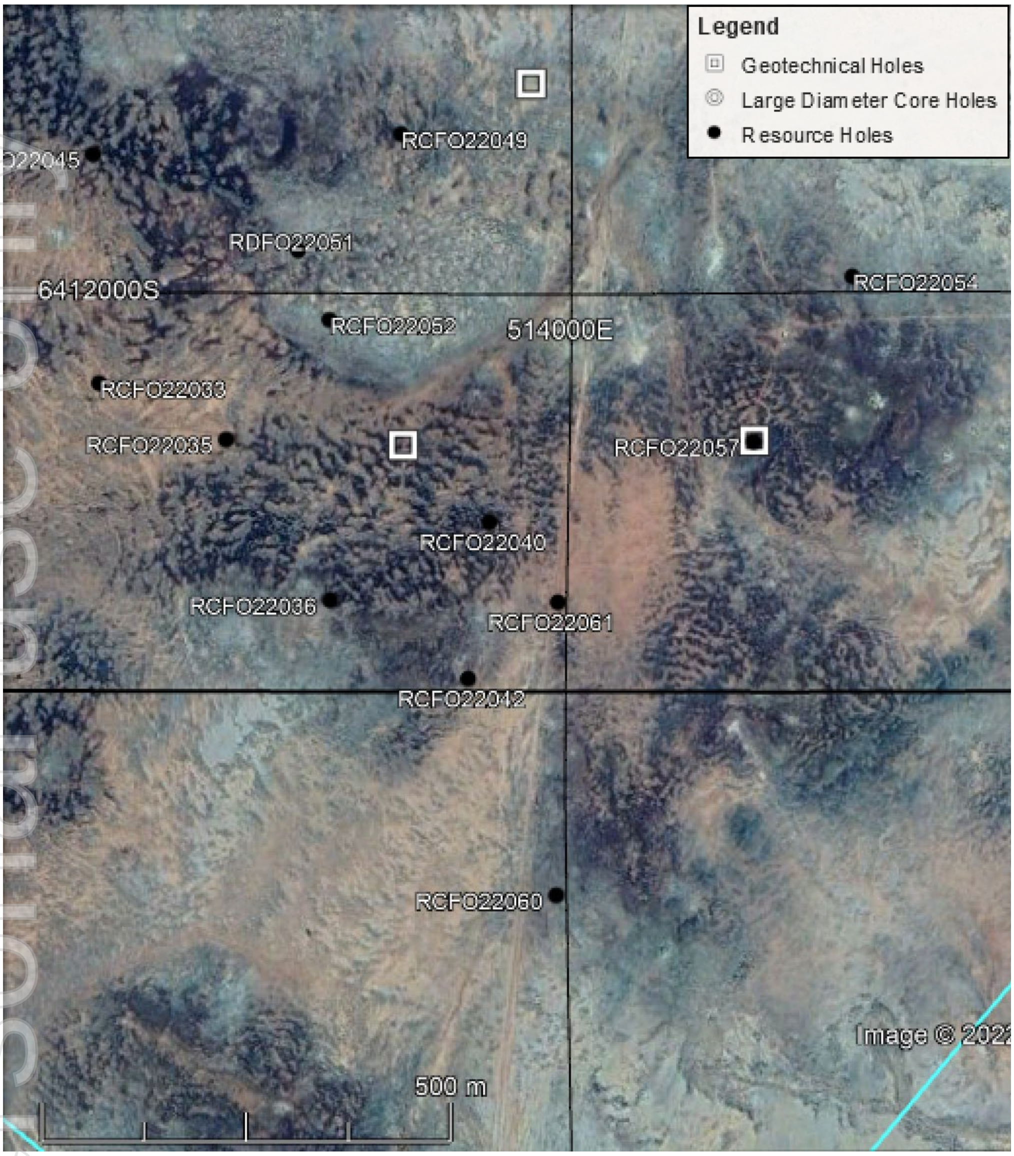

Figure 2d: 2021-22 exploration program drilling showing resource drillholes (Fold).

Brief Geology

The 2021-22 drilling was conducted as an infill program to increase the borehole density (i.e. reduce the hole spacing) across the proposed mine pitshell area. As such there has been no change to the geology as reported in previous announcements.

The Hawsons deposit lies in Neoproterozoic sedimentary basement rocks of the Adelaide Fold Belt. Specifically, it is within the Yudnamutana Sub-Group (750 -700) Ma at the base of the Umbertana Group and contains diamictite & calcareous siltstones (tillites), quartz sandstones, dolomite and magnetite & hematite rich units of the Braemar Ironstone Facies.

Mineralisation comprises bands of variable thickness of disseminated, idioblastic magnetite in low metamorphic grade fine grained siliciclastics and diamictites. Siliciclastic grain size tends to provide a strong control to mineralisation. Substantial regional deformation has occurred but, locally, the main mineral units are relatively straight forward moderately dipping units.

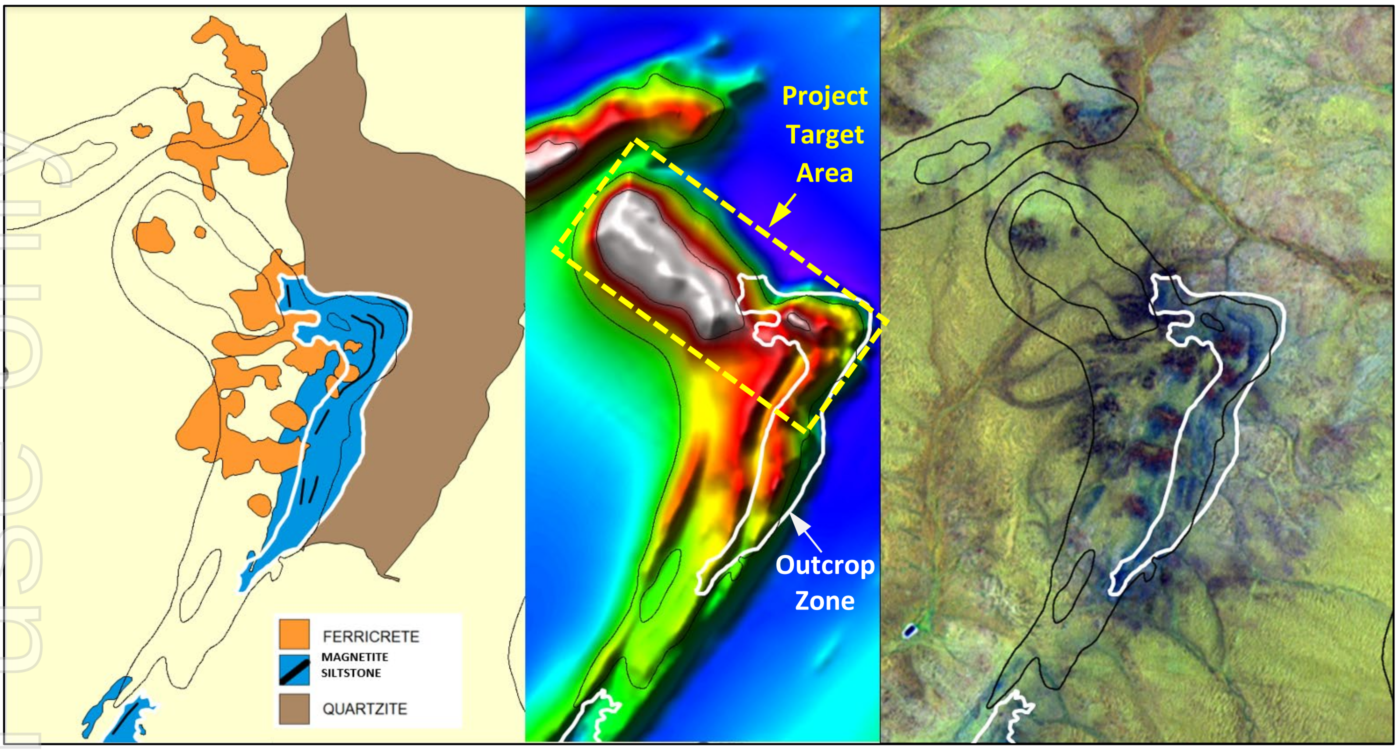

Figure 3: Surface geology, magnetic anomaly signature and Aster image (source: Donohue, 2012)

The Hawsons magnetic anomaly represents a SW plunging syncline and this anomaly defines the target mineralisation. Steeply-dipping magnetite siltstone outcrop is limited to the area bounded by the white polygon. The yellow polygon outlines the target mineralised zone (Figure 3). The north-western portion of the project target area is under cover.

Brief Drilling Summary

Carpentaria Resources (CAP) Drilling Summary

Sampling consisted of drillholes with a mixture of reverse circulation (RC) from surface, diamond tails to RC pre-collars (PD) and diamond from surface (DD). A total of 73 drillholes for 21,429.5m, were drilled by CAP in two main phases i.e. 2010 (RC & DD) and 2016 (RC). RC drillholes were drilled to obtain 1m bulk samples with sample compositing (various lengths under geological control) via spear sampling applied in order to obtain manageable sample sizes for laboratory sample prep and assaying. For the 2010 RC drilling, sampling comprised 2m to 10m 3kg composite samples. The 2016 sampling comprised 5m composites. Geophysical logging was completed for a majority of holes and consisted of natural gamma, magnetic susceptibility, density and calliper readings. The sampling techniques are considered appropriate for the deposit type with all sampling to industry standard practices. No recoveries available for the RC drilling (a minimal number of wet samples) but very good recoveries were noted for the DD. Hole twinning suggested no grade issues with the RC drilling. Logging used a mixture of qualitative and quantitative codes.
All relevant intersections were logged with the geological logging of sufficient detail to allow the creation of a geological model. All RC sample metres were sub-sampled, sieved, washed and stored in a labelled plastic chip tray. All remaining drill core after sampling was stored in labelled plastic core trays and subsequently stored at the company's offices in Broken Hill.
The 2010 RC samples were composited using geological control via the spear sampling method of the 1m bulk sample bags. The spear method was concluded by CAP to be adequate based on the results of a handheld XRF orientation exercise. The compositing produced a 2m to 10m 3kg sample for laboratory analysis at ALS Labs in Perth. The 2016 RC samples were split using a riffle splitter (no details of type used)

that produced a 1/16th split taken from the rig every metre and then composited to 5m intervals by splitting again using a 50/50 splitter to give a 6-7kg sample. DD core was cut into half core using a brick saw and diamond blade. The core was cut using the orientation line or perpendicular to bedding. to produce an 8m composite sample (predominantly NQ core). Half core was sent to ALS Perth for analysis, whilst remaining half core was retained for reference.
Sample prep by ALS Laboratories involved crushing, sub-sampling and pulverising to a 38 micron size using an industry standard procedure. The QAQC programme was variable sometimes not to industry standard; included field and lab duplicates. All sampling methods and samples sizes are deemed appropriate.
The recovered magnetic fraction analysis was measured by using the Davis Tube method with concentrate analysis by XRF. The QAQC programme was variable sometimes not to industry standard; included the use of Coarse blanks certified reference material and 2nd lab checks. All assay methods are deemed appropriate.
The 'twin hole' site data was limited but although there is demonstrable variation in average magnetite grades within several metres along-strike, there is no evidence of a consistent positive bias in the magnetite levels determined for RC samples
Drillhole collars were located by a local surveyor using a Differential GPS with accuracy to less than one metre. Coordinates were supplied in GDA 94 – MGA Zone 54. Down hole surveys for the 2010 drilling were initially recorded as single shot digital displays and were then recorded using a gyroscope due to the highly magnetic nature of the deposit. All the 2016 drillholes had downhole surveys measured using a gyroscope.

Hawsons Iron (HIO) Drilling Summary

The 2021-22 exploration program was comprised of drilling 3 fully cored geotechnical holes (HQ3), 8 partially-cored geotechnical holes (RC top and HQ3 tail), 55 infill Resource upgrade holes (a mix of RC only and RC top with HQ3 diamond tail) and 2 large diameter holes (200mm diameter PCD). All holes were drilled to inform detailed mine design studies.

The geotechnical holes were drilled to determine pit wall (hanging wall, foot wall and end walls) stability and to investigate geological structures. The resource infill drillholes focussed on upgrading the Resource from Indicated status to Measured status, from Inferred status to Indicated status and to investigate geology.

1. Sampling Techniques and Data 2021-2022

Sampling Techniques

Sampling was performed from ground surface to TD. Sampling from surface was a new initiative and had not been done in previous exploration programs. Samples for assay analysis were taken from drillholes in the following ways:

- Reverse Circulation (RC) from surface to total depth (TD);
- RC to max drill depth and diamond tails to TD; and
- Fully cored diamond from surface to TD.

1) RC sampling.

During the 2021-22 drilling program, 67 holes were drilled for 25,094.17m of RC chips and core. Full assay data sets for 33 of these drillholes were received by the cut-off date of 15th June 2022 to meet the company's requirement for this Resource update.

The RC sampling processes are outlined as follows:

- The RC chips presented in a mostly fine talcum powder consistency and the 7/8 split from the cyclone riffle was used to obtain 1m bulk samples (~25 - ~40kg).
- The 1m bulk samples were sub-sampled via spear sampling into 5m composites of approximately 5kg for laboratory sample prep and assaying.
- QAQC riffled samples were taken from a selection of holes across the site to verify the validity of the spear-sampling method.
- Diamond core (all HQ3) were sampled by sawing the core into half and then one half into half again to give quarter core samples. These quarter core samples were used to produce 5m composite samples which were then pulverized at the laboratory to produce a 150g aliquot for XRF and DTR analysis.
- The 1/7 residual split samples (~1kg – ~10kg) from the rig cyclone split are being retained in storage.

Figure 4: RC samples laid out in 60m rows at drill site (photo taken 22/10/2021)

2) HQ3 core sampling for assay.

All HQ3 core for assay sampling was transported to the Hawsons laydown yard at 403 Eyre Street, Broken Hill where it was cut for sampling.

3) Sampling of core for geotechnical analysis.

Geotechnical core was transported in core trays to the machinery shed bay at Burta Homestead. Sampling of core from geotechnical drillholes was conducted by cutting the core with a diamond blade using a hand-held grinder with a thin diamond blade.

Figure 5: Photo of HQ3 geotechnical core: GPFO22047 171.80-175.90m (top = dry, bottom = wet). The core plug on the bottom flute denotes where a sample was taken from.

A range of core orientation tools were used on geotechnical core, including:

- Reflex Act III
- Boart Longyear TruCore
- Boart Longyear TruShot

4) Sampling of large diameter (LD) core for comminution testing.

- Each 3m stick of LD core produced from the core barrel was cut/broken into approximately 1m lengths and placed into 400L drums and these were then sealed shut. A small amount (approximately 2 hands full) of drilling fluid was put in the drum with the core to prevent it drying out.
- LDCW21001 was abandoned at 64.00m due to dislodged tungsten carbide buttons damaging the core bit.
- The rig moved forward ~3m and started a new hole (LDCW21004).

5) QAQC Sampling

The 2020/2021 program included 87 field pairs for determining field halving precision prepared at sample number 20, 40, 70 and 90 per drillhole. 88 blanks (washed sand) were inserted at sample number 1 and 51 per drillhole.

A special sampling program for determining total precision from was undertaken with 78 field duplicates obtained to check for sample bias.

There were 59 OREAS 700 DTR Certified Reference Materials (CRM's) inserted at sample number 25 and 75 per drillhole.

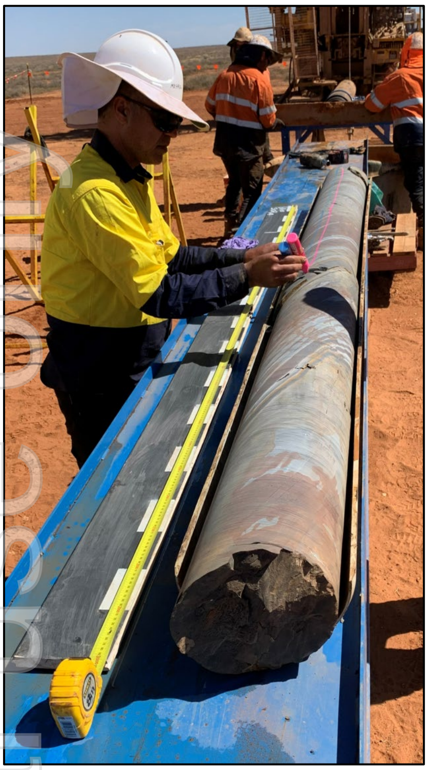


Figure 6: Large diameter (8" = 200mm) corehole LDCW21004 for comminution testing and 400L drum for storage and transport.

