

10 October 2023

## Wickepin Kaolin Project Ore Reserve More than Doubles

### Life of Mine Extension to 73 Years Cements Wickepin as World's Leading Kaolin Resource

#### Highlights

- Wickepin Project Ore Reserve Estimate and Mineral Resource Estimate updated by CSA Global
- Ore Reserve Estimate grows from 30.5Mt to 64.9Mt, an increase of 113%
- Production mine life increases to 73 years, confirming WA Kaolin's Wickepin deposit as a globally significant kaolin resource
- The Mineral Resource Estimate of 643.0Mt (includes the Ore Reserve Estimate)

WA Kaolin Ltd (“**WA Kaolin**” or the “**Company**”) (**ASX: WAK**) is pleased to announce a significant increase in the Ore Reserve Estimate (“**ORE**”) and Mineral Resources Estimate (“**MRE**”) for the Wickepin Kaolin Project in Western Australia.

WA Kaolin commissioned CSA Global, an independent geological and mining consultancy who also authored the previous estimates, to provide an updated ORE and MRE for the Company's Wickepin operation in accordance with the JORC 2012 Code.

#### New 2012 JORC Ore Reserve Estimate and Mineral Resource Estimate

Following the update, the Wickepin Project's 2012 JORC Ore Reserve Estimate is reported at **64.9Mt, an increase of 113%**, with a mine production life of 73 years (Table 1).

The 2012 JORC Mineral Resource Estimate is reported at 643Mt (Table 2).

**Table 1.** Ore Reserves by JORC Classification

JORC classification	Tonnes (Mt)	ISO brightness (%)	Yield (%) (<45 µm in size)	In situ Kaolin (Mt)
Proved	15.8	81.9	49.9	7.9
Probable	49.1	82.2	50.7	24.9
<b>Total</b>	<b>64.9</b>	<b>82.2</b>	<b>50.5</b>	<b>32.8</b>

**Table 2.** Inferred Mineral Resources (<45 µm), WA Kaolin Project

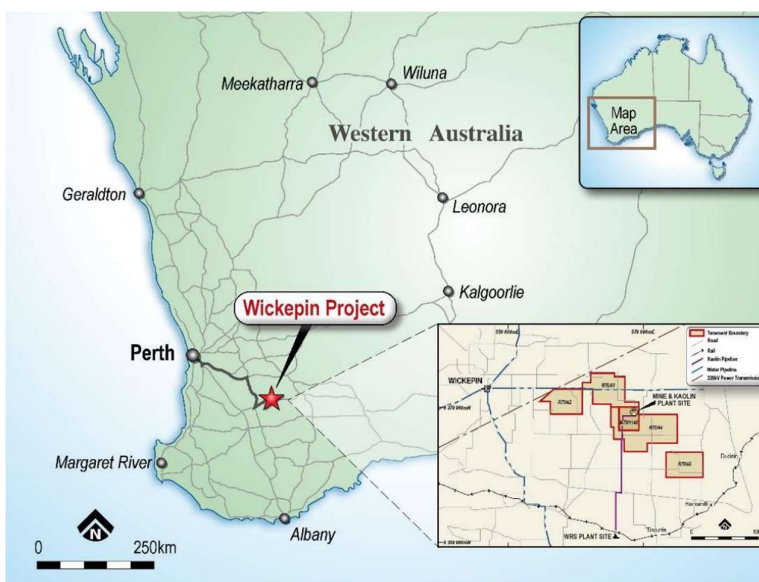
Classification	Kaolinized granite (Mt)	ISO brightness (%)	Yield (%)	Kaolin (Mt)
<b>Total</b>	<b>643.0</b>	<b>75.8</b>	<b>44.0</b>	<b>283</b>

**CEO of WA Kaolin, Andrew Sorensen**, commented, "This ore reserve upgrade more than doubles our Wickepin Kaolin deposit making it the largest known primary kaolin deposit in the world. This massive resource now supports a 73-year mine life proving that it will be a multi-generation project and provides confidence as we progress our production ramp up to Stage 1 nameplate capacity of 200,000tpa and look towards doubling production capacity in Stage 2".

### Wickepin Project Overview

WA Kaolin holds the Wickepin Kaolin Project, 220km south-east of Perth, The WA Kaolin Project is adjacent to the township of Wickepin, approximately 214km east-southeast of Perth.

