

SWEDISH EXPLORATION ADVANCES FOR REE & COPPER - GYTTORP nr 100 SWEDEN

HIGHLIGHTS:

- Bastion Minerals Ltd (ASX: BMO, Bastion, Company or BMO) is pleased to provide an update on the Company's 100% owned Gyttorp nr 100 project in Southern Sweden (Project), where historical sampling by the Swedish Geological Survey identified very elevated Rare Earth Element (REE) results in rock chip samples, of greater than 3.64% (36,400 ppm) and 2.86 (28,600 pm) Total Rare Earth Oxides (TREO¹).
- The Project covers the southern part of the locally named "*Rare Earth Line*", within the Bergslagen mineralised district, where REE are associated with Bastnäs-type iron skarns and have been subject to various studies by the Swedish Geological Survey and Universities.
- These studies confirm that iron skarns with REE mineralisation also contain zones of high grade copper and other elements, such as elevated concentrations of rare metals Gallium and Germanium.
- Recent rock chip samples by the Swedish Geological Survey² returned values as high as 8.4% Cu within the project area, indicating the presence of at least local high grade copper mineralisation.
- Independent academic evaluation of mineralisation throughout the "*Rare Earth Line*" has also confirmed both Gallium and Germanium are elevated within this mineralised event. These are niche elements with a variety of high-tech uses. Detailed metallurgical evaluation would be required to confirm they could be economically extracted as a by-product from this style of mineralisation.
- Gallium and Germanium are subject to an export ban by China (Reuters, July 7), starting on 1 August 2023, with China currently producing approximately 90% of the world's gallium, according to the UK Critical Minerals Intelligence Centre (2021).
- Bastion will now work with the in-country team of Geosyntec geological consultants to carry out validation sampling of the elevated samples collected by the Swedish Geological Survey. This will be followed up by prospecting and sampling of the extensive historical magnetite (iron) mines within the permit, along the "*Rare Earth Line*".
- Once data analysis and landowner relations are carried out on ground exploration is <u>expected to</u> <u>commence in August</u>.

Bastion Minerals Ltd (**ASX:BMO or the Company**) is pleased to confirm the available geochemical data on the Gyttorp nr 100 REE project in Sweden, shows copper mineralisation potential associated with the REE mineralisation style. There is also the possibility of elevated concentrations of critical elements Gallium and Germanium.

¹ For full exploration results including relevant JORC table information, refer to the Company's announcements lodged with the ASX on 19 and 28 June 2023.

² Jonsson, E., June 2020. The REE line in Bergslagen. Summary of sampling and analyses Geological Survey of Sweden Report no. 2020:17.



Executive Chairman, Mr Ross Landles, commented:

"Having recently staked the project for its REE potential, we can confirm the project also has potential for high grade copper and elevated niche, but highly strategic critical elements Gallium and Germanium. The historical Swedish Geological Survey rock chip sampling in the property confirms this and further authentication is provided in a number of studies by University Researchers and the Geological Survey."

"Historical rock chip samples included values up to 8.4% Cu, and elevated Gallium (Ga), to 112.5 ppm, and Germanium (Ge), to 7.8 ppm. Gallium and Germanium are the subject of an upcoming export ban by China which accounts for approximately 90% of the worlds Gallium production."

Bastnäs Style Mineralisation

The Bastnäs-type deposits are restricted to a northeast-trending narrow carbonate-bearing zone within early Svecofennian (1.91–1.88 Ga) supracrustal rocks, mainly felsic metavolcanic rocks and marble, situated in the northwestern part of the Bergslagen mining region, central southern Sweden.

Bastnäs style mineralisation is an iron-copper- Rare Earth Element (REE) skarn style of mineralisation that is present for over a 100 km, along the "REE Line" in the highly mineralised Bergslagen mining district, west of Stockholm in south-central Sweden. Mineralisation occurs as magnetite mineralisation associated with a belt of carbonate rocks. This style of mineralisation has been known for a long time, with mining from late medieval times³.

The discovery of the mineral Cerium from Bastnäs mineralisation is reported from 1804 by Hisinger & Berzelius (referenced by Holtstam and Andersson), who named the corresponding metal Cerium, and subsequent discoveries of other rare-earth elements (REE) and new mineral species have made the locality prominent in the history of natural science. The deposits consist of disseminated to massive magnetite–amphibole skarn replacements in dominantly dolomitic marbles.

