21 February 2024

WIM100 Mineral Resource Estimate Update

Iluka announces a Mineral Resource estimate update for the WIM100 deposit following additional exploration and deposit modelling. WIM100 is one of three Iluka held deposits in the Wimmera region of Western Victoria, Australia, and is currently the subject of a definitive feasibility study (DFS) for the potential long term supply of zircon and rare earths. This estimate is reported in accordance with the guidelines of the JORC Code 2012 edition.

The updated Mineral Resource estimate for WIM100 is a total of 440Mt of Mineral Resource at 4.7% heavy mineral (HM) grade for 21Mt of HM. Overall, the HM tonnage for WIM100 remains broadly unchanged, however 57% of the HM tonnage contained in the WIM100 Mineral Resource is now classified as Measured, where the previous Mineral Resource[1] estimate included only Indicated and Inferred categories. This represents a significant improvement in the confidence level of the WIM100 Mineral Resource estimate. The WIM100 Ore Reserve estimate remains unchanged.[1]

WIM100 deposit Mineral Resource summary

Mineral Resource Category[1]	Resource Tonnes[1]	In situ HM Tonnes	HM	Mineral Assemblage in HM[2]					
				Ilmenite	Zircon	Rutile	Leucoxene	Monazite	Xenotime
	Mt	Mt	%	%	%	%	%	%	%
Measured	220	12	5.3	34	17	6	7	2.1	0.5
Indicated	160	6	4.0	33	17	6	7	2.3	0.5
Inferred	60	3	4.4	33	16	5	7	2.1	0.4
Total[3]	**440**	**21**	**4.7**	**34**	**17**	**6**	**7**	**2.2**	**0.5**

Notes:
1. Mineral Resources are reported at a cut-off grade of 1.0% HM
2. The mineral assemblage is reported as a percentage of the HM content
3. Rounding may generate differences in the totals

Iluka's Wimmera region Mineral Resource inventory, including the other previously reported deposits in the province, WIM50 and WIM50 North, totals 1,380Mt of HM grading 5.0% for 69Mt of HM.

This document was approved and authorised for release to the market by Iluka's Managing Director.

Investor and media enquiries:
Luke Woodgate
General Manager, Investor Relations and Corporate Affairs
Mobile: + 61 (0) 477 749 942
Email: luke.woodgate@iluka.com

[1] Refer ASX release 22 February 2023, *Revised announcement – Wimmera development progress, WIM100 Ore Reserve estimate and updated Mineral Resource estimate.*

WIMMERA MINERAL RESOURCE ESTIMATE - OVERVIEW

The WIM100 deposit is located along the south eastern margin of the Murray Basin geomorphological province in the state of Victoria, Australia (Figure 1). The zone of mineralisation grading in excess of 1% HM is hosted in a single tabular horizon within the Loxton Parilla Sand (LPS) geological unit. Mineralisation extends over a north-south strike distance of 9.5km and an east-west distance of 3.5km. The mineralisation varies from 3 to 20m in thickness averaging 9.5m and resides beneath 8 to 20 m of unmineralised sediment.

The Wimmera Industrial Minerals (WIM) style HM deposits were historically delineated by Conzinc RioTinto of Australia Exploration (CRAE) in the 1980s. The HM differs from traditional beach placer deposits as the valuable minerals are very fine grained and difficult to recover using traditional HM concentrating equipment. In addition, the zircon contained in these deposits has higher levels of impurities which, in the absence of a processing solution, renders most ineligible for the ceramics market.

The WIM100 deposit, along with the adjacent WIM50 and WIM50 North deposits, is located on tenements exclusively held by Iluka's wholly owned subsidiary company (Basin Minerals Holdings Pty Ltd).

The Mineral Resource estimate for Iluka's Wimmera deposits was prepared by Mr Shayne Maycock, an employee of Iluka Resources (refer to Competent Persons Statement), and is reported in accordance with the guidelines of the JORC (2012 Ed.).

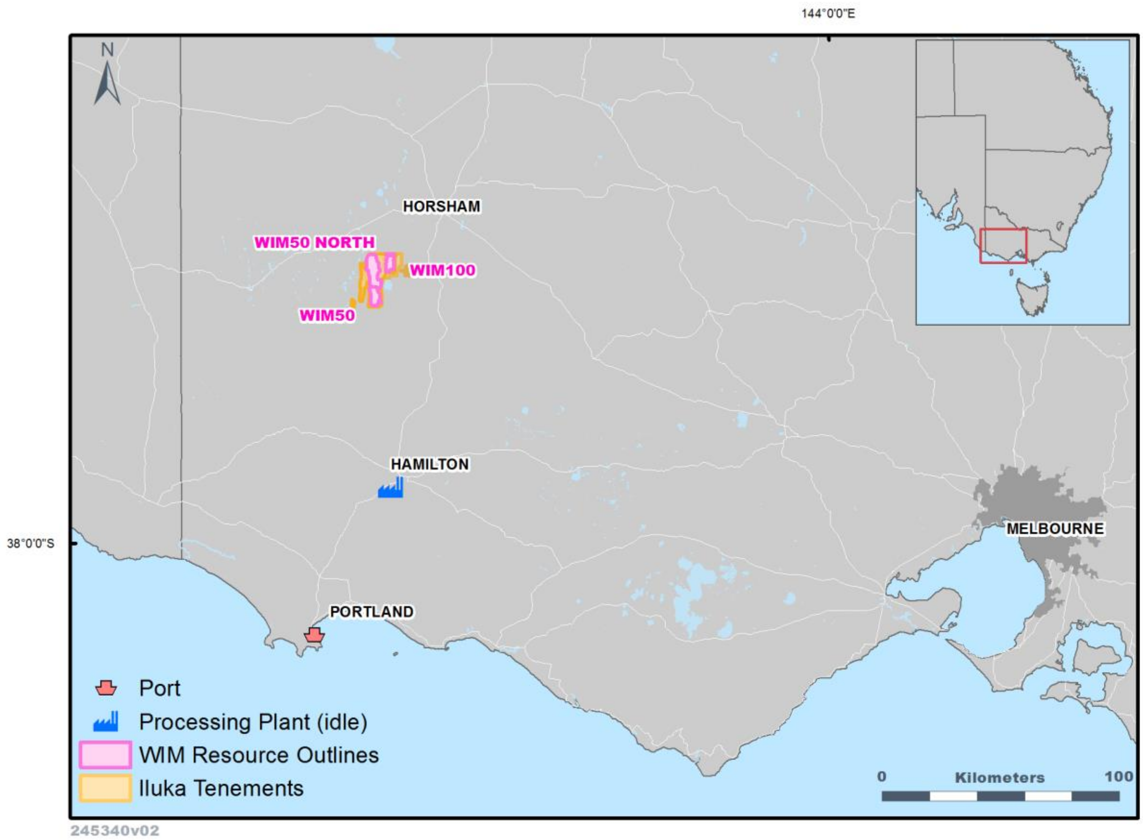

Figure 1: Location plan showing the location of the WIM100 deposit relative to current infrastructure

Table 1: Updated Mineral Resource estimate for WIM100 reported by deposit and JORC Code (2012 Ed.) Category and previously reported Mineral Resource estimates for WIM50 and WIM50 North

Deposit	Mineral Resource Category[1]	Resource Tonnes[1]	In situ HM Tonnes	HM	Clay	Mineral Assemblage in HM[2]					
						Ilmenite	Zircon	Rutile	Leucoxene	Monazite	Xenotime
		Mt	Mt	%	%	%	%	%	%	%	%
WIM100	Measured	220	12	5.3	13	34	17	6	7	2.1	0.5
WIM100	Indicated	160	6	4.0	13	33	17	6	7	2.3	0.5
WIM100	Inferred	60	3	4.4	13	33	16	5	7	2.1	0.4
WIM100	Sub Total	440	21	4.7	13	34	17	6	7	2.2	0.5
WIM50[3]	Inferred	360	15	4.1	12	38	16	7	7	1.8	0.4
WIM50 North[3]	Inferred	580	33	5.7	14	29	15	4	4	1.8	0.4
Total[4]	**Measured**	**220**	**12**	**5.3**	**13**	**34**	**17**	**6**	**7**	**2.1**	**0.5**
Total[4]	**Indicated**	**160**	**6**	**4.0**	**13**	**33**	**17**	**6**	**7**	**2.3**	**0.5**
Total[4]	**Inferred**	**990**	**50**	**5.1**	**13**	**33**	**15**	**5**	**5**	**1.8**	**0.4**
TOTAL[4]	**All**	**1380**	**69**	**5.0**	**13**	**33**	**16**	**5**	**6**	**1.9**	**0.4**

Notes:

1. Mineral Resources are reported at a cut-off grade of 1.0% HM
2. The mineral assemblage is reported as a percentage of the HM content
3. The Mineral Resource estimates for WIM50 and WIM50 North were disclosed in ASX release *Wimmera Mineral Resource Estimate,* 30 November 2021
4. Rounding may generate differences in the totals

The improvement in resource confidence is due to additional drilling and mineralogical data. There was 2,878m of aircore drilling from 88 holes completed during 2022. Following drilling, a further 88 mineralogical composites were completed to confirm the assemblage and mineral quality and contribute to the improved confidence in the updated resource estimate. Overall, the HM tonnage for WIM100 increased by about 1%.

The contained monazite + xenotime content for the Measured + Indicated Resource is 2.6% and closely aligns with the previously reported Indicated Resource of 2.7%. This, in combination with a slight increase in the average HM grade, means the tonnage of monazite + xenotime contained in the Measured + Indicated Mineral Resource has decreased slightly by 0.7%. The tonnage of monazite + xenotime in the updated Measured + Indicated Resource is estimated to be 480kt compared with 484kt for the previously stated Indicated Mineral Resource. The monazite + xenotime content of the Inferred Resource decreased from 3.3% to 2.6% (a reduction of 29%) as a result of the additional composite data. Overall, the total contained monazite and xenotime content in the WIM100 Mineral Resource decreased by 7% primarily due to the lower monazite and xenotime grade of the Inferred Resource Category.

