

# **Exploration Drilling Planned for La Paz Southwest Exploration Target of 742 - 928 Million Tonnes Projected**

#### **Highlights**

- Eight core drill holes are planned for Q1 2022 to explore lateral and vertical extent in the new southwest area.
- ➤ An Exploration Target of approximately 742 928 million tonnes of Rare Earths mineralised rocks was identified 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.
- New Exploration Target identified in addition to the La Paz Rare Earth project's recently upgraded 170MT Resource.
- > 167 Hectares with 20 claims added to La Paz Project area in support of exploration targets

American Rare Earths Limited (ASX: ARR) ("the Company") plans on drilling eight (8) diamond drill holes across the La Paz Southwest Project area. The core holes will provide geological data about the lateral and vertical extent of mineralisation in the area. 900 meters of diamond core drilling is planned for Q1 2022. This drilling will be performed with geological mapping on 20 additional mining claims staked in July 2021, covering 167 hectares.

Based on recent exploration, the Company has compiled a JORC exploration target report "Exploration Target Summary of the La Paz Southwest Project Area" (Report). The Report provides an overview of the geology, results of surface sampling, and exploration target tonnage estimates in Laz Paz Southwest. The Report also outlined the 20 additional claims and the proposed diamond core drilling.

The La Paz Southwest is part of the La Paz Rare Earth Project (LPRE Project) project owned by La Paz Rare Earth, LLC, a wholly owned subsidiary of Western Rare Earths, Inc (WRE), a wholly owned subsidiary of American Rare Earths, Limited. This announcement furthers the exploration and development of large areas of Rare Earths enriched rocks at the La Paz project. If the exploration drilling is successful, ARR plans to develop the La Paz southwest area in conjunction with the La Paz maiden resource area located approximately two kilometres to the Northeast.

Mr Keith Middleton, Managing Director of ARR states, "In 2019 we noted that the La Paz Rare Earth Project "excels by its sheer volume" to quote technical reports available and suspected there was an opportunity to develop the asset further. Today, we can say that the La Paz project continues to exceed our expectations and provides huge potential and future flexibility to develop the La Paz REE project. The Exploration Target and exploration drilling are the first steps in our plans to define extensive mineable resources."

American Rare Earths Limited (ASX:ARR)

Capital Structure: Ordinary Shares on Issue 345,308,326

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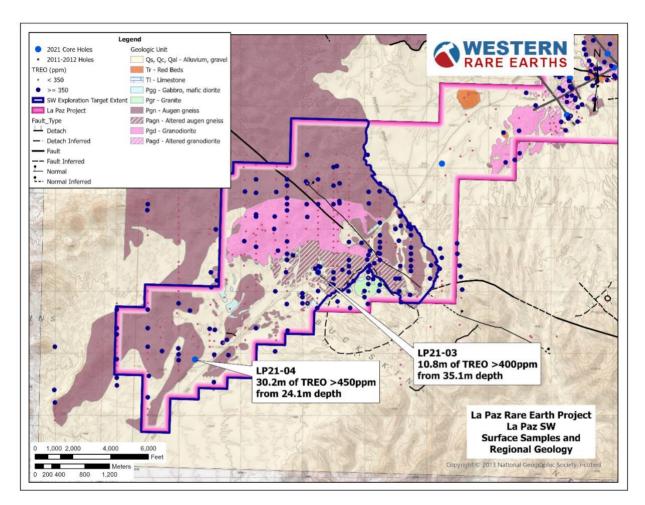


#### **Overview**

#### **Exploration History**

Surface sampling across the La Paz SW area was performed in 2019 and 2020. Out of approximately 487 surface samples, about 215 of these samples TREO values exceeding 350ppm.

In March 2021, WRE drilled two core holes in the La Paz SW area, called LP21-03 and LP21-04. Drill hole LP21-03 contains approximately 11m of TREO mineralisation, exceeding 400ppm, and drill hole LP21-04 has approximately 30m of TREO mineralisation, exceeding 450ppm.



**Drill Hole and Sample Locations** 

#### **Exploration Drilling**

The wide areas of surface samples contained TREO grade exceeding 350ppm with favourable results from the two core holes drilled in March 2021. WRE has since developed a modest eight (8) hole exploration program.

The proposed holes are vastly spaced to obtain the full knowledge of the area. The proposed holes will be drilled in various rock types, each showing favourable TREO mineralisation in surface samples to determine variation between rock types. Some holes will also help assess the thickness of the alluvial

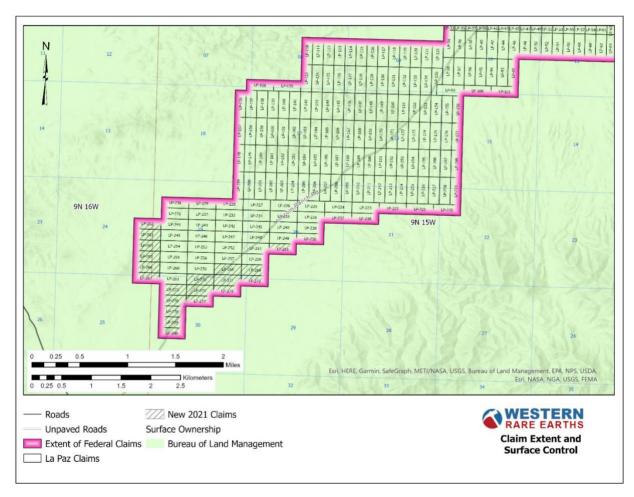


cover. Seven holes will be drilled to approximately 100 meters with one to a depth of 200 meters to locate the regional water-table depth and determine if REE mineralisation continues at depth.

WRE proposes additional detailed geological mapping in conjunction with the exploration drilling. WRE compiled a Notice of Intent for the La Paz Southwest project area and submitted the documentation to the Bureau of Land Management (BLM) for approval. WRE hopes to begin exploration drilling in Q1 2022, depending on the time required for BLM approvals and the availability of exploration drill rigs.

## **Mining Claims and Surface Control**

All surface land and minerals are owned by the United States and administered by the BLM. WRE controls 281 federal mineral lode claims covering 4,900 acres (1,983 ha) across the La Paz project area. The claims include 20 additional mining claims covering 414 acres (167 ha) staked by WRE in late July 2021. The federal lode mining claims provide WRE the exclusive right to explore, develop and ultimately mine at La Paz Southwest.



Surface Ownership and Claims in the La Paz Southwest Area



### **Exploration Target Estimate**

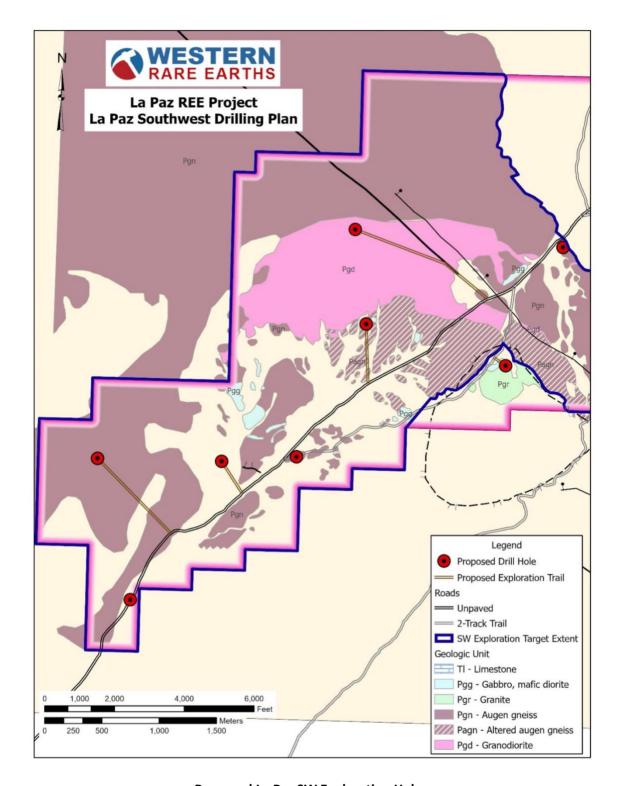
It must be noted that these Exploration Target estimates are based on assumptions made from sparse geological data. The estimates cannot be construed as resources or reserves.

Each mapped rock type was defined in ArcGIS to determine an Exploration Target tonnage. WRE applied a 75% geological uncertainty factor to the calculated area to select a factored area in hectares. A mineralised thickness of 30 meters (vertical) was assumed. An in-place volume was calculated using the factored area and the mineralised thickness. A density factor of 2.68 was applied to the volume to derive in-place tonnes. An average grade of 400ppm was used to estimate TREO and an average grade of 24.5ppm was used to estimate Scandium Oxide.

An Exploration Target with a range of approximately 742.5 - 928.1 million tonnes as estimated using the parameters listed above. It should be noted that a general range of 20% was applied to the tonnage, grade values.

**Table 1 - La Paz Southwest Exploration Target Estimate** 

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	V	olun	ne	Density	In-Plac	е То	onnage	TRE	O G	rade	Ma	ss Tl	REO	Охі	de 0	Grade	C	Oxid	е
Rock Type	(milli	on (	Cu m)	(g/cc)	(millio	n to	onnes)	(	ppm	1)	(mi	llion	kg)		(ppr	n)	(mil	llion	kg)
Augen Gneiss	42.8	-	53.5	2.68	114.6	-	143.3	350	-	400	40.1	-	57.3	20	-	24.5	2.3	-	3.5
Mylonitic Gneiss	234.3	-	292.8	2.68	627.9	-	784.8	350	-	400	219.7	-	313.9	20	-	24.5	12.6	-	19.2
<b>Grand Total</b>	277.0	-	346.3	2.68	742.5	-	928.1	350	-	400	259.9	-	371.2	20	-	24.5	14.8	-	22.7



**Proposed La Paz SW Exploration Holes** 

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 available on ARR's website <a href="https://americanrareearths.com.au">https://americanrareearths.com.au</a>. ARR confirms it is not aware of any new information or data that materially affects the information included in the original market announcements. In the case of Mineral Resources estimates, 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 Person's findings presented have not been materially modified from the original market announcements.

