American Rare Earths Limited ABN 83 003 453 503

ASX RELEASE

14 September 2023

High Grade Assay Results up to 13.9% TREO at Beaver Creek Rare Earths Project in Wyoming

Highlights

- Assay results from surface samples show high-grade TREO from 5.8% to 13.9%
- Neodymium + Praseodymium grade ranged between 1% and 2.2%
- Claims land holding increased 85%
- Plans underway to conduct further field work to define JORC Exploration Target

Denver, CO – American Rare Earths (ASX: ARR | ADRs - OTCQX: AMRRY | Common Shares - OTCQB: ARRNF) | FSE:1BHA) (ARR or the Company) is pleased to announce high grade field assay results at the exciting new Beaver Creek rare earth project in Wyoming.

Final assay results from ALS Global confirmed TREO grades between 5.8% and 13.9%. Assays for the valuable magnetic rare earths, neodymium and praseodymium ranged between 1% and 2.2%.

"These are outstanding results from the initial field work at our new project in Wyoming," says Donald Swartz, CEO American Rare Earths. "The deposit is open at depth and historic reports indicate that the rare earth mineralisation-outcrop may extend over 457 metres (1500 feet). We are enthusiastic about increasing our claim holdings and look forward to conducting further exploration activities to unlock the potential of this new high-grade discovery."

The Beaver Creek REE Project area is north of the Company's flagship Halleck Creek Project. The State Mineral Lease at Beaver Creek REE project covers 640 acres (259 hectares) in Johnson County, Wyoming. The newly acquired state section at the Beaver Creek REE project increases the Company's holdings in the region by 85% from 749 acres (303 hectares) to 1,389 acres (562 hectares). Importantly, the state mineral lease is directly along strike from previously examined outcrops, and has the potential to contain additional, highly enriched REE mineralisation.

This announcement has been authorised for release by the Board of American Rare Earths.

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Competent Persons Statement:

This work was reviewed and approved for release by Mr Dwight Kinnes (Society of Mining Engineers #4063295RM) is employed by American Rare Earths and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 JORC Code. Mr Kinnes consents to the inclusion in the report of the matters based upon the information in the form and context in which it appears.

About American Rare Earths Limited:

American Rare Earths (ASX: ARR | ADRs - OTCQX: AMRRY | Common Shares - OTCQB: ARRNF| FSE:1BHA) is committed to becoming a top supplier of critical minerals. The company is a leading explorer of rare earth projects, with a strong focus on developing sustainable and cost-effective extraction and processing methods. To meet the rapidly increasing demand for resources essential to the clean energy transition and US national security, American Rare Earths is engaged in advanced study and continued exploration of its 100% owned rare earth element projects rich in the magnet elements of neodymium and praseodymium at Halleck Creek in Albany County, Wyoming and La Paz, Arizona. Both projects have the potential to be among North America's largest rare earth deposits. The Halleck Creek deposit was recently identified by Mining.com as fifth in the world's top rare earth projects. A recently released maiden JORC Resource report for Halleck Creek shows 1.43 billion tonnes of in-place TREO, 4.73 million tonnes TREO containing approximately 1.05 million tonnes of the highly desirable magnet metals neodymium and praseodymium. The Halleck Creek deposit is located approximately 70km north-east of Laramie encompassing portions of Albany and Platte Counties in Wyoming. The Company continues to evaluate other exploration opportunities and is collaborating with US Government-supported R&D to develop efficient processing and separation techniques of rare earth elements to help ensure a renewable future.

Technical Information:

Assays for two surface rock samples collected from an exposed outcrop were analyzed by ALS Global in Vancouver, BC. Table 1 summarizes the combined rare earth elements showing TREO grades between 5.8% and 13.9%. Table 2 lists the assay value for each rare earth element.

Table 1. Combined Summary of REO values grab samples from the allanite-bearing rock

SAMPLE	TREO	TREO	LREO	MREO	HREO	NdPr
Unit	ppm	%	%	%	%	%
BC-0026	138,795	13.9	13.8	2.3	0.1	2.2
BC-0028	57,674	5.8	5.7	1.1	0.1	1.0

Table 2. Elemental REO values grab samples from the allanite-bearing rock.

