

## Significant Increase to Lindfield Project Mineral Resource Estimate Following Recent Drilling Campaign

Indicated and Inferred Resources Estimate of 713 Mt at 0.32%  $V_2O_5$ , 3.4%  $Al_2O_3$  and 130g/t Mo comprising over 68% in the Indicated category.

### **Key Highlights**

- Lindfield Project's Mineral Resource Estimate (MRE) increases to 713 Mt, marking a 96% increase.
- 518Mt (72%) of the resource is located within 20m of surface
- The upgraded MRE incorporates the upper horizon (TLBA) as a result of its outstanding beneficiation performance.
- Upgraded MRE increases the overall Al<sub>2</sub>O<sub>3</sub> mineralised material grading 3.4%. Lava Blue continues to test Lindfield mineralised samples to further refine the HPA flow sheet.

Critical Minerals Group Limited (ASX:CMG) (or **the Company**), is pleased to provide a new Mineral Resource Estimate (MRE) for its flagship Lindfield Project.

The MRE has delivered a 96% increase in resource size to 713 Mt, with the noted addition of molybdenum to the resource.

The resource increase is a direct result of CMG's drilling program which was completed in September 2023, providing material for pilot scale and further metallurgical test work.

This key achievement demonstrates CMG's commitment to developing its flagship Lindfield Project.

The Company's Managing Director Scott Winter commented on the upgraded MRE,

"It's a credit to the technical team and the partners we work with in the development of the Lindfield Project, that we have been able to announce a significant upgrade to the Lindfield Project Mineral Resource Estimate. Not only have we been able to increase the mineralised material estimate of vanadium and associated high purity alumina (HPA) but we have now added molybdenum to the resource estimate. The upgrade to 713 Mt marks a 96% increase and is largely as a result of the inclusion of the TLBA mineralisation of the resource that sits at or near surface."

"This upgrade in the resource has flowed from the drilling performed in Q3 2023, the finalisation of the scoping study on the Lindfield Project and the ongoing metallurgical test work that has been



performed. The metallurgical test work highlighted the superior performance of the TLBA mineralisation in upgrading its concentration through the flotation. The test work and modelling also highlighted the buildup of molybdenum in the circuit to economic levels. With these inclusions, the overall planning, development and economics will be worked on further in the next phase of the feasibility studies. The improvements to be added will include lower waste removal volumes, lower strip ratio, increased mineralised material, increased mine life potential and the potential for an additional revenue source through the production of molybdenum."

"With the reduction in overall waste this also brings an environmental benefit to the project with less waste dump requirements, less overall disturbance impact, and potentially lower rehabilitation costs.

"We look forward to working these into the next phase of the feasibility study and continuing to investigate further opportunities as a result."

#### **Mineral Resource Estimate**

The Lindfield Project MRE has been upgraded by John T. Boyd Mining and Geological Consultants of Brisbane. The new MRE of 713 Mt at 0.32%  $V_2O_5$ , 3.4%  $Al_2O_3$  and 130 g/t Mo includes Indicated Resource of 491 Mt at 0.32%  $V_2O_5$  representing a significant increase in mineralised material (up 96%).

Table 1. New Lindfield Project Vanadium, High Purity Alumina (**HPA**) and molybdenum Mineral Resource Summary

Resource Category	Domain	Mass (Mt)	V₂O₅ wt%	Al₂O₃ wt%	Mo g/t
Indicated	Weathered	261	0.30	3.1	110
	Fresh	230	0.34	3.8	160
Inferred	Weathered	61	0.32	3.5	110
	Fresh	161	0.31	3.5	150
Total		713	0.32	3.4	130

In comparison with the previous Mineral Resource Estimate<sup>1</sup>, the new MRE represents a significant increase in scale from the previous 363Mt at  $0.43\%~V_2O_5$ . Importantly the report identifies that a major portion of the Mineral Resource is situated very close to surface indicating potential for lower overburden removal costs and a simple pit shell design.

<sup>&</sup>lt;sup>1</sup> Refer to the Company's ASX announcement dated 16 May 2023.



Table 2. New Lindfield Project In Situ Mineral Resources Estimate Categories

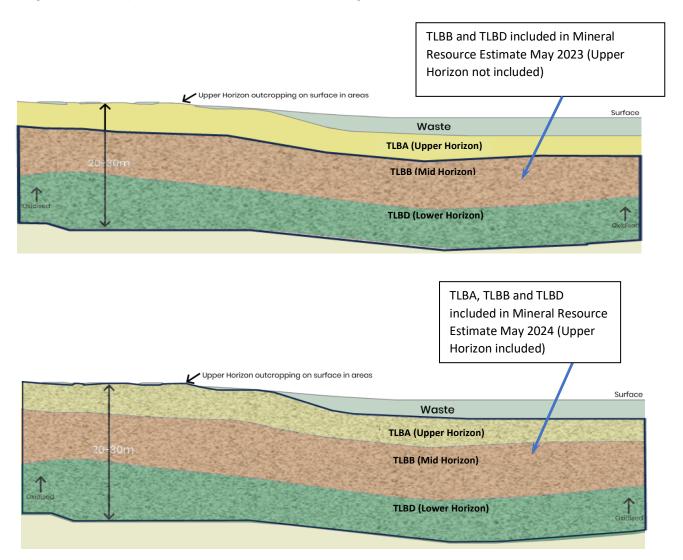
In Situ Mineral Resource (Mt at $V_2O_5$ wt%)					
Horizon	Indicated	Inferred	Total		
TLBA	259 at 0.22%	120 at 0.23%	378 at 0.22%		
TLBB	152 at 0.48	63 at 0.45%	214 at 0.47%		
TLBC	-	-	-		
TLBD	80 at 0.33%	40 at 0.35%	120 at 0.34%		
TLBE	-	-	1		
Total	491 at 0.32%	222 at 0.31%	713 at 0.32%		

