

ASX Announcement

16th September 2024

Hidden Bay Uranium Project, Canada – Drilling Update

THICK ALTERATION ZONE INTERSECTED IN FIRST DIAMOND DRILL HOLE AT HIDDEN BAY

Highlights

- Maiden drilling program at the Hidden Bay Uranium Project in Canada's Athabasca Basin progressing well, with four drill holes completed.
- The first diamond drill hole (DDHB24-001) has intersected a significant zone of alteration from 405.4m to the end-of-hole at 440m.
- DDHB24-001 was drilled to test the previously identified gravity low target HB-01, with the alteration zone encountered likely to be the cause of the gravity low.
- Ground geophysics planned around target HB-01 to better inform follow-up drilling.
- Drill holes DDHB24-002 and 003 completed to test gravity low targets HB-02 and HB-03.
- The drill rig has now moved to test gravity target HB-05, located in the eastern part of the project area.

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 so far completed three of the five proposed drill holes, with a fourth hole completed as follow-up to DDHB24-001. The program is designed to test several basement-hosted uranium targets proximal to the regional Athabasca Basin unconformity. All drill holes completed to date intersected the unconformity at shallow depths (20-30m).

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 (see example in Figure 1).

The alteration zone is interpreted to be the likely cause of the gravity low and is potentially indicative of an unconformity-related uranium mineralising system.

The alteration zone is proximal to a series of pegmatites which have elevated radioactivity in the footwall and hanging wall with up to 255 cps recorded in the down-hole gamma probe*. The elevated radioactivity is interpreted to be related to hydrothermal alteration rather than the pegmatites primary mineralogy.

Selective samples from DDHB24-001 have been sent for Shortwave Infrared Reflectance Spectroscopy (PIMA) analysis to help identify the clay minerals in the alteration zone. Preliminary data has been received but a final interpretation is still awaited.

The details of the completed drill holes are provided in the table below.

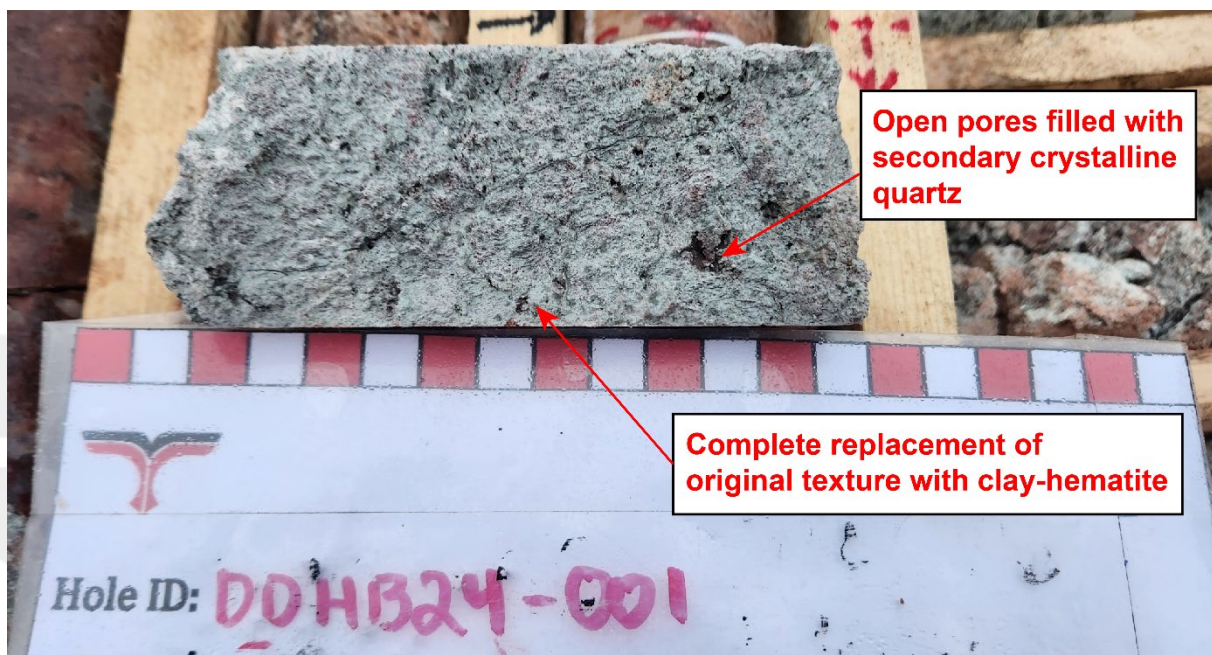


Figure 1: Example of alteration zone from DDHB24-001 (421.5m)

The proposed drill program has been modified to include an additional follow-up hole at target HB-01, which has just been completed to a depth of 264m. This hole is located around 270m west of DDHB24-001.

