# INDEPENDENT TECHNICAL REPORT

# Kenora U Property, Ontario

Prepared for Great Northern Energy Metals Inc.

Prepared by Robert G. Komarechka, P.Geo. Ronacher McKenzie Geoscience Inc.



March 28, 2024

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Appendix 1 – Certificate of Qualified Person



#### 1.0 SUMMARY

Ronacher McKenzie Geoscience Inc. ("RMG") has been retained by Great Northern Energy Metals Inc. ("GNEM") to prepare an independent Technical Report of GNEM's Kenora U property in Ontario in accordance with the standards of the Canadian National Instrument 43-101 ("NI 43-101").

The Kenora U property (the "property") is located approximately 30 km west of the town of Kenora, northwestern Ontario along the Trans-Canada Highway (Highway 17). The property consists of 179 unpatented mining cell claims in the Thunder Bay Mining Division covering a total surface of 3,854.12 ha.

All cell claims are held by 2160083 Ontario Ltd. acting as Agent on behalf of Madison Metals Inc. ("Madison"). On May 17, 2023, Madison announced that it had signed, on May 16, 2023, a binding joint venture agreement for its Kenora U Property in Kenora, Ontario, Canada with GNEM. Under the terms of the agreement, GNEM will pay Madison C\$50,000 on signing and incur C\$900,000 in exploration over three years (C\$300,000 per year) to earn a 60% interest. Upon completing the earn-in, Madison will retain a 40% free-carry interest in the project.

The property is located in the Wabigoon subprovince (Superior Province) of the Canadian Shield. The bedrock geology in the Kenora U area is characterized by early Precambrian (Archean) metavolcanic-metasedimentary rocks of the Vermilion Bay greenstone belt. Granitic intrusions, such as the Dryberry Batholith Complex ("DBC"), were emplaced into the sedimentary-volcanic sequence. Throughout the area, the country rocks are intruded by pegmatite. The pegmatite dykes exhibit considerable variation in size and shape, ranging from a metre to "1,500 m in length and centimetres to 300 m in width. Uranium mineralization in the area is primarily developed in association with pegmatite bodies.

Thirteen mineral occurrences are identified on the property in the Ontario Mineral Inventory ("OMI") database of the Ontario Ministry of Mines. Of these occurrences, all have uranium  $\pm$  thorium as their primary commodities. At the Richard Lake occurrence, the most advanced prospect in the area, pegmatite-hosted mineralization was mined in the 1950s in the form of two drifts, at the –50-foot and –100-foot levels, totaling 525 feet of crosscutting and 430 feet of drifting.

In 2023, GNEM commissioned Precision GeoSurveys Inc. of Langley, BC to conduct a high-resolution helicopter-borne magnetic and radiometric survey of the property. The purpose of the survey was to help delineate controls on uranium mineralization by establishing relationships between historic uranium occurrences and geophysical features. Data acquisition was completed between September 26 and 28, 2023. Three days were spent in the field. A total of 2075 line-km were flown over an area of 113.3 km2. Survey lines were flown at 60 m spacing, oriented at 000°/180°, and tie lines were flown at 600 m spacing, oriented at 090°/270°.

Results of the survey indicate that historic uranium occurrences are associated with domains exhibiting a high U/Th ratio (or low Th/U ratio) and high equivalent uranium (eU). Domains exhibiting high U/Th should be identified and investigated as potential exploration targets. Additionally, magnetic data delineated major features including the lithological contacts between rocks of the DBC and the Vermilion Bay greenstone belt,



the east-west trending metavolcanic-metasedimentary package, and cross-cutting dykes. In general, historic occurrences are preferentially located proximal to the contact between domains of relatively high and low magnetic intensity.

The property was visited by Bob Komarechka on November 12, 2023. The inspection focused on assessing the potential of the property for uranium mineralization and on the collection of radiometric readings using a scintillometer. The site visit consisted of traveling along the Trans-Canada Hwy 17 from the east side of the property to the west side of the property with the scintillometer on and investigating two known uranium showings on the property. No responses were heard from the scintillometer while travelling along the highway. The first showing visited was the Richard Lake Prospect (MDI # MDI52F13SW00044) and second showing being the Bee Lake Occurrence (MDI # MDI52F13SW00041).

At the Richard Lake Prospect, significant radiometric readings were obtained from the upper west adit with readings in the range of 200 to over 9999 cps, the maximum reading on the unit. The lower east adit was also examined, where orange irregular pegmatite veins were examined which gave a maximum radiometric reading of 880 cps. At the Bee Lake occurrence, two sets of channel cuts were observed, including those from the 2021 work program of Madison and one set of four cuts by the road completed previously.

The Qualified Person ("QP") concluded that the Kenora U property has potential for pegmatite-hosted uranium mineralization. Domains of elevated eU and U/Th delineated by the radiometric survey, which are coincident with the location of historic uranium occurrences, warrant follow-up exploration work to determine the economic potential of the property.

The QP recommend (1) completion of a detailed compilation and review of all available historic property exploration data, (2) prospecting, ground-truthing and localized detailed field mapping, which includes collection of ground scintillometer data and rock samples within areas identified as anomalous by the radiometric survey, and (3) an exploratory diamond drill program. Precise collar locations should be defined following data compilation, data integration and ground truthing of the geophysical anomalies.

The coordinate system used in this report is UTM NAD83, Zone 15N.

### 2.0 INTRODUCTION

Great Northern Energy Metals Inc. ("GNEM") commissioned Ronacher McKenzie Geoscience Inc. ("RMG") to prepare an independent Technical Report (the "report") in accordance with the National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101") on the mineral claims of the Kenora Uranium property (the "property") located approximately 30 km east of the town of Kenora, ON.

The purpose of the report is to disclose relevant technical information on the property, which is material to GNEM and to assess the potential of the property to host mineralization. Another purpose is for GNEM to fulfill the requirements of listing on the Canadian Securities Exchange.



The main source of information was GNEM. GNEM provided current exploration data and historic data. Additional historic information and geological literature was obtained from the public domain, dominantly the Ontario Geological Survey of the Ontario Ministry of Mines. Another source of information was Jeffrey Enright, P.Geo, who assisted with data review, compilation and interpretation but is not a QP on the report.

The property was visited by Robert G. Komarechka, P.Geo. on November 12, 2023. During the field inspection, two uranium showings were visited, namely, the Richard Lake Prospect and the Bee Lake Occurrence. Radiometric readings were also collected using a scintillometer.

#### 2.1 Terminology

**CPS:** Counts per second

**DEM**: Digital elevation model

GPS: Global Positioning System

**LIDAR:** Airborne surveying method that measures distance to a target by illuminating the target with pulsed laser light and measuring the reflected pulses with a sensor. Difference in laser return times and wavelengths can then be used to make digital 3D representations of the target.

MASL: metres above sea level

**OGS:** Ontario Geological Survey

**OMI:** The Ontario Mineral Inventory ("OMI") database (previously known as the Mineral Deposit Inventory or MDI database) provides an overview of mineral occurrences in the province of Ontario. It contains information on location, geological environment, exploration history of metallic and industrial mineral occurrences, as well as some building stone and aggregate sites. Occurrences are categorized by their status (e.g., producing mine, developed prospect with reserves or resources, mineral occurrence, etc.). OMI data are extracted from various sources, such as publications of the Ontario Geological Survey ("OGS") and Geological Survey of Canada ("GSC"); press releases from the mining industry; National Mineral Inventory ("NMI") files of the former Department of Energy, Mines and Resources; Assessment files, Resident Geologist files and information gathered on property visits by Ministry geologists.

QA/QC: Quality Assurance/Quality Control

VMS: Volcanogenic Massive Sulfide



### 2.2 Units

The metric system of measurement is used in this report. Historic data are typically reported in imperial units and were converted for this report using appropriate conversion factors. Ounces per (short) ton are converted to grams per (metric) tonne using the conversion factor of 34.2857. One mile is 1.609344 km. Surface area is given in hectares (ha). 1 ha is 2.47 acres. One foot is 0.3048 m. All dollar values are in Canadian dollars unless otherwise noted.

Universal Transverse Mercator (UTM) coordinates are provided in the datum of NAD83, Zone 15 North.

### 2.3 Qualifications

RMG is an international consulting company with offices in Toronto and Sudbury, Ontario, Canada. RMG's mission is to intelligently use geoscientific data integration to help mineral explorers focus on what matters to them. We help a growing number of clients understand the factors that control the location of mineral deposits.

With a variety of professional experience, our team's services include:

- Data Integration, Analysis and Interpretation
- Geophysical Services
- Project Generation and Property Assessment
- Exploration Project Management
- Independent Technical Reporting
- Project Promotion
- Lands Management

The QP and author of this report is Robert Komarechka, B.Sc., P.Geo., president of Bedrock Research Corp., associate with RMG and a geologist in good standing with the Professional Geoscientists of Ontario (PGO #1150). Mr. Komarechka has practised his profession for 44 years since graduation, working with government, academia, and the private sector with both major and junior companies on a wide variety of commodities. In 2020 Mr. Komarechka authored a Technical Report compliant with NI 43-101 standards over this area.

A certificate of Qualifications is provided in Appendix 1.

### 3.0 RELIANCE ON OTHER EXPERTS

Ronacher McKenzie relied on information provided by GNEM and Madison Metals regarding ownership of the property. The QP reviewed the status of mineral claims on the website of the Mining Lands Administration System ("MLAS") of the Ontario Ministry of Mines on March 10, 2024. As such, the QP is of the opinion that the



claims listed in the claim list provided by GNEM are in good standing. Whereas publicly available information on title was reviewed for this report, this report does not constitute nor is it intended to represent a legal or any other opinion to title. The QP relied fully on GNEM regarding underlying agreements not in the public domain.

## 4.0 PROPERTY DESCRIPTION AND LOCATION

The Kenora U property is located approximately 30 km east of the city of Kenora and 30 km west of the city of Dryden along Trans-Canada highway 17 in northwestern Ontario (Figure 4-1). The property consists of 179 non-contiguous unpatented mining cell claims in the Thunder Bay Mining Division covering a total surface of 3,854.12 ha (**Error! Reference source not found.**Figure 4-2). All claims are in good standing at the effective date of the report. Legal access to the property is via provincial highways and roads. The claims occur within multiple townships, including Macnicol, Tustin, Bridges, Docker, and Langton townships. The surface rights to the claims are held by the Crown.

All cell claims are held by 2160083 Ontario Ltd. acting as Agent on behalf of Madison Metals ("Madison"). On May 17, 2023, Madison announced that it had signed, on May 16, 2023, a binding joint venture agreement for its Kenora U Property in Kenora, Ontario, Canada with Great Northern Energy Metals Inc. Under the terms of the agreement, GNEM will pay Madison C\$50,000 on signing and incur C\$900,000 in exploration over three years (C\$300,000 per year) to earn a 60% interest. Upon completing the earn-in, Madison will retain a 40% free-carry interest in the project.