However, apart from initial evaluation by the Swedish Geological Survey in recent years this mineralisation style has not been subject to significant exploration for REE. The growing importance of REE in regions such as Europe (Goodenough et. al⁴., 2016), to supply infrastructure related to the energy transition, makes Sweden, and the Bastnäs district an exciting place to be. Bastion has selected this area for the diversification of the company's Critical Minerals strategy, complementing the company's existing copper project and option over three hard rock lithium project areas in Ontario, Canada.

Detailed study of the Bastnäs style mineralisation by Holtstam and Andersson⁵. has identified two subtypes to the Bastnäs mineralization. Subtype 1 shows enrichment of Light REE (LREE) and Type 2 showing enrichment of both LREE and Y + HREE. The presence of Heavy REE (HREE) will be evaluated in more detail in planned field sampling.

Detailed study of the deposits by Jonsson et. al.(2014)⁶ suggests the major REE-minerals are LREEenriched silicates, e.g. cerite-(Ce), and carbonates, e.g. bastnäsite-(Ce). Available evidence suggest that the Bastnäs-type deposits formed through replacement reactions between c. 1.9 Ga carbonate units and hydrothermal, magmatic-dominated fluids, most likely related to volcanic-subvolcanic activity coeval with the younger parts of the host rock sequence.

³ Holtstam and Andersson. The Ree Minerals Of The Bastnäs-Type Deposits, South-Central Sweden. The Canadian Mineralogist, v45, 2007.

⁴ K.M. Goodenough et. al. Europe's rare earth element resource potential: An overview of REE metallogenetic provinces and their geodynamic setting. Ore Geology Reviews v 72, 2016.

⁵ The Ree Minerals Of The Bastnäs-Type Deposits, South-Central Sweden.

⁶ Jonsson et. al. The Palaeoproterozoic Skarn-Hosted REE Mineralisations Of Bastnäs-Type: Overview And Mineralogical – Geological Character. ERES2014: 1st European Rare Earth Resources Conference|Milos|04-07/09/20



Copper Mineralisation

In addition to iron and REE, referred to in previous announcements, the Bastnäs-type deposits are known to include copper, and also some cobalt and other accessory minerals. Copper is recorded as chalcopyrite, with presence of bismuth and molybdenum at the Bastnäs type locality mines. Several of the samples taken by the Swedish Geological Survey during the reconnaissance evaluation of the mineralisation in the property returned high grade copper in rock chip samples, up to 8.4% in one sample. It is cautioned that these samples were collected by the Swedish Geological Survey, however they are rock chip samples and part of a systematic rock chip sampling program, but part of a regional reconnaissance. The most elevated results are shown in Table 1 below, with all results for copper and base metals shown in Table 3.

Northing	Easting	Date	Ag ppm	Au ppm	Co ppm	Cu ppm	Mo ppm	Zn ppm	Description
6597117	493868	10/01/2019	2.31	0.326	17	84400	12	117	Amphibole chert with sulphide minerals
6597117	493868	10/01/2019	2.38	0.597	46	68500	1	83	Copper-rich skarn
6597194	494237	5/01/2014	1.49	0.217	20	60400	2	45	Magnetite core
6597052	494208	10/01/2019	0.28	0.03	10	7590	37	23	Amphibole skarn with Cu sulfides
6597060	493923	10/01/2019	0.16	0.017	13	4770	38	24	Enrichment material, magnetite-rich sand
6597060	493923	10/01/2019	0.05	0.017	12	4200	3	20	Enrichment goods, magnetite ore
									Magnetite mineralized "mica rock"/schisty
6597052	494208	10/01/2019	0.02	0.011	10	1590	1	27	metamorphic rock

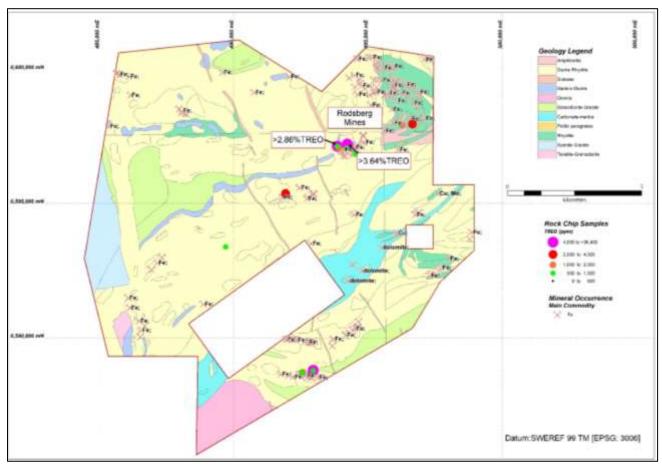


Table 1: Samples with elevated copper results and associated rock types.

