ACN 123 567 073

ASX ANNOUNCEMENT

16 August 2024

Update - Results of Detailed Magnetic - Radiometric Survey

Enterprise Metals Ltd (ASX: **ENT**) ("**Enterprise**" or "the **Company**") advises that the original announcement dated 15 August 2024, and titled "*E70/5999 – Eneabba East - Titanium and Heavy Mineral Prospect Results of Detailed Magnetic - Radiometric Survey*" which details the results of the recent radiometric survey conducted by the Company, did not contain a CP Statement or a JORC 1 Table per LR 5.7 and 5.22.

An updated announcement is attached.

This ASX Announcement has been approved in accordance with the Company's published continuous disclosure policy and authorised for release by the Enterprise Metals Ltd Board of Directors.

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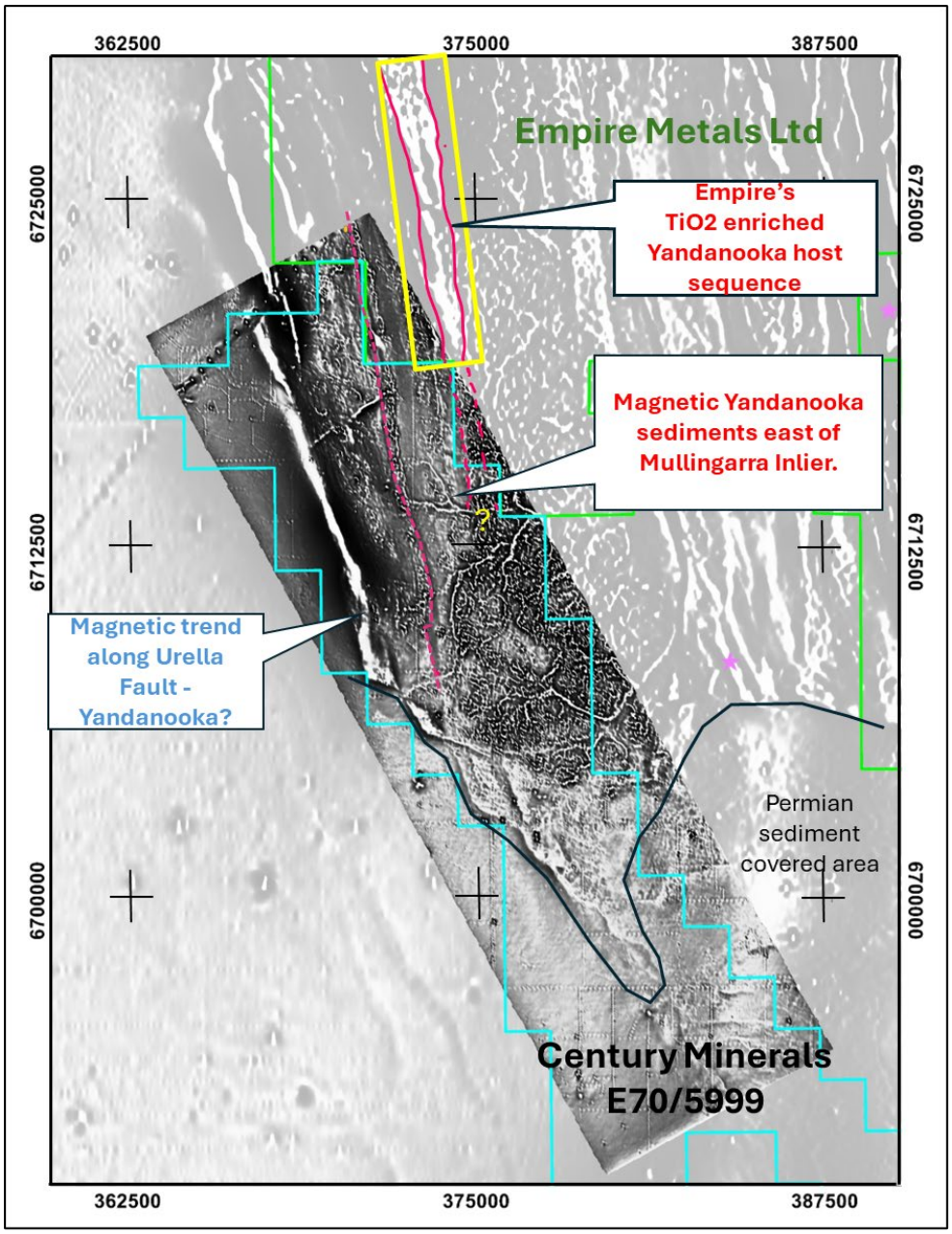
E70/5999 – Eneabba East - Titanium and Heavy Mineral Prospect
Results of Detailed Magnetic - Radiometric Survey
Replacement Announcement with JORC Table 1& Competent Person Statement

Enterprise is pleased to announce that its detailed MagSpec airborne magnetic-radiometric survey has been completed over 80% of E70/5999, which lies south of Empire Metals Ltd (EEE.LON) world class Pitfield titanium discovery. The MagSec survey has identified both Pitfield-style basement exploration opportunities, and conventional strand line Heavy Mineral (HM) opportunities with over 56km of sparsely or completely untested strand lines.