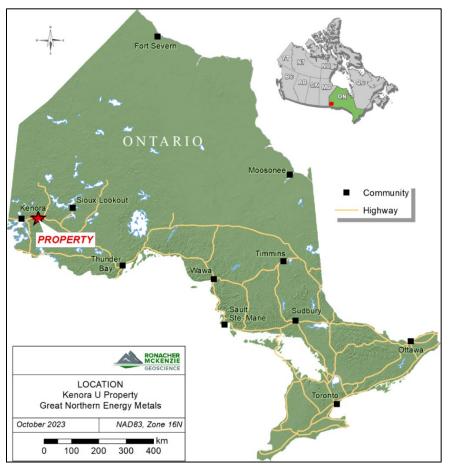


Figure 4-1: Location of the property in northwestern Ontario

#### Table 4-1: Kenora U Property Mineral Claims. All claims are owned by 2160083 Ontario Ltd

Tenure ID	Cell ID	Claim Type	Issue Date	Anniversary Date	Area (ha)	Township
570139	52F13E313	Single Cell Mining Claim	1/21/2020	1/21/2025	20.83	MACNICOL
570202	52F13E335	Single Cell Mining Claim	1/21/2020	1/21/2025	20.83	MACNICOL
570144	52F13E333	Single Cell Mining Claim	1/21/2020	1/21/2025	20.83	MACNICOL
570145	52F13E334	Single Cell Mining Claim	1/21/2020	1/21/2025	20.83	MACNICOL
535216	52F13H361, 52F13H362, 52F13H381, 52F13H382	Multi-cell Mining Claim	11/19/2018	11/19/2024	83.35	BRIDGES
535217	52F13B015	Single Cell Mining Claim	11/19/2018	11/19/2024	20.84	BRIDGES
535237	52F14E294	Single Cell Mining Claim	11/19/2018	11/19/2024	20.83	LANGTON
535218	52F13G325, 52F13G345	Multi-cell Mining Claim	11/19/2018	11/19/2024	41.67	BRIDGES
535220	52F13E374	Single Cell Mining Claim	11/19/2018	11/19/2024	20.84	MACNICOL
535224	52F13E372	Single Cell Mining Claim	11/19/2018	11/19/2024	20.84	MACNICOL



Tenure ID Cell ID		Claim Type	Issue Date	Anniversary Date	Area (ha)	Township	
535230	52F14E287	Single Cell Mining Claim	11/19/2018	11/19/2024	20.83	LANGTON	
535231	52F14E288	Single Cell Mining Claim	11/19/2018	11/19/2024	20.83	LANGTON	
535245	52F14E311, 52F14E312	Multi-cell Mining Claim	11/19/2018	11/19/2024	41.66	LANGTON	
535232	52F14E313	Single Cell Mining Claim 11/19/2018 11/19/2024 20.83		LANGTON			
535233	52F14E314	Single Cell Mining Claim	11/19/2018	11/19/2024	20.83	LANGTON	
535240	52F13E376	Single Cell Mining Claim	11/19/2018	11/19/2024	20.84	MACNICOL	
535241	52F13F349	Single Cell Mining Claim	11/19/2018	11/19/2024	20.83	TUSTIN	
535248	52F13F390	Single Cell Mining Claim	11/19/2018	11/19/2024	20.84	TUSTIN	
535226	52F13F369	Single Cell Mining Claim	11/19/2018	11/19/2024	20.84	TUSTIN	
562865	52F13E353	Single Cell Mining Claim	10/27/2019	10/27/2024	20.83	MACNICOL	
562866	52F13E354	Single Cell Mining Claim	10/27/2019	10/27/2024	20.83	MACNICOL	
535223	52F13E375	Single Cell Mining Claim	11/19/2018	11/19/2024	20.84	MACNICOL	
535229	52F14E307	Single Cell Mining Claim	11/19/2018	11/19/2024	20.83	LANGTON	
535242	52F14E308	Single Cell Mining Claim	11/19/2018	11/19/2024	20.83	LANGTON	
535243	52F14E309	Single Cell Mining Claim	11/19/2018	11/19/2024	20.83	LANGTON	
535244	52F14E310	Single Cell Mining Claim	11/19/2018	11/19/2024	20.83	LANGTON	
535246	52F14E289	Single Cell Mining Claim	11/19/2018	11/19/2024	20.83	LANGTON	
535225	52F13F348	Single Cell Mining Claim	11/19/2018	11/19/2024	20.83	TUSTIN	
535221	52F13E389	Single Cell Mining Claim	11/19/2018	11/19/2024	20.84	MACNICOL	
535222	52F13F368	Single Cell Mining Claim	11/19/2018	11/19/2024	20.84	TUSTIN	
570140	52F13E314	Single Cell Mining Claim	1/21/2020	1/21/2025	20.83	MACNICOL	
570187	52F13E355	Single Cell Mining Claim	1/21/2020	1/21/2025	20.83	MACNICOL	
570137	52F13E352	Single Cell Mining Claim	1/21/2020	1/21/2025	20.83	MACNICOL	
570138	52F13E332	Single Cell Mining Claim	1/21/2020	1/21/2025	20.83	MACNICOL	
535234	52F14E290	Single Cell Mining Claim	11/19/2018	11/19/2024	20.83	LANGTON	
535239	52F13E390	Single Cell Mining Claim	11/19/2018	11/19/2024	20.84	MACNICOL	
570196	52F13E315	Single Cell Mining Claim	1/21/2020	1/21/2025	20.83	MACNICOL	
535227	52F13E316	Single Cell Mining Claim	11/19/2018	11/19/2024	20.83	MACNICOL	
535228	52F13E336	Single Cell Mining Claim	11/19/2018	11/19/2024	20.83	MACNICOL	
535249	52F13C010	Single Cell Mining Claim	11/19/2018	11/19/2024	20.84	TUSTIN	
535235	52F14E291	Single Cell Mining Claim	11/19/2018	11/19/2024	20.83	LANGTON	
535236	52F14E292	Single Cell Mining Claim	11/19/2018	11/19/2024	20.83	LANGTON	
535219	52F13E373	Single Cell Mining Claim	11/19/2018	11/19/2024	20.84	MACNICOL	
535238	52F14E332	Single Cell Mining Claim	11/19/2018	11/19/2024	20.83	LANGTON	
535247	52F14E293	Single Cell Mining Claim	11/19/2018	11/19/2024	20.83	LANGTON	
534812	52F13A022, 52F13A042	Multi-cell Mining Claim	11/14/2018	11/14/2024	41.68	BRIDGES	
638005	52F13F325	Single Cell Mining Claim	2/17/2021	2/17/2025	20.83	TUSTIN	
638006	52F13F326	Single Cell Mining Claim	2/17/2021	2/17/2025	20.83	TUSTIN	
638007	52F13F345	Single Cell Mining Claim	2/17/2021	2/17/2025	20.83	TUSTIN	



Tenure ID	Cell ID	Claim Type	Issue Date	Anniversary Date	Area (ha)	Township
638008	52F13F346	Single Cell Mining Claim	2/17/2021	2/17/2025	20.83	TUSTIN
638009	52F13F341	Single Cell Mining Claim	2/17/2021	2/17/2025	20.83	MACNICOL / TUSTIN
638003	52F13C030	Single Cell Mining Claim	2/17/2021	2/17/2025	20.84	TUSTIN
822453	52F13G391	Single Cell Mining Claim	4/7/2023	4/7/2025	20.84	BRIDGES
651042	52F13H353	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651043	52F13H333	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651044	52F13H354	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651045	52F13H334	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651046	52F13H366	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	DOCKER
651047	52F13H348	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651048	52F13H367	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	DOCKER
651049	52F13H352	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651051	52F13H370	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	DOCKER
651052	52F13H350	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651054	52F13H368	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	DOCKER
651055	52F13H371	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	DOCKER
651056	52F13H351	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651057	52F13H349	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651059	52F13H369	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	DOCKER
651610	52F13B009	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651611	52F13G389	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651616	52F13C038	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	TUSTIN
651619	52F13C013	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	TUSTIN
651627	52F13C016	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	TUSTIN
651628	52F13C017	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	TUSTIN
651630	52F13C014	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	TUSTIN
651632	52F13C015	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	TUSTIN
651645	52F13C012	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	TUSTIN
651653	52F13F389	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	TUSTIN
651661	52F13F391	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	TUSTIN
651666	52F13C009	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	TUSTIN
651671	52F13C011	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	TUSTIN
651675	52F13F324	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	TUSTIN
651677	52F13F365	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	TUSTIN
651678	52F13F347	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	TUSTIN
651679	52F13F329	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	TUSTIN
651680	52F13F322	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	TUSTIN
651683	52F13F342	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	TUSTIN
651684	52F13F366	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	TUSTIN
651685	52F13F327	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	TUSTIN



Tenure ID	Cell ID	Claim Type	Issue Date	Anniversary Date	Area (ha)	Township
651686	52F13F323	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	TUSTIN
651688	52F13F321	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	MACNICOL / TUSTIN
651689	52F13F343	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	TUSTIN
651690	52F13F344	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	TUSTIN
651693	52F13F367	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	TUSTIN
651700	52F13F328	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	TUSTIN
651702	52F13E338	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	MACNICOL
651704	52F13E360	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	MACNICOL
651705	52F13E357	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	MACNICOL
651707	52F13E358	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	MACNICOL
651709	52F13E356	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	MACNICOL
651711	52F13E340	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	MACNICOL
651714	52F13E359	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	MACNICOL
651715	52F13E337	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	MACNICOL
651716	52F13E339	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	MACNICOL
651105	52F14E241	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651110	52F14E222	Single Cell Mining Claim	4/16/2021	4/16/2025	20.82	DOCKER
651116	52F14E221	Single Cell Mining Claim	4/16/2021	4/16/2025	20.82	DOCKER
651122	52F13H280	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651123	52F13H260	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651127	52F13H279	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651128	52F13H239	Single Cell Mining Claim	4/16/2021	4/16/2025	20.82	DOCKER
651129	52F13H240	Single Cell Mining Claim	4/16/2021	4/16/2025	20.82	DOCKER
651131	52F13H259	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651226	52F13H315	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651233	52F13H335	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651234	52F13H337	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651238	52F13H318	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651248	52F13H316	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651260	52F13H355	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651136	52F13H219	Single Cell Mining Claim	4/16/2021	4/16/2025	20.82	DOCKER
651137	52F13H200	Single Cell Mining Claim	4/16/2021	4/16/2025	20.82	DOCKER
651145	52F13H220	Single Cell Mining Claim	4/16/2021	4/16/2025	20.82	DOCKER
651146	52F13H180	Single Cell Mining Claim	4/16/2021	4/16/2025	20.82	DOCKER
651147	52F14E201	Single Cell Mining Claim	4/16/2021	4/16/2025	20.82	DOCKER
651148	52F14E162	Single Cell Mining Claim	4/16/2021	4/16/2025	20.82	DOCKER
651158	52F14E181	Single Cell Mining Claim	4/16/2021	4/16/2025	20.82	DOCKER
651159	52F14E161	Single Cell Mining Claim	4/16/2021	4/16/2025	20.82	DOCKER
054400	52F14E182	Single Cell Mining Claim	4/16/2021	4/16/2025	20.82	DOCKER
651160	021112102					



Tenure ID	Cell ID	Claim Type	Issue Date	Anniversary Date	Area (ha)	Township
651168	52F14E202	Single Cell Mining Claim	4/16/2021	4/16/2025	20.82	DOCKER
651265	52F13H336	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651266	52F13H317	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651274	52F13H332	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651280	52F13H276	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651281	52F13H299	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651285	52F13H295	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651288	52F13H330	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651291	52F13H296	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651292	52F13H298	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651300	52F13H331	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651302	52F13H278	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651307	52F13H314	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651308	52F13H277	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651315	52F13H297	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	DOCKER
651368	52F13G393	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651369	52F13G374	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651372	52F13H383	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651373	52F13G375	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651376	52F13G392	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651379	52F13A003	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651382	52F13G376	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651383	52F13G378	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651385	52F13G380	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651386	52F13H365	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	DOCKER
651387	52F13G396	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651388	52F13G377	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651392	52F13G397	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651393	52F13G379	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651396	52F13G394	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651397	52F13G395	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651399	52F13H363	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651400	52F13H364	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES \ DOCKER
651548	52F13F330	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	TUSTIN
651554	52F13F350	Single Cell Mining Claim	4/16/2021	4/16/2025	20.83	TUSTIN
651561	52F13F370	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	TUSTIN
651583	52F13G385	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651584	52F13B001	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	TUSTIN
651585	52F13B022	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	TUSTIN / BRIDGES



Tenure ID	Cell ID	Claim Type	Issue Date	Anniversary Date	Area (ha)	Township
651587	52F13B006	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651589	52F13B004	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651590	52F13B007	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651592	52F13B008	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651593	52F13C019	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	TUSTIN
651596	52F13G365	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651597	52F13G390	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651598	52F13C020	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	TUSTIN
651603	52F13B023	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651606	52F13B005	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	BRIDGES
651736	52F13E391	Single Cell Mining Claim	4/16/2021	4/16/2025	20.84	MACNICOL

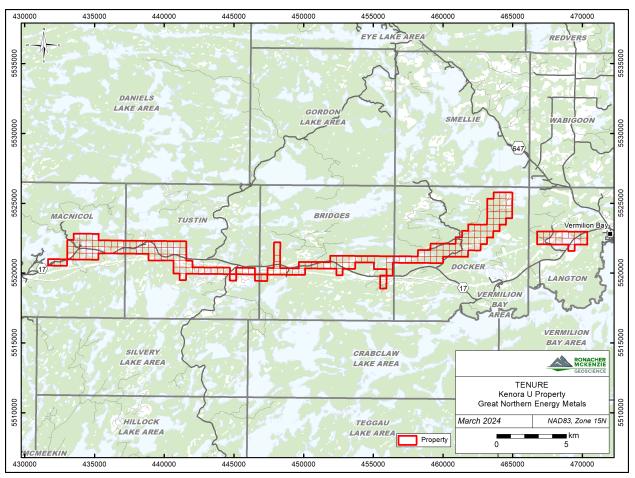


Figure 4-2: Claim fabric of the Kenora U project.



