ASX ANNOUNCEMENT

27 May 2022

Outstanding REE assays Results at Eyre Peninsula Project

Highlights

- **Assays from drilling of kaolin and manganese targets at ChemX's Eyre Peninsula tenements highlight potential of ionically adsorbed rare earth elements (REE)**
- **Widespread REE across the tenements delivering high grades of Total Rare Earth Oxides (TREO) plus Yttrium (Y), with the best individual hole results being:**

MK-077	17m @ 1,519 ppm TREO from 16m, including:
	4m @ 1,833ppm TREO from 25m and
	4m @ 2,614ppm TREO from 29m
SP-053K	6m @ 1,171ppm TREO from 33m
SP-053I	5m @ 903ppm TREO from 10m
SP-062	4m @ 893ppm TREO from 14m
BH-116	1m @ 1,018ppm TREO from 26m
JP-148	3m @ 892ppm TREO from 20m
JP-149	4m @ 1,300ppm TREO from 30m

ChemX Materials Ltd (**ASX:CMX**) (**ChemX** or the **Company**), a materials technology company focused on providing critical materials required for electrification and decarbonisation, is pleased to announce outstanding results from an initial batch of reconnaissance rare earths elements (REE) assays, which were returned from air core drilling across the Company's Eyre Peninsula tenements in South Australia.

The outstanding results highlight the prospectivity of the Eyre Peninsula tenements for ionically adsorbed REE. The recent regional discoveries of REE surrounding the Company's tenements share very similar geology. The remainder of samples collected from the maiden drill program will be further assayed to provide a solid understanding of the distribution of REE through the clays.

ChemX's Eyre Peninsula tenements cover the Kimba Kaolin-Halloysite Project and Jamieson Tank, which historically has been explored for manganese. The air core program returned high REE results at both Kimba and Jamieson Tank. The Company's second foundation focus, in line with targeting critical materials for electrification and decarbonisation, is the development of a High Purity Alumina (HPA) plant in Western Australia using ChemX's in-house HiPurA™ process.

ChemX Materials Managing Director David Leavy commented:

"These assay results from our maiden drill program at both the Kimba and Jamieson Tank projects confirm the presence of REE mineralisation across our Eyre Peninsula tenements.

"The next stage is to further confirm the extent of the mineralisation within the results of the samples currently in the laboratory and undergoing beneficiation in preparation for assaying. This will include developing an understanding of the presence and distribution of high-value magnet rare earths – neodymium, praseodymium, dysprosium and terbium.

"We will also be undertaking metallurgical test work to determine the optimum process to maximise the recoverability of REEs from the host clays."

Materials assayed were from raw, unprocessed samples consisting of kaolin clay associated with silica as quartz sand as well as mica with variable, but generally low, quantities of iron oxides. The assays came from holes drilled at the Kelly Tank, Bunora East and Bunora South kaolin prospects as well as manganese targets at Jamieson Tank. The samples were not selected on their significance as containing high-quality kaolin intervals nor their apparent yield of clay. Sampled drill holes are shown in Figure 1 below.

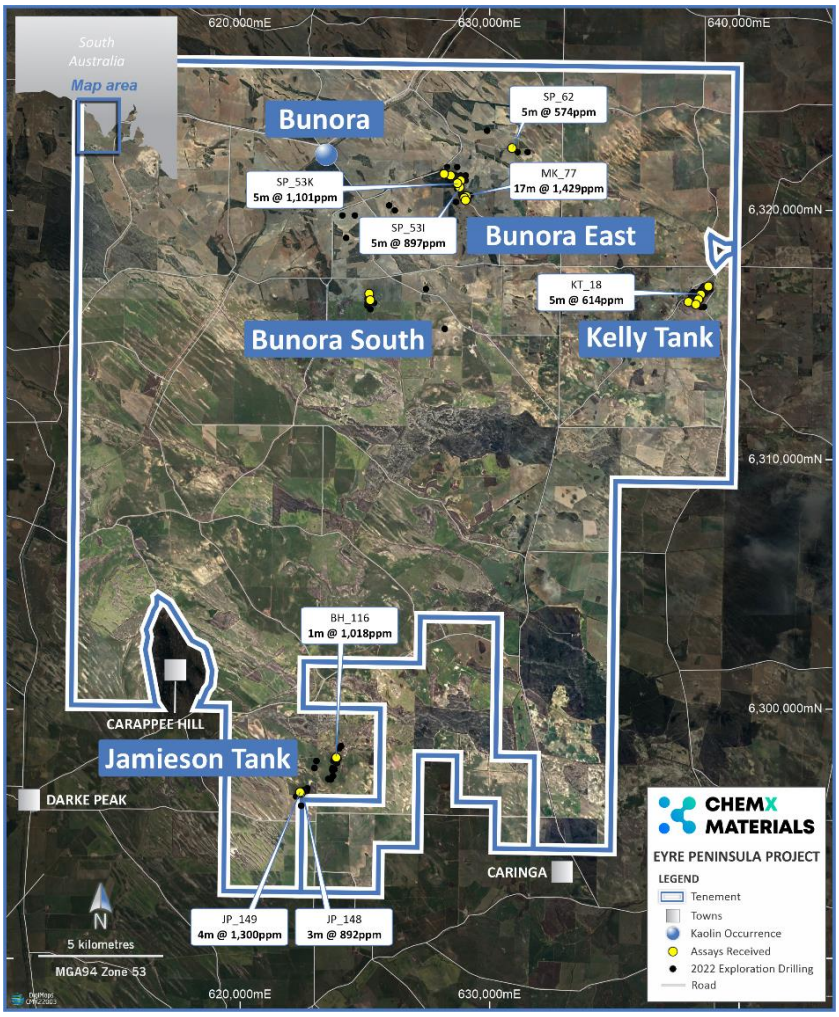

Figure 1: Project drill hole and sample location plan

Assay results from the initial batch of 129 samples indicate the presence of REEs in all samples assayed. Results have been processed to reflect the REEs as their common rare earth oxides (REOs), which are subsequently quoted as Total Rare Earth Oxides (TREOs). Highlights from the preliminary reconnaissance REEs survey are included in Table :

