

## ASX Announcement

16 April 2024

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# DRILLING PERMIT RECEIVED FOR HIGHLY PROSPECTIVE HIDDEN BAY URANIUM PROJECT – THUNDERBIRD’S NUMBER ONE URANIUM PROJECT IN CANADA

Five key unconformity-related uranium targets in the Athabasca Basin ready to be drilled.

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## Highlights

- Drilling permits approved at the Hidden Bay Uranium Project until March 2027.
- Preparations underway for a drill program comprising five drill holes for ~2,400m.
- Drilling to focus on gravity lows coincident with interpreted structures and/or lithological contacts.
- Targets located in the prolific eastern Athabasca Basin –all are proximal to the regional unconformity.
- Hidden Bay located just 20km from the Rabbit Lake uranium mine, the longest operating uranium mine in North America.

Thunderbird Resources Limited (Thunderbird) or (the Company) (**ASX: THB**) is pleased to advise that it has received a 3-year work permit for its flagship Hidden Bay Uranium Project (Hidden Bay or the Property) which includes drilling. The Hidden Bay Project is located 20km south-west of the Rabbit Lake uranium deposit on the eastern flank of Canada’s world-class Athabasca Basin (Figure 1 and 2).

Work completed by Thunderbird over the past two years has included a detailed airborne gravity survey and radon geochemistry surveys which have identified five significant uranium drill targets.

## Management Comment

Thunderbird Executive Chairman George Bauk said: *“The 3-year permit at Hidden Bay allows us to begin preparations for our maiden drill program at the Company’s number one uranium project in Canada.*

*“Apart from its premier location on the eastern flank of the Athabasca Basin – which plays host to some of the richest uranium deposits in the world – Hidden Bay has numerous compelling geological attributes and geophysical indicators which make it our number one priority uranium exploration project”*

*“Following the high-quality work completed by our team over the past two years, this project is now ready to drill, with the targets having been clearly defined based on airborne geophysics and key project/regional features with particular reference to the unconformity.”*

*“The pedigree of this area is reflected in the quality of the deposits around us – the likes of the historic Rabbit Lake mine to the north and 92 Energy/Baselode recent Gemini/ACKIO discovery to the south.”*





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 concentrate<sup>1</sup>. 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. Despite its proximity to multiple uranium prospects and deposits only one hole has been drilled on the property in the last 35 years.

Priority drill targets have been identified through the interpretation of detailed gravity and magnetic data, acquired during an airborne survey in 2022, along with radon geochemistry and reconnaissance geological mapping.

The drilling is intended to focus on gravity lows where coincident with interpreted structures and/or lithological contacts. The hydrothermally clay altered host rocks associated with unconformity uranium deposits will have a lower density than the surrounding rocks and will present as gravity lows.

An example of this is the basement-hosted Arrow Uranium Deposit, which has a Total Mineral Resource of 337.4 million pounds U<sub>3</sub>O<sub>8</sub> at a grade of 1.8%<sup>1</sup>, which was discovered in 2014 by NexGen Energy Ltd (NexGen). The discovery of the Arrow Deposit was, in part, the result of drill testing a circular gravity low with a diameter of around 1km (sourced from Arrow Deposit, Rook I Project, Saskatchewan, NI 43-101 Technical Report on Feasibility Study). In addition, in March this year, a greenfield discovery was made by NexGen, in the southwestern Athabasca Basin, located within a large gravity low and a regional northeast-trending structural/conductive corridor<sup>2</sup>.

In 2022 Thunderbird completed a Radon Flux Monitoring (RFM) survey at the Hidden Bay Uranium Project. Results are detailed in VAL:ASX announcement dated 17 November 2022 titled "*Priority Uranium Drill Targets confirmed at Hidden Bay, near major historic uranium mine*". Radon anomalies were identified that are partly coincident with the gravity targets, close to the regional unconformity. A 1km long radon trend was identified proximal to proposed drill holes HB-01 and HB-02 (see Figure 4).

The western portion of the Hidden Bay property is covered by undeformed rocks of the late Paleoproterozoic Athabasca Group that sits unconformably on the metamorphic basement rocks of the Wollaston Domain.

Two prominent fault directions are recognized on the project:

- North-east trending reverse and thrust faults have been identified throughout the property and are thought to be generally associated with the weak to strongly graphitic pelitic gneisses.
- A prominent north-south sinistral fault system runs through the entire property area and is interpreted to be related to the Tabbernor Fault System which is also a prominent feature of the Rabbit Lake-Collins Bay-Eagle Point Uranium deposits.

