

## QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDING 31 DECEMBER 2023

### Key Highlights

- Preparation for phase 2 drilling program at Geikie commenced following the initial drilling success which included;
  - Anomalous uranium discovered in four of the eight holes drilled, up to 0.27% U<sub>3</sub>O<sub>8</sub><sup>1</sup>
  - Elevated lead isotope anomalies and extensive hydrothermal alteration observed in five holes indicate potential for a major uranium mineralising system.
- Airborne gravity results from Geikie received, identifying multiple targets proximal to phase one drilling success.
- Preparations for ground electromagnetics survey commenced following significant anomalies identified through 3D inversion of North Millennium and Marshall historic geophysical data.
- Continued engagement and consultation with Indigenous and stakeholder groups.
- U<sub>3</sub>O<sub>8</sub> spot price<sup>2</sup> surpasses US\$100/Lb; hitting 16-year high, with uranium spot price trading as high as US\$106/Lb during January 2024.

Basin Energy Ltd (ASX: BSN) ('Basin', or the 'Company') is pleased to provide an overview of activities for the period ending 31 December 2023 ('Quarter', 'Reporting Period') and an accompanying Appendix 5B.

Exploration for the Quarter occurred on all of Basin's Athabasca Basin uranium projects (the 'Projects') (Figure 1). The primary focus was the planning of phase 2 exploration drilling at the Geikie Project ('Geikie') and for maiden ground electromagnetic surveys at the North Millennium and Marshall projects ('North Millennium', 'Marshall').

Basin has been advancing exploration targets deemed prospective for high grade uranium mineralisation, using analogies and models derived from neighbouring uranium deposits and discoveries of the Athabasca Basin. Maiden drilling completed at Geikie successfully identified uranium in drilling with assays up to 0.27% U<sub>3</sub>O<sub>8</sub><sup>3</sup>. Extensive hydrothermal alteration along with pathfinder element halo indicative of large uranium mineralising systems were also identified proximal to two regionally significant structures at the Aero Lake and Preston Creek prospects.

<sup>1</sup> Refer Basin Energy ASX release dated 20/09/2023 "Basin Energy Intersects Uranium Mineralisation up to 0.27% in Maiden Drilling at Geikie".

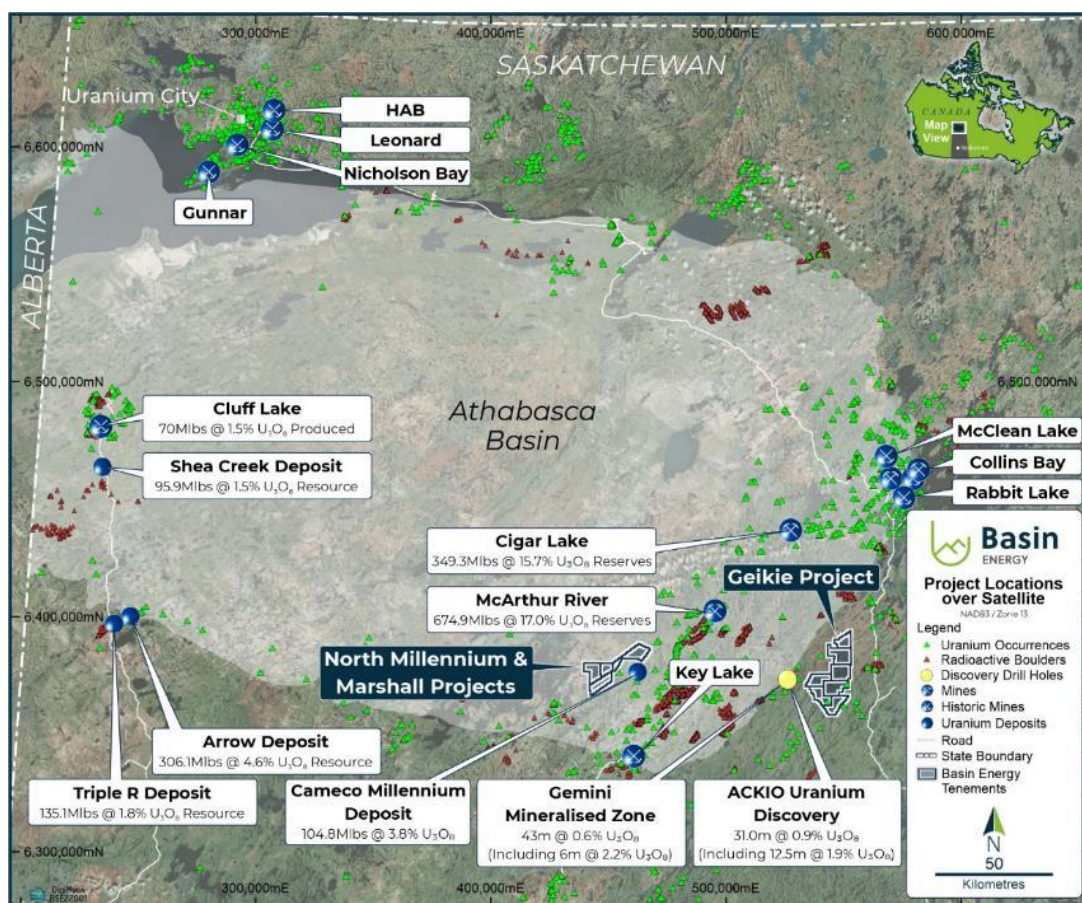
<sup>2</sup> Refer Tradetech <https://www.uranium.info/>