Table A: Significant Intersections - High Value (Magnet) Rare Earths

Hole Id	Depth From	Depth To	Interval	TREO	High Value (Magnet) Rare Earths							
					Neodymium Nd_2O_3		Praseodymium Pr_6O_{11}		Dysprosium Dy_2O_3		Terbium Tb_4O_7	
#	m	m	m	ppm	ppm	%TREO	ppm	%TREO	ppm	%TREO	ppm	%TREO
MK-077	16	33	17	1518.1	239.9	15.8%	64.5	4.3%	23.2	1.5%	4.8	0.3%
SP-053K	33	39	6	1170.1	256.6	21.9%	61.6	5.3%	19.5	1.7%	4.7	0.4%
SP-053L	10	15	5	902.7	161.0	17.8%	45.9	5.1%	6.9	0.8%	2.4	0.3%
SP-062	14	18	4	892.5	128.3	14.4%	44.7	5.0%	5.7	0.6%	1.2	0.1%
BH-116	26	27	1	1018.0	168.0	16.5%	59.2	5.8%	9.2	0.9%	1.8	0.2%
JP-148	20	23	3	892.0	10.3	1.2%	3.2	0.4%	3.4	0.4%	<0.5	<0.05%
JP-149	30	34	4	1299.5	176.7	13.6%	46.2	3.6%	28.8	2.2%	4.9	0.4%

**TREO includes Y_2O_3+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

All results as received are presented in Appendix 1.

The next stage of the analysis will investigate the clay-rich -45 micron fraction where the REEs are expected to be concentrated and ionically adsorbed to the surface of the kaolinite particles.

The relevance of REEs being associated with kaolin clay is that they are loosely bonded to the surface of the clay particles and can be readily displaced by simple low-cost chemical solutions, which can be further processed to recover the individual REOs.

The Kimba Project is specifically targeting high-quality kaolin clays and the kaolinite polymorph, halloysite, that has been identified at both the Kelly Tank and Bunora Prospects. The presence of REEs associated with the clays, if proven to be economically viable to extract during the beneficiation and processing to recover other products, adds another level to the prospectivity to Kimba that will be consistently investigated within the framework of our developing Eyre Peninsula tenements work.

Samples from two holes drilled at Jamieson Tank were also assayed for REEs. These samples were not the targeted manganese mineralisation but the surrounding clay material.

This Announcement has been authorised for release by the Board.

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About ChemX Materials (ASX: CMX)

ChemX is a materials technology company focused on providing critical materials required for electrification and decarbonisation. The Company's vision is to support the energy transition with materials and technology that provide real solutions to lowering carbon emissions.

Developed in-house, ChemX's HiPurA™ Process is a unique technology that is capable of producing high purity alumina (HPA) and high purity aluminium cathode precursor salts for lithium-ion batteries. Initial testwork has indicated that the process is low cost and low in energy consumption, compared to alternative technologies. A key competitive advantage is that the HiPurA™ process is not tied to mine production, with the feedstock being a widely available chemical.

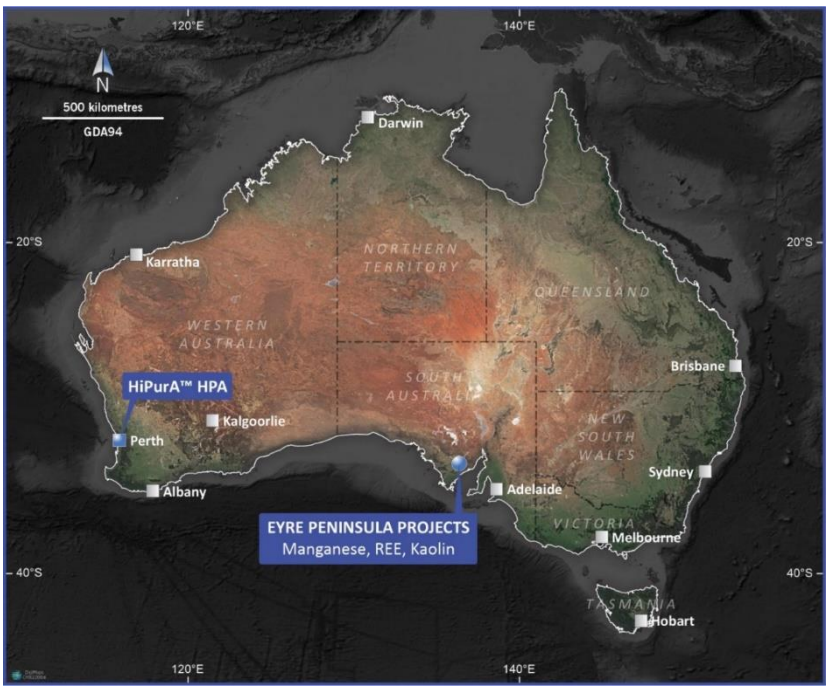
The Company has projects in South Australia and Western Australia.

