Assay Results from New Claims Area Show Significant Upside for Halleck Creek

Assay results from newly staked claim area "*Bluegrass*" indicates consistent rare earth mineralisation throughout the expanded Halleck Creek project. These results demonstrate significant upside potential well beyond the current exploration target. Halleck Creek has now grown to over 6,000 acres, an area encompassing 24.5 km².

These results on the back of an outstanding maiden drill campaign announced in June and July, demonstrate Halleck Creek as potentially one of the largest, rare-earth projects in the United States.

Highlights

- Average Total Rare Earth Oxides (TREO) of 3051 ppm, Magnet Rare Earth Oxides (MREO) of 812 ppm, and Light Rare Earth Elements (LREE) of 2738 ppm were observed from 71 new surface samples
- The surface samples were collected and assayed in the newly claimed area "Bluegrass" at the Halleck Creek Rare Earths Project
    - High value MREO average 27% of observed TREO.
    - Highest observed TREO 5,065 ppm
    - Very low Thorium and Uranium penalty elements.
- Assay results are consistent with existing results from the Red Mountain and Overton Mountain area
- These latest results demonstrate that the current exploration target appears to be significantly underestimated
- Activities are underway to expand existing exploration target and commence resource drilling for a maiden JORC resource.

American Rare Earths Limited **(ASX: ARR, OTCQB: ARRNF, FSE: 1BHA) (ARR** or **'the Company')** is pleased to announce highly promising assay results from recent surface sampling of newly claimed areas at the Halleck Creek Rare Earth project in Wyoming, USA.

The Bluegrass Area

The newly claimed Bluegrass area consists of 32 unpatented federal load claims covering approximately 633 acres (256 ha). The Bluegrass area is one of three areas that form the Halleck Creek Project alongside existing claims for the Red Mountain and Overton Mountain areas. It is located approximately 2 miles Northeast of the Red Mountain area and 1 mile East of the Overton Mountain area.

Surface samples collected in the Bluegrass area exhibit an average TREO value of 3051 ppm. All samples were collected from the same lithology, clinopyroxene quartz monzonite (CQM) within the Red Mountain Pluton (RMP). This is the same lithotype that occurs within the Overton Mountain and Red Mountain Areas.

These latest assays from Bluegrass demonstrate that Rare Earth Elements (REE) mineralisation is likely to expand significantly beyond the current resource target and that rare earth mineralisation may be prevalent throughout the majority of the Red Mountain Pluton (RMP).

MD and CEO Chris Gibbs commented:

"Halleck Creek continues to exceed our expectations."

"These are very exciting results for the Company coming soon after the highly encouraging drill results from the maiden drill program completed at Halleck Creek earlier this year."

"The project continues to grow and these results demonstrate the potential of Halleck Creek to become one of the major, large scale, rare-earth mines in North America."

The Halleck Creek Project

The vast Halleck Creek Project is made up three major connected resource areas, Red Mountain, Overton Mountain, and the newly claimed Bluegrass. The project claims for the Halleck Creek Rare Earths Project comprises 257 claims / licences over 6,052 acres or 2,449 hectares, all of which are in Laramie County, in the mining friendly State of Wyoming.

Halleck Creek currently has an Exploration Target of approximately 308 to 385 million tonnes of rare earths mineralised rocks, that based on recent results appears to be significantly underestimated. Readers are advised that the potential quantity and grade of the Halleck Creek resource are conceptual in nature, and there has been insufficient exploration to estimate a Mineral Resource and that it is uncertain if further exploration will result in the estimation of a Mineral Resource.

Assay Results

The Bluegrass area assay results indicate that rare earth enrichment continues east of Overton Mountain across Bluegrass Creek (Figure 1, Table 1).