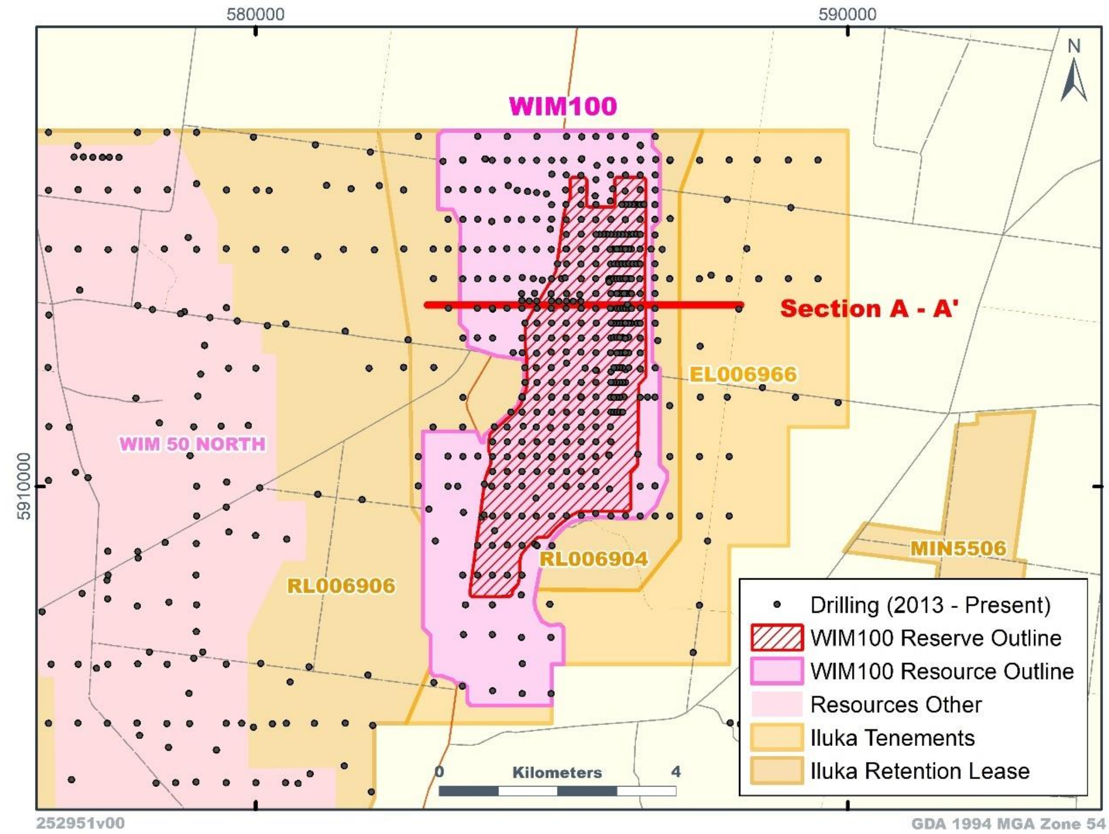

Figure 2: WIM100 Mineral Resource outline and drill collar locations for WIM50, WIM50 North and WIM100, the location for cross section A-A' (Figure 5) is shown

The average grade and ratios of the Rare Earth Oxide (REO) suite based on the laser ablation analysis of the HM in the mineralogical composite samples are tabled below.

Table 2: REO content in the HM for WIM100 (an allowance for Y_2O_3 content of 0.39% in zircon was made)

Mineral Resource Category[1]	Rare Earth Element Oxide in HM[2] (%)														
	CeO_2	Dy_2O_3	Er_2O_3	Eu_2O_3	Gd_2O_3	Ho_2O_3	La_2O_3	Lu_2O_3	Nd_2O_3	Pr_2O_{11}	Sc_2O_3	Sm_2O_3	Tb_4O_7	Y_2O_3	Yb_2O_3
Measured	0.61	0.048	0.035	0.003	0.044	0.011	0.29	0.006	0.26	0.071	0.021	0.050	0.008	0.27	0.005
Indicated	0.66	0.050	0.035	0.003	0.047	0.011	0.31	0.006	0.28	0.076	0.021	0.054	0.008	0.27	0.006
Inferred	0.61	0.046	0.033	0.003	0.043	0.010	0.29	0.006	0.26	0.071	0.019	0.050	0.007	0.26	0.005
TOTAL[3]	**0.63**	**0.049**	**0.035**	**0.003**	**0.045**	**0.011**	**0.30**	**0.006**	**0.26**	**0.072**	**0.021**	**0.051**	**0.008**	**0.27**	**0.005**

Notes:

1. Mineral Resources are reported at a cut-off grade of 1.0% HM
2. The rare earth element oxide is reported as a percentage of the HM content
3. Rounding may generate differences in the totals

Table 3: Average REO proportions in the WIM100 mineralogical composite samples expressed as a percentage of the total REO content and including Y_2O_3 (an allowance for Y_2O_3 content of 0.39% in zircon was made)

Rare earth element oxide	%
Cerium (Ce)	34.9
Dysprosium (Dy)	2.7
Erbium (Er)	1.9
Europium (Eu)	0.2
Gadolinium (Gd)	2.5
Holmium (Ho)	0.6
Lanthanum (La)	16.6
Lutetium (Lu)	0.3
Neodymium (Nd)	14.6
Praseodymium (Pr)	4.0
Scandium (Sc)	1.2
Samarium (Sm)	2.8
Terbium (Tb)	0.4
Thulium (Tm)	0.3
Yttrium (Y)	14.9
Ytterbium (Yb)	2.1
Total	**100%**

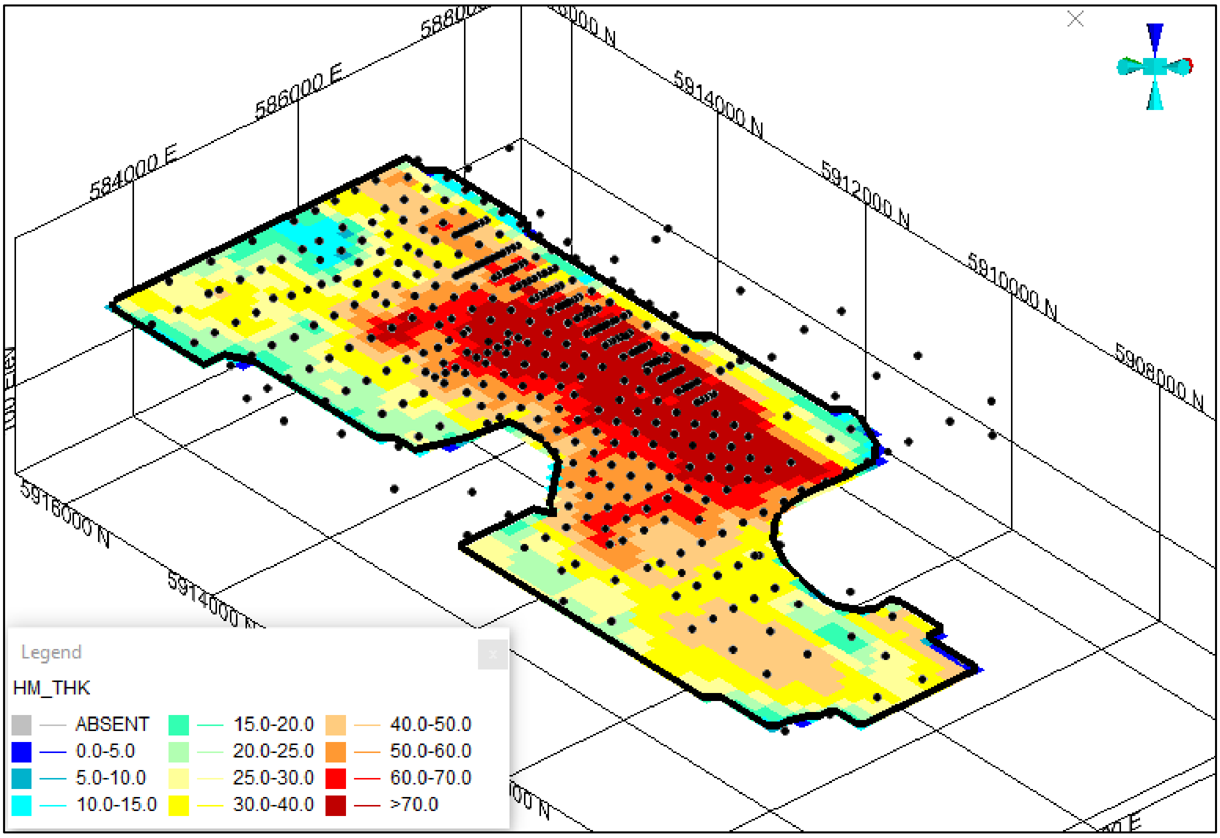

Figure 3: Summary plan showing HM grade * thickness distribution for WIM100. The black line represents the outline of the reported Mineral Resource

SUMMARY OF RESOURCE ESTIMATION AND REPORTING CRITERIA

As per ASX Listing Rule 5.8 and the 2012 JORC reporting guidelines, information material to the updated WIM100 Mineral Resource estimate is summarised below. More detail is provided in the JORC Code (2012 Ed.) Table 1 Summary, Sections 1 to 3 in **Appendix 1**.

Deposit geology and interpretation

WIM100 along with adjacent deposits WIM50 and WIM50 North are located along the southern margin of the Murray Basin, a shallow, intracratonic basin of Cainozoic age. The basin covers a saucer-shaped area around 300,000km^2 extending into eastern South Australia, south-western New South Wales and north-western Victoria. It is flanked by uplands of Proterozoic and Palaeozoic rocks.

The Murray Basin contains a succession of freshwater, marine, coastal and continental sediments. The latest marine transgression-regression event resulted in the deposition of the Late Miocene to Late Pliocene Loxton-Parilla Sand (LPS). These sediments were deposited in shallow marine, littoral environments with some terrestrial fluvial intercalation and are characterised by fine to coarse-grained, generally well sorted sand with minor clay silt and gravel.

The LPS extends over large parts of the basin and is the host of many known HM deposits within the Murray Basin. These include many coarse-grained HM deposits, some of which have been mined, formed in a beach placer environment through the interaction of longshore drift and storm activity. Within the basin, large mineralised zones exist containing very fine grained HM (WIM style deposits), of which WIM50, WIM50 North and WIM100 are examples. The WIM deposits are interpreted to be hosted in low energy offshore shallow marine environments.

The HM in the WIM deposits likely originate from river systems eroding elevated areas of Palaeozoic igneous rocks and Mesozoic sandstones, draining into the Murruvian Sea. These sediments included quantities of valuable HM such as rutile, zircon, ilmenite, monazite and xenotime, which were concentrated through the winnowing action of storms, tides and currents.

