

## Waste-to-Aggregate Studies Underway at Colosseum

### Highlights

- The Colosseum Scoping Study<sup>1</sup> identified significant commercial potential for repurposing mine waste as construction aggregate and asphalt production in the southern Nevada market
- Laboratory testing confirms all major waste rock types meet Alkali Silica Reactivity (**ASR**) standards for concrete aggregate production and use in asphalt production
- Expressions have also been received from parties interested in acquiring all or some of the tailing material generated by the proposed gold mine for use as sand in the production of concrete.
- Regional concrete demand is projected to surge, driven by:
  - South Las Vegas construction boom
  - Major roadway infrastructure projects near the Colosseum Mine
  - Development of the Southern Nevada International Airport
- Converting waste and tailings into saleable construction materials could substantially enhance Colosseum's economic returns while minimising environmental footprint.
- Definitive Feasibility Study (**DFS**) metallurgical program will assess both gold recovery optimization and potential cost offsets through construction material sales.

Dateline Resources Limited (ASX: DTR) (**Dateline** or **the Company**) is pleased to provide an update on its project enhancement activities identified in the Colosseum Gold Mine Scoping Study.

The Colosseum Scoping Study<sup>1</sup>, released in October 2024, modelled the mining of 16.6 million tonnes of ore and 56.8 million tonnes of waste over an initial 8.4 year mine life, resulting in the production of 635k ounces of gold.

### Waste-to-Aggregate Studies

During the Scoping Study phase, the Company received and initiated discussions with various stakeholders in the concrete sector in southern Nevada with regards to the supply of aggregate. Aggregate, along with cement and sand, are the key ingredients in concrete used in construction.

It was determined from these discussions that there is both a current and future forecast deficit in the supply of aggregate due to construction in Las Vegas and the planned Southern Nevada Supplemental Airport, located less than 40km from the Colosseum Mine.

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#### Capital Structure (ASX: DTR)

Shares on Issue	2.51B
Top 20 Shareholders	58.29%
Board & Management	34%

#### Board of Directors

**Mark Johnson AO**  
Non-Executive Chairman

**Stephen Baghdadi**  
Managing Director

**Greg Hall**  
Non-Executive Director

**Tony Ferguson**  
Non-Executive Director

**Bill Lannen**  
Non-Executive Director

#### Colosseum Gold-REE Project\*

(100% DTR, California, USA)

27.1Mt @ 1.26g/t Au for 1.1Moz Au

Over 67% in Measured & Indicated

Mineralisation open at depth

Mining studies underway

Rare earths potential with geology similar to nearby Mountain Pass mine

\* ASX announcement 6 June 2024



In order to be suitable as asphalt production and an aggregate for the concrete sector, the material needs to have certain properties that fall within a specific range. An important metric is related to the expansion potential of the aggregate when mixed with different amounts of fly ash.

The Company submitted various samples to ASR testing from Colosseum that comprised different rock types that represent the waste material at Colosseum (felsite, granite and felsite/granite mix) and analysed it at various fly ash levels.

The results indicate that, at a level of 35% fly ash, all of the Colosseum samples passed with an average expansion of 0.03%, well under the maximum allowable expansion of 0.10%. The results are presented in Appendix A.

## **Tailings Sand Potential**

Initial market discussions indicate dual revenue potential: using both waste rock as aggregate and tailings as concrete sand, subject to quality specifications. For sand applications, tailings must be coarser than 200 mesh (74 microns).

While no tailings characterisation studies have been completed to date, the upcoming DFS metallurgical program will:

- Determine optimal grind size for gold recovery;
- Assess if this grind size can produce tailings suitable for concrete sand specifications; and
- Evaluate potential for a split-stream approach if needed.

## **Economic and Environmental Implications**

The Colosseum Gold Mine Scoping Study forecast that 56.8 million tonnes of waste would need to be mined over the 8.4 year initial mine life at an estimated operating cost of US\$237 million, or just over US\$4 per tonne.

