

## Encouraging lithium grades, LCT pathfinders and REEs identified at Southern Gold Projects

Southern Gold Limited (ASX: SAU) (Southern Gold or the Company) is pleased to provide an update on exploration activities across its lithium (Li) and Chungju rare-earth element (REE) projects in South Korea.

### Highlights

- Reconnaissance exploration conducted across Li Projects and Chungju REE Project, adding three more Li projects with historical Li occurrences to SAU's portfolio.
- Rock-chip samples returned >1% Li<sub>2</sub>O at Seobyeok Li Project and 0.3% Li<sub>2</sub>O at SAU's new Danyang Li Project.
- Geochemical analysis of granites suggests favourable Li fertility and fractionation indicators for the formation of Li-Caesium-Tantalum (LCT) pegmatites across multiple SAU Li projects.
- Rock-chip samples from the Chungju REE project returned up to 1.4% total rare earth oxide (TREO), confirming the western extension of the Eorae San REE deposit into SAU tenements, defining an 8 km+ mineralized trend with significant REE enrichment.
- Regional stream-sediment samples up to 0.16% TREO associated with radiometric highs at Chungju, provide compelling new REE targets.
- Ongoing exploration efforts include follow-up sampling and mapping in areas with encouraging geochemical results and further reconnaissance exploration in unexplored areas across our portfolio.

### Southern Gold Managing Director Robert Smillie said:

*"Our initial Li exploration program is off to an excellent start, yielding encouraging results and highly favourable geochemical indicators for the formation of LCT pegmatites. Furthermore, the inclusion of new projects in our Li exploration portfolio, identified through extensive targeting efforts by our team, underscores the tremendous lithium potential in South Korea."*

*"Exploration at our Chungju REE Project has returned significant TREO results, confirmed extension of the Eorae San deposit into Southern Gold's ground, and highlighted the potential scale of the mineralised system."*

*"In the coming weeks, our team will be diligently following up on these exciting findings with focused mapping and sampling programs, while also maintaining our commitment to uncovering new target opportunities through regional fieldwork."*

### Lithium Projects

In April 2023, Southern Gold announced exploration licence applications for Li across a number of key projects in South Korea<sup>1</sup>. The project areas were identified after a country-wide prospectivity study by consultancy RSC highlighting prospective geology including granites and pegmatites, and Li stream-sediment anomalies from a survey by Korea Institute of Geoscience and Mineral Resources (KIGAM).

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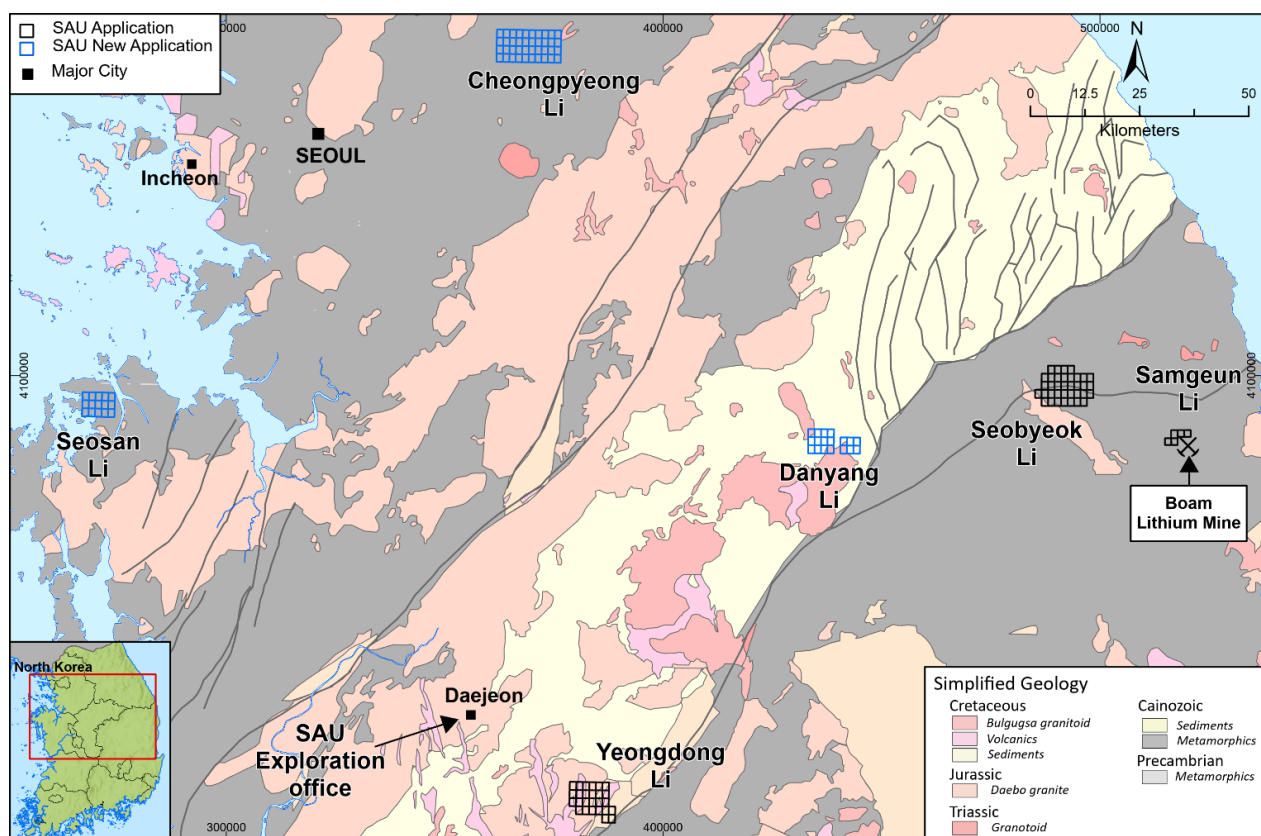
<sup>1</sup> See ASX announcement from 27<sup>th</sup> April 2023 entitled "Southern Gold develops new lithium exploration portfolio in South Korea".  
Competent Person: Dr Michael Gazley

The company has since completed a further data review which has led to addition of the Danyang, Seosan and Cheongpyeong projects to its Li exploration portfolio. Historical records suggest Li-bearing pegmatite and aplite may occur in these areas, and 73 new licence applications totalling ~200 km<sup>2</sup> have been applied for. Exploration at Buyeo and Cheongsong<sup>1</sup> returned negative results, and these areas have been dropped. The company's total Li portfolio now stands at six projects covering 383.8 km<sup>2</sup> (Figure 1).

### Fieldwork & Analysis

An important exploration tool in the search for LCT pegmatites is the identification of fertile parent granites. Additionally, within fertile intrusives, a very high degree of fractionation is crucial for concentrating highly incompatible elements such as Li, Cs and Ta. According to Cerny (1989) and Selway et al. (2005), granites/pegmatites with a Mg/Li <30 are highly fertile<sup>2,3</sup>. Also, Nb/Ta is an important fractionation indicator, with values ≤8 indicative of highly fractionated rock, as is a K/Rb <150<sup>4</sup>.

Southern Gold has completed an initial round of fieldwork at each of its Li projects, and geochemical results have now been received. A fertility and fractionation analysis has also been completed on pegmatite and granite samples. This work has returned encouraging results, as outlined below and in Appendix 1.



**Figure 1:** Southern Gold's Li projects - new exploration license applications in blue.

### Fieldwork & Analysis

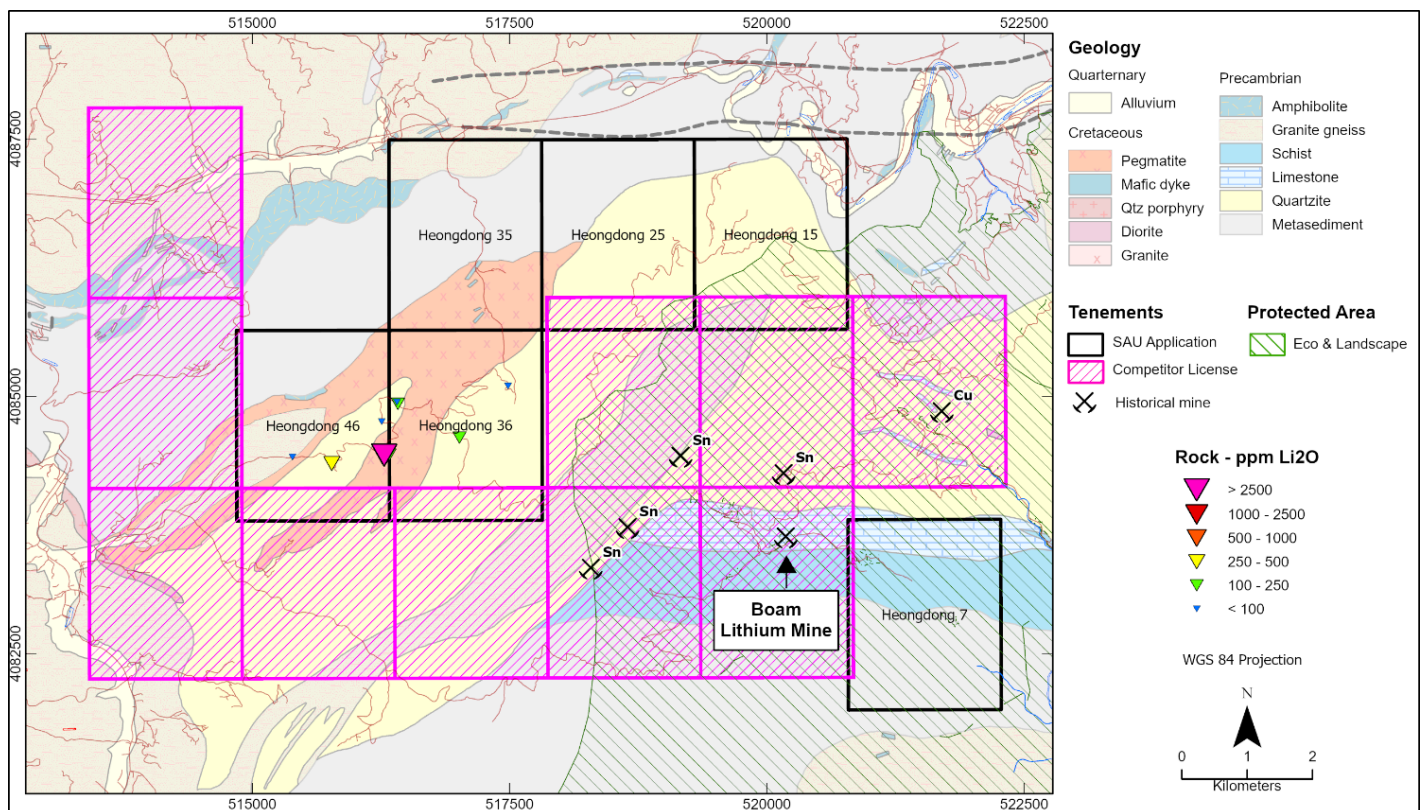
<sup>2</sup> Cerny, P. (1989) 'Exploration strategy and methods for pegmatite deposits of tantalum', in Lanthanides, Tantalum and Niobium, Springer-Verlag, New York, pp. 274-302

<sup>3</sup> Selway, J., Breaks, F., & Tindle, A. (2005), 'A Review of Rare-Element (Li-Cs-Ta) Pegmatite Exploration Techniques for Superior Province, Canada and Large Worldwide Tantalum Deposits', Canadian Institute of Mining, Metallurgy and Petroleum, vol.14, no.1-4, pp.1-30

<sup>4</sup> Steiner, B. (2019) Tools and workflows for grassroots LCT pegmatite exploration. Minerals 9 no.8: 499

The Samguen project is located ~2 km northwest of the historical Boam Li mine, which was mined for spodumene and lepidolite in pegmatite hosted in the Yulri Formation and Janggun Limestone<sup>5,6</sup> (Figure 2). Reconnaissance work by Southern Gold geologists has identified numerous zones of pegmatite and broad areas of amphibolite-facies metasediments, considered an ideal host for pegmatite emplacement<sup>7</sup> (London, 2019). Several pegmatites returned anomalous Li, and encouragingly, Mg/Li, Nb/Ta and K/Rb suggestive of both a lithium fertile and a highly fractionated system (Table 1).

The maximum value of 0.32% Li<sub>2</sub>O was from a metasedimentary rock in close contact with pegmatite. The results occur within broad zones of strongly anomalous Li from stream-sediment sampling<sup>1</sup>. Further field work within this area is planned to confirm whether LCT pegmatite bodies are present.



**Figure 2:** Samguen Li Project exploration licence applications<sup>8</sup> and rock chip sample results.

<sup>5</sup> Choi Y.-H., Park Y.-R. and Noh J.H. (2014) Genesis of Boam Lithium Deposits in Wangpiri, Uljin. Geological Journal, 50 (4), pp.489–500 (in Korean).

<sup>6</sup> Oh I.-H., Yang S.-J., Heo C.-H., Lee J.-H., Kim E.-J., and Cho, S.-H. (2022) Study on the Controlling Factors of Li-Bearing Pegmatite Intrusions for Mineral Exploration, Uljin, South Korea. Minerals, 12(5), p.589.

<sup>7</sup> London, D. (2019) 'Ore forming processes within pegmatitic granites', Ore Geology Reviews, vol.101, pp.349-383

Selway, J., Breaks, F., and Tindle, A. (2005) 'A Review of Rare-Element (Li-Cs-Ta) Pegmatite Exploration Techniques for Superior Province, Canada and Large Worldwide Tantalum Deposits', Canadian Institute of Mining, Metallurgy and Petroleum, vol.14, no.1-4, pp.1-30

<sup>8</sup> Prior to January 2011 all South Korean tenements were granted under the Tokyo Datum, after which time the WGS84 Datum was used. This results in a partial overlap of SAU applications over adjacent tenements granted before January 2011. Any overlapping application areas will be excised from SAU licences by the Mine Registration Office (MRO) upon licence grant if the underlying granted tenement includes the same mineral applied for.



