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ASX ANNOUNCEMENT **20/04/2022**

Drilling uncovers major High-Value Rare Earth Discovery at Comet in the Northern Gawler Craton

HIGHLIGHTS

- Petratherm redefines the mineral prospectivity of the Northern Gawler Craton of South Australia after Greenfield's regional RAB drilling supported by South Australian Government Exploration Initiative Co-Funding uncovers significant rare earth (REE) occurrences.

- Shallow RAB drilling tested the top 3 metres of the prospective clay horizon. Mineralisation encountered, includes impressive concentrations of high-value REE's which remain open at depth below and out into surrounding areas.

- Notable drill intercepts include:

Hole	Interval	High Value Magnet Rare Earths*
703	3m @ 2,819 ppm TREO from 15m - 18m (EOH)	743 ppm
704	3m @ 2,660 ppm TREO from 15m - 18m (EOH)	702 ppm
590	3m @ 2,701 ppm TREO from 15m - 18m (EOH)	1,016 ppm
799	3m @ 1,813 ppm TREO from 12m - 15m (EOH)	456 ppm
931	3m @ 1,705 ppm TREO from 12m - 15m (EOH)	382 ppm
T14_RC10	4m @ 3,042 ppm TREO from 36m - 40m	814 ppm

(* Magnet Rare Earths = Pr_6O_{11}, Nd_2O_3, Tb_4O_7 & Dy_2O_3)

- All 44 holes assayed returned significant results with 23 holes returning TREO > 1,000ppm.

- REE intercepts in clays show striking similarities and comparable grades to the ion-absorption rare earth deposits of China which are a major world supplier.

- Deeper RC drilling into crystalline basement rock below REE enriched clays at the Target 14 Prospect intersected zones of primary REE mineralisation. This may represent a potential source rock for the mineralisation and petrological analysis of the REE enriched basement rock is underway.

- 10,000 metre RAB drilling program scheduled to start in three weeks to test extent of mineralisation. Initial JORC resource potentially defined within six months.

- Petratherm has a strong ground position in the Northern Gawler Craton, totalling 1,885 Km^2. There is large upside for further important new REE Prospects in surrounding un-explored areas.

INTRODUCTION

Petratherm Limited (ASX: **PTR**) is pleased to announce assay results of Rare Earth (REE) drill intersections from the Comet Project Area (EL 6443 & EL 6633) in the Northern Gawler Craton of South Australia. Samples from 44 shallow RAB drill holes returned significant REE mineralised clay intersections outlining several regionally significant Prospect Areas. The results presented are for the most part 3 metre composite bottom hole samples taken from the Company's ongoing regional RAB geochemical sampling program and the mineralisation encountered remains open at depth and out into surrounding areas.

Full suite REE analysis of the 44 drill holes was undertaken following recognition of anomalous light REE (cerium and lanthanum) and other REE path finder elements from the Company's initial assay work. In addition to the 44 holes presented herein, a further 111 drill holes of the 993 shallow RAB holes drilled thus far contain evidence for elevated REEs. These samples are now undergoing analysis to better characterise the extent of REE mineralisation in the region.

First pass drilling was completed on a 400 metre X 400 metre spaced grid and the newly defined REE Prospect areas have been shown to be regionally extensive extending several kilometres (Figure 1).

REE 1 Anomaly - Area 1 is a broad northeast trending anomaly extending over an approximate 9 kilometre by 2-kilometre area (Figure 1). The 10 holes sampled to date in this area have returned a top of clay 3 metre composite Total Rare Earth Oxide (TREO) grade ranging between 703 ppm to 2,819 ppm. The area includes the Target 14 Gold Prospect where REE assaying of the crystalline basement rock below the clay interval has also returned highly anomalous REE's, with drill hole T14_RC10 intercepting 4m @ 3,042 ppm TREO from 36m - 40m. The presence of primary REE mineralisation in fresh rock below the REE clays is highly encouraging, confirming the presence of local REE source rocks.

Drill Hole 703 records 3m @ 2,819 ppm from 15m to end of hole and Hole 704 which is the adjacent hole 400m to east, returned 3m @ 2,660 ppm TREO from 15m to end of hole. These holes contain exceptional high value Magnet REE grades of 743 ppm and 702 ppm respectively. Another 50 drill holes with anomalous REEs and/or REE pathfinder elements from within Area 1 are with ALS laboratories undergoing analysis.

REE2 Anomaly - Area 2 REE anomaly extends over an approximate 3 kilometre by 1.5-kilometre area and broadly overlies a prominent magnetic basement rock complex (Figure 2). Research is underway to determine if the magnetic complex is the source of the REE mineralisation in the area. A further 37 drillholes at REE2 have returned anomalous samples which are now with ALS for analysis.

