ASX Announcement:
3 December 2024

ASX: ADC

ACN 654 049 699

CAPITAL STRUCTURE

Share Price: A$0.05*
Cash: A$3.06 M*
Debt: Nil
Ordinary Shares: 72.3M
Market Cap: A$3.62M*
Enterprise Value: A$0.56M*
Options: 47.7M
***as of 28 Nov 2024**

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ACDC Metals Delivers Significant Resource Upgrade for Heavy Mineral Sands and Rare Earth Elements at Goschen Central

Key Highlights:

- **Significant increase in grade, heavy mineral tonnes and geological confidence of the Goschen Central resource.**
- **Indicated resource classification has increased significantly:**
  - Tonnes have increased by over 60% from 130Mt to 210Mt.
  - Grade has increased by 18% to 2.3% total heavy minerals (THM).
  - Total rare earth oxide (TREO) grade has increased by over 13% to 684ppm.
- **Expanded indicated resource paves the way for completion of the scoping study on the mineral sands and rare earth processing project.**
- **Mineral Resource Estimate now over 600 Mt.**
- **Resource remains open to the north, south and east.**
- **Additional aircore drilling and mineralogy planned for CY2025 to test resource extension.**

ACDC Metals Limited (ASX: ADC) ("ACDC Metals" or the "Company") is pleased to report in accordance with the JORC Code 2012 an updated Mineral Resource Estimate at the Goschen Central Project in western Victoria. The update incorporates the results of aircore drilling undertaken in CY2024. This is ACDC Metals' second Mineral Resource Estimate since listing in January 2023, and sets the stage for additional resource growth and economic studies at Goschen Central.

The Goschen Central deposit remains open in multiple directions and ACDC Metals anticipates further resource growth following additional drilling planned for 2025. The Mineral Resource details are outlined in Table 1.

Table 1: Goschen Central Project Mineral Resource at 1% cut-off, for full results refer to Appendix 1.

Classification	Tonnes	Total HM	Rutile	Leucoxene	Ilmenite	Zircon	Monazite	Xenotime
	Mt	%	%	%	%	%	%	%
Indicated	210	2.3	9.1	10	22	24	3.4	0.45
Inferred	410	2.1	8.1	12	20	21	2.8	0.45
Total	**620**	**2.2**	**8.4**	**11**	**21**	**22**	**3.0**	**0.45**

ACDC Metals CEO Tom Davidson commented:
"We are pleased to share this update with our investors and supporters. The very positive and significant improvements in the indicated resource will directly support the completion of a scoping study. The deposit has an attractive distribution of zircon, monazite and TREO, and the scoping study will allow us to demonstrate the leverage of this high value mineral assemblage. We believe the project aligns well with peer projects in the region, and forms part of an important regional economic development opportunity for the Murray Basin."

Mineral Resource update

The CY2024 drilling campaign completed over 2,880 metres and tested locations identified for grade increase and resource expansion. Figures 1 and 2 highlight key increases to grade (total heavy mineral percentage) over the prior estimate, importantly emphasising importantly the significant increases seen within the indicated category. Grade increases have lifted the total in-situ valuable heavy mineral (VHM) tonnes to 13.6Mt, marking a 13% increase as presented in figure 3.

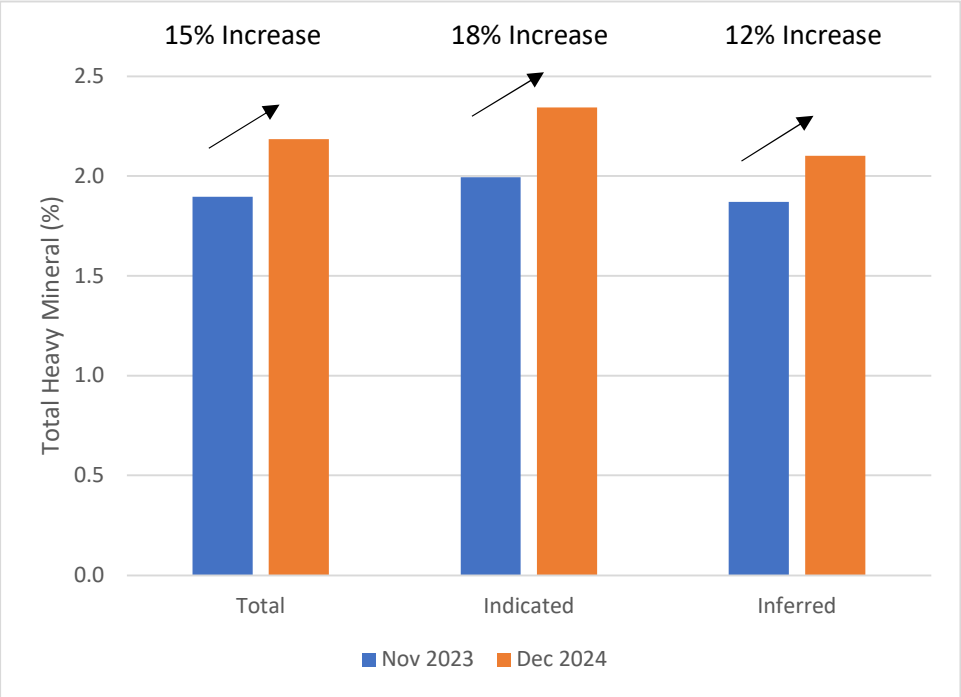

Figure 1 - Comparison of Total Heavy Minerals %; by category and total from Maiden MRE.

