ASX: IVR

ASX ANNOUNCEMENT

INVESTIGATOR RESOURCES LIMITED

8 September 2022

SIGNIFICANT RARE EARTH DISCOVERY AT APOLLO

Highlights:

- High grade rare earth mineralisation identified in recent drilling at the Apollo prospect, adjacent to Investigator's Paris silver deposit, adding potential to IVR's tenements.
- Significant TREO[1] and MREO[2] intersections include:
    - **15m @ 3,221ppm TREO and 1,099ppm MREO from 66m in hole PPRC836[3].**
    - **Includes 9m @ 4,700ppm TREO and 1,772ppm MREO from 72m.**
- 80% of holes at Apollo intersected a distinct clay horizon with intersections above the 1,000ppm TREO reporting cutoff.
- Mineralisation is hosted by interpreted saprolitic volcanics derived from underlying REE-enriched upper Gawler Range Volcanic units.
- High percentages of valuable MREOs in the mineralised intervals are associated with Neodymium and Praseodymium
- Broad-spaced drilling has revealed a consistent trend to the mineralised horizon which shallows to the southwest and is open in all directions.
- The geological setting opens up significant exploration potential across Investigator's Peterlumbo and other Southern Gawler Craton tenements.
- Samples from other previously drilled targets across the broader Peterlumbo tenement have been submitted for assay of their full suite of REEs.
- Investigator also recently reported **8m @ 1,262g/t silver** from 149m (including **3m @ 3,167g/t silver** from 150m and including **1m @ 6,530g/t silver** from 152m at the Apollo Prospect[4].

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1 TREO – Total Rare Earth Oxide
2 MREO – High Value Magnet Rare Earth Oxide (refer significant intersection table for element make up)
3 Note: using a 1,000ppm TREO reporting cutoff
4 - ASX 25 August 2022 – "Further Silver & Zinc in Paris Regional Exploration

Investigator Resources Limited (ASX: IVR, “Investigator” or the “Company”) is pleased to provide this release in relation to rare earth element mineralisation discovered as part of the 7,634m drill program across our 100% owned Peterlumbo tenement, host of the Paris Silver Project in South Australia.

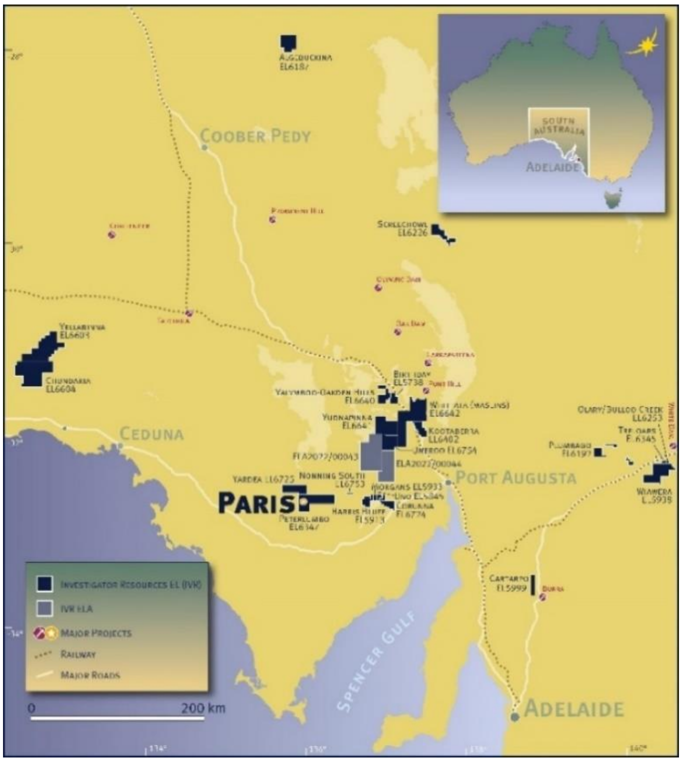


Figure 1: *Investigator’s South Australian tenements*

The Apollo prospect is approximately 4km north-west of Investigator’s 100% owned Paris Silver Project which is itself located 70 kilometres north of the rural township of Kimba on South Australia’s Eyre Peninsula. Access to the Paris Silver Project site is predominantly via highways and sealed roads and is approximately 7 hours by road from Adelaide as seen in Figure 1.

Paris is a shallow, high-grade silver deposit amenable to open pit mining and hosts a Mineral Resource estimate of 18.8Mt silver at 88g/t for 53.1Moz of silver at a 30g/t cutoff[5]. With positive Pre-Feasibility Study outcomes reported in November 2021[6], the company is undertaking work towards completion of a Definitive Feasibility Study whilst progressing exploration across adjacent significant ground holdings within South Australia.

Commenting on the results reported, Investigator’s Managing Director, Andrew McIlwain said:

“Investigator has for some time been aware of elevated Rare Earth Element (REE) concentrations associated with the Gawler Range Volcanics (GRV), including the occurrence of elevated Cerium and Lanthanum at Paris and at a number of other prospects, within our 100% owned tenements. Global attention on decarbonisation and electrification has driven interest in REEs, and, with known occurrences in the district, the team turned its focus on the potential for REEs within Investigator’s tenements.

“Our recent drilling at the Apollo prospect successfully targeted potential Paris-type silver mineralisation beneath volcanic cover, notably intersecting 8m @ 1,262g/t silver[7]. Analysis of this first program of drilling at Apollo for REEs identified a broad, yet consistent saprolitic clay horizon immediately above fresh volcanics with enrichment in Total Rare Earth Oxides (TREO), and notable elevations in the higher value Magnet Rare Earth Oxides (MREO).

5 - ASX 28 June 2021 - “Paris Updated Mineral Resource Estimate”
6 - ASX 30 November 2021 - “Paris PFS delivers outstanding results”
7 - ASX – 25 August 2022 – “Further Silver & Zinc in Paris Regional Exploration”

"This discovery, currently open in all directions, and with a relatively simple model of REE-enrichment above upper GRV units offers an outstanding opportunity for Investigator to capitalise on its strategic ground holding bordering the margins of the GRV, both at Peterlumbo, and at the newly acquired neighbouring tenement of Yardea. Our Uno Range, Harris Bluff and Morgans tenements to the east also host this GRV/Uno Fault geological setting.

"Whilst not detracting from our focus of both driving the Paris Silver Project forward and other silver/base metal exploration activities, this discovery presents an important opportunity for the company to take advantage of potential diversification and value accretion. Our team have already identified a number of opportunities at Apollo following up these exciting silver and REE discoveries.

"We are also reviewing samples from other prospects where prior analysis only partially analysed the suite of rare earth elements. I anticipate further news flow in the near future with respect to this work".

2022 Regional drilling program

The regional exploration program that is the subject of this release forms part of a broader exploration program in the vicinity of the Paris deposit reported to the ASX on 25 August 2022 which focused on silver and base metal mineralisation.

