American Rare Earths Limited ARBN 003 453 503

ASX RELEASE

17 March 2023

Final drill assays indicate a significant rare earth deposit in Wyoming, spanning over 10 square kilometres to depths of 150 metres

Highlights

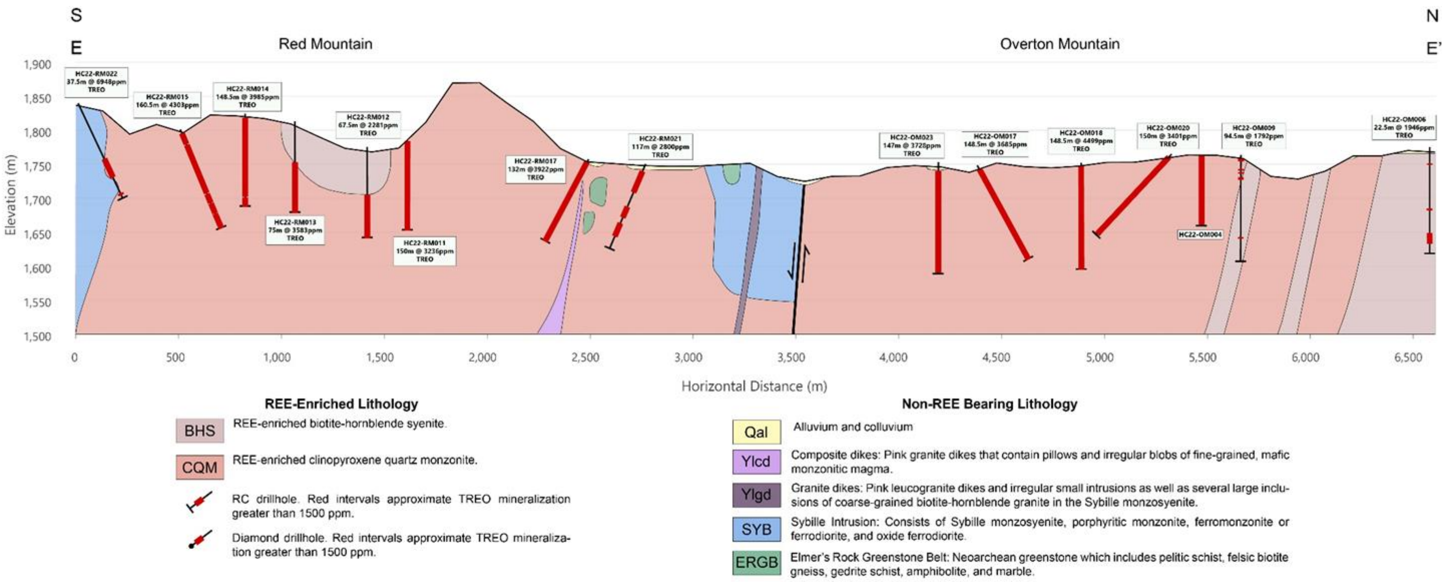
- Final assays received confirm rare earth mineralisation at both the Red Mountain and Overton Mountain areas within the Halleck Creek District Wyoming
- Surface grades from previous sampling shown now to be consistent at depth
- This is important as the area drilled is only 25% of the total area sampled to date
- The company is on target to release its maiden JORC Resource at the end of March 2023

American Rare Earths (ASX: ARR | OTCQB: ARRNF | FSE: 1BHA) the '**Company'** is pleased to announce final assay results for the 38 drill hole program completed recently at its Halleck Creek Rare Earths project in Wyoming, USA. The new assays also confirm rare earth mineralisation extending from surface to new depths at the Overton Mountain area. Importantly, the successful drill program has demonstrated consistent rare earths grades throughout both the Overton Mountain and Red Mountain areas. The deposit remains open.

"These results confirm American Rare Earths has discovered a strategically significant rare earth deposit in the USA at Halleck Creek. The deposit covers over ten square kilometres and is potentially the largest rare earth deposit in North America. The consistency of Total Rare Earth Oxide (TREO) grades at increased depth is perhaps the most significant element of the results thus far, considering the small area of the project drilled to date and the consistency of surface samples across the entire project area" said Chris Gibbs, Managing Director.

The Company's dedicated team is now diligently working toward releasing a maiden JORC resource by the end of March 2023 to conclude a very busy first quarter of the calendar year.

The cross section below provides an overview of the Red Mountain and Overton Mountain areas at Halleck Creek.



Cross Section of Overton Mountain and Red Mountain

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

Mr Chris Gibbs
CEO & Managing Director

Competent Persons Statement:

The information in this document is based on company work performed in March 2023. This work was reviewed and approved for release by Mr Dwight Kinnes (Society of Mining Engineers #4063295RM) who is employed by American Rare Earths and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 JORC Code. Mr Kinnes consents to the inclusion in the report of the matters based upon the information in the form and context in which it appears.

About American Rare Earths:

One of the only ASX listed companies with exposure to the rapidly expanding US market, American Rare Earths is developing its 100% owned magnet metals projects, La Paz in Arizona, and Halleck Creek in Wyoming. Both have potential to be among the largest, rare earths deposits in North America. The Company is concurrently evaluating other exploration opportunities while collaborating with US Government supported R&D to develop a sustainable domestic supply chain for the renewable future.

Assay Results & Technical Summary

Since the announcement on 13 February 2023, assays for all 38 RC holes drilled across the Red Mountain resource area (refer to Table 1) and the Overton Mountain resource area have been received (refer to Table 2). Major intercepts from the new assays continue to show outstanding drill results with consistent TREO grade from surface. These new results include:

- HC22- RM011 averages 3,236 ppm TREO over 150 metres
- HC22- OM010 averages 3,080 ppm TREO over 145.5 metres
- HC22- OM011 averages 4,219 ppm TREO over 147.0 metres
- HC22- OM012 averages 4,256 ppm TREO over 142.5 metres
- HC22- OM013 averages 4,113 ppm TREO over 136.5 metres
- HC22- OM014 averages 4,326 ppm TREO over 150.0 metres
- HC22- OM015 averages 3,570 ppm TREO over 141.0 metres
- HC22-OM017 averages 3,685 ppm TREO over 148.5 metres
- HC22-OM018 averages 4,499 ppm TREO over 148.5 metres
- HC22-OM019 averages 3,870 ppm TREO over 148.5 metres
- HC22-OM020 averages 3,401 ppm TREO over 150.0 metres
- HC22-OM021 averages 3,790 ppm TREO over 148.5 metres
- HC22-OM022 averages 4,197 ppm TREO over 150.0 metres
- HC22-OM023 averages 3,728 ppm TREO over 147.0 metres
- HC22-OM024 averages 4,105 ppm TREO over 150.0 metres
- HC22-OM025 averages 3,538 ppm TREO over 150.0 metres

These assay results demonstrate that the clinopyroxene quartz monzonite (CQM) remains the primary rare earth element bearing unit within the Red Mountain Pluton (RMP).

The results observed drill holes HC22-OM011 through HC22-OM015 are significant because they infer continued mineralisation within both the Overton and Red Mountain areas towards the Bluegrass project area to the east.

The biotite hornblende quartz syenite (BHS) observed in several Overton Mountain holes, also exhibits significant REE enrichment. This is well illustrated in drill holes HC22-OM006 through HC22-OM009, refer to Table 2. For example, HC22-OM007 exhibits an average TREO value of 2,348 ppm sustained over a length of 88.5 m using a cut-off of 1,500 ppm with the BHS as the dominant lithology. As such, the Halleck Creek resources could greatly increase with the BHS as a secondary mineralisation target.

The fence diagrams below illustrate the distribution of TREO grade across Red Mountain (refer to Figure 1 though Figure 3) and Overton Mountain (refer to Figure 4 though Figure 7) for all drill holes in the project. Figure 8 and Figure 9 show oblique views of Red Mountain and Overton Mountain, respectively, with TREO highlighted showing the consistency of rare earth mineralisation vertically within drill holes, and laterally between drill holes.

Table 1 Summary of Assays within the Red Mountain Resource Area**

DHID	Sample Count	Total Thick (m)	TREO			MREO			LREO			HREO		
			Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max
HC22-RM005	26	39.0	2,623	1,687	4,233	702	402	1,098	2,300	1,359	3,844	323	149	495
HC22-RM006	16	24.0	2,480	1,619	3,832	687	463	995	2,123	1,418	3,293	357	201	539
HC22-RM007	100	150.0	3,966	2,238	6,666	1,084	620	1,801	3,523	1,965	5,881	443	269	785
HC22-RM008	3	4.5	1,585	1,513	1,663	509	491	536	1,258	1,201	1,321	327	312	342
HC22-RM009	95	142.5	3,163	1,501	4,726	856	408	1,350	2,863	1,277	4,159	300	157	567
HC22-RM010	99	148.5	2,596	1,776	3,221	709	482	887	2,287	1,518	2,838	309	206	403
HC22-RM011	100	150.0	3,236	2,102	3,675	899	570	1,066	2,856	1,813	3,257	381	265	453
HC22-RM012	45	67.5	2,281	1,603	2,985	602	438	783	2,040	1,379	2,699	241	187	345
HC22-RM013	50	75.0	3,583	1,699	4,323	965	453	1,196	3,283	1,498	3,952	301	194	371
HC22-RM014	99	148.5	3,958	2,897	4,572	1,053	766	1,260	3,639	2,621	4,200	319	239	372
HC22-RM015	113	169.5	4,303	1,635	5,762	1,189	470	1,596	3,860	1,373	5,084	443	230	678
HC22-RM016	99	148.5	3,495	1,890	4,246	954	497	1,174	3,106	1,686	3,782	389	204	464
HC22-RM017	88	132.0	3,922	1,903	5,969	1,092	607	1,705	3,382	1,334	5,129	540	357	984
HC22-RM018	33	49.5	2,225	1,507	4,639	700	459	1,342	1,824	1,212	4,182	401	274	604
HC22-RM019	63	94.5	3,071	1,597	8,784	866	464	2,321	2,722	1,310	8,335	349	215	730
HC22-RM020	8	12.0	3,602	1,592	8,359	983	446	2,307	3,162	1,367	7,466	439	225	893
HC22-RM021	78	117.0	2,800	1,504	7,183	779	430	1,942	2,492	1,216	6,589	309	239	594
HC22-RM022	25	37.5	6,948	1,828	10,636	1,990	493	3,097	6,239	1,620	9,704	710	208	964
Grand Total	**1,140**	**1,710.0**	**3,447**	**1,501**	**10,636**	**948**	**402**	**3,097**	**3,069**	**1,201**	**9,704**	**378**	**149**	**984**