The follow-up hole, DDHB24-004 was designed to test the intersection of an interpreted NE-trending fault and north-south trending Tabbernor fault, where a distinct magnetic low feature has been recognised, as well as intersecting part of the gravity low HB-01. No elevated radioactivity or similar alteration to that found in DDHB24-001 was encountered however the hole did intersect pervasive chlorite alteration with lesser hematite and clay alteration associated with two significant shear zones within a felsic intrusive unit.

The drill rig has now moved to target HB-05 in the eastern part of the project area.

Further exploration using ground geophysics techniques in the vicinity of DDHB24-001, and the target HB-01 are being considered, to more cost effectively map out the extent of the alteration zone and the granite-metasediment contact, prior to any further drilling of this target area.



The other two holes completed in the program thus far, DDHB24-002 and -003, did not intersect any significant alteration or elevated radioactivity (see below for further details).

Management Comment

Thunderbird Executive Chairman George Bauk said: “We’re very encouraged to have intersected a strong zone of alteration in our first drill hole at Hidden Bay. This alteration may indicate that we are proximal to a uranium mineralising system, and follow-up work is now being planned which will hopefully enable us to vector towards uranium mineralisation.”

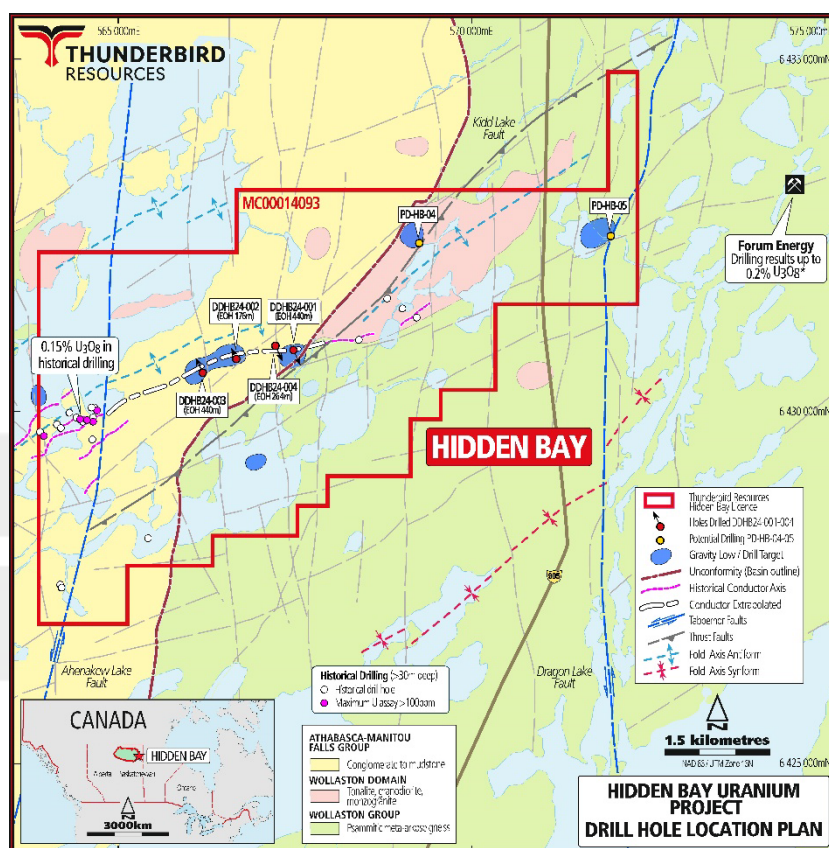


Figure 2: Completed drillholes and proposed drilling locations at the Hidden Bay Uranium Project, Athabasca Basin (* Refer Forum Energy (TSX-V:FMC) website (Wollaston|Forum Energy Metals Corp.))

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
DDHB24-003	HB-01	567192	6430904	420	155	-70	264

(Coordinates using NAD83 UTM Zone 13N)



Figure 3: Drill Rig at Hidden Bay Project – DDHB24-001

Drill hole geological details

DDHB24-001:

The hole was designed to test a discrete gravity low (HB-01), close the regional Athabasca unconformity and a north-south trending Tabbernor fault. The hole intersected the regional Athabasca Basin unconformity at around 19.5m, and then metasediments (meta-arkoses, pelites) to 44.5m. Thereafter, the hole is dominated by various felsic intrusives (granitic to granodioritic in composition), with intervals of pegmatite and minor amphibolites. A zone of deformation was intersected from 405-409m with intense clay, hematite and chlorite alteration which continues to the end- of-hole although less intense (see Figures 1 and 4).

