

26 April 2022

ASX RELEASE

## **Multiple Rare-Earth Element Targets Identified at Redlings**

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- **Auger geochemistry identifies significant and widespread zones of rare-earth element anomalism.**
  - **Surficial values up to 2,928ppm TREO associated with previously unrecognised REE-bearing dykes.**
  - **Results highlight the potential to identify additional REE-bearing dykes throughout the Project area.**
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Marquee Resources Limited (“**Marquee**” or “**the Company**”) (**ASX:MQR**) is pleased to report the results from auger sampling recently completed at the Redlings Rare-Earth Element Project. Results have identified significant and wide spread zones of surficial rare-earth element (“**REE**”) anomalism related to the intrusion of REE-bearing carbonatitic dykes.

1,292 auger holes were completed over previously untested areas with results highlighting the potential to identify additional REE-bearing dykes, or a ‘dyke swarm’, over the broader Project area. Further mapping, auger geochemistry and drilling is being planned to further understand the potential of the Project to host an economic REE mineral resource.

### **Executive Chairman Comment:**

Marquee Executive Chairman, Mr Charles Thomas, commented: “These results are really encouraging given the fact that we have now uncovered additional REE-bearing dykes in the broader project area and, as such, there is a very good potential to identify a part of the system that hosts an economic deposit. After the recent RC drilling results we knew we had to explore beyond the obvious and now we have found multiple new targets and our focus will shift to drill testing them in the coming months. We know that individual REE-bearing dykes are often part of a larger dyke swarm so we see this is as just the beginning in our search for an economic REE deposit.”

“Given the positive demand outlook for REE’s over the coming decade, we see Redlings as a very important Project for the Company and these results give us the impetus to continue our systematic exploration approach over the coming months.”

