

# A TECHNICAL REPORT OF EXPLORATION ACTIVITIES AND RESULTS ON THE SOUTH PRESTON PROJECT, SOUTH-WESTERN ATHABASCA BASIN, SASKATCHEWAN, CANADA

FOR

#### CAT STRATEGIC METALS CORP.

prepared by:

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## 1. SUMMARY

#### **1.1 INTRODUCTION AND TERMS OF REFERENCE**

This Technical Report ("**Report**") has been prepared in accordance with the guidelines of National Instrument 43-101 ("**NI 43-101**") by Watts, Griffis and McOuat Limited, Geological and Mining Consultants ("**WGM**") Senior Geologist, Mr. Albert (Al) Workman. The South Preston Project is a uranium exploration project comprising a group of 12 mineral dispositions located in the vicinity of the south-western Athabasca Basin in northern Saskatchewan. The dispositions are owned by CAT Strategic Metals Corp. ("**CAT**"). With exploration experience in a wide variety of geological terranes over a span of more than 45 years, including ground-breaking experience with Gulf Minerals in the eastern Athabasca Basin, Mr. Workman is a Qualified Person in accordance with the definition prescribed in NI 43-101. He is also a member of the Association of Professional Engineers and Geoscientists of Saskatchewan ("**APEGS**") as well as being a member of the Professional Geoscientists of Ontario.

CAT Strategic Metals' overall Mission Statement and corporate strategy is to source, identify, acquire and advance property interests located in mineral districts proven to have world class potential. CAT's shares trade on the Canadian Securities Exchange ("**CSE**") under the trading symbol "CAT", and on the Frankfurt Stock Exchange under the symbol "8CH".

During September, 2021, CAT engaged WGM for the purpose of managing its exploration activities focused on exploring for economically viable uranium mineralization on CAT's South Preston uranium located in Northern Saskatchewan (Figure 1). The property is situated adjacent to and partly straddling the unconformity between Athabasca Group sedimentary rocks and basement metamorphic rocks in the Athabasca Basin structural province in northern Saskatchewan.

WGM's initial discussions with CAT focused on the most productive approach to advancing the exploration of the South Preston property. After an initial review of the available project data, WGM expressed its interest in carrying out the project with CAT and provided a proposal to the company outlining the scope of work required to ascertain the potential for uranium mineralization similar to other unconformity-type deposits in the Athabasca Basin. These types of deposits are the highest-grade uranium deposits known.

The location of CAT's South Preston property is predominantly outside of the area currently covered by the Athabasca Formation sandstone. As a result, the area has not received the same degree of attention and exploration given to other areas of the Athabasca Basin crossed by

unconformity. The CAT project area therefore has the distinct advantage that basement-hosted mineralization will not be covered by many hundreds of metres of Athabasca sandstone.

Particular interest in the South Preston property has increased as a result of CAT's neighbour, Azincourt Energy, discovering a conductive zone on its East Preston property a short distance to the north of the CAT dispositions; Azincourt's SSW-trending zones project directly onto CAT's exploration property. As mentioned in the foregoing section, the geological setting in respect to lithology, structural trends and indicative conductivity evidence of the CAT property is inferred to be similar to that of the Fission Uranium and NexGen Energy properties in the Patterson Lake South area located about 30 km to the northwest (Figure 2).

WGM initiated its work for CAT by assembling a library of the historical exploration carried out in the South Preston area by previous exploration companies. This review was based on the voluminous exploration assessment records filed with the Saskatchewan Ministry for Energy and Resources, with details, conclusions and recommendation provided in a report delivered to CAT in early January. The information was systematically catalogued, compiled and reviewed to develop points of reference by which CAT's exploration could be focused on specific target areas. Based on its comprehensive review of information dating as far back as the 1960s, WGM strongly recommended that CAT initiate a systematic exploration project employing conventional exploration methods to assess the potential for uranium mineralization consistent with unconformity-type deposits that are known to exist in the Athabasca Basin. These types of deposits are the highest-grade uranium deposits known.

For reasons of exploration efficiency, WGM recommended that CAT's initial exploration should focus on airborne geophysical surveys of two specific areas, and the initially proposed property-wide radon geochemical surveying could be postponed pending the outcome of this initial work. Accordingly, taking into consideration appropriate technical specifications, airborne contractors with suitable systems and experience were quickly contacted to determine potential availability and pricing. The availability of airborne surveying systems was very limited in early 2022, but it was determined that BECI Consulting based in southern Ontario which operates a heliborne time-domain EM plus aero-magnetometer system had existing contracts in Saskatchewan, and thus was a good candidate to conduct the proposed surveys. A detailed contract was thereupon negotiated with BECI, with survey coverage planned for two blocks that were judged most favourable, namely Block A in the west (at 100 m line spacing) and Block B in the east (at 200 m line spacing), with the survey scheduled for late spring. However, due to problems with helicopter availability, equipment and weather, the survey start was delayed until late June, and completed expeditiously in early July.

This Technical Report provides an update on exploration carried out under WGM management during June through early September, 2022. Mr. Workman designed and directed all aspects of the field work which was carried out by a WGM field crew consisting of senior geologist Ricardo Franco, biologist Cameron Majcik and field assistants provided by indigenous members of the Clearwater River Dene Nation.

The Effective Date of this report is 1 February, 2023 (the "**Effective Date**"). The difference between completion of the field work in early September, 2022 and the date of this report is entirely due to unprecedented delays in receiving final analytical results from the Saskatchewan Research Council's GeoLab in Saskatoon.



CAT Strategic Metals Corp. South Preston Project 4 April, 2023





#### **1.2 PROPERTY DESCRIPTION AND OWNERSHIP**

CAT's South Preston uranium property comprises 12 contiguous dispositions totalling  $28,395.85 \text{ km}^2$  located on the southwestern margin of the Athabasca Basin in northern Saskatchewan.

The dispositions are owned 100% by CAT Strategic Metals Corp. subject to purchase agreements with the original owners dated 15 February, 2021. The owners retain a 2% "Gross Royalty" based on total revenue received by CAT for mineral production from the South Preston dispositions.

#### **1.3** ACCESS, CLIMATE, INFRASTRUCTURE AND PHYSIOGRAPHY

The closest access road is gravel road 955 that runs north from La Loche. Road 955 is accessible from Prince Albert by taking Highway 3 West to Shellbrook, Highway 55 North to Green Lake and north on Highway 155 to La Loche. The distance from Prince Albert to La Loche is 508 km with an additional 171 km to the Great Bear Camp, the nearest staging point to the Property. The easiest and fastest access is by chartered float-plane from the airport in Fort McMurray, Alberta located 160 km to the west.

The topography is flat to gently rolling and swampy in places, typical of the boreal forest in northern Saskatchewan. The total relief is approximately 90-100 m, ranging from about 465 m to 560 m als. The forest cover, which is frequently sparse, varies from jack pine, found in well-drained sandy soils along eskers, to black spruce which populates low-lying areas.

There is no infrastructure within the CAT dispositions. Several seasonal camps are operated in the general vicinity of the South Preston Project area. These include Lloyd Lake Lodge, situated on the western side of Lloyd Lake and no closer than 8.5 km from the dispositions, and the Big Bear Camp located on Gryger Lake about 60 km northwest of the dispositions. A small private cabin is found in an isolated location on the western shore of Kelic Lake approximately 12 km northeast of the dispositions.

The average daily temperature varies from a high of +24oC during July to a low of -25oC during January. The reported precipitation averages include an annual snowfall of approximately 41



cm and an annual rainfall of 5.26 cm. During July and August there is minimal rainfall and light winds. While winter exploration work is commonly favoured in this region, early thaws at the end of March have recently caused exploration drilling programs to terminate work sooner than expected.

Like with infrastructure, there are no local resources available. The Clearwater River Dene Nation ("CRDN") owner of the Big Bear Camp, can supply manpower for projects if proper notice is given well inn advance. The camp administration can also provide lodging and meals for exploration crews and can arrange for fuel supplies for helicopters and float-planes. Irregular delivery of equipment and supplies can also be arranged using the camp as a drop point. As mentioned above, float-plane charters are available from Fort McMurray – Cessna 172 and Caravan airframes are flown by McMurray Aviation.

The topography is flat and swampy in places. Total topographic variation is  $\sim$ 90 m, from 468 m to 560 m with a mean elevation of 495 m



## 1.4 HISTORY

The initial surge of uranium exploration in the Athabasca Basin was predicated on the pioneering discovery in 1967 of the Rabbit Lake deposit by Gulf Minerals Resources later to become Gulf Minerals Canada Ltd. ("**Gulf Minerals**"). Although searching for sandstone-type deposits based on the roll-front model prevalent in New Mexico, Gulf Minerals' radiometric survey led to the discovery of high-grade uranium-bearing boulders that were traced in the up-ide direction to the shore of Rabbit Lake. The discovery hole followed the next year, and the mine was developed and brought into production in 1975. Until Gulf Minerals' revolutionary discovery, unconformity-type deposits were unknown.

Although located in the Athabasca Basin, the area of the CAT dispositions is under-explored largely because its dispositions are almost entirely free of the Athabasca sandstone cover rocks near the south margin of the basin. Until recently, mostly in the last decade, those exploring for uranium in the basin have focused their efforts in areas where the sandstone is present because of the importance attributed to the unconformity between the metamorphic basement rocks and the younger sandstone formations. Unconformity-type uranium deposits can occur entirely in the sandstone, at the unconformity in both sandstone and basement rocks, or entirely in the basement as much as 500 m or more below the unconformity. The CAT dispositions are located in an area where the sandstone cover has been removed through erosion. Nevertheless, based on the gradient of the unconformity to the north, the basement rocks on the CAT property are thought to be within 50 to 150 metres of the former unconformity.

Exploration accelerated during the 1970s as many of the oil companies were cash-rich and created mineral subsidiaries to explore for uranium and/or base metals deposits. Much of this activity ceased in the early 1980s when a significant oversupply of uranium depressed uranium prices and high interest rates impacted capital markets. Uranium exploration in the Athabasca Basin slowed yet significant exploration discoveries were made in the years that followed Gulf's discovery: Key Lake (1975), Cluff (1975), Midwest (1977), McLean Lake (1979), Cigar Lake (1981), McArthur River (1988), Shea Creek (2004), Roughrider (2008), Centennial (2008), Phoenix (2008), Patterson Lake South Triple R (2012), Gryphon (2014) and Arrow (2014).

The Centennial, Triple R and Arrow deposits point to the substantial untested potential of the southwestern Athabasca Basin. The history of the basin and that of the region surrounding the CAT property is presented in much greater detail in Chapter 6. The reader is encouraged to review the details, perhaps exhaustively presented in this chapter, because this information provides CAT with substantial guidance as to what exploration techniques are most effective



in discovering uranium deposits in the Athabasca Basin. Previous studies provide important and specific guidance concerning:

- the geology of uranium deposits;
- historical anomalies that provide evidence (vectors) towards potential targets;
- techniques that are not effective in provide conclusive results;
- geochemical thresholds and signatures associated with known deposits
- geophysical signatures related to mineralization; and,
- the best technologies for defining targets for drilling.

The continuing exploration of CAT's neighbour, Azincourt Energy Corp., has been used to inform the design and execution of CAT's exploration program. As a result, CAT has been able to confirm that a series of strong bedrock electromagnetic conductors on the Azincourt property continue onto the CAT property. The conductors have a signature that shows a graphite-associated response, important for triggering uranium mineralization. Follow-up geochemical sampling by CAT's exploration team has discovered strong uranium and radiogenic lead anomalies on its property.

## 1.5 GEOLOGY AND MINERALIZATION

#### 1.5.1 GEOLOGICAL SETTING

The CAT property is characterized by occasional outcrops of bedrock and variably distributed muskeg deposits which overlie a layer of unconsolidated glacial till, esker and outwash (sand and gravel) deposits that may be several 10s of metres in thickness. Over most of the South Preston Property, these surficial deposits rest on basement rocks that are part of the western Churchill Province of the Canadian Shield. These rocks belong to the Rae Sub-Province which takes in most of the western area underlying the sedimentary rocks that characterize or define the Athabasca Basin. Locally, the basement is represented by orthogneiss intruded by pegmatite dikes and less commonly by diabase and intermediate intrusions. There has been no systematic geological mapping in the South Preston project area.

The Athabasca Basin (the "**Basin**") is an oval-shaped sedimentary basin with approximate dimensions of 450 km east-west and 200 km north-south. The maximum thickness of the Athabasca Group sedimentary strata that make up the basin is 1,500 m near its centre.

CAT's South Preston Property (the "**Property**") is located near the south-western margin of the Athabasca Basin. Flat-lying to shallowly dipping sandstone strata of the Athabasca Group



unconformably covers the basement assemblage only in the extreme north-eastern part of the South Preston property. There is no evidence of the presence of any Cretaceous or Paleozoic sedimentary sequences in outcrop or in situ overlying the Precambrian rocks.

The basin hosts high-grade uranium deposits (e.g., Cigar Lake, Rabbit Lake, McArthur River) including the Cluff Lake Deposit which is located 150 km northwest of the survey area. While mineralization at Cluff Lake occurs within the Calder Basin, all uranium deposits within the Basin are thought to have been emplaced over a narrow time interval from 1330 – 1380 Ma (Cumming, Darija Krstić, 2011). Importantly there are several episodes of redeposition (~1280, ~1000, ~575, ~225 Ma). The general trend of the metamorphic units comprising the basement is north-northeast.

The basement rock found on much of the licences is orthogneiss. The Basin model involves subvertical faulting/fracturing of the basement, and the infiltration of uranium-bearing brines moving along the basement-Athabasca unconformity into these structures. Deposition of uranium occurs when the fluids interact with graphite and/or sulphide-bearing basement rocks, thereby triggering REDOX reactions that result in uranium deposition. The exploration model is for graphite/sulphide-rich subvertical conductors within the basement rock and/or sub-horizontal conductors along the basement floor representing a "spilling-out" of the conductive graphite/sulphide. Graphite, intimately associated with uranium mineralization, has been identified as integral to ore formation in many deposits including the Collins Bay deposits discovered in the late 1970s and the deposits found recently by Fission Uranium and NexGen Energy in the Patterson Lake South area. Graphite is therefore useful as a vector in identifying basement structures near surface and at depth that may be host to uranium mineralization.

# **1.5.2 MINERALIZATION**

The South Preston exploration project was initiated with an airborne geophysical survey in late June, 2022 and followed up with only a single 30-day field program dedicated biogeochemical sampling and prospecting. Not surprisingly, no mineralization has yet been found on the CAT property. Geophysical exploration to date has yielded evidence of shear zones, some of which are graphitic, with signatures not unlike those associated with the Triple-R deposit discovered by Fission Uranium Corp. only 50 km to the northwest (BECI report of geophysical survey – Appendix 1). Biogeochemical surveying shows the presence of strong uranium and radiogenic lead anomalies that indicate a potential for high-grade unconformity-type mineralization on the CAT property. According to the deposit model, uranium mineralization would be expected to occur as uraninite in clay-altered, brittle shear zones.



#### **<u>1.6</u> DEPOSIT TYPE**

CAT's exploration is based on a version of the unconformity-type model whereby oxidizing uranium-bearing fluids migrating along the Athabasca unconformity infiltrate and react with sheared graphitic metasedimentary rocks below the unconformity (now removed). Mineralization occurs at, above or below the unconformity as a result of REDOX reactions which destabilize the fluids resulting in the precipitation of uranium minerals commonly in association with strong clay alteration (Figure 2). Mineralization has been discovered as much as 100 m above the unconformity and as deep as 500 m below. The shear zones typically, though not always, are steeply dipping and are commonly NE trending. Uranium occurs primarily as uraninite in pods and semi-massive replacements and occasionally as veins, however, where it occurs at or close to surface, strong oxidation may occur resulting in various oxides and hydroxides such as uranophane  $[Ca(UO_2)_2(SiO_3OH)_2 \cdot 5H_2O]$  and many other rarer uranium-bearing minerals such as sklodowskite  $[Mg(UO_2)_2(HSiO_4)_2 \cdot 5H_2O]$  with which nickel mineralization may associate. Extensive clay alteration in the basement consists of chloritization, hematization and illite alteration with dravite (a high-boron tourmaline). In the absence of the Athabasca Group and regolith (tan coloured and cross-hatched areas in the figure) and the unconformity, as in the South Preston Project area, uranium mineralization would be solely in basement rocks (pink in this figure) and localized along brittle structures.



Figure 2: Idealized Setting of Uranium Mineralization at Major Deposits in the Athabasca Basin. The yellow zones indicate areas of strong clay alteration (*from* Small Cap Investment Research article "CanAlaska Uranium's Project Generator Strategy Provides Solid Foundation for Increasing Shareholder Value", 31 October 2020.



## 1.7 EXPLORATION

During June, 2022, CAT completed a detailed helicopter-borne Versatile Time Domain Electromagnetic ("**VTEM**") and magnetometer survey over portions of the South Preston Property totalling 984.7 line-kilometres. The survey areas covered two key target areas that have geological similarities to established exploration models and that were believed to offer potential for basement-hosted, unconformity-type uranium deposits such as Fission Uranium's Triple R deposit and other deposits in the eastern basin such as Rabbit Lake.

In the western part of the Property, the survey was focused on the probable extension of known graphitic conductors discovered by Azincourt Energy Corp. ("**Azincourt**") adjacent to the CAT property. Some of these conductors can be projected into areas on the CAT Property where elevated background radioactivity and radioactive boulders were found during historical surveys. In the eastern part of the CAT Property, the airborne survey covered an area that was previously described as containing a NE-SW trending, graphitic shear zone.

Several SW-trending conductive zones were discovered on the western part of the CAT property some of which are continuations of the conductors discovered by Azincourt to the northeast. A short conductor striking west to northwesterly was discovered in the eastern part of the CAT Property.

The area surrounding the EM conductors was surveyed for biogeochemical analysis in selected areas by sampling recent growth twigs from black spruce and jack pine trees, an exploration technique proven to be successful in other parts of the Athabasca Basin. The effectiveness of this approach is well-established based on experience elsewhere in the Athabasca Basin. Using twig samples collected solely from black spruce in a test area, Dunn (1983) reported that differences in uranium concentrations are attributed to the amount of labile uranium that is accessible to the roots whether it is in the bedrock or dissolved in formation waters. Dunn concluded that anomalies detected in the test area were the result of predominantly upward migrating, uranium-bearing formation waters sourced from uranium mineralization at the base of the Athabasca Group. Dunn expressed the view that "spruce twigs can provide a useful lowcost exploration tool for identifying uraniferous areas in boreal forests". A subsequent study over the McLean and Jeb orebodies at McLean Lake showed distinct anomalies closely associated with these deposits (Dunn, 1983a). Uranium was concentrated in the black spruce twigs more than any part of any common species in the test area. More recently, Dunn (2007) reviewed the results of 10,000 km<sup>2</sup> of biogeochemical sampling in the Athabasca Basin noting that background values for uranium in black twig ash was less than 1 ppm. It is clear from these studies that background levels of uranium can be variable and the magnitude of an



anomaly above background is more important than the absolute strength of an anomaly as measured in parts per million. Biogeochemical sampling of black spruce has also been shown to produce high-amplitude anomalies over known uranium deposits such as Key Lake, McLean Lake and Cluff Lake. CAT's survey resulted in the delineation of multiple strong and discrete anomalies that are closely spaced above EM conductors and comparable with anomalies over known deposits.

## **1.8 SAMPLE PREPARATION AND QA/QC**

Black spruce and jack pine samples were processed and analysed for trace elements by ICP-OES according to Method ICP3. Samples were placed in stainless steel pans, dried and ashed in a kiln at 500°C. The ash material was mortared and pestled to homogenize the sample after which it was transferred to a barcode-labelled, plastic snap-top vial. An aliquot of pulp was digested in aqua regia (HCl:HNO<sub>3</sub>) in a boiling water bath and then topped up with deionized water. Trace element contents were determined instrumentally using a Perkin Elmer Optima 8300DV ICP-OES spectrometer. Detection limits for the trace element suite were generally in the range of 0.01 to 1 ppm. Detection limits for the major elements were generally 0.01% or lower (see Table 4)

WGM quality control was provided by creating a duplicate sample for one out of every 30 runof-project sample. Due to the nature of the survey, no CRM's could be provided. Internal laboratory quality control was maintained though a quality control being prepared and analyzed with each batch of samples. One in every 40 samples was analyzed in duplicate. All quality control results must be within specified limits otherwise corrective action is taken.

Rock samples also were analysed using SRC's ICP3 method. Rock samples were dried and jaw-crushed following which a 250-gram sub-sample was separated using a Jones sample divider and pulverized using a ring and puck mill to 90% passing 180 µm. The pulp was transferred to a barcode labeled-plastic snap-top vial. A 0.5 gram aliquot of pulp was digested in a mixture of ultra-pure concentrated aqua regia in a boiling water bath then topped up with 15 Mohm deionized water. Total digestion and analysis was performed on samples to determine the dilution required prior to ICP-MS analysis. The ICP-MS detection limits for total analysis included all elements except for the following: Al<sub>2</sub>O<sub>3</sub>, CaO, Fe<sub>2</sub>O<sub>3</sub>, K<sub>2</sub>O, MgO, MnO, Na<sub>2</sub>O, P<sub>2</sub>O<sub>5</sub>, TiO<sub>2</sub>, As, Ba, Ce, Cr, La, Li, Sr, S, V and Zr (highlighted in blue on the detection limits table below). These elements were analyzed only by ICP-OES for total digestion (4-acid) leaching. Instruments were calibrated using certified commercial solutions. The



instrument used was PerkinElmer Optima 5300DV or Optima 8300DV, and a NEXION 2000 or Elan DRCII.

In addition to geochemical analysis, a selected set of samples was analysed mineralogically to accurately determine the rock types present on the CATR property. The SRC QEMSCAN procedures involves the cutting out of a rectangular portion from each sample which was then mounted on glass and cut to approximately 200 µm thick. The thinned rock section was polished to final analytical surface using 1  $\mu$ m diamond abrasive. Each sample was ultrasonically cleaned with deionized water and then isopropyl alcohol. The thin section samples were then coated with a 15 nm thick layer of amorphous carbon to ensure electrical conductivity of the sample surface. The QEMSCAN in the SRC Advanced Microanalysis Centre is built on an FEI Quanta 650 scanning electron microscope fitted with a field emission gun (10 nm resolution) and dual Bruker XFlash 5030 energy dispersive spectrometers ("EDS") with a maximum throughput of 1.5M cps. QEMSCAN analyses are a collection of back-scattered electron images and semi-quantitative point chemical analyses. The grain images and EDS data are combined using image analysis to calculate various parameters such as particle size distribution, mineral associations and liberation, modal abundances, etc. Operating conditions were set to 25Kv and 10nA beam current, measured in a Faraday cup at the sample surface. Data were collected in field stitch mode with a point spacing of 20µm. Raw X-ray energy spectra were compared to a mineral composition database customized for this project. Statistics from the QEMSCAN analyses are tabulated as follows:

Analyzed Area	891 mm <sup>2</sup>
Point Spacing	19.8 µm
X-ray Analyses	2,230,171 analyses per sample

Modal mineralogy is calculated from the combined analysis of the BSE images and the mineral identification from the EDS data. The volumetric abundance of the minerals is converted to mass percent from density data for typical mineral compositions.

## 1.9 DATA VERIFICATION

Data collected in the field principally involved GPS measurements of sample locations and spectrometer measurements of ambient background radioactivity and peak radioactivity. GPS measurements were repeated at each sample site to ensure accuracy. Data was recorded internally within the GPS units and physically recorded on sample cards while in the field.



Spectrometer data was recorded in all areas using a Radiation Solutions Super Spec RS125 gamma ray spectrometer. Each morning, the units were calibrated using the internal self-check function. Ambient radioactivity was also check at a selected site in the camp before departure in the morning and again in the evening to determine any occurrence of instrumental 'drift'. In the field measurements were carefully taken in such a manner that background radioactivity was measured at waist height at all locations.

On receipt of laboratory results, trace element concentrations were compared for biogeochemical samples and field duplicates. In general, the results were comparable. The magnitude of one anomaly was different between the two samples, however both were statistically anomalous in respect to the overall sample population.

#### 1.10 ENVIRONMENTAL AND SOCIAL

WGM is unaware of any pre-existing environmental liabilities on the South Preston dispositions, and based on the lack of a mining history on the Property, there is no reason to believe that continuing exploration and future production would be prevented. CAT's mineral rights are maintained provided that it completes sufficient exploration each year to satisfy the annual assessment requirements specified in the Mining Regulations. CAT must also file its exploration project plans with the Saskatchewan government for approval, and such plans are forwarded to First Nations and other potentially affected parties or communities for comment, however, these groups do not have a veto over CAT's exploration plans. Certain specific conditions may be imposed if the exploration or development project impacts on environmental purposes. Local concerns regarding traditional fishing and hunting areas may be considered, however it has not been the practice of the provincial authorities to unnecessarily burden companies seeking to explore for mineral deposits. Subject to the current regulations concerning mineral projects in the Province of Saskatchewan, CAT's rights to the exploitation of mineral resources on its project lands are therefore protected.

In addition to existing regulations, the provincial authorities encourage social engagement with First Nations and other local communities, however it is the sole responsibility of the provincial authorities to ensure that such communities are informed regarding exploration projects. At this time, CAT and WGM have maintained an open channel of communications with



community leaders however given the location of the project, no conflicts or disputes have arisen.

## 1.11 CONCLUSIONS

CAT's approach to exploring the South Preston project area is sound, developing its initial exploration approach based on an exhaustive review of historical exploration work followed by conventional geophysical and biogeochemical surveying, and bedrock sampling for geochemical analysis and lithological characterization studies.

To date, the results of CAT's exploration have been very encouraging. In the western survey area, the airborne EM survey delineated multiple bedrock conductors in two zones extending southwesterly from the Azincourt property to the north. Strong biogeochemical uranium and radiogenic lead anomalies are located as distinct multi-point anomalies trending above and along some of these conductors. The uranium anomalies are of an order of magnitude comparable to similar anomalies over known uranium deposits such as Key Lake (Walker, 1979). In the eastern survey area, only a single, northwest-trending bedrock conductors was detected. This zone has an uncertain relationship to the geology. The biogeochemical survey delineated several very high uranium and radiogenic lead anomalies having a north-easterly trend parallel to the indicated location of the graphitic shear zone.

Unfortunately, the analytical results from the biogeochemical survey were not provided to WGM and CAT until early February, and consequently CAT has had no opportunity to follow up these discoveries with detailed groundwork. At this time, WGM and CAT are planning a summer-2023 exploration program dedicated to explaining the anomalies and exploring additional areas of interest. This exploration is likely to be a combination of geological mapping, bedrock sampling, additional geophysical surveying (ground and airborne) and additional biogeochemical sampling.

#### 1.12 RECOMMENDATIONS AND PROPOSED EXPENDITURES

The recommended exploration program must enable CAT to maintain its land holdings until such time as relinquishment of portions of the CAT property can be justified. Priority at this time must be given to the Eastern Group of dispositions.



To expedite satisfying the expenditure requirements for the Eastern Group of dispositions, an airborne VTEM-magnetometer survey should be carried out during the summer of 2023. The coverage area would total approximately 125 km<sup>2</sup> and include all of dispositions MC00014561, MC00014558, the southern half of MC00014559 in the area adjoining that previously surveyed, and most of MC00014574 which would add another 50 km<sup>2</sup>. The estimated cost for VTEM and magnetometer would be approximately \$150 per kilometre or a total cost of \$190,000 assuming a 100-metre flight line spacing. Given the airframe available, it would not be possible to add radiometric equipment to the helicopter. A program of biogeochemical sampling should be completed over additional areas of the property, including any areas in the Eastern Group dispositions where conductors are discovered. Using the previously completed survey as a model, this exploration would cost approximately \$225,000 to \$250,000 for a 15-day program that would include planning and support, all field-related costs, laboratory analysis and reporting. Combined with the proposed airborne survey for a total cost of approximately \$415,000, this ground program would satisfy the assessment expenditure requirements (\$352,806) for the Eastern Group through to May, 2024. It would provide sufficient data whereby a decision could be made as to whether some of the dispositions could be relinquished to reduce overall expenditure requirements.

There is no immediate need to expend money on the Western Group of dispositions because this group currently carries excess expenditures from the 2022 exploration work sufficient to satisfy the 2023 and 2024 filing requirements assuming all costs are accepted as eligible as filed. Several approaches to continuing exploration are possible which involve ground-based approaches that are not mutually exclusive as either or both approaches could be carried out, concurrently or sequentially. The options for the Western Group include:

- follow-up geophysical surveying to better define and model the known conductors;
- continued biogeochemical sampling along the more westerly conductors that were not fully sampled during 2022 combined with spectrometer prospecting and bedrock sampling along the known conductive corridors and in other nearby areas;
- the use of a man-portable Wink vibracorer (sonic drill) to determine if samples could be acquired from directly above the conductors are identified and located by the existing EM geophysical survey

Geophysical surveying on the ground is warranted in follow-up of the 2022 airborne survey. BECI has recommended a program of high-resolution moving loop EM surveys with a significant transmitter-separation (e.g., 150 m) to effectively detect sub-vertical conductors beneath shallow-dipping conductors. BECI has proposed a 400 m profile spacing and a total



of 36 km of moving loop surveys. If only the central 1,500 m long portions of the conductors were surveyed in areas with biogeochemical anomalies, this surveying could be reduced by 50% to 18 km. The cost of this surveying will need to be determined at the time it is actually done. Ground conditions would favour doing such a survey in the winter to take advantage of ice-covered drainages.

Continued biogeochemical sampling along the more westerly conductor would involve an additional 27 to 30 profiles with approximately 20 sample stations on each profile = 540 to 600 samples. This would require approximately 3 weeks of effort. If combined with some additional geological reconnaissance work, this program would require a month of work at a cost of approximately \$450,000. Some minor cost efficiencies could be realized if such ground work was carried out simultaneously or sequentially with the work on the eastern group of dispositions.

Information concerning the Wink vibracorer drill can be found at <u>https://www.vibracorer.com/</u> The system is a man-portable sonic drill that can be carried by pick-up truck or helicopter and off-loaded to the drill site. The vibracorer does not penetrate bedrock, but it has the capability to collect small chips of bedrock if the surface is sufficiently weathered and soft. It also has the ability to collect undisturbed, representative core samples of the overburden immediately above bedrock. The Wink system could be used on a reconnaissance basis to test the bedrock along the conductors identified on the western dispositions. It may be possible to acquire sample material from the overburden directly over the conductor that could then be tested for radioactivity on site and/or bagged and sent to a laboratory for analysis. The Wink technology is unproven in this application, and deeper penetration is prevented if boulders are present in the overburden. The Wink drill can be purchased for approximately Cdn. \$50,000. Some field training would be required which would add to initial costs however training would be on-thejob so that the initial holes would be productive to the project. Some discussions with Wink would be needed to develop an approach and budget for a sampling program.

## 2. INTRODUCTION AND TERMS OF REFERENCE

## 2.1 INTRODUCTION

This Technical Report (the "**Report**") has been prepared in accordance with the guidelines of National Instrument 43-101 ("**NI 43-101**") covering Standards of Disclosure for Mineral Projects, Form 43-101F1 and Companion Policy 43-101CP of the Canadian Securities Administrators. The Report was prepared for CAT Strategic Metals Corp. ("**CAT**") by Watts, Griffis and McOuat Limited ("**WGM**") Senior Geologist, Albert W. (Al) Workman, P.Geo., ("**the Author**"). The work described herein was designed by and carried out under the supervision of Mr. Workman who is a Qualified Person ("**QP**") accredited as a member in good standing of the Association of Professional Engineers and Geoscientists of Saskatchewan ("**APEGS**").

#### 2.2 TERMS OF REFERENCE

CAT requested that WGM prepare the Report on the South Preston Project ("**the Project**"). The Report provides a summary of the results of previous historical exploration activities following a hiatus of many years. CAT's recent exploration success on the South Preston Property has underscored the its potential for significant unconformity-type uranium mineralization. The geological setting is thought to be permissive for deposits similar to those discovered nearby in the Patterson Lake South area by Fission Uranium Corp. and Nexgen Energy Ltd. This report represents CAT's initial disclosure of exploration results on its South Preston Property.

#### 2.3 SOURCES OF INFORMATION

Subject to its review, WGM incorporated descriptions of the regional and local geology and previous exploration results from reports by various authors. These sources are presented in the references section of this report.

The discussion of permitting and environmental is based on information available from public sources that can be found on various Saskatchewan provincial government websites.

Details concerning the airborne geophysical survey are taken from the final technical report prepared by Balch Exploration Consultants ("**BECI**") of Mississauga, Ontario entitled "Report



on an Airtem Helicopter-Borne Geophysical Survey, South Preston Project, SW Margin, Athabasca Basin, Saskatchewan" and dated 23 September, 2022. This report is appended hereto in Appendix 1.

A typical laboratory certificate from the Saskatchewan Research Council ("**SRC**") Geolab is included in Appendix 2 for each of biogeochemical samples and rock samples. The SRC Geolab's report for its QEMSCAN study is appended in Appendix 3.

## 2.4 DETAILS OF PERSONAL INSPECTION OF THE PROPERTY

No work had been carried out on the South Preston Property prior to the current exploration program completed by CAT. WGM did not visit the property in advance of its review of historical data, and its decisions regarding the initial CAT exploration program content and design were based solely on WGM's review and the experience of its Project Director, Mr. Workman.

Following completion of the airborne geophysical survey, the WGM field team executed the ground exploration program described herein over a period of approximately five weeks, comprising biogeochemical sampling and bedrock prospecting aided by hand-held gamma-ray spectrometers. Although the field work was carried out in close weekly collaboration between the author of this report and the WGM field team; the author of this report has not personally visited the Property.

#### 2.5 UNITS AND CURRENCY

All units of weights and measures are metric. All currency amounts are given in Canadian dollars ("**Cdn \$**") unless otherwise specified. Analytical results are expressed in parts per million ("**ppm**") unless otherwise noted.



## 3. RELIANCE ON OTHER EXPERTS

The conclusions tendered in this report by WGM are based on the reviews, observations and experience of WGM's senior geologist, Mr. Al Workman, P.Geo. and the observations, measurements and field work of WGM's exploration team. Subject to its review, WGM has also incorporated descriptions of the regional and local geology and previous exploration results from reports by various authors. These sources are presented in the references section of this report.

The discussion of permitting and environmental is based on information available from public sources that can be found on various Saskatchewan provincial government websites. Details concerning the airborne geophysical survey are taken from the final technical report prepared by Balch Exploration Consultants ("**BECI**") of Mississauga, Ontario entitled "Report on an Airtem Helicopter-Borne Geophysical Survey, South Preston Project, SW Margin, Athabasca Basin, Saskatchewan" and dated 23 September, 2022. This report is appended hereto in Appendix 1. The SRC Geolab report on mineralogy was used to support WGM's characterization of the local geology. That report is attached to this report in Appendix 3.

## 4. PROPERTY LOCATION AND DESCRIPTION

## 4.1 LOCATION

The CAT uranium exploration property comprises a group of 12 mineral exploration dispositions located in northern Saskatchewan, Canada. The property is located east and northeast of Lloyd Lake, a major lake that is close to provincial road 955. This gravel road extends north from La Loche, 171 km to the south. Road 955 is accessible from Prince Albert by taking Highway 3 West to Shellbrook, Highway 55 North to Green Lake and then north along Highway 155 to La Loche. The distance from Prince Albert to La Loche is 508 km. The nearest staging point to the CAT Property is at the Big Bear Camp situated near Preston Lake and about 25 km west-northwest of the CAT property.

## 4.2 PROPERTY DESCRIPTION, TERMS AND MAINTENANCE

In Saskatchewan, mineral exploration permits are referred to as "dispositions" whereas in other jurisdictions such allowances may be referred to as exploration licences or mining claims. CAT's South Preston uranium property comprises 12 contiguous dispositions totalling 28,395.85 km<sup>2</sup> located on the southwestern margin of the Athabasca Basin in northern Saskatchewan (Table 1, Figure 3). The dispositions are owned 100% by CAT Strategic Metals Corp.

In Canada, mineral rights are most commonly owned by government entities on land that is referred to as "Crown Land". Private individuals or corporations also own land, referred to as "Freehold Land" which may in some cases include the underlying mineral rights. Across Canada, approximately 89% of the land is Crown Land, the remainder being Freehold Land. Mineral rights fall under the jurisdiction of provincial governments which establish laws and regulations which govern the process by which individuals and companies may acquire and maintain mineral rights.

The Crown Minerals Act (C-50 and subsequently amended) of Saskatchewan can be downloaded from the internet at <u>https://publications.saskatchewan.ca/#/products/453</u>. Guidelines governing how licence-holders should operate in the Province are found on-line at: <u>http://saskmining.ca/ckfinder/userfiles/files/BMP%20August%202016\_Draft.pdf</u>. These two documents provide a relatively complete framework of how mineral projects can be initiated

and sustained in the Province of Saskatchewan. Other federal and provincial acts and regulations also have effect, such as those governing national parks, navigable waterways, wildlife and the environment.

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Table

СЛТ	Stratagia	Matala (	Com	South	Dracton	Droigot	Dispositions
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Group	Disposition #	Area (ha.)	Review Date	Good Standing Date	Assessment Requirement
	MC00013808	3,345.20	15-Apr-22	14-Jul-22	\$50,178
	MC00013968	527.68	8-Jun-22	06-Sep-22	\$7,915
	MC00013969	525.475	8-Jun-22	06-Sep-22	\$7,882
Western	MC00013970	521.265	8-Jun-22	06-Sep-22	\$7,819
	MC00014519	543.049	11-Feb-23	12-May-23	\$8,146
	MC00014557	3,401.98	16-Feb-23	17-May-23	\$51,030
	MC00014560	2,305.87	16-Feb-23	17-May-23	\$34,588
	Sub-Total	11,170.52			\$167,558
	MC00014561	2,949.28	16-Feb-23	17-May-23	\$44,239
	MC00014558	1,672.01	16-Feb-23	17-May-23	\$25,080
Eastern	MC00014559	4,887.92	16-Feb-23	17-May-23	\$73,319
	MC00014574	5278.54	17-Feb-23	18-May-23	\$79,178
	MC00014575	2,437.58	17-Feb-23	18-May-23	\$36,564
	Sub-Total	17,225.34			\$258,380
	Total Area	28,395.85			\$425,938

Note: A small discrepancy may exist in the totals due to rounding.

The mineral dispositions are defined by The Mineral Tenure Registry Regulations, 2017, by the Province of Saskatchewan. The dispositions are registered electronically; a legal survey is not required. A searchable mineral disposition map may be accessed on-line at <a href="https://mars.isc.ca/MARSWeb/publicmap/FeatureAvailabilitySearch.aspx">https://mars.isc.ca/MARSWeb/publicmap/FeatureAvailabilitySearch.aspx</a>. This map shows all registered dispositions in the province and details concerning the location, size and good standing dates may be viewed through this portal. Any person seeking to make an application to acquire mineral rights can determine if the area of interest is available. They can also identify the current owner for contact purposes.





Assessment expenditures required annually to maintain the claims in good standing during the first 10-year period is currently CDN \$15 per hectare. No expenditures are required in the first year following acquisition, however the expenditure requirements must be completed by the second anniversary date and filed with the authorities within 90 days. Extensions may be granted upon request and payment of a non-refundable deferral fee of \$250.00 per disposition plus a refundable deposit of \$0.041 per hectare per day of the deferral. Failure to complete the required work within the required timeframe results in forfeiture of the deposit.

The dispositions have been divided into two groups, the Eastern Group and the Western Group, to enable the spreading of expenditures across disposition boundaries. Disposition Groups must be continuous or have gaps of less than 700 m, and must not exceed 18,000 ha in total size. The assessment work required annually to maintain the Western Group requires expenditure credits of \$236,877 whereas the \$189,061 is required to maintain the Eastern Group. Generally, dollar for dollar credits apply to meeting basic requirements, however the owner's administrative overhead cannot exceed 10% of the eligible expenditures. A 50% bonus credit applies to the cost of airborne geophysical surveying filed for assessment. Assessment work must be completed by the earliest of any 'Review Date' within a group, and the associated assessment report must be filed by the earliest 'Good-Standing Date' within the group.

The provincial government has established a framework, the First Nation and Métis Consultation Policy, which establishes a legal duty for the provincial government to consult with and accommodate First Nation and Métis communities in advance of any decisions or actions regarding mineral exploration and development projects that have the potential to adversely impact the exercise of:

- (1) Treaty and Indigenous rights such as the right to hunt, fish and trap for food on unoccupied Crown land and other land to which a community has a right-of-access for these purposes; and,
- (2) Traditional uses of land and resources such as the gathering of plants for food and medicinal purposes and carrying out ceremonial and spiritual observances and practices on unoccupied Crown land and other land to which a community has a right of access for these purposes.

The duty to consult falls on the shoulders of the government and is triggered when a company submits a plan relating to a mineral (or other) project with the potential to impact the community. As part of this process, mineral project proponents are encouraged to voluntarily engage with First Nation and Métis communities to establish a working relationship to allow for the proactive exchange of information including potential impacts and opportunities, that



can be carried through the life-cycle of the project. The exploration programs completed by CAT have been in areas that lack any existing or historical First Nation or Métis community.

Since late 2021, CAT's communications with the Clearwater River Dene Nation ("**CRDN**") indigenous representatives have been managed by WGM in an effort to keep CRDN advised concerning CAT's planning process, schedules and exploration activities.

As of the date of this report, CRDN has been supportive of CAT's exploration activities.

## 4.3 TAXES AND ROYALTIES

CAT's South Preston dispositions provide mineral rights but do not constitute ownership of surface right, hence they are not subject to property tax.

The dispositions are subject to purchase agreements with the original owners dated 15 February, 2021. The owners retain a 2% "Gross Royalty" based on total revenue received by CAT for mineral production from the South Preston dispositions.

## 5. ACCESS, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

#### 5.1 ACCESS

No road access to the CAT uranium exploration property is possible at this time. The property is located 20 km to 75 km east of provincial road 955, a gravel road that extends north from La Loche, 170 km to the south. Road 955 is maintained by the Saskatchewan government although winter conditions may temporarily impede its use. As at the date of this report, access have been by helicopter based out of the Big Bear Camp located on Gryger Lake about 55 km northwest of the CAT property.

In the future, alternative access may be available, subject to maintenance cost-sharing, via a dirt road constructed by Azincourt Energy Corp. that provides access to portions of its exploration property immediately north of the CAT property. This would be a circuitous route of



approximately 60 km to access the more western CAT dispositions, and probably only useable during the winter due to the need to cross several major stream-beds including the Mirror River (20 m wide).

## 5.2 CLIMATE

The Project is located within the Boreal Shield Ecozone, a 1.8 million km<sup>2</sup> area of northern boreal forest that is Canada's largest ecozone. The regional climate has long, cold winters during which the temperature may drop to -40°C or below for brief periods in January. Summers tend to be short (June-August) with temperatures increasing to the mid-20°C. The mean annual temperature is approximately -4°C in northern Saskatchewan. Snowfalls can be quite variable and heavy at times although mean average annual accumulation is only 650 mm. Wind speeds generally average greater than 10 km/hour with slightly less wind during the period November through January. Strong winds exceeding 20 km/hour are uncommon. The summer solstice produces nearly 18 hours of daylight whereas the winter solstice delivers only 6-7 hours of sun.

## 5.3 LOCAL RESOURCES AND INFRASTRUCTURE

There is no local infrastructure in the project area. As mentioned above, the Big Bear Camp offers lodging and meals for exploration crews. The camp is well equipped with a water purification system that provided hot and cold running water 24/7 and a satellite dish that provides telephone an internet service. The camp is fully equipped with first aid, fire and bear-deterrent provisions to provide for a safe workplace. A helipad is available as is a fuel storage and impoundment facility that meets government standards. The camp is supplied regularly by trucking companies operating north from La Loche 170 km to the south. Float plane services to the Big Bear Camp are available from McMurray Aviation operating out of the airport at Fort McMurray, Alberta, 165 km to the southwest. The CAT geophysical survey and the surface exploration program described in this report were staged out of the Big Bear Camp.

La Loche, with a population of 2,827 in 2016, is a village in northwest Saskatchewan located on the eastern shore of Lac La Loche at the end of Saskatchewan Highway 155. Bordering La Loche to the north and reached via Road 955 s the Clearwater River Dene Nation ("CRDN") with a population of approximately 850 people.



La Loche is a business and retail centre that serves the local population and the mining companies exploring north from the community. Air services are provided to the La Loche Airport and float-plane services can be arranged into Lac La Loche. Postal service is available five times per week. The La Loche detachment of the Royal Canadian Mounted Police (RCMP) and the La Loche Volunteer Fire Department serve La Loche and nearby communities. SaskPower provides electricity and SaskTel provides telecommunications and internet services (including high speed service). Methy Construction and Maintenance Corporation offers commercial and residential property development and construction and contracting for heavy equipment. The La Loche Hospital serves a regional population of over 4,000 people and is part of the Saskatchewan Health Authority. The La Loche Medical Clinic operates from within the main hospital building. Ambulance services are available as is a 911 call service for emergencies, and there are two pharmacies within the community.

Local residents, some from La Loche, were hired on a full-time or casual basis to work in the Big Bear Camp to satisfy CAT's need to prepare biogeochemical samples for analysis by removing needles from the twigs.

