

# **ASX RELEASE**

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#### ASX CODE

PNN

#### **REGISTERED OFFICE**

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#### PROJECTS

**Argentina** Salta Lithium Project

Santa Ines Copper-Gold Project

#### Australia

Eyre Peninsula Kaolin-Halloysite-REE Project

Musgrave Nickel-Copper-Cobalt-PGE Project

# Drilling delivers up to 14,152ppm TREO REE at Eyre Peninsula Project

- Drilling returns 3m averaging 5,025ppm (0.5%) total rare earth oxide (TREO) including 1473ppm magnet rare earth oxide (MREO) from 43m in PKD23-139 at Dicksons Well target
- On screening to -53 μm (micron) this interval returned 3m at 10,253ppm (1.0%) TREO which included 3,078ppm (0.3%) MREO from 43m
- REO interval within PKD23-139 is more than 6m wide averaging 0.61% TREO using a 0.1% TREO cut-off
- PKD23-139 also returned 1m averaging 7,114ppm (0.7%) TREO which included 4,412ppm MREO (31% of TREO) from 44m
- On further screening this result returned 1m averaging 14,152ppm (1.4%) TREO which included 2,204ppm MREO from 44m
- Duplicate samples across separate laboratory batches have confirmed these results
- Results are from drilling at 400m spacing closer spaced drilling is planned to define REO geometry of the deposit
- Power will use geophysical modelling to define targets for planned next phase drilling.

Power Minerals Limited (ASX: PNN, **Power or the Company**) is pleased to announce further high-grade rare earths results from drilling at its Eyre Peninsula Project in South Australia.

Drilling at the Dickson Well target completed on 400m spacing returned exceptionally high results up to 14,152ppm TREO for clay-hosted rare earths.

Drillhole PKD23-139 returned 3m averaging 5,025ppm (0.5%) TREO which included 1,473ppm MREO, or 28.9% of TREO, from 43m.

On screening to -5  $\mu$ m, the interval returned 3m averaging 10,253ppm (or 1.0%) TREO which included 3,078ppm (0.3%) MREO from 43m.

The hole also returned 1m averaging 7,114ppm TREO which included 2,204ppm MREO (31% of TREO), which upon screening to -53 µm,



returned 14,152ppm or 1.4% TREO including 4,412ppm MREO from 44m. PKD23-139's REO interval of 6m averaged 0.61% TREO when screened and using a minimum cut-off of 0.1% TREO.

Duplicate samples of earlier samples were re-submitted and have confirmed the results. The percentage of MREO to TREO did not change for many intervals, indicating the REE mineralogically or REE-phase is consistent over grain size.

A 3m sample from PKD23-139, from 43-46m, was submitted to laboratory Bureau Veritas (Adelaide) for clay analyses and confirmed this interval contains 52.8% material over 45um. Analyses demonstrated the vast majority of valuable rare earths occur in the smaller particles. By separating the ore through simple size beneficiation, the larger particles could be removed from the downstream process.

There are low levels of contaminants such as uranium and thorium in the Dickson Well area. In all, 157 drill samples were analysed for REE (both raw and screened). Average uranium was 6.5ppm U and thorium was 18.7ppm Th, with the highest uranium result of 19.2ppm U in PKD-119 (unscreened).

Recent drilling also returned elevated REE near the Yeelanna target within EL6677 at the Eyre Peninsula Project, with drillhole PKD23-162 containing 0.4% REO, which increased to 0.44% when screened to - 53um. Nearby drillhole PKD23-161 contained 0.21% TREO averaged over a thick ten metres.

"These are highly exciting further results from our drilling at Dickson Well and demonstrate potential for rare earths mineralisation. These results are comparable and even exceed those reported by other explorers and developers from clay-hosted REE deposits in Brazil<sup>1</sup> as well as those commonly reported from China.

"There is potential for further exploration at Dickson Well, and on the basis that our initial drilling was completed on 400m spacing, closer spaced drilling will be required to firm up our understanding of the mineralisation. We plan to use geophysical modelling to define further drill targets for a planned next phase of drilling to advance this exciting REE opportunity."