Enterprise's processed magnetic data has defined magnetic stratigraphy on the sheared western and eastern margins of the gneissic rocks of the Precambrian Mullingarra Inlier. These sheared contact zones are considered to be potential pathways for hydrothermal fluids containing titanium, copper and iron and have not been previously drill tested.

Figure 1. Northern Part E70/5999: Magnetic Data, Reduced to the Pole, Total Magnetic Intensity, 1st Vertical Derivative Image

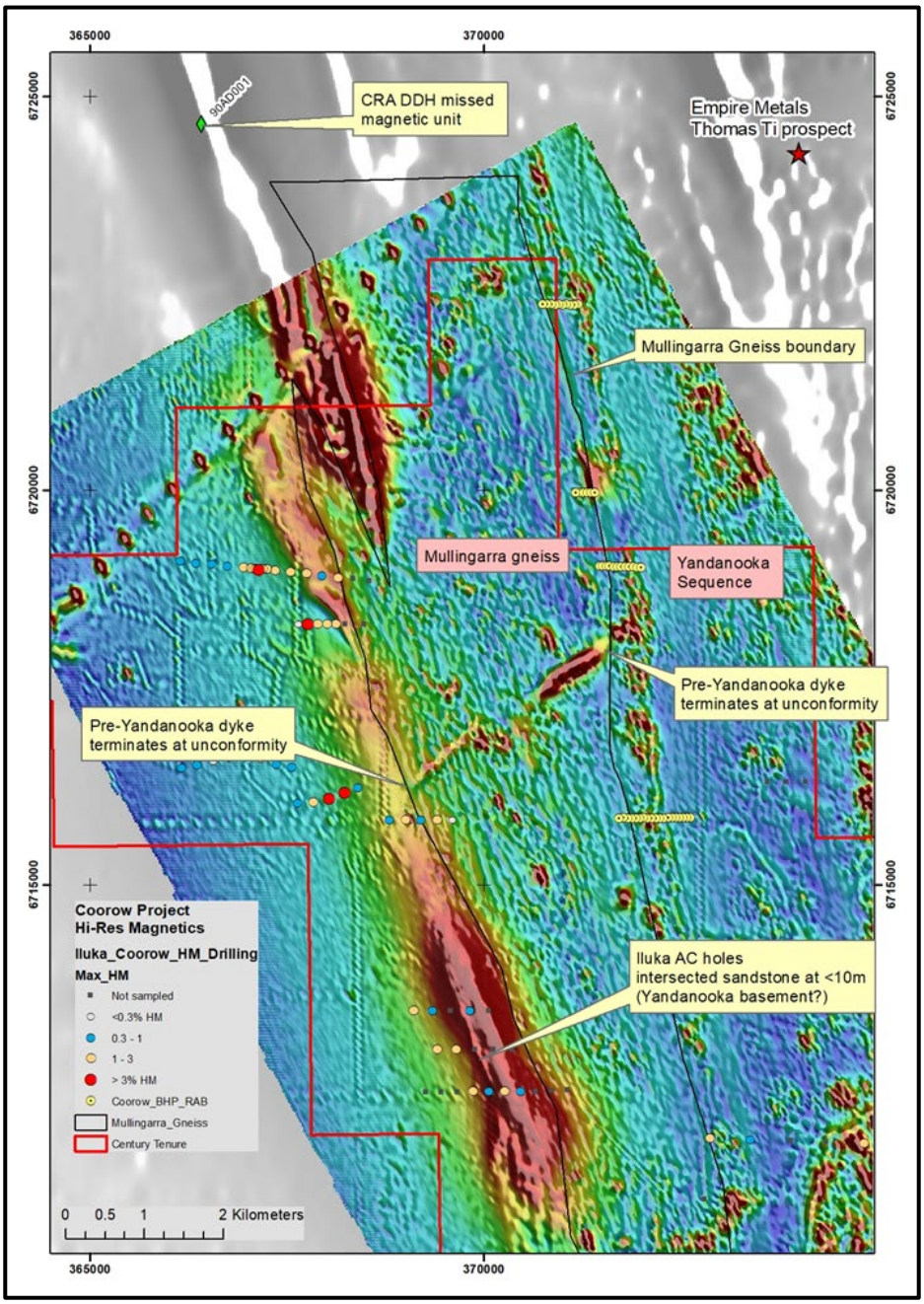


The survey has provided striking detail of the basement geology, including strongly magnetic units along the western margin of the Mullingarra gneiss which appears to broaden to the south where they are segmented by a series of later WNW trending faults. The resolution of the basement geology in the magnetic data demonstrates shallow cover extends further south than expected, before disappearing beneath younger Perth Basin rocks. The areas of shallow cover should be amenable to testing with low-cost aircore drilling.

