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NI 43-101 TECHNICAL REPORT, GEOLOGICAL INTRODUCTION TO THE REA URANIUM PROJECT, ALBERTA, CANADA

Prepared for:

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Report Issued By

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1 Summary

1.1 Issuer and Purpose

This technical report has been prepared for 1818403 Alberta Ltd., a wholly owned subsidiary of GoldMining Inc., and Orano Canada Ltd. (hereafter GMI). The focus of this technical report is on the Rea Uranium Project, or Rea Property, located in northeastern Alberta, with mineral rights owned by GMI (75%) and Orano Canada Inc. (25%).

GMI, under the name Brazil Resources Inc., released a National Instrument 43-101 technical report with an effective date of September 12, 2014. Since that date, GMI has 1) increased the land package of the GMI Property, and 2) reprocessed historical geophysical data for an updated interpretation.

Accordingly, the intent of this technical report is to update the technical information related to the Rea Property in accordance with Canadian Institute of Mining, Metallurgy, and Petroleum Mineral Exploration Best Practice Guidelines and the disclosure rule National Instrument 43-101. The effective date of this report is April 30, 2025.

1.2 Author and Site Inspection

The technical report was prepared by Roy Eccles P. Geol. P. Geo. of APEX Geoscience Ltd. in Edmonton, AB. The author is independent of GMI, the Rea Property, and is a Qualified Person as defined in National Instrument 43-101.

Mr. Eccles conducted a site inspection at the Rea Property on October 30, 2024, enabling the Qualified Person to observe the land position, physiography, vegetation, Quaternary surficial geology, and property access options associated with any future exploration program(s) conducted by the Issuer. The property is covered by surficial (till and glaciofluvial) deposits. Hence, no samples of Athabasca Sandstone or the crystalline basement were available, or obtained, by the Qualified Person during the site inspection to verify the uranium mineralization that is the focus of the Rea Uranium Project.

1.3 Property Location, Description, and Access

The Property is located on the western edge of the Athabasca Basin in northeastern Alberta, about 45 kilometres west-southwest of Cluff Lake and approximately 185 kilometres north-northwest of Fort McMurray. The permits occur between Latitude 57°51′59" and 58°23′00"N and Longitude 110°45′00" and 110°00′00"W and occupy portions of 1:250,000 scale National Topographic System map sheets 74L and 74E.

The Rea Property consists of 16 Alberta Rock-Hosted Mineral Permits (permits), totaling 125,328 ha. Twelve of the 16 permits were originally granted by the GoA in 2004; the additional 4 permits were granted in 2014. The 'original' 12 mineral permits have changed ownership through the acquisition and succession of numerous companies (Red Dragon Resources Corp. to Brazilian Gold Corp. to Brazil Resources Inc. to GMI).



The 4 'newer' permits transferred ownership as part of the name change from Brazil Resources Inc. to GMI. Currently, the Rea Uranium Project is owned by GMI (75%) and Orano Canada Inc. (25%).

Access to the Rea Property is by helicopter or fixed-wing aircraft year-round or winter road that connects Fort McKay with Fort Chipewyan from January to March of each year depending on winter conditions. There are some access roads on the Property that can be used for all-terrain vehicles. The largest town is Fort McMurray and food, fuel, and supplies are available year-round, including exploration services due to the oil field exploration and mining in the area.

1.4 Geology and Mineralization

The Rea Property is located on the western rim of the Athabascan Basin, a basin that encompasses an area of 100,000 km² in Saskatchewan and a small portion of Alberta.

The rocks underlying the western part of the Athabasca Basin comprise a complexly-deformed and strongly metamorphosed Archean to Paleoproterozoic crystalline basement rocks of the Lloyd Domain (Careen Lake Group) of the Rae Province. The basement rocks comprise a dominantly supracrustal package of psammopelitic gneiss, psammitic gneiss, pelitic gneiss, and garnet diatexite with subordinate metaquartzite, amphibolite, and ultramafic rock that are currently assigned to the Careen Lake Group. The supracrustral rocks were later intruded by significant amounts of granodiorite, quartz diorite, monzodiorite, and minor gabbro that, collectively, are termed the 'quartz diorite suite'.

The Athabasca Group comprises the Proterozoic cover sequence over the crystalline basement. Its thickness ranges from zero at the basin edge to more than 1,200 metre in the east-central part of the western Athabasca Basin. Maximum thickness of the sediments in the central part of the Basin is more than 1,500 m. The sandstone units in the western part of the Basin comprise two formations, the 'upper' Manitou Falls Formation and the underlying Smart Formation that form part of the Karras deposystem of the Cree Subbasin (Ramaekers et al., 2007). The Manitou Falls Formation (MF), constituting most of the fill in the Cree Subbasin and about half the total volume of the Athabasca Basin, is composed of three members in the western part of the Athabasca Basin: 'uppermost' Dunlop member (MFd), 'middle' Collins member (MFc), and 'lower' Warnes member (MFw), formerly termed the MFa/MFb member. The Smart Formation (S), formerly termed the MFa member, conformably underlies the MFw and rests unconformably on crystalline basement.

Post-Hudsonian crustal instability resulted in the development of three northeast trending sub-basins within the greater Athabasca Basin. Multiple series of transgressive sedimentary deposits were lain down because of tectonic activity and fault reactivation along Hudsonian northeast trending zones. The Rea Uranium Project encompasses the north-northwest striking Maybelle River Shear Zone.

Quaternary-aged glacial deposits form the most recent topographic features and range in thickness from 6 to at least 60 metres, based on historical drilling in the western Athabasca Basin. Surficial deposits also include impressive drumlin fields and local sand dune fields. Organic-rich clays are also locally encountered adjacent to sandstone bedrock.

With respect to mineralization, several targeted corridors for future exploration have been delineated by GMI based on historical geophysical conductors, surficial geochemical anomalies, and drillholes that





encountered subsurface zones with uranium. In the southwest part of the Rea Property, the Net Lake corridor comprises a sandstone unit that yielded historical uranium concentrations of up to 48 ppm uranium, as well as trace amounts of graphite in the basement rock. North, historical drilling within the Maybelle River corridor yielded 87 ppm total uranium over 1 m. Additionally, drill core along the Maybelle River corridor intersected clay alteration, breccia zones, and dravite, which represent features associated with unconformity uranium deposits elsewhere in the Athabasca Basin.

1.5 Historical Exploration

The Athabasca Basin has undergone extensive exploration for uranium, particularly in Saskatchewan, with the western basin in Alberta initially explored for uranium during the 1960s. Much of the historical exploration completed in 1970's through the 1990's has involved geochemical and geophysical surveys; however, the most notable mineralization on the western rim of the basin is associated with the adjacent-property Dragon Lake prospect, which was discovered by drilling in 1988. The Rea Property surrounds the Maybelle River Property, which contains the Dragon Lake prospect currently owned by Orano Canada Inc.

Note: The Qualified Person has been unable to verify the adjacent-property information, and therefore, the information is not necessarily indicative of the mineralization that is the subject of the Rea Property in this technical report. This includes information related to the Orano Canada's Maybell River Property and Dragon Lake prospect.

Due to the thick glacial till and quaternary cover, the Rea Property and the surrounding area has been subject to lake and stream sediment sampling as well as other radon gas detection programs. These surveys have not been successful in detecting anomalies at surface that translate to buried mineralization.

The depth of the unconformity varies across the Rea property; shallow in the western part of the property to several hundred m's on the eastern part of the property.

The biggest advances in uranium exploration along the western rim of the Athabasca Basin came during Uranerz Exploration and Mining Ltd.'s (Uranerz) exploration programs. In 1985, Uranerz conducted ground geophysical surveys including a Horizonal Loop Electromagnetic survey and identified a set of prominent conductors striking north-northwest along two trends. The western conductor called the Net Lake trend was delineated over 16km and the eastern conductor called the Maybelle River trend was delineated over 30 km.

In 1986 to 1997, Uranerz drilled the conductors and intersected uranium mineralization (Dragon Lake prospect) along the Maybelle River trend, which coincides with the Maybelle River Shear Zone. While the Dragon Lake prospect is not within the Rea Property, the Maybelle River Shear Zone extends onto the northern portion of the Rea Property for approximately 11 kilometres and is prospective to host additional zones of uranium mineralization. Drilling by Uranerz along the Net Lake trend identified additional target areas for future exploration.

Between 2005 and 2009, Red Dragon Resources Corp. (Red Dragon) conducted geophysical surveys that included a 2005 high-resolution helicopter-borne electromagnetic and magnetometer survey, and 2006 Induced Polarization survey, a 2008 fixed loop Time-Domain Electromagnetic survey, and 2009 airborne magnetics and gravity survey. Survey interpretations outlined several north-northwest trending conductors including the Net Lake, Maybelle River, and Keane Lake trends that extend across the property. The



conductors are interpreted to represent large basement faults or graphitic shear zones that can potentially host uranium mineralization.

In 2007, Red Dragon completed a small diamond drill program (8 holes totaling 1,908.7 m) within the Rea Property to test some of the conductors. Several holes identified elevated uranium and associated pathfinder element within the Athabasca sedimentary rocks or basement rocks near the unconformity.

1.6 Recent Exploration

During 2022-2023, GMI commissioned Fathom Geophysics to reprocess and interpret the historical airborne geophysical data. The work was completed in three stages and involved (1a) filtering magnetic and gravity data to highlight important structural features, (1b) generation of a tau map for the Versatile Time Domain Electromagnetic data; (2a) Vertical Prism magnetics and gravity, or VPmg, modeling of gravity data to generate a basement surface, (2b) magnetic vector inversion of magnetic data, constrained so that bodies are placed under the basement surface, (2c) Maxwell plate modeling of untested conductors indicated by the Versatile Time Domain Electromagnetic survey, (2d) inversion of supplied Induced Polarization and resistivity data; and (3) a synthesis and interpretation of the data to detect prospective areas.

As a result of the work, over 70 kilometres of prospective trends were identified in three distinct corridors for future exploration: Maybelle River, Net Lake, and Keane Lake. These corridors exhibit geophysical signatures that are interpreted as graphite-bearing shear zones and have the potential to host unconformity-style uranium mineralization.

1.7 Conclusions and Recommendations

Since the previous technical report in 2014, the size of the Rea Property has increased from 12 permits totaling 88,464 ha to 16 permits totaling 125,328 ha (an increase of 29%).

During 2022 and 2023, GMI compiled extensive historical geophysical, geochemical, and drilling datasets and commissioned Fathom Geophysics to undertake modern reprocessing techniques and inversion modeling to advance the geological interpretation. The objective of study was to highlight features in the geophysical data that could be associated with unconformity and basement-hosted uranium mineralization, including inferences to various shear and fault zones. A new interpreted map of lithology and structure of the basement was produced that depicts zones of graphite shear-dominated rocks within metapelite basement rocks (i.e., target zones for future exploration). This work has identified over 70 kilometres of prospective trend within three distinct corridors called the Net Lake, Maybelle River and Keane Lake for future exploration programs.

In the Qualified Person's opinion, the historical compilation, geophysical re-processing and re-interpretation methods are reasonable and resulted in a valid target delineation exercise for future uranium exploration work at the Rea Property. The QP advocates that the information and exploration data presented in this technical report forms a reasonable database for further exploration.

Additional exploration work is required to refine the numerous geophysical conductors to define areas for follow-up drill testing. The recommendations provided below are current exploration strategies being used to explore for uranium within the Athabasca Basin.



A two-phase approach is recommended. Phase 1 focuses on geophysical surveys (mobile magnetotelluric, gravity, moving loop electromagnetic, and ambient noise tomography) to refine historical conductors, define new conductors, and delineate priority drill targets. The Phase 2 work is dependent on the positive results of the Phase 1 geophysical surveying. Phase 2 focuses on verification and exploratory diamond drilling to test the geophysical targets with the primary objectives to validate historical drilling, locate new occurrences of uranium within the Rea Property, and potentially define areas of mineralization along with alteration and breccia zones. The total cost of the combined Phase 1 and Phase 2 programs, with a 10% contingency, is CDN\$2,156,000 (Table 1.1).

Phase	ltem	Description	Cost estimate (CDN\$)	Sub-Total (CDN\$)
	Ground gravity survey	Ground-based geophysical survey methods to validate	\$165,000	
Phase 1	Ground electro- magnetic survey	historical conductors and delineate localised target zones for drilling within the Maybelle River, Net Lake, and Keane Lake	\$150,000	
	Ambient Noise Tomography	corridors.	\$500,000	\$815,000
Phase 2	Verification and exploratory drill programs	Roughly 2,600 m program to 1) validate historical drilling, 2) test exploration corridor's and conductors identified by historical and current geophysical survey results.	\$1,100,000	
	Technical reporting	Disclose material milestones that could include initial mineral resource modeling and estimations in accordance with CIM (2014 2018, 2019).	\$45,000	\$1,145,000
			Sub-total	\$1,960,000
				.

Table 1.1 Future work recommendations.

10% contingency \$196,000

Total \$2,156,000





2 Introduction

2.1 Issuer and Purpose

This technical report has been prepared for 1818403 Alberta Ltd., a wholly owned subsidiary of GoldMining Inc., and Orano Canada Ltd. (hereafter GMI or the Company). GMI is a publicly traded junior mineral exploration company (TSX: GOLD; NYSE American: GLDG) based in Vancouver, BC, Canada. GMI was formerly Brazil Resources Inc. (Brazil Resources) who announced a company name change to GoldMining Inc. (GoldMining Inc., 2016). GMI is a mineral exploration company focused on the acquisition, exploration, and development of gold, copper, and uranium assets in the Americas.

Part of GMI's portfolio includes the Rea Uranium Project in the western Athabasca Basin in northeast Alberta, Canada, which is the focus of this technical report (Figure 2.1). Mineral rights associated with the Rea Property are owned by GMI (75%) and Orano Canada Inc. (25%; Orano Canada). A previous Rea Property technical report was prepared on behalf of Brazil Resources and filed as a National Instrument 43-101 (NI 43-101) technical report with an effective date of September 12, 2014 (Annesley and Eccles, 2014).

Since the 2014 report, GMI has 1) expanded the property area from 12 to 16 contiguous Rock-Hosted Mineral Permits, and 2) compiled and reinterpreted historical geophysical data intended to highlight faults and basement conductor features that could be associated with unconformity- and basement-hosted uranium mineralization. Accordingly, the intent of this technical report is to update the technical information related to the Rea Property in accordance with Canadian Institute of Mining, Metallurgy, and Petroleum Mineral Exploration Best Practice Guidelines (CIM, 2018) and the disclosure rule NI 43-101. This current technical report supersedes and replaces all previous technical reports prepared for Brazil Resources or GMI. The effective date of this report is April 30, 2025.

2.2 Author and Site Inspection

The technical report was prepared by Roy Eccles P. Geol. P. Geo. of APEX Geoscience Ltd. in Edmonton, AB, who is independent of GMI, the Rea Property, and is a Qualified Person (QP) as defined in NI 43-101. Report contributions were conducted by Nicole Meyer G.I.T., under the direct supervision of the QP.

Mr. Eccles is a Professional Geologist with the Association of Professional Engineers and Geoscientists of Alberta (APEGA) and has worked as a geologist for more than 35 years since his graduation from university. Mr. Eccles has been involved in all aspects of global mineral exploration and mineral resource estimations for metallic, industrial, and specialty mineral projects and deposits. Mr. Eccles technical experience with respect to uranium includes QP technical work in the Western Canada Sedimentary Basin and southwestern and western United States. In his previous capacity as a geologist with the Alberta Geological Survey, he is familiar with the geology of the western Athabasca Basin, its uranium history, and future potential.

Mr. Eccles conducted his most recent site inspection at the Rea Property on October 30, 2024. The site inspection enabled the QP to observe the land position, physiography, vegetation, Quaternary surficial geology, and Property access options associated with any future exploration program(s) conducted at the Rea Property.





Figure 2.1 General location of GoldMining Inc's Rea Property in northeastern Alberta, Canada.





2.3 Sources of Information

The report is a compilation of publicly available, technical information, and information provided to the QP by the Issuer. All sources of information used in this report are listed in Section 27, References.

The QP relied extensively on the wide-ranging contribution of Irvine Annesley's (P. Geo.) involvement within the previous Rea Property technical report (Annesley and Eccles, 2014), which is cordially acknowledged throughout this report.

Select journal papers used in the preparation of the technical report include Burwash (1978), Ramaekers (1978-1981), Hoeve et al. (1980), Armstrong and Ramaekers (1985), Wilson (1986), Ramaekers (1990), Friske et al. (1994), Shi and Annesley (1996), Wheatley et al, (1996), Ruzicka (1997), Portella and Annesley (2000), Card, 2001, 2002; Madore and Annesley (2002, 2003), Card et al. (2003), Hecht and Cuney (2003), Quirt (2003), Annesley et al. (2005), Card (2006), Pană (2006), Wheatley (2006), Bosman and Korness (2007), Card et al. (2007), Jefferson et al. (2007a, 2007b), Kupsch and Catuneanu (2007), Pană et al. (2007), Ramaekers et al. (2007), Pană and Olson (2009), and Mercadier et al. (2010).

Select assessment reports used in the preparation of the technical report include Moreau and Koning (1976), Laanela (1977a-c), McWilliams (1977), McWilliams and Sawyer (1977), Laanela (1978), Micthell and Fortuna (1978), Orr (1986, 1989), Robertshaw (1989), Orr and Lacey (1990), Dufresne and Maynes (2006), Vivian and Strate (2008), Morales and Koning (2010), and Carroll and Morales (2011).

The journal manuscripts and government assessment reports were prepared by a person or persons holding post-secondary geology, or related university degree(s).

To the best of his ability, the QP validated the Rea Property land position at the Government of Alberta (GoA) Alberta Energy Metallic and Industrial Mineral Disposition of Mineral Rights portal at: <u>https://gis.energy.gov.ab.ca/Geoview/Metallic</u>.

The QP has reviewed government, journal, miscellaneous reports, and historical laboratory data, and found no significant issues or inconsistencies. The information and datasets contain relevant and reasonable geological information in relation to the Rea Property and uranium exploration on the western, Alberta-side of the Athabasca Basin. The QP takes ownership of the ideas and values as they pertain to the preparation of a geological introduction technical report that is associated with an early-stage exploration project.

2.4 Units of Measure

With respect to units of measure, unless otherwise stated, this Technical Report uses:

- Abbreviated shorthand consistent with the International System of Units (International Bureau of Weights and Measures, 2006). E.g., metre is m and kilometre is km.
- Geographic coordinates are projected in the Universal Transverse Mercator (UTM) system relative to Zone 12 of the North American Datum 1983 (NAD83).
- Currency in Canadian dollars (CDN\$), unless otherwise specified (e.g., U.S. dollars, US\$; European dollars, €).





3 Reliance on Other Experts

The QP is not qualified to provide an opinion or comment on issues related to legal and environmental matters. Accordingly, the author disclaims portions of this technical report in Section 4, Property Description and Location. More specifically,

- The QP relies entirely on property title information provided by GMI to the QP in October 2024. This information was provided in 2 separate documents: 1) *Option Agreement* dated March 2006, and 2) *Land Index Search Report by the Government of Alberta for each Permit Number* dated July 5, 2024. The property title, and subsequent royalty, information is summarized in Sections 4.2.1 and 4.2.2.
- In Section 4.4 and with respect to the Rea Property Rock-Hosted Mineral Permit assessment expenditure extensions provided to GMI by the Government of Alberta, the QP relies entirely on documentation provided by GMI management to the QP in December 2024. The documents include 1) *Information Letter 2022-41*, and 2) *GoldMining Extension Response 20241127*. The documents were prepared by the Government of Alberta and were dated December 8, 2022, and November 27, 2024, respectively.
- In Section 4.5 and with respect to restrictions, the QP relies partly on information provided by GMI in a report entitled, *GMI Landscape Analysis Tool (LAT) Report* prepared by the Government of Alberta on September 13, 2024. The QP also reviewed reservations and restrictions via the Government of Alberta, Alberta Energy, Metallic and Industrial Mineral Disposition of Mineral Rights portal.



