



7 November 2022

## ANOMALOUS RARE EARTH ELEMENTS (REE) IDENTIFIED IN CARBONATITES

### HIGHLIGHTS

#### Critical Elements Project

- Significant REE recorded up to 0.68% REE\* within pXRF results over an area of 200m x 500m at the Critical Elements Project (Wabli Creek), remaining open along strike to the north and south <sup>1, \*</sup>

#### Skyline Project

- Carbonatites and associated Ironstone discovered within three target areas at the Skyline Project, returning anomalous results up to 0.11% REE\* within pXRF results <sup>1</sup>
- Anomalous manganese up to 4.3% from the Skyline project identifying another battery metal target for the Company <sup>1, \*</sup>

Reach Resources Limited (ASX: RR1) ("Reach" or "the Company") is pleased to announce that it has identified several carbonatite dykes or sills and associated ironstone outcrops within its Skyline Rare Earths project ("Project"), that have returned further anomalous REE\* results. In addition, the team has uncovered significant Manganese potential within the eastern portion of the Project identifying another battery metal target for the Company.

Furthermore, the Company's Critical Elements project ("Project") has returned the highest REE result to date of 0.68% REE\* from the same area where similarly anomalous results were recorded during the last site visit, highlighting the potential for significant REE at the Project.

Reach CEO, Jeremy Bower stated "What is most encouraging is that these highly anomalous results have been recorded from only 5 days in the field and from a very small subsection of the Company's combined ~500 km<sup>2</sup> tenure package, which indicates the potential for future significant REE discoveries on Reach ground."

The Skyline Project is located ~20km to the east and the Wabli Creek and Yinnietharra Projects (Critical Elements), ~80km south of the Hastings Technology Metals Limited Yangibana REE development, which has a current Ore reserve of 16.7Mt at 0.95% TREO for 158Kt (Refer HAS ASX Announcement 27 July 2021).

This current program was commissioned after the identification of anomalous REE\* pXRF results and geology at both Projects during a brief two-day reconnaissance field trip as announced on 18 October 2022. Anomalous results returned from pXRF readings taken during that initial reconnaissance include values up to 0.31% REE\* and 0.31 % Cu <sup>1</sup>.

\* Rare earth elements detectable via pXRF – Y, La, Ce, Pr and Nd only.

#### Cautionary Statement:

**Note 1.** pXRF readings are preliminary and semi-quantitative. The results are not comprehensive, and samples were selected to identify prospectivity. Further, results are deemed to only provide an indication of base metal mineralisation. Samples have been sent to a commercial laboratory for assay.



Several new targets were initially selected for this trip which included areas of:

- thorium anomalism
- REE and/or pegmatite related mineral occurrences
- previously mapped ironstones
- potential ironstone or carbonatite dyke locations identified from aerial photography

In total, 86 rock chip samples and 70 pXRF readings were collected over the two Project areas.

### Skyline Project (E09/2646)

Five of the new target areas returned anomalous detectable REE results from pXRF determined in the field. Anomalous REE\* results (>500ppm) returned from sampling at the Skyline Project are listed in Table 1.

Location	pXRF Sample Number	Lithology	Northing	Easting	Y (ppm)	La (ppm)	Ce (ppm)	Pr (ppm)	Nd (ppm)	REE (ppm - Y+La+Ce+Pr +Nd Only)
Skyline	#21/10-03	Ironstone	7364045	442621	32	125	-1	<100	348	503
<b>Skyline</b>	<b>#21/10-07</b>	<b>Dolerite</b>	<b>7364340</b>	<b>441869</b>	<b>4</b>	<b>1226</b>	<b>1758</b>	<b>235</b>	<b>1164</b>	<b>4387</b>
<b>Skyline</b>	<b>#21/10-13</b>	<b>Carbonatite</b>	<b>7374110</b>	<b>440230</b>	<b>23</b>	<b>&lt;50</b>	<b>240</b>	<b>317</b>	<b>479</b>	<b>1058</b>
Skyline	#21/10-16	Ironstone	7365071	442783	43	<50	221	314	<200	576
Skyline	#21/10-17	Dolerite	7363678	439194	<4	<50	116	255	341	710
Skyline	#21/10-20	Dolerite	7362075	441408	29	199	254	<100	406	887
Skyline	#21/10-27	Carbonatite	7357135	438678	11	182	193	297	<200	682
Skyline	#21/10-34	Dolerite	7353767	446461	7	158	-1	263	299	726
Skyline	#21/10-35	Dolerite	7352334	451304	133	162	306	<100	353	953

**Table 1 Skyline Project (E09/2646) – Anomalous pXRF REE results**

Three of the recently evaluated target areas within the Skyline Project returned anomalous REE\* results within pXRF readings, interpreted to be associated with carbonatites or ironstones overlying carbonatites. A maximum REE\* result within pXRF results of 0.11%, associated with an interpreted carbonatite, was returned from brief reconnaissance of exploration licence application 09/2733.

