

ASX: VMM MARKET ANNOUNCEMENT

Outstanding Halloysite-Kaolin Intercepts from Smoky Project Drilling

ASX Release: 3 July 2023

Highlights

- First drilling confirmation of high-grade halloysite near major highway within northwest NSW.
- ▶ Drillhole VS23-07 intersected 4m downhole at 63% halloysite (<45um fraction) from 7m depth. This includes 1m at 85.3% halloysite from 7m.</p>
- Sampling indicates over 40m downhole thickness of kaolin, with halloysite concentrated closer to the surface in VS23-07.
- 2m of 85.4% halloysite (<45um fraction) from 15m depth in drillhole VS23-06.</p>
- Single sample from drillhole VS23-05 contained 65.3% kaolinite and 9.1% halloysite (total 74.4% <45um fraction) kaolin) from 4m depth.
- Only ten one-metre selected samples have been examined in this first batch of samples.

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 recently completed aircore hammer drilling program at the Smoky Project, NSW (see ASX announcement 20 March 2023). 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.

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 (Table 2) in the minus 45 micron fraction. Limited sampling 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.

As this was the first drilling program ever over this unusual historic halloysite deposit, only ten selected samples were dispatched to confirm the mineralogy. It is not possible to confirm the presence of halloysite-bearing kaolin without detailed laboratory testing.

Shallow halloysite concentrations up to 7m below the surface contained 84.3% halloysite. As the unit is believed to be dipping to the northwest, the halloysite unit is expected to subcrop below the thin scree/soil cover southeast from drill hole VS23-07 (Figure 1). Drillhole VS23-07 recovered halloysite grading from 84.3% down to 37.9% (in minus 45um fraction) in the limited four-metre interval sampled (7-11m). This same down-hole four metre interval contains an average of 77.4% total kaolin in the minus 45 micron fraction. At deeper depth within VS23-07, the kaolin became more kaolinite rich.

Drillhole VS23-06 is located 16.11 metres northwest from VS23-07 and reported halloysite down dip at 15-17 metres (limit of current sampling width). The two metres contained 85.4% halloysite (<45um fraction) from 15m depth with almost no kaolinite (Table 2). All drillholes were terminated within the Werrie Basalt.

At this stage it is believed the single kaolinite sample (4-5m) from drillhole VS23-05 is below the main halloysite hosting part of the sequence. The single one-metre sample contained 65.3% kaolinite and 9.1% halloysite (total 74.4% kaolin) from 4m depth (all <45um fraction).

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). The substitution of cement by meta-kaolin provides a substantial reduction in CO₂ 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.

Commenting on the drill sampling results, VMM's Executive Chairman Mr Agha Shahzad Pervez said: "We are delighted to have discovered the presence of halloysite at shallow depth through high-grade intercepts in the drilling program at Smoky Project."



Figure 1. Drillhole locations at Smoky Project Site

Drillhole	East_WGS8 4	North_WGS8 4	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	Fraction <45um	Kaolinite	Halloysite	Quartz
VS23-05	4	5	VK-144	42.9	65.3	9.1	3.4
VS23-06	15	16	VK-147	35.1	0.9	91.6	0.2
VS23-06	16	17	VK-145	52.2	0.0	82.9	0.6
VS23-06 (duplicate)	16	17	VK-146	41.9	0.0	75.6	0.6
VS23-07	7	8	VK-136	50.4	5.4	84.3	0.1
VS23-07	8	9	VK-137	47.7	4.8	69.9	0.3
VS23-07	9	10	VK-138	40.6	9.5	60.0	0.4
VS23-07	10	11	VK-139	34.0	37.9	37.9	0.1
VS23-07	25	26	VK-141	26.5	50.9	6.0	0.4
VS23-07	38	39	VK-142	15.5	60.5	2.1	7.0
VS23-07	39	40	VK-143	43.8	23.6	1.4	4.4

Table 2. All sample intervals showing halloysite and kaolinite content (% <45um fraction) from recent drilling

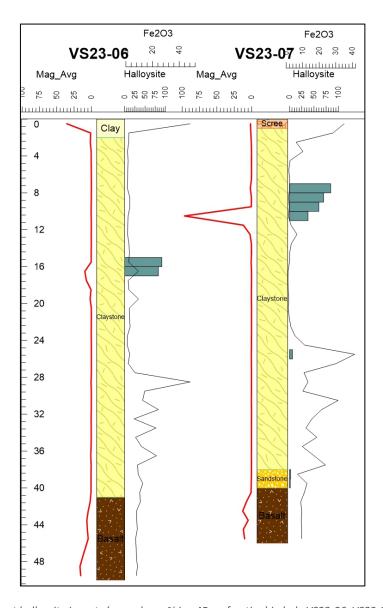


Figure 2 The significant halloysite incepts (green bars, % in <45um fraction) in hole VS23-06, VS23-07 in the high-priority target zone





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 6km2 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) (See prospectus dated 20, January 2022, page 34, Independent Geologist Report, page 59).