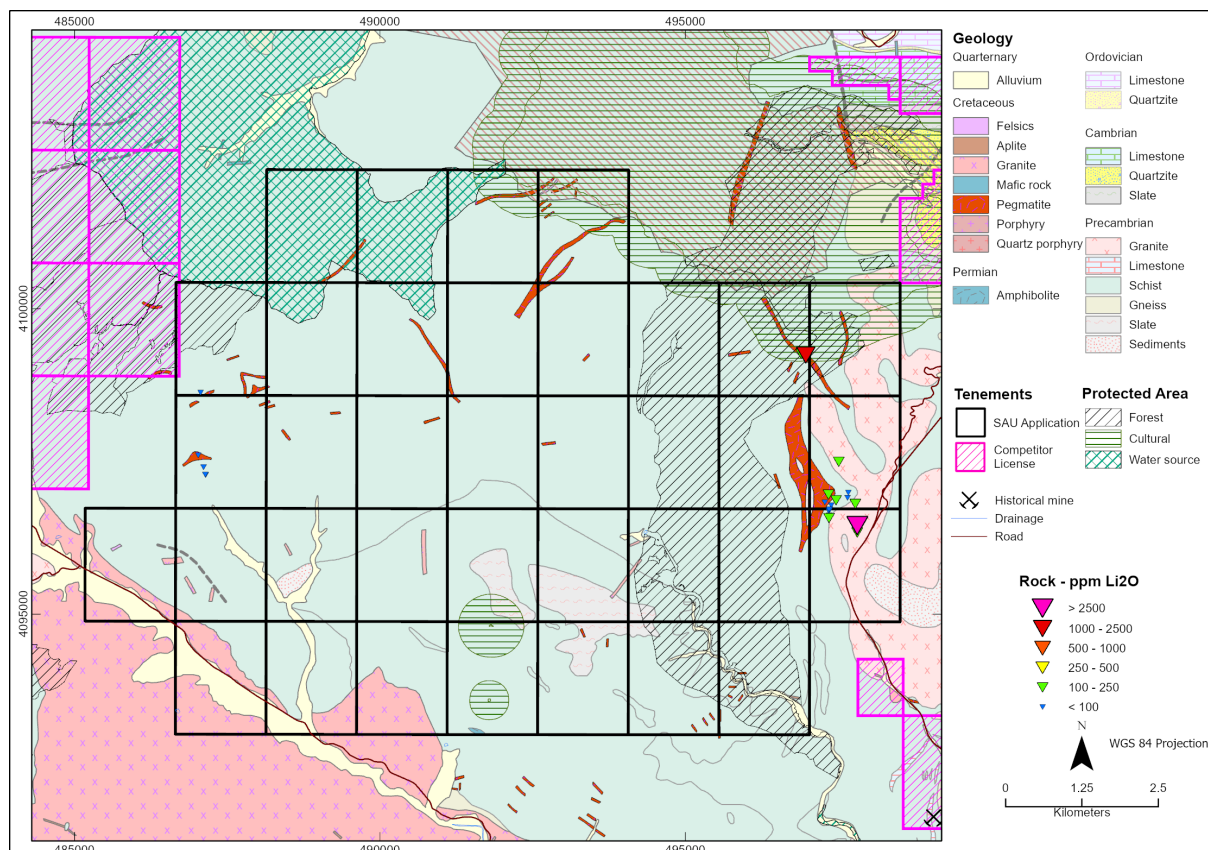
Sample ID	Type	Lithology	Li <sub>2</sub> O ppm	Mg/Li	Nb/Ta	K/Rb
KRS510949	Outcrop	Phyllite	3229	-	-	-
KRS511710	Outcrop	Pegmatite	581	-	3	53
KRS510950	Outcrop	Pegmatite	215	-	3	-
KRS510968	Outcrop	Pegmatite	129	6	6	57
KRS510948	Outcrop	Pegmatite	107	-	1	-
KRS510951	Outcrop	Pegmatite	108	-	5	-

**Table 1:** Significant results and fertility/fractionation indicators from Samgwen rock chips.

### Seobyek Li Project

The Seobyek Li Project includes 36 exploration licence applications covering 98.8 km<sup>2</sup>, in an area comprising Precambrian schists, gneiss, and limestone, with pegmatites mapped by KIGAM located throughout the application area (Figure 3). Data from a historical KIGAM stream-sediment survey has high values in the project area and the project is ~10 km northeast of mapped Jurassic granite, which could be a potential for the Li pegmatites.

Recent fieldwork by Southern Gold included geological reconnaissance and rock-chip sampling. Several pegmatite and granitic bodies were identified occurring in a metasedimentary host. Results include 1.1% Li<sub>2</sub>O and 0.14% Li<sub>2</sub>O, both occurring in metamorphic rock in close contact with granite (Table 2). Significantly, many of the pegmatite and granite intrusions sampled at Seobyek have prospective Mg/Li, Nb/Ta and K/Rb values, which suggests that the granite was sufficiently fractionated for the formation of LCT pegmatites (Table 2).



**Figure 3:** Seobyek Li Project first-pass rock chip sampling results.



Sample ID	Type	Lithology	Li <sub>2</sub> O ppm	Mg/Li	Nb/Ta	K/Rb
KRS510992	Outcrop	Schist	11259	-	-	-
KRS511702	Outcrop	Phyllite	1378	-	-	-
KRS511703	Outcrop	Pegmatite	258	4	11	59
KRS510993	Float	Pegmatite	129	16	9	115
KRS511704	Float	Pegmatite	129	4	8	71
KRS511701	Subcrop	Granite	108	19	7	133
KRS511705	Outcrop	Granite	108	5	6	83

**Table 2:** Significant results and fertility/fractionation indicators from Seobyek rock-chips.

The company considers these early geological and geochemical results to be proof of concept. There is scope for further significant discoveries given several individual pegmatites have been mapped by KIGAM across the project area, with the majority of which are yet to be investigated. Large zones of strongly anomalous Li in historical stream-sediment sampling up to several hundred ppm also occur<sup>1</sup>. Southern Gold is planning a substantial program of further reconnaissance mapping and sampling work across the Seobyek tenement package.

### Danyang Li Project

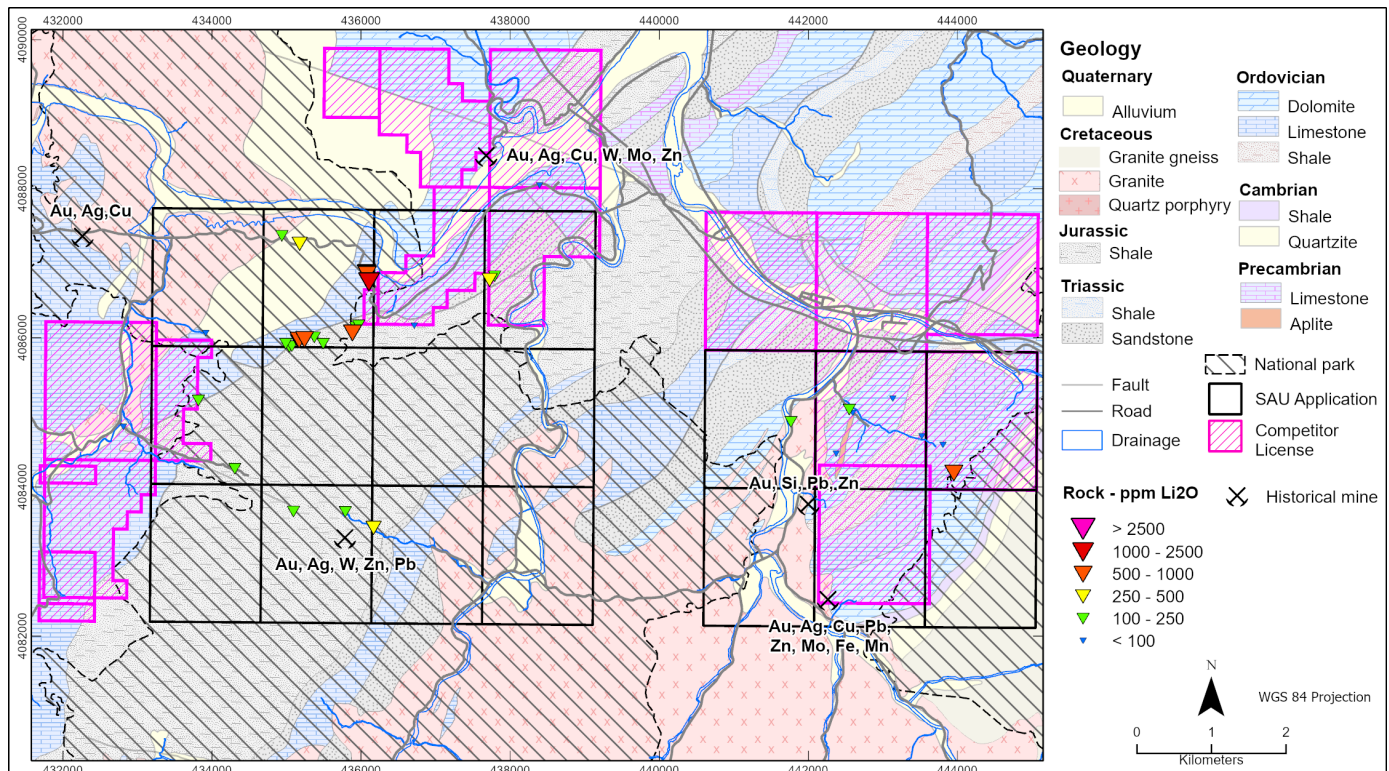
The newly acquired Danyang project comprises 18 tenement applications and totals ~48 km<sup>2</sup> (Figure 4). Many of the applications are coincident with a national park; however, Southern Gold understands that the South Korean tenement system has provision to grant licences in such areas and will follow due process with the Mine Registration Office. Southern Gold considers Danyang highly prospective for Li-bearing pegmatite and aplite, with two historical Li mines are documented to occur in the region.

Early reconnaissance work by Southern Gold has reinforced the strong potential of the Danyang project. Twelve samples grading >500ppm Li<sub>2</sub>O, with a maximum result of 0.31%, predominantly within Li-mica bearing aplite. Lithium fertility and fractionation indicators are particularly strong at Danyang, with a broad suite of samples with extremely low Mg/Li, Nb/Ta and K/Rb values, indicative of a highly fractionated system. Strongly anomalous Cs, and Ga also occur in some samples, along with elevated Rb (Table 3).

These early results from Danyang are extremely encouraging and the company believes there is strong potential for LCT pegmatite occurrences in this area. Follow-up sampling and mapping are planned to further investigate the large area of applications that the company holds.

Sample ID	Type	Lithology	Li <sub>2</sub> O ppm	Cs	Ga	Rb	Mg/Li	Nb/Ta	K/Rb
KRS511783	Float	Aplite	3078	<b>177</b>	33	<b>1880</b>	-	1	12
KRS511782	Float	Aplite	1098	36	32	411	1	2	8
KRS511779	Outcrop	Aplite	753	50	27	989	-	3	31
KRS511768	Float	Breccia	732	10	22	79.6	31	19	184
KRS511786	Outcrop	Granite	732	50	28	<b>1065</b>	-	3	42
KRS511778	Outcrop	Aplite	710	51	22	<b>1115</b>	-	4	31
KRS511784	Float	Aplite	710	63	29	<b>1250</b>	-	4	30
KRS511767	Mullock	Aplite	646	14	<b>42</b>	<b>1275</b>	2	1	21
KRS511732	Mullock	Limestone	624	20	17	215	-	-	-
KRS511777	Outcrop	Aplite	560	51	22	957	1	5	28
KRS511781	Float	Aplite	538	43	31	<b>1445</b>	6	1	31

**Table 3:** Significant results and fertility/fractionation indicators from Danyang rock chips



**Figure 4:** Rock-chip sampling at the Dangyang Li project. Note that licence applications are largely within a National Park; however, Southern Gold understands that there are provisions for granting licences in such areas and will follow due process with the Mine Registration Office (MRO).

### Cheongpyeong, Seosan & Yeongdong Li Projects

Cheongpyeong and Seosan are newly acquired projects for the company, consisting of 55 licence applications across nearly 150 km<sup>2</sup>. A recent review of historical data suggests Li-bearing pegmatites may occur in these areas. Yeongdong is a previously announced<sup>9</sup> group of 26 licence applications totalling ~70 km<sup>2</sup> and covering an area of anomalous stream-sediment geochemistry.