The basic stratigraphy for Iluka's WIM deposits comprises Shepparton Formation, overlaying LPS which in turn overlays sediments of the Winnambool Formation or Ettrick Formation. The Shepparton Formation blankets the area and is described by Brown and Stevens[2]. It is typically 5 to 10m thick and consists of clay and silty clay with intercalated lenses of fine to coarse sand and gravel. The clay is silty, variegated grey, red-brown, yellow and white; the sand consists of poorly sorted, rounded to angular, high sphericity to low sphericity polymictic grains. The LPS presents as an extensive blanket of fine to very coarse sand about 20m thick underlying the Shepparton Formation.

The LPS intersected within Iluka's Wimmera deposits is typically unconsolidated although erratic soft to medium and rare hard iron cementing is prevalent in places.

The offshore sediments of the LPS locally overlay fossiliferous and glauconitic grey-green silty-clay and clay of the Winnambool and Ettrick Formations.

Thickness of the Winnambool and Ettrick Formation vary but is generally 30m thick in the project area where they overlie Palaeozoic basement rocks.

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[2] Brown, C.M. and Stephenson, A.E., 1991. Geology of the Murray Basin South-eastern Australia. Bureau of Mineral Resources, Geology and Geophysics Bulletin 235

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Figure 4: Regional geology plan and Iluka Wimmera deposit locations

Table 4: Typical stratigraphy through the WIM100 deposit

Formation	Environment	Thickness	Description	
Shepparton Formation	Fluvial Lacustrine sediment	5 - 10m	White, orange, brown to dark grey Clay, silty clay and poorly sorted fluvial sand	
Loxton Parilla Sand	Beach placer and shallow marine sediment	15 - 22m	White, yellow orange mottled moderate to well sorted micaeous silt to coarse sand and occassional grit/pebbles.	
Winnambool Formation	Fossiliferous silty clay and clay clay	+10m	Brown to blue grey and grey very fine grained silt, silty clay and clay, richly fossiliferous	
Ettrick Formation	Glauconitc clay unit		Grey, green fossiliferous silty clay and clay	

Data storage

Data supporting the Mineral Resource estimate for WIM100 was recorded on Toughbook field computers installed with acQuire data management software. Data was electronically transferred to acQuire GIM Suite, a geological data management system designed and licensed by acQuire Technology Solutions Pty Ltd. Currently, drill logs and assay data are validated on site, then imported directly into the database. The results from sample analysis by Iluka owned/operated laboratories is hosted in CCLAS, a laboratory Information management system owned by Datamine Software Solutions. The assay results are also electronically transferred from CCLAS to the acQuire database system.

Drill technique and hole spacing

Historically, close spaced Reverse Circulation Air Core (AC) drilling was undertaken by Iluka and predecessor companies, during the period from 1980 to 2010, in the search for high grade beach placer strand mineralisation. This drilling often intersected the fine grained WIM style mineralisation but was given little attention and assay data was often unreliable as a result of the fine grain nature of the HM and an inappropriate assay method being used. Drilling targeting the WIM mineralisation was originally completed on widely spaced drill lines several kilometres apart, typically on road verges, with drill holes spaced at about 500m on the lines. This was subsequently infilled to 1km to 2km spaced drill lines on areas of anomalous or known mineralisation with further infill on a regularised grid spacing at WIM100 of about 500m by 500m and down to 250m by 250m spacing to support increased resource confidence and future mine planning. Some drilling at 50 to 60m hole spacing along the east west orientated drill lines was completed along the eastern margin of WIM100 for edge definition and where increased geological complexity is evident.

All the drilling carried out on the WIM deposits to support the Mineral Resource estimates was completed by suitably equipped contractor companies using AC drilling techniques and using NQ diameter (76mm) drill rods.

Table 5: Summary of AC drilling on Iluka's WIM100 deposit

Drill Year	Holes	Metres	Intervals	HM Assays
2013	2	61	61	26
2014	94	6001.8	4190	1665
2015	9	303	303	227
2016	26	785	785	260
2018	12	455	455	83
2019	124	3939	3937	2807
2020	144	4428	4428	1882
2022	88	2878	2878	2261
Total	**499**	**18,852.8**	**17,037**	**9211**

The previous resource estimate incorporated all drilling and assaying completed prior to 2022. The geological information from drilling carried out during 2022 was used to guide the geological framework supporting the resource estimate disclosed on 23 February 2023 but assay data was not available from the 2022 drilling programme. The current Mineral Resource estimate includes the assay data from the 2022 drilling program along with data from a further 88 mineralogical composites.

Geological logging

All drill intervals have been logged by Iluka company or contracted geologists, or Iluka trained and supervised geo-technicians. The logging is done on site at the time of drilling and records pertinent information such as:

- colour;
- grainsize information;
- lithology;
- estimated HM and Slimes content;
- induration type and an estimate of the percentage of induration;
- quality of the HM including trash and grainsize; and
- presence of ground water.

Sampling and sub-sampling techniques

Virtually all the AC drilling at WIM100 was sampled at 1 metre intervals. Of the assayed intervals, 9,190 are 1m while there are 15 assayed intervals of 1.5m, 2 assay interval of 2m and 4 assay intervals of 3m.

Only 1m intervals are present in the mineralised zones so no decompositing of the longer assay intervals was needed. Sample was delivered via the AC rod string and sample hose to a rig mounted cyclone and rotary splitter. About a 1.5kg to 2kg quarter sample split was collected beneath the rotary splitter for sample analysis.

Sample analysis method

All samples were analysed at Iluka owned and operated laboratories, located at either Hamilton (Victoria) or Narngulu (Western Australia). The analysis method for determining the HM content was the same for all samples. Samples were dried at 105^{O} C for a minimum of 24 hours and then wet sieved with removal of +2mm Oversize (OS) and -38µm Slimes. About 100 grams of the dried sand fraction was split out, screened at 710µm with the 38µm to 710µm sand fraction subjected to float/sink analysis using Lithium Sodium Tungstate (LST) at 2.85 SG. The HM (sinks) from this fraction was used to calculate the in-situ HM content.

Mineralogical composite sampling of the HM from the float/sink analysis was done to determine the mineral assemblage, mineral sizing and key mineral quality indicators. This involved combining weighted amounts of HM from geologically unique zones which was subjected to magnetic separation followed with density separation using Thallium Malonate Formate (TMF) liquid at various Specific Gravities (SG). XRF analysis of selected magnetic and non-magnetic SG fractions was done to infer the HM mineral assemblage. Additional magnetic separation was done to isolate a high susceptibility magnetic fraction which was subjected to XRF analysis to provide information on the ilmenite quality. Indicative zircon quality was determined from the XRF analysis of the +4.38 SG non-magnetic fraction.

The analysis of the mineralogical composite samples was augmented with QEMSCAN analysis of a split of the composite head feed HM at Bureaux Veritas (BV) Laboratory to support the mineral assemblage determination. BV also carried out XRF analysis and Laser Ablation ICPMS analysis to determine major, minor and REO elemental content of the HM.

Estimation methodology

Geological interpretation, wireframe surfaces and grade interpolation were completed using Datamine Studio RM Software. The geological interpretation was done on east-west drill sections through the WIM100 deposit. This was used to create open and closed wireframe surfaces to code the 3D block model with geological and mineralised domains. The drill hole data was also coded so that only values within each domain were used to inform model cells within the corresponding model domains.

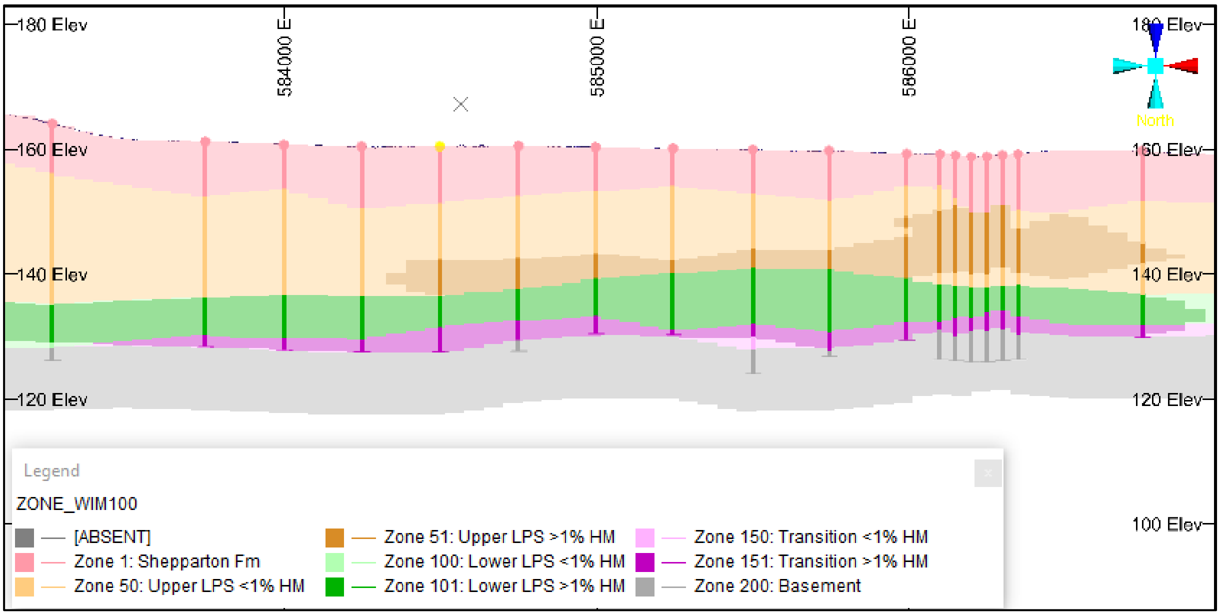
The drill hole spacing at the time of modelling of the WIM100 deposit varied from about 500mE x 1000mN down to 250mE by 500mN or 250mE by 250mN. Drilling spaced at about 60mE by 250mN has been completed along the eastern margin to serve as edge definition and provide information in an area of increased geological complexity. A parent cell dimension of 125mE by 125mN by 1mRL was selected for the WIM100 deposit given the predominantly 250mE by 250mN or 250mE by 500mN drill spacing and 1mRL assay length. Sub-celling in the X, Y and Z dimensions is used to assist with volume representation within closed surfaces and along domain boundaries.