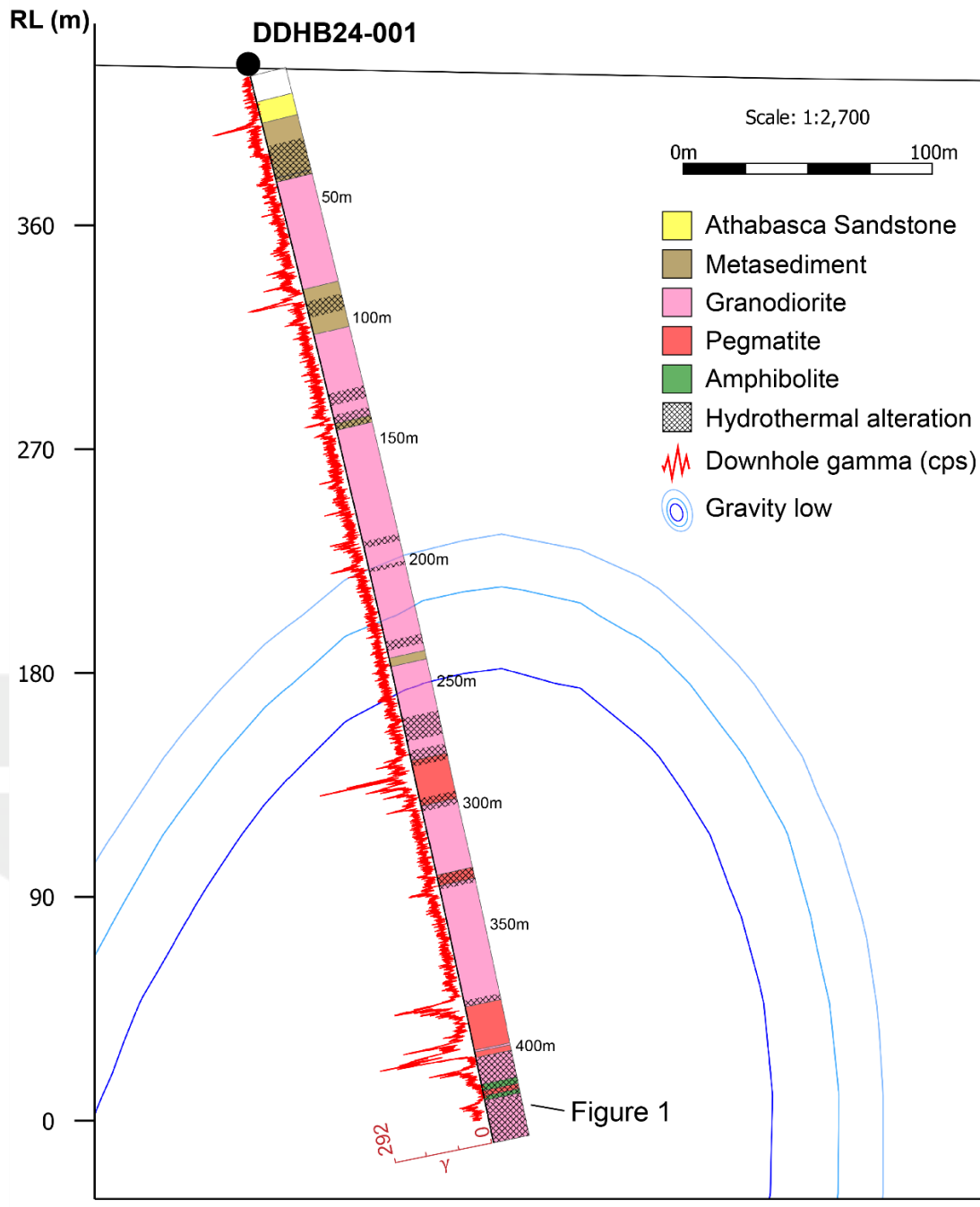


Figure 4: Cross-section of DDHB24-001 showing simplified geology and downhole gamma probe results

DDHB24-002:

The hole was designed to test the gravity low HB-02, however it was terminated at 176m before reaching the target depth of 430m. The hole also intersected the Athabasca Basin unconformity at 32m, metasediments (psammite to psammo-pelitic) to 48m and then a weakly magnetic granite-syenite to the end of hole. The hole was terminated early due to the nature of the granite-syenite, and the gravity anomaly remains untested.