The WA Kaolin Project comprises of five retention licences (R70/40, R70/42, R70/43, F70/44) and a single mining lease (M70/1143).



**Figure 1.** Wickepin location and tenement map

## New 2012 JORC Ore Reserve Estimate

A total (Proved and Probable) Ore Reserve of 64.9Mt has been estimated, an increase of 113% on the previously reported Ore Reserve (Source: CSA Global Report No. R301.2020 – 30<sup>th</sup> July 2020), based on the approved pit designs and with the usage of several modifying factors.

The mine design, production schedule, and associated financial and other studies have demonstrated that Kaolin can be produced with a mine production life of approximately 73 years. The initial 20 years are reported as Proved Ore Reserve while the remaining fall under Probable and comprise the remaining Life of Mine.

The Ore Reserve is reported in accordance with the JORC Code and is shown in Table 1.

**Table 1.** Ore Reserves by JORC Classification

JORC classification	Tonnes (Mt)	ISO brightness (%)	Yield (%) (<45 µm in size)	In situ Kaolin (Mt)
Proved	15.8	81.9	49.9	7.9
Probable	49.1	82.2	50.7	24.9
<b>Total</b>	<b>64.9</b>	<b>82.2</b>	<b>50.5</b>	<b>32.8</b>

Source: CSA Global Report No. R310.2020 – 29<sup>th</sup> September 2023

The ORE is based on the Mineral Resource Classification which is classified in accordance with guidelines contained in the JORC Code. The Mineral Resource has been classified as Measured, Indicated and Inferred.

This classification is based upon assessment and understanding of the deposit style, geological and grade continuity, drill hole spacing, input data quality, interpolation parameters using ordinary kriging, an

This classification is based upon assessment and understanding of the deposit style, geological and grade continuity, drill hole spacing, input data quality, interpolation parameters using ordinary kriging, an assessment of the available density data, and the acknowledgement that the material within the Project is currently being mined and sold as a product.

The reasons for the classification are:

- Geological continuity and confidence in the geological model generally are high
- The nominal spacing of the drilling in the Measured and Indicated areas is 25–100 m and 100– 200m, respectively. The drill hole spacing and the estimation quality indicators for these areas are clearly higher than the Inferred area, where drill hole spacing exceeds 200m.

The Ore Reserves have been classified according to the Mineral Resource classification and the Modifying Factors' status. The status of the Modifying Factors is generally considered sufficient to support the classification of Probable Reserves. Indicated and Measured ore is considered for the Ore Reserve. None of the Inferred material is included in the Reserve calculation and is reported as waste.

The Kaolin price used in the Ore Reserve estimate has been extrapolated from a five-year market projection. The Ore Reserve estimate has been estimated for the first 20 years of the Life of Mine, which is considered a maximum period for extrapolation of the available market analysis.

Analysis of the main economic assumptions within the cash flow model indicates that the Project produces a positive discounted cash flow (DCF) in terms of all operating costs and the current kaolin price and selected modifying factors.

To complete the ORE update, CSA Global used the following information:

- the Wickepin mine is an open-cut mining operation with a dry processing plant on site and two other processing plants at Ward Rd East Rockingham
- The current economic study is based only on the dry (K99 process) production

- Pit optimisations have been carried out using a fixed Kaolin price as advised by WA Kaolin
- Whittle pit optimisation software was used to identify the preferred pit shell on which each of the pit designs was based
- Operating costs taken from site operating data

The statement prepared by CSA Global takes into consideration mining depletion and changes in operating costs, process recoveries and product prices to confirm an updated ORE and MRE.



