Great Northern Minerals

ASX Announcement **2 November 2023**

Rock chip sampling confirms new 1.3km lithium trend

Highlights:

- Rock chip sampling returns assay results of up to **0.32% Li_2O** and associated metals in a newly discovered area of lithium mineralisation located 200-500m south of previous drilling at GNM's Kuusisuo lithium project in Finland.
- Lithium mineralisation and anomalies now define a potential large-scale mineral system that extends for at least 1.3km at surface.
- Grade and mineralogy confirmed to display similarities to the giant Cinovec lithium-tin-tungsten deposit held by European Metals in Czech Republic that is currently nearing development and DFS.
- This new area of lithium mineralisation discovered at surface supports the new deposit model and the potential for larger bulk-tonnage 'cupola' targets on the project.

Great Northern Minerals Limited (**"GNM"** or the **"Company"**) (**ASX: GNM**) is pleased to advise encouraging assay results from extensive rock and biochemistry sampling programs.

GNM CEO & Managing Director, Cameron McLean said "*GNM is delighted to announce lithium mineralisation at the Kuusisuo lithium project with further evidence to support potential for large deposits like Cinovec in Czech Republic. Further work is being undertaken to confirm potential drill targets in parallel with the drill permitting process.*"

Figure 1 Sample KUSGS35 that returned 3,182 ppm LiO_2 at Kuusisuo (left) displaying a similar style, colour and possible mineralogy to the Cinovec deposit that contains extensive lithium minerals zinnwaldite (right)

Kuusisuo Lithium Project Update

Since completing the Kuusisuo lithium project acquisition in May 2023, GNM has undertaken two field reconnaissance rock sampling programs. GNM geologists took 49 rock chip samples and 34 biogeochemistry spruce bark samples which were submitted for assay. The spruce bark samples were taken across the area as a first pass orientation to assess the effectiveness of this technique over the deposit style.

The aim of the surface geochemistry work is to better understand the distribution of lithium mineralisation and anomalism within the project area based on GNM field observations plus historical mapping and drill data where previous intersections of up to 17.35m at 0.35% Li_2O from 7.9m downhole in R4 within a wider zone of 61.5m at 0.22% Li_2O (refer to GNM announcement 26 April 2023).

Renowned lithium consultant Peter Pollard, with extensive worldwide expertise in greisen-style tin-tungsten-lithium systems, was engaged to review the Kuusisuo data in order to establish the nature of mineralisation and lithium mineralogy in comparison to other world-class lithium deposits of similar. Ultimately, this work aims to lead into identification of new drill targets to discover wider intersections and higher grade through developing an appropriate deposit model for the project.

Rock Chip Sampling Results

The results of the rock chip sampling are very encouraging and indicate the presence of extensive lithium-bearing veins with assays of **0.15% to 0.32% Li_2O** and associated metals (Sn, W, Cu, Ag, F), which continue for at least 400m south of the previous drilling (Figure 2). Highlight rock chip samples returned up to **0.32% Li_2O, 0.23% SnO_2, 140 ppm W** and also returned the following material assays: **1,510 ppm Rb, 1,500 ppm Cu, 4.3% F and 13 g/t Ag and** in rock sample KUSGS-35 and KUSGS-34 (Figure 2, Table 1).

As previously reported, the mineralised rock samples, rock outcrops and boulders were identified in the field with sheeted veins 1cm to 1m in thickness associated with fluorite, topaz and extensive quartz plus chalcopyrite, pyrite and sphalerite sulphides (see GNM announcement 24 July 2023).

It is now known that these veins are enriched in lithium and that the handheld LIBS (Laser Induced Breakdown Spectroscopy) has confirmed that unknown dark brown, plate-like alteration minerals are hosting the lithium (Figure 1). In discussion with Peter Pollard (pers. comm., 2023) lithium-enriched minerals in deposits and prospects of this style are likely to be protolithionite and/or zinnwaldite.

The trend of new lithium bearing veins at surface and mapped and documented by Eden (1991) together with previous lithium-tin intersections in drilling indicate the mineralised zone extends for at least 1.3 km (Figure 2). Mapping by Eden indicates the lithium trend appears to “wrap around” and mimic the contact of the porphyry aplite intrusive where the highest lithium and associated metals occur centred around sample KUSGS-35 & 34 at a bend point in the contact toward the Kontimaki area (Figure 2).

