

## **VR extends continuous REE mineralization at Hecla-Kilmer to over 500 metre vertical depth in Hole 13, starting at surface and ending in 2.84 % TREO with gold.**

- Drill Hole HK22-013: **361 m @ 0.96 % TREO<sup>(1)</sup>** of which **20% are PMREO<sup>(2)</sup>** within **461 m @ 0.85 % TREO + 0.13% Nb<sub>2</sub>O<sub>5</sub>, starting at bedrock surface**, and including:
  - **39 m @ 2.01 % TREO** within **66.6 m @ 1.57 % TREO** with **20% as PMREO**.
- The extended Hole to 504 metre depth ends with **2 m @ 2.84 % TREO and 1.1 g/t gold**. Gold increases with TREO grades, and is associated with REE mineralization in monazite.

### **NR-22-18**

**January 17, 2023, Vancouver, B.C.:** VR Resources Ltd. (TSX.V: VRR, FSE: 5VR; OTCQB: VRRCF), the "Company", or "VR", is pleased to report results from the first of five drill holes completed last fall at its Hecla-Kilmer project ("H-K") and critical metal discovery located in Northern Ontario. Data from the remaining drill holes are expected shortly.

Five drill holes were completed at Hecla-Kilmer in November, 2022, for 1,437m. The 21 drill holes completed to date are shown on [Figure 1](#).

The first drill hole completed in the fall program was an extension of Hole 13 completed in June from 330 to 504 metres. The composite stratigraphic column in [Figure 2](#) provides new data to illustrate the extension of the original 291 metre intersection to 461 metres. Salient features include:

- Mineralization starts at the **bedrock surface**, below an overburden of glacial till;
- Mineralization is **continuous** in nature, from bedrock surface to the end-of-hole at 504m;
- The REE mineralization remains **open to depth**, and is as strong as any REE interval higher in the 461 m intersection; there are no systematic changes down the hole in geology, density of carbonatite dykes and veins or intensity of potassic alteration;
- There are **49** one metre samples with **> 2% TREO**, and they span the entire 504m hole;
- The proportion of the high value **PMREO** does not vary from the range of 17-22% of TREO;
- **Gold mineralization** at the bottom of the hole correlates with a corresponding increase in REE mineralization, and is part of the same polymetallic fluid system.

### Drill Core Photographs

A series of four drill core photographs of the high grade TREO mineralization from bedrock surface to 504 m depth in hole HK22-013 follow Figure 2. They provide examples of the carbonatite dykes and vein breccia mineralization and associated high temperature potassic alteration overprint present throughout the entire 461 metre intersection. Grades are provided in each figure caption.

### Significance

**Scale.** The potential of the polymetallic REE + Nb mineralization with gold at Hecla-Kilmer is leveraged by scale, the sheer lateral breadth of the hydrothermal breccia system and high temperature potassic

alteration and the +500 metre vertical extent of REE mineralization intersected to date. The plan map in Figure 2 provides the illustration:

1. There are now intersections with > 1% TREO including 19-22% PMREO in **11 of the first 17 holes**;
2. There is continuous mineralization from bedrock surface to 504 m depth, and it remains open;
3. There is high grade mineralization in at least three separate areas which span 2.5 km of the complex.

**PMREO Content.** The consistent **17 – 22%** proportion of TREO mineralization contributed by the PMREO's in the 461 metre intersection in Hole 13, particularly praseodymium, neodymium and terbium are comparable to, or exceeds their proportion in, existing global *best of breed* REE mines at Bayan Obo in China (the largest deposit) and at Mountain Pass in California (the highest grade deposit). For additional comparison, published resources for most Canadian REE deposits in carbonatite generally contain between 12-15% PMREO, which is roughly 40% lower than the proportion at Hecla-Kilmer.

PMREO are essential in the manufacturing of motors for electric vehicles and wind energy turbines, critical components in the emerging green economy. The high price of the four PMREOs (Neodymium, Praseodymium, Dysprosium and Terbium) in world markets reflects the constraints on demand because of the current global monopoly controlled by China. As such, the consistently elevated levels of these high value PMREO elements within **all** of the mineralized drill intersections at Hecla-Kilmer highlight the niche and value potential of the Hecla-Kilmer discovery in the context of known North American deposits, and demand for new production going forward in response to the Green Economy.

