American Rare Earths Ltd

(ASX:ARR)

An Australian exploration company focused on the discovery & development of strategic technology mineral resources

Commodity Exposure

Rare Earth Elements, Heavy Mineral Sands, Cobalt, Base & Precious Metals, Industrial Metals

Directors & Management

Creagh O'Connor
Non-Executive Chairman
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Executive Director
Geoff Hill
Non-Executive Director
Matt Hill
Non-Executive Director
Denis Geldard
Non-Executive Director
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Chief Technical Advisor
Ian Morgan
Company Secretary

Capital Structure

Ordinary Shares on Issue (30/06/20) 291M

Market Cap (undiluted at 2.5cps) $7.3M

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3 September 2020

HIGHLIGHTS OF SAMPLING PROGRAM – LA PAZ RARE EARTH PROJECT

- Demonstrated the host mineralisation extended beyond the previously established resource parameters
- Significant REE'S and Scandium was identified in altered and unaltered gneiss, granodiorite, and cataclasite metamorphic rocks.
- The program took a total of 45 outcrop samples to the south and west of previously sampled areas.
- It Identified those rock types which host higher grade REE'S and Scandium
- The samples have between 59 and 693 PPM total REE, and 14 of the samples contain more than 300 PPM total REE (31%).
- Scandium content ranges from 1.4 to 23.5 PPM, and is roughly proportional to REE content.
- New rock types identified include a finely banded gneiss and an andesitic basalt
- The Andesitic basalt is a new rock type for the area and has an significantly high REE content (539 PPM).
- Future work in the area will need to examine this rock type (Andesitic basalt) in more detail to determine extent, nature of the occurrence (i.e. flow or intrusive), and its relationship to the other mineralized rock in the area.
- The single sample so far in hand is apparently unaltered, indicating that the REE content is inherent in the rock and not introduced.

This market announcement has been authorized for release to the market by the Non-Executive Chairman of American Rare Earths Limited.

F Creagh O'Connor AM
Non-Executive Chairman

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Initial Sampling Program Completed for the La Paz Rare Earths Project

Based on historical drilling and sampling completed by previous operators who made the initial discovery of the rare earths and scandium, a more detailed sampling program was designed to follow up these results. Additional goals of the sampling program was to identify which rock types are associated with the rare earths and scandium and what if any the role of alteration and silicification had on the enrichment or depletion of rare earths and scandium values.

Geologists at the 100% owned La Paz Rare Earths Project located northeast of Phoenix Arizona (see following location map) have completed an initial round of surface sampling. This new sampling is a follow up to historical exploration on the property prior to 2020. In addition to the rare earths scandium was also included in the analyses.

Significant rare earths and scandium mineralization was found in several varieties of altered and unaltered gneiss, granodiorite and in faulted igneous and metamorphic rock called cataclasite[1]. Specifically, according to historic petrographic work the key association of the rare earths and likely the scandium is with the mineral allanite which occurs as inclusions in both igneous and metamorphic rocks[2].

Results of the sampling in the primary rock types occurring on the property are given as follows (in ppm rounded):

Rock Type	No. of Samples	Range of REE Values	Avg. REE Value	Range of Scandium Values	Avg. Scandium Value
Augen Gneiss	91	**82-714**	**395**	**3-26**	**14**
Banded Gneiss	83	**43-721**	**309**	**1-26**	**12**
Granodiorite	62	**34-596**	**201**	**2-22**	**8**
Granite and Quartz Monzonite	13	**68-226**	**143**	**3-17**	**8**

Results of Sampling of altered and silicified rock are given as follows (in ppm Rounded):

Rock Type	No. of Samples	Range of REE Values	Avg. REE Value	Range of Scandium Values	Avg. Scandium Value
Silicified Rock	41	**9-384**	**116**	**0.4-11**	**4**
Cataclastite	179	**25-674**	**302**	**1-28**	**12**

The locations of the average REE Values (300ppm or greater) and average scandium values (11ppm or greater) are shown on the following maps.

