

14<sup>th</sup> November 2024

**Power Metal Resources PLC**  
**("Power Metal" or the "Company")**  
**Perch River - Significant Uranium Target Outlined**

**Geochemical Sampling from the 'Rapids Target' Returns Area of Anomalous Uranium, Lead Isotopic and Radon Results from the Perch River Uranium Project.**

Power Metal Resources plc (AIM:POW, OTCQB:POWMF), the London-listed exploration company with a global project portfolio, is pleased to report on results from the uranium-focused joint venture (the "Joint Venture" or "JV") with UCAM Ltd ("UCAM" or the "Investor") involving Power Metal's portfolio of uranium licences. This release details the results from the recently completed helium, hydrogen, radon and soil geochemistry surveys from the Perch River Uranium Project ("Perch River" or the "Project"), Saskatchewan, Canada.

**HIGHLIGHTS**

- Combined soil geochemistry and radon sampling completed on the Project has defined a new target area, named the 'Rapids Target', which consists of multiple overlapping geochemical and radon anomalies located within a geological and geophysical setting that is highly prospective for unconformity-hosted uranium mineralisation.
- An airborne electromagnetic and radiometric geophysical survey to provide modern high resolution geophysical information on the Project, and specifically across the Rapids Target, is due to commence in the next few weeks, with the JV considering next steps.
- Ground gas sampling was completed in select areas of the Project, indicating local enrichment in hydrogen close to the Rapids Target.

**Sean Wade, Chief Executive Officer of Power Metal Resources plc, commented:**

*"Following immediately on from our update on Badger Lake and the upcoming work planned there, it is also very pleasing to be able to further inform shareholders about the identification of another significant uranium target area."*

*"The results of the next round of surveying will determine next steps in respect to drilling, and we look forward to updating shareholders on that in due course."*

**Overview of the Perch River Project**

The 54.55 km<sup>2</sup> area Perch River Uranium Project is located in the northeast of the Athabasca Basin in northern Saskatchewan, approximately 30km south east from the community of Black Lake. The Athabasca Basin is a world class district for uranium exploration and production, and is home to such mines and projects as Cameco's McArthur River, NexGen's Arrow, and Fission's Triple R.

The Perch River is prospective for unconformity related uranium, the style of mineralisation which features a high grade uranium orebody in close proximity to an unconformity between crystalline basement, and younger sandstones. Based on historical drillhole data<sup>1</sup>, and information acquired from the Saskatchewan Geological Survey<sup>2</sup> is thought to be shallow lying between 50m and 200m depth.

The Project has been intermittently explored over a period of approximately 40 years, with historical work including multiple geophysical surveys, soil sampling programmes and four drillholes in 1980 by SMD<sup>3</sup> and in 2021 by Purepoint Uranium Group Ltd<sup>3</sup> have been completed on the Project.

**Overview of the Rapids Target**

From the previous exploration completed by multiple operators in the area of Perch River, the Power Metal technical team determined the Rapids Target (or the "Target") to be a prospective area for combined radon gas and soil sampling; based on the following datapoints:

- The Target lies in close proximity to a historical electromagnetic geophysical conductor<sup>4</sup>; electromagnetic conductors are key targets for exploration in the Athabasca Basin, as they may represent graphitic rocks in the basement. The majority of uranium deposits in the Athabasca Basin share a spatial relationship with graphitic rocks in the basement.
- The target is in the vicinity of a significant Bouguer gravity low<sup>5</sup>, identified through a historical ground-based survey located to the north of the Font du Lac River. A historical airborne survey<sup>6</sup> have also indicated a potential gravity low in the vicinity of the Target, below the Font du Lac River. Gravity Lows are key targets for unconformity-related uranium, as they are interpreted to represent the lower-density alteration mineralogy, which is commonly associated with unconformity-related mineralised systems.
- The Target is in the vicinity of the inferred north-south Font du Lac Fault. Elsewhere in the Athabasca Basin, north-south trending fault structures are known to have a spatial relationship with significant buried uranium mineralisation. Additionally, previous work<sup>7</sup> indicates the Rapids Target is in the vicinity of 'fault relay zone' within the Font du Lac Fault, where the fault 'jumps' between two individual fault planes. Fault relay zones are typically areas of intense structural deformation, which may be amicable to fluid flow and, thus, uranium mineralisation.
- The Target is within a magnetic low. Magnetic lows are known to be targets for unconformity-related uranium and may represent prospective graphitic or metapelite lithologies.