#### 4.1 Permits and Environmental Liabilities

In Ontario, permits are generally required for exploration on unpatented mineral claims or leases.

Exploration activities such as geophysical surveys requiring a power generator, line cutting where the line width is less than 1.5 m, mechanized drilling where the total weight of the rig is less than 150 kg, mechanized surface stripping where the total stripped area is less than 100 m<sup>2</sup>, or pitting and trenching of a volume of 1 to 3 m<sup>3</sup> on unpatented mineral claims or leases require an exploration plan. Exploration permits are required for line cutting where the line width exceeds 1.5 m, for drilling where the weight of the drill exceeds 150 kg, mechanized stripping of an area greater than 100 m<sup>2</sup> and for pitting and trenching where the total volume of rock is more than 3 m<sup>3</sup>. Plan and permit applications are submitted for review by the Ontario Ministry of Mines. Exploration permit applications should be submitted at least 55 days prior to the expected commencement of activities. The Ministry of Mines then posts these on the Environmental Registry for 30 days and circulates them to First Nations communities who may have overlapping areas of cultural significance. Plans are typically approved within 30 days and permits within 60 days. Plans are valid for two years and permits are valid for three years.

No exploration plans or permits are generally required for fee simple absolute patents and for areas that are part of a closure plan. All surface rights holders must be notified of the application in advance of the submission.

As of the date of this report, neither GNEM nor Madison hold any exploration plans or permits on the Property.

The QP is not aware of any royalties, back-in rights, payments or other agreements and encumbrances to which the property is subject, other than the ones mentioned above.

The QP is not aware of any environmental liabilities.

The QP is not aware of any other significant factors or risks that may affect access, title or the right or ability to perform work on the property.

# 5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

#### 5.1 Access

The property is located about 30 km west of the town of Kenora, northwestern Ontario and approximately 240 km east of the city of Winnipeg in Manitoba, Canada. Winnipeg (population 700,000) is serviced by scheduled commercial airlines and highways (Figure 5-1). The nearest town is Vermillion Bay. The east property boundary is adjacent to the town of Vermillion Bay and abuts next to a small airport.



Access to the properties is by Trans-Canada Highway (Highway 17), which crosses through much of the Property. Numerous roads and trails access the property from Hwy 17. In addition, there are numerous lakes that also allow access. In the winter these frozen lakes connect to an abundance of snow machine trails for further access.

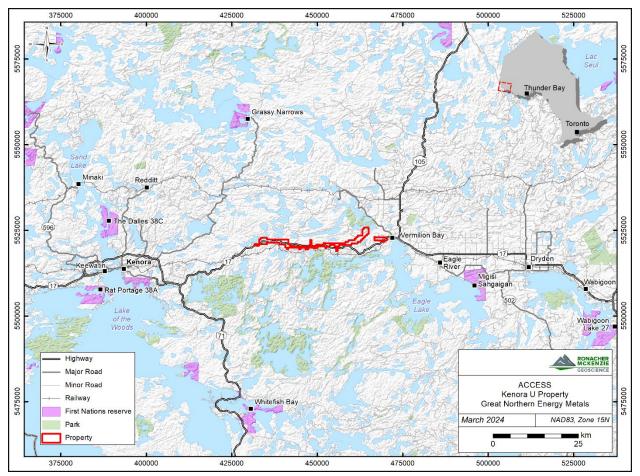


Figure 5-1: Access to the claims that are the subject of this report.

### 5.2 Climate, Vegetation and Physiography

The climate varies from -50°C in winter to +30°C in the summer. Freeze-up begins in late November and break-up occurs in mid to late April. Various types of exploration work can be undertaken year-round, including drilling and geophysical surveying.

Vegetation consists of white pine and spruce on the higher ground with spruce birch and poplar in the lower areas with some local areas of cedar and tamarack.



The maximum relief in the area is roughly 90 m between the Eagle Lake area, at 363 m above sea level and the Cobble Lake area at 460 m above sea level. The topography is hummocky to moderately rugged, and local relief rarely exceeds 46 m. West of the Tustin Township and west of Cobble Lake, the watershed flows west into Lake of the Woods and the Winnipeg River; east of Tustin Township, the watershed flows east into the Wabigoon River system.

#### 5.3 Infrastructure and Local Resources

Labour, accommodations, exploration supplies and equipment are available in the nearby towns of Kenora (population of 15,096; Statistics Canada 2016) and Dryden (population of 7,749; Satistics Canada 2016). Regional airports are located in both Kenora and Dryden. Power lines and the Trans-Canada pipeline run approximately parallel to each other along Highway 17. Water for exploration is available from streams and lakes.

The project is in the early stages of exploration. Therefore, the sufficiency of surface rights for mining operations, the availability and sources of mining personnel, potential tailings storage areas, potential waste disposal areas, heap leach pad areas, and potential processing plant areas is not relevant at this stage.

#### 6.0 HISTORY

The recorded exploration history on the property is summarized in Table 6-1 from previous technical reports, assessments reports, publications and maps that are publicly available from the Ontario Ministry of Mines. Early prospecting activity in the area is recorded in 1949 with the discovery of uranium and beryl mineralization in pegmatites (Pryslak 1976).

At the Richard Lake Prospect, New Campbell Island Mines Ltd. commenced mining development in 1955 in the form of two drifts, at the –50-foot and –100-foot levels, totalling 525 feet of crosscutting and 430 feet of drifting (Pryslak 1976; Laine 2007).

No production has been reported from the property.

Year	Company	Work Type	Work Description & Results	Sources
1955	Preston East Dome Mines Ltd	Drilling	Preston East Dome Mines drilled 28 holes totaling 650 m on the current GNEM property proximal to the Preston East Dome occurrence. In the assessment report, sampling is indicated but no results are reported.	52F14SW0106
1955	Acko Mines	Drilling	Four holes targeting pegmatites and totaling 330 m were drilled on the far western end of the current GNEM property. No assays are reported. Geiger-counter reactions for drill hole no. 3-K.17603 are noted as showing "radioactivity 2-3 x background but spotty".	52F13SW0025

Table 6-1: Summary of historical work



Year	Company	Work Type	Work Description & Results	Sources
1955	Burning Rock Uranium	Drilling	Four holes targeting pegmatites and totaling 327 m were drilled ~550 m northwest of the location of the Quebec Ascot occurrence in MacNicol Township. No assays are reported. Radioactivity up to 5 x background associated with pegmatites is reported in drill logs.	52F13SW0020, 52F13SW0022
			Two holes totaling 120 m were also drilled in MacNicol township southeast of the Richard Lake occurrence. Spotty radioactivity associated with pegmatites (up to 3 x background) is noted in the drill logs.	
1955	Continental Mines	Drilling	Three holes totaling 261 m were drilled proximal to the Bee Lake prospect. The holes were logged for lithology and no assay results or measured radioactivity are documented in the report.	52F13SW0007
1955	James Macleod	Drilling	One hole totaling 55 m was drilled near the Preston East Dome occurrence. The hole was logged for lithology and no assay results or measured radioactivity are noted.	52F14SW0105
1955	Morgan McMillan	Drilling	Seven holes totaling 471 m were drilled at the east-end of the current Property proximal to the Preston East Dome occurrence. The holes were logged for lithology and no assay results or measured radioactivity are documented in the reports.	52F14SW0102, 52F14SW0103
1956	New Campbell Island Mines Ltd.	Drilling, trenching, drifting	Pryslak (1976) notes that thirteen trenches and minor stripped areas were located by him. Seventeen diamond-drill holes, totalling about 5,000 feet (1,500 m) and located over a strike length of 1,300 feet (400 m) are indicated from maps provided by the company. In drill logs provided with publicly available assessment reports, holes were logged for lithology and no assay values are reported. Underground exploration work includes 1,100 feet (335 m) of lateral development from two adits (Pryslak, 1976).	52F13SW0023, 52F13SW0024 Pryslak (1976)
1957	Kenoratomic Mines	Geophysics, drilling	Magnetometer and scintillometer surveys were carried out on the property in Macnicol Township proximal to the Richard Lake prospect. Eighteen zones were delineated with scintillometer readings of between 0.049 and 0.093 milliroentgens per hour, with three zones in close proximity to magnetic highs identified by the magnetometer survey. Eleven holes totaling 661 m were drilled near the Richard Lake occurrence, with several of the scintillometer highs drill tested. The holes were logged for lithology and samples were taken, however, no assay results or measured radioactivity are documented in the logs. The accompanying assessment report reports that 0.098% U308 over 3.5 ft was intersected in hole 1-c in a domain containing magnetite and biotite in pegmatite.	52F13SW0016, 52F13SE0031
1967	Coulee Lead and Zinc Mines	Geophysics	Ground and airborne radioactivity surveys were conducted by Seigel Associates Limited on behalf of the owner in the Game Lake area, which includes a portion of the property in Docker and Bridges townships that is subject to this report. During the airborne survey, several zones with anomalous background U/Th counts were found. Following the ground surveying, the operator recommended that scraping-off overburden around the priority zones be undertaken, followed by trenching and sampling.	52F14SW8135



