

ASX Announcement

7th October 2024

MAIDEN DRILL PROGRAM INTERSECTS ELEVATED RADIOACTIVITY AT HIDDEN BAY

5-hole program provides strong vectors for follow-up ground geophysics and further drilling

Highlights

- Maiden drilling program successfully completed at the Hidden Bay Uranium Project in Canada's Athabasca Basin, with five diamond drill-holes drilled for 1,781m.
- Elevated radioactivity intersected in the 5th hole of the program (DDHB24-005), with up to 597 counts per second (cps) recorded in the down-hole gamma probe. The intersection is associated with a graphitic-pyritic shear structure.
- The graphitic-pyritic shear zone is interpreted to trend north-east and is considered a potential pathway for uranium mineralisation. As a result, follow-up target areas have been identified along strike from DDHB24-005.
- As previously reported, the first diamond drill hole of the program (DDHB24-001) intersected a significant thick zone of hydrothermal alteration from 405.4m to the end-of-hole at 440m. This is a potential indicator of proximity to uranium mineralisation.
- Ground geophysics survey (Induced Polarisation (IP)/Resistivity) planning is underway around DDHB24-005 and DDHB24-001 to better define target areas for the next stage of drilling.

Thunderbird Executive Chairman George Bauk said: *"We're very encouraged to have intersected important geological indicators in two of the five drill-holes completed at the Hidden Bay Project. The evidence from these two holes suggest we have many of the right ingredients for a typical unconformity uranium mineralising system, with drilling giving us invaluable structural, geological and stratigraphic information that will assist greatly in the next phase of exploration."*

"The program has been executed safely, efficiently and effectively thanks to our geological and drilling contractors (Dahrouge and QB Drilling respectively). We now require some time to analyse and interpret the geological data acquired, including the assay data, and then plan our follow-up programs. The information we have gathered provides clear vectors for follow-up exploration, initially using low-cost geophysical methods, to unlock the potential of this highly prospective project."

Thunderbird Resources Limited (Thunderbird) or (the Company) (ASX: **THB**) is pleased to provide an update on its maiden drilling program at the 100%-owned Hidden Bay Uranium Project, located in Canada's world-class Athabasca Basin.

The Company has now successfully completed the program with five diamond drill-holes completed for a total of 1,781m drilled. The program was designed to test several basement-hosted uranium targets proximal to the regional Athabasca Basin unconformity. The preliminary results from the first four holes

of the program were reported in the ASX announcement dated 16th September 2024 and titled “Significant alteration zone intersected at Hidden Bay”.

The last drill hole in the program (DDHB24-005), which was completed to a depth of 461m, intersected a significant graphitic and pyritic shear zone from 438.9m to 441m down-hole, with elevated radioactivity of up to 597 counts per second (cps) recorded in the down-hole gamma probe* (see Figures 1 and 2 for core photos showing the logged zones of interest).

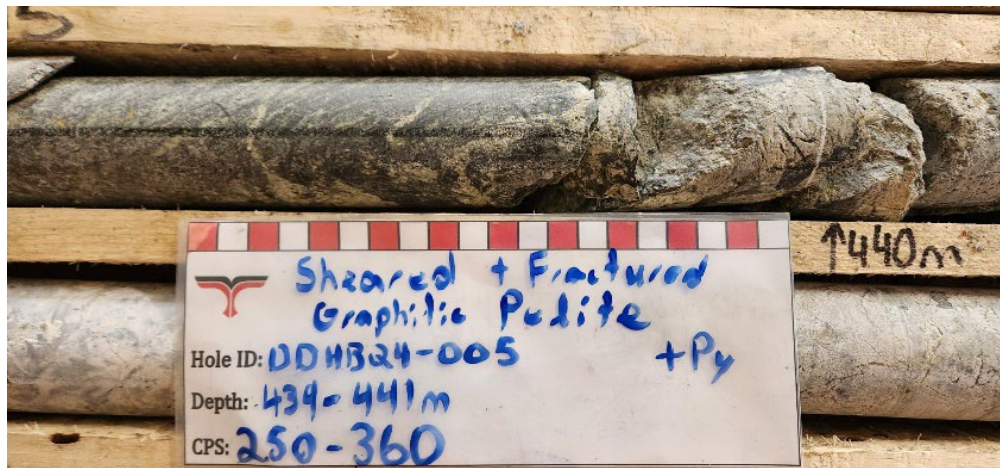


Figure 1: Graphitic sheared metapelite with elevated radioactivity at around 440m down-hole in DDHB24-005.