Table 1: Statistical Summary of May 2022 Sampling Initiative

	Total Rare Earth Oxide ppm (TREO)	Magnetic Rare Earth Oxide ppm (MREO)	Light Rare Earth Oxide ppm (LREO)	Heavy Rare Earth Oxide ppm (HREO)
Minimum	265	60	236	29
Maximum	5065	1353	4604	461
Average	3051	812	2738	313

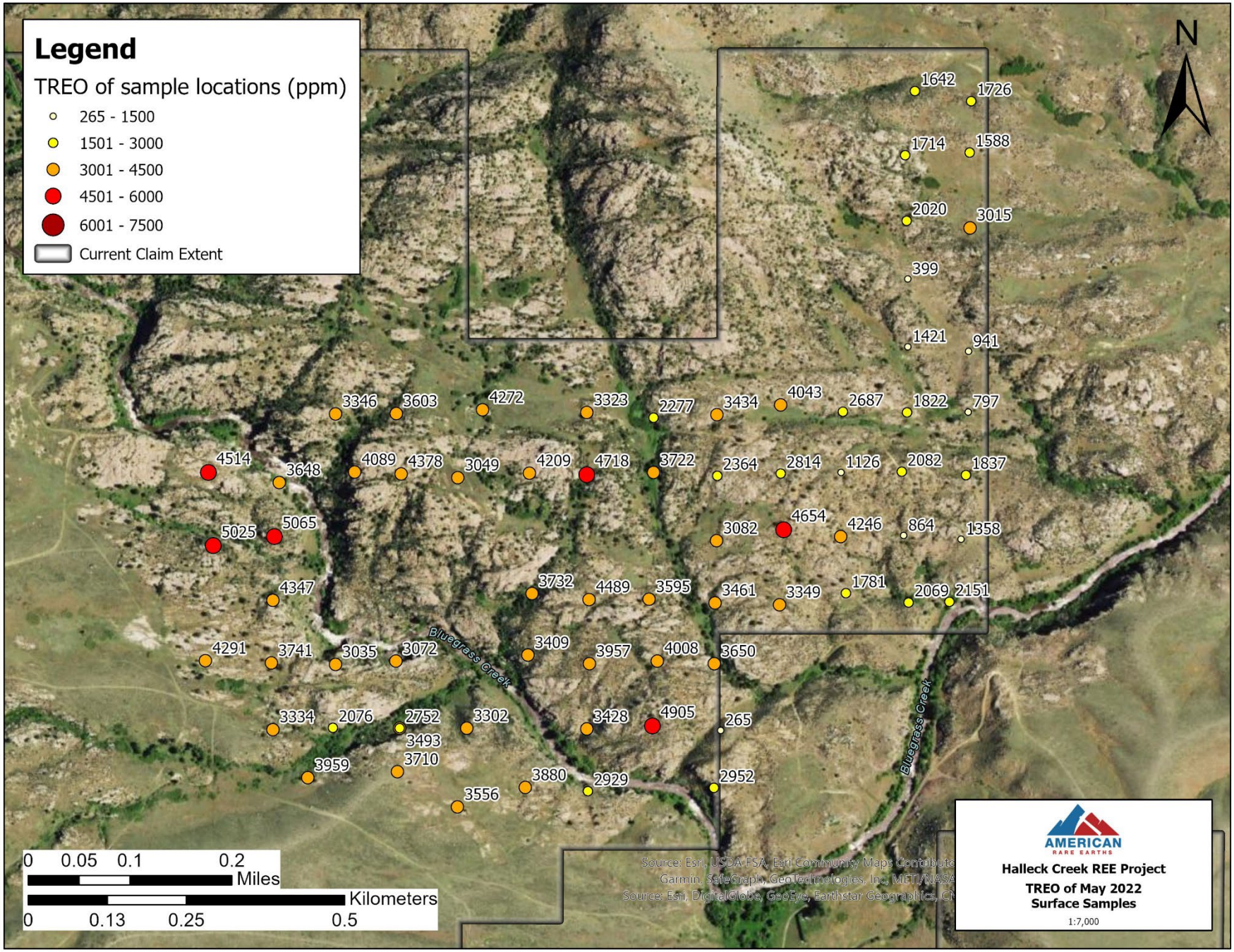
Statistical Summary of REO Values using a 1,500 (ppm) Cut-off

