ASX Announcement
18 July 2023

Elevated REE's returned from Tammin soil sampling program

HIGHLIGHTS

- **Ultrafine soil sampling program delivers high grade TREO's[1] from surface with substantial MREO[2] fraction**
- **Highlights include (all on surface and indicative of subsurface mineralisation):**
  - **843 ppm TREO with 22.3% MREO (TM4-7)**
  - **878 ppm TREO with 19.1% MREO (TM1-16)**
  - **943 ppm TREO with 14.6% MREO (TM1-10)**
- **Soil analysis and historical drilling results showing extensive clay horizons[3] highlight the potential for clay hosted REE's**
- **Land access agreement in place covering areas of immediate interest**
- **Follow up soil sampling anticipated to delineate potential REE footprint prior to conducting a targeted air core (AC) drilling campaign**

Pinnacle Minerals Ltd (ASX: **PIM**) ("**Pinnacle"**, the "**Company"**) is pleased to announce that the Company has completed a roadside ultra-fine soil sampling program with continuous elevated assays highlighting the potential for clay-hosted rare earth mineralisation. The ultrafine soil sampling technique is a cost-effective method to delineate any potential mineralised systems footprint, with further soil sampling work anticipated to occur in the 3rd quarter of 2023. Once the footprint of any mineralised system is defined a targeted air-core (AC) drilling campaign will commence to outline any potential mineralisation.

Figure 1: Outcropping kaolinite mineralisation at the Tammin Project

Pinnacle Minerals Managing Director, Nic Matich, commented:

"The Tammin project is prospective for both kaolinite and clay hosted rare earth mineralisation. There are several ASX peers in the Western Australian wheatbelt that have defined significant kaolin resources with others exploring for clay hosted rare earths. Pinnacle has plans to join the ranks of these companies' via a systematic and targeted exploration campaign to be conducted during H2 2023 and early 2024.".