Figure 1: Geology of the Bastion tenement showing mineral occurrences and old mines with the major commodity. Samples collected by SGU for rare earth analyses (shown as dots) show no systematic sampling has been undertaken. Some of these samples (not the same samples as those with elevated REE) show elevated copper and other elements.

Critical Minerals Gallium and Germanium

Gyttorp nr 100 is located on the southern end of the belt of iron and REE-enriched skarns, more than 100 kilometre long, known locally as the "REE-line" hosting Bastnäs type REE mineralisation.

According to Jonsson & Högdahl⁷ (2018), the presence of the critical and sought-after metals Gallium (Ga) and Germanium (Ge) was previously reported from mineralisation in the Bergslagen ore province, south central Sweden. They noted that significant Ga enrichment observed in skarn-hosted iron-REE deposits of Bastnäs type, with relatively elevated Germanium (Ge) contents.

Jonsson & Karin Högdahl (2018) sampled along the REE line in different Bastnäs type mines found consistently elevated Ga contents, most markedly so in the cases of the Johanna (average 193 ppm) and Malmkärra (average 300 ppm) mines. Their sampling of Bastnäs-type skarns yielded Ga contents from less than 35 ppm to up to nearly 1000 ppm. Table 1 of their report shows the sample from the Gyttorp area 202 ppm.

In 2017-2018 the Geological Survey of Sweden (SGU) undertook a reconnaissance rock chip sampling program at a several mineralised localities within the "REE-line"⁸. The data was reported in 2020 and results are available on the SGU website www.sgu.se/en. The Ga analyses by ALS laboratories from samples taken by the Swedish Geological Survey in the Bastion permit were a maximum of 112.5 ppm (detection limit 0.1 ppm), broadly consistent with the result from Jonsson & Karin Högdahl. For Germanium results were up to 7.8 ppm (the average upper crustal concentration is 1.4 ppm). See Table 2 below for a summary of samples with the most elevated Ga and Ge results.

Gallium is a soft metallic element, widely used in advanced radar systems installed on planes, ships and ground installations and also used for semi-conductors, blue ray technology, light emitting diodes (LEDs), pressure sensors for touch switches, as an additive to produce low melting-point alloys and in mobile phones. There has been no US domestic gallium recovered since 1987 and China accounts for about 90% of the world's gallium production, according to the UK Critical Minerals Intelligence Centre.

Germanium uses include high brightness LEDs used in automobile head lights, fibre optics, in semiconductors for transistors in thousands of electronic applications, infra-red optics and military applications such as night targeting and night vision. The metal has been placed on the US Government Critical Minerals list and has been banned for export by China.

Northing	Easting	Date	Ga ppm	Ge ppm	Description
6595615	492479	19/06/2018	112.5	5.95	Rail. fine-grained brown garnet shard
6597194	494237		100.5	7.85	Magnetite core
6597944	496664	21/06/2018	97.9	0.46	Sparse magnetite mineralized amphibole core
6599018	497117	22/08/2018	79.5	0.29	Mix sample, magnetite ore
6597912	496274	21/06/2018	54.4	0.79	Magnetite-amphibole shard
6595615	492479	19/06/2018	50.1	0.81	Amphibole-bearing magnetite ore
6597117	493868	20/06/2018	49.5	3.31	Amphibole chert with grains of probable allanite (sensu lato)
6598112	497038	21/06/2018	47.7	0.54	Amphibole-bearing magnetite ore
6593376	489712	21/08/2018	46	0.63	Skarn with probable Fe oxides
6596978	494083		44.9	0.81	Bio-amf-klo-grt-skarn, warp
6588771	492973	10/08/2017	43.7	1.17	Iron oxide-bearing micaceous sulphide-bearing rock, mix sample
6596848	494541	20/06/2018	42.2	2.06	Dense/"resistant" magnetite ore
6597154	494582	20/06/2018	40.4	0.74	Scattered magnetite

Table 2: Samples with elevated gallium and germanium results and associated rock types.

