

**VR reports new REE intersections at Hecla-Kilmer, confirms apatite-monazite REE mineralogy from initial bulk sample results, and is awarded a third Ontario OJEP critical metals exploration grant.**

**NR-23-20**

**October 17, 2023, Vancouver, B.C.:** VR Resources Ltd. (TSX.V: VRR, FSE: 5VR; OTCQB: VRRCF), the "Company", or "VR", is pleased to report results for the recent, spring 2023 drill program as well as the initial results on mineralogy from the bulk sample extraction and beneficiation study for rare earth element mineralization (REE) at the company's Hecla-Kilmer ("H-K") project in northern Ontario.

REE critical metals were discovered at Hecla-Kilmer in the very first reconnaissance drill program in 2020, with 24 holes completed to-date, including the three from this spring as shown in [Figure 1](#).

Broad intersections with carbonatite dykes and vein breccia were obtained in two of the three new drill holes. The composite intersection for hole 024 is shown in [Table 1](#), the evolving assay table for all 24 holes completed to date at Hecla-Kilmer. Most importantly, hole 024 at Pike Zone intersected a series of six vein and vein breccia zones with **> 1% TREO**.

Mineralogy

Drill core from the entire intersection in Hole 013 was submitted in May to the SGS Lakefield laboratory in Ontario as a bulk sample for a mineralogical, beneficiation and metallurgical study. SGS is a recognized world leader in mineralogical and metallurgical studies on REE mineral systems. The intersection includes:

- **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 hole ended with **2 m @ 2.84 % TREO and 1.1 g/t gold**.

The new mineralogy data are from TESCAN Integrated Mineral Analyzer (TIMA) analyses. Eight initial representative samples spanning the 361 metres of REE mineralization were crushed, sorted and analyzed with TIMA for elemental and mineral mapping of grains ahead of beneficiation studies.

Initial results indicate that 80% of REEs are contained within the phosphate mineral **apatite**, with the remainder hosted in **monazite**, a phosphate, and **parisite-synchysite**, fluorocarbonates, which themselves occur most commonly as fine grained inclusions in apatite. The results underscore the volume potential for REEs at Hecla-Kilmer based on the sheer breadth of phosphate intersections containing REE as shown on the satellite image in [Figure 2](#).

**The new REE mineralogy from the bulk sample is consistent with previous data:**

- [Figure 3](#). The strong correlation between P2O5 and %PMREO in ICP-MS geochemical data from >1,500 geochemical samples from all 24 drill holes completed to date.
- [Figure 4](#). On-site, XRF and SWIR scanning of whole drill core in 2021 showed the correlation between TREO and P2O5 in the near-surface mineralization in Hole 004.

**The new REE mineralogy from the bulk sample does not change from surface to depth at Pike Zone:**

- [Figure 5](#). Drill core photo and QEMSCAN image of hydrothermal apatite-monazite-magnetite-pyroxchlore with REE minerals at the top of Hole 004, **near bedrock surface** at Pike Zone.

- **Figure 6.** Drill core photo and SEM backscatter image of monazite inclusions in apatite in hydrothermal magnetite-biotite-carbonate vein breccia with REE in Hole 013 some 174 m below near-surface mineralization of the same character in Hole 004.

**The new REE mineralogy at Pike Zone is consistent with the South Rim located 2.5 km to the south.**

- **Figure 7.** SEM backscatter image showing REE-bearing monazite inclusions within apatite in the South Rim zone located 2.5 km south of Pike Zone.

**SGS reports that the 5-7 weight % REE contained in apatite at H-K is unique**, even amongst other igneous deposits mined for phosphate in apatite. Further, the igneous apatite at H-K is pristine compared to the apatite in the world's sedimentary deposits mined for phosphate.

#### OJEP Grant

The Company was informed by the Ontario Ministry of Northern Development, Mines, Natural Resources and Forestry ("MNDM") on August 23, 2023, that its application to the Ontario Junior Exploration Program for critical metals, OJEP, was successful for the third consecutive year. The grants cover 50% of exploration costs up to a maximum of \$200,000.

From VR's CEO, Dr. Michael Gunning, *"The new intersections are simply reinforcing the breadth of the polymetallic REE mineralization including  $P_2O_5$  and  $Nb_2O_5$  at Hecla-Kilmer, as illustrated on the satellite image in Figure 2.*

*While we are only seeing glimpses of 1-3% TREO vein mineralization away from the 461 m continuous intersection starting from surface in Hole 13, the data from the new drill holes once again confirm the unusually high, 20% proportion of TREO as the high value PMREO (permanent magnet) REO at Hecla-Kilmer, a proportion that is maintained both across the hydrothermal system from South Rim to Pike Zone some 2.5 km to the north, and vertically, from surface to greater than 450 m depth at Pike Zone.*

*The new mineralogy data are no surprise. They are entirely consistent with results obtained from each of the state-of-the-art technologies that have been utilized since 2020, the very beginning of our exploration at Hecla-Kilmer, in order to better understand the REE mineralization, including whole-core XRF scanning by GeologicAI, QEMSCAN mineralogy by SGS, ICP-MS geochemistry utilizing lithium-borate fusion for trace REE detection by ALS, and scanning electron microprobe analyses of individual mineral grains by RGS Inc. in London. Canada is plagued with REE discoveries made during the past 60 years that have never been developed because of the difficulty in extracting and recovering REE's contained in silicate and/or refractory minerals; the REE mineralogy at Hecla-Kilmer is a clear distinction.*

*Finally. I wish to convey my sincere appreciation to the Ontario MNDM for the recognition and support of our Hecla-Kilmer project through the OJEP critical metals exploration grant program. The grants make a material difference to advancing this discovery.*

Table 1. Table of assays for drill hole REE intersections, 2020 – 2023, Hecla-Kilmer Property.