The planned Colosseum DFS will investigate whether it is possible to sell the mined waste material, either at the mine gate or as a suitably crushed product, to concrete producer/s in the southern Nevada area as a cost offset or aggregate by-product.

It is anticipated that, if deemed to be suitable and long term contracts can be established with local users, potential aggregate sales may have a material impact on the economics of the project by reducing up front capital costs (as sales could commence during the process plant construction) and generating long term income.

On the environment front, the potential removal of the need for waste rock emplacement at the mine site and potential removal or downscaling of a tailings storage facility will both have positive benefits for the project.

Whilst gold production remains the priority for the Company, these additional opportunities will be progressed in the DFS.

## Disclaimer

Dateline confirms that it is not aware of any new information or data that would materially affect the information included in the Scoping Study released on 23 October 2024 and that all material assumptions and technical parameters underpinning the Scoping Study continue to apply and have not materially change.

This announcement has been authorised for release on ASX by the Company's Board of Directors.

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## About Dateline Resources Limited

Dateline Resources Limited (ASX: DTR) is an Australian publicly listed company focused on mining and exploration in North America. The Company owns 100% of the Colosseum Gold-REE Project in California.

The Colosseum Gold Mine is located in the Walker Lane Trend in East San Bernardino County, California. On 6 June 2024, the Company announced to the ASX that the Colosseum Gold mine has a JORC-2012 compliant Mineral Resource estimate of 27.1Mt @ 1.26g/t Au for 1.1Moz. Of the total Mineral Resource, 455koz @ 1.47/t Au (41%) are classified as Measured, 281koz @ 1.21g/t Au (26%) as Indicated and 364koz @ 1.10g/t Au (33%) as Inferred.

The Colosseum is located less than 10km north of the Mountain Rare Earth mine. Work has commenced on identifying the source of the mantle derived rocks that are associated with carbonatites and are located at Colosseum.

## References

1. ASX Announcement 23 October 2024 - Colosseum Project Scoping Study

## Forward-Looking Statements

This announcement may contain “forward-looking statements” concerning Dateline Resources that are subject to risks and uncertainties. Generally, the words “will”, “may”, “should”, “continue”, “believes”, “expects”, “intends”, “anticipates” or similar expressions identify forward-looking statements. These forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those expressed in the forward-looking statements. Many of these risks and uncertainties relate to factors that are beyond Dateline Resources' ability to control or estimate precisely, such as future market conditions, changes in regulatory environment and the behaviour of other market participants. Dateline Resources cannot give any

assurance that such forward-looking statements will prove to have been correct. The reader is cautioned not to place undue reliance on these forward-looking statements. Dateline Resources assumes no obligation and does not undertake any obligation to update or revise publicly any of the forward-looking statements set out herein, whether as a result of new information, future events or otherwise, except to the extent legally required.