⁷ Erik Jonsson & Karin Högdahl (2018): On the occurrence of gallium and germanium in the Bergslagen ore province, Sweden, GFF, DOI: <u>https://www.researchgate.net/publication/328184266 On the occurrence of gallium and germanium in the Bergslagen ore province</u> <u>Sweden</u>

⁸ Jonsson, E., June 2020. The REE line in Bergslagen. Summary of sampling and analyses Geological Survey of Sweden Report no. 2020:17



Exploration Program

Bastion will now work with in-country geological consultants, Geosyntec and their team to assist in planning and conducting an exploration program expected to commence late August / early September. The work plan currently consists of:

Obtaining land ownership details for landowners in the area where exploration will be prioritized within the permit area and developing communications material and protocols for dealing with landowners. Sweden is a country with a long mining history and is one of the most important minerals producers in Europe, with the Bergslagen an area with active mines. The target areas will be screened for areas of environmental sensitivity, so that if these exist they are excluded from the priority areas.

Additional programmed activities include:

- Compiling GIS Geology with the metallogenic occurrences;
- Reprocessing magnetic and radiometric data covering the area, to assist targeting field visits to areas, which are principally magnetite skarn targets;
- Obtaining high resolution satellite imagery over the primary areas of interest;
- Obtaining a portable XRF spectrometer for prospecting of old mine dumps and workings;
- Submit a work plan to undertake rock chip or rock saw channel samples. This to be done in parallel with prospecting target areas under "non-destructive" access rights, with pXRF and taking rock samples from mine waste dumps for laboratory analysis;
- Collect extensive photographs and geological observations; and
- Visit and resample the areas where the Swedish Geological Survey obtained the elevated REE samples, to assess the potential size of the mineralisation and to collect further samples and expand from these areas out into surrounding areas of occurrences.

This announcement was approved for release by the Board of Bastion Minerals.

For more information contact:

Ross Landles ross.landles@bastionminerals.com 0438 959 144

APPENDIX 1 Statements and Disclaimers

Competent Person Statement

The information in this announcement that relates to exploration reporting has been prepared by Mr Murray Brooker.

Mr Brooker who is an independent geological consultant to Bastion Minerals and is a Member of the Australasian Institute of Geoscientists, has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as the "Competent Person" as defined in the 2012 Edition of the *Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves.* Mr Brooker consents to the inclusion in the announcement of the matters based on this information in the form and context in which it appears.



Forward-Looking Statements

Certain statements contained in this Announcement, including information as to the future financial or operating performance of Bastion Minerals and its projects may also include statements which are 'forward-looking statements' that may include, amongst other things, statements regarding targets, estimates and assumptions in respect of mineral reserves and mineral resources and anticipated grades and recovery rates, production and prices, recovery costs and results, capital expenditures and are or may be based on assumptions and estimates related to future technical, economic, market, political, social and other conditions. These 'forward-looking statements' are necessarily based upon a number of estimates and assumptions that, while considered reasonable by Bastion Minerals, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies and involve known and unknown risks and uncertainties that could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward-looking statements.

Bastion Minerals disclaims any intent or obligation to update publicly or release any revisions to any forward-looking statements, whether as a result of new information, future events, circumstances or results or otherwise after the date of this Announcement or to reflect the occurrence of unanticipated events, other than required by the *Corporations Act 2001* (Cth) and the Listing Rules of the Australian Securities Exchange (**ASX**). The words 'believe', 'expect', 'anticipate', 'indicate', 'contemplate', 'target', 'plan', 'intends', 'continue', 'budget', 'estimate', 'may', 'will', 'schedule' and similar expressions identify forward-looking statements.

All 'forward-looking statements' made in this Announcement are qualified by the foregoing cautionary statements. Investors are cautioned that 'forward-looking statements' are not guarantee of future performance and accordingly investors are cautioned not to put undue reliance on 'forward-looking statements' due to the inherent uncertainty therein.