Further, an anomalous pXRF result of 4.3% Mn <sup>1</sup> was returned from one target area, highlighting the manganese potential within the Project area which is consistent with previously identified manganese occurrences along strike and within the vicinity of the anomalous result.

Following up the anomalous thorium target area in the north west of the Project tenement, originally highlighted during October 2022, (Refer ASX announcement 18 October 2022), further pXRF readings were taken with a maximum REE\* result returned of 0.44%, increasing the interpreted strike length of this zone up to ~500m, whilst still remaining open along strike to the north and south. Reach's discovery of REE within the dolerite system adds to our growing knowledge of locating these critical metals in addition to ironstones and carbonatite dykes on site and the large presence of each geological complex requires further field investigation.

**\* Rare earth elements detectable via pXRF – Y, La, Ce, Pr and Nd only.**



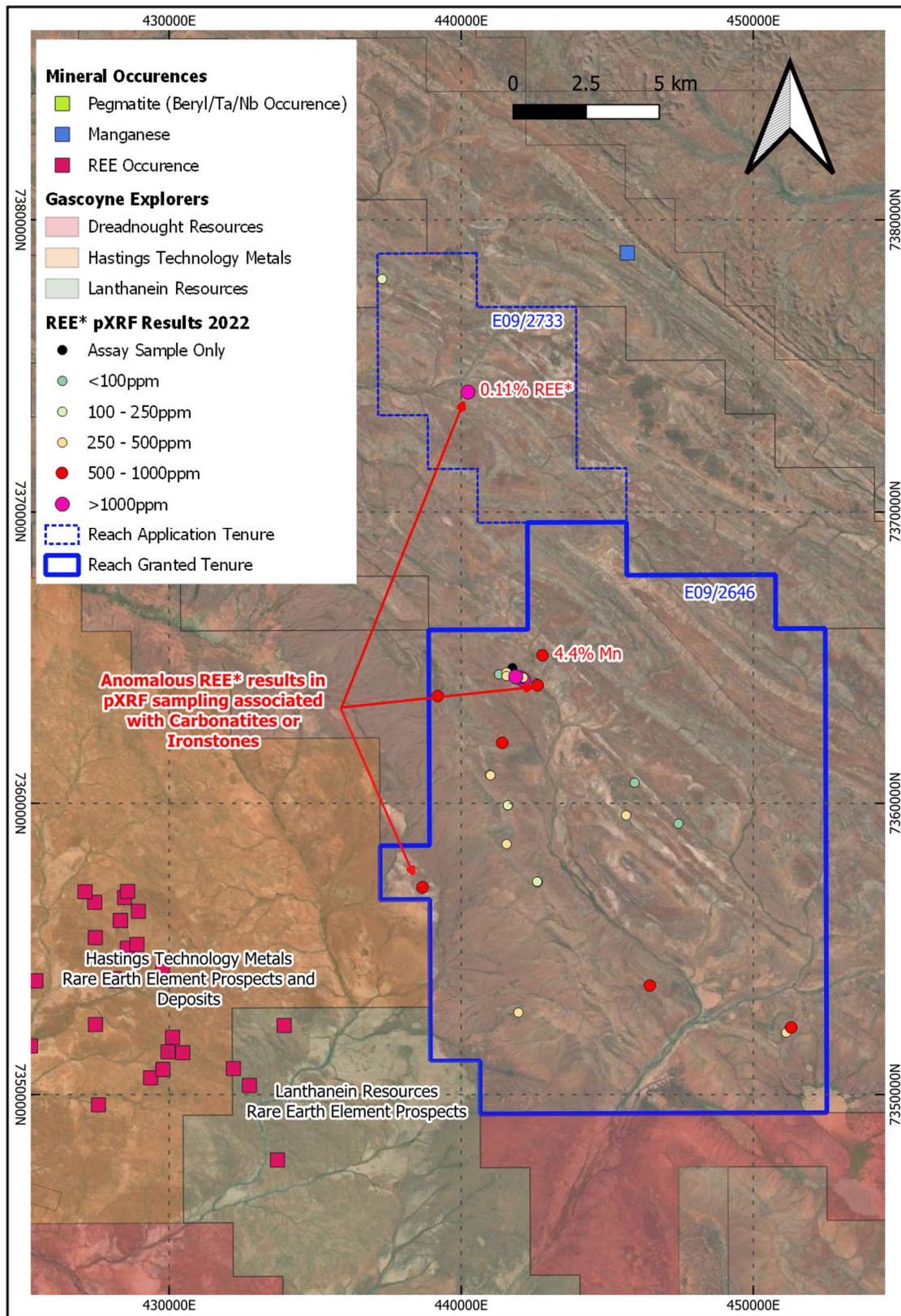


Figure 1 – Skyline Project

\* Rare earth elements detectable via pXRF – Y, La, Ce, Pr and Nd only.



### Critical Elements Project (E09/2377 and E09/2354)

A total of 17 new target areas were identified at the Critical Elements Project and sampling was focussed on the Wabli Creek tenement due to continued station activities at Yinnietharra.

All anomalous REE\* pXRF results returned are listed in Table 2.

Location	pXRF Sample Number	Northing	Easting	Y (ppm)	La (ppm)	Ce (ppm)	Pr (ppm)	Nd (ppm)	REE (ppm - Y+La+Ce+Pr +Nd Only)
Wabli Creek	#22/10-07	7247598	426638	<4	<50	-1	286	431	714
Wabli Creek	#22/10-08	7247376	426565	124	170	248	<100	307	848
Wabli Creek	#22/10-09	7247480	426591	285	333	374	<100	<200	990
