Exceptional results from drilling program at Halleck Creek

written by Raj Shah | December 7, 2023

High Grade Drill Intercepts include 743 ft @ 5084 ppm TREO

Highlights

- Interim 2023 resource drilling results from 8 diamond drill holes at Halleck Creek.
- One deep hole drilled to 302 m, assays have confirmed **consistent** enriched REE mineralization from surface to 302 m (990.81 ft), where the deposit remains open at depth.
    - Significant intercept in this hole included **226.5 m @ 5084 ppm "Total Rare Earth Oxide" TREO and 1311 ppm** magnet rare earth oxides **("MREO").**
    - **Figure** 2 – Fence Diagram illustrates the potential for significantly more resources at higher grades.

- Core holes exhibit TREO **average of 4,478 ppm, which is 35% higher than the 3,309 ppm TREO average from the Company's previous resource estimate.**
- High value magnetic rare earths neodymium and praseodymium ("NdPr") averaged 23% of TREO consistent with prior drilling.
- Metallurgy results completed to date indicate that the ore is easily processed and does not require the complex refining operation and additional processing steps as seen in hard rock deposits.
- Assays are pending for a further 15 reverse circulation

("RC") drill holes.

December 7, 2023 (Source) – American Rare Earths Limited (ASX: ARR | ADRs – OTCQX: AMRRY | Common Shares – OTCQB: ARRNF) **("ARR" or the "Company")** is pleased to announce the exceptional results from the recently completed diamond drilling program[2] at Overton Mountain, located within the broader Halleck Creek Rare Earths Project, Wyoming. These results, with pending assays from RC holes, will provide key inputs to upgrading the current 1.43 billion tonne JORC Resource[3], and furthermore confirms that the deposit remains open at depth to at least 302 m (990.81 ft). The assays received to date exhibit TREO averages 4,478 ppm, which is significantly higher than the 3,309 ppm TREO deposit average from the Company's previous resource estimate.

CEO, Donald Swartz commented on the results:
"These drill results are simply outstanding. The purpose of this drill campaign was to confirm that the deposit is actually much larger than the current resource model, while also being homogenous and cost-effective to mine. We are very excited to upgrade the existing JORC Resource in the near-term as well as with the future potential given that the depth of enrichment was more than double previous results. The exploration team has exceeded expectations, and we eagerly await the forthcoming RC assays. We have not only seen an increase in grade but also extremely encouraged that the deposit remains open at depth."

"Furthermore, the recent metallurgy results indicate the Halleck Creek Project is similar to a clay hosted rare earth deposit when it comes to processing technology. The ore easily leaches and will not require the complex cracking operation and additional processing steps seen with other hard rock deposits. Being low in the penalty elements of Thorium and Uranium, places Halleck Creek in a unique position of having the best of both

worlds (higher grade and easier processing). We are looking forward to the pending assays, upgrading the resource and rapidly advancing our flagship project."

This announcement has been approved by the CEO of American Rare Earths.

Full JORC Report can be found here

Competent Persons Statement: The information in this document is based on information compiled by personnel under the direction of Mr. Dwight Kinnes. 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 Limited:
American Rare Earths (ASX: ARR | ADRs – OTCQX: AMRRY | Common Shares – OTCQB: ARRNF) owns the Halleck Creek, WY and La Paz, AZ rare earth deposits which have the potential to become the largest and most sustainable rare earth projects in North America. American Rare Earths is developing environmentally friendly and cost-effective extraction and processing methods to meet the rapidly increasing demand for resources essential to the clean energy transition and US national security. The Company continues to evaluate other exploration opportunities and is collaborating with US Government-supported R&D to develop efficient processing and separation techniques of rare earth elements to help ensure a renewable future.

