

# EXCEPTIONALLY HIGH GRADE HALLOYSITE-KAOLIN INTERCEPTS AT SMOKY PROJECT

ASX Release: 12 October 2023

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## Highlights

- ▶ **Results from preliminary drilling at Smoky Project in March and April 2023 deliver outstanding halloysite-kaolin results.**
- ▶ **Drillhole VS23-06 intersected:**
  - **8m of 74.6% halloysite** (74% <45um fraction) from 10m. This includes two separate 1m samples with over **90% halloysite** (<45um fraction); and
  - **2m of 92.0% kaolinite** (41.5% <45um fraction) from 19m.
- ▶ **Drillhole VS23-07 intersected:**
  - **7m of 78.7% halloysite** (61% <45um fraction) from 3m; and
  - **1m of 97.6% kaolinite** (25.5% <45um fraction) from 17m
- ▶ **Both the halloysite and kaolinite proportions of the <45um material are exceptionally high.**
- ▶ Additional samples from above and below the measured halloysite layer have been sent for analyses.

Viridis Mining and Minerals Limited (**ASX: VMM**) ("**Viridis**" or the "**Company**") is pleased to provide an update to the market on laboratory results received from the aircore hammer drilling program at the Smoky Project, NSW<sup>1</sup>. Viridis completed an initial 7-hole drill program at the Smoky Project (Table 1) in March and April 2023, with one metre selected samples sent to the James Hutton Institute in Scotland. The current analyses, building on the previous released results, show outstanding halloysite grades exist now over a significant thickness (8 metres in drillhole VS23-06).

Previously, ten samples of one-metre selected intervals (and one blind duplicate) from the drilling were examined by detailed XRD confirming up to 91.6% halloysite in the minus 45 micron fraction<sup>2</sup>. Limited sampling at that time indicated drillhole VS23-07 (Figure 2) intersected nearly 40m of kaolin of the Koogah Formation before entering the Werrie Basalt. A single metre sample from drillhole VS23-05 located further south confirmed 65.3% kaolinite and 9.1% halloysite (total 74.4% kaolin) within the minus 45 micron fraction from 4 metre depth.

All samples measured confirm the visual geological logging, that above the Werrie Basalt, intersected in the lower part of the drillholes, the overlying claystone intersected is kaolin clayrocks of the lower Koogah Formation. The drilling was undertaken to measure the location and concentration of the halloysite rich portion within the kaolin.

Both the impressive halloysite intersections are open above and further samples have been dispatched for analyses. Due to laboratory sample capacity limitations, samples are been sent in batches. As there is difficulty in clearly distinguishing halloysite bearing samples before submission, this has the advantage that previous results can assist in sample selection.

Within the kaolin Koogah Formation the coal burning thermal event created both naturally occurring meta-kaolin and mullite, depending on the temperature. It has been reported not all of the meta-kaolin has reverted to halloysite (Loughnan & Roberts, 1981; American Mineralogist 66). The Koogah Formation has been previously mined for mullite (natural Chamotte) and limited amounts of halloysite was produced<sup>3</sup>.

Halloysite is a form of kaolinite that commands a significantly high sales price in industrial applications. Possible usages for halloysite include controlled release drug delivery, nutrient and methane adsorption in the cattle industry, carbon capture by adsorption at various pressures (industrial uses), premium medical grade ceramics and depending on the purity, an excellent feedstock for High Purity Alumina (“HPA”). The substitution of cement by meta-kaolin provides a substantial reduction in CO<sub>2</sub> emission. Greenhouse-gas emission for meta-kaolin is 55% lower than Portland cement (Haw et al., 2020, Applied Clay Science 188). Halloysite nanotubes can be coated with metallic and other substances to achieve a wide variety of electrical, chemical and physical properties. The hollow tubes of halloysite nanotubes can also be filled with a variety of active substances including those used in cosmetics and pharmaceuticals.

All drillholes were sealed and successfully rehabilitated during the drilling program with no safety or environmental issues encountered.