Competent Persons Statement: The information in this Report related to Exploration Results is based on the 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 relevant to the style of mineralisation and type of deposit under consideration. The activity 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 the matters in the Report are based on the 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 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. As a large tonnage, bulk deposit, La Paz is also potentially the largest, rare-earth deposit in the USA and benefits from containing exceptionally low penalty elements such as radioactive thorium and uranium. ARR plans to deliver its first Preliminary Economic Assessment for La Paz by 2022 and is working with leading USA research institutions La Paz's mineral profile incorporated into emerging US advanced rare earth processing technologies. ARR acquired a second USA REE asset in the Searchlight Rare Earths project in the first half of 2021. ARR acquired a third USA REE asset, the Halleck Creek project in Wyoming, in June 2021.



JORC Code, 2012 Edition – Table 1 La Paz SW Exploration Area					
Section 1 Sampling	Techniques and Data				
(Criteria in this section	on apply to all succeeding sections.)				
Criteria	JORC Code explanation	Commentary			
	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.	March 2021 Core Drilling: WRE drilled nine diamond core holes of HQ size ranging from 168 feet to 403 feet in depth with a total length of 2,238 feet (682 meters). 2 core holes reside within the La Paz SW project area.			
Sampling techniques	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	Representative 1kg samples were collected from each 5' (1.52m) interval of drilling			
,,	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.	A 250g sub-sample was pulverised to -75 microns and a 0.5g charge was assayed for REEO by ICP-MS using standard industry procedures at ALS Chemex, Reno, Nevada.			
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.).	March 2021 Core Drilling: Timberline Drilling, Inc. from Elko, Nevada, used a track-mounted core rig to drill HQ diameter core holes. Six holes were in the La Paz Resource area and three additional holes were drilled on the remainder of the property. See the Drill Hole Location Map. Drilling commenced on 11 March 2021 and concluded on 31 March 2021. Drill hole depths varied between 168 feet and 403 feet for a total length of 2,238 feet (682 meters).			

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	Method of recording and assessing core and chip sample recoveries and results assessed.	March 2021 Core Drilling: Core recovery was 98% ±. The core material was sent to America Assay Labs in Spark, Nevada for assay.
Drill sample recovery	Measures are taken to maximise sample recovery and ensure the representative nature of the samples.	All drilling was carried out above the water table to minimise possible contamination.
	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.	
	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.	A representative sample of each 5' interval was retained in chip trays for logging. Geological logging is considered to have been logged to a level of detail appropriate to support Mineral Resource Estimates.
Logging	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Chip sample logging is qualitative in nature.
	The total length and percentage of the relevant intersections	Drill holes were logged in full based on representative samples from every 5' interval.
	logged.	March 2021 Core Drilling: All Core was logged and photographed on-site by qualified geologists.
	If core, whether cut or sawn and whether quarter, half or all core taken.	March 2021 Core Drilling: All Core was shipped to American Assay Labs for further logging and testing. Additional samples were selected for metallurgical testing.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	
Sub-sampling techniques and sample preparation	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 pulverising 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.	The 1kg samples were delivered to an accredited laboratory for sample preparation and analysis.
	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.	Sample preparation techniques are considered industry practice and are conducted at the accredited external laboratory, all deemed appropriate to the style of mineralisation and suitable for determining Mineral Resource Estimates.

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		March 2021 Core Drilling: After logging, photographing, samples were boxed and securely banded for shipping to American Assay Labs. The lab performed assays, additional photography and cutting in preparation for studies and mineral processing and metallurgy. Chains of custody were always maintained.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	
	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	Sample analysis: A 250g split from each sample was pulverised to - 75 micron. A 0.5g subsample fused with lithium borate was then subjected to a 4-acid digest and then assayed by ICP-MS for 38 elements.
Quality of assay data and laboratory tests	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, spectrometers, handheld XRF instruments, etc were used.
	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.	The laboratory used standard quality control procedures incorporating duplicate samples, standards and blanks.
	The verification of significant intersections by either independent or alternative company personnel.	An independent consultant geologist verified significant intercepts as part of the resource estimation.
Varification of	The use of twinned holes.	No twinned holes were used.
Verification of sampling and assaying	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	WRE collected QAQC samples during sample preparation. WRE is in the process of statistically analysing the sample QAQC sample results.
	Discuss any adjustment to assay data.	None
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.	March 2021 Core Drilling: Locations were determined using Handheld GPS units. Downhole surveys were not performed due to relatively shallow depths.

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	Specification of the grid system used.	March 2021 Core Drilling: UTM grid system NAD 1983 Zone 12. (The entire project was updated to use NAD 1983 UTM Zone 12 projections.
	Quality and adequacy of topographic control.	Drill hole elevations were estimated using existing USGS topographic base maps as control.
	Data spacing for reporting of Exploration Results.	
Data spacing and distribution	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 spacing and distribution are considered sufficient for the current level of early exploration of the areas of interest.
	Whether sample compositing has been applied.	Samples have not been composited as all sample intervals were equal (5').
Orientation of data in relation to	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	March 2021 Core Drilling: Three exploration core holes were drilled in the southwest portion of the claim area to follow up on surface samples and explore additional mineralised zones at depth. See Drill Hole Location Map.
geological structure	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.	Drill samples were kept in a secure storage locker before dispatch by bonded courier to the laboratory.
		March 2021 Core Drilling: All Core was collected from the drill rig daily and stored in a secure, locked facility until bonded courier dispatched the core to America Assay Labs. Chains of custody were always maintained.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews have been conducted. An extensive review of the data has been undertaken to update the historical and current planned exploration activity.

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Section 2 Reporting of	f Exploration Results	
(Criteria listed in the preceding	g 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 tenement schedule is included in the appendix of this report. The tenements are in the form of 20-acre United States Bureau of Land Management lode mining claims. The total land package controlled by the Company in the La Paz Project Area consists of 261 unpatented lode mining claims totalling 5392.26 acres (2178.47 has). The State Exploration Permit totals 640 acres (259 has). The mining claims are 100% owned by the Company with no royalties. All claims are outside of any wilderness or national park and environmental settings. A historic railroad line crosses a portion of the claims outside of any historical or planned exploration programs. The State leased land is subject to a State royalty (yet undetermined) once the exploration activity has advanced to the exploitation level. At this point, the State engineers and geologists will evaluation any defined mineral deposit and determine an appropriate royalty.  The QP is unaware of any environmental liabilities attached to the La Paz claims and is not a Qualified Person to environmental issues. An archaeological survey of the La Paz claims conducted by Professional Archaeological Services of Tucson, Arizona, dated 20 March 2011, was submitted to the Arizona State Land Department. The survey found no substantial areas of archaeological significance (PAST, 2011). The author is not a Qualified Person to archaeological issues.
	The security of the tenure held at the time of reporting and any known impediments to obtaining a licence to operate in the area.	As long as annual Arizona State lease holding fees and annual claim holding fees are paid to both the BLM and the County (La Paz) in which the claims reside, tenure is secure.

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Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	REEs were first recognised in June 2010 by John Petersen, a geologist. He submitted for analysis a reconnaissance sample from the Swansea and Bill Williams River areas that analysed 459.98 ppm Total Rare Earth Elements (TREE). A further 119 samples returned TREE values between 20.6 to 674.21 ppm. Scandium varied from 1.1 to 30.2 ppm. AusAmerican then conducted a confirmation sampling exercise of 22 samples that returned values of 6 to 588 ppm TREE, followed in February 2011 by a sample grid of 199 samples that returned from 49 to 714 ppm TREE. 195 percussion drill holes were drilled in early 2011, with additional sampling was conducted in 2019 and 2020.  AusAmerican Mining Corporation carried out all drilling, and the company was listed on the ASX.
Geology	Deposit type, geological setting and style of mineralisation.	The project lies within the Harcuvar metamorphic core complex within the Basin and Range Province of Arizona. Mineralisation is hosted in alkali granitic gneiss and, to a lesser extent, a structurally superimposed suite of continental red beds. REEOs occur in Allanite (epidote), which appears as fine-grained disseminations and micro-fracture fillings.
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:	March 2021 Core Drilling: Timberline Drilling, Inc. from Elko, Nevada, used a track-mounted core rig to drill HQ diameter Core six holes were in the La Paz resource area and three additional holes were drilled on the remainder of the property. See the Drill Hole Location Map. Drilling commenced on 11 March 2021 and concluded on 31 March 2021. Drill hole depths varied between 168 feet and 403 feet for a total depth of 2,238 feet (682 meters).
	easting and northing of the drill hole collar	
	elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar	March 2021 Core Drilling: Locations of the March 2021 Core Hole data are in Appendix B of the ASX Release Technical
	dip and azimuth of the hole	Report 29 June 2021.
	downhole length and interception depth	

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	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.	
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.	Drill holes cuttings were collected at five-foot intervals. An approximate 2 lb. (1.36 kg) sample was submitted to ALS Chemex laboratory in Reno, Nevada, for geochemical analysis. 3269 samples were submitted: all were analysed for 60 elements, including REE, Y and Sc. REE assay results from the percussion drilling program are summarised in an Appendix at the back of the report.
	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.	March 2021 Core Drilling: All core was packaged in 10-feet long sections in core boxes. No aggregations of the Core were performed.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	
	These relationships are particularly important in the reporting of Exploration Results.	
Relationship between mineralisation widths and intercept lengths	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	The vertical drill hole orientations, 5' sample lengths are considered appropriate to the style of flat-lying bulk tonnage mineralisation.
	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').	
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.	Drill hole locations reside in the ARE report "2021 core hole analysis summary La Paz rare earth deposit La Paz county, Arizona, Appendix B" released in June 2021.