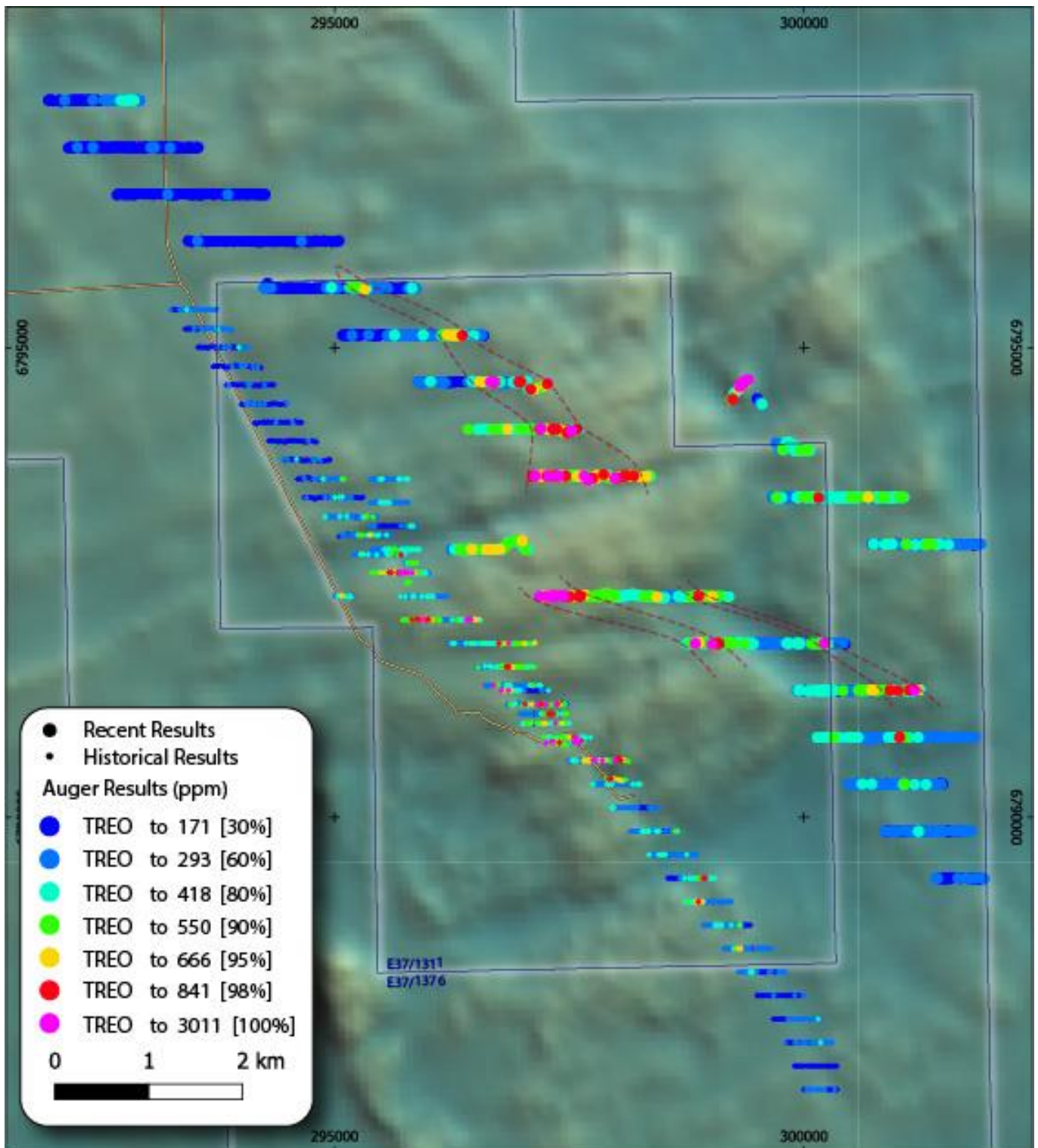


Figure 1: Redlings auger geochemistry results.

## Auger Geochemistry Results & Forward Work Plan

Following completion of slim-line RC drilling (refer MQR ASX Release 18<sup>th</sup> Aug 2021), the Company embarked on a 1,292 auger drilling program to test for surficial REE anomalism away from the historically identified Redlings Dyke. The auger program was designed to target possible dyke-bearing structures which ran parallel to the NW-striking Redlings Dyke. Wide zones, up to 500m, of anomalous REE (98<sup>th</sup> percentile TREO) values are observed in the data which trend roughly NW, however geological interpretation suggests there is a secondary, ENE to NE trending, structural control on the distribution of REE anomalism. Further mapping and infill auger sampling will be undertaken to better understand the geometries of the dyke-bearing structures prior to follow-up RC drill testing.

At Redlings, REE mineralisation is related to carbonatitic intrusions or dykes and associated fenitic alteration, which are elevated in REE compared to background. Economic mineralisation intersected in RC drilling was constrained to the laterite profile where supergene REE enrichment of the underlying carbonatite has occurred, not dissimilar to the mineralisation style encountered at the Mount Weld (LYC) and Yangibana (HAS) deposits. The potential for REE-bearing dykes to host economic fresh-rock mineralisation requires further assessment, however early results suggest there is the potential to define economic supergene REE mineralisation (0-20m vertical depth). Individual REE bearing dykes are often part of a larger dyke swarm the Company will continue to identify additional REE-bearing dykes by systematically testing numerous, analogous geophysical targets.

Table 1: Results (>1,000 ppm) from the Redlings auger program. All results reported in parts per million (ppm).