Table 3. New Lindfield Project In Situ Mineral Resource – Overburden Depth

In Situ Mineral Resource (Mt at V <sub>2</sub> O <sub>5</sub> wt%)				
Overburden Depth	Indicated	Inferred	Total	
0 m - 10 m	205 at 0.33%	51 at 0.33%	256 at 0.33%	
10 m - 20 m	220 at 0.31%	42 at 0.30%	262 at 0.31%	
20 m - 30 m	65 at 0.32%	129 at 0.31%	195 at 0.31%	
30 m - 40 m	-	-	-	
Total	491 at 0.32%	222 at 0.31%	713 at 0.32%	



Figures 1 & 2 (below): Indicative illustration of the effect of including the TLBA horizon in the MRE



#### Vanadium Resource

The new MRE has identified a decrease in grade to  $0.32\%~V_2O_5$  from the previous estimate of  $0.43\%~V_2O_5$  across the Indicated and Inferred Mineral Resource as a result of the inclusion of the lower grade TLBA material for an overall increase in the  $V_2O_5$  volume. The Mineral Resource has increased significantly by 96% to 713 Mt Indicated and Inferred Mineral Resource Estimate from the previous 363 Mt Indicated and Inferred Mineral Resource Estimate.

Further upside has been defined in the shallower weathered zone, identifying an indicated 261 Mt at  $0.30\%~V_2O_5$  and an inferred 61 Mt at  $0.32\%~V_2O_5$ . The identification of lower grade mineralisation that upgrades exceptionally well in the weathered domain adds further justification to the development of the Lindfield Project. The weathered zone begins from surface, is soft and friable and shows improved beneficiation over the fresh zone. Inclusion of the TLBA horizon results in very



low strip ratio mining straightforward mining operations, all of which are expected to have a positive impact on the overall operating cost.

The upgraded MRE strengthens the Lindfield Project's positioning for the feasibility studies currently underway. It will also serve as a foundation for further drilling to progress future MRE assessments. With the MRE completed, the project objective will be to maximise the conversion of the Mineral Resource to an Ore Reserve.

#### Aluminium Oxide – HPA feedstock

The new MRE has also increased the  $Al_2O_3$  component of the mineralised material, grading 3.4% across the 713 Mt, samples of which continue to be metallurgically assessed to refine the HPA process. The ability to produce HPA feedstock from the Lindfield Project could potentially add considerable value to the Lindfield Project as our initial test work and findings are further developed into a flow sheet design alongside the vanadium production.

#### Molybdenum

The new MRE also takes in the molybdenum component of the mineralised material, grading 130 g/t across the 713 Mt, which represents a by-product from the hydrometallurgical circuit.