Based on historical exploration reports acquired by Power Metal, there has never been any systematic surface sampling in the vicinity of the Rapids Target, and minimal modern geophysical work, with previous operators focussing to the north

and west of the Target. From the 2024 sampling now completed, multiple coincident geochemical and radon anomalies exist at the Rapids Target:

- Anomalous/highly elevated radon gas results in and adjacent to the Target, these anomalies are present on both sides of the Font du Lac River. Additionally, hydrogen gas sampling has shown localised elevations.
- Anomalous results for uranium, cobalt, nickel and rare earth elements - these are all known to be associated with unconformity-related uranium elsewhere in the Athabasca Basin.
- Anomalous  $^{206}/^{204}\text{Pb}$  isotopic soil results located immediately west of the Rapids Target and along the Font du Lac River. Alongside being statistically anomalous for the samples collected on Perch River, these results are generally very high in comparison to samples from other uranium districts.

More information on the multiple coincident geochemical and radon anomalies overlying the Rapids Target is presented below.

#### Helium and Hydrogen Sampling

Following the staking of Perch River in summer 2023, Power Metal commissioned a remote sensing hyperspectral data compilation and processing study. Results from the study highlighted the presence of several very strong hyperspectral helium gas anomalies on the Project<sup>8</sup>. To evaluate this feature, the JV completed a dense (25m) grid of soil gas sampling in and around the main hyperspectral anomaly, as well as additional points in proximity to the Font du Lac River.

Sampling of soil gas has indicated a cluster of highly elevated hydrogen results in close proximity to the Rapids Target and to the northeast along the Font du Lac River. Secondary emissions are recorded in the vicinity of the previously identified helium hyperspectral anomaly but are considered to be unrelated. Hydrogen gas is inferred to be generated by uranium deposits through the electrolysis of water following the decay of a uranium atom, and thus elevated hydrogen may be related to uranium mineralisation.

From the sampling completed, values of soil gas helium within the hyperspectral anomaly were not found to be anomalous, and did not exhibit anomalism in line with the response in the hyperspectral data. At this time, the helium hyperspectral anomaly reported prior is considered to be an error in the analysis of the hyperspectral imagery, possibly related to wildfires at the time of Sentinel 2 satellite imagery.

#### Radon Sampling

A total of 344 radon cup samples were completed on the Perch River Project by RadonEx Ltd; the results of which are shown on Figure 1. At the Rapids Target, anomalous results (up to  $2.32 \text{ pCi}/\text{m}^2/\text{sec}$ ) are present to the northwest of the Font du Lac River, and elevated results extend over 300m to the south of the Rapids Target. These results, combined with the soil geochemistry offer a highly prospective target for future work.

In the north of the sampling grid, a further target was delineated which is now named the 'Northern Linear Radon Anomaly', which trends east-west over an area of approximately  $800 \text{ m} \times 150 \text{ m}$ . This area of elevated radon (upto  $2.2 \text{ pCi}/\text{m}^2/\text{sec}$ ), does not show sustained relationships with elevated uranium, lead isotopic values or other elements in soils, but presents a new target, for which further work is needed to understand its prospectivity.

Radon is a radioactive gas generated by the radioactive decay of uranium, which then rises to the earth's surface via faults and fractures. The radon cup sampling method works by trapping ground gas within a small chamber that is placed in a small hand-excavated pit within the ground. The chamber contains a charged plate that loses charge due to the release of ionising radiation caused by the decay of the unstable radon atom, this loss of charge is then measured. The method is less susceptible to materials within drift and the surficial geology of a project than traditional soil sampling methodologies alone. However, as with any surficial-based sampling techniques, the risk of radon being derived from uraniferous material transported by glacial/fluviol activity remains.