Drill hole	From (m)	To (m)	Length (m)	TREO <sup>(1)</sup> (%)	MHREO <sup>(2)</sup> (%)	PMREO <sup>(3)</sup> (%)	Magnet % of REOs	Nb <sub>2</sub> O <sub>5</sub> (%)	Ta <sub>2</sub> O <sub>5</sub> (ppm)	ThO <sub>2</sub> (ppm)
HK23-024	194.52	205	10.48	0.80	0.07	0.18	<b>22%</b>	0.17	9.2	206
HK22-021	170	213.34	43.34	0.48	0.05	0.10	<b>21%</b>	0.17	30.5	148
HK22-020	149	361	<b>212</b>	0.69	0.17	0.12	16%	0.14	20.9	267
including	200	220	20	0.89	0.17	0.16	18%	0.12	14.0	601
and	309	357	48	0.96	0.89	0.19	16%	0.17	0.1	28
HK22-019	71.52	147	75.48	0.35	0.11	0.06	16%	0.10	9.2	61
HK22-018	157	195	38	0.49	0.13	0.09	16%	0.11	18.8	732
including	185	190	5	<b>1.73</b>	0.26	0.37	<b>21%</b>	0.12	19.0	3806
and	213	230	17	0.68	0.28	0.11	15%	0.28	52.9	513
and	291	396	105	0.60	0.16	0.11	18%	0.13	23.2	286
HK22-017	86	131	45	0.65	0.07	0.13	19%	0.13	18.0	82
and	330.42	362	31.58	0.70	0.06	0.12	18%	0.12	20.7	130
HK22-015	68.8	124	55.2	0.70	0.08	0.13	18%	0.17	23.1	322
including	97	122.48	<b>25.48</b>	<b>1.13</b>	0.13	0.21	18%	0.17	27.6	540
and	147.7	162	14.3	0.48	0.06	0.08	17%	0.16	38.5	144
HK22-014	205	253	48	0.49	0.05	0.10	20%	0.13	22.2	398
HK22-013	83	444	<b>361</b>	0.96	0.14	0.20	20%	0.13	23.4	263
including	155	221.61	66.61	<b>1.57</b>	0.17	0.34	<b>22%</b>	0.09	20.8	487
and	155	194	<b>39</b>	<b>2.04</b>	0.22	0.45	<b>21%</b>	0.07	14.2	550
and	255.38	272.08	16.7	<b>2.04</b>	0.22	0.46	<b>22%</b>	0.08	13.8	370
and	311	326	15	<b>2.22</b>	0.25	0.47	<b>21%</b>	0.09	26.2	548
and	358	369	11	1.41	0.26	0.28	19%	0.17	25.6	290
and	396	431	35	1.10	0.28	0.20	17%	0.23	39.7	278
and	491	504	13	1.43	0.37	0.26	18%	0.31	51.2	774
HK22-011	227	315	88	0.52	0.05	0.09	18%	0.12	23.7	165
including	276	289	13	<b>0.97</b>	0.08	0.17	17%	0.11	23.9	190
HK22-010	86	217	131	0.40	0.04	0.07	17%	0.16	36.6	253
including	86	166.07	<b>80.07</b>	<b>0.56</b>	0.06	0.10	18%	0.16	19.7	359
HK21-009	88	95	7	0.85	0.08	0.13	15%	0.11	16.9	123
and	120	272.15	<b>152.15</b>	<b>0.54</b>	0.05	0.08	16%	0.09	14.2	109
including	243	247	4	<b>1.75</b>	0.15	0.30	17%	0.34	58.0	386
HK21-008	144	179	35	0.40	0.03	0.07	16%	0.17	13.7	108
and	237	357	<b>120</b>	<b>0.57</b>	0.04	0.10	18%	<b>0.20</b>	21.3	143
including	324	335	11	1.13	0.09	0.20	28%	<b>0.38</b>	<b>39.2</b>	289
HK21-005	80.75	318.21	<b>237.46</b>	0.49	0.04	0.08	17%	0.20	27.3	149
including	152	180	28	0.80	0.08	0.14	18%	0.17	26.5	252
including	156	159	3	<b>1.70</b>	<b>0.18</b>	0.32	19%	0.08	16.1	562
including	183	238	55	0.44	0.03	0.07	17%	0.23	25.4	123
including	275	306	31	0.61	0.04	0.10	17%	0.31	33.4	215
HK20-004	56	83	27	0.48	0.05	0.11	<b>22%</b>	0.17	31.1	231
including	57	60.21	3.21	1.44	0.15	0.34	15%	0.17	25.2	439
HK20-002	159.6	183	23.4	0.63	0.06	0.10	19%	0.05	8.3	152
and	553	606	<b>53</b>	<b>0.51</b>	0.05	0.09	17%	0.12	17.1	390
HK20-001	83	86	3	<b>1.87</b>	0.19	0.38	19%	0.06	16.4	609
and	102	110	8	0.70	0.07	0.14	7%	0.02	6.2	228

(1) TREO is the summation of Ce2O3 + La2O3 + Pr2O3 + Nd2O3 + Sm2O3 + Eu2O3 + Gd2O3 + Tb2O3 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Lu2O3 + Y2O3.