In addition, an antiform fold axis is interpreted to trend northeast through the middle of the property, in part sub-parallel to the unconformity, adding another dimension of structural complexity.

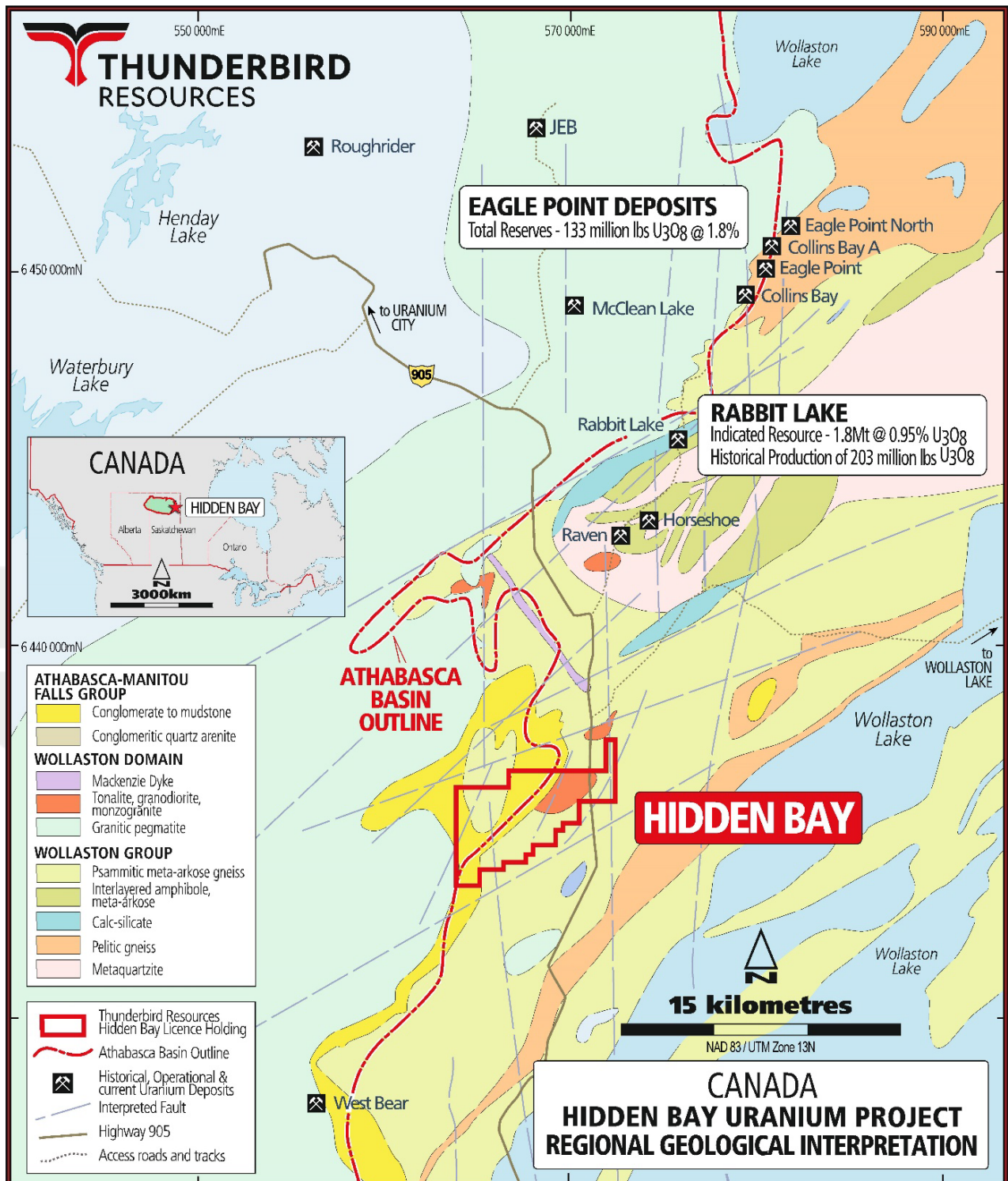


Figure 2. Hidden Bay Project – regional geology<sup>1</sup>.