## 5.4 PHYSIOGRAPHY

It is an area of broadly rolling uplands and lowlands mostly underlain by rocks of the Canadian Shield. Wetlands are numerous – the ecozone contains an estimated 22% of Canada's freshwater surface area. Soils across the region are variable in response to the wide range of climate and soil components present. Most of the cover is glacial till which may be overlain by clay deposits and muskeg and peat (organic matter). Occasional eskers cross the CAT property distinguished by a sinuous 10-20 m increase in elevation.

Watercourses including muskeg-covered areas are generally at an elevation of approximately 500 m. Evaluations across the property range from approximately 490 m to 550 m. Relief over short distances is typically less than 30 m with slopes very rarely exceeding 30-40 degrees.

Glacial till extensively covers the bedrock and even steeply sloping hillsides can lack outcrop exposure due to overburden accumulations, nevertheless bedrock exposures are generally quite common, however the ability to distinguish the rock types is difficult due to algal mat and lichen growth.



Vegetation is softwood common to a northern boreal forest. The most common trees are black spruce and jack pine, with a few poplar and birch clusters, while tamarack, stunted black spruce, willow and alder are most common in the lower wetland areas. Poplar, birch and tamarack tend to occur in valleys that offer access to water and perhaps some protection during severe winter months. Ground cover comprises primarily sphagnum moss, reindeer lichen, Labrador Tea, and other various shrubs. Thick brush and deadfall are commonly encountered in areas that have been affected by forest fires. Generally, the trees are all small in size but local patches of heavy timber have been encountered.



## 6. HISTORY

#### 6.1 GENERAL BACKGROUND

The initial surge of uranium exploration in the Athabasca Basin was predicated on the pioneering discovery in 1967 of the Rabbit Lake deposit by Gulf Minerals Resources later to become Gulf Minerals Canada Ltd. ("**Gulf Minerals**"). Although searching for sandstone-type deposits based on the roll-front model prevalent in New Mexico, Gulf Minerals' radiometric survey led to the discovery of high-grade uranium-bearing boulders that were traced in the up-ide direction to the shore of Rabbit Lake. The discovery hole followed the next year, and the mine was developed and brought into production in 1975. Until Gulf Minerals' revolutionary discovery, unconformity-type deposits were unknown.

The CAT dispositions are located in an under-explored part of the Athabasca Basin. Until recently, mostly in the last 20 years, those exploring for uranium in the basin have focused their efforts in areas where the sandstone is present because of the importance attributed to the unconformity between the metamorphic basement rocks and the younger sandstone formations. Unconformity-type uranium deposits can occur entirely in the sandstone, at the unconformity in both sandstone and basement rocks, or entirely in the basement as much as 500 m or more below the unconformity. The CAT dispositions are located in an area where the sandstone cover has been removed through erosion. Nevertheless, based on the gradient of the unconformity to the north, the basement rocks on the CAT property are thought to be within 50 to 150 metres of the former unconformity.

Exploration accelerated during the 1970s as many of the oil companies were cash-rich and created mineral subsidiaries to explore for uranium and/or base metals deposits. In addition to Gulf, as mentioned above, Esso Minerals, CanOxy, Shell Minerals, Getty Mining and many others participated in uranium exploration. Much of this activity ceased in the early 1980 with a significant oversupply of uranium depressing uranium prices and high interest rates impacting capital markets. Uranium exploration in the Athabasca Basin slowed yet significant exploration discoveries were made in the years that followed Gulf's discovery. The 1970s saw Gulf Mineral extend its record of success with the discovery of the Horseshoe, Raven, Collins Bay A-, B- and D-Zone deposits as well as Eagle Point. During this period other discoveries underscored the importance of the Athabasca Basin as containing the world's highest grading uranium deposits. Amongst many other deposits that have been discovered, including some that are currently being explored, the following are landmarks: Key Lake (1975), Cluff (1975), Midwest (1977), McLean Lake (1979), Cigar Lake (1981), McArthur River (1988),



Shea Creek (2004), Roughrider (2008), Centennial (2008), Phoenix (2008), Patterson Lake South Triple R (2012), Gryphon (2014) and Arrow (2014).

The Centennial, Triple R and Arrow deposits point to the substantial untested potential of the southwestern Athabasca Basin. The history of the basin and that of the region surrounding the CAT property is presented in detail in the following sections. Figure 4 shows some of the key features and indicators that were identified based on WGM's review of historical reports available in the Saskatchewan mineral property assessment files. The dispositions comprising the CAT property are outlined in pale green. The likely location of the unconformity lies between the arching yellow and orange lines crossing the top of the image. Interpreted faults are indicated by white lines. Red and pink lines show the location of various types of northeasttrending EM conductors. Blue lines represent the axis of a gravity anomaly (high). Yellow shaded areas have elevated radioactivity found in airborne surveys. Yellow stars are airborne radiometric anomalies. Yellow arrows represent bedrock samples anomalous in uranium. Yellow diamonds are lake bottom sediments that are anomalous in uranium. Sites marked by "i" are noteworthy due to graphitic schist and other geological features commonly associated with uranium deposits. Glacial ice direction is indicated by the blue arrow pointing southwest. Various target areas are identified (e.g., "Swoosh") which have been a focus for Azincourt. A NNE-striking zone of graphitic schist is identified crossing the CAT disposition in the vicinity of the Athabasca unconformity.

The reader is encouraged to review the details, perhaps exhaustively presented in this chapter, because this information provides CAT with substantial guidance as to what exploration techniques are most effective in discovering uranium deposits in the Athabasca Basin. Previous studies provide specific guidance concerning:

- the geology of uranium deposits;
- historical anomalies that provide evidence (vectors) towards potential targets;
- techniques that are not effective in provide conclusive results;
- geochemical thresholds and signatures associated with known deposits
- geophysical signatures related to mineralization; and,
- the best technologies for defining targets for drilling.




## 6.2 THE 1960s

In the late 1960's Riocanex, Consolidated Nicholson Ltd., Pickle Crow Exploration Ltd., COGEMA Resources (now AREVA Resources), Uranerz Exploration and Mining Ltd. ("Uranerz"), Eldorado Nuclear (now CAMECO) and many other companies, mostly majors, were exploring in the Athabasca Basin. At the time, substantial uncertainly existed in respect to the geological model for deposits like Rabbit Lake. The absence of the unconformity at the basement-hosted Rabbit Lake deposit, though not far removed, created uncertainly regarding its importance to mineralization. Most of the exploration during the period involved airborne magnetic and radiometric surveying and ground work follow-up, in some cases focusing on magnetic anomalies. Soil samples, water samples and lake bottom sediment samples were collected in many areas, but few anomalies were found. Chip samples of radioactive outcrops occasionally yielded interesting values, but none of these resulted in a discovery during this period. Exploration was guided by the use of aerial photography as this period pre-dated the application of satellite imagery to mineral exploration. Groundwork consisted of geophysical programs such as magnetometer and self-potential surveys as well as prospecting with radiation detectors. Radiometric instrumentation was relatively insensitive by modern standards, and in many cases Geiger counters were used. In some cases, geologists concluded that radioactive anomalies might relate to deposits similar to those in the famous Beaverlodge mining camp located north of the Athabasca Basin. In some cases, electromagnetic ("EM") conductors were identified, some of which were associated with radiometric anomalies, however the linkage between uranium, EM conductors and graphite-bearing shear / fault zones in bedrock was not known at this time.

#### 6.3 THE 1970s

The 1970s brought improved exploration technology, especially in geophysics, and in response to soaring uranium prices, increased exploration activity for uranium in the Athabasca Basin. Much of this activity, however, focused on the eastern half of the basin in response to the suspected NE structural trend on which the Rabbit Lake deposit was located. On-going exploration by Gulf Minerals discovered the Horseshoe and Raven deposits southwest of the Rabbit Lake Mine. Despite the discovery of the Cluff Lake deposit in 1975, relatively little exploration was carried out in the western half of the basin where the CAT property is located. That same year, the first of several deposits was discovered at Key Lake by Uranerz Exploration and Mining Limited. The intersection of high-grade uranium mineralization led to the delineation of the Gaertner orebody and continued drilling resulted in the discovery of the Deilmann orebody the following year. The discovery of Key Lake was an important milestone



as it revealed the vital role played by the unconformity, post-Athabasca faulting and graphitic basement rocks in the deposition of uranium (authors personal experience). Shortly afterwards, Gulf Minerals discovered and drilled off the Collins Bay A-Zone, B-Zone, D-Zone and Eagle Point Deposits. The Midwest deposit was initially discovered by Esso Resources in 1977, and was subsequently developed by a joint venture of Orano Canada Inc. ("**Orano**"), Denison Mines Corp. ("**Denison**") and OURD (Canada) Co., Ltd. The McLean Lake discovery was made in 1979. All of these discoveries, only the unusual Cluff Lake deposit was located in the western part of the Athabasca Basin.

Despite the foregoing, exploration in the western basin near the CAT property was active in many areas by companies such as Uranerz, Nexco Mining Co., Denson Mining and the Saskatchewan Mining and Development Corp. ("SMDC").

During 1977-78, Uranerz in partnership with Nexco Mining Co. and the Saskatchewan Mining and Development Corp. ("SMDC") used aerial photography to plan an exploration program in the vicinity of the CAT property that included the collection of water, lake sediment and muskeg (bog) samples for analysis (Lehnert-Thiel et al, 1978). Lake bottom sediments averaged less than 1.3 ppm uranium which is the background with anomalies defined as exceeding 1.8 ppm. Most water samples failed to have detectable uranium values and no anomalies were detected in muskeg samples. Soil samples (-80#) were anomalous with 8.5 and 10.8 ppm uranium in a few locations. Prospecting revealed the presence of maroon to brick red regolith material along the SE shore of Kelic Lake. To the authors, these occurrences were virtually identical to regolith found near the Key Lake deposit, suggesting that a N25E striking, NE-plunging antiform may be present in the area with pronounced magnetic lows and EM conductors on the flanks. The east flank appeared to have been localized along a major fault. A radioactive spring is present on the Mirror River coincident with the proposed location of the antiform nose and the east flank fault. VLEM surveying confirmed the presence of 2 conductors discovered in 1977. Conductor "A" trends NE-SW under Kelic Lake and is situated in a magnetic low - it was thought to be a regional fault. Conductor "B" trends NW under Kelic Lake - Government mapping identified this as a major regional fault. WGM believes that these occurrences associated with NE-trending faults are indicative of both the importance of such structures as conduits for uranium-bearing fluids and that uranium-bearing fluids have been actively migrating in the vicinity of the CAT property. Given typical hydraulic gradients in basins, uranium bearing fluids would tend to be expelled from the deeper basin southerly towards the margin.

During 1978, Uranerz and its partners completed a total of 1,390 m (4,557 ft) of drilling that included four vertical holes on conductors "A" and "B" under Kelic Lake and four holes of



various orientations on conductor "C" on the Mirror River. The Kelic Lake area lies on or very near the Athabasca-Basement unconformity a short distance north of the CAT dispositions. The Athabasca sandstone varied in thickness from 2.4 to 69 m in the vicinity of conductors "A" and "B" with felsic gneiss dominant in the basement. The cover was 118 m in the Mirror River "C" target area below which were mixed gneisses with minor disseminated pyrite in fractures. It was believed that the strong conductor in this area was related to lithology-controlled, graphitic horizons within the basement, however no uranium mineralization was intersected. Diamond drill hole KLL-3 collared into the Athabasca sandstone, crossed into hematite-bearing quartzpebble sandstone in broken regolith at 100 m and terminated at 135 m, intersecting 3-4X background radioactivity immediately below the unconformity. Two samples of this zone carried 255 ppm U and 127 ppm U, with elevated nickel values of 280 ppm and 130 ppm, respectively. No significant radioactivity was detected at the projected point of intersection of conductors "B" and "C". In relation to the CAT property, the depth to the unconformity is noteworthy as it is fairly shallow indicating that the CAT dispositions are also close to the unconformity. WGM believes that the structural zone is significant and warrants followup exploration where topography indicates that it projects south-westerly onto the CAT property.

Uranerz carried out biogeochemical sampling of jack pine and spruce which were ashed for biogeochemical analysis. Background values are of the order of 2 ppm. A significant anomaly at Kelic Lake with values of up to 112 ppm U occurred in sample #47044, and several other samples exceeded 20 ppm U (#47043 and #47050). These outlined an anomaly over a distance of 1,400 m that is correlative with a N-trending zone that projects southerly onto the CAT property. A second weaker anomaly, with values up to 6.6 ppm, occurred along the Mirror River. In light of biogeochemical test surveys completed over the Deilmann ore body at Key Lake, these results are considered very significant and were used to inform CAT's exploration plans (see subsequent section in this report).

Denison Mines Limited completed an exploration program in 1978 in the Kelic and Montgrand Lakes area (Hauseux, M., 1978). Part of this work covered portions of the CAT dispositions in what we refer to herein as the Eastern Group. A number of conductors had been discovered in 1969-70 through airborne surveying. This included a survey by Questor using Mark VI INPUT flown by a Skyvan fixed-wing aircraft using a 268 m profile spacing with a 45 m terrain clearance. Several anomalies were detected, #6 and #7 being identified as two of the better anomalies and having a graphite-type response, and #7 being the stronger of the two. Anomaly #5 was interpreted to be a geological contact response of little or no interest. Denison's 1978 helicopter-borne gamma ray survey of 470 line-kilometres was completed by Sander Geophysics. Ground follow-up using a Scintrex BGS-ISL scintillometer detected five



anomalies clustered around or just north of Anonymous Lake in an area with backgrounds of 20 cps. At the north end of Esker Lake, uranium staining (uranophane) was found along chlorite-filled small-scale fractures in granite producing >1,000 cps on the scintillometer feldspars in this area were brick red in colour. Gneissic biotite granite was found ESE of Esker Lake along a cliff-bound outcrop bordered by a fault zone striking NNW. Highly fractured, chlorite-altered up-heaved granitic boulders and gneissic granite scarps gave anomalous readings up to 1,200 cps. The northeast group of anomalous readings was associated with angular to subangular boulders of graphite schist, graphitic arkosic granulite and calc-silicate. White pegmatite associated with some of the graphite schist gave readings to 1,250 cps. Several kilometres NE of Mushroom Lake, sheared granite and pegmatite in this area along stream reportedly gave scintillometer readings as high as 1,150 cps. A NNW-trending fault is thought to pass through the area and southerly through Anonymous Lake; it is supported by a VLF response using the Cutler Maine station<sup>1</sup>. Lake sediment samples in some areas were anomalous in the 2.0-2.3 ppm range – the mean value was 0.86 ppm. Conductors in the Silvius Lake boulder field were recommended for drilling. WGM notes that the area explored covered very little of the CAT dispositions, however the projection of zones onto the CAT dispositions is interesting. The area of anomalously radioactive graphitic schist rocks is approximately 2 km NE of CAT disposition MC00014558. The uranium-bearing rocks to the NE of Silvius Lake are on or near disposition MC00014559. In this area, a NE-trending conductor was detected in the 1969-70 airborne EM survey. Denison reported the presence of graphitic metasediments in an area near Silvius Lake as well as a yellow radioactive mineral (uranophane) found locally with the graphite. These rocks produced scintillometer measurements up to 1250 cps. Graphite-bearing outcrop and boulders were also found south of Silvius Lake - no uranium mineralization was found however pegmatites showed up to 1250 cps. These zones project south-westerly onto the CAT dispositions. A 1x2 km outlier of Athabasca sandstone, elongated NE-SW, is reported at the NE tip of Silvius Lake indicating that the basement rocks on the CAT dispositions are in a geological setting at or very close to the unconformity. Of particular interest to WGM is the presence of an ENE-trending belt of graphite-bearing schist and granulite (associated with radioactive white pegmatite and calc-silicate), with angular to subangular, upheaved boulders of local origin near Silvius Lake and other graphitic metasedimentary rocks situated at the south end of Silvius Lake. There are two conductors trending N-S and NW-SE which cut across the Silvius Lake graphite boulder belt which is also characterized by a magnetic low. Geochemical surveying of stream and lake sediments revealed various uranium and nickel anomalies

<sup>&</sup>lt;sup>1</sup> WGM notes that the VLF survey using the Cutler Maine transmitter signal is only capable of detecting conductors having an approximate NW-SE orientation, and it cannot be used to detect NE-trending conductors similar to those that are associated with uranium mineralization in much of the Athabasca Basin



# which are certainly supportive of fluid activity along the unconformity in this region and within a few kilometres of the CAT dispositions.

#### 6.4 THE 1980s

A series of milestone uranium discoveries were made in the 1980, exemplified by Cigar Lake (1981) and ending with McArthur River (1988). These deposits, though differing somewhat in setting, gave important new meaning to the unconformity model by virtue of the tremendous size and average grade of these deposits.

During 1981, Denison Mines Ltd. completed geophysical surveys near the CAT property that substantiated the trend of known airborne INPUT conductors and located a ground EM conductor along the flank of an airborne magnetic high coincident with a ENE lineament along Montgrand Lake (Garden, D.E., 1981). The local geology indicated a metasedimentary sequence and thus the conductor could indicate a slightly graphitic meta-pelite. One conductor had a positive relationship to the large magnetic high to the south of Montgrand Lake. It was thought that the conductor might be tracing a fault zone delineated by the low magnetic "trough". There was also enough response from the low-frequency vertical loop to indicate a possible deep-seated conductor in the basement. The VLF-EM surveying used the signal from the Seattle Washington transmitter which is appropriate for the detection of NE-trending conductive features which could reflect overburden, lithology or structures in bedrock. The Crone Vertical Loop EM survey detected only one significant conductor that was located across four lines (possibly five) for a minimum of 800 m of strike length. It was interpreted to be possibly south-dipping. WGM notes that the Athabasca sandstone outcrops about 500 m north of the northern shore of Silvius Lake. The surveys confirmed a NW-SE conductor extending through the lake SW of Anonymous Lake and ENE through the narrows in Montgrand Lake that could reflect a trough of conductive overburden resulting from an easily-eroded shear zone in bedrock and/or a conductive bedrock feature.

Also in 1981 and continuing into 1982, Uranerz carried out follow-up exploration in the area of Dufferin and Fishhook Lakes located east and northeast of the CAT dispositions (Lahaye, R. and Bone, J., 1982). Uranerz discovered a 10,000 cps radioactive outcrop in a narrow zone of pink, fractured and sheared felsic (meta-arkose) basement rock located approximately 3 km SE of Dufferin Lake and 500 m NE of the Dufferin Lake Fault ("**DLF**"). A chip sample of uncertain extent carried 1,500 ppm U. Radioactivity (7,500 cps) also found approximately 1 km SW of Virgin Lake and on strike with the Virgin Lake Fault Zone. Various follow-up surveys were completed and some minor uranium mineralization was seen with values as high



as 290 ppm over a short interval. WGM noted the term "sooty" being used which was commonly used as a descriptive term for disseminated / spotty graphite in rocks along the Collin Bay Thrust (Al Workman - personal observation). WGM also notes that the 10,000 cps scintillometer (1,500 ppm U) showing is correctly marked as a back dot on the map according to its grid location given in the text, however the written description of its location relative to Dufferin Lake is wrong, or at least does not align with the co-ordinates given. The location is very close to one of the traces of the Dufferin Lake Fault. There is no mention of graphite in this showing although a strong NE-trending conductor is described 2.1 km to the NW.

### 6.5 THE 1990s

Possibly in response to low uranium prices, no significant exploration was carried out in the vicinity of the CAT dispositions during the 1990s. However, elsewhere in the basin continuing exploration resulted in discoveries that were announced in the next millennium as increasing uranium prices supported higher levels of activity.

### 6.6 2000 AND BEYOND

The discovery of significant unconformity-type uranium deposits continued with the turn of the century and in particular, exploration increased in the western part of the Athabasca Basin. Important discoveries were made by CAMECO (Centennial, 2004), UEX (Shea Creek, 2008) and Hathor (Roughrider, 2008) and others pointed to the potential for success.

In the region of the CAT dispositions, JNR Resources Inc. constructed four grids near Kelic Lake that were surveyed in 2007 with Max-Min EM systems and TEM based on the geology and an interpretation of the previous VTEM survey completed during a previous survey completed in 2005 (Sweet, K., 2007). A high-priority target was located NE of Kelic Lake interpreted to be a sinuous, 400-metre deep conductor oriented along a general north-easterly trend. The responses were sufficiently strong to indicate either a graphitic affinity or the presence of massive sulphides. Airborne geophysical responses indicated a westerly dip. JNR concluded that the deep sinuous conductor may have a surface expression in the trace of the Mirror River. Given the presence of Athabasca sandstone in this area, this would classify the



conductor as a post-Athabasca feature with implications in respect to the unconformity deposit model. WGM found no record of follow-up exploration by JNR.

In its initial 2008 exploration program, having acquired the Patterson Lake South dispositions, Fission Uranium Corp. ("**Fission**") completed regional radon-in-water sampling. Fission's plan was informed, or partially informed, by a previous survey carried out in 1977 by Canadian Occidental Petroleum Ltd. ("**CanOxy**") which detected a very strong 6-station alphameter (radon) anomaly with dimensions of 1.2 km by 1.7 km on what is now claim S-111375. CanOxy's exploration team believed that this anomaly was a result of transported radioactive boulders within the glacial deposits constituting the Cree Lake Moraine, however, little or no follow-up work specific to this interpretation was carried out. CanOxy identified several airborne EM conductors, and after confirmation through a ground-based EM survey, one zone was tested with drill hole CLU-12-79 on the west shore of Patterson Lake. It intersected 6.1 m of sulphide-graphite "conductor" that contained anomalous concentrations of uranium, copper and nickel together with strong hematite and chlorite alteration in the regolith and fresh basement rock. No follow-up exploration was performed, perhaps as WGM has previously speculated, because the conductor area was devoid of sandstone cover, then thought to be a critical factor in deposit formation.

Fission surveyed the area using airborne MEGATEM® and magnetometer instrumentation. Radon anomalies and NNE-striking conductors were detected that created the rationale for an initial 9-hole (2,795 m) diamond drilling program in 2008. One holes (PT08-004A) intersected a zone containing an anomalous trace-element signature and clay alteration typically associated with unconformity-type uranium mineralization. The drilling program also defined blocks of basement that had been up-lifted or down-dropped relative to each other. This displacement of the basement is a feature of the geological setting hosting the Collins Bay uranium deposits in the eastern part of the Athabasca Basin (author's personal experience). A high-resolution airborne magnetometer and spectrometer survey was completed in 2009 that better-delineated the differing basement lithologies and lineaments thought to be faults, shear zones and areas of structural complexity. A 1.4 km wide by 3.9 km long radiometric anomaly was also identified, and in 2011 shown to be due to radioactive uranium-bearing boulders. A 900 m wide by 4.9 km long, high-grade uranium boulder field was discovered 2 km west of Highway 955 - this was within the area of the original 2009 airborne radiometric anomaly, strong evidence of an up-ice bedrock source. The 66 boulders sampled ranged in size from gravel-sized to greater than 40x30x15 cm and assayed from 3 ppm uranium to 39.6% U<sub>3</sub>O<sub>8</sub> and averaged 12.4% U<sub>3</sub>O<sub>8</sub>. In late 2011, Fission completed 7 drill holes (838 m) but failed to locate the bedrock source of the high-grade uranium boulders.



In 2012, Fission completed a 1,711 line-kilometre helicopter-borne VTEM and magnetic geophysical survey together with 53.5 line-km of DC-resistivity surveying and 14.4 line-km of small moving loop transient electromagnetic ("SMLTEM") surveying that showed resistivitylow anomalies with offset EM conductors. Follow-up drilling of 16 holes (2,174.3 m) showed thick intervals of conductive graphite and pyrite related to hematite and clay-altered shear zones however, only a few of these holes were weakly radioactive. Hole PLS12-016 returned a 60 cm interval assaying 0.085% U<sub>3</sub>O<sub>8</sub> as well as narrow intercepts of lower grading uranium mineralization. In 2012, additional airborne and ground-based radiometric, magnetic and resistivity surveys were completed. Prospecting and dual rotary and diamond drilling were continued. EM surveying identified high-priority targets for drilling where conductors were off-set and "blow outs" along the conductor axes were identified. Ground SMLTEM surveying more precisely located the conductors than the airborne VTEM survey. Favourable graphitic meta-sediments were intersected in the southernmost conductor of the PLS corridor. Diamond drilling on the middle southern conductor within the corridor resulted in the "discovery hole": PLS12-022 that intersected 8.5 m grading 1.07% U3O8 from 70.5 to 79.0 m. Drill hole PLS12-024 intersected 1.78% U<sub>3</sub>O<sub>8</sub> over 18 m from 65.0 to 83.0 m. In January, 2013 Fission initiated a 50-hole 10,000 metre diamond drilling program that further delineated what was to become the Triple R deposit. WGM believes that Fission's success was at least in part attributable to defining the precise location and characteristics of EM conductors as a primary means of targeting its drill holes.

During 2012, Nexgen Energy Ltd., later to discover the Arrow and Rook deposits near Patterson Lake, carried out an exploration program in the Sandhill Lakes area north of the CAT dispositions (Nimeck, G., 2013). The exploration capitalized on previous Mega Uranium work completed nearby during 2005-06 and by Titan Uranium during 2007-09, much of it being EM surveying followed by diamond drilling. Titan's drilling program intersected uranium and pathfinder trace element anomalies in both the sandstone and basement associated with strong illite-sudoite alteration in what was thought to be a NE-trending, NW-dipping zone of thrust faults parallel to the "C" conductor zone. Nexgen carried out a gravity survey in 2012 that identified five areas of interest west of Dufferin Lake where gravity lineaments attributable to basement features intersect and align along historical EM conductors. WGM notes that the areas of interest align along a NNE-trending conductor located west of Dufferin Lake. The conductor has approximately 550 m of left lateral offset on a topographic lineament running NW through Monch Lake. The conductor extends SSW along Dicks Lake and it is a major regional structure parallel and very similar to the lineament that crosses the eastern end of the CAT dispositions and aligning with Springsteen Lake. Other lineaments (structural features) having a similar parallel orientation include:

• those underlying Kelic Lake;



- those associated with the Azincourt conductors discovered immediately north of the CAT dispositions; and,
- the lineament passing through the large muskeg-covered area in the central part of CAT disposition MC00014574.

During 2013-2014, the syndicate of Athabasca Nuclear Corp., Skyharbour Resources, Noka Resources and Lucky Strike Resources (the "Syndicate") completed exploration programs in the Clearwater River area based on a synthesis of the airborne geophysical data and 2013 mapping (Brown, J.A. and McKeough, M., 2013). The southern part of this program, which included a major VTEM + mag survey, overlapped with a portion of the current CAT dispositions north of Lloyd Lake, in particular the northern half of CAT disposition MC00013808. The area north of Lloyd Lake was subdivided into three general litho-structural domains. The Syndicate concluded that the boundaries between these domains are generally considered to be structural breaks with a potential to host uranium mineralization. An area immediately NE of Donut Lake, coinciding with several NE-trending conductors, was also the location of six similar low-level B-horizon soil U anomalies. In WGM's view, it is notable that 3 out of 4 areas selected by the syndicate for follow-up drilling in 2014 fall along major domain breaks bounding the east and west limits of the aforementioned lithostructural zones. The lake-bottom sediment geochemical program was successful in confirming several historic clusters of anomalous uranium concentrations well above the background value of 1.0 ppm U in lake-bottom sediments with a peak of 7.0 ppm U; for comparison, the highest value down-ice from the Fission's Patterson Lake South discovery was 3.8 ppm U. In most cases the uranium and pathfinder element (e.g., Co, Cu, Pb, Zn or Y) anomalies correlate with areas of interest generated independently through the interpretation of airborne VTEM and radiometric geophysical results, radon-in-water samples and historic data reviews. The lake-bottom sediment survey also identified a new target area to the far east property area (termed 'Montgrand Lake Zone') with anomalous U and pathfinder element concentrations.

During 2013-2014, the Syndicate conducted followed exploration based on its previous results that identified the Swoosh, West Fin, Clearwater Hinge and Limb, Lloyd and "Canoe" targets on the Preston property as being of interest. Ground geophysics was initiated with a gravity survey by MWH Geosurveys based on the premise that hydrothermal cells reduce rock density, a number of distinct gravity low targets were generated and prioritized for additional geophysical and other follow-up work (Brown, J.A. and McKeough, M., 2014). High-priority gravity targets were identified in each of the target areas and all were subject to follow-up Max-Min surveying by Patterson Geophysics to delineate the axes and orientations of conductors, and thereby constrain the east-west position and orientation of drill holes. Radon-in-water



(RIW) and/or Radon-in-soil (RFM) surveys were contracted to RadonEx, the data to be used in constraining the northing co-ordinates of drill pads along the respective conductors of each gravity target area. RadonEx ranked the targets and the Syndicate partners agreed to a drilling program in 2014 that totalled 1,571,15 m. The drilling failed to intersect any significant uranium values, the highest being 8.82 ppm in a 50 cm sample of mylonitic, garnetiferous granodiorite-gneiss containing 5% fine graphite in hole PN14003 on the Swoosh target. Sooty graphite was described in many of the Swoosh drill holes. This target is of particular interest as it is located 3.5-4.5 km northeast of CAT disposition MC00013808 and other CAT dispositions to the south. WGM notes that 2014 Preston diamond drilling program verified the effectiveness of the HLEM geophysical survey by intersecting conductive graphite and pyrite related to structural zones in six drill holes. The effectiveness of the gravity survey was also confirmed in that the gravity low anomalies were associated with strong hematite, chlorite and other clay alteration intersected in basement rocks in nine drill holes. WGM believes that it is significant that the best drill hole was one of the most structurally disrupted (sheared) holes of the 2014 program. Radioactivity was primarily caused by thorium – the Th/U and Pb isotope ratios suggest that most zones have undergone significant uranium depletion, an observation that is supported by the strong illite (clay) alteration present sporadically throughout the 9 holes. The proximity of the CAT property suggests that it might be located in an area where uranium could be re-deposited. Illitic alteration zones, commonly associated with uranium deposits elsewhere, is strongest in graphitic horizons in drill hole PN14001 where the alteration is strongly anomalous in Ag, Mo, As, Co, Cu, Ni and REE. The Syndicate concluded that the results suggested a possible NE vector to mineralization at Swoosh.

In 2015, Athabasca Nuclear Corp., the successor to the aforementioned Syndicate, was represented by Skyharbour Resources Ltd. in completing follow-up work based on the previous year's exploration in the Preston Lake area (Brown, J.A. and McKeough, M., 2015). The new drilling carried out by Skyharbour tested targets in the Canoe Lake area and south of the Fin target that had not been drilled the Syndicate during the previous year. Five angled diamond drill holes totalling 1,318 m were completed. All holes intersected graphite-bearing horizons and, as previously, encountered abundant shearing and brecciation. No economically significant mineralization was encountered - the best intersection was only 7 ppm U. Alteration was typically chlorite-sericite with hematite-quartz-clay in the more intensely altered sections. Shear zones corresponding to conductors were commonly graphitic. General follow-up exploration was recommended in the Clearwater area and several others areas as well as follow-up ground geophysics over airborne anomalies.



During 2017, Skyharbour Resources continued its exploration in the Preston Lake area in partnership with Clean Commodities Corp. and Orano Canada Inc., the latter formerly known as Areva Resources Canada Inc. (Orano, 2017). Geophysical surveying comprised EM (Moving Loop-TEM) on two grids in the Dixon Lake and Amber Lake resulting in the detection of three NE-trending basement conductors characterized by moderate to strong EM responses. WGM found that the assessment file report contained many interesting photographs of bedrock exposures and of selected drill core sections from the holes that were relogged. The core photos show that the graphitic gneiss is rather tight and impermeable. While these rocks could trigger reduction of U-bearing fluids, WGM concludes that they do not themselves provide sufficient surface area to generate significant uranium deposition. Open (dilatant) shearing and brecciation is needed to allow greater surface contact between U-bearing fluids and the graphite reductant as well as providing open spaces for U deposition (author's personal observations at Collins Bay D-Zone and Rabbit Lake).

# 6.7 CURRENT AZINCOURT EXPLORATION

Subsequent to the aforementioned Skyharbour-Clean Commodities-Orano exploration program, the dispositions held were divided into two separate projects: Preston, on which Areva continued exploration, and East Preston, which was optioned to Azincourt Energy Corp. ("Azincourt") with Skyharbour and Clean Commodities retaining an interest in the project. The East Preston group of dispositions covered the aforementioned Swoosh target area. Azincourt's interest was predicated on recent information concerning the geological setting of Fission's Patterson Lake South discovery and Nexgen's Arrow discovery, both economically significant deposits as well as knowledge of the setting of Gulf Mineral's Eagle Point discovery in the late 1970s, currently being mined by Cameco. Azincourt recognized that the East Preston project area is located along a parallel conductive trend between the PLS-Arrow trend and Cameco's Centennial deposit (Virgin River-Dufferin Lake trend). According to its news releases (see https://www.azincourtenergy.com/news/news-releases/.html), Azincourt carried out a reinterpretation of the extensive historical airborne and ground geophysical data set that existed on its project area that identified and prioritized the various conductor trends within the former Swoosh area. The highest priority areas were identified as the 'A-Zone' corresponding to the NNE-trending lineament extending through the area previously tested by holes PN14001 to PN14006 completed during 2013-2014 by the aforementioned Syndicate. Also prioritized was the 'B-Zone' extending north-easterly under Five Islands Lake and the 'D-Zone' extending SSE (~1650) from Ridge Lake towards the eastern end of Laternus Lake on the CAT dispositions. In a follow-up program, Azincourt carried out a HLEM (46.1 km) and gravity



(40.6 km) surveys over a 50 line-kilometre grid with profiles perpendicular to the interpreted VTEM conductive trends. Numerous conductors were confirmed corresponding to and better defining those identified from the earlier work. In late 2018 Azincourt retained Geotech Ltd. to complete a 498 line-kilometre helicopter-borne Versatile Time-Domain Electromagnetic ("**VTEM**<sup>TM</sup> Max") and magnetometer survey over the south-eastern portion of the East Preston Project to ensure complete survey coverage over the entire project area.

During the first quarter of 2019, Azincourt completed an initial 3-hole (552 m) drilling campaign that targeted multiple, closely spaced discrete graphitic conductors with coincident gravity low anomalies that are considered to be indicative of alteration or thicker overburden due to enhanced glacial scouring over altered, or structurally disrupted basement. The drill core confirmed the presence of basement lithologies and sheared graphitic rocks that were thought to be analogous to those hosting the uranium deposits previously discovered at Patterson Lake South, Arrow, Hook Lake and Spitfire.

Azincourt commenced a \$1.2 million drilling program in January, 2020 including drilling of the A-Zone and B-Zone targets. Overburden thickness ranged from 15 to 33 m thick, and as expected, no Athabasca sandstone was present. The program resulted in the completion of nine diamond drill holes totalling 2,431 m (Azincourt new release, 8 June, 2020). A project map can be found at https://www.globenewswire.com/NewsRoom/AttachmentNg/7bedbc94-6fd6-43fa-<u>ad62-7ff37640c4d3</u>). The drilling confirmed the presence of interleaved sequences of moderately to strongly deformed orthogneiss assemblages intruded by narrow pegmatite and/or mafic dykes. Brittle (mylonitic to cataclastic) deformation fabrics were common although fault gouge was rare. Graphite-rich (1-25%) intervals are notable in most holes with thicknesses ranging from 0.5 to 10 m and these are generally found within the most strongly deformed rock sequences associated with vein and disseminated pyrite (1-20%), and broad halos of moderate to strong blue and grey quartz alteration. Saskatchewan government geologists have used the term "pseudopelite" to identify such rocks which are one of the main uranium-hosting units along the Patterson Lake trend hosting the Triple R and Arrow uranium deposits. The A-Zone was tested by three holes all of which intersected two or more parallel graphitic and pyritic zones mantled by strong bluish quartz-chlorite alteration over intervals of 10's of meters and confirming the presence of a basement-hosted north to northeast trending fault zone associated with strong hydrothermal fluid interactions centred around graphite-rich strata. Low-level but anomalous radioactivity was detected in two of the holes bracketing the graphite-rich horizons which contained anomalous REE values. The B-Zone was tested by four holes, all intersecting sequences similar to the A-Zone. Significant radioactivity in hole EP20007 occurred at 281 m produced a peak of 2202 cps over a 2-metre interval averaging 816 cps. The interval assayed 3.5 ppm U and 587 ppm Th over 4.25 m. The B-Zone was confirmed by the drilling as being



related to a second basement-hosted NE-trending fault zone with a history of strong hydrothermal fluid interactions which includes the presence of anomalous radioactivity. The high Th/U ration suggests that U may have been leached from this area. Like the A-Zone, the B-Zone is enriched in REEs, the presence of which with silica and boron enrichment confirms mineralizing basement fluid systems were active. The Swoosh Zone was tested with two holes, neither of which intersected significant radioactivity or graphitic strata, however several broken sections bounded by quartz-chlorite +/- hematite alteration indicates the presence of late brittle fault structures in this zone. Strong hydrothermal sulphide mineralization of (673 ppm Zn and 1.5 ppm Ag) was found over a one metre interval in hole EP20005.

During November, 2020 Azincourt initiated a horizontal loop electromagnetic ("HLEM") survey consisting of 40.5 line-km of line-cutting and surveying in six grid areas for the purpose of refining and prioritizing targets where untested conductive corridors had been identified in property-wide airborne VTEM data. The HLEM survey was intended to more clearly define conductive features in the structural corridors as targets for future drilling. The survey was successful in delineating several conductors over the six selected target zones, G1, G2, G3, Q and H which trend southerly to south-westerly towards the CAT dispositions as well as the K-Zone located farther to the north and possibly a dog-leg connector between the B-Zone and the H-Zone. Many of the conductors showed strong well-defined responses that are deemed sufficiently interesting to be drilled (Azincourt news release 18 January, 2021). A winter drilling program was forced by unseasonable warm weather to stop early with the completion of 5 holes totalling 1,195 m approximately half of what had been planned. Initial results indicated that the eastern flank of the conductive corridor through the A to G Zones contains a thick graphitic package in a complex shear/fault system that represents an ideal host for uranium mineralization (Azincourt news release 23 March, 2021). These zones are shown in Figure 5 which illustrates the location of the CAT and Azincourt properties. The location of the westernmost Azincourt property boundary is shown in the green outline, and the adjacent numbered CAT dispositions are outlined in white. EM conductors detected by various means are shown as red sinuous lines and individual conductive corridors are outlined and shaded in blue. Areas of higher radioactivity detected during historical airborne surveys are shaded pale yellow.

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During the latter half of 2021, Azincourt contracted Terralogic Exploration Inc. to facilitate (carry out) a low-level, fixed-wing gamma-ray spectrometer survey over previously unsurveyed areas in the southern part of its property and then carry out ground investigations of any anomalies detected. Special Project Inc. of Calgary, Alberta completed the 2,514 line-kilometre high-resolution survey with a 50-metre line spacing over a 10-day period in August. The survey highlighted and extended the G-Zone and the Q-zone to the border of the CAT dispositions. The 1,000 m of diamond drilling remaining from the previous winter program was added to the late 2021 drilling to bring the newly planned total to at least 6,000 meters in 30-35 drill holes to test targets in the existing knowledge base as well as newly defined conductors (Azincourt new releases: 17 November, 2021 to 25 January, 2022). Drilling was planned to focus on the A-G and K-Q trends beginning with extending the G Zone to the south (on which the previous drilling program had been foreshortened due to warm weather and ground concerns). Elevated uranium values were obtained in some of the previous G-Zone holes. The program was also intended to test the trend through the 'K', 'H' and Q-Zones.

Azincourt's winter drilling program was scheduled to begin in December, 2021 following its opening of the 73 km winter road to access the property and equip the campsite, but the drilling did not commence until 22 January, 2022 due to less than favourable winter conditions. A total of 5,004.5 meters was completed in 19 drill holes over an 8-week period (Azincourt new release 29 March, 2022). Although the drilling followed the general plan in respect to the targets, many holes were drilled significantly deeper than initially planned to get through alteration and the structure intersected, and additional holes were drilled to follow up key results. The company reported >1,700 m of strike that was affected by strong hematite alteration and "elevated radioactivity" along conductive structural zones.

Azincourt initially completed nine drill holes on the NE-trending G-Zone showing "extensive hydrothermal alteration and evidence of east-west cross-cutting structures" along the southern portion of the zone. Azincourt holes EP0030 and EP0037 were the most interesting – these are located 650-700 m east of the CAT disposition boundary. These holes showed evidence of a steep east-west fault cross-cutting the main NE-trending graphitic zone. Six holes were drilled on the K-Zone proving extensive hydrothermal hematite and clay alteration over a strike of at least 1,200 m. Elevated (10x background) radioactivity was found in hole EP0035. Three holes targeted the H-Zone intersecting a thick zone of hydrothermal alteration and "an intense graphitic fault zone". The change in strike of this conductive zone suggested structural complexity that will require additional drilling to evaluate in respect to its relationship with the K-Zone to the north and the Q-Zone to the south which was not drilled during this program. Azincourt concluded that the drilling to date continued to confirm the close relationship between geophysical conductors and structurally disrupted zones that are host to accumulations



of graphite, sulphides and hydrothermal alteration with which anomalous radioactivity is associated.

Recent results released by Azincourt have identified two additional holes drilled close to the above-mentioned holes EP0030 and EP0037. These two holes, EP0045 and EP0047 were identified as having "elevated radioactivity". CAT takes particular interest in this as the location is less than a kilometre from its boundary.

# 6.8 CONCLUSIONS BASED ON HISTORICAL EXPLORATION

The CAT dispositions are situated in the south-western Athabasca Basin, an area that is underexplored in comparison to the eastern basin. CAT's exploration will benefit from what has been learned after many decades of uranium exploration elsewhere. The lack of sustained, systematic exploration in this area, which persisted until approximately 2018, is attributable to several factors enumerated below:

- the early discovery of multiple deposits in the eastern basin (e.g., Rabbit Lake, the Collins Bay deposits, Eagle Point, Key Lake, McLean Lake);
- the early development of infrastructure in the eastern basin (roads, airstrips, processing facilities);
- the perception that the Cluff Lake Mine in the western basin a was an odd-ball deposit in a unique geological setting which persisted until approximately 2008-09 when the Shea Creek discovery was made (96 Mlbs U<sub>3</sub>O<sub>8</sub> at 1.3%) located near Cluff Lake;
- a continued focus on the eastern basin attributed to the discovery of high-grade and very large deposits at Cigar Lake (1981), MacArthur River (1990) and Roughrider (2009);
- the tendency of companies to explore in areas of demonstrated potential because financing is more readily available for projects in those areas, especially in the period following the Fukushima tsunami incident in March, 2011 which triggered a withdrawal of Japan from the nuclear energy business, triggering widespread negative public reactions to nuclear energy which then precipitated a sharp drop in uranium commodity prices;
- the Athabasca Group sandstone in this area of the south-western basin, in which the CAT dispositions are located, is missing as a result of erosion, that is, the unconformity has been eroded and only basement rocks are present in much of Lloyd Lake-Kelic Lake sector; and,
- the mid-term discovery of additional deposits in this area. The Centennial Deposit was found post-Fukushima in the south-central basin, but in an area of sandstone cover.



Viewed through the lens of the experience by Fission at Paterson Lake South and the ultimate discovery of the high-grade Triple R deposit, the favourable geological and geophysical features recognized on or adjacent to the CAT dispositions allow for a systematic, measured approach by CAT using well-proven technologies and methods as are described in this report. Azincourt's experience follows a path not dissimilar to that followed by Fission. CAT can take advantage of this by avoiding ineffective surveys and focusing on conductive corridors as high-potential targets.

Extensive deposits of glacial till represented by drumlin fields, eskers and outwash deposits overlie the bedrock in much of the CAT dispositions. In the east, extensive flat-lying areas are covered by muskeg. Sufficient bedrock exposure is available that the location of the Athabascabasement unconformity can be approximated +/- 500 metres and traced across the area, being for the most part 7-13 km north of the dispositions. The unconformity does cross the mid-section of disposition MC0014575 with an ESE-trend. A 1x2 km outlier of Athabasca sandstone, elongated NE-SW, is reported at the NE tip of Silvius Lake, also on the CAT disposition. From this evidence WGM infers that the basement rocks present on the CAT dispositions under shallow glacial cover are probably within 100 m or less from the former unconformity.

According to the information released to date, the A-B-G and H-K-Q structural corridors currently being drilled by Azincourt, and located adjacent to and a few kilometres northeast of the CAT dispositions, bear a close similarity to the PLS deposit model for Fission Uranium's Triple-R and NexGen's Arrow uranium deposits. Azincourt is currently working to better define the many structures in this corridor. Topographic and radiometric evidence indicated that these structures cross onto the CAT dispositions, and this has now been proven through CAT's own airborne VTEM survey described herein.

The results from projects carried out in the area of the CAT dispositions indicates that the more western half of the property is more favourable in comparison to the eastern half. This conclusion is based on the number of SW-trending conductors that project onto the CAT dispositions west of Craig Lake, areas of high total count radiometric activity discovered previously during partial coverage by an Athabasca Nuclear Corp. airborne survey, the occurrence of strongly radioactive bedrock in the west-central portion of disposition MC00013808, uranium anomalies in lake-bottom sediment in a small lake on the same disposition and a few radon anomalies.