One important geological feature in the magnetic data is an ENE-trending magnetic dyke intruding the Mullingarra Inlier. This dyke does not continue across the unconformity between the gneiss to the west and the Yandanooka sediments to the east, and thus the dyke is pre-Yandanooka timing, and helps position both eastern and western boundaries of this older (and lower prospectivity) geological unit.

Further evidence for the location of the Mullingarra-Yandanooka unconformity occurs in historic BHP Minerals RAB drilling. Iluka drilled a number of aircore holes to blade refusal over the Urella Rise (fault) on the western margin of the Mullingarra Inlier and intersected probable Yandanooka sediments in very shallow (3-6m deep) aircore holes. Iluka's aircore holes were not intended to identify the source of the magnetic anomaly. (*Refer Figure 2, BHP Wamex a16047 & CRAE Wamex* a36570)

Figure 2. Northern Part E70/5999: Coloured Magnetic, Total Magnetic Intensity, Analytical Signal



Analysis of the MagSpec Radiometric Data for Conventional Beach Sand Heavy Minerals

Enterprise believes a likely genetic relationship exists between the hard rock titanium mineralisation as a source rock for the reworked accumulations of heavy mineral sand mineralisation in the Eocene sediments mantling the Coorow licence. Image Resources Ltd recently released a BFS for the development of the Yandanooka HMS Deposit (ASX: IMA, 19 April 2024) which showed a leucoxene-rich mineral suite with robust and compelling economics.

The heavy mineral sand mineralisation in the Coorow District has been known since the late 1970's when "John Baxter" and "RGC" identified HM mineralisation at the Yandanooka, Arrino and Durack locations. At the time, this HM mineralisation was deemed inferior to that recognized at Eneabba and was not investigated further until Iluka Resources Ltd explored this Eocene scarp (named the "*Urella Rise*") between 2001 and 2008.

Iluka undertook broad spaced exploratory AC drilling on sections with line spacings varying from 500 metres to over 8 km apart, including over parts of the Coorow licence. More detailed work resulted in maiden mineral sand resources being defined at Yandanooka and Durack prospects, but Iluka subsequently surrendered the ground in 2008.

Sheffield Resources Ltd drilled out the Yandanooka and Durack Deposits between 2011 and 2016 but did not undertake additional drilling on the area of the current Coorow licence during this period. Sheffield relinquished all ground outside the Yandanooka and Durack Deposits in 2016 and subsequently sold the remaining Yandanooka and Durack Retention Licences to Image Resources Ltd in 2021. Image is currently preparing to commence mining the Durack and Yandanooka deposits.

No material exploration has been completed over the Coorow licence since the Iluka work which identified three prospects with the project: Durack South, Aeolian and Yarra Yarra, with mineral sand mineralisation present along and to the west of the Urella Rise (Scarp).

Analysis of the new detailed magnetic and radiometric data has revealed a high degree of correlation between anomalous HM in Iluka's drilling results and the survey data attributes (K, U, Th, Magnetics, & DTM) considered important for prioritising exploration for HM deposits. Firstly, the surveyed ground could be separated into ***'low plateau'*** areas with broadly elevated radiometric responses and broad '***shallow valleys'*** with diminished radiometric response.

The *'low plateaus*' are in turn comprised of stacked low ridges with coincident Thorium and Uranium channel responses, evident as linear features on those datasets (indicative of mineral sand species zircon, monazite and xenotime). These radiometric anomalies have in places coincident weak magnetic anomalies and also brown staining (iron oxides?) visible in Google Earth satellite images. This is consistent with the weathering of ilmenite and other Fe-bearing heavy minerals concentrated in strandlines. A total extent of 48 kilometers of either lightly drilled or undrilled ***'low ridges' / 'interpreted strandlines'*** have been identified and shown in Figure 3.

To the east of the Urella Rise there are several radiometric anomalies that look like '*possible strandlines*'. In particular, as the Urella Rise (Scarp) trends towards the SSE, a bend towards the south has been suggested from geomorphology interpretation. However, a corridor of elevated radiometric responses continues in the same SSE direction where a further 8km of totally undrilled '*possible strandlines'* has been highlighted in Figure 3.

Figure 4 demonstrates the cyan colour coincident with the interpreted strandlines (comprising equal Thorium/Uranium content of minerals such as zircon, monazite and xenotime) west of the Urella Rise (Scarp) versus the more white and pink character of the circular pans and lunettes (containing K rich salts) and to the east of the Urella Rise (Scarp).

For the '*shallow valley*' areas drainage and erosion of prospective units has occurred back towards the Yarra Yarra Lakes to the east of the licence and then southwards sub-parallel to the Darling Scarp. Enterprise believes in some instances the prospective sediments have been eroded away but in other instances the radiometric responses may be attenuated through the presence of water and moist soil or may continue under a thin veneer of Recent sediments.