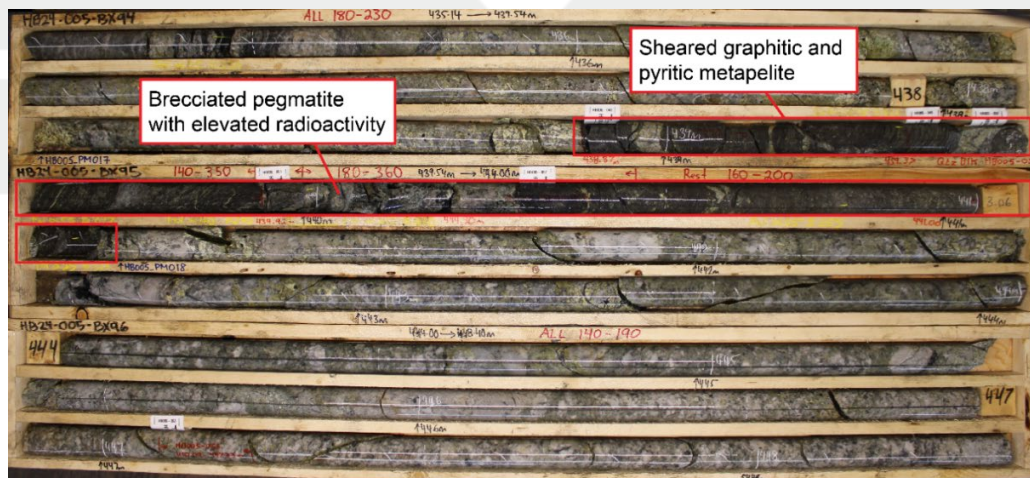


Figure 2: DDHB24-005 (435.14-448.4m) – sheared graphitic and pyritic metapelite (439-441m) with brecciated pegmatites.

Structural core measurements taken from this shear zone indicate an approximate north-east trend (see Figure 3 below). The shear zone occurs within a wider zone from 433m to the end-of-hole (27m down-hole width) consisting of graphitic metapelite with numerous pegmatitic intrusives (Figure 2).

There is evidence of brittle reactivation within the small, brecciated pegmatite, with elevated radioactivity, at around 439.5m down-hole, which is hosted within the graphitic shear zone.

Brittle re-activation associated with graphitic fault zones is a common feature of unconformity uranium deposits in the Athabasca Basin.

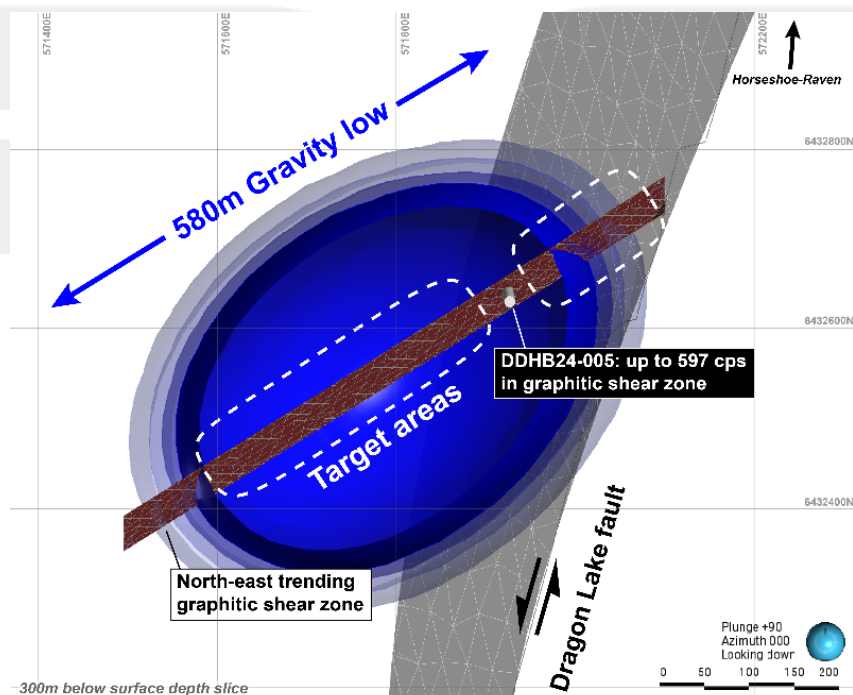
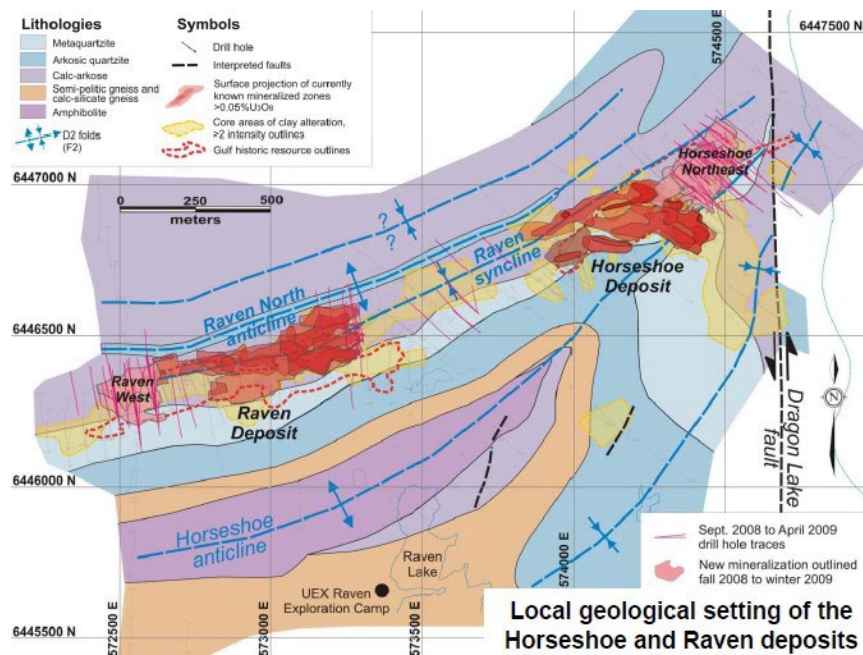