TREO: Total rare earth oxide, MREO: Magnetic rare earth oxide, LREO: Light rare earth oxide, HREO: heavy rare earth oxide

**TREO 1,500ppm cut-off

Table 2 Summary of Assays within the Overton Mountain Resource Area**

DHID	Sample Count	Total Thick (m)	TREO			MREO			LREO			HREO		
			Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max
HC22-OM006	15	22.5	1,946	1,532	2,563	526	411	698	1,572	1,213	2,163	374	319	446
HC22-OM007	59	88.5	2,348	1,510	6,710	662	432	1,837	2,030	1,240	6,228	318	257	482
HC22-OM008	37	55.5	1,631	1,500	2,434	454	415	641	1,368	1,235	2,030	262	234	404
HC22-OM009	63	94.5	1,792	1,501	2,815	486	409	735	1,468	1,175	2,457	324	264	417
HC22-OM010	97	145.5	3,080	1,541	5,579	835	437	1,457	2,759	1,271	5,154	321	229	426
HC22-OM011	98	147.0	4,219	2,944	5,872	1,122	747	1,606	3,861	2,687	5,375	357	257	497
HC22-OM012	99	148.5	4,255	2,436	5,313	1,146	664	1,452	3,873	2,220	4,837	382	216	476
HC22-OM013	91	136.5	4,113	1,564	5,083	1,082	420	1,354	3,737	1,315	4,605	376	249	479
HC22-OM014	100	150.0	4,326	2,331	5,942	1,162	639	1,611	3,936	2,112	5,386	390	219	556
HC22-OM015	94	141.0	3,570	1,579	5,874	960	409	1,579	3,191	1,299	5,282	378	253	592
HC22-OM016	71	106.5	2,954	1,510	4,532	788	379	1,243	2,602	1,233	4,105	352	182	546
HC22-OM017	99	148.5	3,685	1,765	5,070	986	459	1,312	3,312	1,593	4,611	372	172	540
HC22-OM018	99	148.5	4,499	3,236	6,234	1,212	852	1,697	4,083	2,935	5,660	416	301	600
HC22-OM019	99	148.5	3,870	2,955	5,419	1,046	805	1,467	3,494	2,657	4,976	376	298	443
HC22-OM020	100	150.0	3,401	2,322	4,635	920	628	1,263	3,063	2,042	4,227	339	280	408
HC22-OM021	99	148.5	3,790	2,842	5,071	1,006	754	1,362	3,386	2,509	4,577	404	320	537
HC22-OM022	100	150.0	4,197	3,084	5,273	1,118	836	1,395	3,804	2,778	4,810	392	306	463
HC22-OM023	98	147.0	3,728	2,931	5,121	998	802	1,392	3,329	2,564	4,483	399	287	702
HC22-OM024	100	150.0	4,105	2,602	9,310	1,095	706	2,585	3,708	2,300	8,585	397	302	725
HC22-OM025	100	150.0	3,538	1,962	6,483	950	509	1,752	3,180	1,767	5,847	358	195	636
Grand Total	**1,718**	**2,577.0**	**3,658**	**1,500**	**9,310**	**982**	**379**	**2,585**	**3,288**	**1,175**	**8,585**	**370**	**172**	**725**

TREO: Total rare earth oxide, MREO: Magnetic rare earth oxide, LREO: Light rare earth oxide, HREO: heavy rare earth oxide