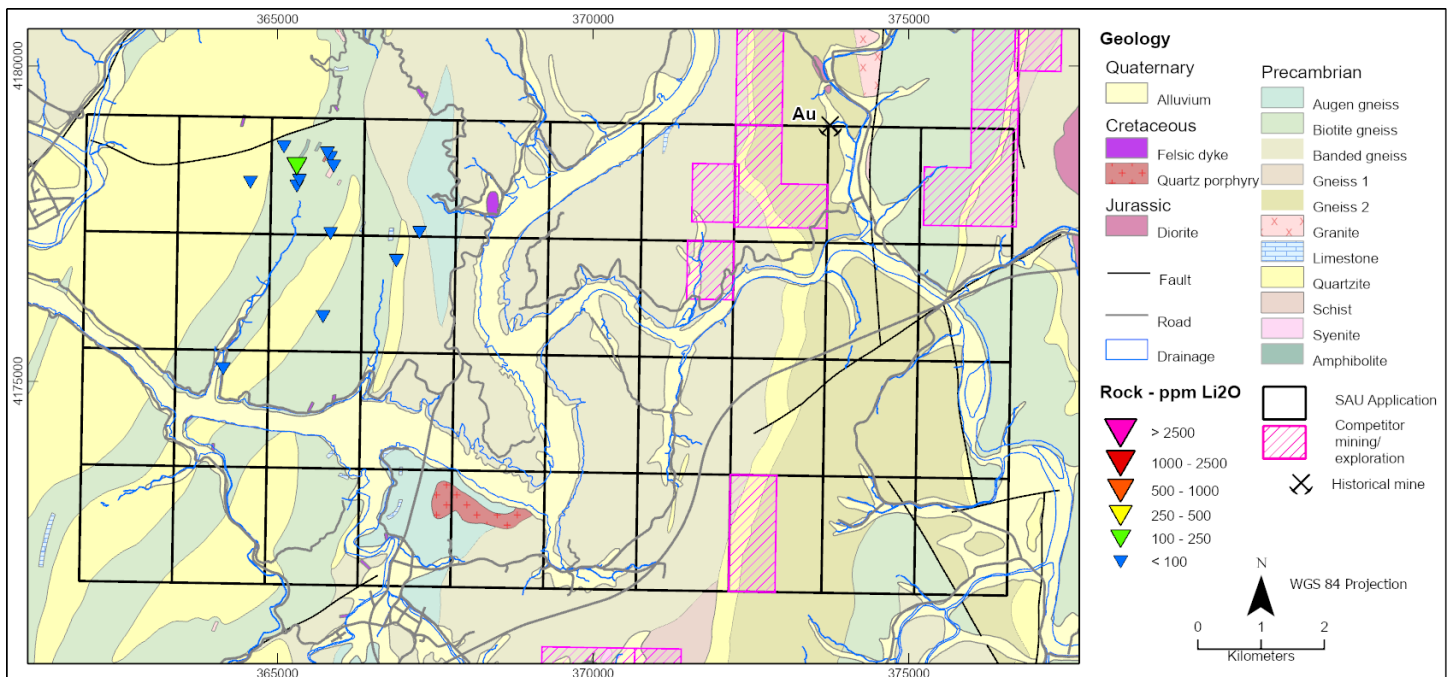
The company has received results from first pass rock-chip sampling programs at Cheongpyeong, Seosan and Yeongdong. The Li contents of rock chips from the reconnaissance sample programme were generally low (Figures 5, 6 & 7, Table 4).

Large areas of the tenement application package for each project remain to be investigated and the company believes significant potential remains. Further fieldwork is planned over the coming Autumn season.

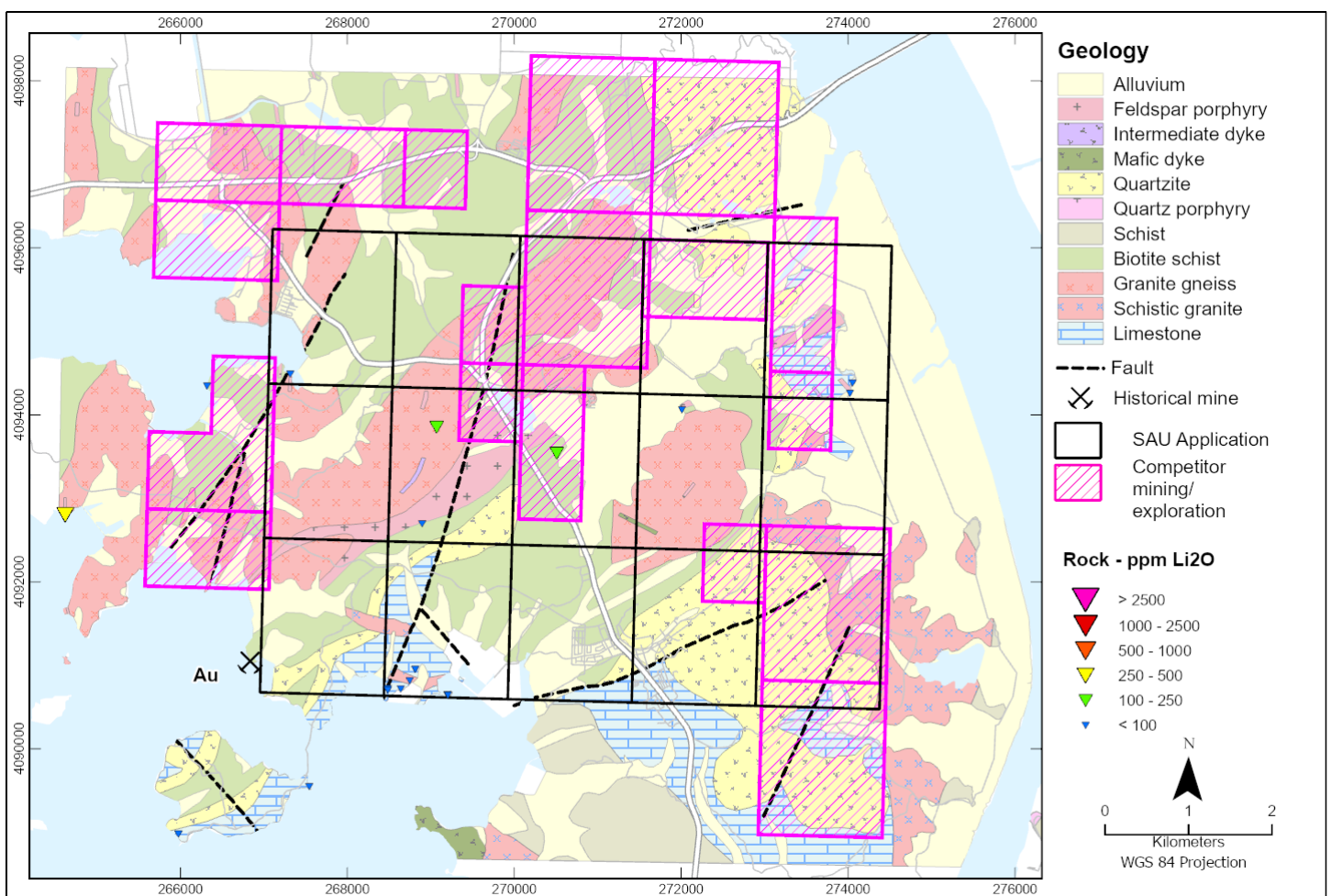
Project	Sample ID	Type	Lithology	Li <sub>2</sub> O ppm
Seosan	KRS511797	Outcrop	Dyke	323
Yeongdong	KRS511717	Outcrop	Mudstone	194
Yeongdong	KRS511724	Outcrop	Granite	151
Seosan	KRS509111	Outcrop	Dyke	129
Cheongpyeong	KRS510311	Outcrop	Pegmatite	129
Seosan	KRS509110	Outcrop	Dyke	108

**Table 4:** Significant results from Cheongpyeong, Seosan & Yeongdong rock-chips

<sup>9</sup> See ASX announcement from 27<sup>th</sup> April 2023 entitled "Southern Gold develops new lithium exploration portfolio in South Korea".  
Competent Person: Dr Michael Gazley

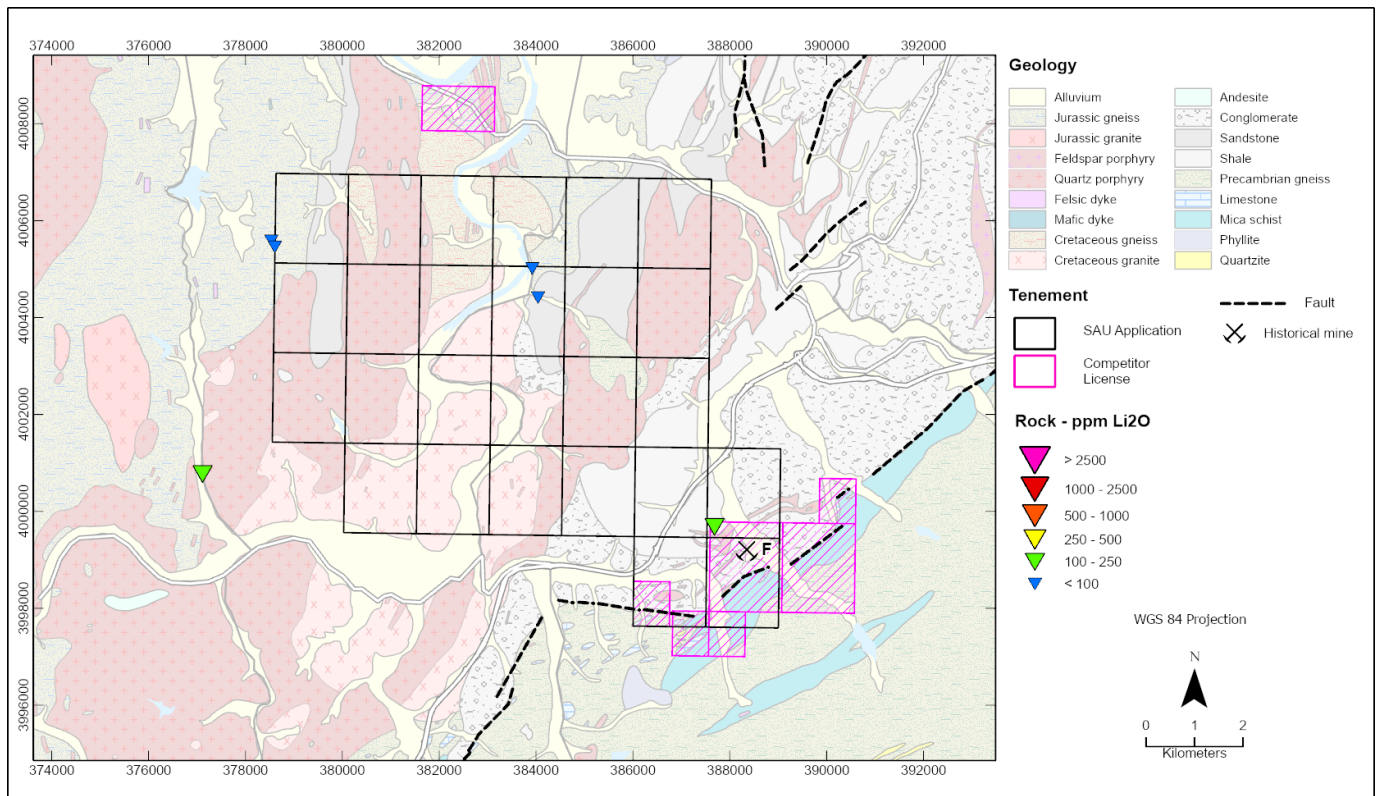


**Figure 5:** Rock-chip samples at the Cheongpyeong Li project.



**Figure 6:** Rock-chip samples at the Seosan Li project.





**Figure 7:** Rock-chip samples at the Yeongdong Li project.

## Chungju REE Project

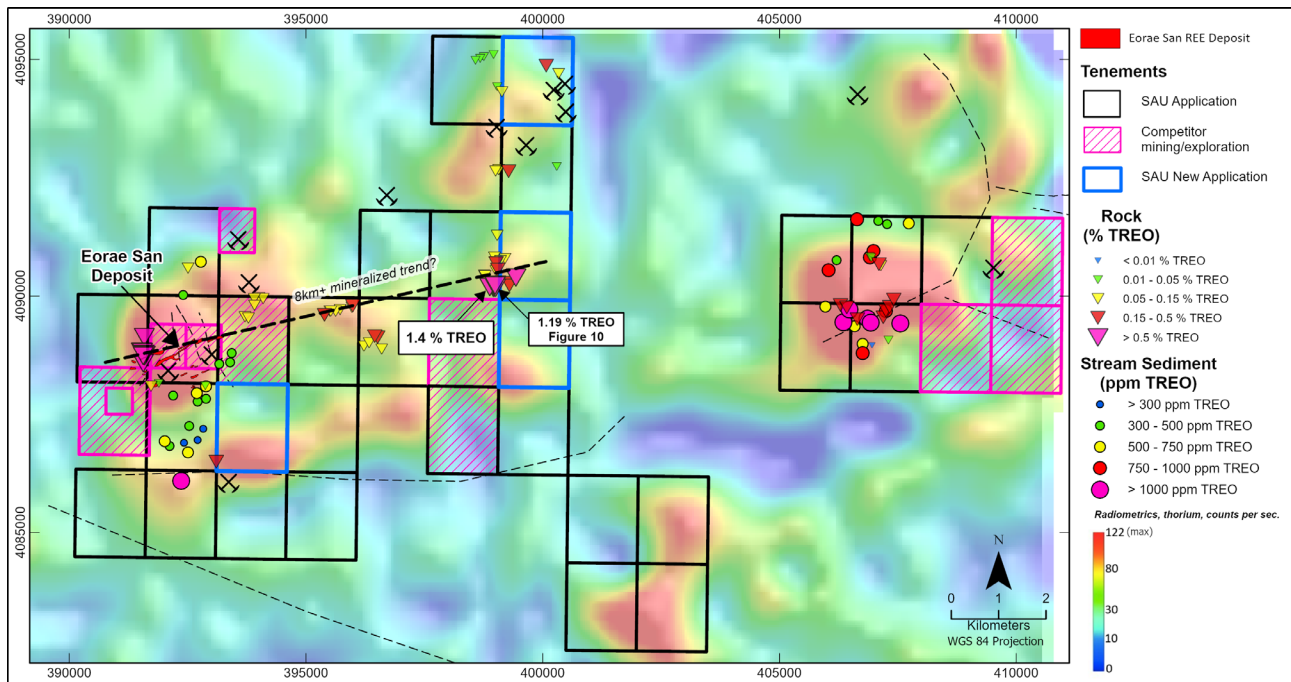
The Chungju project area was identified in a report by consultancy RSC as being prospective for REE mineralisation. It is adjacent to the well-documented Eorae San REE deposit, a NE–SW striking, ~2 km long, faulted REE mineralised body held by a third party, which is hosted in a trachytic syenite intruding an alkali granite precursor.<sup>10</sup>