Drilling Techniques

The RC drilling for 2021-2022 was carried out using the following truck-mounted drill rigs:

- 1 x Sandvik UDR 1200HC
- 1 x Sandvik UDR 1000
- Both rigs used 4.5" rods and 5-5/8" face bits.

The DD drilling was carried out using a range of truck-mounted drill rigs, including:

- 2 x Sandvik UDR 1000
- 1 x Sandvik UDR 1200
- 1 x Bournedrill L1000THD
- 1 x Boart Longyear KWL 1600.

All resource hole core drilled was HQ3 (3m barrel). The large diameter drilling produced 200mm (8") diameter core using a PCD bit (3m barrel).

Logging

Geological logging of chips/core/rock samples is qualitative by nature. Geological lithology and defect logging was completed on all core holes drilled and is considered of appropriate detail to be utilised in future studies. Core was either logged on the core table at the rig or in the yard

Every RC and DD drillhole was lithologically and defect logged by a geologist and entered into iGloo, a tablet-based geological logging program.

iGloo records included: recovery, moisture, oxidation state, colour, magnetite %, hematite %, martite %, vein composition and %, gangue min, sulphide min. Data was validated against a company lithological dictionary and uploaded to a SharePoint cloud-based file storage facility. This data was then loaded into the proprietry Lab-In database software system.

RC drill chips were wet sieved from each one-meter sample and geologically logged and codes digitally recorded into iGloo onsite. Washed drill chips from one-meter intervals were stored in Samplex chip trays with 20 x 1m compartments.

Figure 7: Photo of RC sample chips: Drillhole GPCE22043 1-100m

Records of drillcore included: core orientation (Geotechnical and minimal resource definition core), half meter marking, magnetic susceptibility measurements (every 0.1m), core recoveries, rock quality designation (RQD). All drill core was photographed wet and dry after logging and before cutting, these images represent quantitative records.

Handheld magnetic susceptibility was recorded using a CormaGeo RT-1 Magnetic Susceptibility Meter with inbuild data logger. Three measurements were recorded on each RC sample bag (top, middle & base), then averaged to give a single 1m quantitative measurement. Handheld magnetic susceptibility measurements were taken at 10cm intervals along core.

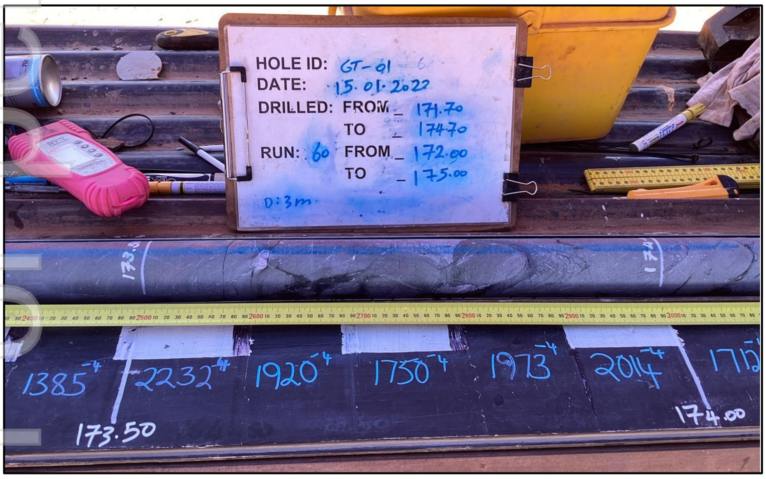

Figure 8a: Marked up core for lithology logging on the core table at the rig site (blue chalk numbers are magnetic susceptibility readings). The CormaGeo RT-1 Magnetic Susceptibility Meters used to take these measurements is at the top left (pink).

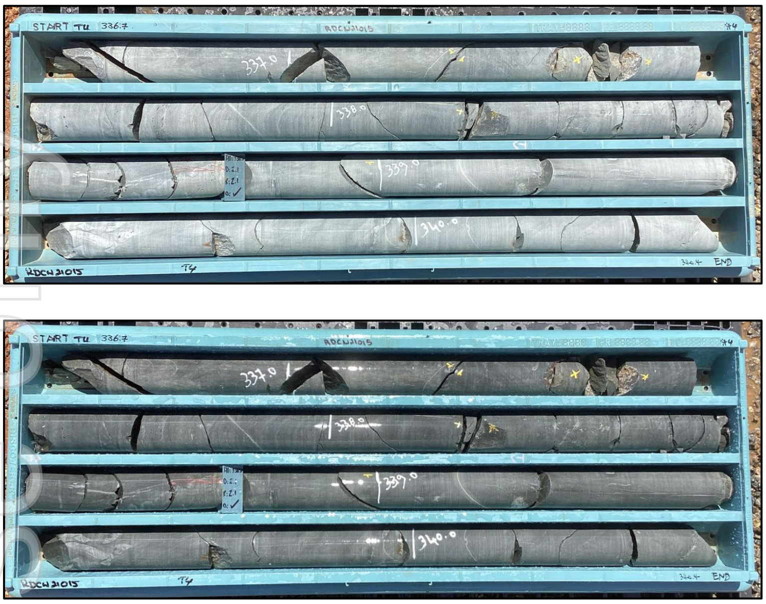

Figure 8b: Core for assay in trays: RDCW21015 336.70-340.40m (top = dry; bottom = wet).

An example of a lithology log is contained in Appendix 1 – Table 3.

Sub-sampling techniques and sample preparation

1) Rig Cyclone & RC Sampling

The 2021/2022 RC samples were split using a 7/8th riffle splitter placed under the rig cyclone. Samples were taken every 1 metre interval and were then a spear sample was taken diagonally from the top to the bottom of the bag and these spear samples were composited into 5m intervals. A QAQC check program of riffling the one metre samples on both a mass and quantity basis was completed to check for analysis bias. A total of 90 samples were taken from holes distributed across the deposit. The results of this QAQC check are contained in separate report (McMahon, 2022) and show that there is no sample bias.

2) Core sampling for assay

DD core was cut perpendicular across the core at the start and end of the sample interval and cut longitudinally to produce a quarter core sample for geochemical analysis. The quarter core was combined in 5m intervals for transport to the laboratory.

3) Core sampling for metallurgical testing

A combination of full HQ3 core and half HQ3 core for intervals nominated by metallurgical consultants was sent to metallurgical laboratories for comminution test work. Remaining geotechnical hole quarter core was sent to Bureau Veritas Laboratory Adelaide for assay analysis.

4) Laboratory sample preparation

Sample Prep was completed at Bureau Veritas Laboratory, Adelaide as follows:

- Crush the sample to 100% below 3.35 mm.
- A 150 g sub-sample for pulverizing in a C125 ring pulveriser (record weight) – DTR SAMPLE.
- Initially pulverize the 150 g sample for nominal 30 seconds – the sample is unusually soft for a ferro-silicate rock.
- Wet screen the DTR sample at 38 micron pressure filter and dry, screen at 1 mm to de-clump and re-homogenize.
- Record the oversize weights – if less than approximately 20 g is oversize, stop the procedure – failure.
- If failure - select another 150 g DTR Sample and reduce the initial pulverization time by 5 secs, repeat until initial grind pass returns greater than approximately 20 g oversize. Once achieved retain the – 38 micron undersize.

- Regrind only the oversize for 4 seconds of every 5 g weight of oversize.
- Repeat the wet screening, drying, de-clumping & weighing stages until less than 5g above 38micron remains.
- Ensure the remaining < 5 g oversize is returned back into the previously retained -38 micron product.
- Report the times and weights for each grind pass phase.
- Combine and homogenize all retained -38 micron aliquots and <5 g oversize –final pulverized product. Sub-sample the final pulverized product to give a 20 g feed sample for DTR work and a ~10 g sample for HEAD analysis via XRF fusion

Quality of assay data and laboratory tests

- The 2020/2021 work included 87 field pairs for determining field halving precision prepared at sample number 20, 40, 70 and 90 per drillhole. Field duplicates defining total precision / primary sampling error outcomes showed relative precision and bias which were acceptable compared with the limits defined for Davis Tube Recovery Magnetics% (DTR Mags%) and Head Iron % (Head Fe%).
- Field pairs defining field halving precision / primary sampling error outcomes showed relative precision and bias which were acceptable compared with the limits defined for DTR Mags% and Head Fe%.
- The OREAS 700 Certified Reference Materials (CRM's) defining analytical precision / analytical error outcomes showed relative precision and bias which were acceptable compared with the limits defined for Head Fe%.
- The OREAS 700 Certified Reference Materials (CRM's) defining analytical precision / analytical error outcomes showed relative precision which was acceptable compared with the limits defined for DTR Mags%.
- The OREAS 700 Certified Reference Materials (CRM's) defining analytical precision / analytical error outcomes showed relative bias which was not acceptable compared with the limits defined for DTR Mags%. The absolute bias was calculated at -0.5%. That is, 0.5% lower DTR outcomes. The testing laboratory was made aware of this difficulty early in testing via data processing checks and maintained that the outcomes were due to the supplied OREAS 700 mass of 50 grams being lower than the DTR test mass requirement of 150 grams.
- Hawsons will investigate further including supplied sample mass requirements and effects for future programs.
- The OREAS 700 CRM testing on testing of the Head Sample (ore) for elemental oxides and elements of SiO_2, Al_2O_3, P, S, TiO_2 and LOI (Loss on Ignition) either had precision and bias outcomes or control limits met jointly or in at least one instance.
- Laboratory duplicates were tested for Head Iron (Fe%) for the measurement component (XRF measuring device) were from the same prepared sample and were found to be in accord with required analytical precision limits.
- 88 blanks (washed sand) were inserted at sample number 1 and 51 per drillhole.
- Blanks were found to be in keeping with ranges observed in the 2016 program for DTR Mags% and Head Fe%.
- A special sampling program for determining total precision from was undertaken with 78 field duplicates attained
- There were 59 OREAS 700 DTR Certified Reference Materials (CRM's) inserted at sample number 25 and 75 per drillhole.
- The laboratory took sample splits to check that their laboratory results were repeatable.
- All sampling methods and samples sizes are deemed appropriate.

Verification of sampling and assaying

- Holes were not twinned in the 2021-22 program. Holes were drilled close to some of the holes drilled in previous programs and these were used for data comparison.
- A file based database system was used "DataStore" which utilised import and export tools that also validated and formatted the data. Data inputs for lithology, geochemistry and geophysics were utilised. Heading checks on each file were enacted via the software and once flagged corrections made in the input forms to ensure correct allocation of outcomes. Data was verified maximum / minimum value checks, sample advice to report reconciliation, dictionary checks and text value checks. Clean validated files once available were automatically uploaded to the Lab-In database.

Location of data points

- For the 2021-22 exploration program, drillhole collars were surveyed by a local accredited surveyor using ALTUS APS-3 RTK (Real Time Kinematic) GPS units in differential mode, which provided an accuracy of some 2 to 3 centimetres in horizontal and vertical measurements.
- Current GDA94 coordinates of existing permanent control point HK1 at the exploration site were utilised as a basis for the surveys.

- Coordinates were supplied in both GDA94 – MGA Zone 54 and GDA2020 – MGA Zone 54. HIO is now operating in GDA2020 – MGA Zone 54 and is using this as standard.
- Due to the highly magnetic nature of the mineralisation, down hole surveys for the 2021-22 drilling were measured using a gyroscope where possible.
- Due to hole conditions (wall cave) in 4 drillholes, a multi shot downhole camera survey was utilised because gyro surveys were not feasible. Difficulty with getting the tool down the hole because of hole cave meant that some holes could not be logged along their entire length.
- Because of the cut-off date for this round of geology model update, for several holes had not yet been logeed and gyro data sets were not available.
- Topographic control was maintained using data control points set out by an accredited local surveyor. In 2021, a LiDAR survey was conducted to better constrain the local topography.
- The DGPS location methods used to determine accuracy of drillhole collars are considered appropriate.

Data spacing and distribution

- The deposit is drilled at a nominal spacing of 200m in section and plan, and extends to 400m on the periphery of the drilled area within the proposed pitshell.
- In 2021-22, closer spaced drilling on approximately 100m centres was completed within the Core West area.
- The drill spacing was deemed adequate for the interpretation of geological and grade continuity for the stratigraphic homogeneity associated with the style of mineralization along strike.
- The data spacing is deemed appropriate for Mineral Resources and their classification.
- The 2021/22 RC and DD samples were composited to 5m intervals along the hole length.

Orientation of data in relation to geological structure

- In the Core East and Core West portions of the deposit, angled drilling commenced at -55° dip and a hole azimuth of 040 degrees True. This was targeted to intersect geological strike and bedding dip of the sediment-hosted ore body as close to perpendicular as possible.
- In the Fold portion of the deposit, the strike of the ore bedding is controlled by folding of the sedimentary sequence. The azimuth of drillholes was altered accordingly with the varying strike of the ore body, again to intersect bedding as close to right angles as possible. The varying azimuths and dips of each drillhole are listed in the table in the Appendix.
- Locally, holes suffered directional deviation to the east with depth. Deviation in inclination was also observed, typically causing shallowing of the drillhole and this increased with depth. The affect was more pronounced the lower part of Unit 2 more than in the upper part of Unit 3.
- Drilling orientations are considered appropriate and display no bias.
- The drilling dip and azimuths made it challenging to intersect the cross-cutting fault structures as the drilling was often sub-parallel to these features. One drillhole was designed to intersect the NW magnetically inferred fault. It has provided a preliminary assessment of the impact that local fault systems have on magnetite grade through zones of structural deformation and penetrative oxidation.
- An Excel spreadsheet containing identified fault intersections in a number of holes has been made available to the geotechnical engineers and hydrogeologist for further design work. An example is shown in the appendix.

Sample security

- All samples were bagged using industry standard UV resistant thermoplastic Samplex bags and stored on site under the supervision of an HIO representative. Samples were combined into polyweave bags and were dispatched to the HIO yard in Broken Hill on a weekly basis and were accompanied by a manifest.
- The polyweave bags of samples were then loaded onto a hardwood pallet and pallet wrapped and secured to ensure no loose material could shift, these were then transported to the laboratory via a trusted freighting network company.
- Chain-of-custody documentation was utilised to track the transport of all samples to the BV Adelaide laboratory.

Audits or reviews

- An audit on sample tracking/arrival, sample preparation and analysis procedures was conducted by Wes Nichols on 01/12/2021 at the Bureau Veritas Laboratory at Wingfield in Adelaide. While the equipment and procedures were observed for XRF analysis during this audit visit, no samples were ready to be analysed via XRF at that date.
- The lab procedures observed were considered to be appropriate and followed the applicable standards.
- Chris McMahon (McMahon Resources) completed a review of the sampling and assaying for the 2021-22 drilling program data. An excerpt from his report is included in Appendix 2.

2. Reporting of Exploration Results

Mineral tenement and land tenure status

- The project is wholly owned by Hawsons Iron Ltd (HIO). HIO currently manage the project.
- The project area is entirely within Exploration Licences (ELs) 6979, 7208 & 7504. Hawsons is the sole tenure holder of these ELs.
- Licence conditions for all ELs have been met and are in good standing.
- An application for a Mining Lease (ML) was lodged with the NSW Trade & Investment Department in October 2013 and HIO is not aware of any impediments to obtaining a mining lease. MLA460 remains in place.

Exploration done 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.
- In 1986, CRAE completed five holes within EL 6979 seeking gold mineralisation in a second-order linear magnetic low. This was 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.
- Carpentaria Resources (CAP) completed drilling programs in 2009, 2010 and 2016.

Geology

- A brief geology description and plan of the surface geology (Figure 3) was given in the preamble to this document.
- 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 -55o), primarily to the south west. 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 West, Core East, Fold, T, Limb and Wonga deposits. Mineral Resources 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 magnetite is believed to be due to one or more of a range of possible processes including in situ recrystallisation of 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. Sediment composition and grain size appear to be the main controlling factors of mineralisation. There is no evidence of 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 southeast and dip between 45° and 65° to the southwest. The eastern part of the Fold deposit comprises a relatively tight synclinal fold structure resulting in a 90_{o} strike rotation.
- A cross section through the Core area is shown in Figure 10.