4 Property Description and Location

4.1 Description and Location

The Rea Property consists of 16 Alberta Rock-Hosted Mineral Permits (permits), totaling 125,328 ha (Figure 4.1 and Table 4.1). Twelve of the 16 permits were originally granted by the GoA in 2004; the additional 4 permits were granted in 2014. The GoA mineral tenure portal shows the designated 100% owner of the 16 permits is 1818403 Alberta Ltd., a subsidiary of GMI. However, the permit land tenure rights were subject to numerous company acquisitions (see Section 4.2.1), and currently, the Rea Uranium Project is owned by GMI (75%) and Orano Canada (25%; GoldMining Inc., 2024).

The Rea Property is on the western edge of the Athabasca Basin in northeastern Alberta (Figure 2.1), about 45 km west-southwest of Cluff Lake and approximately 185 km north northwest of the City of Fort McMurray. The permits occur between 57°51′59″ and 58°23′00″N latitude and 110°45′00″ and 110°00′00″W longitude and portions of 1:250,000 scale National Topographic System (NTS) map sheets 74L and 74E.

4.2 Agreements and Royalties

4.2.1 Agreements

GoldMining Inc. (formerly Brazil Resources Inc.) acquired its interest in the Property through Brazil Resources Inc.'s acquisition of Brazilian Gold Corporation (formerly Red Dragon Resources Corp.) in November 2013. Prior to acquisition, Red Dragon Resource Corp. had entered into an option agreement in June 2005 with Stout Investments Ltd., to acquire a 100% undivided interest in all mineral rights (except diamonds) for the Rea Project mineral permits, in exchange for cash and shares.

In March 2006, Red Dragon Resources Corp. entered into an Option Agreement with Uramin Inc. (Uramin), pursuant to which, Uramin had the right to earn up to a 50% working interest in the Rea project by spending US\$5.5 million and making option payments of US\$1.1 million over a three-year period ending March 31, 2009. In August 2007, Uramin became a wholly owned subsidiary of the AREVA group. By March 31, 2009, Uramin had earned a 25% interest in the Rea project. Subsequent revisions to the option agreement provided for Uramin to earn an additional 25% interest in the Project increasing its ownership to 50% by spending an additional CDN\$2,836,616 in exploration costs by December 31, 2013.

Hence, and in reference to the historical Rea Property land tenure, 12 mineral permits changed ownership through the acquisition succession of numerous companies (Red Dragon Resources Corp. to Brazilian Gold Inc. to GMI). Additionally, 4 permits acquired in 2014 transferred ownership from Brazil Resources Inc. to GMI.

On November 18, 2012, AREVA advised Brazilian Gold Corporation that AREVA was not interested in acquiring the additional 25% interest in the Rea Uranium Project. As such, AREVA, and more specifically, Areva Resources Canada Inc., remained vested in the Rea Uranium Project at 25% interest. In January 2018, Areva Resources Canada Inc. changed its name to Orano Canada Inc. (Orano Canada), setting up the current Rea Uranium Project ownership structure (75% GMI, 25% Orano Canada).









Table 4.1 GMI Rea Property permit descriptions. The designated owner of the permits is 1818403 Alberta Ltd. All permits are in good standing as of the effective date of this technical report. Source: Alberta metallic and industrial minerals permit map (https://gis.energy.gov.ab.ca/Geoview/Metallic).

Permit Number	Recording Date	Expiry	Expenditure Due	Area (ha)	Legal Description	Royalty
9304020432	2004-02-11	Indefinite	2026-02-11	4,608	4-03-104 : 19-36	3% GORR, 1% MMR AB
9304020433	2004-02-11	Indefinite	2026-02-11	8,928	4-04-104: 1-24; 25S, L11-L13; 26-34; 35S, NW, L9, L10, L15; 36L4, L9, L15, L16	3% GORR, 1% MMR AB
9304020434	2004-02-11	Indefinite	2026-02-11	6,912	4-05-104: 1-3; 10-15; 22-27; 34-36; 4-05-105: 1-3; 10-15	3% GORR, 1% MMR AB
9304020436	2004-02-11	Indefinite	2026-02-11	9,216	4-03-105: 1-36	3% GORR, 1% MMR AB
9304020437	2004-02-11	Indefinite	2026-02-11	7,888	4-04-105: 1N,SE,L3,L6; 2L3-L5,L16; 3S,NW,L9,L10,L15; 4-8; 9S,NW,L9,L10,L15; 10SW,L2,L16; 11N,SE,L5,L6; 12-14; 15E,L6,L11,L13,L14; 16SW,L2,L12; 17-19; 20S,NW,L10; 21NE,L1,L7,L8,L14; 22-28; 29SW; 30S,NW,L10,L15; 31W,L2,L7,L10,L15; 32L8,L9,L15,L16; 33-36	3% GORR, 1% MMR AB
9304020438	2004-02-11	Indefinite	2026-02-11	6,048	4-05-105: 22-27; 34-36; 4-05-106: 1-3; 10-12; 13S, L12, L13; 14; 15; 22; 23; 26; 27; 34; 35	3% GORR, 1% MMR AB
9304020440	2004-02-11	Indefinite	2026-02-11	9,216	4-03-106: 1-36	3% GORR, 1% MMR AB
9304020441	2004-02-11	Indefinite	2026-02-11	9,088	4-04-106: 1-4; 5N, SE, L3, L6; 6SW, L11-L13; 7L4, L5, L12, L13, L16; 8-16; 17L1, L8, L9, L16; 20-29; 31NE; 32-36; 4-04-107: 1-5; 6L1, L8, L9, L14-L16	3% GORR, 1% MMR AB
9304020442	2004-02-11	Indefinite	2026-02-11	9,216	4-03-107 : 1-36	3% GORR, 1% MMR AB
9304020443	2004-02-11	Indefinite	2026-02-11	9,152	4-04-107: 7E, L3, L6, L11, L14; 8-36; 4-04-108: 1-6	3% GORR, 1% MMR AB
9304020444	2004-02-11	Indefinite	2026-02-11	5,120	4-05-107: 2W; 11W; 13; 14; 23-27; 34-36; 4-05-108: 1-3; 10-15	3% GORR, 1% MMR AB
9304020446	2004-02-11	Indefinite	2026-04-08	3,072	4-04-108: 7-18	3% GORR, 1% MMR AB
9314040234	2014-04-08	Indefinite	2026-04-08	9,216	4-01-105: 1-36	3% GORR, 1% MMR AB
9314040235	2014-04-08	Indefinite	2026-04-08	9,216	4-01-106: 1-36	1% MMR AB
9314040236	2014-04-08	Indefinite	2026-04-08	9,216	4-02-106: 1-36	3% GORR, 1% MMR AB
9314060254	2014-06-18	Indefinite	2026-06-18	9,216	4-02-107: 1-36	West half: 3% GORR, 1% MMR AB East half: 1% MMR AB
			Total	125,328		





4.2.2 Royalties

Government royalty rates associated with any metallic mineral production in Alberta, as administrated by the Department of Energy, are subject to a 1% gross mine-mouth revenue before payout, and after payout, the greater of 1% gross mine-mouth revenue and 12% net revenue. This applies to all GMI permits with royalty listed as 1% MMR AB (see Table 4.1).

In addition, 15 of the 16 claims are subject to a gross overriding revenue royalty (GORR) equal to 3% on mineral production on the claims listed in Table 4.1 and to be paid to Polaris Capital Ltd., the Royalty Holder. This agreement contains a buy-back right, whereby the Company has the option to purchase – by cash payment – from the Royalty Holder, and to require the Royalty Holder to sell to the Company, 1% of the Royalty Holder's royalty, thereby reducing the royalty percentage of the royalty from 3% to 2% for aggregate consideration of CDN\$2 million.

4.3 Surface Rights

Prospecting for Crown minerals using hand tools is permitted throughout Alberta without a licence, permit, or regulatory approval, if there is no surface disturbance. Prospecting on privately owned land or land under lease is permitted without any departmental approval. However, the prospector must obtain consent from the landowner or leaseholder before starting to prospect.

When prospecting, the prospector can use a vehicle on existing roads, trails, and cutlines. If the work is on public land, the prospector can live on the land in a tent, trailer, or other shelter for up to 14 days. For periods longer than 14 days, approval should be obtained from the Land Administration Division. If the land is privately owned or under lease, the prospector must formulate arrangements with the landowner or leaseholder.

There are no privately held surface rights within the Rea Property.

4.4 Maintenance

With respect to exploration regulation, The *Mines and Minerals Act* governs the management and disposition of rights for Crown-owned mines and minerals and is jointly administered by Alberta Energy, Alberta Environment and Parks, and as of March 1, 2024, the Alberta Energy Regulator (AER). The AER assumes responsibility for Part 8 of the *Mines and Minerals Act*, which relates to the exploration for mines and minerals in Alberta.

The Metallic and Industrial Minerals Tenure Regulation (MIMTR) sets out the requirements for obtaining and maintaining tenure agreements (permits, licences, leases) for metallic and industrial minerals. In December of 2022, Alberta Energy made amendments to the MIMTR. These amendments related to the definition and separation of Rock-Hosted Mineral Permits and Brine-Hosted Mineral Licences as well as changes to the fee and renewal guidelines.





Formerly the Metallic and Industrial Minerals Permit, the newly ratified Rock-Hosted Mineral Permit allows for the exclusive right to explore for Alberta-owned rock-hosted metallic and industrial minerals in a specified location. In addition, where the previous permit was only valid for 14 years, the Rock-Hosted Minerals Permit is now valid for an indefinite amount of time subject to the submission and approval of assessment work expenditures every two years. The value of the expenditure work is:

- \$7/ha/year for the first year,
- \$13/ha/year for the second and third years, and
- \$20/ha/year thereafter (Alberta Regulation 265/2022).

An assessment report that documents all the exploration expenditures and work conducted on the Property must be filed within 60 days after the record date after each two-year period. The mineral assessment appointee for a rock-hosted minerals permit may pay in lieu of spending the exploration work amount during the work period.

The GoA has granted GMI several extensions to file assessment reports due to the implementation of Caribou Protection Plan, further outlined in Section 0. In January 2023, GMI was granted a further extension to file an assessment report on the permits under Act (8)(1)(h), in which extensions are issued at the discretion of the Minister, when there are extenuating circumstances and no option for continuation or extension under the Regulation. GMI's next expenditure deadlines are February 11, 2026, April 8, 2026, and June 18, 2026 (Table 4.1), for a total assessment value of approximately CDN\$2.7 million (Information Letter 2021-41 published December 8, 2022).

In Alberta, a Rock-Hosted Minerals Permit can be converted, through application, to a Rock-Hosted Minerals Lease, which grants the exclusive right to develop and mine Alberta-owned rock-hosted metallic and industrial minerals in a specified location. The term of a lease is 15 years, and it may be continued. Annual rent must be paid. Royalties must be paid if any mineral production takes place on the lease.

4.5 Environmental Liabilities, Permitting and Significant Factors

4.5.1 Permitting

The permitting process is governed by the Alberta Energy Regular (AER) and information about the application process is available at: <u>https://www.alberta.ca/minerals-exploration-tool-kit</u>.

A brief outline of the required steps is given below:

- Before any ground disturbance work, including drilling, is conducted, an Exploration Licence and Exploration Permit are required, both of which have been procured by GMI (Table 4.2).
- The exploration licence allows the holder to submit exploration programs to the AER for authorization. i.e., no exploration activity that results in surface disturbance can be carried out until formal authorization called a Metallic and Industrial Minerals Exploration Authorization (MME) has been issued by the AER for each program submitted under the licence. The Company submitted an MME to AER on September 19, 2024, to complete an exploration program to commence on January 1, 2025. As part of the MME process, the Company began proactive engagement with First Nations





at the same time to introduce the project and proposed exploration program. The Company received a consultation adequacy decision from the Aboriginal Consultation Office (ACO) on September 27, 2024, indicating the required engagement was completed. The MME for the exploration program was received from the AER in a letter dated March 27, 2025 (Table 4.2), which outlines the terms and conditions of the approval. The approval expires on April 30, 2026.

- The Company continued follow-up with the First Nations to maintain dialogue and include them in the on-going planning of the Rea exploration program in October and November of 2024. Although the Company has received an adequacy decision from the ACO, the local First Nations have expressed views that would not be supportive of the proposed exploration program. There is no certainty that support for the exploration program will be received by all indigenous groups, however the Company is of the opinion that ongoing engagement and discussion will potentially lead to a workable outcome.
- Additional permits could include:
- Wildlife
- Crown land
- Aquatic buffers
- Timber management/salvation

Licence / Permit	Effective date	Permit holder*	Comment
6284	6-Aug-2014	1818403 Alberta Ltd.	Permission to operate exploration equipment; in effect while 1818403 Alberta Ltd. is operational in Alberta
6285			Permission to explore for metallic and industrial minerals; in effect while 1818403 Alberta Ltd. is operational in Alberta
MME24100 4	27-Mar-2025	1818403 Alberta Ltd.	Approved exploration program

Table 4.2 Permits granted by the Government of Alberta for GMI's Rea Property.

*1818403 Alberta Ltd is a wholly owned subsidiary of GoldMining Inc.

If the program falls within a caribou zone as shown on the provincially approved caribou range map (Figure 4.2), the licensee must have an accepted Caribou Protection Plan (CPP) as required by the Government of Alberta's CPP guidelines and caribou calving information.

Alberta's Land-Use Framework (LUF), released in December 2008, sets out an approach to managing the province's land and natural resources to achieve Alberta's long-term economic, environmental, and social goals. The LUF establishes 7 land-use regions. Within the Rea Project area a land-use region, known as the Lower Athabasca Regional Plan (LARP), took effect on September 1, 2012. The LARP sets the stage for the next 50 years, concentrating on environmental, economic and social actions. The LARP applies to Crown and private lands in the region. The 10-year review of the Lower Athabasca Regional Plan commenced on August 26, 2022. The Lower Athabasca Regional Plan remains in effect, continues to be implemented and provides strategic direction for the region. With respect to mining, the current LARP places emphasis on oil sands development and production.







Figure 4.2 Alberta Government Restrictions in the vicinity of GMI's Rea Property (see Table 4.3).





Uranium in Canada is regulated by the Provincial and Federal governments. Beyond the exploration and environmental assessment phases, the Canadian Nuclear Safety Commission (CNSC) is responsible for regulating and licensing all existing and future uranium mining and milling operations in Canada. The CNSC's work is undertaken in accordance with the comprehensive requirements of the Nuclear Safety and Control Act (S.C. 1997, c. 9) and its related regulations, which reflect Canadian and international safety standards. Further information is available at the Government of Canada's Natural Resources at: https://natural-resources.canada.ca/energy/energy-sources-distribution/uranium-nuclear-energy/uranium-canada/7693

4.5.2 Environmental Conditions

The GoA's Landscape Analysis Tool (LAT) is used to list restrictions in place on a specific Rock-Hosted Mineral Permits in Table 4.3 lists the restrictions in place and Figure 4.2 shows the coverage of each restriction within and adjacent to the Property. Further information on each restriction is discussed in the text that follows.

Restriction Type and Detail	Restriction Name	Type Description	Restriction Applies to the Following GMI Permits
EWD-0022-01	Richardson Caribou sub-unit	Energy withdrawn	All except 9304020446
SHA-0131-01	Caribou range – Zone A (High Risk)	Sensitive habitat area	9304020432-38, 9304020440-41
SHA-0132-01	Caribou range – Zone B (Low Risk)	Sensitive habitat area	9304020434-36, 9304020438, 9304020440-44, 9304020454
ESA-0033-01	Fragile Soils	Environmentally sensitive area, surface access is subject to specific restrictions	All except 9304020438
CLR950298	Crown Land Reservation	Reserved for land management	All
CLR120015	Crown Land Reservation	Reserved for recreation and tourism potential	9304020433-4, 9304020436-8, 9304020440-4

Table 4.3 A summary of environmental restrictions related to the Rea Property.

4.5.2.1 Crown Land Reservations and Parkland

Large parts of the Property are covered by Alberta crown land reservations (CLR) lands. A reservation is not a disposition, does not grant any rights to public land or rights to access or occupy land or rights to the resources on the land or under it. Table 4.3 lists the two CLRs on the Rea Property and they are presented in Figure 4.2.

This designation does not prevent the exploration for, or the exploitation of resources found in these areas. For CLR950298, a notification of work commencement is required. For CLR120015, a letter of consent is required form the forestry department.



In addition, the Maybelle River Wildland Provincial Park (MRWPP) and the Athabasca Dunes Ecological Reserve (ADER) are located west and outside of the Rea Property. The MRWPP and ADER boundaries are shown in Figure 4.2.

4.5.2.2 Woodland Caribou (boreal caribou) Boreal Range.

Woodland caribou are listed as threatened in Schedule 1 of Canada's Species at Risk Act (since 2003) and are red-listed in Alberta. In 2012, the Federal Government of Canada called upon provinces and territories to develop and put in place measures to protect woodland caribou, with aims to establish self-sustaining populations across Canada.

As a response to the Federal Government Caribou initiative, Alberta introduced the Caribou Protection Plan (CPP) in 2013 for limited activities related to mineral exploration. In October 2020, the provincial and federal governments signed the *Agreement for the Conservation and Recovery of the Woodland Caribou in Alberta* under Section 11 of Canada's *Species at Risk Act* (SARA). These agreements aim to stabilize the province's woodland caribou population, by reducing the industrial footprint and impact on the caribou habitat.

Two caribou ranges occur within the Rea Property: Caribou Range A (high risk) and B zones (low risk) as presented in Figure 4.2. The submission of the CPP to Environment and Sustainable Resource Development (ESRD) is a pre-requisite for exploration and construction activities within zones identified. As part of the CPP guidelines, no work can be conducted on the ground between 15 February to 15 July each year. Other factors in place to protect caribou and its habitat include:

- Utilize preexisting access wherever possible to minimize habitat disturbance.
- Timber avoidance techniques for new access roads to reduce the exposure of caribou to predators.
- Limiting topsoil removal for building structures and drill pads and limiting the need for building water sumps.

4.5.3 Significant Factors

With respect to significant factors, as with any early-stage exploration project there exists potential risks and uncertainties. GMI will attempt to reduce risk/uncertainty through effective project management, engaging technical experts, and developing contingency plans.

The GoA, Department of Energy, has recently revised the *Mines and Minerals Act*. Metallic and Industrial Minerals Tenure Regulation (Alberta Regulation 265/2022). Alberta Energy Regulator Directive 091 outlines the life-cycle requirements for developing rock-hosted mineral resources from initiation, construction, operation, and closure.

Beyond the permitting, consultation, and environmental restrictions discussed in Section 4, in consideration of Directive 091, and to the best of the QPs knowledge, there are no other significant risks and uncertainties that could reasonably be expected to affect the company's ability to conduct mineral exploration at the Rea Property.



5 Accessibility, Climate, Local Resources, Infrastructure, and Physiography

5.1 Accessibility

The Property area is in a remote part of northeast Alberta and is accessible year-round by helicopter or fixedwing aircraft and predominantly in winter by the Fort Chipewyan winter road (Figure 5.1). Chartered fixedwing aircraft from Fort McMurray, AB, and Buffalo Narrows, La Loche, and La Ronge, SK, can access the Property using floats during the summer and skis during the winter. Helicopters are available for charter at Fort McMurray, AB, and La Ronge, SK. Fort McMurray, located southwest of the Property, is approximately 45 to 60 minutes by helicopter or fixed-wing flight. Staging areas for reduced flight times can be staged at the former Cluff Lake site and its decommissioned airstrip to the east-northeast or at staging locations along Highway 63.