**Gold.** Visible gold grains were first discovered at Hecla-Kilmer in the remnant fines of historic drill core rubble found in an abandoned field camp. VR confirmed gold in the system in the second drill hole of the project in 2020, with 15-184 ppb gold reported over several 10-40 metre intervals in drill hole HK20-002, occurring in strongly altered porphyry dykes. The occurrence of **1.1 g/t gold** over 2 m at the bottom of Hole 13 in association with intense REE mineralization at **2.84 % TREO** simply expands the potential of the broad, polymetallic hydrothermal vein and breccia system at Hecla-Kilmer.

#### Next Steps Planned for the Hecla-Kilmer Project in 2023

This REE critical metal discovery at H-K has progressed continuously since mineralization was first intersected at surface in Hole 4 during the first reconnaissance program in October, 2020. Since then, VR has expanded geochemical techniques to include analysis by lithium-borate fusion to optimize detection of all REEs, and utilized QEMSCAN thin section analysis to characterize REE mineralogy. Going forward:

1. VR has commenced a study of drill core samples from Holes 13 and 15 using scanning electron microprobe (SEM) to determine exactly which minerals host the high value magnet rare earth elements. Results are anticipated this quarter, and work will be ongoing through **2023**;
2. VR has initiated the scoping for concentration, metallurgy and mineral extraction studies using a bulk sample obtained from core from a dedicated drill hole with a representative, broad intersection of REE mineralization starting at surface. This work is planned for the first half of **2023**, utilizing the world-class REE expertise at SGS Lakefield Laboratories in Ontario.

Follow-up drilling is planned for the spring of 2023. It will focus on supporting the afore-mentioned advanced-stage studies, and completing additional drill holes to evaluate the extent of mineralization discovered in the central core and south rim of the complex.

The path forward for this emerging discovery is strengthened by its location, just 23 km to the west of the provincial hydroelectric dam at Otter Rapids, with supporting and active Ontario Northern railroad and Highway 634 infrastructure.

### **Technical Information**

Summary technical and geological information for the Company's various exploration properties is available at the Company's website at [www.vrr.ca](http://www.vrr.ca).

VR submits sawn drill core samples for geochemical assay to the ALS Global Ltd. ("ALS") laboratory facilities in Timmins or Thunder Bay, Ontario, with final geochemical analytical work done at the ALS laboratory located in North Vancouver, BC., including lithium borate fusion, ICP-MS and ICP-AES analyses for base metals, trace elements and full-suite REE analysis, and gold determination by atomic absorption on fire assay. Analytical results are subject to industry-standard and NI 43-101 compliant QAQC sample procedures, including the systematic insertion of sample duplicates, blanks and certified reference material (CRM) done both externally on the project site by the Company and internally at the laboratory by ALS, as described by ALS.

Technical information for this news release has been prepared in accordance with the Canadian regulatory requirements set out in National Instrument 43-101. Justin Daley, P.Geo., VP Exploration and a non-independent Qualified Person oversees all aspects of the Company's mineral exploration projects, and the content of this news release has been reviewed on behalf of the Company by the CEO, Dr. Michael Gunning, P.Geo., a non-independent Qualified Person.

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- (1) **TREO** is the summation of  $Ce_2O_3 + La_2O_3 + Pr_2O_3 + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_2O_3 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3$ .
- (2) **PMREO** is the sum of high value rare earth oxides used in permanent magnet motors and turbines used in electric vehicles and wind turbines ( $Pr_2O_3 + Nd_2O_3 + Tb_2O_3 + Dy_2O_3$ ).

### **About the Hecla-Kilmer Property**

The Hecla-Kilmer complex is located 23 km northwest of the Ontario hydro-electric facility at Otter Rapids, the Ontario Northland Railway, and the northern terminus of Highway 634 which links the region to the towns of Cochrane and Kapuskasing to the south, itself located on the northern Trans-Canada Highway.