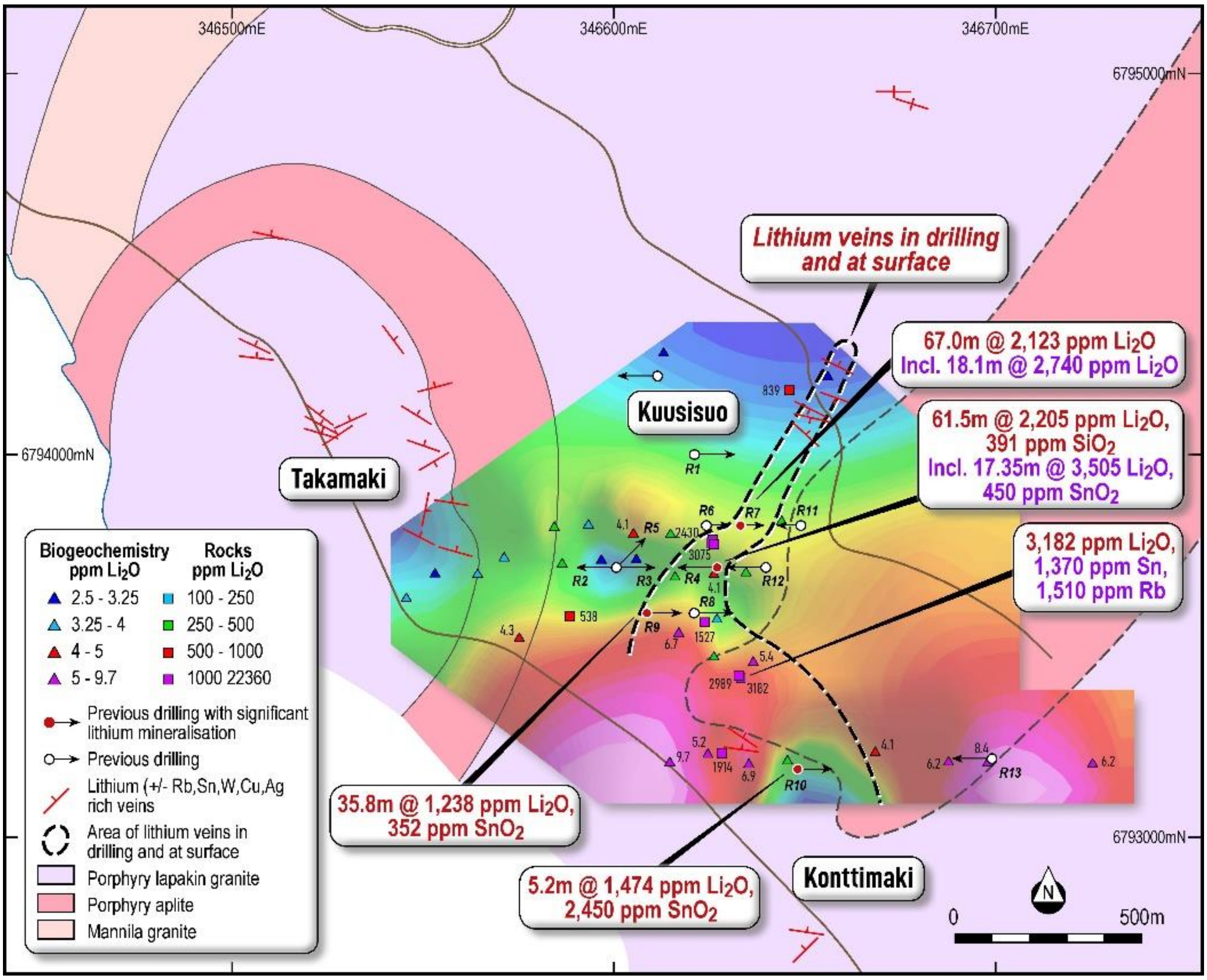

Figure 2 Interpreted Bedrock geology map by Eden 1991[1] showing gridded biogeochemistry lithium results and highlights of the new rock samples and previous drilling.

An additional area of interest is highlighted by mapping work by Eden in 1991 to the west in the Takamaki prospect area where numerous greisen veins have been mapped but largely not yet assayed (Figure 2). The geological setting at Takamaki is highly prospective with a circular-shaped porphyry aplite.

Biogeochemistry (Spruce Bark) Results

The trend of lithium mineralisation at surface is supported by the biogeochemistry results where elevated lithium from 4 to 9.7 ppm Li_2O occurs associated with the drilling intersections of significant lithium in R4 and R7 however, importantly the strength, intensity and width of the biogeochemistry increase toward the south and peaks at a sample 400m south of the drilling which is open to the south and west (Figure 2). These anomalies suggest that the best drill targets are yet to be drilled to the south. The lithium results are supported by many other metals including rubidium which is strongly coincident in both the rocks and biogeochemistry indicating that the biogeochemistry results are working extremely well.

Discussion and Interpretation of the results and next steps

It is clear from this work that the Kuusisuo Lithium Project represents a large-scale lithium-enriched greisen system that extends for at least 1.3km at surface and is open in all directions particularly to the south near Kontimaki where at least 2 untested drill targets have been defined.