Grade interpolation was done using inverse distance weighting cubed (ID3) for primary assay data while hardness and composite identifier were interpolated using nearest neighbour (NN). Selected composite data was joined to the model using the composite identifier as a key value. The orientation of the search ellipse used for grade interpolation was dynamically adjusted to honour variation in geological and mineralised trends. Successive search volume factors of 2 and 7 were applied if insufficient data was available to inform the model cells with the primary search dimensions. Model and interpolation parameters are tabled below.

Table 6: WIM100 model parameters

	Cell Dimension			Interpolation Method	Search Ellipse Dimension			2nd Search Vol Factor	3rd Search Vol Factor
	East	North	RL		X	Y	Z		
Assay Data	125	125	1	ID3	375	700	3	2	7
Composite Data	125	125	1	NN	375	700	5	2	7

Variogram analysis was carried out on the WIM100 data set to provide information on the continuity of the HM grades and verify the search ellipse dimensions, and also to support the JORC Code Mineral Resource Category assigned.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120 Elev
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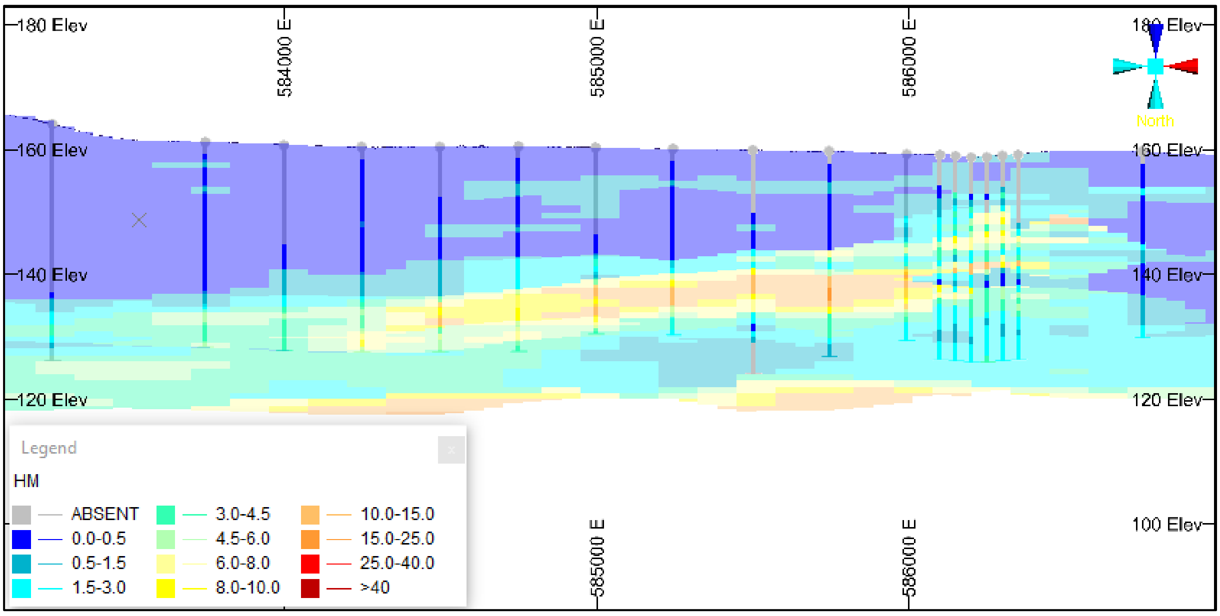
ZONE_WIM100
[ABSENT]
Zone 1: Shepparton Fm
Zone 50: Upper LPS <1% HM
Zone 51: Upper LPS >1% HM
Zone 100: Lower LPS <1% HM
Zone 101: Lower LPS >1% HM
Zone 150: Transition <1% HM
Zone 151: Transition >1% HM
Zone 200: Basement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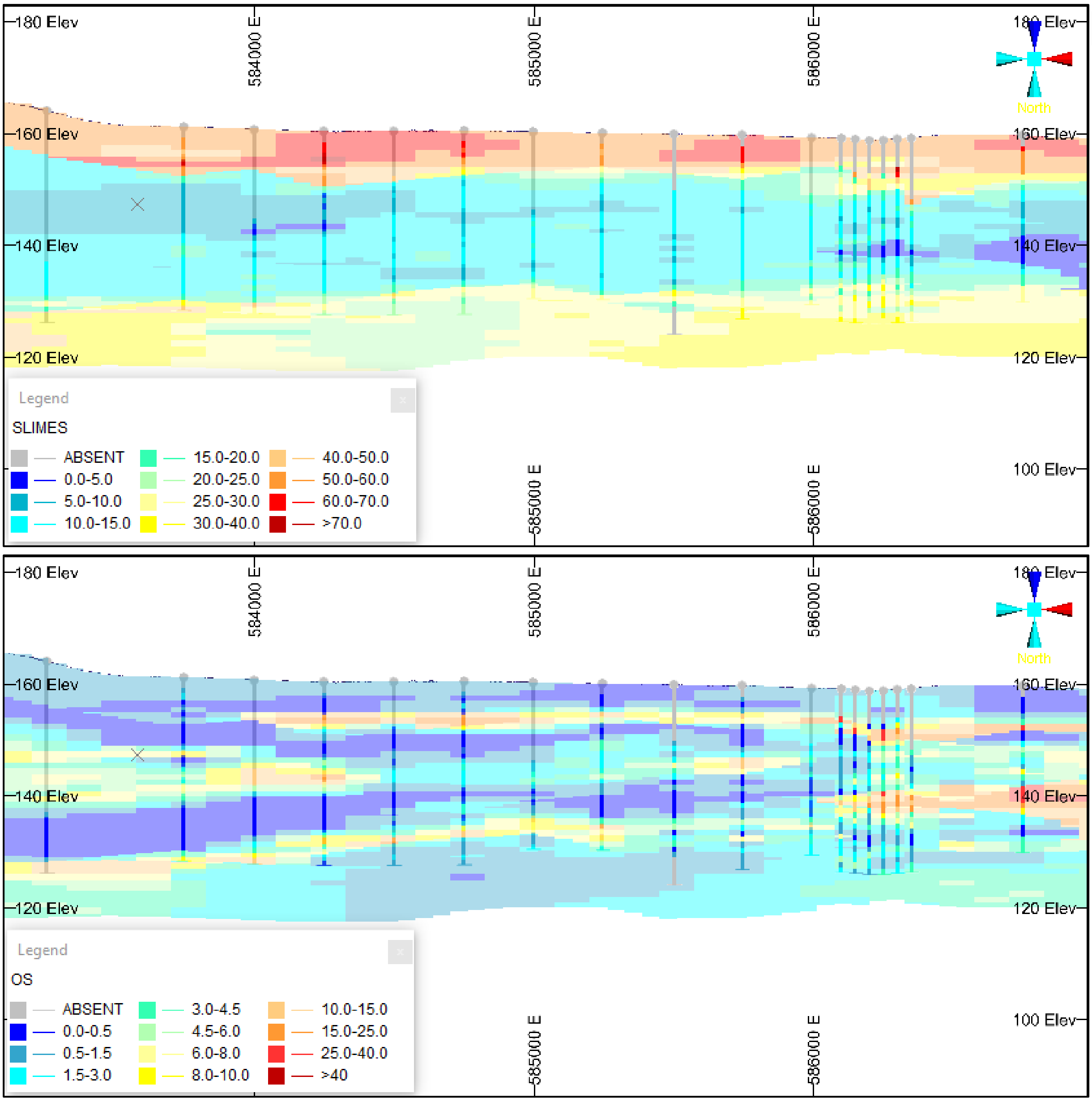


Figure 5: Cross section at 5913000 mN (A – A' in Figure 2) showing drill holes and Model zone assignment, HM, slimes and oversize grades (20x vertical exaggeration; north facing)

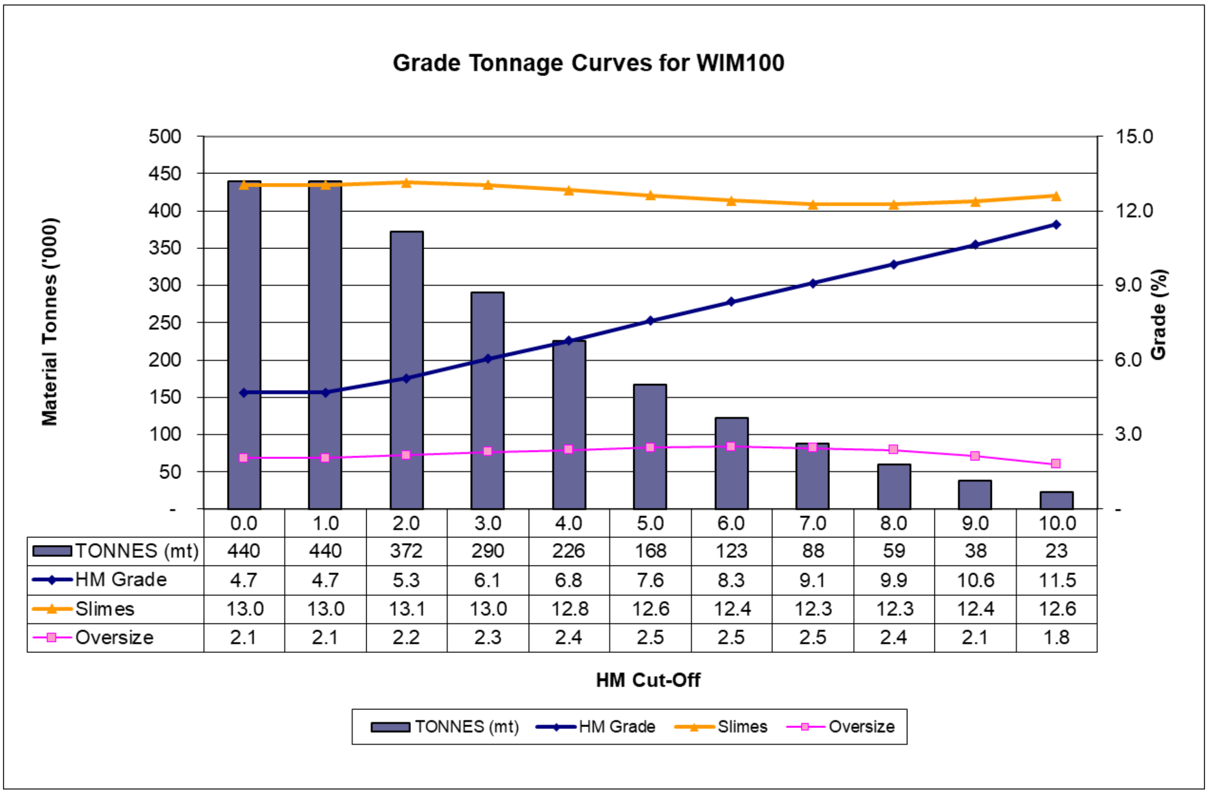
Cut-off grade

The WIM100 Mineral Resource estimate was reported using several criteria:

- a lower HM cut-off grade of 1% was adopted;
- an upper Slimes cut-off of 35% was applied;
- material logged with significant hardness was excluded;
- only material within confirmed HM bearing zones was reported: and
- a "grade*thickness to depth of burial" ratio was applied in conjunction with the 1% HM cut-off.