Wabli Creek	#22/10-14	7247598	426616	9	124	203	242	<200	577
<b>Wabli Creek</b>	<b>#22/10-15</b>	<b>7247616</b>	<b>426707</b>	<b>39</b>	<b>521</b>	<b>657</b>	<b>&lt;100</b>	<b>&lt;200</b>	<b>1215</b>
Wabli Creek	#22/10-16	7247611	426656	55	159	348	<100	326	887
Wabli Creek	#22/10-18	7247740	426551	207	120	259	<100	<200	584
<b>Wabli Creek</b>	<b>#22/10-19</b>	<b>7247862</b>	<b>426572</b>	<b>424</b>	<b>1632</b>	<b>2820</b>	<b>483</b>	<b>1435</b>	<b>6794</b>
Wabli Creek	#22/10-20	7247890	426530	36	71	122	140	202	571
<b>Wabli Creek</b>	<b>#22/10-21</b>	<b>7247890</b>	<b>426530</b>	<b>77</b>	<b>320</b>	<b>629</b>	<b>&lt;100</b>	<b>294</b>	<b>1319</b>
Wabli Creek	#22/10-22	7247896	426525	138	205	230	<100	358	930
Wabli Creek	#20/10-20	7247749	426538	25	<50	-1	267	427	717
Yinnietharra	#22/10-25	7268412	443150	52	<50	180	<100	443	673

**Table 2 Critical Elements Project (E09/2377 and E09/2354) – Anomalous pXRF REE results**

A maximum result of 0.68% REE\* was recorded during this site visit from pXRF sampling within the same area on E 09/2377 (Wabli Creek) that has produced the previous highly significant results including 12.4% Ta<sub>2</sub>O<sub>5</sub>, 32.0% Nb<sub>2</sub>O<sub>5</sub>, 0.94% WO<sub>3</sub> and 0.25% Sn, (Refer ASX Announcement 29 November 2021). Additionally, pXRF results from the Company's last reconnaissance site visit recorded similarly spectacular results of up to 20.2% Ta, 12.1% Nb, 787ppm W, 204ppm Sn and 1079ppm REE <sup>1</sup>, \* (Refer ASX Announcement 18 October 2022).

Importantly, highly significant REE\* within pXRF results have now been recorded sporadically within an area of approximately 200m x 500m which remains open, particularly to the north and south, identifying this zone as a matter of priority for future exploitation.

