

7 June 2024

## Anomalous Radioactivity and Hydrothermal Alteration Intersected at Canary Project

# Highlights

- **Inaugural Success:** Anomalous radioactivity (>300 cps) was intersected in one of the four inaugural drill holes at the Canary Project, in addition to multiple zones of favorable alteration including hydrothermal silicification, clay, chlorite, and hematite.
- **Hydrothermal U Input:** Fracture-hosted elevated radioactivity was intersected in drill hole CAN-24-004 with Uranium:Thorium ("U:Th") ratios >4:1 measured with a handheld RS-125 Super-Spec, suggesting hydrothermal uranium input.
- **Shallow Targets:** Drilling focused on high-priority targets refined by geophysical work completed by the Company in 2022. The unconformity on the Project was intersected ~220-250 metres below surface.
- Ahead of Schedule & Under Budget: Completion of 1,863 metres within 4 drill holes, surpassing meterage expectations more than a week ahead of schedule and under budget.
- Follow Up Targets & Next Steps: Canary holds significant upside for discovery along three different and significantly underexplored conductor systems. Supplementary geophysical surveys over all three corridors will provide further target areas for phase II and III drilling.

Mamba Exploration Limited (ACN 644 571 826) ('Mamba', 'M24' or the 'Company') is pleased to announce that the inaugural drilling activities are now complete at the 7,302-hectare Canary **Project ("Canary" or "the Project").** Highlights include localised anomalous radioactivity<sup>1</sup> and prospective rock types typical of basement-hosted uranium deposits. The Project is currently under a three-year earn-in option agreement (the "Option Agreement") with Standard Uranium Limited ("Standard Uranium"). Canary is situated in the prolific eastern Athabasca Basin, northern Saskatchewan (Figure 1).

#### Commenting on the drilling program, Mamba's Executive Director Simon Andrew said:

"The Canary Drilling program has been nothing short of exemplary, demonstrating a level of execution that surpassed all expectations. Thanks to the planning and efficient operations by our partners Standard Uranium, the program was completed ahead of schedule and under budget. We remain excited by the potential at Canary and eagerly await assay results from the laboratory."

#### Commenting on the Project, Sean Hillacre, President & VP Exploration, Standard Uranium:

"Intersecting anomalous radioactivity in a completely untested area on one of three conductive corridors on the Canary project is very encouraging. The results from this program have revealed packages of the ideal host rocks for basement-hosted uranium mineralization, in addition to a potential quartzite ridge which is an important feature present in other eastern Athabasca uranium deposits such as McArthur River and Phoenix. The technical team and I are





excited to continue our exploration efforts on the Project with our partners at Mamba and look forward to putting out more results through 2024 and begin testing additional target areas in Phase II and III drilling."

The Project is situated in the Mudjatik geological domain where several recent discoveries have been made, including IsoEnergy's Hurricane Deposit<sup>Error! Bookmark not defined.</sup> located 11 km directly to the south, and is significantly underexplored relative to adjacent magnetic low/EM conductor corridors. Follow up targets are being planned as geological data from the spring 2024 program is processed and interpreted.



Figure 1. Overview of northeastern Athabasca Basin region, highlighting the Canary Project. Hurricane Deposit Indicated Resource from IsoEnergy Ltd<sup>1</sup>.

Drillhole CAN-24-004 intersected a narrow interval of anomalous radioactivity (greater than 300 counts per second) from 449.0 to 449.5 m, based upon hand-held scintillometer readings on drill core and downhole gamma probe results. Table 1 lists the drill collar information.

Core samples from the program have been submitted to Saskatchewan Research Council Geoanalytical Laboratory ("SRC") in Saskatoon, for geochemical assay and results will be

<sup>&</sup>lt;sup>1</sup> Indicated Mineral Resources of 48.61 million lbs of  $U_3O_8$  based on 63,800 tonnes grading 34.5% U3O8, see IsoEnergy Ltd (TSX.V: ISO) announcement titled 'Initial Resource Estimate' released 18 July 2022



reported once received and examined by the technical team in accordance with the Company's internal quality control processes.

#### **Technical Highlights**

The spring 2024 drill program comprised 1,863 metres of diamond drilling across 4 drill holes (Table 1). The drill program began on May 3rd and was completed ahead of schedule on May 31st, 2024. Local fracture-hosted anomalous radioactivity was intersected in the basement rocks of drill hole CAN-24-004. A handheld RS-125 scintillometer returned readings up to 410 counts per second (cps) from 449.0 to 449.5 m.