The "grade*thickness to depth of burial" ratio assists in identifying lower grade and/or deeply burial mineralisation that is unlikely to be economic to mine which is excluded from the reported resource estimate.

The 1% HM cut-off was adopted on the basis of the percentage and composition of VHM in the mineral suite, a deposit morphology that allows for large scale low cost mining and is supported by preliminary mine optimisation studies.



	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
TONNES (mt)	440	440	372	290	226	168	123	88	59	38	23
HM Grade	4.7	4.7	5.3	6.1	6.8	7.6	8.3	9.1	9.9	10.6	11.5
Slimes	13.0	13.0	13.1	13.0	12.8	12.6	12.4	12.3	12.3	12.4	12.6
Oversize	2.1	2.1	2.2	2.3	2.4	2.5	2.5	2.5	2.4	2.1	1.8

Figure 6: Grade tonnage curves for the WIM100 deposit

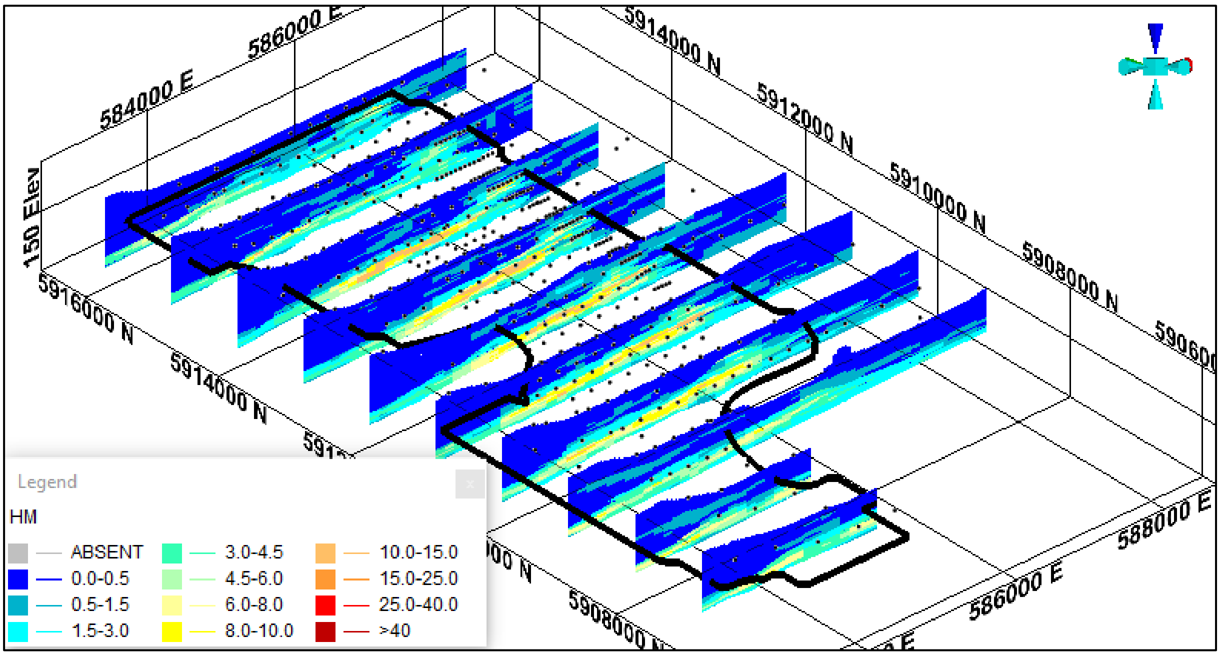


Figure 7: WIM100 deposit block model slices showing HM grade (20x vertical exaggeration; filtered to remove basement cells)

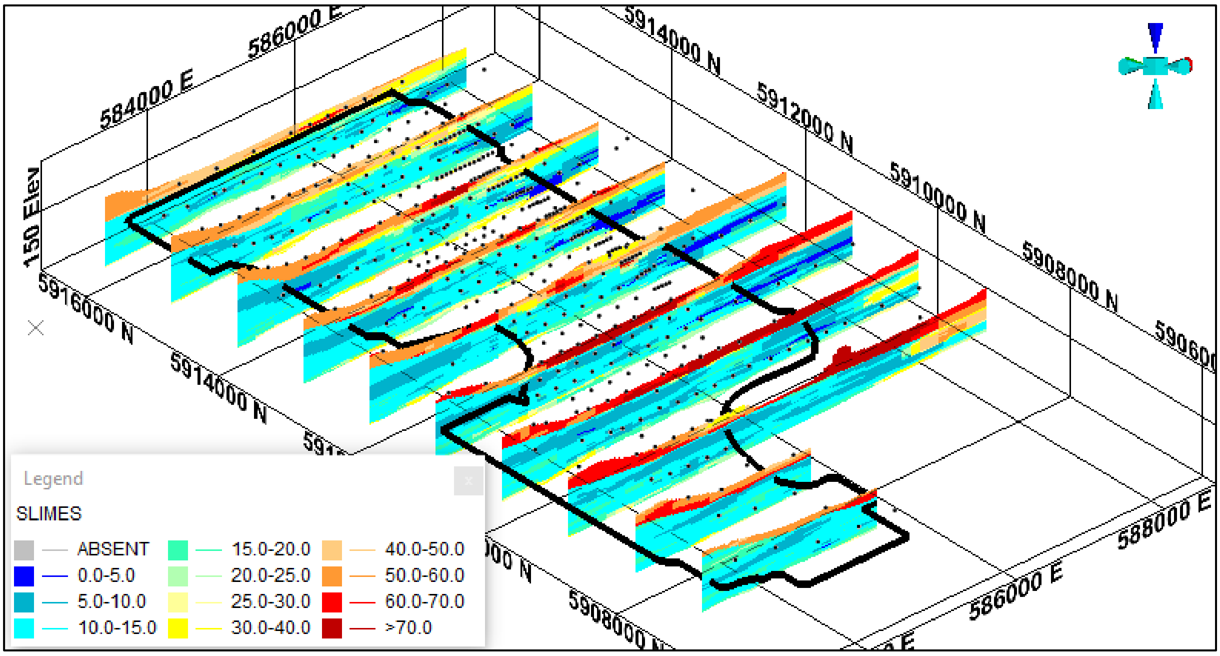


Figure 8: Vertical slices through the WIM100 block model showing Slimes grade (20x vertical exaggeration; filtered to remove basement cells)

Resource classification assignment

The Mineral Resource estimate for WIM100 was assigned a resource category based on the definitions defined in the JORC Code (2012 Ed.). The resource category applied is based on:

- drill hole spacing and sample density, supported by established grade continuity (variography);
- continuity of geological domains;
- confidence in the supporting analytical data;
- density and distribution of mineral assemblage composites; and
- the opinion of the Competent Person.

Primarily based on variogram analysis for the WIM mineralised domains, it was determined that drilling on 250m by 250m spacing with supporting mineralogical composite data is required for Measured Mineral Resource classification. Areas of the model supported by drill holes spaced up to 500m across strike and 1,000m along strike and suitably informed with mineralogical composite data can be considered Indicated. Mineral Resources supported by drill holes spaced at greater than 500m by 1,000m and/or poorly informed by mineralogical composite data have been assigned an Inferred JORC Code Classification. There is limited extrapolation of mineralisation up to distances of 250m from drillholes along strike to the south and up to 75m along strike to the north at WIM100. Less than 1% of the reported Mineral Resource for WIM100 is based on the extrapolation of geological continuity beyond the limit of current drill hole information.

Mining and metallurgical methods and parameters

The WIM100 deposit comprises a large horizontal, lobate and consistently mineralised horizon with in the LPS. It is covered by unmineralised sediments varying from 8 to 20m in thickness that would need to be removed as overburden during mining. The geomorphology and unconsolidated nature of the resource allows for large scale low cost earthmoving options to be deployed in open pit scenarios. The

Pre-Feasibility Study[3] (PFS) selected conventional truck and excavator mining of the overburden material at WIM100 with a wheel suction dredge utilised for ore mining as the preferred mining method.

Due to the fine-grained heavy mineral, flotation technology has been adopted for heavy mineral recovery and separation in conjunction with conventional magnetic separation. The zircon contains elevated uranium and thorium which is typical for all the fine grained WIM deposits and renders a high portion unsalable or of low value.

Rare earth concentrate will be transported to Iluka's Eneabba rare earth refinery, currently under development, through which saleable rare earth oxides will be produced from primarily Pr, Nd, Dy and Tb.

Other material modifying factors

Environmental studies are underway to facilitate the compilation of the Environmental Effects Statement (EES) to support the development of the WIM100 Project. The mineralisation beneath the Jallumba Marsh and Redgum Swamp has been excluded from the WIM100 resource estimate. Additional metallurgical, geological and mining studies are also underway as part of the DFS process.

Competent Persons Statement

The information in this report that relates to Mineral Resource estimates is based on, and fairly represents, information and supporting documentation prepared by Mr Shayne Maycock, a permanent employee of Iluka. Mr Maycock is a member of the Australian Institute of Geoscientists (MAIG) and he has sufficient experience which is relevant to the style of mineralisation and the 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". Mr Maycock consents to the inclusion in this release of the matters based on the information in the form and the context in which they appear. Mr Maycock is a shareholder of Iluka.

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[3] Refer ASX release *Revised Announcement – Wimmera Development Progress. WIM100 Ore Reserve Estimate and Updated Mineral Resource Estimate*, 22 February 2023.