<sup>3</sup> Refer Basin Energy ASX release dated 20/09/2023 "Basin Energy Intersects Uranium Mineralisation up to 0.27% in Maiden Drilling at Geikie".

Subsequent to phase 1 drilling at Geikie, Basin conducted a Falcon Airborne Gravity Gradiometer survey ('**AGG**' or '**gravity survey**'), which has identified potential areas where alteration intensifies adjacent to the identified prospective structures<sup>4</sup>. This technique has been demonstrated to be successful in identifying uranium bearing alteration systems in the eastern Athabasca Basin, most recently at the nearby uranium discoveries by 92 Energy (ASX: 92E) ("**GMZ**") and Baselo Energy Corporation (TSXV: FIND) ("**ACKIO**").

Phase 2 drill preparations targeting the structural and geological interpretations from phase 1 in conjunction with results from the AGG survey were completed. Contractor engagement began and was finalised subsequent to the end of the Reporting Period.

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**Figure 1<sup>5</sup>:** Project locations in relation to the Athabasca Basin

Work at the North Millennium and Marshall projects focussed on preparations for a high-resolution ground Stepwise Moving Loop Time-Domain Electromagnetic ('**EM**') survey. The survey was designed to enable target optimisation following the success in identifying anomalism from modelling and inverting historic geophysical data<sup>6</sup>. The survey has now commenced subsequent to the Quarter.

<sup>4</sup> Refer Basin Energy ASX release dated 15/11/2023 "Gravity Survey Identifies Significant Anomalies at the Geikie Uranium Project".

<sup>5</sup> Refer to Basin Energy ASX Prospectus dated 22/08/2022 for quoted mineralisation, resources figures and background information.

<sup>6</sup> Refer Basin Energy ASX release dated 28/09/2023 "Priority Targets Identified at Marshall Uranium Project" and dated 15/09/2023 "Unconformity Uranium Targets Identified at North Millennium".

Additionally, as part of the Company's broader exploration campaign within the Athabasca Basin, a continued focus has been placed on the engagement and consultation of Indigenous and stakeholder groups within the three exploration Project areas.

## Winter 2024 Drilling Preparations

The phase 2 drill program of up to 2,500-metres is scheduled to mobilise in early February at the Geikie Project, which will allow drilling to commence by mid-February, with the program expected to take 6 to 8 weeks to complete. Technical and logistical preparations for this program commenced during the Reporting Period and subsequent to the end of the quarter, drilling services were awarded to Athabasca Catering Limited Partnership, a 100% First Nations-owned company, who are partnered with ITL Diamond Drilling Ltd.