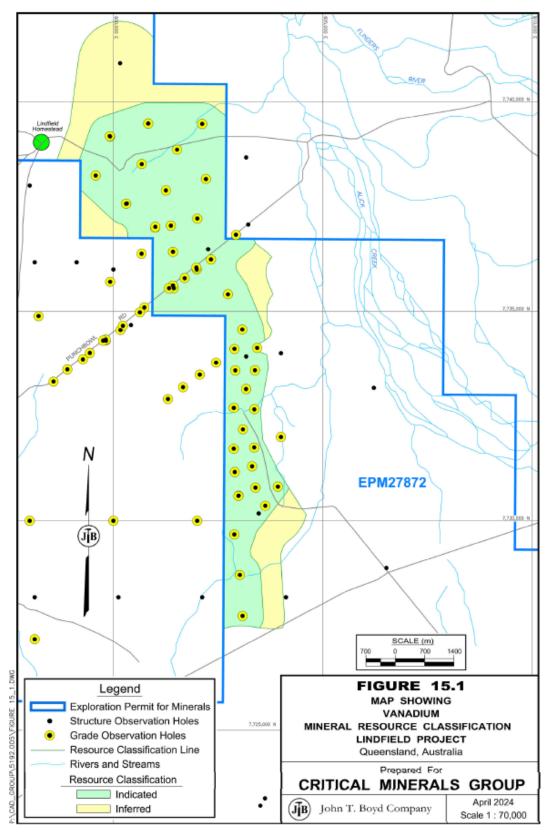


Figure 3 (above): Plan view of the Lindfield Project Resource



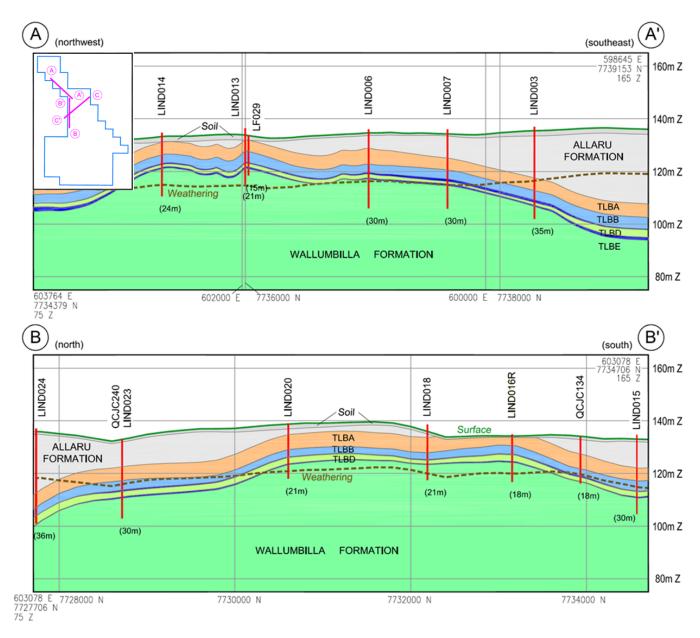


Figure 4 (above): Cross Section of the Lindfield Project Resource



## **Conclusions**

The Lindfield Project formation displays high lateral continuity with the likelihood of bulk horizon extraction. Results are considered most favourable in the Project's central southern area, with shallow, weathered Toolebuc coquina-shale observed outcropping at surface.

In the Mineral Resource Estimate Report, John T. Boyd Company commented that CMG is following a logical program to explore, study, and develop the Lindfield Project's Mineral Resources.

Images 1 & 2 (below): Lindfield Project TLBA outcropping





In accordance with ASX Listing Rule 5.8.1 the Company provides the following information in respect of the vanadium, HPA and molybdenum MRE:

- Geology and geological interpretation: The Lindfield Project Mineral Resource is geologically in the Toolebuc Formation with the geological interpretation consisting of historical exploration reports and studies, the Company's previous MRE and the Company's 2022 and 2023 exploration drilling and results.
- Sampling and sub-sampling techniques: Samples were put in core boxes, photographed and geologically logged. The core samples were selected by lithological and geophysical boundaries. All core samples were then quarter slabbed by Mitra PTS.
- O Drilling techniques: The drilling techniques for the 2023 program used were diamond core for 11 holes using 4C (4 inch) core diameter. The drill program also included two 8C-size core holes and three 4C-size core holes drilled as twins on a previous hole.
- Criteria used for classification: Criteria for classification considered the geology of the deposit evaluating the structural and depositional environment. The selection of hole spacing classification was made based on the Australian Guidelines for the Estimation and Classification of Coal Resources (2014 edition). Based on the results of the geostatistical study, the variography and industry guidelines, nominal spacing for points of observation in the MRE have been defined to 1,000 metres for indicated, and 2,000 metres for inferred.
- Sample analysis method: Samples were analysed by Bureau Veritas and ALS. Bureau Veritas completed ICP-OES, LA-ICP-MS, XRF and Leco analysis. ALS completed ICP\_MS and ICP-OES. Mitra completed moisture and density analysis.
- Estimation methodology: The stratigraphical geological model was used to complete an estimate of the Mineral Resource using Maptek's Vulcan 12.0.5. This included having reviewed and validated the compiled database, created and validated the stratigraphic, geological and grade models, reviewed exploration data to ascertain the level of geological continuity for each working section and reviewed the estimation assumptions. Parameters and criteria: The MRE was estimated on a horizon-by-horizon and working section basis.
- $\circ$  Cut-off grade: A cut-off grade of 0.26%  $V_2O_5$  was applied to the MRE TLBB and TLBD. A cut-off grade of 0.10% was applied to the TLBA. No minimum cut-off grade was applied to the  $Al_2O_3$  (wt%) for the HPA or Mo (ppm) in the molybdenum MRE the resource represents a byproduct of the vanadium processing flowsheet and as such, the vanadium working section limits were applied to the HPA and Mo in the MRE.
- o A maximum overburden depth of 30 metres was applied as the lower constraint of the MRE.
- Mining methods and parameters: Mining methods are applied on the basis of open cut mining.
- Metallurgical methods and parameters: It has been considered that a low-cost process of beneficiation, flotation, atmospheric acid leaching, solvent extraction and precipitation is



expected to achieve vanadium extraction between 60% and 64%.  $Al_2O_3$  and Mo extraction is expected to be variable, dependent on hydrometallurgical circuit management.

This announcement was approved for release by the board.

#### For more information:

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## **Competent Person Statements**

The information in this announcement that relates to the new Exploration Results and Mineral Resources Estimates is based on, and fairly represents, information compiled by Adrian Buck, a Competent Person, who is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). Adrian Buck is the Principal Geologist – Australia for John T Boyd Company. Adrian Buck has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activities which they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves'. Adrian Buck consents to the inclusion of the matters based on his information in the form and context in which it appears.