The winter road to Fort Chipewyan is typically open from January to late March and could provide access for winter drilling programs. Numerous trails from historic drill programs traverse the property along the winter road. An all-season road services the former AREVA's Cluff Lake Mine Site, about 50 km to the east-northeast in Saskatchewan. Food, fuel, and supplies are available at Fort McMurray, AB, or Prince Albert and Meadow Lake, SK. Food, fuel, and limited supplies are available at La Loche and Buffalo Narrows, SK, located to the southeast.

5.2 Site Topography, Elevation and Vegetation

The topography of northern Alberta is characterized by low hills, ridges, drumlins and eskers. Lakes and muskeg are common in the low-lying areas. The geomorphology is dominated by glacial and periglacial unconsolidated sediments that were produced during several ice advances. Outcrops of the Athabasca sandstone and underlying basement rocks are rare. Numerous lakes and ponds generally show a north-easterly elongation imparted by the most recent glaciation. The elevation of the Rea area is approximately 200-500 m above sea level (m asl).

The area is covered by thinly wooded boreal forest. Vegetation consists of jack pine, black spruce, and tamarack with willows and alders in the lower wet areas, while ground cover comprises primarily reindeer lichen and Labrador tea.

5.3 Climate

The Property is within a sub-arctic climate region. Winters are generally extremely cold and dry with temperatures regularly dropping below -30° C, sometimes to -45° C. Lakes start freezing up in early November and ice break-up occurs generally in late April into early May. The cold temperatures allow for development of a sufficient ice thickness to support a drill rig in most winters from mid-January to mid-April. Temperatures in the summer vary widely with yearly maxima of 30° C or more often recorded in late July or early August.



Figure 5.1 Access to and within GoldMining Inc's Rea Property.





Early-stage mineral exploration, like prospecting and geological mapping, can be carried out on the Property in summer from early June to October. Diamond drilling and geophysical surveys can be carried out year-round.

Fort Chipewyan is the closest weather station. Figure 5.2 shows the daily maximum and minimum temperatures throughout the year. Data is the daily average high (red line) and low (blue line) temperature, with 25th to 75th and 10th to 90th percentile bands. The thin dotted lines are the corresponding average perceived temperatures. Figure 5.3 shows the precipitation throughout the year. Graphs are provided from WeatherSpark.com based on publicly available data from Environment Canada.



Figure 5.2 Annual temperature variation at Fort Chipewyan, Alberta. Source: WeatherSpark (2024a).

Figure 5.3 Daily chance of precipitation at Fort Chipewyan, Alberta. Source: WeatherSpark (2024b).





5.4 Local Resources and Infrastructure

The Property has sufficient surface area for the conduct of any envisaged mining and mineral processing operations. There is an adequate availability of water, potential tailings storage areas, potential waste disposal areas, and potential processing plant sites on the Property. There is no power on the property.

Fort McMurray, an urban service centre, is an important economic hub in the area for the oil sands industry. Due to the nature of the oil sands, the area is host to many services that support large-scale mining, such as health services, groceries, and heavy-duty industry supplies. In addition, transport services and infrastructure include highways, freight rail, aviation, and daily, direct flights from Calgary.

Due to the nature of exploration in Fort McMurray, exploration and mining personnel would come from Fort McMurray and the surrounding communities for any envisaged potential mining and mineral processing operations.

Currently, the only producing uranium mines and mills in Canada are in northern Saskatchewan, which is host to numerous high-grade uranium deposits. Professional and technical expertise in the uranium field is available in the neighbouring province.





6 History

This section contains references to adjacent-property uranium prospects, including Orano Canada's Dragon Lake prospect (Maybelle River Project; Sections 6.1, 6.7.4, 6.7.5, 6.8, 6.9.2). The QP has not validated the adjacent property information, and therefore, the information is not necessarily indicative of the mineralization at the Rea Property that is the subject of this technical report. In the text that follows, the QP, to the best of his ability, informs the reader whether the data discussed is related to within-property or adjacent-property information.

6.1 Regional Exploration

From 1976 to 1985, the Athabasca Basin was subject to a uranium exploration boom, utilizing airborne radiometric (scintillometer) surveys (Palmer, 2010). The bulk of the significant uranium discoveries to date are in the Saskatchewan portion of the basin. The western, Alberta, portion of the Athabasca Basin was initially explored in the 1960s as exploration activities expanded outward from the established Beaverlodge uranium district.

The notable Dragon Lake uranium discovery, which is adjacent to, and encompassed by, the Rea Property was discovered in the Alberta portion of the Athabasca Basin in 1988 by a Uranerz Exploration and Mining Limited drill program (Orr, 1989). The Dragon Lake prospect (or Maybelle River Uranium Project) is now part of a joint-venture between Orano Canada Inc. (previously named AREVA), and Cameco Corporation.

The Rea Property surrounds Rock-Hosted Mineral Leases associated with Orano Canada Inc.'s Maybelle River Project, which contains the Dragon Lake prospect. The Rea Property also encompasses the extension of the north-trending Maybelle River Shear Zone (MRSZ), which is associated with the Dragon Lake prospect, as well as numerous other conductors that are oriented parallel to, and oblique to and intersecting, the MRSZ.

Orano Canada and its partners conducted a drill program at the adjacent-property Dragon Lake prospect (Maybelle River Uranium Project) in 2002 that confirmed relatively shallow mineralization with grades up to $40\% U_3O_8$. Mineralogical and geochemical studies by Kupsch (2003) and Wheatley and Cutts (2013) have shown geochemical similarities between uranium mineralization at the Dragon Lake prospect to those associated with uranium deposits in the Saskatchewan portion of the Athabasca Basin.

The following historical exploration information has been compiled from Alberta Mineral Assessment Reports (MR, accessible at: <u>https://content.energy.alberta.ca/minerals/abmarsv2</u>). The MRs were filed with the Alberta Government from the 1970s to present and contain information that pertains to work conducted on the current Rea Property (and in some instances adjacent to it).

Historical work conducted by companies other than GMI in the general Rea Property area is presented in Table 6.1. The extent of the various company exploration properties in comparison to the present-day Rea Property is summarized in the text that follows.



Table 6.1 Historical exploration conducted by company's other than GMI in the Rea Property region.

Year	Company	Work Completed	Mineral Assessment Report number
1976 – 1979	Norcen Energy Resources Ltd	719 lake sediment samples1 rock sample2 DDHs totalling 436.4 m	MAR 19760008 MAR 19770010
1976 – 1979	Eldorado Nuclear Ltd	 1012 soil samples 1600 lake, pond, and stream sediment or water Airborne radiometric survey 24 line-km Resistivity survey 	MAR 19760005 MAR 19770004 MAR 19790004
1976	Mattagami Lake Mines	103 lake sediment samplesRadon studyHammer seismic survey	MAR 19760009
1977	Chevron Standard	• 4 DDHs totalling 928.98 m	AGS SPE-061
1984 – 1990	Uranerz Exploration and Mining Ltd	 450 lake sediment samples 29 DDHs totalling 7,852 m Ground survey including: HLEM, TDEM, FLTEM 	MAR 19860002 MAR 19880002 MAR 19890003 MAR 19900003
1993	Geological Survey Canada	• 96 lake sediments	GSC OFS 2856
2005 – 2013	Red Dragon Resources Corp / Brazilian Gold Corp	 346 soil samples 8 DDHs totalling 1,918.06 m Airborne VTEM survey Airborne Gravity survey 14.3 line-km IP survey 	MAR 20060002 MAR 20080006 MAR 20100007 MAR 20120001

6.1.1 Norcen Energy Resources Limited (1976–1979)

In 1976, Norcen – on behalf of the uranium joint venture with Campbell Chibougamau Mines Limited, E&B Explorations Limited, and Ontario Hydro – acquired two blocks of mineral permits. The Richardson Permits totalled approximately 93,000 ha to the west the current Rea Property (1976 Quartz Mineral Exploration Permit numbers: 6876120002 to 6876120006); and the Archer permits covered an area of approximately 72,500 ha (1976 Quartz Mineral Exploration Permit numbers: 208 to 211; McWilliams, 1977) covering most of the present-day Rea Property.

During the summer of 1976, Norcen conducted a combined prospecting, surficial, and lake bottom geochemical study over the Archer permits. Norcen concluded that the margin of the Athabasca Formation was located further to the west than indicated on the geological maps published by the Research Council of Alberta. A 1977 drilling campaign showed that the depth to the unconformity exceeded 150 m. Geochemical and geophysical tools at that time would be unable to detect uranium mineralization at this depth. Thus, Norcen recommended that no further work be conducted over the Archer permits, and the permits were terminated.



6.1.2 Eldorado Nuclear Ltd. (1974-1979)

In 1974, Eldorado Nuclear Ltd. (Eldorado) began exploring the area, which is now partially covered by the southern extent of the Rea Property. Eldorado's Northern Permits, (1976 Quartz Mineral Exploration Permit 185-187) overlap with the current Rea Property permits 9304020432-3 and 9304020436-41. During 1975 to 1975, Eldorado conducted exploration including prospecting between the Maybelle and Richardson rivers. Due to poor results from geochemical surveys and drilling, a lack of uriniferous boulders and outcrops, the large thickness of overburden, and the number and complexity of glacial deposits, the claims were relinquished (Laanela, 1977b, 1978).

In 1976, Eldorado obtained permits for their Project 508 (1976 Quartz Mineral Exploration Permit 207 and 214-218), what is now south of the current Rea Property. After winter drilling in 1979, Eldorado ceased exploration activities on portions of Project 508, having concluded that expensive exploration methods were required to evaluate the area given the complexity of the thick Devonian sediment cover (Fortuna, 1979).

6.1.3 Mattagami Lake Mines Ltd. (1976)

Mattagami Lake Mines (Mattagami) optioned the Agar Lake Permit area for one year from C. and E. Explorations Calgary. The Agar Lake Permit (1976 Quartz Mineral Exploration Permit 224) covers the current Rea permits 9314040235-6. During 1976, Mattagami collected lake water and lake sediment samples, and conducted a track etch survey and soil radon gas analysis. Due to the lack of outcrop and the lack of positive results from the surveys, Mattagami did not retain the option (Mercer, 1976).

6.1.4 Chevron Standard (1977)

In 1977, Chevron Standard owned permits (1977 Quartz Mineral Exploration Permit 224 and 234) in the Bowen and Agar lakes area, on what is now equated to GMI permits 9314040235-6 on the Rea Property. The permits were discussed in a 1977 Assessment Report of the Norcen Property (McWilliam, 1977); however, no further information can be found except for the location of four drillholes (77-1 to 77-4); these holes were discussed in Ramaekers (2003) publication on the Early Proterozoic Athabasca Group in northeastern Alberta.

6.1.5 Uranerz Exploration and Mining Ltd. (1984–1998)

Uranerz Exploration and Mining Limited (Uranerz) was historically one the most active companies in the Athabasca Basin during the 1970's to 1980's uranium exploration boom. The Uranerz project area covers most of the present-day Rea Property. Uranerz completed an extensive geochemical sampling program including soil, stream, and lake sediment sampling, boulder sampling, extensive regional-scale and local geophysical programs, and 6,296 m of diamond drilling.

In 1998, Cameco acquired a 100% interest in Uranerz, and as a result acquired a 100% interest in the Maybelle River Property. Cameco subsequently sold a portion of its interest in the Maybelle Property to Orano and Japan-Canada Uranium (JCU).



6.1.6 Red Dragon Resources Corp./Brazilian Gold Corporation (2005–2013)

Red Dragon Resources Corp. (Red Dragon, renamed Brazilian Gold Corporation in 2010) optioned the Property from Stout Investments Ltd. in 2005. In 2013, Brazilian Gold Corporation was acquired by Brazil Resources Inc. (now GMI), who released a NI 43-101 technical report in 2014 (Annesley and Eccles, 2014). This report is superseded and replaced by this current technical report.

The property comprised 191,151 ha that extended further north and south of the current Rea Property. Red Dragon conducted extensive geophysical surveys including airborne and ground surveys, which led to an eight-hole drill program in 2007 that tested six airborne EM anomalies. These surveys gave a better understanding of the regional basement geology and structures and led to the identification of 24 targets for follow-up exploration work. Red Dragon released a technical report in 2006 (Dufresne and Maynes, 2006).

6.2 Soil Geochemical Surveys

The Rea Property surficial geology consists of Quaternary sedimentary material that includes glacial till and glaciofluvial deposits. The historical exploration companies generally noted that the thick vegetation and sandy ground cover in the vicinity of the Rea Property is detrimental to ground geochemical programs and in the collection of quality soil samples. Eldorado and Red Dragon completed historical soil geochemical surveys in the Rea Property area as summarized in Table 6.1, Figure 6.1, and the text that follows.

6.2.1 Eldorado Nuclear Ltd.

Exploration work conducted by Eldorado is documented in Mineral Assessment Report (MAR) 19760005 (Moreau and Lannela, 1976). In 1975, Eldorado conducted a soil sampling program whereby they collected 1,012 soil samples on their northern permits, on the current Rea Property. The soil grid was 200 m by 400-800 m and targeted the A-horizon. The values returned ranged from 2 to 2.2 ppm U (mean and median of 0.2 ppm U). No anomalous values were found. Results are presented in Figure 6.1.

6.2.2 Red Dragon Resources Corp.

Exploration work conducted by Red Dragon Resources is documented in MAR 2008006 (Vivian and Strate, 2007). Because Red Dragon is associated with the succession of the Issuer's mineral tenure rights to the Rea Property, (see Section 4.2.1), the Red Dragon geochemical soil program results are discussed in Section 9.4.

Red Dragon carried out a geochemical soil sampling program in May of 2006. The survey collected 346 samples from GPS located sites; however, poor sampling medium and difficulty in locating good representative samples directed this program to be cut short. Only 4 samples collected yielded 1 ppm U or above, and the maximum value obtained was 3.3 ppm U. Results are presented in Figure 6.1.





Figure 6.1 Historical soil and lake and stream sediment uranium-focused geochemical sampling programs within, and adjacent to, the Rea Property.





6.3 Lake and Stream Water and Sediment Geochemical Surveys

Lake and stream sediments analyses have been common practise in northeastern Alberta. However, anomalous values derived from lake sediment geochemical surveys have yet to correspond with uranium mineralization located at depth by diamond drill testing. Currently, the source of the uranium enrichment in the lake sediment is unclear. Norcen, Mattagami, Uranerz, and the Geological Survey of Canada completed historical lake and stream water and sediment geochemical surveys in the Rea Property area as summarized in Table 6.1, Figure 6.1, and the text that follows.

6.3.1 Norcen Energy Limited

Exploration work conducted by Norcen is documented in MAR 19760008 (Williams and Sawyer, 1976). In 1976, Norcen conducted lake-bottom sediment sample analysis on their Archer Permits using a Hornbrook sampler: a torpedo-shaped with a ball valve that traps silty or jelly-like ooze. Samples were collected at an average density of one sample per 2.6 square kilometres; however, lakes to the north had sand or gravel bottoms and the sample retrieval rate was much lower.

In locations where the lake was marshy and had thick organic matter, samples were collected by hand auger were possible. Sample notes included location, water colour, sample colour, depth of lake at sample site, pH, and any unusual features (e.g., organic material). Results of the initial survey indicated several weak to moderate anomalies and two anomalous lakes. These lakes had follow-up sampling in the lake and scintillometer readings on the ground surrounding the lakes.

Eight lakes were sampled for a total of 719 samples. The results from this study were a low background with moderate to weak anomalies. Uranium concentrations ranged from 0 to 18 ppm U (mean of 1.6 ppm U). The authors suggest that the weak anomalies reflect local changes in the bedrock and/or the surrounding overburden. These results have not been digitized nor included in this report.

6.3.2 Mattagami Lake Mines

Exploration work conducted by Mattagami is documented in MAR 19760009 (Mercer, 1976). In 1976, Mattagami Lake Mines conducted lake water and sediment sampling around Agar Lake. The survey covered approximately 775 square kilometres with a sample density of one sample per 2.1 km. Water and sediment were collected simultaneously. Lake sediments for lakes deeper than 3 m were sampled with a GSC-designed tube samples. For shallower lakes, a jaw sampler was used. Small lakes were sampled in the centre and large lakes at the bays. The following parameters were noted: lake surface, type of vegetation, type of lake, relief around the lake, colour of water, amount of suspended organic matter in water, depth at which sediment samples were collected, and any possible contamination. The samples, once collected, were measured for pH before being acidified and transport to the lab for analysis.

The uranium content of the 103 sediment samples was low (mean 0.41 ppm U). There were two slightly anomalous values of 5 ppm and 4 ppm U. All water samples yielded below the detection limit of detection (0.1 ppb U). These results have not been digitized nor included in this report.





6.3.3 Eldorado Nuclear Ltd.

Exploration work conducted by Eldorado is documented in MAR 19760005 (Moreau and Lannela, 1976) and MAR 19770004 (Laanela, 1977). In 1975 and 1976, Eldorado sampled approximately 1,600 sites for lake, pond, and stream sediment or water, both within and outside of their permit area. The water samples are generally at background levels (mean of 0.04 ppb U) with about 0.65% of the samples being anomalous (mean of 0.40 ppb U). Sediment samples range from 0 to 13 ppm U (mean and median of 0.8 and 0.6 ppm U, respectively). In general, stream sediments were on an order of magnitude lower than the lake sediments. On a larger scale, all the significant multi-sample water anomalies occurred in the south, off the Rea Property, and along the Richardson River to the north, off the Rea Property. However, these water anomalies do not correspond with any sediment anomalies. Results are presented in Figure 6.1.

6.3.4 Uranerz Exploration and Mining

Exploration work conducted by Uranerz is documented in MAR 19860002 (Orr, 1986), MAR 19890003 (Orr, 1989), and MAR 19900003 (Orr and Lacey, 1991). In 1985, Uranerz conducted lake sediment geochemistry on their Permits 6884100001 and 6884120001, on what is now the southwest of the Rea Property. A total of 210 samples were collected and range from 0.2 to 4.6 ppm U, with a mean 0.8 ppm U, and median of 0.5 ppm U. The background level was set to 0.5 ppm U. The data have a reasonable correlation with the 1975 and 1976 Eldorado surveys. For example, both surveys have anomalous zones around Maybelle River. These results have not been digitized nor included in this report.

In 1987, additional lake sediment sampling was conducted on permits 688605002-6, on what is the central region of the current Rea Property. A total of 330 samples were collected. The results didn't warrant further follow-up work. These results have not been digitized nor included in this report.

In 1988, follow-up lake sediment sampling was conducted around Brander Lake, northeast and adjacent to the current Rea Property. A review of the lake sediment samples was conducted by Grasswood Geoscience in Saskatoon to determine the origin of the so-called moraine lake sediment anomalies west and southwest of Brander Lake. An important finding was that the surficial material geochemical values does not provide an obvious explanation for the lake sediment anomalies.

6.3.5 Geological Survey Canada

In 1994, the Geological Survey of Canada released a report on the regional lake sediment and water geochemical reconnaissance data for northeastern Alberta (Friske et al., 1994). The study was conducted in the summer of 1993 as part of a Canada-Alberta Agreement on Mineral Development. The report includes 1,080 lake sediment analyses over 22,100 km² of northeastern Alberta. Samples were collected on average of one sample for 19 km² using a helicopter to reach the sites. Collected samples were dried and analysed by Instrumental Neutron Activation Analysis (INAA) and Atomic Absorption Spectroscopy (AAS) to obtain a suite of elements for mineral exploration. AAS is a 'wet chemistry' method and as such, can produce partial extraction for specific metal elements. INAA produces 'total' data and is included in Figure 6.1.