Basin's 2023 maiden drill program successfully identified large complex fault systems associated with locally extensive hydrothermal alteration patterns<sup>7,8</sup>. Assay results returned anomalous uranium intersected in four of the eight holes drilled and pathfinder element anomalism for uranium mineralisation, specifically lead isotopes, in five of the eight holes<sup>6</sup> drilled. Core logging data, combined with previous ground prospecting results<sup>9</sup>, have allowed increased confidence levels on lithological interpretations in areas of primary interest on the Geikie Project.

Subsequent to the completion of maiden drilling, Basin acquired high resolution Airborne Gravity Gradiometer ("AGG") data. The AGG data highlight a series of gravity low anomalies<sup>10</sup> coincident with key structural features identified through high-resolution magnetic data<sup>11</sup>, some of which have been intersected in the 2023 drillholes. Modelling of select gravity low anomalies supports interpretation of active hydrothermal systems adjacent to drilling prospects.

<sup>7</sup> Refer Basin Energy ASX release dated 10/08/2023 "Elevated Radioactivity and Significant Hydrothermal Alteration Identified at Geikie".

<sup>8</sup> Refer Basin Energy ASX release dated 20/09/2023 "Basin Energy Intersects Uranium Mineralisation up to 0.27% in Maiden Drilling at Geikie".

<sup>9</sup> Refer Basin Energy ASX release dated 14/12/2022 "Airborne EM survey commence at Geikie".

<sup>10</sup> Refer Basin Energy ASX release dated 15/11/2023 "Gravity Survey Identifies Significant Anomalies at the Geikie Uranium Project".

<sup>11</sup> Refer Basin Energy ASX release dated 13/10/2022 "Maiden geophysical survey defines multiple priority targets at Geikie".

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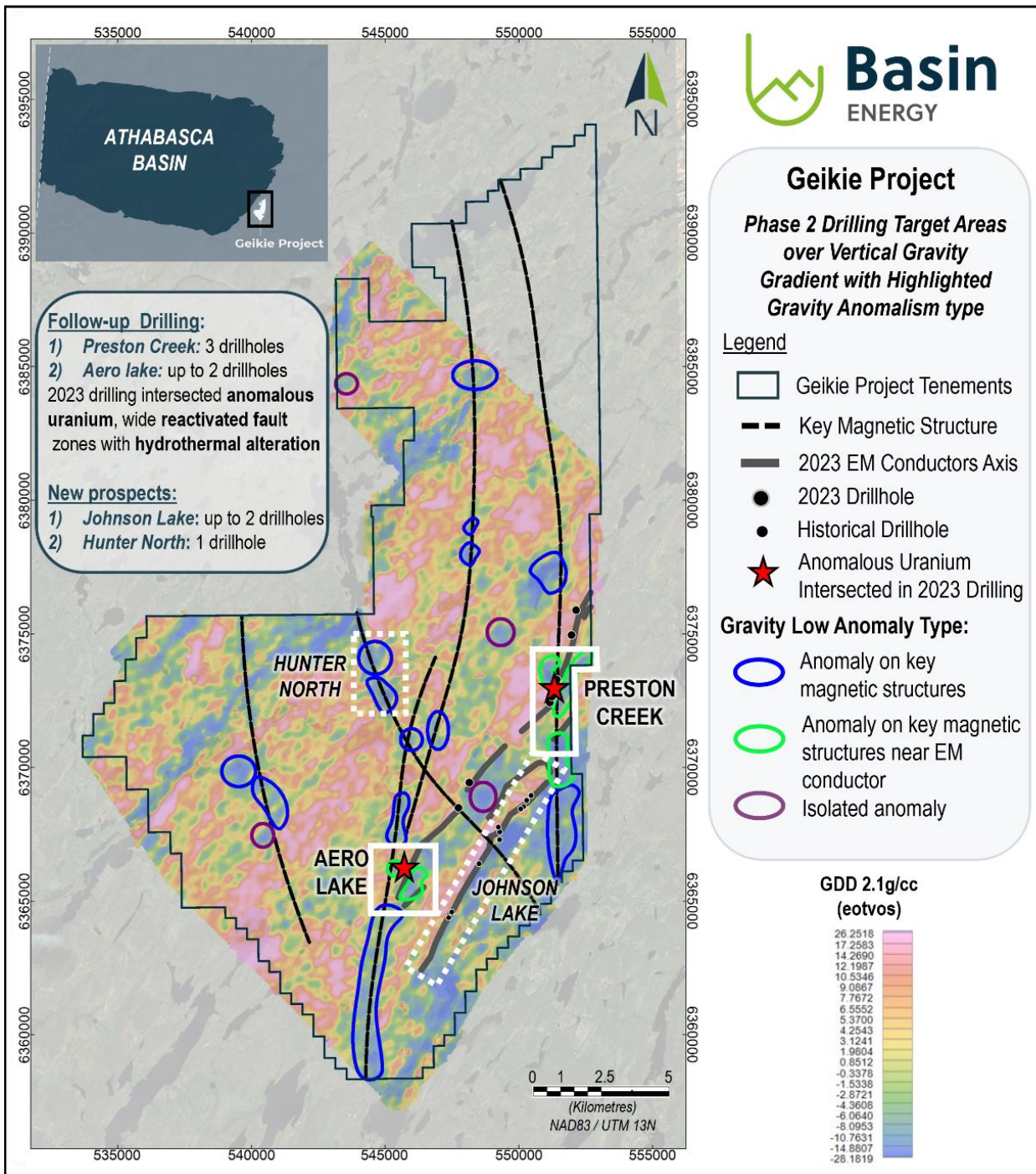