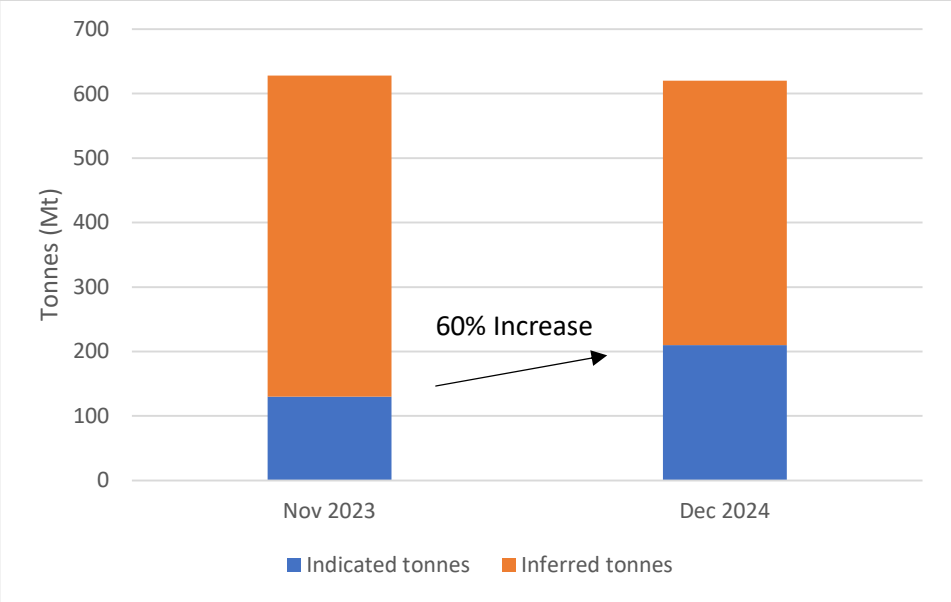

Figure 2 - Comparison of deposit classification from Maiden MRE.

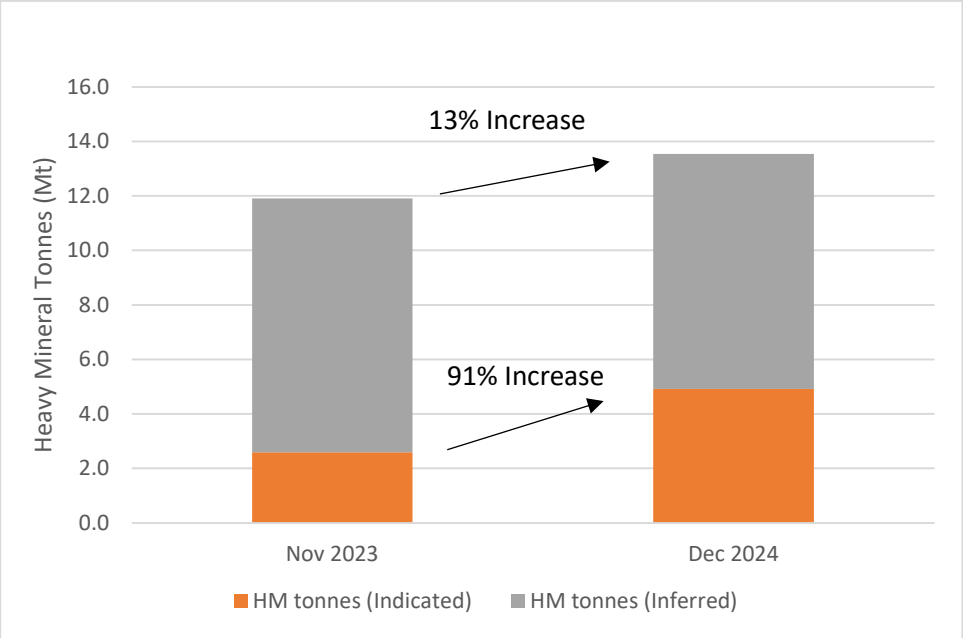

Figure 3 - Comparison of Valuable Heavy Mineral content

Rare Earth Element Assemblage

The Goschen Central project contains over 360,000 tonnes of TREO at an estimated grade of 584 ppm, presenting a very significant opportunity for the future supply of rare earth elements. The key value driver for rare earth elements are the contribution of Magnetic Rare Earth Oxides (MREO) neodymium, praseodymium, dysprosium and terbium, as reported in Table 2, which together contribute over 21% by weight of the total rare earth oxide assemblage.

Table 2: Goschen Central Project Magnet Rare Earth assemblage at 1% Cut-off; for full results refer to Appendix 1.

				In-Situ Grades – Magnetic Rare Earth Oxides								
JORC	Tonnes	HM Grade	TREO	Pr_6O_{11}		Nd_2O_3		Tb_4O_7		Dy_2O_3		TREO
Category	Mt	%	% of HM	ppm	% TREO	ppm	% TREO	ppm	% TREO	ppm	% TREO	ppm
Indicated	210	2.3	2.9	29	4.2%	98	14.4%	3	0.4%	17	2.5%	684
Inferred	410	2.1	2.5	22	4.2%	76	14.3%	2	0.4%	13	2.5%	532
Total	**620**	**2.2**	**2.7**	**25**	**4.2%**	**84**	**14.3%**	**2**	**0.4%**	**14**	**2.5%**	**584**

ASX Listing Rule 5.8.1 Summary

As per ASX report guidelines Section 5.8.1, information material to the reporting of the Goschen Central deposit Mineral Resource estimate update is summarised below. More detail is included in the JORC 2012 Table 1 given in Appendix B.

Table 3 details the Mineral Resource Estimate by total HM% cut-off grade. Figure 3 shows the drilling, THM% envelopes and zones of potential resource extension, Figure 4 shows the distribution of grade over the tenement. Figures 5, 6 & 7 are typical long and cross-sections.

Table 3: Goschen Central deposit Mineral Resource Estimate – by total HM% cut-off grade

Cut-off Grade	Tonnes (Mt)	Total HM %	Slimes %	Oversize %	% of total HM						
					Mineral Assemblage						
					Rutile	Leucoxene	Ilmenite	Zircon	Monazite	Xenotime	TREO
1%	620	2.2	21	4.2	8.4	11	21	22	3.0	0.45	2.7
2%	190	3.4	21	4.0	8.3	11	20	22	2.9	0.43	2.6