### **Executive Chairman Agha Shahzad Pervez commented:**

*“We are delighted to have discovered the presence of significant thickness of halloysite at shallow depth through high-grade intercepts in the drilling program at the Smoky Project.*

*As the Company remains focused on the current drill program at the Colossus Rare Earth Project in Pocos De Caldas, these results from our Smoky Halloysite Project continue adding prospectivity to our portfolio of assets.*

*The work programs completed in March and April 2023 on the Smoky Project have been a beneficial step for Viridis. The team remains committed and working diligently across our projects to continue generating value for shareholders.”*



**Figure 1:** Drillhole locations at Smoky Project Site

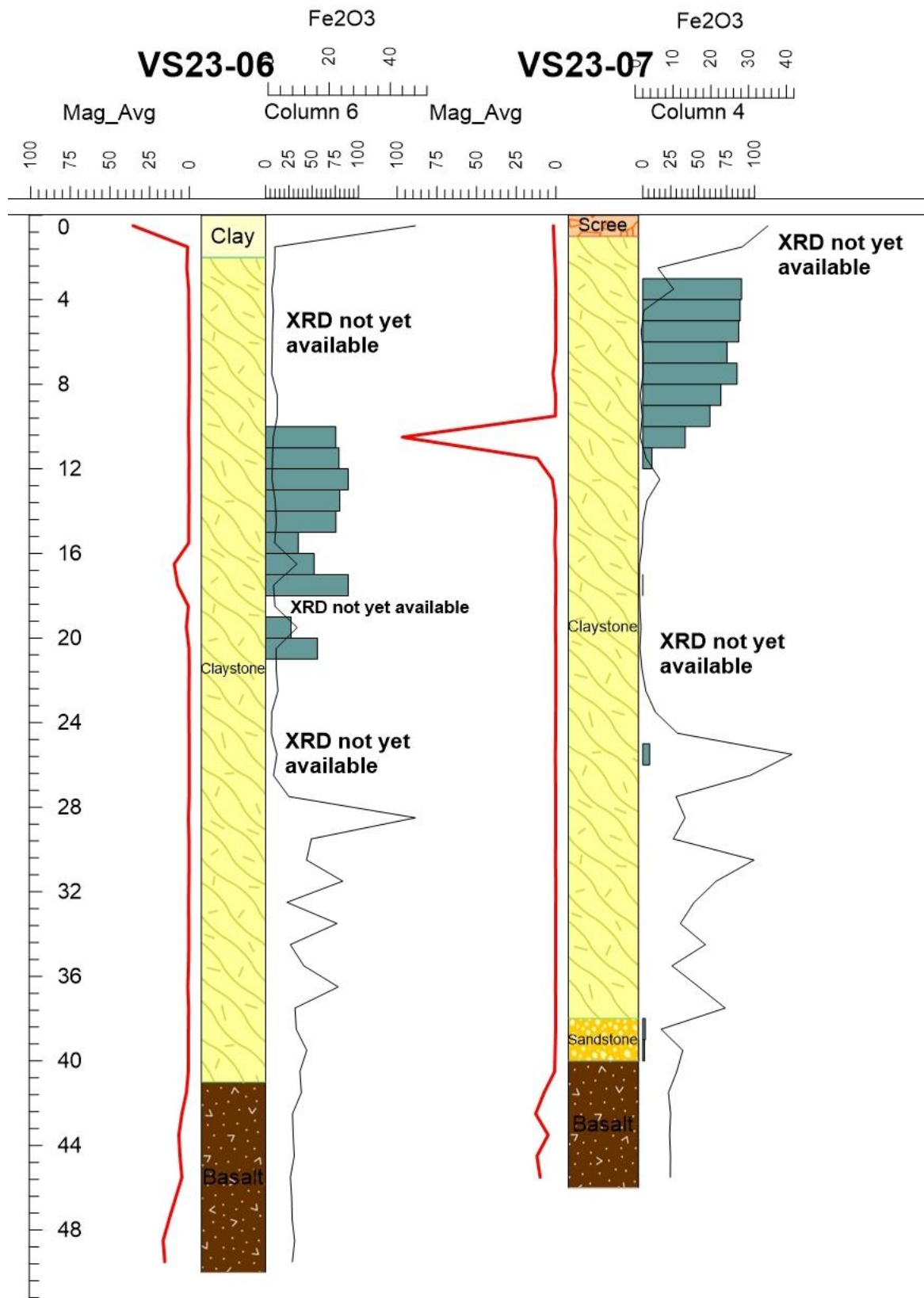
Drillhole	East_WGS84	North_WGS84	RL (m)	Depth
VS23-01	303132.87	6473771.86	592.79	60.0
VS23-02	303163.64	6473806.07	598.2	28.0
VS23-03	303133.51	6473805	593.51	36.0
VS23-04	303153.95	6473805.41	597.3	21.0
VS23-05	303114.3	6473777.06	590.47	37.0
VS23-06	303190.58	6473946.65	577.31	50.0
VS23-07	303205.39	6473940.31	577.88	46.0