The observed vein and alteration style at Kuusisuo display many material similarities to other worldwide examples such as the giant lithium-rich greisen system at Cinovec in Czech Republic with a current resource of **708.2Mt at 0.43% $Li_2$0, 500 ppm Sn and 200 ppm W**[5]. Cinovec is the largest hardrock lithium deposit in Europe[2], has achieved >95% lithium recovery through flotation testwork, and is on track for Definitive Feasibility Study completion at the end of this year[3].

At Kuusisuo, given the potential size and scale of a large lithium system similar to Cinovec, the newly identified drill targets are very attractive. Other factors that may add significantly to the economics of the delineation of a lithium-tin deposit are the addition of other important commodity metals evident at Kuusisuo including copper and silver, which have the potential to contribute significant value.

The veins described in the previous drilling and observed at surface by GNM are currently interpreted to represent veins that occur in the upper parts or lateral to an intrusive-related greisen (Figure 3). In addition to these veins, there is the potential to target a much larger and more extensive buried 'cupola' deposit (Figure 3).

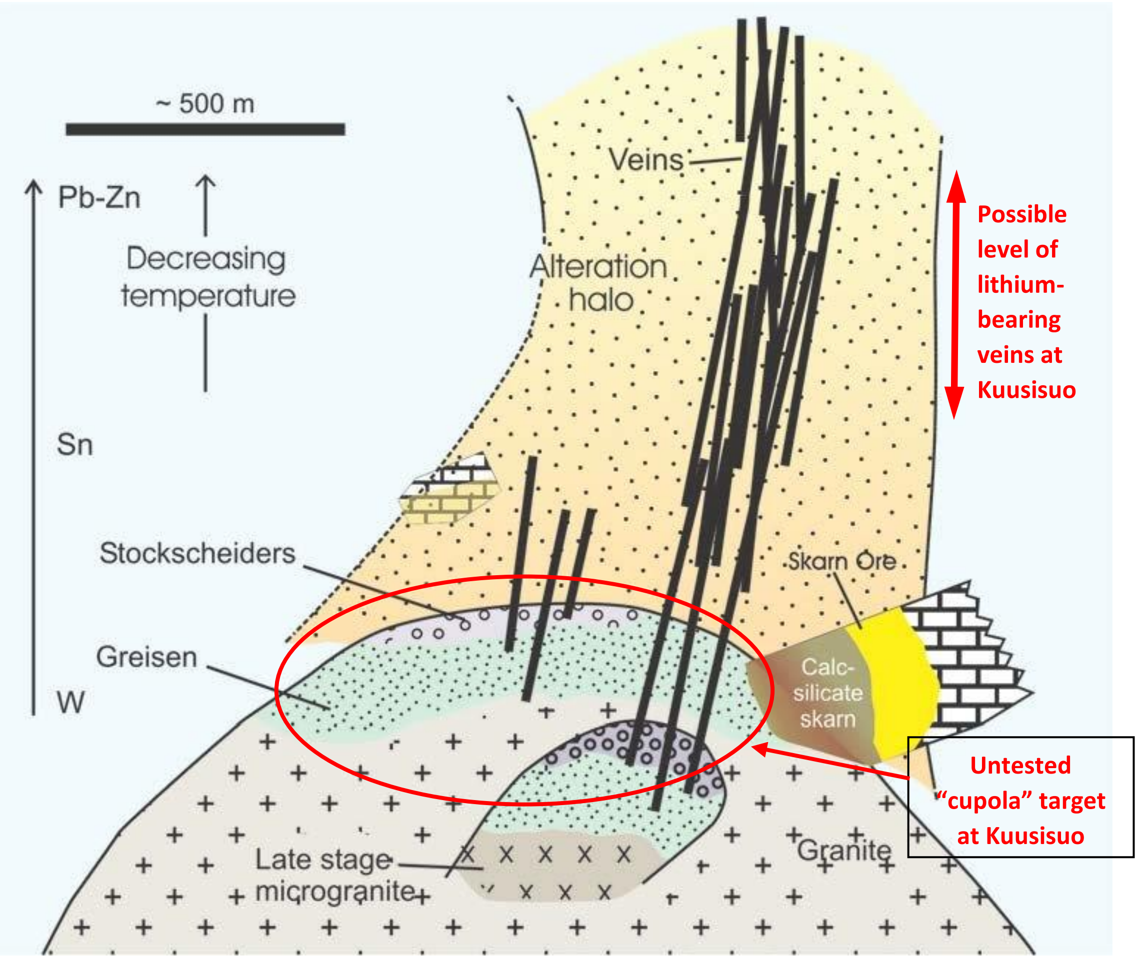

Figure 3 Schematic vertical section across a typical hydrothermal mineralised cupola, showing salient features of shallow granite-related Sn-W and related base metal zonation (modified after Blevin 1998 and D.A. Forster)[4].