Southern Gold has recently extended its tenement application area at Chungju. The company's tenement package now includes 30 exploration licence applications covering an area of ~80 km<sup>2</sup> (Figure 8). Analyses have been returned from a widespread program of surface sampling. A total of 114 rock-chip and 40 stream-sediment samples were taken. Highlights from the program include:

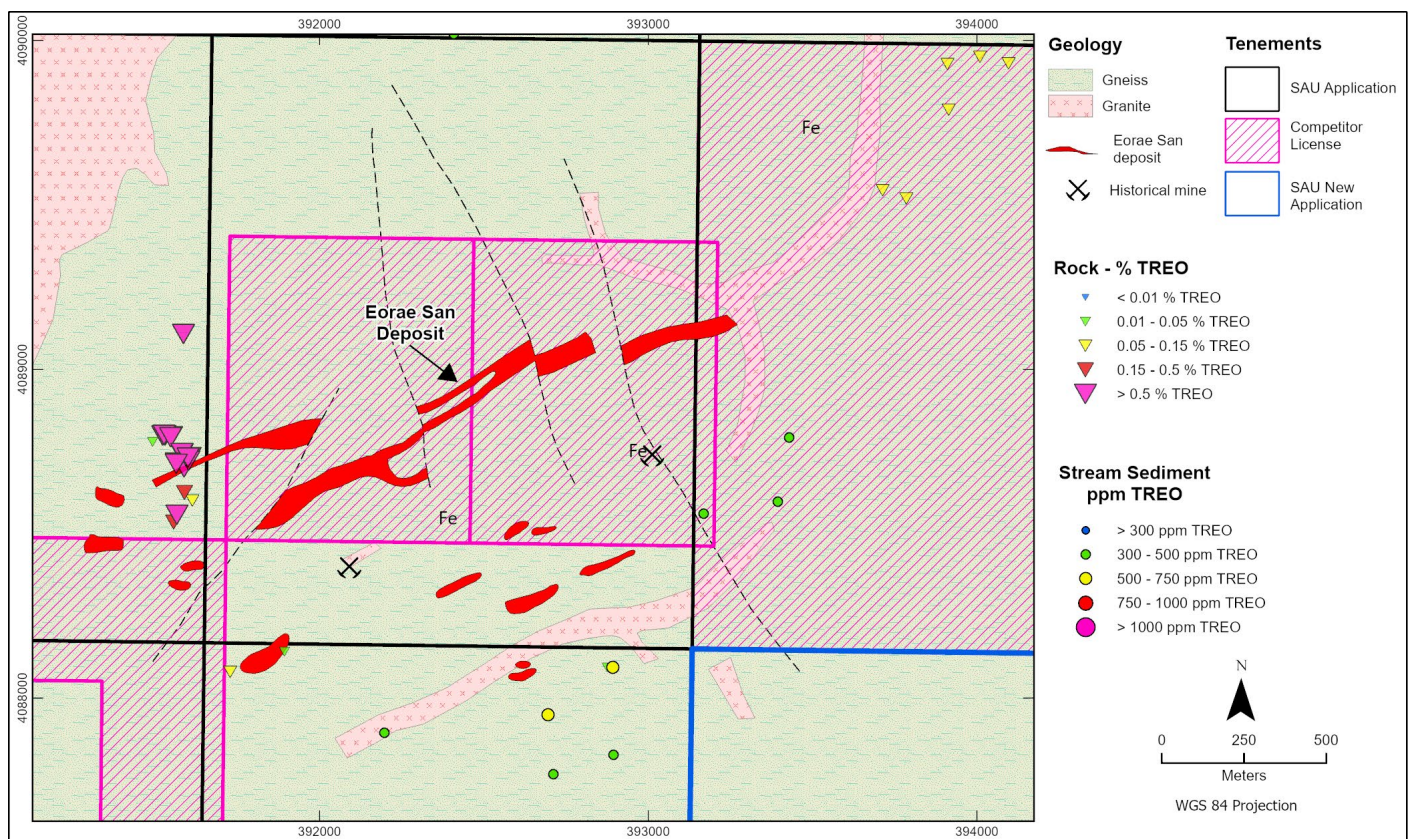
- Nearly a quarter of all rock-chip samples had  $\geq 0.5\%$  TREO, with a maximum of 1.4% TREO;
- Strong heavy REE enrichment, with an average of 30% HREO in mineralised samples ( $\geq 0.5\%$  TREO); and
- Anomalous stream-sediment samples up to 0.16% TREO, predominantly in a new underexplored area to the east.

Immediately west of the Eorae San REE deposit, a group of rock-chips from outcropping syenite have  $>0.5\%$  TREO (Figures 8, 9), confirming extension of the deposit into Southern Gold tenements. To east, several areas of sampling define large zones of  $>0.2\%$  TREO, with rock-chips from an alkaline igneous body have up to 1.4% TREO (Figure 8, 10). These results, together with large areas of anomalous thorium (Th) in a KIGAM radiometrics survey<sup>10</sup>, indicate a potential 8 km+ mineralised trend extending across the company's tenement applications and coincident with the Eorae San mineralisation (Figure 8).

<sup>10</sup> See ASX announcement from 8<sup>th</sup> March 2023 entitled "Southern Gold applies for Exploration Licences adjacent to REE deposits in South Korea – fieldwork underway". Competent Person: Dr Michael Gazley



**Figure 8:** Chungju REE project showing rock-chip and stream-sediment results on thorium radiometric background.



**Figure 9:** Close-up map of Southern Gold's rock-chip samples around the Eorae San deposit, which highlight the extension of mineralisation onto Southern Gold's tenement applications.





**Figure 10:** Banded syenite from Chungju with 1.19% TREO (sample ID KRS513223).

Stream-sediment sampling by Southern Gold has also highlighted the prospectivity of a group of tenement applications in the far east of the project area. Here, several samples have returned >0.1% TREO in a zone situated within a broad Th anomaly. Limited rock-chip sampling in this region has confirmed the presence of mineralised syenite similar to other parts of the project, with grades up to 0.43% TREO (Figure 8).

The company views this first round of results at Chungju as highly encouraging, and indicative of a large, widespread mineralised REE system with the advantage of HREO enrichment. Follow-up mapping and sampling is planned and will aim to further extend and define the identified mineralisation.

## Next Steps

Exploration across Southern Gold's Li projects and at Chungju is ongoing and will include follow-up sampling and mapping at new discoveries and further reconnaissance exploration to generate additional targets. This is expected to comprise of mostly rock-chip sampling and geological mapping. The work will aim to both investigate the unexplored portions of the company's tenement application package, and further define the newly discovered mineralisation noted in this release.

Authorised for release by the Board of Southern Gold Limited.

### Further Information

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## Southern Gold Limited: Company Profile

Southern Gold is a successful mineral exploration and battery technology commercialisation group listed on the Australian Securities Exchange (under ASX ticker “SAU”). The mineral exploration business includes 100% interest in a substantial portfolio of REE, Li and precious metals exploration projects in South Korea. Backed by a first-class technical team, Southern Gold’s aim is to find world-class deposits in a jurisdiction that has seen very little modern exploration. The technology commercialisation business holds three exclusive world-wide licences comprising the next generation battery technologies comprising 1) an enhanced performance non-flammable lithium-ion based battery, 2) a low-cost, environmentally sustainable method for recycling lithium batteries, and 3) a low-cost, high cycle life water-based battery.

### Competent Person’s Statement

The information in this report that relates to Exploration Results is based on information compiled under the supervision of Dr Michael Gazley, a Competent Person who is a Member of The AusIMM and a Member of the AIG. Dr Gazley is employed by RSC as General Manager Geoscience. The full nature of the relationship between Dr Gazley and Southern Gold has been declared, including any issue that could be perceived by investors as a conflict of interest. Dr Gazley has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity he has undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for the Reporting of Mineral Resources and Ore Reserves. Dr Gazley consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

### Reference to Previous Announcements

Previous SAU exploration and historical stream-sediment sampling results referred to in this announcement have been previously announced to the ASX, as specified in footnotes 1 and 10. The announcements are available to the public at <https://southerngold.com.au/investors/asx-announcements/>.

<https://wcsecure.weblink.com.au/pdf/SAU/02641110.pdf>

<https://wcsecure.weblink.com.au/pdf/SAU/02658284.pdf>

The Company is not aware of any new information or data that materially affect the referenced information included here. The Company confirms that the form and context in which the Competent Person’s findings are presented have not been materially modified.

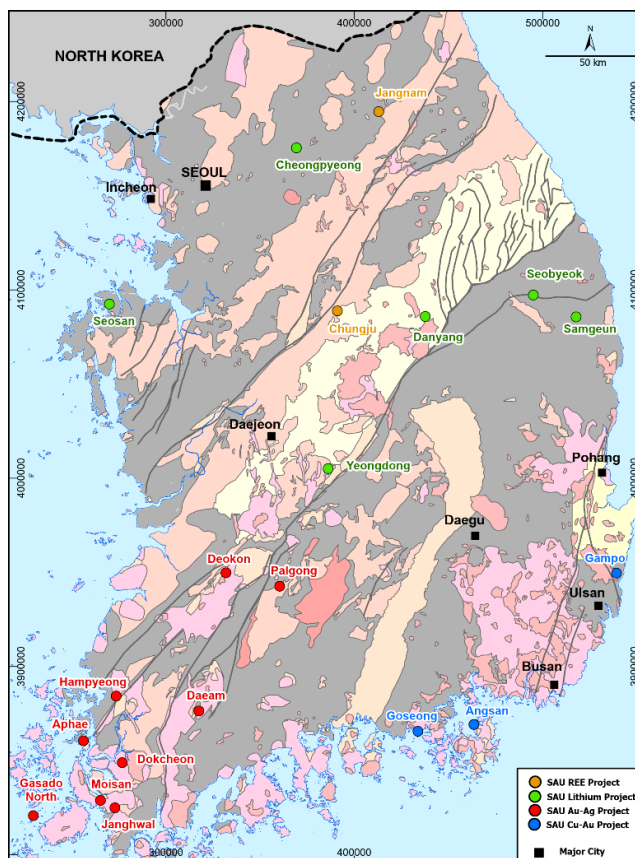
### Forward-looking statements

Some statements in this release regarding estimates or future events are forward looking statements. These may include, without limitation:

- Estimates of future cash flows, the sensitivity of cash flows to metal prices and foreign exchange rate movements.
- Estimates of future metal production; and
- Estimates of the resource base and statements regarding future exploration results.

Such forward looking statements are based on a number of estimates and assumptions made by the Company and its consultants in light of experience, current conditions and expectations of future developments which the Company believes are appropriate in the current circumstances. Such statements are expressed in good faith and believed to have a reasonable basis. However, the estimates are subject to known and unknown risks and uncertainties that could cause actual results to differ materially from estimated results.

All reasonable efforts have been made to provide accurate information, but the Company does not undertake any obligation to release publicly any revisions to any “forward-looking statement” to reflect events or circumstances after the date of this presentation or ASX release, except as maybe required under applicable laws. Recipients should make their own enquiries in relation to any investment decisions from a licensed investment advisor.



## Appendix 1: Geochemical analysis of main relevant elements at lithium projects (>100ppm Li<sub>2</sub>O)

Sample ID	Easting	Northing	Project	Lithology	Li <sub>2</sub> O ppm	Cs ppm	Ta ppm	Sn ppm	Ga ppm	Nb ppm	Rb ppm	K/Rb	Mg/Li	Nb/Ta
KRS510311	365308	4178389	Cheongpyeong	Pegmatite	129	8.88	1.9	7	18.7	10.75	170	244	139	6
KRS510959	504206	4014195	Cheongsong	Siltstone	108	5.08	0.8	67.8	16.4	11.65	50.3	0	0	15
KRS511728	442550	4085027	Danyang	Granite	129	18.15	9.6	9.1	22.8	45.7	540	65	17	5
KRS511731	441767	4084862	Danyang	Granite	129	16	4.9	3.8	17.5	38	426	90	12	8
KRS511732	443953	4084170	Danyang	Limestone	624	20.1	1.6	8.9	16.5	20.7	215	229	312	13
KRS511735	437694	4087519	Danyang	Phyllite	108	7.77	1.4	4.1	18	15.3	133.5	213	217	11
KRS511737	437792	4086815	Danyang	Limestone	215	20.3	1.5	8.5	27.4	16.05	247	162	128	11
KRS511738	437724	4086762	Danyang	Schist	280	25.9	1.4	13.9	28	14.7	288	146	89	11
KRS511739	437480	4086644	Danyang	Phyllite	215	23.7	1.5	9.8	21.4	16.75	223	150	65	11
KRS511741	436354	4086179	Danyang	Phyllite	280	21	1.3	6	25.4	18.15	273	124	51	14
KRS511742	434938	4087357	Danyang	Granite	237	10.75	5.8	3.4	19.3	33.5	428	89	4	6
KRS511743	435177	4087248	Danyang	Limestone	258	6.09	1.3	4.7	23	16.25	189	214	205	13
KRS511746	436178	4086222	Danyang	Schist	387	28.5	1.6	12	25.7	19	393	104	36	12
KRS511748	433106	4084470	Danyang	Limestone	474	9.99	1.1	21.8	17.6	14.55	260	150	103	13
KRS511749	434306	4084233	Danyang	Schist	108	13	0.9	2.7	18.8	11	207	153	65	12
KRS511750	435093	4083658	Danyang	Schist	129	8.4	1.5	5.5	24.1	19.1	196.5	178	58	13
KRS511751	435789	4083655	Danyang	Sandstone	108	7.07	0.9	1.8	10.6	8.26	107	164	21	9
KRS511752	436168	4083438	Danyang	Schist	301	41	1.9	2.1	24.2	27.9	447	176	48	15
KRS511758	435966	4086155	Danyang	Schist	151	11.7	1.5	5.7	28.4	18.55	202	189	109	12
KRS511759	435966	4086155	Danyang	Schist	151	13.45	1.6	4.6	27.9	19.35	219	165	107	12
KRS511760	435931	4086130	Danyang	Schist	194	13.45	1.6	7.7	30.8	20.3	250	172	94	13
KRS511762	435885	4086061	Danyang	Aplite	151	7.14	0.7	2.3	13.3	9.55	105	172	59	14
KRS511763	435886	4086050	Danyang	Vein	581	1.23	0.05	0.5	0.9	0.25	5.9	70	2	5
KRS511764	435492	4085911	Danyang	Schist	108	5.36	1.8	5.7	29.8	22.5	217	179	72	13
KRS511765	435373	4085996	Danyang	Dyke	172	21.9	1.1	4.5	20	14.15	156.5	180	63	13
KRS511766	435373	4085996	Danyang	Aplite	129	5.63	0.3	1.6	6.9	3.48	61.7	183	24	12
KRS511767	435242	4085963	Danyang	Aplite	646	14.45	86.8	4.1	42.1	64.4	1275	21	2	1