## **Previously Reported Information**

The information in this announcement that relates to the previously reported Mineral Resource estimate is extracted from the Company's announcement titled 'Lindfield Vanadium Project Delivers Improved Mineral Resource Estimate with Grade and Tonnage to the World Class Scale' released to ASX on 16 May 2023 and which is available to view on <a href="www.asx.com.au">www.asx.com.au</a>. The Company confirms that the form and context in which the Competent Persons's findings are presented have not been materially modified from the original market announcement.

## **Forward-Looking Statements**

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning planned exploration program and other statements that are not historical facts. When used in this document, the words such as "could", "plan", "estimate", "expect", "intend", "may", "potential", "should" and similar expressions are forward-looking statements. Although the Company believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.



Schedule 1 – Table of Lindfield Project drill-hole information (CMG holes)

Drillhole ID	Company	Easting (GDA94z54)	Northing (GDA94z54)	Elevation (m)	Total Depth (m)	Tenement	Year	Hole Type
LIND001	CMG	599914	7739182	134	54	27872	2022	Diamond Core
LIND002	CMG	600831	7739483	131	42	27872	2022	Diamond Core
LIND003	CMG	599579	7738243	137	35	27872	2022	Diamond Core
LIND004	CMG	600677	7738516	132	30	27872	2022	Diamond Core
LIND005	CMG	601520	7738861	130	28	27872	2022	Diamond Core
LIND006	CMG	600996	7736995	136	30	27872	2022	Diamond Core
LIND006_B1	CMG	601002	7737019	136	30	27872	2023	Diamond Core
LIND007	CMG	600306	7737569	136	30	27872	2022	Diamond Core
LIND008	CMG	601254	7737888	133	36	27872	2022	Diamond Core
LIND009	CMG	602209	7738159	131	29	27872	2022	Diamond Core
LIND010	CMG	602003	7737214	132	42	27872	2022	Diamond Core
LIND011	CMG	601421	7736421	136	24	27872	2022	Diamond Core
LIND012	CMG	602329	7736241	134	42	27872	2022	Diamond Core
LIND013	CMG	601989	7736001	136	16	27872	2022	Diamond Core
LIND014	CMG	602735	7735408	135	24	27872	2022	Diamond Core
LIND015	CMG	603079	7734567	135	30	27872	2022	Diamond Core
LIND016	CMG	603171	7733147	135	25	27872	2022	Diamond Core
LIND016R	CMG	603171	7733147	135	25	27872	2022	Diamond Core
LIND016_B1	CMG	603168	7733147	135	10	27872	2023	Diamond Core
LIND017	CMG	605078	7732805	130	120	27872	2022	RC Hole
LIND017R	CMG	605078	7732805	130	20	27872	2022	RC Hole
LIND018	CMG	603094	7732182	139	25	27872	2022	Diamond Core
LIND019	CMG	603313	7731299	140	34	27872	2022	Diamond Core
LIND020	CMG	602990	7730601	139	28	27872	2022	Diamond Core
LIND020_B1	CMG	602986	7730592	139	28	27872	2023	Diamond Core
LIND020_B2	CMG	602989	7730596	139	28	27872	2023	Diamond Core
LIND020_B3	CMG	602991	7730601	139	28	27872	2023	Diamond Core
LIND021	CMG	603627	7730361	136	72	27872	2022	Diamond Core
LIND022	CMG	602888	7729675	138	30	27872	2022	Diamond Core
LIND023	CMG	603020	7728707	133	35	27872	2022	Diamond Core
LIND024	CMG	603085	7727729	137	64	27872	2022	Diamond Core
LIND026	CMG	602890	7734104	137	25	27872	2023	Diamond Core
LIND027	CMG	603431	7734130	134	25	27872	2023	Diamond Core
LIND027A	CMG	603434	7734126	134	25	27872	2023	Diamond Core
LIND028	CMG	602911	7733591	138	20	27872	2023	Diamond Core



LIND029	CMG	603381	7733594	134	22	27872	2023	Diamond Core
LIND030	CMG	602877	7732698	136	19	27872	2023	Diamond Core
LIND031	CMG	603364	7732663	132	25	27872	2023	Diamond Core
LIND032	CMG	602874	7731721	140	31	27872	2023	Diamond Core
LIND033	CMG	603361	7731751	140	19	27872	2023	Diamond Core
LIND034	CMG	602898	7731165	140	31	27872	2023	Diamond Core
LIND035	CMG	603393	7730794	140	37	27872	2023	Diamond Core
LIND036	CMG	603928	7730816	136	25	27872	2023	Diamond Core



#### **APPENDIX A**

# JORC CODE, EDITION 2012 - TABLE 1 CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA

Section 1 Sampling Techniques and Data				
Criteria	JORC Code Explanation	Commentary		
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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 (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>2022 and 2023 exploration samples have been taken from diamond core drilling only. Recovery of the core is recorded in the drill hole lithological logs, which are recorded by suitably qualified geologists present at the time of drilling.</li> <li>Cores were longitudinally cut, and then a sample was obtained from ¼ of the core, prepared by laboratory technicians working under the direction of the Project Geologist.</li> <li>Geophysical logs were used to correct the recorded depths of the Toolebuc Formation roof and floor intersections.</li> </ul>		
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other	<ul> <li>The total tenure Project contains 95 holes, including 54 holes drilled by previous explorers,</li> <li>24 holes drilled and previously reported by CMG and 17 exploration holes drilled by CMG in</li> </ul>		