The Project covers more than 16 km of conductive corridors across three prospective exploration trends which locally host anomalous historical uranium occurrences. The Company completed a high-resolution ground DC/IP survey on the project in 2022, providing valuable structural and lithological information in the area to identify conductive bodies and potential fault systems.

The drill program was designed to test the newly outlined resistivity-low anomalies along the northern conductor trend, defined by the 2022 ground DCIP survey conducted by **Standard Uranium**. Figures 2 and 3 highlight spring 2024 drilling focused on testing the 3D resistivity anomaly both at the unconformity and in the basement, coinciding with modeled EM conductors.



Figure 2. Geophysical map highlighting basement-linked resistivity anomalies identified through the 2022 DC/IP survey on the Canary Project. The 2024 drill target area is circled in red. Three main exploration trends and historical drill holes are displayed with first vertical derivative (1VD) magnetics in the background.



Inaugural drilling intersected multiple key characteristics of a uranium-bearing mineralised system along the previously untested northern conductive trend on the Project (Figure 2). Key alteration features in the Athabasca sandstone include widespread silicification, extensive limonite alteration, and local moderate bleaching.

Basement intersections confirmed the presence of highly deformed and mylonitic metasedimentary and metasomatised rock packages across the northern corridor and defined a potential "quartzite ridge" in the corridor footwall. The rheology contrast between the softer metasedimentary rocks and resistant quartzite is interpreted as an important structural control on uranium mineralisation and is a common feature of other well-known high-grade uranium deposits such as McArthur River and Pheonix. Multiple zones of significant silicification were intersected in the basement over intervals up to 15 metres thick associated with white clay alteration. Significant silicification zones are also known to be associated with several uranium deposits across the Basin.

Additionally, legacy GeoTEM data defining the southeastern EM corridor on the project is directly comparable to the response and scale of the GeoTEM conductor which hosts the Roughrider/J-zone uranium deposits further to the south. Highly anomalous geochemistry and favorable alteration was returned from historical drill hole CRK-137 along the southeastern conductor, providing an exceptional follow-up target for Phase II drilling.



Figure 3 Map of the northern Canary conductor trend highlighting 2024 drill holes with 2008 VTEM in the background. The geophysical target area is defined by a significant resistivity low anomaly coinciding with EM conductors dipping to the north.



Table 1. Canary spring 2024 drill hole collar summary. Easting and Northing coordinates are reported in UTM Zone 13N, NAD83 datum; EOH = end of hole; m.a.s.l. = metres above sea level.

DDH	Easting	Northing	Elevation (m.a.s.l.)	Azimuth (°)	Dip (°)	EOH (m)
CAN-24-001	548255.56	6512622.24	394.7	188	-65	435
CAN-24-002	548507.17	6512483.57	401.0	180	-63	390
CAN-24-003	548580.35	6512785.88	405.3	174.8	-55.5	576
CAN-24-004	548723.36	6512681.50	403.0	178	-50	462

Samples collected for analysis have been sent to SRC Geoanalytical Laboratories in Saskatoon, Saskatchewan for preparation, processing, and ICP-MS multi-element analysis using total and partial digestion, gold by fire assay and boron by fusion. Sandstone samples were tested using the ICP-MS1 uranium multi-element exploration package plus boron. Basement samples were tested with ICP-MS2 uranium multi-element exploration package plus boron.

All sandstone samples, and basement samples marked as radioactive upon arrival to the lab were also analysed using the U3O8 assay (reported in wt%). Basement rock split interval samples range from 0.1 to 0.5 m and sandstone composite samples are comprised of multiple equal sized full core "pucks" spaced over the sample interval. SRC is an ISO/IEC 17025/2005 and Standards Council of Canada certified analytical laboratory. Blanks, standard reference materials, and repeats were inserted into the sample stream at regular intervals in accordance with Standard Uranium's quality assurance/quality control (QA/QC) protocols.

Samples containing clay alteration have been sent to Rekasa Rocks Inc. in Saskatoon, Saskatchewan to be analysed by Short Wavelength Infrared Reflectance ("SWIR") via a Portable Infrared Mineral Analyser ("PIMA") to verify clay species. Geochemical assay results will be released as they are received and examined by the technical team in accordance with the Company's internal quality control process.