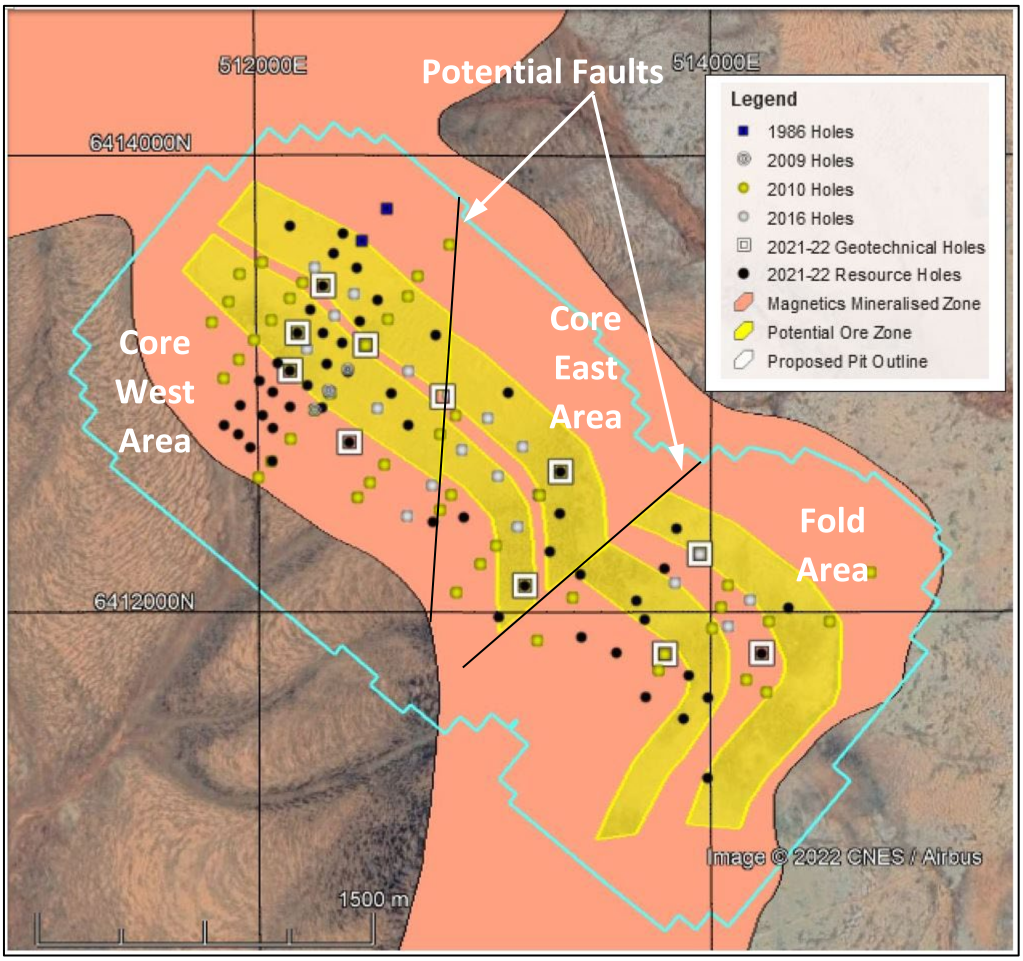

Figure 9: Drillhole location plan within the 2017 mine plan pitshell showing potential modelled units of mineralization (yellow) and potential faulting. The pink zone indicates the extent of the interpreted magnetic anomaly (TMI RTP).

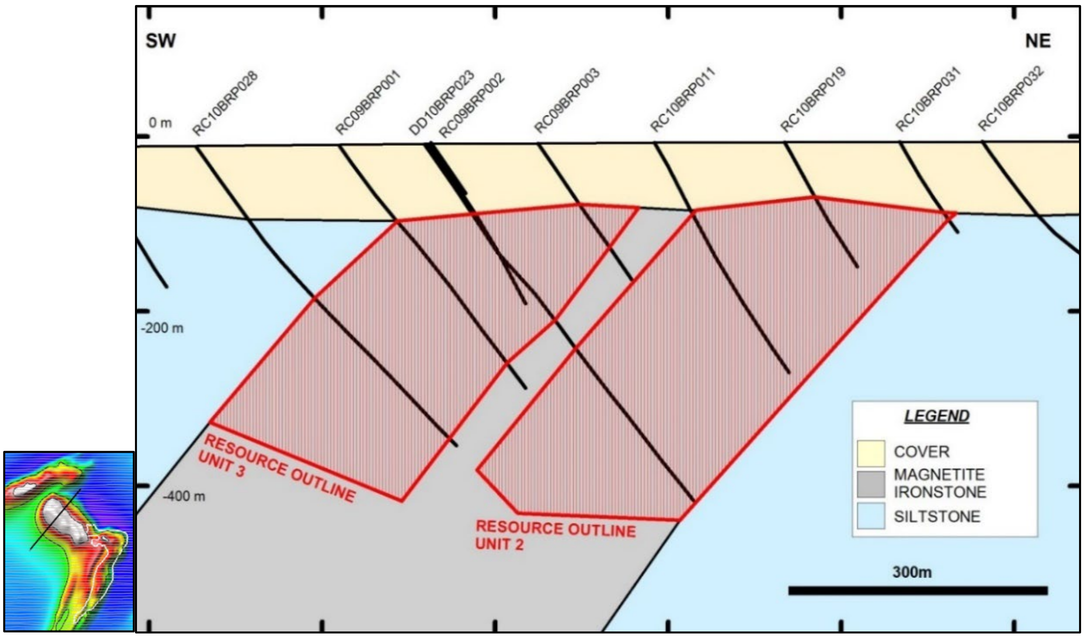

Figure 10: Cross-section through the Core West area showing the dipping sediments and core intersections from previous drilling (source: CAP, 2010).

Drill hole Information

- Drillhole location plans annotated with hole names are included as Figures 2a-2d in this document.
- Appropriate tabulations of drillhole information are available as Excel spreadsheets and examples are included at Appendix 2.
- Because of the potential for mineralisation in the upper oxidised zone, the entire hole length was considered to be the intercept interval.

Data aggregation methods

- All RC samples were collected on 1m intervals
- Each 1m interval was carefully speared and then aggregated into 5m intervals.
- ¼ core samples were aggregated into 5m intervals.
- 1cm downhole density logs were aggregated over the length of each sample that was used to determine a relationship with specific gravity. This was then extrapolated down the hole lengths to estimate gravity from geophysical logs.

Relationship between mineralisation widths and intercept lengths

- Drilling is conducted perpendicular to the dip of the mineralised sediments. This is done in an attempt to get the most representative sample and most representative intercept length possible.
- In Core West and Core East, the drillholes predominantly dip at -55 degrees at azimuth 040, perpendicular to the SW steeply dipping nature of sedimentary beds. In Fold, drilling dips and azimuths vary according to the dip and strike of the folded strata.
- Mineralisation exists from the surface for the full length of drillholes and this constitutes the intercept lengths. See Appendix 1, Table 1 in this report.

Diagrams

- Appropriate plans and tabulations are included in with the text in this document and as tables in the Appendices.

Balanced reporting

- Comprehensive reporting is not practicable.
- Examples of data are included in the Appendices.

Other substantive exploration data

- A geotechnical report was furnished by Gutteridge Haskins and Davey (GHD) in 2019 titled “Carpentaria-Hawsons Iron Ore project 2017 Prefeasibility Study Geotechnical Assessment.” This study was completed via a staged approach in order to progressively improve the level of Geotechnical understanding for the PFS and to identify gaps that needed to be addressed.
- In the 2021-2022 exploration program, Pells, Sullivan & Meynink (PSM) are undertaking the geotechnical design study for pitwall stability and to fill the gaps outlined in the GHD report. This report is not yet at hand.
- 11 cored holes were nominated by PSM to generate the data for geotechnical analysis that will feed into mine design. Of these holes, 3 were fully cored and the remainder were cored from depths nominated by PSM to total depth.
- A specialist PSM geotechnical geologist logged and sampled the core and the samples were transported to Trilab in Brisbane for testing.
- The majority of samples were analysed for Uniaxial Compressive Strength (UCS), Young’s Modulus and Poisson’s Ratio. Selected samples were submitted for shear box testing.
- A substantial amount of downhole geophysics data was generated throughout the 2021/2022 drilling program, comprising magnetic susceptibility, natural gamma, density and resistivity data. This has been utilised to define the

magnetic (and density related) stratigraphy that is coincident with a chronostratigraphic interpretation. Sonic velocity and acoustic televiewer data was also collected to aid in structural interpretation necessary for pit wall stability investigation.

- Acoustic Televiewer (ATV) logs were run for holes where hole cave and other geological conditions did not compromise logging.
- Analysis of geotechnical results/findings is in progress and the results will be reported when they come to hand.

Further work

- Drilling in the 2022-23 period is being considered to determine extents of the ore body outside of the current main drilling pattern.
- Geophysical surveys are being considered to help identify structural features and the lateral extents of the mineralized zone.
- Sterilisation holes are being planned to positively identify that ore potential doesn't exist under planned infrastructure.
- Test pits have been planned to determine the geomechanical properties of the surface material to determine what is required to support infrastructure.
- PSM performed a preliminary desktop study on terrain assessment in December 2021 and then proposed a geotechnical test pitting program to cater for construction of civil infrastructure. Several of these test pits have been cleared for excavation works and sampling and this program is expected to proceed in the second half of 2022.

Wes Nichols

Geology Manager

Hawsons Iron Limited (ASX: HIO)

The data in this report that relates to Exploration Results for the Hawsons Magnetite Project is based on information evaluated by Mr Wes Nichols who is a Member of the Australian Institute of Mining and Metallurgy 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 Nichols is a full-time employee of Hawsons Iron Ltd and he consents to the inclusion in the report of the Exploration Results in the form and context in which they appear.

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Appendix 1

Tables of Data

Table 1: Holes drilled in 2021-22 drilling program

Drillholes Completed as at 15/06/2022												
Hole ID	East MGA94 (Zone 54)	North MGA94 (Zone 54)	AHD RL (Zone 54)	East GDA2020 (Zone 54)	North GDA2020 (Zone 54)	AHD RL GDA2020 (Zone 54)	Azi deg	Dip deg	Planned TD	RC Depth	Core Depth (TD)	Interception Depth
RCCE21000	513108.19	6412960.05	191.41	513108.85	6412961.54	191.47	40	-55	250	250.00	N/A	Entire hole length
LDCW21001	512669.97	6413382.11	194.17	512670.63	6413383.60	194.23	N/A	-90	175	64.00	65.25	Entire hole length
RCCW21002	512787.92	6413217.50	192.08	512788.58	6413218.99	192.14	40	-55	250	250.00	N/A	Entire hole length
RCCW21003	512296.48	6413430.85	195.64	512297.14	6413432.34	195.70	40	-55	300	300.00	N/A	Entire hole length
LDCW21004	512671.51	6413384.05	194.07	512672.17	6413385.54	194.13	N/A	-90	175	N/A	92.70	Entire hole length
RDCW21005	511965.48	6412719.73	187.25	511966.14	6412721.22	187.31	40	-55	590	228.00	590.43	Entire hole length
RDCW21006	511852.15	6412819.31	187.26	511852.81	6412820.80	187.32	40	-55	560	166.00	561.20	Entire hole length
RDCW21007	511925.60	6412907.83	188.64	511926.26	6412909.32	188.70	40	-55	600	399.00	N/A	Entire hole length
RDCW21008	512013.07	6413014.47	190.53	512013.73	6413015.96	190.59	40	-55	650	221.50	650.55	Entire hole length
RDCW21009	512091.43	6413091.81	192.63	512092.09	6413093.30	192.69	40	-55	540	387.30	540.40	Entire hole length
RCCW21010	512181.53	6413227.69	194.23	512182.19	6413229.18	194.29	40	-55	400	405.40	N/A	Entire hole length
RCCW21011	512237.75	6413325.75	194.87	512238.41	6413327.24	194.93	40	-55	350	351.90	N/A	Entire hole length
RCCW21012	512535.82	6413368.19	194.46	512536.48	6413369.68	194.52	40	-55	320	321.20	N/A	Entire hole length
RCCW21013	512457.11	6413273.67	194.20	512457.77	6413275.16	194.26	40	-55	300	300.70	N/A	Entire hole length
RDCW21014	512375.30	6413184.93	193.47	512375.96	6413186.42	193.53	40	-55	420	314.70	420.00	Entire hole length
RDCW21015	512309.80	6413091.21	192.55	512310.46	6413092.70	192.61	40	-55	450	326.50	452.40	Entire hole length
RDCW22016	512225.15	6412994.94	191.33	512225.81	6412996.43	191.39	40	-55	570	351.00	570.00	Entire hole length
RDCW22017	512143.67	6412902.73	189.92	512144.33	6412904.22	189.98	40	-55	640	374.50	N/A	Entire hole length
RDCW22018	512067.14	6412811.03	188.34	512067.80	6412812.52	188.40	40	-55	690	290.50	N/A	Entire hole length
RDCW22019	511909.63	6412782.35	187.50	511910.29	6412783.84	187.56	40	-55	560	302.50	N/A	Entire hole length
GFCW22020	512291.28	6413434.15	195.66	512291.94	6413435.64	195.72	40	-65	475	N/A	475.03	Entire hole length
RDCW22021	512404.99	6412746.39	188.84	512405.65	6412747.88	188.90	40	-55	650	380.50	650.00	Entire hole length
RCCW22022	512151.80	6413691.44	197.82	512152.46	6413692.93	197.88	40	-70	300	300.00	N/A	Entire hole length
RCCW22023	512385.62	6413656.99	197.47	512386.28	6413658.48	197.53	40	-55	350	349.00	N/A	Entire hole length
RCCW22024	512348.47	6413576.54	196.86	512349.13	6413578.03	196.92	40	-55	300	303.70	N/A	Entire hole length
RCCE22025	513335.61	6412428.97	196.36	513336.27	6412430.46	196.42	40	-55	300	303.00	N/A	Entire hole length
RDCE22026	513297.82	6412254.43	196.43	513298.48	6412255.92	196.49	40	-55	450	339.00	450.40	Entire hole length
RDCE22027	512909.02	6412414.47	189.81	512909.68	6412415.96	189.87	40	-55	600	287.60	600.60	Entire hole length
GPCE22028	513179.54	6412112.68	195.42	513180.20	6412114.17	195.48	220	-70	250	98.50	250.15	Entire hole length
RDCE22029	513179.83	6412121.20	195.52	513180.49	6412122.69	195.58	40	-55	400	364.00	N/A	Entire hole length
GFCW22030	512485.24	6413169.19	193.24	512485.90	6413170.68	193.30	40	-65	450	N/A	450.81	Entire hole length
RDCE22031	513068.21	6411981.25	195.18	513068.87	6411982.74	195.24	40	-55	400	248.50	400.00	Entire hole length
RDCW22032	512771.34	6412394.39	189.77	512772.00	6412395.88	189.83	40	-55	670	306.00	671.10	Entire hole length
RCFO22033	513433.71	6411888.93	198.62	513434.37	6411890.42	198.68	40	-55	400	405.00	N/A	Entire hole length
RDCW22034	512436.84	6412504.52	185.62	512437.50	6412506.01	185.68	40	-53	690	293.20	690.00	Entire hole length
RCFO22035	513585.22	6411825.09	198.29	513585.88	6411826.58	198.35	40	-55	300	300.00	N/A	Entire hole length
RCFO22036	513717.14	6411634.60	202.61	513717.80	6411636.09	202.67	130	-55	300	300.00	N/A	Entire hole length
GPCW22037	512402.21	6412747.40	188.65	512402.87	6412748.89	188.71	220	-70	400	90.00	400.00	Entire hole length
RDCW22038	512290.88	6412904.18	190.69	512291.54	6412905.67	190.75	40	-44	470	246.00	470.10	Entire hole length
GPFO22039	513798.35	6411810.83	196.73	513799.01	6411812.32	196.79	N/A	-90	200	80.50	200.15	Entire hole length
RDFO22040	513908.67	6411723.78	198.88	513909.33	6411725.27	198.94	60	-55	300	245.00	N/A	Entire hole length
RCCE22041	513341.12	6412612.06	195.22	513341.78	6412613.55	195.28	40	-55	300	300.00	N/A	Entire hole length
RCFO22042	513878.41	6411541.31	202.58	513879.07	6411542.80	202.64	130	-55	300	300.00	N/A	Entire hole length
GPCE22043	513340.71	6412611.50	195.19	513341.37	6412612.99	195.25	40	-70	275	150.00	275.60	Entire hole length
RCFO22044	513850.98	6412367.98	195.08	513851.64	6412369.47	195.14	40	-55	350	350.00	N/A	Entire hole length
RCFO22045	513426.12	6412157.30	199.12	513426.78	6412158.79	199.18	40	-55	350	348.00	N/A	Entire hole length
RCCW22046	512589.06	6412958.39	190.54	512589.72	6412959.88	190.60	40	-49	320	320.00	N/A	Entire hole length
GPFO22047	513950.99	6412250.71	192.90	513951.65	6412252.20	192.96	10	-70	325	150.00	324.80	Entire hole length
RDCW22048	512294.53	6413222.39	194.06	512295.19	6413223.88	194.12	40	-55	390	348.00	402.20	Entire hole length
RCFO22049	513798.61	6412190.52	196.92	513799.27	6412192.01	196.98	40	-55	350	351.00	N/A	Entire hole length
RDCW22050	512151.47	6413065.89	192.21	512152.13	6413067.38	192.27	40	-55	550	300.00	550.20	Entire hole length
RDFO22051	513673.21	6412052.52	198.97	513673.87	6412054.01	199.03	40	-55	500	362.50	362.50	Entire hole length
RCFO22052	513798.61	6412190.52	196.92	513799.27	6412192.01	196.98	40	-55	300	303.00	N/A	Entire hole length
RDCW22053	512016.49	6412860.50	188.66	512017.15	6412861.99	188.72	40	-55	680	303.70	N/A	Entire hole length
RCFO22054	514341.26	6412025.75	196.33	514341.92	6412027.24	196.39	60	-55	300	303.00	N/A	Entire hole length
RDCW22055	512063.83	6412663.13	187.10	512064.49	6412664.62	187.16	40	-55	600	300.00	N/A	Entire hole length
RDCW22056	512401.44	6413055.68	191.89	512402.10	6413057.17	191.95	40	-55	440	270.00	N/A	Entire hole length
RCFO22057	514225.03	6411822.07	199.67	514225.69	6411823.56	199.73	60	-55	300	303.00	N/A	Entire hole length
RDCW22058	512069.05	6412965.83	190.00	512069.71	6412967.32	190.06	40	-55	700	300.00	N/A	Entire hole length
GPFO22059	514231.65	6411823.31	200.02	514232.31	6411824.80	200.08	130	-60	400	149.60	399.80	Entire hole length
RCFO22060	513987.60	6411280.32	202.18	513988.26	6411281.81	202.24	130	-55	300	300.00	N/A	Entire hole length
RDFO22061	514013.38	6411630.08	200.75	514014.04	6411631.57	200.81	130	-55	300	237.00	N/A	Entire hole length
RDCW22062	512455.12	6413525.60	196.17	512455.78	6413527.09	196.23	40	-55	400	348.00	348.00	Entire hole length
GPCW22063	512816.40	6412951.52	190.40	512817.06	6412953.01	190.46	40	-65	450	149.50	450.00	Entire hole length
RDCW22064	512671.21	6412823.04	189.48	512671.87	6412824.53	189.54	40	-55	450	340.00	N/A	Entire hole length
GPCW22065	512144.61	6413066.01	192.17	512145.27	6413067.50	192.23	270	-70	500	298.70	495.70	Entire hole length
GFCW22066	512178.69	6413232.73	194.24	512179.35	6413234.22	194.30	310	-60	550	N/A	549.00	Entire hole length
							Total Depth (m)			18029.20	13809.07	
							Average Depth (m)			286.18	445.45	