Figure 3. Iluka's Coorow Drilling (Maximum HM in Hole) Overlying Coorow Survey DTM with Uranium Channel Drape on Background of 9 second Auslig DTM with Orthophotograph Drape.

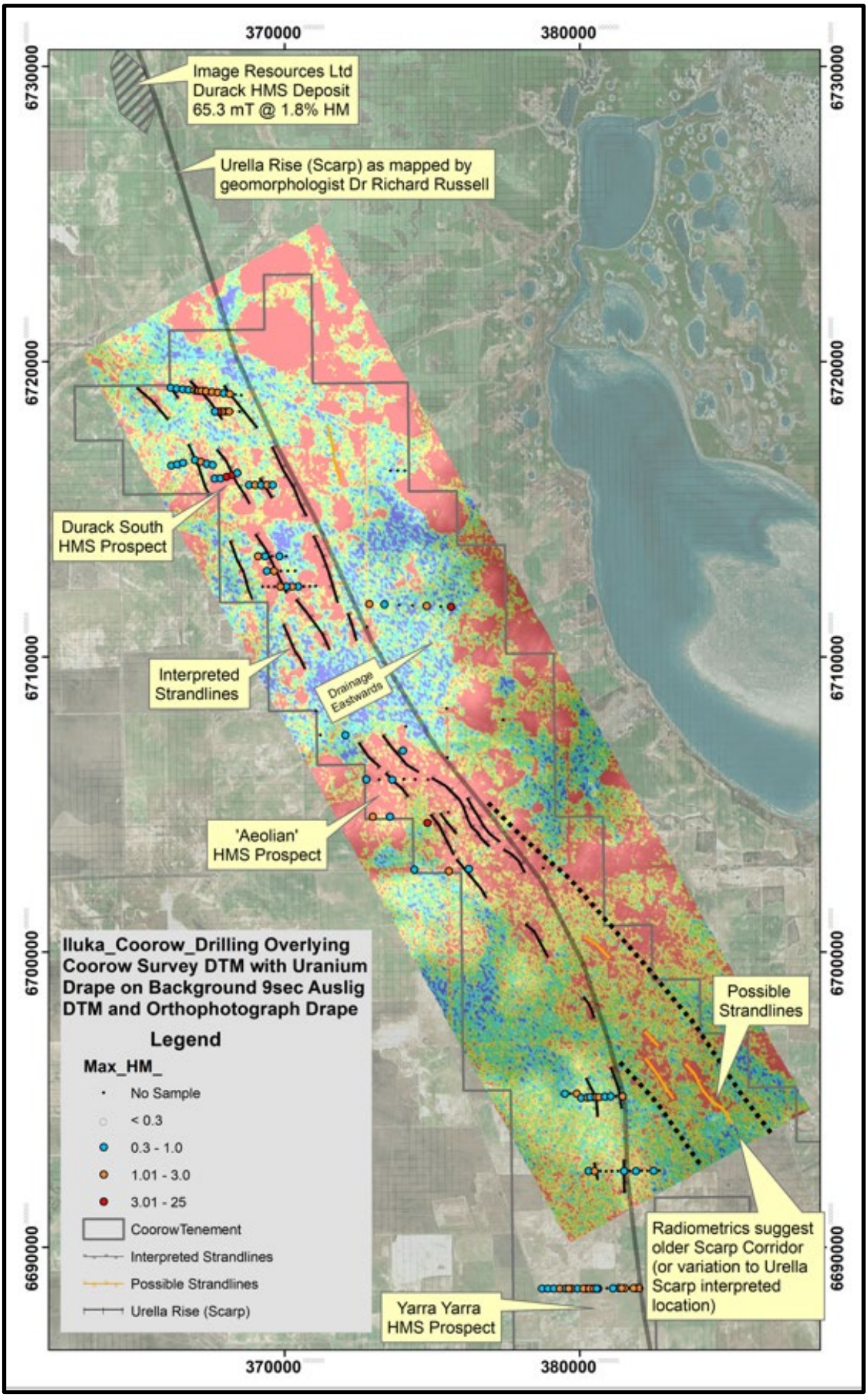
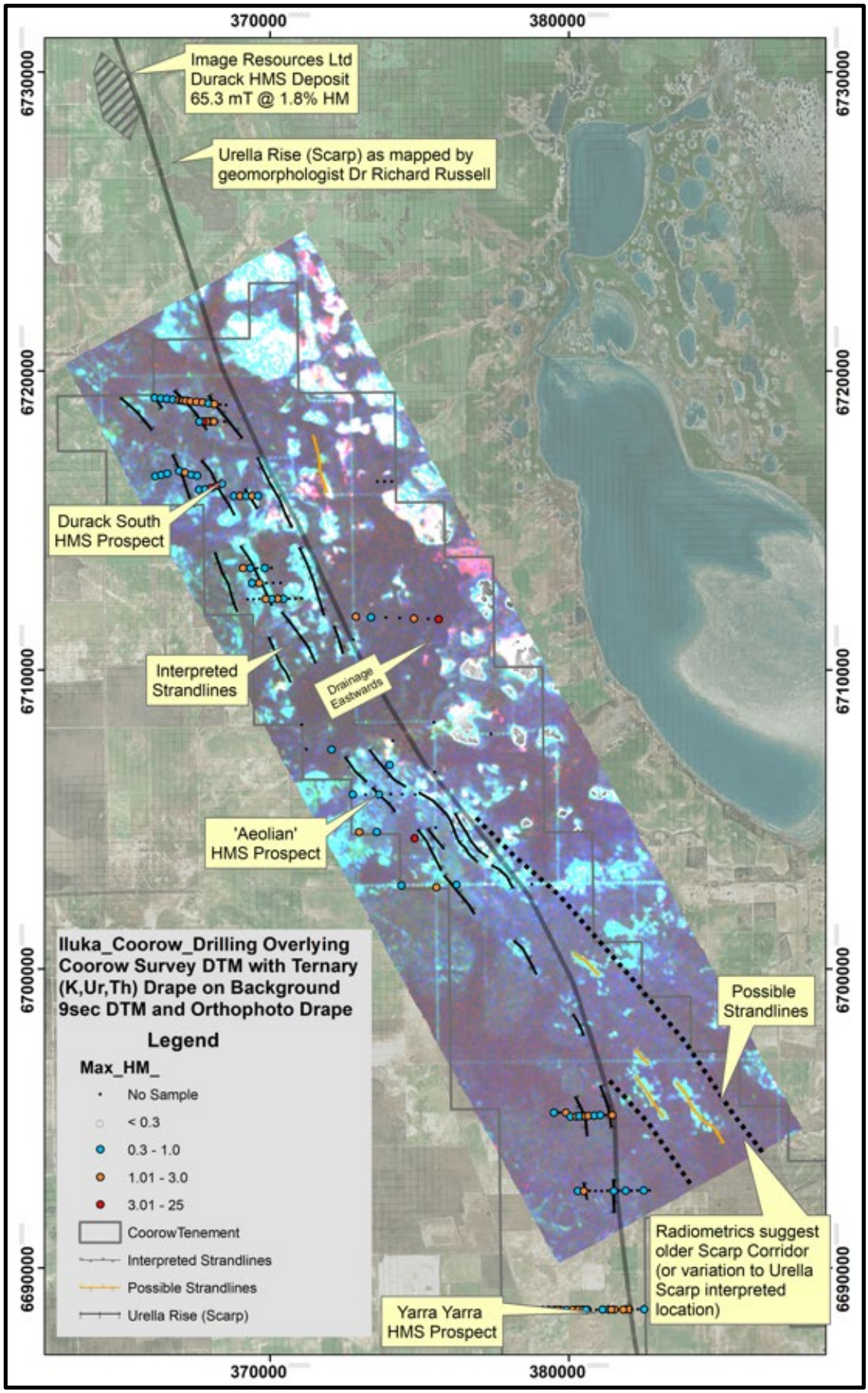