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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.	Drill hole locations reside in the ARE report "2021 core hole analysis summary La Paz rare earth deposit La Paz county, Arizona, Appendix C and Appendix D" released in June 2021.
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.	Metallurgical test work was completed following the 2011 drilling program. Drillhole LP-B7 was twinned, and 16 samples were submitted to Saskatchewan Research Council, Saskatoon, Saskatchewan, Canada for pre-concentration and preliminary leaching tests.  Representative rock specimens were submitted to SGS Canadian Laboratories, Vancouver, Canada, from within the resource areas to determine overall mineral assemblages and liberations/associations of REEs carriers.  March 2021 Core Drilling: Approximately 500 kg of Core has been shipped to Nagrom Labs, in Perth Australia, for additional mineral processing and metallurgical testing.
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).	March 2021 Core Drilling: Approximately 500 kg of Core has been shipped to Nagrom Labs, in Perth Australia, for additional mineral processing and metallurgical testing.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	

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<b>Section 3 Estimation and Reporting of Mineral Resources</b>		
(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)		
Criteria	JORC Code explanation	
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.	Drill hole logs are captured in the DHDB database with built-in validation for imports.
	Data validation procedures used.	n/a
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	Competent Person visited the La Paz project site in 2011 to review drill chips, verify drill hole collar locations and critical geological observations. An additional CP (author of this updated report visited the field in 2020 to review geology and drill sites for the upcoming core drilling program.
		March 2021 Core Drilling: The Competent Person visited the sire during the drilling campaign.
	If no site visits have been undertaken indicate why this is the case.	n/a
Geological interpretation	Confidence in (or conversely, the uncertainty of ) the geological interpretation of the mineral deposit.	The La Paz project area lies within the Reid Valley Basin, adjacent to the Buckskin Mountains, in the west-central part of the Basin and Range Physiographic and Structural province of southwestern United States. The Buckskin Mountains are part of the Harcuvar metamorphic core complex that features exposures of a detachment fault and its mylonitic footwall. Hanging wall rocks, collectively referred to as the Upper Plate, consist of various complexly normal-faulted and tilted rocks that include syntectonic, mid-Tertiary sedimentary and volcanic rocks. The footwall block, commonly referred to as the Lower Plate, is composed of variably mylonitic crystalline and metasedimentary rocks.  The geology at the La Paz project is not well understood at the project level and has not been mapped in detail; however, principal rock units identified in chips included Tertiary red beds, gneiss and felsic intrusives.
	Nature of the data used and of any assumptions made.	n/a

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	The effect, if any, of alternative interpretations on Mineral Resource estimation.	n/a
	The use of geology in guiding and controlling Mineral Resource estimation.	No resource modelling of the La Paz SW area has been performed.
	The factors affecting continuity both of grade and geology.	n/a
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	n/a
	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters, and maximum extrapolation distance from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	n/a
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	n/a
	The assumptions made regarding recovery of by-products.	n/a
Estimation and modelling techniques	Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).	
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	No resource modelling of the La Paz SW area has been performed.
	Any assumptions behind modelling of selective mining units.	
	Any assumptions about correlation between variables.	n/a

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	Description of how the geological interpretation was used to control the resource estimates.	n/a
	Discussion of basis for using or not using grade cutting or capping.	n/a
	The process of validation, the checking process used, the comparison	
	of model data to drill hole data, and use of reconciliation data if	n/a
	available.	
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	n/a
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	n/a
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	n/a n/a
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Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	n/a
	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	n/a
Bulk density	The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.	n/a
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	n/a
	The basis for the classification of the Mineral Resources into varying confidence categories.	n/a
Classification	Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	n/a
	Whether the result appropriately reflects the Competent Person's view of the deposit.	n/a
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	n/a

AMERICAN RARE EARTHS	

Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	n/a
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	n/a



# Exploration Target Summary of the La Paz Southwest Project Area

September 2021

Compiled by
Dwight M. Kinnes, CPG
Chief Technical Officer
American Rare Earths, Ltd.

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### 1.0 Introduction and Location

This report summarizes the geology and presents an Exploration Target tonnage estimate for the La Paz Southwest (La Paz SW) project area located in La Paz County, Arizona. The La Paz SW is part of the greater La Paz Rare Earth Project (LPRE Project) project owned by La Paz Rare Earth, LLC, a wholly owned subsidiary of Western Rare Earths, Inc (WRE), a wholly owned subsidiary of American Rare Earths, Limited (ASX:ARR).

The greater LPRE project consists of 281 federal lode claims, and one Arizona State Mineral Exploration Permit covering more than 5,540 acres (2,242ha). The project is located in La Paz County, Arizona, approximately 15.2 miles (24.4 km) east of the town of Bouse, Az, see Figure 1.

In 2021, WRE announced a resource update for the La Paz Resource area located in the northeastern end of the La Paz Claims. The La Paz SW project is located in the southwestern end of the La Paz project claims. The La Paz SW area is separated from the La Paz Resource area by a large graben (down-thrown) block. This graben block effectively divides the La Paz SW area from the La Paz Resource area. Therefore, in a geological and resource sense, La Paz SW resources, if any, will be developed independently from the La Paz Resource area.

In March 2021, WRE drilled two exploration holes in the La Paz SW project area with favorable results showing Total Rare Earth Oxide (TREO) mineralization exceed 350ppm over depths of 30m in drill hole LP21-04 and over depths of 11m in drill hole LP21-03. Approximately 495 surface samples exist within the La Paz SW project area.

Based on the favorable results of 2021 drilling and the surface samples, WRE compiled this Exploration Target Summary of the La Paz Southwest Project Area.

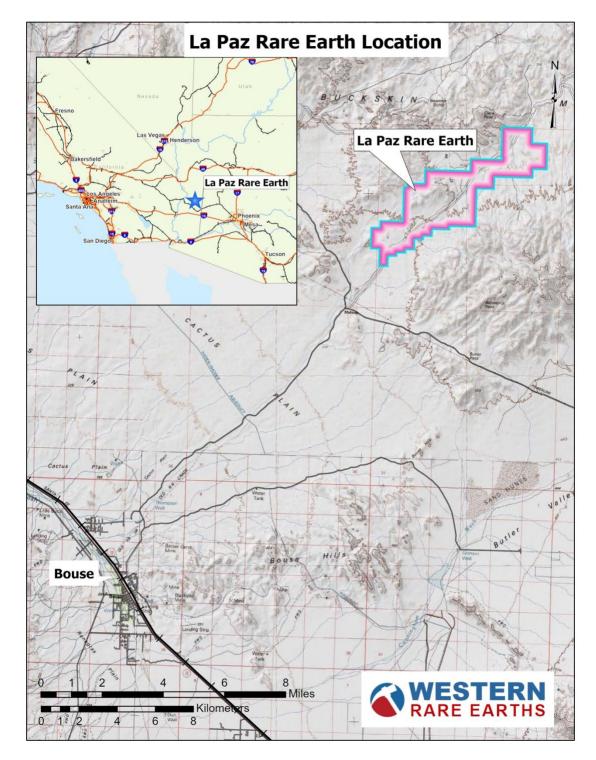


Figure 1 - La Paz Project Location

# 2.0 Geology and Exploration History

### **General Geology**

Parts of the following description of the geological setting and mineralization of the La Paz Project Area are from an internal geologic report prepared by John Peterson and Geological Survey Bulletin 198, Geology and Mineral Resources of the Buckskin and Rawhide Mountains. West-Central Arizona (ed. By Spencer and Reynolds, 1989). Significant text also comes from the "2020 Technical Report on the Arizona La Paz Rare Earths and Scandium Project" report prepared by World Industrial Minerals on behalf of WRE in November 2020.

The La Paz Project Area lies within the Reid Valley Basin, adjacent to the Buckskin Mountains, in the west central Arizona part of the Basin and Range Physiographic and Structural Province of the southwestern United States. The Buckskin Mountains are part of the Harcuvar metamorphic core complex that features exposures of a detachment fault and its mylonitic footwall. Hanging wall rocks, collectively referred to as Upper Plate consist of a variety of complexly normal-faulted and tilted rocks that include syntectonic, mid tertiary sedimentary and volcanic rocks and variable deformed and metamorphosed Mesozoic and Paleozoic sedimentary and volcanic rocks. The footwall block commonly referred to as the Lower Plate, is composed of variably mylonitic crystalline and meta-sedimentary rocks. A schematic structure-stratigraphy diagram showing all pre-Pliocene rock types and some of their contact relationships is shown in Figure 2. Movement on rotational normal faults (not shown) caused tilting of upper plate rocks.

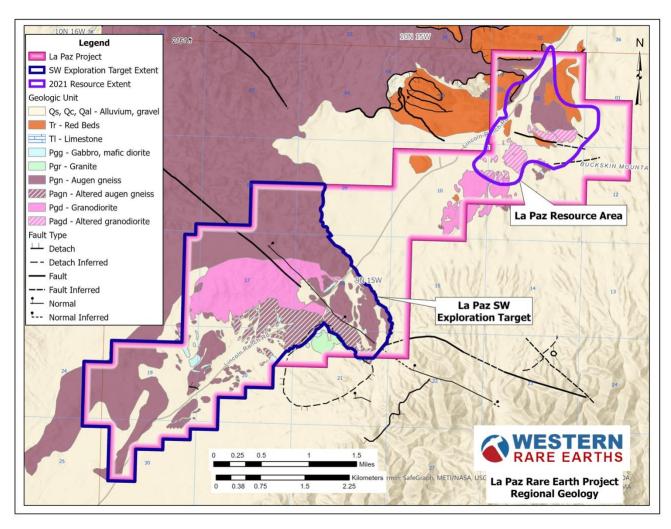


Figure 2 - La Paz Regional Geology

Within the La Paz Project Area, Lower Plate rocks are mostly quartz feldspar gneiss. The gneiss features compositional layering and in part is massive and homogenous, not unlike the crystalline igneous granitic parent. An intrusive unit may also be present in the Lower Plate. Veins, veinlets and stockworks of epidote and quartz are present and similar to occurrences that might be expected in any exposure of early Proterozoic gneiss from Arizona, see Figure 3. The Upper Plate consists of Red-Bed type clastic sedimentary rocks and mafic flows. As illustrated in Figure 2, relatively small areas of metamorphosed pre-Tertiary sedimentary and volcanic rocks have been mapped in proximity to the detachment.

