ASX Announcement
21 August 2024

PINNACLE MINERALS LTD

REE Mineralisation Identified in Narlaby Palaeochannel

HIGHLIGHTS

- **First-pass investigation for rare earth element (REE) mineralisation on historical drillholes at the Wirrulla Project in South Australia identifies significant and shallow REE results over a 3.5-km-long trend within the Narlaby Palaeochannel**
- **Total Rare Earth Element Oxide (TREO) results include:**
    - **6 m at 1,708 ppm from 39 m: including 3 m at 2,095 ppm TREO; 49% heavy REO (HREO) and 28% Magnet REO (MREO)**
    - **15m at 865 ppm TREO from 45 m: including 3 m at 1,475 ppm TREO; 25% HREO and 20% MREO**
- **Preliminary ionic-leach tests identified a minor leachable portion of REE**
- **The focus of the analysis was the Narlaby Palaeochannel which hosts the Boland REE Prospect (LSE: COBR)**
- **Historical petrography of the basement material in the area suggests that the original pre-metamorphic intrusive may have associated carbonatites**[1]
- **Results provide Pinnacle with a strong basis from which to investigate the potential for palaeochannel/clay-hosted REE mineralisation**

Pinnacle Minerals Ltd (**PIM:**ASX) ("**Pinnacle",** the "**Company"**) is pleased to announce that select intervals from nine historical holes from within the footprint of the Narlaby palaeochannel have identified significant and shallow TREO concentrations, including 1,708 ppm TREO over 6 m from 39 m depth (SBRC 13). Importantly, a 3-m sample with the highest TREO grade of 2,095 ppm TREO has the highest portion of HREO at 49% and 105 ppm Tb+Dy-oxide (SBRC 13). This indicates a significant enrichment in valuable heavy REEs at Wirrulla. The MREOs average 24% and peak at 31% (SBRC 3).

Table 1: Significant results from ≥3-m interval samples >600 ppm TREO.

Hole ID	From (m)	To (m)	Drilled Width (m)	TREO ppm	MREO (%)	HREO (%)
SBRC 2	69	72	3	1,009	23	48
SBRC 3	84	87	3	759	31	27
SBRC 5	63	66	3	775	22	26
SBRC 11	36	42	6	686	21	12
including	36	39	3	833	24	12
SBRC 13	45	60	15	865	22	22
including	45	48	3	1,475	20	25
SBRC 18	39	45	6	1,708	29	44
including	42	45	3	2,095	28	49

[1] Open File Envelope Number 8981, EL 1952 Carawa, Annual and final report for the period 27/7/94 to 22/11/95

Rare earth elements are categorised as critical minerals by the Australian Governments Department of Industry Science and Resources[2] and have increased demand given the use of REE in permanent magnets and other high-tech applications.

The analysed holes form a ~3.5-km-long transect that overlies a circular magnetic feature. Historical petrographic analysis from basement material in the target area suggested that the original pre-metamorphic intrusive could have been of ijolitic composition and may have associated carbonatites[1].

Pinnacle is targeting palaeochannel hosted ionic REE mineralisation similar to Cobra Resources (LSE: COBR) Wudinna/Boland Project which has MREO recoveries up to 58%[3] with-in the Narlaby Palaeochannel to the East of Pinnacle's Wirrulla Project (Figure 1).

Pinnacle Minerals Managing Director, Nic Matich, commented:

> ***"The assay results at Wirrulla further strengthen Pinnacle's understanding of the complex geology of the Project and provide the company with confidence to conduct further exploration for REE-bearing minerals within the Narlaby Palaeochannel. Given that historical samples highlight high heavy REE components there is potential for REE mineralisation both at scale and shallow depth."***