Appendix 1

JORC Code 2012 edition – Table 1 report
Section 1 Sampling Techniques and Data
(Criteria in this section apply to all succeeding sections)

Criteria		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 3kg was pulverised to produce a 30g 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.*	The WIM100 deposit was sampled using Reverse Circulation Air-Core (AC) drill holes. All 416 drill holes used in the resource estimation were drilled vertically which is essentially perpendicular to the mineralisation. Samples were collected at 1m intervals through the mineralisation. A rotary splitter was used to disperse material exiting the cyclone and a sub sample was collected from a quadrant beneath the splitter. Duplicate samples were taken from a second quadrant at a rate of approximately 1 in 40 primary samples assayed. All of the drilling utilised the same drilling and assay methodology, and mineralogical composite sample analysis techniques. Samples estimated to contain greater than of 0.5% heavy mineral were considered 'mineralised' and submitted for analysis. The samples were dried, weighed, de-slimed (material <38µm removed) and oversize (material +2mm) was removed. About 100g of the 38µm to 2000µm sand fraction was sieved at 710µm with the 38µm to 710µm (sand) fraction subjected to float/sink analysis using Lithium-Sodium-Tungstate (LST, SG=2.85). The resulting HM concentrate was dried and weighed to determine the in situ HM percentage. Following interpretation of the deposit geology, HM concentrate from similar geological domains was grouped together to form mineralogical composite samples. The composite samples were subjected to magnetic separation with the magnetic and non-magnetic fractions subjected to densometric separation using Thallium Malonate Solution (TMF). Various fractions were then analysed using XRF analysis to determine the mineral assemblage. This separation technique was used to isolate a zircon rich fraction to determine grain size and indicative quality for zircon. Another split of about 20 grams of HM was sent to an external laboratory for QEMSCAN Analysis to support the interpretation of the mineral assemblage.
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).*	All sampling was based on vertical, 76mm diameter AC drill holes.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	Both sample quality and water content were recorded in the field logging. Any factors that have affected sample recovery were recorded in the logging comments.

Criteria		Commentary
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Sample weights were recorded by the laboratory which in conjunction with QA/QC data provides an indication of the effectiveness and representativeness of the sample splitting. Sample weights were generally in the order of 1 to 1.5Kg although some variation is noted. AC samples were visually checked for recovery, moisture and contamination. Sample weights recorded at the laboratory indicate reasonable sample quality and representativity. The mineralised samples were not typically affected by the presence of rock or induration and no sample bias is evident. Minor slimes loss may have occurred with moisture seeping through the calico sample bags as water injection was used to facilitate sample recovery during the drilling.
	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.	No relationship exists between grade and recovery with mineralised samples exhibiting recovery in line with expectation for the air core drilling method.
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.*	Geological logging of AC samples recorded colour, lithology, grainsize, sorting, induration type, hardness and an estimate of the rock, clay and HM content. Whether the sample was dry or wet or water was injected during drilling was also noted.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	A small portion of all samples were panned and logged on site at the time of drilling.
	The total length and percentage of the relevant intersections logged.	100% of the samples were logged.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	No diamond coring was used to support the estimate of contained mineralisation. Diamond drilling was conducted at WIM100 as part of geotechnical studies and collection of sample for density test-work. Sonic drilling was conducted in 2023 at WIM100 to verify the AC sample data. No bias was identified in the HM with no adjustment to the resource estimate required.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	A rotary splitter was used to produce sub samples of typically wet substrate. Most of the mineralisation drilled at the Wimmera deposits is located below the water table and some water injection was used to assist the sample return.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Sample preparation is consistent with industry standard techniques used for sampling mineral sand deposits. A 1 kg to 1.5 kg “quarter” sample split was taken by rotary splitter mounted which is considered to provide a representative sample.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Duplicate sample pairs consisting of an additional quarter split are collected from the rig mounted rotary splitter at specified rates. A total of 169 field duplicates were collected from drilling on the WIM100 deposit and analysed (1 in 48 samples) which show good correlation between the original and duplicate values for HM, Slimes and Oversize, despite some scatter in the received weight. A comparison of the HM and slimes gave correlation coefficients of 0.99 and 0.98 respectively with no significant bias.

Criteria		Commentary
	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.	Regular duplicate sample analysis is undertaken at Iluka's laboratory with a 50/50 split generated from a rotary splitting unit. A total of 276 laboratory duplicate samples were analysed with no significant bias evident in the results for HM, slimes and oversize although the precision for the slimes values was noted to be moderate at times. This reflects the difficult nature of achieving reliable analytical data for the very fine-grained material hosting the WIM mineralisation. It will have not have a significant impact on the Mineral Resource estimate. The sampling methodology is considered consistent with typical industry methods for sampling HM mineralisation and appropriate for providing representative samples of the material hosting the Wimmera deposits.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample size collected at the time of drilling is deemed appropriate for the fine grain sand material intersected in the Wimmera deposits to provide a reliable representation of the HM, slime, sand and oversize characteristics.
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.*	The assay method used is appropriate for assessment of the mineralisation at WIM100. Wet sieving at 38um has been used to ensure appropriate recovery of the fine-grained mineral associated with this style of mineralisation. The mineralogical composite sample evaluation processes are appropriate for the current level of study. While the QA/QC data indicates some difficulty in analysis for the fine-grained samples, the quality of the data is considered appropriate for the estimate of mineral resources. The technique is considered a total analysis.
	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.	Downhole gamma logging conducted in 133 AC holes confirmed the presence of HM mineralisation corresponding to elevated U and Th present in certain heavy minerals, but the geophysical logging was not used in the resource estimation process.
	Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	A total of 234 field standards were analysed (about 1 per 35 routine samples) in conjunction with the WIM100 exploration programs carried out between 2013 and 2022. The HM analysis of the field standards returned a fail rate (a failure is defined as a result outside the three standard deviation (3SD) limit of the expected error for the standard value) of 6% (14 fails) while the slimes fail rate was 14%. A HM standard fail triggered re-split and re-assay of the standard and selected samples that were processed at same time as the standard. The repeat assays were assessed and if the standard returned HM results within specification, then all the repeat assays replaced the original results in the Geology acQuire Database. Slimes results outside of the 3SD failure limits did not trigger repeat assays as the slimes component of the sample is lost during initial processing. The high number of Slimes fails are attributed to a number of factors including difficulty in

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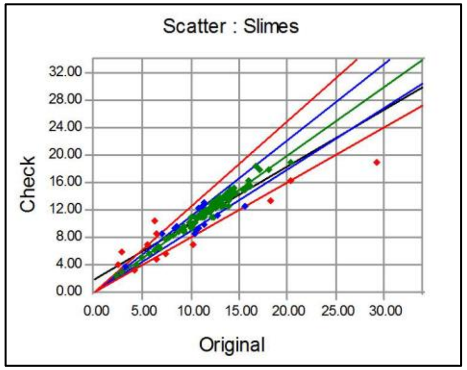
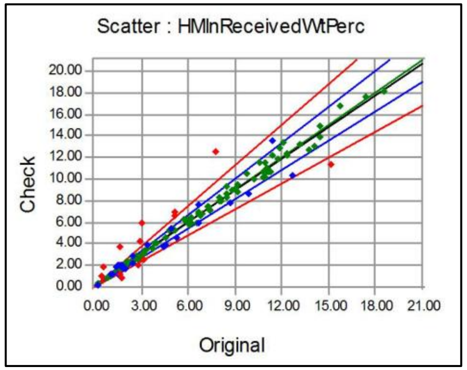
desliming with sieve screens “blinding” due to the very fine material, sensitivity of the slimes to screen wear, the analytical process and training of new laboratory staff.
A total of 288 laboratory reference standards were assayed in conjunction with exploration programs carried out on the WIM100 deposit. This represents a submission rate of 1 per 28 primary samples. The HM fail rate was 6% while the slimes fail rate was 8%.
The field and laboratory standard analysis show reasonable procedural control with no significant bias noted for HM. Some apparent bias observed was deemed to be primarily due to a slight shift in the expected values of the standard material rather than poor laboratory control.
A total of 169 field and 276 laboratory duplicate samples were assayed synchronously with the analysis of the Wimmera samples.
The duplicate samples show good correlation as shown in the charts below confirming the data set is robust and appropriate to support resource estimation.




The assay method used is appropriate for assessment of the mineralisation at WIM100. Wet sieving at 38um has been used to ensure appropriate recovery the fine-grained mineral associated with this style of mineralisation. The mineralogical composite sample evaluation processes are appropriate for the current level of study. While the QA/QC data indicates some difficulty in analysis for the fine-grained samples, the quality of the data is considered appropriate for the estimate of mineral resources. The technique is considered a total analysis.
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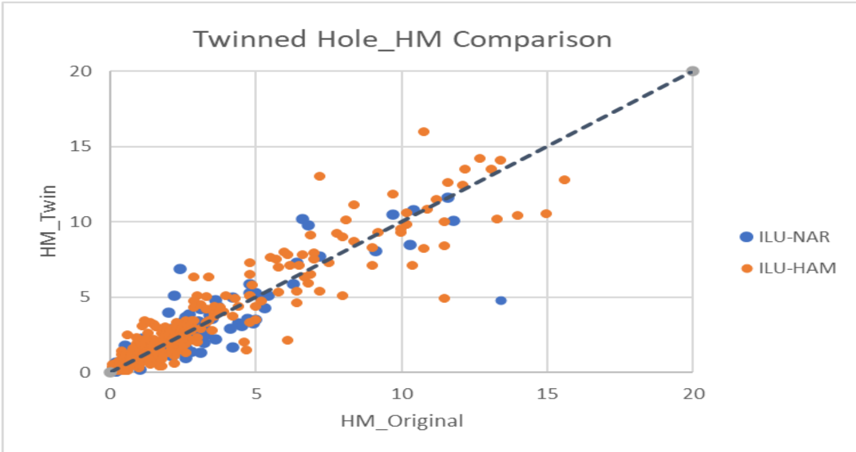
Criteria		Commentary
		The results from the QAQC are considered acceptable although there appears to be scope for improvement in the determination of the slimes content. The modest precision shown by the slimes data does not materially impact on the estimate of the contained HM.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	All assay data is routinely inspected visually and statistically prior to resource estimation. The data has been reviewed by both exploration and resource development personnel at Iluka. The HM component from all samples was verified by examining the sinks after LST separation under a microscope and comparison to adjacent samples within the drill hole and drill holes on the same section.
	The use of twinned holes.	Twenty-three twin AC hole pairs are recorded in Iluka's Geology Database. A comparison of the drill grades between twinned holes shows acceptable correlation. Downhole the high- and low-grade sections compared well, however metre by metre comparison was modest suggesting some in ground variability. One of the twinned pair (typically the second drilled) was removed prior to resource estimation.  Six sonic drill holes were completed in 2023 at WIM100. These holes were drilled within 1m of the original AC drill hole and were used to verify the AC sample data. The results show no bias in the HM grades for mineralised zones. No adjustment to the resource estimate is required.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Logging of AC samples was input directly into a laptop computer using acQuire software with data verification routines enabled. Data was then electronically transferred into Iluka's SQL hosted geology database interfaced with acQuire data management software which incorporates further verification routines.