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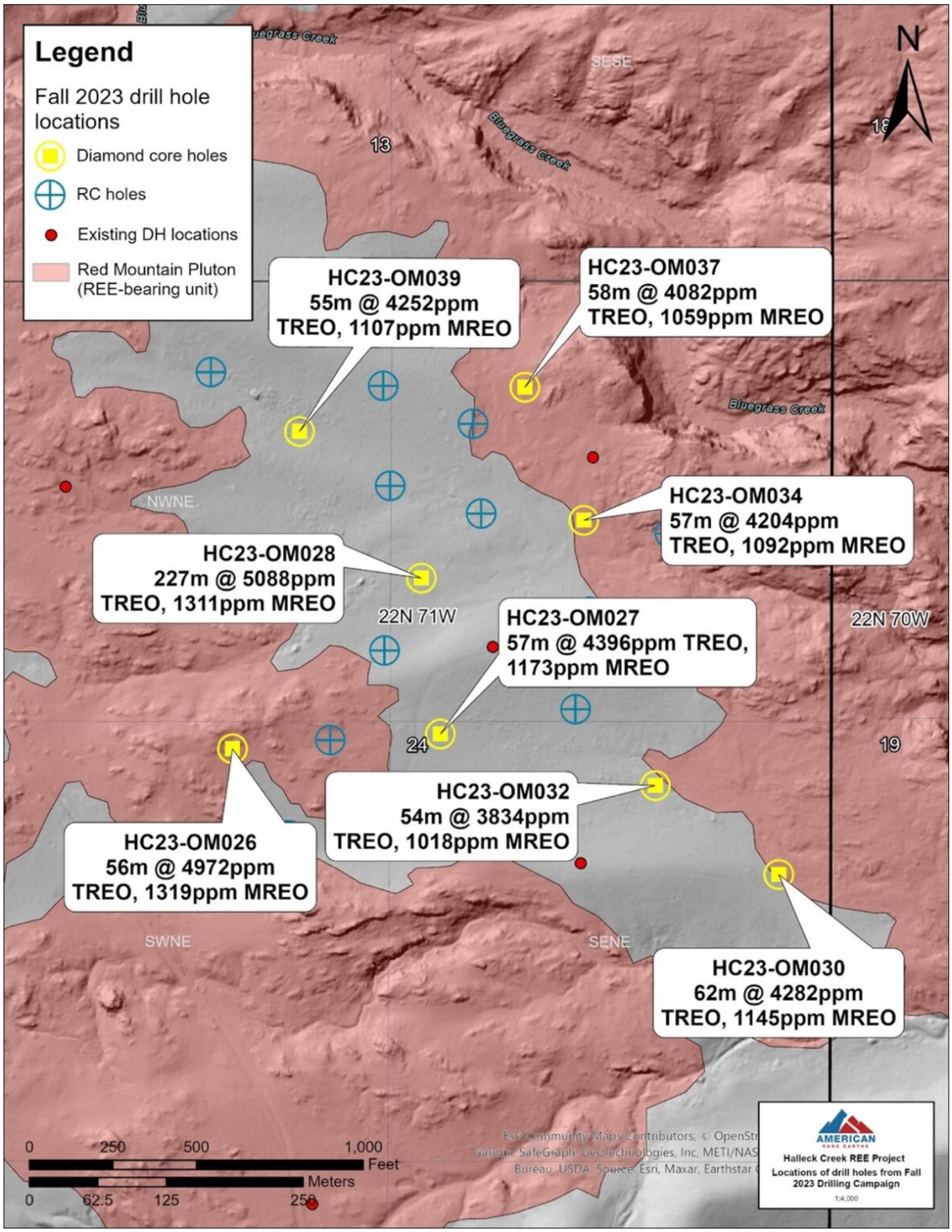
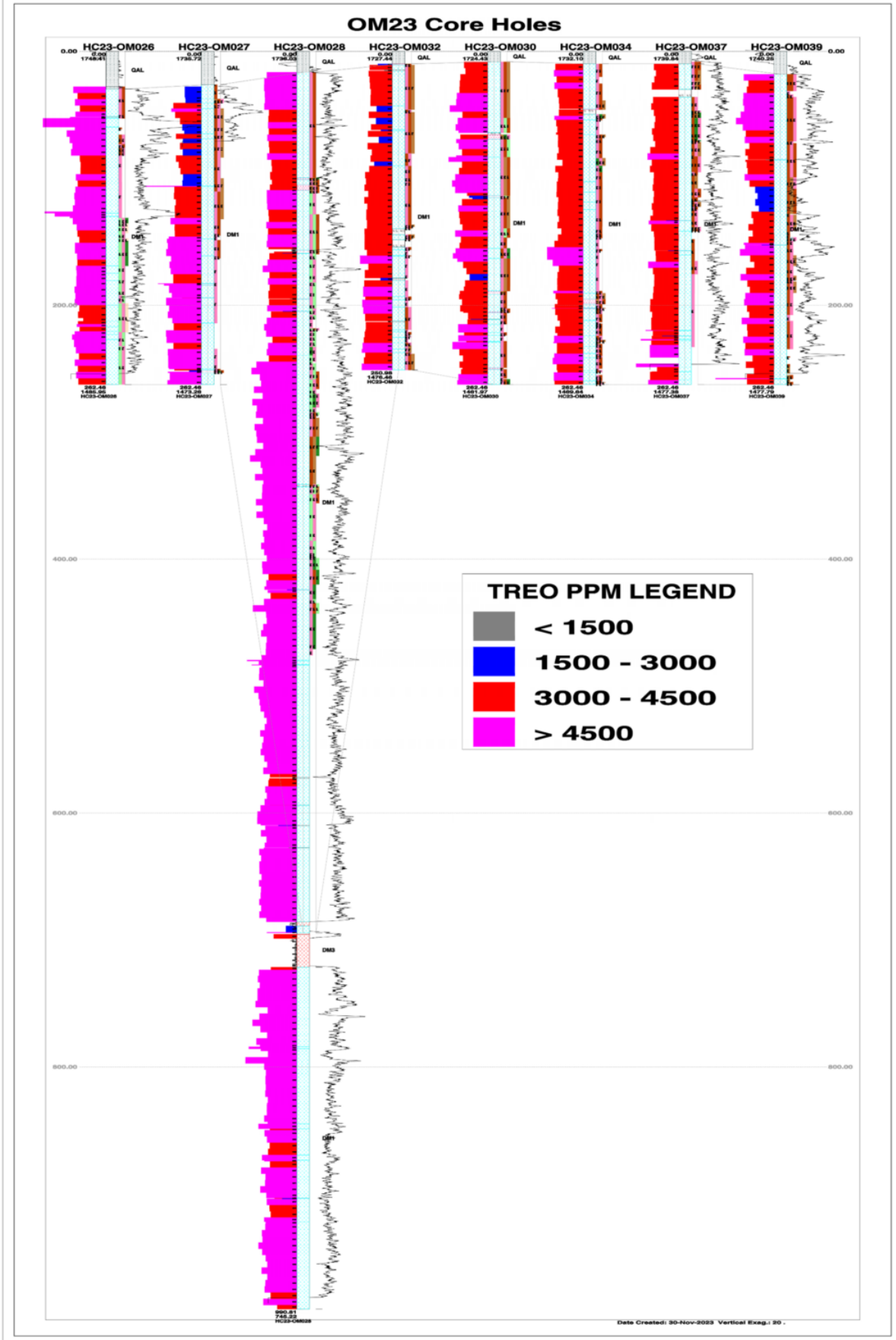