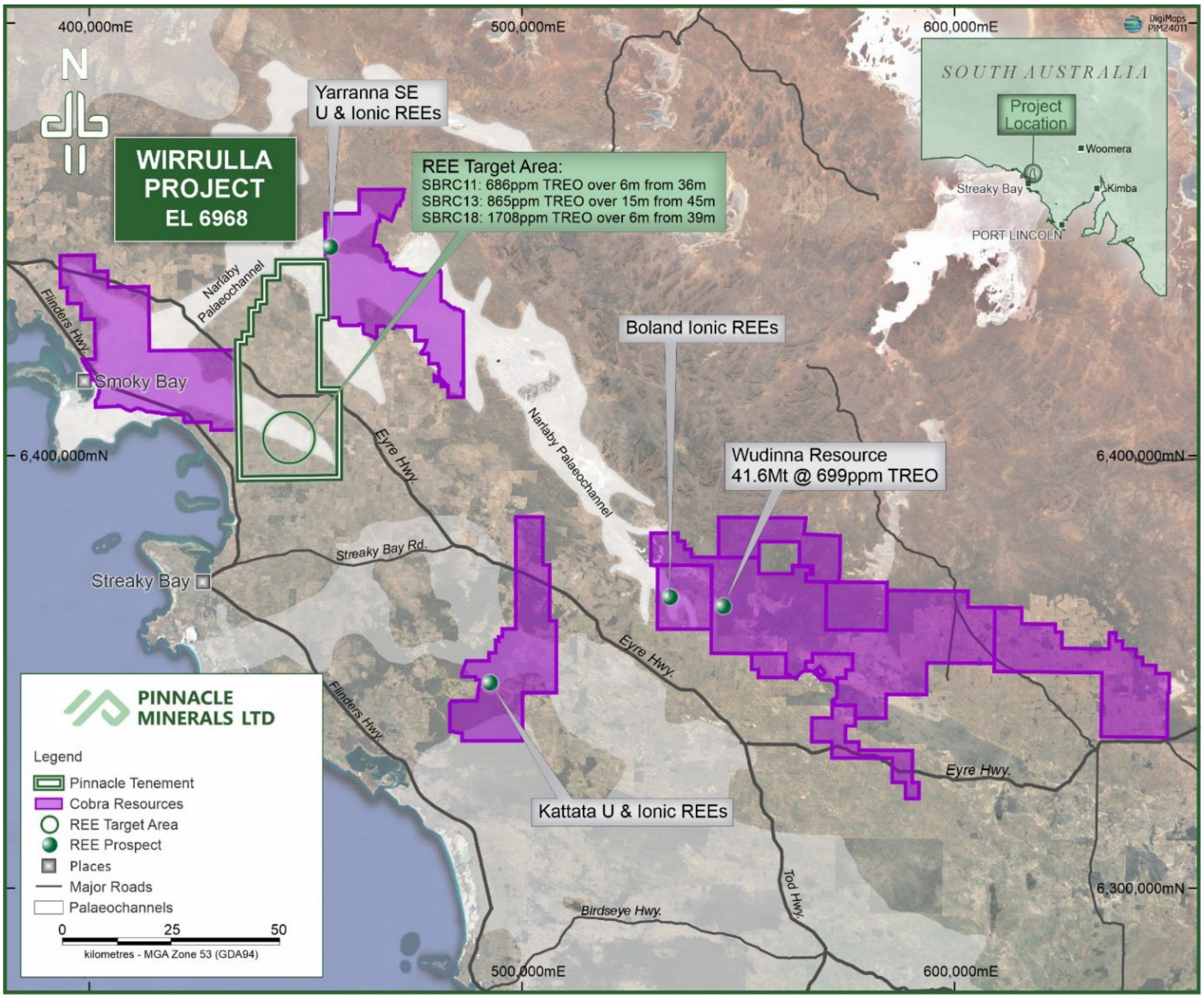

Figure 1: Wirrulla Project highlighting the Narlaby Palaeochannel and Cobra Resources Boland Ionic REE Project.

[2] https://www.industry.gov.au/publications/australias-critical-minerals-list-and-strategic-materials-list