Sample ID	Easting	Northing	Project	Lithology	Li <sub>2</sub> O ppm	Cs ppm	Ta ppm	Sn ppm	Ga ppm	Nb ppm	Rb ppm	K/Rb	Mg/Li	Nb/Ta
KRS511768	435170	4085954	Danyang	Breccia	732	10.45	0.7	5.3	21.9	13.4	79.6	184	31	19
KRS511769	435153	4085942	Danyang	Vein	495	0.85	0.3	0.6	1.1	0.39	8.4	69	3	1
KRS511770	435153	4085942	Danyang	Vein	344	1.38	0.1	2.3	4.9	1.38	5.3	78	13	14
KRS511771	435072	4085878	Danyang	Schist	129	18	1.6	15.8	22.4	18.3	225	178	102	11
KRS511775	435039	4085868	Danyang	Schist	172	59.8	1.6	15.2	23.9	20.8	330	138	113	13
KRS511776	434989	4085911	Danyang	Phyllite	129	9.01	1.4	5.1	22.4	16.6	227	217	229	12
KRS511777	436072	4086850	Danyang	Aplite	560	50.5	11.6	5.9	22.3	55.6	957	28	1	5
KRS511778	436069	4086857	Danyang	Aplite	710	50.9	10.4	5.5	22.4	45	1115	31	0	4
KRS511779	436072	4086861	Danyang	Aplite	753	49.5	21.5	4.9	26.6	60.7	989	31	0	3
KRS511781	436081	4086835	Danyang	Aplite	538	42.8	21.7	6.6	31	21.7	1445	31	6	1
KRS511782	436107	4086732	Danyang	Aplite	1098	35.5	9.9	4.9	32.4	17.05	411	8	1	2
KRS511783	436089	4086545	Danyang	Aplite	3078	177	30.3	28.6	33.3	43.9	1880	12	0	1
KRS511784	433710	4085092	Danyang	Aplite	710	62.9	18.3	12.9	29	64.7	1250	30	0	4
KRS511785	433818	4085148	Danyang	Schist	215	10.6	1.4	5.3	25.1	19.2	182.5	162	85	14
KRS511786	433130	4085656	Danyang	Granite	732	49.6	16.1	14.7	27.6	49	1065	42	0	3
KRS511787	433130	4085656	Danyang	Granite	387	29.8	7.8	9	25.4	48.2	802	53	1	6
KRS509010	497786	4096791	Samgeun	Pegmatite	108	35.1	6.1	30.8	20.6	23.2	350	125	23	4
KRS509013	497514	4097481	Samgeun	Pegmatite	108	7.68	1.7	8.4	25.2	14.7	338	121	16	9
KRS510948	516283	4084415	Samgeun	Pegmatite	108	24.8	41.6	30.8	22.7	42	811	0	0	1
KRS510949	516283	4084415	Samgeun	Phyllite	3229	87	11.2	246	27	24.9	1305	0	0	2
KRS510950	516334	4084428	Samgeun	Pegmatite	215	21.3	7.4	47.8	30.6	18.65	634	0	0	3
KRS510951	516416	4084921	Samgeun	Pegmatite	108	8.68	4.6	17.9	26.5	22.4	419	0	0	5
KRS510968	516415	4084922	Samgeun	UNKN	129	5.93	2.5	22.9	29	15.35	312	57	6	6
KRS510970	520246	4083799	Samgeun	Pegmatite	12012	1855	69.6	19.6	33	57.9	4980	13	0	1
KRS510975	520298	4083801	Samgeun	Pegmatite	21527	4930	300	41	37.5	289	11050	8	0	1
KRS510979	520245	4083806	Samgeun	Pegmatite	20451	2100	317	21.2	26.7	166	5030	9	0	1
KRS511706	514116	4083745	Samgeun	Pegmatite	108	14.35	8.2	94.3	30.7	29.3	519	50	7	4
KRS511708	515773	4084339	Samgeun	Schist	495	13.7	7.8	55.4	29.5	22.5	321	91	50	3
KRS511710	516268	4084413	Samgeun	Pegmatite	581	29.5	12.2	74.8	33.9	35.1	935	53	0	3
KRS511713	517014	4084593	Samgeun	Schist	215	23.5	1.2	18.5	25.9	14.45	288	138	73	12
KRS510989	497817	4096322	Seobyeok	Pegmatite	172	13.65	1.4	6.7	20.5	11.65	218	159	107	8



Sample ID	Easting	Northing	Project	Lithology	Li <sub>2</sub> O ppm	Cs ppm	Ta ppm	Sn ppm	Ga ppm	Nb ppm	Rb ppm	K/Rb	Mg/Li	Nb/Ta
KRS510990	497817	4096401	Seobyeok	Schist	172	13.5	1.6	4.6	27.1	17.05	408	102	154	11
KRS510992	497818	4096426	Seobyeok	Schist	11259	912	76.2	15.2	39.1	109	2590	18	2	1
KRS510993	497346	4096944	Seobyeok	Pegmatite	129	7.7	2.8	9.8	28.4	23.9	357	115	16	9
KRS510996	497355	4096559	Seobyeok	Phyllite	129	12.15	1.4	7.5	27.6	13.75	190	165	136	10
KRS511701	497470	4096852	Seobyeok	Granite	108	7.44	2.6	7.3	19.9	17.25	338	133	19	7
KRS511702	496975	4099220	Seobyeok	Phyllite	1378	35.7	1.2	14.7	26.6	14.55	335	111	6	12
KRS511703	496975	4099220	Seobyeok	Pegmatite	258	9.25	2.8	29.8	21.2	30	263	59	4	11
KRS511704	496947	4099248	Seobyeok	Pegmatite	129	16.85	2.1	28.3	18.7	17.2	403	71	4	8
KRS511705	496901	4099247	Seobyeok	Granite	108	13.35	2.8	24.3	16	16.2	335	83	5	6
KRS509110	270510	4093529	Seosan	Dyke	108	1.19	1.3	1.6	16.6	13.3	105.5	321	13	10
KRS509111	269071	4093840	Seosan	Dyke	129	0.72	1.2	1.9	17.1	10.35	95.1	290	5	9
KRS511797	264621	4092788	Seosan	Dyke	323	1	0.6	0.5	15.4	7.68	56.3	307	6	13
KRS511717	387687	3999653	Yeongdong	Mudstone	194	1.97	1.1	2.8	20.7	13.25	109.5	219	29	12
KRS511724	377117	4000744	Yeongdong	Granite	151	6.53	1	2.8	22.8	10.05	242	166	39	10

## Appendix 2: Geochemical analyses of relevant main elements and REEs of Chungju rock-chip samples.

Sample ID	Easting	Northing	La <sub>2</sub> O <sub>3</sub> ppm	CeO <sub>2</sub> ppm	Pr <sub>6</sub> O <sub>11</sub> ppm	Nd <sub>2</sub> O <sub>3</sub> ppm	Sm <sub>2</sub> O <sub>3</sub> ppm	Eu <sub>2</sub> O <sub>3</sub> ppm	Gd <sub>2</sub> O <sub>3</sub> ppm	Tb <sub>4</sub> O <sub>7</sub> ppm	Dy <sub>2</sub> O <sub>3</sub> ppm	Ho <sub>2</sub> O <sub>3</sub> ppm	Er <sub>2</sub> O <sub>3</sub> ppm	Tm <sub>2</sub> O <sub>3</sub> ppm	Yb <sub>2</sub> O <sub>3</sub> ppm	Lu <sub>2</sub> O <sub>3</sub> ppm	Y <sub>2</sub> O <sub>3</sub> ppm	TREO wt.%	MREO/ TREO %	HREO/ TREO %
KRS506399	406290	4089789	556	1107	127	444	81	3	66	11	60	13	37	5.2	31.8	4.7	392	0.29	22	21
KRS506400	407194	4089530	133	310	35	130	25	6	21	3	19	4	10	1.3	8.7	1.1	108	0.08	23	22
KRS509001	407194	4089530	651	1468	156	552	101	9	81	13	78	15	41	5.5	33.8	4.6	437	0.36	22	20
KRS509002	407329	4089748	354	780	85	292	52	3	43	8	46	9	27	3.9	24.8	3.7	267	0.2	22	22
KRS509003	407415	4089904	391	737	92	316	56	3	46	7	44	8	23	3.2	20.3	3.0	246	0.2	23	20
KRS509055	400075	4094848	5	6	1	3	1	0	1	0	1	0	1	0.1	0.6	0.1	8	0	19	44
KRS509056	400075	4094848	178	391	44	156	34	4	31	5	31	6	18	2.4	14.6	2.1	195	0.11	21	28
KRS509057	400075	4094848	280	614	67	237	48	3	40	7	44	9	24	3.6	21.0	2.8	228	0.16	22	23
KRS509058	400075	4094848	52	120	15	61	13	4	12	2	11	2	6	0.9	5.4	0.8	70	0.04	24	30
KRS509059	400075	4094848	235	493	55	188	37	4	27	4	24	5	14	1.8	12.2	1.5	142	0.12	22	19
KRS509060	400075	4094848	175	375	42	145	30	3	28	5	33	7	19	2.8	16.4	2.3	186	0.11	21	28
KRS509062	391728	4088077	65	122	14	54	9	1	6	1	6	1	4	0.5	4.4	0.8	38	0.03	23	19
KRS509063	391728	4088077	97	203	22	83	14	4	22	3	19	4	10	1.4	9.0	1.4	93	0.06	22	28
KRS509064	391893	4088139	73	159	16	59	9	1	7	2	11	3	8	1.4	10.1	1.6	67	0.04	20	26
KRS509071	392875	4088091	56	126	12	46	9	4	18	3	18	4	11	1.4	9.4	1.3	96	0.04	19	40
KRS509090	391586	4089103	1284	2506	306	1145	250	12	240	42	269	52	164	22.8	152	19.3	1613	0.81	22	32
KRS509091	392510	4090573	181	393	42	155	27	7	22	4	20	4	11	1.6	9.9	1.6	113	0.1	22	20
KRS509092	392510	4090573	151	296	33	122	22	6	19	3	17	3	10	1.4	8.7	1.2	97	0.08	22	21
KRS509093	392510	4090573	22	49	7	31	8	3	9	1	9	2	5	0.7	4.7	0.7	53	0.02	24	43
KRS509094	406424	4089739	395	776	85	294	51	4	41	7	44	9	25	3.6	23.8	3.4	274	0.2	21	21
KRS509095	406910	4090820	89	192	22	85	16	5	14	2	13	2	7	1.0	6.5	0.8	70	0.05	23	23
KRS509096	406940	4090797	33	71	10	45	10	3	9	2	9	2	5	0.7	4.6	0.6	56	0.03	25	35
KRS510901	407115	4090626	86	191	22	83	16	4	14	2	14	3	8	1.0	7.3	1.2	78	0.05	23	25
KRS510902	407142	4090625	101	224	24	96	18	5	15	2	13	3	8	1.0	6.9	1.1	76	0.06	23	22
KRS510903	407103	4090652	789	1677	186	678	118	17	93	15	89	17	47	5.8	35.0	5.0	542	0.43	22	20
KRS510904	406647	4089489	290	590	74	246	44	3	33	5	34	7	21	3.2	22.7	3.3	197	0.16	23	21