Reverse Circulation (RC) drilling of 7,634m in 54 holes was completed in April 2022. The location of the drilling that was completed proximal to Paris is shown in Figure 2 below.

A series of holes in this program targeted an area north of the interpreted Uno Fault at the Apollo prospect. The Uno Fault marks a major structural change between upper GRV sequences to the north of the fault (generally readily identified by higher amplitude aeromagnetic signature), and lower GRV sequences and underlying basement rocks south of the Uno Fault.

These holes tested a model that mineralising fluids migrating along dominant northeasterly or northwesterly structures, may intersect the Uno fault beneath a cap of volcanics, thereby trapping fluids, and depositing silver and base metal mineralisation.

The holes in the program passed through a younger horizon of barren weathered clays before intersecting a saprolitic clay above fresh GRV, enriched in a number of key rare earth elements. Routine assaying of drill samples includes cerium and lanthanum which were elevated within these holes. Investigator subsequently requested that its contracted laboratory re-assay the pulps from this program for the full suite of rare earth elements.

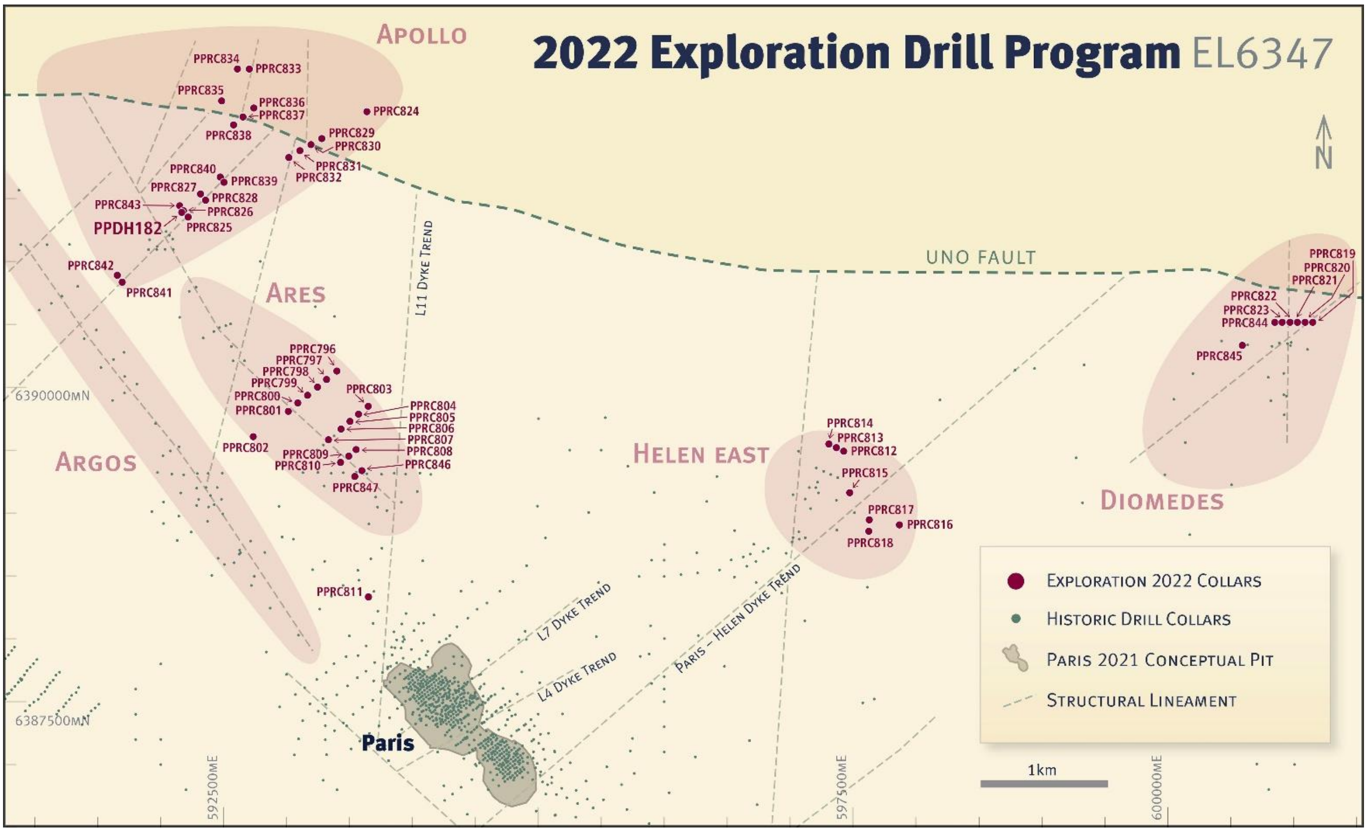


Figure 2: *Plan showing location of the regional 2022 drilling proximal to the Paris Silver Deposit.*

Apollo Rare Earths

Apollo sits approximately 4km northwest of the Paris Silver Deposit, within a prospective structural corridor identified by gravity and magnetic features.

Holes referenced in this release are highlighted in Figure 3 and are predominantly located north of the Uno Fault within the upper GRV which displays a high magnetic intensity relative to other lithologies present.