[3] https://cobraplc.com/project/wudinna-project/

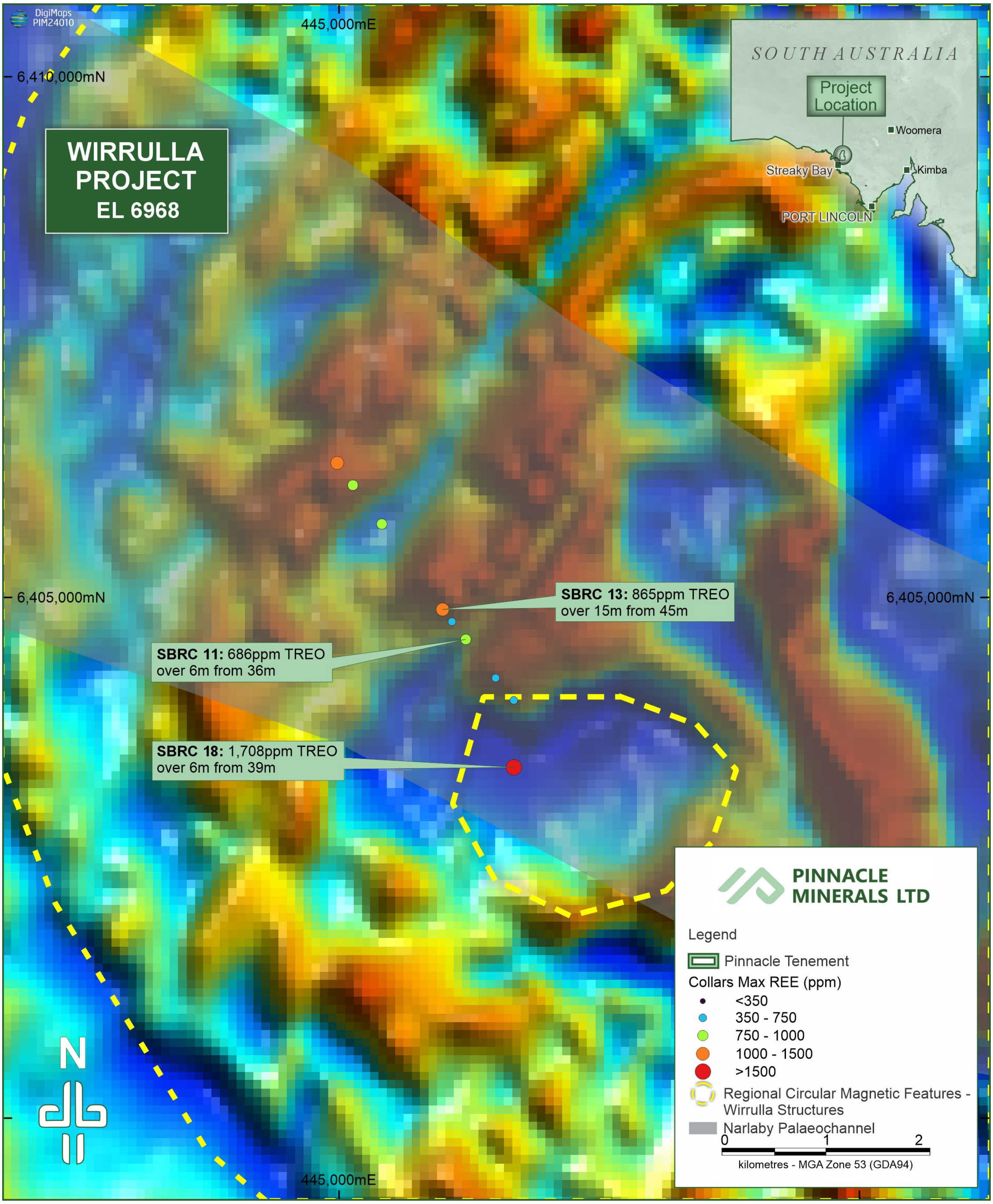

Figure 2: Peak TREO values underlain by Total Magnetic Intensity (TMI) image.

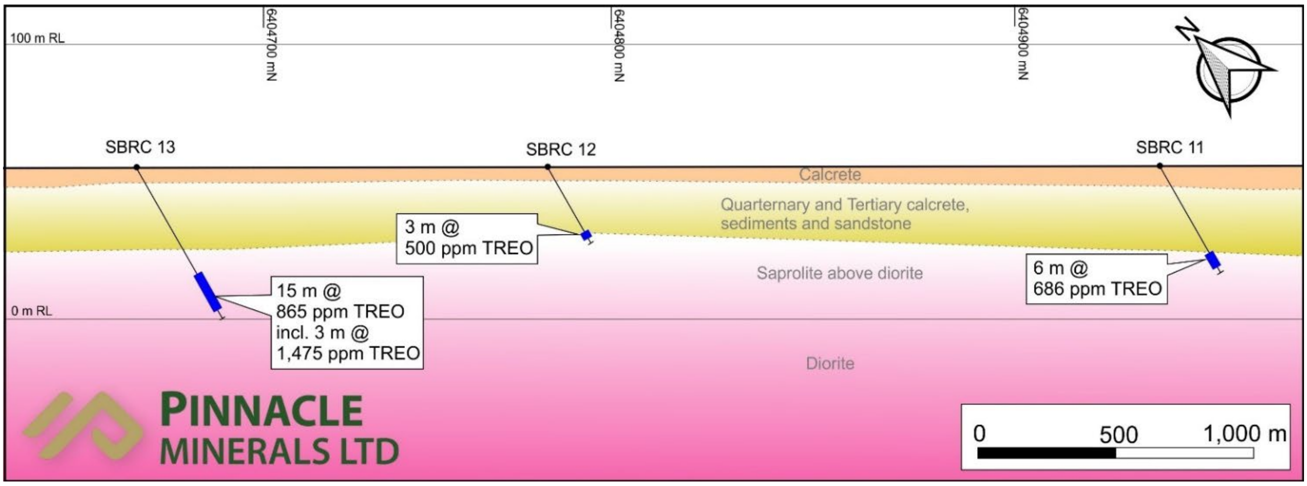

Figure 3: Cross-section of adjacent holes SBRC 11–13. Given that the angled nature of the drilling intercepts do not likely represent true thickness; which is more likely to be 70–80% of the thickness reported here.