Sample ID	Easting	Northing	La <sub>2</sub> O <sub>3</sub> ppm	CeO <sub>2</sub> ppm	Pr <sub>6</sub> O <sub>11</sub> ppm	Nd <sub>2</sub> O <sub>3</sub> ppm	Sm <sub>2</sub> O <sub>3</sub> ppm	Eu <sub>2</sub> O <sub>3</sub> ppm	Gd <sub>2</sub> O <sub>3</sub> ppm	Tb <sub>4</sub> O <sub>7</sub> ppm	Dy <sub>2</sub> O <sub>3</sub> ppm	Ho <sub>2</sub> O <sub>3</sub> ppm	Er <sub>2</sub> O <sub>3</sub> ppm	Tm <sub>2</sub> O <sub>3</sub> ppm	Yb <sub>2</sub> O <sub>3</sub> ppm	Lu <sub>2</sub> O <sub>3</sub> ppm	Y <sub>2</sub> O <sub>3</sub> ppm	TREO wt.%	MREO/ TREO %	HREO/ TREO %
KRS510905	407249	4089671	541	1126	122	436	80	5	66	11	63	12	33	4.4	28.2	4.0	330	0.29	22	19
KRS510906	407302	4089054	94	179	21	80	15	2	12	2	11	2	5	0.8	4.6	0.7	62	0.05	23	21
KRS510907	406956	4088946	24	42	6	22	4	1	4	1	3	1	2	0.3	2.2	0.3	23	0.01	24	28
KRS510908	391492	4088777	44	86	9	33	6	1	4	1	3	1	1	0.2	1.3	0.2	16	0.02	23	14
KRS510909	391523	4088794	1179	1978	280	960	201	9	186	34	226	45	136	18.6	120.1	15.9	1247	0.66	23	31
KRS510910	391540	4088787	51	108	14	57	15	1	16	3	18	4	11	1.8	11.9	1.6	128	0.04	21	45
KRS510911	391540	4088787	3	6	1	3	1	0	1	0	1	0	1	0.2	1.0	0.2	11	0	18	54
KRS510912	391559	4088801	490	1536	152	595	166	8	170	32	210	41	124	16.6	107.5	14.2	1156	0.48	21	39
KRS510913	391559	4088757	10	15	1	5	2	0	2	0	3	1	2	0.3	2.3	0.3	15	0.01	16	43
KRS510914	399278	4090258	830	2193	187	617	86	2	49	8	47	9	29	4.0	27.4	3.8	265	0.44	20	10
KRS510915	399299	4090204	341	937	83	278	56	2	51	9	51	10	29	4.3	28.1	4.1	288	0.22	19	22
KRS510916	399435	4090361	814	2162	215	765	175	8	160	30	200	40	122	16.7	107.7	14.3	1060	0.59	21	30
KRS510921	398884	4090162	1061	2678	268	937	202	9	175	32	212	42	126	17.5	111.7	14.9	1151	0.7	21	27
KRS510922	399010	4090209	1126	2506	285	1003	213	9	188	34	226	44	134	18.4	122.4	16.0	1253	0.72	22	29
KRS513204	391530	4088794	1037	2328	245	829	188	8	189	35	226	47	137	19.2	124.1	17.7	1314	0.67	20	31
KRS513205	391527	4088796	904	1990	237	889	213	9	201	34	222	46	137	19.5	127.5	18.2	1276	0.63	22	33
KRS513206	391547	4088789	905	1978	237	860	208	8	200	34	220	45	133	18.9	124.1	17.8	1248	0.62	22	33
KRS513207	391581	4088741	891	1990	221	777	184	7	162	28	175	35	102	14.9	99.9	13.9	970	0.57	21	28
KRS513208	391582	4088740	966	2518	246	876	206	9	182	32	201	41	124	18.4	123.0	18.3	1069	0.66	20	27
KRS513209	391607	4088736	531	1271	161	651	195	9	193	35	225	47	138	20.0	132.7	19.2	1346	0.5	22	44
KRS513210	391600	4088727	741	1935	172	632	146	6	131	27	172	36	107	16.8	101.9	12.3	1059	0.53	19	32
KRS513211	391606	4088728	776	1836	215	794	183	8	172	32	212	41	126	18.0	112.1	14.0	1248	0.58	22	34
KRS513212	391588	4088697	921	1978	231	784	187	9	186	35	215	46	132	18.4	111.1	15.0	1231	0.61	21	33
KRS513213	391602	4088717	985	1683	244	921	201	8	172	31	183	37	105	16.7	103.3	12.4	1086	0.58	24	30
KRS513214	391564	4088712	909	1978	195	707	147	6	126	25	158	34	103	16.3	104.8	13.0	973	0.55	20	28
KRS513215	391564	4088708	863	1603	182	665	154	7	142	28	174	36	106	17.2	106.2	13.3	1016	0.51	21	32
KRS513216	399005	4090144	1128	2316	290	977	209	10	201	35	216	43	127	16.8	110.8	15.0	1283	0.7	22	29
KRS513217	398990	4090144	1454	3304	346	1277	259	11	210	38	232	48	139	21.1	129.2	15.9	1403	0.89	21	25
KRS513218	398963	4090132	223	924	98	447	153	9	175	40	264	56	163	26.0	160.6	19.3	1460	0.42	20	56
KRS513221	398963	4090141	2316	4729	623	2088	433	17	357	67	402	84	239	36.9	230.0	28.5	2337	1.4	23	27



Sample ID	Easting	Northing	La <sub>2</sub> O <sub>3</sub> ppm	CeO <sub>2</sub> ppm	Pr <sub>6</sub> O <sub>11</sub> ppm	Nd <sub>2</sub> O <sub>3</sub> ppm	Sm <sub>2</sub> O <sub>3</sub> ppm	Eu <sub>2</sub> O <sub>3</sub> ppm	Gd <sub>2</sub> O <sub>3</sub> ppm	Tb <sub>4</sub> O <sub>7</sub> ppm	Dy <sub>2</sub> O <sub>3</sub> ppm	Ho <sub>2</sub> O <sub>3</sub> ppm	Er <sub>2</sub> O <sub>3</sub> ppm	Tm <sub>2</sub> O <sub>3</sub> ppm	Yb <sub>2</sub> O <sub>3</sub> ppm	Lu <sub>2</sub> O <sub>3</sub> ppm	Y <sub>2</sub> O <sub>3</sub> ppm	TREO wt.%	MREO/ TREO %	HREO/ TREO %
KRS513222	398974	4090154	1290	3489	336	1092	254	14	270	58	370	80	240	33.2	203.3	27.3	2165	0.99	19	35
KRS513223	398986	4090159	1712	3980	439	1680	368	15	319	62	384	81	241	38.8	235.7	30.0	2324	1.19	22	31
KRS513224	398994	4090178	1196	2420	272	1012	213	8	174	33	206	42	122	19.1	118.4	14.4	1229	0.71	22	28
KRS513225	398995	4090193	1066	2469	275	1008	206	10	172	31	201	40	125	17.9	110.6	14.2	1156	0.69	22	27
KRS513226	398999	4090201	2211	4680	555	2000	420	17	368	62	404	82	249	36.1	227.2	30.1	2368	1.37	22	28
KRS513227	399010	4090207	2123	4213	528	1849	392	17	350	66	397	80	229	35.2	214.6	26.0	2356	1.29	22	29
KRS513228	399004	4090202	185	308	40	152	24	3	17	3	14	3	8	1.2	7.2	0.9	85	0.09	25	17
KRS513229	395989	4089775	67	150	18	71	13	2	10	2	8	2	5	0.7	4.4	0.6	47	0.04	25	20
KRS513230	395989	4089775	283	678	73	279	51	4	40	7	39	7	20	2.9	16.9	2.0	214	0.17	23	21
KRS513231	395970	4089745	204	612	49	185	34	2	25	4	27	5	16	2.5	16.5	2.1	151	0.13	20	19
KRS513232	395721	4089696	202	545	52	205	37	2	26	4	27	6	16	2.5	15.6	2.2	149	0.13	22	19
KRS513233	395628	4089661	191	528	48	186	36	3	26	5	27	6	16	2.4	15.9	2.1	170	0.13	21	22
KRS513234	395525	4089663	157	563	38	143	26	2	20	4	21	4	12	2.0	12.6	1.7	123	0.11	18	18
KRS513235	395504	4089666	280	520	70	267	47	3	35	6	33	7	18	2.8	17.3	2.2	190	0.15	25	21
KRS513236	395392	4089581	469	1499	115	442	95	6	88	18	115	25	79	13.2	81.9	10.1	734	0.38	18	31
KRS513237	395339	4089622	7	52	3	15	8	1	13	3	20	4	13	2.0	13.4	1.8	128	0.03	15	70
KRS513238	393107	4086477	571	892	117	439	80	5	63	11	63	13	37	5.6	32.8	4.1	377	0.27	23	23
KRS513241	391556	4088532	351	834	85	310	60	2	45	8	47	10	28	4.3	28.2	3.5	283	0.21	21	22
KRS513242	391566	4088553	1319	2739	274	990	198	9	168	33	201	43	128	20.5	124.1	15.1	1219	0.75	20	26
KRS513243	391613	4088598	201	402	51	201	40	2	32	6	32	6	18	2.8	17.3	2.2	187	0.12	24	25
KRS513244	391589	4088622	255	690	62	236	48	2	43	8	46	10	27	4.4	26.4	3.3	281	0.17	20	26
KRS513245	399015	4090677	318	536	72	247	46	3	35	6	38	8	23	3.3	20.8	2.9	227	0.16	23	23
KRS513246	399052	4090540	203	785	50	171	40	4	37	7	43	8	23	3.1	18.7	2.6	248	0.16	16	24
KRS513251	399013	4090518	154	458	40	141	31	2	25	5	30	6	16	2.5	16.1	2.1	163	0.11	20	25
KRS513252	398784	4090412	128	236	34	125	26	4	22	3	20	4	9	1.4	8.5	1.2	110	0.07	25	25
KRS513253	398765	4090423	109	384	29	100	18	3	15	3	17	3	9	1.2	8.1	1.0	99	0.08	19	20
KRS513254	399109	4090728	135	301	33	123	27	4	23	4	23	4	13	1.8	11.5	1.6	134	0.08	22	26
KRS513255	399204	4090775	235	456	52	173	31	2	25	4	26	5	15	2.0	13.7	1.8	142	0.12	22	20
KRS513256	398982	4090805	120	340	28	105	23	2	22	4	26	5	16	2.3	13.4	1.8	149	0.09	19	28
KRS513257	398962	4095089	20	39	5	19	6	0	7	2	12	3	9	1.4	9.5	1.3	90	0.02	17	60

Sample ID	Easting	Northing	La <sub>2</sub> O <sub>3</sub> ppm	CeO <sub>2</sub> ppm	Pr <sub>6</sub> O <sub>11</sub> ppm	Nd <sub>2</sub> O <sub>3</sub> ppm	Sm <sub>2</sub> O <sub>3</sub> ppm	Eu <sub>2</sub> O <sub>3</sub> ppm	Gd <sub>2</sub> O <sub>3</sub> ppm	Tb <sub>4</sub> O <sub>7</sub> ppm	Dy <sub>2</sub> O <sub>3</sub> ppm	Ho <sub>2</sub> O <sub>3</sub> ppm	Er <sub>2</sub> O <sub>3</sub> ppm	Tm <sub>2</sub> O <sub>3</sub> ppm	Yb <sub>2</sub> O <sub>3</sub> ppm	Lu <sub>2</sub> O <sub>3</sub> ppm	Y <sub>2</sub> O <sub>3</sub> ppm	TREO wt.%	MREO/ TREO %	HREO/ TREO %
KRS513258	398773	4095076	16	27	4	14	3	1	3	1	3	1	2	0.3	2.0	0.3	23	0.01	22	36
KRS513259	398759	4095047	55	51	14	49	11	3	10	2	10	2	5	0.8	5.2	0.6	53	0.03	28	34
KRS513260	398757	4095045	54	63	14	52	10	3	9	1	8	1	4	0.6	4.2	0.5	44	0.03	28	28
KRS513261	398727	4095038	13	30	4	14	4	0	4	1	4	1	2	0.4	2.7	0.4	32	0.01	20	42
KRS513262	398680	4095008	58	96	12	42	8	4	7	1	5	1	3	0.5	2.8	0.4	37	0.03	22	22
KRS513263	398581	4094968	34	62	8	26	5	1	4	1	5	1	3	0.4	3.0	0.4	29	0.02	21	26
KRS513264	399022	4094408	26	39	4	12	2	0	1	0	1	0	0	0.1	0.4	0.1	5	0.01	18	9
KRS513265	399140	4094299	129	329	30	99	24	2	25	5	32	6	19	3.1	19.5	2.5	175	0.09	18	32
KRS513266	399040	4094409	50	99	13	43	8	2	6	1	6	1	3	0.4	2.7	0.3	35	0.03	23	21
KRS513267	399043	4094411	11	12	3	9	2	0	2	0	2	0	1	0.1	0.8	0.1	8	0.01	27	28
KRS513268	400337	4094683	246	493	59	192	39	4	34	6	37	7	21	3.2	19.6	2.4	184	0.13	22	24
KRS513269	400297	4092723	48	98	10	36	7	1	5	1	4	1	2	0.4	2.4	0.3	28	0.02	21	19
KRS513270	399038	4091265	121	332	31	112	28	2	28	5	31	6	18	2.7	17.5	2.2	182	0.09	20	32
KRS513271	399281	4092616	264	791	69	247	55	4	46	8	47	9	25	3.3	18.6	2.4	246	0.18	20	22
KRS513272	399280	4092616	29	54	6	24	5	1	4	1	4	1	2	0.4	2.5	0.3	24	0.02	22	25
KRS513273	399006	4092626	113	259	27	105	22	3	19	3	20	4	11	1.6	9.5	1.3	114	0.07	22	26
KRS513274	399071	4092652	192	456	46	166	32	3	27	4	25	5	13	1.8	11.3	1.4	130	0.11	22	20
KRS513275	394096	4089928	209	457	47	162	31	2	21	4	22	4	12	1.9	11.8	1.7	118	0.11	21	18
KRS513276	394009	4089948	196	585	48	171	35	2	30	5	34	7	19	2.8	17.7	2.2	190	0.13	19	23
KRS513281	393910	4089926	140	191	46	172	48	4	41	8	55	11	31	5.1	33.0	4.3	279	0.11	26	44
KRS513282	393914	4089787	62	392	19	74	22	2	24	5	33	7	22	3.2	20.4	2.4	230	0.09	14	38
KRS513283	393713	4089542	77	332	23	83	23	2	25	5	34	7	21	3.0	19.1	2.3	185	0.08	17	36
KRS513284	393785	4089517	96	279	25	98	24	2	28	5	34	7	20	2.7	18.2	2.5	192	0.08	19	37
KRS513285	396514	4089107	455	909	104	369	71	7	52	9	51	10	28	4.1	25.6	3.7	286	0.24	22	20
KRS513286	396453	4089130	379	888	87	302	48	8	33	5	28	5	15	2.4	16.7	2.4	124	0.19	22	12
KRS513287	396335	4088995	107	235	30	118	26	5	20	3	18	3	9	1.2	8.0	1.3	90	0.07	25	24
KRS513288	396225	4088923	163	450	40	145	28	2	24	4	25	5	14	2.1	13.5	1.8	137	0.11	20	22
KRS513289	396600	4088861	138	278	32	115	20	3	13	2	8	2	4	0.7	4.9	0.9	39	0.07	24	12

TREO (Total Rare Earth Oxide) = La<sub>2</sub>O<sub>3</sub> + CeO<sub>2</sub> + Pr<sub>6</sub>O<sub>11</sub> + Nd<sub>2</sub>O<sub>3</sub> + Sm<sub>2</sub>O<sub>3</sub> + Eu<sub>2</sub>O<sub>3</sub> + Gd<sub>2</sub>O<sub>3</sub> + Tb<sub>4</sub>O<sub>7</sub> + Dy<sub>2</sub>O<sub>3</sub> + Ho<sub>2</sub>O<sub>3</sub> + Er<sub>2</sub>O<sub>3</sub> + Tm<sub>2</sub>O<sub>3</sub> + Yb<sub>2</sub>O<sub>3</sub> + Y<sub>2</sub>O<sub>3</sub> + Lu<sub>2</sub>O<sub>3</sub>.