Work by GNM to date indicates that the strongest lithium and rubidium assays occur from rock chip sampling and biogeochemistry sampling to the south of the previous drilling in an interesting geological setting that resemble a cupola setting on the western contact of the porphyry aplite intrusive at Kontimaki. It is highly likely that the porphyry aplite may be the fertile source intrusive, and the cupola targets will occur at the upper carapace position preserved at depth.

The Kontimaki area is a high priority drill target for GNM plus a second possible target at Takimaki (Figure 2). GNM has commenced the process of securing the permits required for drilling. Additional work planned into the leadup of a drill program will be further biogeochemistry to extend the dataset to the west and south to cover the Kontimaki and Takimaki targets, plus the reprocessing of airborne magnetic geophysics and an IP survey to identify areas of more intense chalcopyrite sulphides that we now know occur on the project associated with lithium.

References

[1] Eden, Peter. A Specialized Topaz-Bearing Rapakivi Granite and Associated Mineralized Greisen in the Ahvenisto Complex, SE FInland

[2]European Metals (ASX:EMH) Announcement 4 April 2023. Investor Presentation.

[3]European Metals (ASX:EMH) Announcement 25 May 2023. Testwork Realises Continued Outstanding Lithium Recoveries

[4]Blevin, P. Palaeozoic Tin +/- Tungsten Deposits of Eastern Australia

[5]European Metals (ASX:EMH) Announcement 13 October 2021. Resource Upgrade.

Competent Person Statement

This report's information related to Exploration Results and Historical Exploration Results is based on information and data compiled or reviewed by Mr Leo Horn. Mr Horn is a consultant for the Company. Mr Horn is a Member of the Australasian Institute of Geologists (AIG).

Mr Horn has sufficient experience relevant to the style of mineralisation under consideration and to the activities undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Accordingly, Mr Horn consents to the inclusion of the matters based on the information compiled by him, in the form and context it appears.

The Company confirms that it is not aware of any new information or data that materially affects the information in the relevant ASX releases. The form and context of the announcement have not materially changed.

*****ENDS*****

This announcement has been authorised by the Board of Great Northern Minerals Limited.

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About Great Northern Minerals Limited

Great Northern Minerals Limited is an ASX-listed mineral explorer and developer with projects in Australia and Finland.

Total gold production from the Amanda Bell Goldfield was approximately 95,000 oz Au (57,000 oz from Camel Creek and 14,000 oz from Camel Creek satellite deposits plus 18,000 oz from Golden Cup and 6,000 oz from Golden Cup satellite deposits). Two heap leach gold mines were operated (Camel Creek & Golden Cup). Mining activities commenced in 1989 and ceased in 1998 with the depletion of oxide gold mineralisation. Great Northern Minerals aims to develop a new gold camp in North Queensland based on the Golden Ant Project.

GNM also has also acquired two highly prospective lithium projects at Sukula and Kuusisuo in southern Finland covering an area of 536.3km^2. The Sukula project area comprises the northern portion of the well-known Somero LCT pegmatite field with one of the highest densities of mapped rare metal pegmatites in Finland. The Kuusisuo project is a large 362 km^2 tenure located 163km northeast of Helsinki which consists of the historical Kuusisuo lithium occurrence located central to a very large Mesoproterozoic aged Rapakivi granite intrusive complex.

Table 1: Assays for rock samples from Kuusisuo (Co-ordinate system is ETRS89 / TM35FIN)