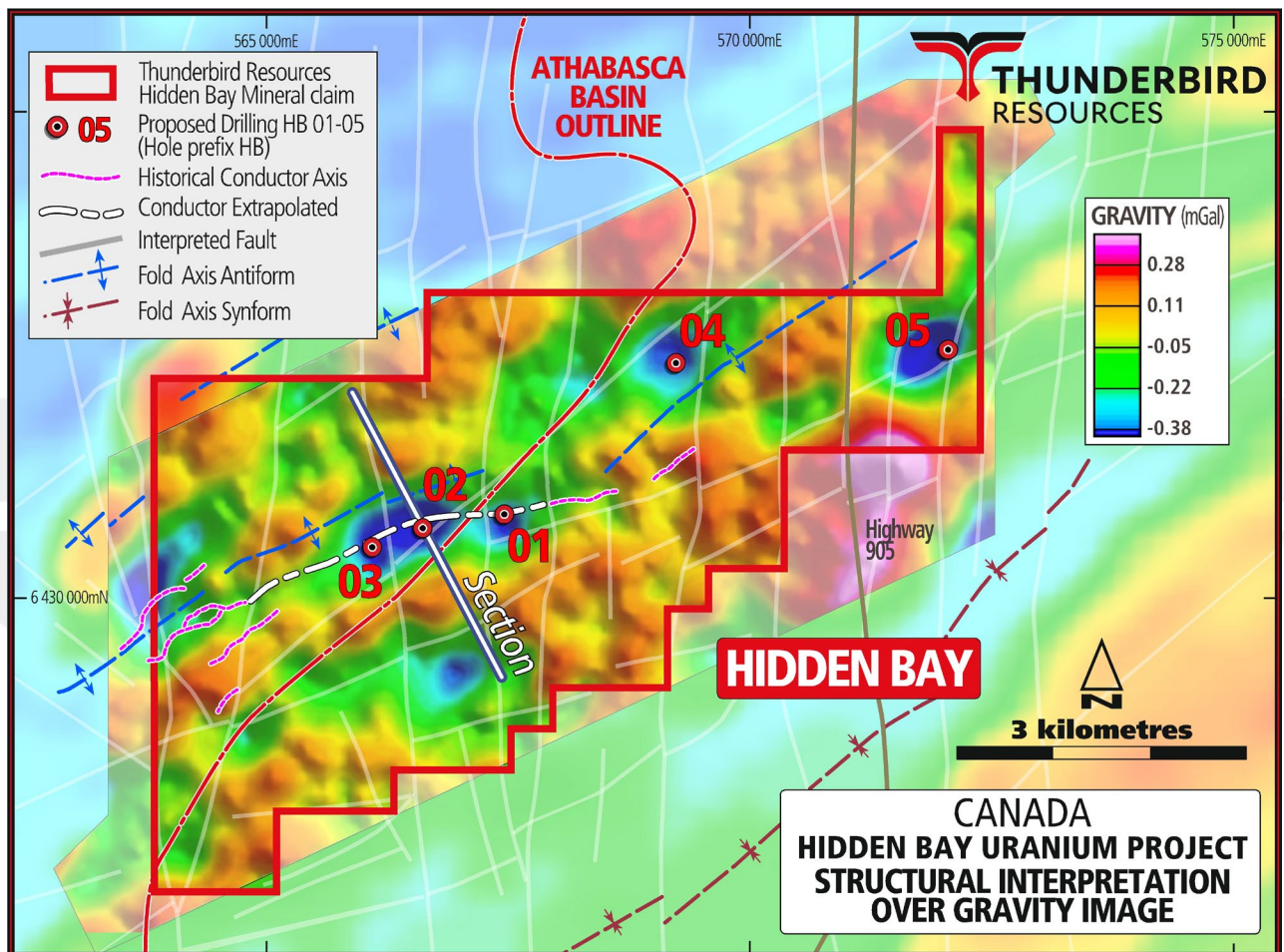


Figure 3. Hidden Bay – current planned drill locations over gravity image.