(2) MHREO is the sum of the middle and heavy rare earth oxides (Sm2O3 + Eu2O3 + Gd2O3 + Tb2O3 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Lu2O3 + Y2O3).

(3) PMREO is the sum of high-value rare earth oxides used in permanent magnet motors and turbines used in electric vehicles and wind turbines (Pr2O3 + Nd2O3 + Tb2O3 + Dy2O3). The % Magnet REO is this PMREO sum divided by TREO, and expressed as a percent.

### **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.

### **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 ("MNDRM"). There are no annual payments, but the MNDRM 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 based in Vancouver (TSX.V: VRR; Frankfurt: 5VR; OTCQB: VRRCF). VR evaluates, explores and advances opportunities in copper, gold and critical metals in Nevada, USA, and Ontario, Canada, and most recently, a kimberlite breccia pipe discovery in northern Ontario. VR applies modern exploration technologies and leverages in-house experience and expertise in greenfields exploration to large-footprint mineral systems in underexplored areas/districts. The foundation of VR is the proven track record of its Board in early-stage exploration, discovery and M&A. The Company is well-financed for its mineral exploration and corporate obligations. VR owns its properties outright and evaluates new opportunities on an ongoing basis, whether by staking or acquisition.



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

**“Michael H. Gunning”**

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

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**Forward Looking Statements**

*This news release contains statements that constitute "forward-looking statements". Such forward looking statements involve known and unknown risks, uncertainties and other factors that may cause the Company's actual results, performance or achievements, or developments in the industry to differ materially from the anticipated results, performance or achievements expressed or implied by such forward-looking statements. Forward-looking statements are statements that are not historical facts and are generally, but not always, identified by the words "expects," "plans," "anticipates," "believes," "intends," "estimates," "projects," "potential" and similar expressions, or that events or conditions "will," "would," "may," "could" or "should" occur. Forward-looking statements in this document include statements concerning VR's expectations concerning the Hecla-Kilmer property and all other statements that are not statements of historical fact.*

*Although the Company believes the forward-looking information contained in this news release is reasonable based on information available on the date hereof, by their nature forward-looking statements involve assumptions, known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements, or other future events, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements.*

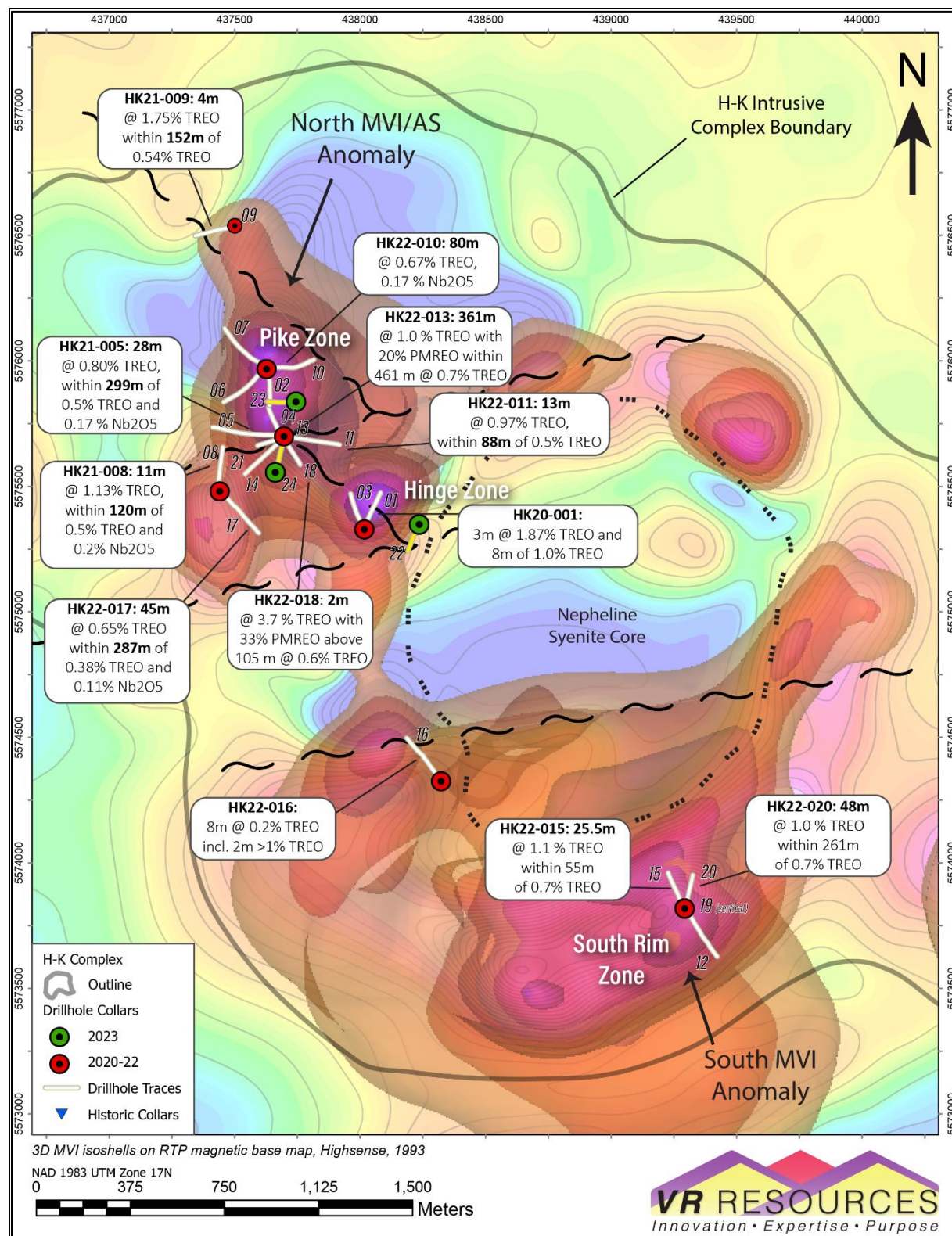
*Examples of such assumptions, risks and uncertainties include, without limitation, assumptions, risks and uncertainties associated with general economic conditions; the Covid-19 pandemic; adverse industry events; future legislative and regulatory developments in the mining sector; the Company's ability to access sufficient capital from internal and external sources, and/or inability to access sufficient capital on favorable terms; mining industry and markets in Canada and generally; the ability of the Company to implement its business strategies; competition; and other assumptions, risks and uncertainties.*