SAMPLE	La2O3	Ce2O3	Pr6O11	Nd2O3	Sm2O3	Y2O3	Eu2O3	Gd2O3	Tb4O7	Dy2O3	Ho2O3	Er2O3	Tm2O3	Yb2O3	Lu2O3
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Ppm	ppm	ppm	ppm	ppm	ppm
BC-0026	43,275	71,369	5,920	16,096	1,158	290	196	345	24	77	10	20	2	11	2
BC-0028	17,474	28,621	2,537	7,885	605	175	100	191	14	47	6	11	1	6	1

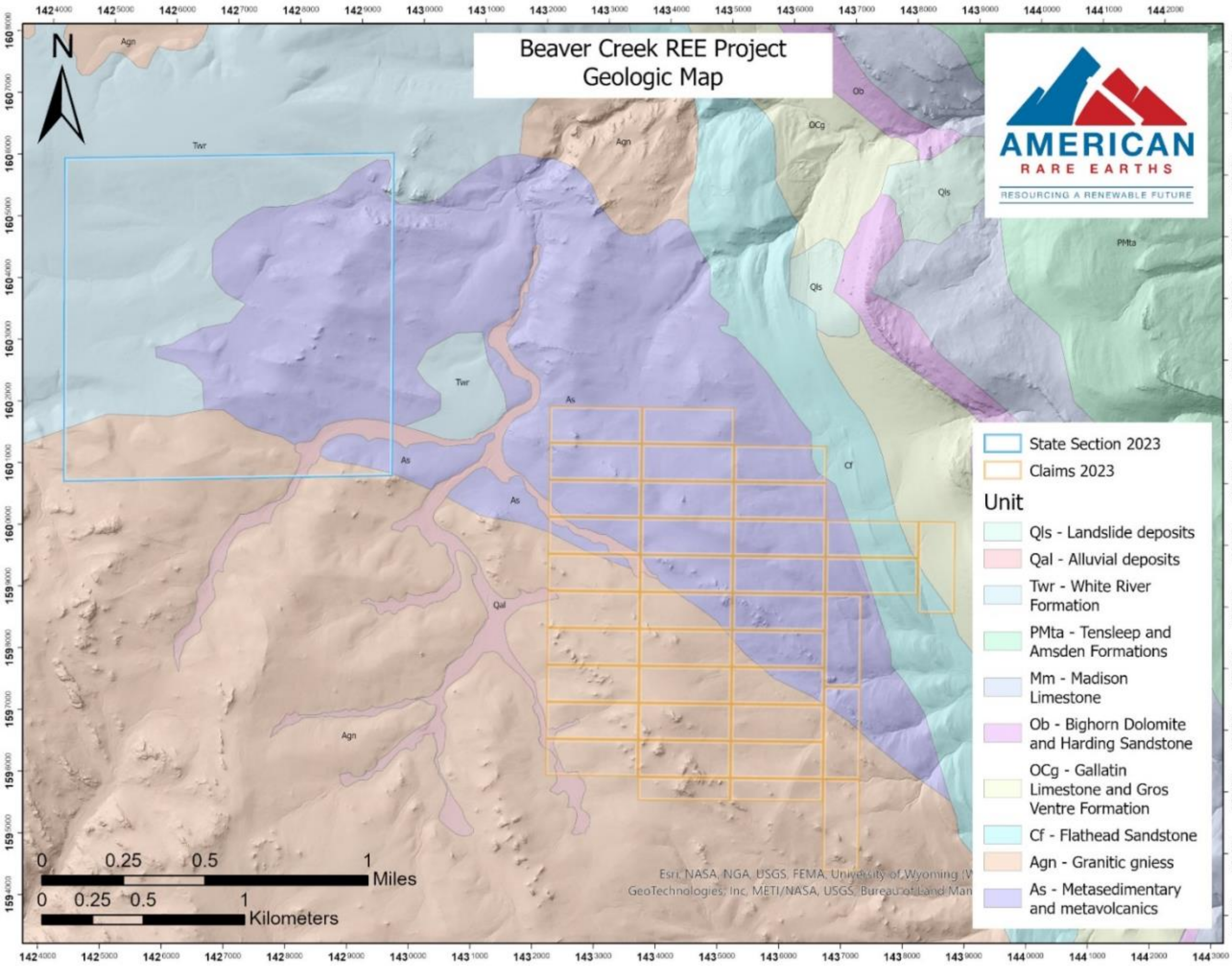

Figure 1. ARR Mineral Control.