**Power Minerals Managing Director Mena Habib** 

#### Background

Power Minerals discovered the Dickson Well REO occurrence during regional halloysite exploration on the Eyre Peninsula. All drill samples are analysed in-house using portable XRF, which identified the clays at Dickson Well contained REE. In ion-adsorption deposits, rare earth elements (REE) are inferred to be weakly adsorbed onto dominantly kaolinite and halloysite clays (Borst et al., 2020; *Nature Communication 11*).

<sup>&</sup>lt;sup>1</sup> Brazil Rare Earths (ASX: BRE) Monte Alto deposit has a JORC Resource of 510 Mt @ 1,513ppm TREO <u>https://investors.brazilianrareearths.com/announcements/5807267</u>;



Power's Dickson Well drilling was completed at an average 400m spacing between drillholes, used as the original target was halloysite. Clay-hosted REE deposits require much closer spacing to define deposit geometry.

Clay hosted REE resources are unique in providing a rare earth content, without deleterious radioactive elements (U or Th), and in deposits that ideally are close to surface, flat lying, and homogenous. Mining of these deposit types is usually simple open cut in soft ground with a low strip to ore ratio, lending itself to lower capital and operating costs, with potential for rapid progressive rehabilitation.

#### **Next Steps**

Additional material is available from the existing drillholes to complete further testing. Power plans to complete ionic leach tests on selected Dickson Well samples. This will determine the amount of REE in an adsorbed (ionic) phase, or secondary mineral phase, or as unaltered resistive phase. Initial leach testing will likely be at pH1 and pH4 and various temperature (including ambient) and times.

REE distribution at Dickson Well appears related to the aerial magnetic pattern. Power will complete detailed modelling on the geophysics to correlated the REE with basement lithological units. Power will use this to target the next stage of drilling.

#### Table 1: Summary of screened results

Drillhole	Depth from m	Depth to m	Interval m	Sample count	TREO ppm Avg	TREO % Avg	CREO ppm Avg	MREO ppm Avg	LREO ppm Avg	HREO ppm Avg	%HREO Avg	%MREO Avg	Licence
PKD23-													
132	51	52	1	2	2076	0.21	155	131	1967	109	5.3	6.3	EL6681
PKD23-													
132	58	60	2	2	1538	0.15	117	99	1460	78	5.4	6.8	EL6681
PKD23-													
132	71	72	1	1	1062	0.11	284	222	857	204	19.3	20.9	EL6681
PKD23-													
132	75	79	4	4	1285	0.13	359	273	1029	255	19.9	21.0	EL6681
PKD23-													
133	63	66	3	4	1232	0.12	404	313	951	281	23.0	25.4	EL6681
PKD23-													
135	43	44	1	1	8743	0.87	4041	2960	5830	2913	33.3	33.9	EL6681
PKD23-													
139	41	47	6	8	6149	0.61	1752	1751	5249	900	17.0	24.4	EL6681
including	43	46	3	5	10253	1.03	2861	3078	8974	1279	12.8	29.7	EL6681
including	44	45	1	3	14152	1.42	3838	4412	12682	1470	10.4	31.2	EL6681
PKD23-													
162	15	16	1	1	4437	0.44	561	713	4293	144	3.3	16.1	EL6677

Table 2: Summary of	unscreen results
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Drillhole	Depth from m	Depth to m	Interval m	Sample count	TREO ppm Avg	TREO % Avg	CREO ppm Avg	MREO ppm Avg	LREO ppm Avg	HREO ppm Avg	%HREO Avg	%MREO Avg	Licence
PKD22- 017	22	23	1	1	1490	0.15	341	361	1326	164	11.0	24.2	EL6689
PKD22- 029	30	31	1	1	2470	0.25	589	570	2140	330	13.4	23.1	EL6689
PKD22- 034	12	13	1	1	1146	0.11	271	291	1019	127	11.1	25.4	EL6689
PKD22- 057	18	19	1	1	3321	0.33	946	973	2856	464	14.0	29.3	EL6689
PKD22- 057	20	21	1	1	1139	0.11	299	312	1001	138	12.1	27.4	EL6689
PKD22- 076	66	68	2	2	1482	0.15	393	359	1265	218	14.9	24.3	EL6681
PKD22- 084	29	31	2	2	1318	0.13	307	324	1183	135	10.5	24.4	EL6681
PKD22- 084	33	34	2	2	1411	0.14	376	332	1187	224	16.0	23.4	EL6681
PKD22- 085	36	38	2	2	1138	0.11	327	296	946	192	17.1	26.0	EL6681
PKD22- 119	36	37	1	1	1353	0.14	409	459	1189	164	12.1	34.0	EL6681
PKD22- 119	44	45	1	1	1162	0.12	176	159	1054	108	9.3	13.7	EL6681
PKD22- 119	46	47	1	1	1744	0.17	292	346	1638	106	6.1	19.9	EL6681
PKD22- 119	50	58	8	8	1947	0.19	551	370	1487	460	24.5	19.1	EL6681