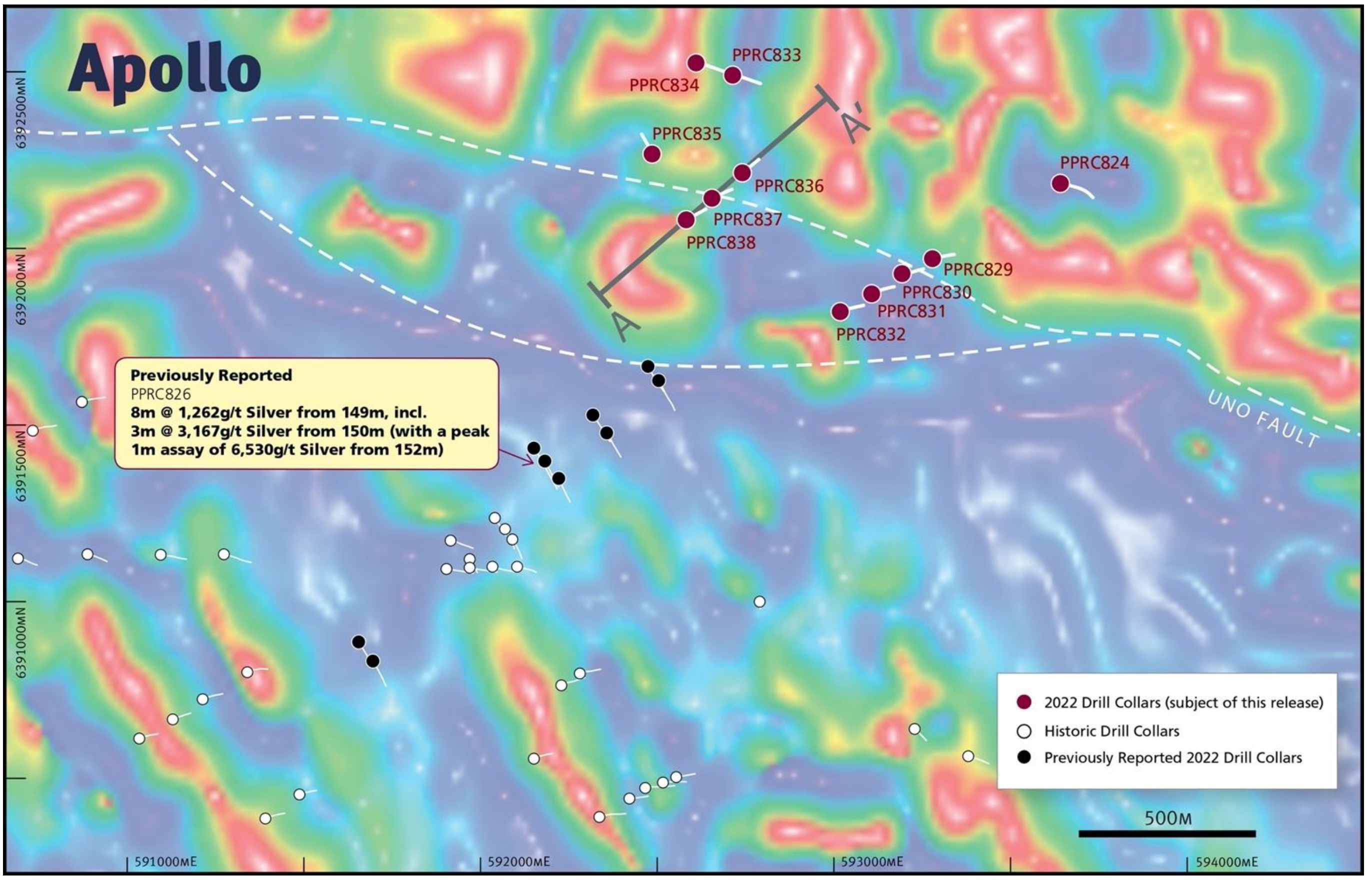


Figure 3: *Apollo prospect (4km from Paris) with background magnetic (RTP_TILT) imagery, identifying holes within this release reporting significant TREO intersections. Note association with higher magnetic intensity north of Uno Fault, within interpreted upper Gawler Range Volcanics. Uno Fault interpreted to be comprised of a series of structures as shown. Section A-A' shown in Figure 4 below.*

Holes were generally drilled to approximately 120 – 150m and intersected variable depths of clay cover material (depleted in rare earth elements) prior to intersecting a lower unit of saprolitic clays marked by a distinct increase in REEs content. It is this saprolite zone that hosts the high TREO intersections reported in this release.

These distinct horizons can be seen in the cross section of drill holes and interpreted geology in Figure 4 below.

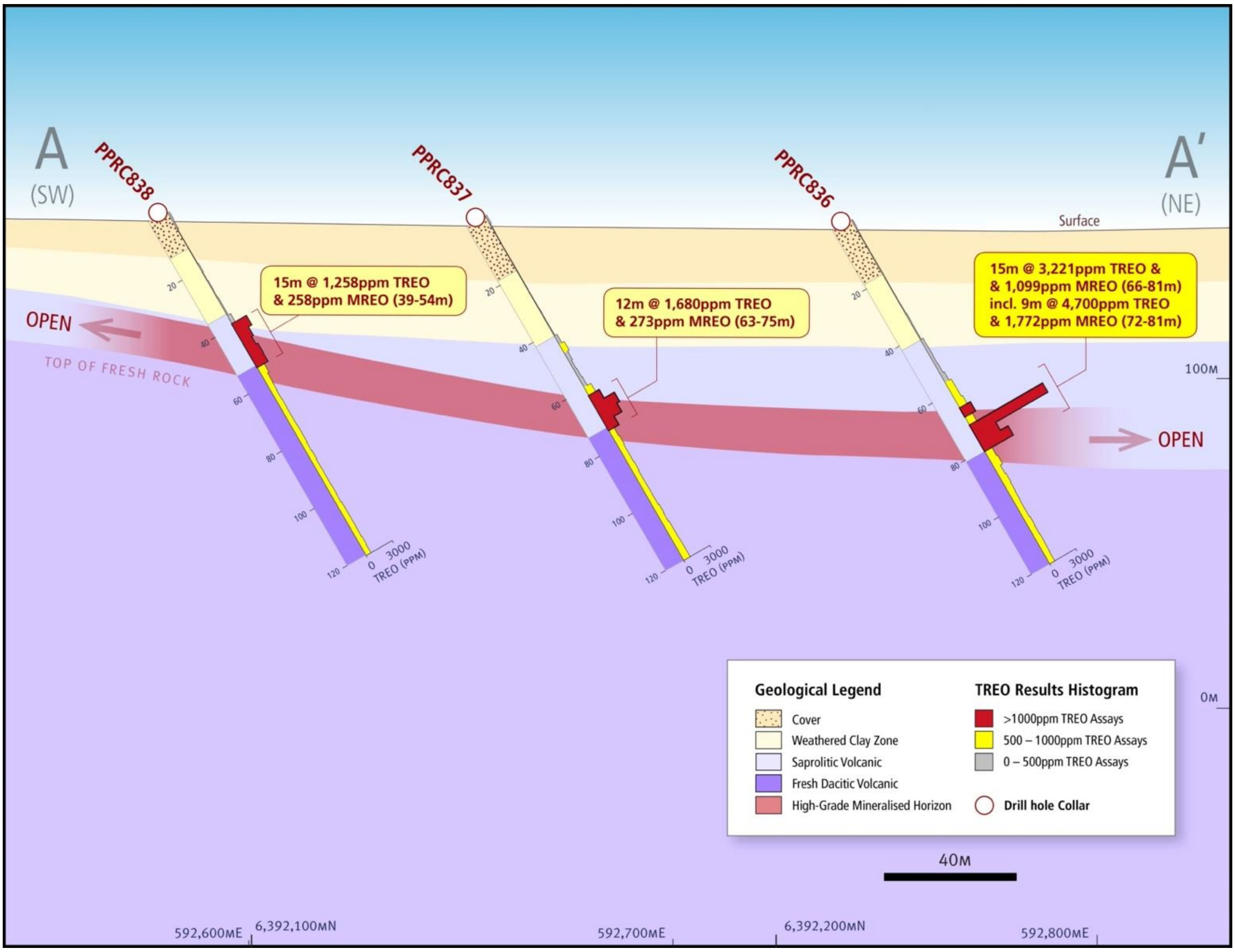


Figure 4: *Drill section A – A' showing cross section of holes. Note clear concentration of TREO immediately overlying dacitic Gawler Range Volcanics that have an elevated TREO content. Section shows clear and simple geological setting, with some evidence of shallowing towards the southwest (left of section).*

At a cutoff of 1,000ppm TREO, the TREO intersections are well defined, and closely aligned with the saprolitic clays immediately above fresh upper GRV. The intersected fresh upper GRV exhibit a consistent background of approximately 500ppm TREO, suggesting weathering or alteration-related enrichment of REEs originating from the GRV within the saprolite horizon. Samples of bedrock have been sent for petrological analysis to understand the host mineralogy of the REEs mineralisation and relative importance of weathering and alteration processes.