Legend
Fall 2023 drill hole locations
Diamond core holes
RC holes
Existing DH locations
Red Mountain Pluton (REE-bearing unit)
N
SESE
13
Bluegrass Creek
HC23-OM039
55m @ 4252ppm
TREO, 1107ppm MREO
HC23-OM037
58m @ 4082ppm
TREO, 1059ppm MREO
HC23-OM034
57m @ 4204ppm
TREO, 1092ppm MREO
NWNE
HC23-OM028
227m @ 5088ppm
TREO, 1311ppm MREO
22N 71W
22N 70W
HC23-OM027
57m @ 4396ppm TREO,
1173ppm MREO
24
19
HC23-OM032
54m @ 3834ppm
TREO, 1018ppm MREO
HC23-OM026
56m @ 4972ppm
TREO, 1319ppm MREO
SWNE
SENE
HC23-OM030
62m @ 4282ppm
TREO, 1145ppm MREO
0 250 500 1,000
Feet
0 62.5 125 250
Meters
Halleck Creek REE Project
Locations of drill holes from Fall 2023 Drilling Campaign

Figure 1 – Fall 2023 drill hole locations

Figure 2 – Fence Diagram of 2023 Core Holes with Assays and Gamma Logs


OM23 Core Holes
HC23-OM026
HC23-OM027
HC23-OM028
HC23-OM032
HC23-OM030
HC23-OM034
HC23-OM037
HC23-OM039
QAL
DM1
DM3
0.00
200.00
400.00
600.00
800.00
TREO PPM LEGEND
< 1500
1500 - 3000
3000 - 4500
> 4500
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Photos accompanying this announcement are available at
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