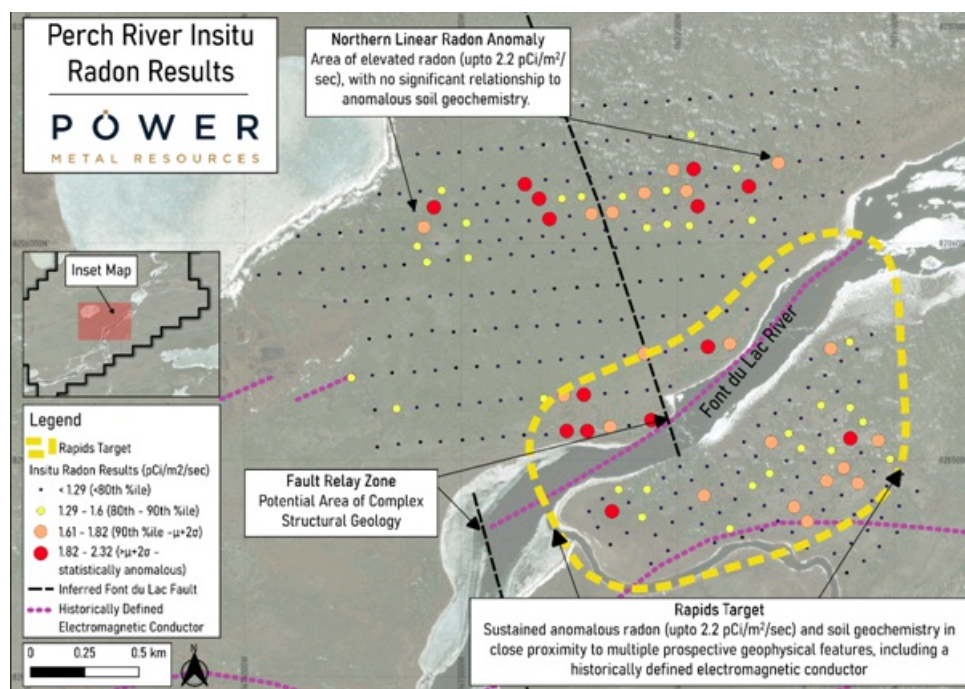


Figure 1: In Situ Radon Results from the Perch River Project.

#### Soil Sampling

During the 2024 sampling campaign a total of 291 soil samples were tested using the Ionic Leach plus Lead Isotopes assay suite at ALS Geochemistry laboratory located in Vancouver, Canada. The Ionic Leach method is designed only to extract the 'mobile' ions from a soil sampling. These 'mobile' ions are those which are more likely to have been derived from buried mineralisation rather than the material which makes up the soil. These ions are weakly bound to the soil particles, and thus Ionic Leach uses a weak acid to separate those weak bonds, isolate the 'mobile' ions, and not extract the vast majority of the material which makes up the soil - material that could potentially contain detrital mineralogy derived from glaciation or fluvial activity. The detrital mineralogy of soil could obscure the geochemistry of a potential deposit at depth. Traditional 'partial' or 'total' leach methods use stronger acids to extract more of the sample, but carry a risk of extracting

fractional portion of total lead measured due to longer delay to encounter more of the sample, reducing a risk of obscuring detrital material which may be unrelated to the underlying geology.

The Ionic Leach method was specifically chosen for use on the Perch River Project as the area is known to have been affected by glaciation as is the case for the entirety of the Athabasca Basin. The risk remains, however, that these signatures, and those of radon, are derived from glacial/fluviol material, and this must be considered in future exploration. In order to further mitigate these results, they are considered in the context of other existing available datasets, predominantly geophysics, which is a measure of geological properties that are considered to be in-situ and not transported.

### Lead Isotopes

In the south of the sample grid (Figure 2), multiple anomalous  $^{206}\text{Pb}/^{204}\text{Pb}$  results are present along the western bank of the Font du Lac River, and further anomalous and highly elevated samples are present in the vicinity of the Rapids Target.