Water samples were also collected, and uranium was determined by laser-induced fluorometric methods and a Scintrex UA-3 uranium analyser. Results of the water sampling were low and are not included in this report.



6.4 Rock and Chip Geochemical Surveys

Due to limited surface outcrop, there have been no bedrock and very few erratic boulder samples collected in the Rea Property area (Table 6.1).

6.4.1 Norcen Energy Limited

Exploration work conducted by Norcen is documented in MAR 19760008 (Williams and Sawyer, 1976). In 1976, Norcen found one radioactive boulder consisting of a pebble conglomerate approximately 11 km east of Archer Lake in a crevasse filling. Assays ranged from 4.49 to 5.26 ppm U. In addition, radioactive granite boulders were found in clusters at the end of moraine ridges and hills, east of the Keane fire tower (McWilliams and Sawyer, 1976).

6.4.2 Eldorado Nuclear Ltd.

Exploration work conducted by Eldorado is documented in MAR 19760005 (Moreau and Lannela, 1976). Eldorado found no bedrock outcropping during their 1976 survey of the 185-187 permits, which is within the current Rea Property. However, they found boulders of mainly sandstone, which were abundant and angular.

6.5 Radon Gas Detector Surveys

In 1975, Mattagami Lake Mines conducted two types of radon survey on their Agar Lake permits (Mercer, 1976). Radon (Rn) is an intermediate decay product of uranium decay to lead (Pb).

6.5.1 Track Etch

This method utilises small alpha-particle-track detectors to measure radon gas emitted by uranium ore bodies. Its purpose is to detect deeply buried mineralised bodies, too deep to be measured by airborne scintillometer.

For the survey, 93 plastic cups were placed downwards in a hole of approximately one metre. The plastic cups have a radon-sensitive film that is effectively etched by radon gas. Collection time is approximately 3 weeks, but results are normalised to a 30-day interval.

The survey conducted by Eldorado yielded a low percentage of anomalous values and generally low uranium mineralization potential. In areas that were slightly above background – generally characterized by broad and diffuse uranium profiles – the data were interpreted to indicate areas in which granitic basement occurs closer to the surface than in the rest of the permit area.

6.5.2 Radon Emanometer Survey

Radon emanometry measures the alpha activity of gases due to the radioactivity of radon in soil, gas, or dissolved in water. It is most suited for areas covered by thick overburden. A soil probe is placed in an


augured hole and the gas is allowed to make its way to the emanometer, which is bombarded by alpha particles produced by the radon and a detector effectively counts these particles. Approximately 30 to 80 samples can be collected in a day.

The results of the radon emanometer survey in the Agar Lake area show a mean count rate of 3.6 counts per minute with a standard deviation of 3.2 counts per minute. Only two results exceed three standard deviations from the mean. However, these two high counts show no geographical clustering and represent only 1.1% of the total amount of data. In addition, the high radon and high Track Etch results have no distinguishable correlation.

6.6 Within-Property Historical Drill Programs

This section pertains to historical diamond drilling conducted within the boundaries of the Rea Property. The following Section 6.8 discusses adjacent-property drilling. The location of the within-Property, and adjacent-Property, drillholes is presented in Figure 6.2. The historical drillhole collar locations and descriptions are presented in Table 6.2.

6.6.1 Norcen Energy Limited

Diamond drilling conducted by Norcen is documented in MAR 19770010 (Williams, 1977). In 1977, Norcen conducted a stratigraphic-based drill program over its permits. Eight BQ holes were drilled for a total of 1,221.7 m (Figure 6.2, Table 6.2). Two of the eight holes were drilled within the current Rea Property:

- R5 (AGS hole ID FC-014) was drilled on northwest (current permit 9304020444) and was terminated in Athabasca sandstone at a depth of 252.2 m.
- Hole R7 (AGS hole ID FC-016) was drilled in the northeast (current permit 9314060254) to target a lake sediment anomaly of 18 ppm U. It was terminated in Athabasca sandstone at a depth of 184.2 m without reaching the unconformity.

Based on previous geophysical surveying, Norcen objectively estimated a maximum depth to the uranium body at 152 m. These two drillholes, which both reached more than 152 m, did not intersect any uranium mineralization. Hence Williams (1977) concluded that the surface anomaly targets by hole R7 is not due to local mineralization but to uranium in the glacial overburden originating from Saskatchewan.

6.6.2 Eldorado Nuclear Ltd

Diamond drilling conducted by Eldorado is documented in MAR 19770004 (Laanela, 1977) and MAR 19780005 (Laanela, 1978). Eldorado, which had permits that covered much of the southern portion of the current Rea Property, drilled 16 holes between 1976 to 1978 (Figure 6.2, Table 6.2). Three of these were drilled directly on the current Rea property with disappointing uranium results, although several of the drillholes did not intersect the contact between the Athabasca Basin sedimentary rocks and the underlying crystalline basement.





Figure 6.2 Historical drilling summary, by company, with differentiation between within-Property (coloured symbols) and adjacent-property (grey symbols) drillholes.





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Table 6.2 Drill collar locations and drillhole descriptions for historic drilling conducted within the Rea Property.

Company	Year Drilled	Hole ID	Easting** NAD83Z12	Northing** NAD83Z12	Azimuth	Dip	Collar Elevation (m)	Depth (m)	Overburden Thickness (m)	Intersected Athabasca Group
Chevron	1977	77-1	548522	6453799	0	-90	329	175.86	11.89	Y
Chevron	1977	77-2	553696	6454649	0	-90	335	261.2	25.3	Y
Chevron	1977	77-3	557247	6447249	0	-90	341	245.96	6	Y
Chevron	1977	77-4	541522	6449548	0	-90	332	245.96	16.15	Y
Eldorado	1977	508-08	526592	6437629	0	-90	316*	56.99	13.72	N
Eldorado	1977	508-11	515793	6431673	0	-90	305*	68.27	38.27	N
Eldorado	1978	508-19	522112	6432323	0	-90	320	214.6	15.8	Y
Norcen	1977	R5	517853	6464345	0	-88	390	252.2	35.1	Y
Norcen	1977	R7	543846	6464499	0	-90	305	184.2	47.6	Y
Uranerz	1986	MR-01	516097	6442561	45	-60	302	167	33.5	Y
Uranerz	1986	MR-02	518239	6442920	45	-60	305	180.5	33.5	N
Uranerz	1986	MR-03	518870	6443553	45	-60	305	191	36.7	Y
Uranerz	1986	MR-05	517483	6443866	45	-60	310	188	50	N
Uranerz	1986	MR-06	516097	6442561	45	-60	300	191	36.7	Y
Uranerz	1986	MR-07	515560	6445926	45	-60	290	185	38	Y
Uranerz	1986	MR-08	514887	6446987	45	-60	308	197	35	Y
Uranerz	1986	MR-09	515562	6447588	45	-60	308	172.5	34.7	Y
Uranerz	1986	MR-11	514638	6448929	45	-60	315	209	47.3	Y
Uranerz	1986	MR-12	514984	6447090	0	-90	312	197	32	Y
Uranerz	1986	MR-13	516343	6445042	45	-60	292	164	35	Y
Uranerz	1986	MR-14	517561	6445109	45	-65	305	185	62.6	Y
Uranerz	1986	MR-15	519352	6442910	45	-60	300	192	39.7	Y
Uranerz	1986	MR-16	519111	6442122	45	-60	305	170	50	Ν
Uranerz	1986	MR-17	521231	6439749	45	-60	303	186	36.5	Ν



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Company	Year Drilled	Hole ID	Easting** NAD83Z12	Northing** NAD83Z12	Azimuth	Dip	Collar Elevation (m)	Depth (m)	Overburden Thickness (m)	Intersected Athabasca Group
Uranerz	1986	MR-18	516526	6443094	0	-90	303	182	33.7	Y
Uranerz	1987	MR-23	523250	6444480	0	-90	320	166.8	40	Y
Uranerz	1987	MR-28	519866	6448823	270	-65	310	251	30.6	Y
Uranerz	1988	MR-38	518146	6461008	270	-62	302	440	45.9	Y
Uranerz	1989	MR-65	538272	6438523	0	-90	347	514	15	Y
Uranerz	1989	MR-66	535032	6443429	0	-90	350	449	18.2	Y
Uranerz	1989	MR-68	517972	6462620	262	-60	308	474.6	75.5	Y
Uranerz	1989	MR-69	517804	6461749	262	-60	308	499	57	Y
Uranerz	1989	MR-72	518207	6461026	262	-62	308	460.1	45.7	Y
Uranerz	1990	MR-78	522953	6444193	229	-60	315	83	28.9	Y
Uranerz	1990	MR-84	517858	6460965	0	-90	297	389	39.7	Y
Uranerz	1990	MT-01	516755	6466518	0	-90	293	419.7	62	Y
Uranerz	1997	MR-89	518017	6460831	0	-90	302*	371.8	25.1	Y
Uranerz	1997	MR-90	517964	6461040	0	-90	303*	377	37	Y
Red Dragon	2007	R010107	519207	6450669	0	-90	301	192.94	18.1	Y
Red Dragon	2007	R040107	522615	6449502	0	-90	322	247.8	13.8	Y
Red Dragon	2007	R070107	526950	6437750	0	-90	332	233.73	32.61	Y
Red Dragon	2007	R070207	526110	6437750	0	-90	326	277.07	10.5	Y
Red Dragon	2007	R110107	529900	6438000	0	-90	336	330.1	21.84	Y
Red Dragon	2007	R120107	515086	6448125	0	-90	302	202.08	39.6	Y
Red Dragon	2007	R130107	516419	6447337	0	-90	303	213.97	34	Y
Red Dragon	2007	R130207	516508	6446924	0	-90	302	220.37	29.57	Y

* Estimated collar elevation

** Recalculated to UTM Zone 12 NAD83





Drillhole 508-08, totaling 57 m, was drilled in the southeast corner of permit 9304020437 and was abandoned due to poor drilling conditions. Drillhole 508-11 was drilled to 68.3 m in the southwestern portion of permit 9304020434 and was abandoned due to a shortage of casing. Drillhole 508-19 was drilled to 214.6 m.

No high radioactivity or uranium mineralization was encountered in the 1977 drillholes. Drilling showed that their northern permits were overlain by deep overburden (13 to 37 m thick) and excessively thick Palaeozoic and Proterozoic sediments.

6.6.3 Chevron

In 1977, Chevon completed four drillholes on the western side of the current Rea Property (current permits of 9314040234-6, Figure 6.2, Table 6.2). Assessment Report data is not available for these drillholes. The collar location and drilling details are documented in Ramaekers (2003).

6.6.4 Uranerz Exploration and Mining Ltd.

Diamond drilling conducted by Uranerz is documented in MAR 19860002 (Orr, 1986) and MAR 19900003 (Orr and Lacey, 1990). Between 1986 and 1997, Uranerz drilled 94 NQ-sized diamond drillholes in the vicinity of the Rea Property, with 29 of those holes (31%) located within the Rea Property on permits 9304020434, 9304020436-8, and 9304020444 (Figure 6.2, Table 6.2). The remainder of the drillholes were drilled on adjacent-property areas including Orano's Maybelle River Project (61 drillholes), which is encompassed by the Rea Property, and to the west and northwest of the property (4 drillholes). In total, the holes ranged in depth from 164 to 260 m.

The drilling concentrated in the southwest and target the geophysical anomalies noted as conductors in a northwest-southeast trend. Drilling on the southern trend – in what is now termed by GMI the Net Lake corridor – targeted three conductors: C1, C2, and C4.

- Conductor C1 MR-01, MR-06
- Conductor C2 MR-02, MR-05, MR-07, MR-08, MR-12, MR-13, MR-16, MR-17
- Conductor C4 MR-03, MR-09, MR-11, MR-14, MR-15

Historical drilling along the Net Lake corridor is wide spaced. Interpretation of the drill results implies minimal evidence of tectonic reactivation and that most of the EM conductors were due to weakly graphitic almost flat-lying meta-sedimentary rocks. Conductor C2 was drilled with a total of nine drillholes (eight within the Rea Property) to test a northwesterly trending conductor that extends for approximately 12 km. Conductor C1 yielded significant geochemical anomalies. Highlights include:

- MR-01: a narrow zone of anomalous radioactivity returned 43 ppm U, and a sandstone sample yielded 44 ppm U.
- MR-06: unsuccessful in intersecting the target but intersected trace amounts of graphite; maximum of 27 ppm U.
- MR-08 up to 48 ppm U, 766 ppm Ni, 328 ppm Zn, and 689 ppm V
- MR-13 up to 17 ppm U, 672 ppm Ni, and 601 ppm V





Drilling on the northwestern area was to test what is now termed by GMI as the Maybelle River corridor. Drillholes MR-68, MR-69, MR-72, and MR-84, totaling 1,822.7 m, were drilled on the northeastern portion of permit 9304020444 along the northern extension of Maybelle River corridor.

In comparison to the Net Lake corridor, the Maybelle River corridor consists of a strongly reactivated subvertical graphitic conductive system and hosts the only known mineralized zone in the area (adjacentproperty Dragon Lake prospect). In addition to the anomalous geochemistry, these holes intersected clay alteration, breccia zones, and dravite: features associated with unconformity uranium deposits elsewhere in the Athabasca Basin. Highlights include:

- MR-68 yielded several positive lithogeochemical indications within the Manitou Falls formation with up to 1.4 ppm bismuth (Bi) and 3.1 ppm U and beneath the unconformity; and a 1-m sample of basement yielded 35 ppm U as well as 160 ppm Ni, 9.6 ppm Bi, and 23 ppm Pb. The down hole log yielded a minor radiometric peak of 100 cps.
- MR-69 yielded several minor radiometric anomalies ranging from 100 to 400 cps with values of up to 87 ppm total U over 1 m, and up to 184 ppm Ni.
- MR-72 yielded no significant geochemical anomalies; however, a radiometric peak of 120 cps occurs within the Upper Manitou Falls sandstone.
- MR-84 yielded no significant radiometric or geochemical anomalies.

Apart from the Net Lake and Maybelle River corridors, other significant geochemical anomalies were identified in several of the Uranerz drillholes. Highlights include:

- MR-66 (permit 9304020436) intersected 87 ppm U over 1 m, targeting an EM conductor parallel to the Maybelle River corridor and referred to as the Keane Lake corridor by GMI.
- MT-01 although no anomalous radiometric intervals were intersected, the basement is like that observed at Orano Canada's adjacent-property Dragon Lake prospect (or Maybelle River Project) and may be a continuation of the Maybelle River corridor on the northern part of the Rea Property.

Uranerz conducted analyses on a selection of drill core from their entire property, including lithogeochemistry and X-ray diffraction (XRD) of clay minerals to assist in the identification of alteration halos (Orr and Robertshaw, 1989). Core samples were also sent to Vancouver Petrographics in Vancouver and SRC in Saskatoon for the preparation of thin sections and polished slabs. Petrographic analysis was performed in the respective offices using a petrographic microscope equipped with both transmitted and reflected light. The major results of the petrographic analysis are documented in Orr (1986, 1989), Orr and Lacey (1990), and Shi and Annesley (1997), among others.

Lithogeochemical results from Orano Canada's adjacent-property Dragon Lake prospect drill core identified graphitic basement rocks with high-grade uranium mineralization. Where mineralization was not encountered in drill core (both within- and adjacent-to the Property), the lithogeochemical and XRD results identified clay alteration and pathfinder elements commonly associated with uranium mineralization.

6.6.5 Red Dragon Resources Corp.

Diamond drilling conducted by Red Dragon is documented in MAR 20080006 (Vivian and Strate, 2007). Because Red Dragon is associated with the succession of the Issuer's mineral tenure rights to the Rea



Property, (see Section 4.2.1), the Red Dragon drill results are discussed in Section 10 and the Red Dragon sample collection, analysis, and quality assurance-quality control (QA-QC) work is discussed in Section 11 of this technical report.

Eight diamond drillholes totaling 1,918 m (1,908 m in Vivian and Strate, 2007) were drilled and a total of 296 half split core samples were collected either for assay or whole rock geochemical analysis. Select conclusions of the drill program from Vivian and Strate (2007) include, 1) the unconformity contact was intersected in every drillhole, 2) there were no economic concentrations of uranium documented but there were anomalous uranium values, 3) the best uranium values (up to 54 ppm U) were documented within the regolith, basement and/or the basal portion of the Fair Point Formation (usually conglomerate), and 4) no obvious structures were intersected; possibly a reflection of drilling vertical drillholes.

6.7 Adjacent-Property Historical Drill Programs

This section describes historical drillhole results from holes that were drilled on adjacent-property permits. The QP has not validated the adjacent property information and therefore the information is not necessarily indicative of the mineralization on the Rea Property that is the subject of this technical report. The information is included due to the similarities of the horizons intersected and comprise information on the depth to the unconformity and the crystalline basement. Adjacent-property drillhole symbols are coloured grey in Figure 6.2.

Observations from the drill programs include:

- To the south of the Rea Property, 1976 to 1978 drilling by Eldorado was successful in finding the edge of the Athabasca Formation, which is marked by the unconformity between the Athabasca Sandstone and Precambrian basement. These results showed that it lies between the Maybelle and Richardson rivers (Laanela, 1977, 1978).
- To the northwest of the Property, BP Minerals Limited completed diamond drilling 3 to 7 km to the west of the Rea Property. Three BQ holes were drilled for a total of 805 m. Only one drillhole (kDH 78-3) intersected the unconformity at a depth of 259 m. In this region, the basement is composed of garnet bearing granitic gneiss and augen gneiss (Bradley, 1978).
- Drilling the Maybelle River EM Trend by Uranerz and Areva (now Orano Canada) resulted in the discovery of Orano Canada's adjacent-property Dragon Lake prospect (or Maybelle River Project). High-grade uranium intersections include 17% U₃O₈ across a 2 m of measured core length in drillhole MR-34 and 21% U₃O₈ across a 5 m measured core length intersection in drillhole MR-39 (Orr et al., 1989). Leases associated with the adjacent-property Dragon Lake prospect are encompassed within the Rea Project.

6.8 Airborne Geophysical Surveys

Geophysical methods have been used extensively within the Rea Property and the surrounding area. The location and spatial extent of 2005 to 2016 radiometric, electromagnetic, and gravity historical geophysical survey programs is presented in Figure 6.3 and discussed in the text that follows.







Figure 6.3 Summary of modern geophysical surveys conducted within and adjacent to the Rea Property.





6.8.1 Radiometric

Radiometric geophysical survey work conducted by Eldorado is documented in MAR 19760005 (Moreau and Lannela, 1976). In 1975, Eldorado flew a helicopter-borne radiometric survey over, and to the northeast of, their permit area. No anomalous radioactivity was recorded.

6.8.2 Electromagnetics

Electromagnetic geophysical survey work conducted by Red Dragon Resources is documented in MAR 20060002 (Lo, 2006). In 2005, Geotech Ltd. flew a high-resolution heliborne electromagnetic and magnetometer (VTEM) survey on behalf of Red Dragon Resources Corp. The project was completed between August 25 to October 20, 2005, and consisted of 5,542 line-kilometres flown at 400 m line-spacing, with an estimated depth of investigation of 400 m. The objective of the survey was to target bedrock conductors (graphitic horizons) and fault zones.

Over a sample area of 2,185.4 km², numerous basement-related magnetic anomalies and EM conductors were identified with fifteen key target areas that warrant further exploration (Figure 6.4). The survey detected and traced the conductors associated with Orano Canada's adjacent-property Dragon Lake prospect, outlined long magnetic lineaments indicative of large faults or shears in the basement, and identified several long trends that are likely related to graphitic basement (Lo, 2006). Hence, the results are encouraging for unconformity uranium deposits. In addition, the northern and southern ends of the prospective MRSZ – as outlined by the airborne geophysics – occur within the current outline of the Rea Property.