Results Discussion

Collar locations with peak TREO results are presented in Figure 2. All historical collars are located on private land with road access all year around. Preliminary investigations for land access agreements for follow up exploration is underway.

Two geochemical techniques were utilised to analyse the historical core held at the Tonsley Core Library, South Australia; reverse circulation drillholes were originally drilled by Newcrest Mining in 1998[4]. The mineralisation largely occurs at the contact between overlying cover and saprolite (Figure 3).

A lithium borate fusion followed by acid dissolution and ICP-MS/AES analysis (ME-MS81) was conducted in conjunction with an ammonium sulphate leach (ME-MS19). The ME-MS81 method is considered representative of the total REE content in the sample (Table 3). The ammonium sulphate leach was utilised to understand the potential for liberating REEs from ionic clays formed by the natural weathering of REE-bearing minerals and adsorption of REE ions onto clay surfaces.

The ammonium sulphate leach was able to liberate a portion of the REEs in each of the samples tested (Table 4). Up to 11% MREO were recovered from ionic leach tests (Appendix 2). The results provide impetus for the company to follow up with further metallurgical test work prior to committing to a drilling program. It has to be noted that the samples have been in the drill core shed for 26 years which may have reduced the ionic component over time.

Pinnacle's assessment of historical samples serves as proof of concept that REE mineralisation with an ionic component is present in the Narlaby Palaeochannel. Follow-up work will target shallower parts of the palaeochannel and produce fresh samples that may have a higher ionic component.

Acidic groundwater within the Narlaby Palaeochannel (pH recorded as low as 2.2)[5] interacting with favourable source rocks rich in REE-containing minerals such as apatite (recorded in basement rock in CAR 10-2[6]) have the potential to result in REE mobilisation or REE accumulation in regolith[7]. Therefore, Pinnacle targets palaeochannel-hosted REE mineralisation analogous to the Boland Project in the same palaeochannel. To this end the company has engaged specialist geological consultants RSC

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[4] Open File Envelope Number 9207, EL 2176 Streaky Bay, Annual and final report for the period 7/6/97 to 6/6/98
[5] Cobra Resources PLC (LSE:COBR) LSE announcement 12th February, 2024
[6] Open File Envelope Number 8981, EL 1952 Carawa, Annual and final report for the period 27/7/94 to 22/11/95
[7] Bamforth et al, High-Grade accumulation in regolith: Insights from supergene alteration of an apatite-rich vein at the Kapunda Cu mine, South Australia, Mineralium Deposita

(https://www.rscmme.com/) to review all available data for the project in conjunction with the geochemical data from ALS to determine follow up steps to progress the project.

This announcement has been authorised for release by the Board of Pinnacle Minerals Ltd.

For further information, please contact:

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About Pinnacle Minerals

Pinnacle Minerals Ltd (ASX: PIM) is an ASX listed technology minerals company focused on delivering shareholder value via the systematic exploration and development of its portfolio of battery and technology metals projects in Canada, Western Australia and South Australia. Pinnacle aims to deliver exploration success via systematic and geologically rigorous techniques. The Company's focus is the "Adina East Project" in James Bay, Quebec which is proximal to the world class Adina Lithium Project (Winsome Resources: ASX: WR1) and adjacent to the Trieste Lithium Project (Loyal Lithium: ASX: LLI) and the Tilly Lithium Project (ASX: WR1). The Company's Australian exploration assets are prospective for Rare Earth Elements and Heavy Mineral Sands.

Forward Looking Statements

This announcement contains 'forward-looking information' that is based on the Company's expectations, estimates and projections as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to the Company's business strategy, plans, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations, mineral reserves and resources, results of exploration and related expenses. Generally, this forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'potential', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this announcement are cautioned that such statements are only predictions, and that the Company's actual future results or performance may be materially different. Forward looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance, or achievements to be materially different from those expressed or implied by such forward-looking information.