**TREO 1,500ppm cut-off

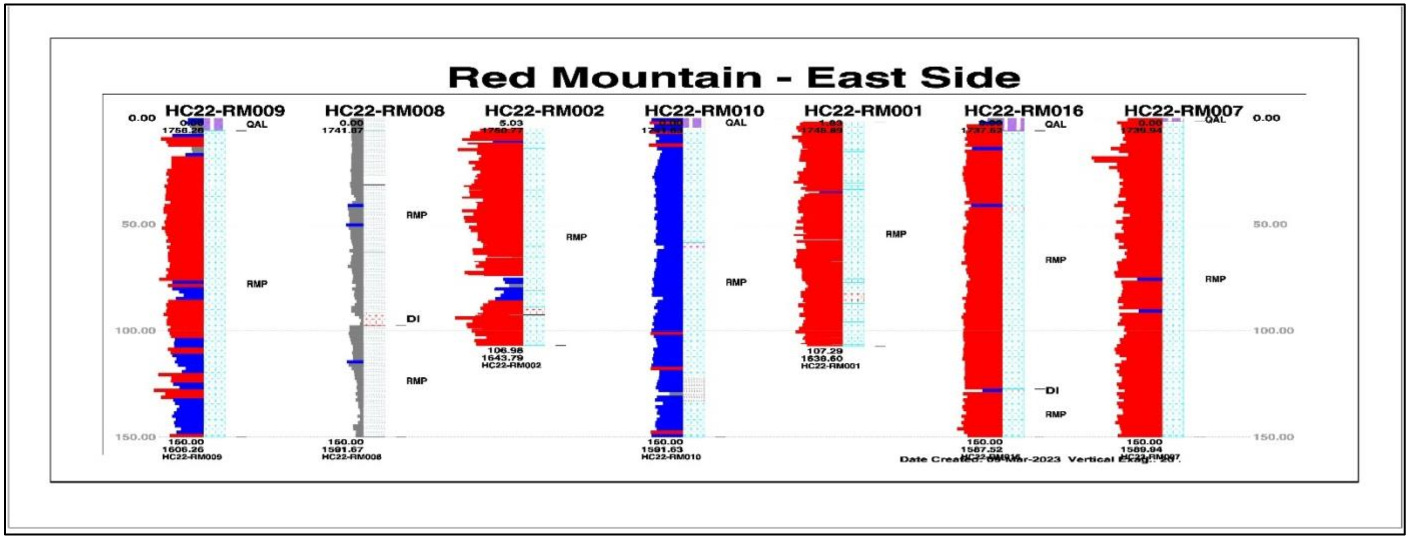


Figure 1 Assay Fence Diagram Red Mountain – East Side

TREO Red: >=3,000ppm, Blue: >=1,500ppm – <3,000ppm, Gray: <1,500ppm

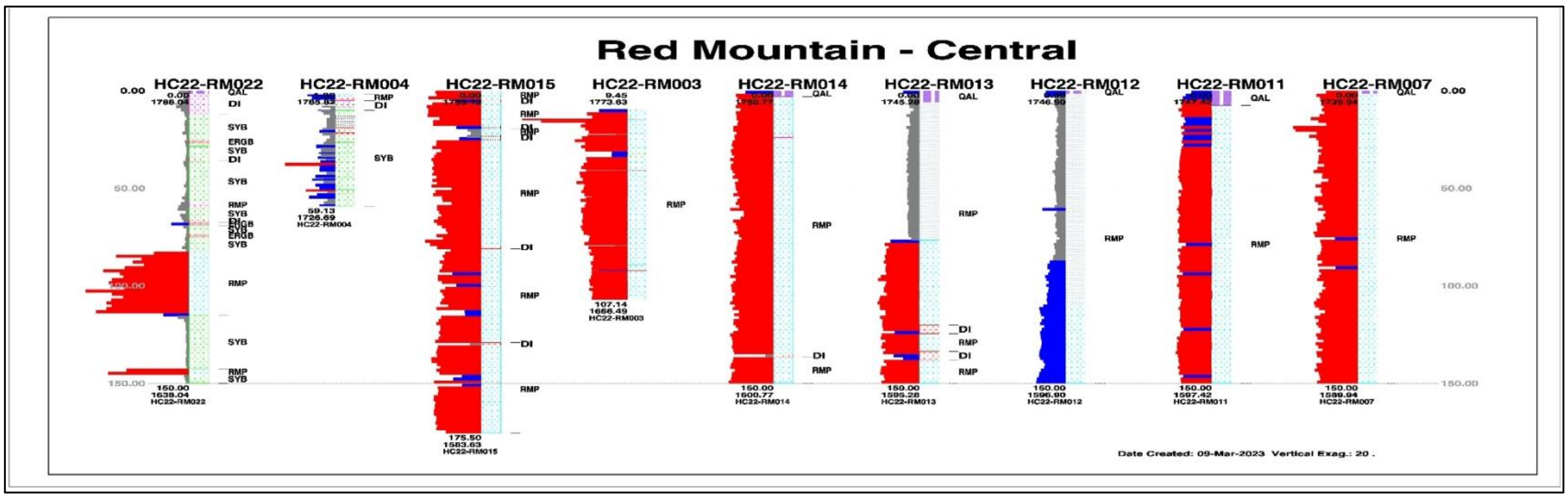


Figure 2 Assay Fence Diagram Red Mountain – Central Area

TREO Red: >=3,000ppm, Blue: >=1,500ppm – <3,000ppm, Gray: <1,500ppm

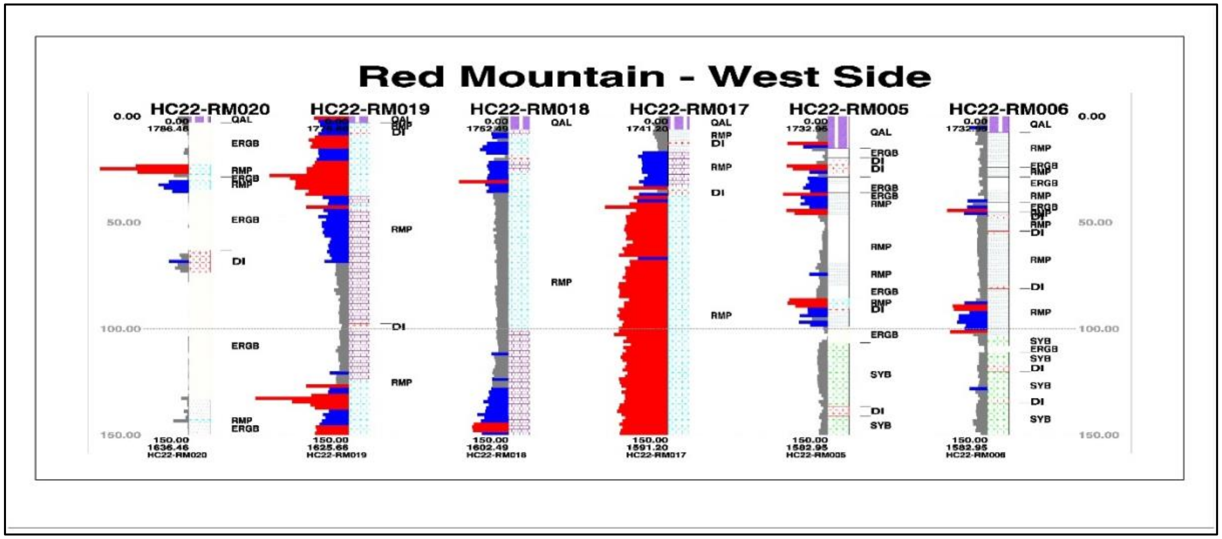


Figure 3 Assay Fence Diagram Red Mountain – West Side

TREO Red: >=3,000ppm, Blue: >=1,500ppm – <3,000ppm, Gray: <1,500ppm

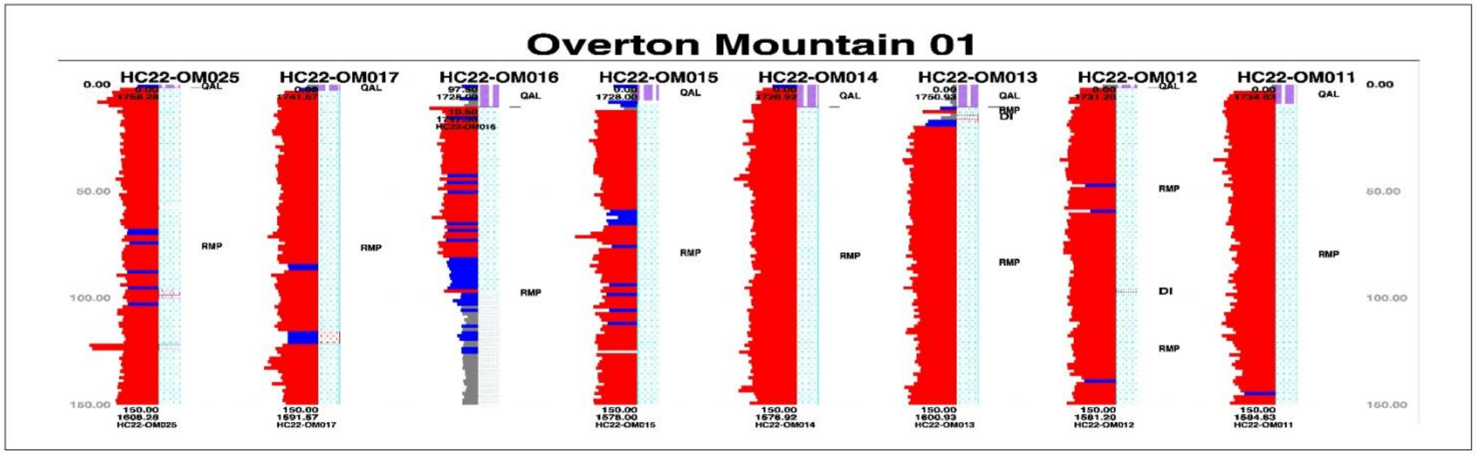


Figure 4 Assay Fence Diagram Overton Mountain 01 (South)

TREO Red: >=3,000ppm, Blue: >=1,500ppm – <3,000ppm, Gray: <1,500ppm

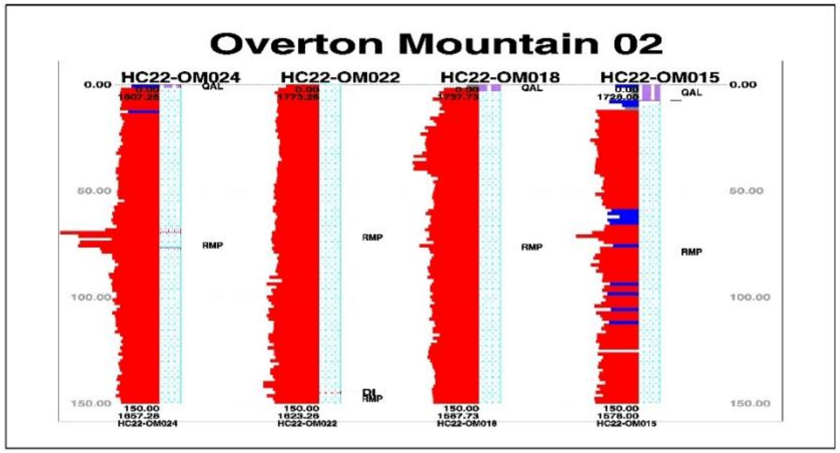


Figure 5 Assay Fence Diagram Overton Mountain 02 (Southeast)

TREO Red: >=3,000ppm, Blue: >=1,500ppm – <3,000ppm, Gray: <1,500ppm

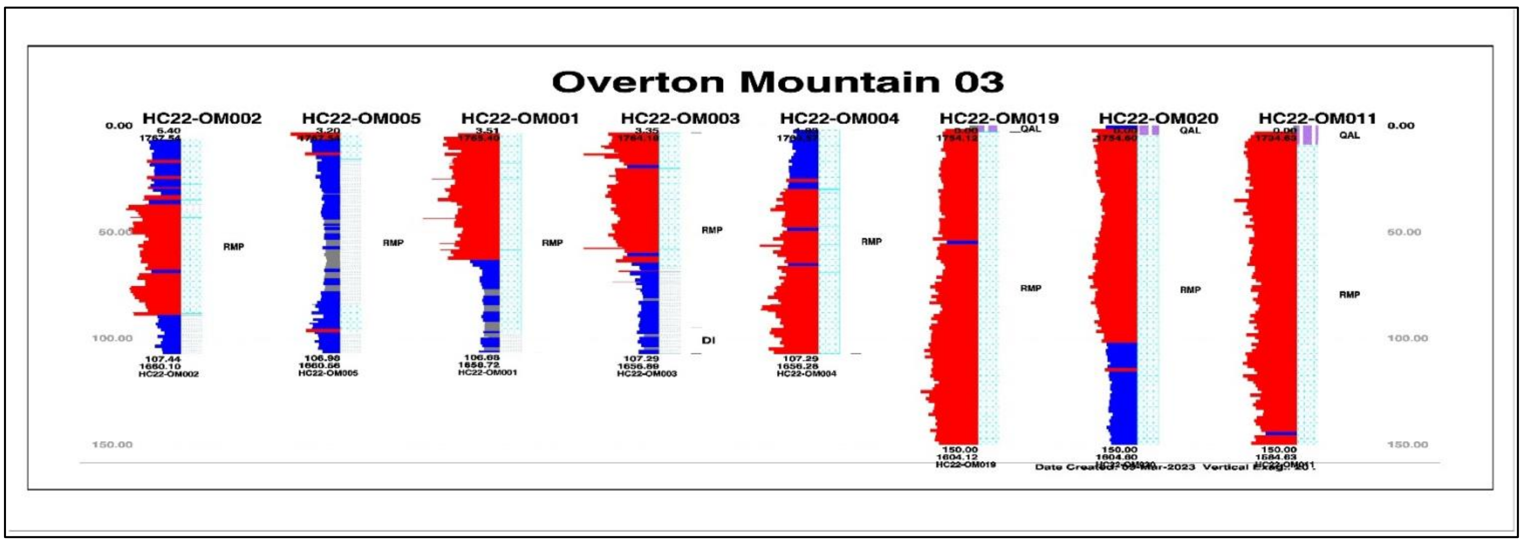


Figure 6 Assay Fence Diagram Overton Mountain 03 (Northeast)