*The forward-looking information contained in this news release represents the expectations of the Company as of the date of this news release and, accordingly, is subject to change after such date. Readers should not place undue importance on forward-looking information and should not rely upon this information as of any other date. While the company may elect to, it does not undertake to update this information at any particular time except as required in accordance with applicable laws.*

*This news release may also contain 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.*

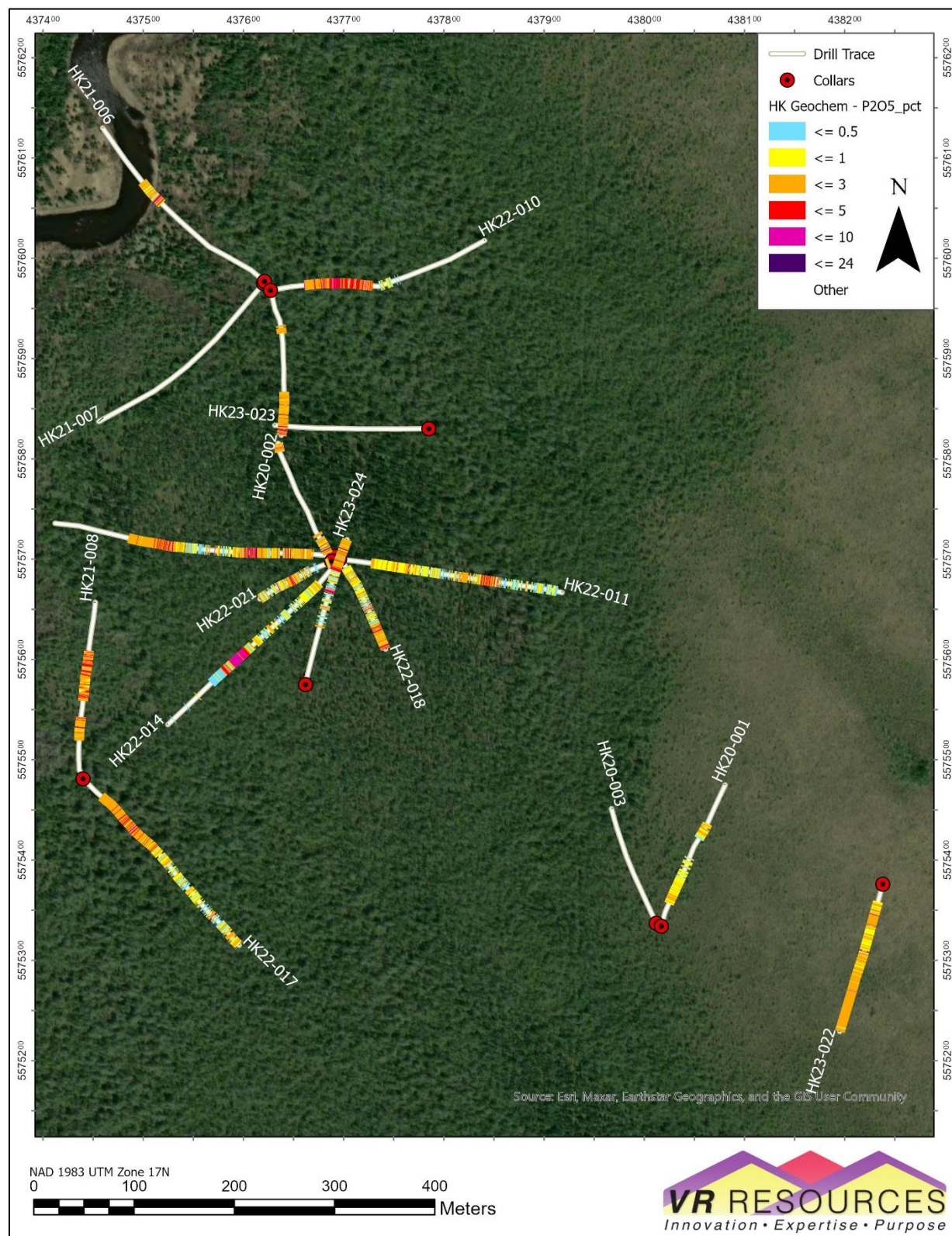
*Trading in the securities of the Company should be considered highly speculative. All of the Company's public disclosure filings may be accessed via [www.sedarplus.ca](http://www.sedarplus.ca) and readers are urged to review them.*