DKD 22					]								
PKD22-	60	61	4	4	1210	0.10	402	274	004	425	22.0	20.0	
119	60	61	1	1	1319	0.13	492	274	884	435	33.0	20.8	EL6681
PKD22-				_		- · -							
120	57	62	5	5	1681	0.17	463	383	1361	320	17.9	22.3	EL6681
PKD23-													
132	51	52	1	2	1950	0.19	139	118	1852	98	5.1	6.0	EL6681
PKD23-													
132	55	60	5	7	2129	0.21	183	163	2018	111	6.9	10.5	EL6681
PKD23-													
133	60	61	1	1	1334	0.13	193	144	1190	144	10.8	10.8	EL6681
PKD23-													
133	62	64	2	4	1127	0.11	291	220	918	210	18.5	18.9	EL6681
PKD23-													
133	65	66	1	3	1012	0.10	306	255	811	201	19.9	25.2	EL6681
PKD23-													·
135	41	50	9	11	3088	0.31	892	780	2544	545	13.1	22.8	EL6681
including	42	44	2	3	7636	0.76	2722	2185	5814	1823	23.4	28.3	EL6681
PKD23-													
139	41	47	6	14	3536	0.35	994	949	2993	542	17.1	24.6	EL6681
including	43	45	2	6	5788	0.58	1528.59	1697	5177	611	11	28.8	EL6681
PKD23-													
144	52	53	1	1	1259	0.13	395	328	1008	251	20.0	26.0	EL6681
PKD23-													
161	10	20	10	10	2097	0.21	458	503	1924	173	8.3	23.8	EL6677
PKD23-													
162	15	16	2	3	2554	0.26	364	447	2457	97	4.3	17.9	EL6677

Authorised for release by the Board of Power Minerals Limited.

-ENDS-

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### **About Power Minerals Limited**

Power Minerals Limited is an ASX-listed lithium-focused exploration and development company, committed to the systematic exploration and development of its core asset, the Salta Lithium Brine Project in the prolific lithium triangle in the Salta Province in Argentina. It is currently undertaking a major JORC Mineral Resource expansion drilling campaign at Salta, and is focused on expediting development of the Project in to a potential, future lithium producing operation. Power also has a portfolio of other assets in key, demand-driven commodities including; kaolin-halloysite-REE, nickel-copper-cobalt and PGEs plus copper-gold.

#### **Competent Persons Statement**

The information in this document that relates to the kaolin, REE and Santa Ines projects has been prepared with information compiled by Steven Cooper, FAusIMM. Mr Steven Cooper is the Australian Exploration Manager and is a full-time employee of the Company. Mr Steven Cooper has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Steven Cooper consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.

#### **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.

# JORC Code, 2012 Edition – Table 1 Report

### **Section 1 Sampling Techniques and Data**

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

riteria JORC Code explanation	Commentary
<ul> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul> <li>All samples were collected from the aircore blade drilling, through a cyclone directly into large plastic bags at one metre intervals.</li> <li>Initial sample preparation was carried out at PNN's secure processing facility at Smithfield, South Australia by PVC spearing. This was completed by laying the bag on its side and recovering an entire cross cutting representative sample through the entire thickness of each one meter interval.</li> <li>An appropriate diameter PVC tube was used to collect approximately 200g into numbered small Kraft paper Geochem bags, which were sent for geochemical analyses. The sample sizes are considered appropriate for the material being sampled</li> <li>The sample sizes are considered appropriate for the very fine grained and homogeneous material being sampled.</li> <li>Selected samples were split by the ALS Geochemistry laboratory and representative splits were either pulverising to 85% passing &lt;75um or screened to pass minus 53um.</li> </ul>