SAMPLE	Easting	Northing	LiO2_ppm	SnO2_ppm	Rb2O_ppm	WO3_ppm	Cu_ppm	Ag_ppm	F_%
KUSGS01	465566	6790716	90	8	441	1.6	<20	<5	
KUSGS02	465585	6790729	140	15	459	2.8	<20	<5	
KUSGS03	465616	6790798	97	15	447	2.4	<20	<5	
KUSGS04	465685	6790817	185	15	468	2.9	<20	<5	
KUSGS05	465738	6790821	178	18	449	2.6	<20	<5	
KUSGS06	465756	6790775	114	4	192	1.5	<20	<5	
KUSGS07	465777	6790762	30	2	36	0.6	20	<5	
KUSGS08	465833	6790730	153	10	444	2.4	<20	<5	
KUSGS09	465961	6790774	41	5	324	1.0	<20	<5	
KUSGS10	466174	6790912	133	11	437	2.8	<20	<5	
KUSGS11	465958	6790692	69	2	132	3.7	20	<5	
KUSGS12	465895	6790668	159	13	404	2.0	<20	<5	
KUSGS13	465793	6790650	116	5	334	1.5	<20	<5	
KUSGS14	467388	6789807	157	5	384	4.8	<20	<5	
KUSGS15	467521	6789744	310	13	432	1.5	<20	<5	
KUSGS16	467205	6789982	206	6	444	1.6	<20	<5	
KUSGS17	457221	6780072	41	14	89	1.5	<20	<5	
KUSGS18	455791	6779723	22	2	247	0.6	<20	<5	
KUSGS19	455801	6779738	34	6	424	1.9	<20	<5	
KUSGS20	455815	6779750	49	2	105	0.8	<20	<5	
KUSGS21	455902	6779737	97	2	294	1.0	<20	<5	
KUSGS22	455918	6779692	34	4	313	1.0	<20	<5	
KUSGS23	455906	6779680	62	8	266	0.9	<20	<5	
KUSGS25	465542	6791013	30	25	468	1.9	<20	<5	
KUSGS26	466231	6790376	90	15	417	3.4	<20	<5	
KUSGS27	464772	6792782	200	10	558	2.1	<20	<5	
KUSGS28	465607	6790936	127	20	488	3.3	20	<5	
KUSGS29	466240	6790372	307	151	493	13.6	<20	<5	
KUSGS30	466250	6790410	310	50	539	7.7	40	<5	
KUSGS31	466198	6790394	355	88	549	8.2	70	<5	
KUSGS32	466199	6790395	161	19	453	4.4	<20	<5	
KUSGS33	466127	6790369	1914	53	1356	45.2	80	<5	2.25
KUSGS34	466172	6790568	2989	2304	1542	175.8	1160	7	4.17
KUSGS35	466173	6790569	3182	1739	1651	168.8	1440	11	4.33
KUSGS36	466082	6790713	1527	52	1045	13.4	<20	<5	1.89
KUSGS37	466101	6790916	3075	71	1515	64.3	110	6	4.02
KUSGS38	466102	6790927	2430	79	1115	95.0	690	13	3.86
KUSGS39	466105	6790918	2516	63	1176	58.8	40	<5	4.76
KUSGS40	466127	6790921	153	244	118	6.7	9070	67	
KUSGS41	466337	6791282	320	83	586	10.6	20	<5	
KUSGS42	466303	6791320	839	303	965	27.3	50	<5	1.74

SAMPLE	Easting	Northing	LiO2_ppm	SnO2_ppm	Rb2O_ppm	WO3_ppm	Cu_ppm	Ag_ppm	F_%
KUSGS43	466327	6791234	323	107	697	36.4	90	<5	
KUSGS44	465705	6791317	495	105	641	6.3	90	<5	
KUSGS45	465417	6790990	178	133	781	3.4	110	<5	
KUSGS46	465390	6791023	58	50	717	3.2	<20	<5	
KUSGS47	465425	6790979	413	48	638	6.9	<20	<5	
KUSGS48	465400	6791068	168	36	507	4.8	<20	<5	
KUSGS49	465291	6791334	198	105	775	7.9	<20	<5	
KUSGS50	465731	6790729	538	86	618	12.2	260	<5	

Table 2: Rock descriptions for Kuusisuo (Co-ordinate system is ETRS89 / TM35FIN)

Sample ID	East	North	Sample type	Description
KUSGS01	465566	6790716	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS02	465585	6790729	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS03	465616	6790798	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS04	465685	6790817	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS05	465738	6790821	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS06	465756	6790775	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS07	465777	6790762	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS08	465833	6790730	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS09	465961	6790774	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS10	466174	6790912	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS11	465958	6790692	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS12	465895	6790668	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS13	465793	6790650	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS14	467388	6789807	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite

Sample ID	East	North	Sample type	Description
KUSGS15	467521	6789744	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS16	467205	6789982	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS17	457221	6780072	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS18	455791	6779723	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS19	455801	6779738	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS20	455815	6779750	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS21	455902	6779737	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS22	455918	6779692	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS23	455906	6779680	Boulder	Red hematite-altered Coarse-grained red–grey K-feldspar-quartz-plagioclase porphyritic rapakivi granite
KUSGS25	465542	6791013	Outcrop	Coarse-grained red–grey K-feldspar porphyritic rapakivi granite with medium-grained quartz and plagioclase in the ground mass.
KUSGS26	466231	6790376	Outcrop	Coarse-grained red–grey K-feldspar porphyritic rapakivi granite with medium-grained quartz and plagioclase in the ground mass. Crosscut by thin dark greisen veinlets with high Rb/K.
KUSGS27	464772	6792782	Outcrop	Coarse-grained red hypersolvus (?) granite with feldspar, quartz, and dark mica. Potentially the "Manilla granite" or "topaz granite".
KUSGS28	465607	6790936	Outcrop	Coarse-grained K-feldspar porphyritic rapakivi granite with quartz, plagioclase, and biotite ground mass, homogeneous. K-feldspar up to 5 cm. The outcrop contains a handful 1 mm wide greisen veinlets, strike/dip measured. Sampled the granite around a dark vein.
KUSGS29	466240	6790372	Outcrop	Coarse-grained K-feldspar porphyritic rapakivi granite with quartz, plagioclase, and biotite ground mass, homogeneous. K-feldspar up to 5 cm. In one area, there are about 7 greisen veins in 0.5 metre, strike/dip measured. Reddish discolouration near the veins. Sampled the granite around a vein.
KUSGS30	466250	6790410	Boulder	Angular granitic boulder, 1.5 m. Dark greisen veins. Sampled at a vein.
KUSGS31	466198	6790394	Boulder	Coarse- to medium-grained rapakivi granite with 1-cm-wide greisen veins. High Rb, some Sn according to pXRF. Red discolouration surrounding the vein. Boulder size 1 m.
KUSGS32	466199	6790395	Boulder	Same boulder as KUSGS31. Sampled the granite in unaltered part for comparison with KUSGS31.

Sample ID	East	North	Sample type	Description
KUSGS33	466127	6790369	Boulder	Fine- to medium-grained grey-reddish rock, mainly composed of feldspar and quartz. Some "aggregates" of coarse-grained quartz and dark mica. High Rb/K ratio according to pXRF. Boulder size 0.3 m.
KUSGS34	466172	6790568	Boulder	Coarse- to medium-grained K-feldspar porphyritic rapakivi granite with greyish zone/vein, which contains high Rb and Sn according to the pXRF. Visible chalcopyrite. Boulder size 1 m.
KUSGS35	466173	6790569	Boulder	Field duplicate of KUSGS34, taken from the same mineralised greisen vein.
KUSGS36	466082	6790713	Boulder	Coarse- to medium-grained rapakivi granite with dark veins, which have high Rb/K according to the pXRF.
KUSGS37	466101	6790916	Boulder	Medium-grained grey rock, dominated by quartz and dark mica. High Rb ± Sn according to the pXRF. Angular boulder, size 0.5 m, probably dug up from the trench.
KUSGS38	466102	6790927	Boulder	Medium-grained grey rock, dominated by quartz and dark mica. Contains a "pod" of coarse-grained quartz with pyrite, chalcopyrite, and sphalerite. The pXRF also shows some arsenic. Angular boulder, size 0.3 m, probably dug up from the trench.
KUSGS39	466105	6790918	Boulder	Medium-grained grey rock, dominated by quartz and dark mica. High Rb according to the pXRF. The angular boulder is either in place or was dug up from the trench, size 1.5 m.
KUSGS40	466127	6790921	Boulder	Coarse-grained quartz–chalcopyrite veins in medium-grained grey greisen. Sample consists mostly of coarse-grained quartz and chalcopyrite. Difficult to get a representative sample. Boulder probably dug up from the trench, size 0.5 m.
KUSGS41	466337	6791282	Outcrop	Coarse- to medium-grained reddish-grey rapakivi granite with thin dark greisen veins. K-feldspar up to 5 cm, medium-grained ground mass with quartz, plagioclase, and biotite. Some grey discolouration of the granite surrounding the greisen veins. Sample of granite with a vein.
KUSGS42	466303	6791320	Outcrop	Coarse- to medium-grained red K-feldspar porphyritic rapakivi granite with grey discolouration surrounding greisen veins, up to 15 cm wide. The greisen contains purple fluorite. Sample of a greisen vein. Approximate coordinates.
KUSGS43	466327	6791234	Outcrop	Long cliff-side outcrop. The cliff has been formed by vertical fractures in the granite, which often coincide with greisen veins. Sample of a fluorite greisen vein. Approximate coordinates.
KUSGS44	465705	6791317	Boulder	Coarse- to medium-grained red K-feldspar porphyritic rapakivi granite. Several greisen veins with grey discolouration up to 5 cm wide. High Rb + Sn according to the pXRF.
KUSGS45	465417	6790990	Boulder	Brecciated and altered K-feldspar porphyritic rapakivi granite. Contains angular fractured granite/K-feldspar fragments, pyrite, and fluorite in a dark fine-grained Mn-rich matrix (pyrolusite? Maybe also tourmaline?). Elevated Zn and Sn on the pXRF. Given the high abundance of greisen veins in granite boulders in the area, it is tempting to speculate whether this boulder could come from of a breccia pipe of some sort. Boulder size 0.5 m.
KUSGS46	465390	6791023	Boulder	K-feldspar porphyritic rapakivi granite with a 3 mm wide fluorite vein. Sampled around the vein. Boulder size 0.5 m.
KUSGS47	465425	6790979	Boulder	Porphyritic aplite containing fractured large K-feldspar fragments (antecrysts?) up to 5 cm. Euhedral feldspar and quartz phenocrysts up to 2 cm and also aggregates of dark mica up to 5 mm occur in a fine-grained ground mass with quartz, feldspar, and dark mica. Abundant thin (<1 mm) dark greisen veins surrounded by dark discolouration of the aplite ground mass up