Significantly, the values of the  $^{206}\text{Pb}/^{204}\text{Pb}$  ratio far exceed the level identified in soils over uranium deposits in Wyoming and lead isotope values from sandstone in close proximity to a uranium deposit located within the Thelon Basin.<sup>9,10</sup>

Lead 206 ( $^{206}\text{Pb}$ ) is derived from the radiogenic decay of uranium, while  $^{204}\text{Pb}$  is stable, and does not decay, nor is it derived from the radioactive decay of other elements. By comparing the ratio between the level of  $^{206}\text{Pb}$  and  $^{204}\text{Pb}$  in a sample, an indication can be given of how much of the lead was derived from the decay of uranium versus other sources. In the event a sample has a high ratio of  $^{206}\text{Pb}$  (i.e. more  $^{206}\text{Pb}$ ), this indicates that a greater proportion of the lead in the sample was derived from uranium mineralisation, and may be associated with uranium mineralisation.

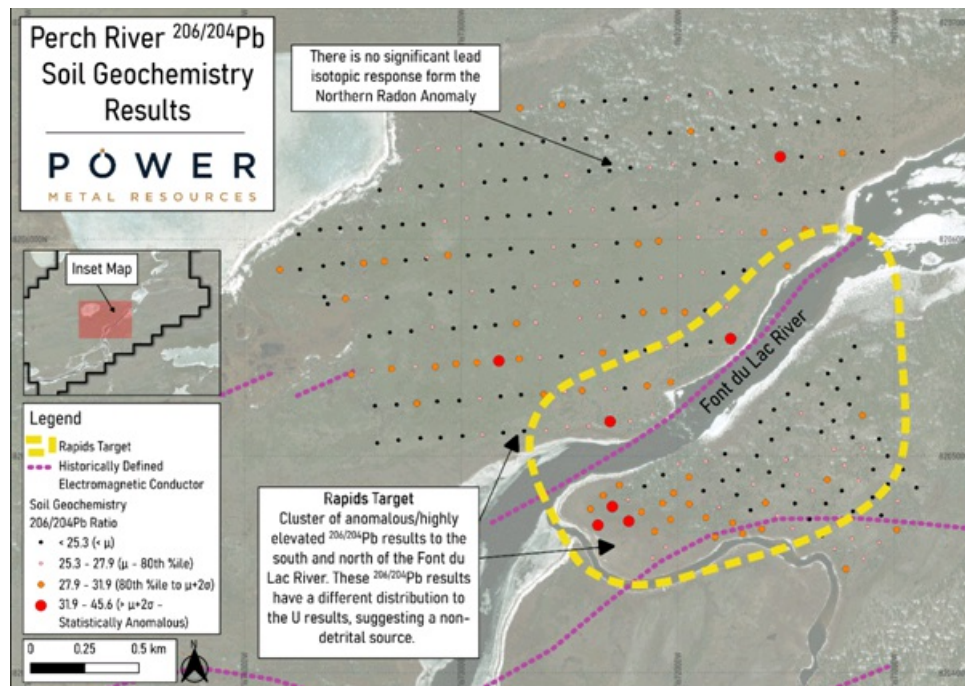
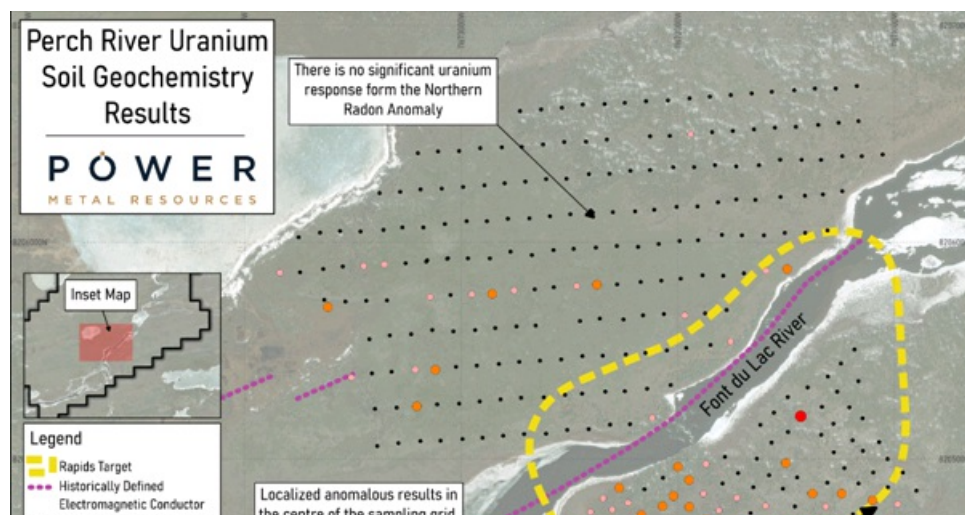