The South Australian Eyre Peninsula projects include the Kimba Kaolin-Halloysite Project and the Jamieson Tank Manganese Project. The ChemX HiPurA™ Project is located in Western Australia.

Figure 2 - ChemX Project Locations

www.chemxmaterials.com.au

LinkedIn



COMPETENT PERSON STATEMENT. The information which relates to exploration results is based on and fairly represents information and supporting documentation compiled by Michael Ware, a Fellow of The Australasian Institute of Mining and Metallurgy. Mr Ware has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking, 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' (the JORC Code). Mr Ware is an independent Consultant and Director of Geological & Ceramic Services Pty Ltd and is Project Manager of the Eyre Peninsular Projects on behalf of ChemX Materials Ltd. Mr Ware consents to the inclusion of the information in this report in the form and context in which it appears.

Table B – Drill hole locations for Kaolin prospects

Kaolin prospect drill holes

Drill hole	RL	Easting	Northing	Depth (m)
KT_003	314	638770	6316950	30
KT_018	321	638470	6316630	20
KT_027	329	638370	6316430	12
KT_029	324	637970	6316330	21
KT_040	343	638270	6316230	15
MK_77	322	629074	6320570	33
MK_80	331	628984	6320506	55
MK_84	327	629037	6320407	24
SP_054	307	628440	6321400	18
SP_059	308	628840	6321200	9
SP_062	315	630900	6322500	18
SP_53H	315	628175	6321464	33
SP_53I	314	628800	6320928	18
SP_53K	298	628710	6321092	39
JC_094	283	625173	6316665	18
JC_100	277	625215	6316405	27

*All drill holes were vertical

Table C – Drill hole locations for Manganese prospects

Jamieson Tank drill holes

Drill hole	RL	Easting	Northing	Depth (m)
JP_148	260	622440	6296640	46
JP_149	251	622400	6296670	37
BH_116	271	623855	6298058	48