Sample ID	East	North	Sample type	Description
				to 3 cm wide. Pyrite occurs in the altered zones. In contrast to the rapakivi granite, greisen veins here occur in two cross-cutting directions.
KUSGS48	465400	6791068	Outcrop	Reddish-grey porphyritic aplite. Fractured pink K-feldspar up to 5 cm. White-green altered phenocrysts of rectangular feldspar up to 3 cm long, 1 cm wide. Quartz phenocrysts up to 1 cm, subhedral rounded. Dark mica aggregates up to 5 mm. Fine-grained grey ground mass with quartz, feldspar, and biotite. Dark vertical greisen veins, up to 2 mm wide.
KUSGS49	465291	6791334	Outcrop	Reddish-grey coarse- to medium-grained K-feldspar porphyritic rapakivi granite. Tightly spaced greisen veins up to 1 cm wide, around a dozen observed in a particular section of 0.5 m. Sample taken including a greisen vein. The outcrop stretches further north.
KUSGS50	465731	6790729	Boulder	Reddish-grey coarse- to medium-grained K-feldspar porphyritic rapakivi granite with greisen veins that contain some fine-grained pyrite. Angular boulder, probably dug up from the ditch, size 0.25 m.

Table 3: Biogeochemistry assay results for Kuusisuo. (Co-ordinate system is ETRS89 / TM35FIN)

SampleID	East	North	Ag_ppm	Cu_ppm	LiO2	Rb_ppm	Sn_ppm	W_ppm
KUSBS001	3466364.828	6793461.179	0.334	139.5	5.4	291	1.76	1.02
KUSBS002	3466267.659	6793572.888	0.598	136	3.2	158	0.97	0.54
KUSBS003	3466160.812	6793682.466	0.323	106	3.4	107	2.02	0.98
KUSBS004	3466059.448	6793731.37	0.128	62.1	2.4	71.7	0.93	0.52
KUSBS005	3465966.589	6793727.26	0.166	126.5	1.7	173	0.67	0.39
KUSBS006	3465753.017	6793523.185	0.212	93.2	4.3	236	1.18	0.73
KUSBS007	3466170.133	6793536.389	0.584	133.5	6.7	256	2.04	1.28
KUSBS008	3466262.348	6793473.424	0.261	151	3.9	242	1.25	0.73
KUSBS009	3466145.541	6793198.517	0.493	114.5	9.7	200	1.04	0.6
KUSBS010	3466246.021	6793217.492	0.186	172.5	5.2	313	1.56	0.88
KUSBS012	3466354.404	6793193.043	0.306	207	6.9	346	1.96	1.16
KUSBS013	3466456.449	6793201.755	0.315	192	3.7	279	0.84	0.76
KUSBS014	3466683.615	6793223.873	0.218	208	4.1	155.5	0.94	0.61
KUSBS015	3466878.113	6793198.507	0.356	118.5	6.2	179.5	1.97	1.16
KUSBS016	3466982.975	6793198.739	0.458	140.5	8.4	215	2.88	1.48
KUSBS017	3467253.112	6793194.522	0.476	120.5	6.2	183.5	1.83	1.14
KUSBS018	3466258.84	6793687.98	0.309	161.5	3	191	0.95	0.58
KUSBS019	3466262.461	6793690.508	0.367	157	4.1	215	1.02	0.67
KUSBS020	3466345.713	6793694.719	0.236	104	3.9	161	1.54	0.93
KUSBS021	3466772.002	6793732.311	0.18	104.5	4.5	180	1.21	0.71
KUSBS022	3466958.201	6793706.583	0.519	151.5	4.3	179	0.89	0.5
KUSBS023	3466929.565	6793789.097	0.387	74.1	4.3	117.5	1.08	0.74
KUSBS024	3466439.92	6793827.762	0.699	145	3.7	151.5	1.14	0.75
KUSBS025	3466148.596	6793795.585	0.55	202	3.9	142	1.03	0.69
KUSBS026	3466051.549	6793796.751	0.182	213	4.1	272	0.98	0.68
KUSBS027	3465933.554	6793818.74	0.165	119	3	111	3.27	0.83
KUSBS028	3465845.141	6793813.476	0.33	171.5	3.9	210	1.23	0.74
KUSBS029	3465864.427	6793716.222	0.191	160.5	3.7	239	1.47	0.75
KUSBS030	3465712.99	6793733.197	0.169	103.5	2.8	246	0.57	0.38
KUSBS031	3465639.017	6793689.906	0.174	95.9	3	155	0.99	0.55
KUSBS032	3465531.591	6793689.628	0.071	85.9	2.2	96.8	0.53	0.35
KUSBS033	3465456.343	6793626.406	0.066	69.8	2.6	58.2	0.72	0.39
KUSBS034	3466133.24	6794270.804	0.144	72.6	1.5	91.6	0.53	0.32
KUSBS037	3466560.438	6794208.622	0.096	85.3	0.9	51	0.34	0.15