Figure 3: Upper - Local geological setting of Horseshoe-Raven uranium deposits (from Rhys et al, A new-look at basement-hosted mineralization in the Horseshoe-Raven deposits, eastern Athabasca Basin, Saskatchewan Geological Survey Open House, Nov 2010) - located 14km north of target HB-05
Lower -Plan view of target area HB05 showing location of DDHB24-005, the Dragon Lake Fault, interpreted shear zone and gravity low feature.



As reported in the ASX announcement of 16 September 2024, the first drill-hole of the program (DDHB24-001) intersected a significant hydrothermal alteration zone from 405.4m to the end-of-hole at 440m.

The alteration is interpreted as clay, chlorite and hematite, with a structural zone of intense alteration including textural destruction of the host rock, quartz dissolution and recrystallization from 405m to 409m down-hole.

The hole ended at 440m still within clay and chlorite altered orthogneiss. The alteration zone is interpreted to be the likely cause of the targeted gravity low and is potentially indicative of an unconformity-related uranium mineralising system.

The locations of the completed drill-holes at Hidden Bay are shown in Figure 4 below.

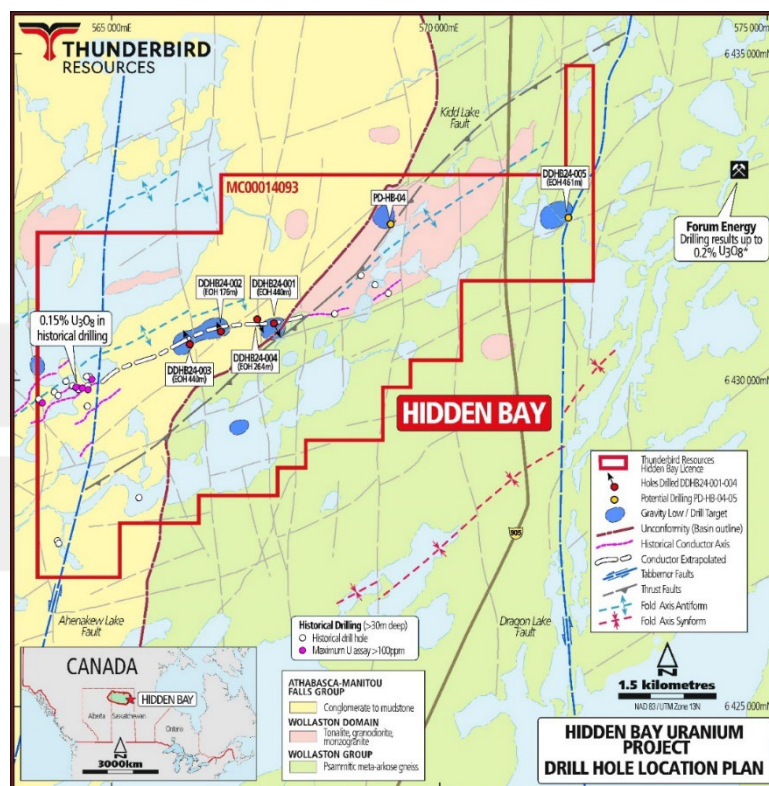


Figure 4: Completed drill-hole locations at the Hidden Bay Uranium Project, Athabasca Basin (* Refer Forum Energy (TSX-V:FMC) website (Wollaston |Forum Energy Metals Corp).