Criteria		Commentary
	Discuss any adjustment to assay data.	No bias or errors were identified in the assay data and no adjustments were made.
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.*	The 2019 to 2022 AC drilling was surveyed using RTK_DGPS equipment, however the drill holes surveyed prior to 2019 used GPS or DGPS. The DGPS and GPS located drill holes are considered to have an accuracy of +/- 5m in X/Y which is adequate considering the spatial extent of the WIM style deposits. The eastings and northings were recorded in GDA94 MGA Zone 54. The topographic surface used for the Wimmera deposits was generated from the 2022 Airborne Laser Scanning (LiDar) survey completed by Outline Global which had a project vertical design accuracy of 0.5m at one sigma. The surface provides very good geomorphological detail and drill hole collar points were projected to this surface to ensure the mineralisation was at a correct position relative to the surface.
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.*	Drilling targeting the WIM mineralisation was originally completed on widely spaced drill lines several km apart, typically on road verges, with drill holes spaced at about 500m on the lines. This was subsequently infilled to 1km to 2km spaced drill lines on areas of anomalous or known mineralisation with further infill on a regularised grid spacing to support resource estimation. The drilling at WIM100 is variable but predominantly was spaced at about 500m by 250m with infill to 250m by 250m on areas expected to be scheduled for the initial 10 years of mining. Some closer spaced drilling at 250m by 50m has been completed on the narrower and more variable HM grade upper eastern mineralisation. Drilling around the periphery of the deposit in areas of lower grade mineralisation may be spaced wider at 500m by 500m or 1,000m by 500m. Access issues, either social or environmental, meant that there are some gaps in the grid and some holes were required to be offset from the ideal drill grid locations. Given the nature of the WIM style of mineralisation, there is sufficient confidence in the interpreted geometry and grade continuity for the Resource classification that has been applied. This is corroborated by geostatistical analysis, particularly variography, and sonic drilling. No compositing was used for assay data however assemblage and mineral quality information was derived from composites of HM sinks.
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*	No bias has been identified or expected as the vertically orientated drill holes are effectively perpendicular to the horizontal mineralisation of the WIM100 deposit. No sampling bias is noted.

Criteria		Commentary
	introduced a sampling bias, this should be assessed and reported if material.	
Sample security	*The measures taken to ensure sample security.*	Samples were stored at secure Iluka compounds following transport from the exploration site. The samples received at Iluka’s laboratory were compared to the dispatch notes generated from the logged data lodged within the acQuire software. No discrepancies were noted.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	No audits have been conducted of the sampling completed on the Wimmera deposits. However, the sampling techniques used were audited for Iluka during exploration over other deposits. A similar assaying process supports Iluka's current mining operations and is a standard method used widely in the exploration for mineral sands. The in-house laboratory undergoes regular inspections by Iluka geology staff.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section)

Criteria		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.*	Iluka's WIM100 deposit is located approximately 30km south west of Horsham in Western Victoria. The WIM100 deposit is predominantly located within RL 6904, granted on the 20/12/21, with minor extension to the south into EL 6966 and to the south west into RL 6906. The tenements are held by Basin Minerals Holdings Pty Ltd, a wholly owned subsidiary of Iluka Resources Limited. **Tenement** — **Status** RL006904 — Live - registration date of 20/12/21 (WIM100). RL006905 — Live - registration date of 27/6/23 (WIM50). RL006906 — Live - registration date of 27/6/23 (WIM50N). EL006966 — Live - registration date of 23/9/19
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The tenements predominantly cover privately owned freehold land with some crown land under reserve, road reserves and the Toolondo State Forest which impinges on the very western margin of retention license RLA006905 (WIM50 deposit). Some potentially sensitive cultural heritage areas have been identified and investigative studies on these areas are in progress. Some ephemeral lakes and wetlands are present in the area which will need consideration from an environmental and social perspective when access for mining is considered. The mineralisation beneath the Jallumba Marsh and Redgum Swamp have been excluded from the WIM100 resource estimate.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	The Wimmera Fine Mineral (WIM) deposits were initially investigated by CRA in the 1980s. While the CRA data has assisted in targeting Wimmera style mineralisation, no historical information by CRA or any other company was used in the estimation of the Mineral Resource estimate for WIM100.
Geology	*Deposit type, geological setting and style of mineralisation.*	The "WIM" style deposits manifest as extensive lobate mineralised zones interpreted to have accumulated in a low energy near/offshore marine setting peripheral to the margin of the Murray Basin geomorphological province. The mineralisation occurs in fine to very fine grained, well sorted, silty sand and is dominantly hosted in lower shore facies of the Lower Loxton-Parilla Sands (LPS). Wimmera HM deposits are typically extensive with strike lengths of 5km to 20 km and

Criteria		Commentary
		widths of 2km to 5km. The mineralisation for WIM100 is between 3m and 20m in thickness and shows good lateral continuity.
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.*	A summary of the data recorded in Iluka's Geology Database for the WIM100 deposit is tabled below. Metallurgical holes, twinned holes, Sonic holes and geotechnical diamond core drill holes were removed from the dataset used for the resource estimation.
	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.	Significant intercepts are not presented due to the large number of drill holes and (in the context of the disclosure of the Mineral Resource estimate(s)) is not material. The Competent Person confirms that this exclusion does not detract from the understanding of the Report, on the basis that all relevant drill hole information was used in the estimation of the reported Mineral Resources. All drill holes were drilled vertically with the top of mineralisation intercepted at depths of 8m to 25m downhole. The mineralisation ranges from 3m to 20m in thickness averaging about 9.5m.
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.*	No weighting or bottom/top cuts were deemed necessary and have not been used in the estimation of mineral resources for the WIM100 deposit. Envelopes defining a +1% HM grade were used to constrain the grade interpolation and the Mineral Resource estimates were reported using a 1% lower HM cut-off grade.
	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.	No aggregation of intercepts was done.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents were used for reporting the WIM100 Mineral Resource Estimate.
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.*	All holes were drilled vertically which is essentially perpendicular to the horizontally orientated mineralisation so all intercepts represent true widths.

Drill Type	Holes	Metres	Intervals	HM Assays
DDH	16	494.25	1,002	445
AirCore	493	18,671.8	16,858	7,987
AirCore_Met	172	4,329	-	-
Sonic	6	189	124	117
Total	**687**	**23,684.05**	**17984**	**8,549**

Criteria		Commentary
	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').	
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 representative cross sections showing the distribution of drill hole and grade information are presented in the main text of the release.
Balanced reporting	*Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	Mineral resource estimates are presented which consider the grade distribution and supersede the reporting on exploration results.
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.*	Logging of the HM sink includes visually estimating the HM present with the results corroborating the presence of valuable HM mineralisation. This is taken into account when creating the geological and mineralised framework for the block modelling and resource estimation. Composite samples have been created from the HM sink fractions of the routine exploration samples. The composited samples generate between 40g and 200g of HM which is subjected to a process of magnetic and heavy liquid separation followed with XRF, QEMSCAN and laser ablation analysis of various fractions to determine the assemblage and quality of the mineral present. A test pit was dug within the WIM100 deposit area during 2019. About 500 tonnes of mineralised material was excavated and sent to Iluka's metallurgical test facility at Capel – Western Australia for processing to support assumptions on mineral recovery, quality and isolate HM products for marketability. Material from the test pit was used to pilot test the mineral processing techniques to recover separated heavy mineral products (zircon, ilmenite, monazite, xenotime and leucoxene). Zircon recovered from the test pit sample has been retained for validation testing of the Zircon Purification Process (ZPP). Once process conditions have been optimised this material will be refined to demonstrate the quality and marketability of the Wimmera zircons. Geophysical gamma surveys were acquired with downhole logging of 125 AC drill holes over Iluka's Wimmera deposits. The surveys are generally considered qualitative but high gamma responses corroborate the presence of radionuclides associated with the HM. A density factor based on the testing of undisturbed triple tube diamond core provided information to support a formula for the density of the Wimmera resource which takes into consideration the slimes and HM content. As with all WIM deposits the effective recovery of the fine grained HM has been considered to be problematic. Also the uranium and thorium levels are above the current typical specification for

Criteria		Commentary
		marketable premium zircon which is typical of the WIM deposits. Investigation into options for purification and marketing of the Wimmera zircons is ongoing.
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.*	Infill and edge definition drilling is forecast to be done on the WIM100 deposit in 2024 to support ongoing project development. Low grade mineralisation is expected to continue to the North but becomes progressively more deeply buried.

Section 3 Estimation and Reporting of Mineral Resources

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

Criteria		Commentary
Database integrity	*Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* *Data validation procedures used.*	Logging of AC samples were input directly into a laptop computer using acQuire software with data verification routines enabled. Data was then transferred into Iluka's acQuire Geology Database with further validation routines enabled. Assay data was stored in Iluka's CCLAS laboratory database at the time of analysis and transferred electronically to the acQuire hosted Geology Database. Drill data was reviewed to ensure no duplicate records were present and statistical evaluation was conducted to ensure all results were within acceptable ranges. Datamine Software was used to visually check the grade magnitude and spatial distribution of data was as expected.
Site visits	*Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* *If no site visits have been undertaken indicate why this is the case.*	All AC programs were visited by experienced Iluka staff geologists. The Competent Person visited the site in 2018. Other Competent Persons from Iluka have visited the site during the 2019, 2022 and 2023 drill programs. All work has been conducted in accordance with Iluka and industry standard practice.
Geological interpretation	*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* *Nature of the data used and of any assumptions made.* *The effect, if any, of alternative interpretations on Mineral Resource estimation.* *The use of geology in guiding and controlling Mineral Resource estimation.* *The factors affecting continuity both of grade and geology.*	The geological framework for the WIM100 and WIM50 deposits is well understood from many years of exploration by Iluka and other exploration companies. The mineralisation is dominantly confined to the interpreted Lower LPS unit which is tabular and flat lying. At the current drill spacing, the geometry and continuity of the mineralisation is well defined. The density of drilling done by Iluka varies considerably and some assumption of the continuity of mineralisation is made based on the typical continuity of grade for the WIM style deposits. The deposits show consistent and continuous mineralisation over large areas. No alternative interpretations have been considered for WIM100. The valid reportable mineralisation was restricted to that hosted in the LPS unit. HM values at the base and transitional to the underlying Winnambool Formation which are logged with high trash or contaminated with carbonate shell fragments are domained separately and excluded from the resource estimate. Appropriate geological domaining and corresponding flagging of drill data was used to control the mineralisation in the WIM100 Mineral Resource estimate. No factors are known which might affect the continuity of the geology. There are no indications of post depositional fluvial wash-outs impacting the deposit. Some induration is noted which is recorded in terms of the logged hardness and oversize values and incorporated into the geology block models.