Other Early Stage REE Anomalies - Several single and multi-hole regional spaced drill holes (Figure 1) have returned highly significant REE grades including:

Hole 590	3m @ 2,701 ppm TREO from 15m - 18m (EOH) of which 1,016 ppm are High-Value Magnet REEs

and

Hole 931	3m @ 1,705 ppm TREO from 12m - 15m (EOH)

Comet Project - Table of all REE Intercepts												
Drill Hole	From	To	Interval	TREO	High Value Magnet Rare Earths							
					Praseodymium Pr_6O_{11}		Neodymium Nd_2O_3		Terbium Tb_4O_7		Dysprosium Dy_2O_3	
	metres	*metres*	*metres*	*ppm*	*ppm*	*% TREO*	*ppm*	*% TREO*	*ppm*	*% TREO*	*ppm*	*% TREO*
280	18	22	4	980	36.25	3.70	109.76	11.20	1.13	0.12	6.5	0.66
358	8	12	4	972	42.65	4.39	137.05	14.11	2.22	0.23	12.9	1.33
400	8	12	4	877	52.80	6.02	177.29	20.23	1.58	0.18	9.3	1.06
404	9	12	3	1322	67.66	5.12	205.29	15.53	1.98	0.15	10.6	0.80
428	14	18	4	654	29.12	4.45	92.03	14.08	1.01	0.15	6.8	1.03
475	6	9	3	1088	53.76	4.94	194.21	17.85	2.57	0.24	16.4	1.51
484	8	12	4	1205	76.84	6.38	261.27	21.68	3.25	0.27	17.3	1.44
493	9	15	6	868	42.17	4.73	152.62	17.58	2.52	0.29	15.1	1.74
567	9	12	3	1030	61.86	6.00	212.87	20.66	2.52	0.24	14.5	1.41
586	18	21	3	550	23.74	4.31	72.20	13.12	0.61	0.11	2.9	0.53
590	15	18	3	2701	216.27	8.01	744.16	27.55	10.08	0.37	45.2	1.67
TG14RB01	28	30	2	906	48.81	5.39	177.88	19.63	1.51	0.17	8.2	0.90
638	9	12	3	1013	66.09	6.52	229.20	22.62	3.02	0.30	14.2	1.40
639	12	15	3	1140	74.30	6.52	244.94	21.49	3.60	0.32	18.9	1.66
703	15	18	3	2819	149.21	5.29	562.20	19.95	4.71	0.17	27.1	0.96
704	15	18	3	2660	141.36	5.31	530.71	19.95	4.47	0.17	25.7	0.97
707	19	22	3	1225	71.65	5.85	246.11	20.09	4.38	0.36	21.1	1.72
710	12	15	3	1081	59.56	5.51	199.45	18.46	3.19	0.29	15.9	1.47
733	24	27	3	848	35.16	4.15	124.22	14.65	1.62	0.19	7.9	0.93
744	18	21	3	1142	77.20	6.76	278.77	24.41	3.62	0.32	16.9	1.48
750	20	24	4	1165	67.90	5.83	258.94	22.22	5.72	0.49	30.3	2.60
757	12	15	3	568	36.49	6.43	137.64	24.24	1.76	0.31	7.8	1.37
785	5	15	10	710	33.04	4.65	120.02	16.90	2.50	0.35	13.4	1.89
790	12	15	3	626	21.87	3.49	78.15	12.48	2.09	0.33	12.3	1.96
799	12	15	3	1813	88.80	4.90	333.59	18.40	5.80	0.32	27.9	1.54
800	8	12	4	1121	53.64	4.79	212.87	18.99	4.63	0.41	22.6	2.01
804	8	14	6	780	40.60	5.20	155.13	19.88	2.58	0.33	11.3	1.44
808	10	14	4	1248	65.00	5.21	242.61	19.45	2.62	0.21	11.5	0.92
and	22	24	2	728	37.09	5.10	137.05	18.83	1.91	0.26	8.1	1.11
822	10	15	5	758	37.51	4.95	132.68	17.51	2.18	0.29	11.6	1.53
855	9	12	3	1418	67.66	4.77	251.94	17.77	4.94	0.35	25.7	1.81
875	15	17	2	1041	63.91	6.14	236.78	22.74	2.81	0.27	14.2	1.36
877	9	15	6	712	37.21	5.23	132.97	18.67	2.05	0.29	10.6	1.49
886	15	18	3	728	41.68	5.72	144.05	19.78	1.83	0.25	9.9	1.36
901	15	18	3	495	22.65	4.58	76.87	15.53	1.35	0.27	7.6	1.54
931	12	15	3	1705	83.49	4.90	286.93	16.83	1.98	0.12	9.5	0.56
953	8	12	4	682	29.36	4.31	105.21	15.43	1.89	0.28	10.4	1.53
961	15	18	3	873	46.64	5.34	147.55	16.90	1.58	0.18	8.4	0.96
21T14RC03	12	16	4	1298	72.37	5.58	271.77	20.94	1.14	0.09	5.9	0.45
and	44	48	4	1179	65.00	5.51	246.11	20.87	1.09	0.09	5.8	0.50
21T14RC08	8	16	8	962	52.13	5.42	186.92	19.44	0.65	0.07	2.9	0.30
21T14RC10	12	16	4	817	44.34	5.42	155.71	19.05	0.68	0.08	3.4	0.42
and	36	40	4	3042	169.15	5.56	640.35	21.05	1.00	0.03	3.4	0.11
and	52	56	4	829	46.27	5.58	174.38	21.03	0.66	0.08	3.5	0.42
21T14RC12	20	24	4	1147	62.71	5.47	239.11	20.84	1.53	0.13	8.6	0.75
21T14RC13	36	40	4	604	31.41	5.21	118.97	19.71	0.88	0.15	4.8	0.79
21T14RC14	8	12	4	749	40.23	5.37	146.97	19.63	0.58	0.08	2.7	0.37
and	24	28	4	727	38.30	5.27	139.38	19.16	0.89	0.12	4.9	0.67
and	32	36	4	1361	74.91	5.50	276.44	20.31	0.66	0.05	2.4	0.18
and	44	48	4	1295	74.06	5.72	276.44	21.34	0.76	0.06	3.2	0.25
21T14RC18	24	28	4	804	34.19	4.25	132.97	16.53	3.01	0.37	18.3	2.28

