

29 November 2021

# **Rare Earth Acquisition**

# **Highlights**

- Acquisition of highly prospective land holding with extensive REE-U
  pegmatites mapped at surface in the Yinnietharra region in the
  Gascoyne Province of Western Australia (Project)
- Project located ~80km from the Company's recently settled Rare Earth Project Acquisition from Skyline Resources Corporation Pty Ltd <sup>1</sup> which is located 20km east of Hastings Technology Metals Limited's (HAS) Yangibana REE Project
- Surface sampling results show elevated levels of critical metals including heavy and light rare earths including the Actinides (Thorium and Uranium<sup>3</sup>)
- Small scale alluvial and primary pegmatite mining undertaken targeting beryl, mica, bismuth, tantalum, and niobium
- Extensive pegmatites mapped at surface warranting drill testing
- The global rare earths market was valued at around US\$2 billion in 2020, and is forecast to grow to around US\$12 billion by 2030, up an average 16% a year <sup>2</sup>

**Reach Resources Ltd** (ASX: RR1) (**Reach** or the **Company**) is pleased to announce that it has entered into a conditional Binding Heads of Agreement (**HoA**) to acquire all of the shares in Critical Elements Pty Ltd (**CE**) which holds exploration licenses EL 09/2354 and EL 09/2377 in the Gascoyne Province of Western Australia.

- 1 ASX announcement 12 November 2021
- 2 (Outlook for Selected Critical Minerals Australia 2021 Australian Government, Department of Industry, Science, Energy and Resources Office of the Chief Economist).
- 3 The WA State Government has implemented a 'no uranium' condition on future mining leases with the exception of four uranium projects that received State Ministerial approval under the former Liberal National Government. As a result, the Company would at present, be unable to mine any potential uranium assets at the Project Government of Western Australia, Department of Mines, Industry Regulation and Safety



# **Overview**

The Gascoyne Project, situated in the Yinnietharra region, has historically produced significant quantities of beryl, mica, bismuth, tantalum and niobium from coarse grained pegmatites. Rare earth minerals have additionally been identified. The Project consists of two granted exploration licenses covering a land area of ~59km<sup>2</sup>.

Small scale alluvial and primary pegmatite mining has been sporadically undertaken. Exploration activities have been primarily focussed on tantalum-niobium-beryl-mica and to a lesser extent uranium. Sampling of a zoned pegmatite containing discrete blebs and pods of euxinite (niobate-titanate), samarskite, and uranopyrochlore.

The latter is particularly important due to its high levels of REEs: 5.04% Ta<sub>2</sub>O<sub>5</sub>; 39.78% Nb<sub>2</sub>O<sub>5</sub>; 11.48% U<sub>3</sub>O<sub>8</sub>; 0.57% Y<sub>2</sub>O<sub>3</sub>; 2.30%, ThO<sub>2</sub>; 0.54% WO<sub>3</sub>; 0.19% ZrO<sub>2</sub>; 0.19% Ce<sub>2</sub>O<sub>3</sub>; 0.13% La<sub>2</sub>O<sub>3</sub>, 0.14%, Nd<sub>2</sub>O<sub>3</sub>; 0.15% Sm<sub>2</sub>O<sub>3</sub>; 0.06% Tb<sub>2</sub>O<sub>3</sub>; 87 ppm EuO<sub>3</sub>  $^4$ .

Costeaning at the Wabli 9 Prospect returned grades of 12.4%  $Ta_2O_5$ , 32%  $Nb_2O_5$ , 0.94%  $WO_3$ , 0.25% Sn from selective samples. REE elements were not analysed. <sup>4</sup>

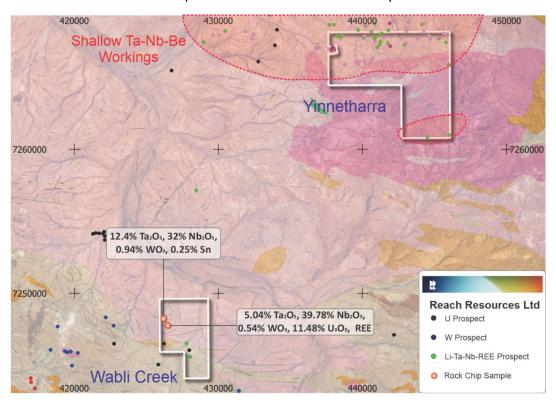


Figure 1: Project Geology, Prospects and Sampling

**<sup>4</sup>** Department of Mines, Industry Regulation and Safety - Wamex A31555



Sampling conducted to date is only from these two localities within the tenure and only of the mineralisation. Sampling was inherently biased through focusing only on the visibly mineralised material in order to gain an understanding of the elemental content of the mineralisation (See JORC table 1). Systematic sampling is required to understand the distribution and extent of mineralisation.