TREO Red: >=3,000ppm, Blue: >=1,500ppm – <3,000ppm, Gray: <1,500ppm

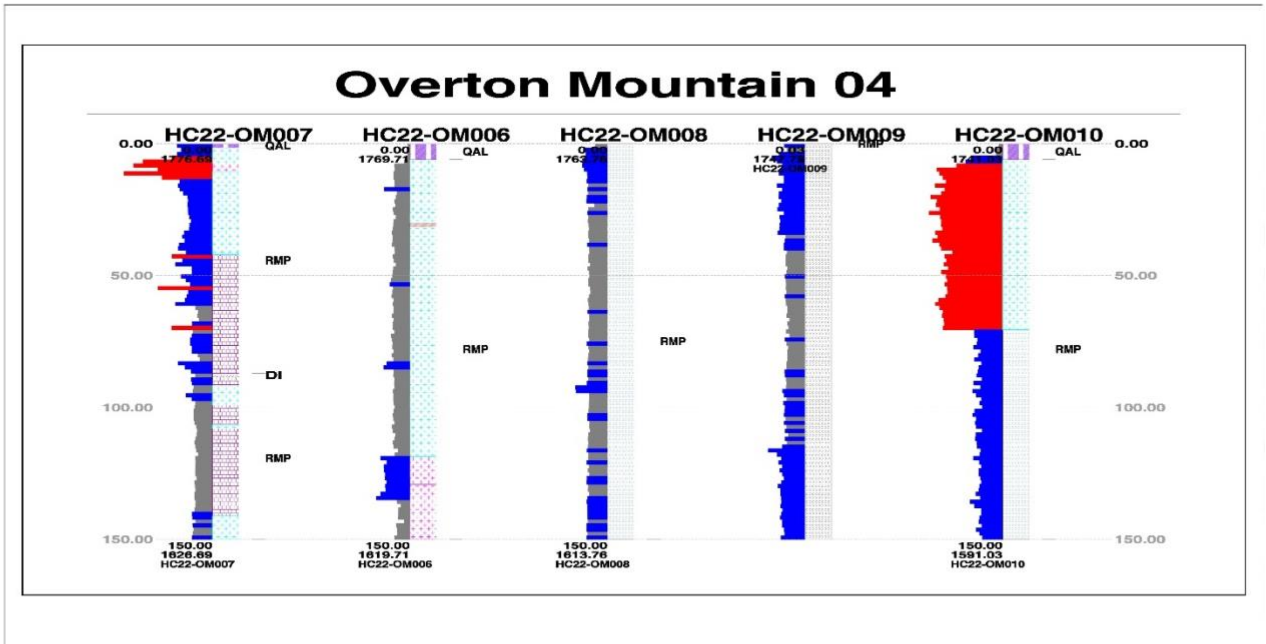


Figure 7 Assay Fence Diagram Overton Mountain 04 (North)

TREO Red: >=3,000ppm, Blue: >=1,500ppm – <3,000ppm, Gray: <1,500ppm

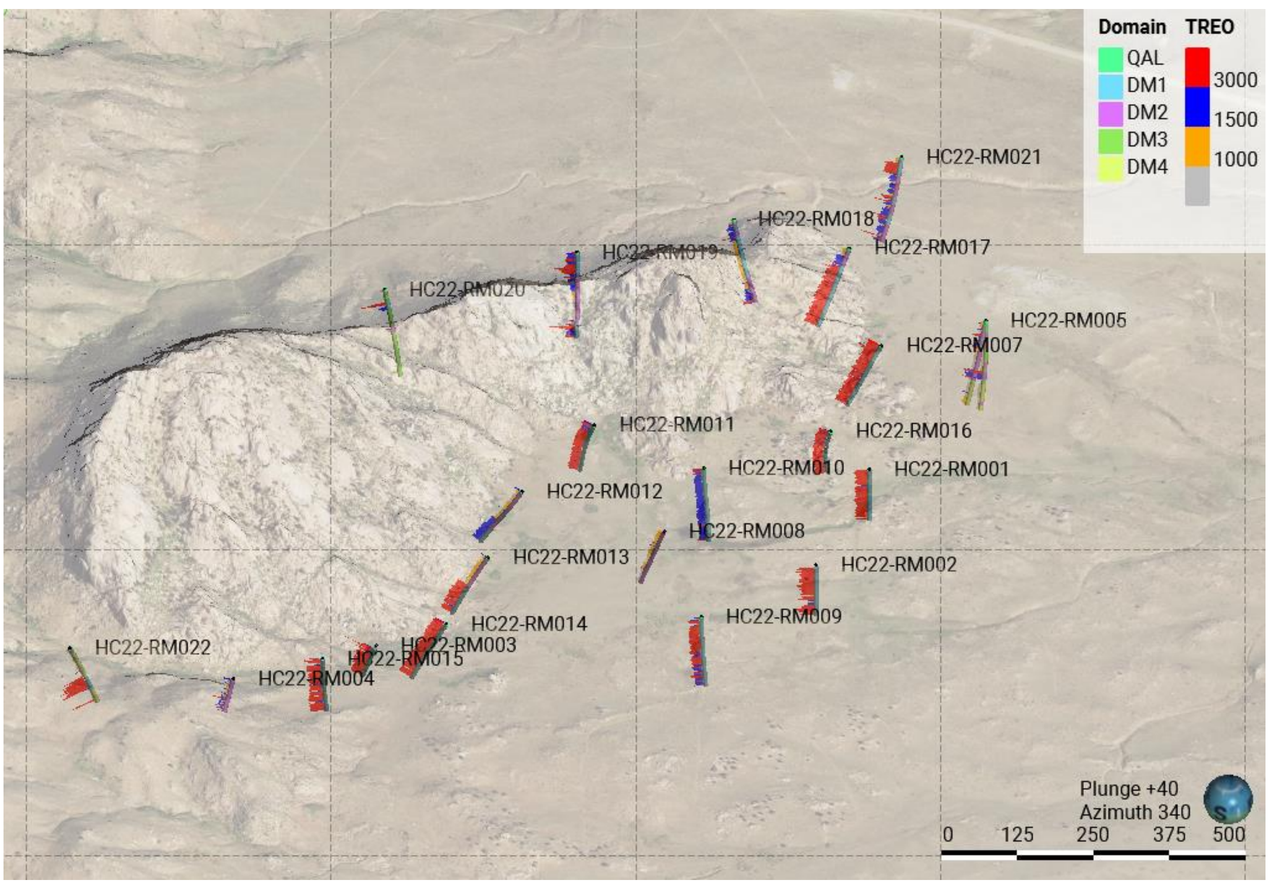


Figure 8 Red Mountain Drill Holes with TREO

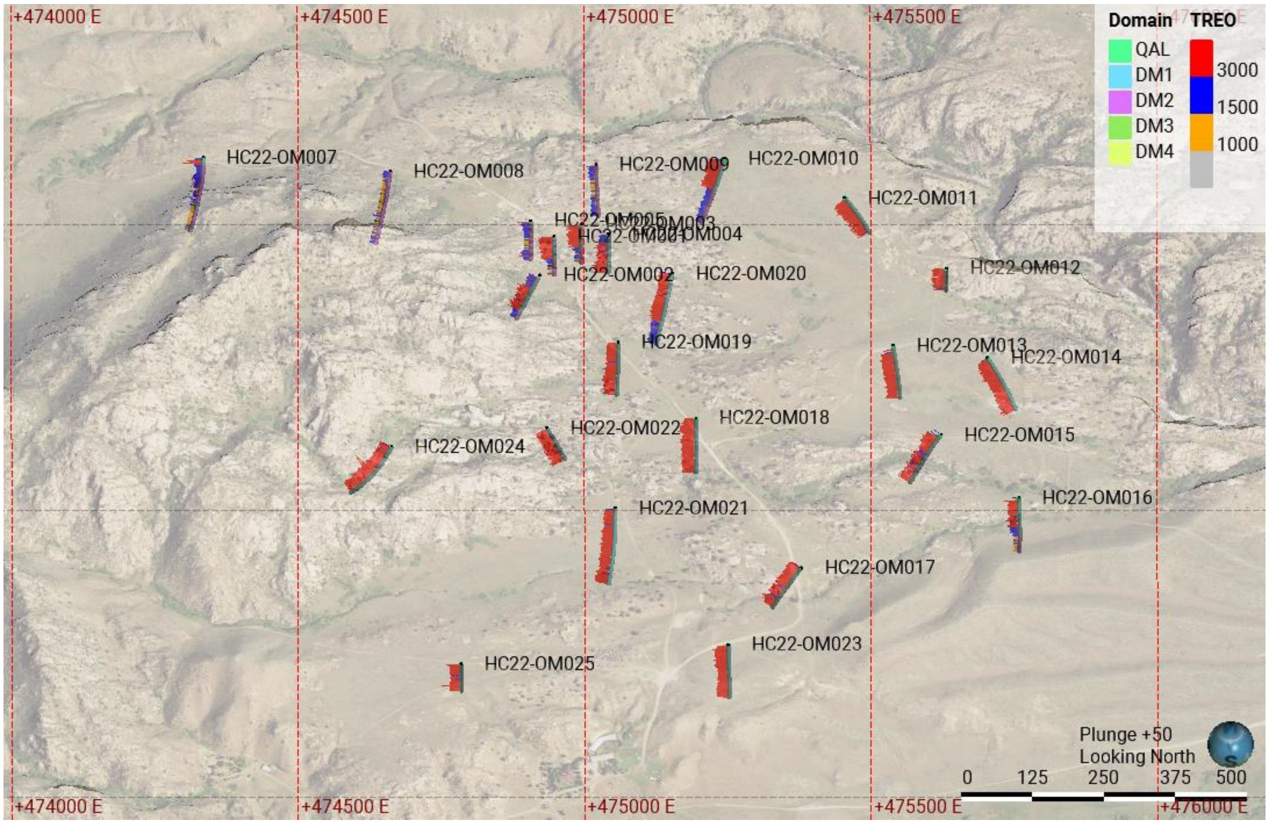


Figure 9 Overton Mountain Drill holes with TREO data to date.

