



American Rare Earths Limited

(ASX:ARR)

An Australian exploration company focused on the discovery & development of Rare Earths and Critical mineral resources in North America and Australia

Commodity Exposure

Rare Earth Elements in the USA

Heavy Mineral Sands and Cobalt in Australia

Directors & Management

Creagh O'Connor

Non-Executive Chairman

Keith Middleton

Managing Director

Geoff Hill

Non-Executive Director

Vice Chairman

Denis Geldard

Non-Executive Director

Jim Guilinger

Chief Technical Advisor

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Company Secretary

Capital Structure

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20 May 2021

Acquisition of High-Grade Rare Earths Element (REE) Project in Nevada, near Mountain Pass

Highlights

- ❖ The Company has secured a new high-grade Rare Earths Elements (REE) exploration project, the Searchlight REE Project, located in Nevada, near the USA's only operating rare earths mine operated by MP Materials Corp.
- ❖ The Project consists of 80 contiguous unpatented lode mining claims, prospective for rare earths, totaling 1620 acres (656 ha) staked by the Company in early 2021
- ❖ One sample contains significant high levels of Heavy REE and Magnetic REE, including a total REE of 14,800 ppm (1.48% REE)
- ❖ These claims are 100% owned by Western Rare Earths (WRE), a wholly-owned US subsidiary of ARR
- ❖ MP Material Corp. Mountain Pass rare earths mine, the only operating rare earths mine in the USA, is located approximately 19 miles (35 km) west of the Searchlight REE project area
- ❖ An initial geological review and sampling program at the Searchlight REE Project was conducted, and 10 surface geochemical samples collected with elevated REE grades identified
- ❖ Systematic surface sampling and geological mapping planned, and high-resolution aerial imagery and LiDAR planned to follow up initial high-grade results

American Rare Earths Limited (ASX: "ARR") ("the Company") is pleased to announce that it has secured 100% ownership of the Searchlight REE Project made up of 80 contiguous unpatented lode mining claims, totaling 1620 acres (656 ha) located in the mining-friendly State of Nevada.

Searchlight Project background

American Rare Earths is pleased to announce that it has secured mining claim rights over the Searchlight REE Project, a high-grade rare earths exploration project in the mining-friendly state of Nevada, USA. The mining claims are all located on public Bureau of Land Management (BLM) land, and are 100% owned by Western Rare Earths (WRE), a US subsidiary of ARR.

More specifically, the Searchlight REE Project is situated in a precious metal mining district in southwestern Nevada, the Crescent mining district, located approximately 20 miles (32 km) from the town of Searchlight and 74 miles (119 km) south of Las Vegas, NV. In addition, the Project is approximately 19 miles (32 km) west of the only integrated operating and processing rare earths mine in the USA, the Mountain Pass rare earths mine, see Figure 1.

The Project consists of 80 contiguous unpatented lode mining claims totaling 1620 acres (656 ha) that were staked by the Company in early 2021 after a historical record of the area revealed that these mining claims, previously prospected for rare earths, were available for acquisition.

The available historical sample data indicated remarkably high grades of Rare Earths, especially of the very coveted heavy Rare Earths (HREE) and Magnet associated Rare Earths. Notably, a historical sample produced a significant assay result of Rare Earths.

The area is readily accessible by road, with climate and terrain favouring year-round exploration activities. There are no apparent environmental issues of serious concern, and the State of Nevada is known as a very friendly mining jurisdiction.

Reconnaissance geologic mapping completed

Prior to staking the mining claims, the Company conducted an initial geological review and sampling program at the Searchlight REE Project to confirm previous historical rare earths exploration success.

In December 2020, geologists from World Industrial Minerals, LLC (WIM), working on behalf of the Company, performed three days of reconnaissance geologic mapping, collecting 10 surface geochemical rock samples from monazite-apatite bearing veins in biotite granite, and hornblende-biotite granite sills occurring in Early Proterozoic granites within the Searchlight Project area.

Analyses of the rock samples indicate the presence of concentrated REE. Hazen Research, Inc. in Golden, Colorado USA, performed the analyses of the rock samples. Sample number TH-01 contains high levels of Heavy REE as well as key magnetic elements, see Table 1. The analytical results for all the samples are shown below in Appendix A.