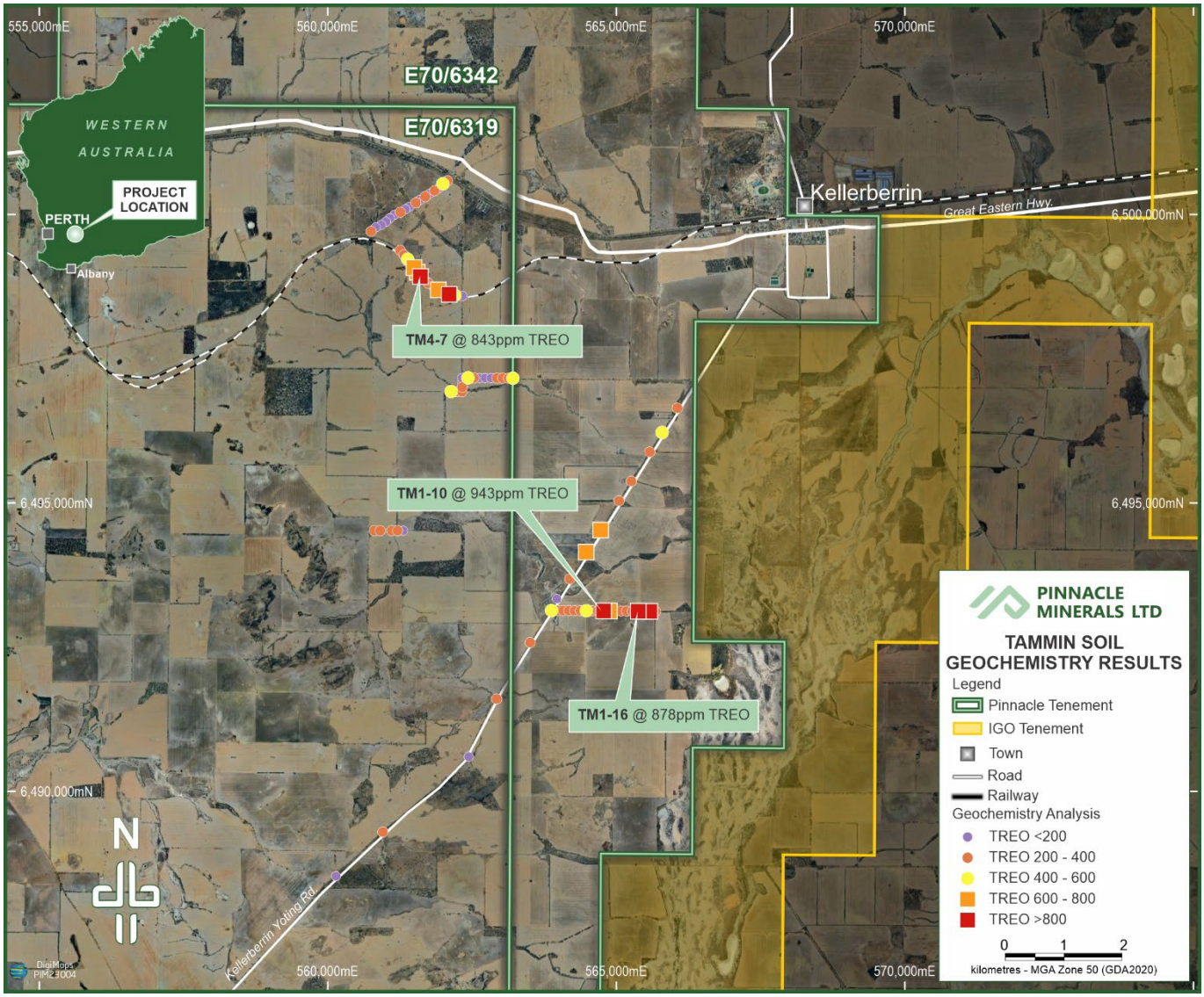

Figure 2: Tammin soil geochemistry results

The roadside soil geochemistry results are a first pass investigation into the prospectivity for clay hosted rare earth mineralisation. With the appropriate land access agreement now formalised, Pinnacle will look to conduct a gridded soil program north of the TM1 line where TM1-10 returned 943ppm TREO, and TM1-16 returned 878 ppm TREO.

Pinnacle's Board and Management is extremely pleased with these initial results, as over 40 samples delivered above 20% Magnet Rare Earth Oxides as a portion of Total Rare Earth Oxides. The commonly accepted industry "standard" is 20% of reported MREO as a portion of TREO. As a result, Pinnacle is focussed on progressing the prospect further with updates to the market as the exploration plan progresses.

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

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References

1 – Total Rare Earths Oxides (TREO) is the sum of the oxides of the light rare earth elements lanthanum (la), cerium (Ce), praseodymium (Pr), neodymium (Nd), and samarium (Sm) and the heavy rare earth elements europium (Eu), gadolinium (Gd), terbium (Tb), dysprosium (Dy), holmium (Ho), erbium (Er), thulium (Tm), ytterbium (Yb), lutetium (Lu), and yttrium (Y).
2 – Magnet Rare Earths Oxides (MREO) is the sum of the oxides of praseodymium (Pr), neodymium (Nd), terbium (Tb), and dysprosium (Dy)
3 – Pinnacle Minerals ASX announcement 26th October 2022

About Pinnacle Minerals

Pinnacle Minerals Ltd (ASX: PIM) is an ASX listed technology minerals company focused on delivering shareholder value via the systematic exploration and development of its portfolio of kaolin, halloysite, battery metals and Heavy Mineral Sands prospective projects in Western Australia and South Australia. The Company is focused on delineating resources at its Bobalong and Holly Kaolin Projects in the Great Southern region of Western Australia whilst simultaneously expanding its' project portfolio through targeted acquisition of prospective ground. Drilling and a scoping study have been completed at Bobalong, with results indicating the potential for a high value direct shipping ore (DSO) product. The White Knight and Camel Lake Projects are strategically located adjacent to Andromeda Metals' (ASX: ADN) high-grade kaolin-halloysite discoveries in South Australia. The Latham and Tammin projects are adjacent to Chalice Mining Ltd (ASX: CHN) Mid-West Project and Anglo Americans' (LON: AAL) Southwest Yilgarn Exploration Project respectively, which have multi-element exploration potential.

Competent person statement

The information in this announcement that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by William Witham, a Competent Person who is a Member of The Australian Institute of Geoscientists (AIG). William Witham is a director of Pinnacle Minerals Ltd. William Witham 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'. William Witham consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