\* Rare earth elements detectable via pXRF – Y, La, Ce, Pr and Nd only.



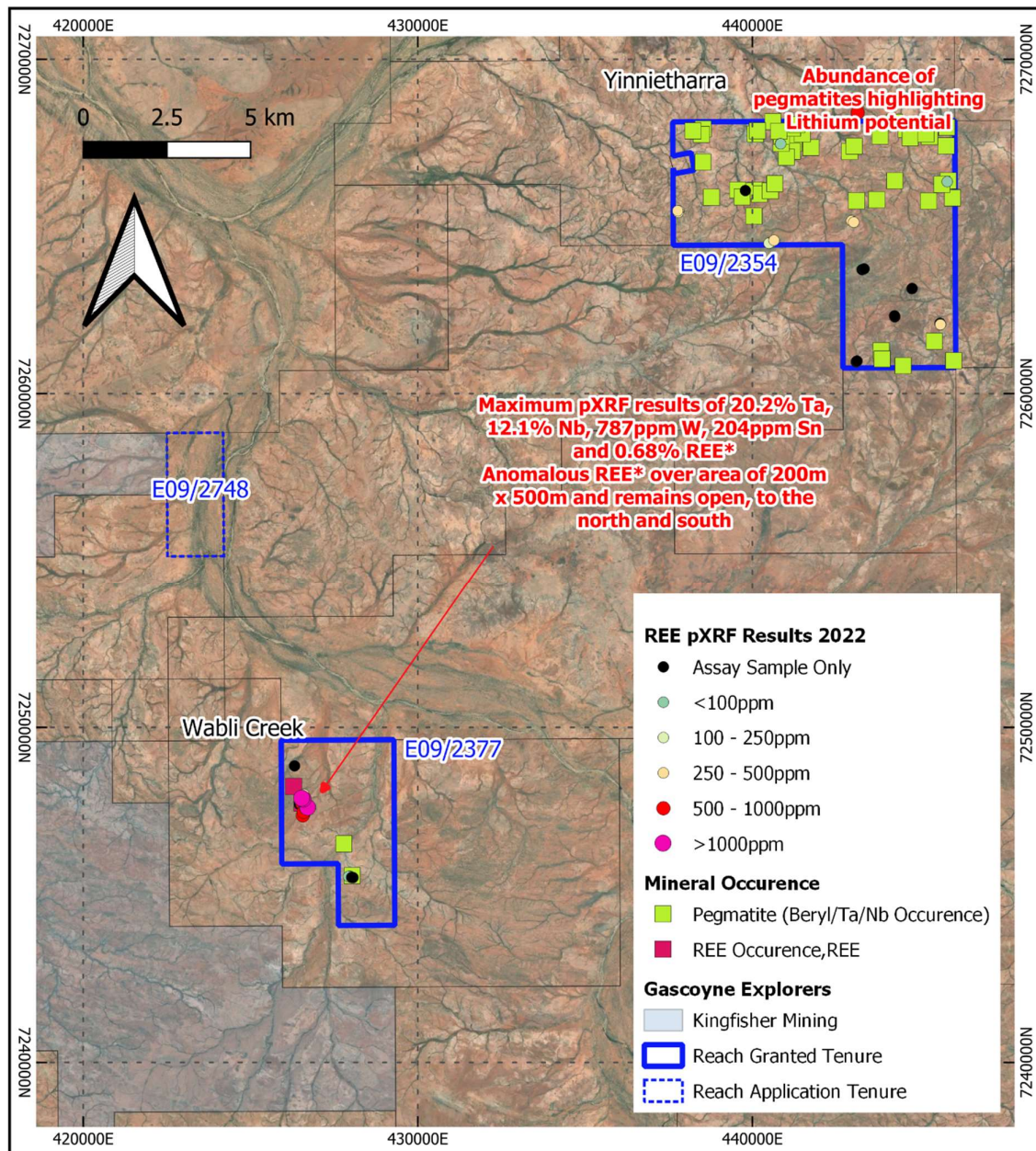


Figure 2 – Critical Elements Project

\* Rare earth elements detectable via pXRF – Y, La, Ce, Pr and Nd only.