Table 1 - Summary of REE in Sample TH-01

REE Type	REE (ppm)
Total REE	14,800
HREE	940
Magnetic REE*	3,320

* Magnetic REE include: Nd,Pr,Dy,Tb

In addition, the Company obtained petrographic analysis of the rock samples from DCM Science in Lakewood, Colorado USA. In summary from DCM, Sample TH-01 “is a red coloured, hard and dense granite/gneiss with areas of localised fracturing and crude banding. The rock shows significant iron staining. Microscopic Description: Major Mineralogy: Quartz 30%, Sericite 22%, Plagioclase 18%, Calcite 12%, Goethite/Hematite 12%, Monazite 3%, and Chlorite 3%. Trace Mineralogy: Rutile, Mn oxide, Leucoxene, Zircon, Calcite.”, see Plate 1.

Plate 1 – Sample TH-01



Based on the promising preliminary results of the 10 surface samples, which also confirmed the high-grade opportunity identified from the historical data, the Company filed for the 80 unpatented mining claims in March 2021. As mentioned, these mining claims, collectively known as the Searchlight Project, cover 1,618 acres (654 ha) in Clark County of southwestern Nevada in the Crescent Mining district, see Figure 3. The mining claims are located on public BLM land.

WIM will prepare a geological summary report of the Searchlight Project for WRE entitled “2021 Technical Report on the Nevada Searchlight Rare Earths Project,” no later than 2021. The summary report will contain the background history of the mining district, previous exploration in the area, details of sampling and mapping, analytical results, and exploration recommendations. A preliminary JORC Table 1 summary is provided with a copy located in Appendix B.