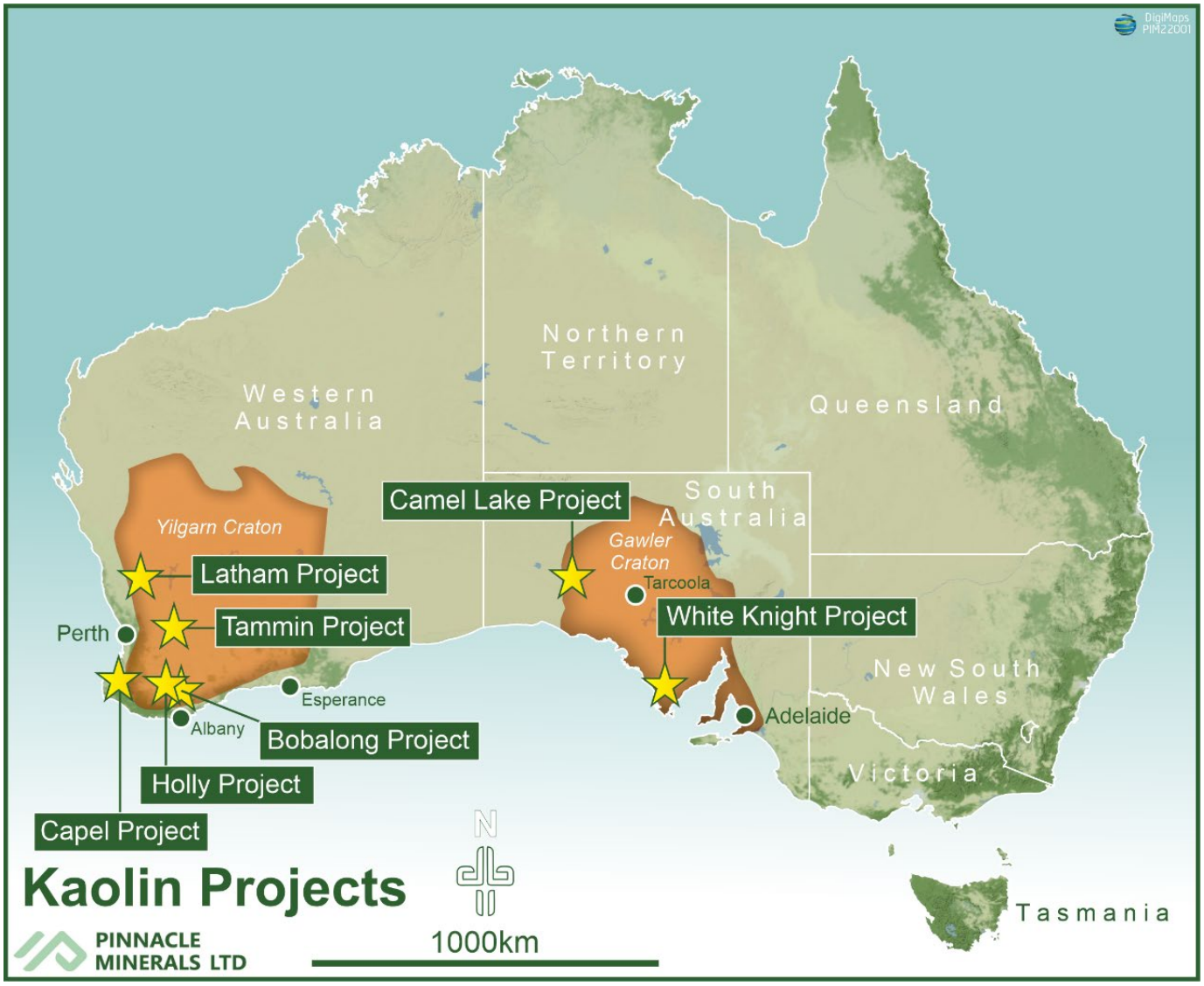

Figure 3: Pinnacle Minerals Projects' Location Map

Appendix 1 Summary of Assay Results

Table 1: Ultrafine Assay results for Tammin Project (all units are in ppm unless otherwise noted)