Next Steps

Samples from the drilling program have been submitted for geochemical assay with results expected in around 6-8 weeks. This geochemical data, along with all geological and structural data from the drilling program, will be integrated and interpreted and then used to plan further ground exploration.

DDHB24-005:

Ground geophysics techniques (Induced Polarisation (IP)/Resistivity) in the vicinity of drill hole DDHB24-005 are currently being planned.



The graphitic-pyritic shear zone encountered in DDHB24-005, which is a potential fluid pathway, may be detectable with ground geophysics (IP). This technique could be utilised to map the extent of the shear zone, prior to conducting follow-up drilling. Additionally, a resistivity survey may highlight clay alteration, indicated as areas of low resistivity.

The target areas are located along the interpreted strike of the shear zone, to the south-west and north-east of DDHB24-005, which are coincident with the large gravity low (nearly 600m in strike length) (see Figure 3).

The target areas are also proximal to the Dragon Lake Fault, a regionally extensive north-south trending fault which is also proximal to the Rabbit Lake and Horseshoe-Raven uranium deposits located just 19km and 14km respectively to the north (Figure 6). The overall geological setting of the target is very similar to the Horseshoe-Raven deposits (Figure 3).

DDHB24-001:

IP/Resistivity is being considered for the target area around drill hole DDHB24-001. These techniques will help map the extent of the clay alteration zone and the granite-metasediment contact in proximity to DDHB24-001 before proceeding with any further drilling of this target area.

Hole ID	Target	Easting	Northing	Elevation (masl)	Azimuth (degrees)	Inc (degrees)	Depth (m)
DDHB24-001	HB-01	567450	6430850	420	155	-77	440
DDHB24-002	HB-02	566640	6430715	430	335	-80	176
DDHB24-003	HB-03	566165	6430505	425	300	-80	440
DDHB24-004	HB-01	567192	6430904	420	155	-70	264
DDHB24-005	HB-05	571945	6432545	420	335	-75	461

Table 1: Hidden Bay Project diamond drill hole details (Coordinates using NAD83 UTM Zone 13N)

Drill Hole Geological Details

DDHB24-005:

The hole was designed to test a discrete gravity low (HB-05), within basement rocks to the east of the regional Athabasca unconformity and proximal to the north-south trending Dragon Lake Fault. The hole intersected calcareous, psammitic and pelitic metasediments down to 261.5m, whereupon a potassic granite was intersected to 284m. This granite is likely to be the same as, or related, to the Kidd Lake Granite which outcrops to west and was intersected in the other drill holes of this program. From 284m to 420m a package of intercalated psammopelitic to pelitic metasediments intruded by numerous multi-metre scale leucocratic pegmatites was encountered. A large leucocratic pegmatite was then intersected to 433m, after which the graphitic metapelite with numerous leucocratic pegmatites was encountered to the end of hole at 461.1m.

Some faulting and clay alteration was noted along the contacts with the potassic granite (261.5m-284m) with associated low-level radioactivity, although this is interpreted to be predominantly due to thorium rather than uranium. Intervals of >300 cps within drill hole DDHB24-005 are summarised as follows (as measured by down-hole gamma probe*):

- 0.3m from 240.35m averaged 365 cps;



- 0.8m from 365.95m averaged 443 cps;
- 0.3m from 438.35m averaged 464 cps

Although a gravity low was the primary drill target the geology encountered in the drill hole does not fully explain the anomaly and further drilling is warranted.