**The H-K property is large.** It consists of 224 mineral claims in one contiguous block approximately 6 x 7 km in size and covering 4,617 hectares. The property is owned 100% by VR. There are no underlying, annual lease payments on the property, nor are there any joint venture or back-in interests.

Hecla-Kilmer is located on provincial crown land, with mineral rights administered by the Ontario Ministry of Northern Development, Mines, Natural Resources and Forestry ("MNDM"). There are no annual



payments, but the MNDM requires certain annual exploration expenditures and reporting. The property falls within the traditional territories of the Moose Cree and Taykwa Tagamou First Nations.

### **About VR Resources**

VR is an established junior exploration company focused on greenfield's opportunities in critical metals, copper and gold (TSX.V: VRR; Frankfurt: 5VR; OTCQB: VRRCF). VR is the continuance of 4 years of active exploration in Nevada by a Vancouver-based private company. The foundation of VR is the diverse experience and proven track record of its Board in early-stage exploration, discovery and M&A. The Company is well-financed for its exploration strategies and corporate obligations, and focuses on underexplored, large-footprint mineral systems in the western United States and Canada. VR owns its properties outright and evaluates new opportunities on an ongoing basis, by staking or acquisition.

### **ON BEHALF OF THE BOARD OF DIRECTORS:**

**"Michael H. Gunning"**

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Dr. Michael H. Gunning, PhD, PGeo  
President & CEO

For general information please use the following:

Website: [www.vrr.ca](http://www.vrr.ca)

Email: [info@vrr.ca](mailto:info@vrr.ca)