Hole_ID	Easting (GDA94 Zone 50)	Northing (GDA94 Zone 50)	CeO_2	Dy_2O_3	Er_2O_3	Eu_2O_3	Gd_2O_3	Ho_2O_3	La_2O_3	Lu_2O_3	Nd_2O_3	Pr_6O_{11}	Sm_2O_3	Tb_4O_7	Tm_2O_3	Y_2O_3	Yb_2O_3	TREO	Mag REEOs %	NdPr	NdPr %
TG001	562071.3	6500583.8	211.3	4.2	1.9	1.1	5.8	0.7	56.3	0.2	71.3	13.7	7.8	0.8	0.3	20.6	1.6	397.4	**22.6**	84.9	21.4
TG002	561992.7	6500531.1	224.8	2.0	0.7	0.7	4.3	0.3	112.8	0.1	78.8	17.8	7.1	0.5	0.1	11.4	0.5	461.9	**21.5**	96.6	20.9
TG003	561933.1	6500467.4	73.3	0.8	0.3	0.3	1.8	0.1	36.7	0.0	25.7	7.6	3.2	0.2	0.0	4.3	0.2	154.6	**22.2**	33.2	21.5
TG004	561847.6	6500411.8	160.9	2.5	1.0	0.8	4.6	0.4	57.6	0.1	54.1	13.8	6.8	0.5	0.1	12.4	0.7	316.4	**22.4**	67.9	21.5
TG005	561760.1	6500360.1	81.0	1.2	0.4	0.4	2.4	0.2	39.8	0.0	28.7	8.3	3.7	0.3	0.0	6.4	0.3	173.1	**22.2**	37.0	21.4
TG006	561685.5	6500308.4	142.5	2.2	0.9	0.6	4.0	0.3	47.6	0.1	40.7	11.0	5.8	0.5	0.1	11.1	0.6	268.0	**20.3**	51.7	19.3
TG007	561594	6500250.7	86.7	1.8	0.6	0.5	3.5	0.3	43.2	0.0	32.8	9.9	5.0	0.4	0.1	9.2	0.4	194.3	**23.1**	42.7	22.0
TG008	561521.4	6500203.0	92.5	3.0	1.3	0.7	4.5	0.5	46.6	0.1	35.7	11.3	6.0	0.6	0.2	19.2	1.0	223.2	**22.7**	47.0	21.1
TG009	561417	6500138.3	82.7	1.6	0.5	0.5	3.3	0.2	41.5	0.0	30.3	8.6	4.6	0.4	0.1	8.2	0.3	182.8	**22.4**	39.0	21.3
TG010	561342.5	6500089.6	67.9	1.4	0.5	0.3	2.8	0.2	29.9	0.0	25.0	7.0	3.8	0.3	0.1	7.5	0.4	147.0	**22.9**	31.9	21.7
TG011	561255	6500038.9	240.8	2.6	1.1	0.6	4.2	0.4	46.0	0.1	70.2	10.6	5.7	0.5	0.1	14.7	0.9	398.4	**21.0**	80.8	20.3
TG012	561153.6	6499996.2	55.5	1.3	0.6	0.3	1.9	0.2	20.4	0.1	18.3	4.6	2.5	0.2	0.1	7.8	0.4	114.1	**21.4**	22.9	20.1
TG013	561074	6499935.5	56.4	1.3	0.6	0.3	1.9	0.2	21.3	0.1	18.2	4.6	2.4	0.3	0.1	8.2	0.5	116.3	**20.9**	22.8	19.6
TG014	561004.4	6499874.9	44.0	0.8	0.3	0.2	1.7	0.1	21.7	0.0	15.5	4.3	2.3	0.2	0.0	4.0	0.2	95.4	**21.9**	19.9	20.8
TG015	560921.9	6499818.2	46.4	0.9	0.3	0.2	1.8	0.1	22.2	0.0	16.2	4.5	2.5	0.2	0.0	4.5	0.2	100.0	**21.9**	20.7	20.7
TG016	560828.4	6499778.4	45.2	1.9	0.8	0.4	2.5	0.3	22.0	0.1	18.2	5.4	3.1	0.4	0.1	10.2	0.5	111.2	**23.3**	23.6	21.2
TG017	560747.9	6499706.8	163.4	2.9	1.2	0.6	4.0	0.5	36.2	0.1	39.3	8.8	5.0	0.6	0.2	16.3	0.9	280.0	18.4	48.1	17.2
TKY0010.5	564192.7	6493682.2	192.9	4.3	1.9	1.1	5.9	0.7	58.9	0.2	56.5	14.3	7.7	0.8	0.2	21.3	1.5	368.1	**20.6**	70.7	19.2
TKY0011.5	564725.6	6494528.4	358.7	5.4	2.3	1.4	8.0	0.8	76.9	0.2	93.2	19.1	10.4	1.1	0.3	26.3	1.7	605.8	19.6	112.3	18.5
TKY0012.5	565258.5	6495374.6	105.3	2.0	0.8	0.5	3.2	0.3	45.6	0.1	32.7	9.1	4.2	0.4	0.1	9.6	0.6	214.3	**20.6**	41.8	19.5
TKY0013.5	565791.4	6496220.8	272.7	4.7	2.0	1.1	6.4	0.7	59.0	0.2	73.2	15.6	8.5	0.9	0.2	21.6	1.6	468.6	**20.2**	88.8	19.0
TKY004	560139.4	6488531.1	86.7	3.4	1.6	0.5	3.7	0.6	36.8	0.2	30.1	8.3	4.8	0.6	0.2	19.9	1.5	199.0	**21.3**	38.4	19.3
TKY005	560950.7	6489294.7	112.2	1.8	0.6	0.3	3.2	0.3	38.0	0.1	34.8	8.4	4.5	0.4	0.1	9.2	0.5	214.2	**21.2**	43.2	20.2
TKY011	564474.4	6494146.8	314.5	4.4	1.8	1.5	7.7	0.7	111.9	0.2	108.1	28.4	11.7	1.0	0.2	22.5	1.4	615.9	**23.0**	136.5	22.2
TKY014	566057.8	6496643.9	119.8	2.1	0.8	0.6	3.7	0.3	47.5	0.1	41.8	11.6	5.7	0.4	0.1	10.3	0.6	245.2	**22.8**	53.3	21.8
TKY06.9	562438.2	6490599.2	97.8	1.8	0.8	0.3	2.5	0.3	24.7	0.1	28.9	6.1	3.3	0.4	0.1	9.5	0.7	177.4	**20.9**	35.0	19.7
TKY08.1	562923.4	6491601.5	199.0	3.8	1.7	0.9	5.5	0.6	61.8	0.2	69.6	15.0	7.5	0.8	0.2	22.4	1.4	390.5	**22.8**	84.6	21.7