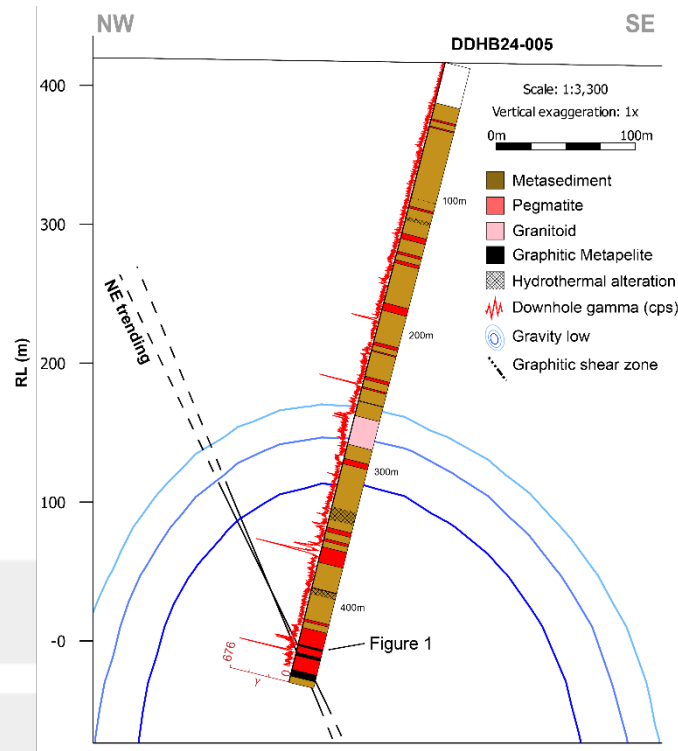


Figure 5: Cross-section of DDHB24-005 showing simplified geology and downhole gamma probe results

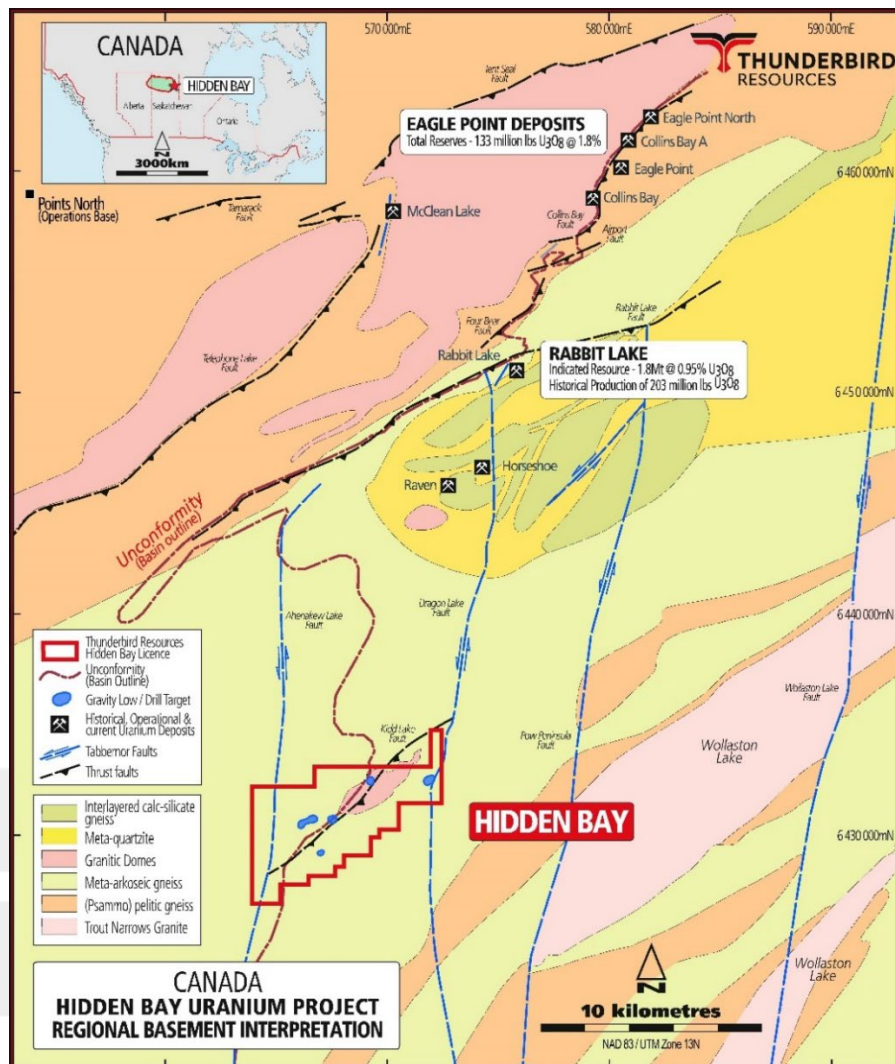


Figure 6: Hidden Bay Project - regional geology1

Hidden Bay is located approximately 20km south of the historic Rabbit Lake Uranium mine, which was the longest running uranium mine in North America with over 41 years of mining, producing over 203 million pounds of uranium concentrate¹.