**Table 1:** Drillhole collar summary at Smoky Project

Drillhole	Depth from	Depth to	Sample	Brightness ISO	Fraction <45um %	Halloysite %	Kaolinite %	Kaolin %
VS23-05	2	3	VK-334	13.3	80.3	29.2	45.6	74.8
VS23-05	3	4	VK-335	14.6	67.6	32.8	45.2	78.0
VS23-05	4	5	VK-144*	18.3	42.9	9.1	65.3	74.4
VS23-06	10	11	VK-326	36.8	75.6	<b>88.1</b>	0.0	88.1
VS23-06	11	12	VK-325	47.5	79.0	<b>91.9</b>	0.0	91.9
VS23-06	12	13	VK-324	32.6	89.1	<b>63.3</b>	0.0	63.3
VS23-06	13	14	VK-323	35.0	79.9	<b>66.5</b>	0.0	66.5
VS23-06	14	15	VK-322	32.5	75.8	<b>72.8</b>	0.0	72.8
VS23-06	15	16	VK-147*/327	37.4	56.3	<b>91.4</b>	1.0	92.4
VS23-06	16	17	VK-145*/146*	10.8	47.1	<b>79.3</b>	0.0	79.3
VS23-06	17	18	VK-321	10.8	89.0	43.6	42.0	85.6
VS23-06	19	20	VK-148*	7.8	27.3	0.0	<b>88.1</b>	88.1
VS23-06	20	21	VK-149*	19.3	55.8	0.0	<b>95.8</b>	95.8
VS23-07	3	4	VK-328	22.3	87.7	<b>88.4</b>	0.0	88.4
VS23-07	4	5	VK-329	32.5	83.7	<b>87.1</b>	0.0	87.1
VS23-07	5	6	VK-330	34.8	66.1	<b>85.9</b>	0.5	86.4
VS23-07	6	7	VK-331/333	32.5	52.9	<b>75.3</b>	10.8	86.1
VS23-07	7	8	VK-136*	38.4	50.4	<b>84.3</b>	5.4	89.7
VS23-07	8	9	VK-137*	22.5	47.7	<b>69.9</b>	4.8	74.7
VS23-07	9	10	VK-138*	14.6	40.6	<b>60.0</b>	9.5	69.5
VS23-07	10	11	VK-139*	5.7	34.0	37.9	37.9	75.8
VS23-07	11	12	VK-332	2.7	79.7	8.1	51.4	59.5
VS23-07	17	18	VK-140*	19.6	25.5	0.0	<b>97.6</b>	97.6
VS23-07	25	26	VK-141*	7.6	26.5	6.0	50.9	56.9
VS23-07	38	39	VK-142*	5.8	15.5	2.1	60.5	62.6
VS23-07	39	40	VK-143*	17.1	43.8	1.4	23.6	25.0

**Table 2:** All sample intervals showing halloysite and kaolinite content (% <45um fraction) from drilling in March and April 2023. Asterisks denote samples previously reported in VMM ASX release dated 3 July 2023.





**Figure 2:** The significant halloysite incepts (green bars, % in <45um fraction) in hole VS23-06 and VS23-07 in the high-priority target zone





*Figure 3: Smoky Project drill site VS23-06 post drilling*



*Figure 4: Management site visit to the Smoky Project drill program March 2023*



## The Smoky Project

The Smoky Project comprises a single exploration license (EL8944), which covers 6km<sup>2</sup> in the upper Hunter Valley region of New South Wales. The exploration license contains a historic halloysite quarry, and covers potentially more than 3km strike length of a known and unique kaolin-halloysite bearing sequence.