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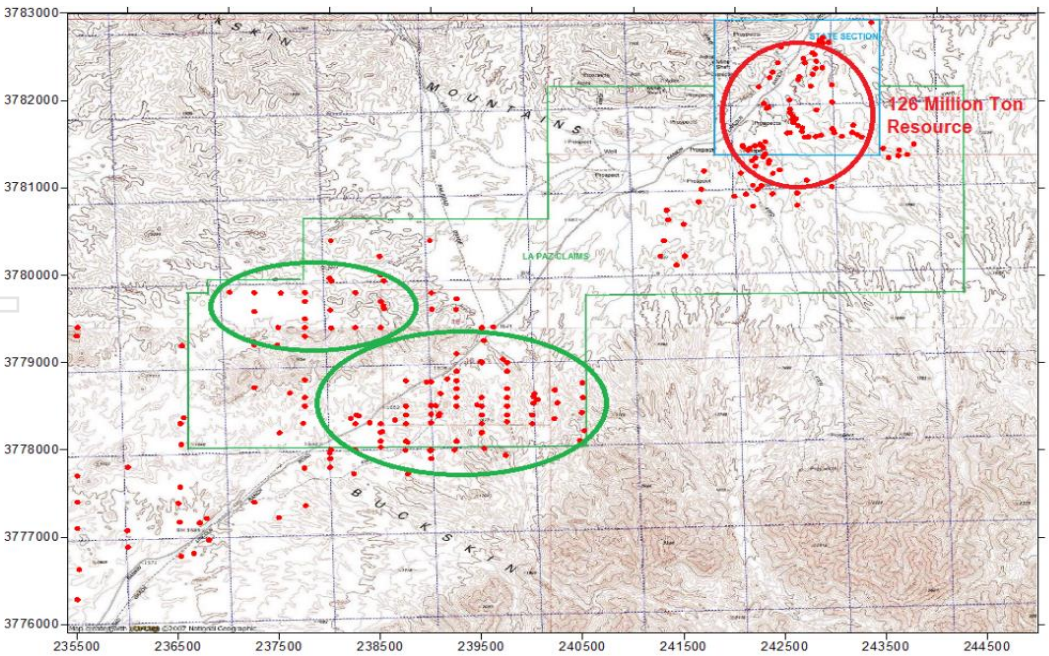
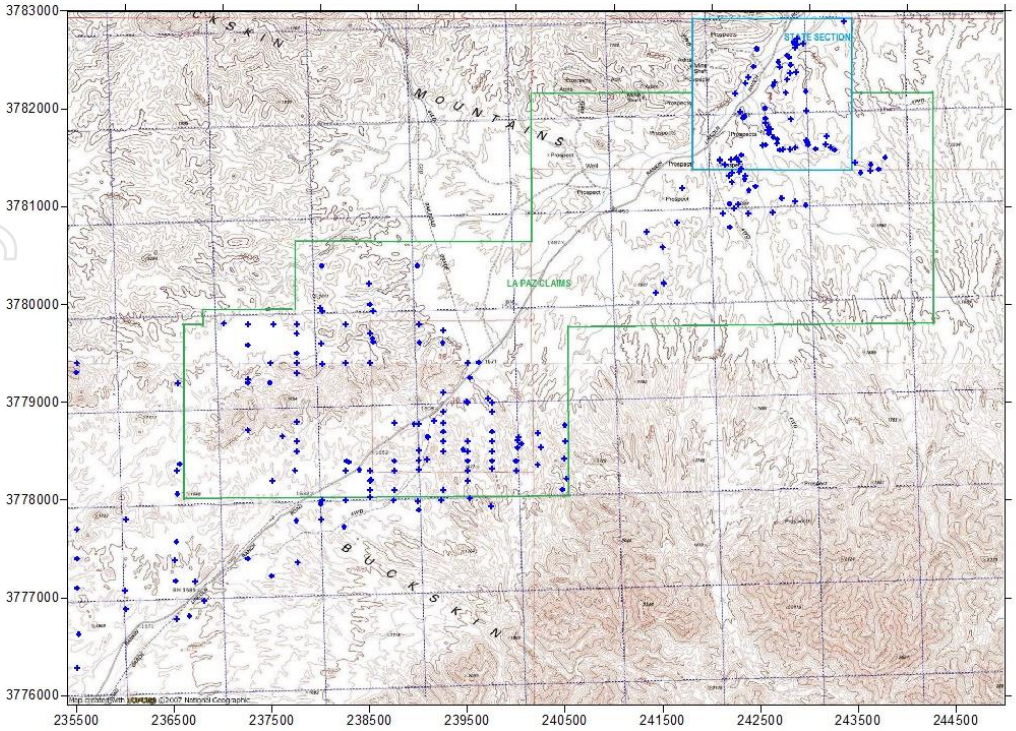
La Paz Project Location Map



Map Showing Rare Earths Combined Values 300 ppm or Greater



Map Showing the Values of Scandium 11 ppm or Greater

The results of the sampling program indicate that the highest grades of rare earths and scandium occur in the metamorphic rocks – specifically Augen gneiss and banded gneiss. Values were also high in the cataclastite likely because of fragments of gneiss caught up in these fault zones. Areas of silicification tended to have lower rare earths and scandium content-except for localized area where the silicification was less intense.