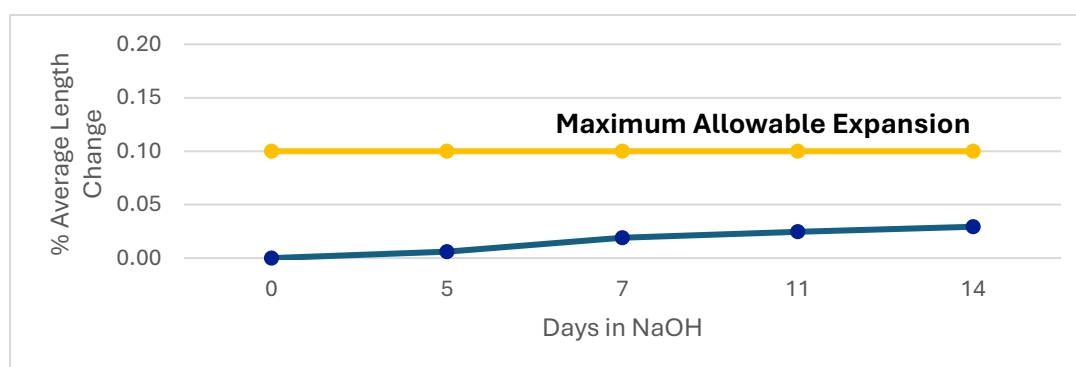
## **Competent Person Statements**

Sample preparation and any exploration information in this announcement is based upon work reviewed by Mr Greg Hall who is a Chartered Professional of the Australasian Institute of Mining and Metallurgy (CP-IMM). Mr Hall has sufficient experience that 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 Exploration Results, Mineral Resources and Ore Reserves" (JORC Code). Mr Hall is a Non-Executive Director of Dateline Resources Limited and consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

## Appendix A – Colosseum Waste Material Aggregate Analysis

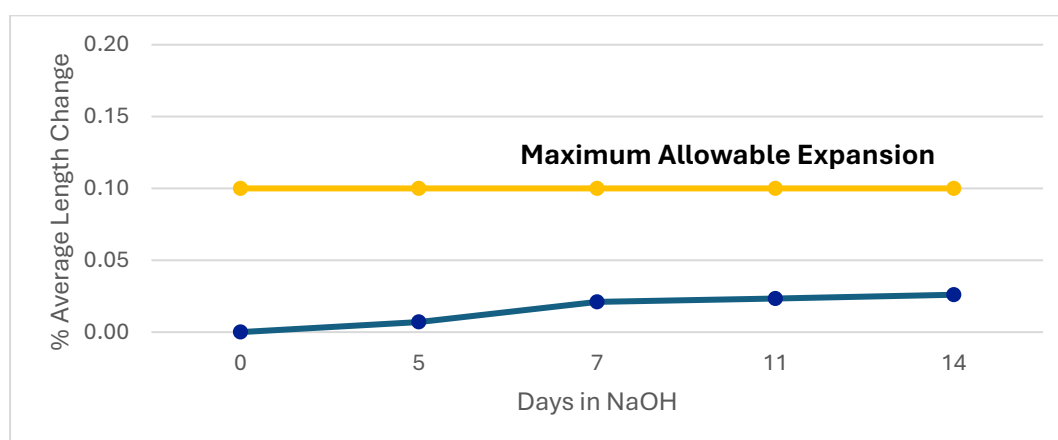
## Granite @ 35% Flyash

Days	Percent Expansion			
	Bar 1	Bar 2	Bar 3	Average
0	0.000	0.000	0.000	0.00
5	0.007	0.005	0.006	0.01
7	0.018	0.019	0.020	0.02
11	0.023	0.024	0.027	0.02
14	0.029	0.028	0.031	0.03