Hole_ID	Easting (GDA94 Zone 50)	Northing (GDA94 Zone 50)	CeO_2	Dy_2O_3	Er_2O_3	Eu_2O_3	Gd_2O_3	Ho_2O_3	La_2O_3	Lu_2O_3	Nd_2O_3	Pr_6O_{11}	Sm_2O_3	Tb_4O_7	Tm_2O_3	Y_2O_3	Yb_2O_3	TREO	Mag REEOs %	NdPr	NdPr %
TKY09.2	563504	6492579.8	258.0	2.1	1.0	0.5	2.7	0.4	17.1	0.1	60.2	4.7	3.0	0.4	0.1	11.1	0.9	362.5	18.6	64.9	17.9
TKY10.1	563965.4	6493335.5	29.0	1.1	0.5	0.3	1.5	0.2	10.5	0.1	11.0	3.0	2.0	0.2	0.1	4.9	0.5	64.9	**23.7**	14.0	21.6
TKY12.1	565045.3	6495036.1	186.7	3.0	1.2	0.8	4.9	0.5	59.9	0.1	64.5	14.0	7.1	0.6	0.1	15.6	1.0	360.2	**22.8**	78.5	21.8
TKY13.1	565578.2	6495882.3	174.4	2.0	0.8	0.5	3.2	0.3	38.9	0.1	40.4	9.5	4.6	0.4	0.1	10.5	0.7	286.4	18.3	49.9	17.4
TM1-1	563875.3	6493135.5	324.3	5.6	2.7	1.6	8.4	1.0	88.2	0.3	69.1	21.1	13.1	1.1	0.4	28.3	2.1	567.3	17.1	90.2	15.9
TM1-2	563975.4	6493134.6	153.6	2.9	1.4	0.9	4.0	0.5	40.3	0.2	29.9	8.9	5.8	0.5	0.2	14.2	1.2	264.4	15.9	38.7	14.6
TM1-3	564075.6	6493133.8	153.6	3.0	1.5	1.0	4.3	0.5	40.5	0.2	29.6	8.9	5.7	0.6	0.2	15.7	1.2	266.4	15.8	38.6	14.5
TM1-4	564175.8	6493132.9	152.3	3.0	1.5	1.0	4.2	0.5	44.4	0.2	28.7	8.9	5.5	0.6	0.2	16.5	1.3	268.8	15.3	37.6	14.0
TM1-5	564275.9	6493132.0	129.0	2.3	1.3	0.7	3.1	0.4	31.4	0.1	21.0	6.4	4.0	0.4	0.2	13.3	1.0	214.7	14.0	27.4	12.7
TM1-6	564376.1	6493131.2	141.3	2.8	1.5	0.8	3.6	0.5	40.7	0.2	25.0	7.8	4.8	0.5	0.2	15.5	1.2	246.5	14.7	32.8	13.3
TM1-7	564476.3	6493130.3	285.0	3.9	2.1	1.2	5.3	0.7	69.9	0.3	44.6	13.9	7.8	0.7	0.3	20.1	1.8	457.6	13.8	58.5	12.8
TM1-8	564576.4	6493129.4	179.3	2.5	1.4	0.8	3.4	0.5	45.6	0.2	25.7	8.0	4.6	0.5	0.2	14.3	1.3	288.3	12.7	33.7	11.7
TM1-9	564676.6	6493128.6	219.9	3.6	1.9	1.4	5.1	0.7	71.2	0.2	48.5	15.1	8.0	0.7	0.3	18.5	1.6	396.8	17.1	63.6	16.0
TM1-10	564776.7	6493127.7	562.6	6.3	2.9	2.2	10.0	1.1	177.1	0.3	98.2	32.3	15.2	1.2	0.4	31.6	2.1	**943.3**	14.6	130.5	13.8