Table 1 *Comet Project - Summary Table of all REE drill intersections analysed*

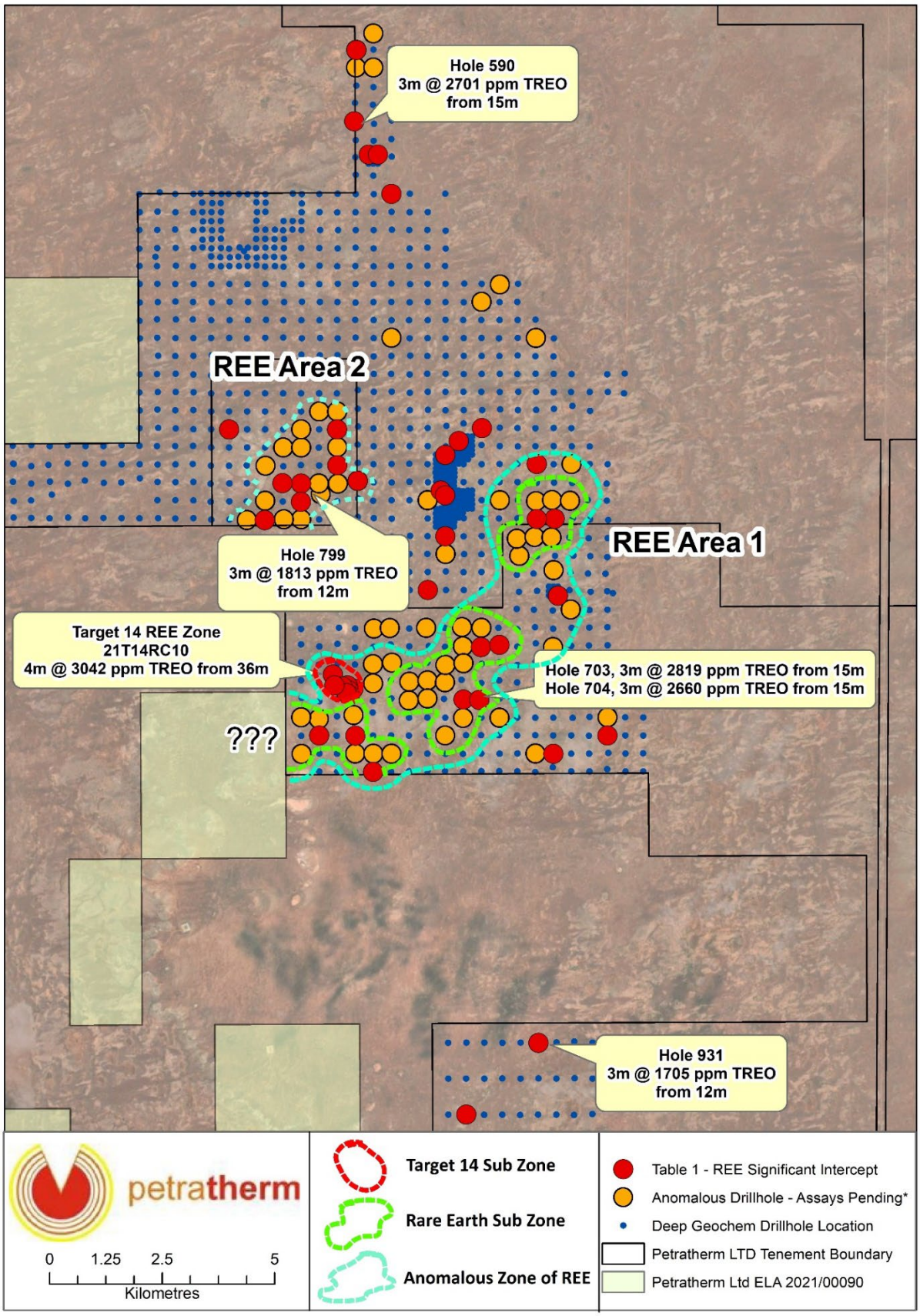

***Figure 1** Comet Project REE Results Overview Map*
(*Anomalous Drillhole = anomalous Ce and/or La and/or REE path finder element(s) Th, Sr & P)

It is important to note that sample results are for the most part single 3 metre composite samples of the top of the interpreted clay (saprolite) zone. Up hole sampling has not occurred and the mineralised intervals remain open at depth and laterally into surrounding areas. Samples from adjacent drill holes currently not recording significant REEs may be due to the sample interval being taken above or below potential mineralisation. Ionic Clay hosted REE occurrences typically show vertical and horizontal grade and depth variability within a saprolite clay profile. Better determination of these unknowns will come from the up-coming drilling scheduled to start in 3 weeks' time.

Commenting on these results Petratherm's Exploration Manager, Mr Peter Reid said:

"These are highly encouraging early results and a validation of the Company's long standing frontier exploration approach, working in under-explored terrains and trialling new exploration methods. The results provide strong evidence that the Northern Gawler Craton of South Australia is fertile for ionic clay hosted rare earth mineralisation."