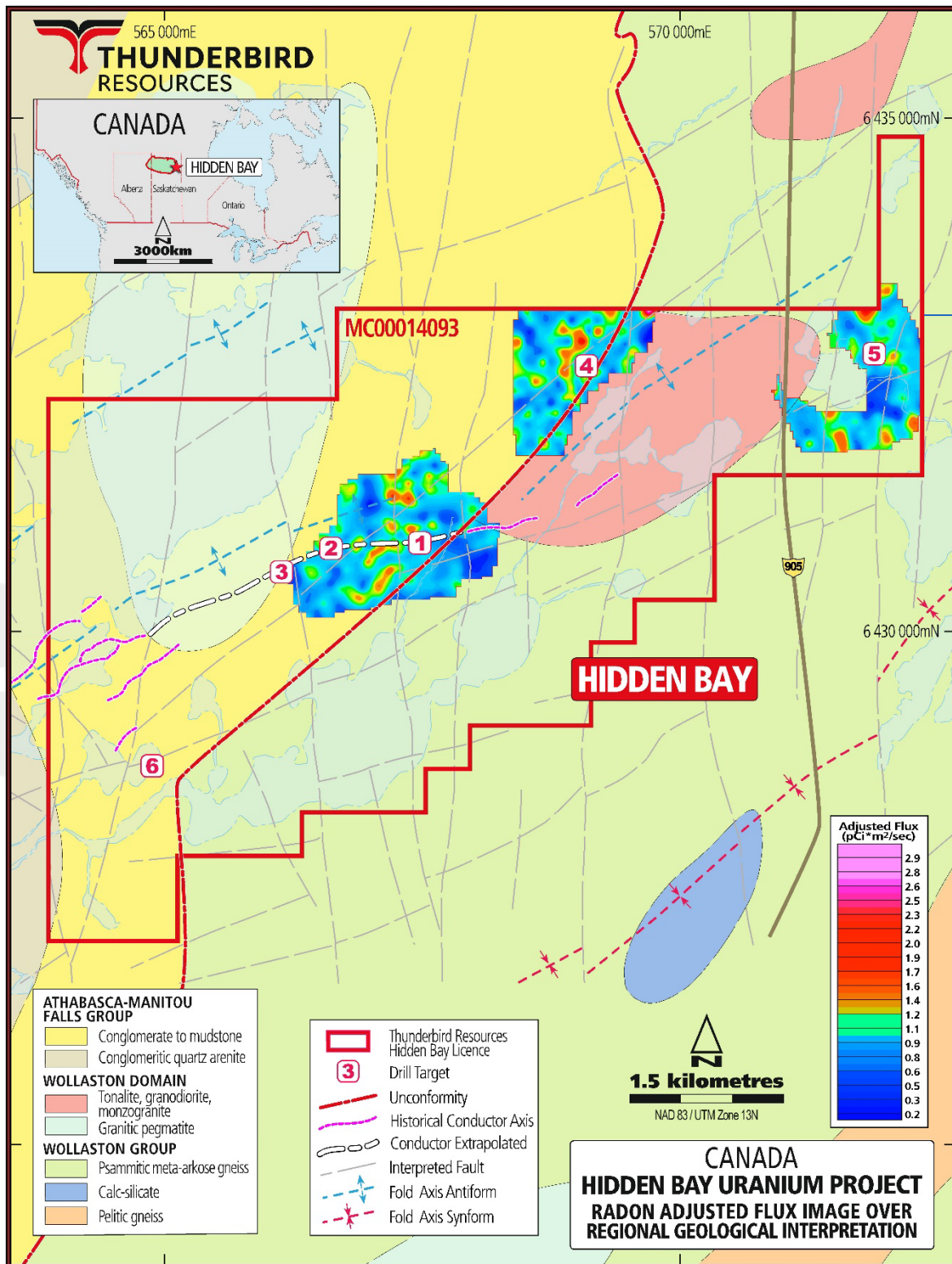


Figure 4. Hidden Bay - radon survey results, drill targets and geological interpretation.

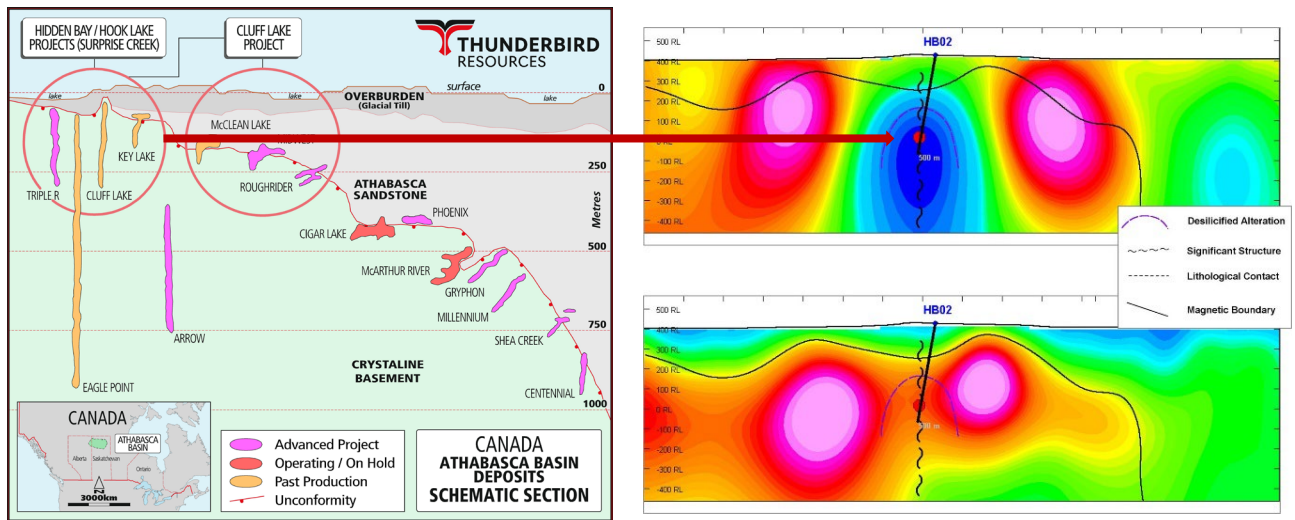


Figure 5. Hidden Bay – Cross-section of proposed drillhole HB-02 (upper- gravity inversion, lower – magnetic inversion) and conceptual target model