### **Tenement Details**

Details of the tenements which cover the Project area are set out in the table below. The exploration tenements that make up the Gascoyne REE Project are 100% owned by Critical Elements Pty Ltd:

Tenement	Legal Holder	Ownership
EL 09/2354	Critical Elements Pty Ltd	100%
EL 09/2377	Critical Elements Pty Ltd	100%

### Location

The Gascoyne Project is located 250km east of Carnarvon, 900km by road to the north of Perth. Access to the Project is via the Carnarvon or Mullewa to Diary Creek homestead thence along the Mt Augustus Road. Access within the tenure is via historical exploration/mining and station tracks.

# **Regional Geology**

The Project is located within the Gascoyne Province which is located at the western end of the Capricorn Orogen, a major zone of tectonism formed between the Archean Yilgarn and Pilbara Cratons

Basement to the province consists of the Glenburgh Terrane, which comprises granitic rocks of the Halfway Gneiss with igneous crystallization ages typically between 2660 and 2430 Ma, psammitic and pelitic rocks of the Moogie Metamorphics deposited between 2240 and 2125 Ma, and a 2005–1970 Ma Andean- type batholith (Dalgaringa Supersuite).

Middle Proterozoic sediments of the Bangamall Basin unconformably overlay the Gascoyne Province to the east and Palaeozoic Carnarvon Basin sediments to the West.

## **Previous Exploration**

Exploration in the region commenced in the early 1970's which led to the identification of multiple uranium occurrences within calcrete, weathered bedrocks and clays. Regional airborne radiometric surveys identified numerous radiometric anomalies which coincided with mineralised pegmatites.



#### Wabli Creek

Pegmatites at Wabli Creek were evaluated cursorily by Great Mines Ltd, Kookynie Resources NL and Nickel Mines Ltd whilst targeting calcrete hosted uranium deposits between 1974 and 1983.

Two mineralised pegmatites have been the focus of exploration to date at Wabli. The No1 vein has been mapped over 10m in a pit and has potential of extending further underneath soil cover. Reconnaissance assays indicate significant levels of critical element like Nb and Ta.

# **Proposed exploration**

In order to understand the extent and potential of the mineralisation evident across the Project the following activities are planned to be undertaken:

- Satellite imagery interpretation to map extents of historical mining activities
- Field reconnaissance and sampling of pegmatites and historical mining activities undertaken across site in order to understand zonation and grade distribution
- Scout drill testing of the pegmatites to determine their geometry and mineralisation potential
- Assays will be undertaken by fusion ICPMS to ensure complete refractory phase (xenotime) dissolution.

# **Key terms of the Proposed Transaction**

The Company proposes to acquire 100% of the issued capital of Critical Elements Pty Ltd. Critical Elements Pty Ltd and its respective shareholders are not related parties of the Company. The consideration payable for the Proposed Acquisition pursuant to the HoA is 40 million fully paid ordinary shares.

Completion of the Proposed Acquisition is subject to final due diligence which is to be completed by the Company within the next 20 days.

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

### For Further information please contact:

Chris Achurch Company Secretary

-ENDS-



#### **About Reach Resources Limited**

Reach Resources is an emerging gold explorer and aspiring gold miner. It has built up a portfolio of gold properties in a well-known and historically producing gold district with a strategy to apply novel exploration and development thinking. The company is committed to maximising shareholder value through the development of those opportunities.

## Competent Person's Statement

Statements contained in this report relating to exploration results and potential are based on information reviewed by Professor Ken Collerson, who is a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM). Professor Ken Collerson BSc (Hons.) PhD., FAusIMM is an independent consultant geologist. He has field mapping and research experience with the geology of Northern Saskatchewan and has published peer reviewed papers on its geological history. He has sufficient relevant experience in relation to the mineralisation styles being reported on to qualify as a Competent Person as defined in the Australian Code for Reporting of Identified Mineral resources and Ore reserves (JORC Code 2012). Professor Ken Collerson consents to the use of this information in this report in the form and context in which it appears.