The eastern half of the CAT dispositions harbours a variety of evidence indicating a degree of favourability for structurally controlled uranium deposits. This includes a SE-trending EM



conductor that crosses MC00014558 and MC00014559 in an area southwest of Anonymous Lake. It is associated with an inferred fault zone. A SW-trending conductor was identified passing between Esker Lake and Silvius Lake – a strong topographic lineament suggests that the conductor extends onto the CAT dispositions and intersects the aforementioned SE-trending conductor in the eastern area of MC00014558. The area of intersection could be structurally favourable for mineralization. A series of lake bottom sediment anomalies north of disposition MC00014559 are anomalous in nickel and uranium, pointing to a source area to the northeast, potentially on the northern extension of this same disposition. The potential source area, which might extend onto disposition MC00014575, is characterized by NNE to ENE-trending EM conductors in an area crossed by the Athabasca unconformity. A 1x2 km outlier of Athabasca sandstone, elongated NE-SW, is reported at the NE tip of Silvius Lake. The NNE-trending conductor was detected in a 1969-70 airborne EM survey, and graphitic metasediments have been reported in this northern part of MC00014559. Several stream sediment geochemical anomalies occur in small stream draining north onto the CAT disposition from Montgrand Lake - two small lakes farther north (downstream) also have bottom sediments anomalous in uranium. Graphite-bearing outcrop and boulders also found south of Silvius Lake although no uranium mineralization has yet been identified here. Pegmatites show radioactivity as high as 1,250 cps. Clearly this area is a target for follow-up exploration.

Also meriting mention is an airborne gravity gradiometer (+aeromag) survey flown by CGG over a block in the Kelic Lake sector, which indicated a significant lithological domain boundary as well as structural features which are not reflected in the present surface topography and glacial deposits. This block, extending east of Craig Lake on the CAT property appears to comprise a different lithological domain based on airborne magnetometer and gravity data. Its lack of linear belts characterized by a low-magnetic response may signal the absence of a metasedimentary package favourable as a host for uranium. However, structures demarcating the block boundary could be a favourable site for mineralization. As is noted in WGM's compilation of prior exploration in the region of Kelic Lake, airborne and ground VLF-EM surveys have been conducted detecting some weak conductive responses.

An area of potential interest is evidenced by a cluster of radioactive boulders (9,000 cps) that was identified in 1970 on the shore (beach) of the point separating Lloyd Lake from Clearwater Lake. It is noteworthy that the geographic co-ordinates given for the boulders are 8 km south of the described location in relation to Lloyd Lake as well as the location shown on the project maps. WGM found no record of any significant follow-up. The source of these boulders could be on the CAT disposition a short distance (7 km) to the northeast in an area with elevated background radioactivity as indicated by an airborne radiometric survey in 2013 by Athabasca Nuclear Corp.



The central area of the CAT dispositions in the Craig and Laturnus Lake area is judged to merit geological mapping as it is located along strike from fault zones to the north and radioactive occurrences have been found both to the north (boulders) and to the south (bedrock). Mapping is warranted to better understand the geological setting of the area.

In a more general sense, systematic exploration of the CAT dispositions is well justified by their proximity to the Athabasca-basement unconformity. In the most pragmatic terms, the portion of the CAT dispositions west of Craig Lake appears to be the most interesting.

Geological mapping, aided by satellite image (data) processing and interpretation, and prospecting with a gamma-ray spectrometer remains as a basic exploration tool required to provide fundamental information whereby any exploration survey result can be properly interpreted. Based on the surveys completed to date, the following exploration methods can be ranked according to effectiveness:

- Airborne VTEM surveying with ground geophysical EM or IP follow-up to better define conductive targets for drilling;
- magnetometer +/- gravity surveying in greenfield areas to define lithological domain boundaries as the likely location of a structural break (shear zone) as a potential site for mineralization;
- Biogeochemical sampling has yielded strong anomalies over known uranium deposits and appears to be a viable exploration tool. Anomalies have been several orders of magnitude above background values of approximately 2 ppm U. A significant anomaly occurs at Kelic Lake with values of up to 112 ppm U in ash and several other samples exceeding 20 ppm U (Alpha Exploration Inc., 2015). Several scattered anomalies up to 11 ppm U were detected at Fishhook Lake in an area with a <2 ppm background. Scattered anomalous as high as 6.9 ppm U with a 2-ppm background were found along an assumed fault trace in the Dufferin-Virgin Lakes area. Sampling in the Sando Lake-Kelic Lake area failed to detect an anomaly but confirmed an average (background) of 0.5 ppm U;</li>
- Radon-in-water sampling is a variety of water geochemistry that is not dependent on a chemical analytical process although technically the water is tested instrumentally. RadonEx, an independent exploration services company, specializes in the use of an electret ionization chamber ("EIC") to measure radon activity in the water column. A



386-sample survey completed during 2013 by the West Athabasca Syndicate successfully identified radon-in-water anomalies occurring both as clusters and as discrete points. Sets of anomalies were discovered that are coincident with EM-conductors at Lloyd Lake, 'South Fin' and in the Swoosh target area, the latter coinciding with strong NE-trending conductors on which Azincourt is currently drilling immediately northeast of the CAT dispositions;

- Lake sediment sampling has generated mixed results. Caution is advised to ensure samples are mineral matter and not organic muck. Some very large survey areas characterized as having no detectable uranium. In general, anomalies have been low order in areas adjacent to the CAT property (e.g., 3 ppm uranium with a 1 ppm background). The highest value detected down-ice from Fission's Triple R deposit at Patterson Lake South was 3.8 ppm U;
- soil and muskeg sampling has yielded mixed results and the results of this approach appear to be very dependent on the local setting in respect to the character and thickness of the surficial deposits and topography, often yielding single station or low-order anomalies;
- Lake water geochemical sampling to determine the dissolved uranium content has generally proven to be ineffective as an exploration technique due to low relief responses attributed to dilution factors from water in-flow as well as stratification and/or mixing in the water column.

# 7. GEOLOGICAL SETTING AND MINERALIZATION

### 7.1 REGIONAL GEOLOGICAL SETTING

The CAT property is characterized by occasional outcrops of bedrock and variably distributed muskeg deposits which overlie a layer of unconsolidated glacial till, esker and outwash (sand and gravel) deposits that may be several 10s of metres in thickness. Over most of the South Preston Property, these surficial deposits rest on basement rocks that are part of the western Churchill Province of the Canadian Shield. These rocks belong to the Rae Sub-Province which takes in most of the western area underlying the sedimentary rocks that characterize or define the Athabasca Basin. Locally, the basement is represented by orthogneiss intruded by



pegmatite dikes and less commonly by diabase and intermediate intrusions. There has been no systematic geological mapping in the South Preston project area.

The Athabasca Basin (the "**Basin**") is an oval-shaped sedimentary basin with approximate dimensions of 450 km east-west and 200 km north-south. The maximum thickness of the Athabasca Group sedimentary strata that make up the basin is 1,500 m near its centre.

CAT's South Preston Property (the "**Property**") is located near the south-western margin of the Athabasca Basin. Flat-lying to shallowly dipping sandstone strata of the Athabasca Group unconformably covers the basement assemblage only in the extreme north-eastern part of the South Preston property. There is no evidence of the presence of any Cretaceous or Paleozoic sedimentary sequences in outcrop or in-situ overlying the Precambrian rocks.

Various airborne and ground geophysical surveys have produced EM, magnetic and gravity data that can be used to map major domains and structural features in the basement. Some of these features, lineaments thought to be associated with conductive fault zones, may have extended upwards into the Athabasca, however because the Athabasca sandstone has very limited extent within the CAT dispositions, the features seen are almost entirely attributable to basement geology. In general, the magnetic and gravity signatures have allowed for the distinguishing of large-scale differences between mafic versus felsic metasedimentary rocks such that individual blocks can be identified. Major differences are often separated by EM conductors that can be mapped as fault zones, the stronger conductors commonly occurring in areas where the presence of graphite is indicated. These structural boundaries represent focal points for uranium exploration as lithology alone does not provide a suitable vector for exploration success.

# 7.2 LOCAL GEOLOGICAL SETTING

Extensive deposits of glacial till represented by drumlin fields, eskers and outwash deposits overlie the bedrock on much of the CAT dispositions. In the east, flat-lying areas are muskeg-covered. Sufficient bedrock exposure is available that the location of the Athabasca-basement unconformity can be approximated +/- 500 metres and traced across the area, being for the most part 7-13 km north of the dispositions. The unconformity does cross the mid-section of disposition MC0014575 with an ESE-trend. A 1x2 km outlier of Athabasca sandstone, elongated NE-SW, is reported at the NE tip of Silvius Lake, also on the CAT disposition.



The CAT dispositions have not been the subject of any dedicated geological or geochemical mapping effort, nor has this specific area been surveyed in a comprehensive fashion by an airborne geophysical survey, although partially covered by various surveys, as discussed further below. This is largely attributed to its location south of the unconformity. The thickness of overburden, locally shown to be as much as 100 m, has also impaired geological mapping. As a consequence, no detailed map exists for the CAT dispositions. The existing maps have varying scales and were created before the advent of the GPS that facilitates metre-scale accuracy. The proximity of the CAT Property to the unconformity means that many historical geological surveys, some quite detailed, overlap onto portions of the CAT property. CAT has plans to compile these maps into a single digital map format for ground truthing in the field.

Many areas lack bedrock exposure. Evidence in subrounded blocks and boulders suggests the presence of fine-grained to very coarse-grained gneiss, pegmatitic granite, and granitic gneiss to gneissic granite. Quartz contents vary from 30 to 45% and both orthoclase and plagioclase are present in amounts of 45% to 65%. Melanocratic crystals of biotite and pyroxenes vary from 2-10%. Some of the felsic boulders are kaolinized with hematite staining. Minor copper mineralization (malachite) was observed in some boulders in the western area associated with the south-westerly projection of the Azincourt G-Zone conductor. Minor white to red sandstone and matrix-supported conglomerate boulders are present locally.

Metamorphic foliations in the area northeast of Lloyd Lake had a north-easterly strike (030°) and a steep (-85°) north-westerly dip. Background total count radioactivity varied from 20 to 400 cps as measured with a Radiation Solutions **RS125** gamma-ray spectrometer. The average total count value for 583 sample stations was 60 cps. The spectral bands for thorium:uranium produced a ratio of 1:7 to 1:30 favouring thorium. Several peaks up to 23,600 cps were noted in the vicinity of the airborne EM conductors 1 and 2. Many of the spikes in radioactivity spiked during the middle of the work day at a time when the field crew was finishing the north end of profile 28 and initiating sampling on profile 29.





Figure 6 Comparison of Spectrometer profile, conductor location and biogeochemical anomalies. The image shows the location of airborne VTEM conductors (red lines) and the location of biogeochemical anomalies. The corresponding profile for sample lines 28 and 29 is given. Line 28 was sampled from SE to NW and line 29 was sampled from NW to SE. The midday radiometric anomaly corresponds with the period of time in which the sampling crew was over the northern conductor.



Surface exploration in the eastern group of dispositions revealed the presence of boulders of mafic to felsic rocks such as pegmatites, graphitic (?) / micaceous granulite, various types of gneissic granites and granodiorites, and black to green chloritic and micaceous schists, the latter being possibly graphitic in nature. Some of these more mafic rocks are variably magnetic. Blocks and boulders of amphibolite, quartz-diorite, tonalite and meta-gabbro can occasionally be seen, especially in the western side of Silvius Lake. Some of the meta-granites and meta-granites and meta-granites and meta-granites and meta-gabbro or amphibolite, as well as crystals of epidote and olivine in centimetre-scale lenses.

# 7.3 QEMSCAN RESULTS

The SRC Geolab carried out QEMSCAN studies on selected bedrock grab samples collected by the WGM field crew. The mandate of the field crew was to complete the biogeochemical sampling and to collect representative samples of any bedrock encountered during the sampling program. The WGM field team operated for a period of only one month and did not have sufficient time/budget for systematic geological mapping.

QEMSCAN analyses are a collection of back-scattered electron images and semi-quantitative point chemical analyses. The grain images and EDS data are combined using image analysis to calculate various parameters such as particle size distribution, mineral associations and liberation, modal abundances, etc. Modal mineralogy is calculated from the combined analysis of the BSE images and the mineral identification from the EDS data. The volumetric abundance of the minerals is converted to mass percent from density data for typical mineral compositions.

The following characterizations have been made of those WGM samples submitted for QEMSCAN mineralogical analysis (Table 2). Mineralogical classifications do not take into account metamorphic fabrics for example in sample 225268 (shown in Figure 7), which would more fully classify the rock as a granitic gneiss.





Figure 7 Bedrock sample #225268 classified as a granite based on modal mineralogy but clearly showing a well-developed metamorphic fabric.

QEMSCAN analysis has shown the widespread presence of illite, an important alteration mineral commonly associated with uranium deposits. The significance of this mineral in the setting of the CAT property is uncertain, however its presence is not surprising given that the WGM field team was focused on geochemical sampling in the vicinity of major EM conductors that have bedrock affinities. It is noted that illite alteration is particularly strong in sample # 225264 (7.9%), 225268 (8%), 225274 (8.4%) and 225281 (10.05%). All four samples are located along the #1 conductor group on the CAT property which is an extension of the Azincourt conductive corridor located across the CAT property boundary one kilometre to the northeast. They are also located near biogeochemical samples with elevated uranium contents.



Table

QEMSCAN Classification of Selected Bedrock Samples

Sample #	Classification	Comments	
230369	granodiorite	mainly composed of plagioclase (44.58%), quartz (32.14%), and orthoclase (9.20%). Illite and biotite are also present. Monazite is not found in this sample.	
230374	gabbro	composed of plagioclase (66.63%), biotite (24.22%), and garnet (4.89%). Monazite is present at 0.11% of the sample. Quartz (0.91%), and orthoclase (0.35%) are present in minor amounts.	
225264	granite	mainly composed of quartz, orthoclase, and plagioclase. Illite occurs in significant amounts, mainly as exsolutions of orthoclase. Trace amounts of muscovite are present.	
225268	granite	mainly composed of orthoclase, quartz, and plagioclase. Illite is found throughout the sample as exsolutions from orthoclase. Other minerals found throughout the sample include hornblende, biotite, iron oxide, orthopyroxene, ilmenite, and apatite. Minerals in trace amounts such as garnet, zircon, chlorite, pyrite, and muscovite are present.	
225274	granite	mainly composed of orthoclase, and quartz. Plagioclase and illite are present in approximately equal amounts, with illite being present as exsolutions of orthoclase. Other minerals include orthopyroxene, ilmenite, apatite, biotite, and garnet. Iron oxide, and chlorite are present in minor amounts. Trace amounts of zircon and monazite are present (0.09%).	
222581	quartz syenite	mainly composed of orthoclase, with quartz, illite and plagioclase in significant amounts. Illite is present as exsolutions of orthoclase. Chlorite is found in crack throughout the sample. Other minerals include orthopyroxene, garnet, monazite, ilmenite, biotite, and trace amounts of apatite. Monazite is 0.35% of the sample.	
225300	granite	mainly composed of orthoclase, quartz, plagioclase, and illite as exsolutions of orthoclase. Other minerals found in minor amounts include garnet, ilmenite, chlorite, biotite, orthopyroxene, iron oxide, and apatite. Trace amounts of zircon and monazite (0.02%) are present.	
225381	granite	mainly composed of quartz, orthoclase, and plagioclase. Illite is found as exsolutions of orthoclase. Significant amounts of orthopyroxene, and biotite can be found throughout the sample. Other minor minerals include ilmenite, garnet, and chlorite. Trace amounts of iron oxide, muscovite, apatite, zircon, and monazite (0.02%) are found.	



# 7.4 MINERALIZATION

No mineralization has yet been discovered on the CAT Property. Bedrock and boulder samples collected by the WGM geologist did not contain significant mineralization. They were collected for characterization purposes. The tendency for unconformity-type uranium mineralization to be deposited along graphitic fault or shear zones that are easily eroded precludes the likelihood of finding mineralization in outcrop.

Historical records have significant gaps in exploration coverage and thus it is rare to find any survey that covers a portion of the South Preston Project area. Various technical reports previously filed with the provincial authorities to meet assessment requirements reference occurrences that indicate a potential for uranium mineralization on the CAT dispositions. These include:

- a cluster of radioactive boulders (9,000 cps) identified in 1970 on the shore (beach) of the point separating Lloyd Lake from Clearwater Lake. WGM found no record of any significant follow-up. The source of these boulders could be on the CAT disposition a short distance (7 km) to the northeast in an area with elevated background radioactivity as indicated by an airborne radiometric survey in 2013 by Athabasca Nuclear Corp.
- 2) the presence of uranium mineralization in graphitic metasedimentary rocks noted by geologists on the northern part of CAT disposition MC0014559. The site, thought to be located about 900 m northeast of Silvius Lake, is spatially associated with a historical NE-trending EM conductor.
- 3) anomalous radioactivity, locally very high (>10,000 cps) has been identified on the western-most CAT disposition MC0013808. Airborne surveying of this disposition has identified large areas with elevated to anomalous radioactivity. No geological map exists to provide a geological context to these readings however they are located in an area into which EM conductors project from the northeast.
- 4) the central area of the CAT dispositions in the Craig and Laturnus Lake area which is located along strike from fault zones to the north - radioactive occurrences have been found both to the north (boulders) and to the south (bedrock). Mapping is warranted to better understand the geological setting of the area.

It is noteworthy that some of the world-class uranium discoveries in the Athabasca Basin were discovered though detailed follow-up exploration of glacially-transported boulders.



Anomalous radioactivity was noted by WGM's prospectors at several locations on the CAT property, notable associated with EM conductors located in the western survey area. These have been noted and flagged for geological follow-up.

# 8. DEPOSIT TYPES

The CAT Property is located within the general area of Athabasca Basin, a lithostructural domain comprising an assemblage of shallowly dipping, unmetamorphosed sedimentary rocks mostly comprising fluvial sandstone formations that are Proterozoic (1800-1550 Ma) in age. These rocks cover an area of approximately 85,000 km<sup>2</sup> and rest unconformably on the underlying basement comprising strongly metamorphosed Proterozoic metasedimentary rock as represented by paragneiss, orthogneiss, quartzite, and lesser that granitoid rocks (pegmatite) and metapelite, commonly including graphitic members. The CAT project is targeting uranium mineralization that is spatially associated with the Athabasca unconformity, known universally as "unconformity-type" or "unconformity-associated" deposits.

Unconformity-type deposits are structurally controlled and typically located at, or within a few hundred metres above or below the Athabasca unconformity, a prominent regional feature that separates crystalline basement from the relatively undeformed, oxidized clastic cover rocks. The host structures are generally near vertical, although reactivated thrust-related deposits can be associated with moderately dipping faults and breccia zones.

Uranium mineralization occurs where uranium-bearing fluids moving along the unconformity have encountered reactivated shear zones that have resulted from the focusing of stress along graphitic metapelite horizons. These structural breaks are commonly situated in regions characterizing a transition within the basement terrane. In some locations, the unconformity may be dislocated by normal and reverse faults parallel to the basin margin. Uranium deposition at the unconformity favours areas characterized by the presence of graphitic basement rocks and complex structural traps, however uranium may be deposited well above the unconformity as well as extending well below the unconformity.

The primary hydrothermal uranium is predominantly in the form of uraninite veins and openspace fillings. Near surface mineralization may be oxidized and occur in a wide variety of hydrous minerals. Hydrothermal alteration associated with the deposits is typically intense and destroys the original mineralogy and texture. Prominent minerals associated with ore deposits include magnesian chlorite, hematite, sudoite, illite and tourmaline. The alteration assemblages



are indicative of low temperature (probably <250  $^{\circ}$ C), low pH (probably <5) and high oxidation state at the site of uranium deposition

The presence of graphitic basement rocks is a key exploration vector. The unconformity was a key factor in the deposition of uranium, and for many decades explorers focused solely on areas where the unconformity was present. However, the discovery of the first unconformity deposit at Rabbit Lake in the late 1960s as well as recent discoveries in the Patterson Lake South area has demonstrated that significant uranium deposits can occur in areas where the Athabasca Group has been removed through erosion.

### 9. EXPLORATION

# 9.1 PROCEDURES/PARAMETERS OF SURVEYS AND INVESTIGATION

The exploration carried out to date included two major components:

- 1) a helicopter-borne magnetometer and electromagnetic ("**EM**") survey over portions of the CAT property; and,
- 2) biogeochemical sampling and limited bedrock characterization sampling.

The geophysical survey comprised time domain electromagnetic and magnetic survey using the AirTEM<sup>TM</sup> system developed by Triumph Instruments and carried out by Balch Exploration Consulting Inc. ("**BECI**", the "**Contractor**"). The objective of this survey was to map the geology with magnetics and electromagnetics to identify targets thought to have potential for uranium mineralization. The survey covered two survey blocks (A and B) located near the south-western contact of the Athabasca Basin, respectively, approximately 15 km and 45 km east of Lloyd Lake, 25 km, and 58 km east of gravel road 955 and 60 km and 85 km south-southeast of The Big Bear Camp within the NTS topographic sheet 074F, Lloyd Lake (Figure X). The survey was completed in late June and early July, 2022. Details of the survey, its specifications and the outcomes are found in this report in Appendix 1.

Biogeochemical sampling was carried out in three areas, two of which were selected on the basis of having EM conductors determined by the aforementioned airborne survey, and one of which was selected on the basis of a favourable geological setting described in historical documents. End-growth twigs of black spruce (*Picea mariana*) were sampled and ashed for analysis. In the absence of black spruce, jack pine (*Pinus banksiana*) was sampled as it has



been shown to have a similar up-take of uranium as black spruce. Profile lines were selected at an orientation normal to the strike of the EM conductors and spaced 150 to 225 metres apart (average 185 m). Sample stations were at a +/- 25 metre intervals over the centre of conductors, at 50 m intervals between and on the shoulders of conductors, and at a 100 m interval extending away from the shoulders of the conductors. A total of 38 profiles were sampled, ranging from 500 to 1,000 metres in length, and on which 718 samples were collected. The sampling program was supported by an AH-R44 (Robinson R44 RII) helicopter that transported the WGM field crew to the work sites in two round trips during the morning and two in the afternoon. Although seemingly time-consuming, the short haul distance, the lower hourly cost for this helicopter and its lower fuel consumption proved cost-effective overall.

# 9.2 GEOCHEMICAL SAMPLING METHODS AND SAMPLE QUALITY

# 9.2.1 BIOGEOCHEMICAL SAMPLING

Recent growth encompassing the outermost 20 cm of black spruce or jack pine twigs were cut from the ends of branches at waist height above the ground (approximately 1 m). This approach ensured consistency within the sample population. The twigs were placed in a plastic bag together with a pre-numbered paper sample tag on which was noted the sample location. Notes were recorded relating to the sample media, the location of the site, the diameter of the tree, the soil type and moisture characteristics, slope of the ground and the characteristics of any bedrock or boulders present. The ambient (background) radioactivity measured in the total count, K, U and Th energy windows using a Radiation Solutions Super Spec RS125 gamma-ray spectrometer. Peak radioactivity was also measured in relation to any anomalies present (boulders or bedrock). The data was entered into a project spreadsheet each evening.

Following the teams return to the project headquarters at the Big Bear Camp, a dedicated team of local residents was trained in the initial preparation of the twig samples. The samples were removed from the bag and spread on a plastic sheet. The needles were removed from each twig because metals including uranium are concentrated in the woody parts of the spruce and jack pine twigs and not in the needles. This was a time-consuming process carried out with the supervision of one of the local residents who also worked as a field assistant. Once the needles were removed, the twigs were placed in Kraft geochemical sample bags on which the sample number was written, stapled closed and placed in order in a heavy-duty cardboard carton. Samples were shipped to the Saskatchewan Research Council's Geoanalytical Laboratory ("SRC Geolab") in Saskatoon, SK for analysis.



#### 9.2.2 BEDROCK SURFACE SAMPLING

The purpose of the surface sampling was to collect a representative suite of bedrock samples to assist with the planned geological compilation and for geochemical analysis with a subset to be selected for mineralogical study. Members of the field team were equipped with RS-125 gamma-ray spectrometers developed by Radiation Solutions Inc. of Mississauga, Ontario. Gamma-ray spectrometer measurements were instrumental in selecting some samples that were anomalously radioactive. Some of the samples were of boulders that showed elevated radioactivity or were visually interesting. Samples were broken with a geology pick to enable fresh or relatively unweathered material to be taken for analysis. Sample locations were recorded using a Garmin GPSMAP 78s global positioning instrument attaining an accuracy (estimated position error) of approximately 2 metres.

All samples were sealed in plastic bags using pre-numbered cable ties. Samples were securely stored in the cabin of the senior geologist until such time as sufficient samples were collected to justify the cost of shipping. The samples were boxed and delivered by float plane to the McMurray Aviation base in Fort McMurray where staff arranged for onward delivery of the samples to the WGM (Toronto) office. In Toronto, the Project Director photographed selected samples before sending the group to the SRC Geolab for analysis. Photographs of the selected samples are included here in Appendix 4.

Geochemical assay results were provided by the SRC, an ISO/IEC 17025:2005 (CAN-P-4E) certified laboratory for major element and trace element analysis using the Whole-Rock and

# 9.3 RESULTS AND INTERPRETATION OF AIRBORNE GEOPHYSICAL EXPLORATION

The results of the geophysical survey are presented in detail in Appendix 1 of this report, and are summarized as follows for Block A in the western group of dispositions and Block B in the eastern group, and illustrated in Figures 8 and 9, respectively.

#### **Block** A

 the western portion of survey area Block A is highlighted by linear magnetic features with an ENE strike of approximately 068°. These features appear to collectively plunge to the east and suggest the basement rocks are shallower to the west, with the basement surface dipping to the east-northeast. 2) The eastern edge of Block-A is a series of very linear NE-striking magnetic features (~040°). The amplitude and wavelengths of these features suggests a shallow depth to basement. The steep gradient seen near the south-eastern margin of the survey area may denote a terrane boundary between highly contrasting rock units. The magnetic data show cross-cutting NW-SE trending features that suggest faulting with a strike direction of 105° to 120° (sub-parallel to the flight line direction).

🏷 Watts, Griffis and McOuat

- 3) The EM responses on Block A can be divided into two main trends, a Western Trend striking 068° and an Eastern Trend striking at 040°. The Western Trend is summarized as two or more dipping conductors that gently plunge to the northeast. The Eastern Trend is a series of faulted conductors with the sudden appearance of a second conductor trend toward the northwest and having higher amplitude. These trends are identified in Figure 28. There are additional short strike length trends that are also described but these trends are of secondary importance as their extent suggests limited extent of favourable graphitic conductivity. Further to these trends:
  - a. The knife-edge response of the Western Trend could be the result of brittle fracturing of the basement rocks with no discernable folding or fault movement subsequently. There is the appearance of intersecting faults, which has been suggested to be an important feature in the Patterson Lake South Deposit. Invoking the Fission Uranium model, the intersection of these two trends would be a good place to focus further exploration.
  - b. The East Trend is a series of 5-6 linear conductors striking across the survey block at  $68^{\circ}$ . The individual conductors have a low relative amplitude (~60 µs time constant) and an asymmetric shape indicative of a shallow northwest dip. The conductor trend located northwest of the main trend shows a much higher amplitude and a more symmetric shape with a time constant of ~140 µs.
- 4) There is a strong correlation between topographic change and EM trend, however it is unlikely that the EM responses identified by this survey on Block A are caused by "conductive overburden". The EM responses are best described as ribbon-shaped, long strike-length conductors with a measurable dip-extent and unknown thickness. The orientation of such a geometry would produce the asymmetric responses with an upper sharp boundary to a peak and then a gradual drop in amplitude depending on the angle of the boundary.





Figure 8: Total magnetic intensity (top) and early off-time VTEM survey shows the location of conductive axes in the western survey area. The CAT property boundary is shown with the pale green line. A portion of Azincourt's East Preston property is located at upper right and its G-Zone conductor corridor is shown in pale blue.





Figure 9: Total magnetic intensity (top) and early off-time VTEM survey shows the location of conductive axes (white line) in the eastern survey area. The CAT property boundary is shown with the pale green line.



In plotting the survey results, WGM found that the mean uranium value defined discrete areas within which anomalies occurred. The "*spotted dog*" effect of patchy highs and lows was absent. Data was contoured at m+1sd and m+2sd. In the eastern survey area, anomalies were 4-10 times the mean uranium value. In the western survey area, anomalies were 5-28 times the mean uranium value. Plots for the two western areas and the eastern area are given in Figures 9, 10 and 11. Statistical values for the western and eastern sample area is provided in Table 3.

Comparison of Western and Eastern Diogeochemical Statistical Data				
Parameter	Western	Eastern		
Number of Samples	583.0	110.0		
U Maximum (ppm)	168.0	187.0		
U Minimum (ppm)	< 0.01	0.0		
Mean Value (ppm)	5.97	18.13		
Median Value (ppm)	2.61	8.87		
Standard Deviation (ppm)	27.34	27.62		
Mean +1 SD (ppm)	33.31	45.75		
Mean+2SD (ppm)	60.65	73.38		
Anomaly Threshold/Mean	8.9	4.0		
Maximum Value/Std. Dev.	24.2	10.3		

 Table 3

 Comparison of Western and Eastern Biogeochemical Statistical Data

Anomaly plots for the two western areas and the eastern area are given in Figures 9, 10 and 11. In these illustrations, uranium values that exceed the mean (5.97 ppm) are outlined in green. Samples exceeding the mean plus one standard deviation (33.31 ppm) are outlined in orange. Red outlines sample sites where the uranium content exceeds the mean plus two standard deviations (60.65 ppm). EM conductors based on CAT's June-July 2022 airborne survey are shown as red, NE-trending linear features.

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Figure 10 Uranium bio-geochemical anomalies in the western survey area. Values exceeding the mean are enclosed by a green line; orange surrounds values above the mean + 1 s.d. Red surrounds sites exceeding the mean + 2 s.d. The highest uranium value in the area shown was 168 ppm. The CAT property boundary is indicated by yellow lines at upper right. Yellow shaded polygons are areas of elevated background radioactivity from historical data. The Azincourt 'G-Zone' conductive corridor is indicated by the blue shaded area at upper right. North is up. The field of view is approximately 5 km east to west.




Figure 11: Uranium bio-geochemical anomalies in the more westerly part of the airborne survey area. The green, orange and red contours denote the same thresholds as were used in Figure 9. The highest uranium value was 81.6 ppm in the area shown. Red ENE-trending linear features are conductors discovered from CAT's July 2022 airborne survey. The western and southern boundaries of the CAT property is indicated by the yellow line. Yellow shaded polygon is an area of elevated background radioactivity from historical data. North is up. The field of view is approx. 6 km east to west. The conductive features shown on the CAT property have a strike length of approximately 5,400 metres. Geophysical data indicates that the most northerly conductor shows the strongest response.

In the eastern survey area (Figure 11), strong uranium anomalies occur in an area having an elevated background uranium content in comparison to the western survey area. These anomalies are spatially associated with a weak historical VLF conductor shown in the figure as a red NNE-trending line. The anomalies are also associated with a corridor containing graphitic rocks that did not produce an EM response in the most recent geophysical survey flown for CAT. The geochemical uranium anomalies are NE-trending and correspond to strong topographic lineaments which are believed to be related to bedrock structure. The strongest anomalies found to date on the CAT property are located in this eastern area despite it having a lower average background radioactivity. No correlation is seen between uranium geochemical values and spectrometer data with the exception of a weak positive correlation (r = 0.25) between uranium geochemistry and Th-channel spectrometer data, which is thought to be due to increased granite and pegmatite in the local bedrock.





Figure 12: Uranium bio-geochemical anomalies in the eastern survey area. The green line surrounds values exceeding the mean (18.1 ppm); orange surrounds values above the mean +1 s.d. (45.8 ppm) and red surrounds sites exceeding mean+2s.d. (73.4 ppm). The highest uranium value was 186 ppm. A NW-trending conductor, partially under Silvius Lake, was detected from CAT's July 2022 airborne survey. Another historical conductor is shown as a red NNE-trending line. The CAT property boundary is indicated by yellow lines. The pale blue corridor trending NNE is a zone containing sheared and graphitic rocks in bedrock and in boulders. North is up. The field of view is approximately 3,500 m east to west. The NE-trending anomalies shown are 900 km in length but clearly extend NE and SW beyond the area sampled. The NE-trending lineaments in the terrain are though to reflect shearing in the underlying bedrock.

Further encouragement in all survey areas is provided from lead isotope ratios in the twig samples, specifically Pb<sup>207</sup>/Pb<sup>206</sup> which are radiogenic products of uranium decay. According to Kyser et al (2015), values of less than 0.7 are considered to be indicative of underlying uranium mineralization at Cigar Lake and in the Athabasca Basin in general. In the western and eastern survey areas, samples with ratios of less than 0.7 accounted for 31% and 88% of the samples, respectively, providing a strong indication that the lead detected in the samples is the result of the decay of uranium mineralization and not resulting from lead mineralization or lead from anthropogenic sources.



Taken together, WGM believes that the results of the airborne EM survey and biogeochemical data provide strong evidence of uranium-bearing fluids moving along NE-trending conductive corridors and being concentrated in spruce and jackpine twigs via their root systems. The magnitude of the uranium anomalies significantly exceeds background levels as reported by Dunn (1983), and approaches the levels detected over major uranium deposits in the Athabasca Basin such as Key Lake. While the source of the uranium on the CAT property may not be directly below the anomalies, WGM believes the anomalies are well defined and should indicate a local source. If the source was from glacially transported till, one would expect broader and lower amplitude anomalies. The geochemical uranium anomalies are sufficiently high and spatially constrained to justify additional focused exploration.

#### 9.4.2 GEOLOGICAL PROSPECTING AND BEDROCK SAMPLING

A suite of 81 representative rock samples including 3 quality control duplicates was collected for the purpose of characterizing the bedrock in the geochemical survey areas. Analytical results for the bedrock samples were received in November, 2022. This data allowed WGM to classify the geological terrane on the CAT property as being similar to that hosting uranium deposits in other regions in the Athabasca Basin. The data will also help in establishing background concentrations against which future results may be classified as anomalous. Historical magnetometer data from a survey by the Western Athabasca Syndicate indicates the presence of a terrane boundary crossing the western part of the CAT property from northeast to southwest (Brown, J.A. and McKeough, M., 2014).

#### **10. DRILLING**

The CAT exploration project completed in 2022, with analytical results received in February, 2023, was an inception-level (grass-roots) program dedicated only to two areas of the South Preston Property thought to have higher geological potential for uranium mineralization. No diamond drilling has been done or is planned at this stage of the project.

#### 11. SAMPLE PREPARATION, ANALYSES AND SECURITY

#### 11.1 SAMPLE PREPARATION AND ASSAYING

Black spruce and jack pine samples were processed and analysed for trace elements by ICP-OES according to Method ICP3. Samples were placed in stainless steel pans, dried and ashed in a kiln at 500°C. The ash material was mortared and pestled to homogenize the sample after which it was transferred to a barcode-labelled, plastic snap-top vial. An aliquot of pulp was digested in aqua regia (HCl:HNO<sub>3</sub>) in a boiling water bath and then topped up with deionized water. Trace element contents were determined instrumentally using a Perkin Elmer Optima 8300DV ICP-OES spectrometer. Detection limits for the trace element suite are shown as follows:

Element		DL	Element		DL
Aluminum	Al2O3	0.01%	Nickel	Ni	1ppm
Antimony	Sb	1ppm	Phosphorous	P2O5	0.002%
Arsenic	As	1ppm	Potassium	K2O	0.01%
Barium	Ва	1ppm	Scandium	Sc	1ppm
Beryllium	Be	0.5ppm	Selenium	Se	1ppm
Bismuth	Bi	1ppm	Silver	Ag	0.2ppm
Cadmium	Cd	1ppm	Sodium	Na2O	0.01%
Calcium	CaO	0.01%	Strontium	Sr	1ppm
Chromium	Cr	1ppm	Sulfur	S	10ppm
Cobalt	Со	1ppm	Tin	Sn	1ppm
Copper	Cu	1ppm	Titanium	TiO2	0.01%
Iron	Fe2O3	0.01%	Tungsten	W	1ppm
Lanthanum	La	1ppm	Uranium	U	1ppm
Lead	Pb	1ppm	Vanadium	V	1ppm
Magnesium	MgO	0.01%	Yttrium	Y	1ppm
Manganese	MnO	0.002%	Zinc	Zn	1ppm
Mercury	Hg	1ppm	Zirconium	Zr	1ppm
Molybdenum	Мо	1ppm			

WGM quality control was provided by creating a duplicate sample for one out of every 30 runof-project sample. Due to the nature of the survey, no CRM's could be provided. Internal laboratory quality control was maintained though a quality control being prepared and analyzed with each batch of samples. One in every 40 samples was analyzed in duplicate. All quality control results must be within specified limits otherwise corrective action is taken.



Rock samples also were analysed using SRC's ICP3 method. The samples were dried and jawcrushed following which a 250-gram sub-sample was separated using a Jones sample divider and pulverized using a ring and puck mill to 90% passing 180 µm. The pulp was transferred to a barcode labeled-plastic snap-top vial. A 0.5 gram aliquot of pulp was digested in a mixture of ultra-pure concentrated aqua regia in a boiling water bath then topped up with 15 Mohm deionized water. Total digestion and analysis was performed on samples to determine the dilution required prior to ICP-MS analysis. The ICP-MS detection limits for total analysis included all elements except for the following: Al<sub>2</sub>O<sub>3</sub>, CaO, Fe<sub>2</sub>O<sub>3</sub>, K<sub>2</sub>O, MgO, MnO, Na<sub>2</sub>O, P<sub>2</sub>O<sub>5</sub>, TiO<sub>2</sub>, As, Ba, Ce, Cr, La, Li, Sr and S in blue on the detection limits in Table 4). These elements were analyzed only by ICP-OES for total digestion (4-acid) leaching. Instruments were calibrated using certified commercial solutions. The instrument used was PerkinElmer Optima 5300DV or Optima 8300DV, and a NEXION 2000 or Elan DRCII.

					1	2		
ICP-OES			ICP-MS					
Element	Expression	D.L.	Element	Expression	D.L.	Element	Expression	D.L.
Aluminum	AI2O3	0.01%	Silver	Ag	0.01 ppm	Lead (total)	Pb	0.001 ppm
Arsenic	As	1 ppm	Antimony	Sb	0.01 ppm	Lead	Pb204	0.001 ppm
Barium	Ba	1 ppm	Beryllium	Be	0.01 ppm	Lead	Pb206	0.001 ppm
Calcium	CaO	0.01%	Bismuth	Bi	0.01 ppm	Lead	Pb207	0.001 ppm
Cerium	Ce	1 ppm	Cadmium	Cd	0.01 ppm	Lead	Pb208	0.001 ppm
Chromium	Cr	1 ppm	Cobalt	Со	0.01 ppm	Praseodymium	Pr	0.01 ppm
Iron	Fe2O3	0.01%	Cesium	Ce	0.01 ppm	Ruibidium	Rb	0.01 ppm
Lanthanum	La	1 ppm	Copper	Cu	0.01 ppm	Scandium	Sc	0.1 ppm
Lithium	Li	1 ppm	Dysprosium	Dy	0.01 ppm	Selenium	Se	0.1 ppm
Magnesium	MgO	0.002%	Erbium	Er	0.01 ppm	Samarium	Sm	0.01 ppm
Manganese	MnO	0.001%	Europium	Eu	0.01 ppm	Tin	Sn	0.01 ppm
Phosphorus	P2O5	0.002%	Gallium	Ga	0.01 ppm	Tantalum	Та	0.01 ppm
Potassium	K2O	0.002%	Gadolinium	Gd	0.01 ppm	Terbium	Tb	0.01 ppm
Sodium	Na2O	0.01%	Germanium	Ge	0.01 ppm	Tellurium	Te	0.01 ppm
Strontium	Sr	1 ppm	Gold	Au	0.01 ppm	Thorium	Th	0.01 ppm
Sulphur	S	10 ppm	Hafnium	Hf	0.01 ppm	Uranium	U	0.01 ppm
Titanium	TiO2	0.002%	Mercury	Hg	0.01 ppm	Vanadium	V	0.1 ppm
			Holmium	Ho	0.01 ppm	Tungsten	W	0.1 ppm
			Molybdenum	Мо	0.01 ppm	Yttrium	Y	0.01 ppm
			Niobium	Nb	0.01 ppm	Ytterbium	Yb	0.01 ppm
			Nepodymium	Nd	0.01 ppm	Zinc	Zn	0.1 ppm
			Nickel	Ni	0.01 ppm	Zinconium	Zr	0.01 ppm

Table 4Detection Limits for Rock Sample Analyses



In addition to geochemical analysis, a selected set of samples was analysed mineralogically to accurately determine the rock types present on the CATR property. The SRC QEMSCAN procedures involves the cutting out of a rectangular portion from each sample which was then mounted on glass and cut to approximately 200 µm thick. The thinned rock section was polished to final analytical surface using 1 µm diamond abrasive. Each sample was ultrasonically cleaned with deionized water and then isopropyl alcohol. The thin section samples were then coated with a 15 nm thick layer of amorphous carbon to ensure electrical conductivity of the sample surface. The QEMSCAN in the SRC Advanced Microanalysis Centre is built on an FEI Quanta 650 scanning electron microscope fitted with a field emission gun (10 nm resolution) and dual Bruker XFlash 5030 energy dispersive spectrometers ("EDS") with a maximum throughput of 1.5M cps. QEMSCAN analyses are a collection of back-scattered electron images and semi-quantitative point chemical analyses. The grain images and EDS data are combined using image analysis to calculate various parameters such as particle size distribution, mineral associations and liberation, modal abundances, etc. Operating conditions were set to 25Kv and 10nA beam current, measured in a Faraday cup at the sample surface. Data were collected in field stitch mode with a point spacing of 20µm. Raw X-ray energy spectra were compared to a mineral composition database customized for this project. Statistics from the QEMSCAN analyses are tabulated as follows:

Analyzed Area	891 mm²
Point Spacing	19.8 µm
X-ray Analyses	2,230,171 analyses per sample

Modal mineralogy is calculated from the combined analysis of the BSE images and the mineral identification from the EDS data. The volumetric abundance of the minerals is converted to mass percent from density data for typical mineral compositions.

# 11.2 SECURITY

CAT's samples were temporarily stored in heavy-duty cardboard boxes in the cabin of the senior field geologist at the Big Bear Camp

Delivery of the rock samples to the WGM office in Toronto, was co-ordinated by McMurray Aviation which picked up the cartons of samples from the Big Bear Camp and arranged for onward delivery by courier to the WGM office in Toronto. In Toronto, the samples remained in the possession of the WGM Project Director for photographic purposes following which they



were taken to a local FedEx office for delivery to the Saskatchewan Research Council Geoanalytical Laboratory ("**SRC Geolab**") located at 820 51<sup>st</sup> Street East in the city of Saskatoon, was co-ordinated by McMurray Aviation which picked up the cartons of samples from the Big Bear Camp and arranged for on-ward delivery to the SRC Geolab from its operational base at Fort McMurray airport.

Delivery of the biogeochemical samples to the SRC Geolab was co-ordinated by McMurray Aviation which picked up the cartons of samples from the Big Bear Camp and arranged for onward delivery to the lab from its operational base at Fort McMurray airport.

WGM corresponded with the SRC Geolab to ensure it received the number of cartons and samples and the sample number series as expected. WGM retained copies of the sample submission sheets included in the cartons, digital versions of which were also e-mailed to the lab. The lab was instructed to report back to WGM concerning any lost or missing samples as well as any cartons that showed evidence of being reopened.

#### **12. DATA VERIFICATION**

At this time, no independent steps have been taken to verify geophysical data as the survey was carried out and reported by an independent contractor. Biogeochemical data was not available until early February, 2022 which has not allowed time for running check profiles over the anomalies reported herein. Ground follow-up work is planned for 2023 which will include ground-truthing of geochemical anomalies. Follow-up geophysical surveying is intended to verify and refine the locations and 3D orientations of reported conductors. Having surveyed the outcrops with a gamma-ray spectrometer that measures equivalent uranium (eU) and equivalent thorium (eTh), and given the age of the Athabasca Basin uranium mineralization that assures equilibrium conditions, no unusual uranium or thorium assays were found in the analytical certificates.

#### 13. MINERAL PROCESSING AND METALLURGICAL TESTING

As the South Preston project is at a very early stage, no mineral processing or metallurgical studies have been warranted.

#### ᠵ Watts, Griffis and McOuat

#### 14. MINERAL RESOURCE ESTIMATES

No drilling or systematic sampling has been carried out on this very early-stage project; therefore, no basis exists for a mineral resource estimate.

#### **15. MINERAL RESERVE ESTIMATES**

There is insufficient information for a Mineral Resource estimate on the South Preston Property that could represent a basis for making a Mineral Reserve estimate.

#### **16. MINING METHODS**

This is not an applicable subject for discussion given a project with no Mineral Resources.

#### **17. RECOVERY METHODS**

This is not an applicable subject for discussion for an early-stage project with no Mineral Resources.

#### **18. PROJECT INFRASTRUCTURE**

Not applicable for an early-stage project with no Mineral Resources for which to estimate infrastructure requirements. For general discussion of infrastructure in the region refer to Section 5.

#### **19. MARKET STUDIES AND CONTRACTS**

This is not an applicable subject for discussion for an early-stage project with no mineral resources.