Investigator has chosen to report intersections at a cutoff of 1,000ppm TREO. This 1,000ppm TREO cutoff, which is at least double the general industry cutoff noted in other recent ASX releases, was chosen for this initial release to demonstrate the close affinity between significant grade and its relationship to geological setting, indicating a robust early stage REEs discovery.

As shown in Table 1 below, 9 of the 11 holes at Apollo have reportable TREO assays above the 1,000ppm TREO cutoff.

HOLE ID	FROM (m)	TO (m)	WIDTH (m)	TREO (ppm)	MREO (ppm)	High Value Magnetic Rare Earths (MREO)							
						Praseodymium Pr_6O_{11}		Neodymium Nd_2O_3		Terbium Tb_4O_7		Dysprosium Dy_2O_3	
						ppm	% TREO	ppm	% TREO	ppm	% TREO	ppm	% TREO
PPRC824	45	51	6	1048	184	40	4%	127	12%	3	0.2%	14	1%
PPRC830	39	48	9	1121	234	50	4%	164	15%	3	0.3%	16	1%
PPRC831	33	42	9	1459	286	63	4%	201	14%	4	0.2%	18	1%
PPRC833	51	54	3	1140	154	38	3%	85	7%	4	0.4%	18	2%
	72	87	15	1436	448	86	6%	319	22%	6	0.4%	36	3%
PPRC834	42	45	3	1215	285	63	5%	203	17%	3	0.3%	16	1%
	60	63	3	1848	392	78	4%	271	15%	6	0.4%	36	2%
PPRC835	63	66	3	1032	228	47	5%	163	16%	3	0.3%	15	1%
PPRC836	66	81	15	3221	1099	207	6%	792	25%	17	0.5%	83	3%
including	**72**	**81**	**9**	**4700**	**1772**	**334**	**7%**	**1281**	**27%**	**26**	**0.6%**	**130**	**3%**
PPRC837	63	75	12	1680	273	55	3%	192	11%	4	0.2%	22	1%
PPRC838	39	54	15	1258	258	57	5%	178	14%	4	0.3%	19	2%

Table 1: *TREO intersections at the Apollo prospect reported at 1,000ppm TREO cutoff. All samples are 3m composite samples.*

Notably, at a 500ppm TREO cutoff, as shown in Table 2 below, all the holes have reportable assays associated with TREOs in fresh GRV and in the enriched saprolite zone.

HOLE ID	FROM (m)	TO (m)	WIDTH (m)	TREO (ppm)	MREO (ppm)	High Value Magnetic Rare Earths (MREO)							
						Praseodymium Pr_6O_{11}		Neodymium Nd_2O_3		Terbium Tb_4O_7		Dysprosium Dy_2O_3	
						ppm	% TREO	ppm	% TREO	ppm	% TREO	ppm	% TREO
PPRC824	42	87	45	675	134	27	4%	92	14%	2	0.3%	13	2%
PPRC829	33	54	21	589	123	25	4%	84	14%	2	0.4%	12	2%
PPRC830	33	51	18	941	192	41	4%	133	14%	3	0.3%	15	2%
	102	105	3	504	Full REE assay suite yet to be received for this interval								
PPRC831	33	54	21	1047	211	45	4%	148	14%	3	0.3%	15	1%
PPRC832	33	69	36	586	132	26	4%	91	16%	2	0.4%	13	2%
PPRC833	51	57	6	827	128	29	4%	74	9%	3	0.4%	22	3%
	66	93	27	1139	335	66	6%	236	21%	5	0.5%	28	2%
PPRC834	42	66	24	961	199	42	4%	136	14%	3	0.3%	17	2%
PPRC835	42	81	39	742	163	33	4%	114	15%	3	0.3%	14	2%
PPRC836	57	120	63	1273	355	67	5%	252	20%	6	0.4%	30	2%
PPRC837	45	48	3	578	100	19	3%	63	11%	2	0.4%	15	3%
	60	120	60	847	161	32	4%	113	13%	3	0.3%	14	2%
PPRC838	39	120	81	692	148	31	4%	102	15%	2	0.3%	13	2%

Table 2: *TREO intersections at the Apollo prospect reported at 500ppm TREO cutoff. All samples are 3m composite samples.*

It is significant to note that re-assay of fresh rock GRV samples were consistently greater than the generally accepted industry reporting cutoff of 500ppm TREO, as seen in Table 2 and Figure 4. Further assessment of REEs content is planned in both fresh GRV and the saprolitc zone, with targeted resampling and analysis on 1m intervals.

Investigator's initial interpretation of the development of REEs concentrations at Apollo (and as a broader initial model for the region) is that enriched REE compositions within select parts of the upper GRV sequence have been exposed to weathering/alteration and resulted in subsequent concentration of TREO and MREO within the saprolite clays immediately above fresh GRV.

Agangi (2011)[8] observed that GRV magmas generally produced volatile-rich, fluorine-bearing phases at a late stage of evolution. Whole rock analyses by Agangi (2011) indicated a moderate-high concentration of REEs in the magma and increasing trends with progressing fractionation (increasing silica), suggesting the magma itself is the most obvious source of REEs. This observation of Agangi (2011) offers support to Investigator's current model, with subsequent weathering and/or alteration exposing these cavities, and potential REE containing minerals, and leading to the development of a zone of higher concentration of rare earth oxides. Additional mineralogical analyses will help refine this model.

Investigator has observed elevated REEs at other prospects which are geologically located such that the REEs are more likely to have been sourced from the lower GRV (e.g. Paris). However, the consistency of REE-enrichment within the Apollo region is indicative of changes in compositional and thermal evolution through time from the lower to the upper GRV that has included REEs compositions, and offers a new target opportunity within the upper GRV. This is supported by observations from a hole recently drilled at Investigator's Uno Range tenement where elevated REEs concentrations were similarly observed in the assays of fresh rock samples of upper GRV.

Our model of weathering of the upper GRV resulting in elevated concentrations of REEs, and in particular, as observed at Apollo, elevated high value MREOs, has major implications for regional exploration. It opens up a broad zone of targets associated with weathering of the upper GRV within Investigator's Southern Gawler Domain tenements (including Peterlumbo, Yardea, Nonning South, Uno Range, Harris Bluff and Morgans; Figure 5 below), and potentially also the recently applied for tenements which cover the Gawler Craton/Stuart Shelf zone further to the east).