For further information please visit the Bastion Minerals website at www.bastionminerals.com

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BASTION
MINERALS

Northing	Easting	Date	Ag ppm	Au ppm	Co ppm	Cu ppm	Mo ppm	Zn ppm	Pb ppm		Description
6597117	493868	10/01/2019	2.31	0.326	17	84400	12	117	11		Amphibole chert with sulphide minerals
6597117 6597194	493868 494237	10/01/2019 5/01/2014	2.38 1.49	0.597 0.217	46 20		1	83 45	12		Copper-rich skarn Magnetite core
6597052	494208	10/01/2014	0.28	0.217	10		37	23	11		Amphibole skarn with Cu sulfides
6597060	493923	10/01/2019	0.16	0.017	13		38		15		Enrichment material, magnetite-rich sand
6597060	493923	10/01/2019	0.05	0.017	12		3		8		Enrichment goods, magnetite ore
6597052	494208	10/01/2019	0.02	0.011	10	1590	1	27	2	42.5	Magnetite mineralized "mica rock"/schisty metamorphic rock
6594598	494479		1	0	100	1340	1	4	15	26	
6597117	493868	10/01/2019	0.01	0.003	7		94		26		Amphibole chert with grains of probable allanite (sensu lato)
6593509	492883		1	0	25		1	32	42	29.8	
6592502 6594597	494774 496765	14/12/2018	2 24.3	0.046	1	240 205	1		15 266	0.6	Mica-skarn association, possibly garnet bearing
6594597	496765	14/12/2018	10.05	0.001	111		3		600		Amphibole metamorphosed rock
6596978	494083	15/11/2015	0.01	0.2	10		97	25	2		Biotite-amphibile-garnet skarn
6596848	494541	16/01/2019	0.02	0.057	8		47	26	8		Dense/"resistant" magnetite ore
6594553	496741	31/10/2008	210	0.01	5		6	779	26300	0	PbS stringers in tuffite. At old North Ltd. sample site
6597194	494237	5/01/2014	0.01	0.001	3		24		29		Magnetite mineralisation
6597080	494116	1/01/1915	0		0		0		0		iron mineralisation
6589881	486319	1/01/1990	0		38		6.1	13	12		Felsic metavolcanic rock
6593478 6592474	491963 486936	1/01/1990 14/12/2018	0.05	0.001	52		5.8		12 13		Dolerite dyke (NNW trend) Fine-grained epidote-bearing skarn
6594597	496765	14/12/2018	6.54	0.001	29		1		102		Massive, gritty magnetite ore
6592474	486936	14/12/2018	0.01	0.001	41	26.1	20		5	80.3	
6593509	492883		1	0	13		1	18	40	14.2	
6593509	492883		1	0			1		15	12.1	
6593376	489712	16/01/2019	0.02	0.001	19		1		12	44.8	Skarn with probable Fe oxides
6592146	494289		2		1		1		22	2	
6589926	485949		1	0	15		1		87	8.1	
6596848	494541	16/01/2019	0.01	0.001	13	17	5	44	6	31.7	Magnetite with skarn
6594543	496801	31/10/2008	16	0.005	1	15	1	25800	2780	0	Sample from block, carbonate. Heavily weathered, probably glacial
6594543	496801	1/01/1990	4.6		1 54	15 14	5.9		2780		deposit. Brown Zn mineralization? Felsic metavolcanic rock
6593383	494074	1/01/1990	2				5.5	4.5	17	1.7	
6600473	495240	18/07/2018	0.5	0.001	3		1	24	187	0	
6588985	493257	1/01/1990	0		39		6.1	14	7	27.8	Felsic metavolcanic rock
											Sample from outcrop, fine-grained volcanic rock. Maybe some Pb
6594574	496748	31/10/2008	1.3	0.005	1		1	79	12		or Zn.
6591080	493692		3		2		1		5	0.94	
6593268	493665		2		1		1		16		
6595615 6600447	492479 495240	10/01/2019	0.01	0.001	2		1	24 19	4	34.7	Rail. fine-grained brown garnet shard
6595360	495240	18/07/2018	0.5	0.001	4		1	19	8	2.1	
6594035	493376		3				1	12	6		
6593107	486960	1/01/1990	0		91	9.5	5.7	4.7	11		Felsic metavolcanic rock
6588771	492973	10/01/2019	0.01	0.001	8		1	42	14	11	
6595380	493830		2	0	1	9	1	3	8	1.8	
6598062	496075	16/01/2019	0.01	0.001	14		1		2		Magnetite-bearing amphibole chert
6592646	490184		2				1		7	5.4	
6591278	494419		3	0			1	10	11	1.1	
6591893 6589511	489853 486323		1			8	1	44	6 30	2.1	
6592821	486323		3				3		30		
6590624	488279		3				1	44	58	3.7	
6595151	491413	1/01/1990	0				5.7	6.8	11		Felsic metavolcanic rock
6587808	489353	1/01/1990	0		67	6.5	5.9		12	2.02	
6591279	494429	1/01/1990	0			6.2	5.7	11	11		Felsic metavolcanic rock
6596536	492706	1/01/1990	0			6.2	7.5	8.8	12		Felsic metavolcanic rock
6589593	493090	1/01/1990	0				6.1	15	12		Felsic metavolcanic rock
6589819 6587808	491978 489353	1/01/1990	0						12		Felsic metavolcanic rock Granite (Örebro-type)
6587808	489353	1/01/1990	0						0		Granite (Orebro-type) Gneissic granitoid
6598541	494016	1,01/1000	0				2.36		12		Na leptite "Wetlands Formation"
6593229	493736	1/01/1990	0				5.8		12		Felsic metavolcanic rock
6592920	487152	1/01/1990	0						12		Felsic metavolcanic rock
6597197	492028	1/01/1990	0	0	56		5.7	7.4	11		Felsic metavolcanic rock
6595369	487992	1/01/1990	0				5.7	17	11		Gneissic granitoid
6593360	495433	1/01/1988	0				2	9.1	5		Dolomite
6596800	494682	15/11/2015	0.01	0.2	1				5		Mica slate
6593376	489712	16/01/2019	0.01	0.001	42		1		6		Scaly magnetite Scattered magnetite-hematite ore
6595352	491944	10/01/2019	0.01	0.001	6	4.2	1	51	3	52.1	scattereu magnetite-nematite ore