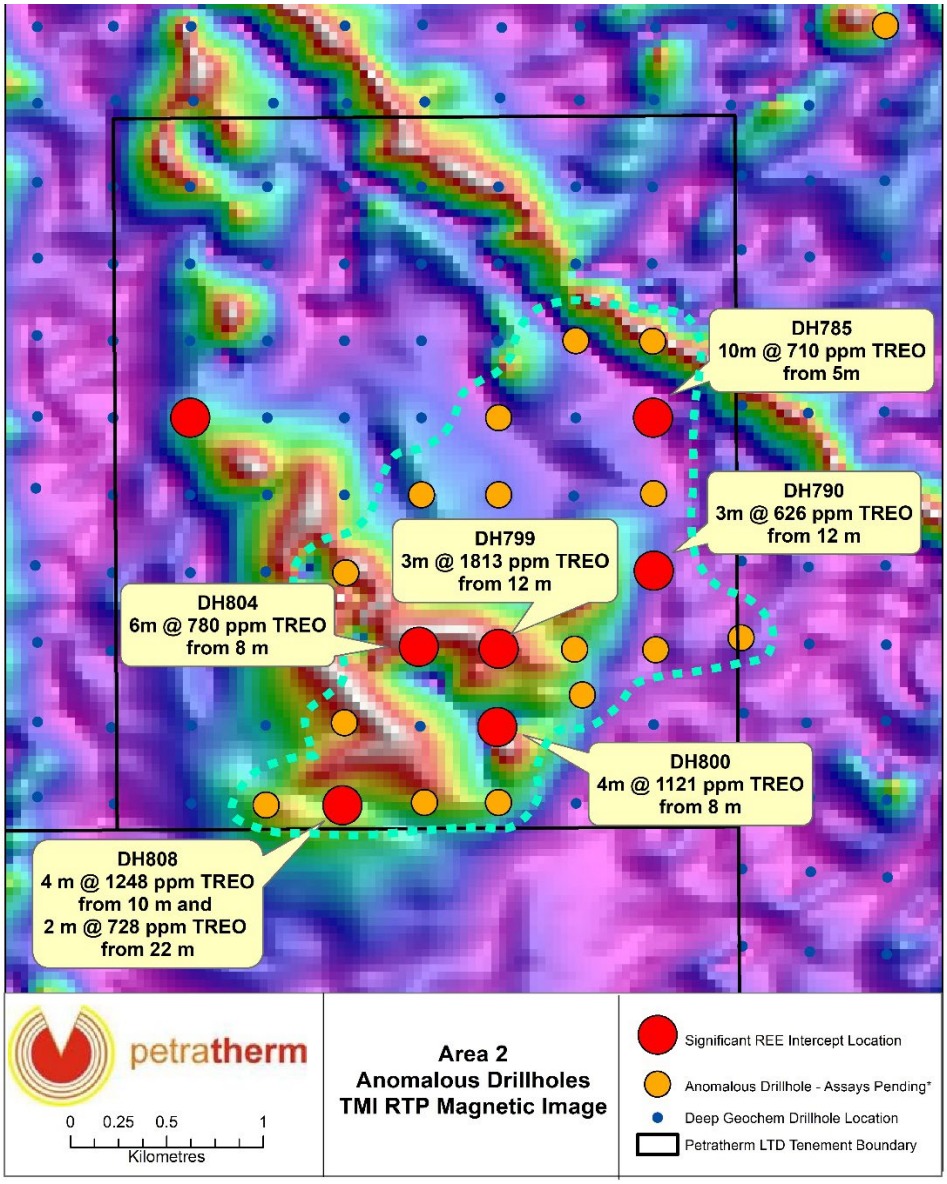

***Figure 2** REE2 Prospect, TREO values and REE anomalous drill holes.*
(*Anomalous Drillhole = anomalous Ce and/or La and/or REE path finder element(s) Th, Sr & P)

Significant Land Position Over Prospective Rare Earth Areas

The current drilling activities occur on the 100% owned, 1,190km^2, Comet (EL 6443) and Gina (EL 6633) tenements. The Company has received an Offer Of Grant for its 100% owned, 110 km^2, adjoining West Comet Tenement (ELA 2020/090) and recently applied for a second Exploration Licence Application area, Perfection Well (ELA 2022/017), totalling 585 km^2 on the eastern side of the Comet Project Area.

The Company has a very strong ground position with the combined Comet Project Holding totalling 1,885 km^2 in area. Regional RAB drilling activities to date have tested an approximate 130 km^2, which is just 7 % of the total Project Holding. There remains substantial upside potential for additional new REE discoveries to be made in the surrounding un-explored tenure.