Figure 4. Ternary (K Ur Th) Radiometric Image Based on 2024 MagSpec Detailed Magnetic - Radiometric Survey.

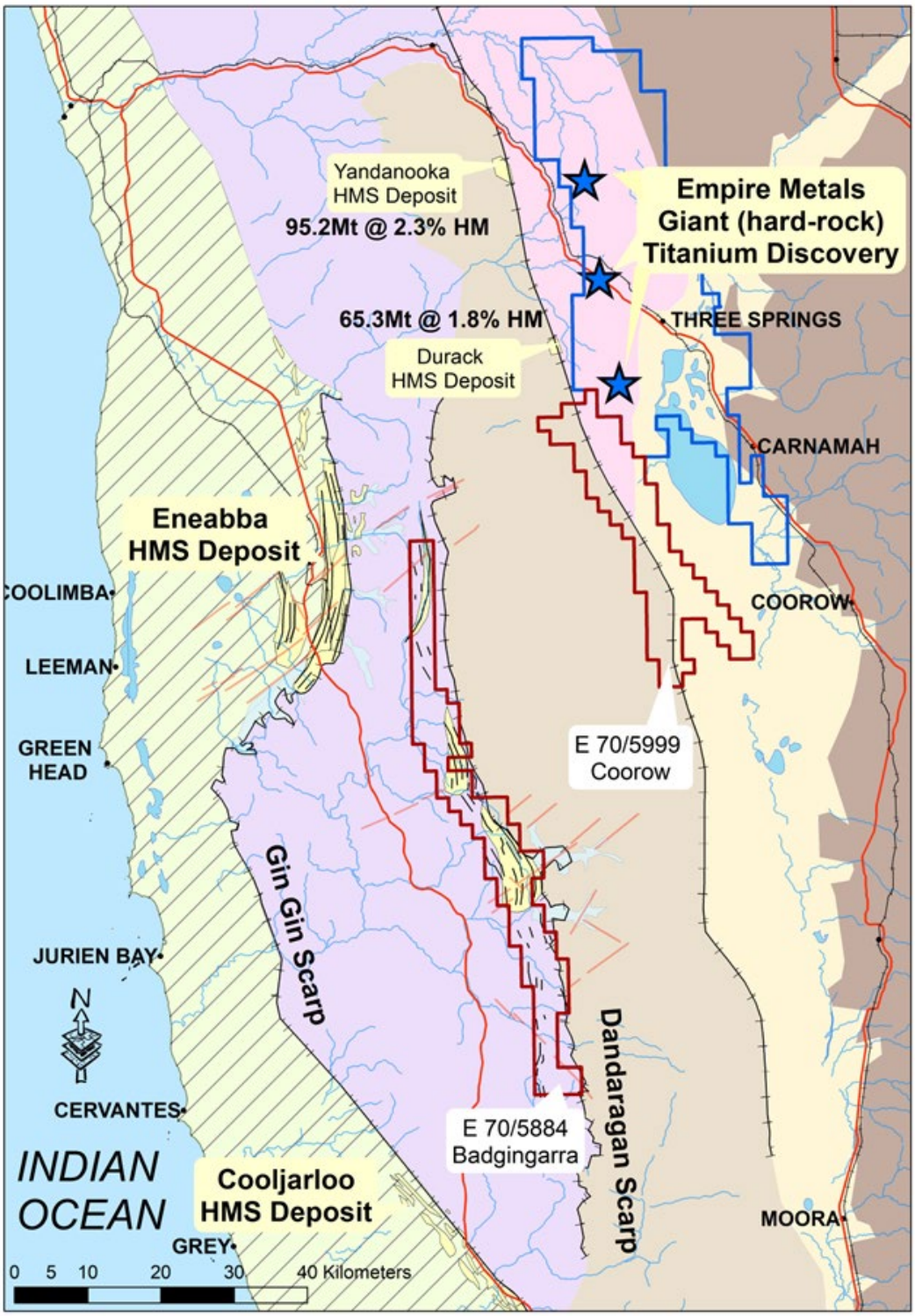


Previous exploration by Iluka Resources Ltd in the area now covered by E70/5999 has focused solely on shallow air core drilling to test for heavy minerals in unconsolidated surficial sediments.

In addition to following up HM targets outlined by Iluka and additional prospective strandlines, highlighted by the new high-resolution geophysics, Enterprise intends to complete the first deeper RC or diamond drilling of the magnetic anomalies associated with basement rocks in E70/5999.

Figure 5 below shows the location of E70/5999 (Coorow) and E70/5884 (Badgingarra) which comprise the Eneabba East Project, and the location of Empire Metals Ltd's recent giant titanium discovery in the Yandanooka Basin (shown in pink).

Figure 5. Location of Century Minerals Ltd's licences E70/5884 and E70/5999, Empire Metals Ltd's new Hardrock Titanium Discoveries, and Image Resources' Yandanooka and Durack HMS Deposits over Geology



Details of Coorow Exploration Licence 70/5999 and Next Steps

E70/5999 was granted to Century Minerals Pty Ltd for 5 years on 9 October 2023, has an area of 312km^2 and an annual minimum expenditure commitment of $105,000.

Following the flying and processing of the detailed MagSpec (magnetic & radiometric survey) over the majority of E70/5999, Enterprise plans to:

- undertake ground gravity surveys over certain anomalous magnetic features, and
- undertake Induced Polarization (IP) surveys over coincident gravity/magnetic anomalies, and
- undertake Reverse Circulation (RC) drill testing of IP anomalies
- undertake AC drilling of heavy mineral strandline targets

Refer to Previous Enterprise ASX Releases

- *6 May 2024: Enterprise - Century Minerals Pty Ltd Option Agreement, and previous Iluka Resources AC HM results. (Includes JORC Competent Person Statement)*
- *18 June 2024: Eneabba East Project- Exploration Planning*
- *26 July 2024: Detailed Magnetic - Radiometric Survey on E70/5999 Titanium and Heavy Mineral Prospect Commenced*

Also, refer to previous LON: EEE release:

- *12 June 2024: Empire Metals Ltd, Target for Pitfield Titanium Project.BHP Wamex a16047*

Wamex References for Historic Exploration on area of Current E70/5999

SURMAN, S. & GUNN, M.J, 1984: Exploration Licence 70/25. Arrino, WA Final Report. BHP Minerals Exploration Dept. *Wamex a16047.*

MANINI, A. 1992: 1991/92 Annual Report on E70/449-450 Arrino. SH50-06. Perenjori, WA CRAE Report 17781. *Wamex a36570*:

CHAPMAN A, 2006, Annual Report on Exploration of E70/2773 Yarra Yarra for the Period 07/10/05 to 06/10/06, (Iluka Report No. 14844, Perenjori). *Wamex a73759*

CHAPMAN A, 2006, Iluka Resources. Technical Report Iluka-Tr-T14992, Group C110/ 2002 Annual Report for The Period 1/12/05 To 30/11/06 Carnamah, Date: 29 January 2007 Carnamah North, Three Springs, Arrino, Durack, Yandanooka, Heavy Minerals, Rutile, Zircon And Ilmenite, E70/2886, E70/2772, E70/2533, E70/2454.