Limited modern exploration has previously occurred at the Smoky Project. In 1970, Commercial Minerals Pty Ltd identified halloysite in four trenches. During 1983-1984, historic records have shown two (2) drill holes were completed within the EL8944 area. One of these drill holes was logged to contain kaolinite clayrock from surface to 23m (end of hole), while the other was logged to contain halloysite from 11m to 14.5m, with metakaolin identified from 21m to 26.5m and kaolinite identified from 27m to 43m (end of hole)<sup>3</sup>.

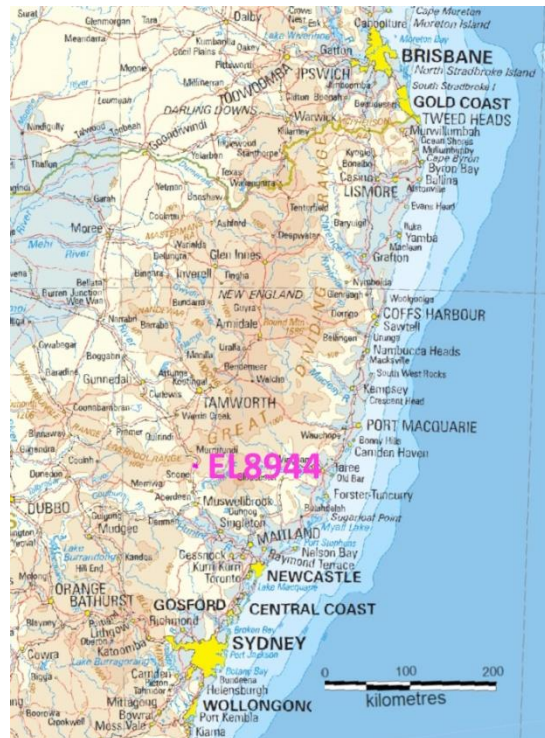


Figure 5: Location of EL8944 north of Sydney

This announcement has been authorised for release by the Board.

## Contacts

For more information, please visit our website [www.viridismining.com.au](http://www.viridismining.com.au) or contact:

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## About Viridis Mining and Minerals

Viridis Mining and Minerals Limited is a resource exploration and development company with assets in Brazil, Canada and Australia. The Company's Projects comprise of:

- The Colossus Project, which the Company considers to be prospective for Rare Earth Elements;
- The South Kitikmeot Project, which the Company considers to be prospective for gold;
- The Boddington West Project, which the Company considers to be prospective for gold;
- The Bindoon Project, which the Company considers to be prospective for nickel, copper and platinum group elements;
- The Poochera and Smoky Projects, which the Company considers to be prospective for kaolin-halloysite; and
- The Ytterby and Star Lake Projects, which the Company considers to be prospective for Rare Earth Elements.

## Competent Persons Statement

The information in this document that relates to the Smoky and Poochera projects has been prepared with information compiled by Steven Cooper, FAusIMM. Mr Steven Cooper is the principle of Orogenic Exploration Pty Ltd appointed by the Company. Mr Steven Cooper has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Steven Cooper consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.

Apart from as outlined in this release, the Company confirms that it is not aware of any new information or data that materially affects the information included in the market announcements referred to in this release, and that all material assumptions and technical information referenced in those market announcements continue to apply and have not materially changed.

All announcements referred to throughout can be found on the Company's website – [viridismining.com.au](http://viridismining.com.au).

## Forward Looking Statements

This announcement contains 'forward-looking information' that is based on the Company's expectations, estimates and projections as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to the Company's business strategy, plans, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations, mineral reserves and resources, results of exploration and related expenses. Generally, this forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'potential', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this announcement are cautioned that such statements are only predictions, and that the Company's actual future results or performance may be materially different. Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward looking information.