Figure 2: 2024 Exploration drilling priorities at Geikie

The drill targets have been designed to test fault zones in key prospect areas. These faults zones provide an ideal location for mineralised fluids to focus and precipitate. This is evident by the nearby GMZ-ACKIO mineralised zone discovery on neighbouring tenements owned by 92 Energy and Baselode Energy, respectively. Basin’s Geikie Project is located less than 10 kilometres east of the GMZ-ACKIO mineralised zone and within a similar geological setting.

## Winter 2024 Geophysics

The North Millennium and Marshall projects are located in the southeastern portion of the Athabasca Basin and situated 7 km north of Cameco's Millennium uranium deposit, host to 104.8 million pounds  $U_3O_8$  at 3.76%<sup>12</sup> and just 40 kilometres from the prolific McArthur River Mine host to 674.9 million pounds  $U_3O_8$  at 17.0%<sup>13</sup>.

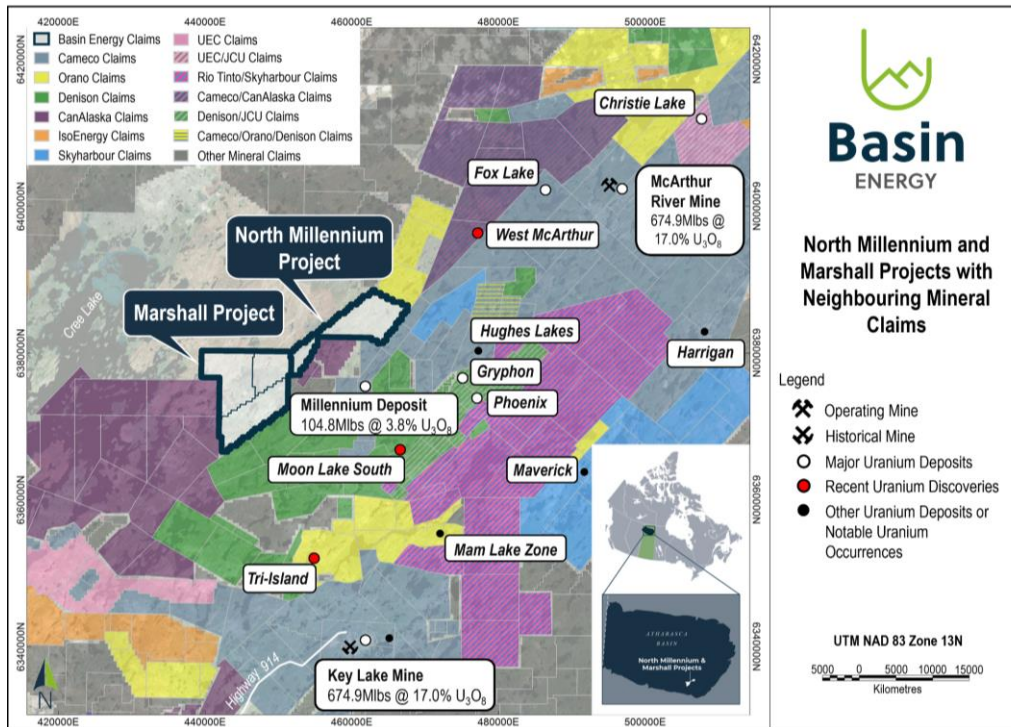


Figure 3: Basin's North Millennium and Marshall uranium project locations<sup>14</sup>

