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
Keith Middleton
Executive Director
Geoff Hill
Non-Executive Director
Matt Hill
Non-Executive Director
Denis Geldard
Non-Executive Director
James Guilinger
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

American Rare Earths Ltd

ARBN 003 453 503

Head Office

Suite 706 Level 7, 89 York St,

Sydney NSW 2000

GPO BOX 1546, Sydney NSW 2001

Tel +61 2 8054 9779

Email
info@americanrareearths.com.au

Web:
https://americanrareearths.com.au/

4 September 2020

HIGHLIGHTS OF TRENCHING PROGRAM

- A 15-trench program was undertaken to test for bedrock below extensive alluvium cover
- The program was also designed to enable sample collection of the bedrock species to highlight high and low REE and Scandium values.
- Trench sampling has been carried out within the guidelines established by the United States Bureau of land Management.
- Four trenches encountered Upper Plate Red Beds and contain between 168 and 355 ppm total rare earth metals and 5.7 to 14.6 PPM Scandium (Sc).
- The higher values are similar to better-mineralized outcrop samples from the Red Beds taken at various times since 2010. The total rare earth metal content of these and other samples is shown on the map and table below
- Results of the trenching program when reviewed with the Sampling program has enabled a more targeted drilling program to test continuity of the original resource and the identified extension areas to be developed
- A follow-up drilling program will target the intersect of the favourable rare earths and scandium enriched host rocks (gneisses) that occur stratigraphically beneath the tertiary sediments and Red beds
- Significantly the Southern trench exposed silicified gneiss which assayed the highest grades of rare earths and scandium
- The La Paz Rare Earth Trenching Program is located within Federal Lode mining claims that have already been claim staked.
- The technical team has identified favorable opportunities to expand on the Federal Lode mining claims currently held, with field work being undertaken in September 2020

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

Initial Sampling Program Completed for the La Paz Rare Earths Project

Geologists at the 100% owned La Paz Rare Earths Project located northeast of Phoenix Arizona (see following location map) have completed a trenching program based on the results of the previous surface sampling. Because of the extensive alluvial cover on the property it was determined that trenching was the most effective means of exposing extensive areas of bedrock for sampling and for geologic mapping.

The trenching program is a follow up to an initial round of surface outcrop sampling. In addition to the rare earths scandium was also included in the analyses. A total of 17 samples were taken from 15 trenches. Two samples (5 & 6) were taken from one trench because two different rock types were encountered and at one site no trench was dug because there was exposed outcrop all along the proposed trench trace[1].

As discussed in the previous sampling report the consistently highest REE and scandium grade association is with the various gneisses present on the property.

The locations of the trench samples and average REE Values and average scandium values are shown on the following table and map. The map also shows the lithology encountered in the subsurface described as follows:

Green Area	Younger Tertiary Sediments
Brown Area	Red Beds
Light Blue	Silicified Rocks (gneisses, granodiorite, quartz monzonite

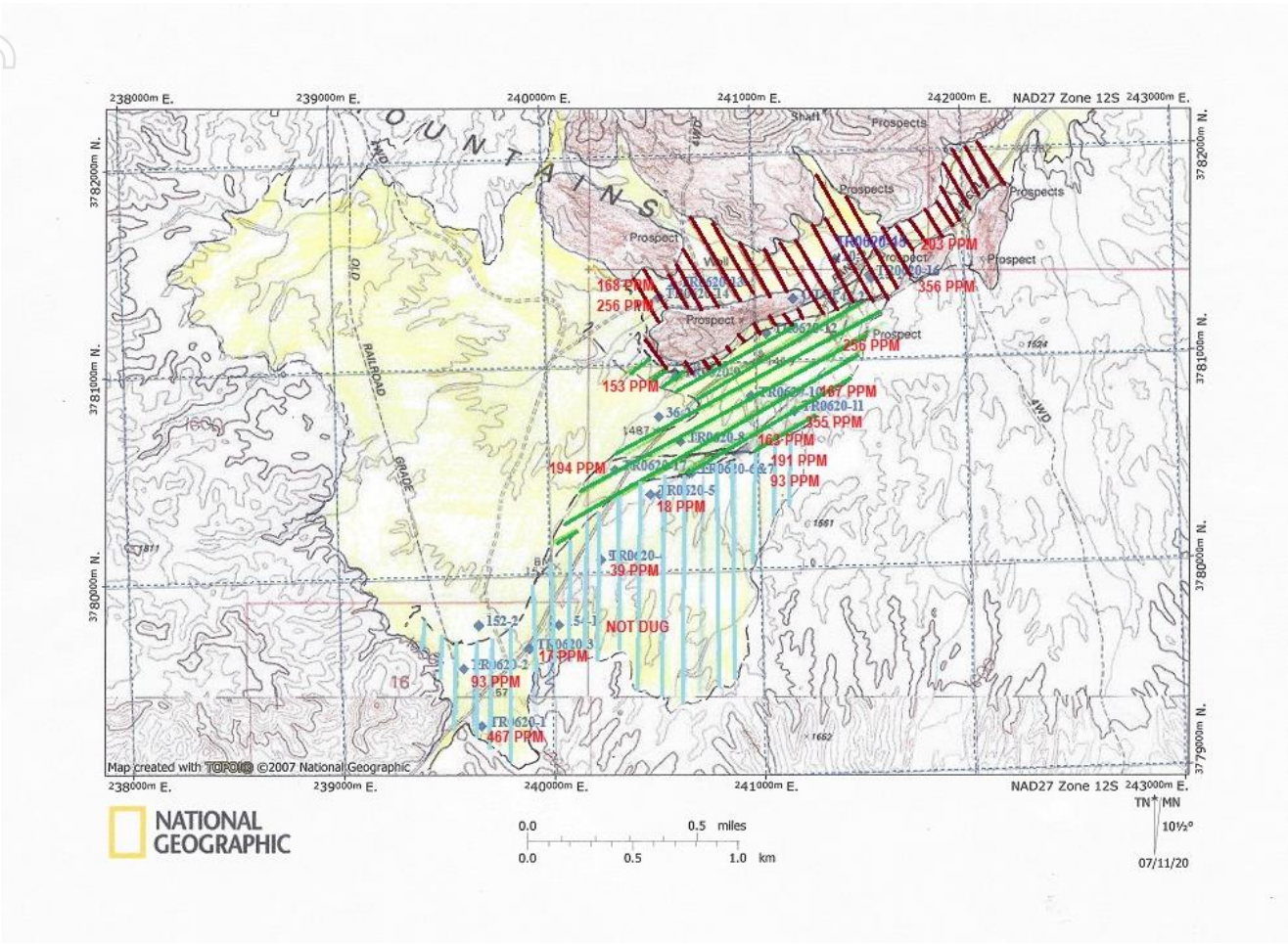
At the edge of the silicified zone is a subcrop of Augen gneiss that returned the highest REE and scandium grades of all samples collected.