	299017	297521	297383	299402	299342	297420	297181	297302	297199	300218	297438	301182
East	299017	297521	297383	299402	299342	297420	297181	297302	297199	300218	297438	301182
North	6791842	6794113	6793630	6794658	6794624	6792356	6792350	6792354	6794139	6791852	6792350	6791353
La <sub>2</sub> O <sub>3</sub>	849.1	928.9	422.2	392.9	334.2	331.9	401.1	315.5	204.1	214.6	213.4	246.3
CeO <sub>2</sub>	1376	756.7	570.0	367.3	474.2	529.4	340.3	445.9	694.0	630.2	571.2	515.9
Pr <sub>2</sub> O <sub>3</sub>	136.9	139.3	70.3	68.0	61.9	61.1	70.6	59.7	35.2	31.5	39.8	45.4
Nd <sub>2</sub> O <sub>3</sub>	380.2	428.1	207.6	203.0	178.5	177.3	213.5	180.8	102.8	95.8	122.5	124.8
Sm <sub>2</sub> O <sub>3</sub>	49.4	55.7	26.4	29.5	27.1	21.3	27.9	22.7	13.8	14.6	17.9	17.6
Eu <sub>2</sub> O <sub>3</sub>	3.67	7.53	3.84	3.73	3.31	2.78	4.04	3.28	1.81	2.18	2.56	2.36
Gd <sub>2</sub> O <sub>3</sub>	33.5	45.4	18.4	25.4	21.0	13.6	19.8	16.6	8.23	10.8	13.7	11.8
Tb <sub>2</sub> O <sub>3</sub>	4.13	6.43	2.37	3.92	3.35	1.70	2.65	2.14	1.14	1.78	1.89	1.68
Dy <sub>2</sub> O <sub>3</sub>	19.3	37.9	11.5	24.9	20.0	8.02	14.1	11.3	5.85	9.38	10.1	8.67
Ho <sub>2</sub> O <sub>3</sub>	3.32	7.88	2.04	5.41	3.79	1.56	2.67	2.16	1.12	1.79	1.98	1.57
Er <sub>2</sub> O <sub>3</sub>	8.2	24.6	5.66	16.8	11.2	4.13	7.40	5.93	2.97	4.69	5.65	4.29
Tm <sub>2</sub> O <sub>3</sub>	0.88	3.52	0.72	2.40	1.62	0.55	1.07	0.85	0.40	0.73	0.78	0.57
Yb <sub>2</sub> O <sub>3</sub>	5.84	20.8	4.63	14.1	9.77	3.15	6.74	5.35	2.60	4.55	4.58	3.37
Lu <sub>2</sub> O <sub>3</sub>	0.77	3.13	0.64	2.07	1.32	0.50	0.89	0.78	0.35	0.64	0.68	0.51
Y <sub>2</sub> O <sub>3</sub>	90.7	299.7	62.5	196.8	115.3	48.8	68.3	64.3	28.2	50.5	60.6	39.2
TREO	2928	2720	1390	1331	1246	1192	1161	1121	1094	1063	1054	1012

### The Redlings Rare Earth Element Project

The Redlings Project (formerly called Jungle Well) is 100% owned by Marquee and comprises exploration licences E 37/1311 and E 37/1376 (Figure 2). The Project is located approximately 40km west of Leonora, and 77km north of Menzies. Lynas Corporation's Mt Weld Project lies approximately 150km east of the project. The Redlings Project covers an area of approximately 108 square kilometres of tenure with historical rock-chip samples up to 7.8% TREO (Refer ASX release 16 September 2021).

The Redlings Project is situated over a NNW trending high magnetic biotite-hornblende monzogranite granite that has intruded into the surrounding granite pluton. A series of NW trending faults run obliquely through the granite and are interpreted to be the controlling structures on the emplacement of REE bearing mafic dykes within the Project. Currently, only the Redlings dyke has been identified during prior exploration activities, however numerous parallel structures are observed in the magnetics data and form prospective structural targets for the discovery of additional REE bearing dykes.