• The Competent Person has reviewed referenced publicly sourced information through the report and considers that sampling was commensurate with industry standards current at the time of drilling

Criteria	JORC Code explanation	Commentary
		and is only appropriate for the indication of the presence of mineralisation.
Drilling techniques	<ul> <li>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).</li> </ul>	<ul> <li>McLeod Drilling used a Reverse Circulation Aircore drill rig mounted on a 6-wheel drive Toyota Landcruiser.</li> <li>Aircore drilling uses an 76mm aircore bit with 3 tungsten carbide blades and is a form of drilling where the sample is collected at the face and returned inside the inner tune. The drill cuttings are removed by the injection of compressed air into the hole via the annular area between the inner tube and the drill rod.</li> <li>Aircore drill rods are 3 m NQ rods.</li> <li>All aircore drill holes were between 4m and 75m in length.</li> <li>The Competent Person was present during the drilling program and considers that drilling techniques was commensurate with industry standards current at the time of drilling and is appropriate for the indication of the presence of mineralisation.</li> </ul>
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>	<ul> <li>All initial one metre interval samples were weighted to check consistency.</li> <li>All efforts were made to ensure the sample was representative.</li> <li>No relationship is believed to exist, but no work has been completed to confirm this.</li> </ul>
Logging	<ul> <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> <li>All samples were geologically logged to include details such as colour, grain size, rock type etc which is naturally qualitative in nature.</li> <li>All samples have quantitative magnetic susceptibility and pXRF measurements taken to support the geological logging.</li> <li>Representative chip tray samples of all intervals were collected and photographed.</li> <li>All samples were one meter vertical intervals.</li> </ul>
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 sub-sampling stages to maximise representivity of samples.</li> </ul>	<ul> <li>All drill chip samples were collected through a cyclone into large plastic bags at 1 metre intervals and then subsampled into ~200g samples within numbered Kraft paper bags, which were sent for geochemical analyses.</li> <li>A full profile of each one metre bag contents was subsampled by spearing to ensure representivity.</li> <li>All samples were moist soft clay.</li> <li>Samples were initially selected based on pXRF data which provides</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <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>Sample sizes are appropriate to the clay grain size of the material being sampled.</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 (eg 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>Drill samples were submitted to ALS Geochemistry laboratory in Adelaide, SA. Entire sample were crushed and pulverised to 85% passing &lt;75um, then analysed following lithium borate fusion on 0.1g sample using ICP-MS and ICP-AES (ALS Method ME-MS81D). This method provides concentrations for 45 elements, including REE.</li> <li>Selected samples submitted to ALS Geochemistry laboratory in Adelaide, split before crushing and screened to pass &lt;53um. These samples were not pulverised before being analysed following lithium borate fusion on 0.1g sample using ICP-MS (ALS Method ME-MS81). This method provides element concentrations including REE.</li> <li>Lithium borate fusion provides quantitative results of all elements, including those encapsulated in resistive minerals.</li> <li>ALS Laboratories used in-house blanks, standards and duplicates and the results were provided in QC Certificates.</li> <li>Sample batch included two REE hosting CRM's from Ore Research &amp; Exploration Pty Ltd (Melbourne), both were OREAS 102a. This standards were chosen as REE concentrations were comparable with those expected and were oxidised. The REE values reported by ALS for the CRM's were all within two standard deviations which is an acceptable range.</li> <li>Numerous blind duplicates, both within and across separate laboratory batches were submitted (see results table) and all results were within acceptable ranges</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>There was no external verification of sampling and no use of twinned drillholes.</li> <li>Data is exploratory in nature and is compiled into in-house relational database after verification. Original laboratory supplied pdf reports and spreadsheets retained.</li> <li>Rare earth element analyses were originally reported in elemental form but have been converted to relevant oxide concentrations using industry standard factors. Abbreviation definitions used: TREO = La<sub>2</sub>O<sub>3</sub> + CeO<sub>2</sub> + Pr6O<sub>11</sub> + Nd<sub>2</sub>O<sub>3</sub> + Sm<sub>2</sub>O<sub>3</sub> + Eu<sub>2</sub>O<sub>3</sub> + Gd<sub>2</sub>O<sub>3</sub> + Tb<sub>4</sub>O<sub>7</sub> + Dy<sub>2</sub>O<sub>3</sub> + Ho<sub>2</sub>O<sub>3</sub> + Er<sub>2</sub>O<sub>3</sub> + Tm<sub>2</sub>O<sub>3</sub> + Yb<sub>2</sub>O<sub>3</sub> + Lu<sub>2</sub>O<sub>3</sub> + Y<sub>2</sub>O<sub>3</sub></li> </ul>