Based petrographic studies at La Paz the deposit may be classified as an allanite hosted rare earth occurrence. Allanite is in the sorosilicate group of minerals within the broader epidote group that contain a significant amount of rare-earth elements Allanite appears to be concentrated in the mylonitic gneiss and augen gneiss of the Lower Plate rocks.

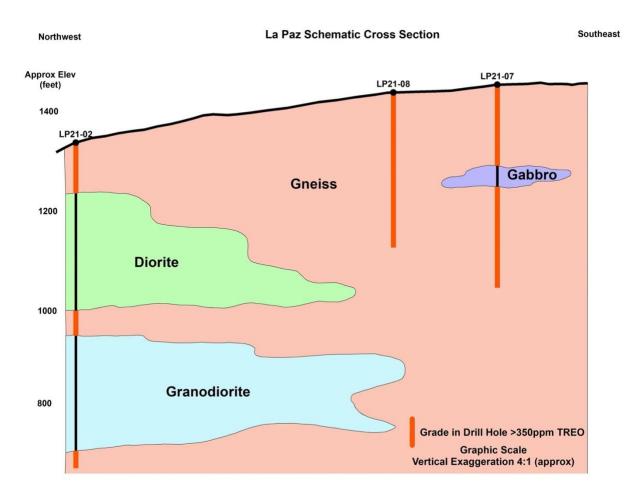


Figure 3 - Generalized Cross-Section

# **Exploration History**

Rare earth element exploration at La Paz in earnest in 2011, when 195 rotary chip holes were drilled in the northeastern part of the project area. Two additional core holes were drilled in the northeast in 2012. Approximately 100 surface outcrop samples were collected in 2010 in the northeast part of the project area.

Surface sampling across the La Paz SW area was performed in 2019 and in 2020. Approximately 487 surface samples reside in the La Paz SW project area, see Figure 4. Approximately 215 of these samples TREO values exceeding 350ppm. In March 2021, WRE drilled two core holes in the La Paz SW area, called LP21-03 and LP21-04.

Drill hole LP21-03 contains approximately 11m of TREO mineralization exceeding 400ppm and drill hole LP21-04 contains approximately 30m of TREO mineralization exceeding 450ppm.

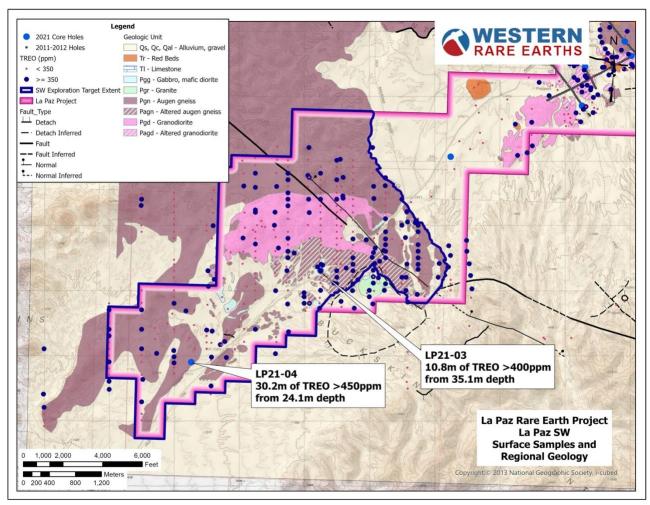


Figure 4 - Existing Drill Hole and Sample Locations

# 3.0 Surface and Mineral

# **Surface Control**

All of the surface lands within the La Paz SW project area belong to the US Federal government and are administered by the Bureau of Land Management (BLM), see Figure 5.

#### **Mineral Control**

All of the mineral lands within the La Paz SW project area belong to the US Federal government and are administered by the Bureau of Land Management (BLM), see Figure 5.

WRE controls 281 federal mineral lode claims covering 4,900 acres (1,983 ha) across the entire La Paz project area.

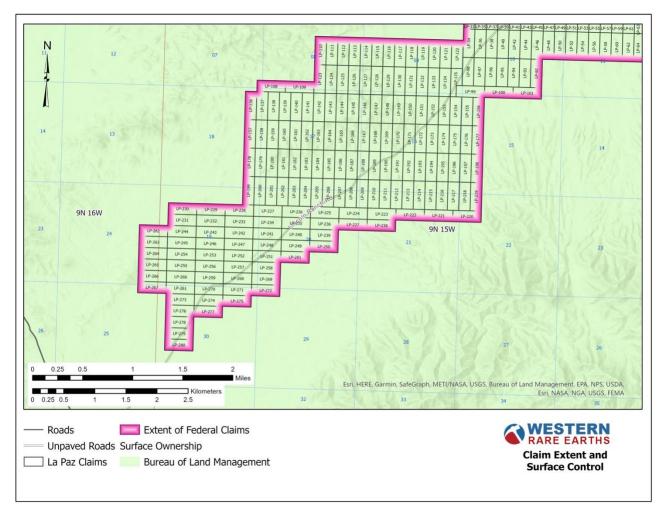


Figure 5 - Surface Ownership and La Paz Claims

# 4.0 Environmental, Permitting and Community Issues

This is an early stage exploration project and as such no environmental studies or permitting have been undertaken, except for those required for exploration drilling. The social impact of the project is currently unknown.

# **5.0 Exploration Target Tonnage Estimates**

WRE compiled an Exploration Target tonnage estimate for the La Paz SW project area based on the extent of the augen gneiss and mylonitic gneiss occurring in the area.

The augen gneiss and mylonitic gneiss rocks extensively outcrop across the La Paz SW area, covering more than 1,500 hectares. Surface samples from these outcrops consistently contain more than 350ppm TREO.

It must be clearly noted that these Exploration Target estimates are based on assumptions made from sparse geological data. The estimates cannot be construed as resources or reserves.

To determine an Exploration Target tonnage, the area, in hectares, within the La Paz claim extent for each mapped rock type were determined in ArcGIS. WRE applied a 75% geological uncertainty factor to the calculated area to determine a factored area in hectares, see Table 1. A mineralized thickness of 30 meters (vertical) was assumed. An in-place volume was calculated using the factored area and the mineralized thickness. A density factor of 2.68 was applied to the volume to derive in-place tonnes.

**Table 1 - Exploration Target Parameters** 

Parameter	Value (unit)		
Geological Uncertainty	75 (%)		
Mineralized Thickness	30 (meters)		
Rock Density	2.68 (g/cc)		
TREO Grade	400 (ppm or g/t)		
Sc2O3 Grade	24.5 (ppm or g/t)		

The general dimensions of the La Paz SW mineralized geology are shown in Table 2.

**Table 2 - La Paz SW Exploration Target Extents** 

Rock Type	Areal Extent (ha)	Factored Areal Extent (ha)	Minerlized Thickness (m)
Augen Gneiss	238	178	30
Mylonitic Gneiss	1,302	976	30
Grand Total	1,539	1,154	30

Using the above parameters WRE determined a potential in-place Exploration Target for La Paz SW with a range of approximately 742.5 - 928.1 million tonnes, see Table 3. It should be noted that a general range of 20% was applied to the tonnage, grade values.

Table 3 - La Paz SW Exploration Target Estimate

Rock Type	Volume (million cu m)	Density (g/cc)	In-Place Tonnage (million tonnes)	Average TREO Grade (ppm)	Mass TREO (million kg)	Average Scandium Oxide Grade (ppm)	Mass Scandium Oxide (million kg)
Augen Gneiss	42.8 - 53.5	2.68	114.6 - 143.3	350 - 400	40.1 - 57.3	20 - 24.5	2.3 - 3.5
Mylonitic Gneiss	234.3 - 292.8	2.68	627.9 - 784.8	350 - 400	219.7 - 313.9	20 - 24.5	12.6 - 19.2
<b>Grand Total</b>	277.0 - 346.3	2.68	742.5 - 928.1	350 - 400	259.9 - 371.2	20 - 24.5	14.8 - 22.7

# 6.0 La Paz SW Regional Exploration Drilling

WRE proposes to drill eight (8) exploration core holes, with a total length of approximately 900 meters, in the La Paz SW project area to determine regional extent and mineralized depth, see Figure 6.

The proposed holes are widely spaced across the project area to maximize geological knowledge in areas with sparse data. The proposed holes will be drilled in various rock types, each showing favorable TREO mineralization in surface samples to determine variation between rock types. Some holes will also help determine thickness of alluvial cover. Seven of the holes will be drilled to approximately 100 meters. One drill one drill be drilled to a depth of maximum 200 meters to locate the depth of the regional water-table and to determine if REE mineralization continues at depth.

WRE proposes to perform additional detailed geological mapping in conjunction with the exploration drilling.

WRE compiled a Notice of Intent for the La Paz SW project area and submitted the documentation to the BLM for approval.

WRE hopes to begin exploration drilling in Q4 2021 depending on time required for BLM approvals and availability of exploration drill rigs.