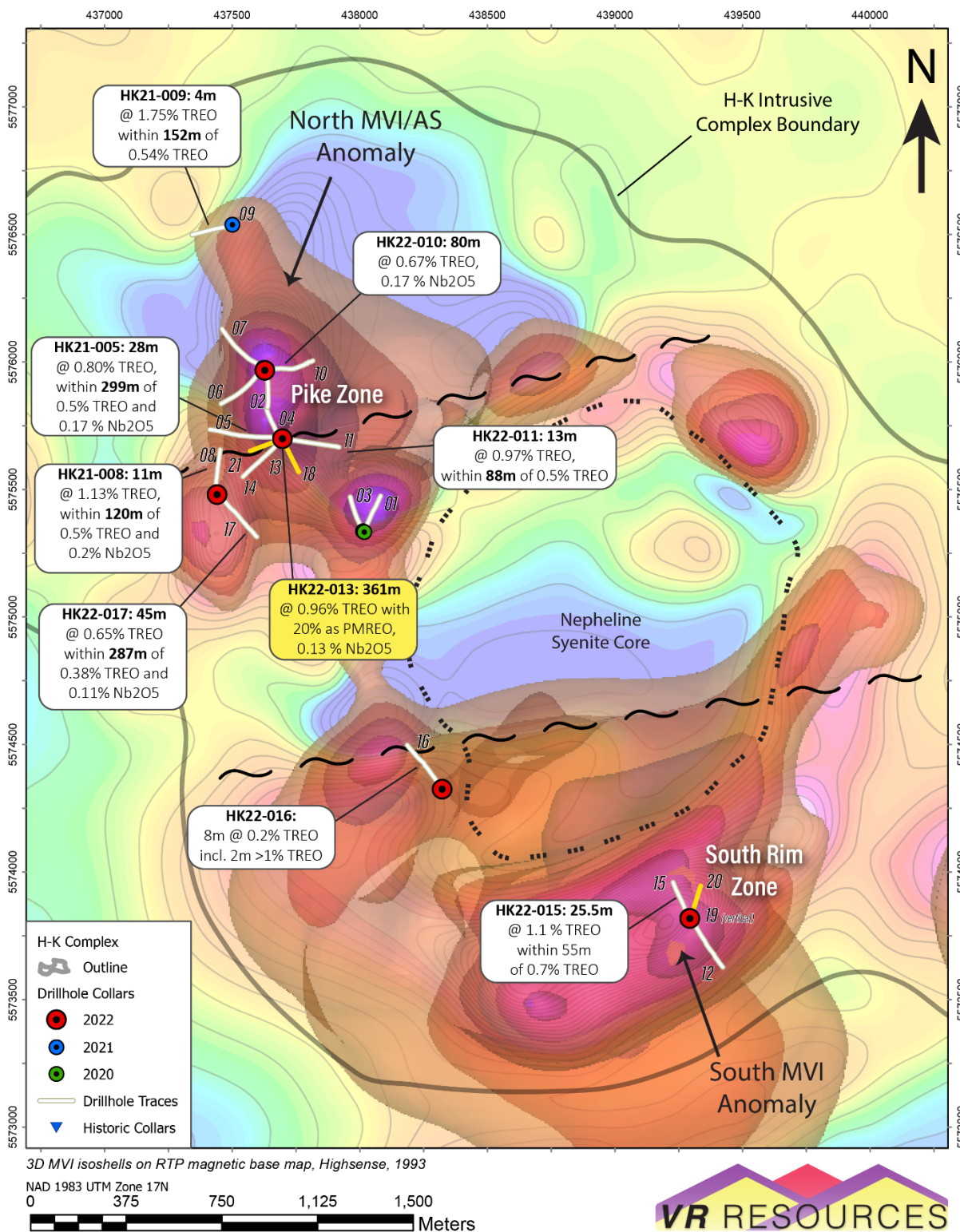
Phone: 604-262-1104

### **Forward Looking Statements**

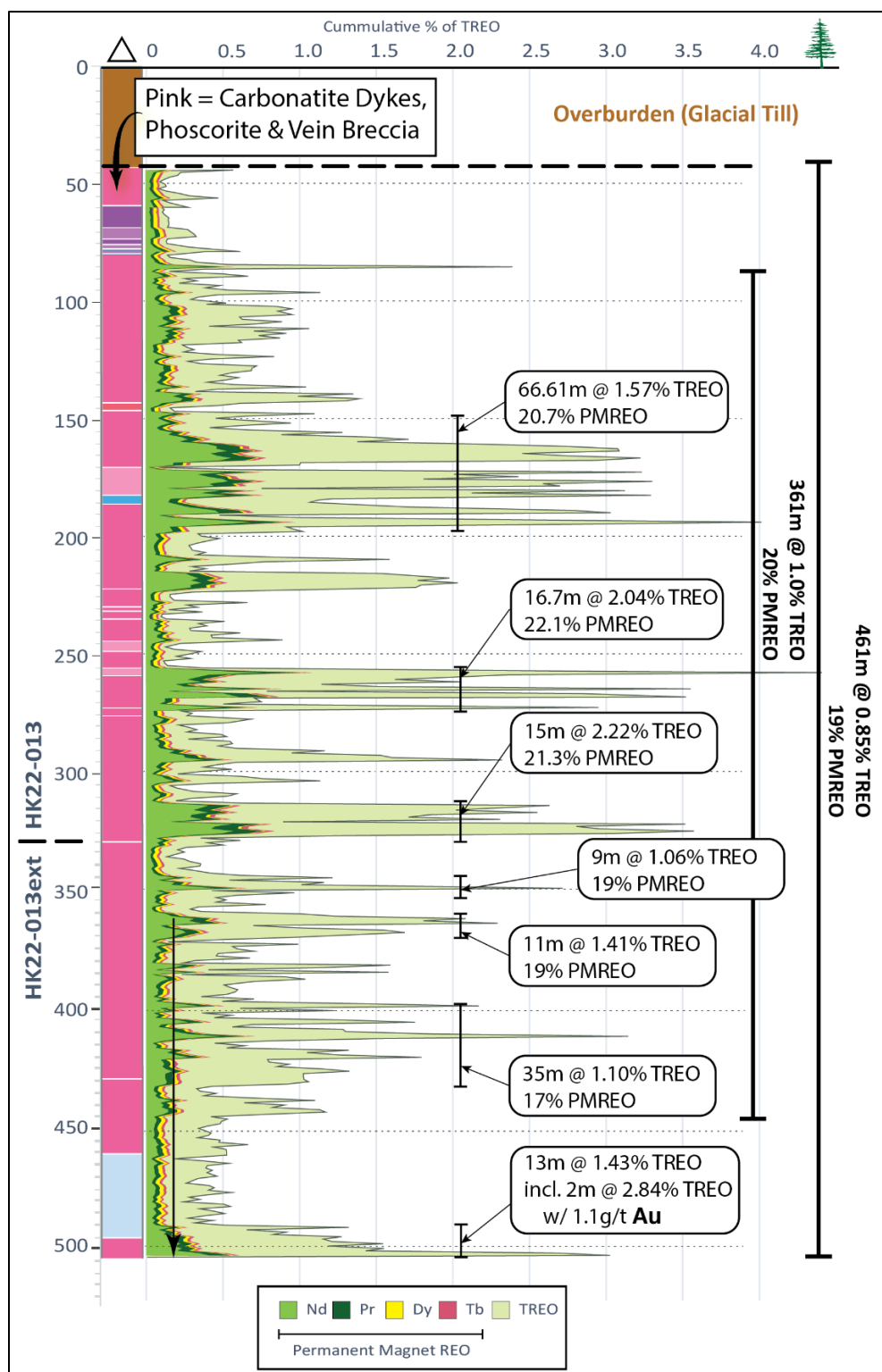
This press release contains forward-looking statements. Forward-looking statements are typically identified by words such as: believe, expect, anticipate, intend, estimate, postulate and similar expressions or those which, by their nature, refer to future events. Forward-looking statements in this release include those related to the company's upcoming plans, such as *"Data from the remaining drill holes are expected shortly"*, and *"VR evaluates new opportunities on an ongoing basis."*