2021-22 Hole Naming Convention

Code Position	Code	Meaning
1st & 2nd characters (alpha)	RC	RC from surface to TD
	RD	RC top and Diamond Tail (HQ3)
3rd & 4th characters (alpha)	CW	Core West
	CE	Core East
	FO	Fold
5th & 6th characters (numeric)	21	Year drilled = 2021
	22	Year drilled = 2022
7th, 8th & 9th characters (numeric)		Hole number in order of drilling

Table 2: Data summary for holes in the 2021-22 program

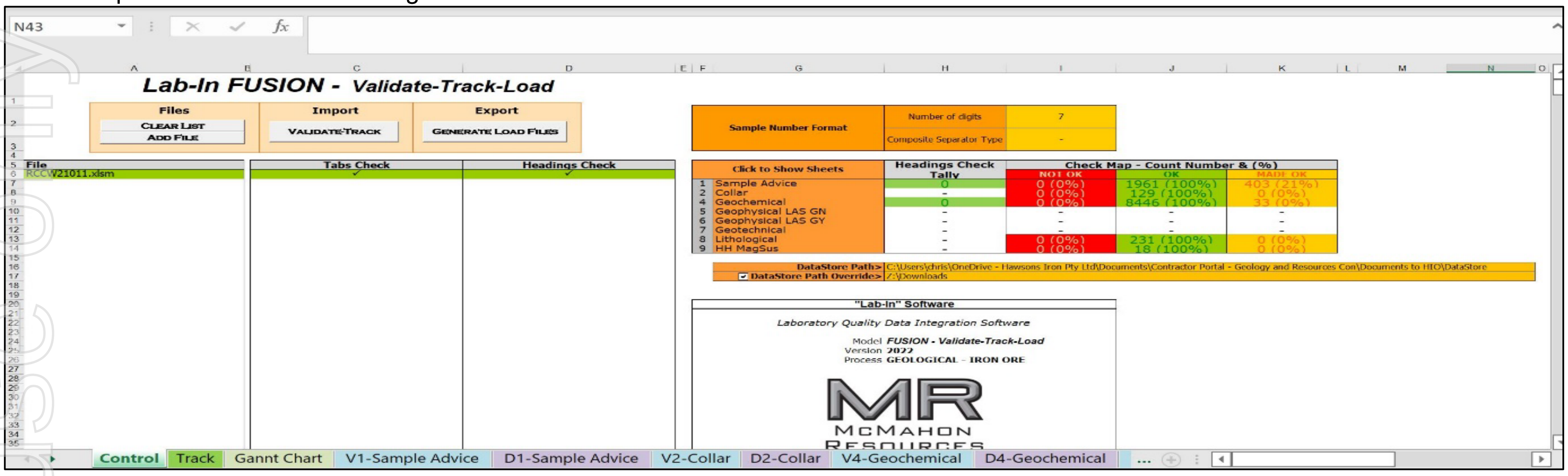
HIO Data Summary 2020/2021 Exploration Programme (as at 15/06/22)											
Drill Order	Drill Hole	Report Date	DTR = 50	XRF (Fe, Si) = 33	Litho = 59	Geophysics Gyro = 48	Geophysics General GN - 45	Complete Data Depth	RC Depth	Total Core	Total Drillhole
0	RCCE21000	18/06/2022	x	x	x	x			250.00		250.00
1	LDCW21001	16/06/2022			x				64.00	1.25	65.25
2	RCCW21002	27/05/2022	x	x	x	x	x	250.00	250.00		250.00
3	RCCW21003	16/06/2022			x	x	x		300.00		300.00
4	LDCW21004	16/06/2022			x	x			N/A	33.70	33.70
5	RDCW21005	27/05/2022	x	x	x	x	x	228.00	228.00	362.43	590.43
6	RDCW21006	27/05/2022	x	x	x	x	x	166.00	166.00	395.20	561.20
7	RDCW21007	27/05/2022	x	x	x				399.00		399.00
8	RDCW21008	18/06/2022	x		x	x	x		221.50	429.05	650.55
9	RDCW21009	27/05/2022	x	x	x	x	x	387.30	387.30	153.10	540.40
10	RCCW21010	27/05/2022	x	x	x	x	x	405.40	405.40		405.40
11	RCCW21011	27/05/2022	x	x	x	x	x	351.90	351.90		351.90
12	RCCW21012	27/05/2022	x	x	x	x	x	321.20	321.20		321.20
13	RCCW21013	27/05/2022	x	x	x	x	x	300.70	300.70		300.70
14	RDCW21014	27/05/2022	x	x	x	x	x	314.70	314.70	105.30	420.00
15	RDCW21015	16/06/2022			x	x	x		326.50	125.90	452.40
16	RDCW22016	27/05/2022	x	x	x				351.00	219.00	570.00
17	RDCW22017	27/05/2022	x	x	x	x	x	374.50	374.50		374.50
18	RDCW22018	18/06/2022	x		x				290.50		290.50
19	RDCW22019	27/05/2022	x	x	x				302.50		302.50
20	GFCW22020	16/06/2022			x	x	x		N/A	475.03	475.03
21	RDCW22021	27/05/2022	x	x	x	x	x	380.50	380.50	269.50	650.00
22	RCCW22022	27/05/2022	x	x	x	x	x	300.00	300.00		300.00
23	RCCW22023	27/05/2022	x	x	x	x	x	349.00	349.00		349.00
24	RCCW22024	27/05/2022	x	x	x	x	x	303.70	303.70		303.70
25	RCCE22025	18/06/2022	x		x	x	x		303.00		303.00
26	RDCE22026	27/05/2022	x	x	x	x	x	339.00	339.00	111.40	450.40
27	RDCE22027	18/06/2022	x		x	x	x		287.60	313.00	600.60
28	GPCE22028	27/05/2022	x	x	x	x	x	98.50	98.50	151.65	250.15
29	RDCE22029	27/05/2022	x	x	x				364.00		364.00
30	GFCW22030	16/06/2022			x	x	x		N/A	450.81	450.81
31	RDCE22031	27/05/2022	x	x	x	x	x	248.50	248.50	151.50	400.00
32	RDCW22032	27/05/2022	x	x	x	x	x	306.00	306.00	365.10	671.10
33	RCFO22033	18/06/2022	x	x					405.00		405.00
34	RDCW22034	18/06/2022	x		x	x			293.20	396.80	690.00
35	RCFO22035	18/06/2022	x	x	x	x	x	300.00	300.00		300.00
36	RCFO22036	18/06/2022	x		x				300.00		300.00
37	GPCW22037	18/06/2022	x	x	x	x	x	90.00	90.00	310.00	400.00
38	RDCW22038	18/06/2022	x		x	x	x		246.90	223.20	470.10
39	GPFO22039	18/06/2022	x	x	x				80.50	119.65	200.15
40	RDFO22040	18/06/2022	x			x	x		245.00		245.00
41	RCCE22041	18/06/2022	x	x			x		300.00		300.00
42	RCFO22042	18/06/2022	x		x	x	x		300.00		300.00
43	GPCE22043	18/06/2022	x	x	x	x	x	149.50	149.50	126.10	275.60
44	RCFO22044	18/06/2022	x						350.00		350.00
45	RCFO22045	18/06/2022	x		x				348.00		348.00
46	RCCW22046	18/06/2022	x	x	x	x	x	320.00	320.00		320.00
47	GPFO22047	18/06/2022	x	x	x	x			150.00	174.80	324.80
48	RDCW22048	18/06/2022	x		x	x	x		348.00	54.20	402.20
49	RCFO22049	18/06/2022	x		x	x	x		351.00		351.00
50	RDCW22050	18/06/2022	x		x	x	x		299.30	250.90	550.20
51	RDFO22051	18/06/2022	x		x	x	x		362.50		362.50
52	RCFO22052	18/06/2022	x		x	x	x		303.00		303.00
53	RDCW22053	18/06/2022	x	x	x	x	x	303.70	303.70		303.70
54	RCFO22054	16/06/2022			x	x	x		303.00		303.00
55	RDCW22055	16/06/2022			x				300.00		300.00
56	RDCW22056	16/06/2022			x				270.00		270.00
57	RCFO22057	18/06/2022	x						303.00		303.00
58	RDCW22058	16/06/2022			x	x	x		300.00		300.00
59	GPFO22059	18/06/2022	x	x					149.60	250.20	399.80
60	RCFO22060								300.00		300.00
61	RDFO22061	16/06/2022			x	x	x		237.00		237.00
62	RDCW22062	16/06/2022			x	x	x		348.00		348.00
63	GPCW22063	16/06/2022			x				149.50	300.50	450.00
64	RDCW22064	16/06/2022			x				340.00		340.00
65	GPCW22065	16/06/2022			x	x	x		298.70	197.00	495.70
66	GFCW22066	19/06/2022				x	x		N/A	549.00	549.00
		Total	**14492.20**	**9339.70**	**22242.37**	**11860.98**	**17838.47**	**6588.10**	**18028.90**	**7065.27**	**25094.17**