TM1-11	564876.9	6493126.8	633.9	2.3	1.0	0.6	3.6	0.4	36.0	0.1	26.0	8.1	5.1	0.4	0.1	9.2	1.0	727.9	5.1	34.1	4.7
TM1-12	564977.1	6493125.9	249.4	2.6	1.4	0.8	3.5	0.5	50.2	0.2	28.0	8.9	5.2	0.5	0.2	12.4	1.3	365.0	10.9	36.9	10.1
TM1-13	565077.2	6493125.1	142.5	2.0	1.1	0.6	2.7	0.4	27.8	0.1	20.6	6.3	4.0	0.4	0.2	9.9	1.1	219.8	13.4	27.0	12.3
TM1-14	565177.4	6493124.2	176.9	3.2	2.0	1.0	3.9	0.6	35.9	0.3	28.5	8.6	5.8	0.6	0.3	15.9	2.1	285.5	14.3	37.1	13.0
TM1-15	565277.6	6493123.3	233.4	4.3	2.3	1.3	5.8	0.8	51.3	0.3	44.1	13.4	9.1	0.8	0.3	20.7	2.2	390.0	16.1	57.5	14.7
TM1-16	565377.7	6493122.5	455.7	9.9	5.4	3.2	15.2	1.9	146.6	0.6	121.3	35.0	22.5	1.9	0.7	54.6	4.3	**878.9**	19.1	156.3	17.8
TM1-17	565477.9	6493121.6	390.6	7.6	4.0	2.4	10.7	1.4	100.3	0.5	84.8	25.9	15.9	1.4	0.5	39.9	3.4	689.2	17.4	110.7	16.1
TM1-18	565578	6493120.7	472.9	10.3	5.7	3.1	14.4	2.0	118.5	0.6	108.5	31.4	20.8	1.9	0.7	58.8	4.5	**854.1**	17.8	139.9	16.4
TM1-19	565675.2	6493119.9	133.9	2.0	0.7	0.4	3.9	0.3	50.2	0.1	30.4	9.3	5.6	0.4	0.1	8.5	0.4	246.3	17.1	39.7	16.1
TM2-3-2	562134.3	6496930.9	195.3	3.7	1.5	1.1	6.4	0.6	96.8	0.1	56.9	17.8	10.0	0.8	0.2	16.9	1.0	409.0	19.4	74.7	18.3
TM2-3-3	562234.5	6496928.9	114.4	2.0	0.8	0.5	3.4	0.3	42.9	0.1	27.2	8.2	4.9	0.4	0.1	9.4	0.6	215.1	17.6	35.4	16.4
TM2-3-4	562323.6	6496927.2	112.0	2.9	1.3	0.8	4.5	0.5	50.7	0.1	34.8	10.6	6.5	0.6	0.2	14.6	0.9	240.9	**20.3**	45.4	18.8
TM2-3-5	562327.4	6497006.6	172.0	4.4	2.0	1.3	6.6	0.7	66.3	0.2	50.9	15.5	9.9	0.9	0.3	19.4	1.6	351.9	**20.3**	66.3	18.8
TM2-3-6	562328.3	6497083.2	100.2	1.9	0.8	0.5	3.1	0.3	41.5	0.1	24.0	7.4	4.5	0.4	0.1	9.6	0.6	195.1	17.3	31.5	16.1
TM2-3-7	562327.4	6497167.4	92.7	2.4	1.0	0.7	3.4	0.4	36.7	0.1	25.9	8.1	5.1	0.5	0.1	9.8	0.7	187.5	19.6	34.0	18.1
TM2-3-8	562427.5	6497166.8	243.2	4.4	1.8	1.6	7.2	0.7	96.8	0.1	67.2	21.5	11.8	0.9	0.2	19.4	1.2	478.1	19.7	88.7	18.6