Count	Total Rare Earth Oxide ppm (TREO)	Magnetic Rare Earth Oxide ppm (MREO)	Light Rare Earth Oxide ppm (LREO)	Heavy Rare Earth Oxide ppm (HREO)
62	3,329	883	3,000	329

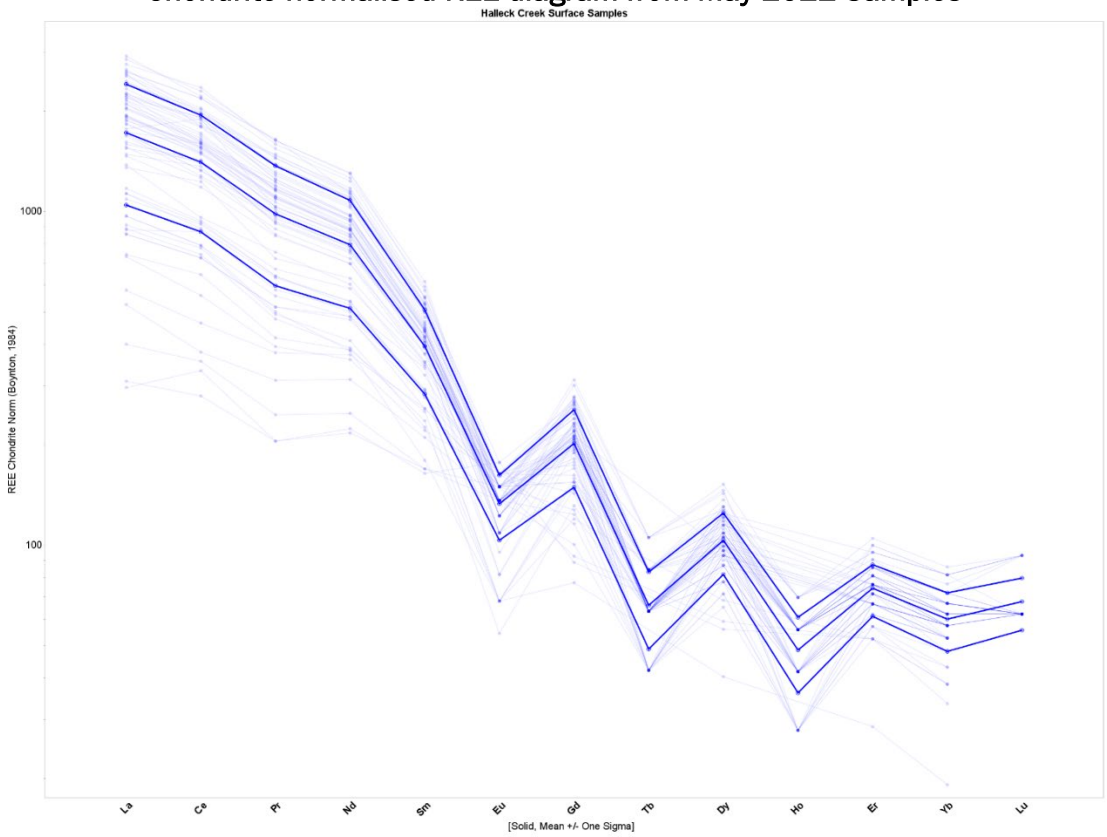
71 samples from the Bluegrass area were assayed and they exhibited an average TREO value of 3051 ppm. These latest assays demonstrate that REE mineralisation has the potential to expand significantly beyond the current resource target and that rare earth mineralisation may be prevalent throughout the majority of the Red Mountain Pluton (RMP). As a result, the Exploration Target may have been significantly underestimated. The Company is currently reviewing recent results for the Halleck Creek project and intends to expand the current Exploration Target in the near future.