	Section 1 Sampling recliniques and Data				
Criteria	JORC Code Explanation	Commentary			
	type, whether core is oriented and if so, by what method, etc).	<ul> <li>2023.</li> <li>34 4C-size (100mm) diamond core holes for resource definition.</li> <li>The conventional drilling method drilled diamond core intervals, typically over 4.5 m length runs.</li> <li>The core size has been 4C (100 mm), providing ample material for metallurgical test work.</li> <li>Two metallurgical larger diameter 8C-sized (200 mm) diamond core holes.</li> <li>Holes were drilled vertically; verticality logs were run to confirm deviation.</li> <li>Drilling by S&amp;K Drilling Pty Ltd and J&amp;S Drilling Pty Ltd using a Fraste FS400 drill rig.</li> </ul>			
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul> <li>2022 and 2023 drill chips and core were assessed, logged and photographed on site by suitably qualified geologists.</li> <li>Linear recovery was recorded for each core run, comparing the length of the core recovered versus drill depth.</li> <li>Core recoveries were generally better than 95%; however, core recoveries of approximately 75% have been recorded in some softer, weathered, mineralised zones.</li> <li>The core required for analysis was sampled at the core storage facility from core storage boxes after longitudinal core cutting.</li> <li>There is no known relationship between sample recovery and the assay results received from the laboratory.</li> </ul>			
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>2022 and 2023 core and chip samples have been logged in detail, which supports the estimation of mineral resources.</li> <li>Geological logging was completed to the CoalLog – Australian Coal Logging Standard, as developed by the Australian Coal Association Research Program (ACARP) and adopted by the Australasian Institute of Mining and Metallurgy (AusIMM). The logging system is well suited to stratified sedimentary deposits.</li> <li>Logging has been quantitative for recording depth.</li> <li>A geologist's visual interpretation of geological characteristics and grain size has been used to differentiate rock types.</li> <li>Qualitative records include percentages of lithologies where interbedded intervals have been encountered, degree of weathering and rock strength.</li> <li>A digital photographic record is maintained for drill core and chip samples.</li> <li>Geological logging data is stored in an Isis Vulcan database.</li> </ul>			



	Section 1 Sampling Techniques and Data				
Criteria	JORC Code Explanation	Commentary			
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field</li> </ul>	2022 and 2023 samples were taken across the entire Toolebuc Formation interval to characterise mineralisation for the complete formation. Samples above and below the mineralised formation were also routinely taken to characterise dilution materials.			
	<ul> <li>duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>The core required for laboratory analysis was sampled at the core storage facility from core storage boxes after longitudinal core cutting. Full sections (continuous and contiguous) of the quarter core diameter of each sample were taken.</li> </ul>			
		<ul> <li>Core sample intervals were selected in smaller increments representing mineralisation horizon and weathering domain boundaries or lithological units.</li> <li>Check samples included CRMs, lab and blind duplicates and blanks were included in the</li> </ul>			
		<ul> <li>assay stream.</li> <li>Sample preparation was carried out by Mitra PTS Pty Ltd (Mitra) laboratories in Gladstone, using Australian Standards laboratory procedures. Mitra Gladstone is accredited by the National Association of Testing Authorities (NATA; NATA corporate accreditation No: 14525, corporate site No: 14569.</li> </ul>			
		• Once Mitra received the core boxes, cores were longitudinal cut, and then ¼ core was sampled by laboratory technicians under the direction of the Project geologist. Samples were weighted and entered into a sample tracking system. Samples were then dried and crushed to ensure that 70% of the sample was below 6 mm, and then a 250 g split riffled off with the remaining stored as a reserve. The 250 g splits were then milled to 75 µm. Pulp samples were split for each analytical method, with the pulp reject retained and stored.			
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels</li> </ul>	<ul> <li>2022 and 2023 samples were analysed by Bureau Veritas (BV), ALS (ALS) and Mitra.</li> <li>BV Perth completed the laser ablation method (XRF202, LA101) and was cast using 66:34 flux with 10% lithium nitrate to form a glass bead. The sample was then analysed by X-Ray fluorescence spectrometry for Al<sub>2</sub>O<sub>3</sub>, CaO, Cl, Cr<sub>2</sub>O<sub>3</sub>, Fe<sub>2</sub>O<sub>3</sub>, K<sub>2</sub>O, MgO, MnO, Na<sub>2</sub>O, P<sub>2</sub>O<sub>5</sub>, SiO<sub>2</sub>, SO<sub>3</sub>, TiO<sub>2</sub>, and V<sub>2</sub>O<sub>5</sub>. The glass bead was then analysed by laser ablation ICP-MS for Ag, As, Ba, Be, Bi, Cd, Ce, Co, Cr, Cs, Cu, Dy, Er, Eu, Ga, Gd, Ge, Hf, Ho, In, La, Lu, Mn, Mo, Nb, Nd, Ni, Pb, Pr, Rb, Re, Sb, Sc, Se, Sm, Sn, Sr, Ta, Tb, Te, Th, Ti, Tl, Tm, U, V, W, Y, Yb, Zn, and Zr.</li> </ul>			