DDH	From (m)	To (m)	Minerals observed and nature of occurrence	RS-125 Scintillometer peak(s) (Counts per Second)
CAN-24-001	277.5	278.0	Hematite-altered fracture	240
	332.5	333.0	Granitic pegmatite	250
CAN-24-002	353.5	354.0	Chlorite-altered fracture	230
CAN-24-003	483.0	483.5	Granitic pegmatite	220
CAN-24-004			Carbonate-hematite	
CAN-24-004	449.0	449.5	fracture	410

Table 2. Drillhole intervals at the Canary Project with RS-125 radioactivity readings > 200cps

**Cautionary Statement:** - The references to the presence of natural gamma radiation in diamond drill core reported in this news release was measured in counts per second (cps) using a handheld RS-125 super-spectrometer and verified using a down-hole Mount Sopris 32GR slim gamma probe. The readings are



not considered to be a proxy or substitute for laboratory analyses. The 32GR gamma probe has been calibrated to optimise the probe for uranium exploration logging and estimating weight percent U3O8 content. Readers are cautioned that scintillometer and gamma probe readings are not uniformly or directly related to uranium grades of the rock sample measured and should be treated only as a preliminary indication of the presence of radioactive minerals. All drill hole intersections are measured down-hole. Core interval measurements and true thicknesses are yet to be determined.

The Company considers radioactivity readings greater than 300 counts per second (cps) to be "anomalous".

The Company considers uranium mineralisation with concentrations greater than 1.0 wt% U3O8 to be "high-grade".

– ENDS –

This announcement has been authorised for release by the board.

For more information, please visit our website, or contact:

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#### About Mamba Exploration

Mamba Exploration, a Western Australian focused exploration Company, has recently expanded its portfolio by acquiring the Canary Uranium Project in the eastern Athabasca Basin, Saskatchewan, Canada. The company also holds four 100% owned geographically diverse projects providing year-round access. These projects are highly prospective mineral exploration assets located in the Ashburton / Gascoyne, Kimberley, Darling Range, and Great Southern regions of Western Australia. The projects in the Ashburton / Gascoyne and Great Southern are prospective for gold and REE, while those in the Kimberley and Darling Range are prospective for base metals such as copper, nickel, PGEs, manganese, and REEs.

#### **Competent Person Statement**

The information in this announcement that relates to Exploration Results is based on information compiled or reviewed by Ms Felicity Repacholi, a Competent Person who is a Director of the Company. Ms Repacholi is a Member of the Australian Institute of Geoscientists and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Ms Repacholi consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements.

#### Forward Looking Statements

This document contains "forward-looking statements" and "forward-looking information", including statements and forecasts which include without limitation, expectations regarding future performance, costs, production levels or rates, mineral reserves and resources, the financial position of the Company, industry arowth and other trend projections. Often, but not always, forward-looking information can be identified by the use of words such as "plans", "expects", "is expected", "is expecting", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates", or "believes", or variations (including negative variations) of such words and phrases, or state that certain actions, events or results "may", "could", "would", "might", or "will" be taken, occur or be achieved. Such information is based on assumptions and judgements of management regarding future events and results. The purpose of forward-looking information is to provide the audience with information about management's expectations and plans. Readers are cautioned that forward-looking information involves known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company and/or its subsidiaries to be materially different from any future results, performance or achievements expressed or implied by the forward-looking information. Such factors include, among others, changes in market conditions, future prices of minerals/commodities, the actual results of current production, development and/or exploration activities, changes in project parameters as plans continue to be refined, variations in grade or recovery rates, plant and/or equipment failure and the possibility of cost overruns.

Forward-looking information and statements are based on the reasonable assumptions, estimates, analysis and opinions of management made in light of its experience and its perception of trends, current conditions and expected developments, as well as other factors that management believes to be relevant and reasonable in the circumstances at the date such statements are made, but which may prove to be incorrect. The Company believes that the assumptions and expectations reflected in such forward-looking statements and information are reasonable. Readers are cautioned that the foregoing list is not exhaustive of all factors and assumptions which may have been used. The Company does not undertake to update any forward-looking information or statements, except in accordance with applicable securities laws.