Table 3: Example Lithology Log Dump from iGloo

hole_id	depth_from	depth_to	Sample_No	RC_Recovery	RC_moisture	MS_Slx_5	Ox_State	Munsell_Hue	Munsell_Value	Munsell_Chroma	Lithology	Hematite	Magnetite	Martite	gangue_comp	Fabric	Fabric_Intensity	Bedding	Sorting	Vein_Type	Vein_perc	Sulfide_perc	text_min_comp1	text_min_comp2	text_min_comp3	Bedding_CIA	Fabric_CIA
GFCW22020	2.5	3.6			D	2091	DO	L-GY			r usap					nil											
GFCW22020	3.6	6.45			D	2186	DO	GR/GY			t cy																
GFCW22020	6.45	9.4			D	1630	DO	L-GR/GY			slt																
GFCW22020	9.4	12.65			D	5860	DO	L-GR/GY			slt						vwk	tnbd									
GFCW22020	12.65	15.6			D	1200	DO	L-GY/BR			slt							tnbd									
GFCW22020	15.6	18.7			D	3347	DO	L-GY/BR			slt							tnbd		qzcarb							
GFCW22020	18.7	21.7			D	1737	DO	GY			slt							mebd	bm								
GFCW22020	21.7	24.3			D	1080	DO	GY			slt							mebd	bm								
GFCW22020	24.3	27.4			D	1061	DO	RD/GY			t motcy							mebd	pr								
GFCW22020	27.4	30.5			D	998	DO	RD/GY			t motcy							mebd	pr								
GFCW22020	30.5	33.51			D	1507	DO	GY/OR			t motcy							mebd	pr								
GFCW22020	33.51	36.54			D	2554	DO	GY			slt							tnbd	bm								
GFCW22020	36.54	39.45			D	2350	DO	GY			slt							tnbd	gd								
GFCW22020	39.45	42.45			D	4929	DO	GY			slt							tnbd	gd								
GFCW22020	42.45	45.5			D	2556	DO	GY			slt							tnbd	gd								
GFCW22020	45.5	48.62			D	1916	DO	GY			ss vf	2						mebd	bm								
GFCW22020	48.62	51.62			D	3723	DO	GY			slt							tnbd	gd								
GFCW22020	51.62	54.68			D	3583	DO	GY			slt							tnbd	gd								
GFCW22020	54.68	57.72			D	1961	DO	GY			slt							tnbd	gd								
GFCW22020	57.72	60.77			D	3549	DO	GY			ss vf							tnbd	bm								
GFCW22020	60.77	63.73			D	5944	DO	GY			slt							tnbd	gd								
GFCW22020	63.73	66.75			D	6968	DO	GY			slt							tnbd		qzcarb							
GFCW22020	66.75	69.75			D	3107	DO	GY/BR			slt						vstr	tnbd		qzcarb							
GFCW22020	69.75	72.75			D	21774	DO	GY/BR			slt							mebd		qtz							
GFCW22020	72.75	75.73			D	36124	DO	GY/BR			slt							tnbd		qzcarb							
GFCW22020	75.73	78.75			D	9399	DO	GY/BR			slt							mebd		qzcarb							
GFCW22020	78.75	81.75			D	4441	FR	GY			slt							tnbd									
GFCW22020	81.75	84.8			D	8499	FR	GY			slt							tnbd		qzcarb							
GFCW22020	84.8	87.75			D	10939	FR	GY			slt							tnbd		qzcarb							
GFCW22020	87.75	90.7			D	6176	FR	GY			slt									qzcarb							
GFCW22020	90.7	93.67			D	12387	FR	GY			slt							tnbd		qzcarb							
GFCW22020	93.67	96.8			D	9641	FR	GY			slt							tnbd		qzcarb							
GFCW22020	96.8	97.7			D	17325	FR	GY			slt							tnbd		qzcarb							
GFCW22020	97.7	99.86			D	32027	FR	GY			slt							tnbd		qzcarb							
GFCW22020	99.86	102.91			D	33238	FR	GY			slt							tnbd		qzcarb							
GFCW22020	102.91	105.33			D	2104	FR	GY			slt							mebd		qzcarb							
GFCW22020	105.35	107.4			D	27741	FR	GY			slt							tnbd		qzcarb							
GFCW22020	107.4	108.86			D	37028	FR	GY			slt							tnbd		qzcarb							
GFCW22020	108.86	111.88			D	21606	FR	GY			slt							tnbd		qzcarb							
GFCW22020	111.88	114.92			D	6088	FR	GY			slt							tnbd		qzcarb							
GFCW22020	114.92	117.93			D	15968	FR	GY			slt									qzcarb							
GFCW22020	117.93	120.93			D	7240	FR	GY			slt									qtz							
GFCW22020	120.93	124			D	17592	FR	GY			slt									qzcarb							
GFCW22020	124	127.1			D	32900	FR	GY			slt									qzcarb							
GFCW22020	127.1	130.04			D	25901	FR	GY			slt							tnbd		qzcarb							
GFCW22020	130.04	133			D	21352	FR	GY			ss f							tnbd		qzcarb							
GFCW22020	133	136.1			D	19315	FR	GY			ss f		2														
GFCW22020	136.1	137.6			D	10074	FR	GY			slt									qzcarb							
GFCW22020	137.6	139.2			D	12154	FR	GY			slt									qzcarb							
GFCW22020	139.2	142.1			D	7269	FR	GY			slt							tnbd		qzcarb							
GFCW22020	142.1	145.14			D	24765	FR	GY			slt							tnbd		qzcarb							
GFCW22020	145.14	148.12			D	18388	FR	GY			slt							mebd		qzcarb							
GFCW22020	148.12	151.21			D	24017	FR	GY			slt							tnbd		qzcarb							
GFCW22020	151.21	153.66			D	21301	FR	GY			slt							tnbd		qzcarb							
GFCW22020	153.66	154.2			D	15370	FR	GY			slt							tnbd									
GFCW22020	154.2	156.7			D	28508	FR	GY			slt							tnbd		qzcarb							
GFCW22020	156.7	159.8			D	18767	FR	GY			dia 3							lam		qzcarb							
GFCW22020	159.8	162.9			D	8765	FR	GY			dia 3							lam									
GFCW22020	162.9	165.95			D	5826	FR	GY			dia 3									qzcarb							
GFCW22020	165.95	168.95			D	4671	FR	GY			dia 3							lam		qzcarb							
GFCW22020	168.95	172			D	12999	FR	GY			dia 3							lam		qzcarb							
GFCW22020	172	175			D	23321	FR	GY			dia 3							lam									
GFCW22020	175	178.05			D	27704	FR	GY			dia 3							lam		qzcarb							
GFCW22020	178.05	180.9			D	13838	FR	GY			dia 3							tnbd		qzcarb							
GFCW22020	180.9	183.9			D	16590	FR	GY			dia 3																
GFCW22020	183.9	187			D	17859	FR	GY			dia 3							tnbd		qzcarb							
GFCW22020	187	190			D	16599	FR	GY			slt							tnbd		qzcarb							
GFCW22020	190	193.04			D	13982	FR	GY			slt									calc							
GFCW22020	193.04	196.04			D	24395	FR	GY			slt							tnbd		qzcarb							
GFCW22020	196.04	199.04			D	21044	FR	GY			slt							tnbd		calc							
GFCW22020	199.04	202.1			D	8964	FR	GY			slt							tnbd		qzcarb							
GFCW22020	202.1	205.02			D	10446	FR	GY			slt																
GFCW22020	205.02	208.04			D	14665	FR	GY			slt																
GFCW22020	208.04	211.05			D	31051	FR	L-GY			slt							tnbd									
GFCW22020	211.05	214.07			D	27972	FR	GY			slt									calc							
GFCW22020	214.07	216.4			D	30049	FR	GY			slt									calc							
GFCW22020	216.47	220.08			D	21043	FR	GY			dia 4								pr								
GFCW22020	220.08	223.12			D	10593	FR	GY			dia 3								pr	calc							
GFCW22020	223.12	226.15			D	11835	FR	GY			dia 3																
GFCW22020	226.15	229.04			D	23610	FR	L-GY			dia 5																
GFCW22020	229.04	229.4			D	29450	FR	GY			dia 5								gd								
GFCW22020	229.4	235.15			D	17880	FR	GY			slt								pr								
GFCW22020	235.15	239.6			D	28772	FR	GY			slt																
GFCW22020	239.6	241.14			D	17603	FR	GY			slt																
GFCW22020	241.14	244.15			D	3583	FR	GY			ss f																
GFCW22020	244.15	247.16			D	29815	FR	GY			slt									calc							
GFCW22020	247.16	250.16			D	10541	FR	GY			slt									qzcarb							
GFCW22020	250.16	253.16			D	8976	FR	GY			slt							tnbd		qzcarb							
GFCW22020	253.16	256.16			D	24552	FR	GY			slt							mebd		qzcarb							
GFCW22020	256.16	259.16			D	8647	FR	GY			slt							tnbd									
GFCW22020	259.16	262.18			D	28241	FR	GY			slt							tnbd		qzcarb							
GFCW22020	262.18	265.12			D	11715	FR	GY			slt							tnbd		qzcarb							
GFCW22020	265.12	268.18			D	7051	FR	GY			slt	2						tnbd		qzcarb							
GFCW22020	268.18	271.18			D	11049	FR	GY			cs																
GFCW22020	271.18	274.1			D	16911	FR	L-GY			ss vf							tnbd		qzcarb							
GFCW22020	274.1	277.15			D	5933	FR	GY			dia 3							tnbd		qzcarb							
GFCW22020	277.15	280.15			D	18582	FR	L-GY/GY			slt							tnbd		qzcarb							
GFCW22020	280.15	283.15			D	16046	FR	L-GY/GY			slt							tnbd		qzcarb							
GFCW22020	283.15	286.15			D	12622	FR	GY			slt							tnbd		qzcarb							
GFCW22020	286.15	289.15			D	4657	FR	L-GY			ss vf							tnbd		qzcarb							
GFCW22020	289.15	292.18			D	11581	FR	L-GY			slt							tnbd		qzcarb							
GFCW22020	292.18	295.18			D	15794	FR	GY			slt							tnbd	gd	calc							
GFCW22020	295.18	298.19			D	24603	FR	GY			slt							tnbd	gd								
GFCW22020	298.19	299.9			D	50583	FR	D-GY			ss f								gd								
GFCW22020	299.9	304.2			D	40308	FR	GY			slt																
GFCW22020	304.2	307.1			D	22312	FR	GY			ss f																
GFCW22020	307.1	310.19			D	22657	FR	GY			dia 5								pr								
GFCW22020	310.19	313.27			D	21833	FR	GY			dia 3								pr								
GFCW22020	313.27	316.27			D	20099	FR	GY			dia 3								pr								
GFCW22020	316.27	319.27			D	22973	FR	GY			dia 3								pr								
GFCW22020	319.27	324.85			D	21388	FR	GY			slt																
GFCW22020	324.85	328.24			D	29042	FR	GY			slt									calc							
GFCW22020	328.24	331.2			D	23574	FR	GY			slt								pr	calc							
GFCW22020	331.2	334.19			D	19540	FR	GY			dia 1									carb							
GFCW22020	334.19	337.2			D	20242	FR	GY			dia 3									calc							
GFCW22020	337.2	340.15			D	17283	FR	GY			dia 3																
GFCW22020	340.15	341.65			D	11341	FR	GY			dia 4							lam									
GFCW22020	341.65	343.17			D	6862	FR	GY			dia 4							lam									
GFCW22020	343.17	346.17			D	8669	FR	GY			dia 4							lam									
GFCW22020	346.17	349.17			D	9076	FR	GY			dia 3							lam		qzcarb							
GFCW22020	349.17	352.17			D	7880	FR	GY			dia 3							lam		qzcarb							
GFCW22020	352.17	355.17			D	4747	FR	GY			dia 3							tnbd		qzcarb							
GFCW22020	355.17	358.17			D	7057	FR	GY			dia 3									qzcarb							
GFCW22020	358.17	361.15			D	3383	FR	GY			dia 3							tnbd		qzcarb							
GFCW22020	361.15	364.17			D	12910	FR	GY			dia 3							lam		qzcarb							
GFCW22020	364.17	367.17			D	5180	FR	GY			dia 4							lam		qzcarb							
GFCW22020	367.17	370.1			D	4356	FR	GY			dia 4							lam		qzcarb							
GFCW22020	370.1	373.12			D	2206	FR	L-GY			slt							lam		qzcarb							
GFCW22020	373.12	376.17			D	22174	FR	GY			slt							lam									
GFCW22020	376.17	379.17			D	40071	FR	GY			slt							tnbd		qzcarb							
GFCW22020	379.17	380.25			D	8394	FR	GY			slt							lam									
GFCW22020	380.25	381.14			D	8441	FR	D-GY			slt							mebd		calc							
GFCW22020	381.14	382.16			D	10343	FR	L-GY			slt							mebd									
GFCW22020	382.16	384.5			D	12034	FR	L-GY			slt							tkbd									
GFCW22020	384.5	385.16			D	10646	FR	L-GY			dia 3							mebd	pr								
GFCW22020	385.16	388.17			D	10344	FR	L-GY			dia 3							tkbd	pr								
GFCW22020	388.17	391.12			D	8287	FR	GY			dia 4							tkbd	pr								
GFCW22020	391.12	394.13			D	8068	FR	GY			dia 3								pr								
GFCW22020	394.13	397.09			D	9470	FR	GY			dia 3								pr								
GFCW22020	397.09	400.02			D	8533	FR	GY			dia 3								pr								
GFCW22020	400.02	403.02			D	19346	FR	GY			dia 3							tnbd	pr								
GFCW22020	403.02	406.03			D	32516	FR	GY			slt							tnbd	pr	calc							
GFCW22020	406.03	406.8			D	17369	FR	GY			slt							tkbd	pr								
GFCW22020	406.8	409			D	14469	FR	GY			slt							tnbd	pr								
GFCW22020	409	412			D	13392	FR	GY			dia 4							lam		qzcarb							
GFCW22020	412	414.94			D	7994	FR	GY			dia 4							tnbd		qzcarb							
GFCW22020	414.94	417.24			D	10250	FR	GY			slt							lam		qzcarb							
GFCW22020	417.24	419.66			D	10561	FR	GY			ss f		2							qzcarb							
GFCW22020	419.66	422.32			D	15425	FR	GY			slt							tnbd		qtz							
GFCW22020	422.32	423.82			D	20216	FR	GY			slt							tnbd		qzcarb							
GFCW22020	423.82	426.77			D	16593	FR	GY			slt							tnbd	pr	calc							
GFCW22020	426.77	428.4			D	13305	FR	GY			slt							tnbd	pr	calc							
GFCW22020	428.4	429.8			D	6417	FR	GY			ss f							mebd	pr								
GFCW22020	429.8	431			D	14753	FR	GY			slt							tnbd	pr	calc							
GFCW22020	431	432.78			D	10698	FR	GY			ss f							tnbd	gd								
GFCW22020	432.78	435.28			D	16987	FR	GY			ss f							tnbd	gd								
GFCW22020	435.28	435.38			D	8494	FR	D-GY			ss f							mebd	gd								
GFCW22020	435.38	435.77			D	8494	FR	D-GY			ss f							tnbd	gd								
GFCW22020	435.77	437.5			D	6033	FR	D-GY			ss f																
GFCW22020	437.5	438.7			D	7496	FR	L-GY			ss f							tnbd									
GFCW22020	438.7	441.8			D	12093	FR	L-GY			ss f							tnbd	gd								
GFCW22020	441.8	444.77			D	4081	FR	L-GY			slt							tnbd	gd								
GFCW22020	444.77	447.68			D	1401	FR	L-GY			slt							tnbd	gd								
GFCW22020	447.68	450.74			D	951	FR	L-GY			slt							tnbd	gd	calc							
GFCW22020	450.74	453.7			D	3906	FR	GY			slt							tnbd	gd	calc							
GFCW22020	453.7	456.74			D	5517	SO	GY			ss vf							tnbd		calc							
GFCW22020	456.74	459.3			D	43261	FR	L-GY			slt							tnbd									
GFCW22020	459.3	459.74			D	57112	FR	GY			slt									calc							
GFCW22020	459.74	462.74			D	27507	FR	GY			slt		3					tnbd		qzcarb							
GFCW22020	462.67	465.67			D	15058	FR	GY			slt	2						tnbd		qzcarb							
GFCW22020	465.74	466.73			D	26260	FR	GY			slt	2						tnbd		qzcarb							
GFCW22020	466.73	468.73			D	26346	FR	GY			slt	2	3					tnbd									
GFCW22020	468.73	471.73			D	9461	FR	L-GY			slt	2						tnbd									
GFCW22020	471.73	474.73			D	5874	FR	GY			slt		3					tnbd		qzcarb							
GFCW22020	474.73	475.03			D	No Data	FR	GY			slt							tnbd	bm	qzcarb							

Table 4: Assay Data Examples

Screen capture of Lab-In data management software.



Example Assay Header

Hole No	Client	Project	Job Number	SAMPLES RECEIVED	INSTRUCTIONS RECEIVED	DATE REPORTED	Client Sample Number	Lab Sample Number	Batch Number	Sample Type	Depth From	Depth To	Thickness	Lab	Drill Diameter_mm	Sample Receipt Weight	DTR Prep Head Weight_grams
RCCW21000	Hawsons Iron	Hawsons Iron	N9879	44522	44638	44643	27251	27251	Batch 1	BLANK	0	0	0	BV Adelaide	143	850	153.61
RCCW21000	Hawsons Iron	Hawsons Iron	N9879	44522	44638	44643	27269	27269	Batch 1	PRIMARY	85	90	5	BV Adelaide	143	4600	150.65
RCCW21000	Hawsons Iron	Hawsons Iron	N9879	44522	44638	44643	27270	27270	Batch 1	DUPLICATE	90	90	0	BV Adelaide	143	1700	150.45
RCCW21000	Hawsons Iron	Hawsons Iron	N9879	44522	44638	44643	27275	27275	Batch 1	OREAS700	110	110	0	BV Adelaide	143	50	
RCCW21000	Hawsons Iron	Hawsons Iron	N9879	44522	44638	44643	27290	27290	Batch 1	DUPLICATE	180	180	0	BV Adelaide	143	3200	150.42
RCCW21000	Hawsons Iron	Hawsons Iron	N9879	44522	44638	44643	27301	27301	Batch 1	BLANK	230	230	0	BV Adelaide	143	900	152.16
RCCW21002	Hawsons Iron	Hawsons Iron	N9879	44522	44638	44643	27306	27306	Batch 1	BLANK	0	0	0	BV Adelaide	143	800	152.08
RCCW21002	Hawsons Iron	Hawsons Iron	N9879	44522	44638	44643	27324	27324	Batch 1	PRIMARY	85	90	5	BV Adelaide	143	3100	151.09
RCCW21002	Hawsons Iron	Hawsons Iron	N9879	44522	44638	44643	27325	27325	Batch 1	DUPLICATE	90	90	0	BV Adelaide	143	1650	154.68
RCCW21002	Hawsons Iron	Hawsons Iron	N9879	44522	44638	44643	27330	27330	Batch 1	OREAS700	110	110	0	BV Adelaide	143	50	
RCCW21002	Hawsons Iron	Hawsons Iron	N9879	44522	44638	44643	27346	27346	Batch 1	PRIMARY	185	190	5	BV Adelaide	143	3150	154.85
RCCW21002	Hawsons Iron	Hawsons Iron	N9879	44522	44638	44643	27347	27347	Batch 1	DUPLICATE	190	190	0	BV Adelaide	143	2200	152.26

Example Assay Data (Part 1)

First Pulverise Time	First Oversize Weight	Second Pulverise Time	Second Oversize Weight	Third Pulverise Time	Third Oversize Weight	Fourth Pulverise Time	Fourth Oversize Weight	Fifth Pulverise Time	Fifth Oversize Weight	DTR Head_grams	DTR Mags_grams	DTR Non-Mags_grams	Mags%	Assay Head_Fe_%	Assay Head_SiO2_%	Assay Head_Al2O3_%	Assay Head_CaO_%
30	101.95	81.56	31.97	25.576	10.6	9	4.42			21.83	0	21.83	0	0.13	2.88	0.11	52.1
30	24.47	22	5.34	4	2.01					21.64	1.12	20.52	5.175600739	27.46	42.19	6.83	1.89
30	24.27	22	5.17	4	1.33					21.71	1.15	20.56	5.297098111	27.84	41.67	6.73	1.97
0										21.85	2.36	19.49	10.80091533	16.26	47.64	10.8	7.94
30	27.67	25	6.56	4	2.16					24.14	3.31	20.83	13.71168186	13.56	50.01	9.59	4.36
30	93.12	74	30.31	24.248	12.79	10.232	4.5			20.35	0	20.35	0	0.12	3.22	0.16	51.5
30	92.54	75	36.68	32	14.09	12	4.97			22.58	0	22.58	0	8.99	66.3	10.2	1.35
30	25.57	21	6.9	6	1.61	0				24.15	1.25	22.9	5.175983437	20.94	51.54	9.02	0.74
30	31.99	26	7	2.5	0	0				23.45	1.06	22.39	4.520255864	21.17	51.23	8.99	0.75
0										23.03	2.45	20.58	10.63829787	16.11	47.53	10.7	7.81
30	41.1	32.88	7.78	6.224	2.1					22.05	2.95	19.1	13.37868481	20.89	48.66	7.13	3.08
30	41.11	32.888	8.33	6.664	2.35					24.71	3.75	20.96	15.17604209	22.62	46.91	6.92	2.79
30	91.03	72.824	33.41	26.728	12.96	10.368	4.98			22.63	0	22.63	0	0.15	2.82	0.13	51.8