## References

1. VMM ASX announcement dated 20 March 2023 'Confirmation of Kaolin Halloysite at Smoky Project'
2. VMM ASX announcement dated 3 July 2023 'Outstanding Halloysite-Kaolin Intercepts from Smoky Project'
3. VMM ASX announcement dated 20 January 2022 'Prospectus' (refer to Independent Geologist Report)

# JORC Code, 2012 Edition – Table 1 report

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	<ul style="list-style-type: none"> <li>All samples were collected from the aircore drill rig, fitted with RC sized hammer, through a cyclone directly into plastic bags placed below, at one metre intervals.</li> <li>Initial sample preparation by spearing method. This was completed by laying the bag on its side and recovering an entire cross cutting representative sample through the entire thickness of each one metre interval. Any subsequent sub-sampling was by micro-riffle splitter.</li> <li>An appropriate diameter PVC tube was used to spear approximately 200g into numbered small plastic sealable bags, which were sent for analyses. The sample sizes are considered appropriate for the material being sampled.</li> <li>The Competent Person has reviewed referenced publicly sourced information and considers that sampling was commensurate with industry standards current at the time of drilling and is appropriate for the indication of the presence of mineralisation.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li><i>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).</i></li> </ul>	<ul style="list-style-type: none"> <li>Chief Drilling used an aircore reverse circulation drill rig mounted on a 6-wheel drive Toyota Landcruiser.</li> <li>The drilling using an 124mm diameter hammer bit is a form of drilling where the sample is collected at the hammer face and returned inside the inner tube. The drill cuttings are removed by the injection of compressed air into the hole via the annular area between the inner tube and the drill rod.</li> <li>Drill rods are 3 metre NQ rods.</li> <li>All drillholes were between 21 metres and 61 metres in length. Average depth was 39.7 metres for the 7 drillholes.</li> <li>The Competent Person was present during the drilling program and considers that drilling techniques were commensurate with industry standards current at the time of drilling and are appropriate for the indication of the presence of mineralisation.</li> </ul>