This part of the Athabasca Basin is highly endowed with several uranium deposits and producing mines within a 40km radius including Eagle Point, Collins Bay, Cigar Lake, Roughrider, and Horseshoe-Raven (see Figures 5 and 6). Despite its proximity to multiple uranium prospects and deposits, only one hole has been drilled on the property in the last 35 years.



Figure 7: Location of Hidden Bay Uranium Project in the eastern Athabasca Basin

¹ Resource references

Deposit	Owner	Status	Category	Tonnes	Lbs U ₃ O ₈	Grade (% U ₃ O ₈)	Cut-off (% U ₃ O ₈)	Source
EAGLE POINT	Cameco	Past-Production	Inferred	2,030,000	25,900,000	0.58		Saskatchewan Exploration and Development Highlights 2015, Sask. Ministry of the Economy, Table 2, p.5
			Measured & Indicated	1,340,000	22,200,000	0.75		
RABBIT LAKE	Cameco	Past-Production	Indicated	1,836,500	38,600,000	0.95		https://www.cameco.com/businesses/uranium-operations/suspended/rabbit-lake/reserves-resources

*Radioactivity (counts per second) measured using a downhole gamma probe. Readings are not directly or uniformly related to uranium grades of the rock sample measures and are only a preliminary indication of the presence of radioactive minerals. Details of the gamma probe tool used are provided in JORC Table 1.



This announcement has been authorised for release by the Board of Directors.

For further information please contact:

George Bauk Executive Chairman +61 408 931 746 george@thunderbirdresources.com	Joe Graziano Company Secretary +61 411 649 551 joe@pathwayscorporate.com.au	Media enquiries Read Corporate Nicholas Read +61 419 929 046 nicholas@readcorporate.com.au
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Competent Person Statement

The information in this documents that relates to Exploration Results is based on information compiled by Mr Robin Wilson who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Wilson is a consultant and Technical Director for Thunderbird Resources and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (the JORC Code). Mr Wilson consents to the inclusion of this information in the form and context in which it appears.

Ends -----



ABOUT THUNDERBIRD RESOURCES

Thunderbird Resources (ASX:THB) (“Thunderbird” or “the Company”) is an exploration company dedicated to creating shareholder value through uranium exploration activities. The Company is focused on its uranium portfolio of projects, in Canada.

- Strong track record of generating high-value projects
- Portfolio streamlined through the sale of Picha and Charaque Copper Projects in Peru to Firetail Resources (ASX: FTL) in 2023.
- Focus on high-potential, drill-ready uranium assets in Canada’s Athabasca Basin at the right time in the Uranium cycle:

Hidden Bay (100%) Maiden drill program completed.

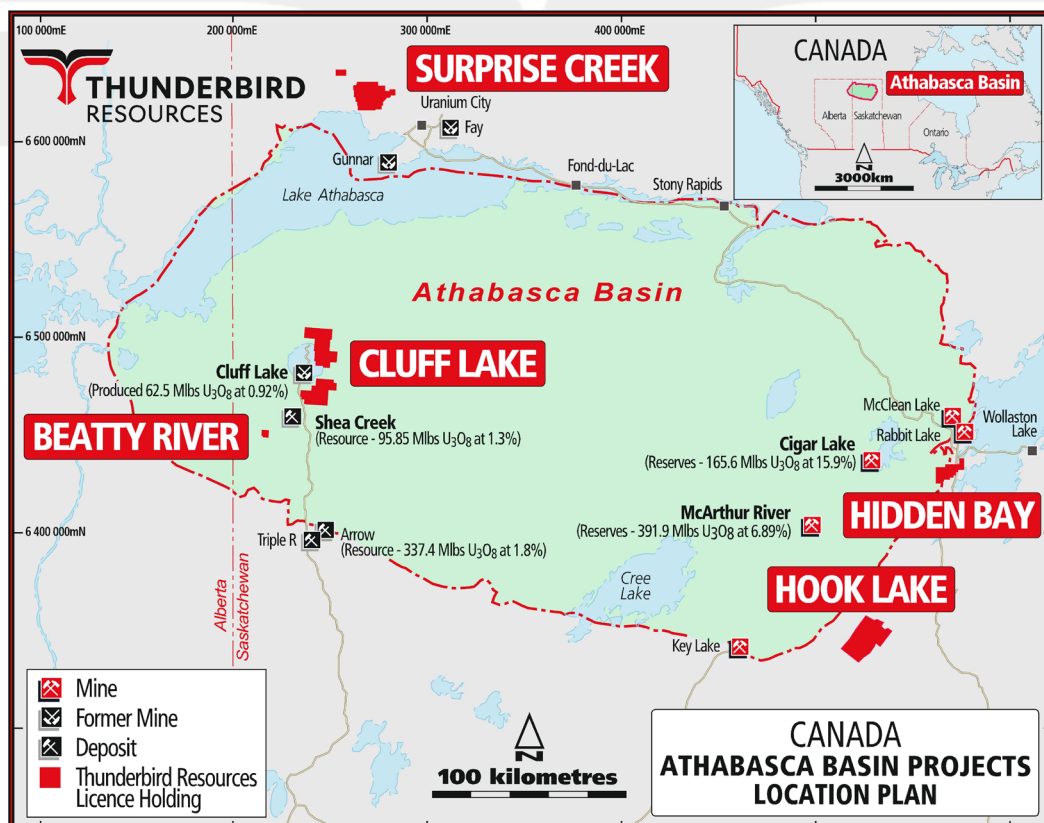
Cluff Lake (100%) 4 priority drill targets identified.