Competent Person statement

The information in this report that relates to Exploration Results is based on information compiled under the supervision of Dr Michael Gazley, a Competent Person who is a Member of The AusIMM and a Member of the AIG. Dr Gazley is employed by RSC as General Manager Geoscience & Exploration. The full nature of the relationship between Dr Gazley and Pinnacle Minerals Ltd has been declared, including any issue that could be perceived by investors as a conflict of interest. Dr Gazley has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity he has undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for the Reporting of Mineral Resources and Ore Reserves. Dr Gazley consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

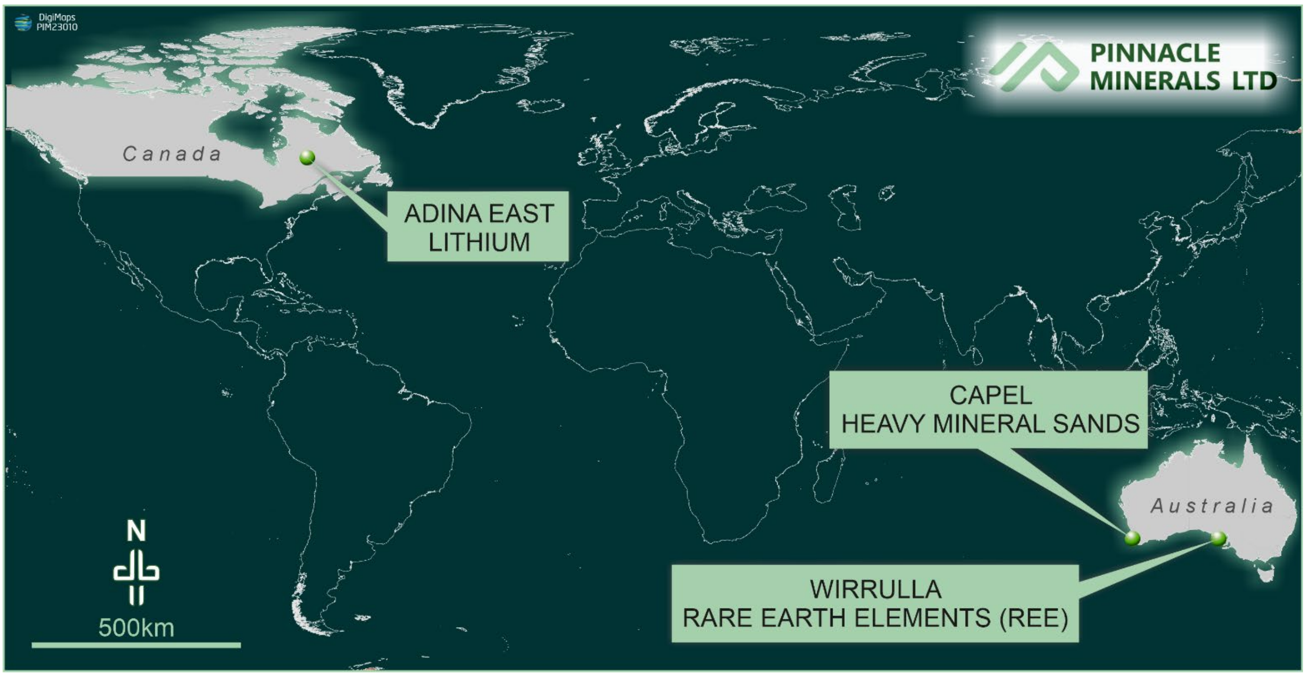

Figure 4: Pinnacle Minerals Projects' Location Map

Appendix 1 Collar Summary and Peak TREO

Table 2: Collars referenced in this announcement

Hole ID	Easting (GDA94 Zone 53)	Northing (GDA94 Zone 53)	EOH (m)	Dip	AZI
SBRC 2	444983	6406292	84	60°	140°
SBRC 3	445411	6405706	105	60°	140°
SBRC 5	445133	6406079	77	60°	140°
SBRC 8	446679	6404013	42	60°	140°
SBRC 9	446505	6404227	29	60°	140°
SBRC 11	446218	6404598	44	60°	140°
SBRC 12	446085	6404768	32	60°	140°
SBRC 13	445995	6404885	63	60°	140°
SBRC 18	446679	6403369	60	60°	180°

Appendix 2 Summary of Assay Results

Table 3: Geochemical Results (ME-MS81) of samples > 400ppm TREO – Results are in parts per million (ppm) unless otherwise stated