Hole_ID	Easting (GDA94 Zone 50)	Northing (GDA94 Zone 50)	CeO_2	Dy_2O_3	Er_2O_3	Eu_2O_3	Gd_2O_3	Ho_2O_3	La_2O_3	Lu_2O_3	Nd_2O_3	Pr_6O_{11}	Sm_2O_3	Tb_4O_7	Tm_2O_3	Y_2O_3	Yb_2O_3	TREO	Mag REEOs %	NdPr	NdPr %
TM2-3-9	562527.7	6497166.1	118.2	2.0	0.8	0.6	3.2	0.3	48.8	0.1	29.3	9.7	5.0	0.4	0.1	9.0	0.5	228.1	18.2	39.0	17.1
TM2-3-10	562627.9	6497165.5	94.5	1.7	0.7	0.5	2.7	0.3	33.7	0.1	21.3	6.6	3.8	0.3	0.1	7.5	0.5	174.3	17.2	28.0	16.0
TM2-3-11	562728.1	6497164.8	67.8	1.3	0.6	0.4	2.1	0.2	29.3	0.1	18.0	5.6	3.2	0.3	0.1	5.8	0.4	135.2	18.6	23.6	17.4
TM2-3-12	562828.2	6497164.2	63.5	1.3	0.5	0.4	2.1	0.2	31.1	0.0	18.5	5.8	3.2	0.3	0.1	5.8	0.4	133.3	19.4	24.3	18.2
TM2-3-13	562928.4	6497163.5	96.4	2.0	0.9	0.7	3.2	0.3	44.7	0.1	28.9	9.1	4.8	0.4	0.1	9.6	0.6	202.0	**20.0**	38.0	18.8
TM2-3-14	563028.6	6497162.9	121.6	2.2	1.1	0.7	3.2	0.4	36.6	0.1	26.8	8.1	4.8	0.4	0.1	9.9	0.8	216.9	17.3	34.9	16.1
TM2-3-15	563128.7	6497162.2	181.8	4.9	2.4	1.6	7.2	0.9	43.4	0.3	48.3	13.5	10.8	1.0	0.3	19.9	1.9	338.2	**20.0**	61.8	18.3
TM2-3-16	563205.1	6497161.8	218.7	4.7	1.7	1.7	8.0	0.7	103.8	0.1	70.5	22.7	12.6	1.0	0.2	19.8	1.0	467.3	**21.2**	93.2	19.9
TM4-1	561252.9	6499377.9	138.8	8.6	3.8	2.5	10.7	1.5	43.2	0.4	50.5	12.9	12.2	1.6	0.5	39.5	3.0	329.5	**22.3**	63.4	19.3
TM4-2	561316.9	6499301.2	100.4	3.5	1.5	0.8	4.8	0.6	45.0	0.2	34.4	10.1	6.9	0.7	0.2	15.1	1.2	225.2	**21.6**	44.5	19.8
TM4-3	561381	6499224.6	218.7	5.2	2.0	1.5	8.8	0.8	112.4	0.2	76.6	23.6	13.3	1.1	0.3	25.1	1.5	491.1	**21.7**	100.2	20.4
TM4-4	561446.6	6499136.8	162.1	6.5	2.9	1.4	8.4	1.1	74.7	0.3	60.1	17.2	11.3	1.2	0.4	31.4	2.1	381.0	**22.3**	77.2	20.3
TM4-5	561489.4	6499079.0	323.1	10.6	4.6	3.0	14.2	1.8	129.0	0.5	112.1	32.0	20.3	2.0	0.6	50.9	3.4	708.0	**22.1**	144.1	20.4
TM4-6	561548.3	6498998.4	217.4	20.1	10.9	3.8	23.1	3.9	129.0	1.3	114.0	29.8	23.9	3.4	1.4	116.8	8.8	707.6	**23.6**	143.8	20.3
TM4-7	561602.9	6498923.9	358.7	16.5	9.3	4.1	20.1	3.2	116.2	1.1	133.0	36.0	25.6	2.9	1.2	107.9	7.6	**843.4**	**22.3**	169.0	20.0
TM4-8	561657.7	6498870.9	147.4	5.9	2.6	1.3	7.7	1.0	57.3	0.3	53.8	15.6	10.6	1.1	0.3	31.7	2.0	338.7	**22.5**	69.4	20.5
TM4-9	561736.8	6498809.8	202.7	2.3	0.9	0.4	3.5	0.4	28.1	0.1	25.1	7.2	5.0	0.5	0.1	10.4	0.8	287.6	12.2	32.3	11.2
TM4-10	561824.2	6498742.3	80.5	1.8	0.8	0.5	2.8	0.3	37.1	0.1	24.0	7.3	4.1	0.4	0.1	9.1	0.6	169.4	**19.8**	31.4	18.5
TM4-11	561911.2	6498692.9	361.1	5.0	2.0	1.4	6.8	0.8	147.8	0.2	87.5	28.2	12.1	0.9	0.2	23.0	1.4	678.4	17.9	115.6	17.0
TM4-12	562031.2	6498642.1	38.7	0.9	0.4	0.2	1.0	0.1	11.2	0.1	7.6	2.3	1.4	0.1	0.1	3.7	0.4	68.3	16.0	9.9	14.5
TM4-13	562100.4	6498615.5	712.5	3.2	1.2	0.7	5.0	0.5	76.0	0.1	46.2	15.0	7.6	0.7	0.1	14.3	0.8	**884.1**	7.4	61.2	6.9
TM4-14	562199	6498598.1	246.9	4.2	1.7	1.0	7.0	0.7	108.8	0.2	69.1	21.6	11.1	0.9	0.2	19.9	1.1	494.3	19.4	90.7	18.3
TM4-15	562329	6498586.1	93.1	2.0	0.5	0.2	3.8	0.2	45.0	0.0	29.0	8.8	5.6	0.5	0.0	6.9	0.3	196.0	**20.6**	37.9	19.3
TM6-2	560805.3	6494518.1	125.3	2.7	0.8	0.4	5.1	0.4	61.1	0.1	37.8	11.4	7.4	0.6	0.1	11.3	0.4	264.7	19.8	49.2	18.6
TM6-3	560905.4	6494518.1	99.9	2.4	0.6	0.3	4.2	0.3	49.0	0.0	32.2	9.9	6.1	0.6	0.1	8.6	0.4	214.6	**21.0**	42.1	19.6
TM6-5	561105.8	6494518.1	105.6	2.5	0.7	0.3	4.5	0.3	51.1	0.0	33.4	10.4	6.5	0.6	0.1	9.7	0.4	225.9	**20.7**	43.7	19.4
TM6-6	561205.9	6494518.1	95.3	2.2	0.6	0.3	3.7	0.3	47.3	0.0	27.9	8.5	5.2	0.5	0.1	8.6	0.4	200.9	19.4	36.4	18.1
TM6-7	561305.1	6494518.1	88.0	1.7	0.4	0.2	3.4	0.2	40.7	0.0	26.8	8.2	5.1	0.4	0.0	6.5	0.2	182.0	**20.4**	35.0	19.2