Criteria	JORC Code Explanation	Commentary
	of accuracy (ie lack of bias) and precision have been established.	<ul> <li>Approximately 10% of samples were duplicate tested by BV Adelaide by ICP-OES and ICP-MS by analytical methods (LB100, LB101, LB102). An aliquot sample is accurately weighed and fused with lithium metaborate at high temperature in a Pt crucible. The fused glass is then digested in nitric acid.</li> <li>Mitra Gladstone completed moisture and density testing using analytical methods (AS1038.1, AS1038.3, AS1038.17, AS1038-12.1.1).</li> <li>External laboratory checks were completed with a 10% subset of samples duplicate tested by ALS Brisbane by ICP-OES and ICP-MS by analytical methods (ME-MS41, ME-MS81).</li> <li>The quality of exploration assay results has been monitored by duplicate testing by a second analytical method and duplicate testing by a second laboratory.</li> <li>Blank and Certified Reference Materials (CRMs) have been included in sample batches to monitor accuracy.</li> <li>Downhole geophysical logging was completed by Weatherfords with service and equipment to the American Petroleum Institute (API) standards Q1 and 14A, and logs were recorded to international Logging Ascii Standards (LAS). The parameters surveyed are appropriate for use in conjunction with lithological data to determine the Toolebuc Formation roof and floor</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>There are strong visual indicators of the Project's mineralised interval observed in the drill core, and significant assays are visually verified against drill hole photographs.</li> <li>Where anomalous results are detected, it is standard practice for the laboratory to retest the sample.</li> <li>Twinned hole testing has been included in the exploration program.</li> <li>Adjustments were made to the reported assay data; where the Lab reported vanadium results as an element or ppm, they were converted to oxide weight per cent using standard practices.</li> <li>A correction factor was applied to the November 2022 LB101 assay results to align with the November 2022 LA101 assay results. The correction factor was applied based on QAQC establishing that LB101 was under reporting vanadium grades by approximately 7% due to incomplete digestion of resistive minerals. Refer Section 11.4.</li> </ul>

 A batch of September 2023 check samples showed a poor correlation between primary assay method LA101 versus check sample methods LB101 and MA101 and a poor correlation between primary laboratory BV versus umpire laboratory ALS. Assessment of the poor correlation established the likely cause as the results of inconsistency in laboratory



Criteria	JORC Code Explanation	Commentary
		preparation by "ashing" on the batch of check samples. Check assays from LA-ICP-MS and XRF were not ashed and showed good quality correlation, sufficient to meet the project QA/QC requirements. Poor check sample results from LB101 and MA101 techniques were considered unreliable and disregarded. Refer Section 11.6
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>The 2022 and 2023 drillhole collar survey was completed by Diverse Surveys Pty Ltd and Ozzie Surveys Pty Ltd using Leica GS18 equipment.</li> <li>Collar locations are stored in grid datum GDA94 projected onto MGA94 zone 54.</li> <li>Holes were drilled vertically; verticality logs were run to confirm deviation.</li> <li>The topography model was created from local survey points and the 38 m regional SRTM elevation dataset and corrected to the RTK survey points.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>The drill hole spacing within the current Project resource area is typically between 500 m and 1000 m.</li> <li>Drill hole spacing is considered appropriate for the confidence classification.</li> <li>Variography of the key variables of the mineralised domains was used to support the drill hole spacing.</li> <li>In 2022 and 2023, the compositing of grade data was calculated using thickness-weighted averages from individual sample results across horizon-by-horizon to represent the mineralised domains.</li> </ul>
Orientation of data in relation to geological structure Sample security	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> <li>The measures taken to ensure sample security.</li> </ul>	<ul> <li>Drill holes have been equally spaced across the deposit. This drilling pattern is considered appropriate due to the shallow dipping nature of the formation. The drill holes have been located to maximise the understanding of the exploration area.</li> <li>The drill hole pattern to date is not expected to introduce any bias to the resource estimate.</li> <li>Core samples are placed into core trays, labelled, sealed and secured for transport by the Project geologists. Appropriate consignment notes are used in the process.</li> </ul>
		<ul> <li>Drill core samples are assigned unique sample identification numbers during sampling. Sample numbers, hole numbers, depth intervals and Project are written on the sample bags, and a sample ID tag is included within the bag. A "Sample Manifest" is recorded during sampling and provides the basis of the sample Chain of Custody. The full sample manifest is sent to the laboratory with sample shipments to ensure that all samples are</li> </ul>



Criteria	JORC Code Explanation	Commentary			
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>received by the laboratory.</li> <li>External geological consults Measured Group completed geological database and mo audits across 2023. No material issues were reported.</li> <li>The geological model was reviewed internally by BOYD and deemed acceptable for resource estimation.</li> </ul>			
(Criteria listed in th	ne preceding section also apply to this section.)				
	Section 2 Reporting of	of Exploration Results			
Criteria	JORC Code explanation	Commentary			
Mineral tenement and land tenure status	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>The CMG Lindfield tenure covers 295 km².</li> <li>The project is held under Exploration Permit for Minerals (EPM) 27872 by Vanteq Minerals Pty Ltd, which is 100% owned by CMG.</li> <li>To the extent known, the tenure is in good standing.</li> </ul>			
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Exploration drilling for the project has been compiled from previous parties' exploration reports, including Pacminex 1971, CSR 1974-1981, Fimiston 1999, Intermin 2005-2006, and Xtract 2007. Refer to Sections 6, 10 and 11.</li> </ul>			
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The Project's vanadium mineralisation is strata-bound in the Toolebuc Formation, a flat-lying, laterally continuous limestone and shale layer. Primarily, syngenetic enrichment is considered to be the source of anomalous levels of vanadium in the Toolebuc Formation. Secondary vanadium enrichment is interpreted to occur as the Toolebuc shales weather.</li> <li>Summaries of previous drill hole information have been included in Chapter 10.</li> </ul>			



#### Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Drill hole Information	<ul> <li>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:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	<ul> <li>A summary of the drill holes for the project is presented in Appendix C of this report.</li> <li>Summaries of drill hole statistics are provided in this report. Maps showing the location of the drill holes are presented throughout this report.</li> <li>Twin holes completed for metallurgical and hydrogeological studies were not used in the MRE assay models.</li> </ul>
Data aggregation methods	<ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>The 2022 and 2023 sample results were calculated using thickness-weighted averages from individual samples across the Toolebuc horizons.</li> <li>Intercepts of the V<sub>2</sub>O<sub>5</sub> mineralised zone, based on a sample cut-off grade of 0.10% and 0.26% V<sub>2</sub>O<sub>5</sub> for the TLBA and TLBB-TLBD horizons, respectively.</li> <li>Intercepts of the HPA mineralised zone, based on the V<sub>2</sub>O<sub>5</sub> working section, as HPA, represent a byproduct of the vanadium process flow sheet.</li> <li>Intercepts of the Molybdenum mineralised zone, based on the V<sub>2</sub>O<sub>5</sub> working section, as molybdenum, represent a byproduct of the vanadium process flow sheet.</li> <li>No metal equivalent values were applied.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul> <li>All drilling is vertical, intersecting the flat-lying mineralised zone at approximately 90 degrees, and is therefore assumed to be unbiased due to orientation.</li> <li>All holes were intended to be drilled vertically. Verticality logs were run to confirm deviation.</li> <li>The down hole deviation was assessed as negligible.</li> <li>Given the nature of diamond core holes and sampling methodology, the true mineralisation width is known to be on a cm scale.</li> </ul>
Diagrams	<ul> <li>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.</li> </ul>	<ul> <li>Plans and tabulation of drill hole information have been included throughout the report.</li> </ul>



#### Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Balanced reporting	<ul> <li>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.</li> </ul>	<ul> <li>Summaries of the drill hole data are provided in Chapters 7 and 12</li> <li>Plans of the data set are provided in the report.</li> </ul>
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.	<ul> <li>Metallurgical studies and mineral processing flowsheet have been undertaken by Wave International. Study work is summarised in Chapter 13 and incorporated into mineral processing assumptions for the Project.</li> <li>Hydrogeological monitoring bore program and studies have been undertaken under the guidance of JBT.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Further work is recommended. The conceptual exploration program is included in Chapter 17.</li> </ul>

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	<ul> <li>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.</li> <li>Data validation procedures used.</li> </ul>	<ul> <li>Field logs are entered into Excel, where code and depth checks are performed before loading them into the ISIS database. The ISIS database also has auditing and validation tools that are applied when the data is uploaded.</li> <li>Thickness anomalies were investigated to ensure they did not introduce inaccurate bias to the model.</li> <li>Major element analysis results were checked to ensure they totalled 100%.</li> </ul>



Criteria	JORC Code explanation	Commentary
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	Site visits to the Project were completed twice during the September 2023 exploration program to observe and provide guidance for exploration drilling across the Project.
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>The density of drilling allows for a high confidence in the volume of the Toolebuc Formation within the central area of the deposit. The extensions of this area are less densely drilled; thus, the confidence in this area is reduced. This is reflected in the resource classification.</li> <li>The interpretation of geological structure and deposit undulation is based on closely spaced drill holes.</li> <li>The geological horizons of the Toolebuc Formation are a primary guide for mineral resource controls.</li> <li>The base of weathering horizon was used to separate metallurgical domains of the resource as weathered or fresh material.</li> </ul>
Dimensions	<ul> <li>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.</li> </ul>	<ul> <li>The project is largely sub-horizontal, dipping to the southwest. The strike length of the deposit is approximately 12 km. The total width is 2 km.</li> <li>The subcrop is typically 1 m deep, with a maximum depth of overburden limit of 30 m. The resource was reported by mineralisation domains.</li> </ul>
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.	<ul> <li>The modelling and estimation were carried out using Vulcan, a mine planning software package that is suitable for modelling stratigraphic deposits of this nature.</li> <li>A 50 m x 50 m grid mesh was used. Fixdhd stratigraphic interpolation tools were applied. Triangulation and Inverse distance extrapolation were used for stratigraphic and grade models, respectively.</li> <li>Down-dip extrapolation of the resource is minimal due to the shallow-dipping formation and depth of overburden cut-off.</li> <li>The grades across the deposit are generally stable and free from extreme grade variation. Exclusions on the basis of statistical analysis were not applied.</li> <li>Weathered and fresh domains are present in the deposit.</li> </ul>
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	This report represents an updated Mineral Resource for the Project. Comparisons with previously reported vanadium estimates are provided in Chapter 15.