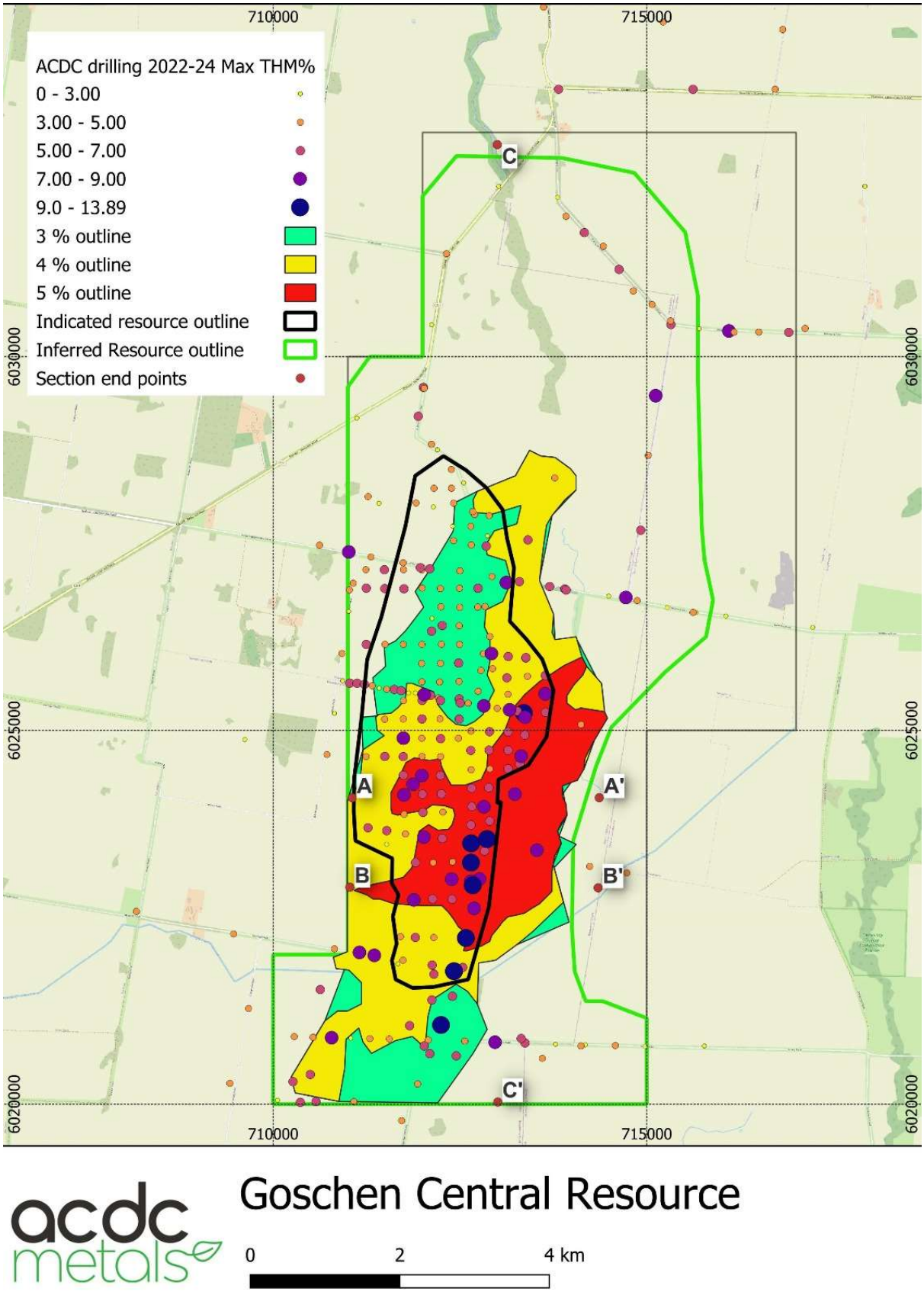

Figure 4 – Resource classification and select grade outlines for the Goschen Central Project. Note that 0.5%, 1% and 2% outlines not shown for clarity.