**Figure 2. Current mining at Wickepin pit**

## **Ore Reserve Estimation Process**

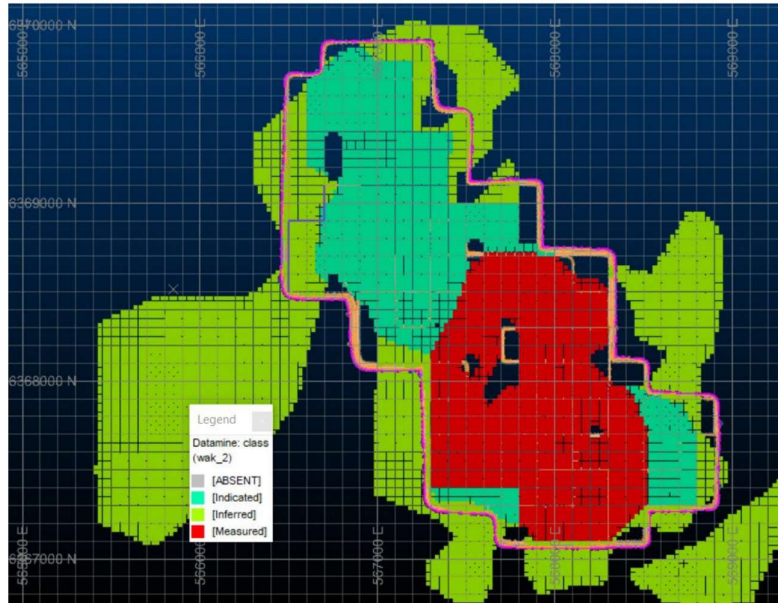
### *Pit Design*

The pit design was completed on updated mining models, which form part of the Ore Reserve estimation. The pit design had to achieve a positive cash flow result in order to move into Ore Reserve status. The pit design was completed with input parameters from WA Kaolin.

As the Whittle outputs don't project the proposed wall angle, a more realistic pit design has been prepared based on the results of the optimisations and incorporating appropriate wall angles, berms and minimum mining widths. Throughout the design process, the pit was checked with the block model and selected whittle shells. The pit design volumes align with the Revenue Factor 1.0 pit shell.

The material inventory within the pit designs has been estimated by intersecting the pit design with the topographical surface within the mining block models. The ore-loss factor was applied against the in-situ numbers resulting from this process. No dilution was applied due to contact between ore and waste being very distinct to the naked eye.

The Measured and Indicated ore is shown in Figure 3.



**Figure 3. Measure and Indicated Ore within the Final Pit**

*LOM Schedule*

Software was used to produce the following schedules on a yearly & monthly basis. Mining rates were adjusted to suit WA Kaolin’s proposed processing schedule as in Table 3. ROM feed in the production schedule includes Measured and Indicated material only. Inferred ore has been treated as waste in the schedule (Inferred ore is approximately 5% of total material).

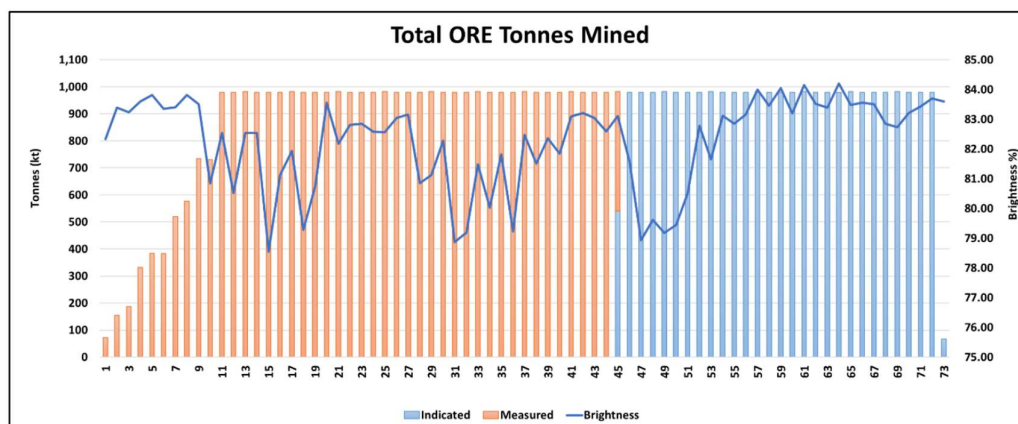
Year	Annual Production (t)
2024	73,200
2025	150,000
2026	187,000
2027	331,000
2028	383,000
2029	383,000
2030	520,000
2031	575,000
2032	732,000
2033	730,000
2034 to 2043	980,000

**Table 3. Processing ramp-up schedule**

Plant recovery of 85%, mining recovery of 98% and mining dilution of 0% are applied to the schedule. The mining schedule is such that Measured and Indicated zones are prioritised as per the Whittle optimisation. However, due to the mining, cutbacks are not considered due to the shallow nature of the deposit, and so the mining void can be used for waste and tailings disposal. The final pit is divided into two sections, South and North. The final pit was sub-divided into 50 m x 50 m wide strips to schedule the proposed mining locations. Each strip will be mined out with temporary ramps.