6.8.3 Gravity

Gravity geophysical survey work conducted over the area surrounding the Maybelle trend by Red Dragon Resources is documented in MAR 20120001 (Carroll and Morales, 2011). In 2009, ARKeX Ltd. conducted an airborne Full Tensor Gravity Gradiometry (FTG) survey, in addition to magnetic and LiDAR DTM, and video data acquisition. A total of 4,352 line-kilometres were flown (including tie-lines), comprising 3,800 km of north-south oriented survey lines (300 m spacing) and 552 km of east-west oriented tie lines (2,000 m spacing). The nominal flying height was 185 m.

Interpretation of the data by Arkex included cluster analysis of the various available geophysical datasets and resulted in:

- Development of a comprehensive regional geological structure map.
- Delineation of 24 targets areas ranked by geophysical signature and correlation with known geology.
- Confirmation that the basement topography currently used by AREVA is a reasonably close approximation to the actual basement surface (Carroll and Morales, 2011).

The recommendations for follow up work include compiling all the 24 target areas with existing surface geochemistry and geophysics to prioritize the most prospective areas for follow-up exploration. Additional ground-based geophysics over some of the target areas will likely be required to establish firm drill targets.







Figure 6.4 Location of VTEM anomalies and EM conductors within and adjacent to the Rea Property.



6.9 Ground Geophysical Surveys

Historical ground-based geophysical surveys included seismic, induced polarization (IP), and electromagnetic (EM) surveys. The survey work is described in the text that follows.

6.9.1 Seismic Survey

Mattagami Lake Mines conducted a hammer seismic survey in 1976 with a HUNTEC FS-3 (MAR 19760009; Mercer, 1976). The refraction technique can determine interfaces of depths of approximately 90 m, whereas the reflection mode theoretically enables depth of approximately 300 m. The reflection mode on the Agar Lake Property was unsuccessful. Refraction indicated the Athabasca-basement contact at 40 to 90 m, but necessitated hammer points approximate 300 m away from the geophones, making the operations difficult. No targets for uranium mineralization were interpreted from the survey data (Mercer, 1976).

6.9.2 Induced Polarization

Exploration work conducted by Red Dragon Resources is documented in MAR 2008006 (Vivian and Strate, 2007). In 2006, Red Dragon carried out an IP survey, contracted to Aurora Geosciences. Rather than using a traditional grid consisting of evenly spaced cut lines, the survey followed individual reconnaissance lines sited with a NDGPS receiver. Stations were placed using the fixed length receiving array as a chain and marked with flagging. The program was completed between June 10 to July 1, 2006, and consisted of 14.3 line-kilometres over four prospective targets. The survey tested geophysical anomalies from the 2005 VTEM airborne survey. Disseminated sulphides and clay alteration that are spatially and genetically related to uranium deposits in the basin, commonly result in chargeability highs and resistivity lows, which can be mapped by the IP survey. Further geophysical surveying and modelling was recommended by Vivian and Strate (2007) to refine the targeting process.

6.9.3 Electromagnetics Survey

Exploration work conducted by Eldorado is documented in MAR 19770004 (Laanela, 1977). In 1976, Edoardo conducted magnetics-EM survey. A grid of approximately 161 line-kilometres, formed a control grid over the two largest lake-geochemical anomalies. A reconnaissance type resistivity survey was carried out on nine lines, totaling about 24 line-kilometres. Two Wenner arrays were also run for depth determination. Results indicated that resistivity reflects mainly overburden conditions, with higher resistivity relating to moraine ridges and lower resistivity relating to muskegs and more water-saturated sand plains. Wenner results show that there is a shallow high resistivity at surface.

Exploration work conducted by Uranerz is documented in MAR 19860002 (Orr, 1986) and 19900003 (Orr and Lacey, 1991). In 1985, Uranerz contracted Phantom Exploration Services to conduct a winter Horizonal Loop EM survey (HLEM). The survey consisted of using 300 m coil spacing and with measurements at 3 frequencies (3555 Hz, 1777 Hz and 444 Hz). The survey was successful in identifying several northwest-trending conductors, which resulted in the identification of a set of prominent EM conductors striking north-northwest along two trends. These EM trends are spatially associated with what is interpreted as northwest-trending mylonite belts based upon magnetics. The Maybelle River EM Trend extends for 27 km within GMI's Rea Property and the adjacent-property Orano Canada's Maybelle River Project.



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In addition, the results indicate two strong conductor horizons within the Net Lake corridor, which were traced for approximately 12 km and show interpreted conductivity typical of several metres of massive graphite in basement. Depths to basement calculated from the HLEM responses over these zones range from 75 m to 135 m. The high frequency (3555 Hz) data show evidence of widespread, shallow conductive material covering much of the central and southwestern survey area, which likely reflects the extent of Devonian sediments. Most lakes and swamps are also seen to be quite responsive, probably due to surficial clays.

Between 1988 and 1989, Uranerz conducted numerous ground geophysical program on their Maybelle River Property. From January 29th and February 23rd, 1988, they completed TDEM surveys consisting of fixed loops 600 m by 600 m and 800 m by 800 m and moving loops of 100 m and 200 m by 200 m with station spacing of 50 m. A total of 183.65 line-km of fixed loop and 2.55 line-km of moving loop TDEM surveys were completed. These covered the Maybelle River and Net Lake corridors within permits 9304020438, 9304020437, 9304020434, 9304020444, 9304020443, 9304020441, 9304020440. During the winter of 1989, a moving loop TDEM survey was completed leading to drilling on what is now permits 9304020444 and 9304020446. Following this, eighteen moving loop TDEM and two fixed-loops surveys were completed at eleven separate locations on the current Rea Property (permits 9304020440, 9304020441, 9304020443, 9304020436, 9304020437, 9304020438). For the surveys, transmitter loops varied in size by 100 m by 100 m to 300 m by 300 m to adapt to the varying sandstone thicknesses on the property. In total, during winter 1989 and 1990, 25.35 line-km of moving loop coverage and 15.45 line-km of fixed loop coverage were completed.

Exploration work conducted by Red Dragon is documented in MAR 20100007 (Morales and Koning, 2010). In 2008, a 41.7 km fixed loop time-domain electromagnetic (FLTEM) survey was completed within 3 grids (05, 12 and 15) by Aurora Geosciences. The survey was completed between June 16 to July 10, 2008. Thirteen loops of 400 m by 800 m were spaced 200-m apart with stations every 50 m. Stations were marked with flagged half length pickets, which were installed with the use of tight chaining from the grid baseline. The objective of the survey was to test basement conductors outlined in the 2005 airborne VTEM survey. In general, the results of the 2008 FLTEM survey correlate with the results of the 2005 VTEM survey. Interpretation of the FLTEM data implied some strong late time responses potentially related to graphitic sources. The best results were obtained on Grid 12, over a portion of the Net Lake Trend.



7 Geological Setting and Mineralization

7.1 Regional Bedrock Geology

The Rea Property area is located on the western edge of the Precambrian Churchill Structural Province of the Canadian Shield (Figure 7.1) and it is situated in the west portion of the Athabasca Basin. The sub-Athabasca basement of the area is situated within the Lloyd Domain and west of the Clearwater Domain, two major subdivisions of the Rae Province (Lewry and Sibbald, 1977; Card, 2001, 2002).

7.1.1 Crystalline Basement

The rocks underlying the western part of the Athabasca Basin comprise a complexly-deformed and strongly metamorphosed crystalline basement of Archean to Paleoproterozoic age that is overlain unconformably by relatively unmetamorphosed quartz-arenite sandstone of late Paleoproterozoic to Mesoproterozoic age. The crystalline basement in this region is mostly part of the Lloyd Domain (Careen Lake Group) of the Rae Province, whilst the overlying sandstone – the Athabasca Group – fills a successor basin that spans parts of both the Rae and Hearne provinces. The Rae and Hearne provinces form parts of the Churchill Structural Province of the Canadian Shield (Hoffman, 1990).

7.1.1.1 Lloyd Domain

The Lloyd Domain forms most of the crystalline basement in northwestern Saskatchewan, south of Lake Athabasca. It is bounded in the east and south by the Snowbird tectonic zone (Virgin River shear zone) and in the west by the Taltson-Thelon magmatic zone. The northern boundary is problematic (see Card, 2001) due to the overlying Athabasca Group cover that attenuates the geophysical signature of the basement. The domain is informally subdivided, along the Clearwater magnetic high, into the "east" and "west" Lloyd domains that were formerly termed the Western Granulite and Firebag domains, respectively (Card, 2002). Exposure of the Lloyd Domain is limited to its eastern edge, south of the Athabasca Basin, with the remainder mostly overlain by Mesoproterozoic and Phanerozoic sedimentary cover of the Athabasca Basin and the Western Canada Sedimentary Basin, respectively.

The rocks of the crystalline metamorphic basement comprise a dominantly supracrustal package of psammo-pelitic gneiss, psammitic gneiss, pelitic gneiss, and garnet diatexite with subordinate metaquartzite, amphibolite, and ultramafic rock that are currently assigned to the Careen Lake Group (see Scott, 1985; Card et al., 2007). The supracrustral rocks were later intruded by significant amounts of granodiorite, quartz diorite, monzodiorite, and minor gabbro that, collectively, are termed the 'quartz diorite suite' (Card, 2002). The Lloyd Domain had previously generally been of Archean age (e.g. Lewry and Sibbald, 1977; Hoffman, 1990).

However, recent work by Stern et al. (2003) has dated granodiorite from the 'quartz diorite suite' at 1.98 Ga, an age that is like granitic intrusions within the Taltson magmatic zone in northeastern Alberta, implying that the influence of Taltson magmatic activity (Paleoproterozoic) was much more widespread within the Lloyd Domain than previously thought (Card et al., 2007).



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Figure 7.1 Location of the Rea Property on the western margin of the Athabasca Basin (Jefferson et al., 2007b).



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Additionally, many of the supracrustal rocks in the Lloyd Domain closely resemble early Paleoproterozoic equivalents within the Taltson magmatic zone and further support a significant amount of Paleoproterozoic aged rocks in the Lloyd Domain, although Archean age supracrustal rocks are probable in the Careen Lake area (Card et al., 2007).

The dominant metamorphic event observed in the Lloyd Domain is a 1.94-1.93 Ga upper amphibolite to granulite grade event overprinted by a later 1.9 Ga upper-greenschist to amphibolite grade event (Card et al., 2007 and Stern et al., 2003)

The age of the upper amphibolite to granulite grade event approximates the age of peak metamorphism in the Taltson-Thelon magmatic zone while the latter event may be related to a 1.9 Ga event that is recorded in the Beaverlodge and Tantato domains to the north and northeast, possibly related to late granite emplacement along the Taltson-Thelon magmatic zone (Card et al., 2007). These earlier metamorphic assemblages apparently predate the first deformation events along the Virgin River shear zone and in the Mudjatik Domain. Later retrograde metamorphism (approximately 1.8 Ga) may be related to the onset of the Trans-Hudson orogen to the east (Lewry and Sibbald, 1977; Card et al., 2007).

There are four phases of ductile deformation recognized within the Lloyd Domain (Card et al., 2007).

- 1) Late Archean D0 deformation related to M1 metamorphism produced recumbent folding. Early Taltson-Thelon D1 deformation (approximately 1985 Ma) produced shallowly NNE- to NE-dipping regional gneissosity that steepens with proximity to the Virgin River shear zone and is complexly reoriented due to later events (Card, 2002).
- 2) The second regional deformation (D2; approximately 1900 Ma), also likely related to Taltson-Thelon events, is characterized by NNW to NNE plunging folds with moderately dipping NW-dipping axial surfaces related to the onset of movement along the Virgin River shear zone.
- 3) The third deformation event (D3; approximately 1820 Ma) is interpreted to relate to Hudsonian-age movements along the Virgin River shear zone characterized by a NE-trending mylonite zone with a NE plunging lineation (Card, 2002).
- 4) The fourth deformation event (D4; post-1800 Ma) comprises poorly developed WNW to NW-trending folds that may be related to a sinistral component of movement along the Virgin River shear zone; although, kinematic evidence suggests a dominantly dextral movement history for the shear zone (Card, 2002).

Brittle deformation has affected many the earlier ductile shear zones. One of the dominant brittle-ductile sets is a north to NNW-trending series of structural breaks with apparent sinistral movement that may be related to the Tabbernor Fault system that affects much of northern Saskatchewan (Card et al., 2003).

7.1.1.2 Clearwater Domain

The Clearwater Domain is exposed along the Clearwater River south of the Athabasca Basin margin and has a regional positive magnetic trend that bisects the entire Lloyd Domain in an NNE alignment (Figure 7.1). Three lithologic groups are recognized: granitic gneiss, K-feldspar porphyritic gneiss, and equigranular granite (Lewry and Sibbald, 1977 and Card, 2002). Lewry and Sibbald (1977) considered the granitic gneiss





to be more like gneiss found in the Mudjatik Domain, east of the Snowbird tectonic zone. The granitic gneiss is the oldest unit as is suggested by the presence of granitic gneiss xenoliths within the equigranular granite phase. Data by Stern et al. (2003) support this observation with a 2.53 Ga age on the granitic gneiss inclusions and a 1.84 Ga age on the K-feldspar porphyritic granite. The source of the magnetic signature is thought to be caused by magnetite entrained within the granitic gneiss with a further contribution from magnetite concentrated near the contact zones of xenoliths and small late aplite dykes (Card, 2002).

The Clearwater Domain may record the earliest metamorphic event in the southern Rae Province and one of the latest events. The granitic gneiss (2.5 Ga) is similar in age to a 2.6 Ga event (overprinting an earlier 3.2 Ga event) that is recorded within the highly deformed Tantato Domain, north of the Lloyd Domain (Hanmer, 1997). The K-feldspar porphyritic granite (1.84 Ga) is similar in age to the Trans-Hudson orogen, although this age would imply emplacement of the porphyry in the waning stages of the orogen (Card et al., 2007).

7.1.2 Athabasca Basin

The following sections on the Athabasca Basin are detailed from the paper by Ramaekers et al (2007), which provides a summary of the sandstone formations identified within the western part of the Athabasca Basin as presently understood.

Post-Hudsonian crustal instability resulted in the development of three northeast trending sub-basins within the greater Athabasca Basin. Multiple series of transgressive sedimentary deposits were lain down because of tectonic activity and fault reactivation along Hudsonian northeast trending zones (Ramaekers, 1990).

The Athabasca Group comprises the Proterozoic cover sequence over the crystalline basement described above. Its thickness ranges from zero at the basin edge to more than 1,200 m in the east-central part of the western Athabasca Basin. Maximum thickness of the sediments in the central part of the Basin is more than 1,500 m. Table 7.1 shows the order of these sequences and their lithology.

The sandstone units in this part of the Basin comprise two formations, the 'upper' Manitou Falls Formation and the underlying Smart Formation that form part of the Karras depo-system of the Cree Sub-basin (Ramaekers et al., 2007). The Manitou Falls Formation (MF), constituting most of the fill in the Cree Sub-basin and about half the total volume of the Athabasca Basin, is composed of three members in the western part of the Athabasca Basin: 'uppermost' Dunlop member (MFd), 'middle' Collins member (MFc), and 'lower' Warnes member (MFw), formerly termed the MFa/MFb member.

The Smart Formation (S), formerly termed the MFa member, conformably underlies the MFw and rests directly on crystalline basement.

Quaternary-aged glacial deposits form the most recent topographic features and range in thickness from six m to at least 60 m, based on current and historical drilling in the western Athabasca Basin. Surficial deposits also include impressive drumlin fields and local sand dune fields. Organic-rich clays are also locally encountered adjacent to sandstone bedrock.





Table 7.1 Stratigraphic summary of the Athabasca Group, northern Saskatchewan and northeastern Alberta. Source: Ramaekers et al. (2007).

Formation	Member	Lithology						
Oarowall [0]	Upper subunit [Cu]	stromatolitic to massive dolostone						
	Lower subunit [CI]	siliciclastic interbeds, stromatolite, oolite						
Douglas [D]		Mudstone, fine to very fine quartz arenite; Organic matter is 1541 \pm 13 Ma by Re-Os						
Otherside	Birkbeck [Ob]	quartz arenite						
[0]	Archibald [Oa]	pebbly quartz arenite, quartz arenite						
	Marsin [LLm]	upper pebbly quartz arenite						
	Brudell [LLb]	conglomeratic quartz arenite						
נבבן	Snare [LLs]	lower pebbly quartz arenite						
		Regional Unconformity						
	Claussen [Wc]	clay-rich quartz arenite >> mudstone						
Wolverine	Brule [Wb]	Wb-sm: quartz arenite > mudstone						
Point [W]	Zircon @ 1644 ± 13 Ma by U-Pb	Wb-s: nearly all quartz arenite						
		Wb-m: mudstone > quartz arenite >> tuff						
	Dowler [LZd]	quartz arenite, siltstone + mudstone						
Lazanbu Laka	Larter [LZI]	quartz arenite >> siltstone + mudstone						
Lazenby Lake	Shiels [LZs]	quartz arenite with pebbly layers						
[22]	Clampitt [LZc]	quartz arenite > siltstone + mudstone						
	Hodge [LZh]	pebbly quartz arenite + conglomerate						
		Basal unconformity to Mirror Subbasin						
	Dunlop [MFd]	quartz arenite with >1% clay intraclasts						
Monitou Follo	Collins [MFc]	quartz arenite						
Manitou Fails	Warnes [MFw]	quartz arenite: nonpebbly, pebbly and >1% clay intraclasts						
[]	Raibl [MFr]	quartz arenite: pebbly and pebbly with >1% clay intraclasts						
	Bird [MFb]	>2% conglomerate						
		S-u: upper quartz arenite, informal Shea Creek beds						
Smart [S]		S-I: lower quartz arenite						
		S-mp: local pebbly mudstone						
		RD-s: low-angle, bedded quartz arenite						
Read [RD]		RD-cg: conglomerate						
		RD-mp: local pebbly mudstone						
	Basal unconformity t	o Cree Subbasin (basement as described below Fair Point Formation)						
Reilly [RY]	RYcg	conglomeratic quartz arenite						
Basal unconformity to Cree Subbasin								
	Beartooth [FPb]	pebbly quartz arenite						
		FPI-cs: conglomeratic quartz arenite						
Fair Point	Lobstick [FPI]	FPI-cg: conglomerate						
	E000tion [i i i]	FPI-ps: pebbly quartz arenite						
		FPI-mp: mudstone, pebbly						
Basal Lag		disseminated or bedded pebbles to boulders in sandstone						



7.2 Property Geology/Local Geology

The following description of rock types withing the Property are from historical drill campaign information (see Section 6); however, the geology is somewhat restricted to the western margin of the Rea Property. Due to the extensive Quaternary surficial deposits in the area, there are no bedrock outcrops to observe.

7.2.1 Basement Geology

The basement rocks (corresponding to the western Lloyd Domain) have been mapped by Alberta government geologists, both north and south of the Maybelle Property area as:

- Banded granite gneisses that show evidence of both an earlier granulite facies metamorphism and a later amphibolite facies overprinting, which are likely to be of pre-Kenoran age.
- High-grade, layered to banded metasediments of probable Archean age, found principally within the granite gneisses.
- A series of Aphebian-aged (Paleoproterozoic) intrusive, massive to foliated amphibolite facies anatectic granitoids, which formed mantled gneiss domes, and which now show several phases of related (Hudsonian?) deformation.
- Isolated outliers of low-grade metasedimentary and metavolcanic rocks which lie in apparent unconformity, upon the Archean granite gneisses, but which are in an uncertain position relative to Aphebian granitoids. There is no evidence for Aphebian supracrustal rocks in outcrop, but Burwash (1978), in a study of the subsurface extension of the basement rocks beneath the Phanerozoic cover rocks, did recognize metasedimentary rocks and suggested that they are only the keels of infolded Aphebian sediments.