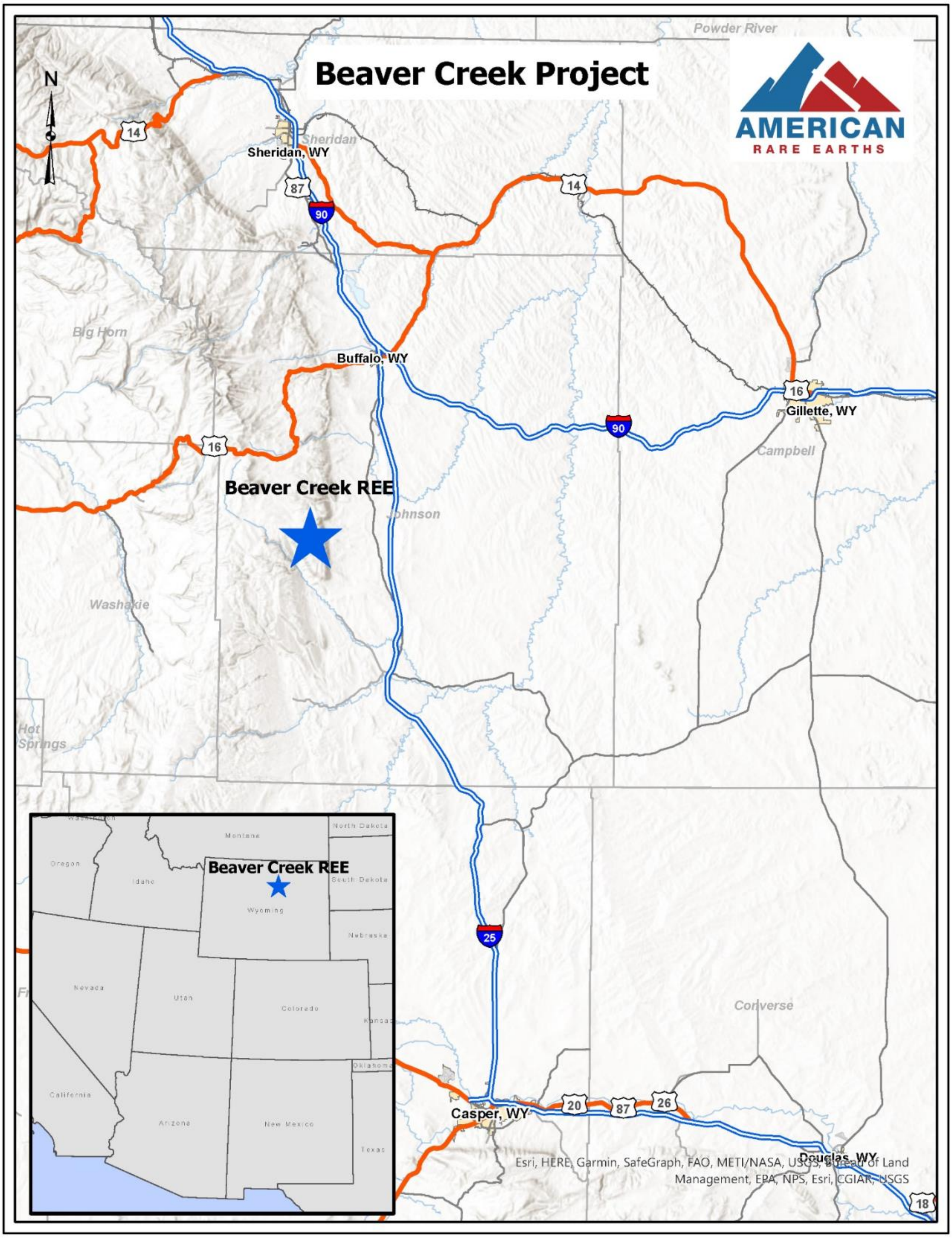

Figure 2. General location of the Beaver Creek REE project

Figure 1. Large reddish-brown allanite crystals in a chlorite, calcite, feldspar, and quartz hydrothermal breccia outcrop.

Appendix A – JORC Table 1

JORC Code, 2012 Edition – Table 1 Beaver Creek Exploration Area		
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 (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.*	A handheld Olympus Vanta M series XRF Analyser was used to provide a preliminary geochemistry assessment of the rocks in outcrop during fieldwork. Two grab samples were collected from surface outcrops that showed high preliminary XRF readings and then powdered to pass a No. 80 mesh prior to XRF analysis. XRF analyses included Lanthanum, Cerium, Neodymium, Praseodymium, and Yttrium readings, as well as a suite of other major and minor elements. Each powdered sample was analyzed three times and then averaged. These values are qualitative in nature.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Grab samples are representative of the outcrop they came from but may not be representative of the deposit as a whole. This type of sampling is appropriate for preliminary exploration. The XRF was factory calibrated, but no other calibration adjustments were applied.
	Aspects of the determination of mineralisation that are Material to the Public Report.	
	In cases where 'industry standard' work has been done, this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 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.	1-3 kg rock samples were collected by a geologist. Samples were broken using a hammer from outcrop. The allanite mineralization is coarse-grained and presents inherent sampling problems; therefore, the grab samples are not representative of the deposit as a whole. Future sampling will address this issue.