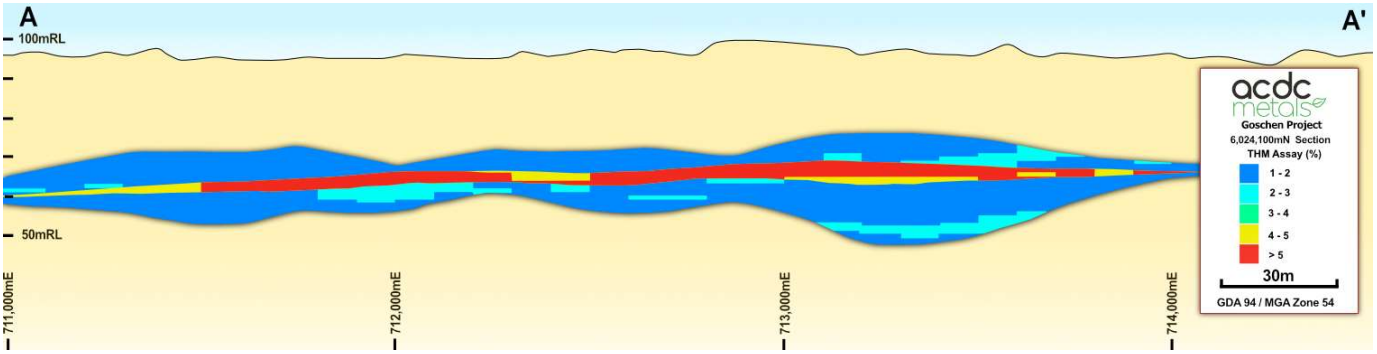

Figure 5 - Cross section A view 6024100 mN, see Figure 4.*

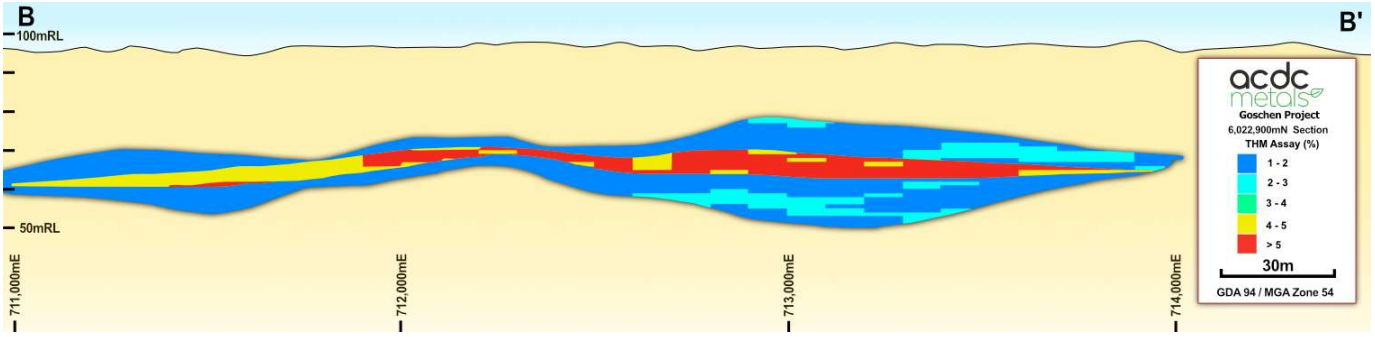

Figure 6 – Cross section B view 6022900 mN, see figure 4.*

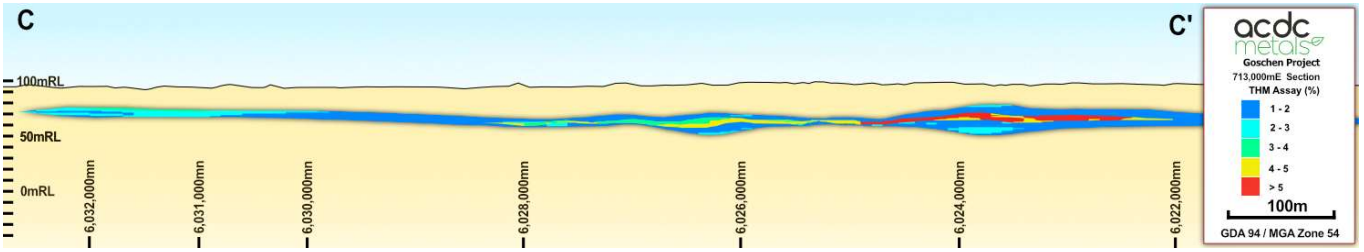

Figure 7 - Long section C view 713000 mE, see figure 4.*

*Figures 6, 7 and 8 vertically exaggerated.

Proposed work

ACDC Metals will conduct further work programs for resource growth and value creation by:

- Articulate the attractive value proposition of the Goschen Central Project, by progressing the Scoping Study with Mineral Technologies Ltd.
- Completing further mineralogy and sizing analysis to increase geological confidence and look for opportunities to increase grade.

- Continue marketing activity to develop relationships with potential customers utilizing key product quality data obtained from the pilot program.
- Additional drilling at Goschen Central in CY2025 to provide further geological data to the east of the indicated zone, and target the high-grade areas presented in Figure 4.

Location, geology and geological Interpretation

Goschen Central sits in the Murray Basin in western Victoria, Australia. The Murray Basin is a globally significant province for the production of heavy mineral sand (ilmenite, rutile, zircon) and is an emerging province for the production of critical rare earth elements needed to for the required global decarbonisation.

Drilling

There have been multiple drilling campaigns conducted across the Goschen Central deposit since the mid-1980s (Table 4). All drilling since 2022 has been conducted by licensed and trained drillers from Wallis Drilling using air core (AC) method and NQ rods (76 mm diameter). Assay information from drilling prior to 2022 has not been used for the resource estimate, only for geological interpretation.

The ACDC Metals drilling is generally spaced at 400 m along roadsides and a central portion has been drilled at a spacing of 250 m by 250 m.

Table 4 Summary of drilling information used for the Goschen Central Resource estimate modelling.

Company	Year	Number of drillholes	Metres drilled	Comment
CRA Exploration	1984-97	38	1,356	Used for geological interpretation only.
Iluka	2011	8	336	
BHP	2020	4	171	
ACDC Metals	2022	21	884	All geological, assay and mineral assemblage data.
	2023	119	6,027	
	2024	68	2,881	
Total		**258**	**11,655**	

Sampling and sub-sampling techniques

All sampling for total heavy mineral (THM), slimes and oversize content has been carried out on 1.5 m intervals down hole. The 1.5 m samples were rotary split at the drill rig, collected and stored at the ACDC Metals' storage facility.

Mineralogy composites were created by grouping samples' heavy liquid sink fractions across multiple adjacent holes and also down hole (where THM is >1%). The 2023 composites were analysed by XRF, optical grain counting and QEMSCAN and the 2024 composites were analysed by ICP-MS and QEMSCAN.

Geological logging

All ACDC Metals drillholes were logged in their entirety on 1.5 m intervals. Geological logging recorded lithology, colour, grainsize, sorting, hardness, sample condition, washability, heavy mineral type and content estimation, and at the collars any relevant comments such as slope, vegetation, or cultural activity were noted. Detailed geological data is not available for the historic drillholes, with only the depth and assay values for the mineralised intervals recorded.

Sample analysis method

All ACDC Metals' samples were prepared and analysed by Diamantina Laboratories (Diamantina) at their Perth laboratory. Samples were dried and then split, weighed, soaked, attritioned and wet screened at 1 mm and 38 µm using stacked screens. The +38 µm fractions were dried and weighed and the -38 µm fractions were discarded. A riffle split was taken of the -1 mm/+38 µm fraction and processed via heavy liquid separation at 2.96 g/cm^3 specific gravity using TBE. The total HM, slimes and oversize data were then reported as a percentage of the total sample.

Mineral assemblage and rare earth oxide

Mineral assemblage and rare earth oxide data includes results from 12 composite samples (from 28 drillholes) from the ACDC Metals' drillholes. The mineral assemblage has been estimated from QEMSCAN, ICP-MS and XRF data provided by Bureau Veritas. Ilmenite, rutile, leucoxene, monazite and xenotime have been estimated from the QEMSCAN Mineral Abundance data and the XRF data was used for zircon and rare earth oxides data.

Bulk density

Dry bulk density was applied for the volume-to-tonnage conversion using the following formula:

- Density = 1.698 + (0.009 x total HM)

This formula has been used for early-stage estimation of WIM style deposits elsewhere in the Murray Basin.

Mineral Resource Estimation methodology

Total HM, slimes and oversize block grades were estimated using ordinary kriging (OK). Variogram analysis was undertaken to determine the kriging estimation parameters used for OK estimation of total HM, slimes and oversize. Mineral assemblage components and rare earth oxides were estimated using a nearest neighbour technique.

Block dimensions were selected from kriging neighbourhood analysis. Grade estimation was into parent blocks of 100 mE by 100 mN by 1 mRL. Sub-cells to a minimum dimension of 25 mE by 25 mN by 0.25 mRL were used for volume representation.