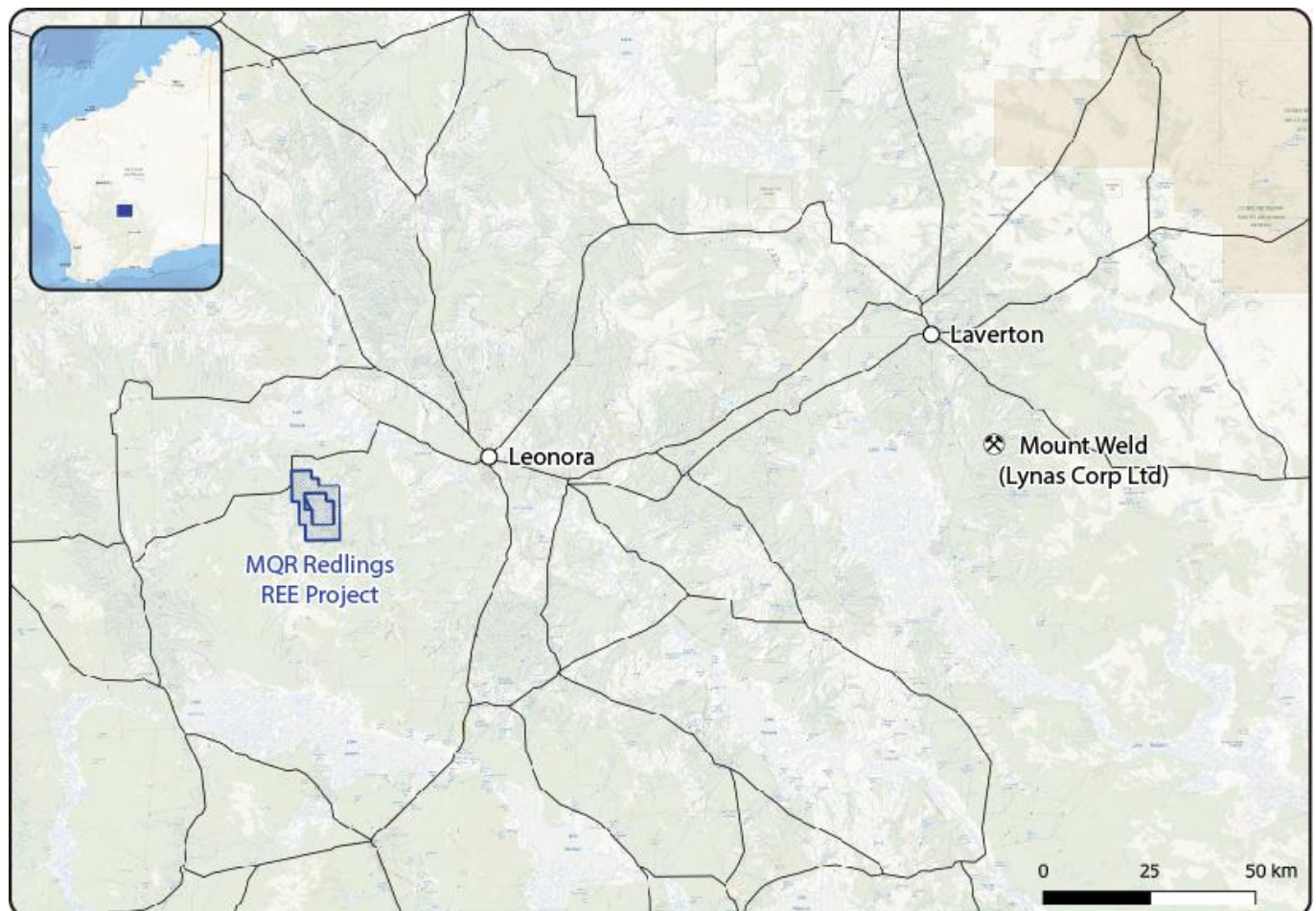


Figure 2: Location of the Redlings Project.



## COMPETENT PERSON STATEMENT

The information in this report which relates to Exploration Results is based on information compiled by Dr. James Warren, a Competent Person who is a member of the Australian Institute of Geoscientists. Dr. Warren is the Chief Technical Officer of Marquee Resources Limited. Dr. Warren has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves". Dr. Warren consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.

## Forward Looking Statements

Statements contained in this release, particularly those regarding possible or assumed future performance, costs, dividends, production levels or rates, prices, resources, reserves or potential growth of Marquee Resources Limited, are, or may be, forward looking statements. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. Actual results and developments may differ materially from those expressed or implied by these forward-looking statements depending on a variety of factors.

This ASX Release has been approved by the Board of Directors.

Charles Thomas – Executive Chairman  
Marquee Resources  
[info@marqueeresources.com.au](mailto:info@marqueeresources.com.au)