## Next Steps

Exploration completed by Reach to date on both the Skyline and Critical Element Projects is the first stage in what will form the basis of a structured long term work program, focusing on rare earth elements. Whilst the rock chip sampling program is early-stage, it is an important first step, and upon the receipt of assays, in addition to further geochemical analysis already underway, the Company will be well placed in its strategy to actively pursue the Company's tenements for REE'. The Gascoyne has only recently been understood for its prospectivity of REE' generally, and with the hive of activity in the area, the Hastings Yangibana REE deposit and other recent exploration activities/discoveries made in the surrounding areas by other explorers such as Dreadnought Resources and Kingfisher Mining, the potential of the region for REE mineralisation continues to be reinforced.

Future exploration within identified anomalous target areas will likely comprise further rock chip sampling, soil sampling and geological mapping, to further define the extent of anomalism before any anticipated drilling on priority targets.

*This announcement has been authorised by the Board of Reach Resources Limited*

For further information please contact:

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### About Reach Resources Limited

*Reach Resources is an emerging gold and rare earth element (REE) explorer. It has built up a portfolio of gold tenements in the well-known and historically producing gold district of Payne's Find with a significant Inferred Resource Estimate and Exploration Target and a strategy to continue exploration to inform future development of this asset.*

*With the acquisition of several highly prospective REE tenements and exposure to a unique REE magnet recycling technology, the Company has the flexibility to also position itself towards the REE side of the minerals exploration sector with exposure to downstream processing. The company is committed to maximising shareholder value through the development of those opportunities*

**\* Rare earth elements detectable via pXRF – Y, La, Ce, Pr and Nd only.**





#### **Competent Person's Statement**

*Information in this announcement that relates to exploration results is based on and fairly represents information and supporting documentation prepared and compiled by Mr Matthew Svensson, who is a Member of the Australian Institute of Geoscientists. Mr Svensson is Exploration Manager for Auris Minerals Limited and consults to Reach Resources Limited on a part-time basis. Mr Svensson has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity which he is undertaking to qualify as a Competent Person, as defined in the 2012 Edition of the Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves. Mr Svensson consents to the inclusion in the announcement of the matters based on this information in the form and context in which it appears.*

#### **Forward Looking Statement**

*This report contains forward looking statements concerning the projects owned by Reach Resources Limited. If applicable, statements concerning mining reserves and resources may also be deemed to be forward looking statements in that they involve estimates based on specific assumptions. Forward-looking statements are not statements of historical fact and actual events and results may differ materially from those described in the forward looking statements as a result of a variety of risks, uncertainties and other factors. Forward looking statements are based on management's beliefs, opinions and estimates as of the dates the forward looking statements are made and no obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.*

**\* Rare earth elements detectable via pXRF – Y, La, Ce, Pr and Nd only.**



JORC Code, 2012 Edition, Table 1

Section 1: Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling techniques	Nature and quality of sampling (e.g. 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.	A total of 70 samples were analysed via pXRF using a Olympus Vanta. Each of the three beams were sampled for 10 seconds. A total of thirteen of these samples, weighing approximately 2-3 kilograms, were collected for laboratory analysis from the above.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	The pXRF unit samples are a pinpoint location on the sampled material. Calibration checks were performed the morning prior to use for the day.
	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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.	A representative sample of each outcrop was taken for both the pXRF and laboratory analysed samples. The sample for laboratory analysis weighed approximately 2-3 kilograms.
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).	Not applicable - No new drill sampling reported.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Not applicable - No new drill sampling reported.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Not applicable - No new drill sampling reported.
	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.	Not applicable - No new drill sampling reported.
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.	Not applicable - No new drill sampling reported.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Not applicable - No new drill sampling reported.
	The total length and percentage of the relevant intersections logged.	Not applicable - No new drill sampling reported.
Sub-sampling techniques	If core, whether cut or sawn and whether quarter, half or all core taken.	Not applicable - No new drill sampling reported.