Geological interpretation and wireframe surface creation was performed using Datamine Studio RM software. Geostatistical data analysis was performed using Snowden Supervisor software and the Mineral Resource estimation was completed using Datamine Studio software.

Assay data was selected separately within the 1% and 3% HM mineralised domains. No compositing was needed, as all samples were 1.5 m lengths, and top-cut grades were not applied, as no outliers were noted. Hard grade boundaries were applied to the estimation of each domain.

Cut-off grades

The Mineral Resource estimate for Goschen Central has been reported above a cut-off grade of 1% total HM to represent the portion of the resource that may be considered for eventual economic extraction by open pit methods. This cut-off grade, which was selected by ACDC Metals, is commensurate with cut-off grades applied for the reporting of Heavy Mineral Sand Mineral Resources elsewhere in Australia. 2% cut-off grade has also been reported. Further detailed economic studies will be required to determine which cut-off grade will be appropriate for use in ongoing studies.

Mining and Metallurgical Modifying Factors

A conventional shallow dry mining approach will likely be used at the Goschen Central Project, accessing ore from a single pit by use of excavators and haul trucks, similar to those commonly and currently used in mineral sands mining in both Australia and globally. Mining factors, such as dilution and ore loss, have not been applied to the Mineral Resource estimate. It is considered that there are no mining factors likely to affect the assumption that the deposit has reasonable prospects for eventual economic extraction.

Initial metallurgical characterisation testwork has been competed by Mineral Technologies Ltd ("MT") on samples collected by Providence Gold Pty Ltd (project vendor) from past programs at EL5278. A further 1.6 tonne bulk sample was collected during 2023 drilling and has been processed through MT's pilot plant to produce a heavy mineral concentrate and enable product qualities for zircon, rutile and ilmenite to be determined. Additionally, a rare earth element bearing concentrate has been produced and separated into monazite and xenotime concentrates.

The pilot plant programme has enabled key testwork parameters to be obtained that will support further development of the project.

Mineral Resource classification

The Mineral Resource has been classified according to the guidelines of the JORC Code (2012) into Indicated and Inferred Mineral Resources, taking into account data quality, data density, geological continuity, grade continuity and confidence in the estimation of heavy mineral content and mineral assemblage.

The nominal drill spacing for the 2023 and 2024 drilling is approximately 250 mE by 250 mN in the central portion of the tenement, which has been classified as Indicated. Inferred Resources are defined within the area with wider spaced drilling. The 2022 drilling is on an approximate spacing of 400 m along roadsides

and, in general, the historical drillhole spacing ranges are restricted to roadsides and on a spacing ranging from 500 m to 1,000 m.

Announcement has been authorised for release by the Board.

About ACDC Metals

ACDC Metals is a Heavy Mineral Sand and Rare Earth Element explorer and developer focussed on projects in the Murray Basin of Western Victoria, Australia. ACDC Metals is also developing its licenced downstream processing technology for its Rare Earth Processing plant (REPP) Project. The process extracts rare earth elements from monazite. Goschen Central is the ACDC Metals' flagship project.

We refer shareholders and interested parties to the website www.acdcmetals.com.au where they can access the most recent corporate presentation, video interviews and other information.

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Competent Persons Statement

The information in this document that relates to exploration results, data quality and geological interpretations is based on information reviewed or compiled by **Mr Kent Balas**, a Competent Person who is a member of the Australian Institute of Geoscientists (AIG, member no 8652).

Mr Balas is an employee of Langdon Warner Pty Ltd and provides consulting services to ACDC Metals.

Mr Balas has sufficient experience, which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which has been undertaken to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code).

Mr Balas consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to the Goschen Central Mineral Resource estimate is based on, and fairly reflects, information and supporting documentation compiled by **Mrs Susan Havlin**, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy and a Chartered Professional Geologist.

Mrs Havlin is a full-time employee of Snowden Optiro and is independent of ACDC Metals, the owner of the Mineral Resources. Mrs Havlin has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code).

Mrs Havlin consents to the inclusion in the report of the matters based on her information in the form and context in which it appears.

Appendix 1: Goschen Central Project Maiden Mineral Resource Estimate

Classification	Tonnes (Mt)	Total HM %	Slimes %	Oversize %	% of total HM					
					Mineral Assemblage					
					Rutile	Leucoxene	Ilmenite	Zircon	Monazite	Xenotime
Indicated	210	2.3	21	4.3	9.1	10	22	24	3.4	0.45
Inferred	410	2.1	21	4.2	8.1	12	20	21	2.8	0.45
Total	**620**	**2.2**	**21**	**4.2**	**8.4**	**11**	**21**	**22**	**3.0**	**0.45**

Classification	% of total HM																
	Rare Earth Oxides																
	Y_2O_3	La_2O_3	CeO_2	Pr_2O3	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_2O_3	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	TREO	TREO - CeO_2
Indicated	0.50	0.48	1.0	0.12	0.42	0.077	0.0040	0.077	0.011	0.073	0.016	0.050	0.007	0.052	0.008	2.9	1.9
Inferred	0.43	0.42	0.9	0.11	0.36	0.067	0.0033	0.066	0.010	0.063	0.014	0.043	0.006	0.045	0.007	2.5	1.6
Total	**0.45**	**0.44**	**0.9**	**0.11**	**0.38**	**0.071**	**0.0036**	**0.070**	**0.011**	**0.066**	**0.014**	**0.045**	**0.007**	**0.048**	**0.008**	**2.7**	**1.7**

Notes

1. *Mineralisation reported above a cut-off grade of 1.0% total heavy minerals (HM).*
2. *The Mineral Resource has been classified and reported in accordance with the guidelines of the JORC Code (2012).*
3. *Total HM is from within the +38 µm to 1 mm size fraction and is reported as a percentage of the total material. Slimes is the -38 µm fraction and oversize is the +1 mm fraction.*
4. *Estimates of the mineral assemblage (rutile, leucoxene, ilmenite, zircon, monozite and xenotime) are presented as percentages of the total HM component, as determined from XRF, ICP-MS and QEMScan analysis. QEMScan data used the following breakpoints are used for definition of the titania minerals: rutile >98% TiO2, leucoxene: 70 to 98% TiO2 and ilmenite: 45 to 70% TiO2.*
5. *Rare Earth Oxides are from XRF data and are presented as percentages of the total HM component.*
6. *All tonnages and grades have been rounded to reflect the relative uncertainty of the estimate, thus sum of columns may not equal.*