[8] Agangi. A 2011; Magmatic and volcanic evolution of a silicic large igneos province: the Gawler Range Volcanics and Hiltaba Suite, South Australia. University of Tasmania CODES PHD.

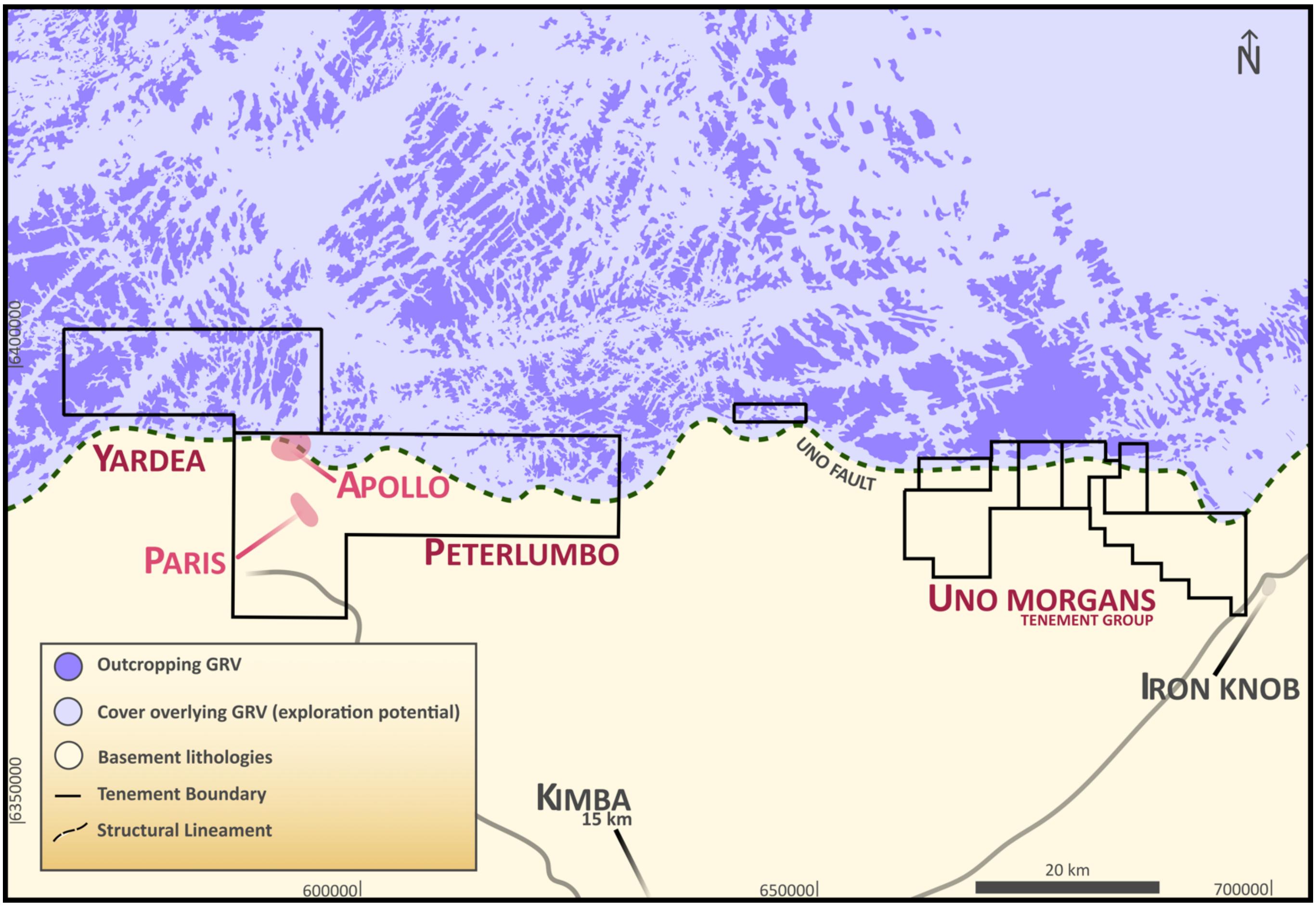


Figure 5: *1:100,000 geology showing outcropping upper GRV (dark purple) and areas of interpreted cover over GRV (light purple) that on basis of current interpretation has potential for the presence of REE mineralisation akin to that observed at Apollo. Investigator tenements identified.*

Next Steps

A key factor in determining the economic viability of the REEs mineralisation discovered is whether the elements are amenable to relatively simple extractive techniques. We are currently investigating appropriate metallurgical testwork to determine whether the identified mineralisation is amenable to economic extraction.

Investigator are in the process of 1m sub-sampling a series of the holes noted in this release for analysis using the "Lithium Borate fusion" technique in order to define the total REE content within the key enriched clay zone and in bedrock. This is an important next step and will provide the total REEs content with greater accuracy than the current "4 acid digest", which potentially may not completely liberate all REEs.

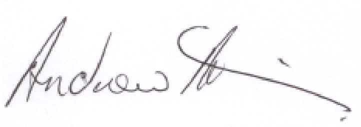
Follow up drilling is planned that will provide greater detail on the distribution of mineralisation and to test for further elevated REEs concentrations within our regional model.

Conclusions

The identification of significant REEs mineralisation, importantly the relatively high percentages of high value MREOs, is a significant discovery by Investigator. This discovery has opened up expanded exploration potential for the company to identify zones of rare earth enrichment at shallow depths associated with weathering of shallow buried upper Gawler Range Volcanics proximal to similar structural settings hosting this discovery at Apollo.

Initial drilling results at Apollo, whilst broad-spaced, displays strong consistency, and evidence of relative increases in REEs content in a number of orientations that remain open. We look forward to expanding our knowledge of the distributions of elevated REEs mineralisation both within the discovery at Apollo and more widely across our tenements in the region. We also look forward to gaining an early understanding of the metallurgical properties of the mineralisation intersected.

For and on behalf of the board.