Surprise Creek Fault (100%) Mineralisation delineated over 500m of strike

Hook Lake (80%) Follow-up on 11 new targets

Beatty River (100%) Follow-up on historical HRE exploration results

Significant leverage to exploration success in Peru through 8% shareholding in Firetail plus retained 30% project interest – 5,000m diamond drilling program recently completed at Picha Project, Peru.



Appendix One

JORC Code, 2012 Edition – Table 1 report

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	- Nature and quality of sampling. - Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. - Aspects of the determination of mineralisation that are Material to the Public Report.	- Not applicable – no sampling reported. - Not applicable – no sampling reported. - Results reported herein relate to qualitative geological observations and interpretations of drill core, along with downhole radioactivity measurements of drill holes using a downhole gamma probe, which takes a reading in counts per second (cps) every 0.1m downhole.
Drilling techniques	Drill type and details	Drilling was completed using an A5 diamond core drilling rig. All core is NQ2 diameter and standard tube. All core is oriented using an ACT III orientation tool.
Drill sample recovery	- Method of recording and assessing core and chip sample recoveries and results assessed. - Measures taken to maximise sample recovery and ensure representative nature of the samples.	Core recovery is determined by piecing core together and measuring the core length between the driller's marker blocks. This information is recorded and entered into the drilling database
Logging	- Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation studies. - Whether logging is qualitative or quantitative in nature. - Core (or costean, channel, etc) photography.	- Diamond core was geologically and geotechnically logged using predefined lithological, mineralogical and physical characteristics (such as colour, weathering, fabric) logging codes using proprietary software. The information collected is sufficient to support mineral resource estimation, mining studies, metallurgical studies should it be required. - Logging was generally qualitative in nature except for the determination of core recoveries and geotechnical criteria which was quantitative. - Photographs of all drill core samples taken.
Sub-sampling techniques and sample preparation	- If core, whether cut or sawn and whether all core taken. - If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. - For all sample types, the nature, quality and appropriateness of the sample preparation technique. - Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. - Measures taken to ensure that the sampling is representative of the in situ	- No samples have been submitted for assay yet, however half core samples have been collected using a manual core splitter. - Not applicable – no sampling reported. - Not applicable – no sampling reported. - Not applicable – no sampling reported. - Not applicable – no sampling reported.



Criteria	JORC Code explanation	Commentary
	material collected, including field duplicate results. Whether sample sizes are appropriate to the grain size of the material being sampled.	
Quality of assay data and laboratory tests	- The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. - For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. - Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	- Not applicable – no assays reported. - A downhole gamma probe is used to measure radioactivity downhole with a reading taken every 0.1m downhole. The gamma probe used is a 2GHF-Triple Gamma. The downhole deviation survey equipment used is an OMNI42x downhole tool. - The gamma probe was calibrated prior to the start of the drilling program.
Verification of sampling and assaying	- The verification of significant intersections by either independent or alternative company personnel. - The use of twinned holes. - Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. - Discuss any adjustment to assay data.	- Internal verification of significant mineralisation or results by more than one company geologist. - Not applicable – no drilling reported herein. - Primary data was collected in the field into company designed spreadsheets with in-built validation. The Company's geological database is used as the database storage and management software and incorporates numerous data validation and integrity checks. All data was checked by the responsible geologist and digitally transferred to Perth office for loading to the Company's database. Data is regularly backed-up. - Not applicable – no assay data reported.
Location of data points	- Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), and other locations used in Mineral Resource estimation. - Specification of the grid system used. - Quality and adequacy of topographic control.	- A Garmin 66st GPS was used to locate all drill hole collars with a nominal accuracy of +/- 5m. - NAD83 UTM Zone 13N projected grid system was used. - Topographic control is considered fit for purpose of early-stage exploration (maiden drill program).
Data spacing and distribution	- Data spacing for reporting of Exploration Results. - Whether the data spacing and distribution is sufficient to establish the	- Drill holes are located to intersect mineralisation and therefore at irregular spacing, which is appropriate for early-stage exploration. - Drill hole spacing and sampling intervals are considered appropriate for early-stage exploration where the initial objective is to intersect mineralisation.