A ground-based high-resolution Stepwise Moving Loop Time-Domain EM survey consisting of around 100-line kilometres has commenced, with Discovery International Geophysics Inc. conducting the work. The program is expected to take approximately 6 weeks to complete, with results due in early Q2 2024. The survey is the final step at North Millennium and Marshall to progress the Projects to a drill ready status.

At North Millennium, Basin are exploring along the interpreted extension of the "Mother Fault", which is host to the Cameco majority owned Millennium deposit. Despite its proximity and geological similarities to significant uranium deposits, there has been minimal mineral exploration at the Project with no known historical exploration drill holes. Historical drilling near the neighbouring Project intersected a mineralized fracture immediately above the unconformity (0.05 m at 0.13%  $U_3O_8$ ) and a wide graphitic-

<sup>14</sup> Refer to Basin Energy ASX Prospectus dated 22/08/2022 for quoted mineralisation, resources figures and background information.

pyritic pelite interval in the basement<sup>15</sup>. Modelling of historic geophysical data by Basin in 2023 defined the extension potential of the Millennium Mother fault, known to be the conduit for mineralisation.

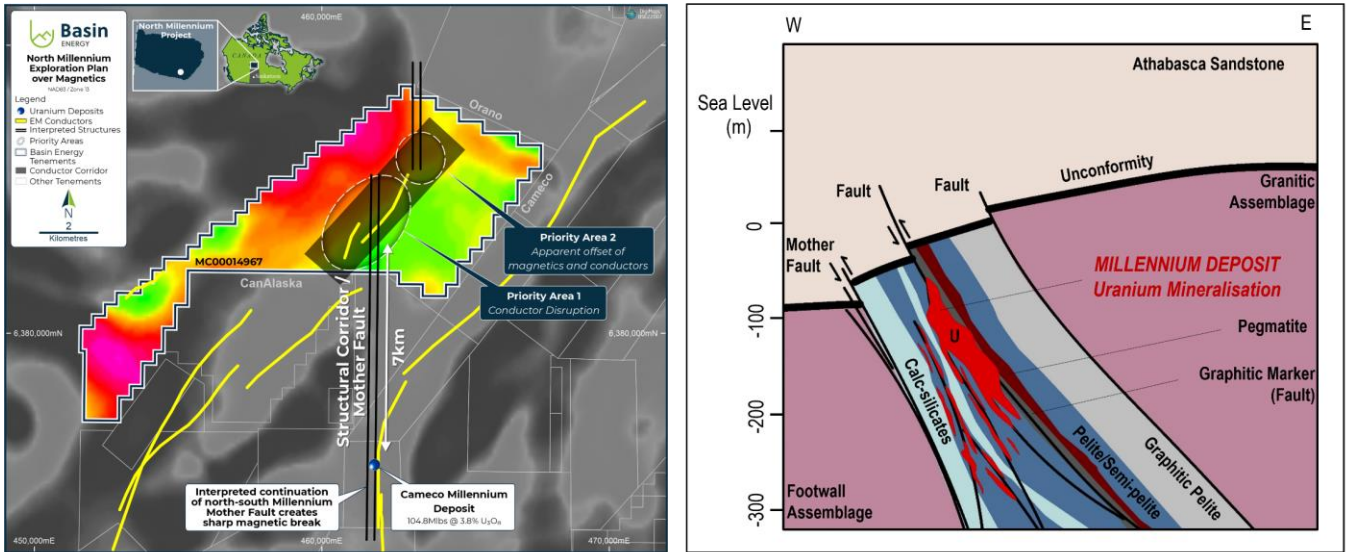


Figure 4: North Millennium Project Exploration Plans (left) and Cameco's Millennium Deposit type section (right)<sup>16</sup>.