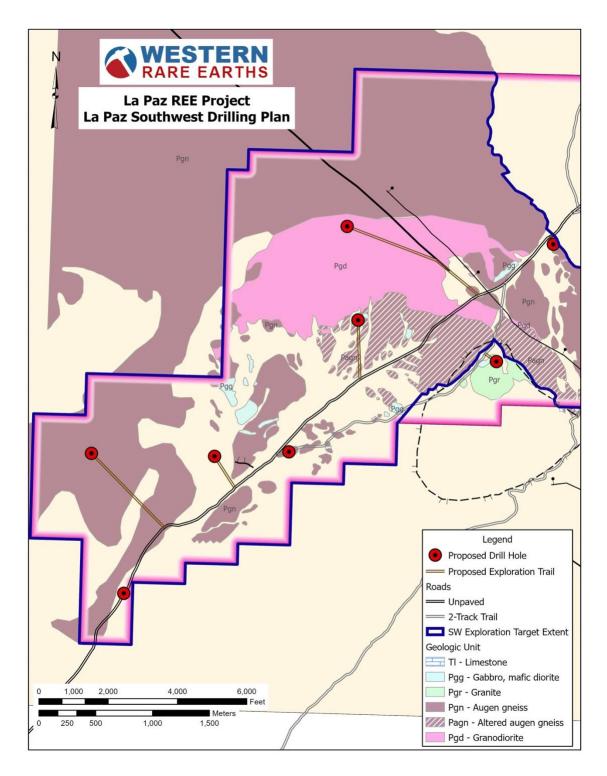


Figure 6 - Proposed La Paz SW Exploration Holes

# 7.0 Certificates of Qualifications

# CERTIFICATION OF QUALIFICATIONS Dwight M. Kinnes, CPG (Author) Chief Technical Officer American Rare Earths, Ltd.

I, DWIGHT M. KINNES, Qualified Professional Member (QP) #4063295RM of the Society of Mining Engineers (SME), HEREBY CERTIFY THAT:

- 1. I am currently employed as chief technical officer with American Rare Earths, Ltd, with an office in Centennial, CO 80122.
- 2. I am a graduate of Colorado State University, with a B.S. degree in Geology (1986), I have been practicing my profession since 1986.
- 3. I am a registered member of the Society Of Mining Engineers (SME), number 4063295.
- 4. From 1986 to present I have been actively employed in various capacities in the mining industry in numerous locations in North America, South America, Asia, Australia, and Europe.
- 5. I am the Author of the Technical Report titled "Exploration Target Summary of the La Paz Southwest Project Area" dated August 30, 2021 (the "Technical Report) and accept professional responsibility for all sections of this report.
- 6. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, The Technical Report Contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
- 7. I am employed by American Rare Earths, Ltd.
- 8. I consent to the filing of this Technical Report with any stock exchange and other regulatory authority and publication by them, including publication of this Technical Report in the public company files on their websites accessible by the public.

DATED in Centennial, Colorado, USA this 30<sup>th</sup> day of August, 2021.

Dwight M. Kinnes, CPG (4063295RM – SME)

# JAMES R. GUILINGER CONSULTING GEOLOGIST WORLD INDUSTRIAL MINERALS LLC

I, JAMES R. GUILINGER, Qualified Professional Member (QP) #01260280RM of the Society Of Mining Engineers (SME), HEREBY CERTIFY THAT:

- I am currently employed as a consulting geologist with World Industrial Minerals LLC, PO Box 130, Arvada, Colorado, USA 80004.
- 2. I am a graduate of the University of Colorado, with a B.A. degree in Geology (1973), I have been practicing my profession since 1974.
- 3. I am a member of the Society Of Mining Engineers (SME) RM, number 01260280 RM.
- 4. From 1974 to present I have been actively employed in various capacities in the mining industry in numerous locations in North America, Asia, Europe and the Middle East.
- 5. I have read the Technical Report titled "Exploration Target Summary of the La Paz Southwest Project Area" dated August 30, 2021 (the "Technical Report) and concur with the findings in this report as presented by the Author.
- 6. I have had extensive prior involvement working in rare earths and on rare earths properties similar to Searchlight since the mid 1980's in various capacities as an employee of mining companies and as a consulting geologist.
- 7. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, The Technical Report Contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
- 8. I am independent of ARR.

9. I consent to the filing of this Technical Report with any stock exchange and other regulatory authority and publication by them, including publication of this Technical Report in the public company files on their websites accessible by the public.

DATED in Arvada, Colorado, USA this 30<sup>th</sup> day of August, 2021.

James R Lenlinger

James Guilinger RM01260280

#### 8.0 Documentation

Peterson, J, 2020, "Trenching Report, La Paz Rare Earth Project", La Paz County, Arizona, Internal Company Report.

Peterson, J, 2020, "Sampling Report, La Paz Rare Earth Project", La Paz County, Arizona, Internal Company Report.

World Industrial Minerals, 2020, "2020 Technical Report on the Arizona La Paz Rare Earths and Scandium Project".

Odessa Resources Pty Ltd., 2021, "Methodology and Resource Estimation Report Undertaken for American Rare Earths at La Paz Rare Earths Project, (La Paz REE) in Arizona".

## Appendix A – JORC Table 1

Section 1 Sampling	Techniques and Data	
(Criteria in this section	on apply to all succeeding sections.)	
Criteria	JORC Code explanation	Commentary
	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.	of 2,238 feet (682 meters), 2 core holes reside within the La Paz SV project area.
Sampling techniques	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.	Representative 1kg samples were collected from each 5' (1.52m interval of drilling
	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.	A 250g sub-sample was pulverised to -75 microns and a 0.5g charge was assayed for REEO by ICP-MS using standard industry procedures at ALS Chemex, Reno, Nevada.
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.).	March 2021 Core Drilling: Timberline Drilling, Inc. from Elko Nevada, used a track-mounted core rig to drill HQ diameter core holes. Six holes were in the La Paz Resource area and three additional holes were drilled on the remainder of the property. See the Drill Hole Location Map. Drilling commenced on 11 March 2021, and concluded on 31 March 2021. Drill hole depths varied

		between 168 feet and 403 feet for a total length of 2,238 feet (682 meters).
	Method of recording and assessing core and chip sample recoveries and results assessed.	March 2021 Core Drilling: Core recovery was 98% ±. The core material was sent to America Assay Labs in Spark, Nevada for assay.
Drill sample recovery	Measures are taken to maximise sample recovery and ensure the representative nature of the samples.	All drilling was carried out above the water table to minimize possible contamination
	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.	
	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.	A representative sample of each 5' interval was retained in chip trays for logging. Geological logging is considered to have been logged to a level of detail appropriate to support Mineral Resource Estimates.
Logging	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Chip sample logging is qualitative in nature
	The total length and percentage of the relevant intersections	Drill holes were logged in full based on representative samples from every 5' interval.
	logged.	March 2021 Core Drilling: All Core was logged and photographed on-site by qualified geologists.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	March 2021 Core Drilling: All Core was shipped to American Assay Labs for further logging and testing. Additional samples were selected for metallurgical testing.
	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 pulverising 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.	The 1kg samples were delivered to an accredited laboratory for sample preparation and analysis
	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.	Sample preparation techniques are considered industry practice and are conducted at the accredited external laboratory; all deemed appropriate to the style of mineralization and suitable for determining Mineral Resource Estimates  March 2021 Core Drilling: After logging, photographing, samples were boxed and securely banded for shipping to American Assay Labs. The lab performed assays, additional photography and cutting in preparation for studies and mineral processing and metallurgy. Chains of custody were always maintained.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	
	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	Sample analysis: A 250g split from each sample was pulverised to - 75 micron and a 0.5g subsample fused with lithium borate, then subjected to a 4-acid digest and then assayed by ICP-MS for 38 elements.
Quality of assay data and laboratory tests	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, spectrometers, handheld XRF instruments, etc were used.
	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.	The laboratory used standard quality control procedures incorporating duplicate samples, standards and blanks.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	An independent consultant geologist verified significant intercepts as part of the resource estimation.
	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.	WRE collected QAQC samples during sample preparation. WRE is in the process of statistically analysing the sample QAQC sample results.
	Discuss any adjustment to assay data.	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.	March 2021 Core Drilling: Locations were determined using Handheld GPS units. Downhole surveys were not performed due to relatively shallow depths.
Location of data points	Specification of the grid system used.	March 2021 Core Drilling: UTM grid system NAD 1983 Zone 12. (The entire project was updated to use NAD 1983 UTM Zone 12 projections.
	Quality and adequacy of topographic control.	Drill hole elevations were estimated using existing USGS topographic base maps as control.
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.	The data spacing and distribution are considered sufficient for the current level of early exploration of the areas of interest
	Whether sample compositing has been applied.	Samples have not been composited as all sample intervals were equal (5').
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.	March 2021 Core Drilling: Three exploration core holes were drilled in the southwest portion of the claim area to follow up on surface samples and to explore additional mineralized zones at depth. See Drill Hole Location Map.
	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	Sample security 1 The measures are taken to ensure sample security	Drill samples were kept in a secure storage locker before dispatch
Gampio Godanty		by bonded courier to the laboratory.
		March 2021 Core Drilling: All Core was collected from the drill rig
		daily and stored in a secure, locked facility until bonded courier
		dispatched the core to America Assay Labs. Chains of custody were
		always maintained.
	The results of any audits or reviews of sampling techniques and	No audits or reviews have been conducted. An extensive review of
Audits or reviews	data.	the data has been undertaken to update the historical and current
		planned exploration activity.

<b>Section 2 Repo</b>	rting 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 tenement schedule is included in the appendix of this report. The tenements are in the form of 20-acre United States Bureau of Land Management lode mining claims. The total land package controlled by the Company in the La Paz Project Area consists of 261 unpatented lode mining claims totalling 5392.26 acres (2178.47 has). The State Exploration Permit totals 640 acres (259 has). The mining claims are 100% owned by the Company with no royalties. All claims are outside of any wilderness or national park and environmental settings. A historic railroad line crosses a portion of the claims outside of any historical or planned exploration programs. The State leased land is subject to a State royalty (yet undetermined) once the exploration activity has advanced to the exploitation level. At this point, the State engineers and geologists will evaluation any defined mineral deposit and determine an appropriate royalty.  The QP is unaware of any environmental liabilities attached to the La Paz claims and is not a Qualified Person to environmental issues. An archaeological survey of the La Paz claims conducted by Professional Archaeological Services of Tucson, Arizona, dated March 20, 2011, was submitted to the Arizona State Land Department. The survey found no substantial areas of archaeological significance (P.A.S.T., 2011). The author is not a Qualified Person to archaeological issues.
	The security of the tenure held at the time of reporting and any known impediments to obtaining a licence to operate in the area.	As long as annual Arizona State lease holding fees and annual claim holding fees are paid to both the BLM and the County (La Paz) in which the claims reside, tenure is secure.

Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	REEs were first recognised in June 2010 by John Petersen, a geologist. He submitted for analysis a reconnaissance sample from the Swansea and Bill Williams River areas that analysed 459.98 ppm Total Rare Earth Elements (TREE). A further 119 samples returned TREE values of 20.6 to 674.21 ppm. Scandium varied from 1.1 to 30.2 ppm. AusAmerican then conducted a confirmation sampling exercise of 22 samples that returned values of 6 to 588 ppm TREE, followed in February 2011 by a sample grid of 199 samples that returned 49 to 714 ppm TREE. 195 percussion drill holes were drilled in early 2011, with additional sampling was conducted in 2019 and 2020.  AusAmerican Mining Corporation carried out all drilling, and the company was listed on the ASX.
Geology	Deposit type, geological setting and style of mineralisation.	The project lies within the Harcuvar metamorphic core complex within the Basin and Range Province of Arizona. Mineralisation is hosted in alkali granitic gneiss and, to a lesser extent, a structurally superimposed suite of continental red beds. REEOs occur in Allanite (epidote), which appears as fine-grained disseminations and microfracture fillings.
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:	March 2021 Core Drilling: Timberline Drilling, Inc. from Elko, Nevada, used a track-mounted core rig to drill HQ diameter Core six holes were in the La Paz resource area and three additional holes were drilled on the remainder of the property. See the Drill Hole Location Map. Drilling commenced on 11 March 2021 and concluded on 31 March 2021. Drill hole depths varied between 168 feet and 403 feet for a total depth of 2,238 feet (682 meters).
	easting and northing of the drill hole collar	March 2021 Core Drilling: Locations of the March 2021 Core Hole
	elevation or RL (Reduced Level – elevation above sea level	data are in Appendix B of the ASX Release Technical Report 29 June 2021.

	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.	
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.	Drill holes cuttings were collected at five-foot intervals. An approximate 2 lb. (1.36 kg) sample was submitted to ALS Chemex laboratory in Reno, Nevada, for geochemical analysis. A total of 3269 samples were submitted: all were analysed for 60 elements, including REE, Y and Sc. REE assay results from the percussion drilling program are summarised in an Appendix at the back of the report
	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.	March 2021 Core Drilling: All core was packaged in 10-feet long sections in core boxes. No aggregations of the Core were performed.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	
Relationship	These relationships are particularly important in the reporting of Exploration Results.	
between mineralisation	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	The vertical drill hole orientations, 5' sample lengths are considered appropriate to the style of flat-lying bulk tonnage mineralisation
widths and intercept lengths	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').	
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.	Drill hole Locations reside in the ARR report "2021 core hole analysis summary La paz rare earth deposit La Paz county, Arizona, Appendix B" released in June 2021.

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.	Drill hole Locations reside in the ARR report "2021 core hole analysis summary La paz rare earth deposit La Paz county, Arizona, Appendix C and Appendix D" released in June 2021.
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.	Metallurgical test work was completed following the 2011 drilling program. Drillhole LP-B7 was twinned, and 16 samples were submitted to Saskatchewan Research Council, Saskatoon, Saskatchewan, Canada for pre-concentration and preliminary leaching tests.
		Representative rock specimens were submitted to SGS Canadian Laboratories, Vancouver, Canada, from within the resource areas to determine overall mineral assemblages and liberations/associations of REEs carriers.
		March 2021 Core Drilling: Approximately 500 kg of Core has been shipped to Nagrom Labs, in Perth Australia, for additional mineral processing and metallurgical testing.
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).	March 2021 Core Drilling: Approximately 500 kg of Core has been shipped to Nagrom Labs, in Perth Australia, for additional mineral processing and metallurgical testing.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	

#### **Section 3 Estimation and Reporting of Mineral Resources**

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.	Drill hole logs are captured in the DHDB database with built-in validation for imports.
	Data validation procedures used.	
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	Competent Person visited the La Paz project site in 2011 to review drill chips, verify drill hole collar locations and critical geological observations. An additional CP (author of this current updated report visited the field in 2020 to review geology and drill sites for the upcoming core drilling program
		March 2021 Core Drilling: The Competent Person visited the sire during the drilling campaign.
	If no site visits have been undertaken indicate why this is the case.	
Geological interpretation	Confidence in (or conversely, the uncertainty of ) the geological interpretation of the mineral deposit.	The La Paz project area lies within the Reid Valley Basin, adjacent to the Buckskin Mountains, in the west central part of the Basin and Range Physiographic and Structural province of southwestern United States. The Buckskin Mountains are part of the Harcuvar metamorphic core complex that features exposures of a detachment fault and its mylonitic footwall. Hanging wall rocks, collectively referred to as the Upper Plate, consist of a variety of complexly normal-faulted and tilted rocks that include syntectonic, mid-Tertiary sedimentary and volcanic rocks. The footwall block, commonly referred to as the Lower Plate, is composed of variably mylonitic crystalline and metasedimentary rocks  The geology at the La Paz project is not well understood at the project level and has not been mapped in detail, however principal rock units identified in chips included Tertiary red beds, gneiss and felsic intrusives.
	Nature of the data used and of any assumptions made.	

	The effect, if any, of alternative interpretations on Mineral Resource estimation.	
	The use of geology in guiding and controlling Mineral Resource estimation.	No resource modeling of the La Paz SW area has been performed.
	The factors affecting continuity both of grade and geology.	n/a
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	n/a
Estimation and	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	n/a
modelling techniques	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	n/a
	The assumptions made regarding recovery of by-products.	n/a
	Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).	

	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	No resource modeling of the La Paz SW area has been performed.
	Any assumptions behind modelling of selective mining units.	
	Any assumptions about correlation between variables.	n/a
	Description of how the geological interpretation was used to control the resource estimates.	
	Discussion of basis for using or not using grade cutting or capping.	
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	

Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	
Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	

Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	
	The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.	
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	
	The basis for the classification of the Mineral Resources into varying confidence categories.	
Classification	Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	
	Whether the result appropriately reflects the Competent Person's view of the deposit.	
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	

Discussion of relative accuracy/	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	
confidence	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	

# Appendix B – Drilling Data for LP21-03 and LP21-04

## **Drill Hole Lithology**

ole	Ea	sting	No	orthing	7 (	Collar	Total Depth	Township	Range	Secti	ion Mine Area	Azimu	th Inclin.
3	23	8,185.00	) 3,7	778,502	2.00	502.09	61.87	T09N	R15W	20	2021 Drilling	S 0.00	90.00
Ra	w Depth	ıs	Adjus	sted Dep	ths								
From	To	Thick.	From	To	Thick.	Color	I	Lithology Typ	e	Lit	h. Qualifier	Lith De	esc
Hard	Grain S	ize	S	Sort		Mech Sta	te Bed Space	Sed Struct	Weath	ering	Interrelation Ga	Comment	
0.00	2.74	2.74	0.00	2.74	2.74							Surficial de	eposits; soil, sheetwash, alluvial rubble
2.74	19.20	16.46	2.74	19.20	16.46			Diorite					
												mylonite de	te; Swansea plutonic suite diorite with local eformation (gneissic textures), strong to epidote and chlorite alteration/mineralization.
19.20	33.22	14.02	19.20	33.22	14.02		Γ	Diorite		gra	nitic		
												igneous un variation); v	y diorite with lesser granodiorite (same it as above with minor compositional very sparse zones of mylonitization and xture; weak epidote and chlorite alteration.
33.22	43.28	10.06	33.22	43.28	10.06		r	mylonite gneiss	3				
												diorite/gran	neiss, very well-banded; derived from nodiorite unit as above; weak to localized epidote/chlorite.
43.28	46.94	3.66	43.28	46.94	3.66		C	cataclasite					
												brittle defor	e (sealed tectonic breccia) derived from mainly rmation of diorite/granodiorite unit as all above. ote/chlorite alteration.
46.94	61.87	14.93	46.94	61.87	14.93			Diorite					
													the Swansea plutonic suite, only very weak bric locally, weak epidote/chlorite locally.
	Ra From Hard 0.00 2.74 19.20 33.22	3 23.  Raw Depth From To Hard Grain S 0.00 2.74 2.74 19.20 19.20 33.22 33.22 43.28 43.28 46.94	3 238,185.00  Raw Depths  From To Thick.  Hard Grain Size  0.00 2.74 2.74  2.74 19.20 16.46  19.20 33.22 14.02  33.22 43.28 10.06	3     238,185.00     3,7       Raw Depths     Adjust       From     To Thick.     From       Hard     Grain Size     S       0.00     2.74     2.74     0.00       2.74     19.20     16.46     2.74       19.20     33.22     14.02     19.20       33.22     43.28     10.06     33.22       43.28     46.94     3.66     43.28	3     238,185.00     3,778,502       Raw Depths     Adjusted Depths       From     To       Hard     Grain Size     Sort       0.00     2.74     2.74     0.00     2.74       2.74     19.20     16.46     2.74     19.20       19.20     33.22     14.02     19.20     33.22       33.22     43.28     10.06     33.22     43.28       43.28     46.94     3.66     43.28     46.94	3       238,185.00       3,778,502.00       3         Raw Depths       Adjusted Depths         From       To Thick.         Hard       Grain Size       Sort         0.00       2.74       2.74       0.00       2.74       2.74         2.74       19.20       16.46       2.74       19.20       16.46         19.20       33.22       14.02       19.20       33.22       14.02         33.22       43.28       10.06       33.22       43.28       10.06         43.28       46.94       3.66       43.28       46.94       3.66	3       238,185.00       3,778,502.00       502.09         Raw Depths         From       To Thick. Color         Hard       Grain Size       Sort       Mech State         0.00       2.74       2.74       0.00       2.74       2.74         2.74       19.20       16.46       2.74       19.20       16.46         19.20       33.22       14.02       19.20       33.22       14.02         33.22       43.28       10.06       33.22       43.28       10.06         43.28       46.94       3.66       43.28       46.94       3.66	3         238,185.00         3,778,502.00         502.09         61.87           Raw Depths         Adjusted Depths           From         To Thick.         From To Thick.         Color         Deed Space           0.00         2.74         2.74         0.00         2.74         2.74           2.74         19.20         16.46         2.74         19.20         16.46         16.46           19.20         33.22         14.02         19.20         33.22         14.02         14.02           33.22         43.28         10.06         33.22         43.28         10.06         10.06           43.28         46.94         3.66         43.28         46.94         3.66         6.94	3	3	3	3       238,185.00       3,778,502.00       502.09       61.87       TO PRISE TOWN R15W 20       2021 Drilling         Raw Depths       Adjusted Depths         From To Thick.       From Sort       Color       Lithology Type       Lith. Qualifier         Hard Grain Size       Sort       Mech State       Bed Space Sed Struct       Weathering       Interrelation       Gas         2.74       19.20       16.46       2.74       19.20       16.46       Diorite       granitic         19.20       33.22       14.02       19.20       33.22       14.02       Diorite       granitic	Raw Depths   Adjusted Depths   From   To   Thick   From   To   Thick   Color   Mech State   Bed Space   Sed Struct   Weathering   Interrelation   Gas   Comment