Year	Company	Work Type	Work Description & Results	Sources	
1968	Noranda Exploration Co Ltd	5 )		52F13SE0025	
			In 1968, under an option agreement with Coulee Lead and Zinc Mines, Noranda Mines Limited conducted a geological survey of the property, blasted numerous trenches, and drilled four diamond-drill holes totaling 422 m. Core was assayed for U-Th, Ag, Cu, Pb and Zn. A drill hole intersected 4.1 m of sulfide- bearing rock with anomalous Ag, Cu, Zn and Pb mineralization. The best analysis from a 0.6 m intersection indicated 9.9 g/t Ag, 0.06 % Cu, 0.05 % Pb and 0.10 % Zn.		
1974	Imperial Oil Limited	Geological mapping	Geological mapping was done from Aug 4 to Sep 8, 1974. The author of the historic assessment report notes that radioactivity is found in darker zones within pegmatite, often associated with yellow secondary uranium minerals occurring along fractures, with highest readings obtained in biotite, apatite and magnetite. The highest reported U3O8 value from rocks sampled during the mapping campaign was 0.04 %, from X-Ray Assay Laboratories in Don Mills, Ontario.	52F13SE0027	
1976	Robert Fairservice	Ground geophysics, sampling	Magnetometer and spectrometer surveys were carried out in Bridges Township along Highway 17. These surveys were followed up by rock sampling on areas identified as anomalous. From the 21 samples collected, 17 had very poor results. The assay results for these ranged from 2.4 ppm to 66.0 ppm, U308. The total count readings taken over these sample locations, which varied from 100 to 205 CPS, can be attributed to the high potassium content of the rock. Two samples, X-6816 and X- 6821, had total count readings less than 100 CPS, but the uranium thorium count was over 10 CPS. Two other samples, X- 6801 and X-6810, were taken because of possible carnotite staining on the outcrop.	52F13SE0011	
			Of the four (4) remaining samples, assay results were 760.0 ppm to 1400 ppm, U308 or 1.75 to 3.5 lbs p/ton U308. There is a good correlation of high total count readings with high uranium thorium readings over the four sample locations. Total count readings are between 250 to 980 CPS, and the uranium thorium readings are over 10 GPS. The highest assay of 1400 ppm U308 is found in the Noranda trench in a biotite rich zone. The other three samples appear to be associated with a biotite pegmatitic granite.		
1977	Robert Fairservice	Drilling	Five holes totaling 111 m were drilled in the summer of 1977 on the Petursson Lake property in Tustin Township. Core was sampled and assayed for uranium at selected intervals. Key assays include 800 ppm U over 2 ft and 480 ppm U over 2.1 ft from samples of granite to pegmatitic granite.	52F13SW0003	
1978	Golden Standard Mines Ltd.	Geophysical Surveys	Ground magnetic and scintillometer surveys were completed on the Richard Lake property. A number of radiation anomalies were identified in association with granitic pegmatites in the surface bedrock geology.	52F13SW0013	



Year	Company	Work Type	Work Description & Results	Sources
1993	Noranda Exploration Co Ltd	Geophysics, drilling	Noranda completed geological mapping, rock sampling and trenching, soil sampling and airborne electromagnetic and magnetic surveys on their Fairservice Option property in Docker, Tustin and MacNicol Townships. Exploration work was targeting base metals developed with the property greenstone belt. HLEM and ground magnetometer surveys were carried out over a number of AEM anomalies exhibited on the Fairservice option properties.	52F13NE0005, 52F14NW0001 52F14NW0004
			Three holes totaling 269 m were drilled on the current GNEM property. The holes tested HLEM conductors delineated following airborne electromagnetic and magnetic surveys that were flown over the project area in early 1993. Hole 93-5 tested the East Cobble Lake/AEM 23A anomaly and holes 93-6.7 and 8 tested the Kimber Lake/AEM 32 anomaly. Trace to minor amounts (1-2%) of sphalerite were noted. The best assay was 0.24 % Zn over 2 meters.	
2000	Carter Nelson	Drilling	Four holes totaling 27 m were drilled south of the Powerline occurrence at the Nelson Granite Quarry. Core was logged for lithology, texture and structure and not assays are documented.	52F13SE2002
2002	Ontario Geological Survey	Sampling	Completed an extensive campaign of lake bottom sediment sampling over the area covered by the NTS sheets 52F-11, -13, - 14, -15. 932 lake sites were sampled and analyzed for a suite of 50 elements including Uranium. The survey outlined several areas with anomalous uranium values ranging from an average of 7.74 ppm with a median of only 3.75 ppm, up to 90 ppm. Two areas have values above 19 ppm (6 times the median, over twice the average): the western most and largest one (15 Km by 40 Km) covers a large portion of the townships of MacNicol to Langton, and it is where most of the previous radiometric showings (uranium) had been found in the past; and the easternmost is by Bluett Lake, Drope Township (See out of pocket Map 1). The largest anomaly, northwest of Eagle Lake, covers the metasedimentary volcanic belt of Bruin Lake, which is intruded by numerous dikes and sills of pegmatites and gabbros. Of the 865 samples that were analyzed for uranium, the latter element correlates with such elements as the Rare Earth (La, Eu, Y and Yb), Pb and Mo, to a lesser extend Ag, Cs, Cd. Uranium correlates negatively with Rb, Sn and Zr. Uranium does not correlate with Loss on Ignition (LOI) (could be linked to organic matter content if correlated with Th; still the uranium correlates negatively with LOI (no links with organic matter content).	Felix (2004)
2004	Emerald Fields Resources Corporation	Geophysics	Emerald Fields contracted Geotech to fly a VTEM survey over an area partially encompassing the current GNEM property. Several EM anomalies were identified to the north of the current GNEM property boundary. No anomalies were identified on the property that is subject to this report. In 2016, Geofortune reprocessed the results and conducted a trenching and stripping program to test the anomalies. The authors of the historic assessment report concluded that the results did not encourage further work.	52F11NW2005
2006	Delta Uranium	Geophysics	An Airborne Radiometric Survey combined with a gradient magnetometer survey and VLF survey was flown over the property. The magnetic survey confirmed the east-west trend of the greenstone belt and the presence of mafic intrusive rocks. The radiometric survey also delineated historic occurrences and new anomalies which required follow up.	2000002856
			Ground follow up with a scintillometer resulted in 45,000 georeferenced readings which were later plotted. Airborne anomalies were located, and some new anomalies were found. Locations for follow up geochemical sampling were located to prioritize a winter drill program.	



Year	Company	Work Type	Work Description & Results	Sources
2008	Delta Uranium	Sampling	Delta reported work undertaken from a field sampling program from the Preston East Dome ("PED") uranium occurrence. Results for the 76 geochemical samples, comprising 7 channel sample intervals returned local uranium values ranging from 0.01 to 0.24% U3O8 (4.8 lbs/ton U3O8).	Delta Uranium Press Release (January 7, 2008)
2008	Delta Uranium	Sampling	During 2008, Delta Uranium Canada Inc. completed a sampling program on its Kenora project. The samples were taken from granite-pegmatite uranium-bearing zones to test uranium content. In the area of the Bee Lake prospects, values up to 2620 ppm U were returned. At the Pipeline prospect, a sample returned 3304 ppm U. At the Powerline prospect, values up to 2395 ppm U were returned. At the Coulee Area A prospect, values up to 1758 ppm U were returned.	20006406
2008	Delta Uranium	Drilling	Sixty holes totaling 7,703m were drilled in 6 locations. The most significant result was from hole BL08-001 drill on the Bee Lake prospect, which returned 1,241 ppm U308 over 1.65 m. In general, the best intersections ranged from 100 to 300 ppm U308 over 1 to 30 m core length.	2005478, 20000002856 20000013531 20000003627
2014	Geofortune Resources	Sampling	Limited rock sampling was carried out on the property, with samples collected from the Richard Lake and Bee Lake prospects on current GNEM property. The highest assay result from Richard Lake was 604 ppm U, and at Bee Lake the highest result was 718 ppm U.	20013016
2021	Madison Metals	Prospecting and sampling	Emerald Geological Services (EGS) conducted mapping and prospecting, collected radiometric readings, and collected channel and chip samples during the fall of 2021. Work was conducted in the areas of Bee Lake, Richard Lake, Ely Lake and Peterson Lake. Bee Lake received the most attention, where the highest assay result was 1330 ppm U, with 23 samples 34 returning assay results of over 100 ppm U. No assay results were reported from Richard Lake, Ely Lake or Peterson Lake.	20000020326

# 7.0 GEOLOGICAL SETTING AND MINERALIZATION

### 7.1 Regional Geology

The Property is located in the Wabigoon subprovince (Superior Province) of the Canadian Shield (Figure 7-1). The Wabigoon subprovince consists of volcanic rocks with a central axis of plutonic rocks; the eastern and western domains of the Wabigoon subprovince exhibit different tectonic characteristics (Percival et al., 2006). The western domain, where the property is located, is dominated by a range of volcanic rocks from tholeiitic to calc-alkalic that were deposited between 2.745 and 2.720 Ga (Percival et al., 2006). The plutonic rocks are synvolcanic and consist mainly of tonalite, diorite and gabbro. Younger meta-sedimentary rocks form narrow belts within the volcanic sequences. The eastern Wabigoon domain consists of greenstone belts and granitic plutons.

The east-trending greenstone belt that underlies the property is bordered to the north by the English River Subprovince and Winnipeg River Terrane and to the south by the Dryberry Batholith Complex ("DBC") (Figure 7-2; Pryslak, 1976). Pryslak (1976) and Ayer et al. (1987) interpret the DBC as an intravolcanic granitoid complex within the Western Wabigoon Subprovince, similar to the adjacent Atikwa and Aulneau batholiths.



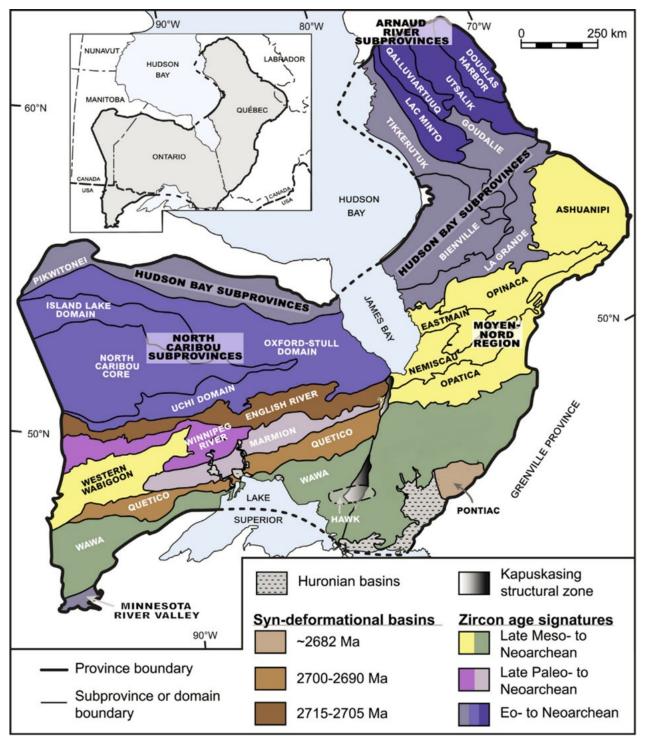


Figure 7-1: Location of the Wabigoon subprovince (modified from Frieman et al., 2017).



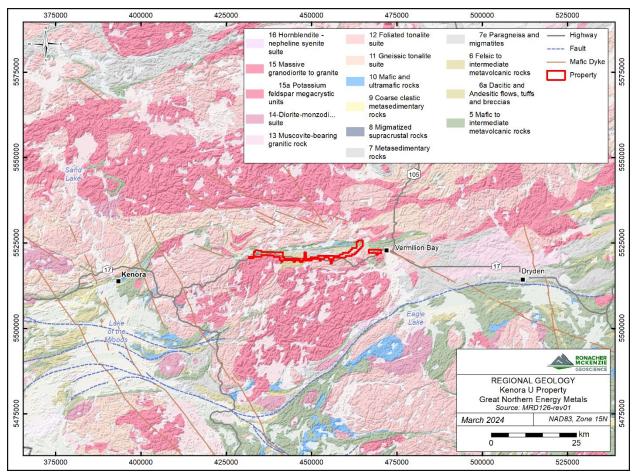


Figure 7-2: Map showing the regional geology of the Kenora U property

### 7.2 Local Geology

The bedrock geology in the Kenora U area is characterized by early Precambrian (Archean) metavolcanicmetasedimentary rocks of the Vermilion Bay greenstone belt that have been regionally and contact metamorphosed under almandine-amphibolite facies conditions and locally under hornblende-hornfels facies conditions (Pryslak 1976). The metavolcanic rocks, which make up 75% of the entire sequence, vary in composition from mafic to intermediate and are comprised of flows and pyroclastic material (Laine 2007). Locally, the mafic metavolcanic rocks exhibit a gneissic fabric, including those areas adjacent to the granitic batholiths (Pryslak 1976).