Next steps and further planned work

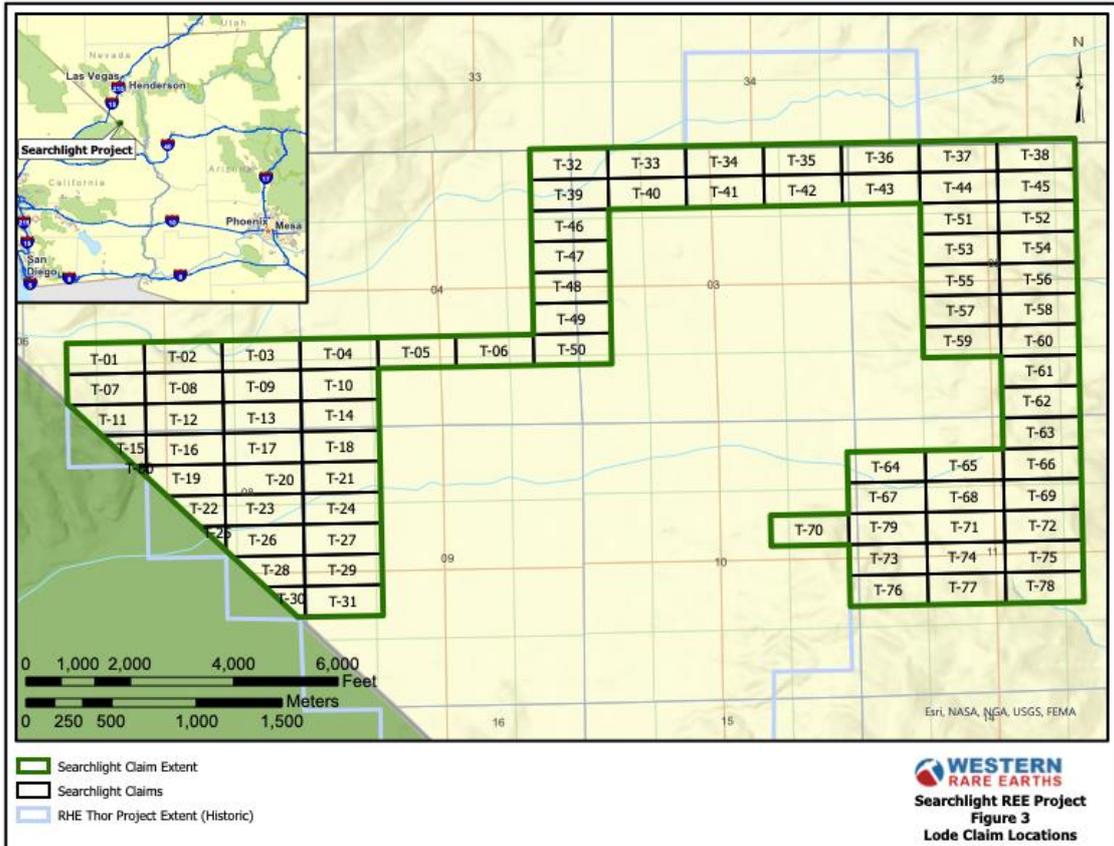
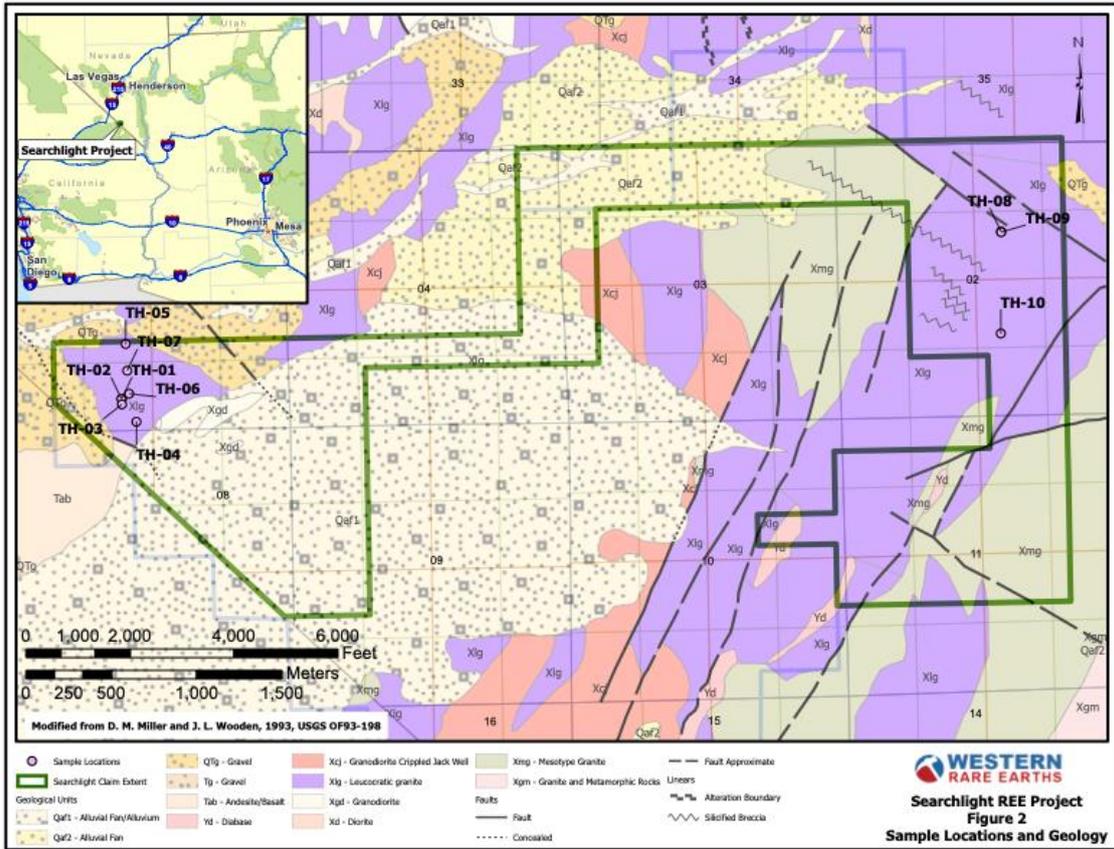
The Searchlight mining claims are adjacent to additional active mining claims in the region. WRE personnel are in preliminary discussions with the controlling interests of the adjacent claims to acquire geological data within the Searchlight REE project area.

Additionally, WRE is developing exploration plans for the Searchlight Project area for systematic surface geological sampling, detailed surface geologic mapping, and options for acquiring high resolution aerial imagery and LiDAR data. The objectives for this exploration include locating additional higher-grade veins at surface, developing a structural framework of vein, joint and fault orientations, and locating targets for future exploration drilling.

Commenting on the acquisition of the Searchlight REE Project, Managing Director of the Company, Keith Middleton said:

“The Company is delighted to be adding the high-grade Searchlight REE Project to its portfolio of rare earths assets as a compliment to the Company’s existing flagship La Paz Rare Earths Project in Arizona. The historical data and new sampling results, which confirm the high-grade opportunity of the Searchlight Project, makes this an extremely attractive acquisition. In addition, the proximity of the Project to the only integrated operating and processing rare earths mine in the USA, the Mountain Pass mine, and the Project’s unique positioning within the friendly mining jurisdiction of the State of Nevada, further highlights the Project as a strategic acquisition for the Company. Lastly, the Searchlight Project offers a unique REE property unusually endowed with heavy REE’s that warrants further study and exploration.”