Appendix 2 JORC Tables

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g., 'reverse circulation drilling was used to obtain 1m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.*	• A 200g "soil" sample was taken from an approximate 40cm depth at each sample location. This ensured that the sample was not affected by windblown debris. • The sample was sieved in a plastic sieve to remove any detritus pebbles / rocks. • The sample was collected in a sealable wax paper bag.
Drilling techniques	• *Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	• No drilling reported
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.*	• No drilling / core sample recovered
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.*	• The GPS coordinates of each location was recorded.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all cores 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.*	• The entire 200g sample was sent for ultrafine analysis.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.*	• Rare earth element analysis was originally reported in elemental form but have been converted to relevant oxide concentrations as per the industry standard: TREO = La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 +

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>$Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Yb_2O_3$
• Element to Oxide Conversion Factors are:
<table>
<tr><th><u>Element</u></th><th><u>CF (multiplier)</u></th><th><u>Oxide</u></th></tr>
<tr><td>La</td><td>1.1728</td><td>La_2O_3</td></tr>
<tr><td>Ce</td><td>1.2284</td><td>CeO_2</td></tr>
<tr><td>Pr</td><td>1.2082</td><td>Pr_6O_{11}</td></tr>
<tr><td>Nd</td><td>1.1664</td><td>Nd_2O_3</td></tr>
<tr><td>Sm</td><td>1.1596</td><td>Sm_2O_3</td></tr>
<tr><td>Eu</td><td>1.1579</td><td>Eu_2O_3</td></tr>
<tr><td>Gd</td><td>1.1526</td><td>Gd_2O_3</td></tr>
<tr><td>Tb</td><td>1.1762</td><td>Tb_4O_7</td></tr>
<tr><td>Dy</td><td>1.1477</td><td>Dy_2O_3</td></tr>
<tr><td>Ho</td><td>1.1455</td><td>Ho_2O_3</td></tr>
<tr><td>Er</td><td>1.1435</td><td>Er_2O_3</td></tr>
<tr><td>Tm</td><td>1.1421</td><td>Tm_2O_3</td></tr>
<tr><td>Yb</td><td>1.1387</td><td>Yb_2O_3</td></tr>
<tr><td>Lu</td><td>1.1371</td><td>Lu_2O_3</td></tr>
<tr><td>Y</td><td>1.2699</td><td>Y_2O_3</td></tr>
</table></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>• All results are checked by the Competent Person
• The Competent Person makes periodic visits to the laboratory to observe sample processing.
• A process of laboratory data validation using mass balance is undertaken to identify entry errors or questionable data.
• Standard Certified Reference Material sample results are checked from each sample batch to ensure they are within tolerance (<2SD) and that there is no bias or drift.
• The field and laboratory data has been updated into a Microsoft Access database.
• Data validation criteria are included to check for overlapping sample</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
		intervals, end of hole match between 'Lithology', 'Sample', 'Survey' files, duplicate sample numbers and other common errors. No adjustments are made to the primary assay data
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.*	• Collars were analysed by handheld GPS to ~5m accuracy in XY.
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.*	• Samples were taken at an approximate line spacing of 100m. • The sampling distance is considered adequate to determine a potential mineralised footprint
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.*	• Surface sample
Sample security	• *The measures taken to ensure sample security.*	• Samples remained in the custody of Company representatives until they were trucked to Perth using an independent contractor or samples were transported by Company representatives. • The samples were transported to Perth and delivered directly to the laboratory along with a sample manifest for checking of samples. • The laboratory inspected the packages and did not report tampering of the samples
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No independent audits or reviews of sampling techniques and data has been conducted. • Internal reviews undertaken

Section 2 Reporting of Exploration Results
(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The samples were taken from within the granted exploration licences. • At the time of reporting all tenure was secure and any administrative costs or fees were fully paid up.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Previous exploration was undertaken by Swan River Kaolin Pty Ltd on previous tenement E70/2357 in 2004 and 2006 for a total of 41 AC drill holes totalling 958 metres. The campaigns identified thick kaolin intercepts (in excess of 10m) in over 177 holes.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Kaolin mineralisation is a function of weathering of granite. It is unclear at this stage if the kaolin is a transported or in-situ. • REE mineralisation is anticipated to be from the weathered granites.

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 why this is the case.*
		• No drilling results to report.
		• No relevant material data has been excluded from this report.

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• There are no data aggregation methods applied.
Relationship between mineralisation	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle*	• No drilling results to report

Criteria	JORC Code explanation	Commentary
widths and intercept lengths	*is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., 'down hole length, true width not known').*	
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• Figures and plans are displayed in the main text of the Release
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• TREO reporting is considered representative of REE mineralisation as the ultrafine method focuses on -2µ fraction
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.*	• All information has been provided as available
Further work	• *The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Further ultrafine soil analysis is recommended to determine any mineralised footprint. • Refer to the main body of the release for further information regarding diagrams