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Northing	Easting	Date	Ag ppm	Au ppm	Co ppm	Cu ppm	Mo ppm	Zn ppm	Pb ppm	Fe2O3 %	Description
6589549	488632	Date	2	0	4		1	5	15 pp.11	1.7	Description
6599896	496078	10/01/2019	0.01	0.001	15	3.6	1	87	11		Banded iron ore, hematitic
6599896	496078	10/01/2019	0.01	0.001	48	3	1	69	2		Mica rinse
6588816	489171		1	0	2	3	1	8	14	1.9	
6595615	492479	10/01/2019	0.01	0.002	7	2.7	1	69	10	52.4	Amphibole-bearing magnetite ore
6592147	494299	1/01/1988	0	0	1.1	2.7	2	30.2	5	0	Dolomite
6595615	492479	10/01/2019	0.01	0.001	7	2.4	1	32	5	9.19	Amphibole core
6595504	497631	31/10/2008	0.5	0.005	6	2	1	106	29	0	Sample from outcrop, pyrrhotite in "elongated" vulcanite
6589684	488271		2	0	1	2	1	1	5	0.86	
6588771	492973	10/01/2019	0.01	0.006	29	1.7	1	30	14	95.6	Iron oxide-bearing micaceous sulphide-bearing rock, mixed sample
6597944	496664	16/01/2019	0.01	0.001	18	1.3	1	65	2	29.1	Amphibole skarn
6595352	491944	10/01/2019	0.01	0.001	4		1	31	6		Amphibole skarn
6597154	494582	16/01/2019	0.01	0.001	3	1.2	1	18	4		Carbonate-bearing amphibole skarn
6599820	485736	16/01/2019	0.01	0.001	10	1.2	6	15	7		Mixed sample, iron oxide mineralized
6591126	486138	10/01/2019	0.01	0.001	18		1	12	6		Mica-bearing magnetite
6588771	492973	10/01/2019	0.01	0.001	8		1	68	8		Iron oxide-bearing micaceous rock, mixed sample
6593615	494181		1	0	1	1	1	1	20	0.76	
6598998	496846	16/01/2019	0.01	0.001	1	0.9	2	2	2		Mixed sample, hematite mineralized material
6595352	491944	10/01/2019	0.01	0.001	3	0.6	1	29	6		Amphibole-mica schist rock
6589962	492216		0.01	0.001	10	0.6	3	24	7		Skarn iron mineralisation
6597154	494582	16/01/2019	0.01	0.001	5		1	26	2		Scattered magnetite
6598112	497038	16/01/2019	0.01	0.001	12	0.4	1	33	7		Amphibole-bearing magnetite
6599018	497117	16/01/2019	0.01	0.001	21	0.4	1	55	4		Mix sample, magnetite
6588705	492570	11/11/2014	0.02	0.001	11	0.3	1	39	14		Skarn iron mineralisation
6588705	492570	11/11/2014	0.02	0.001	14	0.3	1	49	2		Skarn iron mineralisation
6592617	497526	14/12/2018	0.01	0.001	1	0.3	1	6	10		Hematite mineralized metavolcanite (?)
6593705 6597944	498779	14/12/2018 16/01/2019	0.01	0.001	4		1	10 59	2		Flaky hematite
6597944	496664 496274	16/01/2019	0.01	0.001	10		1	40	2		Sparse magnetite mineralized amphibole skarn
6593705	496274	14/12/2019	0.01	0.001	3	0.2	1	40	4		Magnetite-amphibole skarn Banded mica metamorphosed rock
6593705	498779	1/01/1988	0.01		3		0	0	4		Dolomite
6593360	495433	1/01/1988	0	-	0	-	0	0	0		Dolomite
6593360	495433	1/01/1988	0		0		0	0	0		Dolomite
6593360	495433	1/01/1988	0		0		0	0	0		Dolomite
6592147	494299	1/01/1988	0		0		0	0	0		Dolomite
6592147	494299	1/01/1988	0	-	0		0	0	0		Dolomite
6593509	492883	_,,	0		0	-	1	23	13	7.6	
6593509	492883		0		0		1	19	15	4.1	
6598369	496322		0		0	-	0	0	0		Quartz keratophyre
6598777	496987		0		0		0	0	0		Mica rich rock
6598955	496815		0		0	0	0	0	0		Mica rich rock
6600000	497312		0		0		0	0	0		Quartzitic mica gneiss
6598369	496322		0	0	0	0	0	0	0		Quartz keratophyre
6598369	496322		0	0	0	0	0	0	0	0.22	Quartz keratophyre
6598777	496987		0	0	0	0	0	0	0	0.97	Mica volcanics
6598369	496322		0	0	0	0	0	0	0	1.22	Quartz keratophyre
6598955	496815		0	0	0	0	0	0	0		Mica volcanics
6600000	497312		0	0	0	0	0	0	0	0.87	Mica gneiss
6598449	494672		0	0	0	0	0	0	0		Amphibolite
6599864	490157		0	0	0	0	0	0	0	0.77	Red gneissic granite
6598448	494572		0	0	0	0	0	0	0	0.31	White rock
6597684	489333		0	0	0	0	0	0	0	0.63	
6599864	490157		0		0	0	0	0	0	0.29	White gneissic granite
6595369	487992		0		90	0	-		0	1.92	Metagranite
6595458	487061		0	0	68	0	0	33	0	2.11	Metagranite