JORC Code, 2012 Edition – Table 1 report template

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.*	Aircore drilling was used by ACDC Metals to obtain samples at 1.5m intervals. The following information covers the sampling process: • each 1.5m sample was homogenized within the bag by manually rotating the sample bag; • a sample of sand, approx. 20 g, is scooped from the sample bag for visual THM% and SLIMES% estimation and logging. The same sample mass is used for every pan sample for visual THM% and SLIMES% estimation. Estimates are also made of induration hardness, induration type, grain size, sorting and heavy mineral assemblage. • the standard sized sample is to ensure calibration is maintained for consistency in visual estimation; • a sample ledger is kept at the drill rig for recording sample intervals; • A rotary splitter is used to take a 25% split of the drill sample of each 1.5m interval. • ACDC Metals cannot confirm the sampling techniques of previous explorers.
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).*	• Wallis Drilling was the contractor used for the ACDC Metals drilling program. • Aircore drilling with inner tubes for sample return was used. • Aircore is considered a standard industry technique for heavy mineral sand exploration. Aircore drilling is a form of reverse circulation drilling where the sample is collected at the face and returned inside the inner tube. • Aircore drill rods used were 3 m long. • NQ diameter (76 mm) drill bits and rods were used. • All drill holes were vertical. • ACDC Metals cannot confirm the drilling techniques of previous explorers.
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.*	• Drill sample recovery is monitored by recording sample condition from 'dry good' to 'wet poor'. • While initially collaring the hole, limited sample recovery can occur in the initial 0 m to 1.5 m sample interval owing to sample and air loss into the surrounding loose soil.

	• *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.*	• The initial 0 m to 1.5 m sample interval is drilled very slowly in order to achieve optimum sample recovery. • Samples are collected at 1.5m intervals into a standard numbered calico sample bags via a rotary splitter taking a 25% split of the total 1.5m interval. • At the end of each drill rod, the drill string is cleaned by blowing down with air to remove any clay and silt potentially built up in the sample tubes. • The twin-tube aircore drilling technique is known to provide high quality samples from the face of the drill hole (in ideal conditions). • ACDC Metals cannot confirm sample recovery of previous explorers.
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.*	• The 1.5 m aircore samples were each qualitatively logged via digital entry into a Microsoft Excel spreadsheet, and later uploaded to the Micromine database. • The aircore samples were logged for lithology, colour, grainsize, sorting, hardness, sample condition, washability, estimated THM%, estimated SLIMES% and any relevant comments such as slope, vegetation, or cultural activity. • Every drill hole was logged in full. • Logging is undertaken with reference to a Drilling Guideline with codes prescribed and guidance on description to ensure consistent and systematic data collection.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• The 1.5 m sample interval is rotary split at the drill rig, collected and stored at the ACDC Metals storage facility. • The water table depth was noted in all geological logs if intersected whereby sample condition was specified as 'wet poor'. • Hole twinning, laboratory standards and duplicates are used to ensure samples are representative.
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,*	The wet panning at the drill site provides an estimate of the THM% which is sufficient for the purpose of determining approximate concentrations of THM in the first instance. • Standards are inserted in the laboratory every 40 samples. • Duplicate assays are conducted every 25 samples to ensure sample homogeneity. • Sample separation meshes are ultrasonically cleaned twice a day to ensure there is no sample contamination.

	external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• All results are checked by the rig geologist and the Exploration Manager, in addition to the independent consulting Resource Geologist • Standard Reference Material sample results are checked from each sample batch to ensure they are within tolerance (<2SD) and that there is no bias. The field and laboratory data has been updated into a master spreadsheet which is appropriate for this stage in the program. Data validation criteria are included to check for overlapping sample intervals, end of hole match between 'Lithology', 'Sample', 'Survey' files, duplicate sample numbers and other common errors. • Twin holes are drilled periodically to test variation in terms of sample collection and assay. • Assay data has been received from Bureau Veritas who insert standards and blanks at regular intervals and have robust QAQC processes. • Conversion of elemental analysis (REE) to stoichiometric oxide (REO) was undertaken by the below conversion factors:

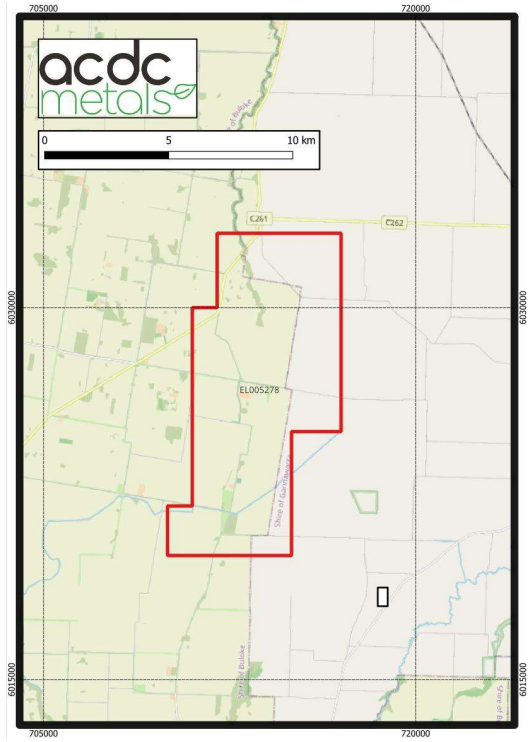
Element (ppm)	**Conversion Factor**	**Oxide Form**
La	1.1728	La_2O_3
Ce	1.2284	CeO_2
Pr	1.1703	Pr_6O_{11}
Nd	1.1664	Nd_2O_3
Sm	1.1596	Sm_2O_3
Eu	1.1579	Eu_2O_3
Gd	1.1526	Gd_2O_3
Tb	1.151	Tb_4O_7
Dy	1.1477	Dy_2O_3
Ho	1.1455	Ho_2O_3