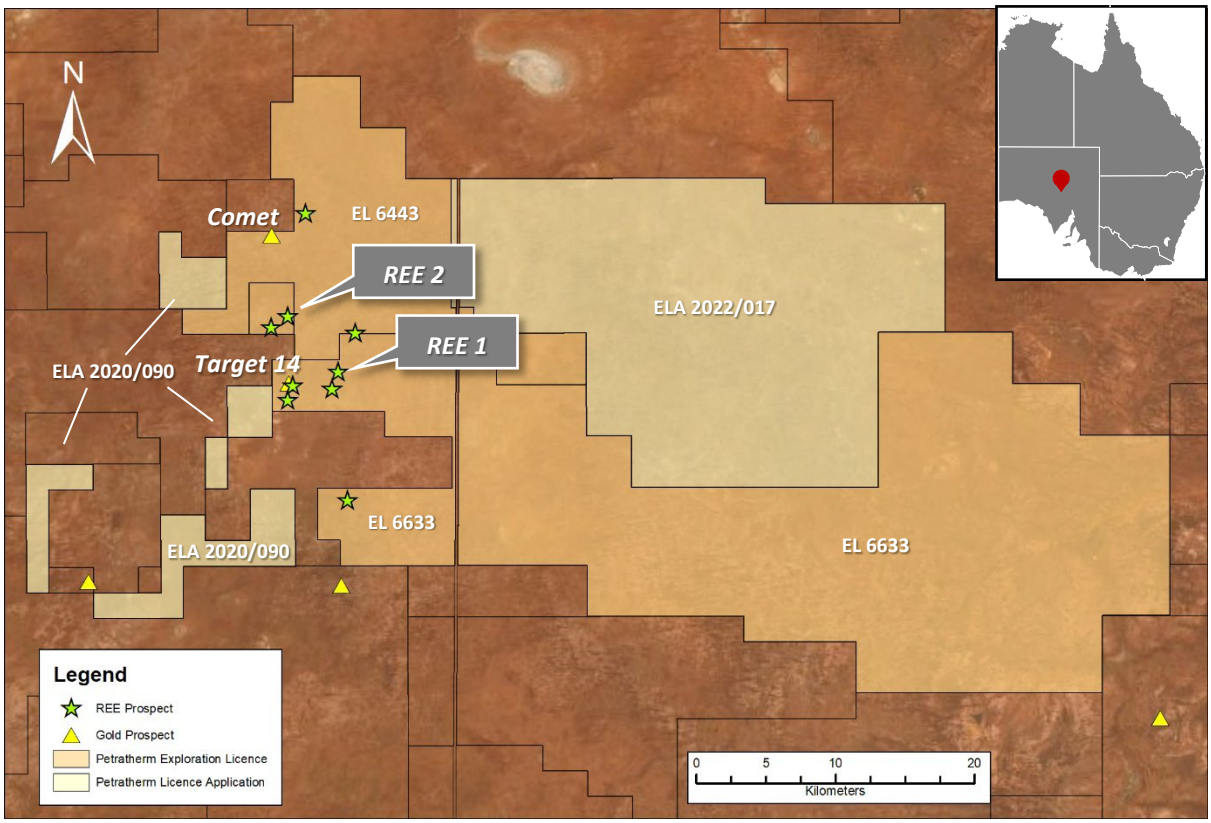

Figure 3 *Petratherm's 100% Comet Tenement Holdings*

About Petratherm's Shallow RAB Drill Geochemical Program

The Company has applied a new exploration methodology to explore for gold and critical minerals. Historical surface geochemical sampling exploration techniques in the region have been impeded by shallow cover strata which masks most of the prospective basement geochemical response. To overcome this issue, Petratherm applied a new exploration methodology, where regional scale (400 metre by 400 metre) shallow grid drilling has been undertaken to directly sample the top of the in-situ "saprolite" zone clays (deeply weathered basement rock which has been chemically decomposed to clay) below the younger transported cover strata. In most areas the top of the saprolite zone occurs between 5 and 15 metres depth and shallow drilling was undertaken using a light weight and cost effective, land cruiser mounted RAB drill rig.

This work was co-funded by a South Australian Government Accelerated Discovery Initiative Grant, which aims to accelerate mineral discovery through innovative exploration and research projects in regional and frontier terrains throughout South Australia.

Next Steps – 10,000 metres of Drilling to Start from mid-May.

Drilling will resume in approximately 3 weeks' time. The program will infill REE anomalous areas, test deeper extensions of current REE drill intercepts and expand the regional program into new adjacent territories. Continuous sampling will be undertaken to determine full extent of REE clay mineralisation within the clay profile. At this stage, approximately 10,000 metres of drilling is planned during this next critical phase. To permit more intensive resource scale drilling operations, additional heritage surveying is planned over the coming weeks concurrent with the drilling operations. The Company is highly encouraged by these early results and looks forward to this next major phase of exploration drilling.

***Photo** RAB Drilling Operations at Comet*

This ASX announcement has been approved by Petratherm's Board of Directors and authorised for release by Petratherm's Chairman Derek Carter.

For further information please contact :

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Competent Persons Statement: The information in this report that relates to Exploration Targets and Exploration Results is based on information compiled by Mr Peter Reid, who is a Competent Person, and a Member of the Australian Institute of Geoscientists. Mr Reid is not aware of any new information or data that materially affects the historical exploration results included in this report. Mr Reid is an employee of Petratherm Ltd. Mr Reid has sufficient experience that 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 Reid consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Drill Hole Collars