Hole ID	From (m)	To (m)	CeO_2	Dy_2O_3	Er_2O_3	Eu_2O_3	Gd_2O_3	Ho_2O_3	La_2O_3	Lu_2O_3	Nd_2O_3	Pr_6O_{11}	Sm_2O_3	Tb_4O_7	Tm_2O_3	Y_2O_3	Yb_2O_3	TREO	MREO %	HREO %
SBRC 2	69	72	149	44	29	10	46	9	110	3	152	34	34	7	4	357	22	**1,009**	23%	**48%**
SBRC 3	84	87	134	21	13	8	26	4	148	2	170	44	31	4	2	141	12	759	**31%**	27%
SBRC 5	63	66	276	21	13	7	23	4	104	1	119	30	23	3	1	137	9	775	22%	26%
SBRC 8	36	39	220	10	6	4	14	2	97	1	105	28	19	2	1	56	4	568	26%	15%
SBRC 9	18	21	144	10	6	3	11	2	68	1	73	19	13	2	1	59	4	414	25%	21%
SBRC 11	36	39	302	13	7	4	17	2	208	1	141	44	23	2	1	63	6	833	24%	12%
SBRC 11	39	42	206	7	5	3	8	1	164	1	64	22	10	1	1	43	4	539	17%	12%
SBRC 12	27	30	209	8	4	8	10	1	98	0	82	24	14	1	0	37	2	500	23%	13%
SBRC 13	45	48	604	33	25	10	33	7	170	4	202	50	40	5	3	264	24	**1,475**	20%	25%
SBRC 13	48	51	267	24	16	7	25	5	172	2	148	41	27	4	2	172	16	928	23%	27%
SBRC 13	51	54	235	15	9	4	16	3	114	1	102	27	18	2	1	102	8	657	22%	22%
SBRC 13	54	57	205	11	6	4	13	2	99	1	90	24	14	2	1	69	5	546	23%	18%
SBRC 13	57	60	265	14	9	5	17	3	130	1	117	31	20	2	1	95	7	719	23%	19%
SBRC 18	39	42	203	55	32	17	58	10	164	3	269	60	58	9	4	350	26	**1,320**	**30%**	**38%**
SBRC 18	42	45	174	91	55	27	94	18	247	6	387	88	85	14	7	761	40	**2,095**	**28%**	**49%**

Table 4: Percentage of REEs extracted via ammonium sulphate leach (ME-MS19)

Hole ID	From	To	CeO_2	Dy_2O_3	Er_2O_3	Eu_2O_3	Gd_2O_3	Ho_2O_3	La_2O_3	Lu_2O_3	Nd_2O_3	Pr_6O_{11}	Sm_2O_3	Tb_4O_7	Tm_2O_3	Y_2O_3	Yb_2O_3	TREO	MREO	HREO
SBRC 2	69	72	3.5	2.6	2.4	2.9	2.7	2.4	0.7	2.7	1.8	1.3	3.1	2.7	2.6	2.0	2.7	2.2	1.9	2.2
SBRC 3	84	87	7.9	5.9	6.0	5.2	5.9	5.8	3.7	6.2	5.0	4.3	5.5	5.5	5.9	5.7	5.7	5.5	5.0	5.7
SBRC 5	63	66	0.4	1.8	2.3	1.0	1.4	2.0	0.2	4.2	0.6	0.4	1.1	1.5	3.1	1.9	3.5	0.8	0.7	1.9
SBRC 8	36	39	3.0	4.8	4.6	4.4	4.8	4.6	1.8	6.0	3.8	3.0	5.0	4.6	5.3	4.7	5.5	3.3	3.8	4.7
SBRC 9	18	21	9.3	11.6	10.7	7.4	12.8	12.5	8.6	8.8	11.3	10.0	12.9	12.5	11.0	11.1	10.9	10.1	11.1	11.2
SBRC 11	36	39	2.7	3.9	4.3	4.1	3.9	4.2	1.7	3.8	3.3	2.7	3.9	4.1	3.9	4.1	4.0	2.7	3.2	4.1
SBRC 11	39	42	2.4	6.5	6.3	4.3	6.5	6.9	1.8	5.9	3.9	3.0	6.0	5.7	6.8	6.8	6.1	3.1	3.9	6.5
SBRC 12	27	30	0.7	3.3	3.1	2.1	3.1	3.3	0.4	3.5	1.8	1.1	2.8	3.1	3.7	3.3	4.1	1.3	1.7	3.2
SBRC 13	45	48	4.4	5.0	4.6	4.7	5.1	4.9	2.4	5.0	4.5	3.8	5.1	4.8	5.0	4.5	5.2	4.3	4.5	4.7
SBRC 13	48	51	4.2	5.2	5.7	4.2	4.8	5.7	1.5	6.2	3.5	2.6	4.6	5.1	6.0	5.6	6.2	3.9	3.6	5.5
SBRC 13	51	54	5.0	6.1	7.2	4.2	5.8	6.7	2.1	7.8	3.6	3.0	4.2	6.0	7.8	7.3	7.7	4.6	3.8	6.9
SBRC 13	54	57	5.6	5.9	6.5	4.1	5.5	6.1	2.5	7.8	4.2	3.6	5.4	5.5	7.0	6.7	7.5	4.8	4.3	6.4
SBRC 13	57	60	4.1	4.3	4.6	3.7	3.8	4.4	2.2	5.0	3.3	2.8	3.7	4.3	5.8	4.7	5.9	3.6	3.3	4.6
SBRC 18	39	42	3.3	4.7	3.9	4.2	5.3	4.5	3.0	4.1	3.5	3.0	4.4	4.9	4.1	3.3	4.1	3.6	3.6	3.8
SBRC 18	42	45	3.4	2.7	2.3	2.9	2.9	2.5	2.4	2.5	2.6	2.3	2.9	2.7	2.4	1.6	2.6	2.3	2.6	2.0