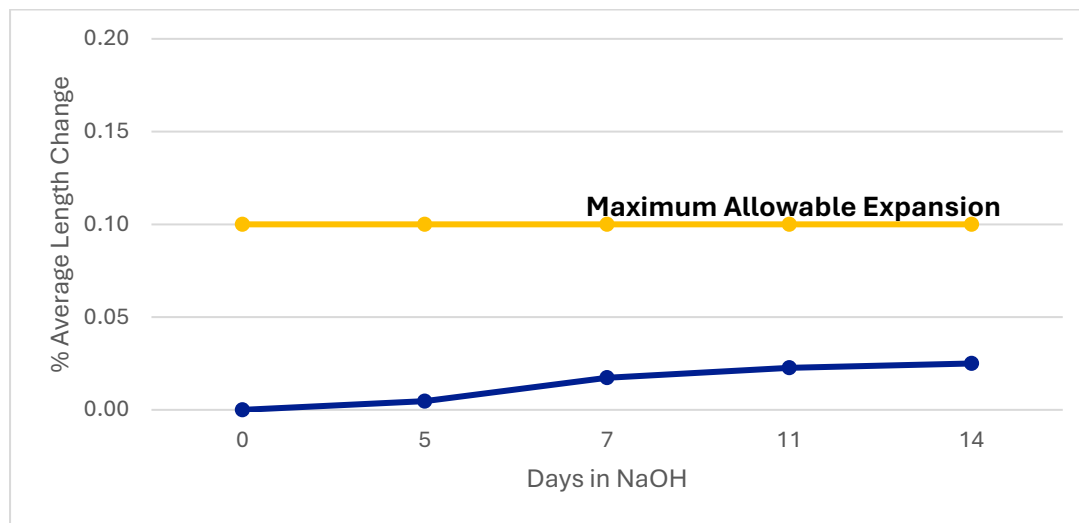
## Felsite @ 35% Flyash

Days	Percent Expansion			
	Bar 1	Bar 2	Bar 3	Average
0	0.000	0.000	0.000	0.00
5	0.007	0.006	0.008	0.01
7	0.02	0.02	0.023	0.02
11	0.022	0.023	0.025	0.02
14	0.025	0.026	0.027	0.03



## Felsite/Granite Mix @ 35% Flyash

Days	Percent Expansion			
	Bar 1	Bar 2	Bar 3	Average
0	0.000	0.000	0.000	0.00
5	0.006	0.004	0.004	0.00
7	0.019	0.016	0.017	0.02
11	0.025	0.022	0.021	0.02
14	0.027	0.024	0.024	0.03



## JORC Code, 2012 Edition – Table 1

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<p><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></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></p> <p><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></p>	<ul style="list-style-type: none"> <li>• In September 2024 Colosseum Rare Metals, INC. tested ten 5-gallon buckets of waste dump material surrounding the North and South Pits for aggregate testing. Material was dug by hand in three separate categories; two buckets of felsite dominated material, four buckets of granite dominated materials, two buckets of mixed granite and felsite materials, and two buckets of fine-grained material. Material was taken across two sample locations, the northern and western sides of the North and South Pits (where majority of the waste dump material is located).</li> <li>• Buckets were filled by hand expanding out from the two sample locations to create a large, representative, sample.</li> <li>• The geologist oversaw collection to identify specific rock types for separation into specific buckets to ascertain if only certain materials were viable for aggregate and/or concrete production.</li> <li>• All samples followed a strict Chain of Custody.</li> <li>• Samples were put into labeled buckets, sealed and driven to Aztech Materials Testing.</li> </ul> <p>Sampling practice is appropriate to geology and complies with industry best practice.</p>
<b>Drilling techniques</b>	<p><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></p>	<p>No drilling occurred while this sampling and testing was undertaken.</p>
<b>Drill sample recovery</b>	<p><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></p> <p><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></p> <p><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></p>	<p>Drill sample recovery not applicable to this testing.</p>
<b>Logging</b>	<p><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></p>	<p>Separation of material based on lithology oversaw by qualified geologist before separating into specific samples.</p>