All samples were collected from the clinopyroxene quartz monzonite (CQM) within the RMP, similar to the remainder of surface samples that have already been collected within the claimed extent. This supports the idea that the vast majority of the RMP has the potential to be REE enriched.

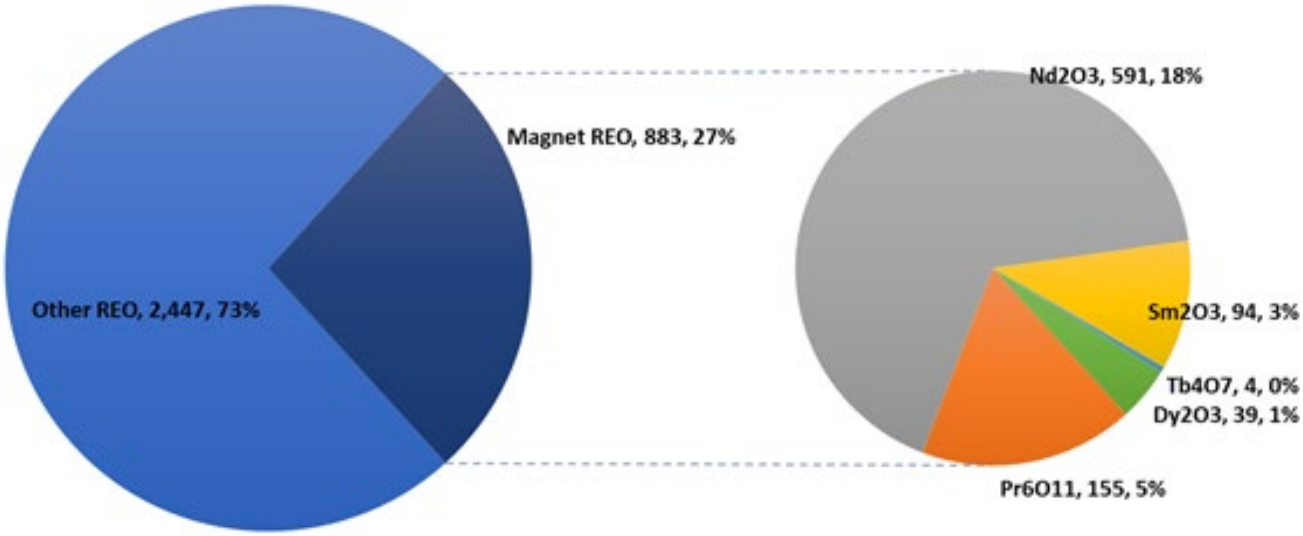
Figure 1: TREO Values and Location of Surface Samples from May 2022 Sampling Initiative



Chondrite normalised REE diagram from May 2022 Samples



Magnet REO Distribution of May 2022 Samples



The Halleck Creek maiden drilling campaign, which took place during the northern Spring of 2022, showed that rare earth element is reflected in the core at a depth of at least 350 ft (100 m). This trend is expected to continue throughout all regions which exhibit surface enrichment in the RMP.

Low Penalty Elements

Furthermore, the thorium and uranium content within this newly claimed area is very low. The assays show an average value of 73 ppm for the combined elements of Thorium and Uranium across the newly claimed area. These results are an unusual feature of a rare earths property and align with very low levels of the penalty elements across the entire project as well as the Company's flagship La Paz project in Arizona.

Average Thorium and Uranium values in May 2022 Surface Samples

Th (ppm)	U (ppm)	Th-U Combined (ppm)
72	0.9	73

Next Steps

The promising results from this sampling initiative suggest that the remainder of claimed areas within the RMP should be REE enriched. As a result, company geologists continue mapping and sampling across the full extent of claim areas. This will be completed throughout the remainder of the northern Summer 2022.