DDHB24-003:

This hole was designed to test the gravity low at HB-03 and was completed to a depth of 440m. The drill hole intersected various felsic intrusives including granite-granodiorite, syenite and pegmatites, but no significant alteration or elevated radioactivity was intersected.

DDHB24-004:

This hole was designed as a follow-up to DDHB24-001 and the significant alteration zone intersected in that hole. Similar alteration to DDHB24-001 was not intersected, nor any elevated radioactivity, however the hole contains multiple brittle overprinted shear zones with pervasive chlorite alteration and lesser hematite and clay alteration. Athabasca sandstone was intersected below the overburden to a depth of 20m and highly altered metasediments beneath the unconformity down to 35m. Various evolutions of granite and pegmatite extend to the end of hole at 264m.

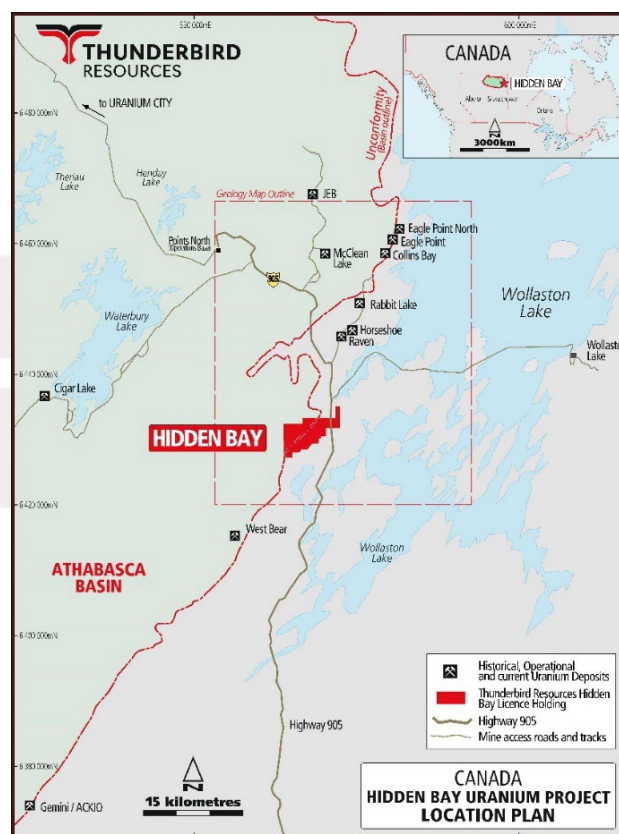


Figure 5: Location of Hidden Bay Uranium Project in the eastern Athabasca Basin

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.



Hidden Bay Drilling Targets

The drill targets defined at Hidden Bay are based on airborne gravity and magnetic surveys, radon-in-soil surveys, and re-interpretation of historical exploration data. Six priority gravity low targets were identified within an NE-trending structural corridor proximal and sub-parallel to the regional Athabasca unconformity. The NE-corridor is defined by EM conductors (historical surveys), structures and fold axes. Historical drilling in the south-western part of the property returned up to 0.15% $U_3O_8^2$ and elevated radon geochemistry³ occurs proximal to the gravity lows. The gravity lows can be caused by clay alteration of the host rock, potentially due to hydrothermal fluids associated with unconformity-related uranium mineralisation.

⁽²⁾ Refer to THB:ASX announcement dated 9th August 2022 titled “Hidden Bay Uranium airborne survey identifies drill targets”

⁽³⁾ Refer to THB:ASX announcement dated 17th November 2022) titled “Priority Uranium drill targets confirmed at Hidden Bay”)