Example Assay Data (Part 2)

Assay Head_MgO_%	Assay Head_MnO_ppm	Assay Head_P_%	Assay Head_S_ppm	Assay Head_K2O_%	Assay Head_Na2O_%	Assay Head_TiO2_%	Assay Head_Cu_%	Assay Head_Ni_%	Assay Head_Co_%	Assay Head_Cr_ppm	Assay Head_Pb_%	Assay Head_Zn_%	Assay Head_As_%	Assay Head_Sn_%	Assay Head_Sr_%	Assay Head_Zr_%	Assay Head_Ba_%
1.47	50	0.03	1110	0.04	0.27	0.02	0.002	0.002	0.001	5	0.003	0.0005	0.0005	0.006	0.206	0.005	0.003
2.73	1700	0.309	30	1.39	0.68	0.46	0.006	0.003	0.003	20	0.006	0.008	0.0005	0.002	0.009	0.014	0.037
2.79	1900	0.306	20	1.33	0.75	0.45	0.0005	0.002	0.004	30	0.003	0.008	0.0005	0.002	0.009	0.014	0.022
1.74	4200	0.362	3060	1.86	1.66	0.33	0.223	0.006	0.002	60	0.004	0.021	0.001	0.023	0.012	0.014	0.015
5.3	2700	0.168	730	2.28	0.3	0.74	0.001	0.006	0.0005	70	0.003	0.008	0.0005	0.013	0.011	0.022	0.036
1.46	50	0.029	1080	0.05	0.29	0.03	0.001	0.0005	0.001	5	0.001	0.0005	0.002	0.016	0.203	0.005	0.006
1.01	400	0.024	530	0.98	0.39	0.65	0.002	0.001	0.003	100	0.004	0.077	0.002	0.009	0.008	0.025	0.064
1.95	400	0.248	60	2.02	0.1	0.65	0.004	0.001	0.001	60	0.003	0.008	0.001	0.008	0.005	0.019	0.044
1.93	400	0.254	60	2	0.06	0.65	0.005	0.002	0.002	40	0.005	0.007	0.001	0.005	0.005	0.019	0.031
1.75	4200	0.359	2890	1.83	1.65	0.33	0.21	0.008	0.003	60	0.005	0.021	0.0005	0.016	0.012	0.014	0.013
3.77	700	0.258	50	1.6	0.5	0.54	0.003	0.002	0.003	50	0.005	0.006	0.001	0.01	0.009	0.016	0.03
3.71	700	0.245	50	1.51	0.48	0.54	0.002	0.002	0.003	70	0.006	0.005	0.0005	0.009	0.009	0.016	0.037
1.47	50	0.031	1110	0.05	0.32	0.02	0.0005	0.0005	0.0005	20	0.002	0.0005	0.0005	0.008	0.205	0.003	0.007

Example Assay Data (Part 3)

Assay Head_V_ppm	Assay Head_Cl_%	Assay Head_LOI_%	Assay Mags_Fe_%	Assay Mags_SiO2_%	Assay Mags_Al2O3_%	Assay Mags_CaO_%	Assay Mags_MgO_%	Assay Mags_MnO_ppm	Assay Mags_P_%	Assay Mags_S_ppm	Assay Mags_K2O_%	Assay Mags_Na2O_%	Assay Mags_TiO2_%	Assay Mags_Cu_%	Assay Mags_Ni_%	Assay Mags_Co_%	Assay Mags_Cr_ppm
20	0.018	42.7															
70	0.008	3.24	70.03	0.86	0.16	0.04	0.05	400	0.01	50	0.02	0.005	0.02	0.008	0.006	0.007	110
70	0.006	3.36	71.05	0.95	0.2	0.04	0.05	300	0.008	30	0.01	0.005	0.02	0.006	0.007	0.009	170
80	0.019	2.01	68.55	2.43	0.94	0.53	0.18	700	0.028	200	0.12	0.04	0.08	0.013	0.006	0.002	230
80	0.004	6.88	68.43	4.32	0.15	0.14	0.13	200	0.008	90	0.03	0.005	0.06	0.005	0.008	0.002	290
10	0.017	42.9															
180	0.005	5.63															
80	0.001	3.04	69.19	0.93	0.25	0.03	0.05	50	0.02	30	0.03	0.05	0.03	0.004	0.006	0.005	250
90	0.003	3.04	69.75	1.02	0.28	0.03	0.07	100	0.02	50	0.03	0.08	0.03	0.004	0.006	0.003	210
80	0.012	2.62	68.24	2.59	1.01	0.57	0.2	800	0.032	190	0.14	0.08	0.08	0.008	0.01	0.005	190
90	0.0005	4.2	70.17	2.23	0.13	0.05	0.06	50	0.004	30	0.03	0.1	0.03	0.004	0.004	0.001	130
90	0.003	3.83	70.64	1.87	0.14	0.04	0.09	100	0.004	30	0.02	0.02	0.04	0.004	0.006	0.003	190
5	0.016	42.9															

Example Assay Data (Part 4)

Assay Mags_Pb_%	Assay Mags_Zn_%	Assay Mags_As_%	Assay Mags_Sn_%	Assay Mags_Sr_%	Assay Mags_Zr_%	Assay Mags_Ba_%	Assay Mags_V_ppm	Assay Mags_Cl_%	Assay Mags_LOI_%	Distribution_Fe	Distribution_SiO2	Distribution_Al2O3	Distribution_CaO	Distribution_MgO	Distribution_MnO	Distribution_P	Distribution_S
										0	0	0	0	0	0	0	0
0.004	0.008	0.0005	0.002	0.002	0.009	0.0005	170	0.004		13.19910123	0.105499328	0.121243941	0.109536524	0.094791222	1.217788409	0.16749517	8.626001232
0.005	0.008	0.001	0.007	0.002	0.009	0.0005	110	0.008		13.51863581	0.120764176	0.157417477	0.107555292	0.094930074	0.836383912	0.138486225	7.945647167
0.004	0.009	0.001	0.008	0.002	0.004	0.0005	80	0.018	-2.73	45.53522423	0.550928301	0.940079668	0.7209679	1.117336069	1.800152555	0.835429915	0.705942179
0.006	0.005	0.0005	0.0005	0.002	0.013	0.0005	260	0.014	-2.88	69.19545645	1.184452422	0.214468434	0.440283362	0.336324272	1.015680137	0.652937231	1.690481325
										0	0	0	0	0	0	0	0
										0	0	0	0	0	0	0	0
0.008	0.005	0.0005	0.01	0.002	0.01	0.003	190	0.003		17.10249733	0.093396674	0.143458521	0.209837166	0.132717524	0	0.417418019	2.587991718
0.006	0.005	0.001	0.008	0.002	0.01	0.001	170	0.0005		14.89314343	0.089999238	0.140786612	0.180810235	0.163947104	1.130063966	0.355925659	3.766879886
0.004	0.011	0.0005	0.012	0.002	0.002	0.013	110	0.001	-2.63	45.06253549	0.579701062	1.00417578	0.776418667	1.215805471	2.026342452	0.948260535	0.699403666
0.006	0.005	0.001	0.0005	0.002	0.008	0.017	130	0.003	-2.99	44.93931608	0.613120985	0.24393114	0.217186442	0.212923366	0	0.20742147	8.027210884
0.004	0.007	0.001	0.01	0.002	0.008	0.019	170	0.003	-3.17	47.39326318	0.604971194	0.307029753	0.217577664	0.368151964	2.168006013	0.247772116	9.105625253
										0	0	0	0	0	0	0	0

Example Assay Data (Part 5)

Distribution_K2O	Distribution_Na2O	Distribution_TiO2	Distribution_Cu	Distribution_Ni	Distribution_Co	Distribution_Cr	Distribution_Pb	Distribution_Zn	Distribution_As	Distribution_Sn	Distribution_Sr	Distribution_Zr	Distribution_Ba	Distribution_V	Distribution_Cl
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.074469075	0	0.225026119	6.900800986	10.35120148	12.07640173	28.46580407	3.450400493	5.175600739	0	5.175600739	1.150133498	3.327171904	0	12.56931608	2.58780037
0.039827805	0	0.235426583	0	18.53984339	11.91847075	30.0168893	8.828496852	5.297098111	0	18.53984339	1.177132914	3.405277357	0	8.324011318	7.062797482
0.696833247	0.26026302	2.618403717	0.629649773	10.80091533	10.80091533	41.40350877	10.80091533	4.628963714	10.80091533	3.756840115	1.800152555	3.085975809	0	10.80091533	10.2324461
0.180416867	0	1.111757988	68.55840928	18.28224247	0	56.80553912	27.42336371	8.56980116	0	0	2.493033065	8.10235746	0	44.56296603	47.9908865
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.076871041	2.587991718	0.238891543	5.175983437	31.05590062	25.87991718	21.56659765	13.8026225	3.234989648	0	6.469979296	2.070393375	2.724201809	0.352907962	12.29296066	15.52795031
0.067803838	6.027007818	0.208627194	3.616204691	13.56076759	6.780383795	23.73134328	5.424307036	3.228754188	4.520255864	7.232409382	1.808102345	2.379082033	0.145814705	8.538261076	0
0.813858854	0.51579626	2.578981302	0.40526849	13.29787234	17.73049645	33.68794326	8.510638298	5.572441743	0	7.978723404	1.773049645	1.519756839	10.63829787	14.62765957	0.886524823
0.25085034	2.675736961	0.743260267	17.83824641	26.75736961	4.459561602	34.7845805	16.05442177	11.14890401	13.37868481	0	2.973041068	6.689342404	7.581254724	19.32476694	0
0.20100718	0.632335087	1.124151266	30.35208418	45.52812626	15.17604209	41.19211424	10.11736139	21.24645892	0	16.86226899	3.372453797	7.588021044	7.793102694	28.66585728	15.17604209
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 5: Fault Data Example

Drillhole ID	FZ Code	FZ Top	FZ Base	FZ TK	Angle1	Angle2	Vein_Type	Defect
RDCW21006	1	35.00	40.00	5.00			quartz	
RDCW21006	1	66.00	67.00	1.00			Qtz vein due to high volume of angular qtz	
RDCW21005	1	527.80	528.12	0.32			calcite	brecciated - minor
RDCW21005	1	531.76	541.40	9.64			Calcite 1%	joint - highly fractured
RDCW21005	1	575.73	576.75	1.02			Calcite 3%	Calcite vein infilling jt
RDCW21005	1	585.02	587.33	2.31			Calcite? 2-3%	
RDCE22031	1	251.67	251.72	0.05	60			Vein, Planar, Rough, Calcite, Coating (≥ 1 mm) 60°
RDCE22031	2	251.80	255.05	3.25			Clay & chlorite	Brecciated Zone, Rough, Calcite, Moderately Weathered (DW), Filled , Clay & chlorite.
RDCE22031	1	258.60	275.90	17.30			Chlorite and Haematite alteration	Alteration Zone, Irregular, Rough, Clay, , Chlorite and Haematite alteration .
RDCE22031	1	281.86	282.03	0.17	40			Vein, Planar, Smooth, Quartz, Filled 40°
RDCE22031	2	283.50	311.85	28.35	30		4 faults, soft sed def,central fault Qtz filled	Fault, Planar, Smooth, Quartz, Displaced 30°, 4 faults, soft sed def,central fault Qtz filled.
RDCE22031	0	313.22	319.75	6.53	45		Haem alt	Brecciated Zone, Planar, Rough, Clay, Slightly Altered, Coating (≥ 1 mm) 45°, Haem alt.
RDCE22031	2	323.20	324.85	1.65			Haem alt.	Brecciated Zone, Rough, Calcite, Slightly Altered, Veneer (<1 mm) , Haem alt..
RDCE22031	2	327.63	328.70	1.07	30		Clay filled in part	Brecciated Zone, Irregular, Rough, Calcite, Slightly Altered, Coating (≥ 1 mm) 30°, Clay filled in part.

Table 6: Example Geophysical Logs

Example Gyro Log (LAS)

WELL.	DEPT.M	DIRE.DEG	TILT.DEG	NORT.M	EAST.M	AZIM.DEG	DRIF.M	TDEP.M
RCCW21002	0	51.04	34.66	0	0	0	0	0
RCCW21002	10	53.92	35.15	3.39	4.653	53.9	5.757	8.176
RCCW21002	20	52.26	36.19	7.005	9.322	53.1	11.661	16.247
RCCW21002	30	53.74	37.3	10.589	14.209	53.3	17.72	24.202
RCCW21002	40	52.26	38.55	14.403	19.137	53	23.951	32.022
RCCW21002	50	52.44	39.41	18.273	24.17	52.9	30.3	39.749
RCCW21002	60	53.35	39.95	22.106	29.321	53	36.721	47.415
RCCW21002	70	52.32	40.9	26.108	34.503	52.9	43.268	54.973
RCCW21002	80	52.81	41.68	30.128	39.8	52.9	49.918	62.442
RCCW21002	90	52.32	42.88	34.287	45.186	52.8	56.722	69.77
RCCW21002	100	52.48	44.46	38.553	50.741	52.8	63.726	76.907
RCCW21002	110	54.53	45.47	42.69	56.547	52.9	70.852	83.92
RCCW21002	120	53.68	46.16	46.962	62.359	53	78.064	90.847
RCCW21002	130	54.11	47.06	51.253	68.289	53.1	85.383	97.659
RCCW21002	140	56.07	47.56	55.373	74.413	53.3	92.754	104.407
RCCW21002	150	55.52	48.34	59.602	80.571	53.5	100.22	111.054
RCCW21002	160	54.91	49.56	63.977	86.799	53.6	107.829	117.541
RCCW21002	170	55.23	49.78	68.332	93.071	53.7	115.462	123.998
RCCW21002	180	55.79	50.77	72.687	99.477	53.8	123.203	130.322
RCCW21002	190	54.2	51.89	77.29	105.859	53.9	131.071	136.494
RCCW21002	200	54.2	52.27	81.916	112.273	53.9	138.98	142.613
RCCW21002	210	50.89	53.17	86.965	118.484	53.7	146.974	148.608
RCCW21002	220	50.3	54.38	92.158	124.738	53.5	155.089	154.432
RCCW21002	230	48.94	54.93	97.534	130.91	53.3	163.249	160.178
RCCW21002	240	46.69	55.33	103.175	136.894	53	171.421	165.866

Example GN Geophysical Log (LAS)