Based on the trenching and outcrop sampling results, a drilling program is being developed that will test for continuity of REE and scandium values to depth.

La Paz Project Location Map

SAMPLE NUMBER	NORTHING UTM ZONE 12S NAD 27	EASTING UTM ZONE 12S NAD 27	TOTAL RARE EARTH METAL PPM	SCANDIUM METAL PPM	DESCRIPTION
TR0620-1	239655	3779271	466.59	13.7	LOWER PLATE AUGEN GNEISS
TR0620-2	239577	3779553	92.93	4.3	LOWER PLATE GNEISS
TR0620-3	239889	3779641	16.7	0.7	LOWER PLATE SILICIFIED ROCK
TR0620-4	240243	3780063	39.04	1.5	LOWER PLATE SILICIFIED ROCK
TR0620-5	240486	3780369	19.74	0.6	LOWER PLATE SILICIFIED ROCK
TR0620-6	240681	3780465	190.54	7.2	YOUNGER TERTIARY SEDIMENT
TR0620-7	240681	3780465	93.26	2.4	LOWER PLATE SILICIFIED ROCK
TR0620-8	240635	3780621	162.86	5	YOUNGER TERTIARY SEDIMENT
TR0620-9	240620	3780933	153.39	5.9	YOUNGER TERTIARY SEDIMENT
TR0620-10	240973	3780829	166.82	5.7	YOUNGER TERTIARY SEDIMENT
TR0620-11	241180	3780755	355.09	10.5	UPPER PLATE RED BEDS
TR0620-12	241056	3781133	255.62	7.3	YOUNGER TERTIARY SEDIMENT
TR0620-13	240614	3781366	168.42	5.7	UPPER PLATE RED BEDS?
TR0620-14	240546	3781314	255.8	8.4	UPPER PLATE RED BEDS
TR0620-15	241388	3781472	202.7	6.2	BOULDERS WITH CALICHE
TR0620-16	241547	3781396	355.65	14.6	UPPER PLATE RED BEDS
TR0620-17	240321	3780491	194.09	8.3	YOUNGER TERTIARY SEDIMENT

Trenching Sample Results for Total Combined REE's and Scandium along with Lithologic Associations



Map Showing the Locations of the Trenching (diamond shaped symbol) and Total Combined REE's

The trenching exposed extensive areas of silicification, younger Tertiary sediments, and red beds. Only the most southern trench exposed silicified gneiss which assed the highest grades of rare earths and scandium. The remainder of the silicified rock contained only minimal values of rare earths and scandium. Most of the red beds exposed by the trenching also had minimal rare earths and scandium content. The one exception is trench 11 which had values almost in the same range as the Augen gneiss.

It is concluded that a follow-up drilling program will be necessary to intersect the favorable rare earths and scandium enriched host rocks (gneisses) that occur stratigraphically beneath the tertiary sediments and red beds. Plans are underway to implement this drilling program in the near term.

References

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

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.

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***	Trenched rock samples were collected by hand from in-situ subcrops encountered from the trenching Trench samples are believed to be representative of the subcrops they came from. 1-2 kg trench 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

Criteria	JORC Code explanation	Commentary
	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.	
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 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.***	Trench rock samples were geologically described 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.***	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.

Criteria	JORC Code explanation	Commentary
	• ***Whether sample sizes are appropriate to the grain size of the material being sampled.***	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.
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.***	Trench sample location is based on GPS coordinates +/-5m. NAD83 / UTM zone 12N Topography control is +/-10m.

Criteria	JORC Code explanation	Commentary
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. 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.***	Trench rock samples were taken of encountered subcrops 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.

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. Trench sampling has been carried out 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 trench rock sampling within the region as a follow up to a previously completed outcrop sampling.
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.

Criteria	JORC Code explanation	Commentary
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 of metal equivalent values should be clearly stated.*	No high grade cutting No aggregation used 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 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

Criteria	JORC Code explanation	Commentary
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.