Average values for the penalty elements of Thorium and Uranium continue to remain very low, with average ThO_2 values of 64ppm and average UO_2 values of 7ppm.

Figure 10 and Figure 13, below, show lines of section and average TREO grades across the Red Mountain Resource area and Overton Mountain resource area, respectively. Figure 11 and Figure 12 illustrate the extent of the CQM and BHS lithological units at Red Mountain. Figure 14 and Figure 15 illustrate the extent of the CQM and BHS lithological units at Overton Mountain.

Figure 16 illustrates a longitudinal cross-section from Red Mountain to Overton Mountain. The cross-section demonstrates the extent of Red Mountain Pluton between the two resource areas.

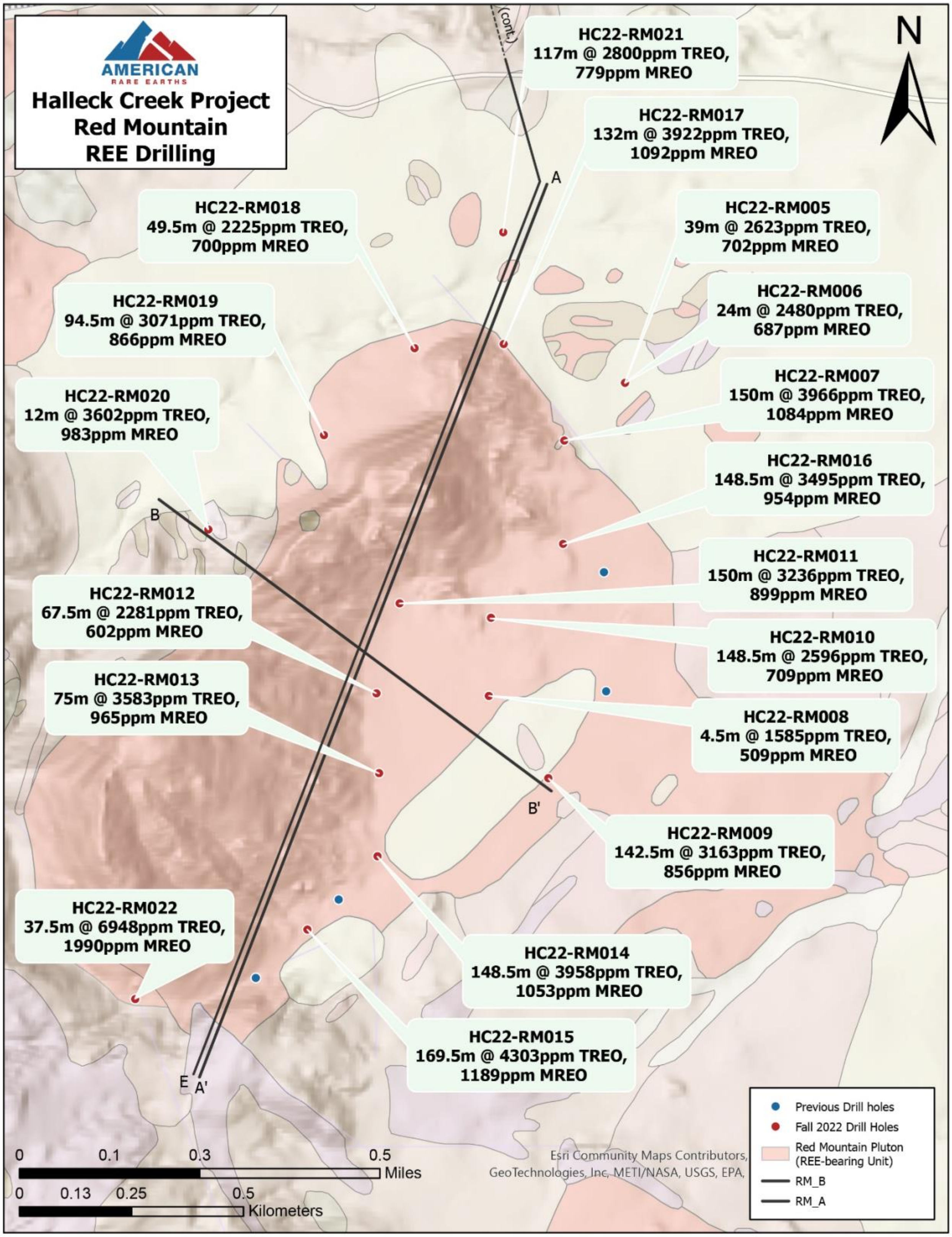


Figure 10 Red Mountain Area Drill Holes

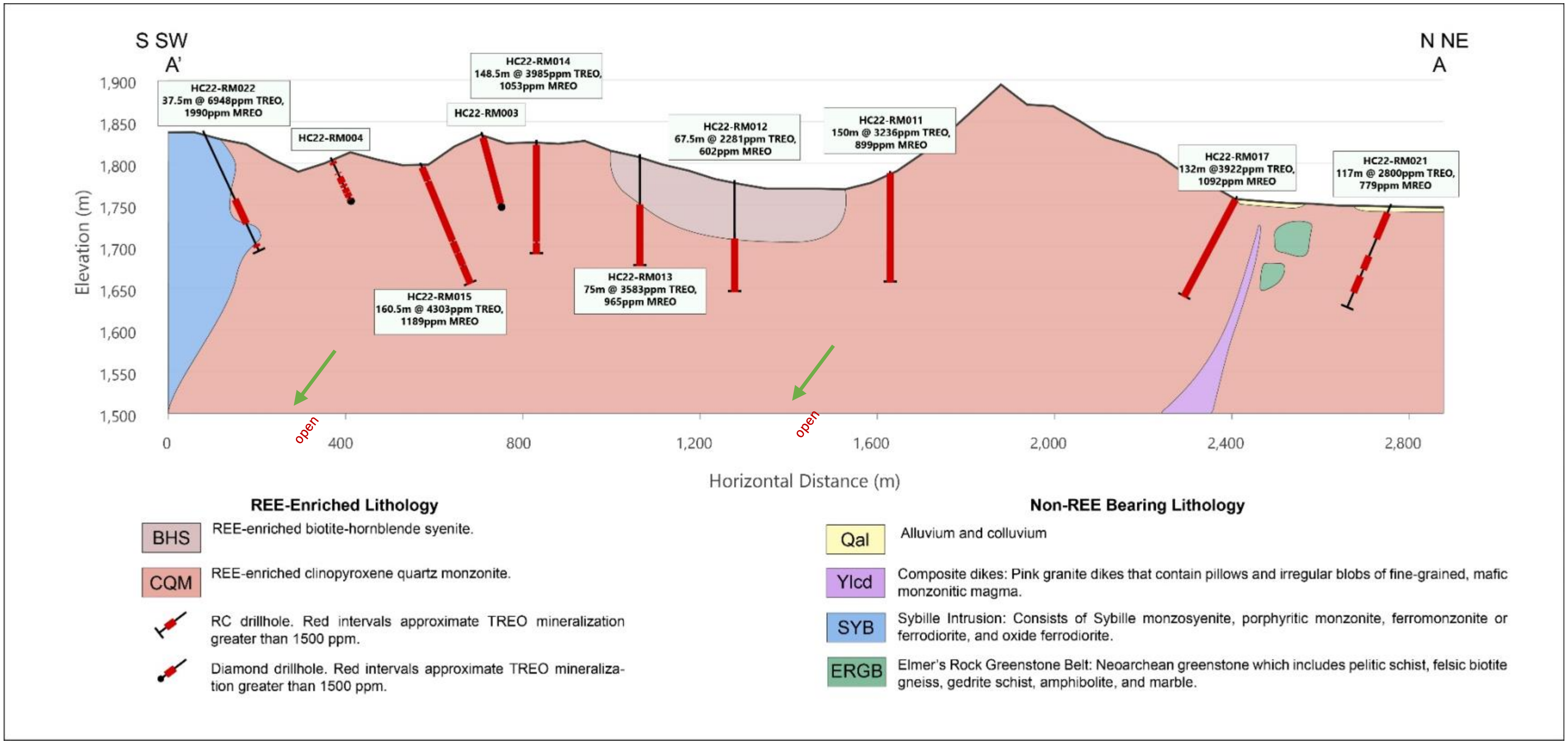


Figure 11 Red Mountain Cross-Section A-A'