		<table><tr><td>Er</td><td>1.1435</td><td>Er_2O_3</td></tr><tr><td>Tm</td><td>1.1542</td><td>Tm_2O_3</td></tr><tr><td>Yb</td><td>1.1387</td><td>Yb_2O_3</td></tr><tr><td>Lu</td><td>1.1371</td><td>Lu_2O_3</td></tr><tr><td>Y</td><td>1.2699</td><td>Y_2O_3</td></tr></table> Rare earth oxide is the industry accepted form for reporting rare earths. The following calculations are used for compiling REO into their reporting and evaluation groups: • Note that Y2O3 is included in the TREO calculation. • TREO (Total Rare Earth Oxide) = La2O3+ CeO2+ Pr6O11+ Nd2O3+ Sm2O3+ Eu2O3+ Gd2O3+ Tb4O7+ Dy2O3+ Ho2O3+ Er2O3+ Tm2O3+ Yb2O3+ Y2O3+ Lu2O3.
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.*	• Drill hole collar locations are collected using a Garmin hand held GPS with an accuracy of +-3m. • The datum used is GDA 94 and coordinates are projected as MGA zone 54.
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.*	• Drill holes were spaced at between 400 m and 800 m for the initial drill program. • This data spacing is considered appropriate for possible later inclusion in a Mineral Resource or Ore Reserve estimate. • Sample compositing has not been applied.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The aircore drilling traverse was oriented perpendicular to the strike of mineralisation defined by previous drill data information. • The strike of the mineralisation is approximately north-south. • All drill holes were vertical, and the orientation of the mineralisation is horizontal. • The orientation of the drilling is considered appropriate for testing the lateral and vertical extent of mineralisation without any bias.
Sample security	• *The measures taken to ensure sample security.*	• Air core samples were stored at the ACDC Metals Bendigo Warehouse facility. • The samples were then dispatched by freight agent to Diamantina Laboratories Perth facility for assay and reporting. • Metallurgical samples were utilised from previous drilling completed by previous vendor: ○ Samples were stored by previous vendor Providence and Gold Minerals.

		○ Samples were collected and dispatched to Mineral Technologies' Queensland facility, using freight agents from Bendigo and delivered to the Mineral Technologies laboratory. ○ The laboratory inspected the packages and did not report tampering of the samples. ○ Mineral Technologies metallurgical manager inspected the packages and prepared a sample inventory which will be reconciled with the sample dispatch information and sample database.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Internal reviews were undertaken during the geological interpretation and throughout the modelling process.

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 license to operate in the area.*	• The exploration work was completed on EL005278 that is 80% owned by ACDC Metals Ltd, and 20% Providence Gold and Minerals. • All work was conducted with relevant approval from local and state authorities. • The tenure is secure with no impediments to obtaining a licence to operate in the area. 
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	• Historic exploration work was completed by CRAE from 1982. The project was also explored by Iluka Resources. ACDC Metals cannot confirm the validity of work completed by previous explorers.

Geology	*Deposit type, geological setting and style of mineralisation.*	• Murray Basin style 'WIM' deposits, higher grade Murray Basin strand deposits. EL005278 is located within the Murray Basin which is a significant Mineral Sands producing region globally
Drill hole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar* *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* *dip and azimuth of the hole* *down hole length and interception depth hole* *length.* *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• No new drill hole information is reported. .
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.*	• Samples have been composited from heavy mineral sachets then split by Bureau Veritas and their laboratory facility. The results reported come directly from the Bureau Veritas assay report.
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').*	The nature of the mineralisation is broadly horizontal, thus vertical aircore holes are thought to represent close to true thicknesses of the mineralisation: • Reported widths are the true widths due to the horizontal nature of the deposit.
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.*	• Figures and plans are displayed in the main text of the release. All plans and sections are clearly labelled and are shown in GDA94/UTMZ54 coordinates.

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 practised to avoid misleading reporting of Exploration Results.*	• Both low and high grade intervals have been reported.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• All known relevant exploration data has been reported in this release.
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.*	• ACDC Metals intends to continue to define the resource in 2024 and 2025. This will include (but not limited to) drilling, assay, ground based geophysical surveys and further metallurgical testwork.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in the preceding section 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.*	• Drillhole data was extracted directly from an external database managed by EarthSQL, which includes internal data validation protocols. • Data was further validated by Snowden Optiro upon receipt, and prior to use in the resources estimation.
	Data validation procedures used.	• Validation of the data was confirmed using mining software (Datamine) validation protocols, and visually in plan and section views.
Site visits	*Comment on any site visits undertaken by the Competent Persons and the outcome of those visits.*	• Mrs Susan Havlin (Snowden Optiro, acting as Competent Person for the Mineral Resource estimation and classification) has not visited the site. Mr Kent Balas (ACDC Metals, acting as Competent Person for the data quality) has visited the site on multiple occasions.
Geological interpretation	*Confidence in (or conversely, the uncertainty of the geological interpretation of the mineral deposit.*	• There is good confidence in the geological interpretation which is based on geological logging and assay data.
	Nature of the data used and of any assumptions made.	• Both assay and geological data were used for the interpretation. • The mineralised horizon is defined by a nominal cut-off grade of 1% total HM with an internal higher-grade horizon defined by a nominal cut-off of 3% total HM.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	• No alternative interpretations were considered. • Any alternative interpretations are unlikely to significantly affect the Mineral Resource estimate.

	The use of geology in guiding and controlling Mineral Resource estimation.	• The geological units were defined using geological logging, slimes and oversize contents.
	The factors affecting continuity both of grade and geology.	• The mineralisation is contained within offshore-hosted HM sediments which are formed in a near-shore environment and, are fine grained and can extend laterally over several kilometres. • The confidence in the grade and geological continuity is reflected by the assigned resource classification.
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.*	• HM are concentrated within the full extent of EL5287 and extend over an area of area of 12.9 km north-south by 5 km east-west. • The overlying formation ranges in thickness from 18 m to 28 m with an average thickness of 22 m. • The mineralised horizon ranges in thickness from 1.5 to 33 m and has an average thickness of 1.5 m for the 3% wireframe and 5.6 m for the 1% wireframe.
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.*	• Data analysis and estimation was undertaken using Snowden Supervisor and Datamine software. • Drilling is generally on a 250 m by 250 m spacing within the central zone and ranges from 400 m to 1,000 m along roadsides throughout the remaining tenement. • A maximum extrapolation distance of 250 m was applied north-south and east-west. • All data has been collected from downhole intervals of 1.5 m. • Total HM, slimes and oversize block grades were estimated using ordinary kriging (OK). Mineral assemblage and rare earth oxide components were estimated using nearest neighbour (NN) technique. Snowden Optiro considers these methods to be appropriate estimation techniques for this type of mineralisation and data. • Variogram analysis was undertaken to determine the kriging estimation parameters used for OK estimation of total HM, slimes and oversize. • Total HM has a maximum continuity range of 1,000 m to 1,300 m along strike (010o to 015o), 550 m to 1,350 m across strike and 4 m vertical. Maximum continuity ranges interpreted for the slimes are 1,300 m along strike, 700 m to 980 m across strike and 4 m to 10 m vertical Maximum continuity ranges for oversize are 550 m to 1,600 m along strike, 325 m to 750 m across strike and 3.2 m to 6 m vertical for oversize. Kriging neighbourhood analysis was performed to determine the block size, sample numbers and discretisation levels used for OK.