## JORC Code, 2012 Edition – Table 1 report template

### 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>Auger soil sampling is a reconnaissance stage technique and offers only an indication of the tenor of underlying mineralisation.</li> <li>Auger soil samples were taken from drilled spoil, scooped by hand from the top of the spoil pile to represent end of hole material.</li> <li>Samples were sieved to 2mm and 1-2kg of material was collected in numbered calico bags.</li> <li>Sample preparation and laboratory analysis was undertaken at LabWest Minerals Analysis Pty Ltd, Perth, Western Australia.</li> <li>Samples were dried, crushed (~2mm) and rotary divided where required. Pulverisation to 85% passing 75 microns is undertaken by LM1 mill, and bowls are barren-washed after each sample.</li> <li>For gold analysis (WAR-25); A 25g portion of pulverised sample is analysed for gold content using aqua-regia digestion, with determination by ICP-MS to achieve high recovery and low detection limits (0.5ppb).</li> <li>For 64 element geochemical analysis (MMA-04); the MMA technique is a microwave-assisted, HF-based digestion that effectively offers total recovery for all but the most refractory of minerals. A portion of sample is digested in an HF-based acid mixture under high pressure and temperature in microwave apparatus for analysis, with determination of 64 elements including Rare-Earths by a combination of ICP-MS and ICP-OES.</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>Auger holes were drilled vertically down to a maximum depth of 1m with the average hole depth of approx. 0.5m</li> <li>Auger diameter was 300 mm.</li> </ul>
Drill sample recovery	<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</i></li> </ul>	<ul style="list-style-type: none"> <li>Auger sample recoveries are considered to be 100%.</li> <li>Some sample bias may have occurred during augering through sandy soils, in which material may have fallen into the hole and diluted the</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>samples.</p> <ul style="list-style-type: none"> <li>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.</li> </ul>	<p>end of hole sample.</p>
Logging	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Samples were qualitatively logged with colour, and lithology of end of hole material.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>All company samples submitted for analysis underwent drying and were pulverized to 85 % passing 75 microns each, from which a 0.25 g charge was taken for four-acid digest and ICP analysis.</li> <li>This sample preparation technique is considered appropriate for the type and tenor of mineralisation.</li> <li>The laboratory inserted certified reference material and blanks into the analytical sequence and analysed lab duplicates. These appear to confirm accuracy and precision of the sample assays.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable</li> </ul>	<ul style="list-style-type: none"> <li>Assaying was completed by Labwest Minerals Analysis Pty Ltd, 10 Hod Way, Malaga WA 6090.</li> <li>For gold analysis (WAR-25); A 25g portion of pulverised sample is analysed for gold content using aqua-regia digestion, with determination by ICP-MS to achieve high recovery and low detection limits (0.5ppb).</li> <li>For 64 element geochemical analysis (MMA-04); the MMA technique is a microwave-assisted, HF-based digestion that effectively offers total recovery for all but the most refractory of minerals. A portion of sample is digested in an HF-based acid mixture under high pressure and temperature in microwave apparatus for analysis, with determination of 64 elements including Rare-Earths by a</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>levels of accuracy (ie lack of bias) and precision have been established.</i>	combination of ICP-MS and ICP-OES from the historical reports.
<i>Verification of sampling and assaying</i>	<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>This release refers to 1,292 results of a recently completed auger program.</li> <li>Data was recorded digitally and in hard copy by on-site Company field staff.</li> <li>All field data is directly recorded in hard copy, then sent electronically to the Chief Technical Officer in the office. Assay files are received electronically from the Laboratory. All data is stored in an Access database system, and maintained by the Database Manager</li> <li>All results have been collated and checked by the Company's Chief Technical Officer.</li> </ul>
<i>Location of data points</i>	<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 coordinate system used is MGA_94 Zone 51.</li> <li>A handheld GPS was used to record the position of the auger holes. Horizontal accuracy was +/- 3 metres.</li> <li>Location accuracy at collars is considered adequate for this stage of exploration.</li> </ul>
<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>Company auger hole spacing was approximately 20 metres along 500 metre-spaced lines.</li> <li>The spacing is appropriate for this stage of exploration.</li> <li>The samples are not appropriate for Mineral Resource estimation.</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>Known REE-bearing dykes strike NW. Further work is required to understand the geometries of dyke-bearing structures.</li> <li>Sampling was completed on east-west oriented lines, roughly sub-perpendicular to the orientation of known REE-bearing dykes</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>Company samples were kept by the company representatives and submitted directly to the laboratory.</li> </ul>



Criteria	JORC Code explanation	Commentary
<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>No audits or reviews beyond consultant geologists have been conducted on the exploration data.</li> </ul>