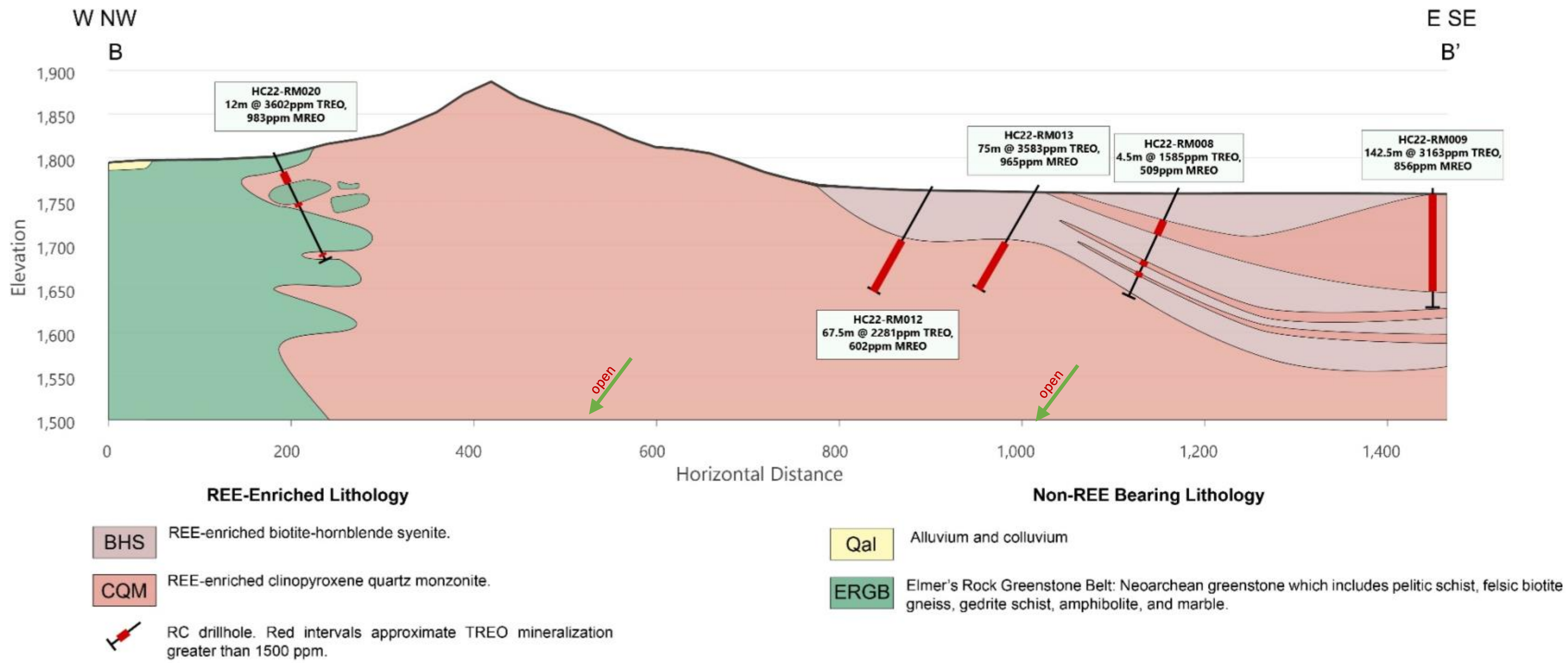


Figure 12 Red Mountain Cross Section – B-B'

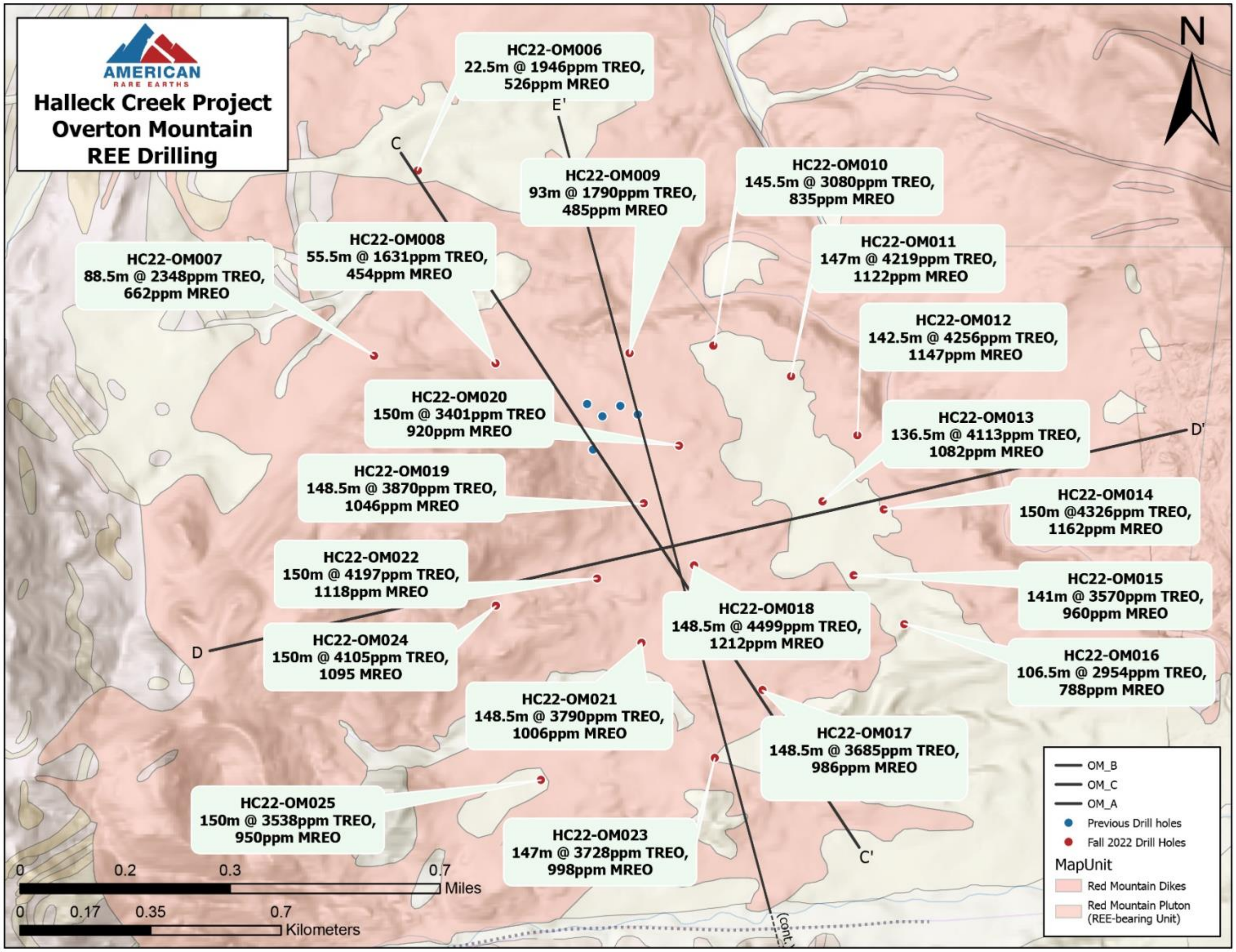


Figure 13 Overton Mountain Area Drill Holes

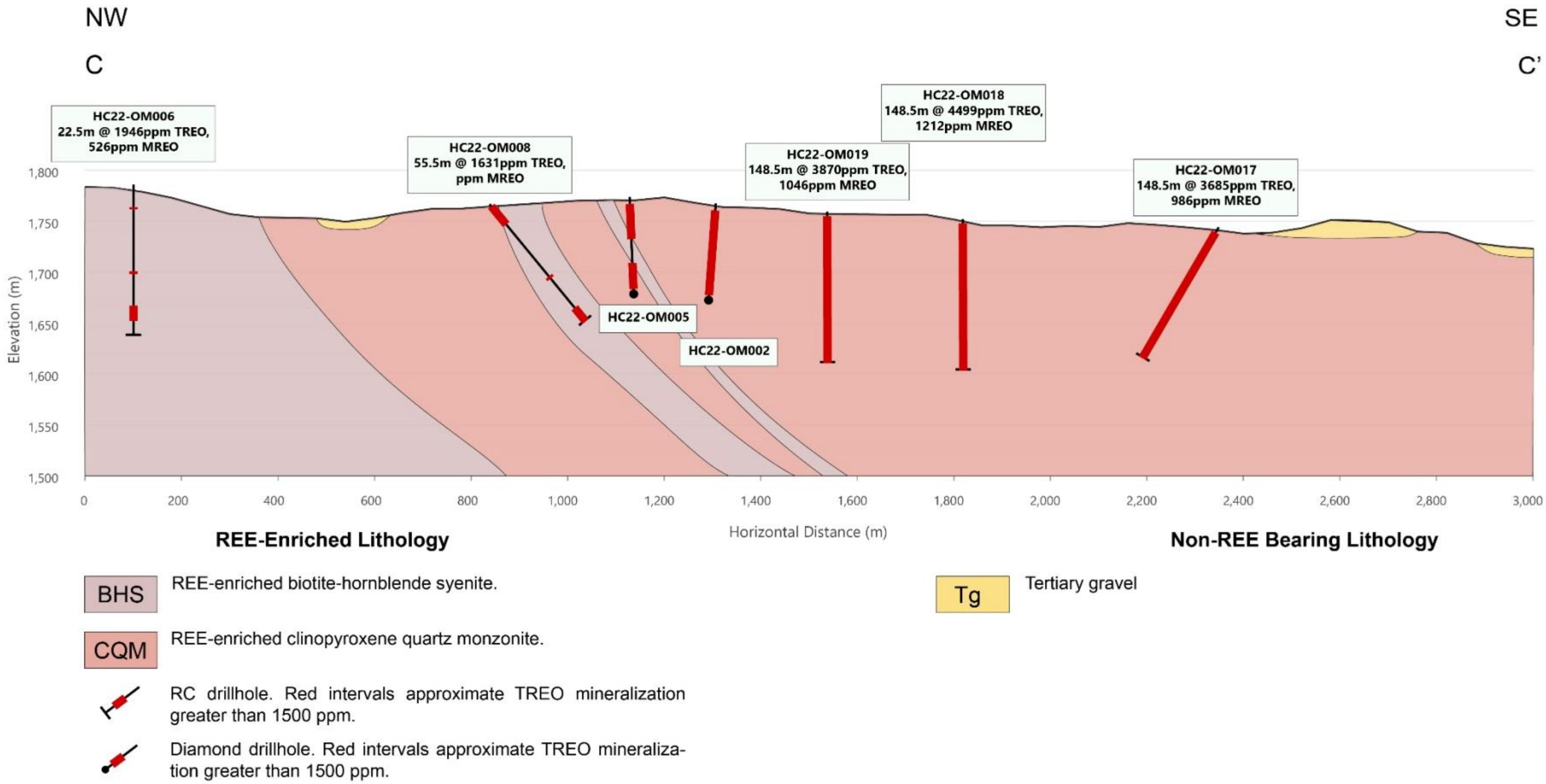


Figure 14 Overton Mountain Cross Section – C-C'