Hole ID	Easting (MGA94 z53)	Northing (MGA94 z53)	RL (m ASL)	Dip	Azimuth (Mag)	Total Depth EOH (m)	Assays Received
280	444,496	6,714,450	167	-90	0	22	Y
358	443,750	6,708,070	167	-90	0	12	Y
400	445,305	6,705,648	171	-90	0	12	Y
404	445,696	6,706,841	168	-90	0	15	Y
428	446,505	6,709,242	172	-90	0	18	Y
475	445,592	6,707,854	163	-90	0	9	Y
484	445,693	6,708,649	173	-90	0	12	Y
493	445,691	6,707,752	172	-90	0	15	Y
567	445,990	6,708,958	166	-90	0	12	Y
586	443,719	6,717,643	172	-90	0	21	Y
590	443,773	6,716,059	167	-90	0	18	Y
TG14RB01	443,657	6,703,455	164	-90	0	36	Y
638	448,125	6,707,230	163	-90	0	12	Y
639	447,727	6,707,224	168	-90	0	15	Y
703	446,097	6,703,215	176	-90	0	18	y
704	446,447	6,703,204	176	-90	0	18	y
707	446,486	6,704,378	168	-90	0	36	Y
710	446,898	6,704,427	172	-90	0	15	Y
733	448,195	6,705,519	160	-90	0	27	Y
744	443,995	6,715,319	170	-90	0	21	Y
750	444,195	6,715,319	162	-90	0	24	Y
757	440,893	6,709,212	175	-90	0	18	Y
785	443,293	6,709,212	166	-90	0	15	Y
790	443,297	6,708,418	169	-90	0	15	Y
799	442,493	6,708,013	175	-90	0	15	Y
800	442,486	6,707,607	172	-90	0	12	Y
804	442,078	6,708,023	171	-90	0	24	Y
808	441,682	6,707,201	168	-90	0	24	Y
822	447,724	6,708,448	169	-90	0	15	Y
855	449,295	6,702,416	161	-90	0	15	Y
875	443,696	6,702,409	156	-90	0	17	Y
877	442,892	6,702,414	159	-90	0	27	Y
886	444,092	6,701,608	160	-90	0	18	Y
901	448,093	6,702,008	168	-90	0	18	Y
931	447,763	6,695,585	168	-90	0	15	Y
953	446,160	6,693,993	170	-90	0	15	Y
961	448,158	6,693,192	163	-90	0	18	Y
21T14RC03	443,518	6,703,528	160	-60	120	60	Y
21T14RC08	443,198	6,703,770	163	-60	120	60	Y
21T14RC10	443,546	6,703,418	168	-60	120	60	Y
21T14RC12	443,408	6,703,504	165	-60	120	60	Y

Hole ID	Easting (MGA94 z53)	Northing (MGA94 z53)	RL (m ASL)	Dip	Azimuth (Mag)	Total Depth EOH (m)	Assays Received
21T14RC13	443,571	6,703,306	168	-60	120	60	Y
21T14RC14	443,501	6,703,352	160	-60	120	60	Y
21T14RC18	443,232	6,703,526	163	-60	120	60	Y
1	435,752	6,707,419	179	-90	0	24	N
14	436,955	6,707,762	175	-90	0	12	N
16	436,881	6,708,421	174	-90	0	15	N
27	438,505	6,708,863	177	-90	0	12	N
64	441,111	6,714,444	176	-90	0	7	N
68	442,308	6,714,451	171	-90	0	12	N
71	442,504	6,714,036	169	-90	0	8	N
73	442,501	6,713,643	166	-90	0	7	N
114	439,703	6,714,040	175	-90	0	12	N
130	439,319	6,709,247	177	-90	0	10	N
138	439,708	6,710,450	169	-90	0	9	N
148	439,299	6,712,445	175	-90	0	10	N
152	439,316	6,710,850	177	-90	0	15	N
156	440,093	6,708,847	175	-90	0	10	N
163	440,087	6,711,654	172	-90	0	9	N
166	440,092	6,712,837	175	-90	0	10	N
171	440,495	6,711,246	174	-90	0	10	N
172	440,506	6,710,861	172	-90	0	10	N
173	440,910	6,710,858	173	-90	0	10	N
174	441,325	6,710,847	174	-90	0	10	N
175	441,707	6,710,845	169	-90	0	10	N
176	442,110	6,710,853	176	-90	0	10	N
180	440,905	6,711,641	168	-90	0	10	N
183	441,316	6,712,043	170	-90	0	10	N
211	442,911	6,712,044	173	-90	0	10	N
273	444,498	6,711,248	161	-90	0	7	N
280	444,496	6,714,450	167	-90	0	22	N
282	444,904	6,714,038	168	-90	0	22	N
295	445,306	6,710,050	164	-90	0	10	N
326	446,498	6,712,051	163	-90	0	19	N
338	446,903	6,712,433	168	-90	0	19	N
349	447,706	6,711,245	159	-90	0	19	N
356	443,747	6,708,877	169	-90	0	16	N
358	443,750	6,708,070	167	-90	0	12	N
389	444,901	6,708,051	170	-90	0	9	N
395	445,302	6,707,640	172	-90	0	12	N
403	445,701	6,706,447	167	-90	0	12	N
433	446,905	6,707,639	155	-90	0	9	N
506	445,794	6,707,755	162	-90	0	9	N

Hole ID	Easting (MGA94 z53)	Northing (MGA94 z53)	RL (m ASL)	Dip	Azimuth (Mag)	Total Depth EOH (m)	Assays Received
523	445,888	6,708,452	177	-90	0	13	N
585	443,719	6,717,643	169	-90	0	21	N
586	443,719	6,717,643	172	-90	0	21	N
587	443,712	6,717,256	169	-90	0	20	N
589	443,689	6,716,467	166	-90	0	18	N
590	443,673	6,716,059	167	-90	0	18	N
601	444,095	6,717,255	164	-90	0	21	N
603	444,095	6,718,010	165	-90	0	21	N
615	447,733	6,705,624	169	-90	0	15	N
619	448,098	6,706,087	164	-90	0	12	N
628	447,335	6,706,403	171	-90	0	15	N
629	447,281	6,706,784	172	-90	0	12	N
630	447,675	6,706,823	173	-90	0	12	N
631	448,051	6,706,813	170	-90	0	15	N
640	447,708	6,707,619	169	-90	0	15	N
641	448,066	6,707,646	166	-90	0	18	N
642	448,463	6,707,628	169	-90	0	24	N
649	443,656	6,702,869	164	-90	0	18	N
661	442,887	6,702,783	161	-90	0	12	N
672	442,491	6,702,817	165	-90	0	12	N
675	444,090	6,703,570	168	-90	0	12	N
676	444,086	6,703,996	168	-90	0	12	N
677	444,106	6,704,787	168	-90	0	27	N
678	444,106	6,704,787	166	-90	0	12	N
679	444,459	6,704,802	166	-90	0	15	N
680	444,511	6,704,030	164	-90	0	16	N
681	444,511	6,704,030	165	-90	0	12	N
684	444,881	6,703,193	163	-90	0	12	N
685	444,896	6,703,608	165	-90	0	12	N
689	445,268	6,704,804	169	-90	0	18	N
692	445,295	6,703,638	170	-90	0	12	N
693	445,297	6,703,237	170	-90	0	12	N
695	445,687	6,703,593	170	-90	0	18	N
696	445,693	6,703,982	170	-90	0	15	N
699	446,061	6,704,824	169	-90	0	18	N
700	446,086	6,704,393	167	-90	0	21	N
701	446,098	6,704,019	168	-90	0	18	N
703	446,097	6,703,215	166	-90	0	18	N
704	446,447	6,703,204	168	-90	0	18	N
707	446,486	6,704,378	168	-90	0	22	N
708	446,493	6,704,805	174	-90	0	21	N
710	446,898	6,704,427	174	-90	0	15	N