WELL.	DEPT[M]	MagS	SSD	LSD	GAM	CAL	BRD	CDL	Temp	MC2F	MC4F	DT	LON	SHN	SPR
RCCW21002	94.00	4.95974	2.19288	1.97904	135.517	154.04	2.34032	2.17007	23.0578	-999.25	-999.25	-999.25	-999.25	-999.25	-999.25
RCCW21002	94.10	3.78702	2.1423	2.12788	137.862	147.254	2.2571	2.17453	23.0501	-999.25	-999.25	-999.25	-999.25	-999.25	-999.25
RCCW21002	94.20	5.52842	2.35561	2.12148	149.064	151.662	2.22115	2.23661	23.0543	-999.25	-999.25	-999.25	-999.25	-999.25	-999.25
RCCW21002	94.30	7.11453	2.43379	2.09647	115.275	146.259	2.66444	2.3956	23.0678	-999.25	-999.25	-999.25	-999.25	-999.25	-999.25
RCCW21002	94.40	7.92724	2.42288	2.11992	128.182	149.837	2.48757	2.34221	23.058	-999.25	-999.25	-999.25	-999.25	-999.25	-999.25
RCCW21002	94.50	7.91142	2.36932	2.11556	92.6403	145.143	2.37032	2.28774	23.0602	-999.25	-999.25	-999.25	-999.25	-999.25	-999.25
RCCW21002	94.60	3.61134	2.43447	2.09321	150.906	145.222	2.48471	2.34013	23.0676	-999.25	-999.25	-999.25	-999.25	-999.25	-999.25
RCCW21002	94.70	3.01911	2.4574	2.05693	102.36	146.767	2.52144	2.34787	23.0502	-999.25	-999.25	-999.25	-999.25	-999.25	-999.25
RCCW21002	94.80	2.00911	2.43273	2.20099	83.8973	149.821	2.59356	2.4092	23.0621	-999.25	-999.25	-999.25	-999.25	-999.25	-999.25
RCCW21002	94.90	7.28132	2.67022	2.25118	87.9252	149.087	2.6771	2.53802	23.068	-999.25	-999.25	-999.25	-999.25	-999.25	-999.25
RCCW21002	95.00	18.7248	2.977	2.31172	61.6571	148.914	3.02672	2.77107	23.0699	-999.25	-999.25	-999.25	-999.25	-999.25	-999.25
RCCW21002	95.10	25.4652	3.02669	2.39756	44.9238	147.579	3.06132	2.82406	23.066	-999.25	-999.25	-999.25	669.053	138.825	2815.51
RCCW21002	95.20	36.9461	3.05683	2.47179	111.238	145.198	3.02756	2.85806	23.068	-999.25	-999.25	-999.25	779.809	150.088	1693.96
RCCW21002	95.30	38.0277	2.89853	2.36321	90.787	144.164	3.00253	2.76053	23.07	-999.25	-999.25	-999.25	301.885	92.2989	2311.88
RCCW21002	95.40	54.1741	2.72114	2.32209	117.358	144.891	2.82615	2.61844	23.0681	-999.25	-999.25	-999.25	55.8572	42.0313	1840.02
RCCW21002	95.50	57.0324	2.38112	2.22472	98.6534	143.18	2.53224	2.37281	23.072	-999.25	-999.25	-999.25	56.3678	77.9389	1560.02
RCCW21002	95.60	52.0168	2.23367	2.05971	91.1485	147.858	2.24829	2.17915	23.0721	-999.25	-999.25	-999.25	64.2025	117.56	1807.55
RCCW21002	95.70	44.185	1.9206	1.849	95.5398	149.926	2.15212	1.96932	23.0756	-999.25	-999.25	-999.25	88.2252	134.822	2678.32
RCCW21002	95.80	37.7628	1.85569	1.89903	127.129	144.06	1.58579	1.77966	23.0584	-999.25	-999.25	-999.25	78.2571	132.799	2913.66
RCCW21002	95.90	25.1534	2.04006	1.95053	91.1033	148.665	2.26058	2.09097	23.0779	-999.25	-999.25	-999.25	75.0299	124.728	1209.43
RCCW21002	96.00	15.0692	2.23752	1.97772	87.6046	153.476	2.19304	2.14053	23.0722	-999.25	-999.25	-999.25	72.4028	76.9204	1200.55
RCCW21002	96.10	5.44644	2.11947	2.06339	132.57	150.81	2.33781	2.1672	23.08	-999.25	-999.25	-999.25	69.0821	89.1636	924.747
RCCW21002	96.20	3.25205	2.29558	2.13308	71.0585	144.118	2.14047	2.19888	23.0799	-999.25	-999.25	-999.25	67.8471	87.2586	924.942
RCCW21002	96.30	2.90054	2.57391	2.18754	70.7557	145.265	2.65329	2.47293	23.0758	-999.25	-999.25	-999.25	65.1364	77.8996	607.341
RCCW21002	96.40	4.94099	2.87057	2.26527	78.3224	143.53	2.72333	2.62184	23.0681	-999.25	-999.25	-999.25	63.5731	106.269	384.491
RCCW21002	96.50	8.74845	3.19592	2.32908	60.3551	143.444	3.08688	2.8784	23.0722	-999.25	-999.25	-999.25	62.9298	120.053	142.881
RCCW21002	96.60	18.5062	3.29177	2.38586	65.6977	144.261	3.22832	2.96539	23.08	-999.25	-999.25	-999.25	62.4088	130.335	16.5851
RCCW21002	96.70	49.0091	3.37254	2.57435	41.6948	146.607	3.24155	3.06339	23.08	-999.25	-999.25	-999.25	61.3384	122.498	15.6411
RCCW21002	96.80	60.7806	3.09806	2.49347	67.9313	147.101	3.11667	2.89867	23.0798	-999.25	-999.25	-999.25	59.9721	111.996	15.1854
RCCW21002	96.90	66.0001	2.70472	2.46542	135.411	144.998	2.84906	2.66578	23.0682	-999.25	-999.25	-999.25	59.1858	77.3322	14.0702
RCCW21002	97.00	58.361	2.54096	2.3344	114.861	144.787	2.50864	2.45467	23.08	-999.25	-999.25	-999.25	58.861	113.073	13.779
RCCW21002	97.10	33.4612	2.38968	2.15539	120.199	144.437	2.53399	2.35309	23.08	-999.25	-999.25	-999.25	57.8027	104.441	13.5318
RCCW21002	97.20	13.9919	2.27376	2.0274	135.518	147.645	2.2372	2.1768	23.08	-999.25	-999.25	-999.25	56.431	125.555	13.3294
RCCW21002	97.30	0.144183	2.26378	2.09436	143.133	143.889	2.20305	2.18513	23.08	-999.25	-999.25	-999.25	55.1849	109.389	13.4872
RCCW21002	97.40	0.823158	2.34691	2.01468	133.462	154.904	2.44749	2.27094	23.08	-999.25	-999.25	-999.25	53.8014	104.613	13.1529
RCCW21002	97.50	1.49303	2.0958	2.04768	139.237	158.38	2.31433	2.15	23.082	-999.25	-999.25	-999.25	50.9058	99.7756	12.9983
RCCW21002	97.60	1.64111	2.08997	2.0314	108.2	169.365	1.85067	1.99145	23.0802	-999.25	-999.25	-999.25	45.5369	106.009	12.9088
RCCW21002	97.70	1.69011	2.2854	2.00044	131.496	144.545	2.37383	2.225	23.0878	-999.25	-999.25	-999.25	42.495	114.388	12.6529
RCCW21002	97.80	2.12471	2.24688	1.92176	140.141	144.961	2.2594	2.13667	23.0802	-999.25	-999.25	-999.25	41.166	111.274	12.5947
RCCW21002	97.90	2.06411	1.79772	1.812	124.39	152.785	1.82915	1.80651	23.09	-999.25	-999.25	-999.25	40.5586	107.83	12.3301
RCCW21002	98.00	3.33935	1.69284	1.81404	117.714	150.387	1.40795	1.64113	23.09	-999.25	-999.25	-999.25	39.7034	112.363	12.135
RCCW21002	98.10	2.71811	2.03586	1.91761	115.858	145.209	2.09686	2.02857	23.09	-999.25	-999.25	-999.25	39.6915	127.022	11.8837
RCCW21002	98.20	4.32075	2.42709	2.09909	87.6237	144.195	2.34627	2.29162	23.09	-999.25	-999.25	-999.25	40.4644	140.273	11.5692
RCCW21002	98.30	8.6977	2.57956	2.25026	84.5552	144.617	2.74969	2.53366	23.0898	-999.25	-999.25	-999.25	41.0971	140.957	11.2142
RCCW21002	98.40	11.9449	2.65696	2.26145	74.6321	143.496	2.73328	2.54993	23.0822	-999.25	-999.25	-999.25	42.3492	134.174	10.0379
RCCW21002	98.50	22.5003	2.70128	2.2318	120.16	142.851	2.69864	2.5452	23.09	-999.25	-999.25	-999.25	43.319	125.645	9.53069
RCCW21002	98.60	27.3696	2.56772	2.12547	82.0259	145.23	2.72689	2.47268	23.09	-999.25	-999.25	-999.25	44.4635	60.5849	9.07082
RCCW21002	98.70	34.1703	2.55336	2.19611	106.228	143.535	2.57548	2.4396	23.09	-999.25	-999.25	-999.25	45.2514	41.1255	8.90854
RCCW21002	98.80	26.8908	2.51952	2.10184	130.577	142.231	2.64562	2.4176	23.09	-999.25	-999.25	-999.25	46.6098	39.022	8.64116
RCCW21002	98.90	27.3234	2.39568	1.99727	89.9034	141.801	2.52744	2.29897	23.09	-999.25	-999.25	-999.25	47.6069	37.6623	8.60351
RCCW21002	99.00	24.1176	2.28368	2.05984	143.47	141.466	2.40284	2.24754	23.0901	-999.25	-999.25	-999.25	48.8441	38.3824	8.779
RCCW21002	99.10	17.6447	2.36771	2.05153	127.351	142.538	2.44627	2.29112	23.0939	-999.25	-999.25	-999.25	49.5473	39.1941	8.92918
RCCW21002	99.20	11.2449	2.4516	2.02916	149.182	147.49	2.5574	2.34674	23.0902	-999.25	-999.25	-999.25	50.2206	39.495	9.08925
RCCW21002	99.30	8.00281	2.43015	2.08669	132.141	144.311	2.52492	2.34847	23.0978	-999.25	-999.25	-999.25	51.2502	39.4519	9.25356
RCCW21002	99.40	11.2488	2.34179	2.11808	115.832	150.682	2.37396	2.27335	23.0902	-999.25	-999.25	-999.25	52.4635	39.7658	9.52747
RCCW21002	99.50	16.1108	2.42268	2.02416	173.383	148.543	2.36964	2.27013	23.1001	-999.25	-999.25	-999.25	53.747	40.9613	9.60424
RCCW21002	99.60	15.5717	2.06464	2.0316	134.55	150.282	2.24372	2.1101	23.106	-999.25	-999.25	-999.25	55.1944	42.0817	9.81572
RCCW21002	99.70	9.2114	2.09712	2.01104	112.438	145.398	1.74904	1.95375	23.1058	-999.25	-999.25	-999.25	56.5287	41.011	10
RCCW21002	99.80	4.83038	2.1544	1.96524	104.282	142.407	2.28661	2.1374	23.0979	-999.25	-999.25	-999.25	57.9726	42.1977	10.0056
RCCW21002	99.90	3.98772	2.27459	2.02855	144.544	143.48	2.22198	2.17645	23.0942	-999.25	-999.25	-999.25	60.1037	40.6339	10.2843
RCCW21002	100.00	4.46052	2.40348	2.15336	151.115	144.427	2.419	2.3304	23.1018	-999.25	-999.25	-999.25	62.1872	41.7124	10.4032

Table 7: Example Specific Gravity Data For Core Samples

Hole ID	Date	Core Type	Core Subtype	Depth From (m)	Depth To (m)	Length (cm)	Dry Weight (g)	Wet Weight (g)	Specific Gravity	Corresponding Sample Number and Interval		
RDCW21009	24/05/2022	HQ3	3/4	390.60	390.80	20	1138	734	2.8168	292196	387.3	392
RDCW21009	24/05/2022	HQ3	3/4	395.60	395.83	23	1376	906	2.9277	292197	392	397
RDCW21009	24/05/2022	HQ3	3/4	400.52	400.66	14	878	588	3.0276	292198	397	402
RDCW21009	24/05/2022	HQ3	3/4	406.00	406.19	19	1164	772	2.9694	292199	402	407
RDCW21009	24/05/2022	HQ3	3/4	411.29	411.49	20	1134	742	2.8929	292200	407	412
RDCW21009	24/05/2022	HQ3	3/4	414.58	414.83	25	1512	1006	2.9881	292201	412	417
RDCW21009	24/05/2022	HQ3	3/4	420.60	420.84	24	1514	1000	2.9455	292202	417	422
RDCW21009	24/05/2022	HQ3	3/4	424.26	424.42	16	892	582	2.8774	292203	422	427
RDCW21009	24/05/2022	HQ3	3/4	431.10	431.35	25	1548	1040	3.0472	292204	427	432
RDCW21009	24/05/2022	HQ3	3/4	436.40	436.58	18	1010	672	2.9882	292205	432	437
RDCW21009	24/05/2022	HQ3	3/4	439.52	439.75	23	1416	950	3.0386	292206	437	442
RDCW21009	24/05/2022	HQ3	3/4	442.71	442.97	26	1692	1142	3.0764	292207	442	447
RDCW21009	24/05/2022	HQ3	3/4	450.60	450.85	25	1458	956	2.9044	292208	447	452
RDCW21009	24/05/2022	HQ3	3/4	456.04	456.23	19	1230	826	3.0446	292209	452	457
RDCW21009	24/05/2022	HQ3	3/4	460.55	460.75	20	1126	766	3.1278	292210	457	462
RDCW21009	24/05/2022	HQ3	3/4	465.84	466.05	21	1262	832	2.9349	292211	462	467
RDCW21009	24/05/2022	HQ3	3/4	470.03	470.26	23	1358	888	2.8894	292212	467	472
RDCW21009	24/05/2022	HQ3	**1/2**	475.45	475.70	25	948	626	2.9441	292213	472	477
RDCW21009	24/05/2022	HQ3	3/4	480.79	481.00	21	1422	958	3.0647	292215	477	482
RDCW21009	24/05/2022	HQ3	3/4	485.31	485.51	20	1152	789	3.1736	292216	482	487
RDCW21009	24/05/2022	HQ3	3/4	490.85	491.10	25	1650	1118	3.1015	292217	487	492
RDCW21009	24/05/2022	HQ3	3/4	495.20	495.39	19	1118	756	3.0884	292218	492	497
RDCW21009	24/05/2022	HQ3	3/4	501.54	501.81	27	1650	1086	2.9255	292220	497	502
RDCW21009	24/05/2022	HQ3	3/4	505.77	506.00	23	1538	1052	3.1646	292221	502	507
RDCW21009	24/05/2022	HQ3	3/4	510.29	510.52	23	1886	1386	3.7720	292222	507	512
RDCW21009	24/05/2022	HQ3	3/4	516.17	516.43	26	1704	1144	3.0429	292223	512	517
RDCW21009	24/05/2022	HQ3	3/4	519.76	520.00	24	1726	1264	3.7359	292224	517	522
RDCW21009	24/05/2022	HQ3	3/4	523.84	524.04	20	1302	896	3.2069	292225	522	527
RDCW21009	24/05/2022	HQ3	3/4	530.00	530.23	23	1386	864	2.6552	292226	527	532
RDCW21009	24/05/2022	HQ3	3/4	535.95	536.19	24	1486	1010	3.1218	292227	532	537
RDCW21009	24/05/2022	HQ3	3/4	539.62	539.85	23	1512	1036	3.1765	292228	537	540.4

Appendix 2

McMahon QAQC Report

Hawsons Iron Project 2021 Drill Program
QA Evaluation
Hawsons Iron

MR McMahon Resources

1 Summary

1.1 Brief

This report details the QAQC (quality assurance, quality control) methods employed by Hawsons Iron for their 2021 drilling program on laboratory and other test results to date.

This report has been produced by McMahon Resources and serves as a surmise of outcomes for data received to date, a further more complete report detailing all methods used and updated data received is to be issued at completion of the drill program testing.

1.2 Methods

Primary and duplicate samples from drill holes, plus lab duplicates, certified reference materials and blank samples have been reviewed using statistical methods consistent with the QAQC report from the 2016 (prior) drilling program from Geochem Pacific, entitled "Hawsons Iron Project, QA Evaluation of the RC Drilling Program", 26th February 2017 (The Geochem Pacific report).

The samples, methods and 2021 outcomes for evaluation described in this report are tabulated in the sections following along with outcomes from the prior 2016 program, and acceptable limits via the Geochem Pacific report & Certified Reference Materials.

1.3 Outcomes

1.3.1 Davis Tube Recovery Magnetics (DTR Mags%)

Following are the summary outcomes from the DTR Mags% testing. Green cells indicate acceptable outcomes, orange cells, less acceptable outcomes.

QA Sample Type	QA Parameter	Test Parameter	Type	Relative Precision Average% (2 x APD[1])			Relative Bias Average (RDP[2])			Number of Samples	
				2021*	2016	Acceptable Limits[3]	2021*	2016	Acceptable Limits[3]	2021	2016
Field duplicates of 5 m RC composites	Total precision / primary sampling error	DTR Magnetics (DTR Mags)	Sub Sets I, II & III - All Duplicates	31.3	24.1[4]	40	-5.0	-1.7	5% intra-lab	78	23
			Sub-Set I - Equal Mass Duplicates	40.5			-12.5			26	
			Sub-Set II - Half-Split, Equal Mass Duplicates	28.4			-3.0			26	
			Sub-Set III - Half-Split, Proportional Mass Duplicates	25.2			0.6			26	
Field pairs of 5 m RC composites	Field halving precision / primary sampling error		All Duplicates	26.8	20.4	40	-2.0	-3.7	5% intra-lab	73	87
Certified Reference Materials (CRM's)	Analytical precision / analytical error		All compared with OREAS 700 CRM	4.5[5]	3	5	-4.4[6]	Not calculated	2% intra-lab	59	6

*Green shading denotes acceptable outcomes, orange less acceptable.
[1]APD - absolute pair difference; the absolute value of the difference between the primary and duplicate sample pair, divided by the mean of the sample pair and multiplied by two (2) to attain the relative precision value at 95% confidence. All samples tested are then averaged to give the relative precision average.
[2]RDP - the relative difference between pairs; the difference between the primary and duplicate sample pair, divided by the mean of the sample pair to attain the relative bias. All samples tested are then averaged to give the relative bias average.
[3]Limits are per Table 4 of the Geochem Pacific report.
[4]Based on 2010 result of speared field duplicates (Hawson's Iron Project) applied to 2016 data by Geochem Pacific.
[5]Mathematical adjustment with bias removed and one outlying value removed.
[6]Low mass of CRM sample supplied to the lab may be producing bias. Further investigation to be undertaken with potential modified (increased) future sample mass. One outlying value removed.