# 20. ENVIRONMENTAL STUDIES, PERMIT AND SOCIAL OR COMMUNITY IMPACT

#### 20.1 ENVIRONMENTAL STUDIES, LIABILITIES AND PERMITTING

The CAT South Preston Property is located in a remote area in northern Saskatchewan accessible only by float plane or helicopter. No environmental studies are yet required for the project nor is the author aware of any that have any been carried out on the Property in the past. No previous mining activity has been undertaken on the Property, consequently the author is unaware of any environmental liabilities in this area, nor would any be expected other than those arising out of compliance with the environmental obligations prescribed under the laws of Saskatchewan and Canada.

The South Preston project is not located in a protected area or in an area where there is private ownership of surface rights. In the Province of Saskatchewan, the issuance of exploration rights (referred to as "dispositions") extends to the owner the right to carry out exploration activities subject only to an application to the Ministry of the Environment (Fish, Wildlife and Lands) located in Prince Albert, Saskatchewan (the "**MOE**"). These activities must be specified in advance and the approval is normally granted within 30 days. While approval is not automatic, limitations are not normally imposed except in very unusual circumstances. As of the date of this reports, CAT has carried out a very narrow range of activities that have had no significant surface disturbances other than the occasional clearing of trees to enable helicopter landing zones.

Notwithstanding the rights to explore granted under the provincial Mining Act and the MOE, CAT is responsible for conducting its activities in accordance with the provisions in its application, and amendments thereof, as well as other rules imposed by various laws and regulations. For example, any future construction of exploration camps must meet building and safety codes. Exploration work must not impact water courses or water bodies. Fuel supply facilities must include containments to prevent the contamination of groundwater. Drill holes that are artesian must be capped (sealed); refuse must be properly handled ..... etc. While



these restrictions carry costs to the operator, the costs are not onerous during the course of a project; however, such costs tend to increase in lock-step with the advancement of a project from initial reconnaissance exploration through more costly surveys and diamond drilling. Certain costs are also incurred if a project is terminated according to any requirements for removal of structures and equipment, or site remediation.

During the course of its exploration, personnel working on the project have been billeted in the Big Bear Camp which is a fully permitted camp operated by the Clearwater River Dene Nation ("**CRDN**"). In taking this approach, CAT has avoided the cost of permitting and constructing a camp on its dispositions as well as avoiding the logistical challenges of supporting a remote camp and maintaining a safe working environment.

#### 20.2 COMMUNITY RELATIONS AND SOCIAL IMPACT

Canada is a signatory to the Universal Declaration of Human Rights and United Nations Declaration on the Rights of Indigenous People, among others. The application for approval of exploration activities imposes a duty on the Ministry of The Environment to notify local communities and representatives of indigenous groups as to the planned exploration work. In many cases, those notified reside in a wide area having little or no actual residential or commercial presence in the area to be explored. Although CAT operates its project in an area that lacks road access, and no organized commercial activity is carried out in this area, its operational base in the Big Bear Camp ensures that project personnel interact with residents who are members of communities in the region many of whom are indigenous.

Notwithstanding the duty of the government regulators, exploration companies are well advised to independently notify key groups that have real or potential interests in the exploration area. Since the beginning of the project, WGM and CAT have endeavoured to keep local community representatives, specifically those of the Clearwater River Dene Nation, informed as to CAT's planning process and its exploration activities. This has been achieved primarily through the use of ZOOM videoconferencing and exchanges of e-mails. It is CAT's desire to be a responsible steward of the environment and a good corporate citizen. During the exploration program described in this report three members of the local indigenous community worked alongside WGM personnel as field assistants and received basic training in geochemical sampling principles and techniques. A second group of local residents was hired to assist with the preparation of biogeochemical samples. In addition to satisfying project needs, this



employment helps in bridging the knowledge-gap that can so easily develop between exploration companies and local communities.

#### 21. CAPITAL AND OPERATING COSTS

Not applicable for an exploration project at this stage with no established mineral resources.

#### 22. ECONOMIC ANALYSIS

Not applicable for an exploration project at this stage with no established mineral resources.

#### **23. ADJACENT PROPERTIES**

A significant exploration program is currently being conducted in a staged and systematic manner by Azincourt Energy Corp. on its East Preston Uranium Project (see news release at <u>https://www.azincourtenergy.com/news/news-releases/2023/</u>). Azincourt's exploration program is discussed in the history section of this report and elsewhere because its results to date have provided guidance to WGM insofar as the approach to CAT's exploration that is detailed in this report. Azincourt's most recent 2023 exploration program has resulted in the completion of 3,066 metres of diamond drilling in 13 drill holes. Drilling was focused on the G, K, H, and Q conductor zones shown in Figure X and completed on March 8<sup>th</sup>, 2023. The following information is summarized from Azincourt's most recent news release dated 28 March, 2023.

Three holes were completed in the northeast trending G-Zone in follow-up to the previous 2022 drilling results. Extensive hydrothermal alteration and evidence of steeply dipping, east-west cross-cutting structures were intersected along the southern portion of the zone. The hydrothermal alteration is highlighted by hematite and extensive evidence for a steep east-west fault cross-cutting the G-Zone structure and graphitic lithologies. Elevated radioactivity was intersected in EP0045 and EP0047.



On the north end of the K-Zone, three holes were completed which intersected extensive structure and hydrothermal alteration, increasing the known length of this alteration zone by 300 meters to 1500 meters long. The prospectivity of the zone has been increased on the basis of extensive clay alteration within the structural zone. Short Wavelength Infrared Reflectance studies have identified the clays as containing illite and kaolinite clay species, with EP0049 also having dravite identified within the structural zone. The presence of these clays is a common feature of unconformity-type deposits band provides a vector towards uranium mineralization.

Five holes were completed on the north section of the H Zone. Drilling intersected an intense graphitic fault zone with hydrothermal alteration identified as containing illite, kaolinite and dravite in an alteration halo that extends from EP0052 to EP0053, a distance of approximately 1,300 m.

One drill hole was completed on the Q-Zone that intersected weak structures with hematite alteration. There was a notable lack of a graphitic structural zone. At this time, the reason for the conductor in this area is unknown.

Analytical results from the core samples have not yet been received. Azincourt considers the drilling results to date to be significant.

# 24. OTHER RELEVANT DATA AND INFORMATION

No other relevant data are presented here that is material to the CAT project.

#### 25. INTERPRETATION AND CONCLUSIONS

#### 25.1 GENERAL

CAT's South Preston Project consists of 12 mineral exploration dispositions which in other jurisdictions might be referred to as licences or claims. The exploration property is situated on Crown land that is not subject to the private ownership of surface rights. All the dispositions are in good standing as of the Effective Date of this report, and grant CAT the right to explore for and mine any mineral deposits that it discovers, subject only to provincial and federal regulations.

The project is easily accessible by helicopter from the Big Bear Camp on Gryger Lake about 70 km to the northwest. Topography presents challenges and prevents vehicular access to the property at this time although access may be possible in the future though a sharing agreement with CAT's neighbor immediately to the north, Azincourt, which has constructed a winter road to within a kilometre of the central part of the CAT property. At this time, supplies and equipment can be flown to the Big Bear Camp by floatplane from Fort McMurray, Alberta or trucked north from La Loche, approximately 180 km to the south.

Bedrock on the CAT South Preston property is almost entirely metamorphic basement rocks; the Athabasca sandstone cover rocks have been removed through erosion from all areas except the farthest NE corner of the property. CAT has completed an effective initial airborne geophysical (VTEM-magnetometer) survey on two selected target areas chosen by WGM based on historical exploration data. This has resulted in the discovery of two north-easterly trending conductive corridors that approximate the direction and geological setting of similar features associated with Fission Uranium Corp.'s Triple-R discovery at Patterson Lake South, about 50 km to the northwest. These conductors are thought to be related to brittle shear zones in the metamorphic basement. Some of these zones are sufficiently strong to indicate a graphitic component, and as such the conductors represent a major vector for uranium deposits.

CAT's follow-up biogeochemical sampling has shown the presence of strong uranium and radiogenic lead anomalies of a magnitude comparable with anomalies associated with uranium mines in the Athabasca Basin such as Key Lake. In combination with the geophysical data, the geochemistry represents a strong positive indicator of uranium potential.



#### 25.2 GEOPHYSICAL SURVEYING

The results of the geophysical survey are considered to be very positive and are discussed earlier in Chapter 9 of this report. The full body of the geophysical survey report is attached hereto in Appendix 1. The interpretation of the results is summarized briefly here as follows for Block A in the western group of dispositions and Block B in the eastern group.

#### **Block** A

- 1) Linear magnetic features have an ENE strike of approximately 068° which are thought to collectively plunge to the east indicating a basement surface dipping to the east-northeast. In concluding that the depth to basement is shallow, the report's author appears to be unaware that the metamorphic basement in this area is not covered by the Athabasca sandstone.
- 2) The geophysics report's author notes that very linear NE-striking magnetic features (~040°) near the eastern edge of the survey area suggests a shallow depth to basement in fact the basement is not covered by sandstone as noted above. The magnetic data show cross-cutting features that suggest faulting with a strike direction of 120° (sub-parallel to the flight line direction).
- 3) The westernmost EM conductors striking 068° with knife-edge responses that are thought to be the result of brittle fracturing of the basement rocks with no discernable folding or fault movement subsequently. A NE plunge is indicated which may follow the original erosional surface on which the Athabasca was originally deposited. There is the appearance of intersecting faults, which has been suggested to be an important feature in the Patterson Lake South Deposit. Invoking the Fission Uranium model, the intersection of these two trends would be a good place to focus further exploration.
- 4) The easternmost EM conductors strike  $040^{\circ}$  and comprise a series of faulted conductors with the sudden appearance of a second parallel conductor toward the northwest having a higher amplitude. The series of 5-6 linear conductors within which the individual conductors have a low relative amplitude (~60 µs time constant) and an asymmetric shape indicative of a shallow northwest dip. The conductor trend located northwest of the main trend shows a much higher amplitude and a more symmetric shape with a time constant of ~140 µs.
- 5) There is a strong correlation between topographic change and EM trend, however it is unlikely that the EM responses identified by this survey on Block A are caused by "conductive overburden". The EM responses are best described as ribbon-shaped, long strike-length conductors with a measurable dip-extent and unknown thickness. The



orientation of such a geometry would produce the asymmetric responses with an upper sharp boundary to a peak and then a gradual drop in amplitude depending on the angle of the boundary.

6) The exploration program by Fission Uranium is important in that they made a discovery along a conductive trend very similar to the trend identified on CAT's South Preston Property. The difficulty encountered by Fission was due to the complex nature of the VTEM responses that were assumed to be caused by an assemblage of multiple dipping conductors overlying a deeper subvertical trend (the target).

#### Block B

Although Block B does not contain any significant conductor trends, there is the hint of a trend in the northwest section of the block. Although a graphitic schist unit was described east of Silvius Lake in historical reports, the CAT survey failed to distinguish this as a conductive feature, the reason for which is unknown and may only be explained with some investment in surface prospecting and geological mapping. The area does have remaining interest as a result of strong biogeochemical anomalies in the vicinity of the reported graphitic horizon.

#### 25.3 BIOGEOCHEMICAL SURVEYING

Biogeochemical surveying was based on the consistent sampling of new growth twigs black spruce and jack pine trees from which needles were removed. This geochemical approach based on these tree species is a well-documented uranium exploration method that has shown significant high-amplitude uranium anomalies to exist over known uranium deposits such as Key Lake and Cigar Lake. These surveys indicate that a mean value of approximately 2 ppm uranium in ashed samples including samples reported by Walker (1979) in his paper on the biogeochemistry of twig samples collected over the Key Lake orebodies. Mean uranium values of 2 ppm uranium were also reported by Uranerz Exploration and Mining Ltd. from black spruce and pine samples collected during 1978 in the Kelic Lake area, a short distance north of the CAT property (Rich, Williams and Kuley, 1978). Uranerz considered any value in the range of 6-11 ppm to be anomalous, and reported a significant anomaly at Kelic Lake with values of up to 112 ppm which has yet to be explained.



The results of the CAT survey also show a background of 2 ppm which WGM interprets to indicate that its tree selection, sampling and analytical procedures align with the procedures used in other surveys.

Statistical analysis of the geochemical data indicates that twig samples in the western and eastern survey areas have significantly different background uranium levels, with mean ("*m*") values of 5.97 ppm and 18.13 ppm, respectively, and corresponding median values of 2.61 and 8.87 ppm. For this reason, the two populations were treated separately in respect to defining what was anomalous as indicated by the mean plus two standard deviations ("**s.d.**'s"). In plotting the results, WGM found that the mean value defined discrete areas elongated along the EM conductors and within which anomalies occurred. This result is significant and contrasts with alternative outcomes that could produce a "spotted dog" effect of patchy highs and lows. Data was contoured at m+1sd and m+2sd.

In the eastern survey area, anomalies were 4-10 times the mean uranium value and aligned along the metamorphic foliation in several parallel zones. In the western survey area, anomalies were 9-24 times the mean uranium value and elongated along the EM conductors. All clusters of anomalies are considered statistically and geologically significant. With the exception of a single peak, **Uranerz anomalies in the range of 6 to 11 ppm uranium underscore the importance of CAT's results with anomalies in the range of 73 to 186 ppm uranium.** 

In the western survey area, the ENE-trending geochemical anomalies are spatially associated with similarly striking EM conductors which underlie some of the major drainages in the survey area. Azincourt's drilling north of and adjacent to the CAT property indicate that these conductors are graphite-bearing shear zones (Azincourt news releases). These conductors seem to be offset along NW-trending topographic lineaments which are believed to represent orthogonal fault zones. The sharp boundaries of the uranium anomalies and the lack of correlation between biogeochemical uranium values and surface radioactivity (r=-0.02) is thought to indicate that the uranium in the ashed plant fibre is from a local bedrock source rather than transported boulders or glacial till. Taken together, the biogeochemical results and geophysical EM results strongly suggest a local source of uranium along sheared, graphite-bearing structures. While the grade, depth and specific location of such uranium is unknown, the results of the geochemical survey are highly encouraging.

Strong NE-trending uranium anomalies in the eastern survey area occur in an area having an elevated mean (background) uranium content in comparison to the western survey area - 18.1 ppm vs. 6.9 ppm. The reason for this is unknown - it could be the result of domain



differences; however, this would have the expected result of producing a higher gamma radiation background and this is clearly not the case. The result could indicate uranium mineralization is a narrow zone that was not picked up by hand-held sensors. No correlation was seen between uranium geochemical values and spectrometer data with the exception of a weak positive correlation (r = 0.25) between uranium geochemistry and Th-channel spectrometer data, which is thought to be due to increased granite and pegmatite in the local bedrock. The eastern anomalies are spatially associated with a weak historical VLF conductor and are parallel to a corridor containing graphitic rocks. For reasons that are unknown, the graphitic rocks did not produce an EM response in the most recent geophysical survey flown for CAT. The geochemical uranium anomalies correspond to strong topographic lineaments which are believed to be related to bedrock structure.

Further encouragement in all survey areas is provided from lead isotope ratios in the twig samples, specifically Pb<sup>207</sup>/Pb<sup>206</sup> which are radiogenic products of uranium decay. According to Kyser et al (2015), values of less than 0.7 are considered to be indicative of underlying uranium mineralization at Cigar Lake and in the Athabasca Basin in general. In the western and eastern survey areas, samples with ratios of less than 0.7 accounted for 31% and 88% of the samples, respectively, providing a strong indication that the lead detected in the samples is the result of the decay of uranium mineralization and not resulting from lead mineralization or lead from anthropogenic sources.

Taken together, WGM believes that the results of the airborne EM survey and biogeochemical data provide strong evidence of uranium-bearing fluids moving along NE-trending conductive corridors and being concentrated in spruce and jackpine twigs via their root systems. The magnitude of the uranium anomalies significantly exceeds background levels as reported by Dunn (1983), and approaches the levels detected over major uranium deposits in the Athabasca Basin such as Key Lake (Walker, 1979). While the source of the uranium on the CAT property may not be directly below the anomalies, WGM believes the anomalies are well defined and should indicate a local source. If the source was from glacially transported till, one would expect broader and lower amplitude anomalies. The geochemical uranium anomalies are sufficiently high and spatially constrained to justify additional focused exploration.

#### 25.4 FIELD PROTOCOLS AND DATA VERIFICATION

WGM quality control protocol was provided by creating a duplicate sample for one out of every 30 run-of-project biogeochemical samples. Due to the nature of the survey, no CRM's could



be provided<sup>2</sup>. Internal laboratory quality control was maintained though a quality control being prepared and analyzed with each batch of samples. One in every 40 samples was analyzed in duplicate. All quality control results must be within specified limits otherwise corrective action is taken. On receipt of laboratory results, trace element concentrations were compared for biogeochemical samples and field duplicates. In general, the results were comparable. The magnitude of one anomaly was different between the two samples, however both were statistically anomalous in respect to the overall sample population.

Data collected in the field principally involved GPS measurements of sample locations and spectrometer measurements of ambient background radioactivity and peak radioactivity. GPS measurements were repeated at each sample site to ensure accuracy. Data was recorded internally within the GPS units and physically recorded on sample cards while in the field. In using new Garmin GPSMap 78 units, WGM is confident that the locations measured for sample sites is highly accurate and certainly within the range of error normally associated with GPS instrumentation.

Spectrometer data was recorded in all areas using a Radiation Solutions Super Spec RS125 gamma ray spectrometer. Each morning, the units were calibrated using the internal self-check function. Ambient radioactivity was also check at a selected site in the camp before departure in the morning and again in the evening to determine any occurrence of instrumental 'drift'. In the field measurements were carefully taken in such a manner that background radioactivity was measured at waist height at all locations. The spectrometers operated continuously while in the field creating a time-measured profile over the distance travelled while operating. The measurement taken are believed to be representative of ambient conditions at each sample site and although not verified, WGM has no reason to believe that the measured data is inaccurate.

#### 25.5 ENVIRONMENTAL AND SOCIAL

CAT's exploration to date has been based out of the existing Big Bear Camp located on Gryger Lake. Its field crews have accessed the property by helicopter requiring only minimal clearing of small trees for helipads. The number of helipads constructed was minimized by the use of

<sup>&</sup>lt;sup>2</sup> WGM has since learned that spruce twig and spruce needle CRM's are available from NRCan with appropriate uranium concentrations; however, these are very expensive and would be easily identifiable by the laboratory. A better alternative approach would be for CAT to produce its own CRM using a single source location and from which a large sample could be homogenized, sub-sampled and then inserted into the run-of-project samples as needed.

landing zones in areas lacking tree cover and the repeated use of individual pads. All fuelling was carried out at the permitted fuel depot at Big Bear Camp.

The exploration program involved sampling of the ends of branches of black spruce and jack pine trees and did not endanger the trees themselves. No bedrock was stripped or cleared to facilitate sampling.

Environmental management and community relations are vital to CAT's South Preston Project as problems with either could result in the project being delayed or halted. The author and CAT management have been involved in discussions with the Clearwater River Dene Nation ("**CRDN**") indigenous group that has oversight privileges and rights in the project area. We believe we have kept CRDN well informed of progress on the project and periodically informed regarding the planning process.

CAT has also employed local residents from the area and from La Loche to work on the project including working as field assistants and in the role of preparing samples for analysis. The author has found such dealings to be friendly and supportive. The author believes that CAT's taking all reasonable steps to engage in a timely manner with CRDN and local stake-holders. We are confident that the CAT exploration project will not be negatively impacted by significant political or social events that are largely out of CAT's control. The project is located in a politically stable region of Saskatchewan that has embraced mineral exploration as a significant contributor to the provincial economy. CRDN is engaged with CAT's neighbor, Azincourt, and we understand that the relationship has proven beneficial for both parties. The South Preston Project is located in an area containing other uranium projects and in a geological province that is a major supplier of uranium to the world. Saskatchewan's laws and regulations are therefore seen as a protective foundation for CAT's mineral interests.



#### **26. RECOMMENDATIONS**

#### 26.1 FOLLOW-UP EXPLORATION

In continuing exploration on the CAT project, the highest priority is to continue exploration programs dedicated to defining targets for drilling on the main conductor axes. However, care must also be taken to ensure assessment requirements are met. To this end, the next tasks should include, but not limited to:

- a) An airborne geophysical survey over the central portions of the CAT property focusing on the eastern group of dispositions and of sufficient size to cover current and next year's assessment requirements. The estimated cost of this survey should be approximately \$190,000 which would partially satisfy the required assessment work. This could be augmented with a 15-day ground geochemical program of the same makeup as that completed in 2022, and estimated to cost \$225,000 which combined would meet the expenditure requirements for the filing in 2024.
- b) concentrated effort put forth additional ground radiometric prospecting and geological mapping / sampling with a large focus on structural mapping with stripping of overburden where possible to expose and sample outcrops to improve the geological understanding of the property;
- c) a program of high-resolution moving loop EM surveys with a significant transmitterseparation (e.g., 150 m) to effectively detect sub-vertical conductors beneath shallowdipping conductors;
- d) Alternatively, a series of moving loop profiles could be laid out at 400 m intervals (line spacing) across both trends for a maximum length (across strike) of 1.6 km for the West Trend and 1.0 km for the narrower East Trend. This would represent 36 km (1.6 km x 6.4 km and 1.0 km by 4.8 km at 400 m spacing) of moving loop surveys. However, subvertical conductors can exist within the basement that are conductive but might not contain uranium (at all, or not in sufficient concentration) so the moving loop program could be seen as redundant unless it is believed that the "strongest" conductive response (i.e., best developed or most conductive) is known to correlate with the presence of uranium (which seems doubtful);
- e) Systematic exploration comprising prospecting, geological mapping and biogeochemical sampling of the entirety of the CAT dispositions is well justified by their proximity to the Athabasca-basement unconformity. Historical reports show clear evidence of sheared, graphitic metasediments in some locations associated with structural lineaments that cross the CAT property. Anomalous radioactivity in bedrock



is also reported from airborne radiometric surveys, and radioactive boulders are located down-ice from the CAT dispositions in the eastern and central areas that therefore could be derived from a bedrock source on the CAT dispositions. The CAT dispositions are also located 3-4 km southwest and on strike with the Azincourt Energy A-G structural corridor which has recently shown encouraging results, and which Azincourt is aggressively exploring.

Induced polarization surveying could be used on a trial basis over one of the EM conductors to determine its effectiveness – a pole dipole array would be sufficient with a 50-metre electrode spacing and acquiring measurements for n=1 to n=8. Ground conditions would dictate that such a survey would be best completed during the late winter months.

In the most pragmatic terms, the portion of the CAT dispositions west of Craig Lake are the most interesting. These constitute the five most westerly dispositions onto which many of the EM conductors can be projected. The occurrence of radioactive boulders SE of Lloyd Lake also presents the possibility that they were sourced on these western CAT dispositions. Given the presence of uranium mineralization in sheared graphitic metasedimentary rocks on the eastern disposition MC0014559, and associated with a conductor, it cannot be ignored as a high priority target area. The central area is more distal from interesting data points, yet the presence of radioactive rocks south of this area lends some possibility of mineralization and some reconnaissance level exploration is warranted.

The exploration program will also require active and multi-faceted permitting through the Saskatchewan Ministry of Energy and Resources by CAT as well as dialogue and the completion of applications with First Nations representatives of the Clearwater River Dene Nation ("**CRDN**"). These non-technical matters, which are beyond the current mandate of WGM, can be very time-consuming and certainly require immediate attention. WGM initiated dialogue with Chief Teddy Clark (306-822-7678 Cno@sasktel.net) and subsequently with Mr. Cam Wheeler, CRDN Engagement Lead (403 505 6319 cammer7@shaw.ca). WGM has found them to be interested in the CAT project and willing to assist in facilitating the exchange of information and applications needed to execute the project;

Although drilling is not advised at this point in the project, focused diamond drilling should be used to test specific EM anomalies - given the strike length of the Patterson Lake South Deposit (2.8 km), a series of drillholes drilled along strike that undercut the trend would more directly test for uranium mineralization. Such a series of holes could be initially spaced at intervals of 800 m to cover the West Trend (8 holes across 6.4 km) and the East Trend (6 holes across 4.8

km) with 4-8 additional holes offset from the axis of the main trends to test the areas of intersecting trends or interpreted faults along a section that transects the trends' strike direction. These inclined holes would be drilled to a maximum length of 200 m for a total meterage of 4,400 m (8 x 200 m + 6 x 200 m + 8 x 200 m). In the event of uranium mineralization present, drilling could be reduced to 400 m sections, 200 m sections and so on.

# 26.2 PROTOCOLS

CAT's exploration and QA/QC protocols meet generally accepted exploration practices far an inception-level or first-year project. The author has some recommendations as follows:

- future biogeochemical sampling should include a blank sample prepared by collecting several kilograms of woody material sourced from an area well away from any potential source of uranium and the from a species that does not accumulate uranium. This material should be shredded, homogenized and separated into sub-samples in sealed zip-lock bags that can be reopened to allow the blank material to be inserted into the run-of-project sample stream;
- To reduce variances with duplicate samples, a single large sample should be collected from the tree, shredded or broken into small pieces and homogenized to avoid variances attributable to taking two separate samples from the same tree;
- A source of blank (near zero uranium content) should be found and homogenized to produce blank material to be inserted into the sample stream. Twenty kilograms of material would be sufficient for approximately 40 250-gram blanks which would provide quality control for approximately 800 bedrock samples;
- A certified reference material ("**CRM**") is needed for quality control purposes for future bedrock sampling program to offset the reliance on equivalent uranium (eU) provided by the gamma-ray spectrometer. NRCan in Canada and OREAS in Australia are reliable sources for mineral exploration grade standards. NRCan sample tend to be very expensive compared to commercial suppliers. OREAS provides appropriate standards in single 10 g sachets (Cdn \$4.25) or 1 kg jars (Cdn \$420).
- CRM's composed of twig material are available from NRCan (# CLV-1 and # CLV-2) in 125 g units costing \$215.00 per unit. These samples would be distinct from the run-of-project samples so therefore easily identifiable by the lab. A better approach would be for CAT to produce its own CRM using a single source location and from which a large twig



sample could be homogenized, sub-sampled and then inserted into the run-of-project samples as needed. While the uranium content would not be known for certain (i.e., certified), variance should be minimized with diligent homogenization. This approach would ensure that the control media is the same as the exploration samples collected.

#### 26.3 PROPERTY MAINTENANCE

It is in CAT's best interests to maintain the entirety of its exploration dispositions. Assessment expenditures required to maintain the claims in good standing during the first 10-year period is currently CDN \$15 per hectare per year. No expenditures are required in the first year following acquisition, however the expenditure requirements must be completed by the second anniversary date and filed with the authorities within 90 days. Extensions may be granted upon request and payment of a non-refundable deferral fee of \$250.00 per disposition plus a refundable deposit of \$0.041 per hectare per day of the deferral. Failure to complete the required work within the required timeframe results in forfeiture of the deposit.

The dispositions have been divided into two groups, the Eastern Group and the Western Group, to enable the spreading of expenditures across disposition boundaries. Disposition Groups must be continuous or have gaps of less than 700 m, and must not exceed 18,000 ha in total size. The assessment work required annually to maintain the Western Group requires expenditure credits of \$236,877 whereas the \$189,061 is required to maintain the Eastern Group.

At this time, the expenditure requirements totalling \$167,558 for the Western Group of dispositions have been satisfied through 2023. There is an additional credit of \$347,424 that can be carried forward and applied against future filing requirements in 2024. The Eastern Group of dispositions requires an expenditure of \$258,381 against which CAT has eligible expenditures of \$163,955. The shortfall of \$94,425 can be covered by CAT posting a refundable bond with the Mineral Assessment Regulator that will be refunded to CAT at the subsequent filing date in mid-May, 2024 on condition that CAT satisfies the expenditure requirement for both 2023 and 2024 which will total \$352,806 at that time.



#### 26.4 PROPOSED BUDGET

#### Eastern Disposition Group

To expedite satisfying the expenditure requirements for the eastern group of dispositions, an airborne VTEM-magnetometer survey should be carried out during the summer of 2023. The coverage area would total approximately 125 km<sup>2</sup> and include all of dispositions MC00014561, MC00014558, the southern half of MC00014559 in the area adjoining that previously surveyed, and most of MC00014574 which would add another 50 km<sup>2</sup>. The estimated cost for VTEM and magnetometer would be approximately \$150 per kilometre or a total cost of \$190,000 assuming a 100-metre flight line spacing. Given the airframe available, it would not be possible to add radiometric equipment to the helicopter.

A program of biogeochemical sampling should be completed over additional areas of the property, including any areas in the eastern dispositions where conductors are discovered. Using the previously completed survey as a model, this exploration would cost approximately \$225,000 to \$250,000 for a 15-day program that would include planning and support, all field-related costs, laboratory analysis and reporting (Table 5). The cost of the foregoing program is summarized in the following table exclusive of CAT management costs and expense allowances. The schedule would allow for some geological prospecting and bedrock sampling. The month of August would be preferred as this would allow time for completion of the airborne survey and an interpretation of results. The weather at this time of year is relatively dry which translates into drier ground conditions and fewer days lost due to inclement weather.

Table 5Estimated Costs for a 15-Day Field Sampling Program			
Item	Cost (Cdn \$)		
WGM Management	\$ 45,000		
WGM Field Personnel	62,500		
Travel	4,500		
Communications & Sample Courier	1,900		
Lab Fees	23,000		
Equipment Rental	12,100		
Camp - Room & Board	16,000		
McMurray Aviation (sample pick-up)	3,000		
Helicopter (Time and Fuel)	57,000		
Total	\$ 225,000		



Combined with the proposed airborne survey for a total cost of approximately \$415,000, this ground program would satisfy the assessment expenditure requirements (\$352,806) for the Eastern Group through to May, 2024. It would provide sufficient data whereby a decision could be made as to whether some of the dispositions could be relinquished to reduce overall expenditure requirements.

#### Western Disposition Group

There is no immediate need to expend money on the western group of dispositions because this group currently carries excess expenditures from the 2022 exploration work sufficient to satisfy the 2023 and 2024 filing requirements assuming all costs are accepted as eligible as filed. Several approaches to continuing exploration are possible which involve ground-based approaches that are not mutually exclusive as either or both approaches could be carried out, concurrently or sequentially. The options include:

- follow-up geophysical surveying to better define and model the known conductors;
- continued biogeochemical sampling along the more westerly conductors that were not fully sampled during 2022 combined with spectrometer prospecting and bedrock sampling along the known conductive corridors and in other nearby areas;
- the use of a man-portable Wink vibracorer (sonic drill) to determine if samples could be acquired from directly above the conductors are identified and located by the existing EM geophysical survey

Geophysical surveying on the ground is warranted in follow-up of the 2022 airborne survey. BECI has recommended a program of high-resolution moving loop EM surveys with a significant transmitter-separation (e.g., 150 m) to effectively detect sub-vertical conductors beneath shallow-dipping conductors. A series of moving loop profiles could be laid out at a 400 m profile spacing across the conductor trends for a maximum length (across strike) of 1.6 km for the West Trend and 1.0 km for the narrower East Trend. This would represent 36 km (1.6 km x 6.4 km and 1.0 km by 4.8 km at 400 m spacing) of moving loop surveys. If only the central 1,500 m long portions of the conductors were surveyed in areas with biogeochemical anomalies, this surveying could be reduced by 50% to 18 km. Subvertical conductors can exist within the basement that are conductor may not in fact be the best mineralized. The cost of this surveying will need to be determined at the time it is actually done. Ground conditions would favour doing such a survey in the winter to take advantage of ice-covered drainages.



Continued biogeochemical sampling along the more westerly conductor would involve an additional 27 to 30 profiles with approximately 20 sample stations on each profile = 540 to 600 samples. This would require approximately 3 weeks of effort. If combined with some additional geological reconnaissance work, this program would require a month of work at a cost of approximately \$450,000. Some minor cost efficiencies could be realized if such ground work was carried out simultaneously or sequentially with the work on the eastern group of dispositions.

Information concerning the Wink vibracorer drill can be found at https://www.vibracorer.com/ The system is a man-portable sonic drill that can be carried by pick-up truck or helicopter and off-loaded to the drill site. The "drill" does not rotate the rod string, rather it uses highfrequency vibratory movement at 7,000 to 12,000 vibrations per minute to allow the rod string to be pushed / pulled by hand downwards through surficial deposits (soil, muskeg, sand, silt). A by-pass system allows the uppermost material to simply be excluded from the sample chamber. The vibracorer does not penetrate bedrock, but it has the capability to collect small chips of bedrock if the surface is sufficiently weathered and soft. It also has the ability to collect undisturbed, representative core samples of the overburden immediately above bedrock. It has no need for drilling fluids which contaminate the sample and impede operations in remote areas or cold weather. The drilling power is packed into a package that includes a 17 kg (37 lb) drill head, a 28 kg (61 lb) Honda driven power plant, a 12 kg (27 lb) flex-cable drive, and miscellaneous gin pole hoisting and pull-down systems, drill rods, core bits and core retainer spring. In respect to dimensions, the longest piece of equipment is only 1.6 m (62") in length. Because it is man-portable and allows for rapid deployment and moves between holes, the Wink system could be used on a reconnaissance basis to test the bedrock along the conductors identified on the western dispositions. It may be possible to acquire sample material from the overburden directly over the conductor that could then be tested for radioactivity on site and/or bagged and sent to a laboratory for analysis. The Wink technology is unproven in this application, and penetration is hindered if boulders are present in the overburden. Maximum vertical penetration under ideal conditions may not exceed 30 m. Although the Vibracorer is unproven in this capacity, the sampling of the basal overburden over and down-ice from a mineral deposit is a well-proven exploration technique. The Wink drill can be purchased for approximately Cdn. \$50,000. Some field training would be required which would add to initial costs however training would be on-the-job so that the initial holes would be productive to the project. Some discussions with Wink would be needed to develop an approach and budget for a sampling program.



#### 27. DATE AND SIGNATURE PAGE

This report titled "A Technical Report of Exploration Activities and Results on the South Preston Project, South-Western Athabasca Basin, Saskatchewan, Canada for CAT Strategic Metals Corp." with an effective date of 4 April, 2023, was prepared and signed by the following author:

Dated 4 April, 2023.

SIONAL GEOSC PROFE A.W. WORKMAN MEMBER 10906 2023 04 04 YR. MN. DAY 9SKATCHEW

Albert W. (Al) Workman, B.Sc., P.Geo. (Sask., Ont.), AusIMM, SEG Senior Geologist and Vice-President Watts, Griffis and McOuat Limited



# CERTIFICATE

- I, Al Workman, do hereby certify that:
- 1. I reside at 2-228 Blueski George Crescent, The Blue Mountains, Ontario, L9Y 0V8, Canada.
- 2. I am a Senior Geologist and Vice-President with Watts Griffis and McOuat Limited, a firm of consulting geologists and engineers, which has been authorized to practice professional engineering by Professional Engineers Ontario since 1969, and professional geoscience by the Association of Professional Engineers and Geoscientists of Saskatchewan and the Professional Geoscientists of Ontario.
- 3. This certificate accompanies the report titled "A Technical Report of Exploration Activities and Results on the South Preston Project, South-Western Athabasca Basin, Saskatchewan, Canada for CAT Strategic Metals Corp." and dated 4 April, 2023.
- 4. I am a graduate of Brock University, St. Catharines, Ontario with an Honours B.Sc. Degree in Geological Sciences (1975). I have practised my profession continuously since 1975, initially with Gulf Minerals in northern Saskatchewan (1975, 1977-1982) and Texasgulf in Ontario and Quebec(1975-1976). From 1983 through 1986, I managed a drilling program that ultimately led to the definition of the Holt-McDermott Gold Mine in the Abitibi Region of Ontario. I have subsequently worked in various capacities as a consultant, in Canada and in close to 40 other countries on a wide variety of mineral projects, with a focus on gold, uranium, zinc and granite-related metals including REE deposits. During my career, I gained experience working on all stages of exploration projects including economic assessments (PEA's and feasibility-level).
- 5. I am a Professional Geologist licensed by the Association of Professional Engineers and Geoscientists of Saskatchewan (Membership Number 10906) and the Professional Geoscientists of Ontario (Membership Number 0170).
- 6. I am a "Qualified Person" for the purpose of this report under National Instrument 43-101 ("**NI 43-101**").
- 7. I am solely responsible for the content of this Report.
- 8. I am independent of the issuer as described in Section 1.5 of NI 43-101.
- 9. I am not a shareholder of CAT Strategic Metals Corp. nor am I a Director or employee of CAT or any affiliated company. My role with the South Preston Project has been to review historical data, to design and recommend to CAT appropriate exploration techniques and procedures, to oversee the execution of work approved by CAT and to



work with other contributors and members the WGM team in the interpretation of survey results.

- 10. I have read NI 43-101 and Form 43-101F1 and have prepared this technical report in compliance with NI 43-101, Form 43-101F1 and generally accepted Canadian mining industry practice.
- 11. As of the effective date of the technical report, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.



Albert W. (Al) Workman, B.Sc., P.Geo. Senior Geologist and Vice-President Watts, Griffis and McOuat Limited



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# APPENDICES



# **APPENDIX 1:**

# **REPORT ON AIRBORNE GEOPHYSICAL SURVEY**



# REPORT ON AN AIRTEM HELICOPTER-BORNE GEOPHYSICAL SURVEY SOUTH PRESTON PROJECT, SW MARGIN, ATHABASCA BASIN, SASKATCHEWAN



**Project Name: South Preston** 

Project Number: 2022-04-08





Date: September 23, 2022



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#### **EXECUTIVE SUMMARY**

An AirTEM survey consisting of magnetic and electromagnetic measurements has been flown over Block A and Block B at South Preston, a collection of mineral claims owned by CAT Strategic, in the search for high-grade uranium mineralization.

The South Preston Block is located near the southwest contact of the Athabasca Basin. The property is characterized by a thin layer of unconsolidated sediments (sand and gravel) which directly cover the basement rocks that are predominantly orthogneiss. There is no evidence of the presence of any Cretaceous or Paleozoic sedimentary sequences in outcrop or *in situ* overlying the basement rocks.

The exploration model is based on sub-vertical fractures or favourable graphitic sediments in the basement that could act as conduits for uranium-rich hydrothermal fluids also rich in sulphide. While the orientation of the fractures is sub-vertical, the near-surface alteration could have any orientation including flat-lying and gently dipping. The region is known to have cross-faulting so trends could be offset along strike.

The survey has identified two major conductive trends (referred to here as the West and East Trend). These are defined as having a long strike length (6.6 km and 4.8 km respectively) and a very linear orientation along strike. The EM conductors representing the West Trend are interpreted to be gently dipping but the dip direction changes across an intersecting conductor trend. The East Trend is narrower across strike and is more easily located but it is intersected by at least two cross-cutting faults.

The trends identified on Block A are inferred to be caused by conductive lithologies or alteration that may be related to mineralizing events within the basement rock and are recommended for future exploration, consisting of high-resolution moving loop EM using a separated transmitter-receiver and/or stratigraphic drill program to crosscut the two trends and explore for uranium within alteration related to hydrothermal graphite-rich fluids within the upper 200 m.



## **1.0 INTRODUCTION**

#### **1.1 CONTRACTOR**

This report presents the details of a helicopter time domain electromagnetic and magnetic survey using the AirTEM<sup>TM</sup> system developed by Triumph Instruments carried out by Balch Exploration Consulting Inc. ("BECI", the "Contractor") having its head office at 11500 Fifth Line, Rockwood, Ontario, Canada, N0B 2K0, has performed.

#### 1.2 CLIENT

CAT Strategic Metals Corp., having its head office at 1015 – 789 W. Pender St., Vancouver, BC, V6C 1H2, Canada.

#### **1.3 SURVEY OBJECTIVES**

The objective of this survey is to map the geology with magnetics and electromagnetics to identify targets thought to have potential for uranium mineralization.

## 2.0 PREVIOUS EXPLORATION

The following is summarized in part from Armitage (2013).

Exploration for uranium with the western portion of the Athabasca Basin has been ongoing since the 1960s. Airborne radiometric surveys in the late 1960s led to the discovery of uranium-bearing boulders which in turn led to detailed geological mapping and drilling. This led to the discovery of the Cluff Lake Deposit in 1970, which opened in 1980 and closed in 2002.

Airborne electromagnetic and magnetic surveys were initiated in 1990 with follow-up surveys in 1991 and 1992 and subsequent ground surveys and drilling. By 1994 Cogema had identified significant uranium mineralization at Shea Creek.

Cogema conducted a substantial exploration program from 1994 to 2004 including 99 km of drilling from 177 drillholes, resulting in the discovery of two deposits – Anne and Colette.



From the period 2004 to 2009 Cogema (later renamed Areva) partnered with UEX Corporation on an 89 km drill program of 194 diamond drillholes which resulted in the discovery of the Kiaana Deposit. This exploration period saw the use of more powerful airborne EM systems (MegaTEM) and airborne gravity (Falcon).

## **2.1 PATTERSON LAKE NORTH**

Early exploration at Patterson Lake North (1969-1974) was led by airborne radiometrics and lake sediment sampling. From 1990 to 1998 ground electromagnetic systems were introduced. During 2005-2006 airborne EM including AeroTEM II and MegaTEM were deployed.

From 2006 to 2008 Strathmore Minerals Corporation performed radon surveys and drilled 5 holes, the drilling of which was impacted by thick overburden and mechanical problems. Best drill results were an anomalous peak of 1,060 cps (total count radioactivity) at 304 m downhole.

# **2.2 PATTERSON LAKE SOUTH**

Fission Uranium conducted an extensive exploration program from 2007 to 2013 including geological mapping, geophysical surveys, trenching and prospecting and drilling. From 2007 to 2009 airborne geophysical surveys were performed including MegaTEM, and high resolution magnetic and radiometric. Follow-up groundwork discovered radioactive boulders with assays as high as 39.6% U<sub>3</sub>O<sub>8</sub>. A drill program in 2011 intersected favourable geology.

A helicopter-borne VTEM survey in 2012 followed by a 16-hle drill program intersected narrow intervals of mineralization with narrow grades up to  $0.10\% U_3O_8$ . Notable features of the drill core included thick intervals of conductive graphite and pyrite thought to be related to important structural zones.

Exploration in 2012 made a major advance starting with airborne radiometric and magnetic surveys over newly staked mineral claims. Radiometric anomalies were followed up and several boulders were identified within an area now expanded to 1 km by 7 km with individual assays up to  $40\% U_3O_8$ .

Ground DC resistivity and moving loop surveys improved the location of airborne VTEM targets. Drilling in the fall of 2012 intersected wide intersections of high-grade uranium in the final four holes of the program including 12.5 m of 2.49%  $U_3O_8$  in PLS12-024, one of the Patterson Lake South Deposit discovery holes.



#### **3.0 GEOLOGY AND MINERALIZATION**

Portions of the following summary were provided by Al Workman of WGM with edits from Jerry Roth (geophysical consultant for the client).

The Athabasca Basin (the "Basin") hosts several high-grade uranium deposits (e.g., Cigar Lake, Rabbit Lake, McArthur River) including the Cluff Lake Deposit which is located 150 km northwest of the survey area. While mineralization at Cluff Lake occurs within the Calder Basin, all uranium deposits within the Basin are thought to have been emplaced over a narrow time interval from 1330 – 1380 Ma (Cumming, Darija Krstić, 2011). Importantly there are several episodes of redeposition (~1280, ~1000, ~575, ~225 Ma). The general trend of the fractured basement is north-northeast.

The Basin is oval-shaped and has approximate dimensions of 450 km east-west and 200 km northsouth. The South Preston Property (the "Property") is located near the southwest contact within a shallower region of the Basin. The maximum thickness of the Basin is 1,500 m near its centre.

The Property is overlain by unconsolidated sediments estimated to be up to tens of meters in thickness and consisting of a sand to gravel mix. Underlying the sediments are the basement rocks, primarily orthogneiss.

Neither Cretaceous nor Paleozoic cover have been identified or recognized in outcrop in the CAT Property area although they do occur to the west, near Patterson Lake South. Within most of the Property, including the survey area, Quaternary sediments rest directly on basement rocks due to erosion and removal of the Athabasca Group dated at approximately 1.7-1.6 Ga. Flat lying to shallowly dipping sandstone strata belonging to the Athabasca Group are exposed a few kilometres north of the eastern survey area (Block B) and within the client's exploration licences.

The basement rock found on much of the licences is orthogneiss. The Basin model involves subvertical faulting/fracturing of the basement, and the infiltration of uranium-bearing brines moving along the basement-Athabasca unconformity into these structures. Deposition of uranium occurs when the fluids interact with graphite and/or sulphide-bearing basement rocks, thereby triggering REDOX reactions that result in uranium deposition. The exploration model is for graphite/sulphide-rich subvertical conductors within the basement rock and/or sub-horizontal conductors along the basement floor representing a "spilling-out" of the conductive graphite/sulphide. Graphite, intimately associated with uranium mineralization, has been identified as integral to ore formation in many deposits including the Collins Bay deposits discovered in the late 1970s and the deposits found recently by Fission Uranium and NexGen



Energy in the Patterson Lake South area. Graphite is therefore useful as a vector in identifying basement structures near surface and at depth that may be host to uranium mineralization.