Figure 2: Lead Isotope ( $^{206}/^{204}\text{Pb}$  ratio) Results from the Perch River Project.

### Uranium-in-Soil Results

At the Rapids Target (Figure 3), the U-in-soil results highlight a sustained area of elevated uranium with multiple anomalous values also identified in the southwest of the sampling area.

Importantly, the anomalous uranium values are not present in the same samples as those with highly elevated  $^{206}\text{Pb}/^{204}\text{Pb}$  samples, or elevated  $^{206}\text{Pb}$ . Statistical analysis of the data has shown that there is a limited correlation between the uranium and  $^{206}\text{Pb}$  datasets; this indicates that the potential detrital signature from the U-in-soil values is minimal and thus improves the confidence that these anomalous uranium results are derived from a uraniferous source at depth. Furthermore, comparison with historical soil sampling to the north of the Font du Lac River, which utilised total and partial leach techniques, and thus may have been susceptible to detrital signatures, indicates minimal correlation with the results from this survey.





**Figure 3: Uranium-in-soil Results from the Perch River Project**

#### Other Elements

Nickel, cobalt, copper and rare earth elements - which are known to have an association with unconformity-related uranium, are anomalous to the south of the Rapids Target, with a similar distribution to uranium.

The presence of a significant U-in-soil anomaly that broadly coincides with lead isotopic values suggestive of uranium mineralisation and other elements is highly significant. Sustained anomalism - but with different distribution of elevated values between uranium and lead isotopes minimises the risk that the anomalies are derived from glacial material, as it would be unusual for detrital material to contain all of these elements in the same distribution. Additionally, each element behaves differently in groundwater and soils, influencing the pathway it would take from a theoretical deposit to the surface. Sustained anomalies in uranium, lead, cobalt, nickel, and rare earth elements may, therefore, suggest a shared source at depth.

#### REFERENCES

- <sup>1</sup> Saskatchewan Mining Development Corporation, 1981, Black Lake Project, Permits 3 and 4, MPP 1065 and 1066 1980 Diamond Drilling, 74P02-0012
- <sup>2</sup> Top Crystalline Basement Structure Contours, Athabasca Region, Saskatchewan, Canada, Saskatchewan Geological Survey, UTM NAD83 Zone13, [https://gisappl.saskatchewan.ca/WebDocs/Geo\\_Atlas/MetaData/Top\\_Crystalline\\_basement\\_structure\\_contours.html](https://gisappl.saskatchewan.ca/WebDocs/Geo_Atlas/MetaData/Top_Crystalline_basement_structure_contours.html)
- <sup>3</sup> <https://www.newswire.ca/news-releases/purepoint-uranium-completes-drilling-at-umfreville-and-provides-an-update-on-tabbernor-projects-895628970.html>
- <sup>4</sup> SMDC; 1978, Airborne Geophysical Survey, SMDC Permit # 3 NTS 74-P-3 Black Lake Project, 74P-0004
- <sup>5</sup> Purepoint Uranium Group Inc., 2017, Umfreville Project, 2017 Exploration Report, MAW02161
- <sup>6</sup> Purepoint Uranium Group Inc. 2008, Umfreville Lake and Newnham South Projects 2007 Exploration Report, 74P02-0023
- <sup>7</sup> Purepoint Uranium Group Inc. 2007, Umfreville Lake, McEwen Lake and Newnham South Project Fall 2005 and 2006 Exploration Report, 74P-0017.
- <sup>8</sup> [https://polaris.brighterir.com/public/power\\_metal\\_resources/news/rns/story/rd1n0pr](https://polaris.brighterir.com/public/power_metal_resources/news/rns/story/rd1n0pr)
- <sup>9</sup> Abzalov, M.Z., 2021, Geochemical exploration for buried sandstone-hosted uranium mineralisation using mobile U and Pb isotopes: case study of the REB deposit, Great Divide Basin, Wyoming, Geochemistry: Exploration, Environment, Analysis, Volume 21
- <sup>10</sup> Quirt, D., Benedicto, A., 2020, Lead Isotopes in Exploration for Basement-Hosted Structurally Controlled Unconformity-Related Uranium Deposits: Kiggavik Project (Nunavut, Canada), Minerals10(6), 512; <https://doi.org/10.3390/min10060512>