Hole ID	Easting (MGA94 z53)	Northing (MGA94 z53)	RL (m ASL)	Dip	Azimuth (Mag)	Total Depth EOH (m)	Assays Received
728	448,091	6,703,981	167	-90	0	24	N
729	448,086	6,704,377	170	-90	0	24	N
732	448,479	6,705,213	167	-90	0	30	N
775	442,093	6,708,812	162	-90	0	15	N
776	442,493	6,708,812	169	-90	0	15	N
777	442,493	6,709,212	166	-90	0	24	N
784	442,893	6,709,612	170	-90	0	18	N
786	443,291	6,709,610	164	-90	0	15	N
789	443,296	6,708,819	170	-90	0	18	N
791	443,307	6,708,008	169	-90	0	18	N
795	442,926	6,707,774	162	-90	0	15	N
796	442,887	6,708,011	172	-90	0	11	N
801	442,492	6,707,215	176	-90	0	12	N
802	442,108	6,707,215	178	-90	0	15	N
804	442,078	6,708,023	171	-90	0	24	N
806	441,699	6,708,407	168	-90	0	12	N
807	441,692	6,707,629	169	-90	0	15	N
808	441,682	6,707,201	168	-90	0	14	N
809	441,286	6,707,202	169	-90	0	12	N
828	448,497	6,708,444	161	-90	0	21	N
854	449,295	6,702,815	165	-90	0	21	N
866	446,895	6,702,810	173	-90	0	18	N
868	446,090	6,702,805	173	-90	0	18	N
879	442,499	6,702,006	154	-90	0	15	N
882	443,695	6,702,013	159	-90	0	15	N
883	444,095	6,702,008	160	-90	0	15	N
884	444,498	6,702,009	163	-90	0	21	N
901	448,093	6,702,008	168	-90	0	18	N
902	447,697	6,702,013	166	-90	0	24	N
912	445,690	6,702,414	168	-90	0	18	N

EL 6443 & EL 6633 (Comet Project) JORC Table 1

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 '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 Au that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• A total of 993 drill holes have been drilled to collect samples from the top of the saprolite on 400m spacing. Infill sampling has also been completed at select locations at 100 metre spacings. At Target 14 drillholes were at 80m spacings. • Samples were collected as composite intervals from one metre drill samples stored individually in buckets. At Target 14 samples were collected in green plastic RC bags at one metre intervals. • Composite samples were collected using a "spear" tool to collect representative samples from buckets and RC bags. Composite samples were an average weight of 2 kg. A handheld Garmin 64s was used to record the location of each drill hole. The accuracy of this GPS is +/- 3m
Drilling techniques	• *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.).*	• Drill method consists of RAB. Hole diameters are 100 mm. • At Target 14 the drill method was a combination of Air core and RC drilling. Drillhole diameter at Target 14 is 300 mm
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*	• RAB drilling methods were utilised throughout the regional drill program. Air Core and RC methods were used at Target 14. • Hole diameters are 100mm for RAB and 300mm for RC