Criteria	JORC Code explanation	Commentary
	<ul> <li>The assumptions made regarding recovery of byproducts.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. Sulphur for acid mine drainage characterisation).</li> </ul>	<ul> <li>HPA and Mo represent a byproduct of the vanadium processing flowsheet. As such, the vanadium limits were applied. Nominal 50-60% recovery rates were applied on the basis of metallurgical studies.</li> <li>A wide range of elements was completed to provide information for mine planning for potentially deleterious elements. Excess silica, calcium, and iron contents are deleterious in the hydrometallurgical process.</li> </ul>
	<ul> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> </ul>	<ul> <li>The Project was stratigraphically modelled – block model parameters and assumptions are not applicable.</li> <li>Stratigraphic horizons and weathering domains were modelled separately due to lithology, mineralogy and metallurgical differences.</li> </ul>
	<ul> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>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.</li> </ul>	<ul> <li>Design strings were used in part to control the structural interpretation. The approach was typically applied to refine modelling extrapolation beyond the project area. The use of such data provides a more robust geological model.</li> <li>Contours of thickness and modelled grade parameters were generated and compared to the drill hole data.</li> <li>Modelled surfaces were checked to ensure they were positioned at the appropriate horizon in the drill holes.</li> <li>Resource area, volumes &amp; mass were checked by arithmetic.</li> </ul>
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	<ul> <li>Tonnage was reported on an estimated in situ moisture basis.</li> <li>Most assay samples were also tested for free, air-dried, and total moisture. On the basis of this testing, an in situ moisture of 4% and 10% was applied to the TLBA and TLBB-TLBE, respectively.</li> </ul>
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	<ul> <li>A minimum cut-off grade of 0.10% V<sub>2</sub>O<sub>5</sub> (wt%) was applied to the TLBA MRE working section based on beneficiation test work, which demonstrated a simple upgrade to higher-grade concentrate prior to leaching.</li> <li>A minimum 0.26 wt% V<sub>2</sub>O<sub>5</sub> cut-off was applied to the TLBB-TLBD MRE working sections.</li> </ul>



Criteria	JORC Code explanation	Commentary
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 working section is of sufficient thickness to allow open cut excavation using common mining equipment currently used in the mining industry.
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.	<ul> <li>The baseline vanadium process flowsheet comprises: 1) beneficiation/floatation, 2) atmospheric acid leaching, 3) solvent extraction, and 4) precipitation.</li> <li>Metallurgical studies reported that, based on metallurgical work on the mineralised material from the Project, the flow sheet is expected to achieve viable vanadium recovery of 50% to 60%.</li> <li>The Project metallurgical flowsheet is provided in Chapter 13.</li> </ul>
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. 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.	<ul> <li>The resource lies within 10 km of the Flinders River. Studies have been conducted to determine the potential risk of floodwaters and likely design requirements.</li> <li>Flora and fauna baseline studies have been undertaken to the extent that no known material issues have been reported.</li> </ul>
Bulk density	<ul> <li>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.</li> <li>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.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>Tonnage was reported on an estimated in situ density basis.</li> <li>The majority of assay samples were also tested for air-dried relative density. On the basis of this testing, densities of 2.50 g/cm³ dry-basis and 2.20 g/cm³ dry-basis were applied to the TLBA and TLBB-TLBD, respectively.</li> <li>Densities for the 2024 MRE were estimated using the Preston Saunders Method to convert density results to in situ densities.</li> <li>In situ, density estimates for the TLBA and TLBB-TLBD were 2.36 g/cm³ and 1.96 g/cm³, respectively.</li> </ul>



Criteria	JORC Code explanation	Commentary
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>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).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>The distances between points of observation were used as a guide to classifying the resource. However, the resource limits were refined based on geological domains and the competent person's confidence in the data's representation of the deposit.</li> <li>The grade is consistent across the deposit, with few exceptions. Some grade variation is noted between fresh and weathered mineralised material. Consequently, fresh and weathered domains have been applied.</li> <li>The results of the estimate are consistent with the views of the competent person.</li> </ul>
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	<ul> <li>External geological consults Measured Group completed geological database and model audits across 2023. No material issues were reported.</li> <li>The Mineral Resource estimate was reviewed internally by experienced mining professionals.</li> </ul>
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.	<ul> <li>Geostatistical and experimental variogram studies were completed as part of the 2023 MRE; the results were used to support mineral resource confidence classifications. Factors that could affect the estimate include rapid degradation of horizon thickness and/or grade between points of observation and supporting drill holes. This is unlikely as it has not been observed within the data at hand, which is of sufficient density to exclude such features.</li> <li>There is potential for undetected faults or localised undulations to impact the tonnage of the Mineral Resource. However, due to the density of drilling, it is expected that any such features would only cause minimal changes to the resource and/or localised degradation of grade.</li> </ul>
Discussion of relative accuracy/confidence – cont.	<ul> <li>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.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	The relative accuracy of the estimate is reflected in the confidence classifications applied to the resource.