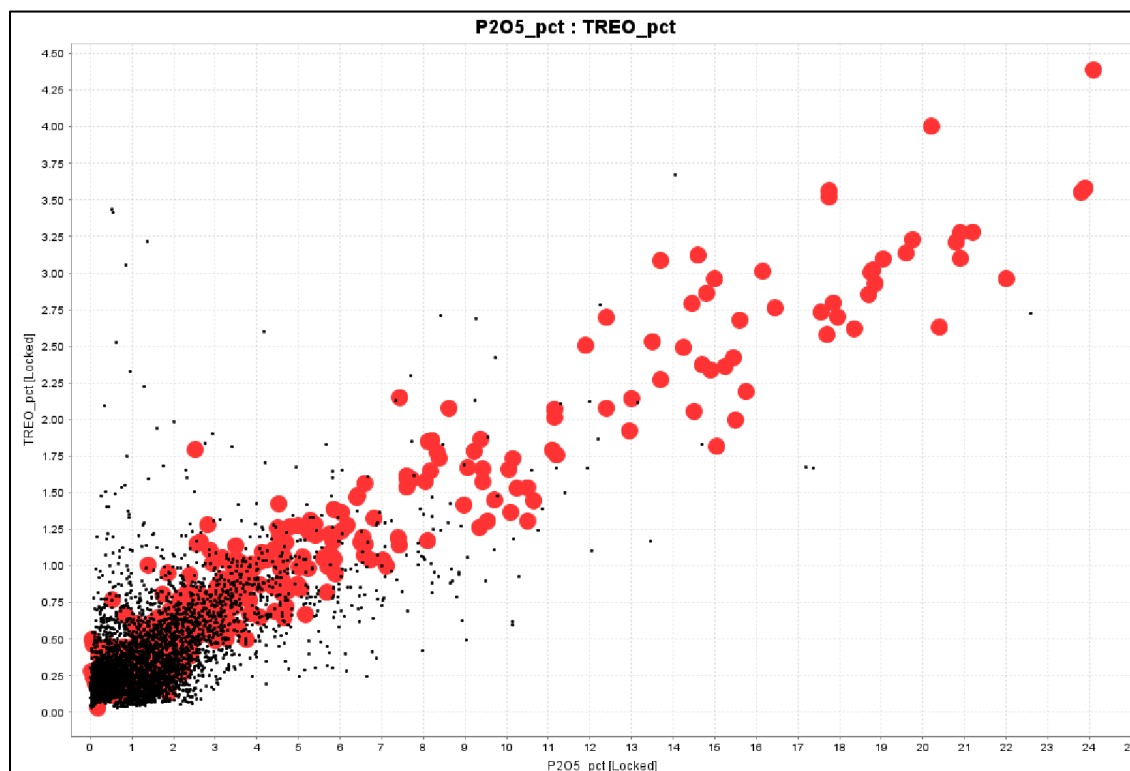


**Figure 1.** Locations and key REE intersections for the 24 drill holes completed to date at Hecla-Kilmer, 2020 - 2023, plotted on a contoured RTP magnetic base map with superimposed 3D iso-shells from the MVI inversion. Drill traces are shown in yellow for the three new drill holes completed in May.