Table 3: Copper and base metal results for samples taken by the Swedish Geological Survey in the project area. Note that not all of the samples are from 2019 and some are historical samples taken at different periods, for different objectives and styles of mineralisation.

Previous News Releases by The Company on This Project

28 June 2023. Exploration Permit Granted For Strategic REE Project In Sweden - Rock Chips In Excess 3.64% (36,400) TREO.

19 June 2023. BMO Secures High Grade Swedish REE Project - Rock Chips In Excess of 3.64% (36,400 Ppm) TREO.



APPENDIX 2 - 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	 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. 	 This public report refers to rock chip samples collected by the Geological Survey of Sweden (SGU) as part of a program to investigate rare earth elements in the Bergslargen District of southern Sweden. Grab samples were subject to high quality and comprehensive laboratory geochemical analyses. Samples were collected to characterize specific rock types and alteration. Analytical results from rocks are Material to this Public Report with respect to the target elements (copper, base metals, rare earth elements-REE and rare metals) which had not been assessed before using modern techniques. The work and analyses have been completed to a high standard require in government surveys. Assays for the most recent samples were analysed by ALS Scandinavia.
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). 	 This Public Report does not include drilling or drilling results
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. 	 This Public Report does not include drilling or drilling results
Logging	Whether core and chip samples have been geologically and	This Public Report does not include drilling or drilling results