1: Mineral Resource References

Deposit	Owner	Status	Category	Tonnes	Lbs U <sub>3</sub> O <sub>8</sub>	Grade (% U <sub>3</sub> O <sub>8</sub> )	Cut-off (% U <sub>3</sub> O <sub>8</sub> )	Source
ARROW	NextGen Energy Ltd.	Advanced Project	Measured	2,183,000	209,600,000	4.35	0.25	NexGen Energy Ltd website, Arrow Deposit, Rook I Project, <a href="https://nexgenenergy.ca/rook-1-project/default.aspx#mineral-reserves">https://nexgenenergy.ca/rook-1-project/default.aspx#mineral-reserves</a>
			Indicated	1,572,000	47,100,000	1.36		
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		
MCCLEAN LAKE	Denison Mines Corp.	Operating/ On-Hold	Inferred	510,900	7,600,000	0.68	0.1	Technical reports: (A) the "Technical Report on the Denison Mines Inc. Uranium Properties, Saskatchewan, Canada, November 21, 2005; Sourced from Denisonmines.com
			Indicated	374,900	17,800,000	2.22		
ROUGH RIDER WEST	Uranium Energy Corporation	Advanced Project	Inferred	40,000	10,600,000	11.03	0.05	Preliminary Economic Assessment Technical Report for the East and West Zones, Roughrider Uranium Project, Saskatchewan, September 13, 2011
			Indicated	390,000	17,210,000	1.98		
ROUGH RIDER EAST	Uranium Energy Corporation	Advanced Project	Inferred	120,000	30,130,000	11.58	-	Preliminary Economic Assessment Technical Report for the East and West Zones, Roughrider Uranium Project, Saskatchewan, September 13, 2011
CIGAR LAKE	Cameco	Operating	Inferred	186,400	22,900,000	5.58	-	<a href="https://www.cameco.com/businesses/uranium-operations/canada/cigar-lake/reserves-resources">https://www.cameco.com/businesses/uranium-operations/canada/cigar-lake/reserves-resources</a>
			Indicated	313,300	99,300,000	14.37		
			Measured	26,800	4,500,000	7.55		
			Mineral Reserves	448,500	152,400,000	15.41		
RABBIT LAKE	Cameco	Past-Production	Indicated	1,836,500	38,600,000	0.95	-	<a href="https://www.cameco.com/businesses/uranium-operations/suspended/rabbit-lake/reserves-resources">https://www.cameco.com/businesses/uranium-operations/suspended/rabbit-lake/reserves-resources</a>
HORSESHOE-RAVEN	Uranium Energy Corporation	Advanced Project	Horseshoe - Indicated	4,982,500	23,594,000	0.215	0.05	2022 Technical report on the Horseshoe-Raven Project, Saskatchewan - UEC
			Raven - Indicated	5,370,000	13,832,400	0.117	0.05	2022 Technical report on the Horseshoe-Raven Project, Saskatchewan - UEC

2: <https://www.nexgenenergy.ca/news/news-details/2024/NexGen-Announces-Discovery-of-New-Intense-Mineralization-in-Greenfields-Discovery-3.5-Kilometers-from-Arrow/default.aspx>



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 acquisitions and exploration activities. The Company is focused on three key commodities, uranium, lithium and copper, as outlined below, in Canada.

- Diversified critical minerals explorer focused on Tier-1 jurisdictions
- Strong track record of generating high-value projects (Uranium, Lithium and Copper)
- Entered into binding agreements to acquire three lithium assets in Ontario, Canada
- Portfolio streamlined through recent sale of Picha and Charaque Copper Projects in Peru to Firetail Resources (ASX: FTL)
- Focus on high-potential, drill-ready uranium assets in Canada’s Athabasca Basin at the right time in the Uranium cycle:

**Hidden Bay (100%)** 5 drill-ready targets identified.

**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 20.58% shareholding in Firetail plus retained 20% project interest – drilling commenced at Picha Project in October.