Criteria	JORC Code explanation	Commentary
		$\label{eq:creative} \begin{array}{l} \textbf{CREO} = Nd_2O_3 + Eu_2O_3 + Tb_4O_7 + Dy_2O_3 + Y_2O_3 \\ \textbf{LREO} = La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 \\ \textbf{HREO} = Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 \\ + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3 \\ \textbf{NdPr} = Nd_2O_3 + Pr_6O_{11} \\ \textbf{TREO-Ce} = TREO - CeO_2 \\ \end{tabular} & \textbf{NdPr} = NdPr/TREO \\ \end{tabular} & \textbf{HREO} = HREO/TREO \\ \end{tabular} & \textbf{Superior} & \textbf{Superior} \\ \textbf{REO} = LREO/TREO \\ \end{tabular}$
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>The location of drillhole collars was undertaken using a Garmin multiband GPS in extended averaging mode which has an accuracy of +/-2m using UTM MGA94 Zone 53.</li> <li>The quality and adequacy are appropriate for this level of exploration.</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>The drilling pattern was approximately a grid and the collar spacing was mostly approximately 400 metres. Final locations were defined by access for the drill rig, geological parameters, and land surface.</li> <li>Sample representation, data spacing and distribution are <b>not</b> sufficient to establish the degree of geological and grade continuity or for resource reporting. The data spacing and quality only provides guide for future drill planning.</li> <li>No sample compositing has been applied before analyses. All analyses were on one metre intervals as recovered from the drilling.</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>	<ul> <li>It is believed that the drilling has intersected the geology at right angles; however, it is unknown whether the drill holes have interested the mineralisation in a perpendicular manner. The mineralised horizon is obscured by a veneer of transported material.</li> <li>It is believed no bias has been introduced due to drilling orientation.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>All samples have been in the custody of PNN employees since drilling. Sealed samples and chip trays were transported to Adelaide within PNN vehicles and stored in the secure PNN private property in Smithfield with no access from the public.</li> <li>Representative chip tray samples of all intervals were collected and photographed. These chip trays and photographs are stored securely.</li> <li>Best practices were undertaken at the time.</li> </ul>

Criteria	JORC Code explanation	Commentary
		All residual sample material (pulps) is stored securely
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	None 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	<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>	<ul> <li>Drilling was completed during 2022 and 2023 within Exploration Licences EL6677, EL6681 and EL6689. EL6677 is held 100% by Pepinnini Resources Curnamona Pty Ltd, a wholly owned subsidiary of PNN. EL6681 and EL6689 is held by Pepinnini Kaolin Pty Ltd, a wholly owned subsidiary of PNN, and is in a JV with Seattle Capital Pty Ltd, Aerobotics Pty Ltd, and Kaolin SA Pty Ltd which together holds 20% interest.</li> <li>Both the tenements are in good standing with no known impediments.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>In the Dickson Well region the only relevant previous exploration has been undertaken separately by BHP Minerals Pty Ltd and Iluka Resources Ltd, both for mineral sands only in the area further west from Cungena (EL6681).</li> <li>In the area west from Yeelanna (EL6677), BHP Minerals conducted aircore drilling in January 2001 for Archaean polymetallic VMHS deposits on the flanks of linear magnetic features believed to be folded mafic/felsic volcanic and sedimentary sequences. No analyses for REE are recorded (McLatchie, 2002; SARIG Env8957).</li> <li>Historical drilling within the EL6681 area was restricted to along roads and provides additional limited stratigraphic information.</li> <li>No relevant previous exploration for REE within EL6689</li> </ul>
Geology	• Deposit type, geological setting and style of mineralisation.	<ul> <li>The tenements are within the Gawler Craton, South Australia.</li> <li>PNN is exploring for kaolin and halloysite deposits and associated possible REE mineralisation.</li> <li>This release refers to both kaolin mineralisation and possible ion adsorption rare earth elements mineralisation (IS-REE) related to lateritic weathering processes on basement rock of the Gawler Craton, in particular the Palaeoproterozoic Moody Suite granitic and the Sleaford and St Peter Suite granitic gneiss.</li> </ul>