Criteria	JORC Code explanation	Commentary
	<p><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></p> <p><i>The total length and percentage of the relevant intersections logged.</i></p>	
<b>Sub-sampling techniques and sample preparation</b>	<p><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></p> <p><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></p> <p><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p> <p><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></p> <p><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></p> <p><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	<ul style="list-style-type: none"> <li>Aggregate samples sent to Aztech Materials Testing are logged and given unique identification numbers with fully calibrated machines and internal computer software checks of all samples for precise and repeatable testing.</li> <li>Depending on test performed samples are crushed using bicone crusher, washed, screened according to specific size sieve required for specific tests, and put through riffle splitter and weighed to a 500g minimum sample size.</li> </ul> <p>Aztech Materials participates in external audits administered by the Cement and Concrete Reference Laboratory (CCRL) and AASHTO resource every 18 months to ensure quality, verifiable testing.</p>
<b>Quality of assay data and laboratory tests</b>	<p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></p> <p><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></p> <p><i>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.</i></p>	<ul style="list-style-type: none"> <li>Samples were tested using industry standard methods by Aztech Materials Testing in Las Vegas, Nevada, a fully accredited by the AASHTO Accreditation Program for soil, aggregate, concrete, and asphalt.</li> <li>All tests completed in accordance with ASTM C136, C1567, C177 etc. standardized requirements to CCRL and AASHTO guidelines.</li> </ul>
<b>Verification of sampling and assaying</b>	<p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p> <p><i>The use of twinned holes.</i></p> <p><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></p> <p><i>Discuss any adjustment to assay data.</i></p>	<ul style="list-style-type: none"> <li>Sampling, documentation, and sample submittal were under the guidance and care of Graham Craig, GIT (Association of Professional Engineers and Geoscientists of Manitoba).</li> </ul> <p>Sampling and results data is currently stored in Excel Database and cloud server for multiple backups.</p>
<b>Location of data points</b>	<p><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></p>	<p>Samples were collected at random to spread out across two major sample areas for a better representation of waste dump material.</p>

Criteria	JORC Code explanation	Commentary
	<p><i>Specification of the grid system used.</i></p> <p><i>Quality and adequacy of topographic control.</i></p>	
<b>Data spacing and distribution</b>	<p><i>Data spacing for reporting of Exploration Results.</i></p> <p><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></p> <p><i>Whether sample compositing has been applied.</i></p>	<p>Spacing and distribution randomized and spread out for better representation.</p>
<b>Orientation of data in relation to geological structure</b>	<p><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></p> <p><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></p>	<ul style="list-style-type: none"> <li>No sampling orientation applicable to this testing methodology.</li> </ul> <p>No bias is considered to have been introduced by the sampling orientation or procedures.</p>
<b>Sample security</b>	<p><i>The measures taken to ensure sample security.</i></p>	<p>All samples were taken and maintained under the constant care of Colosseum Rare Metals, INC. personnel. Samples were delivered by Colosseum Rare Metals, INC., personnel to licensed laboratory.</p>
<b>Audits or reviews</b>	<p><i>The results of any audits or reviews of sampling techniques and data.</i></p>	<p>Sample techniques and QAQC procedures reviewed by Graham Craig, GIT according to industry standards.</p>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<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, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i></li> <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>The Colosseum Mine project is located in T17N R13E Sec 10, 11, 14, 15, 22, 23 SB&amp;M.</li> <li>All tenements are 100% owned by Dateline Resources Limited or a wholly owned subsidiary and there exist production-based royalties as previously disclosed to ASX.</li> </ul>
<b>Exploration done by other parties</b>	<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>No previous aggregate testing undertaken by other parties or considered in this report.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style</i></li> </ul>	<ul style="list-style-type: none"> <li>The Colosseum mine is hosted by Cretaceous aged</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>of mineralisation.</i>	breccia-pipe. The pipe contains aphanitic Cretaceous rhyolite flows, Pre-Cambrian granitic basement material, and Cambrian-Devonian dolomite clasts replaced by sulphide mineralisation. <ul style="list-style-type: none"> <li>All sampled waste dump materials collected are from the North and South Pits during historical mining operations and excavation.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>Drilling is not applicable to this testing.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>Results reported based on industry standardized reporting and testing methodology to evaluate aggregate, concrete, and asphalt viability.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>Results reported according to industry standards regarding viability of product.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should</li> </ul>	<ul style="list-style-type: none"> <li>Supporting figures have been included within the body of this release.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>Reporting based on application of manufactured product viability based on pass/fail standards according to industry standards.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Testing was completed for multiple soil, aggregate, concrete, and asphalt mixes and proved viable for all products across all samples taken. Therefore, no separation of materials is required at this time.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Continued testing on soil, aggregate, concrete, and asphalt applications are being reviewed.</li> <li>Further tests on rock material remaining in-situ for aggregate viability still being reviewed.</li> </ul>