This news release contains statements and/or information with respect to mineral properties and/or deposits which are adjacent to and/or potentially similar to the Company's mineral properties, but which the Company has no interest in nor rights to explore. Readers are cautioned that mineral deposits on similar properties are not necessarily indicative of mineral deposits on the Company's properties.

Although the Company believes that the use of such statements is reasonable, there can be no assurance that such statements will prove to be accurate, and actual results and future events could differ materially from those anticipated in such statements. The Company cautions investors that any forward-looking statements by the Company are not guarantees of future performance, and that actual results may differ materially from those in forward-looking statements. Trading in the securities of the Company should be considered highly speculative. All of the Company's public disclosure filings may be accessed via [www.sedar.com](http://www.sedar.com) and readers are urged to review these materials.



**Figure 1.** Locations of the 21 drill holes completed to date at Hecla-Kilmer, plotted on a contoured RTP magnetic base map with superimposed 3D iso-shells from the MVI inversion. Key intersections for critical metal are highlighted for the first 18 holes for which data are received, with data from four holes pending.



**Figure 2.** Graphic log for drill hole HK22-013, completed to 330 m in June, 2022, and extended to 504m in October. The permanent magnet REO elements (PMREO: Nd, Pr, Tb, and Dy) are shown as a cumulative proportion of total rare earth oxide (TREO), and average 19% of the 0.81% TREO grade over 461 m, with neodymium by far the most abundant of the four PMREO's. Note the gold in association with the increase in TREO mineralization and PMREO content at the bottom of the hole.