Criteria	JORC Code explanation	Commentary				
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</li> </ul> </li> </ul>	Peninsula, Sout selected from di have been provi	h Australia. Ba rillholes located ided in previous s on all July 20	program in July 202 ased on initial pXRI I in separate areas s ASX releases inc 23 drillholes are:	measuremer Details from 1	nts samples we 2022 drilling ober 2022.
	<ul> <li>sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> </ul>	PKD23-130	Easting 477226	Northing 6390022	78	Depth 83
	<ul> <li>o down hole length and interception depth</li> </ul>	PKD23-130	477601	6389989	78	69
	o hole length.	PKD23-131	477593	6389758	77	84
	<ul> <li>If the exclusion of this information is justified on the basis that the information is not Material and this</li> </ul>	PKD23-132	478001	6389795	85	73
	exclusion does not detract from the understanding of	PKD23-133	478357	6390008	84	41
	the report, the Competent Person should clearly explain	PKD23-135	478536	6390402	90	58.5
	why this is the case.	PKD23-136	478511	6390801	109	52
		PKD23-137	478581	6391200	123	45
		PKD23-138	478785	6391798	123	30
		PKD23-139	478401	6391463	126	60
		PKD23-140	477998	6391474	86	48
		PKD23-141	477600	6391473	89	49
		PKD23-142	477217	6391463	111	47
		PKD23-143	477199	6390794	99	59
		PKD23-144	477201	6390401	79	63
		PKD23-145	476802	6390196	77	40
		PKD23-146	476410	6390214	101	38
		PKD23-147	476000	6390202	87	37
		PKD23-148	475716	6390199	82	40
		PKD23-149	477197	6391195	102	30
		PKD23-150	476742	6391471	82	42
		PKD23-151	476782	6391189	78	33.1
		PKD23-152	476797	6390803	103	40
		PKD23-153	477299	6392001	111	26
		PKD23-154	477307	6392401	118	43

Criteria	JORC Code explanation	Commentary				
		PKD23-155	477306	6392800	116	16
		PKD23-156	477304	6393202	118	21
		PKD23-157	564816	6225017	84	36
		PKD23-158	563533	6225045	79	22
		PKD23-159	563556	6225507	72	27
		PKD23-160	563559	6224396	82	26
		PKD23-161	563590	6223361	95	28
		PKD23-162	563594	6222495	92	20
		PKD23-163	564525	6222225	102	21
		PKD23-164	564419	6222747	114	45
		PKD23-165	564279	6223219	111	46
		PKD23-166	564794	6222287	106	38
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>		is using downh	ggregated (results pole sample length 1000ppm (or 0.1%)	weighted aver	rages with no
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 (eg 'down hole length, true width not known').</li> </ul>	<ul> <li>All holes are be represent true w</li> <li>All intercepts re</li> </ul>	vidths		on at 90 degre	es and therefore

Criteria	JORC Code explanation	Commentary
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>	See main body of report.
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul> <li>All other relevant data has been reported.</li> <li>The reporting is considered to be balanced.</li> <li>Where data has been excluded, it is not considered material.</li> </ul>
Other substantive exploration data	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul> <li>The target areas have been the subject of no previous exploration except west from Cungena with minor exploration for mineral sands along road reserves (EL6681) and in the area west from Yeelanna over linear magnetic features.</li> <li>The reported results are from samples collected from two drilling program in 2022 and 2023. Very early stage REE were reported in ASX release dated 5 September 2023.</li> <li>All relevant exploration data has been included in this report</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Further exploration geochemical sampling and drilling is required.</li> <li>The clay samples will be leach tested to determine the ionic content of the REE's using standard industry methodology.</li> <li>Detailed interpretation of existing geophysical data to determine an map possible source lithology units for the clay hosted REE.</li> </ul>