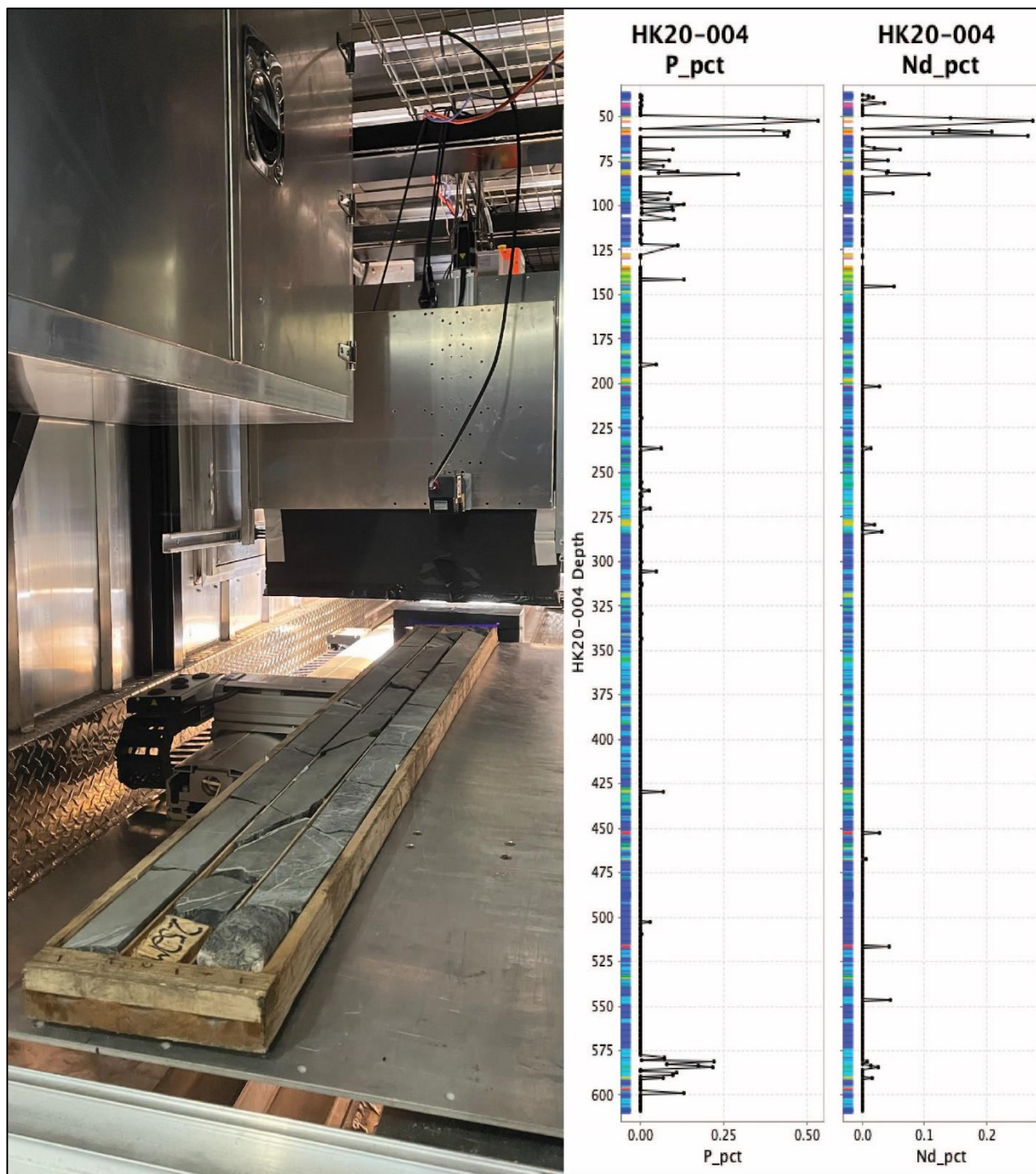


**Figure 2.** Aerial extent of broad phosphate intersections with related REE mineralization at Pike Zone in the northern part of the Hecla-Kilmer polyphase alkaline complex with carbonatite and hydrothermal vein breccia.



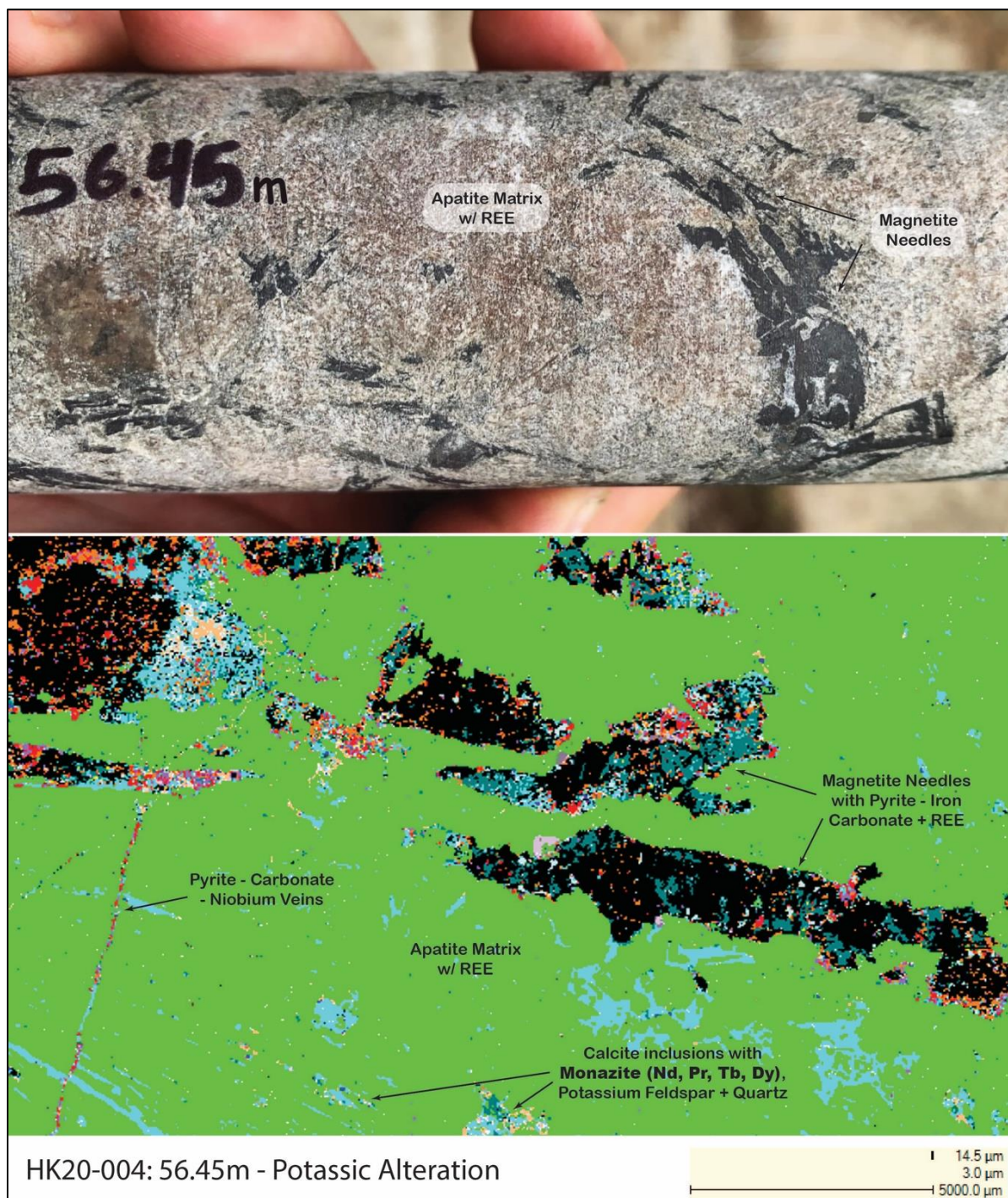
**Figure 3.** Geochemical plot of  $P_2O_5$  vs. PMREO (the permanent magnet REO's) based on data from more than 1,500 samples of drill core from all 24 of the drill holes completed to date at Hecla-Kilmer. The correlation coefficient is nearly 1, and it reinforces the new mineralogy data from SGS Lakefield on the bulk sample from the 361 metre intersection in Hole 013 reported herein.