	• Search parameters from the HM variography were used for NN estimation of the mineral assemblage data.
Description of how the geological interpretation was used to control the resource estimates.	• All geological logging data (including historical drillholes), slimes content and oversize content were used to define the geological units. • Hard boundary conditions were applied for all geological and mineralised units. • The mineralised horizon was defined using a nominal cut-off grade of 1% total HM with an internal higher-grade horizon defined by a nominal cut-off of 3% total HM. • The mineralised domains are considered geologically robust in the context of the resource classification applied to the estimate.
Discussion of basis for using or not using grade cutting or capping.	• The distributions of the total HM, slimes and oversize data within each geological unit and within the mineralised horizon are positively skewed; however, the total HM, slimes and oversize all have low coefficients of variation (less than 1.0). High-grade outliers are not present and so top-cut grades (cap grades) were not applied.
The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	• There is a decrease in tonnes of 2% since the 2023 estimate and an increase of 15% THM, 6% in slimes and 3% in OS. • There has been no production
The assumptions made regarding recovery of by-products.	• Processing is expected to recover total HM from the +38µm/-1 mm fraction which is aligned with the current assay data.
Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	• Deleterious elements were not considered for the Mineral Resource estimate.
In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	• Grade estimation was into parent blocks of 100 mE by 100 mN by 1 mRL. • Block dimensions were selected from kriging neighbourhood analysis and reflect the variability of the deposit as defined by the current drill spacing. • Sub-cells to a minimum dimension of 25 mE by 25 mN by 0.25 mRL were used to represent volume.

	Any assumptions behind modelling of selective mining units.	• Selective mining units were not modelled.
	Any assumptions about correlation between variables.	• Total HM and slimes, total HM and oversize, and slimes and oversize data is uncorrelated. • Correlation coefficients of the mineral assemblage data indicate a moderate to strong positive relationship between rutile and monazite, rutile and xenotime, rutile and zircon, zircon and monazite, zircon and xenotime and leucoxene and ilmenite (correlation coefficients of 0.49 to 0.85).
	The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	• The total HM, slimes, oversize, mineral assemblage and rare earth oxide estimated block model grades were visually validated against the input drillhole data and comparisons were carried out against the de-clustered drillhole data and by northing, easting and elevation slices. • Data from additional drilling (68 holes) was incorporated into the resource model. This has resulted in a small decrease in tonnes of 2% since the 2023 estimate. • No production has taken place and thus no reconciliation data is available.
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages have been estimated on a dry basis.
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The Mineral Resource is reported above a cut-off grade of 1.0% total HM. This cut-off grade was selected by ACDC Metals and Snowden Optiro following comparison with mineral sands deposits currently being or recently having been mined in Australia. • It is expected that the entire Goschen Central Mineral Resource has reasonable prospects for eventual economic extraction using open pit mining.
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.*	• Open pit mining methods will be used, similar to those commonly and currently in use in HM mining operations both in Australia and globally. • Mining factors such as dilution and ore loss have not been applied. • It is considered that there are no mining factors which are likely to affect the assumption that the deposit has reasonable prospects for eventual economic extraction.

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.*	• Mineral Technologies Ltd were engaged to complete conceptual characterisation testwork, the intent of the program was to validate that the Goschen central project was 'typical' Murray Basin deposit. Testwork results suggested that a 'standard' flowsheet could be implemented for economic extraction. • Mineral Technologies Ltd were engaged to complete pilot work on 1.6 tonne bulk sample from the Goschen Central deposit, the intent was to produce separated product suite for quality testing and to gather metallurgical data for flowsheet development.
Environmental 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.*	• There are no known significant environmental impediments to the project's viability from the currently available information.
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.* *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Bulk density was applied for the volume-to-tonnage conversion using the following formula: ○ Density = 1.698 + (0.009 x total HM) • This formula has been used for early-stage estimation of WIM style deposits elsewhere in the Murray Basin.
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.* *Whether appropriate account has been taken of all relevant factors (i.e. 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).*	• The Mineral Resource has been classified as Indicated and Inferred taking into account data quality, data density, geological continuity, grade continuity and confidence in the estimation of heavy mineral content, mineral assemblage and rare earth oxides. • Indicated Mineral Resources have been defined within the central area covered by the 2023 and 2024 drilling (on a nominal spacing of 250 m by 250 m) and where the mineral assemblage has been determined by QEMSCAN and XRF analysis. • The remaining area has been classified as Inferred Mineral Resources where there 2022 drilling (on roadsides at a 500 m to 1,000m spacing) and historic drilling indicates the extensions to the mineralised horizons. Assay data from the historic drillholes were not used for grade estimation; only the 2022 data was used.
	Whether the result appropriately reflects the Competent Person's view of the deposit	• The assigned classification of Indicated and Inferred reflects the Competent Person's assessment of the accuracy and confidence levels in the Mineral Resource estimate.

Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	• The Mineral Resource has been reviewed internally as part of normal validation processes by Snowden Optiro. • ACDC Metals Ltd engaged an external independent contractor to review the 2023 Maiden resource estimate, and provide input to the 2024 update.
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.*	• The assigned classification of Indicated and Inferred reflects the Competent Person's assessment of the accuracy and confidence levels in the Mineral Resource 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.	• The confidence levels reflect potential production tonnages on an annual basis, assuming open pit mining.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• No production has occurred from the deposit.