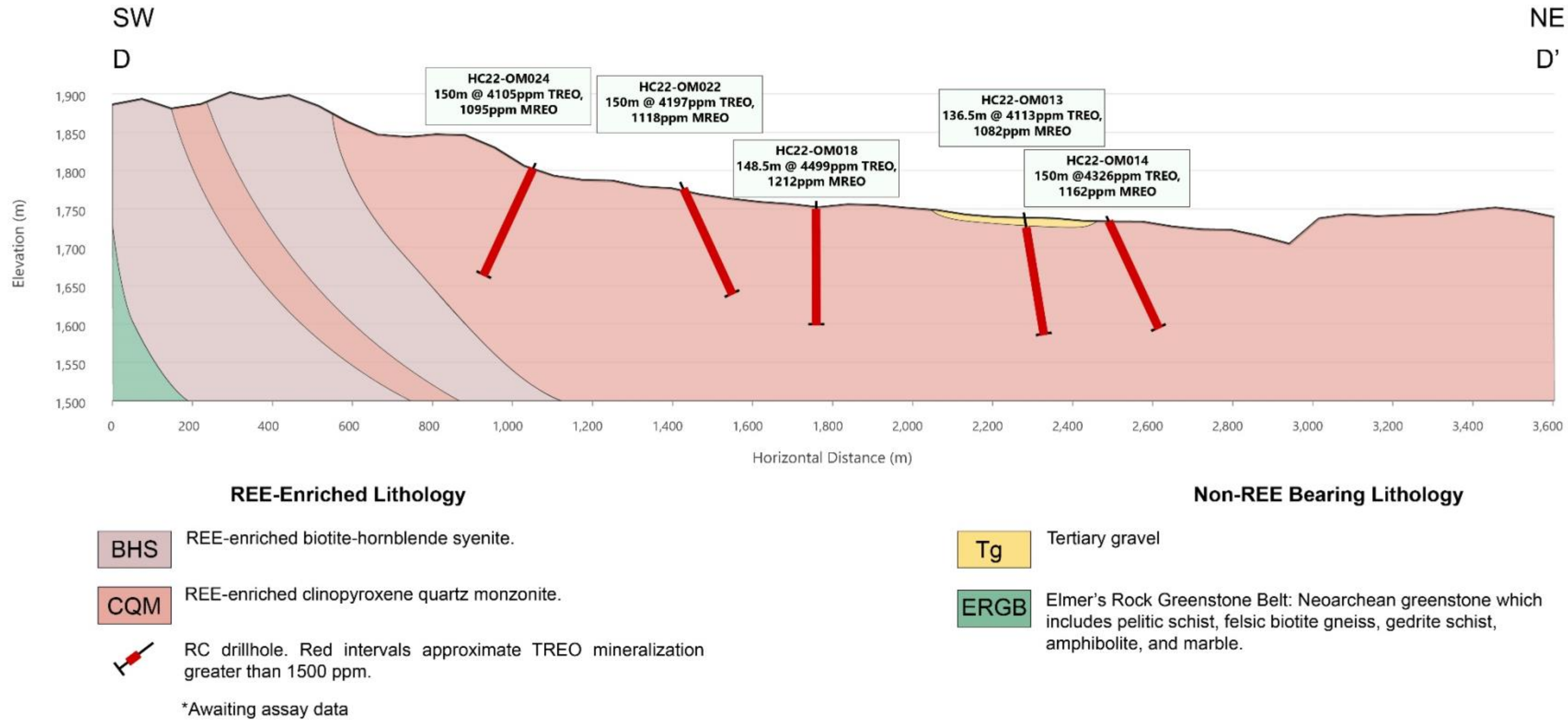


Figure 15 Overton Mountain Cross Section – D-D'

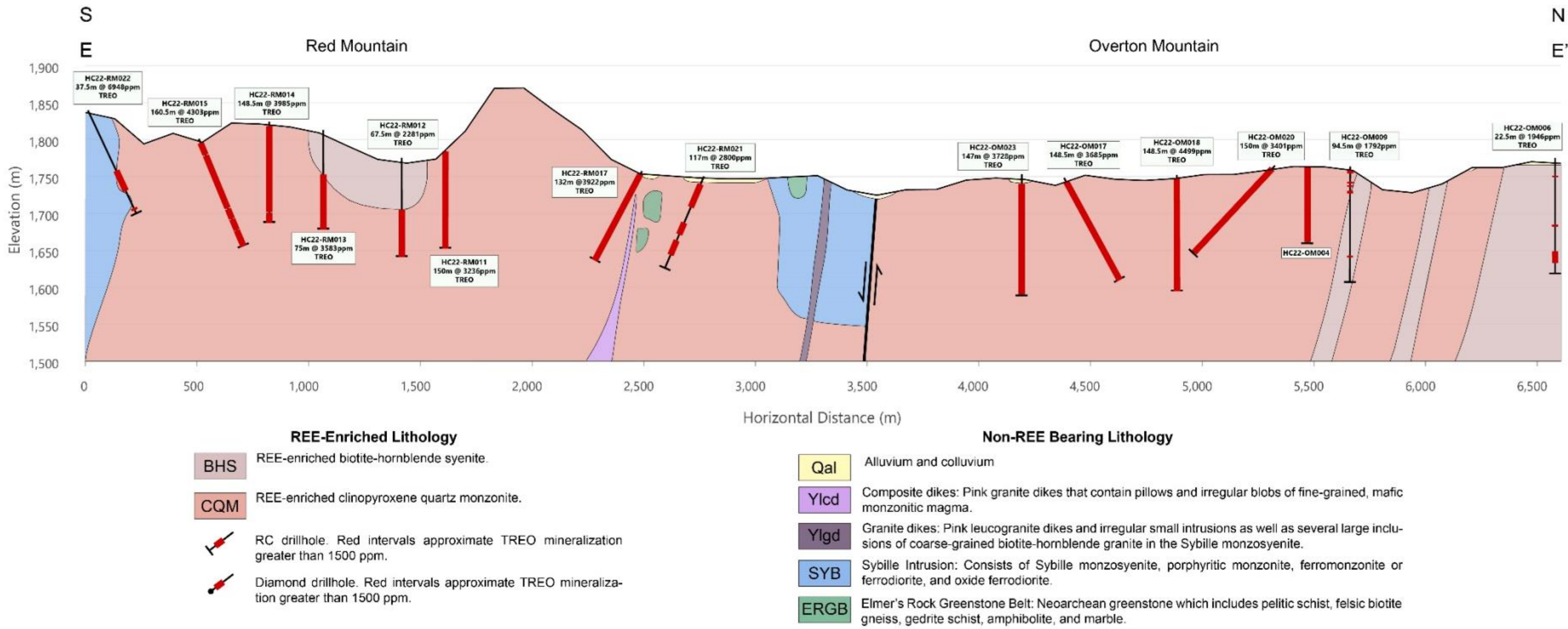


Figure 16 Longitudinal Cross Section – E-E'

Appendix – JORC Table 1

JORC Code, 2012 Edition – Table 1 Halleck Creek Exploration Area		
Section 1 Sampling Techniques and Data		
(Criteria in this section apply to all succeeding sections.)		
Criteria	***JORC Code explanation***	**Commentary**
Sampling techniques	*Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.*	From October to December 2022, ARR drilled 38 reverse circulation (RC) holes across the Halleck Creek Resource Claim area. All holes were approximately 150 meters (492.13 feet) deep. With the exception of HC22-RM015 which went to a depth of 175.5 meters (576 feet). Total drilled length was 5,724.5 metres (18,781 feet). Approximately 3,816 chip samples were collected at 1.5 meter continuous intervals via rotary splitter. In March and April 2022, ARR drilled nine HQ-sized core holes across the Halleck Creek Resource claim area. All holes were approximately 100 metres deep (352 feet) except for one hole which was terminated at 59 metres (194 feet). Total drilled length of 917 metres (3,008 feet). Rock core was divided into sample lengths of 5 ft (1.52 m) long and at key lithological breaks. A total of 513 surface rock samples exist at the Halleck Creek. Surface rock samples collected by ARR are logged, photographed and located using handheld GPS units. As part of reverse circulation (RC) exploration drilling at Halleck Creek. ARR collected XRF readings on RC chip samples. Elements included in XRF measurements include:

		Lanthanum, Cerium, Neodymium, and Praseodymium. ARR collected three XRF readings on each sample, then averaged the readings. Readings are performed at 25-meter intervals down each drill hole. These values are considered to be qualitative in natures and provide only rough indications of grade.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Core recoveries and RQDs were calculated by ARR field geologists.
	Aspects of the determination of mineralisation that are Material to the Public Report.	
	In cases where 'industry standard' work has been done, this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	Reverse circulation rock chip samples were collected at 1.5-meter continuous intervals via rotary splitter. For each interval chip samples were placed in labelled sample bags weighing between 1-2kg. A 0.5-1kg sample was collected for reserve analysis and logging. Chip samples were also placed into chip trays with 20 slots for logging and XRF analysis. Rock core samples 5 ft (1.52 m) long are being fillet cut. The fillet cuts are being pulverised and sampled for 60 elements including rare earth elements using ICP-MS and industry standards. A select number of samples are additionally being assayed for whole rock geochemistry. American Assay Labs in Sparks, NV is performed the analyses.
		RC chip samples were sent to ALS labs in Twin Falls, ID for preparation and forwarded on to ALS labs in Vancouver, BC for ICP-MS analysis.