Appendix A – Summary of Searchlight Rock Sample Analyses – December 2020

Element (ppm)	Western Prospect Area								Northeast Prospect Area			
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Sample 7	Average Samples 2-7	Sample 8	Sample 9	Sample 10	Average Samples 8-10
Dy	150	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	0
Er	30	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	0
Gd	250	nd	10	nd	nd	10	nd	3	nd	nd	10	3
Ho	20	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	0
Sm	380	nd	20	nd	nd	nd	nd	3	nd	nd	10	3
Tb	30	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	0
Tm	70	90	30	30	40	10	90	48	20	10	20	17
Yb	10	nd	nd	nd	nd	nd	nd	0	nd	nd	nd	0
Total HREE's	940	90	60	30	40	20	90	55	20	10	40	23
La	3,280	40	310	140	130	70	40	122	60	10	110	60
Ce	6,900	60	590	270	260	160	80	237	120	200	210	177
Nd	2,430	nd	170	90	70	40	nd	62	20	50	50	40
Pr	710	20	50	30	20	nd	20	23	20	nd	nd	7
Total LREE"s	13,320	120	1,120	530	480	270	140	443	180	260	370	270
Y	540	20	20	10	10	30	20	18	20	20	30	23
Total REE +Y	14,800	230	1,200	570	530	320	250	517	220	290	440	317
Sc	nd	20	nd	nd	nd	nd	20	7	nd	nd	nd	0
Thorium	1,960	10	220	110	60	40	10	75	30	50	60	47
U	nd	500	nd	nd	100	nd	600	200	300	nd	nd	100
Magnetic Elem (Nd,Pr,Dy,Tb)	3,320	20	220	120	90	40	20	85	40	50	50	47

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

Keith Middleton
Managing Director

This ASX announcement refers to information extracted from market announcements, which are available for viewing on ARR's website <https://americanrareearths.com.au>

ARR confirms it is not aware of any new information or data that materially affects the information included in the original market announcements, and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. ARR confirms that the form and context in which the Competent Person's findings presented have not been materially modified from the original market announcements.

Competent Persons Statement: The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Mr. Jim Guilinger. Mr. Guilinger is a Member of a Recognised Overseas Professional Organisation included in a list promulgated by the ASX (SME Registered Member of the Society of Mining, Metallurgy and Exploration Inc). Mr. Guilinger is Principal of independent consultants World Industrial Minerals LLC. Mr. Guilinger has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Guilinger consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

About American Rare Earths

American Rare Earths Limited (ASX: ARR) is the only Australian company listed on the ASX with assets in the growing rare earth metals sector of the United States of America, itself emerging as an alternative international supply chain to counter China's market dominance of a global rare earth market expected to balloon to US\$20 billion by the mid-2020s. ARR owns 100% of the world-class La Paz rare earth project, located 170km northwest of Phoenix, Arizona. The project's highly shallow 2012 JORC resource (128.2Mt @ 373.4ppm (0.037%) Total Rare Earth Elements), is less than 30m below surface and is contained within just 525 acres of ARR's total La Paz footprint of 5,143 acres that points to potential resource upside. As a large tonnage, bulk deposit, La Paz is also potentially the largest, rare earth deposit in the USA and benefits from containing very low penalty elements such as radioactive thorium and uranium. ARR plans to deliver its first Preliminary Economic Assessment for La Paz in late 2021 and is working with leading USA research institutions to have La Paz's mineral profile incorporated into emerging US advanced rare earth processing technologies. ARR is also acquiring a second USA rare earth asset, the Laramie project in Wyoming. Transaction completion is due by mid-2021.

APPENDIX B: JORC TABLE 1

JORC Code, 2012 Edition – Table 1 Searchlight Rare Earths Project

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Individual grab rock samples and were collected by hand at the surface, from in-situ outcrops. Grab samples are believed to be representative of the outcrops they came from 1-2kg rock samples were collected by a geologist, samples were broken using a hammer from outcrop. Rock samples were crushed in the laboratory and then pulverized before analysis.
Drilling techniques	<ul style="list-style-type: none"> 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). 	<ul style="list-style-type: none"> No drilling
Drill sample recovery	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> No Drilling
Logging	<ul style="list-style-type: none"> Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies 	<ul style="list-style-type: none"> Rock samples were geologically described and photographed.