*All drill holes inclined -60 degrees, azimuth 290

All coordinates MGA94 53S

Appendix 1 – Program drill hole sample results

			IDENT	Y	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
			UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Sample	Hole No	From (m)	To (m)															
KTR-001	KT-027	1	6	8	15	21.5	3	10.5	2.5	<0.5	2	<0.5	1.5	<1	<1	<1	<1	<0.5
KTR-002	KT-027	6	12	17	44	76	10	34.5	6	1	6	0.5	4.5	<1	2	<1	3	<0.5
KTR-003	KT-003	2	6	10	48	89	10	30.5	5.5	0.5	4	0.5	3.5	<1	<1	<1	<1	<0.5
KTR-004	KT-003	11	16	8	68	130	13	42	6.5	1	5	<0.5	2	<1	<1	<1	<1	<0.5
KTR-005	KT-003	16	21	9	78	155	16	49.5	8.5	1	6	0.5	3	<1	<1	<1	1	<0.5
KTR-006	KT-003	21	26	10	74	136	15	47	8.5	1	6	0.5	3	<1	<1	<1	1	<0.5
KTR-007	KT-003	26	30	7	45	84.5	9	34	6	1	4	<0.5	2	<1	<1	<1	1	<0.5
KTR-008	KTR-018	2	6	21	84	160	20	67	9.5	1	8	1	5.5	<1	2	<1	2	<0.5
KTR-009	KTR-018	6	10	34	113	249	25	79	13.5	1	12	1.5	7.5	2	4	<1	4	0.5
KTR-010	KTR-040	1	6	6	37	21	7	23	3	1	2	<0.5	1.5	<1	<1	<1	<1	<0.5
KTR-011	KTR-040	6	11	6	8	22.5	2	7.5	2	0.5	2	<0.5	1.5	<1	<1	<1	<1	<0.5
KTR-012	KTR-040	11	15	6	11	23.5	2	8	2	<0.5	2	<0.5	1	<1	<1	<1	<1	<0.5
KTR-013	KTR-029	1	6	14	44	72	9	29.5	5.5	0.5	4	0.5	3.5	<1	2	<1	2	<0.5
KTR-014	KTR-029	6	11	16	62	120	14	48	9	1	8	1	4	<1	2	<1	1	<0.5
KTR-015	KTR-029	11	16	21	63	119	15	51	9.5	1	7	1	4.5	<1	2	<1	2	<0.5
KTR-016	KTR-029	16	21	15	35	74.5	9	35	6.5	1	5	0.5	3.5	<1	<1	<1	2	<0.5
BUR-201	SP-054	2	6	9	44	75.5	9	30	5.5	<0.5	4	<0.5	2.5	<1	<1	<1	<1	<0.5
BUR-202	SP-054	6	11	8	60	99	11	36.5	6.5	<0.5	4	0.5	2.5	<1	<1	<1	<1	<0.5
BUR-203	SP-054	11	15	10	48	87	10	33.5	6.5	0.5	5	0.5	2.5	<1	<1	<1	<1	<0.5
BUR-204	SP-054	15	18	8	37	48	4	14.5	3.5	1	2	<0.5	1.5	<1	<1	<1	<1	<0.5
BUR-205	SP-053H	28	33	15	63	129	15	53.5	8.5	1.5	6	0.5	3.5	<1	2	<1	2	<0.5
BUR-206	SP--053I	10	15	23	163	332	38	138	27.5	1	18	2	6	<1	2	<1	2	<0.5
BUR-207	SP-053K	33	39	55	115	399	51	220	56.5	9.5	36	4	17	3	6	<1	4	<0.5
BUR-208	SP-059	2	6	21	65	135	16	56.5	11.5	0.5	9	1	6	<1	2	<1	1	<0.5
BUR-209	SP-059	6	9	19	72	139	15	54.5	12	1	10	1	5.5	<1	2	<1	1	<0.5
BUR-210	SP-062	14	18	15	191	354	37	110	15.5	2.5	9	1	5	<1	2	<1	1	<0.5
BUR-211	MK-077	1	6	3	7	16.5	2	7	1.5	<0.5	1	<0.5	<0.5	<1	<1	<1	<1	<0.5
BUR-212	MK-077	6	11	2	21	58.5	4	11	2.5	<0.5	<1	<0.5	<0.5	<1	<1	<1	<1	<0.5
BUR-213	MK-077	11	16	<1	22	64.5	5	15	2.5	<0.5	<1	<0.5	<0.5	<1	<1	<1	<1	<0.5
BUR-214	MK-077	16	21	11	190	401	40	137	21	3.5	13	1	5	<1	<1	<1	<1	<0.5
BUR-215	MK-077	21	25	86	107	198	33	132	25.5	4.5	23	3	15.5	3	6	<1	6	1
BUR-216	MK-077	25	29	148	231	590	73	285	61.5	11	49	6.5	31	6	16	2	13	2
BUR-217	MK-077	29	33	144	224	1230	71	286	64	11.5	51	6.5	33	6	16	2	13	2
BUR-218	MK-080	25	30	8	16	37.5	4	13.5	2.5	0.5	2	<0.5	1.5	<1	<1	<1	1	<0.5
BUR-219	MK-080	30	34	7	8	17.5	2	7.5	2	<0.5	1	<0.5	1	<1	<1	<1	<1	<0.5
BUR-220	MK-080	41	45	6	20	43	5	17	3.5	<0.5	2	<0.5	1.5	<1	<1	<1	1	<0.5
BUR-221	MK-084	1	6	4	13	28	3	11.5	2.5	<0.5	1	<0.5	1	<1	<1	<1	<1	<0.5
BUR-222	MK-084	6	11	10	50	115	13	55.5	12	1	6	0.5	2.5	<1	<1	<1	1	<0.5
BUR-223	MK-084	11	16	9	51	104	12	46	10	0.5	6	0.5	3	<1	<1	<1	<1	<0.5
BUR-224	MK-084	16	24	6	46	88	10	35.5	6.5	0.5	4	<0.5	1.5	<1	<1	<1	<1	<0.5
BUR-225	JC-094	1	5	22	22	39.5	4	15	4	0.5	3	0.5	4.5	<1	3	<1	4	<0.5
BUR-226	JC-094	5	9	16	35	66.5	7	27.5	6	0.5	3	<0.5	2.5	<1	2	<1	2	<0.5
BUR-227	JC-094	9	13	24	14	28	3	11	2.5	<0.5	2	<0.5	3	<1	4	<1	7	1
BUR-228	JC-094	13	18	26	31	67	8	31	7	1	6	1	5	<1	3	<1	4	0.5
BUR-229	JC-100	1	6	24	53	107	12	44	9.5	0.5	8	1	5	<1	3	<1	2	<0.5
BUR-230	JC-100	6	11	16	148	255	25	78.5	13	1	7	1	4.5	<1	<1	<1	1	<0.5
BUR-231	JC-100	11	16	46	92	197	22	74.5	14	2.5	12	2	8.5	2	5	<1	3	0.5
BUR-232	JC-100	16	21	41	83	170	19	70.5	14.5	2.5	12	1.5	9	2	4	<1	2	<0.5
BUR-233	JC-100	21	27	28	48	95	11	44	8.5	1.5	7	1	5	<1	3	<1	2	<0.5