#### **3.1 PATTERSON LAKE MODEL**

Fission Uranium has developed a conceptual model for uranium mineralization at its Patterson Lake South Uranium Deposit (Bingham, 2017). Patterson Lake South is located 42 km westnorthwest of South Preston. High-grade (uranium-rich) boulders at surface are thought to be related to scouring of Cretaceous sedimentary cover rocks to the basement floor during the past ice age. According to the model, the ice removed the overlying Cretaceous sediments producing an inclined scour surface with the uranium-boulders eventually being pushed to the top of the glacial overburden in the down-ice direction. This model helps explain the orientation of the shallower airborne EM targets and has important implications for the South Preston Uranium Project given the conductor responses detected on that property.

There are several issues with the conceptual model by Fission Uranium, however, especially as it relates to geophysical responses. For example, Bingham and Legault (2018) report that "initial MaxMin horizontal loop EM results encountered some difficulty seeing through a conductive Cretaceous cover of sediments" but the actual EM results are inconsistent with a conductive overburden response and there is no specific description given to the "conductive sediments". In other areas of the Basin the Cretaceous sediments are known to be highly resistive unless mineralized from the basement fractures. Bingham and Legault also comment that "it was difficult to accurately locate conductors with the in-loop geometry of the VTEM survey". This is not entirely correct. The concentric geometry of HTEM systems like VTEM provide good lateral resolution along with its ability to detect deep targets, although other AEM systems such as DIGHEM are superior for shallow conductors. The reason for the confusion is further revealed in a subsequent Bingham and Legault comment "instead [of VTEM], a Small Moving Loop EM Design was used with a 20 m square multiple turn loop [and] SQUID sensor ... with a [transmitterreceiver] separation of 150 m". This configuration better couples to sub-vertical conductors. That this technique proved more effective than VTEM is due to the difference in coupling (more directly to the basement conductors and less so to the overlying conductors) and to the fact that the interpreter had access to the VTEM data to layout the moving loop survey lines. Based on Bingham and Legault's description of Fission's evolving geophysical program, they most likely encountered problems with overlying conductors that were caused by the mineralizing event and that screened the underlying subvertical conductors located deeper within the basement and which ultimately carried the uranium mineralization. This is an important observation because the shallow exploration brought the exploration program to the right location, but its complexity prevented



them from initially making a discovery, an aspect which should be kept in mind in this survey interpretation.

The mineralization identified by Fission Uranium is relatively shallow (less than 50 m) as is evidenced by the longitudinal section presented on Bingham and Legault's geophysical summary (Figure 14 b). The difficulty encountered in Fission's exploration program suggests that the conductive material highlighted by the EM surveys does not always contain uranium but that the trends are related to the mineralizing events and need to be explored.

#### **4.0 SURVEY AREA**

## 4.1 LOCATION

The survey covered two survey blocks (A and B) located near the southwestern contact of the Athabasca Basin, respectively, approximately 15 km and 45 km east of Lloyd Lake, 25 km, and 58 km east of gravel road 955 and 60 km and 85 km south-southeast of The Big Bear Camp within the NTS topographic sheet 074F, Lloyd Lake. Figure 1 shows the location of the survey blocks.

#### 4.2 ACCESS

The closest access road is gravel road 955 that runs north from La Loche. Road 955 is accessible from Prince Albert by taking Highway 3 West to Shellbrook, Highway 55 North to Green Lake and north on Highway 155 to La Loche. The distance from Prince Albert to La Loche is 508 km with an additional 171 km to the Big Bear Camp, the nearest staging point to the Property.

#### **4.3 INFRASTRUCTURE**

Within the survey block there is no infrastructure. Several seasonal camps are operated in the general vicinity of the survey blocks. The survey utilized one (Big Bear Lodge) as the survey base of operations.





Figure 13 – Survey area showing the survey blocks A and B that were flown in red.



## 4.4 CLIMATE

The average daily temperature varies from a high of +24°C during July to a low of -25°C during January. During the survey, the weather was moderate to warm (10°C to 20°C). Annual snowfall is approximately 41 cm and annual rainfall is 5.26 cm. During the survey there was minimal rainfall and light winds.

# 4.5 TOPOGRAPHY

The topography is flat and swampy in places. Total topographic variation is ~90 m, from 468 m to 560 m with a mean elevation of 495 m (see Figure 1).

# **4.6 MINERAL AND MINING CLAIMS**

The mineral claims are shown in Figure 2 and Figure 4. The Client mineral claims (dispositions) are shown in black and listed in Appendix B and appear as 100% owned by CAT Strategic Metals Corporation.

#### **4.7 FLIGHT AND TIE LINES**

The flight lines are shown in Figure 3 and Figure 5 and summarized in Table 1.

Survey Block	Area (km²)	Туре	Lines	Spacing (m)	Direction (deg)	Height (m)	Planned (km)	Actual (km)
Block A	96.8	Flight	86	125	305º/125º	40	772.3	802.4
		Tie	13	1000	35º/115º	40	95.8	100.0
Block B	14.8	Flight	16	100	305º/125º	40	100.0	98.6
		Tie	7	1000	35º/115º	40	16.6	18.0
		Totals					984.7	1019.0

Table 6 – Summary of flight and tie line specifications.





Figure 14 – The mineral claims within survey Block A.





Figure 15 – Flight and tie lines within survey Block A.





Figure 16 – The mineral claims within survey Block B.



Figure 17 - Flight and tie lines within survey Block B.



#### **4.8 DATUM AND PROJECTION**

The survey was flown using the WGS-84 Datum. The Datum used to produce this report as well as the map products, grids and database is WGS-84. The projection is UTM, ZONE 12 N. All references to UTM coordinates in this report are based on the WGS-84 Datum.

## **4.9 FUEL CACHING**

The distance from the base of operations (The Big Bear Camp) to the survey blocks was more than 60 km. Therefore, a fuel cache was required (near Wolvernan Lake). Sealed drums of Jet A fuel were flown 3-4 at a time via helicopter to the survey area (using a long-line and net). The AirTEM system was left at the fuel cache overnight and empty drums were periodically returned to The Big Bear Camp. No drums (empty or otherwise) were left in the field.

#### **5.0 SURVEY SYSTEM**

The survey system is comprised of an electromagnetic airframe and magnetic sensor housing connected to the helicopter via a tow cable and related and ancillary electronics and sensors inside the helicopter to control navigation, power, and survey height. Combined, this system measures the response from conductive sources in the surface and sub-surface, including sub-surface conductors containing minerals such as pyrrhotite and pyrite and the magnetic response from features containing minerals such as magnetite. The positions of these responses are measured using a differential GPS antenna and receiver. Flight height is measured by radar altimeter.

#### 5.1 ELECTROMAGNETIC SYSTEM

The electromagnetic system (Figure 6) was developed by Triumph Instruments (Triumph) and is known as AirTEM<sup>TM</sup>, a helicopter time domain electromagnetic (HTEM) system that is designed for mineral exploration, oil & gas exploration, and geologic mapping. AirTEM<sup>TM</sup> is based on the concept of a concentric transmitter and receiver geometry originally developed by Wally Boyko. The AirTEM<sup>TM</sup> (TS-150) system features an 8.54 m diameter transmitter weighing approximately 500 Kg and producing up to 150,000 Am<sup>2</sup> in transmitted power. The system records the full waveform and "X", "Y" and "Z" coil measurements for improved interpretation of complex conductor responses. Measurements of the total magnetic field are also provided.





Figure 18 – The Triumph AirTEM<sup>TM</sup> TS-150 HTEM System.

#### Features

- Rigid concentric geometry
- Full waveform recording
- Software selectable base frequency
- Software selectable on-time period
- dB/dt off-time and on-time profiles
- Total magnetic field

#### Advantages

- Excellent early off-time response
- On-time conductance discrimination
- Excellent performance in rugged terrain
- Direct drilling of targets
- Improved nomogram correlation
- Interpretation software readily available

## **5.2 SYSTEM WAVEFORM**

The AirTEM<sup>TM</sup> system uses a bipolar linear triangular pulse as shown in Figure 7. The on-time pulse is 33% of the half-cycle. The up-going and down-going portions of the pulse are 95% symmetric with the down-going pulse being slightly shorter in time duration.





Figure 19 – The transmitter full cycle waveform is bi-polar and triangular with 95% on-time linearity.

#### 5.3 BASE FREQUENCY

This survey was flown using a 90 Hz base frequency. At this frequency the bi-polar waveform produces half-cycles 180 times per second. The total half cycle period is the inverse of 180 Hz or  $5,556 \,\mu$ s. For a one third duty cycle the on-time pulse is  $1,850 \,\mu$ s in duration and the off-time pulse is  $3,704 \,\mu$ s.

The data is stacked to a 10 Hz output sample rate. Each stack is the average of 18 half-cycles, 9 positives and 9 negatives. The negative half-cycles are rectified before being added to the positive cycles. The rectified and stacked half-cycles are stored at the 10 Hz sample rate.

The half-cycle is sampled at 105 kHz or one sample every 9.48 µs producing 580 half-cycle samples, 193 during the transmitter on-time and 387 during the off-time. During the on-time there are 99 up-going samples and 94 down-going samples.

#### **5.4 TIME CHANNELS**

The time channels are defined on a logarithmic scale starting at channel 10. Channels 1 through 9 are linearly spaced, have a 5  $\mu$ s width and start 10  $\mu$ s after the end of the on-time pulse. For a 90 Hz base frequency there are 41 off-time channels. The time channels used are listed in Table 2.

<u>Channel</u>	<u>Start time (ms)</u>	<u>Channel</u>	<u>Start time (ms)</u>
1	0.0100	26	0.4199
2	0.0150	27	0.4810
3	0.0200	28	0.5512
4	0.0250	29	0.6320
5	0.0300	30	0.7249
6	0.0350	31	0.8317
7	0.0400	32	0.9545
8	0.0450	33	1.0957
9	0.0500	34	1.2581
10	0.0557	35	1.4448
11	0.0622	36	1.6595
12	0.0698	37	1.9063
13	0.0784	38	2.1901
14	0.0884	39	2.5164
15	0.0998	40	2.8916
16	0.1130	41	<del>3.3230</del>
17	0.1281	4 <del>2</del>	<del>3.8190</del>
18	0.1455	43	4.3893
19	0.1655	44	<del>5.0451</del>
20	0.1885	4 <del>5</del>	<u>5.7992</u>
21	0.2150	4 <del>6</del>	<del>6.6662</del>
22	0.2454	47	<del>7.6631</del>
23	0.2803	<del>48</del>	<del>8.8093</del>
24	0.3205	<del>49</del>	<del>10.1273</del>
25	0.3667	<del>50</del>	<del>11.6427</del>

Table 7 – Time channels for the TS-150.

## **5.5 MAGNETIC SYSTEM**

The airborne magnetometer system consists of the housing, the sensor and control module and Larmour frequency counter. The counter output rate is 10 Hz in digital RS 232 format. Power is provided to the sensor electronics via a 28 VDC power cable on the tow cable which is terminated to a 5-pin connector at the magnetometer housing. This cable also contains conductors that carry the RS 232 signal.



#### **5.6 MAGNETOMETER SENSOR**

The magnetometer sensor is a model CS-3 made by Scintrex Limited. It is an optical split-beam cesium magnetometer and consists of a sensor head with a 3-m cable connected to a sensor driver. The output of the sensor driver is a Larmour frequency which is linearly proportional to the earth's magnetic field. The CS-3 is shown in Figure 8 and the sensor specifications are given in Table 3.



Figure 20 – Scintrex CS-3 magnetometer sensor, cable, and electronics.

## 5.7 LARMOUR COUNTER

The Larmour frequency is input into a frequency counter made by Triumph Instruments. The counter can convert the magnetic field to a theoretical accuracy of 0.2 pT. The output of the frequency counter is a digital value of the magnetic field with  $\pm - 0.001$  nT resolution. This value is transmitted to the EM console at a 10 Hz output rate.

The Larmour counter is not synchronized to the EM transmitter but is synchronized instead to the EM data system. This allows the frequency counter to average down the magnetic field caused by the on-time pulse from the EM transmitter. The noise resulting from lack of synchronization to the EM transmitter is removed using a high-cut frequency filter during processing which also removes the effects of dropouts when the magnetometer sensor loses lock with the magnetic field (common during turnarounds).



#### 5.8 SENSOR HOUSING

The magnetometer sensor housing is made from a thin-wall fiberglass tube (see Figure 9). The manufacturer is AeroComp of London, Ontario. Within the housing a two-axis gimbal holds the sensor and can be rotated in both the horizontal and vertical plane. The sensor was set to the point 45° degrees forward with a 25° azimuth for this survey. The housing contains the sensor driver electronics and the Larmour frequency counter.



Operating Principal	Self-oscillation split-beam Cesium Vapor (non- radioactive Cs-133)				
Operating Range	15,000 to 105,000 nT				
Gradient Tolerance	40,000 nT/meter				
Operating Zones	10° to 85° and 95° to 170°				
Hemisphere Switching	<ul><li>a) Automatic</li><li>b) Control voltage</li><li>c) Manual</li></ul>				
Sensitivity	0.0006 nT √Hz rms				
Noise Envelope	Typically, 0.002 nT P-P, 0.1 to 1 Hz bandwidth				
Heading Error	+/- 0.25 nT (inside the optical axis to the field direction angle range 15° to 75° and 105° to 165°)				
Absolute Accuracy	<2.5 nT throughout range				
Output	<ul> <li>a) Continuous Larmor frequency proportional to the magnetic field (3.49857 Hz/nT) sine wave signal amplitude modulated on the power supply voltage</li> <li>b) Square wave signal at the I/O connector, TTL/CMOS compatible</li> </ul>				
Information Bandwidth	Only limited by the magnetometer processor used				
Sensor Head	Diameter: 63 mm (2.5") Length: 160 mm (6.3") Weight: 1.15 kg (2.6 lb)				
Sensor Electronics	Diameter: 63 mm (2.5") Length: 350 mm (13.8") Weight: 1.5 kg (3.3 lb)				
Cable, Sensor to Sensor Electronics	3 m (9' 8"), lengths up to 5 m (16' 4") available				
Operating Temperature	-40°C to +50°C				
Humidity	Up to 100%, splash proof				
Supply Power	24 to 35 Volts DC				
Supply Current	Approx. 1.5 A at start up, decreasing to 0.5 A at 20°C				
Power Up Time	Less than 15 minutes at -30°C				

Table 8 – Scintrex CS-3 specifications.





Figure 21 – Airborne magnetometer housing with tow cable.

## 5.9 BASE STATION MAGNETOMETER

A GSM-19 base station magnetometer (manufactured by Gem Systems) was used to record variations in the earth's magnetic field and referenced into the master database using a GPS UTC time stamp. This system is based on the Overhauser principle and records the total magnetic field to within  $\pm$  0.02 nT at a one (1) second time interval.

The base station unit was erected in a geomagnetically quiet location behind The Big Bear Camp in a forest (Figure 10). The data was reviewed periodically to ensure a quiet environment.





Figure 22 – Base station magnetometer used for diurnal corrections.

# 5.10 NAVIGATION

Navigation was provided by the AgNav Incorporated (AgNav-2 version) GPS navigation system (Figure 11 - left) for real-time locating while surveying. The AgNav unit was connected to a Tee-Jet GPS receiver (Figure 11 – right).

Also used was a Garmin 19x antenna and receiver located on the HTEM airframe. The Garmin 19x, which is capable of sub five-meter accuracy, was sampled at 10 Hz.



Figure 23 – AgNav main console (left) and Tee-Jet GPS receiver (right).

## 5.11 RADAR ALTIMETER

The radar altimeter transmitter and receiver antenna were fixed to the rear skids of the helicopter (one antenna on each skid) approximately 36" apart. The coaxial cables were fed through the floor of the helicopter and routed along the floor. Both coaxial cables connected to the controller which was located near the TDEM-2400 control unit. On the output side of the controller (Figure 12 - left) a proprietary 16-bit A/D convertor was connected proving digital input to the TDEM-2400 via RS 232 format. The altimeter signal was also fed into a digital read-out unit (Figure 12 - right) mounted on the dashboard of the helicopter in clear vision of the pilot to provide height above ground navigation.





Figure 24 – Freeflight radar altimeter controller and digital readout.

# **5.12 HELICOPTER**

The helicopter used (Figure 13) was an AS 350 SD2 with registration C-GXAH, owned and operated by Access Helicopters and based in Okotoks, Alberta, and contracted by BECI (together with an experienced pilot) to carry out the survey.



Figure 25 – The survey used an AS 350 SD2 as shown above.



# **5.13 PERSONNEL**

The following personnel were involved in the survey.

Individual	Position	Description
Julien Gfeller	Pilot	Helicopter pilot
Dan LeBlanc	Operator	Operated/maintained equipment
Stephen Balch	Processing	On-site processing, line-leveling, drift correction, diurnal corrections, tie-line leveling, reporting. Contractor representative
Chris Balch	Mapping	Plotting maps, printing report, folding, and binding
Jerry Roth	Geophysicist	Client representative

Table 9 – Summary of Personnel.



## 6.0 DATA ACQUISITION

## 6.1 HARDWARE

Data was collected through the main console (the TDS-2400, see Figure 14) which contained both the acquisition system and dc-dc power control module (booster circuit) for the transmitter coil. The TDS-2400 has a hardware controller that sets the timing for the four (4) 24-bit A/D converters that sample at 9.48  $\mu$ s. The controller also generates and transmits the timing control signals to the transmitter driver located on the airframe.

The main controller also performs synchronization between the transmitter and receiver and all ancillary information (GPS, MAG, EM, RAD ALT). The ancillary information is digitized and stored at a rate of 10 Hz. The resulting data string is transmitted to a laptop computer and stored on an internal hard drive.



Figure 26 – Triumph TDS-2400 EM console and acquisition system.



# 6.2 SOFTWARE

A rugged laptop computer running the Windows 10 operating system controls the incoming data stream from the TDS-2400. The software on the laptop (AirDAS) is capable of real-time acquisition with no data loss from 25 Hz to 300 Hz for a duty cycle that can vary from 10% to 50% (nominally set at 33%).

During the survey the Operator can monitor the incoming differential GPS data, radar altimeter, magnetometer, and all EM profiles.

After each flight data is copied from the laptop internal hard drive onto a memory stick. While there is no limit on the maximum file size during acquisition, the processing software can only process up to five (5) continuous hours of recorded data. For longer flights the data can be broken into two files.

## 6.3 CALENDAR

Data was acquired over a 5-day period (Table 5). Mobilization occurred on June 26<sup>th</sup> from La Ronge, Saskatchewan to The Big Bear Camp. Assembly of the system took place at The Big Bear Camp outdoors on June 28<sup>th</sup> including a short test flight. Production commenced the next day on June 29<sup>th</sup>. The system was left in the field during the survey to cache fuel. Upon completion the system was returned to The Big Bear Camp and disassembled on July 4<sup>th</sup>. The crew demobbed the following day through Saskatoon.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
June 26	June 27	June 28	June 29	June 30	July 1	July 2
MOB	MOB	Assemble / Testing	FL-01	FL-02 FL-03	FL-04 FL-05	FL-06 FL-07
July 3	July 4	July 5	June 1			
FL-08	Disassemble	DEMOB	DEMOB			

Table 10 – Time schedule of the survey.



#### 7.0 DATA PROCESSING

Preliminary data processing is performed using BECI proprietary methods. This includes compensation, filtering and line levelling of the HTEM data. This also includes calculation of the vertical magnetic gradient, analytic signal, digital terrain model, bird height, and merging of the base station magnetic data (sampled at 1.0 sec) with the survey data (sampled at 0.1 sec).

#### 7.1 NAVIGATION

The helicopter pilot uses "ideal" flight lines as guidance during surveying as displayed on the real-time AgNav system with the aid of a helicopter mounted GPS. A separate GPS mounted to the bird is used to record actual position. The sample rate of the GPS is 10 Hz, the same as the EM, MAG and ancillary data collected in flight.

The GPS unit outputs both latitude, longitude and easting, northing values, all in the WGS-84 Datum, using a UTM Projection. The positional data is not filtered but occasional bad data points are interpolated using a linear algorithm.

#### 7.2 TERRAIN CLEARANCE

The radar altimeter is located under the base of the helicopter. The helicopter mounted radar altimeter is used to maintain terrain clearance by the pilot. A digital indicator is mounted on the dashboard of the helicopter. This installation is approved by a licensed helicopter engineer provided by the helicopter operator.

## 7.3 EM DATA PROCESSING

The EM data is processed using BECI proprietary software designed to compensate, filter and level both the off-time and on-time data.

The first step in processing is to determine the transmitter shut-off time and align the time gates to this position. The length of time that the transmitter is on is known as the on-time. The time gates are logarithmically spaced in the off-time and linearly spaced in the on-time.

The second processing step is the calculation of the system background transient. This is done at a suitable flight height, nominally 1,000 feet or higher, beyond the effect of any earth



conductivity. During this time EM data is collected for a period of 50 seconds and averaged into a single background transient. This is subtracted from the transients recorded online.

The third step is to assign the flight line numbers to each data point so that the flight can be separated into flight lines within Geosoft.

Line-leveling and drift-correction are achieved on a flight-by-flight basis using the background transients, recorded at the start and end of each flight.

Filtering the data involves a two-step process. Spikes are removed using an algorithm based on the Naudy non-linear filtering algorithm. This is followed by an 11-point Hanning filter that has the effect of smoothing the profiles over an equivalent distance of approximating twice the nominal flight height.

Micro-leveling of the late time channels is also performed before the data file is written to disk. Conductor picks and Tau time constants are determined at this point as well.

B-field processing of the time channels uses a fully integrated on-time in addition to the integrated off-time (i.e. full waveform). The early off-time channels are evaluated for possible primary field leakage (this involves a compensation filter based on linearly derived correlation between the late on-time and early off-time samples). The exact methodology is considered proprietary.

# 7.4 MAGNETIC DATA PROCESSING

The magnetic data (i.e. MAG from the airborne sensor and BMAG from the ground sensor) is collected without a lag time (i.e. synchronous with the HTEM data and UTC time), therefore a lag time correction is not applied. In areas where the MAG sensor has become unlocked (e.g., most often during turnarounds), the total magnetic field values are replaced with a dummy value ("\*") and the data is later interpolated in Geosoft.

The raw ASCII survey data files and BMAG ASCII data files are imported into BECI software and merged using UTC time, common to both files. A quality control check of the BMAG data is made on a day-to-day basis.

Diurnal magnetic corrections are applied to the MAG data using the BMAG data. The base station data (i.e., BMAG) is linearly interpolated from a 1.0 sec sample rate to 0.1 sec to correspond to the flight data after the BMAG has been filtered with a 60 second filter.

Once the diurnal field is subtracted from the MAG data, a heading correction is applied, and the resulting total magnetic intensity (TMI) is micro-levelled.



#### 8.0 RESULTS AND INTERPRETATION

#### **8.1 AIRTEM RESULTS**

Results of the magnetic survey are presented in the form of the total magnetic intensity (TMI) which is shown in Figure 15-16 and the 1<sup>st</sup> vertical derivative of the TMI as shown in Figure 17-18. The magnetic data are assumed to represent variations in the basement rock geology as the overlying cover is assumed to be non-magnetic.

The anomalous EM response is shown for early off-time (Figure 19-20), mid off-time (Figure 21-22) and late off-time (Figure 23-24). The overlying Quaternary sediments are assumed to be resistive.

Figure 25-26 show the digital terrain model (DTM) for the survey area, derived from the radar altimeter and GPS elevation measurements.





Figure 27 - Shaded image of the Total Magnetic Intensity (TMI) over survey Block A.



Figure 28 - Shaded image of the Total Magnetic Intensity (TMI) over survey Block B.





Figure 29 - Shaded image of the First Vertical Derivative (1VD) over survey Block A.



Figure 30 - Shaded image of the First Vertical Derivative (1VD) over survey Block B.





Figure 31 - Image of the Early Off-Time (Zoff[0]) over survey Block A.





Figure 32 - Image of the Early Off-Time (Zoff[0]) over survey Block B.




Figure 33 - Image of the Mid Off-Time (Zoff[19]) over survey Block A.





Figure 34 - Image of the Mid Off-Time (Zoff[19]) over survey Block B.





Figure 35 - Image of the Late Off-Time (Zoff[39]) over survey Block A.



Figure 36 - Image of the Late Off-Time (Zoff[39]) over survey Block B.





Figure 37 - Shaded image of the Digital Terrain Model (DTM) over survey Block A.



Figure 38 - Shaded image of the Digital Terrain Model (DTM) over survey Block B.



## **8.2 BLOCK A RESULTS**

Based on the TMI in Figure 15, the western portion of survey area Block A is highlighted by linear magnetic features with a strike direction of ~68°. These features appear to collectively plunge to the east and suggest the basement rocks are shallower to the west, with the basement surface dipping to the east-northeast. At the eastern edge of Block-A is a series of very linear magnetic features striking ~40°. The amplitude and wavelengths of these features suggests a shallow depth to basement. The magnetic data show cross-cutting features that suggest faulting with a strike direction of 120° (sub-parallel to the flight line direction).

The EM responses (see Figure 27) are due to shallow sources and show a distinct dip direction suggesting a shallow dipping target that is likely related to the scoured surface of the basement rocks as they dip below the unconsolidated Quaternary sediments. Modeling of these responses would improve the dip estimate, but they are inferred to be shallow (30-40° below the horizontal). The presence of these shallow dipping responses is interpreted to be a result of a scoured sediment surface that overlies the basement rock; however, these conductors are assumed to be related to mineralizing events. For greater clarity, the reason for their conductivity is not that they are inclined sediments but that they are sediments that have been mineralized with graphite and/or sulphide, and later scoured out, with the possibility (but not the requirement) that uranium is present.

The EM responses on Block A can be divided into two main trends, a west trend striking at 68° and an east trend striking at 40°. The west trend is summarized as two or more dipping conductors that gently plunge to the northeast. The east trend is a series of faulted conductors with the sudden appearance of a second conductor trend toward the northwest and having higher amplitude. These trends are identified in Figure 28. There are additional short strike length trends that are also described but these trends are of secondary importance as their extent suggests limited extent of favourable graphitic conductivity and might not provide a large enough target to build a sufficient resource along strike.





Figure 39 - Early off-time with conductor picks showing the two main trends.

### **8.3 BLOCK A WEST TREND**

The Block-A West Trend EM response has a sharp peak from line to line and the location of the peak is very linear along trend. This knife-edge response could be the result of brittle fracturing of the basement rocks with no discernable folding or fault movement subsequently. There is the appearance of intersecting faults, which has been suggested to be an important feature in the Patterson Lake South Deposit. A good example is on flight line L190:7 at 630,687 mE and 6,363,835 mN (Figure 20) where a discrete EM trend (striking at 40°) transects a larger (longer and wider) trend (striking at 68°). Invoking the Fission Uranium model, the intersection of these two trends would be a good place to focus further exploration. The West Trend dips (deepens) to the northwest, west of the intersecting trend and dips (deepens) to the southeast, east of the trend.





Figure 40 - EM response on L190 shows main West Trend response and intersecting EM response.

## 8.4 BLOCK A EAST TREND

The East Trend is a series of 5-6 linear conductors striking across the survey block at  $68^{\circ}$ . The individual conductors have a low relative amplitude (~60 µs time constant) and an asymmetric shape indicative of a shallow northwest dip. The conductor trend located northwest of the main trend shows a much higher amplitude and a more symmetric shape with a time constant of ~140 µs.

Within the East Trend there is a second weak amplitude trend striking 40° and crossing four flight lines, centred near 640,685 mE and 6,362,473 mN on line L560:4. This weak amplitude response is on-trend with the higher amplitude, more conductive trend described above.

## **8.5 BLOCK A DISCUSSION**

It is unlikely that the EM responses identified by this survey and by other surveys on nearby properties are caused by "conductive overburden". The term itself is confusing as it does not discriminate between the overlying Quaternary sediments (an unconsolidated mix of sand and



gravel) which is assumed to occur as flat-lying and laterally extensive "layers". The EM responses are best described as ribbon-shaped, long strike-length conductors with a measurable dip-extent and unknown thickness. The orientation of such a geometry would produce the asymmetric responses with an upper sharp boundary to a peak and then a gradual drop in amplitude depending on the angle of the boundary. It is unlikely the conductive overlying sediments could have been emplaced with this orientation and over such a short lateral extent within a "basin".

The exploration program by Fission Uranium is important in that they made a discovery along a conductive trend very similar to the trend identified on the South Preston Property. The difficulty encountered by Fission was due to the complex nature of the VTEM responses that were assumed to be caused by an assemblage of multiple dipping conductors overlying a deeper subvertical trend (the target).

As a follow-up to the conductive trends identified on South Preston, a program of high-resolution moving loop EM surveys with a significant transmitter-separation (e.g., 150 m) would be an effective method for detecting sub-vertical conductors beneath shallow-dipping conductors. However, given the strike length of the Patterson Lake South Deposit (2.8 km), a series of drillholes drilled along strike that undercut the trend would more directly test for uranium mineralization. Such a series of holes could be initially spaced at intervals of 800 m to cover the West Trend (8 holes across 6.4 km) and the East Trend (6 holes across 4.8 km) with 4-8 additional holes offset from the axis of the main trends to test the areas of intersecting trends or interpreted faults along a section that transects the trends' strike direction. These inclined holes would be drilled to a maximum length of 200 m for a total meterage of 4,400 m (8 x 200 m + 6 x 200 m + 8 x 200 m). In the event of uranium mineralization present, drilling could be reduced to 400 m sections, 200 m sections and so on. Alternatively, a series of moving loop profiles could be laid out at 400 m intervals (line spacing) across both trends for a maximum length (across strike) of 1.6 km for the West Trend and 1.0 km for the narrower East Trend. This would represent 36 km (1.6 km x 6.4 km and 1.0 km by 4.8 km at 400 m spacing) of moving loop surveys. However, subvertical conductors can exist within the basement that are conductive but might not contain uranium (at all, or not in sufficient concentration) so the moving loop program could be seen as redundant unless it is believed that the "strongest" conductive response (i.e., best developed or most conductive) is known to correlate with the presence of uranium (which seems doubtful).

The DTM from Block A shows very linear features that correlate with the interpreted faults of the East Trend and that are also sub-parallel to the West Trend. The fault direction on the East Trend that strike limits the conductors appears to be roughly east-west.

Figure 29 shows the SRTM derived DTM plotted as a vertical derivative with the conductor picks overlain. There is a strong correlation between topographic change and EM trend.





Figure 41 - Conductor picks and interpreted trends and faults over SRTM 1st derivative.

## **8.6 BLOCK A ADDITIONAL TRENDS**

There are shorter strike length conductor trends within Block A but these appear to be too short for exploration interest directly. Indirectly, however, one trend is on-strike with the intersecting conductive trend shown in Figure 28. The projected extension of this trend (based on the SRTM derivative) lines up closely with a re-emerging trend farther northeast as shown in Figure 29.

## **8.7 BLOCK B SUMMARY**

Block B does not contain any significant conductor trends. There is the hint of a trend in the northwest section of the block, although it mostly coincides with a local lake. It is recommended that additional ground be acquired to the west (if available) to capture a possible trend in this direction.



## 9.0 CONCLUSIONS AND RECOMMENDATIONS

The AirTEM survey Block A outlines two important conductor trends that could represent <del>f</del>eatures related to a uranium emplacing mineralizing event within the basement rocks. As incompletely outlined by the survey on the property, the West Trend is 6.6 km long, has a strike direction of 68° and consists of two sub-parallel trends that intersect on flight line L120:8 near 629,976 mE and 6,363,096 mN. The East Trend is 4.8 km long and strikes 40° as a series of fault-offset conductors and is located at the edge of a highly magnetic feature. Both trends are of exploration interest.

Other smaller conductor trends occur within Block A. In some cases, they appear along the same topographic features as the main trends, while others appear to be discrete.

AirTEM survey Block B has no definitive conductor trends although a possible trend could exist just off the northwest corner of the survey block.

The conductive trends identified by AirTEM are recommended for follow-up either using moving loop EM to better highlight the subvertical extent of underlying conductors within the basement rocks or more directly by drilling a series of holes spaced 400 m apart and at least one section across each trend to locate any subvertical conductors at depth and hopefully to identify uranium mineralization within.



## **10.0 QUALIFICATIONS**

I, Stephen Balch, do hereby state the following to be true:

- 1. I am a professional geoscientist (P.Geo.) in good standing, registered with the Association of Geoscientists of Ontario (#2250),
- 2. I am a graduate of University of Western Ontario with a degree in Honors Geophysics (1985),
- 3. I am a practicing exploration geophysicist with more than 37 years experience,
- 4. I reside at 11500 Fifth Line, Rockwood, Ontario, NOB 2K0,
- 5. I have no direct interest in the CAT Strategic or the surveyed property,
- 6. I do not own common shares or options in CAT Strategic,
- 7. I prepared this report based on my general experience and my detailed involvement with the survey and the data, and I am solely responsible for its contents.

Dated at Rockwood, Ontario on the 22<sup>nd</sup> day of September 2022.

signed

\_\_\_\_\_

Stephen Balch, P.Geo. Geophysicist Balch Exploration Consulting Inc.



### **11.0 REFERENCES**

- G.L. Cumming, Darija Krstić (February 2011): The age of unconformity-related uranium mineralization in the Athabasca Basin, Northern Saskatchewan, in Canadian Journal of Earth Sciences 29(8): 1623-1639.
- David Bingham (June 2017): Geophysics on Fission Uranium's Patterson Lake South Uranium Deposit, in CSEG Recorder, Vol. 42 No. 04.
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- Jason Cox, David Robson, Mark Mathisen, Mark Wittrup, Charles Edwards (November 2019): 43-101 Technical Report on the Pre-feasibility Study on the Patterson Lake South Property Using Underground Mining Methods, Northern Saskatchewan, Canada on www.sedar.com.
- Allan Armitage (May 2013): Technical Report on the Patterson Lake North Property, Northern Saskatchewan, for Azincourt Resources Inc. on www.sedar.com.



## **APPENDIX A – OUTLINE OF SURVEY POLYGONS**

Table 6 shows the polygon corners in meters easting and northing, WGS-84 and UTM ZONE 12N.

Table 11 – Corner	coordinates f	for the survey	blocks.
-------------------	---------------	----------------	---------

BLOCK A												
Easting (m), Northing (m)												
629522, 6361650												
627030, 6363360												
631100, 6368900												
638000, 6368900												
642400, 6365840												
642400, 6362400												
640950 <i>,</i> 6360368												
638050, 6360290												
636090, 6361650												

BLOCK B														
Easting (m), Northing														
(m)														
664640, 6368750														
666046, 6370660														
671120, 6367087														
669789 <i>,</i> 6365127														



Good

standing

2023/05/17

## APPENDIX B – LIST OF MINING CLAIMS AND DATES

Table 12 – Mining claim numbers.

OCK B	BLO	CK A	BLO
(	Claim	Good	Claim
sta		standing	
9 202:	MC00014559	2022/07/14	MC00013808
		2022/12/29	MC00013968
		2022/12/29	MC00013970
		2023/05/12	IC00014519
		2023/05/17	4C00014557
		2023/05/17	MC00014560



# **APPENDIX 2:**

# **REPRESENTATIVE SRC GEOLAB CERTIFICATES OF ANALYSIS**



#### CAT Strategic Metals Corp.

Attention: Robert Rosner PO #/Project: Samples: 117

#### Column Header Details

Silver in ppm (Ag) Arsenic in ppm (As) Gold in ppm (Au) Beryllium in ppm (Be) Bismuth in ppm (Bi)

Cadmium in ppm (Cd) Cobalt in ppm (Co) Cesium in ppm (Cs) Copper in ppm (Cu) Dysprosium in ppm (Dy)

Erbium in ppm (Er) Europium in ppm (Eu) Gallium in ppm (Ga) Gadolinium in ppm (Gd) Germanium in ppm (Ge)

Hafnium in ppm (Hf) Mercury in ppm (Hg) Holmium in ppm (Ho) Molybdenum in ppm (Mo) Niobium in ppm (Nb)

Neodymium in ppm (Nd) Nickel in ppm (Ni) Lead204 in ppm (Pb204) Lead206 in ppm (Pb206) Lead207 in ppm (Pb207)

Lead208 in ppm (Pb208) Lead in ppm (PbSUM) Praseodymium in ppm (Pr) Rubidium in ppm (Rb) Antimony in ppm (Sb)

Scandium in ppm (Sc) Selenium in ppm (Se) Samarium in ppm (Sm) Tin in ppm (Sn) Tantalum in ppm (Ta)

#### SRC Geoanalytical Laboratories

2901 Cleveland Avenue, Saskatoon, Saskatchewan, S7K 8A9 Tel: (306) 933-8118 Fax: (306) 933-5656 Email: geolab@src.sk.ca

> Multi-Element ICP MS Analysis Aqua Regia Digestion

Report No: G-2022-2550

Date of Report: Jan 23, 2023

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#### **CAT Strategic Metals Corp.** Attention: Robert Rosner PO #/Project: Samples: 117

#### SRC Geoanalytical Laboratories

2901 Cleveland Avenue, Saskatoon, Saskatchewan, S7K 8A9 Tel: (306) 933-8118 Fax: (306) 933-5656 Email: geolab@src.sk.ca

> Multi-Element ICP MS Analysis Aqua Regia Digestion

Report No: G-2022-2550

Date of Report: Jan 23, 2023

Terbium in ppm (Tb) Tellurium in ppm (Te) Thorium in ppm (Th) Uranium in ppm (U) Vanadium in ppm (V)

Tungsten in ppm (W) Yttrium in ppm (Y) Ytterbium in ppm (Yb) Zinc in ppm (Zn) Zirconium in ppm (Zr)

Page 2 of 11



CAT Strategic Metals	s Corp.				2001	SR	C Geoa	nalytic	al Labo	ratorie	es	10				Rep	ort No: G-2022-255	0
PO #/Project: Samples: 117					Tel: (30	6) 933-8	118 Fax:	(306) 933	3-5656 E	mail: geo	n, S/K 8. olab@src.	.sk.ca				Date of	Report: Jan 23, 202	3
Samples. 117						I	Multi-Ele Aaı	ement IC ua Regia	P MS A	nalysis								
Sample	Ag	As	Au	Be	Bi	Cd	Co	Cs	Cu	Dy	Er	Eu	Ga	Gd	Ge	Hf	Hg	
DOD01	0.74	20.6	0.50	0.47	e eo	0.60	44.4	0.40	070	1.00	0.00	0.50	0.44	2.46	0.00	0.50	0.14	
230199	2.74	2.80	0.53	0.47	0.02	1.25	14.1	0.40	130	0.42	0.80	0.58	2.41	0.57	<0.02	0.56	0.14	
230200	2.44	3.39	<0.02	0.07	0.35	1.20	3.00	1.40	118	0.42	0.15	0.33	2 47	0.95	<0.01	0.04	0.02	
230201	0.93	2.11	0.01	0.21	0.12	11.0	2.32	4.38	216	0.41	0.17	0.28	1.84	0.61	< 0.01	0.02	0.05	
230202	3.91	2.10	0.03	0.10	0.20	1.27	3.88	4.22	195	0.49	0.21	1.04	2.12	0.64	< 0.01	0.03	0.04	
230203	3.55	2.62	<0.01	0.14	0.16	1.10	3.15	2.82	132	0.32	0.14	0.27	1.71	0.44	<0.01	<0.01	0.02	
230204	2.27	2.36	0.01	0.18	0.10	0.80	3.11	2.05	108	0.36	0.17	0.87	1.35	0.51	< 0.01	0.02	0.02	
230205	3.50	2.71	< 0.01	0.13	0.14	1.22	2.23	2.41	204	0.25	0.12	0.94	1.62	0.40	< 0.01	0.04	0.04	
230200	2.90	0.22	0.01	0.13	0.29	1.50	2.90	1.47	165	0.25	0.10	0.57	2.15	0.39	< 0.01	0.03	0.01	
230207	2.50	2.30	0.02	0.05	0.12	1.55	5.10	5.52	100	0.20	0.14	0.77	2.15	0.44	<0.01	0.04	0.04	
230208	2.58	3.69	0.01	0.12	0.18	1.23	2.83	2.00	209	0.37	0.16	0.39	2.40	0.58	<0.01	0.02	0.05	
230209	3.64	2.02	0.01	0.14	0.13	1.70	3.27	2.24	238	0.35	0.15	0.43	2.31	0.49	< 0.01	0.05	0.03	
230210	0.38	2.27	< 0.01	0.18	0.07	16.5	2.99	2.48	245	0.32	0.16	0.20	1.58	0.45	< 0.01	0.03	<0.01	
230212	0.70	1.98	<0.01	0.18	0.09	23.3 16.7	4.15 2.31	3.24	125	0.38	0.18	0.33	1.37	0.54	<0.01	0.04	0.03	
230213	5.16	2.36	<0.01	0.14	0.12	0.81	3.53	1.25	125	0.45	0.20	0.50	1.78	0.62	<0.01	<0.01	0.02	
230214	2.19	2.37	< 0.01	0.11	0.12	0.70	2.54	1.04	101	0.60	0.28	0.36	1.96	0.84	< 0.01	0.03	<0.01	
230215	1.79	2.54	<0.01	0.11	0.10	0.68	2.25	1.38	130	0.36	0.17	0.43	1.79	0.51	<0.01	0.08	0.03	
230216	2.35	2.92	< 0.01	0.04	0.18	0.62	2.57	0.87	147	0.36	0.17	0.33	1.59	0.47	< 0.01	0.02	0.01	
230217	3.70	1.83	<0.01	<0.01	0.15	0.77	1.91	3.42	270	0.17	0.07	0.38	1.30	0.24	<0.01	0.03	<0.01	
DCB01	2.63	29.1	0.52	0.47	6.96	0.57	14.0	0.38	271	1.91	0.80	0.58	2.37	3.20	0.02	0.63	0.14	
230218	2.49	2.51	0.03	0.14	0.28	1.08	2.92	5.33	156	0.40	0.17	0.63	1.89	0.53	<0.01	0.03	0.02	
230219	2.42	0.70	<0.01	0.05	0.15	0.76	3.79	0.52	150	0.44	0.16	0.37	2.62	0.58	<0.01	0.03	0.02	
230220	5.25	2.44	< 0.01	0.27	0.17	1.93	18.4	1.97	168	0.54	0.26	0.72	2.71	0.78	< 0.01	0.03	0.01	
230221	4.67	2.30	<0.01	0.20	0.18	1.46	3.45	2.50	206	0.85	0.26	0.59	4.14	1.24	<0.01	0.04	0.02	
230222	0.53	2.15	0.01	0.14	0.07	20.3	2.33	2.20	144	0.30	0.14	0.36	1.39	0.42	<0.01	0.02	0.01	
230223	1.54	1.86	<0.01	0.18	0.11	8.42	4.85	1.70	168	0.43	0.20	0.25	1.98	0.60	< 0.01	0.12	0.02	
230224	2.93	2.69	0.02	0.10	0.23	1.21	4.57	1.34	191	0.20	0.08	1.09	1.74	0.31	<0.01	0.07	0.01	
230225 230226	1.72 2.67	1.87 2.75	0.01 <0.01	0.06 0.15	0.14 0.12	1.47 1.03	3.16 2.42	1.90 2.83	242 138	0.21 0.45	0.10 0.21	0.60 0.38	2.03 2.18	0.39 0.65	<0.01 <0.01	0.03 0.02	0.02 0.02	
230227	1.35	3.27	0.02	0.21	0.20	1.13	3.25	1.34	79.4	0.59	0.28	0.43	2.29	0.86	<0.01	0.04	0.03	
230228	1.21	2.78	< 0.01	0.18	0.14	1.12	2.64	2.11	76.1	0.72	0.33	0.30	2.05	0.95	< 0.01	0.01	0.01	
230229	0.87	2.43	< 0.01	0.14	0.14	1.10	2.30	1.28	132	0.56	0.22	0.41	2.77	0.75	< 0.01	0.05	0.02	
230230	1.00	5.54	<0.01	0.13	0.23	0.84	2.40	1.45	116	0.55	0.21	0.24	2.08	0.75	<0.01	0.03	0.02	
230231	1.16	2.36	<0.01	0.13	0.09	1.02	2.97	1.06	87.3	0.52	0.25	0.36	2.24	0.74	<0.01	0.02	0.04	
230232	2.23	2.18	< 0.01	0.15	0.15	0.98	3.22	1.20	124	0.69	0.32	0.38	2.76	1.01	< 0.01	0.04	0.05	
230233	1.21	2.71	< 0.01	0.17	0.11	0.67	3.27	0.90	103	0.50	0.28	0.48	2.72	0.71	< 0.01	0.05	0.03	
230234	0.93	2.81	< 0.01	0.18	0.12	1.49	2.48	0.94	106	0.44	0.21	0.32	2.22	0.64	< 0.01	0.03	0.01	
230233 P	1.07	2.11	<0.01	0.20	0.17	0.95	3.23	0.97	104	0.03	0.29	0.50	2.01	0.93	<0.01	0.02	0.02	
230233 K	1.19	2.04	<b>\U.UI</b>	0.10	0.09	0.00	3.23	0.07	104	0.47	0.23	0.45	∠.00	0.07	<b>~0.01</b>	0.02	0.03	