In MacNicol, Tustin, Bridges, Docker and Langton townships, the metasedimentary sequence is characterized by intercalated sandstones, argillites, and siltstones. In Tustin and Bridges townships, the belt contains discontinuous bands of felsic to intermediate pyroclastic rocks, while in Docker township flows are present (Laine 2007). Granitic intrusions were emplaced into the sedimentary-volcanic sequence. The metavolcanic-metasedimentary belt is intruded by dykes, sills and irregular bodies of mafic and ultramafic rock (Pryslak 1976).

The granitic batholiths, which includes the DBC in the west of the property, are dated at 2,600 to 2,500 Ma.



and are considered to predate a majority of the potassic rocks that intrude the metasedimentary sequence (Blackburn 1979). The DBC has a complex history including early sodium-rich varieties (tonalite-trondjemite) which were overprinted by later potassic-rich compositions (granodiorite-granite). Sanborne-Berry (1991) subdivided the DBC into three suites: a tonalite suite, granodiorite suite and granite suite. The granite suite of the DBC, which is more potassic in character than the more sodic tonalite suite and is generally associated with uraniferous pegmatites, is described as peraluminous in character, as indicated by its corundum normative mineralogy (2.3 to 3.2% corundum) and Aluminum Saturation Index (ASI) between 1.15 and 1.21. The granite suite also has highly fractionated REE and shows LREE-enrichment and HREE-depletion (Sanborne-Barrie 1991). Late diabase dykes are reported to the southeast of the property and are dated 1,900 to 1,500 Ma. (Blackburn 1979).

Throughout the area, the metavolcanic-metasedimentary sequence, the mafic to ultramafic intrusions and most of the granitic rocks are intruded by pegmatite (Pryslak 1976; Laine 2007). The pegmatite dykes exhibit considerable variation in size and shape, ranging from a meter to ~1,500 m in length and centimetres to 300 m in width. Pink and white varieties of pegmatite have been observed. The dykes appear to both cross-cut and follow the foliation. The main mineral constituents of the pegmatite are microcline, plagioclase, quartz and biotite, with accessory black tourmaline, molybdenite, magnetite and blue-green apatite. The pegmatites of the property are frequently radioactive due to the presence of uranium-bearing minerals. Pryslak (1976) also notes that crystals of tantalite occur in a white variety of pegmatite northeast Medicine Lake in Tustin township. Beryl in pegmatite has also been noted near the property, such at the Medicine Lake occurrence ~3 km north of the property boundary.

Pryslak (1976) does not describe any faults in the area, however, he describes shear zones up to 6 m in width that are generally developed parallel and locally oblique to foliation at angles up to 15 degrees.

Pleistocene deposits are rare in the property, while lacustrine deposits are recent features.



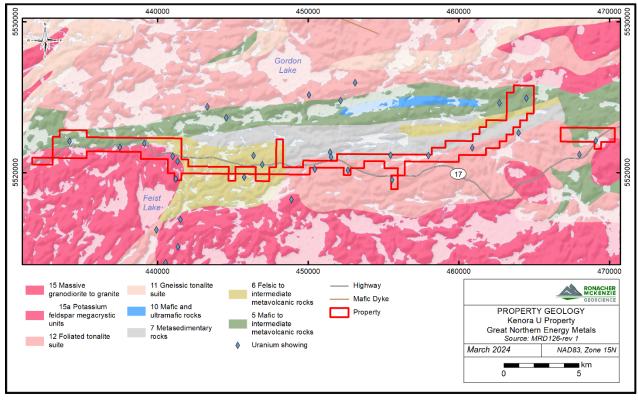


Figure 7-3: Local Geology

#### Property Mineralization and Alteration 7.3

Thirteen mineral occurrences are identified on the property in the Ontario Mineral Inventory ("OMI") database of the Ontario Ministry of Mines (Table 7-1; Figure 7-2). Of these occurrences, all have uranium  $\pm$  thorium as their primary commodities.

All Names	OMI ID	Status	Primary Commodities	Secondary Commodities
Corner Lake South	MDI000000001049	Occurrence	URANIUM, THORIUM	
Bee Lake Southeast	MDI00000002116	Discretionary Occurrence	URANIUM	
Quebec Ascot	MDI52F13SW00040	Occurrence	URANIUM, THORIUM	
Kimber Lake East	MDI52F13SE00063	Occurrence	URANIUM, THORIUM	

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All Names	OMI ID	Status	Primary Commodities	Secondary Commodities
Fiest Lake	MDI52F13SW00042	Occurrence	URANIUM, THORIUM	
Eagle River	MDI52F13SE00049	Occurrence	THORIUM, URANIUM	
Peturrson Lake	MDI52F13SW00047	Occurrence	URANIUM, THORIUM	
Pipeline	MDI52F13SE00058	Occurrence	URANIUM, THORIUM	
Powerline	MDI52F13SE00059	Occurrence	URANIUM, THORIUM	
Coulee, Kimber Lake-West	MDI52F13SE00046	Occurrence	URANIUM, THORIUM	
Bee Lake	MDI52F13SW00041	Occurrence	URANIUM, THORIUM	MOLYBDENUM
Preston East Dome	MDI52F14SW00026	Occurrence	URANIUM, THORIUM	
Richard Lake Prospect, Golden Standard, New Campbell Island, New Campbell No.2	MDI52F13SW00044	Developed Prospect With Reported Reserves or Resources	URANIUM, THORIUM	

Uranium mineralization in the area is primarily developed in association with the pink (potassic-rich) pegmatite bodies associated with the peraluminous Dryberry Dome composite granite batholith, as well as the white pegmatites. These pegmatite bodies frequently intrude the adjacent metasedimentary rocks and often exhibit hematite alteration. During the 2008 Delta Uranium sampling program, 99% of samples taken were of granites or pegmatitic granites found in either massive form or dykes (assessment report no. 20000004302). The uranium mineralization found in the granitic and pegmatitic rocks are commonly found on the flanks of the felsic intrusions and at the margins of metasedimentary rafts within the intrusive rocks. Shute (assessment report no. 20000004302) notes that the rafts do not host uranium mineralization, and that a contact reaction caused by magmatic and possibly late magmatic hydrothermal processes during emplacement may have facilitated development of the mineralization.

Radioactive minerals include uraninite, thorite, uranophane, beta-uranotile, boltwoodite, euxenite, uranothorite and monazite (Pryslak 1976). Uranium mineralization is often associated with higher concentrations of magnetite. The most highly radioactive areas are biotite-rich zones, apatite-rich zones and magnetite-rich zones in pegmatites. Secondary yellow uranium minerals, including beta-uranotile and uranophane, are often observed in fractures and as staining on weather surfaces (Pryslak 1976).

Limited base metal mineralization developed as Pb, Zn, Ag and Cu-bearing sulfides has been noted at the Coulee prospect and was the subject of exploration by Noranda Exploration in 1968 (assessment report no.



52F13SE0025). Rio Algom explored the Game Lake area for Cu-Zn-sulfides (Laine 2007).

The geological control, length, width, depth and continuity of the mineralization from the property showings are unknown at this stage.

#### 7.3.1 Richard Lake Prospect

The following description of the Richard Lake Prospect is taken from Laine (2007).

The Richard Lake Mine is located in MacNicol Township and represents the most advanced prospect in the area. The uranium deposit, discovered in the early 1950's, occurs in Precambrian granites and granitic pegmatites intruding Archaean volcanic and sedimentary rocks. The mineralization is traceable in outcrop for over 300 m, before disappearing under overburden, and was trenched over widths of up to 15 feet, although sections of up to 20 feet were commonly observed during drilling.

Uranium mineralization is associated with a series of parallel, magnetite-bearing pegmatite dikes, which are commonly hematized and intrude highly recrystallized, foliated to gneissic metavolcanics (Pryslak, 1976). Individual dikes vary in width from several inches (cm) to 30 feet (9 m) and occur in a zone that varies in width from 250 to 350 feet (76 to 110 m). The dikes trend east-northeast and dip steeply to the north. There appear to be five zones, with the most southerly two zones containing dykes of low-grade material over widths of from 5 to 7 feet [1.5 to 2.1 m] (Bayne, 1976). Drilling has extended the southern zone to a vertical depth of 840 feet [256m] (Bayne, 1976).

The two largest and most persistent zones occur in the central part of the formation, ranging in width from 10 to 20 feet [3 to 6m] as indicated by trenching, diamond-drilling, and underground work (Bayne, 1976). Sampling of underground workings and diamond drill core in these zones indicate a grade ranging from 0.08 percent to 0.14 percent U<sub>3</sub>O<sub>8</sub>, with a probable average of about 0.10 percent U<sub>3</sub>O<sub>8</sub>. Radioactive minerals include uraninite, uranothorite, allanite, and beta-uranotyle (Robertson, 1968).

Mining development commenced in 1955 in the form of two drifts, at the –50-foot and –100-foot levels, totalling 525 feet of crosscutting and 430 feet of drifting. By 1956, the Company had failed to qualify the property as a "current supplier" of uranium, and operations were suspended.

### 8.0 DEPOSIT TYPES



The mineral deposit types that have been explored for on the property are (1) uranium mineralization and (2) base metal mineralization.

#### 8.1 Uranium Mineralization

Granitic pegmatites are an important source of metals such as Li, Rb, Cs, Be, Ga, Sc, Y, REE (rare earth elements), Sn, Nb, Ta, U and Th (Selway et al. 2005). The pegmatites of the Kenora U property, which are spatially associated with granitic rocks of the DBC, are host to uranium-bearing minerals including uraninite, thorite, uranophane, beta-uranotile, boltwoodite, euxenite and uranothorite.

Many granitic pegmatites are considered to form due to fractionation of a parental granitic melt (Černý and Ercit 2005), which can migrate into the adjacent country rocks. Černý (1991) classified rare-element pegmatites as Li-Cs-Ta enriched (LCT), Nb-Y-F enriched (NYF) and mixed. Pegmatites of the LCT family are enriched in Li, Rb, Cs, Be, Sn, Ta, Nb (with Ta>Nb), in addition to progressive enrichment of B, P and F with increasing fractionation (Černý and Ercit 2005). Parental granites are generally peraluminous S, I or mixed S + I type, strongly fractionated, and fertile, differing from barren granites with respect to their geochemistry, mineralogy and texture (Selway et al. 2005).

Pegmatites of the NYF family are enriched in REE, U and Th in addition to Nb (with Nb>Ta), Y, F, and are often associated with subaluminous to metaluminous, A-type granites characterized by the presence of Fe-rich micas, amphiboles, and pyroxenes (Selway et al. 2005).

Internal zonation is a common feature in pegmatites, where a core zone is rimmed by concentric shells, termed from the margin inward as the border, wall and intermediate zones, which differ in mineralogy and texture (Černý 1991). At the regional scale, zonation may be present within a granite (outward-fractionated), as well as in its pegmatite aureole, where increasing fractionation and volatile enrichment is observed with increasing distance from the granitic body (Figure 8-1). In the DBC, where multiple suites of granitoid rock occur, including an early Na-rich suite (tonalite-trondhjemite) and later, more fractionated, K-rich varieties (granodiorite-granite) suggest a regional zonation may be present.

The pegmatites of the Kenora U area, which were likely concentrated by fractionation of granitic magmas that migrated into the country rocks adjacent to the DBC, exhibit features common to both families of pegmatites. Characteristics of LCT-type pegmatite include the presence of beryl and tantalite in pegmatite at the Medicine Lake occurrence, as well as the potassic varieties of granite occurring in the eastern portion of the DBC, which are proximal to the mineralized pegmatites, are considered slightly peraluminous and were likely sourced from the melting of a sedimentary source (Goad 1990). Conversely, the prominence of uranium-thorium-bearing minerals in pegmatite adjacent to the DBC may suggest a similarity to NYF-type pegmatites.