The Exploration Target for the greater Halleck Creek project area is being updated to reflect the results of exploration drilling and the results of the Bluegrass surface samples.

Company geologists are preparing an exploration notice of intent for the Bureau of Land Management outlining exploration drilling in the Bluegrass study area.

Application has been submitted to conduct a more comprehensive drilling program with the objective of defining a high tonnage maiden JORC resource.

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

Mr Chris Gibbs
CEO & Managing Director

Competent Persons Statement:

The information in this document is based on a company memorandum entitled "Updated surface sampling results at Halleck Creek Project (Bluegrass) Area", July 2022, compiled by Ms Sara Stotter and Mr Dwight Kinnes employed by Western Rare Earths and American Rare Earths, respectively. This memorandum has been 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:

American Rare Earths Limited (ASX: ARR, OTCQB: ARRNF, FSE: 1BHA) is an Australian company listed on the ASX with assets in the growing rare earth metals sector of the United States of America, emerging as an alternative international supply chain to China's market dominance of a global rare earth market expected to expand to US$20 billion by the mid-2020s. The Company's mission is to supply Critical Materials for Renewable Energy, Green Tech, Electric Vehicles, National Security, and a Carbon-Reduced Future.

Western Rare Earths (WRE) is the wholly owned US subsidiary of the Company. ARR owns 100% of the world-class La Paz Rare Earth Project, located 170km northwest of Phoenix, Arizona. As a large tonnage, bulk deposit, La Paz is potentially the largest, rare-earth deposit in the USA and benefits from containing exceptionally low penalty elements such as radioactive thorium and uranium. Approximately 742 - 928 million tonnes of Rare Earths mineralised rocks are identified as an exploration target in the La Paz Rare Earths project's Southwest area with an average TREO Grade of 350 - 400ppm and Scandium Oxide grade of 20 - 24.5ppm. The new exploration Target is additive to the La Paz Rare Earth project recently upgraded 170MT Resource. (ASX Announcement, 29 September 2021). During the period from February to April 2022 the Company drilled nine holes for 821 metres and collected 677 samples in the La Paz southwest area. The assay results from the first 332 samples demonstrate rock type associated with higher rare earth grades. The enhanced grades and thickness of the mineralised zone have accelerated exploration planning. The Company is working on establishing a JORC resource for the southwest area (ASX Announcement, 14 June, 2022). Preliminary metallurgical test work demonstrates that La Paz ore can be effectively concentrated using conventional magnetic separation, selective grinding and direct flotation. Under the guidance of Wood Australia, advanced metallurgy and mineral processing test work is near completion with Nagrom Laboratories in Perth Western Australia (ASX Announcement, 7 April 2022).

In the first half of 2021, ARR acquired the USA REE asset, the Halleck Creek Project in Wyoming. Since acquiring the asset the company has increased the land holding to over 6,000+ acres. Approximately 308 to 385 million tonnes of rare earths mineralised rocks were identified as an exploration target for the Halleck Creek project area with an average Total Rare Earth Oxide (TREO) grade of 2,330 - 2,912 ppm. Initial surface sampling of the Overton Mountain area conducted in 2018 revealed average TREO values of 3,297 ppm, average Heavy Rare Earth Oxide (HREO) values of 244 ppm, and average Magnetic Rare Earth Oxide (MREO) values of 816 ppm. (ASX Announcement,26 April 2022). The maiden exploration drilling program was completed in April 2022. The Company is updating the existing exploration target and developing a more comprehensive drilling program with the objective of defining a high tonnage maiden JORC resource.

La Paz and Halleck Creek's mineral profiles are incorporated into emerging US advanced rare earth processing technologies in collaboration with US national laboratories, major universities and the US DOE innovation hub, the Critical Materials Institute.