Drilling techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or another type, whether the core is oriented and if so, by what method, etc.).*	No drilling
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	No drilling
	Measures are taken to maximise sample recovery and ensure the representative nature of the samples.	No drilling
	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
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.*	No logging
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Rock samples were qualitatively, geologically described and photographed before crushing.
	The total length and percentage of the relevant intersections logged.	No logging
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	No drilling
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	Grab samples were dry
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Samples were assayed by ALS Global using ME-MS81 and ME-OGREE methods.
	Quality control procedures adopted for all sub-sampling stages to maximise the representivity of samples.	A subsample of the powdered, homogenized rock material was analyzed via using ME-MS81 and ME-OGREE methods.

	Measures are taken to ensure that the sampling is representative of the in situ material collected, including, for instance, results for field duplicate/second-half sampling.	Grab sampling was selective and based upon geological observations and field XRF analyses.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Not applied
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.*	The samples were crushed and analysed using a handheld XRF which is appropriate for preliminary exploration work. The XRF reports near-total results.
	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.	An Olympus Vanta M series handheld XRF was used with the Geochem (3-beam) analysis mode. Beam 1 read for 15s, Beam 2 read for 15s, and Beam 3 read for 60s for a total of 90s per sample. Each sample was analysed three times and averaged. No calibration factors were used as this is a preliminary exploration project and project-specific calibration factors have not yet been developed. Samples were assayed by ALS Global using ME-MS81 and ME-OGREE methods.
	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.	A silica blank and a standard were analysed before and after the two powdered grab samples. Results for the standard and blank were checked.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Samples have not yet been verified by independent personnel.
	The use of twinned holes.	No drilling
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Data entry was performed by ARR personnel and checked by ARR geologists. Field data were all recorded in field notebooks and then entered into a digital database. Rocks were photographed prior to crushing and analysis.

	Discuss any adjustment to assay data.	Not applied
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.*	Sample location is based on GPS coordinates +/- 10 m.
	Specification of the grid system used.	The grid system used to compile data was NAD83 Zone 13N.
	Quality and adequacy of topographic control.	Topography control is +/- 10 ft (3 m).
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	Data spacing is currently random.
	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.	Not applied
	Whether sample compositing has been applied.	Not applied
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.*	Not applied
	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.	No drilling
Sample security	*The measures are taken to ensure sample security.*	Chains of custody were maintained at all times. All rock samples were in the direct control of company geologists until dispatched to ALS Labs. Samples were kept in numbered bags and transferred to numbered XRF cups after crushing.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	No external audits or reviews have been conducted to date. However, sampling techniques are consistent with industry standards.

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.*	ARR controls 37 unpatented mining claims on BLM US Federal Land and private land totaling approximately 749 acres. ARR acquired a mineral lease on a WY State Section close to the claims totaling 640 acres. The claims are 100% owned by Wyoming Rare (USA) Inc (100% owned ARR subsidiary).
	The security of the tenure held at the time of reporting and any known impediments to obtaining a licence to operate in the area.	No impediments to holding the claims exist. To maintain the claims an annual holding fee of $165/claim is payable to the BLM. To maintain the State leases minimum rental payments of $1/acre for 1-5 years; $2/acre for 6-10 years; and $3/acre if held for 10 years or longer.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	The area was previously explored for allanite by the USGS.
Geology	*Deposit type, geological setting and style of mineralisation.*	The REE's occur within allanite which occurs as a hydrothermal vein hosted in Precambrian gneisses. The occurrence can be characterised as a vein-type rare earth deposit.
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:*	No drilling
	easting and northing of the drill hole collar	No drilling
	elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar	
	dip and azimuth of the hole	
	downhole length and interception depth	
	Hole length.	

	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	No drilling
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.*	No high-grade cutting
	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.	No aggregation used
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents used
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 unknown and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	No drilling
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.*	See Figures in the within this press release, above.
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 practised to avoid misleading reporting of Exploration Results.*	Total Cerium + Lanthanum + Neodymium + Praseodymium + Yttrium values range from 1.7 to 9.1% in powdered rock samples as read by the handheld XRF.

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.*	In hand specimen the black allanite grains are 2-4 cm in diameter and show a red oxide coating on weathered surfaces. The allanite vein is hosted in a calc-silicate rock within a gneiss. The allanite is considered to be hydrothermal in nature as it is hosted in a breccia of chlorite, calcite, feldspar, and/or quartz minerals.
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).*	Further mapping, grid sampling, and ground radiometric studies are planned to delineate potential drill targets.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	There is not enough data for geological interpretations and drill planning at this time.

Note that JORC Sections 3 and 4 are relevant at this early state of exploration.