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About Investigator Resources

Investigator Resources Limited (ASX: IVR) is a metals explorer with a focus on the opportunities for silver-lead, copper-gold and other metal discoveries. Investors are encouraged to stay up to date with Investigator's news and announcements by registering their interest here: https://investres.com.au/enews-updates/

Capital Structure (as at 30 June 2022)

Shares on issue	1,332,313,657
Unlisted Options	28,000,000
Performance Rights	5,000,000
Top 20 shareholders	31.1%
Total number of shareholders	5,556

Directors & Management

Dr Richard Hillis	Non-Exec. Chairman
Mr Andrew McIlwain	Managing Director
Mr Andrew Shearer	Non-Exec. Director
Ms Melanie Leydin	CFO
Ms Anita Addorisio	Company Secretary

Competent Person Statement

The information in this announcement relating to exploration results is based on information compiled by Mr. Jason Murray who is a full-time employee of the company. Mr. Murray is a member of the Australian Institute of Geoscientists. Mr. Murray has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Murray consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

The information in this announcement that relates to Mineral Resources Estimates at the Paris Silver Project is extracted from the report entitled "Paris Updated Mineral Resource Estimate" dated 28 June 2021 and is available to view on the Company's website www.investres.com.au The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

Appendix 1: Drillhole Location Table

Hole Number	Prospect	Easting (metres)	Northing (metres)	RL (Metres)	Azimuth (Magnetic)	DIP	Total Depth
PPRC824	APOLLO	593640	6392184	149.5	83	-60	198
PPRC829	APOLLO	593279	6391971	150.7	53	-60	126
PPRC830	APOLLO	593193	6391924	150.3	53	-60	120
PPRC831	APOLLO	593107	6391874	149.3	53	-60	120
PPRC832	APOLLO	593018	6391822	147.7	53	-60	120
PPRC833	APOLLO	592708	6392524	144.6	83	-60	150
PPRC834	APOLLO	592612	6392525	144.4	83	-60	150
PPRC835	APOLLO	592486	6392271	147.2	323	-60	120
PPRC836	APOLLO	592741	6392214	147.1	44	-60	120
PPRC837	APOLLO	592655	6392142	148.2	44	-60	120
PPRC838	APOLLO	592582	6392081	148.8	44	-60	120

APPENDIX 2: JORC Code, 2012 Edition – Table 1

The following section is provided to ensure compliance with the JORC (2012) requirements for the reporting of the "Significant Rare Earth Discovery at Apollo" ASX release dated 8 September 2022.

Assessment and Reporting Criteria Table Mineral Resource – JORC 2012

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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.* • *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 (eg 'RC 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.*	**<u>Reverse Circulation ("RC") Drilling</u>** • RC drilling was undertaken to obtain samples from each 1m down-hole interval, from which a nominal 3kg sample was collected for multi element geochemical analysis. • All RC samples were collected, passed through a cone splitter with 1m calico samples collected and retained in green bags with the bulk sample for subsequent 1m assay if mineralisation is identified in 3m composites. A 50:50 split of bulk sample material occurred after the 1m sample collection as a method to reduce bulk residual weight from a safety perspective. • At the same time as above sampling, a 3 metre composite spear sample weighing a nominal 3kg was collected for assay analysis. • Drill intervals had visual moisture content and volume recorded i.e., Dry, Moist, Wet and Normal, Low, Excessive in addition to the method of sampling recorded (3m composite or 1m split). • Analysis was undertaken using industry standard techniques on a 40g pulverised sample. • No other aspects for determination of mineralisation that are material to the public report have been used. • Samples were analysed using industry standard ICP-MS/OES for multielement geochemistry and AAS for gold. • Additional reanalysis of pulp samples for expanded rare earth suite was undertaken post initial assay to determine composition of REE contributing to the TREO suite.
Drilling techniques	• *Drill type (eg core, RC, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc)*	• Reverse Circulation (RC) drilling was completed using 143mm face sampling hammer bits.

Criteria	JORC Code explanation	Commentary
	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).	
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.*	**Reverse Circulation Drilling** • Visual observations were recorded on a 1m basis for Low/Normal/High volume and Dry/Moist/Wet content and stored in the company database, with hard copy field booklets retained. • Additional secondary visual checks to verify the interval representivity were made by geologists to confirm these records on a randomised basis. • Reported intersections were checked against 1m visual bag weight/recovery observations for the program and no obvious bias between sample volume and grade was identified. • Where sample volume variability was identified it was generally constrained to below standing water level in a hole, drillers utilised booster/compressors to maximise dry hole drilling conditions and this was successful in maximising sample volume and overall representivity.
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.*	**Reverse Circulation Drilling** • Entire holes are logged comprehensively and photographed on site. • Qualitative logging includes lithology, colour, moisture content, sample volume, mineralogy, veining type and percentage, sulphide content and percentage, description, marker horizons, weathering, texture, alteration, mineralisation, and mineral percentage. • Quantitative logging includes recording the magnetic susceptibility of each 1m bulk sample. • Portable XRF is utilised on an informal basis to identify zones of mineralisation and mineralogical components to assist in lithological logging but not relied upon for reporting of mineralisation in this release. • Intersections identified in this release were re-logged and interpreted as part of the verification process visually and with assistance of multi-element geochemistry.
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 na-*	**Reverse Circulation Drilling** • RC drilling samples collected at nominal 1m intervals. • RC drill holes were routinely spear sampled on a 3m composite basis from individual 1m intervals. At the same time, a cone split sample was retained in an individually numbered calico for subsequent sub sample analysis at 1m intervals should a 3m composite return anomalous geochemistry. • The drill contractor uses high pressure air and boosters which maintains dry sample in the majority of instances; however, there are occasions where damp or

Criteria	JORC Code explanation	Commentary
	ture, 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.*	wet sample is returned. In these circumstances, the damp and/or wet sample interval is recorded. • Records of sampling type and interval widths are recorded at the time of sampling. • If 3m composite samples are resampled at 1m intervals, the original sample is retained in the database but deprioritised such that 1m intervals take precedence. • Field duplicates are taken on every 20th sample within the 1m sampling sequence. • No field duplicates were taken within 3m composite sampled intervals in this particular program. • Certified Reference Standards are inserted on every 25th sample within the 1m sampling sequence only and were not utilised in 3m composite intervals. • Re analysis of 1m sub sampling is to occur in order to confirm QAQC integrity, including duplicates and REE suitable standards. • Sample sizes are regarded as appropriate to the grainsize of the material being sampled.
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 (eg standards, blanks, duplicates, external laboratory checks) and*	• A certified and accredited commercial laboratory Bureau Veritas Minerals Laboratory ("BV") (Adelaide) was used for initial 3m composite assays. • Samples were analysed using methods MA100 with a 20g (minimum) prepared sample subjected to a 4 acid total digest with perchloric, nitric, hydrofluoric and hydrochloric acids and analysed by ICP-AES and ICP-MS for 59 elements. • Detection limits for the assay method employed are regarded as at appropriate levels of precision for the program of work. • A number of samples require additional expanded suite assay and are clearly annotated in Table 2 of the release. • Four acid digestions can dissolve most minerals; however, although the term "near-total" is used, depending on the sample matrix and mineralogy of REE, not all elements are quantitatively extracted. Additional 1m subsampling is yet to occur and will utilise lithium borate fusion which is regarded as a total digest method of analysis. • Laboratory analysis methods are regarded as appropriate for the style of mineralisation being targeted and early stage of exploration work. • Internal certified laboratory QA/QC is undertaken by BV, with results monitored by Investigator Resources Ltd ("Investigator") **QA/QC Summary for RC Drilling** • Records of QA/QC data obtained from each drilling program are retained by Investigator. • No standards were used within 3m composite sampling on the basis that resampling of mineralisation at 1m intervals would occur where of significance.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td>whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</td><td>

Duplicates were not taken from 3m composite intervals in this program but are routinely taken on 1m sub sampling. Future programs will include duplicate sampling on all 3m composites.
No significant analytical biases have been detected in the results presented; however, some variability may be present in some 3m intersections that are yet to be resampled, this variability is unlikely to significantly impact on results given the early exploratory nature of drilling subject to this release. The 3m composite results are of lower confidence than 1m sub-sampled intervals due to absence of standard/duplicate insertion in the 3m compositing process. However, 3m composite results are regarded as representative of mineralisation for the purpose of early-stage exploration.