Criteria	JORC Code explanation	Commentary
	occurred due to preferential loss/gain of fine/coarse material.	• A Geologist was on site for every drill hole to ensure that sample recoveries were appropriate.
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.*	• All samples were geologically logged by the on-site geologist. • Geological logging is qualitative. • Representative chip trays containing 1 m geological subsamples were collected.
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.*	• Samples averaging 2 kg were collected for laboratory assay. • It is considered representative samples were collected. • Laboratory sample preparation includes drying and pulverizing of submitted sample to target of p80 at 75 um. • Duplicate samples have been introduced into the sample stream by the Company. • Standard samples were introduced into the sample stream by the Company, and the laboratory will also complete standard assays. • Laboratory analytical charge sizes are standard sizes and considered adequate for the material being assayed.
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*	• ALS in Perth was used for analytical work. Samples were analysed in the following manner: • Lithium Borate Fusion and Mixed Acid Digest. Analysed by Inductively Coupled Plasma Mass Spectrometry for 41 elements.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td>checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</td><td>• For laboratory samples, the Company has introduced QA/QC samples at a ratio of one QA/QC sample for every 40 drill samples. The laboratory will introduce additional QA/QC samples (blanks, standards, checks)</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>• The company has queried the results with ALS to verify the accuracy of the results and ensure the results are not an outcome of lab contamination.
• No twinned holes were drilled in the program.
• Rare earth element analyses were originally reported 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
<table>
<tr><th>Element Name</th><th>Element Oxide</th><th>Oxide Factor</th></tr>
<tr><td>Ce</td><td>CeO2</td><td>1.2284</td></tr>
<tr><td>Dy</td><td>Dy2O3</td><td>1.1477</td></tr>
<tr><td>Er</td><td>Er2O3</td><td>1.1435</td></tr>
<tr><td>Eu</td><td>Eu2O3</td><td>1.1579</td></tr>
<tr><td>Gd</td><td>Gd2O3</td><td>1.1526</td></tr>
<tr><td>Ho</td><td>Ho2O3</td><td>1.1455</td></tr>
<tr><td>La</td><td>La2O3</td><td>1.1728</td></tr>
<tr><td>Lu</td><td>Lu2O3</td><td>1.1371</td></tr>
<tr><td>Nd</td><td>Nd2O3</td><td>1.1664</td></tr>
<tr><td>Pr</td><td>Pr6O11</td><td>1.2082</td></tr>
<tr><td>Sc</td><td>Sc2O3</td><td>1.5338</td></tr>
<tr><td>Sm</td><td>Sm2O3</td><td>1.1596</td></tr>
<tr><td>Tb</td><td>Tb4O7</td><td>1.1762</td></tr>
<tr><td>Th</td><td>ThO2</td><td>1.1379</td></tr>
<tr><td>Tm</td><td>Tm2O3</td><td>1.1421</td></tr>
<tr><td>U</td><td>U3O8</td><td>1.1793</td></tr>
<tr><td>Y</td><td>Y2O3</td><td>1.2699</td></tr>
<tr><td>Yb</td><td>Yb2O3</td><td>1.1387</td></tr>
</table></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.</td><td>• All maps and locations are in UTM grid (GDA94 Z53) and have been measured by hand-held GPS with a</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	• *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	lateral accuracy of ±3 metres and a vertical accuracy ±5m.
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 has been applied.*	• Drill holes were completed on a 400-metre spaced grid. A 100-metre spaced grid at Anomaly A and an 80-metre spaced grid at Target 14. • The data spacing and distribution is insufficient to establish the degree of geological and grade continuity appropriate for a JORC mineral resource.
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.*	• No Geological information regarding orientation of structure was available.
Sample security	• *The measures taken to ensure sample security.*	• Company staff collected all laboratory samples. • Samples submitted to the laboratory were transported and delivered by Company staff.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Internal review and checking of data has been completed by staff members.

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*	• EL 6443 Comet and EL 6633 Gina are located approximately 80km south south-west of Coober Pedy overlapping Ingomar and Commonwealth Hill Pastoral Stations. • The tenements are located

Criteria	JORC Code explanation	Commentary
	reporting along with any known impediments to obtaining a licence to operate in the area.	within the Woomera Prohibited Area (Amber Zone) and the Far North Prescribed Wells Area. • Native Title Holder: SCD2011/001 Antakirinja Matu-Yankunytjatjara. • The tenement is in good standing and no known impediments exist.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Previous exploration work includes; • **Surface Geochemical Sampling:** Calcrete **Airborne Geophysics:** Magnetics & Radiometrics. **Ground Geophysics:** Magnetics and Gravity. **Exploration Drilling:** 202 Mechanised Auger, 103 Aircore, 9 Rotary Air, 27 Reverse Circulation & 3 Diamond.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The tenements are within the Northern Gawler Craton, South Australia • Petratherm are exploring for gold and other critical minerals. • This release refers to ion adsorption REE mineralisation bound to clays within the weathered saprolite profile. • Anomalous primary REE minerals are also recorded from fresher rock samples below the clays at Target 14 Prospect. Petrological studies of the REE enriched basement rock are underway.
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*	• The type of drilling performed, comprised vertical shallow holes to an average depth of 20 metres on a 400m grid spacing. The drilling is

Criteria	JORC Code explanation	Commentary
	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 why this is the case.*	effectively a regional deep auger geochemical sampling program and as a result tabulation of drill hole information is considered not necessary as it does not add further material information and does not detract from the understanding of the report. • Drilling at Target 14 consisted of 18 drill holes drilled at -60 degrees on a 120 Azi. The tabulated drill hole data for Target 14 is not deemed significant at this stage of exploration and is thus not yet provided.
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.*	• All reported drill results are true results as reported by ALS. • No assumptions of metal equivalent values were made or used.
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').*	• Drill holes were drilled vertically at -90 degrees. Any relationship between mineralisation widths and intercepts lengths is not known. • At Target 14 drill holes were angled -60 degrees towards the southwest. TREO values reported are down hole length.
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*	• See figures in release attached.

Criteria	JORC Code explanation	Commentary
	collar locations and appropriate sectional views.	
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.*	• Assay results from 44 drill holes showing elevated Ce and La were re-assayed using Lithium Borate Fusion and Mixed Acid Digest and assayed by ICP-MS are reported in the Table 1 of Significant Intercepts. A cut off value of 350 ppm was implemented which is in line with other ionic clay bound rare earth deposits. • All values returned by ALS exceeded this cut-off grade. Drillholes with anomalous intercepts still pending from ALS laboratories are shown and drill holes with no anomalous REE are also shown.
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.*	• See attached ASX Release. Geological observations are included in that report.
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.*	• See attached release.