CAT Strategic Metal	s Corp.	Corp. SRC Geoanalytical Laboratories Report No: G-2022										ort No: G-2022-2550					
PO #/Project:					Tel: (30	6) 933-8	118 Fax:	(306) 933	3-5656 E	mail: geo	n, S/K 8/ olab@src.	sk.ca				Date of I	Report: Jan 23, 2023
Samples: 117						I	Multi-Ele Aai	ement IC	P MS A	nalysis							
Sample	Ag	As	Au	Be	Bi	Cd	Co	Cs	Cu	Dy	Er	Eu	Ga	Gd	Ge	Hf	Hg
Number	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DCB01	2.58	29.3	0.51	0.49	6.94	0.63	14.6	0.40	274	1.90	0.78	0.58	2.02	3.18	< 0.01	0.57	0.14
230236	1.35	< 0.01	0.04	0.14	0.19	1.63	2.72	1.12	101	0.53	0.22	0.26	2.85	0.74	< 0.01	0.03	0.04
230237	1.02	<0.04	<0.01	0.21	0.14	1.03	2.02	1.17	121	0.01	0.20	0.27	2.40	0.03	<0.01	0.03	0.04
230239	3.00	<0.01	0.01	0.20	0.14	2.00	2.90	3.22	156	0.40	0.17	0.60	2.91	0.60	<0.01	0.03	0.06
230240	2.84	<0.01	< 0.01	0.14	0.11	1.30	2.74	1.70	144	0.46	0.17	0.35	2.92	0.65	<0.01	0.07	0.03
230241	1.06	< 0.01	0.02	0.14	0.18	30.0	2.80	4.99	135	0.77	0.22	0.20	2.23	0.64	< 0.01	0.13	0.05
230242	1.17	<0.01	0.02	0.08	0.13	29.9	3.04	5.82	184	0.38	0.16	0.19	2.72	0.52	< 0.01	0.04	0.07
230243	2.04	< 0.01	0.02	0.28	0.15	17.8	3.70	2.44	147	0.45	0.20	0.27	2.39	0.01	< 0.01	0.04	0.08
230244	0.32	1.50	<0.01	0.12	0.07	0.90	3.57	1.47	101	0.51	0.15	0.14	1.47	0.59	<0.01	0.03	0.03
230245	0.79	<0.01	< 0.01	0.18	0.14	13.2	3.77	1.72	202	0.31	0.15	0.16	1.48	0.39	<0.01	0.06	0.03
230246	0.37	< 0.01	< 0.01	0.17	0.07	13.0	2.58	3.23	198	0.25	0.10	0.13	1.60	0.34	< 0.01	0.02	0.03
230247	1.07	< 0.01	< 0.01	0.13	0.05	19.2	2.71	2.32	141	0.30	0.13	0.12	1.35	0.40	< 0.01	< 0.01	0.02
230248	0.74	<0.01	<0.01	0.16	0.08	18.2	3.10	3.88	249	0.26	0.12	0.23	4.72	1.34	<0.01	0.05	0.05
230250	0.84	<0.01	< 0.01	0.31	0.14	13.3	3.31	4.28	153	0.54	0.21	0.35	2.41	0.63	<0.01	0.07	0.02
230251	0.36	<0.01	< 0.01	0.17	0.05	11.2	2.59	4.14	170	0.24	0.10	0.27	2.24	0.31	<0.01	0.02	0.02
230252	1.28	<0.01	<0.01	0.23	0.28	9.75	3.47	4.64	180	0.39	0.14	0.29	2.63	0.52	<0.01	0.04	0.08
230253	0.92	<0.01	< 0.01	0.19	0.24	14.5	3.21	3.41	157	0.32	0.15	0.33	2.38	0.40	< 0.01	0.03	0.05
230254	0.92	<0.01	<0.01	0.09	0.10	19.7	3.89	3.79	238	0.30	0.12	0.25	1.92	0.38	<0.01	0.07	0.02
DCB01	2.70	29.2	0.50	0.49	6.55	0.58	15.0	0.40	275	1.91	0.78	0.59	2.22	3.12	< 0.01	0.62	0.15
230255	2.00	<0.01	0.01	0.15	0.36	23.2	2.74	3.86	211	0.48	0.20	0.37	2.69	0.58	<0.01	0.06	0.08
230256	1.49	< 0.01	< 0.01	0.12	0.12	20.5	3.39	4.26	159	0.38	0.14	0.25	1.97	0.52	<0.01	0.02	0.03
230257	0.85	<0.01	<0.01	0.15	0.11	24.4	2.53	7.68	202	0.35	0.15	0.18	1.95	0.40	<0.01	<0.01	0.03
230258	3.23	<0.01	<0.01	0.12	0.12	1.23	2.33	4.08	190	0.23	0.08	0.46	2.59	0.30	<0.01	0.03	0.03
230259	1.64	<0.01	<0.01	0.16	0.08	1.71	2.57	3.39	78.4	0.30	0.13	0.23	2.19	0.43	<0.01	0.02	0.04
230260	0.79	<0.01	<0.01	0.20	0.08	14.6	2.47	3.51	165	0.29	0.14	0.31	2.62	0.47	<0.01	0.02	0.02
230261	1.02	<0.01	<0.01	0.22	0.10	18.7	3.36	3.89	172	0.38	0.15	0.23	2.83	0.47	<0.01	0.03	0.04
230262 230263	0.53 0.92	<0.01 <0.01	<0.01 <0.01	0.16 0.11	0.07 0.20	11.7 6.22	2.96 3.17	2.96 5.47	304 200	0.21 0.29	0.10 0.12	0.32 0.18	1.91 2.10	0.30 0.39	<0.01 <0.01	0.16 0.16	0.02 0.01
230264	1.61	<0.01	<0.01	0.12	0.09	19.2	3.04	3 31	202	0.34	0.16	0.38	2 54	0.48	<0.01	0.02	0.07
230265	1.65	< 0.01	0.02	0.19	0.21	27.0	3.29	3.67	138	0.40	0.18	0.31	2.72	0.60	< 0.01	0.08	0.04
230266	0.59	< 0.01	< 0.01	0.15	0.23	15.0	3.94	3.92	162	0.44	0.19	0.39	2.83	0.48	< 0.01	0.02	0.07
230267	1.29	< 0.01	< 0.01	0.22	0.12	16.5	4.00	5.37	176	0.43	0.18	0.40	2.74	0.56	< 0.01	0.04	0.06
230268	1.16	<0.01	<0.01	0.15	0.14	10.2	4.30	2.74	196	0.48	0.21	0.30	2.62	0.61	<0.01	<0.01	0.07
230269	1.60	<0.01	<0.01	0.18	0.09	36.8	3.16	2.56	150	0.45	0.18	0.36	3.00	0.55	<0.01	0.03	0.02
230270	0.74	< 0.01	< 0.01	0.15	0.14	16.4	2.81	4.28	147	0.35	0.14	0.32	2.40	0.44	< 0.01	0.02	0.06
230271	0.95	< 0.01	< 0.01	0.11	0.14	12.3	3.27	4.51	176	0.23	0.11	0.17	2.33	0.30	< 0.01	0.14	0.03
230272	0.84	< 0.01	< 0.01	0.22	0.11	19.4	3.26	2.55	135	0.39	0.17	0.32	2.42	0.54	< 0.01	0.07	0.02
2302/1 K	0.96	<0.01	< 0.01	0.14	0.11	12.1	3.16	4.48	174	0.26	0.11	0.18	2.33	0.30	< 0.01	0.21	0.06



CAT Strategic Metals ( Attention: Robert Rosne	Corp. SRC Geoanalytical Laboratories										Repo	ort No: G-2022-	-2550					
PO #/Project: Samples: 117	1		Tel: (306) 933-8118 Fax: (306) 933-5656 Email: geolab@src.sk.ca										Date of	Report: Jan 23,	2023			
						N	<b>Iulti-Ele</b> Aqu	ment IC la Regia I	P MS Ar Digestion	alysis								
Sample Number	Ag ppm	As ppm	Au ppm	Be ppm	Bi ppm	Cd ppm	Co ppm	Cs ppm	Cu ppm	Dy ppm	Er ppm	Eu ppm	Ga ppm	Gd ppm	Ge ppm	Hf ppm	Hg ppm	
DCB01	2.64	30.3	0.52	0.45	6.67	0.57	14.2	0.41	272	1.91	0.78	0.56	2.30	3.17	< 0.01	0.61	0.12	
230273	0.43	< 0.01	< 0.01	0.12	0.20	8.33	2.56	1.87	189	0.21	0.09	0.13	1.54	0.31	< 0.01	0.03	0.03	
230274	0.54	<0.01	< 0.01	0.21	0.09	8.69	2.81	2.41	150	0.29	0.13	0.24	1.88	0.38	< 0.01	0.05	0.02	
230275	2.52	< 0.01	< 0.01	0.15	0.10	45.6	2.12	1.93	145	0.30	0.11	0.15	2.10	0.35	< 0.01	0.09	0.03	
230276	1.52	<0.01	<0.01	0.08	0.09	24.2	2.78	2.73	150	0.24	0.11	0.20	2.41	0.29	<0.01	0.03	0.03	
230277	1.68	<0.01	<0.01	0.17	0.32	20.6	3.69	2.99	169	0.45	0.20	0.41	3.11	0.70	< 0.01	0.03	0.08	
230278	0.60	< 0.01	< 0.01	0.09	0.17	18.9	2.05	3.34	195	0.16	80.0	0.25	1.98	0.26	< 0.01	0.03	0.04	
230279	2.08	< 0.01	< 0.01	0.09	0.12	0.84	2.04	1.82	189	0.26	0.10	0.38	2.30	0.38	< 0.01	0.02	0.06	
230280	3.85	<0.01	< 0.01	0.09	0.09	1.92	1.83	0.72	104	0.32	0.13	0.24	2.14	0.42	< 0.01	0.02	0.02	
230281	0.62	<0.01	<0.01	0.28	0.14	8.79	5.27	9.52	368	0.31	0.13	0.16	1.85	0.39	<0.01	0.06	0.05	
230282	1.15	<0.01	< 0.01	0.07	0.10	12.9	2.39	4.73	168	0.22	0.09	0.13	2.08	0.28	<0.01	0.02	0.03	
230283	0.98	<0.01	< 0.01	0.31	0.12	13.6	3.18	3.70	234	0.46	0.21	0.28	2.65	0.58	< 0.01	0.02	0.03	
230284	0.73	<0.01	<0.01	0.13	0.07	15.6	2.12	2.05	168	0.22	0.11	0.14	1.86	0.30	<0.01	0.05	0.04	
230285	2.23	<0.01	<0.01	0.21	0.09	22.3	2.53	6.63	176	0.31	0.13	0.44	2.27	0.41	<0.01	0.20	0.02	
230286	2.32	<0.01	<0.01	0.23	0.18	26.0	3.36	2.80	165	0.46	0.18	0.44	2.28	0.59	<0.01	0.02	0.03	
230287	1.79	<0.01	<0.01	0.20	0.22	17.5	3.28	2.55	147	0.39	0.18	0.43	2.49	0.50	<0.01	0.04	0.07	
230288	0.86	<0.01	<0.01	0.11	0.11	27.2	2.60	4.74	228	0.33	0.13	0.18	2.29	0.43	<0.01	0.05	0.06	
230289	0.75	<0.01	<0.01	0.10	0.09	15.1	1.87	1.89	209	0.22	0.09	0.20	1.43	0.30	<0.01	0.02	0.02	
230290	2.13	<0.01	< 0.01	0.21	0.12	24.7	3.18	4.59	133	0.41	0.19	0.20	1.95	0.55	< 0.01	0.03	0.02	
230291	0.65	<0.01	<0.01	0.18	0.11	10.6	3.61	2.93	148	0.35	0.13	0.33	2.74	0.40	<0.01	0.01	0.05	
DCB01	2.59	29.4	0.49	0.40	6.75	0.64	14.2	0.40	272	1.90	0.77	0.56	2.24	3.11	< 0.01	0.65	0.13	
230292	0.99	<0.01	0.02	0.28	0.62	11.8	3.53	2.61	175	0.49	0.20	0.26	2.63	0.53	< 0.01	0.18	0.06	
230293	1.03	< 0.01	0.01	0.24	0.14	17.7	2.92	2.64	157	0.42	0.19	0.38	2.03	0.55	< 0.01	0.05	0.03	
230294	0.50	<0.01	< 0.01	0.13	0.10	17.8	2.08	5.29	295	0.18	0.08	0.17	1.90	0.23	< 0.01	0.10	0.02	
230295	0.69	<0.01	<0.01	0.08	0.10	21.5	3.06	7.16	179	0.30	0.16	0.33	2.34	0.34	<0.01	0.18	0.04	
230296	1.43	<0.01	< 0.01	0.20	0.17	32.1	3.29	3.67	131	0.32	0.15	0.36	1.93	0.40	<0.01	0.04	0.01	
230297	0.42	<0.01	< 0.01	0.14	0.05	6.91	1.66	1.59	71.3	0.24	0.09	0.13	0.91	0.43	< 0.01	0.02	0.01	
230298	2.64	<0.01	<0.01	0.06	0.09	1.12	1.98	1.96	212	0.23	0.09	0.81	2.55	0.28	<0.01	0.13	0.03	
230299	2.08	<0.01	<0.01	0.14	0.13	1.00	2.09	2.52	162	0.25	0.10	0.34	2.19	0.33	<0.01	0.08	0.06	
230300	2.85	<0.01	<0.01	0.09	0.10	2.08	2.76	3.36	216	0.23	0.12	0.66	2.71	0.37	<0.01	0.07	0.03	
230301	0.94	<0.01	<0.01	0.11	0.10	8.98	2.21	2.01	200	0.30	0.13	0.20	1.74	0.36	<0.01	0.02	0.04	
230302	0.76	<0.01	< 0.01	0.10	0.07	15.8	1.96	5.24	205	0.21	0.09	0.18	1.50	0.26	< 0.01	0.10	0.02	
230303	2.99	6.73	0.01	0.04	1.44	0.75	10.0	4.21	231	0.55	0.17	0.63	3.54	0.55	< 0.01	0.34	<0.01	
230304	0.61	<0.01	<0.01	0.11	0.06	16.9	2.06	3.82	119	0.25	0.12	0.32	1.38	0.34	<0.01	0.02	0.01	
230305	1.38	0.10	<0.01	0.14	0.10	24.8	2.76	5.36	126	0.34	0.15	0.15	1.63	0.43	<0.01	0.01	0.02	
230306 230306 R	0.57 0.42	<0.01 <0.01	<0.01 <0.01	0.03 0.11	0.29 0.14	16.4 14.5	5.37 4.83	8.69 8.31	202 197	0.29 0.24	0.12 0.09	0.30 0.29	2.72 2.28	0.36 0.29	<0.01 <0.01	0.06 0.02	0.05 0.03	



CAT Strategic Metals	s Corp.				2001	SR	C Geo	analytic	cal Lab	oratorio	es - 574 9	4.0				Repo	ort No: G-2022-2550
PO #/Project:	101				Tel: (3	06) 933-8	3118 Fax	: (306) 93	33-5656 I	Email: geo	olab@src.	.sk.ca				Date of	Report: Jan 23, 2023
Samples. 117							Multi-E Ac	lement I jua Regia	CP MS A Digestie	<b>Analysis</b> on							
Sample Number	Ho	Mo	Nb ppm	Nd ppm	Ni ppm	Pb204 ppm	Pb206 ppm	Pb207	Pb208	PbSUM ppm	Pr	Rb ppm	Sb ppm	Sc ppm	Se	Sm	Sn ppm
DCB01	0.31	11 1	0.35	20.1	79.4	1 20	30.6	18.6	41.0	91.4	5.89	9.75	0.87	17	19	3.46	1.30
230199	0.07	1.77	0.13	2.86	17.3	0.092	2.42	1.46	3.25	7.22	0.79	125	0.24	1.1	3.7	0.60	0.34
230200	0.11	2.08	0.10	4.49	24.5	0.143	2.87	2.18	4.92	10.1	1.24	70.8	0.51	1.4	4.0	0.96	0.55
230201	0.07	1.56	0.14	2.70	38.0	0.058	1.84	0.963	2.09	4.96	0.73	395	0.24	1.0	3.4	0.60	0.28
230202	0.08	2.40	0.18	2.96	46.0	0.096	4.34	1.67	3.39	9.49	0.83	298	0.32	1.3	2.8	0.66	0.38
230203	0.06	1.89	0.08	2.49	37.3	0.107	3.29	1.76	3.86	9.02	0.69	162	0.46	0.9	4.6	0.46	0.44
230204	0.06	1.16	0.11	2.52	30.0	0.119	3.61	1.95	4.07	9.75	0.70	150	0.27	1.0	4.8	0.52	0.33
230205	0.04	1.63	0.12	1.89	51.4	0.145	3.43	2.18	4.88	10.6	0.52	191	0.91	0.8	5.7	0.37	0.73
230206	0.04	3.75	0.11	1.84	34.0	0.049	3.50	0.944	1.74	0.23	0.55	199	1.18	0.8	3.1	0.40	0.82
230207	0.05	2.30	0.12	1.90	20.0	0.062	1.51	0.941	2.00	4.00	0.54	17.1	0.20	0.0	1.5	0.44	0.30
230208	0.06	2.79	0.12	2.97	48.2	0.106	3.01	1.67	3.77	8.56	0.84	184	0.55	1.1	4.7	0.57	0.52
230209	0.06	2.11	0.31	2.45	58.3	0.177	3.82	2.76	6.18	12.9	0.68	274	1.13	1.1	3.8	0.50	1.21
230210	0.06	1.41	0.12	2.27	48.7	0.057	1.05	0.800	1.80	3.71	0.63	317	0.20	0.9	2.7	0.45	0.28
230211	0.06	1.34	0.12	2.65	32.4	0.076	1.61	1.14	2.56	5.39	0.74	197	0.20	1.1	4.8	0.54	0.31
230212	0.05	1.21	0.16	1.79	51.2	0.031	0.952	0.528	1.18	2.70	0.49	457	0.17	0.8	2.8	0.38	0.21
230213	0.07	1.86	0.13	2.98	36.4	0.120	2.99	1.87	3.97	8.95	0.85	97.9	0.52	1.1	5.4	0.60	0.48
230214	0.10	1.64	0.13	3.98	19.7	0.130	2.50	2.03	4.62	9.28	1.14	80.3	0.29	1.4	3.9	0.83	0.38
230215	0.06	1.53	0.12	2.54	24.8	0.083	2.59	1.33	2.84	6.84	0.68	107	0.48	1.1	4.6	0.52	0.63
230216	0.06	1.75	0.13	2.40	24.7	0.101	3.71	1.71	3.64	9.16	0.69	112	0.40	0.9	3.7	0.51	0.60
230217	0.03	1.74	0.09	1.13	28.7	0.057	1.72	0.981	2.16	4.91	0.31	185	0.34	0.5	5.9	0.22	0.36
DCB01	0.30	11.2	0.36	20.9	78.6	1.18	29.9	18.5	42.8	92.4	6.20	9.68	0.89	1.7	1.7	3.32	1.30
230218	0.07	1.79	0.18	2.76	28.5	0.123	2.65	1.87	4.10	8.75	0.76	155	0.50	1.2	3.0	0.57	0.60
230219	0.07	2.03	0.24	2.46	28.6	0.069	2.89	1.20	2.51	6.67	0.64	122	0.43	1.0	1.8	0.61	0.71
230220	0.10	2.25	0.16	4.17	29.4	0.178	3.22	2.77	6.19	12.4	1.13	117	0.54	1.5	3.8	0.86	0.51
230221	0.11	1.95	0.28	4.71	41.5	0.094	3.51	1.63	3.55	8.78	1.20	207	0.47	1.7	4.6	1.22	0.62
230222	0.05	1.39	0.12	2.15	36.6	0.065	1.25	0.947	2.13	4.39	0.60	183	0.30	0.9	5.2	0.42	1.31
230223	0.08	1.85	0.17	3.28	28.9	0.111	2.19	1.69	3.85	7.84	0.93	239	0.39	1.2	3.0	0.65	0.41
230224	0.03	3.44	0.12	1.50	27.8	0.047	1.67	0.766	1.61	4.10	0.41	173	0.39	0.8	2.8	0.30	0.47
230225	0.04	2.45	0.15	1.84	24.9	0.066	1.79	1.01	2.29	5.15	0.51	189	0.56	0.8	1.9	0.34	0.44
230220	0.06	2.07	0.15	3.29	20.0	0.096	2.70	1.50	3.20	7.03	0.69	04.5	0.52	1.1	3.3	0.65	0.30
230227	0.10	2.43	0.16	4.49	30.4	0.194	5.66	3.07	6.64	15.6	1.20	66.1	0.77	1.6	4.0	0.93	0.94
230228	0.12	1.67	0.11	4.75	20.2	0.189	3.41	2.82	6.43	12.8	1.31	67.4	0.43	1.6	4.6	1.01	0.53
230229	0.09	2.30	0.33	3.46	22.0	0.098	2.28	1.51	3.29	7.18	0.95	110	0.51	1.4	3.8	0.79	1.71
230230	0.08	3.03	0.14	3.18	24.1	0.092	2.47	1.46	3.25	7.27	0.88	86.1	0.33	1.3	3.9	0.68	1.40
230231	0.09	1.64	0.10	3.46	15.6	0.090	3.16	1.54	3.42	8.21	0.95	62.2	0.28	1.1	3.4	0.72	0.35
230232	0.12	2.46	0.13	4.70	24.5	0.158	3.04	2.46	5.60	11.2	1.30	102	0.42	1.7	4.2	1.06	0.48
230233	0.10	2.41	0.12	3.27	19.3	0.095	1.67	1.32	3.21	6.29	0.93	61.2	0.55	1.2	3.6	0.74	0.34
230234	0.08	2.39	0.10	3.12	18.8	0.115	2.14	1.72	3.89	7.86	0.88	73.9	0.47	1.0	4.2	0.64	0.74
230235	0.11	2.30	0.10	4.51	24.4	0.145	3.00	2.15	4.83	10.1	1.26	85.3	0.40	1.4	5.1	0.97	0.43
230233 R	0.09	2.39	0.10	3.23	16.3	0.091	1.63	1.36	3.17	6.25	0.91	60.0	0.47	1.1	3.8	0.72	0.32

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CAT Strategic Meta	lls Corp.	orp. SRC Geoanalytical Laboratories									Repo	ort No: G-2022-2550					
PO #/Project:	51101	Tel: (306) 933-8118 Fax: (306) 933-5656 Email: geolab@src.sk.ca											Date of	Report: Jan 23, 2023			
Samples: 117							Multi_F	lomont I	CP MS	Analycic							
							Ac	jua Regia	a Digesti	on							
Sample	Ho	Мо	Nb	Nd	Ni	Pb204	Pb206	Pb207	Pb208	PbSUM	Pr	Rb	Sb	Sc	Se	Sm	Sn
Number	ppin	ppm	ppm	ppin oo 4	ppin	ppm	ppin	ppin 40.4	ppm	ppin	ppin	ppm	ppm	ppm	ppm	ppm	ppin
DCB01	0.31	11.3	0.36	20.4	80.9	1.23	30.9	18.4	41.3	91.8	5.69	10.1	0.84	1.7	1.2	3.47	1.36
230230	0.09	2.14	0.14	4.00	15.9	0.128	2.03	1.82	4.11	8.69	1.05	45.2	0.46	1.0	0.7	0.76	0.74
230237	0.10	1.68	0.10	3.26	16.6	0.102	4.24	2.70	4.63	12.4	0.88	40.2	0.30	1.0	0.4	0.79	0.39
230239	0.08	1.30	0.16	2.82	37.6	0.102	3.31	1.74	3.63	8.77	0.71	244	0.40	1.4	<0.1	0.60	0.50
230240	0.07	1.10	0.12	2.79	30.1	0.051	5.62	1.17	1.84	8.69	0.68	108	0.39	1.2	1.2	0.58	0.29
230241	0.12	1.20	0.18	2.37	35.2	0.176	6.88	2.79	5.65	15.5	0.60	256	0.33	1.0	<0.1	0.50	0.33
230242	0.05	1.32	0.30	2.26	25.8	0.061	1.90	0.986	2.25	5.19	0.57	372	0.31	1.2	< 0.1	0.44	0.24
230243	0.08	1.44	0.21	3.48	73.5	0.089	2.41	1.45	3.23	7.18	0.92	185	0.32	1.3	<0.1	0.59	0.26
230244	0.05	1.09	0.12	1.92	50.4	0.050	1.52	0.807	1.70	4.08	0.52	241	0.32	1.0	0.4	0.36	0.21
230245	0.06	2.04	0.12	1.97	22.6	0.067	3.87	1.16	2.22	7.32	0.53	171	0.25	1.0	<0.1	0.40	0.31
230246	0.04	1.06	0.13	1.66	29.8	0.041	2.65	0.739	1.31	4.74	0.46	288	0.21	0.9	0.6	0.29	0.15
230247	0.05	0.93	0.10	2.05	26.0	0.053	0.982	0.761	1.70	3.50	0.56	150	0.24	0.9	0.9	0.35	0.18
230248	0.05	1.23	0.12	1.88	20.8	0.057	1.82	0.909	1.91	4.70	0.48	156	0.28	0.9	< 0.1	0.38	0.20
230249	0.13	1.78	0.22	5.10	45.0	0.072	1.79	1.08	2.40	5.35	1.21	218	0.28	1.5	<0.1	1.21	0.27
230250	0.09	1.96	0.18	3.40	30.1	0.109	3.51	1.70	3.69	9.01	0.91	192	0.50	1.4	<0.1	0.64	0.54
230251	0.04	1.60	0.11	1.54	57.3	0.034	1.36	0.572	1.18	3.14	0.40	384	0.16	0.8	<0.1	0.28	0.21
230252	0.07	2.20	0.18	2.42	39.5	0.073	4.52	1.27	2.55	8.42	0.70	293	0.42	1.0	<0.1	0.44	0.31
230253	0.05	3.44	0.11	2.23	26.5	0.085	2.72	1.33	2.90	7.04	0.62	185	0.32	1.0	< 0.1	0.44	0.34
230254	0.06	1.23	0.12	1.88	67.6	0.070	1.83	1.08	2.44	5.42	0.51	218	0.27	0.7	<0.1	0.36	0.22
DCB01	0.31	11.2	0.34	20.4	79.3	1.24	30.6	18.6	41.7	92.2	5.73	10.2	0.81	1.7	1.0	3.44	1.27
230255	0.08	2.07	0.14	3.03	34.7	0.133	4.84	2.21	4.49	11.7	0.81	231	0.46	1.3	1.4	0.62	0.46
230256	0.07	1.29	0.13	2.78	29.7	0.176	7.13	2.90	7.62	17.8	0.75	242	0.28	1.0	2.0	0.55	0.26
230257	0.05	1.78	0.13	2.22	36.8	0.078	3.19	1.22	2.49	6.97	0.59	373	0.33	1.0	0.5	0.45	0.31
230258	0.03	1.46	0.11	1.34	44.4	0.345	7.46	5.08	11.4	24.3	0.38	351	1.62	0.6	<0.1	0.26	0.99
230259	0.05	1.21	0.10	2.25	20.8	0.103	2.40	1.59	3.58	7.68	0.58	108	0.36	1.1	0.3	0.42	0.34
230260	0.05	1.33	0.14	2.56	22.0	0.066	2.20	1.04	2.23	5.52	0.62	218	0.27	0.9	<0.1	0.47	0.24
230261	0.07	1.58	0.15	2.52	23.9	0.077	2.59	1.18	2.46	6.31	0.67	260	0.36	1.1	< 0.1	0.48	0.25
230262	0.04	0.94	0.12	1.57	125	0.049	1.14	0.685	1.56	3.44	0.44	256	0.20	0.7	< 0.1	0.29	0.20
230263	0.05	2.21	0.12	1.98	90.8	0.064	4.39	1.21	2.27	7.93	0.54	309	0.26	0.9	<0.1	0.40	0.24
230264	0.05	1.23	0.14	2.58	37.7	0.079	1.98	1.24	2.71	6.01	0.67	267	0.48	0.9	<0.1	0.48	0.82
230265	0.06	1.89	0.14	2.98	40.2	0.084	2.85	1.27	2.80	7.00	0.82	199	0.30	1.0	<0.1	0.50	0.28
230266	0.07	3.73	0.16	2.69	53.2	0.074	6.76	1.53	2.80	11.2	0.78	250	0.39	1.1	<0.1	0.47	0.35
230267	0.06	1.70	0.16	3.08	41.4	0.087	2.41	1.40	3.01	6.90	0.78	250	0.27	1.0	< 0.1	0.55	0.32
230268	0.08	2.04	0.17	2.96	59.6	0.095	11.0	2.23	3.51	16.8	0.80	233	0.45	1.1	<0.1	0.55	0.48
230269	0.06	1.40	0.14	2.75	23.0	0.086	1.69	1.27	2.87	5.92	0.70	232	0.30	1.0	< 0.1	0.54	0.36
230270	0.06	1.74	0.13	2.40	25.8	0.110	5.63	1.93	4.62	12.3	0.64	291	0.37	1.0	< 0.1	0.45	0.35
2302/1	0.04	1.85	0.12	1.75	57.6	0.035	1.62	0.674	1.62	3.95	0.48	372	0.30	0.8	< 0.1	0.34	0.30
230272 230271 R	0.07	1.32	0.15	1.68	29.0 57 1	0.093	1.62	0.682	2.01	2 85	0.00	248	0.30	0.7	<0.1	0.40	0.25
2002/11/	0.05	1.70	0.10	1.00	57.1	0.004	1.02	0.002	1.01	0.00	0.44	040	0.20	0.7	-v.1	0.20	0.20



<b>CAT Strategic Metals</b> Attention: Robert Rosn PO #/Project:	s Corp. ner	SRC Geoanalytical Laboratories 2901 Cleveland Avenue, Saskatoon, Saskatchewan, S7K 8A9 Tel: (306) 933-8118 Fax: (306) 933-5656 Email: geolab@src.sk.ca											Repo Date of	ort No: G-2022-2550 Report: Jan 23, 2023			
Samples: 117							Multi-El Ac	ement I ua Regia	CP MS A	Analysis on							
Sample	Ho	Мо	Nb	Nd	Ni	Pb204	Pb206	Pb207	Pb208	PbSUM	Pr	Rb	Sb	Sc	Se	Sm	Sn
Number	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DCB01	0.29	11.3	0.41	18.2	78.7	1.25	30.6	18.5	41.4	91.8	5.62	9.69	0.83	1.7	1.0	3.32	1.38
230273	0.04	1.12	0.20	1.59	36.1	0.044	1.68	0.701	1.45	3.88	0.44	311	0.24	0.8	<0.1	0.28	0.20
230274	0.05	1.11	0.13	1.91	19.7	0.046	1.09	0.740	1.68	3.56	0.54	261	0.29	0.9	0.2	0.37	0.25
230275	0.04	1.11	0.12	1.66	21.6	0.052	1.76	0.735	1.54	4.10	0.45	199	0.19	0.8	< 0.1	0.32	0.20
230276	0.04	1.01	0.11	1.54	23.3	0.052	1.65	0.892	1.90	4.49	0.41	249	0.20	0.8	<0.1	0.28	0.30
230277	0.08	1.80	0.18	3.19	34.3	0.096	4.54	1.66	3.47	9.77	0.92	257	0.39	1.1	0.4	0.62	0.26
230278	0.03	2.00	0.09	1.29	48.7	0.031	2.02	0.654	1.22	3.93	0.36	310	0.31	0.6	<0.1	0.22	0.24
230279	0.04	1.40	0.12	1.83	22.8	0.058	2.68	1.04	2.13	5.91	0.56	171	0.29	0.7	<0.1	0.34	0.25
230280	0.05	1.20	0.10	2.17	12.8	0.073	1.64	1.10	2.45	5.26	0.59	91.6	0.25	0.8	<0.1	0.40	0.24
230281	0.06	1.74	0.13	2.16	79.0	0.084	2.49	1.27	2.76	6.60	0.60	400	0.47	0.8	0.6	0.40	0.49
230282	0.03	1.14	0.10	1.30	26.9	0.043	2.18	0.758	1.44	4.42	0.37	378	0.24	0.6	<0.1	0.26	0.23
230283	0.08	1.39	0.14	2.71	24.8	0.110	2.06	1.49	3.41	7.07	0.74	216	0.47	1.2	<0.1	0.54	0.38
230284	0.04	0.82	0.12	1.53	29.7	0.059	1.30	0.959	2.11	4.43	0.43	209	0.48	0.7	<0.1	0.28	0.31
230285	0.05	1.44	0.09	1.81	51.2	0.073	2.50	1.17	2.40	6.15	0.53	264	0.54	0.7	<0.1	0.32	0.38
230286	0.08	2.12	0.14	3.28	30.6	0.132	3.42	2.04	4.51	10.1	0.89	180	2.68	0.9	<0.1	0.58	1.30
230287	0.07	1.52	0.11	2.68	26.8	0.111	2.91	1.57	3.45	8.04	0.72	142	0.43	0.8	0.3	0.50	0.38
230288	0.06	2.65	0.14	2.15	54.3	0.088	2.05	1.27	2.74	6.14	0.57	285	0.83	0.8	0.1	0.39	0.53
230289	0.04	1.08	0.10	1.53	28.1	0.054	4.76	1.12	1.81	7.75	0.43	204	0.71	0.7	0.7	0.28	1.26
230290	0.07	1.56	0.14	3.03	38.0	0.115	2.94	1.68	3.60	8.34	0.83	178	0.42	1.0	0.9	0.56	0.46
230291	0.06	1.63	0.14	2.35	35.2	0.074	2.53	1.24	2.80	6.65	0.62	254	0.95	0.9	<0.1	0.43	0.61
DCB01	0.31	11.4	0.45	18.4	79.4	1.26	31.0	19.0	42.1	93.4	5.49	9.80	0.84	1.8	1.5	3.45	1.35
230292	0.08	2.07	0.15	2.74	37.4	0.182	9.21	3.26	6.50	19.2	0.75	232	0.42	1.0	<0.1	0.50	0.41
230293	0.07	1.21	0.13	2.68	24.2	0.109	5.65	1.79	3.31	10.8	0.78	206	0.33	0.9	<0.1	0.48	0.54
230294	0.03	1.52	0.10	1.13	40.6	0.045	4.49	0.922	1.47	6.92	0.33	332	0.18	0.5	<0.1	0.20	0.21
230295	0.05	1.44	0.15	2.11	52.8	0.078	2.23	1.16	2.64	6.12	0.56	394	0.31	0.8	<0.1	0.36	0.30
230296	0.05	1.78	0.10	2.10	29.7	0.096	2.38	1.42	3.04	6.94	0.58	192	0.34	0.8	0.8	0.37	0.32
230297	0.04	0.74	0.07	2.63	13.9	0.054	1.06	0.818	1.83	3.76	0.72	111	0.32	0.5	0.8	0.47	0.21
230298	0.04	1.29	0.14	1.53	23.5	0.051	3.02	0.940	1.85	5.85	0.42	187	0.70	0.7	<0.1	0.32	0.21
230299	0.04	1.38	0.13	1.83	28.6	0.071	2.60	1.13	2.37	6.17	0.48	108	0.72	0.7	<0.1	0.35	0.63
230300	0.04	1.30	0.14	1.82	26.4	0.063	3.53	1.17	2.33	7.10	0.47	204	0.31	0.8	<0.1	0.34	0.31
230301	0.05	1.25	0.10	1.88	26.2	0.063	4.30	1.17	2.27	7.80	0.49	239	0.25	0.7	<0.1	0.34	0.20
230302	0.04	1.26	0.10	1.47	39.1	0.058	1.27	0.822	1.86	4.00	0.38	398	0.51	0.6	0.8	0.25	0.72
230303	0.09	2.35	0.17	1.76	46.2	0.223	25.7	4.99	10.4	41.3	0.47	230	1.58	0.9	<0.1	0.42	0.76
230304	0.04	0.77	0.12	1.77	26.0	0.058	1.24	0.865	2.00	4.17	0.47	212	0.23	0.6	1.9	0.33	0.22
230305	0.06	1.09	0.10	2.11	20.4	0.068	2.28	1.06	2.20	5.60	0.56	213	0.21	0.8	1.2	0.40	0.21
230306	0.04	4.47	0.11	1.36	47.9	0.067	6.48	1.46	2.61	10.6	0.39	539	0.22	0.8	<0.1	0.34	0.20
230306 R	0.04	4.41	0.09	1.34	48.6	0.071	6.57	1.46	2.55	10.6	0.37	536	0.20	0.7	<0.1	0.23	0.16



CAT Strategic M	etals Corp.	P. SRC Geoanalytical Laboratories											
Attention: Robert	Rosner	2901 Cleveland Avenue, Saskatoon, Saskatchewan, S7K 8A9											
PO #/Project:					Tel: (30	6) 933-8	118 Fax:	(306) 93	3-5656 E	mail: geo	lab@src.sk.	ca	1
Samples: 117						.,		(200)/20					
-						1	Multi-Ele	ement IC	CP MS A	nalysis			
							Aqu	.a Regia	Digestio	n			
Sample	Та	Tb	Те	Th	U	V	W	Y	Yb	Zn	Zr		
Number	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
DCB01	0.02	0.31	0.13	23.7	123	32.9	3.6	7.04	0.61	124	27.9		
230199	0.03	0.06	< 0.01	1.44	7.35	16.3	0.5	1.77	0.16	2680	0.66		
230200	0.02	0.10	< 0.01	1.08	4.14	18.7	0.4	2.68	0.24	2730	0.17		
230201	0.02	0.06	0.02	0.71	9.45	19.3	0.2	1.61	0.14	3000	0.37		
230202	0.04	0.08	<0.01	0.71	27.8	19.6	0.3	2.02	0.17	4280	0.46		
230203	< 0.01	0.05	< 0.01	0.50	12.2	13.5	0.8	1.35	0.13	2310	0.30		
230204	0.02	0.05	< 0.01	0.55	16.4	16.7	0.2	1.60	0.16	2060	0.26		
230205	0.02	0.04	< 0.01	0.43	11.8	18.1	0.5	1.21	0.11	3130	0.66		
230206	0.02	0.04	< 0.01	0.57	27.7	10.2	0.2	0.90	0.08	1960	1.04		
230207	0.02	0.04	<0.01	0.46	3.58	17.0	0.6	1.28	0.11	2070	0.51		
230208	0.01	0.06	< 0.01	0.65	10.3	17.8	1.3	1.44	0.16	3480	0.89		
230209	0.04	0.05	< 0.01	0.66	7.80	18.7	0.6	1.37	0.14	3220	1.53		
230210	0.04	0.05	< 0.01	0.43	1.48	12.1	0.2	1.40	0.13	2760	0.37		
230211	0.02	0.06	<0.01	0.64	4.32	13.4	0.3	1.70	0.15	2530	0.58		
230212	0.02	0.04	<0.01	0.44	4.18	13.8	0.7	1.08	0.09	2810	0.62		
230213	0.02	0.07	< 0.01	0.70	11.2	17.1	0.5	1.92	0.20	3760	0.24		
230214	0.02	0.09	< 0.01	0.96	2.55	19.4	0.4	2.52	0.23	2550	0.22		
230215	0.03	0.05	< 0.01	0.55	13.0	16.5	0.4	1.80	0.14	2230	1.47		
230216	0.02	0.06	< 0.01	0.56	16.9	19.4	1.0	1.71	0.13	2090	0.56		
230217	0.01	0.02	0.02	0.27	2.64	15.2	0.2	0.93	0.06	2920	0.73		
DCB01	0.02	0.30	0.15	23.1	124	32.7	3.7	7.19	0.62	127	29.0		
230218	0.04	0.06	0.03	1.44	7.03	14.4	0.5	1.88	0.15	3430	0.74		
230219	0.04	0.07	< 0.01	0.78	24.0	16.6	0.5	1.74	0.14	2920	1.00		
230220	0.03	0.08	<0.01	0.90	3.79	21.8	0.4	2.34	0.22	1840	0.36		
230221	0.05	0.14	<0.01	1.40	17.6	22.4	1.0	2.65	0.21	2710	1.22		
230222	0.02	0.05	<0.01	0.49	2.45	12.2	0.5	1.42	0.12	3290	0.43		
230223	0.02	0.06	< 0.01	0.71	3.84	16.3	0.5	1.86	0.18	2340	1.25		
230224	0.01	0.03	<0.01	0.37	5.57	18.1	0.2	0.84	0.09	1980	0.83		
230225	0.02	0.04	< 0.01	0.39	5.10	16.3	0.2	0.89	0.09	3050	0.88		
230226	0.03	0.07	<0.01	0.71	8.96	18.5	0.4	1.89	0.17	3270	0.50		
230227	0.03	0.09	< 0.01	0.95	15.8	21.4	1.2	2.52	0.24	1990	0.50		
230228	0.01	0.11	<0.01	1.20	2.10	20.6	0.4	3.12	0.26	1820	0.16		
230229	0.05	0.09	<0.01	0.88	7.33	17.8	0.5	2.32	0.18	2650	1.06		
230230	0.02	0.08	0.01	0.78	5.59	18.7	0.3	2.20	0.17	2310	0.70		
230231	0.01	80.0	<0.01	0.87	18.8	16.7	0.3	2.09	0.19	2350	0.21		
230232	0.04	0.11	<0.01	1.09	4.03	23.1	0.4	3.05	0.24	3200	0.39		
230233	0.01	0.09	<0.01	0.84	1.57	20.0	0.3	2.21	0.21	2960	0.41		
230234	0.01	0.06	< 0.01	0.73	1.73	14.2	0.3	1.96	0.18	2950	0.38		
230235	0.03	0.10	< 0.01	1.15	4.27	21.0	0.6	2.79	0.25	1630	0.40		
230233 R	0.02	0.07	<0.01	0.82	1.53	19.3	0.3	2.17	0.18	3020	0.39		

Report No: G-2022-2550

Date of Report: Jan 23, 2023

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CAT Strategic Met	als Corp.			SR	C Geoa	nalvtic	al Labo	oratorie	S			
Attention: Robert Ro	osner				2001	Clevelan	d Avenue	Sackat	on Sach	atchewa	S7K 840	)
PO #/Project:					Tal: (20	6) 022 81	118 Eax	(206) 022	5656 E	mail: gao	leb@ere.ek	
Samples: 117					Tel: (30	0) 955-8	116 Fax:	(300) 933	5-3030 E	man: geo	lab@src.sk	ca
Samples. 117						T.	Multi-Ele	ment IC	P MS A	nalvsis		
						1	Aai	a Regia	Digestion	n		
<u> </u>	-	-	-					u regu	Digeotion	-	-	
Sample	la	dl	le	In	U	V	VV	Y	YD	Zn	∠r	
Number	ppm	ppm	ppm	ppm	ppm	ppm	ррт	ppm	ppm	ppm	ppm	
DCB01	0.01	0.31	0.16	22.5	120	33.3	3.6	7.04	0.62	127	30.8	
230236	0.02	0.08	0.01	1.32	6.80	14.1	0.4	2.22	0.19	1980	0.78	
230237	0.01	0.09	<0.01	1.08	3.96	17.2	0.4	2.66	0.22	1880	0.37	
230238	0.02	0.08	0.02	0.79	20.0	14.0	0.4	1.95	0.18	2600	0.39	
230239	0.02	0.07	<0.01	0.66	15.4	12.7	0.5	1.54	0.13	2800	1.72	
230240	0.02	0.08	<0.01	0.60	36.1	11.5	0.4	1.60	0.14	3350	1 01	
230240	0.02	0.00	0.03	0.00	105	12.0	0.4	2.48	0.14	2600	4.36	
230242	0.03	0.05	0.00	0.55	8.05	13.9	0.4	1 28	0.10	2500	0.80	
230242	0.00	0.00	0.00	0.60	7.61	14.4	0.4	2.12	0.19	3090	0.36	
230244	0.02	0.00	0.04	0.43	6.41	9.6	0.0	1 32	0.10	2410	0.65	
230244	0.01	0.00	0.00	0.45	0.41	5.0	0.5	1.52	0.11	2410	0.00	
230245	0.01	0.04	< 0.01	0.43	29.4	9.3	0.2	1.35	0.11	2720	1.23	
230246	0.01	0.04	0.04	0.34	15.8	8.3	0.2	1.08	0.10	2200	0.28	
230247	< 0.01	0.05	0.04	0.37	3.76	8.3	0.2	1.37	0.10	3250	0.29	
230248	0.01	0.04	0.03	0.37	8.32	10.6	0.3	1.14	0.10	4000	1.08	
230249	0.02	0.16	<0.01	0.96	6.77	14.0	0.3	2.62	0.22	2780	1.35	
220250	0.02	0.09	<0.01	0.60	17 7	127	0.0	2.27	0.10	2260	1.67	
230250	<0.02	0.06	<0.01	0.09	5.54	0.7	0.0	2.37	0.19	2200	1.07	
230251	~0.01	0.04	0.07	0.55	25.6	12.6	0.5	1 75	0.00	2200	1.09	
230232	0.02	0.00	0.07	0.50	20.0	11.0	0.2	1.75	0.13	2040	0.50	
230233	-0.01	0.05	0.04	0.44	9.04	9.5	0.2	1.45	0.13	2020	0.59	
230234	-0.01	0.04	0.05	0.55	0.94	0.0	0.4	1.20	0.11	3100	2.00	
DCB01	< 0.01	0.30	0.15	23.3	121	32.9	3.5	7.03	0.62	125	29.1	
230255	0.02	0.07	< 0.01	1.45	25.0	13.2	0.8	2.03	0.16	3000	3.03	
230256	0.01	0.05	< 0.01	0.62	5.94	10.9	0.4	1.65	0.12	3480	0.45	
230257	0.01	0.04	< 0.01	0.48	25.0	9.4	0.4	1.40	0.11	2460	0.26	
230258	<0.01	0.04	0.03	0.33	23.4	8.4	0.5	1.98	0.10	2820	1.77	
220250	-0.01	0.04	<0.01	0.40	7 09	11 /	0.2	1 4 2	0.12	2120	0.20	
230235	-0.01	0.04	0.01	0.49	14.2	10.0	0.5	1.42	0.12	2720	0.30	
230260	0.01	0.05	<0.01	0.44	5 22	12.9	0.2	1.50	0.10	2220	0.29	
230201	<0.01	0.03	0.06	0.52	2 72	0.4	0.2	0.00	0.12	2000	4.40	
230262	0.01	0.03	0.08	0.38	23.9	9.4 10.0	0.2	1.24	0.08	3200	5.77	
230264	<0.01	0.05	0.08	0.50	7.28	11.1	0.4	1.63	0.12	4000	1.15	
230265	0.01	0.06	<0.01	0.50	12.7	13.6	0.3	1.87	0.15	3410	2.48	
230266	<0.01	0.06	<0.01	0.57	52.0	14.1	0.4	1.76	0.15	2330	0.24	
230267	0.02	0.06	0.02	0.57	5.07	13.6	0.3	1.80	0.14	2860	0.49	
230268	0.02	0.07	<0.01	0.62	83.3	13.2	1.0	2.07	0.16	2430	0.94	
230269	0.01	0.06	0.03	0.55	6.92	13.2	0.2	1.75	0.14	4740	0.36	
230270	<0.01	0.04	< 0.01	0.50	11.6	11.2	0.6	1.39	0.12	2960	0.67	
230271	<0.01	0.04	< 0.01	0.37	7.96	9.9	0.4	1.06	0.08	2760	4.81	
230272	<0.01	0.06	0.05	0.56	8,80	13.0	0.2	1.73	0.15	4640	1.41	
230271 R	< 0.01	0.05	< 0.01	0.37	7.87	9.7	0.3	1.09	0.08	2740	4.77	