#### QUALIFIED PERSON STATEMENT

The technical information contained in this disclosure has been read and approved by Mr Nick O'Reilly (MSc, DIC, MIMMM QMR, MAusIMM, FGS), who is a qualified geologist and acts as the Qualified Person under the AIM Rules - Note for Mining and Oil & Gas Companies. Mr O'Reilly is a Principal consultant working for Mining Analyst Consulting Ltd which has been retained by Power Metal Resources PLC to provide technical support.

This announcement contains inside information for the purposes of Article 7 of the Market Abuse Regulation (EU) 596/2014 as it forms part of UK domestic law by virtue of the European Union (Withdrawal) Act 2018 ("MAR"), and is disclosed in accordance with the Company's obligations under Article 17 of MAR.

For further information please visit <https://www.powermetalresources.com/> or contact:

Power Metal Resources plc

Sean Wade (Chief Executive Officer)

+44 (0) 20 3778 1396

SP Angel Corporate Finance LLP (Nomad and Joint Broker)

Ewan Leggat/Caroline Rowe

+44 (0) 20 3470 0470

Tamesis Partners LLP (Joint Broker)

Richard Greenfield/Charlie Bendon

+44 (0) 20 3882 2868

BlytheRay (PR Advisors)

Tim Blythe/Megan Ray

+44 (0) 20 7138 3204



## NOTES TO EDITORS

### Power Metal Resources plc - Background

Power Metal Resources plc (AIM:POW, OTCQB:POWMF) is a London-listed metals exploration company which finances and manages global resource projects and is seeking large scale metal discoveries.

The Company has a principal focus on opportunities offering district scale potential across a global portfolio including precious, base and strategic metal exploration in North America, Africa, Saudi Arabia and Australia.

Project interests range from early-stage greenfield exploration to later-stage prospects currently subject to drill programmes.

Power Metal will develop projects internally or through strategic joint ventures until a project becomes ready for disposal through outright sale or separate listing on a recognised stock exchange thereby crystallising the value generated from our internal exploration and development work.

Value generated through disposals will be deployed internally to drive the Company's growth or may be returned to shareholders through share buy backs, dividends or in-specie distributions of assets.

This information is provided by RNS, the news service of the London Stock Exchange. RNS is approved by the Financial Conduct Authority to act as a Primary Information Provider in the United Kingdom. Terms and conditions relating to the use and distribution of this information may apply. For further information, please contact [rns@seg.com](mailto:rns@seg.com) or visit [www.ms.com](http://www.ms.com).

RNS may use your IP address to confirm compliance with the terms and conditions, to analyse how you engage with the information contained in this communication, and to share such analysis on an anonymised basis with others as part of our commercial services. For further information about how RNS and the London Stock Exchange use the personal data you provide us, please see our [Privacy Policy](#).

END

MSCFXLLFZFLFFBL