## **Drill Hole Lithology**

Drill H	ole	Ea	sting	N	orthing	3 (	Collar	Total Depth	Township	Range	Sect	ion Mine Are	ea	Azimut	h Inclin.	
LP21-04	4	236	5,199.00	9 3,	777,095	5.00 4	482.74	77.11	T09N	R15W	19	2021 Drill	ling S	0.00	90.00	
	Ra	w Depth	s	Adjus	sted Dep	oths										
Seam	From	To	Thick.	From	To	Thick.	Color	]	Lithology Typ	e	Lit	h. Qualifier		Lith De	sc	
RQD	Hard	Grain Si	ize	5	Sort		Mech Sta	te Bed Space	e Sed Struct	Weath	ering	Interrelation	Gas	Comment		
Qal	0.00	3.05	3.05	0.00	3.05	3.05		;	alluvium					Surficial de	posits of soil and sheetwas	sh alluvium
Tsp	3.05	10.06	7.01	3.05	10.06	7.01			Gneiss					derived from the Swanse	mylonite gneiss and local the deformation of granite a plutonic suite; strong epi neralization.	e or granodiorite of
Tsp	10.06	17.37	7.31	10.06	17.37	7.31			Diorite						only weak local mylonite crite alteration.	gneiss fabric; weak
Tsp	17.37	18.59	1.22	17.37	18.59	1.22		l	mylonite gneis	S				Mylonite gn weak epidot	eiss derived from granodio e/chlorite.	orite or diorite,
Tsp	18.59	24.08	5.49	18.59	24.08	5.49		1	Granodiorite						e with thin zones mylonite epidote/chlorite alteration	
Tsp	24.08	29.87	5.79	24.08	29.87	5.79		l	mylonite gneis	S				granodiorite	eiss and cataclasite brecc or granite; strong epidote/ neralization.	
Tsp	29.87	39.62	9.75	29.87	39.62	9.75			Diorite						weak, local mylonite gneis pidote/chlorite.	ss textures,
Tsp	39.62	51.21	11.59	39.62	51.21	11.59		I	mylonite gneis	S					eiss derived from diorite; r rite alteration.	noderate to weak
Tsp	51.21	58.22	7.01	51.21	58.22	7.01			Diorite						weak to locally moderate of narrow mylonitic gneiss	
Tsp	58.22	66.14	7.92	58.22	66.14	7.92			Gneiss		dio	ritic		gneiss fabri from weak t	with diorite and highly var c and variable epidote/chlo o strong. Includes a fine-ging epidote/chlorite mineral	orite mineralization rained aplitic dike
Tsp	66.14	74.98	8.84	66.14	74.98	8.84			Diorite					Diorite, wea	ak epidote/chlorite. Mostly	non-foliated.

Drill H	lole	East	ting	No	orthing	g	Collar	Total Depth	Township	Range	Sectio	n Mine Area	Azimuth	Inclin.
LP21-0	4	236,	199.00	3,7	777,095	5.00	482.74	77.11	T09N	R15W	19	2021 Drilling S	0.00	90.00
	Ra	w Depths		Adjus	ted Dep	pths								
Seam	From	То Т	hick.	From	To	Thick.	Color	L	ithology Type	e	Lith.	Qualifier	Lith Desc	e
RQD	Hard	Grain Siz	æ	S	ort		Mech Sta	ite Bed Space	Sed Struct	Weath	ring I	nterrelation Gas	Comment	
Tsp	74.98	76.81	1.83	74.98	76.81	1.83		D	Diorite					
														eiss derived from deformation of diorite; weak epidote/chlorite.

 Drill Hole
 Northing
 Easting
 Collar
 Total Depth
 Hole Type

 LP21-03
 3,778,502.00
 238,185.00
 502.09
 61.87
 FC

From	To Denth	Sample No.						Li	ght Rì	EE						Heavy	REE	;				
Depth	10 Верін	Sample 110.	TREE	LREE	HREE	MREE	La	Ce	Pr	Nd	Sm	Y	Eu	Gd	Tb	Dy	Ho	Er	Tm	<i>Yb</i>	Lu	Sc
2.74	3.96	10046	182	148	23	46	38	67	8	30	5	17	1	4	5	3	1	2	0	1	0	10
3.96	5.49	10047	200	166	24	51	42	77	9	33	6	16	1	4	5	3	1	2	0	1	0	11
5.49	6.40	10048	213	173	27	53	39	84	9	35	6	19	1	5	5	4	1	2	0	2	0	12
6.40	7.62	10049	274	216	37	73	48	98	13	49	9	29	2	8	6	6	1	3	0	2	0	13
7.62	8.84	10050	233	187	31	60	44	86	11	39	7	22	2	6	6	5	1	2	0	2	0	11
8.84	10.06	10051	316	255	40	86	57	115	15	58	10	30	2	8	6	6	1	3	0	2	0	13
10.06	11.58	10053	498	402	63	137	84	183	25	93	17	49	3	13	8	11	2	5	1	4	1	17
11.58	13.11	10054	273	217	36	73	49	98	13	49	9	29	2	7	5	6	1	3	0	2	0	12
13.11	14.63	10055	177	144	22	47	33	65	9	31	6	17	1	5	3	4	1	2	0	1	0	9
14.63	16.15	10056	287	229	37	77	52	104	14	51	9	29	2	7	6	6	1	3	0	2	0	12
16.55	18.17	10057	320	258	41	89	57	115	16	60	11	32	2	8	6	7	1	3	0	3	0	12
18.17	19.20	10058	245	196	32	66	45	87	12	44	8	25	2	6	5	5	1	3	0	2	0	10
19.20	20.42	10060	321	259	42	88	58	117	15	58	10	30	2	8	8	6	1	3	0	2	0	12
20.42	21.95	10061	235	189	32	68	43	83	12	44	8	20	2	6	8	4	1	2	0	2	0	11
21.95	23.47	10062	257	206	36	74	47	90	13	48	8	23	2	7	8	5	1	3	0	2	0	11
23.47	24.99	10063	223	176	33	64	41	77	11	41	7	21	2	6	8	5	1	2	0	2	0	12
24.99	26.52	10064	173	137	25	50	32	59	9	32	6	17	2	5	5	4	1	2	0	2	0	9
26.52	28.04	10065	247	203	32	69	49	89	12	45	8	20	2	6	7	4	1	2	0	2	0	10
28.04	29.66	10066	206	161	31	58	34	74	10	37	7	21	2	6	7	5	1	2	0	2	0	11
29.66	31.24	10067	219	171	33	63	38	75	11	40	7	22	2	6	8	5	1	2	0	2	0	11
31.24	32.40	10068	253	195	39	74	41	86	12	47	9	28	2	7	9	6	1	3	0	2	0	13
32.40	33.28	10069	230	173	37	68	36	77	11	42	8	27	2	6	9	5	1	3	0	3	0	13
33.28	34.26	10070	141	114	18	39	26	50	7	27	5	13	1	4	3	3	1	1	0	1	0	7
34.26	35.05	10072	257	200	38	74	43	88	13	48	9	28	2	7	7	6	1	3	0	2	0	12
35.05	37.06	10073	376	294	54	109	61	129	19	73	13	41	3	11	9	9	2	5	1	4	1	16
37.06	38.71	10074	237	176	41	71	38	75	11	43	8	28	2	7	10	6	1	3	0	3	0	16
38.71	40.29	10075	446	351	63	129	72	153	22	87	16	49	3	13	9	11	2	5	1	4	1	17
40.29	41.15	10076	452	357	63	131	72	158	23	89	16	48	3	13	9	10	2	5	1	4	1	17
41.15	42.06	10077	409	319	59	120	66	137	21	81	15	45	3	12	10	10	2	5	1	4	1	18

 Drill Hole
 Northing
 Easting
 Collar
 Total Depth
 Hole Type

 LP21-03
 3,778,502.00
 238,185.00
 502.09
 61.87
 FC

From	To Depth	Sample No.						Lig	ght RI	E <b>E</b>						Heavy	REE	!				
Depth	1	1	TREE	LREE	HREE	MREE	La	Ce	Pr	Nd	Sm	Y	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Sc
42.06	43.28	10078	348	275	50	102	56	121	18	68	13	36	3	10	8	8	1	4	1	3	0	13
43.28	44.68	10079	355	280	50	101	62	121	17	67	12	38	3	10	8	8	2	4	1	3	0	16
44.68	45.90	10081	301	241	42	99	51	95	19	66	11	28	2	8	7	6	1	3	0	3	0	14
45.90	47.00	10082	225	175	34	67	38	75	11	43	8	23	2	6	8	5	1	3	0	2	0	15
47.00	48.16	10083	224	180	31	63	42	79	11	41	7	21	2	6	7	4	1	2	0	2	0	15
48.16	49.68	10084	172	136	25	49	32	60	8	31	6	17	2	4	6	4	1	2	0	1	0	14
49.68	51.21	10085	113	87	17	32	20	38	5	21	4	13	1	3	3	3	1	1	0	1	0	9
51.21	52.73	10086	187	134	36	59	27	56	9	36	7	25	2	6	9	5	1	3	0	2	0	14
52.73	54.25	10087	155	116	26	46	22	51	7	29	6	19	2	5	5	4	1	2	0	2	0	14
54.25	55.78	10088	175	130	31	54	26	55	8	34	6	21	2	5	8	5	1	2	0	2	0	14
55.78	57.30	10089	234	180	37	68	41	77	11	43	8	25	2	6	9	6	1	3	0	2	0	14
57.30	58.40	10090	164	122	28	49	25	51	8	31	6	21	2	5	6	4	1	2	0	2	0	15
58.40	60.08	10091	164	120	29	49	25	51	8	31	6	21	2	5	6	5	1	2	0	2	0	13
60.08	61.87	10092	198	149	33	59	33	61	10	37	7	24	2	6	7	5	1	3	0	2	0	16