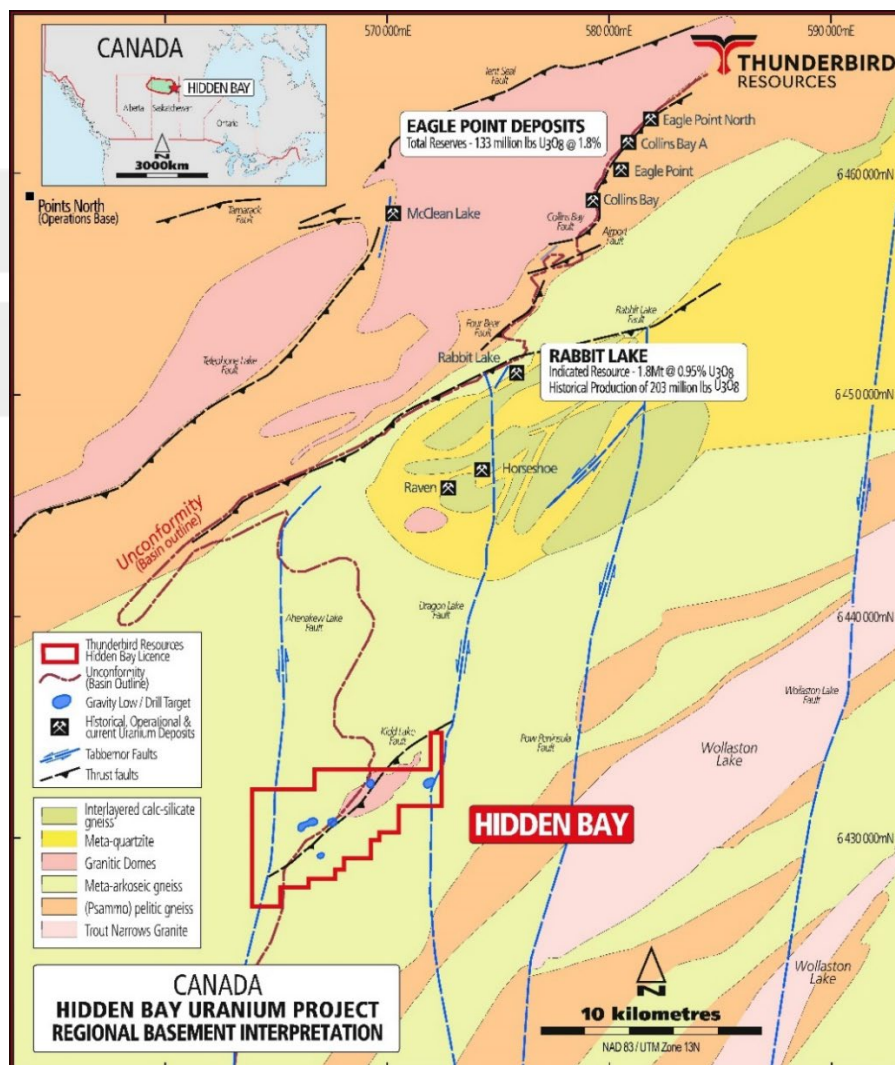


Figure 6: Hidden Bay Project – regional geology¹



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.

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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.

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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 underway.

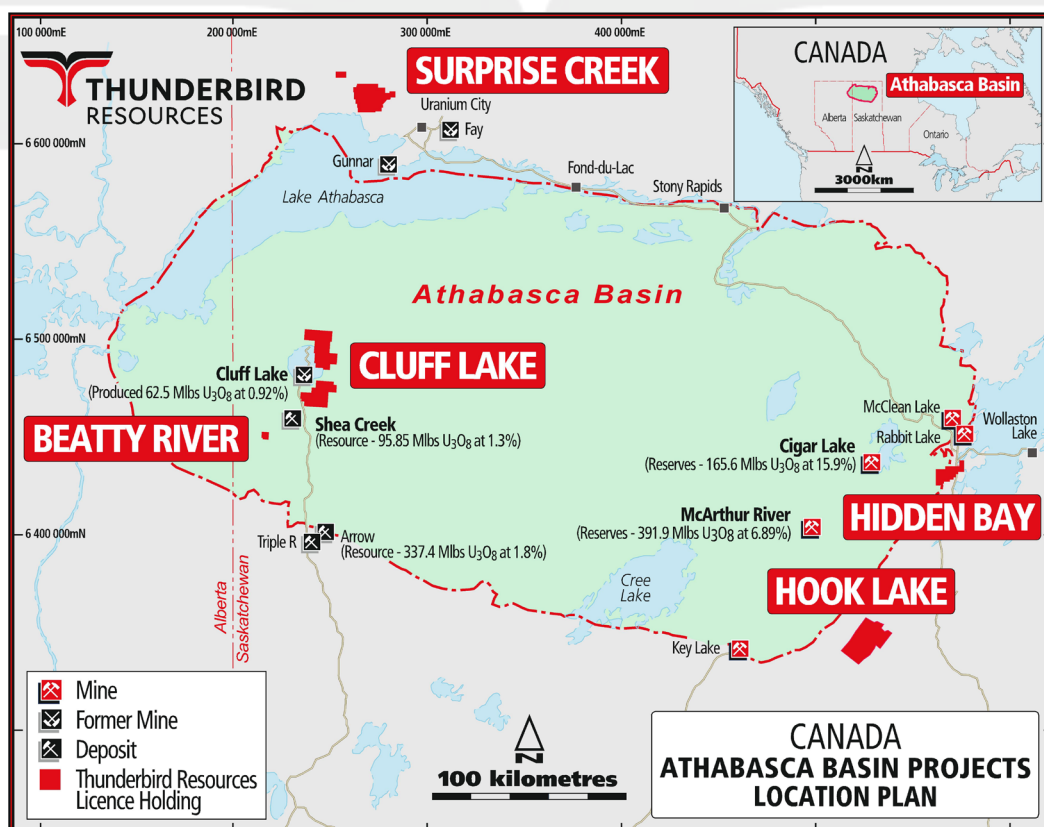
Cluff Lake (100%) 4 priority drill targets identified.