Table 1: Samples, methods, outcomes and comparisons for the 2021 drill program, DTR Mags%.

2021 v 2016 Data - The magnitude of 2021 outcomes for all QA Sample Types per the above table were in general accord with those of the 2016 program where available.

Field Duplicates - Field duplicates defining total precision / primary sampling error outcomes for all data subsets combined were as follows.

1. DTR Mags%[1] / Relative Precision[2] - DTR Mags% gave a relative precision average of 31.3%, which was acceptable compared with the limits defined[3] of 40%.
2. DTR Mags% / Relative Bias[4] - DTR Mags% gave a relative bias average of -5.0% (duplicate low of original), which was acceptable compared with the limits defined.
3. Subset I – Equal Mass Duplicates – Subset I showed high relative precision and bias compared with the Subsets II & III.

   For Subset I, a flaw in the manual sampling method employed is thought to have been identified upon review.

   The method was to use a sampling scoop to take horizontal increments from a mixed, flattened bag with the end open. This is less precise than other sub-division methods (more discussion below), due to the significant mass for each one metre section available, that had to be manually sampled (at least double the mass required usually) into a much smaller equal mass increment for combination into five metre composites.

   Further, Half-Split Equal Mass and Half-Split Proportional Mass Duplicates showed more precise outcomes as minimal mass was left for manual sampling of the former, the riffle giving a representative split, thus minimising this error.

[1]Magnetics % determined from Davis Tube Recovery method.
[2]Relative Precision – the variability relative to the data average of the duplicate sample pair examined (thus standardised to 100% of the duplicate pair sample average). Average of all outcomes. 95% statistical confidence.
[3]Per Table 4 of the Geochem Pacific report.
[4]Relative Bias – the mean difference of the duplicate sample pair relative to the data average of the duplicate pair examined (thus standardised to 100% of the duplicate pair sample average). Average of all outcomes.

Field Pairs - Field pairs defining field halving precision / primary sampling error outcomes for all data were as follows.

1. DTR Mags% / Relative Precision - DTR Mags% gave a relative precision average of 26.8%, which was acceptable compared with the limits defined of 40%.
2. DTR Mags% / Relative Bias - DTR Mags% gave a relative bias average of -2.0% (duplicate low of original), which was acceptable compared with the limits defined.

Certified Reference Material's (CRM's) - CRM's defining analytical precision / analytical error outcomes for all data using the "OREAS 700" CRM were as follows*

*One obvious outlying value was removed.

1. DTR Mags% / Relative Precision - DTR Mags% gave a relative precision average of 4.5%, which was acceptable compared with the limits defined of 40%.

   The precision was calculated with bias removed - the bias shown (discussed following) increasing the precision value also. The outcome indicates that if the bias was removed, the variability is within acceptable limits.
2. DTR Mags% / Relative Bias - DTR Mags% gave a relative bias average of -4.4% (original low of CRM), which was not acceptable compared with the limits defined.

   The absolute bias was calculated at -0.5%. That is, 0.5% lower DTR outcomes.

3.1.3 Half-Split Equal Mass Duplicates

Following is a chart and statistics for Half-Split Equal Mass Duplicates for 26 samples (of all 78 samples).

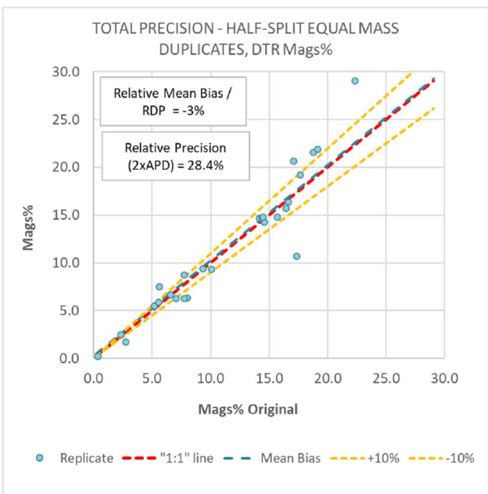


Figure 3: Half-Split Equal Mass Duplicates for DTR Mags% chart & statistics.

3.1.4 Half-Split Proportional Mass Duplicates

Following is a chart and statistics for Half-Split Proportional Mass Duplicates for 26 samples (of all 78 samples).

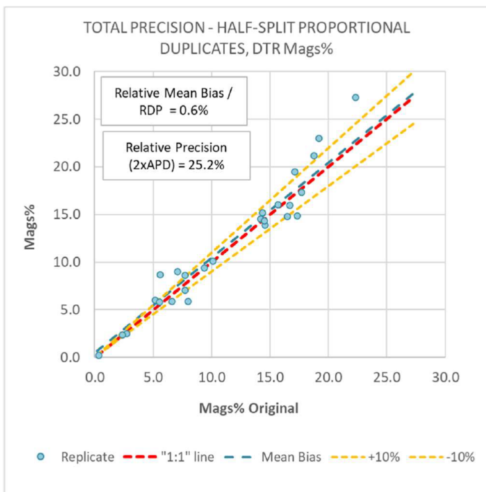


Figure 4: Half-Split Proportional Duplicates for DTR Mags% chart & statistics.

Hawsons IRON
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Monday 25 July 2022

HIO Exploration Target Estimate 2021-22

Hawsons Iron Ltd has upgraded its Exploration Target in July 2022 to 5-18 Mt at a recoverable magnetic fraction via Davis Tube Recovery (DTR) of 7.5% to 33.6% and a potential iron concentrate grade range of 65.3% to 70.6% (see Table 1). The potential quantity and grade of this Exploration Target is conceptual in nature only. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

This upgrade is derived from:

1) The existence and continuity of high amplitude and linear airborne magnetic signatures discrete to the mineralisation;
2) Existing holes in the current Mineral Resources have confirmed the magnetic anomalies as being the source of the magnetite mineralisation
3) An average density of known mineralisation of 3.10t/m^3; and
4) The stratigraphic nature to the mineralisation and its associated geometry indicate the expectation of continuation at depth.

The assay results shown in this report relate to the samples taken for the intersections in the drillholes.

Table 1: Exploration Target tonnage and grade approximations.

Target Area	Approx. Tonnes Range (Bt)		Approx. DTR% Range		Approx. Concentrate Fe% Range	
	Min	Max	Min	Max	Min	Max
Core/Fold	1	1	10.0	12.5	67.5	69.5
Dam	0	1	7.4	27.4	68.9	69.9
Limb	2	8	7.6	30.1	65.7	70.1
T	1	5	7.5	54.7	61.8	71.4
Wonga	1	3	5.2	43.4	62.4	71.9
	5	**18**	**7.5**	**33.6**	**65.3**	**70.6**

Table 2 below outlines the parameters used to determine Exploration Target tonnage approximations for the target areas within the Hawsons Exploration Licence Areas.

Table 2: Parameters used to derive approximate tonnages.

Target Area	No of Bands	Approx. Strike Range (km)		Approx. Thickness Range (m)		Approx. Width Range (m)		Approx. Volume Range (Million m^3)		Approx. Tonnes Range (Bt)	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Core/Fold	5	See excerpt below from H&S July 2022 Resource report.								1	1
Dam	1	5.0	11.0	100	273	250	300	125	899	0	3
Limb	1 to 4	9.0	19.0	100	250	400	450	360	2138	1	7
T	1	7.0	14.0	100	120	400	600	280	1008	1	3
Wonga	?3	7.5	8.1	100	250	600	750	450	1519	1	5
	Totals/Aves	**28.5**	**52.1**	**100**	**223**	**413**	**525**	**1215**	**5564**	**5**	**18**

The total number of drillholes available in each of the areas outside of the mine pitshell area are: 1 at Dam, 7 at Limb, 12 in the T area and 6 at Wonga.

Table 3 shows a selection of the drillholes within these various deposit areas that have intersected mineralisation and that have lithology records to indicate they are still in mineralisation at total depth (TD).

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The availability of assay data for these holes is shown in Table 3. The assay analyses were conducted by ALS Laboratory, Perth.

Table 3: Selected drillholes intersecting mineralisation within Dam, Limb, T and Wonga areas with assay approximations.

Deposit Area	Hole Name	No. Samples	Assay Top Depth (m)	Assay Base Depth (m)	Intersection Thickness (m)	Total Depth (m)	Approx Ave DTR%	Approx Ave Concentrate Fe%
Dam	RC10HA007	9	93.0	227.0	134.0	272.5	14.90	69.37
Limb	RC10HA001	10	65.0	230.0	165.0	230.0	15.89	68.43
Limb	RC10HA009	3	112.0	135.0	23.0	250.0	14.39	69.63
T Area	RC10BRP006	13	120.0	250.0	130.0	250.0	14.85	69.26
T Area	RC10BRP008	4	89.0	125.0	36.0	249.0	12.75	70.05
T Area	RC10BRP027	22	78.0	300.0	222.0	300.0	12.22	68.23
T Area	RC10BRP044	20	98.0	270.0	172.0	270.0	12.86	70.44
Wonga	DD10HA003	34	121.3	300.0	178.7	300.0	15.00	67.26
Wonga	RC10HA012	39	28.0	291.4	263.4	295.5	15.22	60.03

The range in DTR% and concentrate Fe% was determined by averaging the full set of sample interval data for holes within each Target area shown above.

The new Mineral Resources estimate for the main Hawsons prospects has included potentially economic material in the oxide/transition zone. The same may be the case for the Exploration Targets. Most of the CAP drilling had holes that stopped in mineralisation and the expectation would be that there is additional exploration potential down dip from the current drill intercepts.

Figure 1 shows the location of the magnetic anomalies which form the basis for the surface extents of the Exploration Targets (also labelled in the diagram). The diagram also shows the location of some of the drillholes used in the target assessment.

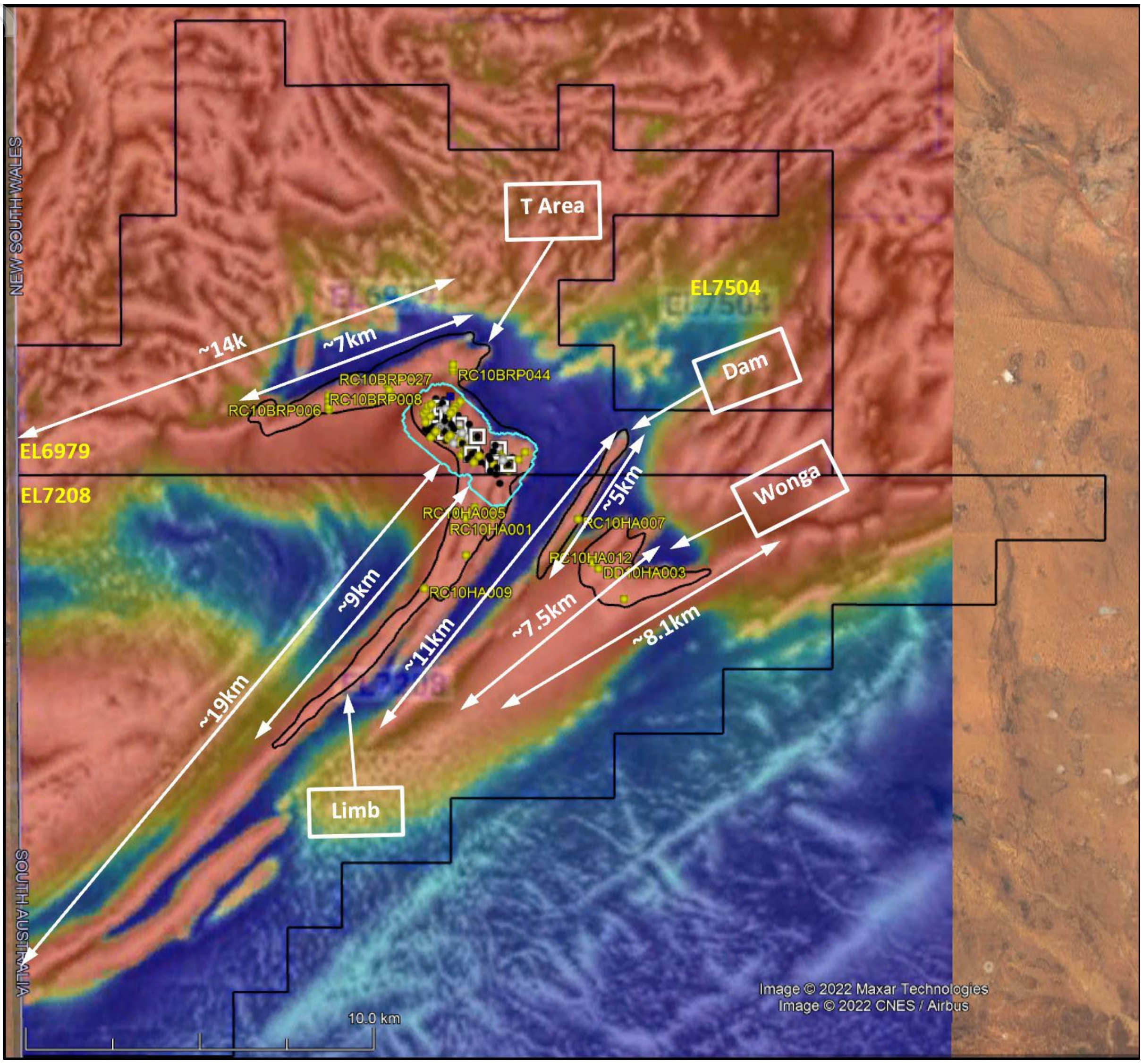

Figure 1: Airborne magnetics (TMI RTP Tilt Filtered) showing potential mineralization zones, selected drillholes and the extents of the Exploration Target areas used in the conceptual approximations.

Exploration activities, including ground-borne geophysical surveys and drilling, to investigate the Exploration target areas further is expected to be undertaken between 2023-2025.

Wes Nichols

Geology Manager

Hawsons Iron Limited (ASX: HIO)

This Exploration Target report is a statement of an estimate of the exploration potential for additional quantities of mineralisation that are contained in satellite deposits outside of the main (propose mine pitshell) Hawsons mineral deposit. Hawsons sits in a defined geological setting and this Exploration Target is quoted as a range of tonnes and a range of grade that relates to mineralisation for which there has been insufficient exploration to estimate a Mineral Resource.

The data in this report that relates to Exploration Target for the Hawsons Magnetite Project is based on information evaluated by Mr Wes Nichols who is a Member of the Australian Institute of Mining and Metallurgy 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 Nichols is a full-time employee of Hawsons Iron Ltd and he consents to the inclusion in the report of the Exploration Target approximations in the form and context in which they appear.

25/07/2022

Competent Person's Consent Form

Pursuant to the requirements of ASX Listing Rule 5.6 and clause 8 of the 20012 JORC Code (Written Consent Statement)

Report Description

ASX Announcement :

Hawsons Iron Limited is releasing to the ASX an update to the Mineral Resource estimates for the Hawsons Magnetite Project. Includes the latest resource estimates for the Core and Fold Deposits. The new resource estimates are reported at a 6% DTR cut off and includes the results from a substantial amount of infill drilling completed in 2021/22.

Resource Estimate Table from H&S Consultants Resource Estimate memo for the Hawsons Magnetite Project, 25th July 2022.

25th July 2022

Statement

I, Simon Tear confirm that:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("2012 JORC Code").
- I am a Competent Person as defined by the 2012 JORC Code, having five years experience which is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member of The Australasian Institute of Mining and Metallurgy
- I have reviewed the Report to which this Consent Statement applies.
- I am a Director of H & S Consultants Pty Ltd and was engaged by Hawsons Iron to prepare the documentation for the Mineral Resources, for the period ended July 2022.
- I verify that the tables fairly and accurately reflect the Mineral Resources in the form and context in which they appear, and the information in my supporting documentation relating to Mineral Resources.

CONSENT

I consent to the release of the Report and this Consent Statement by the directors of:

Hawsons Iron Limited

Signature of Competent Person:

Simon Tear, Esq
AusIMM Membership No. 202841

Date:
25th July 2022

Professional Membership:
MAusIMM, MIOM3, PGeo, EurGeol

Signature of Witness:

Witness Name and Place of Residence:
Luke A Burlet
Director
H & S Consultants Pty Ltd
Belrose NSW 2085