### Appendix 1: JORC Code 2012 Table 1 Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	Commentary
Sampling techniques	<ul> <li>Drilling is primarily NQ diamond core from surface. Holes are logged geologically and measuring radioactivity in counts per second by handheld scintillometer and downhole gamma probe.</li> <li>Core will be sampled and assayed for uranium and other trace elements.</li> </ul>
Drilling techniques	• Drilling is diamond core from surface, primarily NQ.
Drill sample recovery	<ul> <li>Core Recovery was measured by recording the rock sample returned per run (~3 m) in reference to driller's depth blocks, noting depth drilled. Core recovery is generally excellent.</li> <li>There is not enough information to know if a relationship exists between recovery and grade.</li> </ul>
Logging	<ul> <li>All drill core has been logged geologically and geotechnically in detail. Logging is qualitative in nature.</li> <li>Each drill hole had downhole natural gamma and neutron logs completed at the end of hole with rods still in place.</li> </ul>
Sub-sampling techniques and sample preparation	<ul><li>Core will be sampled as half core with the remaining half preserved for reference.</li><li>Standards are inserted every 40 samples.</li></ul>
Quality of assay data and laboratory tests	<ul> <li>All drill core was analysed by a handheld Radiation Solutions RS-125 Super-Spectrometer continuously throughout all drill holes at minimum 5 cm intervals.</li> <li>All holes were probed with a Mount Sopris 32GR slim gamma probe at 10 cm intervals.</li> <li>Samples collected for analysis have been sent to SRC Geoanalytical Laboratories in Saskatoon, Saskatchewan for preparation, processing, and ICP-MS multi-element analysis using total and partial digestion, gold by fire assay and boron by fusion. Sandstone samples were tested using the ICP-MS1 uranium multi-element exploration package plus boron. Basement samples were tested with ICP-MS2 uranium multi-element exploration package plus boron. Basement samples marked as radioactive upon arrival to the lab were also analysed using the U308 assay (reported in wt %). Basement rock split interval samples range from 0.1 to 0.5 m and sandstone composite samples are comprised of multiple equal sized full core "pucks" spaced over the sample interval. SRC is an ISO/IEC 17025/2005 and Standards Council of Canada certified analytical laboratory. Blanks, standard reference materials, and repeats were inserted into the sample stream at regular intervals in accordance with Standard Uranium's quality assurance/quality control (QA/QC) protocols.</li> <li>Samples containing clay alteration have been sent to Rekasa Rocks Inc. in Saskatoon, Saskatchewan to be analysed by Short Wavelength Infrared Reflectance ("SWIR") via a Portable Infrared Mineral Analyser ("PIMA") to verify clay species.</li> </ul>
Verification of sampling and assaying	<ul> <li>Only visual estimates of uranium mineralisation are reported. No geochemical assay results or intersections are available as yet.</li> <li>No twinned holes have been completed.</li> </ul>
Location of data points	<ul> <li>Drill hole coordinates are recorded in UTM (NAD83 – Z13N).</li> <li>Collars were recorded with a handheld GPS with accuracy of ± 5m.</li> <li>Topography is generally flat to rolling with ~60 meters of local relief. Surface features consists of glacial depositional features including outwash sand plains, drumlins, and eskers.</li> </ul>



Data spacing and distribution	<ul> <li>Data spacing is variable due to broad regional exploration targets.</li> <li>Drilling completed to date is exploratory in nature and is not sufficient for Mineral Resource or Ore Reserve estimation purposes.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Drilling completed to date is exploratory in nature and the relationship between orientation and mineralisation is unknown.</li> </ul>
Sample security	• Samples are shipped via road to SRC Geoanalytical Laboratories in Saskatoon.
Audits or reviews	No audits or reviews have been completed.

### Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section)