</td></tr>
<tr><td>Verification of sampling and assaying</td><td>

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.

</td><td>

Results of significant intersections were verified by a minimum of two Investigator personnel.
No twinned hole comparison has occurred with respect to results in this release given broad exploratory nature of drilling.
Rare earth element analyses were originally reported by BV in elemental form but have been converted to relevant oxide concentrations as in 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 = $Pr_6O_{11} + Nd_2O_3 + Dy_2O_3 + Tb_4O_7$

<table>
<tr><th>Element Symbol</th><th>Element Name</th><th>Element Oxide</th><th>Oxide Factor</th></tr>
<tr><td>Ce</td><td>Cerium</td><td>CeO2</td><td>1.2284</td></tr>
<tr><td>Dy</td><td>Dysprosium</td><td>Dy2O3</td><td>1.1477</td></tr>
<tr><td>Er</td><td>Erbium</td><td>Er2O3</td><td>1.1435</td></tr>
<tr><td>Eu</td><td>Europium</td><td>Eu2O3</td><td>1.1579</td></tr>
<tr><td>Gd</td><td>Gadolinium</td><td>Gd2O3</td><td>1.1526</td></tr>
<tr><td>Ho</td><td>Holmium</td><td>Ho2O3</td><td>1.1455</td></tr>
<tr><td>La</td><td>Lanthanum</td><td>La2O3</td><td>1.1728</td></tr>
<tr><td>Lu</td><td>Lutetium</td><td>Lu2O3</td><td>1.1371</td></tr>
<tr><td>Nd</td><td>Neodymium</td><td>Nd2O3</td><td>1.1664</td></tr>
<tr><td>Pr</td><td>Praseodymium</td><td>Pr6O11</td><td>1.2082</td></tr>
<tr><td>Sm</td><td>Samarium</td><td>Sm2O3</td><td>1.1596</td></tr>
<tr><td>Tb</td><td>Terbium</td><td>Tb4O7</td><td>1.1762</td></tr>
<tr><td>Yb</td><td>Ytterbium</td><td>Yb_2O_3</td><td>1.1387</td></tr>
<tr><td>Y</td><td>Yttrium</td><td>Y2O3</td><td>1.2699</td></tr>
<tr><td>Tm</td><td>Thulium</td><td>Tm_2O_3</td><td>1.1421</td></tr>
</table>

Primary data is captured directly into an in-house referential and integrated database system.
All assay data is cross validated using Micromine drill hole validation checks including interval integrity checks.
Laboratory assay data is not adjusted. Below detection results reported with a “<” sign are converted to “-“as part of validation.
Any laboratory analysis undertaken by alternate methods is recorded such that the method with highest level of precision takes precedence in the database.
Electronic data is housed on a commercially supported

</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
		industry specific database that is hosted in the cloud with supported backup redundancy and unique login security.
Location of data points	• *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.*	**<u>Collar co-ordinate surveys</u>** • All coordinates are recorded in GDA 94 MGA Zone 53. • All RC Holes were field located utilising handheld GPS (accuracy of approximately +/-4m) and orthoimagery. • Post drilling, RC collars are surveyed utilising differential GPS with a typical accuracy of +/-10cm. • Survey method for all drill holes is recorded in the company's referential database. • Topographic control uses a high resolution DTM generated by an AeroMetrex 28cm survey. • All oriented angled holes were lined up manually using sighting compass by the rig geologist. **<u>Down hole surveys</u>** • Survey results, depth and survey tool are recorded for each hole in Investigator's in house referential database. • Angled drillholes were surveyed every 30m down hole until end of hole. • Hole surveys were checked by geologists for potential errors due to lithological conditions (eg magnetite/sphalerite) or setup errors. Suspect surveys were flagged in the database and omitted where reasonable evidence was present to do so. • During the program the RC survey azimuth was found to be in error due to a camera/operator fault. Due to the shallow nature of drilling, the impact is regarded as negligible. Follow up collar surveys were undertaken using a gyroscope at approximately 5 metres to verify collar setup. Results confirmed collar setup was within acceptable margins from planned setup. The shallow depth of RC holes and exploratory nature lowers overall impact on azimuth change in this program.
Data spacing and distribution	• *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*	• Drill hole spacing is variable over the program (refer to drill location plan) and reconnaissance in nature. • Traverses were oriented and designed to target potential structural or lithological trends. • Drillhole spacing is insufficient to establish geological and grade continuity in this program. • 3m compositing of 1m sample intervals occurred during exploration drilling and is clearly recorded within the database. Concurrent 1m down hole sampling allowed for subsequent subsampling at greater detail or subsampling at the time of drilling at the geologist's discretion. Sampling method is recorded for all drillholes in the referential database. • Intersection tables accompanying this release are

Criteria	JORC Code explanation	Commentary
	has been applied.	based entirely on 3m field composite samples. No 1m sub sample assaying has occurred at the time of this release.
Orientation of data in relation to geological structure	• *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 orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Drillholes were designed to intercept lithological, structural (geophysical) and in some instances geochemical targets. The orientation of sampling was designed to best test each feature based on its interpreted orientation. • A preliminary interpretation suggests a relatively flat lying contact between fresh and weathered/altered clays such that future drilling would be optimal at 90 degrees dip. The 60 degree dip in this drilling does not represent true width intersections, and all intersections are reported on a down hole basis. • There is insufficient data to be sure that holes are oriented to ensure unbiased sampling over a broader prospect scale and further drilling would be required to improve confidence. • All drilling was undertaken with inclined holes with orientation depending on target model. • No true width intersections have been presented.
Sample security	• *The measures taken to ensure sample security.*	**<u>Reverse Circulation</u>** • Samples were collected at each drillhole site in individually numbered calico sample bags. The sample bags are subsequently tied and placed in poly-weave bags. The poly-weave bags are then cable-tied to prevent access to the samples. • Samples were dispatched to Adelaide commercial laboratories by Investigator Resources personnel or independent contractors. Records of each batch dispatched included the sample numbers sent and the date. • Investigator Resources personnel provided, separate to the sample dispatch, a submission sheet detailing the sample numbers in the dispatch and analytical procedures to the laboratory. • The laboratory conduct an audit of samples received to confirm correct numbers per the submission sheet provided. If any issues are identified in the audit, the issues are advised to Investigator Resources immediately for review and interrogation. • Assay pulps are returned to Investigator from contracted laboratories on a regular basis and stored at a secure warehouse facility leased by Investigator. Pulp samples are stored in original cardboard boxes supplied by the laboratory with laboratory batch code displayed on each box. • Samples may suffer from oxidation and are not stored under nitrogen or in a freezer. • Field 1m sub samples are stored on site at the drill hole location within interval bags until sub sampling is required. Given the random sub sampling selection based on composite results, the ability to tamper whilst