OLIVER R, 2001, Annual Technical Report ILUKA TR-01-93 Exploration Licence E70/2091. 20/4/00 - 19/4/01. *Wamex a62625*

OLIVER R, 2022, Annual Technical Report ILUKA TR 02/77 Exploration Licence E70/2091, Carnamah, WA Annual Technical Report 20/4/01 - 19/4/02. *Wamex a64943*

PARKER, S. 2006, Iluka Resources,Technical Report Iluka-Tr-T12887 Group C110/ 2002 Annual Report For The Period 1/12/04 To 30/11/05 Carnamah, 29 January 2006. *Wamex a71858.*

WORTH, M. 2003, Iluka-T9594 Partial Surrender Report for Carnamah E70/2091, 20 June 2003 *Wamex a6684.*

WORTH M, 2004, Technical Report Iluka-TR-T10506 Group C110/2002 Annual report for the period 1/12/02 to 30/11/03 Carnamah. Wamex *a67942*

WORTH M, 2004, Iluka Resources, Technical Report Luka-T10845 Final Surrender Report for Carnamah E70/ 2091 20/04/ 2000 To 14/4/2004: 31 May 2004. *Wamex a68700*

WORTH M, 2008, Carnamah Project, Iluka, Final Surrender Report for the period 11th September 2003 to 11th August 2008, E70/2533, E70/2454, E70/2772 & E70/2886. [C110/2002] *Wamex a79428.*

Enterprise Metals Limited Agreement with Century Minerals Pty Ltd.

Enterprise Metals Limited has the right to explore for all minerals on Exploration Licences 70/5999 (Coorow) and 70/5884 (Badgingarra) under the Eneabba East Option Agreement with Century Minerals Pty Ltd. The focus of exploration includes titanium and heavy minerals (HM) such as zircon, monazite, rutile, ilmenite, rare earths (REE) and base metals. The two tenements are located approximately 270km north of Perth and are well serviced with road and rail. *(Refer ENT: ASX 6 May 2024)*

Enterprise is a West Australian based exploration company with wholly owned projects at Doolgunna north of Meekatharra, at Murchison north of Cue, and Mandilla, just north of Widgiemooltha. The Company also has a 30% free carried interest to completion of bankable feasibility in the Orpheus Project in the Fraser Range with Constellation Resources Ltd. The Company is focused on applying world-class exploration technologies and experience to proven mineralised tenure to generate shareholder wealth through discovery and production.

This ASX Announcement has been approved in accordance with the Company's published continuous disclosure policy and authorised for release by the Enterprise Metals Ltd Board of Directors.

For further information, contact: Dermot Ryan – Director
Ph: +61 8 6381 0392. admin@enterprisemetals.com.au

Forward Looking Statements: *Information included in this release constitutes forward-looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward-looking words such as "may", "will", "expect", "intend", "plan", "estimate", "anticipate", "continue", and "guidance", or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management. Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the Company's actual results, performance and achievements to differ materially from any future results, performance or achievements.*

Forward looking statements are based on the Company and its management's good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the Company's business and operations in the future.

COMPETENT PERSON'S STATEMENT

The information in this report that relates to Exploration Activities and Results is based on information compiled by Mr Steve Hart, who is a consultant to the Company and a shareholder and director of Century Minerals Pty Ltd. Mr Hart is also security holder of Enterprise Metals Limited. Mr Hart is a graduate from the University of Western Australia and Member of the Australian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation and types of deposits 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 Resources (the JORC Code). Mr Hart consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

JORC Table 1 Section 1, Sampling Techniques and Data
(Criteria in this section apply to all succeeding sections.)

Criteria	Explanation	
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple*	Iluka's drilling over the Project Areas was undertaken using an Iluka-owned, reverse circulation, air core drill rig with an on-board cyclone and rotary splitter for drill sample collection. (Iluka) Approximately 1.5 to 2 kilograms of sample is collected from a or 50% split at 3 or 1m intervals, designated by the geologist supervising the program. (Iluka) A fraction of the sample was then panned by a geotechnician and the geology is logged into a field computer. (Iluka) All drill holes were designed to terminate at a depth where basement material is encountered. (Iluka) Drill samples with visible HM's were submitted to the Iluka Laboratory in Geraldton (Narngulu) for processing. • Samples were screened into Slimes (2000um). • A 100g split was taken of the sand-size fraction (53-2000uUm) and retained for bulk sampling if required. • The sand fraction was then screened into Sand (53-710um) and Coarse Sand (SandC: 710-2000um). • Slimes, Sand C and Oversize are weighed and discarded and Sand is subjected to a heavy liquid (Lithium poly-tungstates - LST) separation. • At this stage the heavy mineral (including gangue mineral and ground ironstone) is separated on the basis of specific gravity (>2.85g/cc) from the hosting sand. • The components were dried and weighed and a heavy mineral (HM) content is reported. • Upon definition of geologically discrete mineralised units from drill sample logs and assay results, a bulk sample may be composited (by weight).