Appendix A – JORC Table 1

JORC Code, 2012 Edition – Table 1 Halleck 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.*	In March and April 2022, WRE drilled nine HQ-sized core holes across the Halleck Creek Resource claim area. All holes were approximately 350 ft with the exception of one hole which was terminated at 194 ft. Total drilled length of 3,008 ft (917 m). Rock core was divided into sample lengths of 5 ft (1.52 m) long and at key lithological breaks. An additional 71 surface rock samples were collected on claim areas east of the Overton mountain study area.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Core recoveries and RQD's were calculated by WRE field geologists.
	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.	Rock core samples 5 ft (1.52 m) long are being fillet cut. The fillet cuts are being pulverized and sampled for 60 elements including rare earth elements using ICP-MS and industry standards. A select number of samples are additionally being assayed for whole rock geochemistry. American Assay Labs in Sparks, NV is performed the analyses.

		The rock samples pulverized and analyzed for 48 elements, including rare earth elements using ICP-MS. American Assay Labs in Sparks, NV is performed the analyses.
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.).*	Core: HQ, diamond tip, 5-ft runs, unoriented. Total drilled depth of 3,008 ft (917 m).
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	All drill core was visually logged, measured, and photographed by WRE geologists. Drill core was collected in lengths (runs) of 5 ft (1.52 m). Recoveries were calculated for each core run. Each rock sample was described, photographed with its location determined using handheld GPS.
	Measures are taken to maximise sample recovery and ensure the representative nature of the samples.	All core and associated samples were immediately placed in core boxes.
	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.	Recoveries were very high in competent rock. No loss or gain of grade or grade bias related to recovery
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.*	All drill core was visually logged, measured, and photographed by WRE geologists. Drill core was collected in lengths (runs) of 5 feet (1.52m). WRE geologists calculated recoveries for each core run. WRE geologists logged lithology, various types of alteration and mineralization, fractures, fracture conditions, and RQD.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Core logging is quantitative in nature. All core was photographed.
	The total length and percentage of the relevant intersections logged.	All drill core was visually logged, measured, and photographed by WRE geologists. Drill core was collected in lengths (runs) of 5 feet (1.52m). WRE geologists calculated recoveries for each core run. WRE geologists logged lithology, various types of alteration and mineralization, fractures, fracture conditions, and RQD.

Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	Drill core was fillet cut by American Assay Labs, with approximately 1/3 of the core used for assay. The remaining core material will be kept in reserve by WRE in a secure location.
	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.	All samples were dry. Sample preparation: 1kg samples split to 250g for pulverizing to -75 microns. Sample analysis: 0.5g charge assayed by ICP-MS technique.
	Quality control procedures adopted for all sub-sampling stages to maximise the representivity of samples.	WRE submitted CRM sample blanks, CRM standard REE samples from CND Labs and duplicate samples for analysis. Blank samples were added one for every 10 core samples, REE samples were added one for every 25 core samples, and Duplicate samples were added one per every 25 core samples.
	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.	Fillet cuts along the entire length of all core are representative of the in-situ material.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Allanite is generally well distributed across the core and the sample sizes are representative of the fine grain size of the Allanite.
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.*	AAL Labs uses 5-acid digestion and 48 element analysis including REE reported in ppm using method REE-5AO48 and whole-rock geochemical XRF analysis using method X-LIB15.
	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.	No geophysical tools used in the drilling program.

	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.	WRE submitted CRM sample blanks, CRM standard REE samples from CND Labs and duplicate samples for analysis. Blank samples were added one for every 10 core samples, REE samples were added one for every 25 core samples, and Duplicate samples were added one per every 25 core samples. Internal laboratory blanks and standards will additionally be inserted during analysis.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Consulting company personnel have observed the assayed samples. Company personnel sampled the entire length of each hole.
	The use of twinned holes.	No twinned holes were used.,
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Data entry was performed by WRE personnel and checked by WRE geologists. All field logs were scanned and uploaded to company file servers. All photographs of the core were also uploaded to the file server daily. Drilling data will be imported into the DHDB drill hole database. All scanned documents are cross-referenced and directly available from the database. Assay data was received electronically from AAL labs. These raw data as elements reported ppm were imported into the database with no adjustments.
	Discuss any adjustment to assay data.	Oxide values are calculated in the database using the molar mass of the element and the oxide
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.*	Down hole surveyed were not used. Drill hole location is based on GPS coordinates +/- 10 ft (3 m) accuracy.
	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.*	Both randomly spaced and localized clustering of drillholes.
	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.	The data is not at a sufficient spacing to determine a mineral resource or reserve. No resources or reserves are being reported for the Halleck creek area.