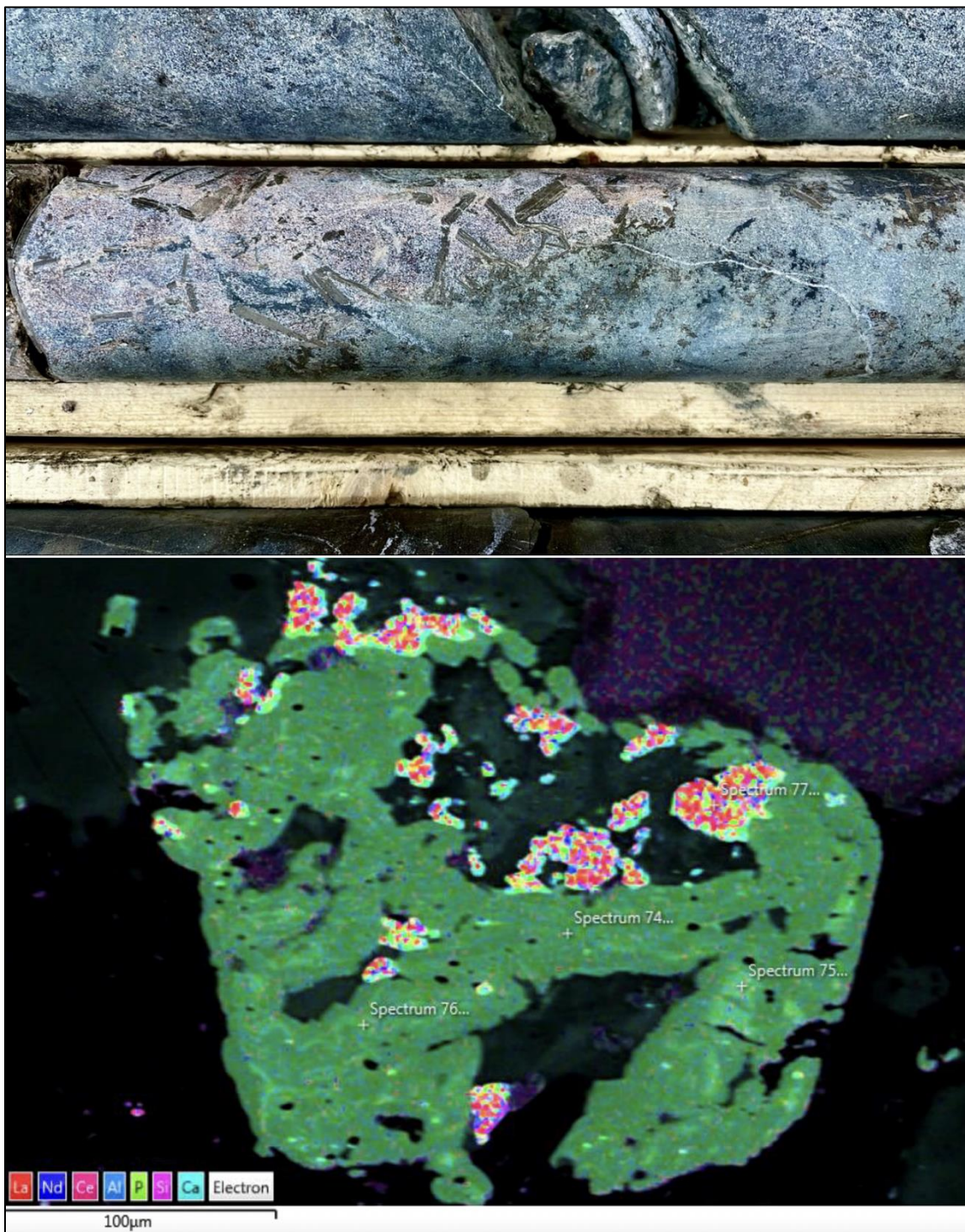
**Figure 4.** Whole-core XRF and SWIR scanning on-site at the exploration drill camp at Otter Rapids in 2021, using technology by GeologicAI, Calgary. The correlation between TREO and P<sub>2</sub>O<sub>5</sub> evident in the REE mineralization from the very first drill program in Hole 004 is consistent with the correlation evident in the new mineralogy data from SGS for Hole 013. This correlation is also consistent with the apatite-monazite phosphate mineralogy for the PMREO's at Hecla-Kilmer as identified by QEMSCAN (**Figure 5**).