### No New Information

Except where explicitly stated, this announcement contains references to prior exploration results, all of which have been cross-referenced to previous market announcements made by the Company. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements.

## 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.



# Appendix A: JORC Code (2012) Table 1

# Oakover Project

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>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 downhole gamma sondes, or handheld XRF instruments, etc).</li> <li>These examples should not be taken as limiting the broad meaning of sampling.</li> </ul>	Selective rock chip sampling of mineralised pegmatite was also undertaken Kookynie Resources NL in1990
	<ul> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	<ul> <li>It is noted that in the body of the release that the sampling was selective, focusing on mineralisation within the pegmatite</li> </ul>
	Aspects of the determination of mineralisation that are Material to the Public Report.	<ul> <li>Mineralisation was visually identified within the pegmatite and selectively sampled to determine the elemental content of the mineralisation- it was not intended to be representative of the entire pegmatite</li> </ul>
	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.	No description was provided in relation to the size of the sample or analysis method applied
Drilling techniques	Drill type (e.g. core, reverse circulation, openhole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is oriented and if so, by what method, etc).	No drilling conducted
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <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>	No drilling conducted
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.	Only cursory visual logging of the samples were documented
	<ul> <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>	



Criteria	JORC Code explanation	Commentary
Sub- sampling techniques and sample preparation	<ul> <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 subsampling 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> <li>No sub sampling methods were provided, no sample preparation methods were documented</li> <li>Sampling was inherently biased through focusing only on the visibly mineralised material in order to gain an understanding of the elemental content of the mineralisation</li> <li>Sample sizes weren't documented</li> </ul>
Quality of assay data and laboratory tests	<ul> <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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>Assaying procedure and quality control procedures were not documented</li> <li>No geophysical tools were utilised</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>The substantial reports were evaluated from previous exploration report WAMEX A31555</li> <li>No drilling data was reported</li> <li>Data was digitised from historical reports</li> <li>No adjustments were performed to the assay data</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Sample locations were registered from historical maps and cross referenced to Western Australia Department of Mines, Industry Regulation and Safety Mindex database</li> <li>MGA 94 zone 50</li> <li>Topography was sourced from the regional DTM which is sufficient for the</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Two selective rock chip samples were taken</li> <li>The sampling is early stage by nature and is not intended for use for mineral resource estimation</li> <li>No sample compositing utilised</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	Rock chip samples only represent point samples



Criteria	JORC Code explanation	Commentary
Sample security	The measures taken to ensure sample security.	<ul> <li>Details of measures taken for the chain of custody of samples is unknown for the previous explorers' activities.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>All digital data audited by an independent consultant.</li> </ul>

# Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>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.</li> <li>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.</li> </ul>	The Gascoyne Project is comprised of two granted exploration licenses, EL 09/2354 and EL 09/2377 There are no known impediments to exploration across the Project
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Previous exploration across Wabli predominantly focused on uranium and tungsten potential. Uranium exploration utilised airborne radiometric surveys and follow up geochemical sampling. Through the investigation of radiometric anomalies, REE-U pegmatites were identified</li> <li>Previous exploration across Yinnietharra focused on prospecting style sampling and where justified small scale mining of pegmatites for beryl, mica, bismuth, tantalum and niobium</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	Poly mineral pegmatites are the target for exploration within the Project.
Drill hole Information	<ul> <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> <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>	No drill holes reported
Data aggregation methods	<ul> <li>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.</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>	No data aggregation conducted



Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	<ul> <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 (e.g. 'down hole length, true width not known').</li> </ul>	No drilling reported
Diagrams	<ul> <li>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.</li> </ul>	Appropriate plans are included in the body of the report
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.	Only two surface samples have been taken and both have been reported
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.	<ul> <li>To date only mapping and selective sampling has been completed</li> <li>No other modifying factors have been investigated at this stage.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work         (e.g. 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> <li>Further work will include systematic mapping and sampling of pegmatites identified</li> <li>Appropriate plans are included the body of this release</li> </ul>