		(BHP) BHP RAB holes were drilled in 1984 with an average 8m in depth with a maximum depth of 26m and used primarily as a geological mapping tool. BHP maps were georeferenced using local topographic features, and positions of the historic RAB holes estimated to ±30m accuracy from these maps.

Criteria	**Explanation**	
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc)*	Iluka's drilling over the Project Areas was undertaken using an Iluka-owned, reverse circulation, air core drill rig with an on-board cyclone and rotary splitter for drill sample collection. BHP's drilling over the Project Areas was undertaken using a RAB, Rotary-Air-Blast drilling techniques where sample comes up between the outer drill rod and the whole surface. Contamination is higher in this drilling technique, compared to reverse circulation or core methods.

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.*	•(Iluka/BHP) Iluka's reports were not sufficiently detailed to ascertain recovery of each sample.

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.*	• (Iluka/BHP) No core was available, and the AC drill programs were scout exploration programs, not planned for Mineral Resource estimation. • (Iluka/BHP) Logging was both qualitive and quantitative. • (Iluka) 3m samples were logged and sampled, but only samples with (gravity) heavy minerals (HM) present were sent for laboratory analysis.
Subsampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	• (Iluka/BHP) No core collected due to unconsolidated nature of shallow drilling in clay and sand. • (Iluka) All samples were split into 2 x 50% portions for analysis and reference purposes. • (BHP) A single sample was collected from the bottom of each hole and analysed by AAS at Amdel Laboratories, Perth for Cu, Zn, Pb, Ag, Co, Mn and Fe. None of this data has been captured or used by Enterprise with elemental titanium not assayed by BHP. The logging of geology was the primary value of the drilling to Enterprise.

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.* •	(Iluka) Drill samples with HM's were submitted to the Iluka Laboratory in Geraldton (Narngulu) for processing. • Samples were screened into Slimes (2000um). • A 100g split was taken of the sand-size fraction (53-2000uUm) and retained for bulk sampling if required. • The sand fraction was then screened into Sand (53-710um) and Coarse Sand (SandC: 710-2000um). • Slimes, Sand C and Oversize are weighed and discarded and Sand is subjected to a heavy liquid (Lithium poly-tungstates - LST) separation. • At this stage the heavy mineral (including gangue mineral and ground ironstone) is separated on the basis of specific gravity (>2.85g/cc) from the hosting sand. • The components were dried and weighed and a heavy mineral (HM) content is reported. • Upon definition of geologically discrete mineralised units from drill sample logs and assay results, a bulk sample may be composited (by weight) • (BHP) BHP's reports were not sufficiently detailed to ascertain quality control matters. Samples were for exploration and not resource delineation or calculation.
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.*	• (Iluka/BHP) As these AC programs were "scout" in nature, no holes were twinned. • (Iluka) Of the samples that were assayed, few returned HM grades greater than 1.0% HM. The highest grade was 5.4% HM in a 3m sample in one hole (CARN019). The grade was attributed to the presence of laterite/ironstone (as logged).

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.*	• (Iluka) DGPS was used to locate planned Ac collar positions, and DGPS was used to confirm the exact location of the collar when drilling was completed. • (Iluka) The drilling was concentrated on existing roadsides and tracks, giving a nominal drill line spacing of between 0.5km and 2.0km, averaging 1.2km. However, large gaps of up to 8 kilometres also exist. Drill holes along the gridlines are spaced between 0.5km and 1.0km. • (Iluka) The samples collected represented a 3m interval, with the occasional 1.5m sample. • BHP maps were georeferenced using local topographic features, and positions of the historic RAB holes estimated to ±30m accuracy from these maps.
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.*	• (Iluka/BHP) As these AC programs were "scout" in nature, spacing for resource estimation was likely not a priority. • (Iluka/BHP) No sample compositing. • (Iluka) Samples were logged with 3 m intersections. • BHP one sample was taken from the bottom of the hole.
Criteria	**Explanation**	
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	• (Iluka) Not relevant due to the shallow unconsolidated nature of the material being drilled. • BHP the drill holes tested the unconformity between Yandanooka Formation and Mulingarra Gneiss.

Sample security	• *The measures taken to ensure sample security.*	• (Iluka/BHP) No information available.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• (Iluka/BHP) No information available.