Report No: G-2022-2550

Date of Report: Jan 23, 2023

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CAT Strategic M Attention: Robert PO #/Project:	<b>Metals Corp.</b> t Rosner				2901 Tel: (30	SR Clevelar	3	Report No: G-2022-25: Date of Report: Jan 23, 20							
Samples: 117					101. (50	.0) 755-0	1101ux.	(500) 55			nuowsie.sk.et			Dute of Repo	n. 5an 25, 2025
						1	Multi-Ele	ement IC	CP MS A	nalysis					
	_		_				Aq	ua Regia	Digestio	n	_				
Sample	Та	Tb	Te	Th	U	V	W	Y	Yb	Zn	Zr				
Number	ppin	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm				
DCB01	< 0.01	0.29	0.18	20.5	122	31.7	3.5	6.96	0.58	125	30.1				
230273	0.01	0.03	0.02	0.72	2.40	1.1	0.4	1.22	0.08	1940	1.47				
230274	0.01	0.04	~0.01	0.44	10.6	10.5	0.2	1.32	0.10	2050	1.96				
230275	<0.01	0.04	0.02	0.35	10.3	9.8	0.2	1.03	0.09	3880	0.88				
230277	< 0.01	0.07	< 0.01	0.69	26.8	14.3	2.0	1.86	0.17	4110	0.74				
230278	< 0.01	0.03	0.07	0.30	8.55	8.3	0.9	0.76	0.06	2760	1.95				
230279	0.01	0.04	0.02	0.41	20.2	9.6	0.9	1.00	0.08	2770	1.15				
230280	0.01	0.05	0.04	0.55	4.80	8.9	0.3	1.35	0.12	1700	0.83				
230281	<0.01	0.04	<0.01	0.43	11.9	9.3	1.2	1.52	0.11	1870	2.39				
230282	<0.01	0.04	0.02	0.34	24.6	8.2	0.6	0.89	0.08	3020	1.09				
230283	0.01	0.06	0.02	0.68	4.37	14.0	0.4	1.87	0.15	3590	0.46				
230284	< 0.01	0.03	0.03	0.39	4.49	8.6	0.2	0.94	0.10	2920	2.37				
230285	0.01	0.04	0.03	0.42	15.3	9.0	0.2	1.32	0.09	3860	6.24				
230286	<0.01	0.07	<0.01	0.60	11.5	12.3	0.6	2.10	0.18	3450	1.30				
230287	0.01	0.06	0.04	0.53	19.5	12.0	0.6	1.65	0.13	3500	1 15				
230288	0.01	0.00	<0.04	0.82	7 50	9.9	1.4	1.00	0.10	3950	2.22				
230289	<0.01	0.04	0.02	0.31	37.1	6.8	0.8	0.98	0.12	2930	0.68				
230290	<0.01	0.06	0.02	0.71	13.2	10.8	0.6	1.84	0.16	3380	0.99				
230291	0.01	0.05	0.03	0.46	12.6	11.6	0.4	1.47	0.15	2560	0.67				
DCB01	< 0.01	0.30	0.18	20.4	123	32.2	3.6	6.95	0.61	123	30.9				
230292	< 0.01	0.08	<0.01	1.83	113	14.1	0.7	1.97	0.14	2520	8.14				
230293	< 0.01	0.07	0.05	0.65	46.1	11.0	0.4	1.86	0.16	2610	1.24				
230294	< 0.01	0.03	0.05	0.24	43.9	7.6	0.2	0.76	0.06	3590	2.72				
230295	0.01	0.05	0.05	0.43	25.9	9.8	0.5	1.43	0.10	3220	7.83				
230296	<0.01	0.05	0.02	0.46	10.1	9.4	0.4	1.42	0.11	2510	0.76				
230297	< 0.01	0.04	< 0.01	0.43	2.36	5.7	0.2	0.99	0.08	1220	0.55				
230298	0.01	0.04	0.04	0.43	16.4	10.5	0.3	0.88	0.09	2720	3.86				
230299	< 0.01	0.04	0.04	0.43	16.8	9.0	0.5	1.00	0.08	2100	1.72				
230300	<0.01	0.04	<0.01	0.40	26.0	11.6	0.2	1.02	0.10	3000	2.34				
230301	<0.01	0.04	<0.01	0.40	32.2	8.8	0.8	1 16	0.08	1650	0.50				
230301	<0.01	0.04	<0.01	0.40	4 76	6.7	0.0	0.05	0.00	2050	3.00				
230302	~0.01	0.03	0.01	0.32	144	15.4	0.4	1.91	0.07	2900	8.29				
230304	<0.01	0.03	<0.01	0.58	2.66	9.1	0.4	1.16	0.12	1700	0.62				
230305	<0.01	0.05	0.03	0.44	13.7	8.0	0.4	1.36	0.12	2980	0.32				
200000	-0.01	0.00	0.00	0.44	10.1	0.0	0.4	1.00	0.12	2000	5.02				
230306	0.01	0.04	<0.01	0.30	52.6	8.8	0.7	1.00	0.09	2290	0.64				
230306 R	0.01	0.04	0.05	0.28	52.9	8.6	0.6	0.95	0.09	2270	0.62				

Aqua Regia: A 0.5 g pulp is digested with 2.00 ml of 3:1 ultrapure HCL:HNO3 for 1 hour at 95 C. The standard is DCB01.

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## SRC Geoanalytical Laboratories

2901 Cleveland Avenue, Saskatoon, Saskatchewan, S7K 8A9 Tel: (306) 933-8118 Fax: (306) 933-5656 Email: geolab@src.sk.ca

> Multi-Element ICP Analysis Aqua Regia Digestion

Report No: G-2022-2550

Date of Report: Jan 23, 2023

#### Column Header Details

CAT Strategic Metals Corp.

Attention: Robert Rosner

PO #/Project:

Samples: 117

Aluminum in wt % (Al2O3) Arsenic in ppm (As) Barium in ppm (Ba) Calcium in wt % (CaO) Cerium in ppm (Ce)

Chromium in ppm (Cr) Iron in wt % (Fe2O3) Potassium in wt % (K2O) Lanthanum in ppm (La) Lithium in ppm (Li)

Magnesium in wt % (MgO) Manganese in wt % (MnO) Sodium in wt % (Na2O) Phosphorus in wt % (P2O5) Sulfur in ppm (S)

Strontium in ppm (Sr) Titanium in wt % (TiO2)

i itailialli ili	wt /0 (1102)		_												_	-	
Sample	AI2O3	As	Ba	CaO	Ce	Cr	Fe2O3	K2O	La	Li	MgO	MnO	Na2O	P2O5	S	Sr	TiO2
Number	wt %	ppm	ppm	wt %	ppm	ppm	wt %	wt %	ppm	ppm	wt %	wt %	wt %	wt %	ppm	ppm	wt %
DCB01	1.39	33	91	1.12	47.1	178	2.67	0.292	24	10	1.10	0.029	0.05	0.145	4110	88	0.069
230199	1.04	21	1090	41.3	1.10	29	0.83	10.4	<1	6	6.44	3.29	0.87	6.76	4770	308	0.006
230200	2.06	15	755	40.3	2.83	36	1.32	7.68	2	7	5.34	3.50	0.21	4.64	4570	207	0.013
230201	3.13	12	849	32.5	3.16	27	0.68	16.0	1	8	8.27	1.58	0.50	9.23	9400	502	0.009
230202	1.30	9	4210	31.7	<1	28	0.81	13.9	2	6	6.49	3.86	1.96	9.08	6200	628	0.010
230203	1.27	5	1290	44.0	<1	34	0.74	7.39	<1	4	6.35	3.36	0.16	5.32	3570	439	0.002
230204	1.08	9	3510	42.6	2.97	31	0.69	7.33	1	8	7.76	1.64	0.74	7.01	4750	660	0.002
230205	1.02	14	4180	38.8	<1	31	0.66	10.9	<1	5	5.81	3.07	0.19	9.19	5910	581	0.002
230206	1.06	12	2420	30.4	<1	25	0.31	11.6	1	4	4.35	3.97	0.84	6.00	4720	412	0.006
230207	0.88	2	3040	42.3	<1	29	0.57	7.99	<1	6	5.46	5.39	0.81	7.14	5190	435	<0.002
230208	1.34	11	1220	34.8	<1	32	0.72	11.4	<1	7	6.06	4.72	0.31	8.64	6160	294	0.008
230209	1.40	1	1540	34.6	<1	39	0.75	12.4	<1	7	6.55	3.85	1.24	9.30	6590	510	0.022
230210	3.76	8	1110	30.4	<1	28	0.72	19.3	1	5	7.53	2.64	0.18	11.8	9140	455	0.004
230211	4.56	<1	1140	43.2	2.57	31	0.83	11.1	2	4	5.56	1.89	0.12	6.67	5540	601	0.002
230212	2.69	8	1070	30.8	1.48	30	0.56	16.6	<1	7	9.49	1.17	0.24	13.4	9730	555	0.004
230213	1.41	6	1820	43.1	<1	34	0.84	8.59	<1	5	5.38	3.07	0.25	6.05	5240	349	0.005
230214	1.39	7	864	44.1	3.73	39	1.07	7.28	2	6	4.43	2.83	0.18	5.74	4510	307	0.009
230215	1.09	10	1470	40.1	<1	47	0.69	12.0	<1	5	6.17	2.95	0.28	6.32	4960	349	0.007
230216	0.80	8	1090	37.8	<1	31	0.66	13.8	<1	5	4.31	2.62	0.30	7.09	4370	910	0.005
230217	0.58	11	1490	42.0	<1	32	0.36	12.8	<1	4	6.80	2.92	0.24	6.17	5210	372	< 0.002

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CAT Strategic Meta Attention: Robert Ro	als Corp.		SRC Geoanalytical Laboratories 2901 Cleveland Avenue, Saskatoon, Saskatchewan, S7K 8A9														Report No: G-2022-2550		
PO #/Project: Samples: 117			Tel: (306) 933-8118 Fax: (306) 933-5656 Email: geolab@src.sk.ca														Date of Report: Jan 23, 2023		
Samples. 117							Multi- Aq	Element ua Regia	ICP Ana Digestior	lysis 1									
Sample Number	AI2O3 wt %	As ppm	Ba ppm	CaO wt %	Ce ppm	Cr ppm	Fe2O3 wt %	K2O wt %	La ppm	Li ppm	MgO wt %	MnO wt %	Na2O wt %	P2O5 wt %	S ppm	Sr ppm	TiO2 wt %		
DCB01	1.41	34	92	1.11	47.5	178	2.74	0.294	24	10	1.11	0.029	0.05	0.144	4170	87	0.070		
230210	1.25	15	3120	37.4	<1	34 /1	0.00	12.0	<1	5	5.98	2.69	0.95	0.12	4730	017	0.010		
230220	1.80	14	3870	36.2	<1	34	1.14	8.58	2	10	6.50	4.61	0.43	6.81	5090	1220	0.018		
230221	4.22	4	3190	37.0	1.92	34	0.50	12.3	2	6	5.72	3.23	1.00	8.11	5900	620	0.041		
230222	2.24	5	1430	41.1	<1	36	0.64	11.4	<1	5	5.47	2.13	0.28	8.60	7140	523	0.002		
230223	5.15	10	699	32.7	2.26	31	1.13	12.4	2	6	7.31	2.66	0.21	9.39	8760	550	0.013		
230224	0.79	2	4420	38.3	<1	33	0.51	13.6	<1	5	5.65	3.55	0.28	10.1	5830	777	<0.002		
230225	0.96	18	2410	32.6	<1	32	0.54	14.0	1	6	5.77	5.04	1.15	9.18	5390	377	0.005		
230226	1.31	/	1110	40.5	4.28	34	0.87	10.7	4	6	6.57	3.49	0.23	6.86	6020	381	0.010		
230227	1.77	4	1150	37.4	3.73	35	1.18	10.9	2	8	5.57	2.88	0.56	6.03	5160	473	0.017		
230228	1.94	5	521	41.6	6.63	33	1.38	6.36	3	6	4.09	1.81	0.19	3.99	5170	162	0.016		
230229	1.95	10	1250	34.2	<1	36	0.75	13.6	1	6	6.56	5.14	2.62	7.12	6010	257	0.028		
230230	1.42	10	488	40.0	1.01	32	0.78	11.0	1	6	5.85	3.41	0.45	4.62	5260	154	0.011		
230231	1.52	10	909	43.5	1.50	33	0.91	7.30	2	0	4.03	3.01	0.20	3.00	4900	420	0.010		
230232	1.72	8	829	34.5	2.05	45	1.29	12.1	4	8	7.38	5.39	0.26	5.27	6380	309	0.015		
230233	1.34	12	1430	37.6	<1	33	0.87	8.74	<1	6	6.53	5.95	0.21	4.37	5080	580	0.010		
230234	1.23	12	909	40.9	<1	33	0.95	9.47	3	6	5.56	5.58	0.17	4.83	4390	227	0.005		
230235 230233 P	1.63	11	1480	30.8	1.52	32	1.20	10.4	2	8	4.08	4.95	0.17	4.69	5320 5010	207	0.013		
230233 R	1.31	15	1400	36.0		31	0.00	0.90		0	0.01	0.12	0.20	4.30	5010	362	0.005		
DCB01	1.36	32	98	1.11	49.7	183	2.76	0.298	23	10	1.12	0.030	0.05	0.145	3990	85	0.067		
230236	1.47	13	829	33.7	<1	31	0.99	12.8	2	7	4.64	5.62	0.46	4.46	5790	461	0.018		
230237	1.75	12	773	39.7	4.61	34	1.33	7.56	4	6	5.18	3.23	0.16	3.64	4790	236	0.012		
230230	1.30	10	3200	33.1	40.0	31	0.90	13.0	41	5	7.40	3.34 2.19	0.41	0.47	4440	Z/0 512	0.013		
230233	1.03	10	5200	50.7	2.00	51	0.02	15.5		0	4.55	2.10	0.00	7.50	4440	512	0.015		
230240	2.26	<1	1420	44.2	<1	32	0.58	9.51	<1	5	5.19	3.00	0.91	5.56	4250	272	0.011		
230241	2.75	<1	756	38.2	3.71	31	0.59	11.3	<1	5	5.55	1.20	0.34	7.45	5500	428	0.004		
230242	2.53	1	698	28.3	1.40	40	0.46	20.6	<1	5	8.03	1.71	0.96	10.2	9870	428	0.017		
230243	4.31	<1	972	32.0 28.6	2.31	26	0.74	22.8	-1	11	7.62	1.73	0.37	0.10	7760	567	0.010		
230244	5.72		005	20.0	2.40	20	0.70	22.0			7.02	1.00	0.57	14.1	7700	507	0.000		
230245	3.76	<1	738	31.0	2.31	27	1.08	20.3	<1	10	7.58	1.33	0.19	12.0	7580	516	0.005		
230246	2.65	<1	503	34.1	1.77	29	0.56	19.7	<1	10	7.69	1.19	0.28	12.1	8170	715	0.004		
230247	3.35	<1	382	40.7	2.32	29	0.56	15.6	1	4	7.13	1.50	0.28	9.10	5300	775	< 0.002		
230248	2.88	14 <1	595	34.2	5.84	28	0.71	12.0	<1	6 11	7.30	1.60	0.26	12.2	8200	509 631	0.004		
200240	7.04	- 1	000	51.5	0.04	51	0.00	12.0	2		0.00	1.07	0.70	10.1	0000	001	0.020		
230250	4.88	3	1760	31.2	4.02	35	0.85	15.4	2	6	8.58	2.15	0.36	8.24	7140	684	0.013		
230251	3.58	<1	1530	29.1	<1	27	0.53	22.2	<1	12	8.77	2.40	0.30	14.6	7300	576	0.003		
230252	3.88	2	1490	28.5	2.24	34	0.63	18.5	<1	10	9.54	2.18	0.51	11.0	7100	566	0.008		
230254	3.92	4	1320	38.0	1.42	30	0.56	12.5	<1	5	6.34	1.95	0.18	9.81	8220	536	<0.002		

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CAT Strategic Met	als Corp.		SRC Geoanalytical Laboratories 2901 Cleveland Avenue, Saskatoon, Saskatchewan, S7K 8A9														Report No: G-2022-2550		
PO #/Project: Samples: 117	, sher		Tel: (306) 933-8118 Fax: (306) 933-5656 Email: geolab@src.sk.ca														Date of Report: Jan 23, 2023		
Samples. 117							Multi- Aq	Element ua Regia	ICP Ana Digestion	lysis 1									
Sample Number	Al2O3 wt %	As ppm	Ba ppm	CaO wt %	Ce ppm	Cr ppm	Fe2O3 wt %	K2O wt %	La	Li ppm	MgO wt %	MnO wt %	Na2O wt %	P2O5 wt %	S ppm	Sr ppm	TiO2 wt %		
DCB01	1.37	31	97	1.12	48.0	182	2.75	0.302	23	10	1.12	0.030	0.05	0.148	4030	86	0.068		
230255	3.08	5	1830	37.5	1.30	30	0.77	11.7	<1	5	5.87	3.09	0.24	8.94	7500	548	0.005		
230256	3.72	<1	1280	33.7	2.98	29	0.72	10.4	<1	9	4.73	1.72	0.16	8.47	4370	710	0.008		
230257	2.98	3	875	32.0	1.66	30	0.62	16.4	1	6	5.66	1.96	0.21	12.0	4900	657	0.005		
230258	0.98	<1	3280	34.3	<1	32	0.38	19.4	<1	3	5.52	2.91	0.35	11.5	6310	517	0.002		
230259	1.73	3	1310	46.5	<1	37	0.70	7.50	<1	6	3.74	2.37	0.27	5.26	2560	563	0.004		
230260	3.37	<1	1530	34.6	4.64	31	0.56	14.5	1	12	7.95	1.43	0.40	10.4	7580	656	0.003		
230261	2.14	<1	1110	35.8	2.44	34	0.64	16.4	<1	9	7.03	1.65	0.37	9.56	6860	363	0.006		
230262	6.14	<1	1970	25.6	2.48	22	0.57	18.7	<1	7	7.98	0.729	0.12	11.2	7910	530	0.002		
230263	5.24	<1	799	25.6	2.12	27	0.66	16.7	<1	5	10.6	1.43	0.29	15.2	8450	451	0.004		
230264	2.12	<1	2170	29.4	8.16	24	0.61	18.4	4	6	7.63	1.52	0.42	12.5	7560	671	0.006		
230265	2.45	1	1390	38.1	3.38	32	0.68	13.9	<1	8	5.65	2.15	0.22	8.96	6610	637	0.005		
230266	3.33	3	1970	29.8	4.11	31	0.73	16.2	<1	10	8.64	1.56	0.41	13.9	9010	538	0.010		
230267	2.36	11	2130	35.9	4.33	29	0.82	13.0	<1	6	6.42	1.63	0.24	9.94	8300	664	0.008		
230268	3.09	<1	1530	28.5	3.46	29	0.82	16.1	<1	10	8.20	1.80	0.28	12.4	7700	729	0.010		
230269	2.51	<1	1860	32.2	1.96	26	0.79	15.8	<1	5	8.05	2.35	0.22	12.1	7160	603	0.006		
230270	3.14	<1	1680	31.3	2.63	26	0.67	15.5	<1	9	7.37	1.89	0.27	11.8	5740	458	0.005		
230271	3.48	<1	850	27.1	1.21	29	0.59	15.3	<1	10	8.64	1.54	0.22	14.3	6890	418	0.003		
230272	2.71	<1	1510	36.8	3.05	28	0.69	12.6	<1	17	7.12	1.38	0.38	10.8	7620	566	0.004		
230271 R	3.41	<1	855	27.7	1.19	24	0.51	15.4	<1	9	8.17	1.58	0.18	14.3	6830	420	<0.002		
DCB01	1.35	33	92	1.13	45.6	184	2.79	0.301	22	10	1.12	0.030	0.05	0.148	3930	79	0.068		
230273	2.99	<1	832	29.8	1.62	33	0.50	24.3	<1	4	8.20	0.970	1.53	13.5	8420	577	0.006		
230274	3.22	<1	1910	30.3	1.53	25	0.62	21.0	<1	4	7.13	1.65	0.47	12.9	8530	806	0.004		
230275	3.36	<1	627	38.2	1.58	38	0.52	14.7	<1	3	6.72	1.33	0.35	8.73	6090	425	<0.002		
230276	2.62	<1	1260	33.6	<1	26	0.45	17.9	<1	4	8.83	2.21	0.25	10.4	8050	457	<0.002		
230277	2.73	<1	1910	32.8	3.54	28	0.67	16.0	<1	10	7.62	2.28	0.50	12.2	7300	520	0.013		
230278	2.00	3	1380	32.0	<1	26	0.41	18.0	<1	17	8.33	1.62	0.64	13.4	7330	464	<0.002		
230279	0.67	<1	2480	38.2	<1	30	0.51	16.6	<1	3	5.05	2.75	0.26	6.53	4490	348	0.003		
230280	0.80	6	1080	36.0	<1	24	0.58	10.4	<1	3	2.84	2.90	0.18	4.17	3590	188	0.003		
230281	5.39	<1	971	33.8	3.53	27	0.70	16.0	1	10	7.58	1.19	0.15	12.9	9860	690	0.003		
230282	3.01	<1	675	31.2	<1	29	0.48	20.6	<1	5	10.9	2.00	0.68	12.9	7270	375	<0.002		
230283	3.34	11	1150	31.4	2.45	28	0.83	17.2	<1	6	9.98	2.16	0.20	8.71	8630	514	0.009		
230284	1.99	1	648	25.4	1.51	21	0.58	13.4	<1	3	6.68	0.984	0.12	10.1	6000	337	0.002		
230285	4.24	<1	2800	33.0	<1	25	0.65	14.6	<1	4	7.70	2.02	0.16	11.1	7250	658	<0.002		
230286	3.91	<1	2350	38.5	5.46	28	0.78	12.3	4	4	5.22	1.86	0.25	8.03	6800	704	0.004		
230287	3.49	8	2450	39.1	2.68	30	0.71	10.3	<1	3	6.34	2.00	0.16	6.76	7330	702	<0.002		
230288	4.86	7	867	31.6	1.37	27	0.64	16.4	<1	6	7.77	2.13	0.21	13.6	9160	340	0.004		
230289	2.79	3	1240	37.7	1.93	28	0.47	18.8	<1	6	7.43	1.39	0.17	10.6	5930	599	<0.002		
230290	4.91	15	765	38.5	3.94	33	0.90	11.6	2	8	6.09	1.95	0.16	8.76	7130	713	0.005		
230291	3.12	<1	1740	31.0	1.68	31	0.61	16.8	<1	8	9.97	1.91	0.19	12.9	10800	591	0.004		



CAT Strategic Meta Attention: Robert Ro PO #/Project:	als Corp.		SRC Geoanalytical Laboratories 2901 Cleveland Avenue, Saskatoon, Saskatchewan, S7K 8A9 Tel: (306) 933-8118 Fax: (306) 933-5656 Email: geolab@src.sk.ca															Report No: G-2022-2550 Date of Report: Jan 23, 2023		
Samples: 117			Multi-Element ICP Analysis Aqua Regia Digestion														T.			
Sample	AI2O3	As	Ba	CaO	Ce	Cr	Fe2O3	K2O	La	Li	MgO	MnO	Na2O	P2O5	S	Sr	TiO2			
Number	wt %	ppm	ppm	wt %	ppm	ppm	wt %	wt %	ppm	ppm	wt %	wt %	wt %	wt %	ppm	ppm	wt %			
DCB01	1.35	31	92	1.14	44.5	183	2.79	0.300	22	10	1.12	0.030	0.05	0.152	3920	78	0.069			
230292	4.73	8	1160	37.1	4.05	30	0.64	10.8	<1	6	7.59	1.53	0.16	7.18	8990	718	0.003			
230293	4.56	7	2070	38.2	4.12	28	0.69	13.0	1	4	6.75	1.27	0.14	9.38	7870	895	<0.002			
230294	3.92	<1	876	35.1	<1	26	0.41	18.9	<1	5	8.58	1.92	0.08	12.8	9300	448	<0.002			
230295	2.49	<1	1860	32.3	1.04	28	0.60	16.7	<1	10	8.19	2.29	0.17	14.3	6680	631	0.002			
230296	3.29	7	2870	42.5	<1	33	0.58	10.2	<1	4	6.35	2.14	0.17	7.70	5310	756	<0.002			
230297	3.77	6	390	35.4	5.82	22	0.44	7.87	3	4	4.53	0.971	0.11	4.19	3440	531	<0.002			
230298	0.74	<1	5460	42.0	<1	28	0.43	11.8	<1	5	6.10	2.42	0.45	6.35	4790	489	0.002			
230299	0.91	14	2100	48.5	<1	32	0.45	7.30	<1	3	4.98	2.60	0.27	5.12	4350	462	<0.002			
230300	0.91	<1	4220	40.6	<1	29	0.54	11.9	<1	5	4.56	2.65	0.42	7.83	4470	607	0.004			
230301 230302 230303 230304 230305	2.37 2.92 0.76 1.96 3.69	<1 <1 36 3 3	951 961 3620 2210 845	31.5 30.8 41.4 45.1 43.6	2.13 1.27 <1 2.03 <1	25 26 26 27 29	0.53 0.53 0.43 0.56 0.63	20.0 18.8 10.3 12.4 11.9	<1 <1 <1 <1	9 10 5 5 8	8.86 8.77 5.30 4.48 5.88	1.05 1.51 1.91 1.04 2.24	0.13 0.16 0.41 0.13 0.24	12.0 14.5 7.64 7.34 8.13	7720 6820 6330 6390 4640	512 427 707 561 558	0.004 <0.002 <0.002 <0.002 <0.002			
230306	2.01	8	1790	26.6	<1	25	0.47	21.4	<1	18	8.69	1.91	0.24	14.9	12700	534	0.004			
230306 R	2.02	8	1810	26.8	<1	24	0.45	21.1	<1	19	8.70	1.90	0.13	15.7	12800	539	0.003			

Aqua Regia: A 0.5 g pulp is digested with 2.00 ml of 3:1 ultrapure HCL:HNO3 for 1 hour at 95 C. The standard is DCB01.

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CAT Strategic Metals Corp. South Preston Project 4 April, 2023



## BEDROCK SAMPLES

Appendix 2 - 17

CAT Strategic Metals Corp. South Preston Project 4 April, 2023



#### SRC Geoanalytical Laboratories

2901 Cleveland Avenue, Saskatoon, Saskatchewan, S7K 8A9 Tel: (306) 933-8118 Fax: (306) 933-5656 Email: geolab@src.sk.ca

**ICP MS Partial Digestion** 

Report No: G-2022-2213

Date of Report: Nov 03, 2022

#### Column Header Details

Silver in ppm (Ag) Arsenic in ppm (As) Beryllium in ppm (Be) Bismuth in ppm (Bi) Cadmium in ppm (Cd)

CAT Strategic Metals Corp.

Attention: Robert Rosner

PO #/Project:

Samples: 64

Cobalt in ppm (Co) Cesium in ppm (Cs) Copper in ppm (Cu) Dysprosium in ppm (Dy) Erbium in ppm (Er)

Europium in ppm (Eu) Gallium in ppm (Ga) Gadolinium in ppm (Gd) Germanium in ppm (Ge) Hafnium in ppm (Hf)

Mercury in ppm (Hg) Holmium in ppm (Ho) Molybdenum in ppm (Mo) Niobium in ppm (Nb) Neodymium in ppm (Nd)

Nickel in ppm (Ni) Lead204 in ppm (Pb204) Lead206 in ppm (Pb206) Lead207 in ppm (Pb207) Lead208 in ppm (Pb208)

Lead in ppm (PbSUM) Praseodymium in ppm (Pr) Rubidium in ppm (Rb) Antimony in ppm (Sb) Scandium in ppm (Sc)

Selenium in ppm (Se) Samarium in ppm (Sm) Tin in ppm (Sn) Tantalum in ppm (Ta) Terbium in ppm (Tb)

Page 1 of 8



### CAT Strategic Metals Corp.

Attention: Robert Rosner PO #/Project: Samples: 64

#### SRC Geoanalytical Laboratories

2901 Cleveland Avenue, Saskatoon, Saskatchewan, S7K 8A9 Tel: (306) 933-8118 Fax: (306) 933-5656 Email: geolab@src.sk.ca

**ICP MS Partial Digestion** 

Report No: G-2022-2213

Date of Report: Nov 03, 2022

Tellurium in ppm (Te) Thorium in ppm (Th) Uranium in ppm (U) Vanadium in ppm (V) Tungsten in ppm (W)

Yttrium in ppm (Y) Ytterbium in ppm (Yb) Zinc in ppm (Zn) Zirconium in ppm (Zr)

Page 2 of 8



CAT Strategic Meta	als Corp.		SRC Geoanalytical Laboratories 2901 Cleveland Avenue, Saskatoon, Saskatchewan, S7K 8A9														Report No: G-2022-2213		
PO #/Project: Samples: 64	Sher				Tel: (30	6) 933-8	118 Fax:	(306) 933	3-5656 E	mail: geo	lab@src.	sk.ca				Date of Report: Nov 03			
Samples. 04							ICP N	AS Parti	al Digest	ion									
Sample	Ag	As	Be	Bi	Cd	Co	Cs	Cu	Dy	Er	Eu	Ga	Gd	Ge	Hf	Hg	Но		
Number	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
DCB01	2.27	27.0	0.47	6.64	0.47	14.7	0.43	273	1.66	0.82	0.52	2.06	2.36	< 0.01	0.73	0.08	0.31		
125200	0.01	0.22	0.03	0.07	< 0.01	0.52	0.02	0.00	0.17	0.10	0.18	0.97	0.90	< 0.01	0.02	< 0.01	0.03		
225251	<0.01	0.15	0.00	<0.01	0.02	1.37	0.05	0.50	0.21	0.12	0.19	1.00	1.15	<0.01	0.09	<0.01	0.03		
225252	0.02	0.22	0.07	<0.01	0.02	1.79	0.00	1.73	2.82	0.20	0.20	0.79	5.09	<0.01	0.05	<0.01	0.42		
225253	0.03	0.44	0.08	< 0.01	0.02	4.03	0.08	8.79	5.06	2.11	0.54	3.03	8.42	0.02	0.08	< 0.01	0.84		
225254	0.02	0.14	0.05	< 0.01	0.02	1.15	0.05	2.57	0.78	0.63	0.17	1.33	1.39	0.01	0.02	< 0.01	0.19		
225255	0.03	0.20	0.06	< 0.01	0.01	1.75	0.13	2.70	3.27	1.27	0.15	1.61	4.30	< 0.01	0.04	< 0.01	0.55		
225250	<0.01	0.09	<0.02	<0.01	<0.01	0.00	0.15	10.1	0.17	0.09	0.05	1.25	1 16	<0.01	0.02	< 0.01	0.03		
223237	0.02	0.14	<0.01	<0.01	0.02	5.12	0.05	10.1	0.41	0.20	0.12	1.25	1.10	<0.01	0.05	<0.01	0.07		
225258	0.04	0.11	0.02	0.01	0.03	2.28	0.09	27.7	0.56	0.34	0.12	1.96	1.50	< 0.01	0.08	<0.01	0.10		
225259	0.02	0.06	< 0.01	< 0.01	0.01	3.00	0.03	5.82	0.30	0.21	0.09	1.25	0.54	< 0.01	0.04	< 0.01	0.06		
225260	0.01	0.28	0.09	<0.01	0.02	3.25	0.04	0.56	3.31	1.42	0.43	3.31	5.65	0.02	0.04	<0.01	0.57		
225262	0.04	0.68	0.13	<0.01	0.04	3.54 1.17	0.04	0.84	0.51	0.22	0.12	1.07	9.36	<0.01	0.24	<0.01	0.32		
225263	<0.01	0.12	0.05	<0.01	0.02	0.74	0.10	0.24	0.24	0.14	0.19	0.94	1.25	<0.01	0.02	<0.01	0.04		
225264	0.02	0.07	0.04	< 0.01	0.01	0.66	0.01	1.60	0.36	0.16	0.17	0.61	0.70	< 0.01	0.02	0.01	0.06		
225265	0.02	0.07	0.15	< 0.01	0.02	1.47	0.01	2.42	0.20	0.19	0.18	1.50	0.62	< 0.01	0.01	< 0.01	0.05		
225266	< 0.01	0.15	0.07	<0.01	< 0.01	1.69	0.01	0.58	0.47	0.23	0.22	4.26	1.90	0.01	0.04	< 0.01	0.07		
225267	0.02	0.52	0.12	<0.01	0.02	3.03	0.08	3.04	0.80	3.44	0.64	3.22	10.5	0.01	0.10	<0.01	1.17		
DCB01	2.36	27.3	0.45	6.83	0.49	14.2	0.42	271	1.64	0.80	0.52	2.00	2.35	<0.01	0.71	0.07	0.30		
225268	0.03	0.60	0.15	0.05	0.02	3.86	0.02	5.82	5.64	2.82	0.65	2.75	9.33	0.02	0.14	0.05	1.00		
225269	0.02	0.13	0.08	< 0.01	0.01	1.84	0.06	1.18	0.75	0.32	0.14	2.07	1.64	0.02	0.03	< 0.01	0.12		
225270	0.02	0.16	0.04	< 0.01	0.01	0.84	0.02	0.35	0.87	0.38	0.12	1.12	2.26	0.02	0.02	< 0.01	0.14		
225271	0.02	0.04	0.04	<0.01	<0.01	0.51	0.06	0.24	0.11	0.07	0.05	0.99	0.28	0.01	0.01	<0.01	0.02		
225272	0.03	0.25	0.43	<0.01	0.08	27.7	0.70	16.0	2.52	1.40	1.02	10.9	2.77	0.03	0.07	<0.01	0.51		
225273	0.01	0.16	0.07	<0.01	0.02	4.17	0.06	2.25	1.44	0.64	0.41	3.94	2.41	0.05	0.04	<0.01	0.25		
225274	0.01	0.39	0.09	<0.01	0.02	2.27	0.12	1.01	2.97	1.40	0.40	1.89	5.88	< 0.01	0.05	<0.01	0.51		
225275 225276	<0.01 0.03	0.05	0.03	<0.01 <0.01	<0.01 <0.01	0.33 1.15	0.01 0.01	0.42 0.19	0.07 0.37	0.05 0.18	0.13 0.15	0.64 1.38	0.15 1.36	<0.01 <0.01	0.01 0.02	<0.01 <0.01	0.02 0.06		
225277	0.02	0.40	0.19	<0.01	0.02	2.91	0.06	1.89	4.79	2.46	0.40	2.40	7.54	<0.01	0.07	<0.01	0.90		
225278	0.04	1.10	0.59	0.02	0.04	3.83	0.22	19.3	7.21	3.09	3.36	1.08	18.3	< 0.01	0.25	< 0.01	1.11		
225279	<0.01	0.10	0.04	<0.01	0.01	1.18	0.02	0.52	0.33	0.17	0.20	1.51	0.90	< 0.01	0.02	<0.01	0.05		
225280	0.02	0.07	0.04	<0.01	0.05	2.54	0.03	10.3	0.57	0.50	0.20	1.43	0.54	0.01	0.16	<0.01	0.15		
225281	0.01	0.85	0.13	<0.01	0.02	1.79	0.02	1.35	2.72	1.29	0.82	1.74	11.3	<0.01	0.03	<0.01	0.38		
225282	0.03	0.67	0.09	<0.01	0.02	2.94	0.07	9.33	8.23	3.85	1.12	2.35	13.4	< 0.01	0.08	<0.01	1.46		
225283	0.02	0.12	0.07	< 0.01	0.03	2.76	0.05	3.08	0.88	0.54	0.21	1.75	1.60	< 0.01	0.10	< 0.01	0.18		
220204	0.01	0.05	0.05	<0.01	< 0.01	0.70	0.02	0.88	0.14	0.09	0.09	1.21	0.34	< 0.01	0.02	<0.01	0.03		
225283 R	0.01	0.30	0.13	<0.01	0.02	2.00	0.02	3.03	0.02	0.54	0.10	2.32	1 56	<0.01	0.00	<0.01	0.72		
	0.02	0.12	0.01		0.01	2.1.1	0.00	0.00	0.02	0.01	0.20	1.10	1.00	-0.01	0.10		00		

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CAT Strategic Meta Attention: Robert Ro PO #/Project:	als Corp. sner				2901 Tel: (30	<b>SR</b> Clevelar 6) 933-8	C Geoa d Avenu 118 Fax:	nalytic e, Saskat (306) 933	<b>al Labo</b> oon, Sask 3-5656 E	<b>ratorie</b> atchewar mail: geo	e <b>s</b> n, S7K 8. lab@src.	A9 sk.ca				Repo Date of R	ort No: G-2022-221 Report: Nov 03, 202	3
Samples: 64						.,	ICP N	AS Parti	al Digest	ion								
Sample	Ag	As	Be	Bi	Cd	Co	Cs	Cu	Dy	Er	Eu	Ga	Gd	Ge	Hf	Hg	Но	
Number	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
DCB01	2.32	27.3	0.46	6.48	0.45	13.8	0.44	270	1.64	0.79	0.49	2.01	2.28	0.03	0.72	0.10	0.31	
225286	0.02	0.31	0.06	0.05	0.03	2.20	0.02	3.86	1.43	0.68	0.18	1.81	3.03	0.04	0.04	0.02	0.26	
225287	0.01	0.13	<0.01	0.01	0.02	3.01	0.03	11.5	0.43	0.28	0.23	1.38	0.98	0.01	0.04	0.02	0.09	
225288	0.06	0.43	0.06	<0.01	0.16	5.51	0.12	7.44	1.68	0.73	0.36	4.26	4.53	0.05	0.10	0.02	0.28	
225289	<0.01	0.28	0.20	<0.01	<0.01	2.64	0.02	0.60	3.60	1.73	0.40	4.14	4.45	0.04	0.12	0.02	0.70	
225290	0.02	0.10	<0.01	<0.01	0.02	0.73	0.01	0.42	0.25	0.14	0.09	1.06	0.78	0.02	0.03	0.02	0.04	
225291	0.01	0.20	0.06	<0.01	0.01	1.21	0.02	0.38	0.30	0.16	0.24	1.75	1.76	0.02	0.06	0.02	0.04	
225292	0.03	0.25	0.06	<0.01	0.01	1.74	0.04	2.27	1.04	0.39	0.16	1.78	3.10	0.04	0.04	0.02	0.15	
225293	0.02	0.41	0.13	<0.01	0.01	3.37	0.08	4.17	1.22	0.55	0.67	3.46	4.24	0.05	0.04	0.01	0.19	
225294	0.05	0.29	0.15	<0.01	0.03	5.06	0.08	6.61	1.24	0.54	0.21	4.74	3.13	0.05	0.05	0.01	0.20	
225295	0.02	0.20	0.03	<0.01	0.02	1.39	0.05	2.40	0.77	0.43	0.14	1.66	1.77	0.02	0.04	0.02	0.15	
225296	< 0.01	0.60	0.33	<0.01	0.03	3.08	0.16	4.48	4.14	1.79	0.42	5.33	8.43	0.08	0.32	0.01	0.71	
225297	< 0.01	0.16	0.25	<0.01	0.01	3.35	0.05	0.85	2.20	1.10	0.24	3.10	2.46	0.04	0.07	0.02	0.44	
225298	0.05	1.56	0.26	<0.01	0.04	4.19	0.06	6.54	6.19	3.20	1.86	4.00	19.2	0.10	0.10	0.01	1.07	
225299	0.01	0.63	0.05	<0.01	0.02	1.66	0.12	0.42	1.10	0.54	0.36	2.54	6.78	0.08	0.03	0.02	0.14	
225300	0.01	0.30	0.16	<0.01	0.02	1.01	0.03	0.84	2.11	0.78	0.15	2.33	3.98	0.04	0.18	0.02	0.34	
230351	0.02	0.30	0.03	<0.01	0.02	1.38	0.04	1.33	0.53	0.29	0.14	1.47	2.84	0.04	0.04	0.02	0.08	
230352	0.04	0.94	0.11	<0.01	0.02	1.99	0.08	4.76	8.70	3.87	0.53	1.84	13.7	0.10	0.10	<0.01	1.59	
230353	< 0.01	0.10	<0.01	<0.01	0.01	1.76	0.04	0.44	1.54	0.71	0.12	2.43	1.86	0.03	0.04	<0.01	0.29	
230354	0.02	0.63	<0.01	<0.01	0.02	2.20	0.10	0.30	1.29	0.64	0.37	3.39	7.12	0.06	0.06	0.01	0.17	
DCB01	2.35	27.9	0.41	6.94	0.47	14.4	0.44	272	1.62	0.80	0.48	2.03	2.26	0.03	0.70	0.08	0.31	
230355	0.02	0.41	0.03	0.05	< 0.01	1.68	0.06	1.09	0.91	0.43	0.18	1.95	3.93	0.04	0.04	< 0.01	0.13	
230356	< 0.01	0.22	0.04	< 0.01	0.01	2.47	0.07	1.09	1.11	0.50	0.12	2.21	2.51	0.03	0.07	<0.01	0.20	
230356 R	0.02	0.34	0.05	< 0.01	0.02	2.49	0.07	1.05	1.08	0.48	0.11	2.18	2.52	0.04	0.07	< 0.01	0.18	