Criteria	JORC Code explanation	Commentary
	<i>degree of geological and grade continuity</i> <i>Whether sample compositing has been applied.</i>	No applicable – no sampling reported.
Orientation of data in relation to geological structure	<i>Whether the orientation of the sampling achieves unbiased sampling of possible structures.</i>	Orientation and geometry of potential mineralising structures is currently uncertain due to the early-stage nature of the exploration program.
Sample security	<i>The measures taken to ensure sample security.</i>	The samples will be delivered to the SRC Laboratory in Saskatoon in compliance with chain of custody documentation provided by SRC.
Audits or reviews	<i>The results of any audits or reviews of sampling techniques and data.</i>	Not applicable for early-stage exploration.



Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	- Type, reference name/number, location and ownership including agreements or material issues with third parties. - The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	- The Hidden Bay Project comprises 1 mineral claim covering 31.9km². Ownership is 100% by Thunderbird Resources wholly owned subsidiary 1255004 B.C. Ltd. - Mineral Claim is current. There are no objections by landowners or indigenous parties over the area of activity, no known environmental claims, no proclaimed or proposed wilderness areas and no known Impediments to operate.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	- Exploration was previously completed on the Hidden Bay Project by several companies since the 1970s including Gulf Minerals Canada from 1972 to 1981, Eldorado in 1987, and Denison Mines from 2007-2015. Programs included: - Boulder, radon sampling - VLF-EM, magnetics, HLEM geophysical surveys - RC and Diamond drilling - No drill testing of targets being tested by Thunderbird Resources in current drill program has previously been completed.
Geology	Deposit type, geological setting and style of mineralisation.	Unconformity related uranium deposit with mineralisation occurring as pods, lenses and veins within a ~ 300m thick, altered impure calcareous metasediment of the Wollaston Group. The western portion of Hidden Bay property is covered by undeformed rocks of the late Paleoproterozoic Manitou Falls Formation (Athabasca Group) that sits unconformably on the metamorphic basement rocks of the Wollaston Domain. Targets based on the Basement-hosted model which includes examples such as the nearby Rabbit Lake, and Eagle Point Uranium mines.
Drill hole Information	- A summary of all material information including a tabulation of the following information for all Material drill holes: - Easting, northing and elevation of the drill hole collar - Dip, azimuth and depth of the hole - down hole length and interception depth	All drilling details provided in Table 1 above in the body of the report.
Data aggregation methods	- In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. - The assumptions used for any reporting of metal equivalent values should be clearly stated.	- Not applicable to the results reported. - Not applicable - no metal equivalents reported.



Relationship between mineralisation widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If the True width is not known there should be a clear statement to this effect (eg 'down hole length, true width not known').	• All intervals reported herein are downhole lengths only. True widths are currently unknown. • Geometry of any mineralisation is currently unknown. • Downhole lengths only reported above.
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	• Refer to Figures in the body of the report above.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced.	• All relevant results reported in the body of report above.
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• No other relevant exploration data to report at this time. Previous relevant ASX announcements reported by Thunderbird Resources are as follows: ○ 9th August 2022: Hidden Bay Uranium Airborne Survey identifies Drill Targets ○ 17 November 2022: Priority uranium drill targets confirmed at Hidden Bay ○ 16th September 2024: Significant Alteration Zone intersected at Hidden Bay
Further work	• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas.	• Further work on the project likely to include the following: ○ Plan ground geophysics to follow-up on alteration intersected in DDHB24-001. ○ Follow-up drilling based on ground geophysics. • Relevant diagrams are included in the body of the report above.

Sections 3, 4 and 5 do not apply to this report as there are no mineral resources, no ore reserves and no gemstones reported in this report.