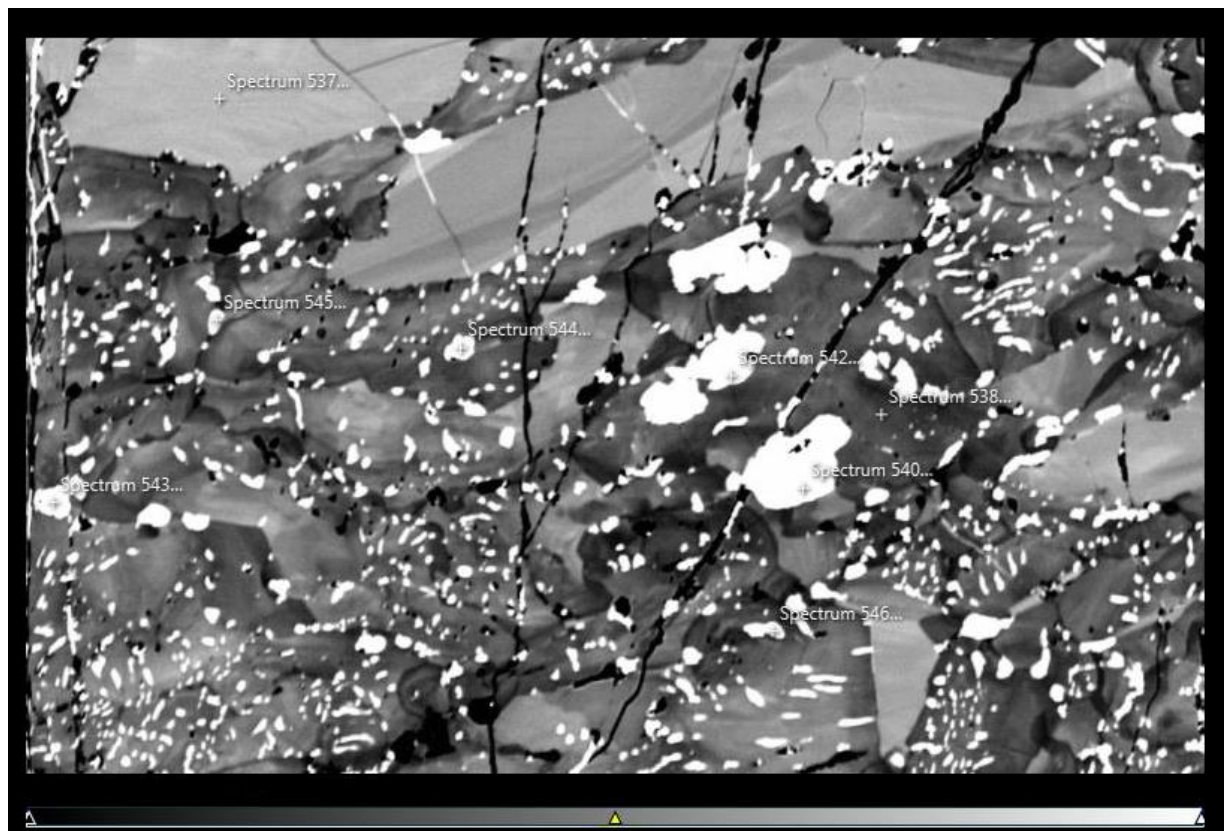
**Figure 5.** Drill core photograph above QEMSCAN imagery and element data from SGS Lakefield Research below, from **bedrock surface** at the top of Drill Hole **HK20-004**, showing the relationship between REE minerals and apatite, a phosphate mineral. Calcite inclusions in the apatite vein matrix contain REE-bearing monazite ((Nd,Pr,Dy,Tb)PO<sub>4</sub>) and parisite, and occur near altered magnetite needles with reaction rims of pyrite–iron carbonate (LREE)–pyrochlore (Na,Ca)<sub>2</sub>Nb<sub>2</sub>O<sub>6</sub>(OH,F). See **Figure 1** for location of Hole 004 at the same collar as Hole 13 with the intersection of 361 m @ 1% TREO used for the bulk sample mineralogy reported herein.





**Figure 6.** Upper: photograph of drill core at **173m** depth with **2.8% TREO** in drill hole **HK22-013** from the Pike Zone at Hecla-Kilmer. The pink and green areas are high temperature, potassic alteration which displays elongate, quenched magnetite and biotite crystals in a matrix of apatite, fluorapatite and carbonate. Lower: scanning electron microprobe image of a complexly zoned apatite crystal; the areas of blue, pink and red pixels are REE-bearing monazite inclusions with **Nd**, **Pr**, **Tb** and **Dy**. The monazite occurs **both** as inclusions within **apatite** in veins, and in the carbonatite vein breccia cement.





**Figure 7.** Backscatter electron microprobe image from 111m depth in Hole 15 at the South Rim Zone. The abundant areas of bright white reflectance are inclusions of REE-bearing **monazite**, parisite and britholite within larger and complexly zoned crystals of **apatite**. This style of REE mineralization, with **Nd**, **Pr**, **Tb** and **Dy** contained in monazite and parisite as both inclusions within apatite and as isolated crystals in carbonatite breccia cement is consistent across Hecla-Kilmer, from the South Rim to Pike Zone located 2.5 km to the north (**Figure 6**).