Appendix 3 JORC Tables

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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g., 'reverse circulation drilling was used to obtain 1m 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.*	• Samples derive from historical drilling from the South Australia Drill Core Reference Library and do not relate to drilling carried out by Pinnacle Minerals. • Sample compositing by Newcrest at the time of drilling of 1 m samples to 3 metres (1kg – 2kg) has been applied to the SBRC series holes. • Approximate 50 g samples were taken with a small scoop for analysis.
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.).*	• Aircore/Reverse Circulation drilling (with and without hammer attachment) was used to obtain samples.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• The twin-tube aircore drilling technique is known to provide appropriate samples from the face of the drill hole for exploration targeting. • As this drilling campaign was not utilised for resource definition any variation over a metre-by-metre basis of sampling is not expected to alter the interpretation of the results. • No historical sample return information was recorded.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Every drill hole was logged in full (Open File Envelope Number 9207, EL 2176 Streaky Bay, Annual and final report for the period 7/6/97 to 6/6/98), with detailed logging based on the sample collected for each metre by the site geologist at the time of drilling.

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc., and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Sample methods were appropriate for scout drilling which as variation on a meter-by-meter basis will not affect the interpretation of the results. • 50 g is the maximum amount of sample allowed to collect from the core library and the sample sizes are suitable to reliably capture geological characteristics, based on industry experience of the geologists involved.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.*	• Pinnacle used a total digest fusion method (ME-MS81) to analyse the full REE content of the samples including acid-resistant minerals. • For the ionic leach tests, an acidified ammonium sulphate leach method (ME–MS19) was carried out by ALS. This technique is appropriate to identify the leachable portion of clay-hosted REE mineralisation. Standard Certified Reference Material sample and results were checked to ensure they are within tolerance (<2 SD) and that there is no bias or drift for both ME-MS81 and ME-MS19. Accuracy and Precision are acceptable
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• REE analysis was originally reported in elemental form, but it has been converted to relevant oxide concentrations as per the industry standard: TREO = La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3 MREO = Dy_2O_3 + Nd_2O_3 + Pr_6O_{11} + Tb_4O_7 HREO = Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3 • Element to Oxide Conversion