MREO (Magnetic Rare Earth Oxide) = Pr<sub>6</sub>O<sub>11</sub> + Nd<sub>2</sub>O<sub>3</sub> + Tb<sub>4</sub>O<sub>7</sub> + Dy<sub>2</sub>O<sub>3</sub>

HREO (Heavy Rare Earth Oxide) = Eu<sub>2</sub>O<sub>3</sub> + Gd<sub>2</sub>O<sub>3</sub> + Tb<sub>4</sub>O<sub>7</sub> + Dy<sub>2</sub>O<sub>3</sub> + Ho<sub>2</sub>O<sub>3</sub> + Er<sub>2</sub>O<sub>3</sub> + Tm<sub>2</sub>O<sub>3</sub> + Yb<sub>2</sub>O<sub>3</sub> + Y<sub>2</sub>O<sub>3</sub> + Lu<sub>2</sub>O<sub>3</sub>

### Appendix 3: Geochemical analyses of relevant main elements and REEs of Chungju stream-sediment samples.

Sample ID	Easting	Northing	La <sub>2</sub> O <sub>3</sub> ppm	CeO <sub>2</sub> ppm	Pr <sub>6</sub> O <sub>11</sub> ppm	Nd <sub>2</sub> O <sub>3</sub> ppm	Sm <sub>2</sub> O <sub>3</sub> ppm	Eu <sub>2</sub> O <sub>3</sub> ppm	Gd <sub>2</sub> O <sub>3</sub> ppm	Tb <sub>4</sub> O <sub>7</sub> ppm	Dy <sub>2</sub> O <sub>3</sub> ppm	Ho <sub>2</sub> O <sub>3</sub> ppm	Er <sub>2</sub> O <sub>3</sub> ppm	Tm <sub>2</sub> O <sub>3</sub> ppm	Yb <sub>2</sub> O <sub>3</sub> ppm	Lu <sub>2</sub> O <sub>3</sub> ppm	Y <sub>2</sub> O <sub>3</sub> ppm	TREO wt.%	MREO/ TREO %	HREO/ TREO %
KRS510604	392119	4086826	73	159	16	59	9	2	8	1	7	1	4	0	3	0.4	35	0.04	22	16
KRS510605	392019	4086930	102	220	23	87	14	3	11	2	10	2	5	1	4	0.5	51	0.05	23	17
KRS510606	392427	4086893	53	102	11	42	7	1	5	1	4	1	2	0	2	0.2	20	0.03	23	15
KRS510607	392506	4086695	87	237	20	76	13	2	13	2	13	3	7	1	5	0.7	70	0.06	20	21
KRS510608	392708	4086959	48	116	10	38	6	1	5	1	5	1	3	0	2	0.3	24	0.03	21	17
KRS510609	392535	4087250	63	138	14	53	9	2	7	1	7	1	3	0	3	0.4	33	0.03	22	17
KRS510610	392833	4087194	49	108	11	41	7	2	6	1	6	1	3	0	3	0.3	31	0.03	22	20
KRS510611	392893	4087827	56	126	12	46	9	2	7	1	7	2	4	1	3	0.4	39	0.03	21	21
KRS510612	392892	4088093	103	225	23	86	14	2	12	2	11	2	6	1	4	0.6	55	0.05	22	17
KRS510613	392711	4087769	70	154	16	60	10	2	9	1	8	2	4	1	3	0.5	44	0.04	22	20
KRS510614	392695	4087950	92	226	20	79	14	2	13	2	13	2	7	1	6	0.7	73	0.06	21	22
KRS510615	392197	4087895	58	140	14	56	10	3	9	1	8	1	4	1	4	0.5	42	0.04	23	21
KRS510622	393168	4088561	52	120	12	46	9	1	8	1	8	2	4	1	4	0.5	48	0.03	21	24
KRS510628	392409	4090020	74	168	17	62	12	2	10	2	11	2	6	1	5	0.7	69	0.04	21	24
KRS510629	392779	4090727	98	228	23	81	15	2	12	2	12	2	6	1	5	0.7	69	0.06	21	20
KRS510630	392361	4086089	189	431	47	177	29	2	23	4	22	4	12	2	10	1.2	130	0.11	23	19
KRS510631	393394	4088598	87	185	19	71	12	2	9	1	9	2	5	1	4	0.5	51	0.05	22	18
KRS510632	393428	4088792	74	163	16	61	10	2	8	1	7	1	4	1	3	0.4	40	0.04	22	17
KRS510633	406122	4090016	286	640	70	261	43	2	34	6	34	6	17	2	13	1.6	190	0.16	23	19
KRS510634	405972	4089777	100	257	22	82	14	2	11	2	10	2	5	1	4	0.5	60	0.06	20	17
KRS510635	406353	4089446	208	726	50	183	30	3	23	4	23	4	12	2	9	1.0	122	0.14	19	14
KRS510636	406479	4089713	216	603	50	184	31	2	25	5	28	5	14	2	10	1.2	148	0.13	20	18
KRS510641	406504	4089637	120	270	27	106	17	3	15	2	15	2	7	1	5	0.6	70	0.07	23	18
KRS510642	406040	4090541	138	440	35	127	22	2	21	3	21	4	11	1	8	1.0	105	0.09	20	19
KRS510643	406204	4090759	83	220	18	69	12	2	11	2	10	2	5	1	4	0.5	51	0.05	20	18
KRS510644	406988	4090954	147	356	34	125	20	3	17	3	15	3	8	1	6	0.7	78	0.08	22	16
KRS510645	406908	4090816	157	472	40	144	24	3	20	3	18	3	9	1	7	0.8	88	0.10	21	16

Sample ID	Easting	Northing	La <sub>2</sub> O <sub>3</sub> ppm	CeO <sub>2</sub> ppm	Pr <sub>6</sub> O <sub>11</sub> ppm	Nd <sub>2</sub> O <sub>3</sub> ppm	Sm <sub>2</sub> O <sub>3</sub> ppm	Eu <sub>2</sub> O <sub>3</sub> ppm	Gd <sub>2</sub> O <sub>3</sub> ppm	Tb <sub>4</sub> O <sub>7</sub> ppm	Dy <sub>2</sub> O <sub>3</sub> ppm	Ho <sub>2</sub> O <sub>3</sub> ppm	Er <sub>2</sub> O <sub>3</sub> ppm	Tm <sub>2</sub> O <sub>3</sub> ppm	Yb <sub>2</sub> O <sub>3</sub> ppm	Lu <sub>2</sub> O <sub>3</sub> ppm	Y <sub>2</sub> O <sub>3</sub> ppm	TREO wt. %	MREO/ TREO %	HREO/ TREO %
KRS510646	406636	4091619	50	114	11	40	7	1	6	1	6	1	3	0	2	0.3	29	0.03	21	18
KRS510647	406636	4091619	133	377	33	119	20	3	17	3	17	3	8	1	6	0.7	82	0.08	21	17
KRS510648	407084	4091587	59	152	13	51	9	1	9	1	9	2	5	1	4	0.5	50	0.04	20	23
KRS510649	407274	4091516	78	181	17	66	11	2	11	2	11	2	6	1	4	0.6	57	0.04	21	21
KRS510650	407732	4091537	123	299	31	118	20	3	16	3	15	3	8	1	6	0.8	79	0.07	23	19
KRS510651	406651	4089489	258	701	61	230	34	3	30	5	30	5	14	2	9	1.0	141	0.15	21	16
KRS510652	406587	4089358	109	256	27	101	18	3	13	2	13	2	6	1	4	0.5	61	0.06	23	17
KRS510653	406758	4088987	94	201	22	86	14	4	13	2	10	2	5	1	3	0.4	48	0.05	24	17
KRS510654	406925	4089434	143	533	36	127	22	2	24	4	26	5	13	2	9	1.0	120	0.11	18	19
KRS510655	406862	4089524	161	604	40	141	25	2	24	4	26	5	13	2	9	1.0	123	0.12	18	18
KRS510656	407250	4089678	144	380	35	122	21	2	21	3	22	4	11	1	7	0.7	103	0.09	21	20
KRS510661	407555	4089418	161	429	39	145	28	3	23	4	27	5	15	2	15	2.1	150	0.10	21	23
KRS510662	406758	4088792	139	313	37	145	27	9	22	3	16	3	7	1	5	0.8	76	0.08	25	18

TREO (Total Rare Earth Oxide) = La<sub>2</sub>O<sub>3</sub> + CeO<sub>2</sub> + Pr<sub>6</sub>O<sub>11</sub> + Nd<sub>2</sub>O<sub>3</sub> + Sm<sub>2</sub>O<sub>3</sub> + Eu<sub>2</sub>O<sub>3</sub> + Gd<sub>2</sub>O<sub>3</sub> + Tb<sub>4</sub>O<sub>7</sub> + Dy<sub>2</sub>O<sub>3</sub> + Ho<sub>2</sub>O<sub>3</sub> + Er<sub>2</sub>O<sub>3</sub> + Tm<sub>2</sub>O<sub>3</sub> + Yb<sub>2</sub>O<sub>3</sub> + Y<sub>2</sub>O<sub>3</sub> + Lu<sub>2</sub>O<sub>3</sub>.

MREO (Magnetic Rare Earth Oxide) = Pr<sub>6</sub>O<sub>11</sub> + Nd<sub>2</sub>O<sub>3</sub> + Tb<sub>4</sub>O<sub>7</sub> + Dy<sub>2</sub>O<sub>3</sub>

HREO (Heavy Rare Earth Oxide) = Eu<sub>2</sub>O<sub>3</sub> + Gd<sub>2</sub>O<sub>3</sub> + Tb<sub>4</sub>O<sub>7</sub> + Dy<sub>2</sub>O<sub>3</sub> + Ho<sub>2</sub>O<sub>3</sub> + Er<sub>2</sub>O<sub>3</sub> + Tm<sub>2</sub>O<sub>3</sub> + Yb<sub>2</sub>O<sub>3</sub> + Y<sub>2</sub>O<sub>3</sub> + Lu<sub>2</sub>O<sub>3</sub>



## Appendix 4: JORC Code, 2012 Edition – Table 1

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<i>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.</i>	Rock-chip samples were collected from outcrop where present and float in areas where no outcrop was present. Surface reconnaissance rock-chip samples were taken based upon geological features relevant to the target style of mineralisation. Sample sites were chosen selectively to reflect geological features relevant to the target style of mineralisation. Stream-sediment samples sites were pre-defined based on a catchment analysis. Actual samples sites were refined in the field based on suitability and representative nature
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	Only fresh rock samples were collected. Surface reconnaissance rock-chip samples are not considered representative and are used as an early-stage exploration tool. Stream-sediment samples were only taken at sites considered to be free of significant anthropogenic sedimentary contaminants
	<i>Aspects of the determination of mineralisation that are Material to the Public Report.</i>	Mineralisation was visually determined by the field geologists by presence of iron oxides
	<i>In cases where 'industry standard' work has been done this would be relatively simple (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.</i>	Outcrop samples were collected using a geological hammer with a target weight of 1–2 kg which was crushed. Stream-sediment samples were collected from surface with a shovel, and coarse sieved to sub 5 mm in the field, with a weight of ~2 kg collected.
Drilling techniques	<i>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.).</i>	No drilling reported.
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	No drilling reported.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	No drilling reported.
	<i>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.</i>	No drilling reported.
Logging	<i>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.</i>	Field observations were recorded for rock-chip and stream-sediment samples and all samples were photographed to support the early-stage reconnaissance targeting.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.)</i>	No drilling reported.