Criteria	JORC Code explanation	Commentary
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All initial one metre interval samples were checked to ensure consistency.</li> <li>• All efforts were made to ensure the sample was representative.</li> <li>• No relationship is believed to exist between sample recovery and grade, but no work has been completed to confirm this.</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All samples were geologically logged to include details such as colour, grain size, rock type etc which is naturally qualitative in nature.</li> <li>• All samples have quantitative magnetic susceptibility and pXRF measurements taken to support the geological logging.</li> <li>• Representative chip tray samples of all intervals were collected and photographed.</li> <li>• All collected samples are one metre vertical intervals.</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All drill chip samples were collected through a cyclone into plastic bags at 1 metre intervals during drilling, and then sub-sampled into ~200g samples within numbered plastic sealable bags. Selected samples have been sent for analyses.</li> <li>• A full profile of each one metre bag contents was subsampled by spearing to ensure representivity.</li> <li>• All samples were dry soft power and fine chips.</li> <li>• Samples were initially selected based on visual examination of the drillhole samples with the aim of including kaolinised saprolite.</li> <li>• Sample sizes are appropriate to the clay grain size of the material being sampled. All sub-samples were weighed.</li> </ul>
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>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.</i></li> <li>• <i>Nature of quality control procedures adopted (eg standards, blanks,</i></li> </ul>	<ul style="list-style-type: none"> <li>• Selected drill samples were submitted to James Hutton Institute (Scotland).</li> <li>• James Hutton Institute dried samples at a low temperature (60°C) to avoid destruction of halloysite. The sample was wet sieved at 45 µm and all plus and minus fractions weighed.</li> <li>• The James Hutton Institute measured by advanced XRD methods the halloysite and other mineral content of the rock samples. All results are based on the minus 45 micron fraction.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	<ul style="list-style-type: none"> <li>Bulk quantitative analysis samples are wet ground for 12 minutes (in ethanol or water) in a McCrone mill and spray dried to produce random powder specimens. X-ray powder diffraction (XRPD) patterns are typically recorded over a range of 65°2θ or more using either Cu or Co radiation, the actual range being instrument dependent is given on the scans. Quantitative analysis is made by a normalised full pattern reference intensity ratio (RIR) method (Omotoso et al., (2006) and Butler &amp; Hillier (2021)). Unless stated otherwise, expanded uncertainty using a coverage factor of 2, i.e. 95% confidence, is given by <math>\pm X^{0.35}</math>, where X = concentration in wt.%, (e.g. 30 wt.% <math>\pm 3.3</math>).</li> <li>No standards were used in the XRD quantification process. VMM included one external blind duplicate sample (VK-333 for VK-331) and one blind duplicate sample with a previous batch sample (VK-327 for VK-147).</li> <li>Brightness was reported by James Hutton Institute using a Minolta CM2600d Colour Spectrophotometer which measures over a 360-750nm wavelength range, under D65 standards. The instrument was calibrated before each set of analyses on a UKAS accredited Ceram tiles.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>There was no use of twinned holes.</li> <li>Blind duplicate of the single sample from drillhole VS23-07 (6-7m) were included within the sample batch to James Hutton Institute, together with blind duplicate of drillhole VS23-06 (15-16m) sample VK-147 from previous laboratory batch. All comparable results are acceptable.</li> <li>Data is exploratory in nature and is compiled into in-house relational database. Original laboratory supplied pdf reports and spreadsheets retained. Sample and assay data have been reviewed by the VMM Consulting Geologist, who was involved in the sampling of the drilling at the time.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Specification of the grid system used.</i></li> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>The location of drillhole collar was undertaken using a DGPS by RAP Surveying, Registered Land Surveyors. Accuracy of +/- 0.1m using UTM WGS84 Zone 56S.</li> <li>The quality and adequacy are appropriate for this level of exploration.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Most of the drilling was on sections approximate perpendicular to the geological strike. The final spacing and detailed collar position is defined by access for the drill rig, geological parameters and land surface.</li> <li>• Data spacing and distribution are <b>not</b> sufficient to establish the degree of geological and grade continuity or for resource reporting. The data spacing only provides guide for future drill planning.</li> <li>• Sample compositing has not been applied.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i></li> </ul>	<ul style="list-style-type: none"> <li>• It is believed that the drilling has intersected the geology at a steep angle; possible around 30 degrees to the west-northwest, however, it is known the drill holes have not intersected the mineralisation in a perpendicular manner. The mineralised horizon is obscured by a thin veneer of scree and soil.</li> <li>• It is believed no bias has been introduced due to drilling orientation.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All samples have been in the custody of VMM contractors since drilling. Sealed samples were transported to Adelaide within contractor vehicles and stored in the secure private property with no access from the public.</li> <li>• Representative chip tray samples of all intervals were collected and photographed. These chip trays and photographs are stored securely.</li> <li>• Best practices were undertaken at the time.</li> <li>• All residual sample material (pulp) is stored securely.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• None undertaken.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and</i>	<ul style="list-style-type: none"> <li>• <i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures,</i></li> </ul>	<ul style="list-style-type: none"> <li>• Drilling was completed within Exploration Licence 8944, held 100% by Dig Ore Pty Ltd (a wholly owned subsidiary of VMM).</li> </ul>



Criteria	JORC Code explanation	Commentary
land tenure status	<p><i>partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i></p> <ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Drilling details and sample results presented are all from EL8944.</li> <li>The tenement is in good standing with no known impediments.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>Mining of chamotte (mullite) commenced in 1966 under private mining agreement in the area by Steetley Industries/Commercial Minerals Limited resulting in a number of small quarries located along the Koogah Formation.</li> <li>Relevant previous exploration has been undertaken by Steetley Industries/Commercial Minerals Limited under EL1440 between 1981 and 1987 and included limited drilling along strike.</li> <li>An unknown but small amount of halloysite was mined as an industrial raw material by Commercial Minerals Limited from the 'Halloysite Quarry' during the chamotte operation.</li> </ul>
Geology	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>The tenement is over the Permian Koogah Formation in the upper Hunter Valley on the western limb of the Pages River Anticline.</li> <li>The Koogah Formation within EL8944 consists mostly of transported alluvial fan of silt to conglomerate sized clasts of kaolinite set in a matrix of kaolinite.</li> <li>A coal seam near the top of the Koogah Formation has been naturally burnt underground (it is still alight at Burning Mountain) and the thermal metamorphism has altered the kaolinite clayrocks mainly above to include mullite and cristobalite. Below the brunt seam the kaolinite clayrocks has converted mainly to metakaolin and then rehydroxylated by groundwater to hydrated halloysite.</li> <li>VMM is exploring for the resulting halloysite deposits.</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <li><i>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:</i> <ul style="list-style-type: none"> <li><i>easting and northing of the drill hole collar</i></li> <li><i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li><i>dip and azimuth of the hole</i></li> <li><i>down hole length and interception depth</i></li> <li><i>hole length.</i></li> </ul> </li> <li><i>If the exclusion of this information is justified on the basis that the</i></li> </ul>	<ul style="list-style-type: none"> <li>VMM completed a seven drillhole program during the period 27 February 2023 to 2 March 2023. Based on visual, pXRF data, and XRD results already received (see VMM ASX release 3 July 2023) selected push tube speared samples from three drillholes were dispatched to the laboratory.</li> <li>See main body of report for detailed drillhole information for samples reported.</li> <li>All holes were vertical (dip -90°); depth in metres, datum UTM WGS84, zone 56S.</li> </ul>