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
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<tr><th>Element</th><th>CF (multiplier)</th><th>Oxide</th></tr>
<tr><td>La</td><td>1.1728</td><td>La_2O_3</td></tr>
<tr><td>Ce</td><td>1.2284</td><td>CeO_2</td></tr>
<tr><td>Pr</td><td>1.2082</td><td>Pr_6O_{11}</td></tr>
<tr><td>Nd</td><td>1.1664</td><td>Nd_2O_3</td></tr>
<tr><td>Sm</td><td>1.1596</td><td>Sm_2O_3</td></tr>
<tr><td>Eu</td><td>1.1579</td><td>Eu_2O_3</td></tr>
<tr><td>Gd</td><td>1.1526</td><td>Gd_2O_3</td></tr>
<tr><td>Tb</td><td>1.1762</td><td>Tb_4O_7</td></tr>
<tr><td>Dy</td><td>1.1477</td><td>Dy_2O_3</td></tr>
<tr><td>Ho</td><td>1.1455</td><td>Ho_2O_3</td></tr>
<tr><td>Er</td><td>1.1435</td><td>Er_2O_3</td></tr>
<tr><td>Tm</td><td>1.1421</td><td>Tm_2O_3</td></tr>
<tr><td>Yb</td><td>1.1387</td><td>Yb_2O_3</td></tr>
<tr><td>Lu</td><td>1.1371</td><td>Lu_2O_3</td></tr>
<tr><td>Y</td><td>1.2699</td><td>Y_2O_3</td></tr>
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All results are checked by the Competent Person.
The leach recovery from ME-MS19 was calculated against ME-MS81 to obtain the recovery in percent.
</td></tr>
<tr><td>Location of data points</td><td>
Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.
Specification of the grid system used.
Quality and adequacy of topographic control.
</td><td>
Coordinates were retrieved from open file documentation (SARIG) which were surveyed with a differential GPS.
The datum used for is GDA94 and coordinates are projected as UTM zone 53.
For the purposes of first pass exploration, the Competent Person considers that this is appropriate precision in location of drillhole collars.
</td></tr>
<tr><td>Data spacing and distribution</td><td>
Data spacing for reporting of Exploration Results.
Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.
Whether sample compositing has been applied.
</td><td>
Historical drill density was 80–600 m on a 140° traverse line for the SBRC 1–13 series holes where Pinnacle collected isolated historical samples of 8 holes.
Historical drill spacing was 300–1,200 m on an east-west traverse line for the SRBC 14-20 where Pinnacle collected two samples from hole SBRC 18.
Each aircore sample is a single 1-m sample of material intersected down the hole. Samples have been composited to 3-m intervals.
</td></tr>
<tr><td>Orientation of data in relation to geological structure</td><td>
Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.
If the relationship between the drilling orientation and the
</td><td>
SBRC holes drilled at -60°.
1–3 m samples are sufficient to define clay zones and to
</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	define layers / structures in the basement. • The orientation of the drilling is considered appropriate for testing the lateral and vertical extent of mineralisation.
Sample security	• *The measures taken to ensure sample security.*	• The historical samples remained in the custody of Government employees at the Tonsley Core Library and were delivered to Challenger Geological Services for processing. • The samples were delivered to the ALS laboratory in Adelaide.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No independent audits or reviews of sampling techniques and data have been conducted. • Internal reviews undertaken.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The historical drilling reported in this announcement lies within the granted exploration licences EL 6968 (Wirrulla Project). • At the time of reporting all tenure was secure and any administrative costs or fees were fully paid up.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Prior exploration in the tenement was for diamonds (Diamond Ventures NL), sedimentary uranium (Broken Hill Pty Co Ltd), heavy mineral sands (Iluka Resources Ltd) and base metals (Newcrest Mining Ltd). • The state regional geophysics dataset was used to help interpret the local geology.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Clay hosted REE mineralisation is a function of weathering of igneous rocks. • The basement is interpreted to be early Mesoproterozoic Gawler craton undifferentiated granitoid intrusive rocks related to the Lincoln Complex, Palaeoproterozoic Hutchison Metasediments and tertiary sand and clay sediments • The Narlaby Palaeochannel lies within the tenement.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from*
		• Coordinates, end of hole (EOH) depth, dip and azimuth are presented in Table 2.
		• All significant drill results and drill hole collar locations have been identified in Appendix 1 and Appendix 2 of this report.
		• No relevant material data

Criteria	JORC Code explanation	Commentary
	the understanding of the report, the Competent Person should clearly explain why this is the case.	has been excluded from this report.
Data aggregation methods	• *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.* • *Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Three intervals are reported as linear averages over 6–15 m sample lengths. • Significant results in Table 1 have a 600 ppm TREO cut-off. • Data cut-offs are used for samples presented in the Appendix B (> 400 ppm TREO). • Six samples had <250 ppm TREO and were therefore not classified as mineralisation.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., 'down hole length, true width not known').*	• The deposit style is assumed to be flat-lying and the -60° holes are therefore not necessarily true width of the mineralisation. • Further drilling will outline the geometry of mineralisation.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• Figures and plans are displayed in the main text of the release.
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.*	• Six samples from holes SBRC 11 and SBRC 12 had <250 ppm TREO and were therefore not classified as mineralisation/relevant for ionic leach testing. • Only samples from holes outlined in Table 2 were analysed.
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.*	• The regional geophysics dataset available for download from SARIG (https://map.sarig.sa.gov.au/).
Further work	• *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.*	• Revisit historical holes not sampled in this program and within EL 6968. • Refer to the main body of the release for further information regarding diagrams.