Laine (2007) suggests that the uranium mineralization at the property may share an affinity with Bancroft area uranium mineralization in the Grenville province. In reference to potential deposit styles, Laine (2006) writes:



Based on existing geology one could expect deposits of the following types:

-Bancroft Area, granitic pegmatites dikes in calcareous metasediments and gneiss (1.3 million tonnes of 0.11 U3O8) with uraninite associated with magnetite, hematite. A large pluton flanks the mineralized pegmatite en-echelon dykes transgressing the metasediments (Griffith, 1985).

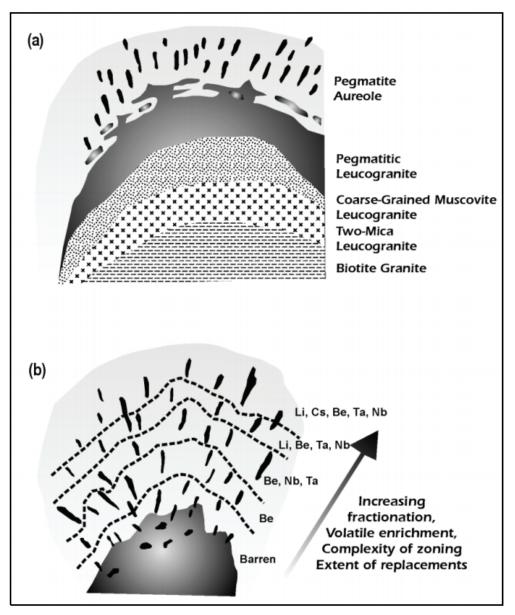


Figure 8-1: Pegmatite-associated regional zonation

#### 8.2 Base Metal Mineralization



Pryslak (1976) notes that concentrations of sulfide minerals are confined to the metavolcanic-metasedimentary sequence and are widespread in them. In Bridges Township in the Game Lake area north of the property, segregations of massive sulfides up to 30 cm wide, including pyrite, pyrrhotite, sphalerite and minor amounts of galena and chalcopyrite, are concentrated along shears in the metasedimentary rocks (Pryslak 1976). The apparent style of base metals exhibited on the Property appears to be of a volcanogenic massive sulfide ("VMS") type associated with felsic volcanic and metasedimentary contacts.

The following description of VMS deposits is summarized from Galley et al. (2007). VMS deposits are also known as volcanic-associated, volcanic-hosted, and volcano-sedimentary hosted massive sulfide deposits. They typically occur as lenses of polymetallic massive sulfide that form at or near the seafloor in submarine volcanic environments, and are classified according to base metal content, gold content, or host-rock lithology.

They are discovered in submarine volcanic terranes that range in age from 3.4 Ga to actively forming deposits in modern seafloor environments. The most common feature among all types of VMS deposits is that they are formed in extensional tectonic settings, including both oceanic seafloor spreading and arc environments. Most ancient VMS deposits that are still preserved in the geological record formed mainly in oceanic and continental nascent-arc, rifted-arc, and backarc settings.

Primitive bimodal mafic volcanic-dominated oceanic rifted arc and bimodal felsic-dominated siliciclastic continental back-arc terranes contain some of the world's most economically important VMS districts. Felsic volcanic rocks associated with VMS deposits typically have distinctive geochemical characteristics, referred to as Groups FI to FIV (Hart et al. 2004), where FIII-FIV are the least evolved, highest temperature and highest-silica groups and appear to represent the most favourable VMS-rhyolite association (Hart et al., 2004; Franklin et al., 2005).

Most, but not all, significant VMS mining districts are defined by deposit clusters formed within rifts or calderas. Their clustering can occur on multiple stratigraphic levels and is further attributed to a common heat source that triggers large-scale sub-seafloor fluid convection systems. These sub-volcanic intrusions may also supply metals to the VMS hydrothermal systems through magmatic devolatilization. As a result of large-scale fluid flow, VMS mining districts are commonly characterized by extensive semi-conformable zones of hydrothermal alteration that intensify into zones of discordant alteration in the immediate footwall and hanging wall of individual deposits.

Franklin, et al. (2005) classified the typical deposits with variable lithologies and tectonic settings shown in Figure 8-2. They are associated with bimodal-mafic VMS-type deposits as follows:

- Rifted bimodal volcanic arcs above intra-oceanic subduction (oceanic supra-subduction rift-arc);
- Basalt-dominant but with up to 25% felsic volcanic strata;
- Pillowed and massive volcanic flows, felsic flows, and predominant domes;
- Subordinate felsic and mafic volcaniclastic rocks;



- Sedimentary rocks are dominantly immature wacke, sandstone, and argillite with local debris flows;
- Hydrothermal chert common in the immediate hanging wall to some deposits

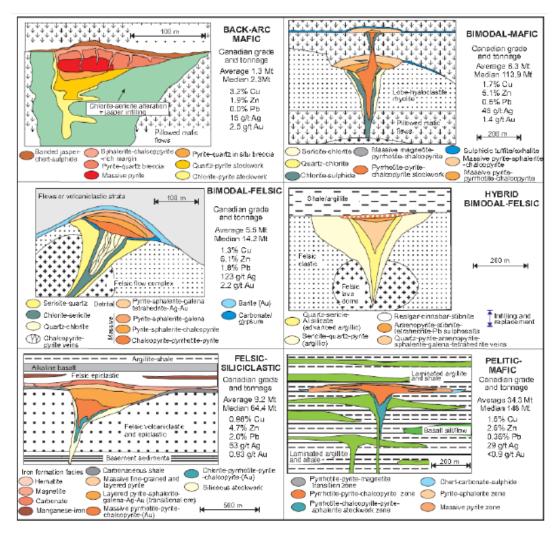


Figure 8-2: Classification of VMS deposits (after Galley et al., 2007)

### 9.0 EXPLORATION

GNEM commissioned Precision GeoSurveys Inc. ("Precision") of Langley, BC to conduct a high-resolution helicopter-borne magnetic and radiometric survey of the Property (Poon 2023). The purpose of the survey was to help delineate controls on uranium mineralization by establishing relationships between historic uranium occurrences and geophysical features. Data acquisition was completed between September 26 and 28, 2023. A total of 2075 line-km were flown over an area of 113.3 km<sup>2</sup>. Survey lines were flown at 60 m



spacing, oriented at 000°/180°, and tie lines were flown at 600 m spacing, oriented at 090°/270° (Figure 9-1). The nominal sensor height was 40 m above ground. RMG provided survey design, management and data QC for the airborne survey.

#### 9.1 Magnetic Dataset

The survey was flown using a Bell 206 Jet Ranger helicopter equipped with a Scintrex CS-3 split-beam cesium vapor magnetometer mounted on the front of the helicopter in a non-magnetic and non-conductive "stinger" configuration to measure total magnetic intensity. The magnetometer sensor was oriented at 45° to couple with local magnetic field at the Kenora survey area. The Scintrex CS-3 Magnetometer has a sensitivity of 0.0006 nT /  $\sqrt{Hz}$  rms and an absolute accuracy of <2.5 nT throughout range.

In addition, temporal variations of Earth's magnetic field, particularly diurnal, were monitored and recorded by two GEM GSM-19T base station magnetometers during surveying. The base stations were located in an area with low magnetic gradient (i.e., away from electric power transmission lines and moving ferrous objects, such as motor vehicles), for optimum survey data integrity. The GEM GSM-19T magnetometer, with integrated GPS time synchronization, uses proton precession technology with absolute accuracy of ±0.20 nT and sensitivity of 0.15 nT at 1 Hz.

The magnetic data was corrected using the following procedures:

- 1. Aircraft effects were removed by real-time magnetic compensation using a fluxgate magnetometer.
- 2. Time lag and heading corrections were applied, as determined by pre-survey test flights.
- 3. Diurnal variations were removed using a base-station magnetometer.
- 4. Final data leveling was applied using a combination of tie-line leveling algorithms and grid-based microlevelling.



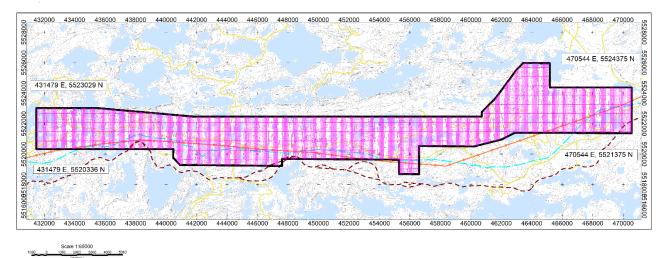


Figure 9-1: Survey flight path



Figure 9-2: Survey helicopter equipped with a magnetic sensor and gamma ray spectrometer

#### 9.1.1 Magnetic Filtering

To aid in interpretation, Fast Fourier Transform ("FFT") filter products were calculated from the gridded residual magnetic intensity ("RMI") data. FFT is a computational method that allows signals (often time or space) to be represented in the frequency domain and vice versa. This allows for practical computational filtering. The following FFT products were calculated:



- Reduction to Pole (RTP)
- Calculated Vertical Gradient (CVG)
- Calculated Horizontal Gradient (CHG)
- Analytic Signal (AS)

The calculated products highlight contacts and structural information in the magnetic data that are not always apparent in the total field data (Figure 9-3; Figure 9-4).

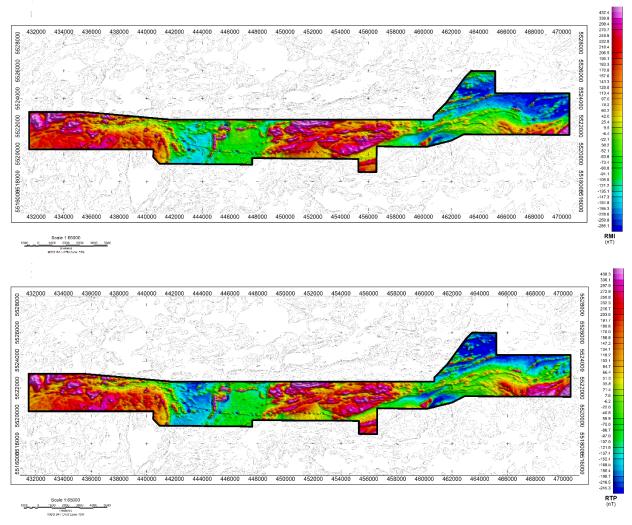


Figure 9-3: Top - Residual Magnetic Intensity (RMI); Bottom - Reduced to Pole (RTP)



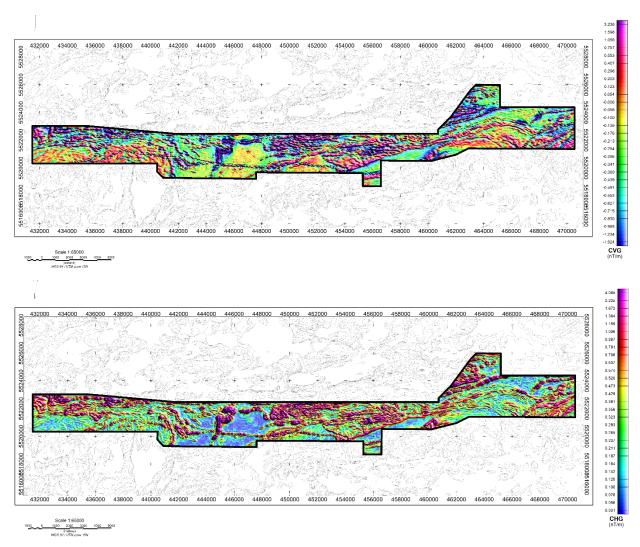


Figure 9-4: Top - Calculated Vertical Derivative (CVD); Bottom - Calculated Horizontal Derivative (CHD)

#### 9.2 Radiometric Dataset

Gamma radiation data were collected by a Medusa GR-820.1 gamma ray spectrometer manufactured by Medusa Radiometrics BV of Groningen, Netherlands. The GR-820.1 is a self-calibrating, fully integrated gamma detection system containing five thallium-activated synthetic sodium iodide crystals: 16.8 L (four crystals of 4.2 L each) downward-looking and 4.2 L (one crystal of 4.2 L) upward-looking, with user-selectable 256, 512, or 1024 channel output at 1 Hz sampling rate. The downward-looking crystals are designed to measure gamma rays from below the aircraft. The upward-looking crystal is mounted directly on top of the four downward-looking crystals to provide shielding from terrestrial gamma radiation to measure cosmic and solar gamma radiation originating from above the survey aircraft. The GR-820.1 system is installed in the rear cargo compartment of the helicopter away from the fuel tank to minimize variable gamma attenuation from fluctuating fuel levels. Additional specifications are described in Appendix B of Poon (2023).