Criteria		Commentary
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.*	This model covers the full extent of drilling conducted by Iluka on the WIM100 Deposit within tenure held by Iluka. The WIM100 mineralisation has a north-south strike extent of about 9.5km, an east-west across strike extent of about 3.5km. The mineralisation varies from 3m to 20m in thickness and averages about 9.5m in thickness. The mineralisation is covered by an average thickness of about 15m of non-mineralised Shepparton Formation and coarse grained LPS with depth to mineralisation varying from about 8m to 20m.
Estimation and modelling techniques	*The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* *The assumptions made regarding recovery of by-products.* *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).*	Grade interpolation was done using the Estima Superprocess within Datamine Studio software. Grade estimation was completed using Inverse Distance Cubed which is an Iluka standard and is deemed appropriate for this style of mineralisation. Mineralogy composite identifier and Hardness values were interpolated using Nearest Neighbour (NN) method. No HM top cut has been used nor deemed necessary. Drill hole sample data were flagged with domain codes corresponding to the geology of the deposit and a +1% HM grade domain. The domains were imprinted on the model from 3-dimensional surfaces generated from the geological and mineralisation interpretations. A primary search dimension of 375m across strike by 700m along strike by 3m RL (X*Y*Z) was used for all assay data with limitations placed on the minimum and maximum number of samples used to inform model cells. Successive search volume factors of 2 and 7 were adopted to interpolate grade in areas of lower data density. An increased vertical search distance of 5m was used to interpolate the composite data. In the event that a cell still remained uniformed, a domain average value was applied and the cell would be excluded from the resource estimate. There is limited extrapolation of mineralisation up to distances of 250m from drillholes along strike to the south and up to 75m along strike to the north at WIM100. Less than 1% of the reported Mineral Resource for WIM100 is based on the extrapolation of geological continuity beyond the limit of current drill hole information. Nearest Neighbour grade interpolation was carried out which resulted in a similar grade distribution and tenor as the Inverse Distance Cubed results. The comparison between the previous estimate and this updated estimate shows the overall Mineral Resource remained essentially the same in tonnes however a 2% increase in HM grade has resulted in a 1% increase in HM tonnes. The assemblage has remained relatively constant. The contained monazite + xenotime content for the Measured + Indicated Resource is 2.6% and closely aligns with the previously reported Indicated Resource of 2.7%. This in combination with a slight increase in the average HM grade means the tonnage of monazite + xenotime contained in the Measured + Indicated Mineral Resource has decreased slightly by 0.7%. The tonnage of monazite + xenotime in the updated Measured + Indicated Resource is estimated to be 480kt compared with 484kt for the previously stated Indicated Mineral Resource. The monazite + xenotime content of the Inferred Resource decreased from 3.3% to 2.6% (a reduction of 29%) as a result of the additional composite data. Overall, the total contained monazite and xenotime content in the WIM100 Mineral Resource decreased by 7% primarily due to the lower monazite and xenotime grade of the Inferred Resource Category.

Criteria		Commentary
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	No by-products were considered as part of the resource estimates for Iluka's Wimmera deposits. Deleterious minerals (trash minerals) were identified as part of the mineralogical composites. Various mineral quality attributes are also included in the grade interpolation which inform the marketability of the Wimmera HM. The zircon contains elevated uranium and thorium which is typical for all the fine grained WIM deposits and renders a high portion unsalable or of low value. Iluka has carried out metallurgical testing and is developing a process to remove deleterious contaminants from the zircon which is currently in a "scaling up" phase of testing. The drill spacing over WIM100 was dominantly 250mE x 500mN or 250mE by 250mN at the time of resource estimation and a parent cell of 125mE x 125mN by 1mRL was adopted. Sub-celling of 2 x 2 x 10 (X/Y/Z) was used to improved volume resolution along domain boundaries.
	Any assumptions behind modelling of selective mining units.	(see table below)
	Any assumptions about correlation between variables.	
	Description of how the geological interpretation was used to control the resource estimates.	No assumptions have been made regarding modelling of selective mining units however based on the previously completed PFS, the ore will be mined using dredge and the overburden mined using truck and excavator methods.
	Discussion of basis for using or not using grade cutting or capping.	No correlations or assumptions were used in this resource estimation. Appropriate geological domaining and corresponding flagging of drill data and model cells was used to control the grade interpolation. Closed wireframes outlining the extent of +1% HM grade was used to constrain the extent of mineralisation.
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available	A top cut was not deemed necessary for HM assays following evaluation of statistics and consideration of the extent and consistency of the sample grades. Validation of the grade interpolation was done for all Iluka's Wimmera deposits by comparing model statistics to sample statistics and a visual comparison of drill to model grades using Datamine Studio Software. The modelled grades are in line with the input drill assay data. Given no mining has taken place no reconciliation data is available.

	Model		Cell Dimensions	Number of Cells	Sub celling
Axis	Origin	Extent			
X	582,575	588,700	125	49	2
Y	5,905,80	5,916,67	125	87	2
Z	115	180	1	65	10

Criteria		Commentary
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	The tonnages are estimated on a dry basis.
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	A nominal cut-off grade of 1.0 per cent HM was chosen for reporting the Mineral Resource for WIM100. A 1.0 per cent HM cut-off is considered appropriate for a deposit of this magnitude and contained valuable HM assemblage to represent an inventory of the contained mineralisation.
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 Pre-Feasibility Study (PFS) selected conventional truck and excavator mining of the overburden material at WIM100 with a wheel suction dredge utilised for ore mining as the preferred mining method.
Metallurgical factors or assumptions	*The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	The metallurgical assumptions are based on mineralogical data and comprehensive testing of a number of bulk samples (including the test pit sample) collected from WIM 100 between 2015 to 2022. This has included detailed analysis of recovery and the quality of various marketable mineral species. Iluka has also developed a process that is expected to remove contaminants from the zircon that currently restricts its saleability as a premium product from the WIM100 deposit.
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.*	Environmental studies are underway to facilitate the compilation of the Environmental Effects Statement (EES) associated with the Definitive Feasibility Study (DFS). The EES is required as part of the progression to mining. Additional metallurgical, geological and mining studies are also underway as part of the DFS process. The studies were initiated with the expectation that metallurgical test work, currently being undertaken will be successful thus providing a rapid progression to mining. No assumptions were made regarding possible waste and process streams in the estimation of the WIM100 Mineral Resource. The overburden including topsoils and subsoils will be removed and stockpiled from the areas identified in the mine optimisation studies. Ore will be mined and processed to remove the HM and the sand tails and fines will be returned to the mine void. Following stabilisation of the tails the overburden, subsoil and topsoil will be replaced and the site rehabilitated.

Criteria		Commentary
Bulk density	*Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	An in situ dry bulk density, based on testing of 127 samples selected from undisturbed triple tube diamond core acquired in early 2022, was developed by Iluka. The density formula comprises a regression formula taking into account the Slime and HM content which impact on the insitu dry density. Sections of high quality core varying in length from 20cm to 50cm were selected for testing. The core was carefully measured for length and diameter, then double bagged in plastic bags ensuring no loss of material. The samples were then analysed at Iluka's Narngulu laboratory for wet weight and dry weight (after drying at 105^{O}C for 24 hours). The samples were then analysed for HM and Slimes using Iluka's standard HM determination method. The calculation of the bulk density takes into account the weight percent of HM and SLIMES and is derived from diamond drilling completed in 2022 specifically commissioned to provide bulk density details. The formula results in a deposit average dry density of about 1.6t/m^3 for the fine grained mineralised LPS. Iluka's standard bulk density which is appropriate for high clay and coarse grained sedimentary material was applied to the Shepparton Formation and coarse grained LPS.
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.* *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* *Whether the result appropriately reflects the Competent Person's view of the deposit.*	In consideration of the JORC Code Classification of Measured, Indicated or Inferred, the following aspects were considered: • the drill hole spacing; • the quality of sample data as demonstrated by supporting QA/QC; • level of supporting mineralogical data; • confidence in the style of mineralisation under consideration; and • continuity of grade within the geological framework as assessed both visually and geostatistically. The QA/QC data associated with the WIM100 samples demonstrate sound data integrity which is suitable to for resource estimation. Primarily based on variogram analysis for the WIM mineralised domains, it has been determined that drilling on 250m by 250m spacing with supporting mineralogical composite data supports a Measured Mineral Resource classification Where drilling is 250m by 250m up to 1,000m by 500m spacing and there is supporting assemblage data an Indicated Classification was assigned. If the drill spacing is >1,000m by 500m and/or there is limited supporting assemblage data an Inferred Classification was assigned. It is the view of the Competent Person that the frequency and integrity of data, and the resource estimation methodology are appropriate for this style of mineralisation and the Resource Classification applied.
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	Internal review processes within Iluka assisted in the estimation of the WIM100 Mineral Resource. External review of the previous model was undertaken by Snowden Optiro Consultants which

Criteria		Commentary
		corroborated the Mineral Resource estimate for WIM100. No external review of the current model has been undertaken.
Discussion of relative accuracy/ confidence	*Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	No geostatistical process was done (such as kriging or conditional simulation) for the resource estimation of WIM100. Variography was undertaken on the HM grade distribution to determine the optimal sample spacing to support the JORC classification assigned. Validation of the model against drill grades by visual assessment, swathe plot and statistical comparison supports the integrity of the resource estimates for the WIM100 deposit. This statement refers to global estimates for the WIM100 HM deposit. No reconciliation data is available as the WIM100 deposit is not in production.