			IDENT	Y	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
			UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Sample	Hole No	From (m)	To (m)															
JP148#5	JP148	4	5	5	6	21	1	4.5	1	<0.5	<1	<0.5	<0.5	<1	<1	<1	<1	<0.5
JP148#6	JP148	5	6	9	9	17	2	6	1.5	<0.5	1	<0.5	2	<1	2	<1	1	<0.5
JP148#7	JP148	6	7	7	9	15.5	1	5.5	1	<0.5	1	<0.5	1.5	<1	<1	<1	<1	<0.5
JP148#8	JP148	7	8	6	11	17	2	5	1.5	<0.5	<1	<0.5	1	<1	<1	<1	<1	<0.5
JP148#9	JP148	8	9	8	7	24	1	4.5	1.5	<0.5	<1	<0.5	1.5	<1	<1	<1	1	<0.5
JP148#10	JP148	9	10	9	38	43	6	19	3.5	0.5	3	<0.5	2.5	<1	<1	<1	2	<0.5
JP148#11	JP148	10	11	8	18	27.5	3	10.5	2	<0.5	1	<0.5	2.5	<1	<1	<1	<1	<0.5
JP148#12	JP148	11	12	10	7	25	1	5.5	1	<0.5	2	<0.5	2	<1	<1	<1	2	<0.5
JP148#13	JP148	12	13	8	21	18	3	11.5	2	<0.5	2	<0.5	2	<1	<1	<1	1	<0.5
JP148#14	JP148	13	14	8	6	15	1	5	1.5	<0.5	2	<0.5	2	<1	<1	<1	2	<0.5
JP148#15	JP148	14	15	10	16	18.5	2	8	2	<0.5	2	<0.5	1.5	<1	<1	<1	1	<0.5
JP148#16	JP148	15	16	9	11	16.5	2	5	1	<0.5	2	<0.5	2	<1	<1	<1	1	<0.5
JP148#17	JP148	16	17	8	14	21	2	7.5	2	<0.5	1	<0.5	2	<1	<1	<1	2	<0.5
JP148#18	JP148	17	18	8	12	18	1	6	1.5	<0.5	2	<0.5	2	<1	<1	<1	1	<0.5
JP148#19	JP148	18	19	8	4	18	<1	4	1	<0.5	1	<0.5	1.5	<1	<1	<1	1	<0.5
JP148#20	JP148	19	20	13	5	32.5	1	5	1.5	<0.5	2	<0.5	2.5	<1	<1	<1	1	<0.5
JP148#21	JP148	20	21	11	9	699	2	6.5	2	<0.5	2	<0.5	3	<1	2	<1	1	<0.5
JP148#22	JP148	21	22	11	10	773	2	8	2	<0.5	2	<0.5	2.5	<1	2	<1	2	<0.5
JP148#23	JP148	22	23	19	18	562	4	12	3	<0.5	3	<0.5	3.5	<1	3	<1	3	<0.5
JP148#24	JP148	23	24	8	11	211	2	7.5	2	<0.5	2	<0.5	1.5	<1	<1	<1	1	<0.5
JP148#25	JP148	24	25	4	5	69	<1	3	1	<0.5	<1	<0.5	1	<1	<1	<1	<1	<0.5
JP148#26	JP148	25	26	8	6	138	1	4	1	<0.5	2	<0.5	1.5	<1	<1	<1	1	<0.5
JP148#27	JP148	26	27	10	20	319	3	9	2	<0.5	2	<0.5	2	<1	2	<1	2	<0.5
JP148#28	JP148	27	28	7	7	220	1	5.5	1.5	<0.5	1	<0.5	1.5	<1	<1	<1	1	<0.5
JP148#29	JP148	28	29	6	8	314	1	4.5	1	<0.5	<1	<0.5	1.5	<1	<1	<1	2	<0.5
JP148#30	JP148	29	30	6	4	65.5	<1	4.5	1.5	<0.5	<1	<0.5	1.5	<1	<1	<1	<1	<0.5
JP148#31	JP148	30	31	5	2	27.5	<1	3	<0.5	<0.5	<1	<0.5	1	<1	<1	<1	<1	<0.5
JP148#32	JP148	31	32	6	2	25	<1	3	1.5	<0.5	<1	<0.5	1.5	<1	<1	<1	<1	<0.5
JP148#33	JP148	32	33	8	12	207	3	11	2.5	0.5	2	<0.5	2	<1	2	<1	2	<0.5
JP148#34	JP148	33	34	7	13	137	3	10.5	2	0.5	2	<0.5	1.5	<1	<1	<1	<1	<0.5
JP148#35	JP148	34	35	8	11	115	3	9.5	2.5	0.5	2	<0.5	2	<1	<1	<1	1	<0.5
JP148#36	JP148	35	36	9	15	137	3	10.5	3.5	0.5	2	<0.5	2.5	<1	2	<1	2	<0.5
JP148#37	JP148	36	37	14	16	190	3	10	2.5	0.5	2	<0.5	2.5	<1	2	<1	2	<0.5
JP148#38	JP148	37	38	12	22	216	4	15	3	<0.5	3	<0.5	3	<1	2	<1	2	<0.5
JP148#39	JP148	38	39	12	23	219	4	13.5	3.5	0.5	2	<0.5	3	<1	<1	<1	2	<0.5
JP148#40	JP148	39	40	13	28	241	6	21	5	0.5	4	0.5	3.5	<1	2	<1	3	<0.5
JP148#41	JP148	40	41	12	23	227	5	18	4.5	1	2	<0.5	3.5	<1	2	<1	2	<0.5
JP148#42	JP148	41	42	10	20	306	4	16	4	1	2	<0.5	2.5	<1	2	<1	2	<0.5
JP148#43	JP148	42	43	9	19	344	4	16	3.5	0.5	2	<0.5	2	<1	<1	<1	2	<0.5
JP148#44	JP148	43	44	9	18	290	4	16	3	0.5	2	<0.5	2.5	<1	<1	<1	2	<0.5
JP148#45	JP148	44	45	9	16	270	3	12.5	2.5	<0.5	3	<0.5	2	<1	<1	<1	1	<0.5
JP148#46	JP148	45	46	8	15	326	4	13	3	0.5	2	<0.5	2	<1	<1	<1	1	<0.5