Radiometric correction coefficients are summarized in Table 9-1.

Table 9-1: Radiometric correction coefficients						
Compton Stripping						
Alpha (a)	0.3184					
Beta (β)	0.4309					
Gamma ( <sub>Y</sub> )	0.8467					
GrastyBackscatter_a	0.3184					
GrastyBackscatter_b	0.0000					
GrastyBackscatter_g	0.0000					
Sensitivities						
ТС	42.31					
К	134.62					
U	12.36					
Th	6.12					

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Energy windows corresponding to total count, potassium (<sup>40</sup>K), uranium (<sup>238</sup>U using the <sup>214</sup>Bi daughter product), and thorium (<sup>232</sup>Th, using the <sup>208</sup>Tl daughter product) were extracted from the spectrum and corrected using standard procedure (Figure 9-5). Radioelement ratio and ternary image maps were also compiled by the survey contractor.



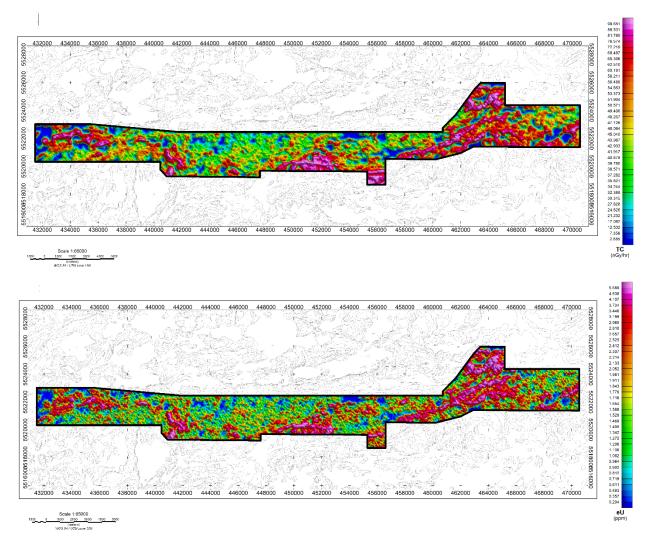


Figure 9-5: Top - Total count (TC); Bottom - Equivalent Uranium (eU)

### 9.3 Results

Results of the survey indicate that historic uranium occurrences are associated with domains exhibiting high equivalent uranium (eU) and a high U/Th ratio (or low Th/U ratio). Domains exhibiting high eU should be identified and investigated as potential exploration targets. Areas exhibiting low eU often overlie waterbodies such as lakes and streams. Additionally, magnetic data delineated major features including the lithological contacts between rocks of the DBC and the Vermilion Bay greenstone belt, the east-west trending metavolcanic-metasedimentary package, and cross-cutting dykes. In general, historic occurrences are preferentially located proximal to the contact between domains of relatively high and low magnetic intensity.



# 10.0 DRILLING

Great Northern Energy Metals has not completed drilling on the Property.

## 11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

Great Northern Energy Metals has not completed any sampling on the Property.

# 12.0 DATA VERIFICATION

#### 12.1 Site Visit

On November 11, 2023, Bob Komarechka P.Geo., QP and the author of this report, and his prospecting assistant, L. Vincent, left Sudbury, Ontario by truck to visit the Kenora U Property. November 11, 2023 was spent as a travel day and the site was visited on November 12, 2023. An Exploranium model GR-110G Gamma Ray Scintillometer was also brought to the property. The site visit consisted of traveling along the Trans-Canada Hwy 17 from the east side of the property to the west side of the property with the scintillometer on and investigating two known uranium showings on the property. No responses were heard from the scintillometer while travelling along the highway. The first showing visited was the Richard Lake Prospect (MDI *#* MDI52F13SW00044) and second showing was the Bee Lake Occurrence (MDI *#* MDI52F13SW00041) (Figure 12-1).

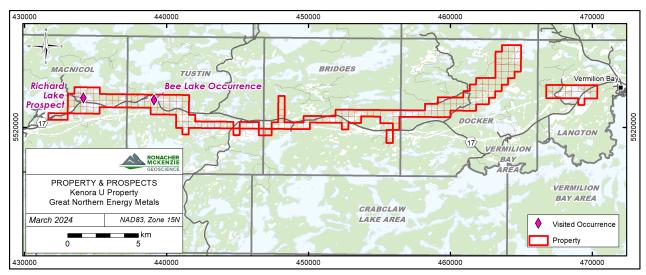


Figure 12-1: Location of the occurrences visited



The Richard Lake Prospect occurs in MacNicol Township along the west shore of Richard Lake ~450 m north of the Trans-Canada highway 17 (Figure 12-2). The regional bedrock in the area consists of east-west trending metasedimentary rocks and minor metavolcanic gneisses intruded by granitic intrusive rocks and pegmatites of the Dryberry Intrusion to the south. Radioactivity can occur in these granitic bodies. Historic diamond drilling and drifting has occurred on this occurrence. The locations of the diamond drill holes were located using GPS by Emerald Geological Services, as described in a 2021 assessment report for Madison Metals (assessment report no. 20000020326). Due to the snow on the ground this site visit focussed on locating the historic drifting from the two historic adits.

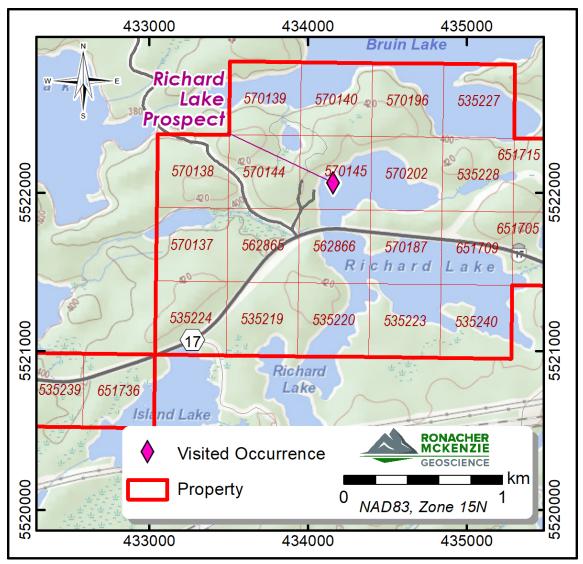


Figure 12-2: Location of the Richard Lake Prospect relative to the property claim fabric



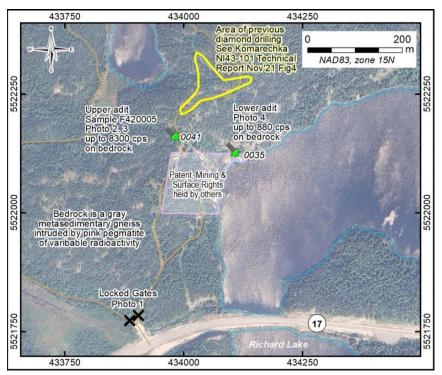


Figure 12-3: Richard Lake Prospect site location

The claim area, private property, roads, photo locations, sample locations and adits on the site are shown in Figure 12-3. Access from Highway 17 is through a locked and gated road that leads to the adits (Figure 12-4). The property owner of the nearby land, Jervis Swannack, was at the site and assisted with access to the property. It should be noted that the eastern lower adit appears to be on the edge of the private property but is on the Kenora U property.

One sample, F420005, was collected from the ceiling of the upper adit. The details of this sample and the locate of the lower east adit are described in Table 12-1.

Sample #	Easting*	Northing*	Elevation (m)	Area	Comments
F420005	433983	5522171	424	Richard Lake	Pegmatite: light gray to pink, very coarsely crystalline with clear quartz, a cream gray mineral possibly plagioclase but with lineated cleavage, white oligoclase (probably albite with albite twinning, black biotite. Sample gave radiometric reading of 200 to 735 cps. Sample should be assayed for rare earths and lithium.
n/a	434112	5522129	409	Richard Lake	n/a

Table 12-1: Description of grab sample collected and location of the lower east adit. The sample was collected from claim # 570145 in MacNicol Township.

\*UTM NAD 83 Z15U





Figure 12-4: Richard Lake Property access road from the Trans-Canada Highway

Significant radiometric readings were obtained from the upper west adit with readings in the range of 200 to over 9999 cps, the maximum reading on the unit. Figure 12-5 shows the readings as taken from the ceiling of the west adit, with the entrance shown in Figure 12-6. Bat studies are also being undertaken in this adit to study the spread of the White-nose syndrome.

The lower east adit was also examined (Figure 12-7). This adit has a secure door entry and on entry it was observed that the granitic rocks were of a more scattered nature compared with the Upper west adit. Orange irregular pegmatite veins were examined which gave a maximum radiometric reading of 880 cps.





Figure 12-5: Richard Lake Property west upper adit ceiling radiometric reading of 9999 cps



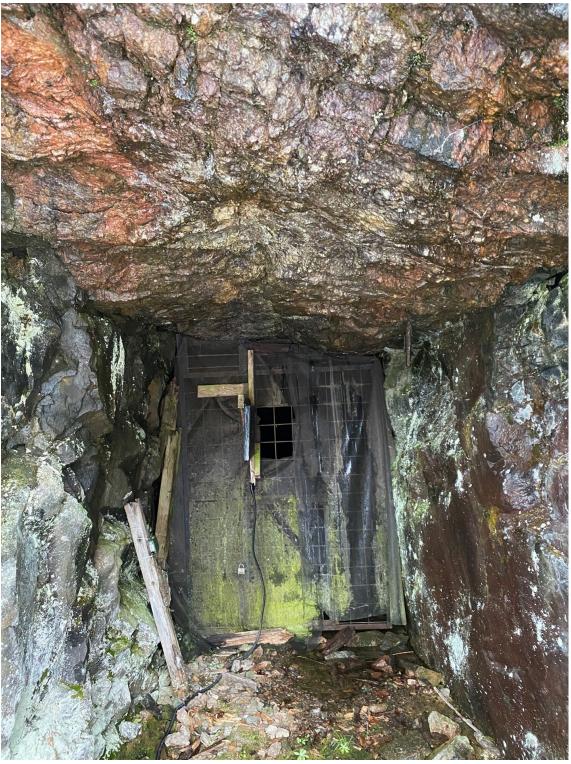


Figure 12-6: Richard Lake Property west upper adit entrance





Figure 12-7: Richard Lake lower east adit entrance

The Bee Lake Occurrence occurs in Tustin Township on the northern edge of the Feist Lake Pluton between Little Joe Lake to the west and Bee Lake to the East (Figure 12-8; Figure 12-9). This occurrence has had past trenching and diamond drilling with some interesting historic uranium values. Recently in 2021 a series of rock samples were collected as grab samples and from sawcuts in the work program undertaken by Emerald Geological Services, Timmins Ontario. During examination of this area on November 12, 2023 snow cover limited examination, however, two sets of sawcuts were observed: (1) Channel sawcuts along line BL-L29E + 4M from the work program of Madison Metals Inc. undertaken by Emerald Geological Services in 2021 (Figure 12-10; Figure 12-11) and (2) one set of 4 cuts by the road done earlier (Figure 12-11). Trenches were not located



on this visit, but they were recognized previously (Komarechka 2021). The location of the 2021 sawcuts matched the location data of the 2021 assessment report. Figure 12-12 shows a radioactive granite-pegmatite erratic sill along the road.