Criteria	JORC Code explanation	Commentary
	 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. 	
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. 	 This Public Report does not include drilling or drilling results and no subsampling is described in rock chips
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. 	 The nature of the analyses is appropriate to the nature of mineralization. Analyses were complete by ALS Global Sweden. Samples were crushed and pulverized to industry standard and analysed using ALS Code Me-MS81. This uses a lithium borate fusion prior to acid digest with an ICP-MS analysis. SGU report using standards. No analytical issues are reported. The table below shows the analytes and their lower and upper range of detection using this technique. Non-REE have been analysed with other analytical packages, such as ME-ICP06, for major element oxides, ME-MS41 for metallic elements such as copper, and ME-4ACD81 for elements like Ni. Gallium analyses were via ME-MS81 below. CODE ANALYTES AND RANGES (ppm) Ba 0.5-10000 Gd 0.05-1000 Rb 0.2-10000 Ti 0.01-10% Cc 0.1-10000 Gd 0.05-10000 Rb 0.2-10000 Ti 0.01-1000 Er 0.03-1000 U 0.5-10000 U 0.5-10000 Er 0.03-1000 U 0.5-10000 U 0.5-10000 Er 0.03-1000 U 0.5-10000 E 0.1-2500 Ti 0.1-10000 Fi 0.01-1000 Fi 0.01-



Criteria	JORC Code explanation	Commentary
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. 	 This Public Report does not include drilling or drilling results. Data was extracted from the SGU website www.sgu.se/en ME-MS41 - with Germanium analyses using this method (not available in the ME-MS81 method) CONTINUE REPORT OF STATUS FRAMES (print) A CONTINUE REPORT OF STATUS FRAMES



Criteria	JORC Code explanation	Commentary
		Analytical results are reported by the laboratory on ppm. Rare earth oxide is the industry accepted form for reporting rare earth elements. The following calculations are commonly used for compiling REO into their reporting and evaluation groups.
		TREO (Total Rare Earth Oxide) = La2O3+CeO2+Pr6O11+Nd2O3+Sm2O3+Eu2O3+Gd2O3+Tb4O7+Dy2O3+Ho3O3+Er2O3 +Tm2O3+Yb2O3+Y2O3+Lu2O3
		TREO-Ce = TREO-CeO2
		LREO (Light Rare Earth Oxides) = CeO2+La2O3+Pr6O11+Nd2O3+Sm2O3
		HREO (Heavy Rare Earth Oxides) = Eu2O3+Gd2O3+Tb4O7+Dy2O3+Ho2O3+Er2O3+Tm2O3+Yb2O3+Y2O3+Lu2O3
		CREO (Critical Rare Earth Oxides) = Nd2O3+Eu2O3+Tb4O7+Dy2O3+Y2O3
		MREO (Magnet Rare Earth Oxides) = Pr6O11+Nd2O3+Tb4O7+Dy2O3
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. 	 This Public Report does not include drilling or drilling results. SGU data indicates rock samples were located using handheld GPS Grid system is SWEREF 99 TM [EPSG: 3006] Topographic control is not reported but GPS elevation data is sufficient for the reconnaissance nature of the sampling.
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. 	Data spacing is appropriate for the style of geological reconnaissance and rock characterisation
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. 	 Orientation is not considered in this reconnaissance style of rock sampling
Sample security	The measures taken to ensure sample security.	None were reported
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	None were reported



Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	 Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	 The exploration permit was granted during June and a corresponding announcement was made on the 28th June 2023. "Exploration permit granted for strategic REE project in Sweden - rock chips in excess 3.64% (36,400) TREO".
Exploration done by other parties	 Acknowledgment and appraisal of exploration by other parties. 	 Work by SGU is of very high quality typical of geological surveys
Geology	Deposit type, geological setting and style of mineralisation.	Skarn-hosted rare earth deposits
Drill hole Information	 A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	This Public Report does not include drilling or drilling results
Data aggregatio n methods	 In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	 This Public Report does not include drilling or drilling results



Criteria	JORC Code explanation	Commentary
Relationshi p between mineralisati on widths and intercept lengths	 These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	This Public Report does not include drilling or drilling results
Diagrams	 Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	Maps and tables shown in body of report
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 rock samples which have comprehensive base metal analyses from the tenure have been reported (Table 3 at the end of the report)
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. 	 Airborne magnetic geological surveys have been complete by SGU but at this time have not been fully evaluated by the Company
Further work	 The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	 Full compilation of available data, magnetic and radiometric interpretations geological mapping and more comprehensive rock chip sampling is planned