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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Drill type and details 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> Measures taken to ensure that the sampling is representative of the in situ 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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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).



Criteria	JORC Code explanation	Commentary
Data spacing and distribution	<ul style="list-style-type: none"> • <i>Data spacing for reporting of Exploration Results.</i> • <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity</i> • <i>Whether sample compositing has been applied.</i> 	<ul style="list-style-type: none"> • 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. • No applicable – no sampling reported.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> • <i>Whether the orientation of the sampling achieves unbiased sampling of possible structures.</i> 	<ul style="list-style-type: none"> • Orientation and geometry of potential mineralising structures is currently uncertain due to the early-stage nature of the exploration program.
Sample security	<ul style="list-style-type: none"> • <i>The measures taken to ensure sample security.</i> 	<ul style="list-style-type: none"> • The samples will be delivered to the SRC Laboratory in Saskatoon in compliance with chain of custody documentation provided by SRC.
Audits or reviews	<ul style="list-style-type: none"> • <i>The results of any audits or reviews of sampling techniques and data.</i> 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • <i>Type, reference name/number, location and ownership including agreements or material issues with third parties.</i> • <i>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.</i> 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • <i>Acknowledgment and appraisal of exploration by other parties.</i> 	<ul style="list-style-type: none"> • Exploration was previously completed on the Hidden Bay Project by several companies since the 1970s including Gulf Minerals Canada from 1972 to 1981,



Criteria	JORC Code explanation	Commentary
		<p>Eldorado in 1987, and Denison Mines from 2007-2015. Programs included:</p> <ul style="list-style-type: none"> ○ Boulder, radon sampling ○ VLF-EM, magnetics, HLEM geophysical surveys ○ RC and Diamond drilling <p>No drill testing of targets being tested by Thunderbird Resources in current drill program has previously been completed.</p>
Geology	<ul style="list-style-type: none"> • <i>Deposit type, geological setting and style of mineralisation.</i> 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • <i>A summary of all material information including a tabulation of the following information for all Material drill holes:</i> <ul style="list-style-type: none"> ○ Easting, northing and elevation of the drill hole collar ○ Dip, azimuth and depth of the hole ○ down hole length and interception depth 	<ul style="list-style-type: none"> • All drilling details provided in Table 1 above in the body of the report.
Data aggregation methods	<ul style="list-style-type: none"> • <i>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.</i> • <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i> 	<ul style="list-style-type: none"> • Not applicable to the results reported. • Not applicable - no metal equivalents reported.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> • <i>These relationships are particularly important in the reporting of Exploration Results.</i> • <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> • <i>If the True width is not known there should be a clear statement to this effect (eg 'down hole length, true width not known').</i> 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • <i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These</i> 	<ul style="list-style-type: none"> • Refer to Figures 2 and 4 above.



Criteria	JORC Code explanation	Commentary
	<i>should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	
Balanced reporting	<ul style="list-style-type: none"> Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced. 	<ul style="list-style-type: none"> All relevant results reported in the body of report above.
Other substantive exploration data	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> No other relevant exploration data to report at this time. Previous relevant ASX announcements reported by Thunderbird Resources are as follows: <ul style="list-style-type: none"> 9th August 2022: Hidden Bay Uranium Airborne Survey identifies Drill Targets 17 November 2022: Priority uranium drill targets confirmed at Hidden Bay
Further work	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Further work on the project likely to include the following: <ul style="list-style-type: none"> Complete current drill program which includes drill testing target HB-05. 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.