 Drill Hole
 Northing
 Easting
 Collar
 Total Depth
 Hole Type

 LP21-04
 3,777,095.00
 236,199.00
 482.74
 77.11
 FC

From	To Don41.	Sample No.						Lic	ght RI	EE						Heavy	REE	,				
Prom Depth	10 Деріп	Sample No.	TREE	LREE	HREE	MREE	La	Ce	Pr	Nd	Sm	Y	Eu	Gd	<b>Tb</b>	Dy Dy	Но	Er	Tm	<i>Yb</i>	Lu	Sc
0.00	1.83	10093	175	140	21	44	34	63	8	30	6	18	1	5	2	4	1	2	0	2	0	7
1.83	2.96	10095	301	240	39	80	54	106	14	55	10	32	2	9	4	7	1	4	1	3	0	11
2.96	3.96	10096	465	370	64	130	79	163	23	89	16	48	3	14	8	10	2	5	1	4	1	16
3.96	5.36	10097	411	328	55	112	70	147	20	77	14	43	3	12	6	9	2	5	1	4	1	16
5.36	6.46	10098	538	432	70	147	93	194	26	101	18	54	3	16	8	12	2	6	1	5	1	17
6.46	7.41	10099	369	300	46	99	66	136	18	68	12	35	2	10	5	8	1	4	1	3	0	12
7.41	8.90	10100	135	115	14	33	30	51	6	24	4	10	1	3	1	2	0	1	0	1	0	5
8.90	10.00	10101	409	325	55	113	69	145	20	77	14	43	3	12	7	9	2	5	1	4	1	17
10.00	11.28	10102	365	293	48	100	65	131	17	68	12	35	3	10	7	8	1	4	1	3	0	13
11.28	12.80	10103	194	150	30	53	36	66	9	34	6	20	2	6	7	4	1	2	0	2	0	10
12.80	14.33	10104	210	161	34	60	37	70	10	38	7	23	2	6	7	5	1	3	0	2	0	10
14.33	15.85	10105	221	170	34	62	39	74	10	40	7	25	2	7	7	5	1	3	0	2	0	13
15.85	17.31	10106	202	154	32	59	34	66	10	38	7	23	2	6	6	5	1	3	0	2	0	13
17.31	18.62	10107	264	209	37	73	47	91	13	49	9	28	2	8	5	6	1	3	0	2	0	13
18.62	19.84	10109	168	142	19	41	37	65	8	28	5	13	1	4	3	3	1	1	0	1	0	7
19.84	21.09	10110	209	162	31	56	37	73	9	36	7	22	2	6	6	5	1	3	0	2	0	13
21.09	22.62	10111	147	124	16	36	33	57	7	24	4	10	1	3	3	2	0	1	0	1	0	7
22.62	24.08	10112	135	110	16	33	27	51	6	22	4	13	1	3	2	2	1	1	0	1	0	6
24.08	25.30	10113	368	285	51	97	62	127	17	66	13	45	2	11	5	9	2	5	1	4	1	12
25.30	26.82	10114	436	350	58	120	77	156	21	81	15	42	3	12	8	9	2	5	1	4	0	15
26.82	28.35	10115	443	357	58	122	76	161	22	84	15	43	3	13	7	10	2	5	1	4	1	14
28.35	29.99	10116	423	340	56	117	75	149	21	80	14	41	3	12	7	9	2	5	1	4	0	12
29.99	31.24	10117	341	271	47	95	60	120	17	64	11	34	3	10	7	7	1	4	1	3	0	13
31.24	32.92	10118	392	314	53	106	69	142	19	72	13	39	3	12	7	9	2	4	1	3	0	13
32.92	34.44	10119	403	322	53	109	69	145	19	75	14	41	3	12	6	9	2	4	1	4	0	15
34.44	35.97	10120	361	290	47	99	64	129	17	68	12	36	3	10	6	8	1	4	1	3	0	11
35.97	37.49	10122	331	266	43	89	61	119	15	61	11	33	2	9	6	7	1	4	1	3	0	11
37.49	39.01	10123	421	335	56	115	73	150	20	79	14	44	3	12	7	9	2	5	1	4	0	15
39.01	39.72	10124	259	208	34	70	46	92	12	48	9	26	2	8	4	6	1	3	0	2	0	11

 Drill Hole
 Northing
 Easting
 Collar
 Total Depth
 Hole Type

 LP21-04
 3,777,095.00
 236,199.00
 482.74
 77.11
 FC

From	To Denth	Sample No.						Li	ght Rl	E <b>E</b>						Heavy	REE	,				
Depth	To Depin	Sumple 110.	TREE	LREE	HREE	MREE	La	Ce	Pr	Nd	Sm	Y	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Sc
39.72	40.54	10125	452	361	61	126	78	160	22	86	15	45	3	13	8	10	2	5	1	4	1	18
40.54	42.06	10126	422	341	53	112	75	154	20	78	14	43	3	12	5	9	2	5	1	4	0	14
42.06	43.59	10127	469	373	62	128	81	166	22	88	16	49	3	14	7	10	2	5	1	4	1	17
43.59	45.11	10128	411	331	53	110	73	150	19	75	14	42	3	11	6	9	2	4	1	3	0	15
45.11	46.63	10130	509	418	61	141	95	181	27	98	17	46	3	14	6	10	2	5	1	4	1	14
46.63	48.16	10131	476	380	62	126	83	173	22	87	16	50	3	13	8	10	2	5	1	4	1	15
48.16	49.68	10132	429	345	55	114	77	155	20	79	14	44	3	12	6	9	2	5	1	4	0	15
49.68	51.21	10133	335	275	41	89	65	123	16	61	11	30	2	9	5	6	1	3	0	3	0	12
51.21	52.73	10134	291	237	36	77	54	108	14	52	9	27	2	8	5	6	1	3	0	2	0	9
52.73	54.25	10135	351	287	44	94	68	128	17	64	11	31	3	9	7	7	1	3	0	3	0	12
54.25	55.78	10136	158	128	20	41	31	58	7	28	5	15	1	4	3	3	1	2	0	1	0	7
55.78	57.30	10137	260	213	33	70	52	94	12	46	8	22	2	7	6	5	1	2	0	2	0	11
57.30	58.09	10138	306	247	40	82	61	109	14	55	9	28	2	8	8	6	1	3	0	3	0	14
58.09	59.28	10139	499	404	63	134	89	182	24	93	16	48	3	14	7	11	2	5	1	4	1	14
59.28	60.35	10140	265	210	37	73	48	92	13	49	9	27	2	8	6	6	1	3	0	2	0	12
60.35	61.90	10141	333	263	48	94	58	115	16	63	11	34	3	10	8	7	1	4	1	3	0	16
61.90	62.82	10143	469	374	63	129	81	166	23	89	16	49	3	14	8	10	2	5	1	4	1	16
62.82	63.83	10144	225	179	29	58	42	80	10	40	7	24	2	6	3	5	1	2	0	2	0	10
63.83	64.92	10145	313	247	44	85	58	110	14	55	10	32	2	9	8	7	1	4	1	3	0	13
64.92	66.11	10146	334	262	46	89	59	117	15	60	11	36	2	10	6	8	1	4	1	3	0	20
66.11	67.00	10147	280	224	37	74	54	101	13	49	8	27	2	7	8	5	1	3	0	2	0	13
67.00	67.97	10148	313	248	44	88	56	110	15	57	10	30	2	9	9	6	1	3	0	3	0	14
67.97	69.49	10149	342	283	41	88	71	128	16	59	10	28	2	8	8	6	1	3	0	3	0	14
69.49	71.02	10150	256	200	38	74	43	87	12	49	9	27	2	7	7	6	1	3	0	3	0	13
71.02	72.54	10151	279	228	36	74	55	102	13	49	8	24	2	7	7	5	1	3	0	2	0	12
72.54	74.07	10152	312	258	37	80	65	116	14	54	9	26	2	8	7	5	1	3	0	2	0	11
74.07	74.86	10153	409	329	54	111	76	145	19	75	13	39	3	11	9	8	2	4	1	3	0	14
74.86	75.59	10154	432	349	54	114	79	157	20	78	14	43	3	12	6	9	2	5	1	4	0	13
75.59	76.66	10155	479	386	60	127	85	174	23	88	16	48	3	13	6	10	2	5	1	4	1	15

Rare	<b>Earth</b>	Element	<b>Summary</b>
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 Drill Hole
 Northing
 Easting
 Collar
 Total Depth
 Hole Type

 LP21-04
 3,777,095.00
 236,199.00
 482.74
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 FC

From Depth	To Depth San	Sample No.					Light REE					Heavy REE										
	•		TREE	LREE	HREE	<b>MREE</b>	La	Ce	Pr	Nd	Sm	Y	Eu	Gd	Tb	Dy	Ho	Er	Tm	<i>Yb</i>	Lu	Sc
76.66	77.11	10157	308	247	41	82	59	110	14	54	10	30	2	8	8	6	1	3	0	3	0	18