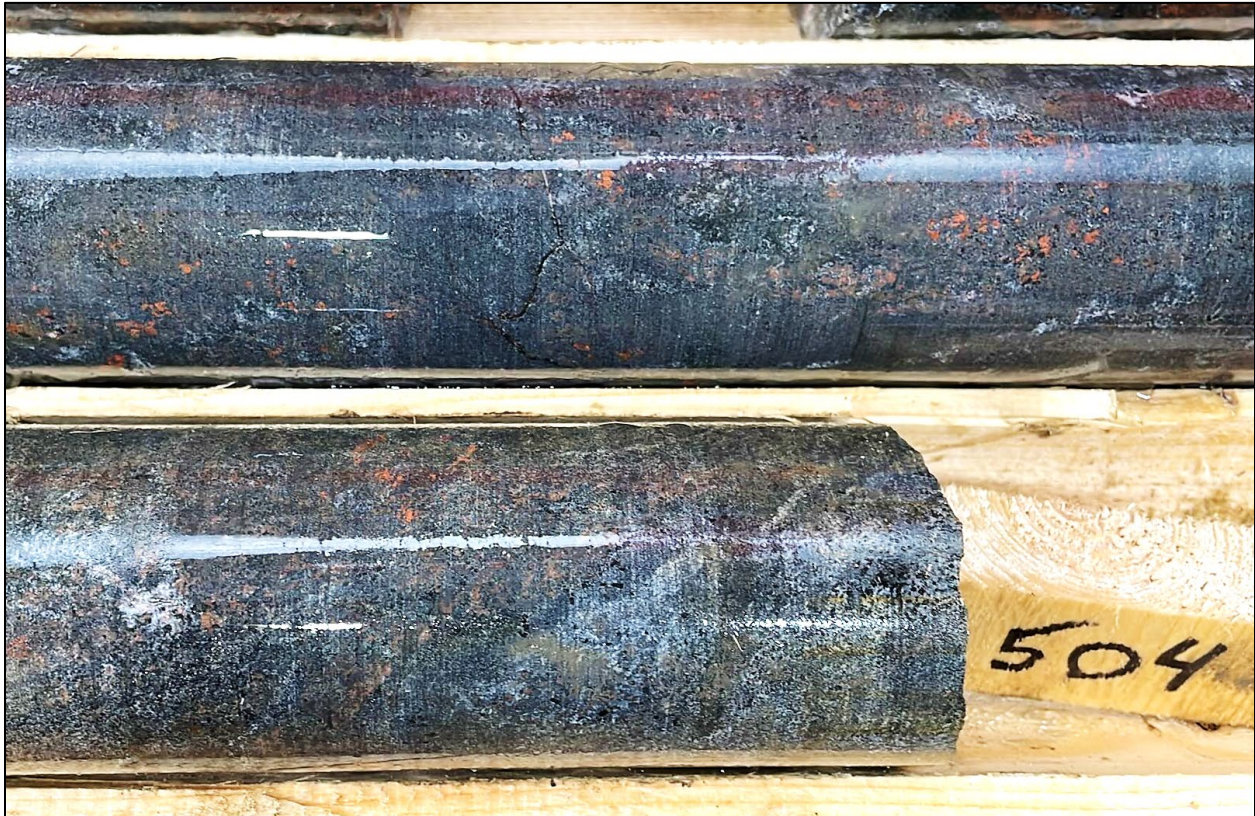
**Photo 1.** Photograph of drill core from near **bedrock surface** at the top of drill hole **HK20-004**, located on the same drill collar as Hole 13, showing altered magnetite needles with reaction rims of pyrite–pyrrhotite–iron carbonate and bastnaesite (LREE)–pyrochlore ( $(Na,Ca)_2Nb_2O_6(OH,F)$ ) in a matrix of apatite with calcite inclusions containing monazite  $((Ce,La,Nd,Th)PO_4)$ , quartz and potassium feldspar. The magnetite-quartz-potassium feldspar assemblage is a high temperature **potassic alteration facies**.



**Photo 2.** Photograph of drill core with **2.2% TREO** and **19% P2O5** at **219m** in drill hole HK22-013. Rare earth element mineralization is amongst a myriad of carbonatite dykes (phoscorite and sovite) which themselves are cut by fluorite-rich carbonate veins. Protolith alkaline igneous rocks are completely replaced by a potassic alteration assemblage dominated by hydrothermal biotite.



**Photo 3.** Discrete phoscorite carbonatite vein **1.7% TREO** at **366.8 m** in drill hole HK22-013. The vein is cored by pink apatite, and cuts fenitized ijolite porphyry host rock, with large books of hydrothermal biotite and sulfide with trace amounts of chalcopyrite. Within the apatite vein are mm-scale crystals of monazite and parasite which contribute to the 1.7% TREO grade within this 1m sample. At top of frame is a grey-green phoscorite with smaller biotite crystals; there are no observed differences in grade or mineralogy between the two styles of REE mineralization.



**Photo 4.** Photograph of core at **504 m** at the end of drill hole HK22-013, with **2m @ 2.84% TREO** and **1.1 g/t gold**. Shown is the **complete replacement** of host rock by apatite-biotite-magnetite alteration. Gold assays are strongly correlated with monazite geochemistry in the bottom 11 metres of the hole, indicating a gold - and REE-rich hydrothermal fluid phase.