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.).*	A Schraam T-450 reverse circulation drill rig was used to drill all 38 RC drill holes. A continuous rotary sample splitter was used to collect the RC samples at 1.5m intervals.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	A continuous rotary sample splitter was used to collect the RC samples at 1.5m intervals. All RC samples were visually logged by ARR geologists. Drill core was collected in lengths 1.5 meters. Samples at 25m intervals were photographed and analysed using an Olympus Vanta handheld XRF analyser in triplicate. Lanthanum, Cerium, Neodymium, and Praseodymium were analysed.
	Measures are taken to maximise sample recovery and ensure the representative nature of the samples.	Reverse circulation rock chip samples were collected at 1.5-meter continuous intervals via rotary splitter. For each interval chip samples were placed in labelled sample bags weighing between 1-2kg. A 0.5-1kg sample was collected for reserve analysis and logging. Chip samples were also placed into chip trays with 20 slots for logging and XRF analysis.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	Recoveries were very high in competent rock. No loss or gain of grade or grade bias related to recovery
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	All RC samples were visually logged by ARR geologists from chip trays using 10x binocular microscopes. Samples at 25m intervals were photographed and analysed using an Olympus Vanta handheld XRF analyser in triplicate. Lanthanum, Cerium, Neodymium, and Praseodymium were analysed.

	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	RC samples and logging is quantitative in nature. Chip samples are stored in secure sample trays. Chip samples were photographed and 25m intervals.
	The total length and percentage of the relevant intersections logged.	All RC samples were visually logged by ARR geologists for each 1.5-meter continuous sample.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	Samples varied between wet and dry. The course crystalline nature of the deposit minimizes adverse effects of wet samples. Samples were rotary split during drilling and sample collection.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	RC samples were from Pulverize split of up to 250 g to better than 85 % passing minus 75 microns.
	Quality control procedures adopted for all sub-sampling stages to maximise the representivity of samples.	For the RC samples, ARR submitted CRM sample blanks, CRM standard REE samples from CND Labs and duplicate samples for analysis. Blank, duplicate and CRM standard samples were added in rotation for one for every 20 RC sample.
	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.	A continuous rotary sample splitter was used to segregate three samples per 1.5m interval.

	Whether sample sizes are appropriate to the grain size of the material being sampled.	Allanite is generally well distributed across the deposit and the sample sizes are representative of the fine grain size of the Allanite.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	ALS uses a 5-acid digestion and 48 elements by lithium borate fusion and ICP-MS. For quantitative results of all elements, including those encapsulated in resistive minerals.
	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.	Samples at 25m intervals were photographed and analysed using an Olympus Vanta handheld XRF analyser in triplicate. Lanthanum, Cerium, Neodymium, and Praseodymium were analysed. Simple average values of three XRF readings were calculated. No downhole geophysical tools used in the drilling program.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	For the RC drilling, ARR submitted CRM sample blanks, CRM standard REE samples from CND Labs and duplicate samples for analysis. CRM and Blank samples were inserted alternately at 20 sample intervals. Internal laboratory blanks and standards will additionally be inserted during analysis.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	RC chip samples have not yet been verified by independent personnel.
	The use of twinned holes.	No twinned holes were used.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Data entry was performed by ARR personnel and checked by ARR geologists. All field logs were scanned and uploaded to company file servers. All photographs of the core were also uploaded to the file server daily. Drilling data will be imported into the DHDB drill hole database. All scanned

		documents are cross-referenced and directly available from the database. Assay data for the RC drilling was received electronically from ALS. Digital copies of the final data are cross-referenced in DHDB. The spreadsheets of data from ALS are imported directly into DHDB.
	Discuss any adjustment to assay data.	Oxide values are calculated in the database using the molar mass of the element and the oxide
Location of data points	*Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	RC drill holes have been located using handheld GPS units. Final surveys of hole locations will be performed by professional surveyors.
	Specification of the grid system used.	The grid system used to compile data was NAD83 Zone 13N.
	Quality and adequacy of topographic control.	Topography control is +/- 10 ft (3 m).
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	Both randomly spaced and localised clustering of drillholes.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	The drill hole data is at a sufficient spacing to determine a mineral resource or reserve. However, until all assay results of the RC drilling have been received, verified and modelled, no resources or reserves are being reported for the Halleck creek area.
	Whether sample compositing has been applied.	Each sample is the result of assaying a 1.5m interval. Composite assay values have not been calculated or applied.
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	All the RC holes were drilled at 65-degree angles using azimuth toward the primary rock formation.

	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	
Sample security	*The measures are taken to ensure sample security.*	All RC chip samples were collected from the drill rigs and stored in a secured, locked facility. Sample pallets were shipped weekly, by bonded carrier, directly to ALS labs in Twin Falls, ID. Chains of custody were maintained at all times. All rock samples were in the direct control of company geologists until dispatched to ALS Labs.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	No external audits or reviews have been conducted to date. However, sampling techniques are consistent with industry standards.

Section 2 Reporting of Exploration Results		
(Criteria listed in the preceding section also apply to this section.)		
Criteria	***JORC Code explanation***	**Commentary**
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership, including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	ARR acquired 5 unpatented federal lode claims on BLM US Federal Land totalling 71.6 acres (29 has) from Zenith Minerals Ltd. in 2021. 67 unpatented federal lode claims were staked by ARR that totalled 1193.3 acres (482 ha) in summer 2021. ARR staked 182 unpatented federal lode claims in March 2022 covering an area of approximately 3,088 acres (1,250 ha). ARR staked 118 unpatented federal lode claims in November 2022 covering an area of approximately 2,113 acres (855 ha). As of 31 December 2022, ARR controlled 367 unpatented federal lode claims and 4 Wyoming State mineral licenses covering 8,165 acres (3,304 ha).
	The security of the tenure held at the time of reporting and any known impediments to obtaining a licence to operate in the area.	No impediments to holding the claims exist. To maintain the claims an annual holding fee of $165/claim ($11,880.00) is payable to the BLM. To maintain the State leases minimum rental payments of $1/acre for 1-5 years; $2/acre for 6-10 years; and $3/acre if held for 10 years or longer.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	Prior to sampling by WIM on behalf of Blackfire Minerals and Zenith Minerals there was no previous sampling by any other groups within the ARR claim and Wyoming State Lease blocks.
Geology	*Deposit type, geological setting and style of mineralisation.*	The REE's occur within Allanite which occurs as a variable constituent of the Red Mountain Pluton. The occurrence can be characterised as a disseminated type rare earth deposit.

Drill hole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*	FTE DRILLING USA INC. of Mount Uniacke, Nova Scotia used a Schraam T-450 track mounted rig to drill 38 reverse circulation drill holes. Drill hole depths for 327 holes was 150m and one hole at 175.5m.
	easting and northing of the drill hole collar	A preliminary summary of the Halleck Creek RC program can be found in the report entitled "Summary of Fall 2022 Exploration Drilling at the Halleck Creek Project Area", December 2022.
	elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar	
	dip and azimuth of the hole	
	downhole length and interception depth	
	Hole length.	
	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	No Drilling data has been excluded
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	Average Grade values were cut at minimum of TREO 1,500 ppm.
	Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Assays are representative of 1.5m sample intervals for RC chips.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents used.

Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* *If it is unknown and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	The mineralisation at Halleck Creek is evenly distributed within the RE enriched CQM material. Therefore, drill hole angles and geometry of mineralisation are not related.
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to, a plan view of drill hole collar locations and appropriate sectional views.*	See Figures in the within this press release, above.
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.*	ARR currently has assay results for approximately 4,016 samples for 38 full drill holes in the Red Mountain area including assays for blanks, CRM standards and duplicate samples.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported, including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	In hand specimen this rock is a red colored, hard and dense granite with areas of localised fracturing. The rock shows significant iron staining and deep weathering. Microscopic description: In hand specimen the samples represent light colored, fairly coarse-grained granitic rock composed of visible secondary iron oxide, amphibole, opaques, clear quartz and pink to white colored feldspar. All the specimens show moderate to strong weathering and fracturing. Allanite content is variable from trace to 2%. Rare Earths are found within the Allanite. Historical metallurgical testing consisted of concentrating the Allanite by both gravity and magnetic separation. The

		current program employs sequential high gradient magnetic separation and flotation to produce a concentrate suitable for downstream rare earth elements extraction.
Further work	*The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).*	Further drilling, mapping and sampling is planned.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Additional drilling is planned in new exploration areas and to increase resource confidence levels.

Appendix B –Incremental Assay Results – Converted to Oxides