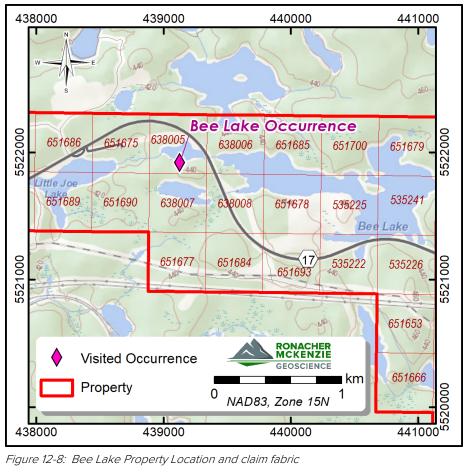


Figure 12-8: Bee Lake Property Location and claim fabric





Figure 12-9: Bee Lake Property Location site visit





Figure 12-10: Bee Lake Property Location 2022 sawcuts on Line BL-L29E + 4M





Figure 12-11: Close up of Bee Lake Property Location 2022 sawcuts on Line BL-L29E + 4M





Figure 12-12: Bee Lake occurrence pre-2022 sawcuts above outcrop along west side of Highway 17





Figure 12-13: Bee Lake occurrence outcrop below pre-2022 sawcuts along west side of Highway 17. Earlier scintillometer readings of up to 4680 cps have been collected at this location

A short traverse going westward just north of the roadside outcrop was undertaken in 2020 by R. Komarechka along an old overgrown access road that led to several trenches where two readings were taken, both over the 9999 cps limits of the GR 110 Exploranium scintillometer (Figure 12-14; Figure 12-15). Both readings were in the vicinity of blasted trenches. These readings confirm the presence of anomalous radioactivity that can correlate with uranium mineralization.





Figure 12-14: Exploranium GR-110 unit displaying 9999 counts per second (cps), its maximum reading limit, on a pegmatite outcrop located in a blasted trench on the Bee Lake Occurrence UTM co-ordinates 15U 0439293mE, 5521912mN, in the vicinity of a previous old sample SB09. This reading was recorded in 2020 from an earlier site visit by R. Komarechka, a QP of this report.



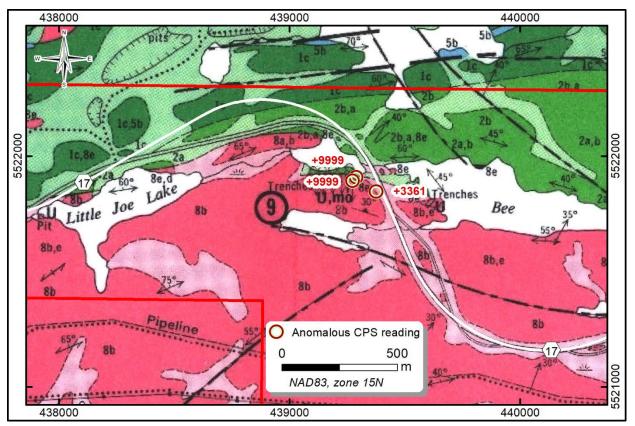


Figure 12-15: Bee Lake local geology showing the locations of the anomalous cps readings collected by R. Komarechka, the author of this report, in an earlier site visit in 2020. See appendix 5 on OGS Map 2302 for MacNicol and Tustin Townships for the legend for this map.

This site visit to the Kenora U Property confirmed the location and existence of past work on the Bee Lake occurrence. It also confirmed that airborne radiometric data can be used to effectively focus ground-based activities. The high cps readings obtained, in excess of 9999 cps from The Bee Lake Occurrence, confirms the potential for significant uranium mineralization that warrants further exploration. It should be noted that these high readings are atypical as the other readings measured in this area were lower and often highly variable.

It is the opinion of the QP that the data collected is reliable and adequate for the purpose of this report.

# 13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

GNEM has not completed any mineral processing and metallurgical testing.



## 14.0 MINERAL RESOURCE ESTIMATES

GNEM has not completed any resource estimates on the property.

## 15.0 ADJACENT PROPERTIES

There are no adjacent properties of significance.

# 16.0 OTHER RELEVANT DATA AND INFORMATION

The QP are not aware of any other relevant data, information or explanation that would make this report understandable or not misleading.

## 17.0 INTERPRETATION AND CONCLUSIONS

The Kenora U property is situated proximal to the DBC a major granitic batholith located near the boundary of the Western Wabigoon Subprovince and the Winnipeg River Terrane. Uraniferous pegmatites are developed in association with potassic-rich varieties of the DBC near its northern margin with metavolcanic-metasedimentary rocks of the Vermilion Bay greenstone belt and are localized proximal to uranium-depleted metasedimentary rafts hosted within the granitic rocks. Mineralization occurs predominantly as uraninite, uranothorite and allanite, which is most concentrated in biotite, apatite and magnetite-rich zones in pegmatites.

In 2023, GNEM completed a heli-borne magnetic and radiometric survey of the property to delineate controls on uranium mineralization by establishing relationships between historic uranium occurrences and geophysical features. Results from the radiometric survey indicate that historic uranium occurrences are associated with domains exhibiting high equivalent uranium (eU) and a high U/Th ratio (or low Th/U ratio). Domains exhibiting high eU should be identified and evaluated as potential exploration targets.

The magnetic data delineated major features including the lithological contacts between rocks of the DBC and the Vermilion Bay greenstone belt, the east-west trending metavolcanic-metasedimentary package, and crosscutting dykes. In general, historic occurrences are preferentially located proximal to the contact between domains of relatively high and low magnetic intensity. It is also apparent these areas frequently occur proximal to the edges of the granitic rocks. Pegmatites in metavolcanic-metasedimentary rocks previously mapped by Pryslak (1977) were not clearly delineated by the magnetic survey.

Based on the geological setting of the property, the results of the 2023 heli-borne magnetic and radiometric survey and the field visit of the property, the QP concluded that the property has potential for pegmatite-hosted uranium mineralization. Significant, anomalous radiometric readings were obtained at both the Richard Lake and Bee Lake occurrences during the field visit. The location of radiometric anomalies delineated by the



radiometric survey match the existing occurrences examined during the field visit. There exist many other radiometric anomalies that should be investigated.

The QP emphasize that overburden and water weaken the radiometric bedrock response. This should be considered when interpreting projected radiometric trends beyond outcrop exposures. A more extensive exploration program is required to properly evaluate the Kenora U Property.

The QP are not aware of any significant risks or uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information. No economics outcomes are projected from the data at this early stage of exploration. There are no reasonably foreseeable impacts of potentials risks and uncertainties on the project's viability given the early stage of exploration.

### 18.0 RECOMMENDATIONS

Based on the work completed by GNEM, the historic exploration data, and the geological setting of the Kenora U property, the following work is recommended to advance the property:

- Completion of a detailed compilation and review of all available historic property exploration data, which includes (1) digitization of historic drill hole logs and desurveying of historic drill holes in order to evaluate previous drilling results, and (2) georeferencing of geological maps, surface rock assay and scintillometer measurements. Integration of all available datasets should be completed to evaluate the position, shape and orientation of the uranium mineralization.
- 2. Due to overburden attenuation of radiometric readings, a map showing areas of overburden and outcrop should be prepared so the radiometric response dampened by overburden can be recognized and the trends of the responses over outcrop can be followed up.
- Prospecting, ground-truthing and localized outcrop mapping, which includes collection of ground scintillometer data and rock samples within areas identified as anomalous by the radiometric survey. On sample collection, care is required to collect fresh unweathered samples.
- 4. Exploratory diamond drilling, with precise collar locations to be defined following data compilation, data integration and ground truthing of the geophysical anomalies.



ITEM	Cost
Compilation, digitization, integration, and interpretation of all available historic surface exploration and drill hole data	\$ 13,200
Follow up ground truthing of the geophysical survey results, prospecting and sampling	\$ 50,000
Diamond drilling (inclusive of mobilization, demobilization and support costs)	\$ 300,000
Interpretation and Reporting	\$ 7,500
Total	\$ 370,700

#### Table 18-1: Cost estimate for the recommended exploration program on the property.



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# 20.0 STATEMENT OF AUTHORSHIP

This report, titled "Independent Technical Report - Kenora U Property", dated March 28, 2024, and prepared for Great Northern Energy Metals Inc., was completed, and signed by the following author:



Robert G. Komarechka, P.Geo. March 28, 2024 Sudbury, ON



Appendix 1 – Certificate of Qualified Person



#### CERTIFICATE OF QUALIFICATIONS

Robert G. Komarechka, P.Geo. Bedrock Research Corp. Sudbury, ON, Canada <u>bkomar@fibreop.ca</u>

I, Robert Komarechka, do hereby certify that:

- 1. I am an independent consulting professional geoscientist operating under the name of Bedrock Research Corp.
- I am responsible for all sections and solely responsible for Section 12.1 (Site Visit) of this report titled "Independent Technical Report – Kenora U Property, Ontario" dated March 28, 2024 and prepared for Great Northern Energy Metals Inc.
- 3. I graduated from Laurentian University in Sudbury with a B.Sc. (1978) with a major in Geology and have practised my profession for 44 years since graduation, working with government, academia, and the private sector with both major and junior companies. During this time, I have been involved in oil and gas exploration, wellsite geology, mineral exploration, mineral property acquisitions and evaluations, drill program management, field crew supervision and mine management. Commodities have included gold, silver, platinum group metals, base metals, uranium, diamonds, lithium, graphite, industrial minerals, dimension stone, aggregate and high purity silica. This work has been conducted in most provinces of Canada, United States (Montana, Arizona, Nevada, Idaho, Kentucky, and Maine), Mexico, Peru, and Spain.
- I am a registered practicing professional member in good standing with the Association of Professional Engineers and Geoscientists of Alberta (APEGA) since 1985 with P.Geol. membership number M39059.
- 5. I am a registered practicing professional member in good standing with the Geoscientists of Ontario (PGO) since 2004 with P.Geo. membership number 1150.
- 6. I am a registered Fellow in good standing of the Canadian Gemmological Association since graduation as a Gemmologist in 1990.
- 7. I personally examined and studied the literature of government and corporate reports on the property of Great Northern Energy Metals. I am familiar with the project area and have visited the property on November 12, 2023.
- 8. I have knowledge of the geology and mineralization in this general area having undertaken geological studies on the property, undertaking a preliminary cursory examination of the rocks and mineralization of the area.
- 9. I have had no prior or subsequent involvement with the property that is the subject of the Technical Report.
- 10. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
- 11. I am independent of the issuer applying all the tests in section 1.5 of National Instrument 43-101. I do not own, directly or indirectly, nor am I under an agreement, arrangement or understanding or expect to acquire any securities of Madison Metals Inc. or any affiliated entity of the Company. I hold no interest, directly or indirectly, in the mineral properties that are the subject of the forgoing report or in any adjacent mineral properties nor do I expect to receive any direct or indirect interest in the Property.
- 12. I have read the definition of "qualified person" set out in National Instrument 43-101/Regulation 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a qualified person for the purposes of NI 43-101 on this Technical Report.



- 13. I am responsible for the preparation of all Sections of "The Technical Report"
- 14. I have read NI 43-101 and Form 43-101F1, and the sections of the Technical Report for which I am responsible have been prepared in accordance with that instrument and form.

Dated this 28th day of March 2024



Robert G. Komarechka, P.Geo.