Drilling within the Rea Property, and immediate area, intersected aluminous metasedimentary rocks which are in part graphite-bearing. These are tentatively correlated with Aphebian-aged metasedimentary units of the Peter River gneisses of the Cluff Lake area and/or the Wollaston Domain present in eastern Saskatchewan. Other basement lithologies intersected include charnockitic gneisses and anatexites, both being like the Earl River complex at Cluff Lake. Petrographic work by Shi and Annesley (1996) identified orthogneisses, pelitic gneisses, and granitoids and microgranites. These rocks were subject to lower to middle granulite-facies metamorphism, with retrograde metamorphism at amphibolite to greenschist facies. The pelitic gneisses examined were strongly anatectized with intense development of quartzofeldspathic leucosomes.

7.2.2 Athabasca Group

The Athabasca Group has been subdivided into three main sequences bounded by unconformities (Ramaekers, 2002): the Fair Point sequence (fluvial), the Manitou Falls – Wolverine Point sequence (fluvial) and the Locker Lake – Carswell sequence (fluvial to marine).

The Rea Property bedrock geology is presented in Figure 7.2. The area is underlain by Late Paleoproterzoic to Early Mesoproterozic strata of the Athabasca Basin. From southwest to northeast, this includes the Fair Point Formation with a thickness ranging from 0 to 100 m. These are interpreted to be fluviatile sheet flood deposits (Ramaekers, 2002).



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Figure 7.2 Local geology of GMI's Rea Property with Alberta government-defined uranium occurrences within and adjacent to the Property. Source: Alberta Interactive Minerals Map (2024).





Above the Fair Point Formation, the Manitou Falls Formation comprises diagenetically altered quartz arenite and conglomerate with a total thickness ranging from 0 to 300 m. The Manitou Falls Formation is overlain by the Lazenby Lake Formation that locally reaches a thickness of 30 m.

7.3 Mineralization

Drilling within the Rea Property has yet to discover significant zones of uranium mineralization; however, there have been several occurrences of anomalous uranium concentrations and the presence of geological indicators that illustrate the potential for uranium mineralization at the Rea Property.

As part of a 2024 interpretative study utilizing historical geophysical and geochemical data, GMI identified three corridors for future exploration as presented in Figure 7.3 and described as follows:

- The Maybelle River corridor (11 km) trends northward along the MRSZ. Historical drill core yielded 87 ppm total U over 1 m (drillhole MR-69) and contains clay alteration, breccia zones, and dravite: features commonly associated with unconformity uranium deposits elsewhere in the Athabasca Basin.
- The Net Lake corridor (20 km) was historically tested with wide-spaced drilling (20 historic holes). Five drillholes intersected anomalous uranium and associated pathfinder elements and minerals. For example, a sandstone unit yielded uranium concentrations up to 48 ppm U (historical drillhole MR-08), as well as trace amounts of graphite in the basement rock.
- The Keane Lake corridor (40 km) is largely untested except for two historic drill holes in the southcentral area of the Rea Project. One historical drillhole intersected 82 ppm U over 1 m (drillhole MR-66). Conductive (graphite bearing) anomalies that parallel the MRSZ are detected via airborne or ground-based EM (electromagnetic) surveying.

Three historical uranium occurrences are documented to occur within the Rea Property as illustrated by the GoA in Figure 7.2 and include 1) Rea (North Zone; METID 0829), 2) Rea (West Zone; METID 0826), and 3) METID 0831, all of which correspond to historical exploration work completed in the region.





Figure 7.3 Prospective uranium corridors for future exploration as defined by GoldMining Inc. from a 2024 interpretative study utilizing historical geophysical and geochemical data.







8 Deposit Types

Proterozoic unconformity-type uranium deposits host greater than 30% of the world's known uranium resources. The Saskatchewan portion of the Athabasca Basin is renowned for its high-grade uranium deposits. The basin currently supplies approximately 15.5% of the world's uranium for energy of which approximately 80% was exported (World Nuclear Association, 2024). Other notable unconformity-type uranium districts occur in the Thelon Basin (Nunavut, Canada) and the Alligator River District (Northern Territory, Australia). The Athabasca deposits unconformity-type uranium occurs at the unconformity and in the underlying basement. The average grade of the top 30 deposits in the Athabasca Basin is approximately 1.97 wt. % U₃O₈ (1.67 ppm U), four times the average grade of the Australian unconformity-type uranium deposits (Jefferson et al., 2007a).

Unconformity-type uranium deposits of the Athabasca Basin are characterized by elongate, pod-shaped uranium mineralization at the unconformity between the Proterozoic fluvial and conglomeratic sedimentary basin and the underlying graphitic metasedimentary basement. The basin strata are relatively flat-lying and unmetamorphosed. In contrast, the basement rocks often show signs of multiple stages of deformation and associated metamorphism. A clay-rich paleoregolith occurs at the surface of the crystalline basement rocks (Figure 8.1). The paleo-weathering profile commonly consists of a red hematite-rich zone, which grades with depth into a greenish chlorite-rich zone and then finally into fresh crystalline basement rock. Late stage diagenetic/hydrothermal bleaching is often observed directly below the unconformity within mineralized areas/districts (Figure 8.1). Extreme hydrothermal alteration completely overprints the regional paleo-weathering profile in zones of intense uranium mineralization. The basement lithological units are dominated by Archean granitic gneiss and Paleoproterozoic metasedimentary gneiss. The latter gneiss-type was originally enriched in graphite and represents a common basement host of uranium deposits (Annesley et al., 2005).

Two end member models of unconformity associated uranium deposits have been identified: mono-metallic and poly-metallic (Figure 8.2). Mono-metallic uranium deposits occur dominantly as basement-hosted uranium mineralization within fault zones or veins below chloritic and/or silicified Athabasca sedimentary rocks. The MacArthur River deposit is a typical example of a mono-metallic uranium deposit.

Poly-metallic uranium deposits dominantly straddle the unconformity as sub-horizontal clay bounded lenses below quartz corroded sedimentary rocks. Poly-metallic deposits include Midwest Lake (Denison/Orano Canada) and Cigar Lake (Cameco/Orano Canada). The uranium mineralization of poly-metallic deposits is commonly associated with variable amounts of nickel (Ni), cobalt (Co), molybdenum (Mo), arsenic (As), and gold (Au). High-grade uranium ore (> 1.00 wt. % U₃O₈ / > 8,490 ppm U) in poly-metallic deposits is mantled by a medium to low grade zone (< 1.00 wt. % U₃O₈ / < 8,490 ppm U). These deposits have mineralized roots extending downwards into major graphitic basement structures and upwards into the sandstone column. Typically, poly-metallic deposits are associated with plume-shaped halos of illite-kaolinite-chlorite alteration in the sediments. This surrounds the major ore controlling structures and can extend for several hundred metres above the deposit. Poly-metallic deposits are hosted by sandstone and conglomerate and occur within 25 to 50 m of the unconformity (Jefferson et al., 2007a).



Figure 8.1 Empirical geological model of unconformity-type uranium deposits. Source: Jefferson et al. (2007a).



Figure 8.2 Schematic cross section showing comparison between mono-metallic and poly-metallic unconformity-type uranium deposits. Source: Jefferson et al. (2007a).







Petrogenetically, unconformity associated uranium deposits are hydrothermal in origin and form at temperatures <250° C. They have U-Pb isotopic ages of 1.6 to 1.1 Ga with younger, remobilization ages from 0.9 Ga to recent time. They occur at three locations within the lithostratigraphic column, including above (perched), at (classical), and below (basement-hosted) the Athabasca unconformity.

Unconformity associated uranium deposits are related to structures rooted in the basement; reactivated through time and invariably graphite- and sulfide-bearing. They show strong K-Mg-B alteration: illite-chlorite-dravite/Mg-foitite (Mg-Tourmaline)-hydrothermal quartz. The mineralizing fluids are Na-Ca-rich brines (25-35 wt. % equivalent NaCl).

Another model proposed by Mercadier et al. (2014) proposes that the structural-geochemical architecture of unconformity-related uranium deposits is related to brine mixing, or gas-brine mixing, or brine-mineral interaction (Figure 8.3). Each system will have its own unique geological-geochemical-geophysical signature and resulting exploration program methodology.



Figure 8.3 Alternative model for unconformity-type uranium deposits. Source: Mercadier et al. (2014).





9 Exploration

In 2022-2023, GMI commissioned Fathom Geophysics (Fathom) to compile, re-process, and interpret historical magnetic, gravity, and electromagnetic data as they pertain to the Rea Property and the directly adjacent region. As part of the process, Fathom used modern reprocessing techniques and inversion modeling to advance the geological interpretation. A three-stage report was prepared on behalf of GMI with the objective of highlighting features in the geophysical data that could be associated with sandstone- and basement-hosted uranium mineralization, including inferences to faults, fault zones, and basement conductors.

Fathom Geophysics Stage 1 work involved 1) filtering of the magnetic and gravity data to highlight important structural features, and 2) generation of a tau map for the VTEM data (Fathom Geophysics, 2022). Stage 2 work focused on 1) VPmg modeling of gravity data to generate a basement surface, 2) magnetic vector inversion of magnetic data, constrained so that bodies are placed under the basement surface, 3) Maxwell plate modeling of untested conductors indicated by the VTEM survey, and 4) inversion of supplied IP and resistivity data (Fathom Geophysics, 2023a). The Stage 1 and 2 work was summarized in a data interpretation results internal report (Fathom Geophysics, 2023b).

A new interpreted lithology and structure of the basement image was produced that depicts zones of graphite shear-dominated rocks within the metapelite basement rocks (i.e., target zones for future exploration; Figure 9.1). The structural interpretation image in association with historical drilling is presented in Figure 9.2

As a result of the Fathom interpretative work, GMI identified over 70 km of prospective areas within three distinct corridors for future exploration: Maybelle River, Net Lake, and Keane Lake (Figure 9.2). These corridors exhibit geophysical signatures that are like those associated with uranium deposits in the Athabasca Basin. More specifically, the corridors are interpreted as graphite-bearing shear zones, which are indicative of potential unconformity-style uranium mineralization. The three corridors for future exploration are described in the text that follows utilizing information from Goldmining Inc. (2024, 2025).

9.1 Maybelle River Corridor

The Maybell River corridor extends northward for approximately 11 km from Orano Canada's Maybelle River Project, where shallow, high-grade uranium mineralization is hosted at the Dragon Lake prospect. Within Orano Canada's Dragon Lake prospect, Fathom's interpretive study highlighted numerous graphitic shear rocks along a major sinistral shear. This shear zone extends north into the Rea Property, where five historic drillholes have intersected it and returned either anomalous uranium values or pathfinder minerals including clay alteration and dravite.

Note: The QP has been unable to verify the adjacent property information, and therefore, the information is not necessarily indicative of the mineralization on the Rea Property that is the subject of the technical report.





Figure 9.1 Basement structure interpretation with future target zones for exploration for the Rea Property. Source: Fathom Geophysics (2023b).







Figure 9.2 Interpreted structural information with historical drilling on the Rea Property. Includes the broad and equant future target zones for exploration from Figure 9.1. Source: Fathom Geophysics (2023b).





9.2 Net Lake Corridor

The Net Lake corridor is situated southwest of the Maybelle River corridor and is approximately 20 km in length. Fathom's interpretive study highlighted numerous graphitic shear rocks along a major sinistral shear: a similar structural trend to the Maybelle River Prospect. Twenty, widely spaced drillholes have tested the area, with five intersecting anomalous uranium and associated pathfinder elements such as vanadium, nickel, cobalt, and arsenic, as well as pathfinder minerals like clay alteration and dravite.

9.3 Keane Lake Corridor

The Keane Lake corridor is approximately 40 km in length, has a NW-SE orientation, and is interpreted to contain graphitic shear rock along its northern extent. The corridor is largely unexplored, except for two historic drillholes that intersected anomalous uranium values in the south-central area of the Property (see Section 6). Like the Maybelle River corridor, major sinistral shears at the Keane Lake corridor are offset by younger northeast striking sinistral shear faults, which could be an important control to localizing uranium mineralization.

Each of the three prospective corridors for future exploration is interpreted as a potentially deeply rooted basement structure. These structures are fundamental to the formation of Athabasca uranium deposits because conductive, graphite-bearing shear zones in basement rocks beneath sedimentary layers can be intrinsically associated with unconformity-style uranium deposits. Within these corridors, the shear zones, as inferred through electrical geophysical methods, could be associated with extensive hydrothermally alteration zones within the overlying sandstone, near the unconformity, and/or within the upper crystalline basement.

9.4 Red Dragon Resources Corp. Geochemical Soil Sampling Program

Because Red Dragon is related to the current Issuer's mineral tenure rights succession at the Rea Property, the Red Dragon geochemical soil sampling program is presented in the text that follows as documented in MAR 20080006 (Vivian and Strate, 2007).

Red Dragon completed a geochemical soil sampling program between May 15th and May 26th, 2006. The program was initiated to follow-up on the results of the VTEM survey flown in February-March 2006. The sampling program collected a total of 346 soil samples from GPS located sites. Poor sampling medium and difficulty in locating good representative samples was disclosed by Vivian and Strate (2007).

A total of 408 soil samples were assayed including standard samples and duplicates. The samples were analysed at ACME Analytical Group using ICP-MS on a 30 g sample of sieved material after aqua regia digestion (lab code IF-MS).

Four samples yielded 1 ppm U or above (see Figure 6.1)). Sample numbers 11095, 11091 A and B (B is a duplicate) and 11075 returned U values of 0.9, 3.3, 2.7 and 3.1 ppm U, respectively. The anomalous samples are coincident with one of the areas outlined for ground IP geophysics and diamond drilling. The results were not significant enough to warrant further geochemical sampling (Vivian and Strate, 2007).





9.5 Red Dragon Resources Corp. Geophysical Surveys

The Red Dragon geophysical surveys are presented in Section 6.9, together with several other historical geophysical surveys. Red Dragon completed a 2005 airborne magnetic and VTEM survey, 14.3 line-kilometre IP survey over 4 target areas in 2006, a 41.7 km FLTEM survey within 3 grids in 2008, and a 2009 airborne gravity and magnetic survey.

9.6 GoldMining Inc. Geophysical Survey

Brazil Resources (now GMI) commissioned APEX Geoscience Ltd. to complete a ground TDEM survey in 2016. The TDEM survey was completed over 10 days (February 28 to March 8) along 19 east-west lines spaced 200 m apart using three fixed transmitter loops for a total of 35.7-line kilometres of collected data resulting in a total survey area of approximately 4.6 square kilometres.

Data interpretation and modeling of the ground TDEM data indicates the survey was successful in identifying a single conductor that extends in a northerly trending orientation over a distance of at least 1.8 km. The response is likely related to a nearly flat lying conductor with a slight westerly dip between 0 and 10° at a dip direction of 275°. The decay rate of the conductor response identified in the TDEM survey suggests a graphite-related body, which could correspond to a wide zone of highly strained and mylonitized rocks; a potentially favourable scenario for unconformity-hosted uranium deposits.

Forward modelling of the response places a single plate model at a depth of 350 to 500 m below surface and with a width ranging from 500 to 1,000 m. It may be possible that conductive overburden responses associated with the ground TDEM data obscure the underlying conductor response by pushing it deeper and broader than it is in reality; the anomaly has yet to sufficiently drill tested.



10 Drilling (2007 Red Dragon Resources Corp.)

At the effective date of this technical report, GMI has yet to complete a drill program on the Rea Property. Historical diamond drilling in the vicinity of the Rea Property, by companies other than GMI, is presented in Section 6.6.

Legacy diamond drill data and information associated with the current Rea Property mineral permits, and associated with a series of company transaction agreements through to GMI, extends back to Red Dragon Resources Corp. The 2007 Red Dragon diamond drill program is documented in MAR 20080006 (Vivian and Strate, 2007) and summarized in this Section and Section 11.

In 2007, Red Dragon completed a diamond drill program of 1,908 m in 8 NQ holes that tested six airborne EM anomalies. The conductors are along and parallel to the north-northwest trending Maybelle River conductor. The location of the Red Dragon drillholes is presented in Figure 6.2. The description of the Red Dragon drillholes is presented in Table 10.1.

Company	Year Drilled	Hole ID	Easting** NAD83Z12	Northing** NAD83Z12	Azi- muth	Dip	Collar Elevation (m)	Depth (m)	Overburden Thickness (m)	Intersected Athabasca Group
Red Dragon	2007	R010107	519207	6450669	0	-90	301	192.94	18.10	Y
Red Dragon	2007	R040107	522615	6449502	0	-90	322	247.80	13.80	Y
Red Dragon	2007	R070107	526950	6437750	0	-90	332	233.73	32.61	Y
Red Dragon	2007	R070207	526110	6437750	0	-90	326	277.07	10.50	Y
Red Dragon	2007	R110107	529900	6438000	0	-90	336	330.10	21.84	Y
Red Dragon	2007	R120107	515086	6448125	0	-90	302	202.08	39.60	Y
Red Dragon	2007	R130107	516419	6447337	0	-90	303	213.97	34.00	Y
Red Dragon	2007	R130207	516508	6446924	0	-90	302	220.37	29.57	Y
* Estimated col	lar elevatio	n					Total	1,908		

Table 10.1 Description of the Red Dragon drillholes at the Rea Property.

* Estimated collar elevation

** Recalculated to NAD83 Zone 12

All diamond drillholes were drilled vertically, using a Boyles 37 drill, operated by contractors Cyr Diamond Drilling of Winnipeg, MB. No down hole surveys were completed. All holes drilled on the Rea Property recovered NQ drill core size for their entire depth. Drillholes were generally cased to a minimum depth of 20 m. The drill program was initiated on February 25, 2007, with demob on April 18, 2007.

The drill collar locations were recorded using various conventional handheld GPS units. All drillhole locations were planned and recorded using the NAD 83 (UTM Zone 12) coordinate system. Drillholes were named as follows R=Rea property, Target Number from 2005 airborne geophysical survey, hole number and year; example R120107 is R=Rea property, Target=12, Hole Number=1 and Year=2007.

Core recoveries typically ranged from 95% to 100%, and rarely below 90%. The drillhole core logging, sampling, security, and analytical techniques is presented in Section 11.





A total of 296 half split core samples were collected either for assay or whole rock geochemical analysis. No economic concentrations of uranium mineralization were documented by Vivian and Strat (2007). However, the Red Dragon drill program intersected alteration and anomalous concentrations of uranium in several holes.

Drillholes R040107, R070107, R070207, R110107, and R120107 successfully intersected the unconformity separating the overlying Fair Point Formation from the deeper basement granite (including some pegmatitic intervals of unknown age) and/or gneisses. However, none of the drillholes intersected graphitic units or graphitic faults and no significant uranium mineralization.

The highest uranium concentration obtained was in drillhole R130107, which reported 54 ppm U in the Fair Point Formation, approximately 6.0 m above the basement unconformity. A summary of Vivian and Strate (2007) observations from select drillholes is presented as follows,

- Drillhole R010107 was oriented to intersect a VTEM and IP geophysical response. The drillhole intersected basement granite at 165.15 m and a pegmatite horizon approximately 15 m thick below the basement contact. The basement depth is approximately documented on Red Dragon's IP-resistivity inversion model (see Section 6). A 12.2 ppm U value was reported 5 m into the granitic basement.
- Drillhole R040107 tested an interpreted structure on the resistivity model. Uranium values of up to 6 ppm occur within 5 m of the unconformable Athabasca-basement contact.
- Drillhole R070107 targeted a highly resistive source into the edge of a very low resistivity response. The regolith appears at the approximate contact of the higher chargeability and lower resistivity response. The regolith is intersected from 18 1.5 to 214.75 m and contains elevated uranium values at the lower and upper contacts of the regolith.
- Drillhole R070207 intersected regolith at 214.07 to 241.83 m that contain up to 6.7 ppm U. Two narrow sections (10 cm) measure up to 7.4 and 5.3 ppm within the overlying sandstone but do not appear to be related to structures. One 7.1 ppm U value occurs in the Fair point Formation conglomerate.
- Drillhole R110107 showed the margins of a resistivity low are coincident with the contact of the regolith and the basement. Uranium values of up to 34 ppm U occur within the regolith and at the regolith/basement contact.
- Drillhole R130107 was targeted to cut an interpreted fault structure. The best uranium intersection occurs at the base of the Fair Point Formation and the basement (5.97 m grading 25.36 ppm U, including a smaller section of 4.0 m of 34.05 ppm U).