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	<i>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.</i>	<table><thead><tr><th>Drillhole</th><th>East_WGS84</th><th>North_WGS84</th><th>RL (m)</th><th>Depth</th></tr></thead><tbody><tr><td>VS23-01</td><td>303132.87</td><td>6473771.86</td><td>592.788</td><td>60</td></tr><tr><td>VS23-02</td><td>303163.64</td><td>6473806.07</td><td>598.202</td><td>28</td></tr><tr><td>VS23-03</td><td>303133.51</td><td>6473805.00</td><td>593.512</td><td>36</td></tr><tr><td>VS23-04</td><td>303153.95</td><td>6473805.41</td><td>597.303</td><td>21</td></tr><tr><td>VS23-05</td><td>303114.30</td><td>6473777.06</td><td>590.467</td><td>37</td></tr><tr><td>VS23-06</td><td>303190.58</td><td>6473946.65</td><td>577.306</td><td>50</td></tr><tr><td>VS23-07</td><td>303205.39</td><td>6473940.31</td><td>577.879</td><td>46</td></tr></tbody></table>	Drillhole	East_WGS84	North_WGS84	RL (m)	Depth	VS23-01	303132.87	6473771.86	592.788	60	VS23-02	303163.64	6473806.07	598.202	28	VS23-03	303133.51	6473805.00	593.512	36	VS23-04	303153.95	6473805.41	597.303	21	VS23-05	303114.30	6473777.06	590.467	37	VS23-06	303190.58	6473946.65	577.306	50	VS23-07	303205.39	6473940.31	577.879	46
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Data aggregation methods	<ul style="list-style-type: none"><li><i>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.</i></li><li><i>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.</i></li><li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li></ul>	<ul style="list-style-type: none"><li>If aggregated results are presented (results over more than one metre) then they are downhole sample length weighted averages with no lower or upper limit cut-off applied.</li></ul>																																								
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"><li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li><li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li><li><i>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’).</i></li></ul>	<ul style="list-style-type: none"><li>All holes are believed to intersect the mineralisation at a steep angle and therefore do not represent true widths.</li><li>All intercepts reported are down hole lengths.</li></ul>																																								
Diagrams	<ul style="list-style-type: none"><li><i>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.</i></li></ul>	<ul style="list-style-type: none"><li>See main body of report.</li></ul>																																								
Balanced reporting	<ul style="list-style-type: none"><li><i>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.</i></li></ul>	<ul style="list-style-type: none"><li>All other relevant data has been reported.</li><li>The reporting is considered to be balanced.</li><li>Where data has been excluded, it is not considered material.</li></ul>																																								

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<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>The target areas have been the subject of previous mullite exploration and limited halloysite mining.</li> <li>The reported results are the second halloysite results received from the drilling program sample examination. The first, initial results were presented in the ASX release dated 3 July 2023 by VMM. The drillhole sample selection is not fully systematic as there are still samples from other intervals or other drillholes have not yet been dispatched to laboratories. Mainly due to laboratory sample number capacity limitations, samples are dispatched in batches.</li> <li>All relevant exploration data has been included in this report.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>Further examination of drill hole samples is progressing.</li> <li>Further exploration drilling is required.</li> </ul>