			IDENT	Y	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
			UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Sample	Hole No	From (m)	To (m)															
BH-116-21	BH-116	20	21	8	7	81	2	6	2.5	1	2	0.5	2	<1	<1	<1	2	0.5
BH-116-22	BH-116	21	22	5	9	61	2	6	1	<0.5	<1	<0.5	1	<1	<1	<1	<1	<0.5
BH-116-23	BH-116	22	23	5	7	46.5	2	6.5	2	<0.5	1	<0.5	1.5	<1	<1	<1	<1	<0.5
BH-116-24	BH-116	23	24	16	84	204	15	42.5	7	1	5	1	5	<1	3	<1	3	<0.5
BH-116-25	BH-116	24	25	25	36	207	8	29	7.5	1	5	1	5	<1	3	<1	3	<0.5
BH-116-26	BH-116	25	26	17	73	110	12	34	5	0.5	3	0.5	3.5	<1	2	<1	2	<0.5
BH-116-27	BH-116	26	27	25	369	221	49	144	17.5	3.5	12	1.5	8	<1	3	<1	2	<0.5
BH-116-28	BH-116	27	28	12	57	77	9	25.5	5	0.5	3	<0.5	3.5	<1	2	<1	1	<0.5
BH-116-29	BH-116	28	29	9	16	59.5	3	12.5	2.5	0.5	2	<0.5	2	<1	<1	<1	1	<0.5
BH-116-30	BH-116	29	30	7	16	40.5	3	11.5	2	<0.5	2	<0.5	2	<1	<1	<1	<1	<0.5
BH-116-31	BH-116	30	31	17	60	80.5	9	31	5.5	1	4	0.5	4.5	<1	2	<1	2	<0.5
BH-116-32	BH-116	31	32	17	21	75.5	5	16	4	0.5	3	0.5	4	<1	2	<1	2	<0.5
BH-116-33	BH-116	32	33	10	29	55.5	4	14.5	3	<0.5	2	<0.5	2	<1	<1	<1	2	<0.5
BH-116-34	BH-116	33	34	10	19	75.5	4	15	4	0.5	2	<0.5	2.5	<1	2	<1	2	<0.5
BH-116-35	BH-116	34	35	13	31	117	8	28	6.5	1	3	0.5	3.5	<1	2	<1	2	<0.5
BH-116-36	BH-116	35	36	19	46	124	12	43.5	9.5	1.5	5	0.5	4	<1	2	<1	2	<0.5
BH-116-37	BH-116	36	37	14	48	120	13	46.5	11	1	6	1	4	<1	3	<1	2	<0.5
BH-116-38	BH-116	37	38	18	41	135	11	41	9.5	1	5	1	4.5	<1	3	<1	3	<0.5
BH-116-39	BH-116	38	39	18	59	446	25	91	21.5	2	8	1	6.5	<1	3	<1	3	<0.5
BH-116-40	BH-116	39	40	18	53	332	18	65.5	14	1	6	1	6	<1	3	<1	4	0.5
BH-116-41	BH-116	40	41	9	24	155	6	25.5	7	<0.5	2	<0.5	3	<1	2	<1	1	<0.5
JP-14921	JP-149	20	21	8	8	27.5	2	7.5	1.5	<0.5	1	<0.5	2	<1	<1	<1	2	<0.5
JP-14922	JP-149	21	22	21	16	156	4	13	3.5	0.5	3	0.5	3	<1	2	<1	2	<0.5
JP-14923	JP-149	22	23	16	18	110	4	15	3	0.5	3	<0.5	2.5	<1	<1	<1	1	<0.5
JP-14924	JP-149	23	24	27	10	50.5	2	9	2.5	<0.5	2	<0.5	3	<1	2	<1	2	<0.5
JP-14925	JP-149	24	25	23	33	52	9	29.5	5.5	1	5	0.5	4.5	<1	2	<1	3	<0.5
JP-14926	JP-149	25	26	32	17	29	5	19.5	4	1	4	1	6.5	2	5	<1	7	1
JP-14927	JP-149	26	27	14	13	76	4	13	2.5	0.5	3	<0.5	3	<1	3	<1	3	<0.5
JP-14928	JP-149	27	28	10	15	76	4	11.5	3.5	0.5	2	<0.5	3	<1	2	<1	2	<0.5
JP-14929	JP-149	28	29	47	21	88	5	20	5	1	6	1	8	2	5	<1	5	1
JP-14930	JP-149	29	30	88	34	70	7	29.5	7	1.5	9	1.5	11	3	8	1	7	1
JP-14931	JP-149	30	31	120	164	116	37	147	24	5.5	24	3.5	18	4	11	1	9	1
JP-14932	JP-149	31	32	120	178	575	41	165	30	6.5	25	4	24.5	5	13	2	10	1.5
JP-14933	JP-149	32	33	201	178	665	45	170	33.5	8	33	4.5	29	7	18	3	17	2.5
JP-14934	JP-149	33	34	256	150	294	30	124	24.5	6	30	4.5	29	8	23	3	20	3
JP-14935	JP-149	34	35	90	38	61	7	28.5	5.5	1.5	7	1	9	2	7	1	6	1
JP-14936	JP-149	35	36	73	40	73	7	32.5	5.5	1	8	1	7.5	2	6	<1	4	0.5
JP-14937	JP-149	36	37	48	34	68.5	6	26	5.5	1	6	1	6	<1	4	<1	3	<0.5

JORC Code, 2012 Edition – Table 1 report

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 gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	**ChemX Materials Ltd.** Drilling, sampling and initial assays of Aircore with an 87 mm Aircore bit and open hole 98 mm Down Hole Hammer (DHH) programs in the Kimba Project area South Australia. • Drill holes within the Rare Earth Elements (REE), Kaolin clay and Manganese prospects were sampled at 1 metre intervals from surface to the end-of-hole (EOH) via a sampling collar fitted at the foot of the mast and thence via a delivery hose to a cyclone fitted with a large plastic bag attached to the base of the cone. • 100% of the sample delivered to the cyclone was collected with a small sub-sample taken from the center of the bag, with a concave trowel, that was placed on a black plastic sheet in rows of 6 metre intervals. A head-board recording date, hole ID and depth of hole from surface to EOH was placed at the top of the display prior to photographing. • Drill intervals were later sampled using a 50mm diameter spear, and or trowel, as appropriate, following mixing or the sample in the polythene bags. • Samples were transferred as either single intervals or composite intervals, as required, to plastic bags, that were subsequently sealed, for assaying. • The Competent Person (CP) considers that the sampling techniques adopted are appropriate for the style of mineralisation.
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).*	• The drilling was undertaken using a 6x6 Landcruiser mounted rig running a NQ Aircore system and powered by a 200 psi, 400 cfm compressor. The rig has dual purpose capability and is owned and operated by McLeod Drilling. • The kaolin prospects were drilled with vertical uncased Aircore holes. • At the Jamieson Tank prospect, uncased holes were angle drilled -60 degrees, at an azimuth of 290-310 degrees. Both Aircore and DHH techniques were used