CAT Strategic Metal Attention: Robert Ross				200		C Geo	analyti	cal Labo	oratorie	es 	40				Rep	ort No: G	-2022-2213	
PO #/Project:					Tel: (3	06) 933-8	118 Fax:	: (306) 9	33-5656 E	mail: geo	olab@src	.sk.ca				Date of I	Report: N	ov 03, 2022
Samples. 04							ICP	MS Par	tial Digest	ion								
Sample	Мо	Nb	Nd	Ni	Pb204	Pb206	Pb207	Pb208	PbSUM	Pr	Rb	Sb	Sc	Se	Sm	Sn	Та	
Number	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
DCB01	10.5	0.10	16.1	51.7	1.18	29.4	18.5	42.5	91.6	4.25	10.1	0.26	1.9	0.8	2.89	1.03	<0.01	
125266	0.21	0.02	9.93	0.82	0.049	0.760	0.708	1.91	3.42	3.14	1.88	0.01	0.1	< 0.1	1.17	0.03	< 0.01	
125291	0.07	0.06	12.2	0.96	0.059	0.850	0.871	2.84	4.62	3.91	15.3	< 0.01	0.2	<0.1	1.49	0.02	< 0.01	
225251	0.14	0.03	25.9	0.98	0.040	0.616	0.608	3.20	4.46	8.10	10.1	<0.01	0.3	<0.1	3.43	0.05	< 0.01	
223232	2.13	0.05	32.9	1.30	0.009	0.160	0.120	1.01	1.91	10.5	2.00	<0.01	0.5	0.6	5.72	0.02	<0.01	
225253	2.64	0.24	55.9	3.04	0.014	0.249	0.204	1.83	2.30	15.4	24.0	<0.01	0.5	1.2	10.4	0.92	0.01	
225254	0.38	0.05	13.1	0.74	0.048	0.640	0.710	2.07	3.47	4.26	8.09	<0.01	0.6	<0.1	1.61	0.11	<0.01	
225255	1.07	0.10	24.2	2.24	0.021	0.287	0.324	1.05	1.68	6.87	8.93	<0.01	0.4	0.4	4.57	0.03	<0.01	
225256	0.13	0.02	5.00	0.50	0.015	0.207	0.219	0.653	1.09	1.54	4.17	< 0.01	0.2	< 0.1	0.65	0.03	< 0.01	
225257	1.04	0.01	11.5	19.9	0.029	0.514	0.438	1.70	2.68	3.18	5.13	<0.01	0.5	<0.1	1.59	0.02	<0.01	
225258	2.01	0.02	15.0	10.7	0.043	0.720	0.651	2.36	3.78	4.22	12.9	<0.01	0.9	<0.1	1.94	0.02	< 0.01	
225259	0.35	0.01	5.40	12.4	0.062	0.948	0.965	2.40	4.38	1.54	3.82	<0.01	0.4	<0.1	0.67	<0.01	<0.01	
225260	0.57	0.10	38.2	2.07	0.054	0.729	0.788	2.99	4.57	11.8	5.33	<0.01	1.1	0.7	6.39	0.13	<0.01	
225261	0.30	0.06	102	4.13	0.229	3.18	3.36	11.5	18.2	33.7	4.41	<0.01	0.9	1.4	10.9	0.07	<0.01	
225262	0.07	0.01	16.2	0.74	0.025	0.388	0.384	1.49	2.29	5.34	5.88	<0.01	0.4	<0.1	2.17	0.02	<0.01	
225263	0.06	0.03	13.2	0.47	0.024	0.355	0.365	1.33	2.08	4.29	5.11	0.01	0.3	<0.1	1.56	0.04	<0.01	
225264	0.43	0.03	5.40	0.56	0.064	0.886	0.957	2.29	4.19	1.68	1.87	0.03	0.1	<0.1	0.84	0.10	<0.01	
225265	0.63	0.07	7.33	2.11	0.034	0.479	0.527	1.64	2.68	2.26	1.34	< 0.01	0.2	< 0.1	0.83	0.01	< 0.01	
225266	0.10	<0.01	18.3	1.23	0.029	0.412	0.419	1.44	2.30	5.62	1.29	< 0.01	0.6	<0.1	2.39	0.01	< 0.01	
225267	0.30	0.15	72.3	2.00	0.033	0.491	0.503	3.15	4.18	20.6	37.0	<0.01	1.1	1.8	12.7	0.32	0.02	
DCB01	10.7	0.09	16.0	52.5	1.19	29.3	18.8	42.0	91.3	4.34	9.77	0.27	1.8	0.6	2.86	1.06	<0.01	
225268	1.56	0.12	68.3	2.43	0.028	0.423	0.417	1.80	2.66	20.1	13.1	0.05	1.0	1.4	11.4	0.59	0.01	
225269	0.16	0.04	12.7	0.85	0.030	0.427	0.447	1.38	2.29	3.61	10.6	<0.01	0.6	<0.1	2.03	0.15	<0.01	
225270	0.16	0.02	18.0	0.68	0.044	0.547	0.620	1.48	2.69	4.76	2.82	<0.01	0.3	0.2	3.06	0.08	<0.01	
225271	0.07	0.01	2.57	0.40	0.045	0.584	0.661	1.58	2.87	0.80	2.76	<0.01	0.3	<0.1	0.33	0.03	<0.01	
225272	0.46	0.06	13.1	50.9	0.044	0.596	0.636	1.44	2.72	3.20	60.1	<0.01	2.4	<0.1	2.69	0.28	<0.01	
225273	0.28	0.08	15.0	1.76	0.059	0.813	0.864	2.02	3.76	3.54	27.9	< 0.01	1.2	<0.1	3.07	0.31	< 0.01	
225274	0.32	0.04	46.1	1.40	0.051	0.747	0.778	4.21	5.79	14.8	10.1	< 0.01	0.7	0.5	6.84	0.27	< 0.01	
225275	0.07	<0.01 <0.01	1.57	0.53	0.049	0.658	0.742	1.69	3.14 2.53	0.56 4.43	2.15	<0.01 <0.01	0.2	<0.1 <0.1	1.78	0.01	<0.01	
005077	0.70	0.14	52.0	2.40	0.007	0.270	0.204	1.00	0.40	147	45.5	-0.01	0.7		0.01	0.20	0.01	
225277	0.76	0.14	53.0	2.40	0.027	0.379	0.394	1.32	2.12	14.7	15.5	<0.01	1.2	1.1	9.21	0.30	0.01	
225270	0.79	0.24	8 56	0.09	0.256	4.27	4.02	1 00.2	3.60	2 75	10.0	<0.01	0.4	⊃.0 ∠0 1	25.4	0.72	<0.02	
225280	6.49	<0.01	1 96	0.77	0.035	1 33	1 32	2 97	5.00	1 52	3.05	<0.01	0.4	<0.1	0.61	0.12	<0.01	
225281	0.19	0.02	111	1.39	0.081	1.26	1.23	8.42	11.0	35.8	2.84	<0.01	0.4	2.2	14.7	0.08	<0.01	
225282	1 98	0.06	91.5	2 61	0.052	0.748	0.790	2 74	4.33	24 4	21.5	<0.01	0.6	22	17.0	0.23	0.02	
225283	6.17	0.04	14.5	3.84	0.121	1.69	1.82	4.95	8.58	4,40	5.36	<0.01	0.6	<0.1	1.99	0.02	<0.01	
225284	0.13	< 0.01	3.33	0.90	0.064	0.855	0.946	2.37	4.24	1.00	2.70	< 0.01	0.3	<0.1	0.44	0.05	< 0.01	
225285	0.80	0.03	42.9	1.63	0.031	0.419	0.468	1.73	2.65	11.8	3.85	< 0.01	1.2	1.1	7.41	0.02	< 0.01	
225283 R	6.12	0.04	13.5	4.04	0.120	1.73	1.83	4.79	8.46	4.12	5.38	<0.01	0.7	< 0.1	1.90	0.02	< 0.01	

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CAT Strategic Meta Attention: Robert Ro	als Corp.				290	SR 1 Clevela	C Geo:	<b>analyti</b> ue, Saska	cal Labo atoon, Sasl	oratorie catchewa	es n, S7K 8	A9				Rep	ort No: G-	-2022-2213
Samples: 64					Tel: (3	06) 933-8	3118 Fax:	: (306) 9	33-5656 E	mail: geo	lab@src	.sk.ca				Date of I	Report: No	ov 03, 2022
<b>k</b>							ICP	MS Par	tial Digest	ion								
Sample	Мо	Nb	Nd	Ni	Pb204	Pb206	Pb207	Pb208	PbSUM	Pr	Rb	Sb	Sc	Se	Sm	Sn	Та	
Number	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
DCB01	10.2	0.08	15.6	53.4	1.22	29.4	18.7	42.9	92.2	4.26	9.81	0.34	1.8	0.9	2.71	1.10	<0.01	
225286	0.46	0.02	23.5	1.48	0.057	0.767	0.807	2.37	4.00	6.56	6.52	<0.01	2.0	0.2	3.79	0.02	<0.01	
225287	0.31	0.01	9.31	15.6	0.039	0.631	0.574	1.70	2.94	2.73	3.75	<0.01	1.1	<0.1	1.20	<0.01	<0.01	
225288	6.61	0.16	38.2	3.10	0.156	2.22	2.24	7.38	12.0	11.6	40.2	<0.01	3.3	0.6	5.41	0.04	<0.01	
225289	0.84	0.02	25.6	1.59	0.014	0.216	0.209	0.726	1.17	6.94	3.20	<0.01	3.0	0.2	5.44	0.01	<0.01	
225290	2.77	<0.01	7.48	1.20	0.039	0.645	0.569	1.76	3.01	2.24	2.80	<0.01	0.8	<0.1	1.00	0.02	<0.01	
225291	0.10	0.03	18.2	0.91	0.082	1.19	1.20	4.03	6.50	5.80	5.48	<0.01	0.4	0.1	2.33	0.02	<0.01	
225292	0.43	0.03	23.7	0.96	0.036	0.570	0.524	2.40	3.53	6.51	9.18	<0.01	1.1	0.4	4.25	0.05	<0.01	
225293	0.48	0.04	40.0	2.01	0.176	2.34	2.53	6.29	11.4	10.9	12.3	<0.01	1.7	0.5	6.15	0.02	<0.01	
225294	3.09	0.14	23.4	8.54	0.156	2.47	2.31	6.88	11.8	6.62	15.2	<0.01	1.7	0.2	3.95	0.06	<0.01	
225295	2.60	0.02	15.2	1.81	0.038	0.512	0.524	1.58	2.65	4.26	8.34	<0.01	2.0	0.2	2.41	<0.01	<0.01	
225296	0.88	0.12	63.0	1.10	0.055	0.787	0.786	2.82	4.45	18.1	67.4	<0.01	1.8	1.3	10.7	0.02	<0.01	
225297	0.33	0.02	13.4	3.79	0.016	0.253	0.240	0.914	1.42	3.32	15.9	<0.01	3.4	0.4	2.86	0.04	<0.01	
225298	1.10	0.20	180	2.22	0.137	1.93	1.99	5.73	9.79	54.3	19.8	<0.01	2.6	3.8	23.5	0.25	0.01	
225299	0.15	0.07	65.5	0.85	0.065	1.17	0.955	7.55	9.74	20.1	16.6	<0.01	0.9	1.1	9.05	0.08	<0.01	
225300	1.91	0.02	26.9	1.68	0.109	4.14	1.87	5.37	11.5	7.91	2.85	<0.01	1.0	0.5	5.07	0.12	<0.01	
230351	0.10	0.02	31.9	0.57	0.019	0.619	0.331	3.44	4.42	9.61	7.02	< 0.01	1.3	0.6	3.78	0.21	<0.01	
230352	0.43	0.07	98.0	1.53	0.065	0.863	0.904	2.46	4.29	25.5	16.4	< 0.01	1.7	3.6	18.4	0.03	0.02	
230353	0.10	0.01	8.73	1.16	0.084	1.12	1.20	2.86	5.27	2.06	5.74	< 0.01	1.4	0.2	2.28	0.08	<0.01	
230354	0.29	0.10	71.8	1.03	0.040	0.807	0.615	6.73	8.20	21.5	32.6	<0.01	1.8	1.5	9.74	0.21	<0.01	
DCB01	10.4	0.07	15.7	51.5	1.21	29.4	18.5	42.8	92.1	4.18	9.93	0.34	1.9	0.6	2.65	1.06	<0.01	
230355	0.21	0.05	39.0	1.69	0.101	1.52	1.44	5.33	8.38	11.7	23.3	< 0.01	0.9	0.1	5.40	0.13	< 0.01	
230356	0.30	0.02	19.7	1.50	0.036	0.510	0.517	1.69	2.76	5.83	20.8	< 0.01	2.6	< 0.1	3.09	0.04	< 0.01	
230356 R	0.28	0.02	20.4	1.50	0.036	0.506	0.494	1.66	2.70	6.16	20.8	0.03	2.6	<0.1	3.14	0.04	< 0.01	



CAT Strategic Metals Attention: Robert Rosne PO #/Project: Samples: 64	Corp. er				2901 Tel: (30	<b>SR</b> Clevelan 6) 933-83	C Geoa d Avenue 118 Fax: (	nalytic: e, Saskate (306) 933	<b>al Labo</b> oon, Sask 3-5656 Er	ratories atchewan, mail: geola	S7K 8A9 ab@src.sk.ca
I man							ICP N	IS Parti	al Digesti	ion	
Sample	Tb	Те	Th	U	V	W	Y	Yb	Zn	Zr	
Number	ppin	ppin	ppin	ppin	ppin	ppin	ppin	ppm	ppin	ppin	
DCB01	0.31	0.13	14.8	112	28.9	5.0	7.10	0.61	121	30.0	
125266	0.04	< 0.01	3.62	2.53	2.1	0.1	0.60	0.04	7.0	0.82	
125291	0.06	<0.01	7.83	0.38	4.8	<0.1	0.56	0.03	19.6	3.05	
225251	0.15	<0.01	18.9	0.48	7.0	<0.1	1.52	0.09	23.8	1.40	
225252	0.57	<0.01	13.1	0.26	7.5	0.1	9.21	0.32	38.3	1.18	
225253	0.98	0.01	14.3	0.29	20.5	<0.1	18.4	1.04	63.5	2.19	
225254	0.12	<0.01	5.03	0.13	3.9	<0.1	3.92	0.69	24.8	0.30	
225255	0.57	<0.01	3.64	0.10	10.5	<0.1	12.5	0.64	21.8	0.47	
225256	0.04	<0.01	1.79	0.13	2.4	<0.1	0.59	0.05	6.9	0.42	
225257	0.08	0.02	7.78	0.44	11.0	<0.1	1.62	0.21	18.1	1.56	
225258	0.11	0.06	9.81	0.48	26.9	< 0.1	2.25	0.28	14.1	2.59	
225259	0.05	0.03	3.07	0.23	10.6	< 0.1	1.34	0.21	13.9	1.32	
225260	0.63	< 0.01	15.9	0.16	17.6	< 0.1	11.8	0.70	33.0	0.78	
225261	0.37	< 0.01	37.6	0.69	9.5	< 0.1	6.90	0.56	48.3	6.36	
225262	0.12	<0.01	6.47	0.20	5.0	<0.1	1.46	0.08	15.0	4.14	
225263	0.06	<0.01	5.59	0.15	4.0	<0.1	0.79	0.05	13.6	0.46	
225264	0.07	< 0.01	1.63	0.10	2.6	< 0.1	1.41	0.12	11.4	0.50	
225265	0.04	< 0.01	6.64	0.09	6.6	<0.1	1.04	0.20	12.8	0.36	
225266	0.11	< 0.01	9.32	0.21	7.3	<0.1	1.45	0.08	8.7	1.19	
225267	1.19	<0.01	23.1	0.26	14.9	<0.1	28.2	2.44	36.0	2.17	
DCB01	0.31	0.13	14.2	111	28.5	5.1	6.89	0.62	120	30.4	
225268	1.04	<0.01	8.71	0.23	14.4	0.1	22.4	1.91	51.1	2.70	
225269	0.15	<0.01	3.75	0.10	6.4	<0.1	2.64	0.16	25.8	0.78	
225270	0.20	<0.01	0.69	0.11	5.5	<0.1	3.04	0.17	19.6	0.57	
225271	0.02	<0.01	0.67	0.07	2.9	<0.1	0.44	0.06	12.5	0.19	
225272	0.41	<0.01	0.64	0.13	116	0.1	11.7	1.06	74.2	1.20	
225273	0.27	<0.01	0.89	0.07	37.0	<0.1	5.38	0.36	36.1	0.99	
225274	0.56	<0.01	26.9	0.20	9.3	<0.1	11.2	0.70	31.9	1.32	
225275	0.01	<0.01	0.36	0.06	1.1	<0.1	0.33	0.06	4.5	0.20	
225276	0.08	<0.01	6.83	0.15	4.0	<0.1	1.18	0.08	20.2	0.44	
225277	0.88	<0.01	6.64	0.11	11.5	<0.1	20.0	1.55	40.6	1.38	
225278	1.63	0.01	17.2	2.45	19.4	0.1	24.6	1.78	29.3	7.42	
225279	0.06	<0.01	1.94	0.14	5.0	<0.1	1.18	0.10	17.8	0.36	
225280	0.07	0.03	1.67	0.15	14.8	<0.1	3.24	0.55	16.8	4.62	
225281	0.67	<0.01	61.1	0.77	8.2	<0.1	7.99	0.46	22.2	0.59	
225282	1.51	<0.01	8.83	0.14	32.4	<0.1	31.5	2.33	31.1	1.65	
225283	0.15	0.01	7.27	0.24	11.3	<0.1	3.88	0.43	21.8	2.87	
225284	0.02	<0.01	1.61	0.06	2.6	<0.1	0.57	0.07	11.9	0.29	
225285	0.70	<0.01	6.95	0.07	4.1	<0.1	15.3	1.14	16.7	0.98	
225283 R	0.15	0.01	7.22	0.25	11.3	<0.1	3.96	0.43	21.6	2.93	

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<b>CAT Strategic Met</b> Attention: Robert Ro PO #/Project: Samples: 64	als Corp.				2901 Tel: (30	<b>SR</b> Clevelan 6) 933-83	C Geoa d Avenu 118 Fax:	<b>nalytic</b> e, Saskate (306) 933	<b>al Labo</b> oon, Sask 3-5656 Er	<b>ratories</b> atchewan, mail: geola	S7K 8A9 b@src.sk.ca
Samples. 04							ICP N	AS Partia	al Digest	ion	
Sample	Tb	Те	Th	U	V	W	Y	Yb	Zn	Zr	
Number	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
DCB01	0.30	0.12	14.2	113	27.9	5.2	6.81	0.59	120	28.6	
225286	0.30	<0.01	5.30	0.19	7.8	0.1	5.14	0.37	40.0	0.81	
225287	0.08	0.02	4.54	0.18	13.1	0.1	2.43	0.24	10.5	1.40	
225288	0.38	<0.01	20.9	0.38	30.1	0.1	5.69	0.30	121	2.96	
225289	0.66	<0.01	3.73	0.06	8.8	0.1	13.8	1.05	17.4	2.50	
225290	0.06	<0.01	4.65	0.24	3.7	<0.1	0.92	0.07	14.8	0.71	
225291	0.09	<0.01	14.3	0.24	4.1	0.1	0.83	0.05	18.2	2.13	
225292	0.27	< 0.01	13.0	0.19	10.1	0.1	3.21	0.17	29.8	0.90	
225293	0.32	0.01	5.31	0.09	26.0	<0.1	4.02	0.23	31.2	1.20	
225294	0.28	0.01	17.8	0.60	39.0	0.1	4.52	0.28	40.7	1.34	
225295	0.16	<0.01	3.25	0.07	5.5	<0.1	2.90	0.35	13.0	0.86	
225296	0.91	< 0.01	15.8	0.14	9.3	0.1	13.5	0.93	41.7	5.87	
225297	0.38	< 0.01	5.68	0.12	14.2	<0.1	9.82	0.77	16.8	1.50	
225298	1.42	0.02	14.2	0.45	20.8	0.2	22.5	1.57	43.6	3.07	
225299	0.38	<0.01	59.1	0.90	12.3	<0.1	2.69	0.13	17.4	0.74	
225300	0.46	<0.01	30.3	8.44	4.1	<0.1	6.78	0.35	11.7	5.31	
230351	0.15	<0.01	30.3	1.08	4.5	<0.1	1.48	0.10	11.9	0.81	
230352	1.73	< 0.01	3.92	0.08	11.6	0.1	32.0	2.00	21.8	1.40	
230353	0.29	< 0.01	0.99	0.03	5.5	<0.1	6.63	0.42	39.9	1.02	
230354	0.41	<0.01	62.7	0.80	16.0	<0.1	3.40	0.18	32.7	1.74	
DCB01	0.30	0.13	13.8	114	27.0	5.0	6.87	0.60	122	28.6	
230355	0.25	< 0.01	21.5	0.44	11.2	< 0.1	2.69	0.19	27.3	1.21	
230356	0.25	< 0.01	5.26	0.10	15.6	<0.1	3.82	0.24	16.3	2.41	
230356 R	0.24	< 0.01	5.23	0.11	15.9	<0.1	3.48	0.24	16.1	2.55	

Partial Digestion: A 0.5 g pulp is digested with 2.25 ml of 8:1 ultrapure HNO3:HCl for 1 hour at 95 C. The standard is DCB01.

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Attention: Robert Rosner

Column Header Details

Barium in ppm (Ba) Calcium in wt % (CaO) Cerium in ppm (Ce) Chromium in ppm (Cr) Iron in wt % (Fe2O3) Potassium in wt % (K2O) Lanthanum in ppm (La) Lithium in ppm (Li)

Sodium in wt % (Na2O)

Sulfur in ppm (S) Strontium in ppm (Sr) Titanium in wt % (TiO2)

PO #/Project:

Samples: 64



# CAT Strategic Metals Corp. **SRC** Geoanalytical Laboratories 2901 Cleveland Avenue, Saskatoon, Saskatchewan, S7K 8A9 Tel: (306) 933-8118 Fax: (306) 933-5656 Email: geolab@src.sk.ca **ICP Total Digestion** Aluminum in wt % (Al2O3) Magnesium in wt % (MgO) Manganese in wt % (MnO) Phosphorus in wt % (P2O5)

Vanadium in pp	om (V)																	
Zirconium in pr	om (Zr)																	
Sample	AI2O3	Ba	CaO	Ce	Cr	Fe2O3	K2O	La	Li	MgO	MnO	Na2O	P2O5	S	Sr	TiO2	V	Zr
Number	wt %	ppm	wt %	ppm	ppm	wt %	wt %	ppm	ppm	wt %	wt %	wt %	wt %	ppm	ppm	wt %	ppm	ppm
DCB01	11.1	386	1.52	125	273	3.34	2.46	64	40	1.70	0.035	0.57	0.212	3970	409	0.800	101	414
125266	13.0	1250	0.44	73	13	0.90	6.43	45	3	0.214	0.015	2.36	0.026	<10	182	0.097	3.2	59
125291	13.1	2130	0.82	120	8	0.78	6.38	72	5	0.438	0.005	2.24	0.030	<10	311	0.290	5.6	155
225251	19.4	1640	2.96	167	4	1.52	5.02	102	5	0.715	0.017	4.60	0.040	<10	430	0.372	10.5	327
225252	13.6	1430	1.57	382	7	4.37	4.56	232	1	0.936	0.065	3.00	0.337	<10	263	0.797	36.5	254
225253	13.4	1260	2 34	532	14	5 54	4 28	307	6	1 16	0.056	2 75	0.578	<10	335	1 01	56.4	560
225254	14.5	2040	1.00	126	5	1.85	6.38	82	4	0.488	0.035	2.89	0.049	175	299	0.225	5.3	59
225255	14.6	1950	1.84	342	7	4.16	5.69	191	<1	0.935	0.052	2.49	0.256	<10	330	0.783	35.3	195
225256	13.0	1750	0.82	71	5	0.95	5.73	44	3	0.194	0.006	2.69	0.032	<10	299	0.133	3.6	111
225257	17.2	750	0.85	70	152	10.2	3.24	43	4	3.08	0.103	1.19	0.062	188	102	0.853	139	198
225258	17.6	714	0.53	123	166	11.4	3.00	70	5	3.42	0.094	0.74	0.053	374	84	1.12	163	237
225259	14.1	659	0.58	45	126	8.62	2.60	31	2	2.62	0.081	0.68	0.042	117	80	0.769	119	208
225260	12.8	1500	1.41	298	12	3.26	4.66	175	8	0.839	0.047	2.67	0.236	<10	299	0.565	24.5	148
225261	15.3	5260	2.43	441	52	3.40	5.23	278	2	1.04	0.064	2.86	0.354	39	1420	0.922	31.1	561
225262	13.8	2460	0.85	281	6	1.38	6.14	157	5	0.314	0.010	2.76	0.067	<10	325	0.293	8.3	163
225263	13.8	2340	1.19	121	10	1.12	4.97	71	4	0.426	0.015	3.06	0.027	<10	382	0.224	6.3	192
225264	11.8	1210	0.87	48	11	1.16	4.37	32	2	0.247	0.018	2.59	0.048	<10	279	0.207	13.4	117
225265	12.0	309	3.09	128	21	2.28	0.842	76	3	0.683	0.044	2.25	0.024	11	256	0.885	38.2	233

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CAT Strategic Met Attention: Robert R PO #/Project:	tals Corp.				290 Tel: (3	<b>SR</b> 1 Clevelar 06) 933-8	C Geoa nd Avenu 118 Fax:	nalytic e, Saskat (306) 93	<b>al Lab</b> oon, Sasl 3-5656 F	oratori katchewa	es in, S7K 8 olab@src	A9 .sk.ca				Rep Date of F	ort No: G Report: N	-2022-2213 ov 03, 2022
Samples: 64					(-		IC	P Total l	Digestion	1	0							
Sample	AI2O3	Ва	CaO	Ce	Cr	Fe2O3	K20	La	Li	MgO	MnO	Na2O	P2O5	s	Sr	TiO2	V	Zr
Number	wt %	ppm	wt %	ppm	ppm	wt %	wt %	ppm	ppm	wt %	wt %	wt %	wt %	ppm	ppm	wt %	ppm	ppm
225266	13.0	1110	0.48	113	22	2.21	5.69	68	10	0.799	0.024	2.63	0.034	<10	199	0.266	11.1	136
225267	13.5	1340	1.69	367	14	3.97	5.28	220	8	1.08	0.048	2.59	0.378	45	289	0.798	37.8	240
DCB01	11.2	389	1.52	130	268	3.36	2.47	65	40	1.70	0.035	0.57	0.212	3900	406	0.784	101	403
225268	13.6	1430	1.81	252	14	4.37	5.38	148	4	0.890	0.057	2.55	0.335	175	346	0.782	40.5	222
225269	15.0	1540	1.40	116	6	2.27	5.67	72	5	0.568	0.019	3.16	0.100	12	322	0.359	17.2	144
225270	14.0	1730	1.47	100	15	2.25	5.57	63	<1	0.462	0.026	2.83	0.132	<10	324	0.360	13.1	127
223271	13.0	1010	1.27	51	12	1.12	4.72	34	2	0.279	0.016	3.21	0.034	< 10	311	0.131	0.0	07
225272	17.1	999	6.52	30	85	18.7	2.92	23	8	7.70	0.228	1.34	0.392	<10	221	3.06	314	131
225273	14.5	2780	2.14	117	10	3.88	3.69	68	9	1.08	0.063	2.98	0.259	<10	431	1.14	48.8	301
225274	12.7	1340	0.98	318	15	2.68	5.55	194	2	0.657	0.033	2.54	0.202	31	253	0.535	20.2	189
225275	12.6	1430	0.61	27	17	0.58	5.40	19	3	0.153	0.009	2.68	0.018	<10	231	0.047	1.5	26
223276	13.4	2300	1.02	137	12	1.23	5.41	80	0	0.437	0.006	2.70	0.029	< 10	320	0.164	4.9	100
225277	13.2	1600	1.80	179	14	4.16	4.77	97	4	0.916	0.062	2.70	0.323	<10	358	0.781	37.3	229
225278	15.6	11600	4.88	365	29	4.79	8.06	165	3	2.52	0.087	2.39	1.04	34	2400	1.13	78.3	344
225279	14.1	2290	1.14	87	18	1.49	5.49	58	2	0.440	0.017	3.03	0.036	<10	377	0.206	9.6	133
225280	12.7	622	1.18	34	159	8.27	2.00	22	5	2.03	0.184	1.34	0.040	<10	157	0.363	83.2	369
225281	16.2	2480	0.76	571	9	1.54	7.65	307	8	0.853	0.020	2.84	0.089	<10	351	0.364	12.9	45
225282	14.0	1980	2.78	518	16	7.41	4.42	276	<1	2.06	0.092	2.87	0.756	<10	415	1.42	73.1	358
225283	18.0	1650	0.91	132	53	8.56	4.97	83	4	2.40	0.194	1.54	0.058	<10	228	0.670	68.4	495
225284	12.6	1120	0.78	32	22	0.97	5.43	22	2	0.213	0.011	2.66	0.018	<10	214	0.086	6.4	64
225285	13.4	1230	1.39	340	12	3.29	5.88	181	2	0.371	0.028	2.05	0.119	<10	207	0.472	20.8	196
225283 R	18.1	1650	0.91	129	53	8.49	4.96	81	4	2.39	0.192	1.55	0.055	<10	225	0.656	67.9	491
DCB01	11.2	380	1.52	128	271	3.34	2.47	65	40	1.69	0.035	0.57	0.209	3930	404	0.780	101	409
225286	13.0	1450	1.26	189	17	2.42	5.75	108	1	0.746	0.022	2.10	0.084	25	316	0.314	13.9	259
225287	13.7	880	0.79	67	131	7.39	3.20	40	5	2.28	0.075	1.34	0.047	<10	119	0.635	114	249
225288	14.2	2190	1.19	580	15	3.68	6.28	309	8	1.74	0.030	2.12	0.207	60	329	0.940	43.8	465
225289	12.0	847	0.41	186	15	2.87	5.85	98	8	0.890	0.021	1.80	0.092	13	131	0.350	11.6	227
225290	13.0	1190	1.08	60	16	1.45	6.00	39	1	0.446	0.017	2.30	0.044	<10	287	0.232	9.1	224
225291	14.6	1900	1.24	129	12	0.92	5.84	76	6	0.449	0.007	2.82	0.035	<10	330	0.264	5.5	248
225292	13.5	1400	1.45	229	21	2.77	5.13	113	4	0.582	0.036	2.45	0.153	89	322	0.392	21.7	192
225293	14.7	5290	1.83	424	27	3.35	5.29	247	7	1.09	0.028	2.45	0.363	41	874	1.07	43.8	271
225294	21.2	1280	3.81	246	29	3.73	4.13	136	27	1.49	0.030	4.81	0.155	160	628	0.697	57.0	386
225295	13.1	1250	0.97	176	13	2.75	5.75	96	4	0.792	0.042	2.24	0.048	20	195	0.306	13.3	202
225296	14.6	575	2.06	621	8	5.78	4.24	310	9	0.762	0.044	2.47	0.143	<10	149	0.775	19.0	281
225297	13.6	954	1.62	94	19	2.72	3.98	51	28	1.27	0.035	2.47	0.110	<10	220	0.314	22.4	172
225298	15.2	4930	3.88	650	15	7.46	4.83	358	4	1.69	0.078	2.68	0.714	100	1030	1.63	91.4	536
225299	16.9	2190	1.37	441	8	1.26	7.16	236	7	0.517	0.008	3.08	0.073	<10	392	0.336	16.6	54
225300	13.5	1000	0.80	135	19	1.37	5.95	69	10	0.297	0.017	2.74	0.069	<10	187	0.236	6.0	167
230351	13.0	834	1.42	213	15	1.28	4.99	114	7	0.349	0.015	2.54	0.040	<10	234	0.254	8.7	175
230352	14.0	2000	2.28	2/5	16	3.81	5.34	144	1	1.02	0.048	2.34	0.308	133	415	0.747	41.0	212

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CAT Strategic Metals Corp.SRC Geoanalytical LaboratoAttention: Robert Rosner2901 Cleveland Avenue, Saskatoon, SaskatcherPO #/Project:Tel: (306) 933-8118 Fax: (306) 933-5656 Email: gSamples: 64Samples: 64											es in, S7K 8 olab@src	A9 .sk.ca				Repo Date of F	ort No: G Report: N	-2022-2213 ov 03, 2022
Samples: 64							IC	P Total I	Digestio	ı								
Sample	AI2O3	Ba	CaO	Ce	Cr	Fe2O3	K2O	La	Li	MgO	MnO	Na2O	P2O5	S	Sr	TiO2	V	Zr
Number	wt %	ppm	wt %	ppm	ppm	wt %	wt %	ppm	ppm	wt %	wt %	wt %	wt %	ppm	ppm	wt %	ppm	ppm
230353	13.1	1870	1.05	109	13	2.84	5.67	64	2	0.794	0.027	2.50	0.194	<10	284	0.312	10.9	96
230354	20.6	500	4.51	329	12	2.17	2.06	181	9	0.894	0.019	5.31	0.053	<10	376	0.519	23.8	338
DCB01	11.2	389	1.52	128	270	3.36	2.46	64	40	1.70	0.035	0.57	0.211	3900	407	0.796	101	422
230355	13.6	1990	0.92	207	13	1.50	6.58	110	5	0.634	0.015	2.25	0.076	<10	326	0.354	16.9	171
230356	14.3	1440	1.10	383	14	3.35	7.14	207	9	1.14	0.029	2.09	0.130	<10	245	0.500	34.4	340
230356 R	14.4	1460	1.08	379	17	3.36	7.12	205	9	1.13	0.030	2.07	0.116	<10	243	0.496	33.5	347

Total Digestion: A 0.125 g pulp is gently heated in a mixture of ultrapure HF/HNO3/HClO4 until dry and the residue dissolved in dilute ultrapure HNO3. The standard is DCB01.

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### **APPENDIX 3**

## SRC QEMSCAN REPORTS



#### CONFIDENTIAL REPORT

QEMSCAN Analysis

Prepared for CAT Strategic Metals

By Matthew Wudrick Saskatchewan Research Council Mining and Energy

SRC Publication No. 12772-218C22 - G-2022-2212

October 2022

#### CONFIDENTIAL REPORT

**QEMSCAN** Analysis

Prepared for CAT Strategic Metals

By Matthew Wudrick Saskatchewan Research Council Mining and Energy

SRC Publication No. 12772-218C22 - G-2022-2212

October 2022

Advanced Microanalysis Centre<sup>™</sup> Saskatchewan Research Council 2901 Cleveland Ave Saskatoon, SK S7K 8A9 Tel: 306-291-1338

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#### Sample receiving and preparation

A rectangular portion was cut from each sample which was then mounted on glass and cut to approximately 50µm thick. The thinned rock section was polished to final analytical surface using 1µm diamond abrasive. Each sample was ultrasonically cleaned with deionized water and then isopropyl alcohol. The thin section samples were then coated with a 15nm thick layer of amorphous carbon to ensure electrical conductivity of the sample surface.

#### **QEMSCAN** operation

The QEMSCAN in the SRC Advanced Microanalysis Centre is built on an FEI Quanta 650 scanning electron microscope fitted with a field emission gun (10nm resolution) and dual Bruker XFlash 5030 energy dispersive spectrometers with a maximum throughput of 1.5Mcps.

QEMSCAN analyses are a collection of back-scattered electron images and semi-quantitative point chemical analyses. The grain images and EDS data are combined using image analysis to calculate various parameters such as particle size distribution, mineral associations and liberation, modal abundances, etc.

Operating conditions were set to 25Kv and 10nA beam current, measured in a Faraday cup at the sample surface. Data were collected in field stitch mode with a point spacing of 20µm. Raw X-ray energy spectra were compared to a mineral composition database customized for this project.

#### Analytical Statistics

Statistics from the QEMSCAN analyses are tabulated below.

Sample	225264	225268	225274	225281	225300	225351							
Analyzed Area (mm <sup>2</sup> )	891	891	891	891	891	891							
Point Spacing (μm)	19.8	19.8	19.8	19.8	19.8	19.8							
X-ray Analyses	2,025,313	2,020,220	2,102,942	1,829,288	2,254,344	1,970,099							
Table 1: Operational Statistics													

#### Modal Mineralogy

Modal mineralogy is calculated from the combined analysis of the BSE images and the mineral identification from the EDS data. The volumetric abundance of the minerals is converted to mass percent from density data for typical mineral compositions.





Plagioclase

Illite

Mineral	Sample 225264
Quartz	38.37
Orthoclase	35.14

Muscovite Table 2: Modal Mineralogy of Sample 225264

Sample 225264 Sample 225264 is mainly composed of quartz, orthoclase, and plagioclase. Illite occurs in significant amounts, mainly as exsolutions of orthoclase. Trace amounts of muscovite are present. The sample is classified as a granite on a QAP diagram.

17.98

7.92

0.30



Figure 3: QEMSCAN Image of Sample 225268



Figure 4: Pie Chart of Modal Mineralogy of Sample 225268

Mineral	Sample 225268
Orthoclase	35.91
Quartz	22.74
Plagioclase	20.85
Illite	8.01
Hornblende	4.03
Biotite	2.05
Fe-oxide	1.75
Orthopyroxene	1.59
Ilmenite	1.19
Apatite	1.12
Garnet	0.13
Zircon	0.08
Chlorite	0.06
Pyrite	0.04
Muscovite	0.03

Table 3: Modal Mineralogy of Sample 225268

Sample 225268 is mainly composed of orthoclase, quartz, and plagioclase. Illite is found throughout the sample as exsolutions from orthoclase. Other minerals found throughout the sample include hornblende, biotite, iron oxide, orthopyroxene, ilmenite, and apatite. Minerals in trace amounts such as garnet, zircon, chlorite, pyrite, and muscovite are present. The sample is classified on a QAP diagram as a granite.

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Figure 5: QEMSCAN Image of Sample 225274



Figure 6: Pie Chart of Modal Mineralogy of Sample 225274

Mineral	Sample 225274
Orthoclase	42.52
Quartz	33.00
Plagioclase	8.61
Illite	8.36
Orthopyroxene	1.60
Ilmenite	1.19
Apatite	1.15
Biotite	0.95
Garnet	0.85
Fe-oxide	0.48
Chlorite	0.42
Zircon	0.09
Monazite-(Ce)	0.09
5 2 7 1	

Table 4: Modal Mineralogy of Sample 225274

Sample 225274 is mainly composed of orthoclase, and quartz. Plagioclase and illite are present in approximately equal amounts, with illite being present as exsolutions of orthoclase. Other minerals include orthopyroxene, ilmenite, apatite, biotite, and garnet. Iron oxide, and chlorite are present in minor amounts. Trace amounts of zircon and monazite are present (0.09%). The sample classifies on a QAP diagram as a granite.



Figure 7: QEMSCAN Image of Sample 225281



Figure 8: Pie Chart of Modal Mineralogy of Sample 225281

Mineral	Sample 225281
Orthoclase	65.70
Quartz	11.32
Illite	10.05
Plagioclase	7.81
Chlorite	1.91
Orthopyroxene	0.90
Garnet	0.74
Monazite-(Ce)	0.35
Ilmenite	0.22
Biotite	0.16
Apatite	0.03
775701	

Table 5: Modal Mineralogy of Sample 225281

Sample 22581 is mainly composed of orthoclase, with quartz, illite and plagioclase in significant amounts. Illite is present as exsolutions of orthoclase. Chlorite is found in crack throughout the sample. Other minerals include orthopyroxene, garnet, monazite, ilmenite, biotite, and trace amounts of apatite. Monazite is 0.35% of the sample. The sample classifies on a QAP diagram as a quartz syenite.



Figure 9: QEMSCAN Image of Sample 225300



Figure 10: Pie Chart of Modal Mineralogy of Sample 225300

Mineral	Sample 225300
Orthoclase	46.29
Quartz	29.56
Plagioclase	15.87
Illite	6.03
Garnet	0.65
Ilmenite	0.26
Chlorite	0.24
Biotite	0.20
Orthopyroxene	0.19
Fe-oxide	0.16
Apatite	0.10
Zircon	0.03
Monazite-(Ce)	0.02
F 200	

Table 6: Modal Mineralogy of Sample 225300

Sample 225300 is mainly composed of orthoclase, quartz, plagioclase, and illite as exsolutions of orthoclase. Other minerals found in minor amounts include garnet, ilmenite, chlorite, biotite, orthopyroxene, iron oxide, and apatite. Trace amounts of zircon and monazite (0.02%) are present. The sample classifies on a QAP diagram as a granite.





Figure 12: Pie Chart of Modal Mineralogy of Sample 225351

Mineral	Sample 225351
Quartz	41.32
Orthoclase	26.58
Plagioclase	22.91
Illite	4.02
Orthopyroxene	3.08
Biotite	1.16
Ilmenite	0.29
Garnet	0.12
Chlorite	0.09
Fe-oxide	0.06
Muscovite	0.03
Apatite	0.02
Zircon	0.02
Monazite-(Ce)	0.02

Table 7: Modal Mineralogy of Sample 225351

Sample 225381 is mainly composed of quartz, orthoclase, and plagioclase. Illite is found as exsolutions of orthoclase. Significant amounts of orthopyroxene, and biotite can be found throughout the sample. Other minor minerals include ilmenite, garnet, and chlorite. Trace amounts of iron oxide, muscovite, apatite, zircon, and monazite (0.02%) are found. The sample classifies on a QAP diagram as a granite.



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**QEMSCAN** Analysis

Prepared for CAT Strategic Metals

By Matthew Wudrick Saskatchewan Research Council Mining and Energy

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## Sample receiving and preparation

A rectangular portion was cut from each sample which was then mounted on glass and cut to approximately 200 $\mu$ m thick. The thinned rock section was polished to final analytical surface using 1 $\mu$ m diamond abrasive. Each sample was ultrasonically cleaned with deionized water and then isopropyl alcohol. The thin section samples were then coated with a 15nm thick layer of amorphous carbon to ensure electrical conductivity of the sample surface.

#### **QEMSCAN** operation

The QEMSCAN in the SRC Advanced Microanalysis Centre is built on an FEI Quanta 650 scanning electron microscope fitted with a field emission gun (10nm resolution) and dual Bruker XFlash 5030 energy dispersive spectrometers with a maximum throughput of 1.5Mcps.

QEMSCAN analyses are a collection of back-scattered electron images and semi-quantitative point chemical analyses. The grain images and EDS data are combined using image analysis to calculate various parameters such as particle size distribution, mineral associations and liberation, modal abundances, etc.

Operating conditions were set to 25Kv and 10nA beam current, measured in a Faraday cup at the sample surface. Data were collected in field stitch mode with a point spacing of  $20\mu m$ . Raw X-ray energy spectra were compared to a mineral composition database customized for this project.

#### Analytical Statistics

Statistics from the QEMSCAN analyses are tabulated below

Sample	Sample 230369	Sample 230374
Analyzed Area (mm <sup>2</sup> )	891	891
Point Spacing (μm)	19.8	19.8
X-ray Analyses	2,230,171	2,242,433

Table 1: Operational Statistics

#### Modal Mineralogy

Modal mineralogy is calculated from the combined analysis of the BSE images and the mineral identification from the EDS data. The volumetric abundance of the minerals is converted to mass percent from density data for typical mineral compositions.



Figure 1: Pie Chart of Modal Mineralogy of Sample 230369

Mineral	Sample 230369
Plagioclase	44.58
Quartz	32.14
Orthoclase	9.20
Illite	6.27
Biotite	5.87
Fe-oxide	0.74
Ilmenite	0.48
Apatite	0.24
Hornblende	0.13
Chlorite	0.10
Muscovite	0.03
Zircon	0.03
Garnet	0.02

Table 2: Modal Mineralogy of Sample 230369

Sample 230369 is mainly composed of plagioclase (44.58%), quartz (32.14%), and orthoclase (9.20%). Illite and biotite are also present. Monazite is not found in this sample. The sample classifies on a QAP diagram as a granodiorite.



Figure 2: QEMSCAN Image of Sample 230369



Figure 3: Pie Chart of Modal Mineralogy of Sample 230374

Mineral	Sample 230374
Plagioclase	66.63
Biotite	24.22
Garnet	4.89
Ilmenite	0.97
Quartz	0.91
Chlorite	0.53
Hornblende	0.42
Orthoclase	0.35
Illite	0.34
Monazite-(Ce)	0.11
Muscovite	0.11
Pyrite	0.02
Zircon	0.02
Fe-oxide	0.01
271	

Table 3: Modal Mineralogy of Sample 230374

Sample 230374 is mainly composed of plagioclase (66.63%), biotite (24.22%), and garnet (4.89%). Monazite is present at 0.11% of the sample. Quartz (0.91%), and orthoclase (0.35%) are present in minor amounts, which classifies this sample on a QAP diagram as a gabbro.



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### **APPENDIX 4**

#### PHOTOS OF SELECTED BEDROCK SAMPLES

(see also SRC Geolab QEMSCAN Report – Appendix 3)



<b>Bedrock Sample Photo</b>	Sample # and Description
	#225264 Spectrometer: 70 cps / 60 cps Uranium Content: 0.30 ppm <i>3 cm hammer for scale</i>
	#225268 Spectrometer: 60 cps / 60 cps Uranium Content: 0.57 ppm U
WDTS, GLIFTIS AND MCOUNT	#225274 Spectrometer: 90 cps / 60 cps Uranium Content: 0.62 ppm <i>3 cm hammer for scale</i>



<ul> <li>#225274</li> <li>Spectrometer: 90 cps / 60 cps</li> <li>Uranium Content: 0.62 ppm</li> <li><i>3 cm hammer for sca</i></li> <li><i>3 cm hammer for sca</i></li> <li><i>4225281</i></li> <li>Spectrometer: 80 cps / 60 cps</li> <li>Uranium Content: 1.46 ppm</li> <li><i>3 cm hammer for sca</i></li> <li><i>3 cm hammer for sca</i></li> <li><i>3 cm hammer for sca</i></li> </ul>	Bedrock Sample Photo	Sample # and Description
#225281         Spectrometer:       80 cps / 60 cps         Uranium Content:       1.46 ppm <i>3 cm hammer for sco</i> #225300         Spectrometer:       100 cps / 60 cps         Uranium Content:       14.6 ppm		#225274 Spectrometer: 90 cps / 60 cps Uranium Content: 0.62 ppm <i>3 cm hammer for scale</i>
#225300 Spectrometer: 100 cps / 60 cps Uranium Content: 14.6 ppm	WATTS, GAIFTS AND MCOUNT	#225281 Spectrometer: 80 cps / 60 cps Uranium Content: 1.46 ppm <i>3 cm hammer for scale</i>
3 cm hammar for so		#225300 Spectrometer: 100 cps / 60 cps Uranium Content: 14.6 ppm


Bedrock Sample Photo	Sample # and Description
	#225351
A STATE OF	Spectrometer: 85 cps / 60 cps
No DEFERSAVE AND MICOURT	Uranium Content: 2.75 ppm
a the same and a the	
	3 cm hammer for scale
and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second sec	#225269 (SRC # 225369)
	Spectrometer: 65 cps / 60 cps
	Uranium Content: 0.42 ppm
Comment of the second	
Company of the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second sec	
	3 cm hammer for scale
	#225274 (SRC 225374)
	Spectrometer: 90 cps / 60 cps
	Uranium Content: 0.62 ppm
WALTS, GRIFFIS AND MCOUAT	
	3 cm hammer for scale