It is concluded that the metamorphic rocks (Augen gneiss and banded gneiss) are the best host rocks for rare earths and scandium mineralization. Because of the extensive alluvial cover on much of the property it was decided to trench these areas in order to expose bedrock for sampling and to gain a better understanding of the geology.

The trenching was completed in July 2020, the results of which will be presented in a separate report.

References

[1]Peterson, J., Sampling report for the La Paz Rare Earth Deposit La Paz County, Arizona, Internal Company Report, June 2020.

[2]Henderson, G., Review of the La Paz Metallurgical Test work Data and Program, Wood Internal Report, February 2020.

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Competent Persons Statement: The information in this report that relates to Exploration Results 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.

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JORC Code – Table 1 report

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.***	Rock samples were collected by hand at the surface from in-situ outcrops. Grab samples are believed to be representative of the outcrops they came from. 1-2 kg rock samples were collected by a geologist, samples were broken using a rock hammer from outcrop. Rock samples were crushed in the laboratory and pulverized before analysis
Drilling techniques	• ***Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).***	• No drilling
Drill sample recovery	• ***Method of recording and assessing core and chip sample recoveries and results assessed.*** • ***Measures taken to maximise sample recovery and ensure representative nature of the samples.*** • ***Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.***	• No drilling
Logging	• ***Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource***	Rock samples were geologically described

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Criteria	JORC Code explanation	Commentary
	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.***	Qualitative logging No drilling
Sub-sampling techniques and sample preparation	• ***If core, whether cut or sawn and whether quarter, half or all core taken.*** • ***If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*** • ***For all sample types, the nature, quality and appropriateness of the sample preparation technique.*** • ***Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*** • ***Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.*** • ***Whether sample sizes are appropriate to the grain size of the material being sampled.***	No drilling No Drilling Samples were analysed at ALS Laboratories in Reno Nevada, the samples were crushed, pulverised and assayed by ICP-ME and MS61r for REE. ~2kg of rock was crushed and pulverised and a subsample was taken in the laboratory and sent for analysis. Sampling was selective and based on geological observations. Each sample was 1kg – 2 kg in weight which is appropriate to test for the grain size of the material.
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 samples were crushed and assayed for 60 elements by fusion ICP-MS. The procedure will report near total results No geophysical tools used in this sampling program Internal laboratory standards were analysed with rock samples.
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.***	Consulting company personnel have observed the assayed samples No drilling Field data were all recorded in field note books and sample record books and then entered into a digital database No adjustments were made.

Criteria	JORC Code explanation	Commentary
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.***	Sample location is based on GPS coordinates +/- 5m. NAD83 / UTM zone 12N Topography control is +/-10m.
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.***	All sample sites are shown on Figure 1. The data alone will not be used to estimate mineral resource or ore reserve. No compositing 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.*** • ***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.***	Rock samples were taken of selected outcrops that were considered representative of varying rock types. No drilling
Sample security	• ***The measures taken to ensure sample security.***	The samples were kept in numbered bags until delivered to the laboratory
Audits or reviews	• ***The results of any audits or reviews of sampling techniques and data.***	Sampling techniques are consistent with industry standards.

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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 La Paz Rare Earth Project is located within Federal Lode mining claims that have been claim staked. Sampling has been carried within the guidelines established by the United States Bureau of land Management. As above. The staked mining claims have no known impediment to future granting of exploitation rights provide appropriate permitting and bonding is completed.
Exploration done by other parties	• ***Acknowledgment and appraisal of exploration by other parties.***	American Rare Earths Ltd.'s consultant undertook rock sampling within the region as a follow up to a previously uranium exploration program by a different company.
Geology	• ***Deposit type, geological setting and style of mineralisation.***	The deposit consists of REE's hosted in allanite primarily that occurs in gneisses, granodiorite and an altered cataclastite.

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.***
		No drilling

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.* • *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*	No high grade cutting No aggregation used No metal equivalents used

Criteria	JORC Code explanation	Commentary
	of metal equivalent values should be clearly stated.	
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	No drilling No drilling 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.*	Refer to descriptions and diagrams in body of text
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.*	Summary of results reported in the body of the text
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.*	Exploration trenching was recently completed and will be discussed in a separate report.
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.*	A drilling program is planned. Refer to figures in the body of the report.

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