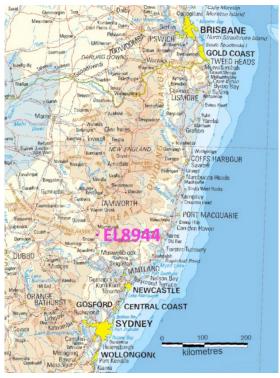


Figure 5 Location of EL8944 north of Sydney

This announcement has been authorised for release by the Board.

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About Viridis Mining and Minerals

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

- 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 kaolinhalloysite; and
- the Ytterby and Star Lake Projects which the Company considers to be prospective of rare earth elements.

Competent Persons Statements

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.

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.



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	 Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information. 	sized hammer, through a cyclone directly into plastic bags placed below, at one metre intervals.
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).	6-wheel drive Toyota Landcruiser.

Criteria	JORC Code explanation	Commentary
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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 is believed to exist between sample recovery and grade, but no work has been completed to confirm this.
Logging	 Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	 colour, grain size, rock type etc which is naturally qualitative in nature. All samples have quantitative magnetic susceptibility and pXRF measurements taken to support the geological logging.
Sub-sampling techniques and sample preparation	 If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled. 	 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. A full profile of each one metre bag contents was subsampled by spearing to ensure representivity. All samples were dry soft power and fine chips. Samples were initially selected based on visual examination of the drillhole samples with the aim of including kaolinised saprolite. Sample sizes are appropriate to the clay grain size of the material being sampled. All sub-samples were weighed.
Quality of assay data and laboratory tests	 The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. 	 (Scotland). 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. 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.

Criteria	JORC Code explanation	Commentary
		 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 & Hillier (2021)). Unless stated otherwise, expanded uncertainty using a coverage factor of 2, i.e. 95% confidence, is given by ±X^0.35, where X = concentration in wt.%, (e.g. 30 wt.% ±3.3). No standards were used in the XRD quantification process. VMM included one external blind duplicate sample
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	Blind duplicate of the single sample from drillhole VS23-06 (16-17m) were included within the sample batch to Hutton. All comparable
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. 	
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. 	defined by access for the drill rig, geological parameters and land
Orientation of data in relation to geological structure	 Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	angle; possible around 30 degrees to the west-northwest, however, it is known the drill holes have not interested the mineralisation in a

Criteria	JORC Code explanation	Commentary
Sample security	The measures taken to ensure sample security.	 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 in Smithfield with no access from the public. Representative chip tray samples of all intervals were collected and photographed. These chip trays and photographs are stored securely. Best practices were undertaken at the time. All residual sample material (pulps) is stored securely
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	None undertaken.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	 Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	 by Dig Ore Pty Ltd (a wholly owned subsidiary of VMM). Drilling details and sample results presented are all from EL8944. The tenement is in good standing with no known impediments.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	 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 Relevant previous exploration has been undertaken by Steetley Industries/Commercial Minerals Limited under EL1440 between 1981 and 1987 and included limited drilling along strike. An unknown but small amount of halloysite was mined as an industrial raw material by Commercial Minerals from the 'Halloysite Quarry' during the chamotte operation.
Geology	Deposit type, geological setting and style of mineralisation.	 The tenement is over the Permian Koogah Formation in the upper Hunter Valley on the western limb of the Pages River Anticline. The Koogan Formation within EL8944 consists mostly of transported

Criteria	JORC Code explanation	Commentary
		 alluvial fan of silt to conglomerate sized clasts of kaolinite set in a matrix of kaolinite. 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. VMM is exploring for the resulting halloysite deposits.
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	period 27February to 2 March 2023. Based on visual and pXRF data selected push tube samples from three drillholes were dispatched to the laboratory.
	 hole length. If the exclusion of this information is justified on the basis that the 	Drillhole East_WGS84 North_WGS84 RL (m) Depth
	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.	V\$23-01 303132.87 6473771.86 592.788 60 V\$23-02 303163.64 6473806.07 598.202 28 V\$23-03 303133.51 6473805.00 593.512 36 V\$23-04 303153.95 6473805.41 597.303 21 V\$23-05 303114.30 6473777.06 590.467 37 V\$23-06 303190.58 6473946.65 577.306 50 V\$23-07 303205.39 6473940.31 577.879 46
Data aggregation methods	 In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	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.
Relationship between	These relationships are particularly important in the reporting of Exploration Results.	 All holes are believed to intersect the mineralisation at a steep angle and therefore do not represent true widths

Criteria	JORC Code explanation	Commentary
mineralisation widths and intercept lengths	 If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	All intercepts reported are down hole lengths
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. 	, ·
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. 	The reporting is considered to be balanced.
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.	and limited halloysite mining
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. 	 Further examination of drill hole samples is progressing. Further exploration drilling is required.