To conclude, the thickness of the regolith developed at the unconformity was quite variable, between 12 m (drillhole R110107) to 34 m (drillhole R070107) thick, and comprised of variably intensely chlorite-, illite-, and hematite-altered boulders of basement granitoid +/- sandstone. Drillholes that intersected basement and a reasonably overlying porous regolith or conglomerate, establish the validity of exploration for uranium in this portion of the Athabasca Basin. It is evident from assay and geochemical results, there are elevated uranium values within the basement and/or the overlying porous regolith or conglomerate suggesting transport of uranium-rich fluid. The drill program did not intersect any significant faults.



11 Sample Preparation, Analyses and Security

At the effective date of this technical report, the Issuer has yet to conduct a sampling program on the Rea Property. For historical sampling programs, see Section 6. Because Red Dragon is related to the current Issuer's mineral tenure rights succession at the Rea Property, the Red Dragon drill results are presented in the text that follows. The Red Dragon drill program core sampling and analytical program is documented in MAR 20080006 (Vivian and Strate, 2007).

11.1 Sample Collection, Preparation, and Security

The Red Dragon drill program was supervised by an experienced, on-site, geologist and Project Manager that oversaw all quality control aspects of the drill program, from logging to sampling to security of the samples. Drill core was logged by a geologist on site who recorded core recovery rate, fractures per metre, and the angle of fractures to the core axis. Core photos were taken after the geological logging, geotechnical logging, and sample mark-up were completed.

Selective core samples were collected for whole-rock geochemical analyses in the basement rocks where interesting features exist with respect to lithology, structures or alteration. These samples were either whole spot samples or split core. In addition to the selective sampling of zones of interest described above, every 5th metre was half split along a 10 cm interval. These samples were bagged, sealed and transported in the same way for whole-rock geochemical analyses. The selective sampling did not identify any zones of economic mineralization in the basement rocks. Drilling, sampling or recovery factors did not materially impact the accuracy and reliability of the selective sampling.

Core to be geochemically analyzed was marked, split in half using a manual splitter, bagged in numbered plastic sample bags, and sealed using a zap straps (plastic cable). All drill core samples were put into plastic bags, sealed, and labelled. Samples were placed into large rice bags and sealed with zap straps, for transport to the laboratory via charter flight and commercial freight carrier.

The samples were transported directly form the field to ALS Laboratory Group; an independent, ISO 9001:2000 and ISO 17025 accredited laboratory in Vancouver, BC. Samples were prepared for analysis by the ALS Laboratory Group upon arrival. No special security measures are enforced during the transport of core samples apart from those set out by Transport Canada regarding the transport of dangerous goods.

11.2 Analytical Method

Drill core radioactivity was checked by a hand-held total count gamma ray scintillometer, measuring incoming radiation with readings up to a maximum of 9,999 cps.

The core samples were analyzed at ALX Chemex (ALS Canada Ltd.) in Vancouver, BC. ALS Canada Ltd. is an ISO 9001:2000 and ISO 17025 certified laboratory that is independent of Red Dragon and the current Issuer. The analytical method used was ALS Chemex's Lab Code MS61U, a uranium-package that uses 4-acid digestion followed by inductively coupled plasma - mass spectroscopy (ICP-MS).





Samples arriving at the laboratory in Vancouver were sorted, dried with fine crushing of the entire sample to better than 70% passing 2 mm. The sample was reduced to a 1-kilogram charge by repeated passes through a riffle splitter and then pulverized to 80% passing 75 µm. The sample is then dissolved using a four acid (HF, HNO3, HCLO4, and HCL) near-total digestion followed by ICP-MS finish for 48 elements including U, Ph, Co, Cu, Ni, As, and B. The minimum limit of detection for uranium was 0.1 ppm U.

11.3 Quality Assurance – Quality Control

Red Dragon inserted a few Quality Assurance – Quality Control (QA-QC) samples, including sample standards and duplicate samples; however, the frequency of these samples was insufficient to adequately assess the quality of the analytical data.

Based on the QPs review of Vivian and Strate (2007), it is not clear how the standard samples were inserted into the analytical sample stream. Two standard samples are documented as being emplaced into the sample stream associated with drillhole R070107. The other 8 standards (DS7) could relate to laboratory-inserted standard samples (?). Two duplicate core samples were recorded within the drill log files (also within drillhole R070107).

11.4 Qualified Person Opinion

The QP reviewed Red Dragon drill core sampling program protocols and is of the opinion that the core sample collection, preparation, and security is reasonable, within standard industry practice, and of acceptable quality. However, and with respect to assay verification, there is a lack of rigorous QA-QC protocols. While Red Dragon cites the use of sample standards and duplicate samples, the frequency and protocol of QA-QC samples and analyses is considered by the QP to be insufficient to adequately assess the quality of the analytical data.



12 Data Verification

12.1 Data Verification Procedures

The geological information and data presented and discussed in this technical report relates to historical exploration work and publicly available journal articles and government reports. The following data verification procedures were applied by the QP:

- Historical soil and lake geochemical surveys, and drill programs were compiled from Alberta Mineral Assessment Reports. These reports were completed by the various companies that worked in the Rea Property area prior to GMI. The purpose of the assessment report is to provide information and data that support the company's exploration expenditures to maintain the mineral permits in good standing. The assessment report data is reviewed and validated by GoA geologists that either approve or reject the expenditure requirements. The QP has reviewed the individual assessment reports utilized in this technical report. The QP acknowledges that the information disclosed in this technical report is accurate as the information is presented in the original assessment report. Because the historical exploration work was completed prior to CIM Exploration Best Practice Guidelines (CIM, 2018), the assessment reports do not include QA-QC procedures. However, it is the QPs opinion that the assessment report data are representative of the overall exploration work and analytical results that were historically conducted at the Property.
- With respect to the historical geophysical surveys,
 - Red Dragon Resources Corp. retained geophysical consultant Bob Lo, P. Eng. to provide geophysical guidance, including QA-QC, for the airborne geophysical data. The QA-QC was deemed acceptable to industry standards. For the 2008 and 2009 ground and airborne geophysical surveys, AREVA Canada geologists and geophysicists managed the program, which included geophysical guidance, data interpretation, assessment report writing, and QA-QC checking of the geophysical data.
 - GMI commissioned geophysical consultants, Fathom Geophysics, to compile, re-process, and interpret the historical survey data and provide QA-QC guidance. In Fathom Geophysics review of these historical survey data, their internal report to GMI noted that the historical geophysical datasets are sufficient to qualitatively highlight areas of interest (see Section 12.3).
 - The QP is therefore of the opinion that the historical geophysical data discussed in this report are reasonable, are sufficient for qualitative assessment of potential exploration targets, and should be complemented with future, modern, geophysical survey techniques.
- The journal manuscripts and GoA and Government of Saskatchewan geologists, many of whom hold post-graduate degrees and prepared the reports in academic or provincial geological survey capacities that involve internal reviewers. The QP has reviewed the journal and government reports and is of the opinion that the information is reasonable and relevant to the disclosure presented in this technical report as it relates to an early-stage project.





With respect to Red Dragon's 2007 drill program, the QP reviewed MAR 20080006 (Vivian and Strate, 2007) including 1) core sample collection, preparation, and analysis, 2) drillhole logs, and 3) ALS Chemex Certificates of Analysis. There were no economic concentrations of uranium documented vy Vivian and Strate (2007) but anomalous uranium values, up to 54 ppm U, were documented in the basement, the overlying regolith and the basal portion of the Athabasca Group Sediments (Fair Point Formation, usually conglomerate). The QP recommends additional verification work in association with CIM Exploration Best Practice Guidelines (CIM, 2018) to include the legacy Red Dragon drill program information and data in the current Rea Property database.

12.2 Qualified Person Site Inspection

On October 30, 2024, the QP visited the Rea Property in northeast Alberta on behalf of GMI. The QPs primary site inspection objectives were to verify the land position, access, proximity to services, physiography, and conditions related to any future exploration projects. The site locations observed by the QP are presented in Figure 12.1. As part of the site inspection, the QP:

- Validated the 16 permits via the GoA's on-line metallic and industrial minerals land tenure portal (<u>https://gis.energy.gov.ab.ca/Geoview/Metallic</u>).
- Travelled approximately 140 km from Fort McMurray to the Rea Property and followed the Fort Chippewan Road, which provides winter road access between the City of Fort McMurray and remote Hamlet of Fort Chipewyan and traverses through the central portion of the Rea Property.
- The QP defines the main access Fort Chippewan Road as a winterized off-highway vehicle trail. Apart from approximately 3 sections, large portions of the road can be navigated by Off-Highway Vehicles. In summer, some trail re-routing, or temporary bridges, are required in swampy areas and/or crossing creeks.
- The QP inspected several historical drill sites; other than trails and road access associated with the historical drill programs, the physical collar locations were not readily visible during the site inspection. It is possible that the historical drill collars may be located, and validated, during future summer- and ground-based exploration programs.
- The topography of the Rea Property region is defined by Quaternary surficial material (glaciofluvial and till) that has formed a hilly terrain associated with glacial hills, ridges, drumlins, and eskers. Quaternary material appears to form the surficial geology of the entire property.

In summary, the site inspection enabled the QP to observe the land position, physiography, vegetation, Quaternary surficial geology, and Property access options associated with any future exploration program(s) conducted at the Rea Property. The Property is covered by surficial (till and glaciofluvial) deposits. Hence, no samples of Athabasca Sandstone or the crystalline basement were available, or obtained, by the QP during the site inspection to verify the uranium mineralization that is the focus of the Rea Property.





Figure 12.1 Qualified Person personal inspection sites at the Rea Property. Includes GoldMining Inc.'s proposed drill target area in the northern part of the property (purple rectangle).




12.3 Validation Limitations

The surface of the Property is covered by extensive Quaternary surficial deposits. For these reasons, no outcrops were observed during the QP site inspection.

Fathom Geophysics (2023b) noted that the historical gravity images are of "less-than-ideal quality", and the EM dataset has "E-to-W-trending artifacts". However, the historical geophysical data was sufficient to qualitatively highlight locales within the amalgamated datasets, in which case, Fathom Geophysics report focal spots called 'candidates for exploration targets', rather than 'exploration targets'.

As is the case with many historical exploration work programs, there is a lack of rigorous QA/QC data for the historic drilling, and it is recommended that any future ground geochemical programs and drill programs, and sampling and analytical methodologies adhere to rigorous QA/QC procedures to provide the necessary confidence levels in data that will be required during future exploration programs. Systematic QA-QC samples (field duplicate, sample blanks, and Certified Reference Material standard samples) should be randomly inserted in the sample stream. Results from the QC samples need to be monitored and reviewed on an ongoing basis and any batches falling outside the acceptable limits should be investigated (e.g., sample procedures, sampling and laboratory contamination, re-assaying, etc.).

12.4 Adequacy of the Data

Based on the Rea Property QP site inspection and the QPs review and verification of the historical exploration data, and the 2022-2023 geophysical re-processing and -interpretation work conducted on behalf of GMI by an independent, professional geophysicist contractor, it is the QPs opinion that the data and information presented in this report are reasonable, of acceptable quality, and relevant to the disclosure presented in this technical report as it relates to the geological introduction of an early-stage project.

The QP recommends that future legacy data verification work is required to advance the confidence level of the historical subsurface geochemical data to enhance the Rea Project data library for future target delineation work and any potential future estimation of mineral resources.





13 Mineral Processing and Metallurgical Testing

At the effective date of this technical report, the Issuer has yet to conduct mineral processing or metallurgical testing for the Rea Property.





14 Mineral Resource Estimates

At the effective date of this technical report, the Issuer has yet to consider mineral resource models or estimations for the Rea Property.

*** Items 15 to 22 omitted; this technical report discloses information related to an early-stage project ***



23 Adjacent Properties

The QP has been unable to verify the adjacent property information, and therefore, the information presented in this section is not necessarily indicative of the mineralization on the Rea Property that is the subject of the technical report. This disclaimer applies to entire Section 23.

Within the Athabasca Basin, and with respect to the location of GMIs Rea Project, adjacent properties are present on both sides of the Alberta-Saskatchewan border. The adjacent-property companies are illustrated in Figure 23.1 and the competitor project names and source information is listed in Table 23.1. Select adjacent property projects are discussed in the text that follows.

Company	Project	Source	
ALBERTA		•	
ATHA Energy Corporation	West Rim	https://athaenergy.com/projects/athabasca-basin-	
		generative-projects/	
Orano Canada Inc.	Maybelle Property	Not available	
SASKATCHEWAN			
ATHA Energy Corporation	Western Athabasca	https://athaenergy.com/projects/athabasca-basin-	
		generative-projects/	
Cameco Corporation, Orano Canada Inc., Purepoint Uranium Group Inc.	Hook Lake	https://purepoint.ca/projects/hook-lake/	
CanAlaska Uranium	Carswell Project	https://www.canalaska.com/2021/12/12/carswell/	
Denison Mines	Wheeler River	https://denisonmines.com/projects/wheeler-river-	
(Foremost Clean Energy)		project/	
F3 Uranium Corp	Minto	https://f3uranium.com/projects/pln-area/minto/	
Paladin Energy (formerly Fission Uranium Corp.)	Patterson Lake South (PLS)	https://www.paladinenergy.com.au/pls/	
Mustang Energy Corporation	Yellowstone East	https://www.mustangenergy.ca/yellowstone-east-	
		project	
NextGen Energy Corporation	SW 1	https://www.nexgenenergy.ca/exploration/sw1/	
Orano Canada Inc. – Uranium	Shea Creek	https://www.uraniumenergy.com/projects/canada/she	
Energy Corp. Joint Venture		<u>a-creek/</u>	
Purepoint Uranium Group	Smart Lake	https://purepoint.ca/projects/smart-lake/	
Standard Uranium	Davidson River; Harrison Project	https://standarduranium.ca/projects/projects-overview	
	Sandy Lake; Borderline;	https://www.stallionuranium.com/projects/athabasca-	
Stallion Uranium	Coffer; Newlands	basin-uranium/overview/_	
Thursdayland Dessures a little	Cluff Lake; Beatty River	https://www.thunderbirdresources.com/projects/urani	
i nunderbird Resources Ltd.		um/cluff-lake/	

Table 23.1 Select western Athabasca Basin Uranium Deposit and Exploration Properties.



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Figure 23.1 Adjacent properties in northeast Alberta and western Saskatchewan with select advanced Athabasca Basin uranium projects. Sources: Government of Alberta mineral tenure (2024) and Saskatchewan GeoHub (2024).





23.1 Alberta-Based Adjacent Property's

Presently, there are two uranium properties in the Alberta portion of the Athabasca Basin, both of which are early-stage projects (Figure 23.1). ATHA Energy Corp. acquired a large land package (41 permits totaling 3,227.3 km²) between the Hamlet of Fort Chipewyan and the Alberta-Saskatchewan border known as the West Rim project. The West Rim project is a generative project in a largely underexplored area of the westernmost Athabasca Basin for uranium. Currently, ATHA is in the planning and program optimization stage for the West Rim project (ATHA Energy Corp., 2024).

The other Alberta Athabasca Basin uranium project is Orano Canada's Maybelle River Project, which hosts the Dragon Lake prospect. This project has been mentioned throughout this technical report because the Maybelle River Project property is encompassed within the central portion of the Rea Property. In addition, the MRSZ, which structurally hosts the Dragon Lake prospect, has been inferred through geophysical studies to extend northward into the Rea Property and similar inferred parallel structural zones occur within the Rea Property both west and east of the MRSZ.

The Dragon Lake prospect has been subject to historical exploration studies between 1988 and 2013, and drill programs between 2016 and 2019, that resulted in the prospect being popularized as Alberta's first uranium discovery. A summary of the results of this work including geological features, structures, and rock types as documented by Wheatley and Cutts (2013) are discussed in the text that follows.

To the best of the QPs knowledge, an historical mineral resource estimate for the Dragon Lake prospect was never disclosed. The QP has been unable to verify the adjacent Dragon Lake prospect information, and therefore, the Dragon Lake Prospect information is not necessarily indicative of the mineralization on GoldMining's Rea Property that is the subject of the technical report.

Historical drilling at the Dragon Lake prospect in 2002 confirmed relatively shallow uranium mineralization with grades of up 40% U_3O_8 over 0.5 m. The Dragon Lake prospect mineralization consists of uraninite, coffinite and massive to disseminated pitchblende within a steep, narrow 160° trending structure that occurs primarily within the Fair Point Formation (Figure 23.2). This structure originates in the basement and cuts the north-south trending MRSZ at a low angle. The mineralization is present over a strike length of 110 m, varying in height from 3.5 m below the unconformity to 40 m above the unconformity. The mineralized width is narrow, ranging from 1 m to 5 m, with two closely spaced parallel zones in the north end of the prospect.

Alteration surrounding the Dragon Lake prospect mineralization is limited to a halo of about 20 m within the Fair Point Formation and surrounds the trace of the 160° structure where it overlies the MRSZ. The alteration is characterized by a dark green zone of Fe-chlorite, illite, and an increase in the total clay content from 12% to 25%. Uranium mineralization is always found within this alteration zone.

The Dragon Lake prospect alteration halo in the overlying Manitou Falls Formation is broader, weaker and is identified by a steep north-south fracture zone (30-80 m wide) with druzy quartz on fracture surfaces, local quartz flooding and a central zone of quartz dissolution and collapse breccia. Uranium, boron, and vanadium are slightly elevated within this halo, which is not always centered over the N160° structure.



Figure 23.2 Geology of the Dragon Lake prospect: (a) cross section and (b) plan view. Source: Wheatley and Cutts (2013).



23.2 Saskatchewan-Based Adjacent Property's

In contrast to uranium projects in the Alberta portion of the Athabasca Basin, projects on the Saskatchewan side include exploration, advanced exploration, producers, and past producers. Historically, most of the uranium mines are situated in the easternmost portion of the Athabasca Basin.

Because the Rea Property occurs in Alberta, this sub-section focuses on uranium prospects, developing deposits, and past-producers in the eastern Saskatchewan portion of the Athabasca Basin near the Alberta-Saskatchewan border.

Saskatchewan-based uranium deposits east of the Rea Property include the past-producing Cluff Lake Mine and Shea Creek Deposit, which are located approximately 65 km east of the Rea Property. These deposits occur on the margin of, or adjacent to, the Carswell impact structure, the largest known impact crater in Saskatchewan and 4th-largest in Canada. Unconformity-related uranium deposits associated with the impact structure include U-Th mineralization in pegmatites and granodiorites, pitchblende vein and unconformity-related deposits of simple and complex mineralogy, and detrital U-Th concentrations in Athabasca Group conglomerates (Harper, 1983). Company summary information of the Cluff Lake Mine and Shea Creek Project include,

- Thunderbird Resources Ltd.'s Cluff Lake Mine is decommissioned former uranium mine located in northern Saskatchewan, located 30 km east of the provincial border with Alberta and approximately 75 kilometres south of Lake Athabasca. The Cluff Lake Project produced over 62 million pounds of uranium concentrate during its operation from 1979 to 2002 (Orano Canada Inc., 2023).
- Orano Canada Inc.-Uranium Energy Corporation Joint Venture Shea Creek Project is 18 km south of the past producing Cluff Lake mine. In total, 278,889 m of drilling in 563 drill holes have been completed on the Shea Creek property since 1992 defining the Colette, 58B, Kianna, and Anne





deposits. Shea Creek indicated and inferred mineral resources are reported at Uranium Energy Corp. (2024).