Mining sequence prioritise measured material and commences in the South while progressing towards the North. Mining that is considered in the schedule has only focused on Measured and Indicated Material, with a priority on Measured material.



**Figure 4. Ore Mined in Tonnes**

*Financial Model and Sensitivity Checks*

Capital and operating costs estimated to a Pre-Feasibility confidence level have been applied to the planned activities. The revenue assumptions are based on the market study report done by Grand View Research in conjunction with WA Kaolin. The cash flow model has been generated solely for ore reserve studies.

CSA Global has been issued with updated parameters after the optimisation process, which are marginally different from those discussed in the optimisation section. The new parameters were tested in the cash flow model and identified that it has no material impact on the Ore Reserve. In addition, the first 20 years of the 73 years of mine is reported as a Proven Ore Reserve.

Sensitivity analysis was done for the commodity price, processing recovery, operating cost and discount rate. The sensitivity analysis indicates that the project results are most sensitive to commodity price and processing recovery and less sensitive to operating costs. The project's Net Present Value (NPV) remains positive for a price variance down by -20% and processing recovery as low as up by -20%. Operating costs remain positive for the tested sensitivity between +20% and -20% as displayed in Figure 5.



**Figure 5. Project's Sensitivity Analysis**

## Mineral Resource Estimate

The last statement for a Mineral Resource Estimate for the WA Kaolin Project Wickepin deposit was dated 3 August 2017 with 644.5 million tonnes of ore.

Since the discovery of Wickepin by Rio Tinto in 1994, approximately 17,5124m have been drilled over the Project by the air-core method.

The resultant model is depleted with the open pits as of 19 May 2023 and presented in Table 4. The total Mineral Resource Estimate is 643.0Mt, consisting of 65.5 in Measured and Indicated Category and 577.5Mt in Inferred Resource.

The variables under consideration for estimation were ISO brightness and kaolin yield (<45 µm in size).

**Table 4.** Inferred Mineral Resources (<45 µm), WA Kaolin Project

Classification	Tenement	Kaolinized granite (Mt)	ISO brightness (%)	Yield (%)	Kaolin (Mt)
<i>Measured</i>	M70/1173	38.0	82	51	21.3
<i>Indicated</i>	M70/1173	27.5	83	50	13.8
<i>Inferred</i>	M70/1173	43.3	83	49	19.2
<i>Inferred</i>	R70/40	73.4	77.7	51.6	37.8
<i>Inferred</i>	R70/42	107.2	73.1	40.7	43.6
<i>Inferred</i>	R70/43	210.7	74.4	41.9	88.3
<i>Inferred</i>	R70/44	142.9	73.7	41.2	58.9
<i>Total Inferred</i>		577.5	75.0	43.3	61.1
<b>Total</b>		<b>643.0</b>	<b>75.8</b>	<b>44.0</b>	<b>283</b>

Source: CSA Global Report No. R313.2023 – 29<sup>th</sup> September 2023

### Sampling Techniques and Date

All drill holes within the database have been drilled by aircore to the maximum depth of 60m. Samples were generated as 1-2kg splits from metre of drilling, scooped from a return pile collected from a cyclone splitter attached to the return hose of the rig.

The mineralisation of the WA Kaolin Project is weathering derived, constrained by a particular regolith horizon in an area of generally low relief. The result is a shallow, laterally extensive and sub-horizontal deposit. The vertical orientation of the holes drilled into the WA Kaolin Project deposit can all be assumed to orthogonally intersect the main geological structure controlling mineralisation (see Figure 6).