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Criteria	JORC Code Explanation	Commentary
<b>and sample preparation</b>	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	Not applicable - No new drill sampling reported.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Not applicable - No new sampling reported.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Not applicable - No new drill sampling reported.
	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.	Not applicable - No new drill sampling reported.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Not applicable - No new drill sampling reported.
<b>Quality of assay data and laboratory tests</b>	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	All rock chip samples (13) have been submitted to ALS Laboratories in Perth for analysis via multi elements and rare earth minerals via ME-MS81 and ME-4ACD81 and gold via Au-TL43.
	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..	An Olympus Vanta was used to undertake the PXRF sampling. All three beams were utilised to determine the multi-element and a selection of rare earth elements.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	No company standards, blanks or duplicates have been submitted. The laboratory incorporates several relevant standards as part of the analysis.
<b>Verification of sampling and assaying</b>	The verification of significant intersections by either independent or alternative company personnel.	Not applicable - No new drill sampling reported.
	The use of twinned holes.	Not applicable - No new drill sampling reported.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Not applicable - No new drill sampling reported.
	Discuss any adjustment to assay data.	Not applicable - No new sampling reported.
<b>Location of data points</b>	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.	All locations were determined via a GPS. All locations are expected to be within 3-5m of the location reported.
	Specification of the grid system used.	GDA94 Zone 50
	Quality and adequacy of topographic control.	Not applicable - No new drill sampling reported.
<b>Data spacing and distribution</b>	Data spacing for reporting of Exploration Results.	The sample spacing of pXRF and samples for laboratory analysis is considered sufficient given the reconnaissance nature of the sampling.
	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.	Not applicable – Reconnaissance sampling only.

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Criteria	JORC Code Explanation	Commentary
	Whether sample compositing has been applied.	Not applicable - No new drill sampling reported.
<b>Orientation of data in relation to geological structure</b>	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Not applicable - No new drill sampling reported.
	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.	Not applicable - No new drill sampling reported.
<b>Sample security</b>	The measures taken to ensure sample security.	All samples were stored securely once collected and were transported to the laboratory in Perth for analysis.
<b>Audits or reviews</b>	The results of any audits or reviews of sampling techniques and data.	No audits were undertaken of the pXRF results.

## Section 2: Reporting of Exploration Results

Criteria	JORC Code Explanation	Commentary
<b>Mineral tenement and land tenure status</b>	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 Wabli Creek (E09/2377) and Yinnietharra (E09/2354) projects cover an area of approximately 65m <sup>2</sup> and are located 270km east of Carnarvon. Gascoyne Junction is situated 110km to the west-southwest. The Skyline (E09/2646 and ELA09/2733) project covers an area of approximately 327m <sup>2</sup> and is located 300km east-northeast of Carnarvon. Gascoyne Junction is situated 170km to the southwest.
	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.	Reach owns 100% of both projects.
<b>Exploration done by other parties</b>	Acknowledgment and appraisal of exploration by other parties.	Historic exploration has been limited comprising of rock chip sampling and stream sediment sampling
<b>Geology</b>	Deposit type, geological setting and style of mineralisation.	Reach's projects within the Gascoyne Mineral Field are prospective for rare earths mineralisation associated with carbonatite intrusions and associated fenitic alteration as well as Lithium mineralisation associated with pegmatites.
<b>Drill hole Information</b>	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>o easting and northing of the drill hole collar;</li><li>o elevation or RL (Reduced Level – elevation above sea level in metres);</li><li>o of the drill hole collar;</li><li>o dip and azimuth of the hole;</li></ul>	Not applicable - No new drilling reported.

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Criteria	JORC Code Explanation	Commentary
	<ul style="list-style-type: none"><li>○ down hole length and interception depth; and</li><li>○ hole length.</li></ul> <p>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.</p>	
<b>Data aggregation methods</b>	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	Not applicable - No new drilling reported.
	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.	Not applicable - No new drilling reported.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents are used.
<b>Relationship between mineralisation widths and intercept lengths</b>	These relationships are particularly important in the reporting of Exploration Results.	Not applicable - No new drilling reported.
	If the geometry of the mineralisation with respect to the drill-hole angle is known, its nature should be reported.	Not applicable - No new drilling reported.
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	Not applicable - No new drilling reported.
<b>Diagrams</b>	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.	Appropriate maps are included within the body of the accompanying document.
<b>Balanced reporting</b>	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.	Not applicable - No new drilling or sampling reported.
<b>Other substantive exploration data</b>	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.	Not applicable - No other data reported.

\* Rare earth elements detectable via pXRF – Y, La, Ce, Pr and Nd only.





Criteria	JORC Code Explanation	Commentary
<b>Further work</b>	The nature and scale of planned further work (e.g. 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 rock chip sampling, soil sampling and geological mapping, to further define the extent of anomalism with the aim of working towards defining drill targets.

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