Criteria	JORC Code explanation	Commentary
		where appropriate, depending upon the coherence of the strata.
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.*	• Sample recoveries were not generally recorded. However, if wet or damp zones were encountered and recoveries were visibly affected, the drilling would stop, and the cyclone and hose heads would be cleaned before drilling would continue. Between holes the cyclone was checked and cleaned as required. • It is believed that under normal ground conditions, limiting the down-hole intervals to 1 metre provided a satisfactory sample with no apparent down-hole sampling bias. • Where exceptionally poor ground conditions were encountered, mainly due to moisture down hole, resulting in partial blocking of the cyclone and delivery hose, or conditions that resulted in caving of the hole, the hole was abandoned and not sampled.
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.*	• Intervals were logged as drilled based upon the sub-samples laid-out in rows on the black plastic sheet. Kaolin intervals were assessed and recorded based on color, grit, and non-kaolin intervals, generally sands or transported sediments at or near surface, were recorded. Occasionally foreign minerals were recorded. • All logged intervals were representatively sampled and stored in chip tray, recording Hole ID and respective metres. • The Jamieson Tank prospect intervals were logged according to essential mineralogy and character being generally ferruginous, manganiferous, or with calcrete; associations being in schist or heavy clays. • All intervals were logged broadly based on qualitative and quantitative characteristics.
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.*	• Assay samples from the Jamieson Tank prospect were obtained by compositing sub-samples, obtained by trowel or spear, according to their perceived mineralogy, over a maximum interval of 5 metres. Material sub-sampled was in the main free-flowing and although it was not dried prior to sampling, it was judged to be sufficiently dry to minimize any bias during sampling and compositing. Individual sub-samples were approximately 0.2 - 0.25 kg. • Assay samples from the kaolin prospects were composited up to a maximum of 6 metre intervals, based upon the perceived mineralogy of the intervals: the grittiness of the interval (suggestive of the probable clay yield), the color of the individual intervals (generally reflecting the probable iron levels), and overall whiteness of the composite. • Representative material from all drilled and sampled holes, and intervals, has been retained either in bulk (as recovered from the cyclone) or as a reference sub-sample (where the interval had no apparent interest), based upon

Criteria	JORC Code explanation	Commentary
		geological or resource related criteria. • Given the styles of drilling used, and the resultant range of fineness within the cyclone capture, there is no evidence that the sample sizes are inadequate or inappropriate for sub-sampling using the techniques adopted. The competent person does not consider there is any bias in the sampling process.
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 whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• Results from an initial batch of samples submitted to Bureau Veritas (BV) in Adelaide are those referenced within the attached release. Details relate exclusively to these results. • All assays relate to unprocessed material as drilled, recovered and sub-sampled in conformance with the criteria above. • All samples were assayed by ICP-MS for extended suite of elements including the standard silicate mineral-related elements, 15 Rare Earth Elements (REE) (including yttrium) shown in Appendix 1. • Sample preparation consisted of a Lithium Peroxide fusion with an acid finish followed by ICP-MS analysis. • The Competent Person considers that the laboratory analyses methodology is appropriate for the style of mineralisation.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Verification of sampling and assaying has not been undertaken on the reconnaissance batch of assays being reported. • At this stage the company has no basis for twinning holes. • Primary data is stored securely by the company. • Independent reviews, visual presentations, interrogation, and integration of primary data is undertaken outside of the primary data bank, with supplementary or enhanced uploads as required.
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.*	• Drill hole sites were pre-pegged using a Garmin hand-held GPSMAP 62s based upon the MGA94 Zone 53 grid. Accuracy (+/-5m) is considered by the CP to be acceptable for the reporting of Exploration Results. • Topographic survey control at this preliminary drilling stage was not undertaken.
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.*	• Kelly Tank was drilled on a 100x100 grid to determine the lateral extent of the mineralization within the targeted area. • The remaining REE/Kaolin prospects had either no prior drilling recorded or (at Bunora East) assay data from 3 holes drilled in 2020. This area was investigated at drill locations approximately 100 m apart for 1.8 km along a ridge line, with minimal lateral holes. • While the Bunora exploration results were based on a variable drill grid density

Criteria	JORC Code explanation	Commentary
		and lateral distribution they are, for reconnaissance purposes, and considered by the CP to have been appropriate for the purpose and the reporting of Exploration Results only. Additional drilling is required to potentially establish and report a maiden Mineral Resource. • Depths were to the extent of the kaolin mineralisation, to a maximum of 56 m at Bunora East, 54m at Kelly Tank and 38m at Bunora South. Drilling and assaying has established the basis for a follow-up phase to investigate an exploration target and an inferred to indicated resource. • Sample compositing was applied according to the procedure detailed above.
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.*	• There is no basis for drilling other than vertical holes at the kaolin prospects and would be unlikely to be necessary in the future. • The Jamieson Tank mineralisation is believed to be confined within 040 degree striking corridors where previous drilling identified both flat lying and high angle, discontinuous, pods or lenses of mineralization, dipping to the SE. • Accordingly, inclined holes were drilled between an azimuth of 270-310 degrees and 60 degrees depressed with a few vertical holes drilled near inclined holes to test the possible shape and orientation of the lenses or pods.
Sample security	• *The measures taken to ensure sample security.*	• Samples were collected from the field on the day or following day from drilling and transported to the exploration laydown area located on a private property within EL6634. The exploration laydown area is within 200m of the homestead/outbuildings and is secure. • Individual sample bags are folded and on a slight slope with open end folded under the sample and pointed down-slope to mitigate to ingress of moisture or foreign matter.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• There have been no external reviews completed.