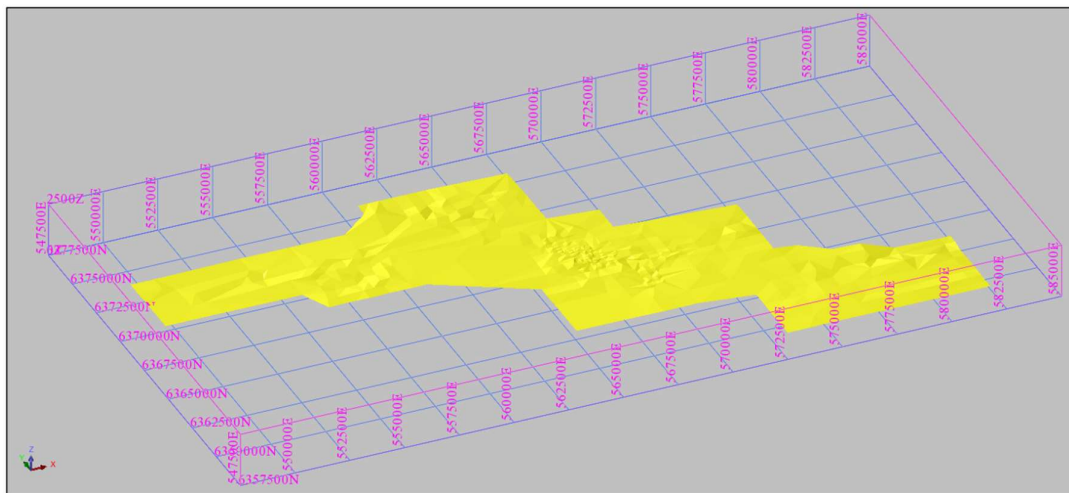


**Figure 6. Mineralisation in relation to drillhole orientation (Section 6367715 mN)**

**Mineralisation**

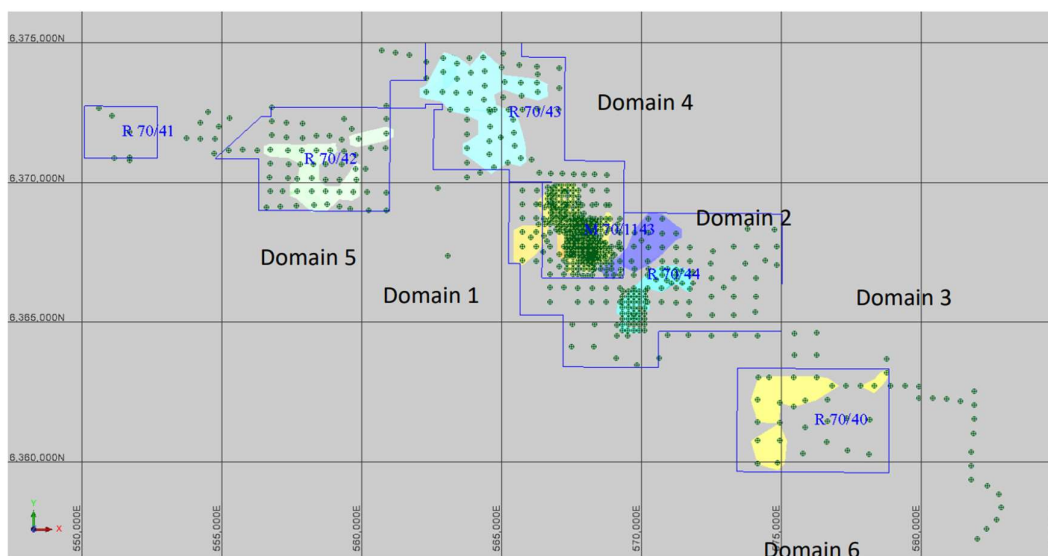
Mineralisation at the WA Kaolin Project is wholly constrained within the regolith horizon defined by the lithological code corresponding to “kaolinsed granite”, representing the saprolitic horizon with the weather profile above the host granite within the Project area. This horizon has been modelled by two DTM surfaces defining the lower contact to either transitionally weather granite ore granite and the upper contact to either mottled zone clays or laterite (Figure 7).

Within this horizon, the mineralised body has been defined by a nominal 80% brightness cut-off on the basis that this value is the target cut-off for production within the pits currently being mined on M70/1143. The results are several highly tabular sub-horizontal bodies and highly laterally continuous (Figure 7).



**Figure 7. Geological surface extents**





**Figure 8. Mineralisation domains**

The mineralisation contained within the WA Kaolin Project is the product of the weathering of the underlying granite. Modelling the upper and lower surfaces of the host horizon for kaolin mineralisation is tantamount to modelling the various oxidation states within the weathered granite.

A topographic surface was built for the WA Kaolin Project using the drillhole collar date and then extended horizontally where required to ensure coverage and appropriate coding on the subsequent block model.