Criteria	JORC Code explanation	Commentary
	<i>photography.</i>	
	<i>The total length and percentage of the relevant intersections logged.</i>	No drilling reported.
<i>Sub-sampling techniques and sample preparation</i>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	No drilling reported.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i>	Rock-chip samples were taken dry and a selection had representative slabs cut. All of the remaining offcuts of each sample were sent for analyses. Stream-sediment samples were coarse sieved in the field then oven dried.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	<p>All SAU rock-chip samples were sent to SGS laboratory in South Korea for sample preparation. SGS is an ISO/IEC 17025:2005 certified laboratory. Samples were dried and crushed to 75% passing 2mm, split to 1,000g, then pulverised to 85% passing 150 microns. Pulp samples are then split using a micro-riffle splitter to produce 500g of pulp reject, 250g of pulp duplicate, and 250g of sample for shipment to ALS Laboratories in Australia in the case of REE &amp; Li projects</p> <p>For stream-sediment samples, a 1kg split was oven dried then sent to SGS laboratory in South Korea. At SGS, samples were dried and crushed to 75% passing 2mm, split to 500g, then pulverised to 85% passing 150 microns. Pulp samples are then split using a micro-riffle splitter to produce 250g of pulp duplicate, and 250g of sample for shipment to ALS Laboratories in Australia</p> <p>The nature of the laboratory preparation techniques is considered 'industry standard' and appropriate.</p>
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	The crushing stage unit is a Rocklabs Smart Boyd-RSD Crusher capable of over 5 kg primary sample in one load, with rotating sample divider (RSD) ensuring single pass crushing, producing representative coarse sample split sent to grinding, typically up to 1,000 g. Coarse rejects are retained for each sample. The grinding stage unit is an Essa LM2 and uses a large grinding bowl (1,600 g) ensuring single pass grinding of the coarse split. The full 1 kg of pulp material was sent to ALS Labs for micro-riffle splitting enabling a parent pulp sample, a daughter pulp sample, and two reject pulp samples to be produced (typically each 250 g) in one grind. Pulp rejects are retained for each sample.
	<i>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.</i>	<p>Rock-chips were collected from representative outcrop or float.</p> <p>Stream-sediment samples were only taken at sites considered to be free of significant anthropogenic sedimentary contaminants</p>
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	The size of rock-chip and stream-sediment samples is appropriate for this stage of exploration.
<i>Quality of assay data and laboratory tests</i>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	Rock-chips for Chungju & lithium projects were analysed using protocol ME-MS81D to obtain the full REE suite. This technique is a total method that is considered appropriate for REE analyses. The samples were analysed using ME-4ACD81 and ME-ICP06 for additional trace and major elements.
		Stream-sediment samples were analysed using protocol ME-MS61r to obtain the full REE suite, Li and various other metals considered relevant for exploration.

Criteria	JORC Code explanation	Commentary																													
		The nature of the laboratory analytical techniques is a near-total method that is considered appropriate for early stage exploration.																													
	<i>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.</i>	Not applicable.																													
	<i>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.</i>	The laboratory uses in-house controls, blanks, and duplicates. Acceptable levels of accuracy and precision have been achieved by the laboratory given the purpose of the analysis (early stage exploration).																													
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	No independent verification of the geochemical data has been carried out to date.																													
	<i>The use of twinned holes.</i>	No drilling reported.																													
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	All field logging is entered into notebooks on site and then digitised into Excel sheets and uploaded into the database at the office. Assay files are received electronically from the laboratories and uploaded into the database.																													
	<i>Discuss any adjustment to assay data.</i>	<ul style="list-style-type: none"><li>The conversion of elemental weight percent of REEs to oxide weight percent in order to calculate TREO and MREO used the following conversion factors:<table><tr><td>La<sub>2</sub>O<sub>3</sub></td><td>1.1728</td></tr><tr><td>CeO<sub>2</sub></td><td>1.2284</td></tr><tr><td>Pr<sub>6</sub>O<sub>11</sub></td><td>1.2082</td></tr><tr><td>Nd<sub>2</sub>O<sub>3</sub></td><td>1.1664</td></tr><tr><td>Sm<sub>2</sub>O<sub>3</sub></td><td>1.1596</td></tr><tr><td>Eu<sub>2</sub>O<sub>3</sub></td><td>1.1579</td></tr><tr><td>Gd<sub>2</sub>O<sub>3</sub></td><td>1.1526</td></tr><tr><td>Tb<sub>4</sub>O<sub>7</sub></td><td>1.1762</td></tr><tr><td>Dy<sub>2</sub>O<sub>3</sub></td><td>1.1477</td></tr><tr><td>Ho<sub>2</sub>O<sub>3</sub></td><td>1.1455</td></tr><tr><td>Er<sub>2</sub>O<sub>3</sub></td><td>1.1435</td></tr><tr><td>Tm<sub>2</sub>O<sub>3</sub></td><td>1.1421</td></tr><tr><td>Yb<sub>2</sub>O<sub>3</sub></td><td>1.1387</td></tr><tr><td>Lu<sub>2</sub>O<sub>3</sub></td><td>1.1371</td></tr><tr><td>Y<sub>2</sub>O<sub>3</sub></td><td>1.2699</td></tr></table></li><li>The conversion of ppm Li to Li<sub>2</sub>O was achieved by multiplying by 2.153</li><li>The calculation of ppm Mg and K from oxide weight percent for fertility and fractionation calculations was achieved by multiplying by 0.60317 &amp; 0.83013 respectively</li></ul>	La <sub>2</sub> O <sub>3</sub>	1.1728	CeO <sub>2</sub>	1.2284	Pr <sub>6</sub> O <sub>11</sub>	1.2082	Nd <sub>2</sub> O <sub>3</sub>	1.1664	Sm <sub>2</sub> O <sub>3</sub>	1.1596	Eu <sub>2</sub> O <sub>3</sub>	1.1579	Gd <sub>2</sub> O <sub>3</sub>	1.1526	Tb <sub>4</sub> O <sub>7</sub>	1.1762	Dy <sub>2</sub> O <sub>3</sub>	1.1477	Ho <sub>2</sub> O <sub>3</sub>	1.1455	Er <sub>2</sub> O <sub>3</sub>	1.1435	Tm <sub>2</sub> O <sub>3</sub>	1.1421	Yb <sub>2</sub> O <sub>3</sub>	1.1387	Lu <sub>2</sub> O <sub>3</sub>	1.1371	Y <sub>2</sub> O <sub>3</sub>
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Location of data points	<i>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.</i>	Rock-chip and stream-sediment sample locations were collected using a handheld GPS with an accuracy of +/- 5 m in easting and northing and +/- 10 m in elevation.																													
	<i>Specification of the grid system used.</i>	Grid system used is WGS 84/UTM zone 52N. South Korean tenements were granted under the Tokyo Datum before January 2011 with all tenements subsequently granted under WGS84/UTM geodetic reference system.																													
	<i>Quality and adequacy of topographic control.</i>	The quality of topographic control is adequate for early-stage surface reconnaissance REE exploration																													
	<i>Data spacing for reporting of Exploration Results.</i>	Rock-chip samples were taken where opportune and are therefore irregularly spaced. Stream-sediment sites were																													

Criteria	JORC Code explanation	Commentary
Data spacing and distribution		generated by a catchment analysis and then refined in the field based on site suitability & contamination factors
	<i>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.</i>	Exploration is at an early-stage reconnaissance level. The rock-chip & stream-sediment spacing and distribution is not sufficient to establish the degree of geological and grade continuity appropriate for a Mineral Resource.
	<i>Whether sample compositing has been applied.</i>	No sample compositing has been applied.
Orientation of data in relation to geological structure	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	Samples were collected where outcrop and/or mineralised float were encountered south of Hongcheon. Rock-chip sampling by nature is biased and this is considered appropriate for early-stage exploration. Stream-sediment sampling was guided by a catchment analysis and no significant bias is known.
	<i>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.</i>	No drilling reported.
Sample security	<i>The measures taken to ensure sample security.</i>	All samples were collected, bagged, and sealed by SAU staff. From the point of sample generation to laboratory, samples (and reject returns) are under the full security and Chain of Custody of the Company. This is done by the following procedures: Post on-site logging and processing, samples are transported to the Company's shed facilities under the direct supervision of a Company representative. Samples are further processed for dispatch by Company representatives under guidance of the Competent Person. Bagged samples are secured by tags and delivered by a Company representative to a courier service to deliver to the sample preparation laboratory. The preparation laboratory sends pulp samples directly to the assay laboratory for analysis via door-to-door courier service. All rejects are returned under courier service and stored in the Company's secure lock-up long-term core storage facility.
Audits or reviews	<i>The results of any audits or reviews of sampling techniques and data.</i>	No audits or reviews have been undertaken for rock-chip or stream-sediment sampling.

## 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	<i>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.</i>	<p>All tenements referred to in this report are exploration licence applications, submitted by SAU.</p> <p>All tenements pertinent to this release are presented in Figures within the text, e.g., Figure 1, Figure 8.</p> <p>The Dangyang Project has exploration licence application lodged over a national park. The company understands that there is provision within the Korean tenement system for applications to be granted over such areas and will follow due process with the Mine Registration Office (MRO).</p> <p>Prior to January 2001 all South Korean tenements were granted using the Tokyo Datum with all tenements now granted using the WGS84 Datum. This results in a partial overlap of SAU applications over any tenements granted before January 2011. These overlapping areas will be excised</p>



Criteria	JORC Code explanation	Commentary
		<p>from SAU applications by the MRO upon grant of licence if the underlying granted licence is for the same mineral sought in SAU applications.</p> <p>There are no native title interests in Korea. It is a generally accepted requirement that mineral title holders gain the consent of local landowners and residents before undertaking any major exploration activity, such as drilling. However, no consent is required for geophysical surveys, soil/rock-chip sampling and mapping.</p>
	<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</i>	<p>Following the submission of a Mineral Deposit Report for a licence application, it is reviewed by the Mine Registration Office (MRO) who determines if the application meets specified criteria for approval and if so, grant an Exploration Right. The holder has one year to submit an Exploration Plan to MOTIE outlining planned work. An initial three-year exploration period is given to complete exploration work, which can be subsequently extended for a further 3 years upon successful submission to MOTIE.</p> <p>Upon successful conversion to an Exploration Right, the holder has 3 years to submit Exploration Results and have an Extraction Plan authorised. An application can be made to extend this period by 1 year. The Extraction Plan is submitted to the Local Government and requires approvals from a number of stakeholders. The term of an Extraction Right is 20 years. This can be extended upon application, provided all statutory requirements have been met over the life of the mine. From the date the Extraction Plan is approved, the title holder has a 3-year period in which mine production must commence. During this 3-year period, the title holder must make a minimum level of investment on plant and mine infrastructure in the amount of KRW100 million (~AUD\$120,000) and meet certain minimum annual production levels, which are dependent on the commodity being mined.</p> <p>There are no known impediments to obtaining a license to operate.</p>
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<p>KIGAM has undertaken high-level reconnaissance surveys including airborne geophysics, country-wide regional stream sediment surveys and regional geological mapping.</p> <p>SAU geologists are in the process of interpreting extensive reports by KIGAM and KETEP detailing historical drilling and rock-chip sampling at the Boam deposit, adjacent to SAU's application area.</p> <p>Peninsula Mines Limited conducted a stream-sediment sampling survey at its Dongsugok Project (within SAU Samgwen Li Project) and Daehyeon Li Project (within SAU Seobyeok Project) for a total of 339 samples in 2016. Locations of the stream sediments were not publicly reported, only summary maps were presented. In 2017, Peninsula collected 568 ridge and spur soil samples at Tonggo, the locations of which were publicly reported.</p> <p>Historical drilling at Eorae San has been undertaken by KIER, KIGAM and KETEP and previously reported by SAU in ASX release dated 27<sup>th</sup> April 2023 entitled "Southern Gold</p>

Criteria	JORC Code explanation	Commentary
		develops new lithium exploration portfolio in South Korea". Competent Person: Dr Michael Gazley.
Geology	<i>Deposit type, geological setting, and style of mineralisation.</i>	<p>The Boam deposit comprises Li and Sn mineralised pegmatites emplaced in the Janggun Limestone and Yulri Formation, in the Uljin area. The pegmatites intruded in a northeast to southwest direction, parallel to the direction of the foliation.</p> <p>The primary Li mineral in these pegmatites is lepidolite, while the primary Sn mineral is cassiterite. Dating of the lepidolite suggests that hydrothermal fluvial inputs occurred in the Early to Late Jurassic, with Li mineralisation occurring in the Middle to Late Jurassic. Therefore, a Jurassic leucocratic granite has been identified as the source rock for the Li pegmatites.</p> <p>The REE mineralisation at Eorae San is hosted in a magnetite-bearing, metamorphic and metavolcanic layer of the Kyemyungsan Formation of the sedimentary Okcheon Group. The Kyemyungsan Formation covers SAU's Chungju REE project and the westernmost REE mineralised zone of the Eorae San deposit extends into one of SAU's exploration licence applications. The primary REE mineralisation is interpreted to relate to an alkaline intrusion and pegmatite at Eorae San.</p>
Drill hole Information	<i>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:</i> <ul style="list-style-type: none"> <li>• easting and northing of the drill hole collar</li> <li>• elevation or RL (Reduced Level – elevation above sea level in meters) of the drill hole collar</li> <li>• dip and azimuth of the hole</li> <li>• down hole length and interception depth</li> <li>• hole length.</li> </ul>	No drilling reported.
	<i>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.</i>	The Competent Person is not aware of any Material information being excluded from this ASX release.
Data aggregation methods	<i>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.</i>	No drilling reported.
	<i>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.</i>	No drilling reported.
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	No metal equivalent values have been reported in this ASX Release.
	<i>These relationships are particularly important in</i>	No drilling reported.

Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	<i>the reporting of Exploration Results.</i>	
	<i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i>	No drilling reported.
	<i>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').</i>	No drilling reported.
Diagrams	<i>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.</i>	No drilling reported. Overview maps of samples are shown in Figures throughout.
Balanced reporting	<i>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.</i>	Results presented in Appendices 2, 3 & 4 represent all samples assayed. Appendix 1 shows Li results >100ppm Li <sub>2</sub> O.
Other substantive exploration data	<i>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.</i>	All relevant data available to SAU has been documented in this report or previous SAU announcements: <a href="https://wcsecure.weblink.com.au/pdf/SAU/02641110.pdf">https://wcsecure.weblink.com.au/pdf/SAU/02641110.pdf</a> <a href="https://wcsecure.weblink.com.au/pdf/SAU/02658284.pdf">https://wcsecure.weblink.com.au/pdf/SAU/02658284.pdf</a>
Further work	<i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	Planned work programs include detailed follow-up exploration around areas with encouraging results to date and ongoing regional reconnaissance exploration across unexplored areas, including stream sediment sampling and rock chip sampling.
	<i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	Li exploration and exploration at Chungju REE project is early stage greenfields with drill targets yet to be defined.