The southwestern margin of the Saskatchewan portion of the Athabasca Basin has received recent attention for its shallow uranium deposit discoveries, which are located approximately 82 to 88 km southeast of the Rea Project. Discovery of the Patterson Lake South (PLS) prospect in November 2012 was an important discovery in that all previous major high grade uranium deposits were located inside the basin margins on the east side of the Athabasca Basin; whereas Patterson Lake South lies outside the basin margin and is on the west side of the Basin. PLS was discovered by initial airborne radiometric and EM surveys, followed by ground-based DC resistivity and IP, horizontal loop EM, moving loop TEM, and radon surveys, leading to drill testing and the discovery holes (Bingham, 2018).

Since, the PLS discovery, several new uranium discoveries have been made as summarized in the Figure 23.1 and select projects in the text that follows.

- Fission Uranium Corp.'s Patterson Lake South (PLS) project is an advanced, development stage project. The PLS project hosts the Triple R deposit a high-grade, near-surface uranium deposit. Fission has completed a Feasibility Study for PLS and plans to develop PLS through the permitting/licensing phase through to future construction and production by 2029 (Fission Uranium Corp., 2024).
- NexGen Energy Ltd.'s Rook I Project is centred around the basement-hosted Arrow Deposit. A
 Feasibility Study was released in 2021, which includes Mineral Reserve and Mineral Resource
 estimates for the Arrow Deposit. The project has received Provincial EA Approval under the
 Environmental Assessment Act of Saskatchewan to proceed with the development of the Project
 and is undergoing completion of the Federal EA Review (NexGen Energy Ltd., 2024).
- F3 Uranium Corp.'s Patterson Lake North (PLN) JR Zone was discovered during a 2022 drilling program on the PLN property in which uraninite mineralization was associated with the A1 main shear zone. In July 2023, the company sub-divided the legacy PLN Property into 3 distinct properties: PLN, Minto, and Broach. The PLN JR Zone hosts uranium mineralization within the A1 Main and B1 Main shear zones (F3 Uranium Corp., 2024).
- Joint Venture partners Cameco Corp., AREVA Resources Canada Inc., and Purepoint Uranium Group Inc.'s Spitfire Zone at the Hook Lake JV is located along the prospective Patterson Lake trend at a relatively shallow depth to the unconformity ranging from zero to 350 m (Purepoint Uranium Group Inc., 2024).

The trend of the southwestern Athabasca Basin uranium deposits is generally referred to as the Patterson Lake Corridor, which has a general spatial correlation with the 1.84 Ga Clearwater Domain granitic belt. This correlation enabled a study and the theory that high heat producing intrusions are an important component of the Patterson Lake Corridor uranium system (Powell et al., 2022). These authors concluded that the Clearwater Domain granitic belt likely formed along pre-existing structures, and provided localized strain and pathways, and a radiogenic heat engine to mobilize fluids, gases, and precious metals.





24 Other Relevant Data and Information

None to report at the effective date of this technical report.



25 Interpretation and Conclusions

GMI's Rea Property is located along the western margin of the Proterozoic age Athabasca Basin. The Saskatchewan portion of the Athabasca Basin remains a hotspot for global uranium exploration and production. At the effective date of this report, there are 2 producing uranium mines in Canada located in Saskatchewan on the eastern side of the Athabasca Basin: Cigar Lake and McArthur River. As of 2022, they account for 14.8% of the world's uranium production (World Nuclear Association, 2024).

Apart from Orano Canada's adjacent-property Maybelle River Project in Alberta, which is surrounded by the Rea Property, the western Alberta portion of the basin has, by comparison, had minimal exploration. This could possibly change because exploration interest in the southwestern margin of the Athabasca Basin has gained uranium exploration company interest since 2012 when shallow high-grade deposits were discovered within the Patterson Lake Corridor, SK. Since then, several deposits have been discovered in this region and have subsequently advanced to the Feasibility Stage toward potential commercial development (e.g., PLS, Rook I).

Note: The QP has been unable to verify the adjacent property information, and therefore, the information is not necessarily indicative of the mineralization on the Rea Property that is the subject of the technical report.

25.1 Results and Interpretations

Since the previous technical report by Annesley and Eccles (2014), the size of the Rea Property has increased from 12 permits totaling 88,464 ha to 16 permits totaling 125,328 ha (an increase of 29%). Also, since Annesley and Eccles (2014), GMI has conducted 1) a 35.7-line kilometre ground TDEM survey that was successful in identifying a single conductor that extends in a northerly trending orientation over a distance of at least 1.8 km, and 2) office-based geophysical re-processing and re-interpretation study.

The early-stage project warrants follow up exploration. Historical exploration work and studies show mineralogical and geochemical similarities between uranium mineralization in the Maybelle River area to known deposits in the Saskatchewan portion of the Athabasca Basin (Kupsch, 2004; Kupsch and Catuneanu, 2007; Wheatley and Cutts, 2013).

A geophysical interpretation study conducted by Fathom Geophysics, on behalf of GMI, documents evidence of major, broadscale, arcuate, NNW-trending bedrock geological structures underlying the Rea Property area, which in places develop broadly N-trending or NW-trending features. Situated at, or near, or along-trend, from the major NW-trending bedrock structures, minor ENE-trending sinistral shear fabrics were also observed. Fathom Geophysics authors speculate that perhaps the combined behavior of the broadly NNW-trending sinistral shear faults and the broadly ENE-trending sinistral shear faults could produce vertically oriented dilational 'torque-created tubes' that are potentially favorable for the precipitation of uranium mineralization (Fathom Geophysics, 2023b). Candidate areas for this type of exploration target within the Rea Property include the Maybelle River Shear Zone (Maybelle River corridor) and Fletcher Fault (Net Lake corridor).

Regional observations associated with the Fathom Geophysics report include a western Athabasca Basin magnetic signature defined as being "pulled down"; this signature extends southward, beyond the defined erosional boundary of the southwestern Athabasca Basin. The regional gravity data images suggest that the far west Athabasca Basin may involve along-strike NE-trending continuances of activity that produced the Clearwater and Tantato domains. Alternatively, the pulled-down regional magnetic signature may be related



to 1) deep-seated and laterally extensive radiogenic batholith emplacement activity, or 2) a currently unrecognized intracontinental silicic large igneous province, which could potentially explain the presence of mylonitic microgranite at Maybelle River Project. Fathom Geophysics also concluded that there are unique fabric orientations in the southeast portion of the Rea Property, which could potentially be associated with the Beatty Trough in the southwest portion of the Athabasca Basin.

The geophysical re-interpretation has enabled GMI to infer three corridors for future exploration.

- The Maybelle River corridor extends northward from Orano Canada's adjacent-property Dragon Lake
 prospect along an inferred, but historically drill-tested, conductor(s) for approximately 11 km. The
 geophysical study highlighted numerous graphitic shear rocks within the corridor along a major
 sinistral shear known as the MRSZ. Five historic drillholes within the corridor yielded either
 anomalous uranium values or pathfinder indicators, such as clay alteration or dravite, and
 brecciated and altered sandstones above the trace of the basement EM conductor (Maybelle River
 Shear Zone).
- The Net Lake corridor is southwest of the Maybelle River corridor, west and parallel with the MRSZ, and has an inferred conductor(s) that is/are approximately 20 km in strike length. The geophysical study highlighted numerous graphitic shear rocks along a major sinistral shear: a similar structural trend to the MRSZ. Minimal historic drillholes have tested the area, although five of twenty holes intersected anomalous uranium and associated pathfinder elements such as vanadium, nickel, cobalt, and arsenic, and pathfinder minerals including clay alteration and dravite.
- The Keane Lake corridor is assumed from the geophysical study to extend for approximately 40 km in length. Like the Maybelle River corridor, the major sinistral shear is offset by younger northeast striking sinistral shear faults, which may be an important control to localizing uranium mineralization. However, unlike the Maybelle River and Net Lake corridors, graphitic shear rocks were only interpreted from geophysics in the northern portion of the corridor.

The structures, as inferred through electrical geophysical methods, in the three prospective corridors are believed to be fundamental to the formation of uranium mineralization because conductive, graphite-bearing shear zones in basement rocks beneath sedimentary basin layers can be intrinsically associated with unconformity-style uranium deposits within the Athabasca Basin. Within these corridors, the shear zones could also be associated with extensive hydrothermally alteration zones within the upper crystalline basement, at the unconformity, and within the overlying sandstone.

25.2 Qualified Person Opinion on GMIs Exploration Work

The airborne geophysical surveys, ground surveys, diamond drilling programs, and other previous work performed historically within the Rea Property area (particularly by Eldorado and Uranerz) forms large geochemical and geophysical sets of data that has been systematically compiled. The resulting geological database is strategic for continued exploration.

GMI has compiled extensive historical geophysical datasets and used modern reprocessing techniques and inversion modeling to advance the geological interpretation. The objective of study was to highlight features in the geophysical data that could be associated with sandstone-hosted uranium mineralization, including inferences to faults, fault zones, and basement conductors. A new interpreted map of lithology and structure

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of the basement was produced that depicts zones of graphite shear-dominated rocks within metapelite basement rocks (i.e., target zones for future exploration). Subsequently, GMI has identified over 70 km of prospective areas within three distinct corridors for future exploration: Maybelle River, Net Lake, and Keane Lake.

In the QPs opinion, the historical compilation, geophysical re-processing and re-interpretation methods are reasonable and resulted in a valid target delineation exercise for future uranium exploration work at the Rea Property. The QP advocates that the information and exploration data presented in this technical report forms a reasonable database for further exploration. Further work is required to verify the historical work results and validate the numerous geophysical-interpreted conductors. The potential for the Rea Property area to contain unconformity-type uranium occurrences is well-founded based upon the favourable bedrock geology, including the presence of graphitic mylonite zones and brittle fault zones within the basement rocks and the anomalous alteration and tectonic zones intersected in historical drill core to date within the Rea Property.

25.3 Risks and Uncertainties

The Rea Property is an early-stage exploration project. Further work is required to verify the historical work results and validate the numerous geophysical-interpreted conductors. To the best of the QPs knowledge, other than exploration permitting processes identified in this report (application processing, First Nations and Métis consultation, Caribou Protection Plans), there are no other significant risks and uncertainties that could reasonably be expected to affect the company's ability to conduct mineral exploration at the Rea Property.



26 Recommendations

The Rea Property is an early-stage exploration property and a property of merit. Additional exploration work is required to validate the numerous geophysical-interpreted conductors, and drilling to verify the historical drilling results and test new target areas. The recommendations provided below are current exploration strategies being used to explore for uranium within the Athabasca Basin.

A two-phase approach is recommended. Phase 1 focuses on ground geophysical surveys (gravity, moving loop electromagnetic, and ambient noise tomography) to refine historical conductors, define new conductors, and delineate priority drill targets. The Phase 2 work is dependent on the positive results of the Phase 1 geophysical surveying. Phase 2 focuses on exploratory diamond drilling to test the geophysical targets with the primary objective of locating new occurrences of uranium within the Rea Property, validate historical drilling, and potentially define areas of mineralization along with alteration and breccia zones. The total cost of the combined Phase 1 and Phase 2 programs, with a 10% contingency, is CDN\$2,156,000 (Table 26.1).

26.1 Phase 1 Geophysical Surveys

Although the Rea Property has historical geophysical surveys, additional ground-based methods are warranted. GMI's re-interpretation of the historical surveying has outlined three corridors as future targets for exploration across the Rea Property. These corridors, which include Maybelle River, Net Lake, and Keane Lake, require ground-based geophysical methods to produce localised targets for drilling. Due to the accessibility of the Property, it is advised that the geophysical surveys are conducted in winter with crews stationed in Fort McMurray.

An airborne gravity survey was conducted on the Rea Property in 2009; however, the data are not sensitive enough to select targets for drilling. It is suggested that a ground-based gravity survey is completed within select portions of the Maybelle, Net Lake, and Keane Lake corridors outlined in this technical report. The cost of the ground gravity surveying is estimated at CDN\$165,000. The cost is based on CDN\$75 per station at approximately 20 stations per day along with field personnel, accommodations and food, and transportation.

A ground-based moving loop electromagnetic (EM) survey is recommended to further image the conductors interpreted from the historical work, specifically on the norther extension of the MRSZ where the conductor disappears in the UTEM data. A survey of 20- to 50-line kilometres is envisioned. The cost of the ground electromagnetic surveying is estimated at CDN\$150,000, including rentals, field personnel, accommodations and food, transportation, and data processing.

Ambient Noise Tomography (ANT) is a relatively new exploration technique that has been utilized in the Athabasca Basin. The method utilises ambient low frequency waves (noise) that travel through the ground. The waves are collected by receivers (geophones) placed in the ground and spaced over the area of interest. From this technique, zones of low and intermediate seismic velocity are imaged. These zones are important as hydrothermal alteration replaces the more dense and interconnected minerals, such as quartz or feldspar, with less dense and therefore lower velocity minerals such as clays. Thus, picking out clay alteration halos at the sandstone-basement interface, which would be the location of uranium mineralization. The ANT method is useful as a low-impact exploration technique as the geophones are buried to a shallow depth (maximum of 50 cm), do not generate loud frequencies, and do not require energy generation. The ANT



survey can only be run in snow-free conditions. The cost of the ground ANT survey is estimate at CDN\$500,000 for rental of the equipment, field personnel, accommodations and food, transportation, and processing of the data for a one-month survey.

The total cost of the combined Phase 1 work program, with a 10% contingency, is CDN\$896,500 (Table 26.1)

26.2 Phase 2 Exploratory Drilling and Technical Reporting

The Phase 2 work is dependent on the positive results of the Phase 1 geophysical surveying. The total cost of the combined Phase 2 work program, with a 10% contingency, is CDN\$2,156,000 (Table 26.1).

The recommended Phase 2 work involves historical data verification, and a 2,600 m diamond drill program. The work programs should include:

- Data legacy verification studies to verify the subsurface lithologies and assays recorded in historic drillhole information. The QP recommends the Issuer access archived Red Dragon cores and consider re-logging the cores, conduct non-destructive core measurements (e.g., scintillometer, hyperspectral), and re-sample and analyze the archived core. In addition, the drillhole program should twin a minimum of 2-3 historical holes to verify the historical drillhole lithologies and assays.
- Exploration drilling to test conductor targets identified within the Phase 1 geophysical survey results to test for potential mineralization, alteration, and breccia zones associated with Athabasca Basin unconformity-type uranium deposits.
- Rigorous QA-QC protocols as part of any future drill program that includes the random insertion of control samples such as Certified Reference Material standard samples, duplicate samples, and blank samples, within the sample analytical stream.

Phase 1 results pending, it is proposed that the Maybelle River corridor become a priority target due to its association with the MRSZ.

Due to the remoteness of the Property and the lack of summer road access, it is recommended that the program either be conducted as part of a summer helicopter-supported program, or a winter-based camp program. Based on a summer heli-supported program with four-hour minimums, the estimated cost the exploratory drilling on the Rea Property is CDN\$1,100,00. This estimate is based on drilling costs of approximately CDN\$160 per metre with all-in costs, including sample shipping and analyses, of CDN\$425 per metre.

The results of the legacy data verification work are intended to 1) advance the confidence level of the subsurface geochemistry and mineralization associated with the Rea Property, and 2) verify the Red Dragon legacy drillhole information with the potential to add the Red Dragon drillhole information and data to the Rea Project data library for future target delineation work and potential future estimation of mineral resources.

Finally, ongoing preparation of technical reporting and disclosure is recommended that is prepared in accordance with CIM definition standards and best practice guidelines (2014, 2018, 2019) and the disclosure rule NI 43-101. The estimated cost for an updated technical report is approximately USD\$45,000.



Table 26.1 Future work recommendations.

Phase	ltem	Description	Cost estimate (CDN\$)	Sub-Total (CDN\$)
Phase 1	Ground gravity survey	Ground-based geophysical survey methods to validate historical conductors and delineate localised target zones for drilling within the Maybelle River, Net Lake, and Keane Lake corridors.	\$165,000	
	Ground electro- magnetic survey		\$150,000	
	Ambient Noise Tomography		\$500,000	\$815,000
Phase 2	Verification and exploratory drill programs	Roughly 2,600 m program to 1) validate historical drilling, 2) test exploration corridor's and conductors identified by historical and current geophysical survey results.	\$1,100,000	
	Technical reporting	Disclose material milestones that could include initial mineral resource modeling and estimations in accordance with CIM (2014 2018, 2019).	\$45,000	\$1,145,000
			Sub-total	\$1,960,000
		4 00/	contingonou	¢106.000

10% contingency \$196,000

Total \$2,156,000





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28 Certificate of Author

- I, D. Roy Eccles, P. Geol., do hereby certify that:
- 1. I am a Senior Consulting Geologist and Vice-President (Corporate Compliance) of APEX Geoscience Ltd., #100 11450-160 Street, Edmonton, Alberta T5M 3Y7.
- 2. I graduated with a B.Sc. in Geology from the University of Manitoba in Winnipeg, Manitoba in 1986 and with a M.Sc. in Geology from the University of Alberta in Edmonton, Alberta in 2004.
- 3. I am and have been registered as a Professional Geologist with the Association of Professional Engineers and Geoscientists of Alberta (APEGA, Member Number 74150) since 2003, and Newfoundland and Labrador Professional Engineers and Geoscientists (PEGNL, Member Number 08287) since 2015.
- 4. I have worked as a geologist for more than 35 years since my graduation from university and have been involved in all aspects of mineral exploration, mineral research, and mineral resource estimations for metallic, industrial, and critical mineral projects and deposits.
- 5. I have read the definition of "Qualified Person", as set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101). By reason of my education, affiliation with a professional association and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101. My experience with respect to uranium includes Qualified Person technical work in the Western Canada Sedimentary Basin and southwestern United States. In my previous capacity as a geologist with the Alberta Government, I am familiar with the geology of the western Athabasca Basin, its uranium history, and future potential.
- 6. I prepared, and accept responsibility, for all sections of the "NI 43-101 Technical Report, Geological introduction to the Rea Uranium Project, Alberta, Canada", with an effective date of April 30, 2025 (the Technical Report). I performed a site inspection at the Rea Property on October 30, 2024, verifying the land position, access routes, physiography, and surficial geology.
- 7. To the best of my knowledge, information and belief, the Technical Report contains all relevant scientific and technical information that is required to be disclosed, to make the Technical Report not misleading.
- 8. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
- *9.* I am independent of GoldMining Inc. and the Rea Property, applying all the tests in section 1.5 of NI 43-101 and Companion Policy 43-101CP.
- 10. My prior involvement with the Rea Property includes the following technical report effectively dated September 12, 2014, that was prepared on behalf of Brazil Resources Inc. (now GoldMining Inc.) in my capacity as an independent geological consultant and Qualified Person.

Annesley, I.R. and Eccles, D.R. (2014): National Instrument 43-101 Technical Report on the Rea Property, Northeastern Alberta, Canada; Technical Report prepared on behalf of Brazil Resources Inc., 84 p.

11. I have no other prior involvement with the Property that is the subject of this Technical Report.

Effective date: April 30, 2025 Signing date: May 16, 2025 Edmonton, Alberta, Canada



D. Roy Eccles P. Geol. P. Geo. (APEGA #74150)