JORC Code, 2012 Edition

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.	• No drilling reported in this announcement. • Rock sampling by GNM is associated with the company's mapping and sampling programs which aimed to locate and sample pegmatite outcrops or boulders in the absence of any outcrop.
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).	• No drilling reported in this announcement
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• No drilling reported in this announcement
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.	• No drilling reported in this announcement • Rock and boulder samples during the field program were described geologically qualitatively based on important characteristics for the deposit style. All data is stored digitally for GIS review.

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.	● No drilling reported in this announcement ● Rock sample sizes are in the range of 1-3kg and considered appropriate for the reporting of exploration results ● No QAQC procedures adopted for reconnaissance exploration rock sampling
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.	● Rock samples collected by GNM were sent to ALS Laboratories in Sweden and assayed for multi-elements by Fusion ME-MS89L plus 4-Acid ME-MS61. Spruce Bark samples were dispatched to ALS Laboratories in Canada to utilise ashed vegetation technique and assayed by Super Trace ME-VEG41a for low-level multi-elements. ● Handheld Bruker Portable XRF used as a guide tool only in the field where key indicator pathfinder metals for (e.g. Rb, Sn, Ta, Cu, Zn) in order to prioritise the submission of rocks samples for assay. ● Handheld SciApps Z-903 LIBS unit was utilised in the field to assist in the identification of lithium-bearing minerals and to prioritise the submission of rocks samples for assay ● Competent person considers the sample and analytical procedures to be acceptable for an early stage project
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.	● No additional verification or testing as completed during this evaluation ● Oxide conversions calculated for some metals (see Data Aggregation Methods section
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.	● Outcrop locations were collected using a handheld GPS. ● Coordinates are in ETRS89 / TM35FIN (E,N)

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.	• The data is not appropriate for use in estimating a Mineral Resource and is not intended for such use. There has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource. • Rock sampling was conducted where outcrop and boulder samples are available. • No sample compositing undertaken for this announcement
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.	• The outcrops and boulders were recorded at selected sites, and it is unknown if these results are biased or unbiased. • Pegmatite outcrops identified in the field are generally observed to be dominantly oriented west to northwest trending in. • Selected samples were generally taken to be representative of the outcrop or boulder.
Sample security	• The measures taken to ensure sample security.	• Rock sample security has been adequately maintained by GNM
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• No audits or reviews have been completed.

Section 2 JORC Code, 2012 Edition - Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. • The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	• Finland Reservations VA2023:0010-01 (Kuusisuo VA2023:0010) and VA2023:0011-01 (Ojankylä VA2023:0011) are currently held by Stedle Exploration AB. Great Northern Minerals have an option to acquire 100% ownership of Stedle Exploration AB. That holds the tenure. • One application for a reservation west and northwest of and adjoining Ojankylä VA2023:0011 has been lodged by Stedle Exploration AB and awaiting grant. • Small area of Natura 2000 national park occurs on both tenures. Non-ground disturbing exploration activities are permitted in these areas. Ground disturbing exploration activities are permitted in these areas with approvals.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• The majority of previous information reported on this project was completed by Rautaruukki Oy in 1985 at Kuusisuo.
Geology	• Deposit type, geological setting and style of mineralisation.	• Lithium-tin granite greisen style mineralisation is interpreted to be very similar to the giant Cinovec deposit in Czech Republic.
Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	• Drill assay results not reported in this announcement
Sub-sampling techniques and sample preparation	• The assumptions used for any reporting of metal equivalent values should be clearly stated.	• No metal equivalents are reported.
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 (e.g. 'down hole length, true width not known').	• Not applicable – no sample results reported
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being	• Appropriate maps, sections and tables are included in this ASX announcement.

	reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• All available data has been reported in tables and figures.
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.	• Everything meaningful and material is disclosed in the body of the report. • Exploration data for the project continues to be reviewed and assessed and new information will be reported if material.
Further work	• The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• Further work is detailed in the body of the announcement.