Criteria	JORC Code explanation	Commentary
	<p><i>and metallurgical studies.</i></p> <ul style="list-style-type: none"> • <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i> • <i>The total length and percentage of the relevant intersections logged.</i> 	<ul style="list-style-type: none"> • No logging
<p><i>Sub-sampling techniques and sample preparation</i></p>	<ul style="list-style-type: none"> • <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> • <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> • <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> • <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> • <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i> • <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> 	<ul style="list-style-type: none"> • No Drilling • Samples were analyzed at Hazen Laboratories in Golden Colorado, the samples were crushed, pulverized and assayed by ICP-ME MS81 for REE • ~2kg of rock was crushed and pulverized and a subsample was taken in the laboratory and sent for analysis. • Grab sampling was selective based upon geological observations. • Each sample was 1kg to 2kg in weight which is appropriate to test for grain size of material.
<p><i>Quality of assay data and laboratory tests</i></p>	<ul style="list-style-type: none"> • <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> • <i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i> • <i>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.</i> 	<ul style="list-style-type: none"> • The samples were crushed and assayed for 34 elements by fusion ICP-MS. The procedure will report near total results. • No geophysical tools used in the sampling program. • Internal laboratory standards were analysed with

Criteria	JORC Code explanation	Commentary
		rock samples.
Verification of sampling and assaying	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Consulting company personnel have observed and collected the assayed samples. No Drilling Field data were all recorded in field notebooks and sample record books and then entered into a digital database. No Adjustments were made.
Location of data points	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Sample location is based on GPS coordinates +/- 5m accuracy. The grid system used to compile data was NAD27 Zone 12N. Topography control is +/- 10m
Data spacing and distribution	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Both randomly spaced surface chip sampling The data alone will not be used to estimate mineral resource or ore reserve None
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Rock samples were taken of selected outcrops that were considered representative of varying rock types. No drilling
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> Samples were kept in numbered bags until delivered to the laboratory.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> 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
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i> <i>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.</i> 	<p>Wyoming Rare Earths Project Acquisition –81 Unpatented mining claims on BLM US Federal Land totalling approx.. 1620 acres were staked in the Searchlight Project Area.</p> <p>The claims are 100% owned by WRE (100% owned ARR subsidiary).</p> <p>No impediments to holding the claims exist. To maintain the claims an annual holding fee of \$165/claim (\$13,365) is payable to The BLM.</p>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <i>Acknowledgment and appraisal of exploration by other parties.</i> 	<ul style="list-style-type: none"> Sampling in the region was completed by Elissa Resources Ltd on adjacent mining claims controlled by Red Hill Energy.
<i>Geology</i>	<ul style="list-style-type: none"> <i>Deposit type, geological setting and style of mineralisation.</i> 	<ul style="list-style-type: none"> The deposit is within veins/veinlets in pre Cambrian granites/gneisses. REE elements are hosted in monazite, and apatite which is found in veins and veinlets within the granites/gneisses.
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i> <ul style="list-style-type: none"> <i>easting and northing of the drill hole collar</i> <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i> <i>dip and azimuth of the hole</i> <i>down hole length and interception depth</i> <i>hole length.</i> <i>If the exclusion of this information is justified on the basis that the</i> 	<ul style="list-style-type: none"> No Drilling

Criteria	JORC Code explanation	Commentary
	<i>information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i>	
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <i>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.</i> <i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i> <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i> 	<ul style="list-style-type: none"> No high-grade cutting No aggregation used No metal equivalents used
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <i>These relationships are particularly important in the reporting of Exploration Results.</i> <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> <i>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’).</i> 	<ul style="list-style-type: none"> No Drilling No Drilling No Drilling
<i>Diagrams</i>	<ul style="list-style-type: none"> <i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i> 	<ul style="list-style-type: none"> See maps in body of Report discussing “claims staked” and “sample locations”
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i> 	<ul style="list-style-type: none"> Total REE’s range in samples: 14,800 – 220ppm; HREE’s: 940-20ppm See Figures in report for sample site locations and assay values.
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i> 	<p>In hand specimen this rock is a red colored, hard and dense granite/gneiss with areas of localized fracturing and crude banding. The rock shows significant iron staining.</p> <p>Microscopic Description: Major Mineralogy: Quartz 30% Sericite 22% Plagioclase 18% Calcite 12%</p>

Criteria	JORC Code explanation	Commentary
		<p><i>Goethite/Hematite 12% Monazite 3% Chlorite 3%</i></p> <p><i>Trace Mineralogy: Rutile, Mn oxide, Leucoxene, Zircon, Calcite,</i></p>
<i>Further work</i>	<ul style="list-style-type: none"> <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i> 	<ul style="list-style-type: none"> Further mapping and sampling is planned leading to drill targets.

Note that Sections 3 and 4 are not relevant for any reporting for this early-stage exploration Project