Criteria	JORC Code explanation	Commentary
		possible, is unlikely to simply or effectively result in a significant material change given approximate tenure of intervals is known from 3m composite sampling completed. The ability to resample the 1m split and retained 1m bulk sample is retained as an additional assurance protocol. All 1m sub sample intervals required from this program have been collected and stored at IVR offices. • Laboratory assays undertake additional QA/QC review and integrity checks as part of importation processes with Investigators contract database module. Any identified issues are quarantined until reviewed by senior Investigator geologists.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• The program was under supervision of Investigator's Senior Project Geologist with sufficient experience in the style of mineralisation and methods of drilling and sampling. • Reviews of past drill hole data has seen continual improvement, with significant changes to recording of quality control data from drill holes to ensure maximum confidence in assessment of drill and assay data. • Current drilling and sampling procedures have been reviewed during site visits by Investigator's Exploration Manager and found appropriate. Increased use of duplicate and standards for broader 3m composites has been recommended as an ongoing improvement.

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 Paris Project is contained within EL 6347 that was granted to Sunthe Minerals Pty Ltd ("Sunthe") a wholly owned subsidiary of Investigator. • Investigator manages EL 6347 and holds 100% interest. • EL 6347 is located on Crown Land covered by several pastoral leases. • An ILUA has been signed between Sunthe and the Gawler Range Aboriginal Corporation. This ILUA terminated on 28th February 2017 however this termination does not affect EL 6347 (or any renewals, regrants and extensions) as Sunthe entered into an accepted contract prior to 28th February 2017. • The Peterlumbo Project area has been culturally and heritage cleared for exploration activities over all areas drilled. • There are no registered Conservation or National Parks on EL 6347. • An Exploration PEPR (Program for Environment Protection and Rehabilitation) for the entirety of EL 6347

Criteria	JORC Code explanation	Commentary
		has been approved by DEM (South Australian Government Department for Energy and Mining). • All drilling work has been conducted under DEM approved work program permitting, and within the Exploration PEPR guidelines. All relevant landowner notifications have been completed as part of work programs.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• No previous exploration work has been undertaken by other parties at the exploration prospect as part of this program.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• This release refers to potential ion adsorption REE mineralisation bound to weathered upper Gawler Range Volcanic (GRV) derived saprolitic clays. • Elevated REE signature also recorded in fresh GRV below the weathering interface at TREO greater than 500ppm consistently in holes from this program. • High grade mineralisation is observed in current holes to be spatially related to the saprolite zone immediately above fresh GRV. • Upper and Lower Gawler Range Volcanics and brittle/permissive basement lithologies (eg dolomites/calc silicates) that are intersected by structural features are key targets being tested for base metals with large weathering profiles within the upper GRV a suitable host for REE enrichment. • Potential for epithermal mineralisation and skarn mineralisation is present and noted within the region.

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 the understanding of the report, the Competent Person should clearly explain*
		• Drill hole information is recorded within the Investigator in-house referential database and subsequently incorporated in full format into a industry specific contracted database management system with QA/QC records management and system backups.
		• The company has maintained continuous disclosure of drilling details and results for the Peterlumbo tenement, which are presented in previous public announcements.
		• A table of collar information for all holes drilled and reported in this release is included.
		• No material information relating to this program is excluded.

Criteria	JORC Code explanation	Commentary
	why this is the case.	
Data aggregation methods	• *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.* • *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.*	• Any references to reported intersections in this release are on the basis of weighted average intersections. • No top cut to intersections has been applied. • Allowance for 1 sample (3m) of internal dilution within intersection calculations is made. • Lower cutoff for intersection reporting has been at >500ppm TREO and >1000ppm TREO. (500ppm TREO being close to peer standard cutoff thresholds, 1000ppm TREO a diagnostic lithology based cutoff that clearly defined the dominant TREO mineralisation within drilling to date). • No metal equivalents are reported. • All reported results in this release relate to 3m field composite intervals.
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 (eg 'down hole length, true width not known').*	• Broad extent of mineralisation is unknown at this point due to a small number of drillholes and currently is open in all directions. • Mineralisation is observed to be flat lying and closely associated with the fresh rock/weathered rock interface in all holes, suggesting a generally flat lying geometry, albeit with potential changes in slope dependent on paleotopographic features and weathering. • All reported intersections are on the basis of down hole length and have not been calculated to true widths.
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.*	• See attached figures in release showing drill hole density. • See attached tables of significant intersections.
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.*	• Comprehensive reporting is undertaken. All prior historic holes identified in drill plans have been released to the ASX in prior programs of work. All TREO results above the selected cutoff for the Apollo area in this release have been reported. A small number of intervals are awaiting return of full REE suite assays and this is annotated on Table 2 of the release. A cutoff value of 500ppm was implemented which is above the 350 ppm TREO cutoff reported by other companies with similar ionic clay bound rare earth elements. Additional reporting at a higher 1000ppm TREO cutoff was applied to demonstrate clear higher

Criteria	JORC Code explanation	Commentary
		grade mineralisation associated with geologic boundaries.
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.*	• A substantial body of work has occurred on the nearby Paris Deposit as part of the pre-feasibility study which includes metallurgical testwork, process flowsheet design and mining studies (not REE related) • The broader Peterlumbo area subject to this release has had gravity and aero-magnetic surveying completed and used for targeting. • Prior drilling, geochemistry and petrologic studies have confirmed prospectivity and presence of hydrothermal alteration systems in the region. • Groundwater is generally present below 40m depth however may or may not be present in many areas drilled and likely attributed to lithological controls and degrees of alteration or presence of fault structures. • Multi-element geochemistry assaying (48 or 61 elements) is routine for all sampling. Some elemental associations are recognised within certain lithologies and are used as a tool to assist in interpretation of original lithologies where alteration affected the ability to visually determine.
Further work	• *The nature and scale of planned further work (eg 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.*	• 1m subsampling of key clay intervals will be undertaken to determine total REE content. • Mineralogic and baseline early metallurgical study to determine base case leach properties and REE metal mineral associations is planned. • Follow up drilling is in the process of design.