	Whether sample compositing has been applied.	Each sample is the result of assaying a 5 ft interval of core. Composite assay values have not been calculated or 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.*	6 holes were vertical, and three were angled at 65° in various directions depending on drill hole location.
	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.	
Sample security	*The measures are taken to ensure sample security.*	All core was collected from the drill rig daily and stored in a secure, locked facility until the core was dispatched by bonded courier to American Assay Labs. Chains of custody were maintained at all times. All rock samples were in the direct control of company geologists until dispatched to American Assay Labs.
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.*	Wyoming Rare Earths Project Acquisition – 5 Unpatented mining claims on BLM US Federal Land totaling 71.6 acres (29 has) were acquired from Zenith Minerals Ltd. Sixty seven (67) additional unpatented mining claims were staked by ARR that totaled 1193.3 acres (482 ha). Overall, the ARR subsidiary controls 3101 acres (1255 ha) of mining claims and Wyoming State Leases. ARR staked an additional 182 federal claims in March 2022 covering an area of approximately 3,088 acres (1,250 ha).

	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 ($11,880.00) 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.*	Prior to sampling by WIM on behalf of Blackfire Minerals and Zenith Minerals there was no previous sampling by any other groups within the ARR claim and Wyoming State Lease blocks.
Geology	*Deposit type, geological setting and style of mineralisation.*	The REE's occur within allanite which occurs as a variable constituent of the Red Mountain Pluton. The occurrence can be characterized as a disseminated 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:*	Authentic Drilling from Kiowa, Colorado used both a track mounted and ATV mounted core rig to drill nine HQ diameter core holes. From March to April 2022, WRE drilled nine core holes across the Halleck Creek claim area. Drill holes ranged in depth from 194 to 352.5 ft with a total drilled length of 3,008 ft (917 m).
	easting and northing of the drill hole collar	All relevant information for this section can be found in Table 1 of the report entitled "Summary of Maiden Exploration Drilling at the Halleck Creek Project Area", May 2022.
	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 has been excluded
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.*	Average Grade values were cut at minimum of TREO 1,500 ppm.
	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.	Assays are representative of each 5 ft (1.52 m) sample interval.

	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 (eg 'down hole length, true width not known').*	The geometry of the mineralization with respect to drill hole angle is not yet known. Vertical holes represent true depth and angled holes represent down-hole length.
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 this 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 practised to avoid misleading reporting of Exploration Results.*	The latest exploration results reported in "Mapping and Surface Sampling Summary at the Halleck Creek Project Area: April 2022". All relevant information for this section can be found in Table 1 of the report entitled "Summary of Maiden Exploration Drilling at the Halleck Creek Project Area", May 2022.
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 this rock is a red colored, hard and dense granite with areas of localized fracturing. The rock shows significant iron staining and deep weathering. Microscopic description: In hand specimen the samples represent light colored, fairly coarse-grained granitic rock composed of visible secondary iron oxide, amphibole, opaques, clear quartz and pink to white colored feldspar. All of the specimens show moderate to strong weathering and fracturing. Allanite content is variable from trace to 2%. Rare Earths are found within the allanite. Metallurgical testing to date consisted of concentrating the allanite by both gravity and magnetic separation. The rare earth rich allanite concentrate will be further evaluated for extraction of the rare earths.

Further work	*The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	Further drilling, mapping and sampling is planned.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Locations of additional drillholes will be based on assay results when received.