Criteria	Commentary
Mineral tenement and land tenure status	<ul> <li>Standard Uranium (Saskatchewan) Ltd., a wholly owned subsidiary of Standard Uranium Ltd., has 100% ownership of all Mineral Dispositions as listed in the Appendix 1 above.</li> <li>All Mineral Dispositions are in good standing and all necessary permits for the current level of operations have been received.</li> <li>While the Mineral Dispositions are in good standing, additional permits/licences may be required to undertake specific (generally ground disturbing) activities such as surface exploration and underground development.</li> <li>First Nation and Métis consultation has been facilitated via Exploration Agreements, which are in place and current for live Mineral Dispositions on the Canary Project. The specifics of these agreements are outlined in the body text above.</li> </ul>
Exploration done by other parties	<ul> <li>A brief history of previous exploration was press released by Mamba on 27<sup>th</sup> December 2023.</li> <li>The Canary Project is situated along the Waterfound River in the Athabasca Basin and comprises two mineral dispositions totalling 7,303 hectares. The Project was acquired via staking in July 2020, and Standard Uranium Ltd. holds a 100%-interest in the Project. Historical airborne electromagnetic work between 1993 and 2006 identified 3 main conductive systems that represent trends of graphitic metasedimentary rocks - prospective host rocks for uranium mineralisation. Furthermore, ground EM and IP surveys have confirmed two prospective target areas on the Project related to structural disruptions of the conductive corridors. In addition, depth to the Athabasca-basement nonconformity is known to be between 84 and 230 metres from the surface on the project, resulting in shallow drill target depths. Historical drill-hole CRK-137 identified highly anomalous uranium enrichment near the unconformity with 10 ppm uranium over 7.4 metres in systematic composite sampling of the sandstone, and strong hydrothermal alteration observed throughout the interval. Within this zone, a discrete 0.5 m sub-interval returned 103.1 ppm uranium; and a 0.5m interval in the graphitic metasediments immediately below the unconformity returned 200 ppm uranium. Only one of the three conductive targets on the Project has been tested by drilling, and results are considered highly anomalous. The ground-based DCIP resistivity survey completed by the Standard Uranium in 2022 has defined high-priority drill targets for an inaugural drill program on the Project.</li> </ul>
Geology	• The Canary Project is situated in the northeastern portion of the Athabasca Basin and lies within the Hearne Subprovince. The Hearne Subprovince contains crystalline basement rocks of the lithostructural Mudjatik Domain, characterised by a dome and basin structural style comprising concentric domes of Archean granitoid orthogneiss separated by discontinuous Paleoproterozoic supracrustal rocks of the Wollaston Supergroup and



	<ul> <li>overlain by Paleo to Mesoproterozoic sandstones of the Athabasca Supergroup.</li> <li>Crystalline basement lithologies in the Project area predominately consist of metasedimentary rocks, including pelitic to semi-pelitic to psammitic gneisses and pegmatite intrusions. Major structural features such as faults and lithological contacts coincident with conductive packages have also been intersected along with corresponding increases in alteration intensities.</li> <li>The overlying Athabasca Supergroup rocks on the Project are comprised of Manitou Falls Formation sandstones. The Manitou Falls Collins member (MFc) and Bird member (MFb) unconformably overlie the Archean to Paleoproterozoic basement lithologies and range in thickness from approximately 70 metres in the easternmost portion of the Project and increasing westward to upwards of 215 metres.</li> <li>Uranium mineralisation on the Project is proximal to the unconformity within isolated fractures and locally disseminated intervals in drill hole CRK-137 (See public assessment report 64I12-NW-0062). Anomalous radioactivity was intersected in the basement of drillhole HL-07-03, which returned elevated uranium up to 3.3 ppm over 20.6 m in the sandstone (See public assessment report 74I09-0086).</li> <li>Pleistocene glacial till deposits superimpose the Athabasca Supergroup on the Project and vary in thickness from 0 to 60 metres.</li> <li>The exploration model for the Canary Project is unconformity-related and basement hosted uranium mineralisation. Exploration efforts will focus on several high-priority target areas along several kilometres of untested conductors, coincident with cross-cutting faults and historical zones of elevated uranium, in addition to favourable geochemical</li> </ul>
	anomalies.
Drill hole Information	Refer to Table within body of the report.
Data aggregation methods	• No data aggregation methods were utilised in the reporting of historical mineral assays.
Relationship between mineralisation widths and intercept lengths	<ul> <li>Mineralisation on the Canary Project is poorly defined, and orientations are approximate. Mineralisation is generally intersected obliquely to true-width and approximations have been made based on geological interpretations; however, true widths are unknown.</li> </ul>
Diagrams	• All appropriate maps and figures are included in the body of text.
Balanced reporting	All significant and relevant intercepts have been reported.
Other substantive exploration data	• All relevant exploration data is depicted in figures, body text, and included appendices.
Further work	<ul> <li>A discussion of further exploration work is outlined in the body of the report.</li> <li>Sampling of drill core is currently ongoing with assays expected within a few months.</li> </ul>