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 Kimba Project comprises licenses EL6634 and EL5920, colloquially named Carappee Hill. • EL6634 is located approximately 20km SSW of Kimba (Legal Area 664km^2), and EL5920 approximately 60km NW of Cowell (Legal Area 54km^2), with the tenements being held 100% by ChemX Materials Ltd.

Criteria	JORC Code explanation	Commentary
	• *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.*	• No Native Title has been registered. • There are two small Conservation Parks within EL6634 (Malgra and Lacroma) and one, Caralue Bluff, excised from EL6634. Several Heritage Vegetation areas have also been identified within the tenements. • Within the tenements are MPL150 (within EL5920) and MPL151 (within both EL6634 & 5020). These are registered to Pirie Resources P/L as part of their Campoona Graphite project. • EML6324, covering 5.6 Ha, is a private mine registered for sand production within EL6634. • The Company is duly bound under a Mineral Rights Agreement with Pirie Resources from conducting exploration for, mining or processing graphite within the Wilclo South excluded area, contained within the Tenements (Wilclo South Excluded Area). Other Minerals, noted as Excluded Minerals, ChemX Materials holds eligibility with respect to exploration, mining and processing.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	<u>Rare Earth Exploration Activities:</u> • From the late 1960s to early 1970s, Pechiney explored the tenement for kaolin suitable for paper coating but withdrew when rheological properties were found to be out of specification for the proposed application. They were neither interested in, nor did they apparently identify, any REE associated with the clays. • Monax Mining Ltd had, in the past, identified the presence of REE within the general area of the ChemX tenements, but not specifically related to the Kaolin clays. They also identified several additional prospects, that have not been investigated to date by ChemX, that contained manganese and REE, additional to investigating Jamieson Tank. • While a few surveys historic surveys reported Cerium in Granitic Gneiss in the Bunora area and in sediments near Caralue Bluff the reports were not linked to the possibility of REE in the clays. • Archer 2019/2020 within EL6634, found intersections of white kaolin clay, with high grade kaolin found in 10 out of 21 holes drilled at Kelly Tank and Bunora assayed >35% Al_2O_3 and <0.9% Fe_2O_3. <u>Highlights included:</u> • 14m (35.5% Al_2O_3, 0.38% Fe_2O_3, and 52.6% yield of -45µm material) and 23m (36.1% Al_2O_3, 0.38% Fe_2O_3,

Criteria	JORC Code explanation	Commentary
		and 77.1% yield of -45µm material) confirming the potential for quality kaolin clays at Kelly Tank and within the Bunora area. • Testing revealed the presence of halloysite at both prospects. <u>Monax Mining Ltd</u> • 2008 to 2011 undertook considerable work for manganese throughout the area including rock chip sampling, RC drilling and an airborne magnetic, radiometric, and electromagnetic surveying. Results when modelled revealed resistivity and gravity anomalies (WMC data) were coincident with known occurrences of manganese grading between 38-45% Mn, interpreted to be within the Katunga dolomite. • Other possible targets were identified and a 180 line-km ground magnetics survey was undertaken covering Jamieson Tank and other prospects within the tenement targeting manganese in BIF formations. Metallurgical test work indicated potential for upgrading Jamieson Tank manganese to economic concentrations. • 2019 Archer Exploration investigated whether the manganese at Jamieson Tank was amenable to a process that had been used to produce an economic product from low grade manganese feedstock. The laboratory Kemetco (located in BC, Canada) completed the work and indicated that Battery grade Electrolytic Manganese Dioxide could be produced.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Dominant within the tenements are Palaeoproterozoic basin sediments, of circa 2000-1850 Ma Hutchison Group sediments, unconformably overlying late Archaean (ca 2400 Ma) inliers of para and orthogneiss. • The kaolinite mineralisation is a product of intense weathering and leaching of acid volcanic schist and Granitic gneiss within the Cleve sub-domain of the Gawler Craton. Manganese mineralization is related to Lower Middleback Jaspillite banded Iron formations and the underlying Katunga dolomite within the Hutchinson Group.
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*	• All drill hole collar information is presented in Drill Hole Collar Tables B and C. • The significant assays are included as (Appendix 1).

Criteria	JORC Code explanation	Commentary
	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.*	
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 results are reported as received from the laboratory on the samples as submitted with no aggregation of results.
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').*	• All samples and results relate to single continuous down hole intervals be they single metres or composited samples. • Where drill holes are inclined, as in relation to the manganese drilling, there is insufficient data available to determine a true width of mineralization.
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.*	• Map illustrating project drill holes and significant intercepts is included as Figure 1.
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*	• All results received to date from the drilling program are reported.

Criteria	JORC Code explanation	Commentary
	Results.	
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.*	• No further material information related to the initial assay data is available at this stage.
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.*	Additional exploration work is required to improve the geological understanding of the REE potential. This work will include: • Assaying and screening of kaolin samples to acquire -45 micron material for further testing and development of %yield data is on-going. • Additional drilling at Bunora and Bunora South will be planned once all the assay results from the recent program are received.