**This announcement was authorised for market release by the Board of WA Kaolin Limited.**

### Competent Person's Statement

*The information in this report that relates to the Ore Reserve and Mineral Resources is based on information compiled by Mr. Phil Jankowski who is a Fellow of AuSIMM and a geologist, and Ms. Charlotte Nangolo, who is a member of AuSIMM and who is a mining engineer. Both are employed by CSA Global. Both Mr Phil Jankowski and Ms. Charlotte Nangolo have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity which he is undertaking, to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Phil Janowski and Ms. Charlotte Nangolo consent to the inclusion in the release of the matters based on his/her information in the form and context in which it appears.*

### Forward Looking Statements

*This ASX announcement may include forward-looking statements. These forward-looking statements are not historical facts but rather are based on WAK's current expectations, estimates and assumptions about the industry in which WAK operates, and beliefs and assumptions regarding WAK's future performance. Any forward-looking statements, that are inconsistent with previous forward-looking statements made by the Company supersede those previous statements or prevail to the extent of any inconsistency. Words such as "anticipates", "expects", "intends", "plans", "believes", "seeks", "estimates", "potential" and similar expressions are intended to identify forward-looking statements.*

*Forward-looking statements are only predictions and are not guaranteed, and they are subject to known and unknown risks, uncertainties and assumptions, some of which are outside the control of WAK. Past performance is not necessarily a guide to future performance and no representation or warranty is made as to the likelihood of achievement or reasonableness of any forward-looking statements or other forecast. Actual values, results or events may be materially different to those expressed or implied in this announcement. Given these*

*uncertainties, recipients are cautioned not to place reliance on forward looking statements. Any forward-looking statements in this announcement speak only at the date of issue of this announcement. Subject to any continuing obligations under applicable law, WAK does not undertake any obligation to update or revise any information or any of the forward-looking statements in this announcement or any changes in events, conditions or circumstances on which any such forward looking statement is based.*

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## Project Background

WA Kaolin holds the Wickepin Kaolin Project, 220km south-east of Perth, a Mineral Resource (JORC 2012) of 643.0 million tonnes<sup>1,2</sup>, including an Ore Reserve Estimate of 64.9 million tonnes of kaolinised granite. The Wickepin Project produces kaolin products for tier one customers and the Company aims to expand its production to 400,000tpa in a two-stage strategy.

WA Kaolin has a two-stage ramp up strategy. Stage 1 will see the production rate optimised up to 200,000tpa followed by the second stage which will expand production to 400,000 tpa.

The Company acquired the Wickepin Project in 1999 from Rio Tinto which, through exploration, had discovered and drilled out a Mineral Resource and commissioned engineering and feasibility studies. The acquisition included the tenements covered by the Wickepin Project and all associated engineering and feasibility studies.

Since then and prior to the Company's IPO in November 2020, WA Kaolin co-founders and owners invested over \$42 million to develop and progress the Wickepin Project. Through extensive R&D of product and processes, the Company has spent significant time and funds in optimising its proprietary dry processing method for kaolin ("K99 Process") to build and extend on its success as a kaolin producer and exporter to global markets.

The project comprises a mining lease, a general-purpose lease, a miscellaneous licence and retention licences. It is one of the largest known remaining kaolin resources in the world, and contains:

- A **Probable Ore Reserve of 64.9 million tonnes** (Table 1) in the mining lease which is part of and included in;
- An **Inferred Mineral Resource of 643.0 million tonnes** (Table 2) of high-grade premium kaolinised granite across all tenements.

**Table 1.** Ore Reserves by JORC Classification

JORC classification	Tonnes (Mt)	ISO brightness (%)	Yield (%) (<45 µm in size)	In situ Kaolin (Mt)
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<b>Total</b>	<b>64.9</b>	<b>82.2</b>	<b>50.5</b>	<b>32.8</b>

Source: CSA Global Report No. R310.2020 – 29<sup>th</sup> September 2023

<sup>1</sup> The Mineral Resource estimate is inclusive of Ore Reserves

<sup>2</sup> CSA Global Mineral Resource Estimate R313.2023

**Table 2.** Inferred Mineral Resources (<45 µm), WA Kaolin Project

	Kaolinized granite (Mt)	ISO brightness (%)	Yield (%)	Kaolin (Mt)
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