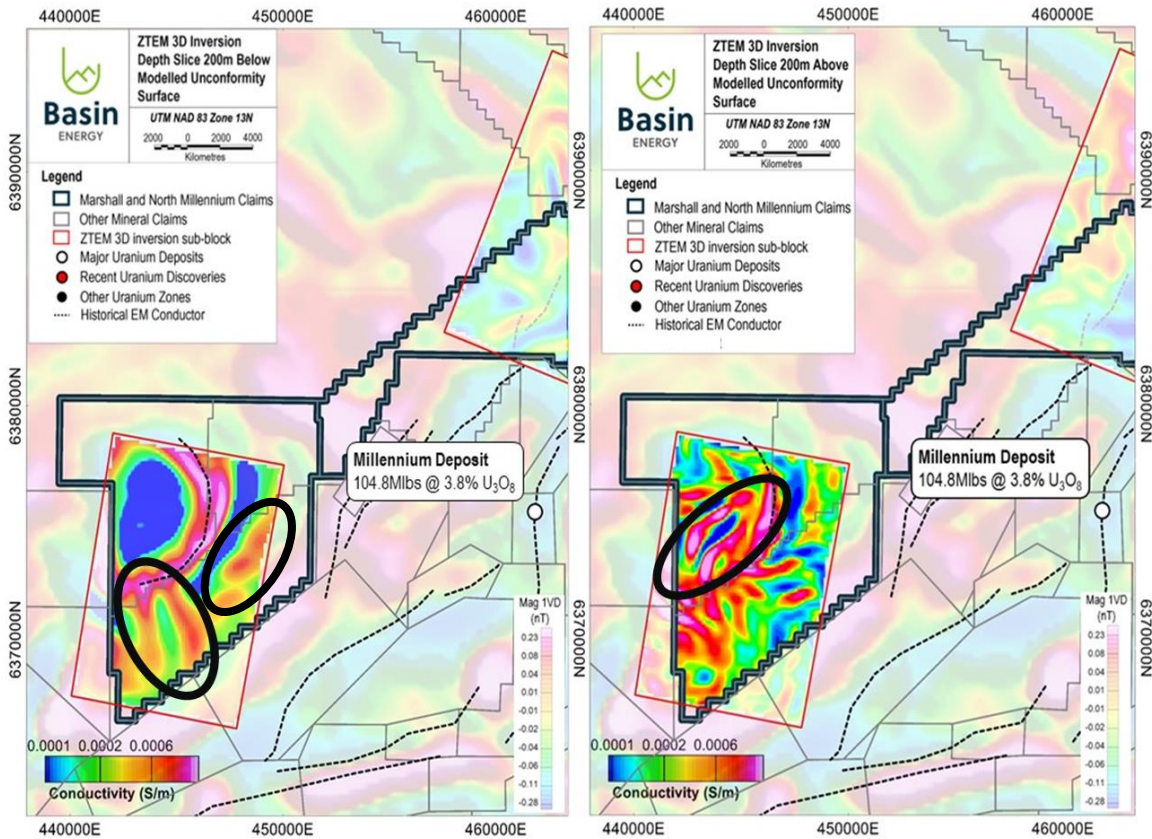
At the Marshall Project, Basin are exploring a series of large-scale geophysical features. Modelling of historic geophysical data by Basin in 2022 defined a series of anomalies both below and above the Athabasca unconformity contact.

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<sup>15</sup> <https://www.canalaska.com/project/mctavish/>.

<sup>16</sup> After Wood, G., et al, 2012, An interpretation of surface and borehole seismic surveys for mine planning at the Millennium uranium deposit, northern Saskatchewan, Canada. *Geophysics*, Vol.77, No.5 (September-October 2012).





**Figure 5 (left):** 3D inversion ZTEM depth slice 200m below modelled unconformity surface over first vertical derivative magnetics.  
**Figure 6 (right):** 3D inversion ZTEM depth slice 200m above modelled unconformity surface over first vertical derivative magnetics.

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## Upcoming Events

Basin will be attending the following events, and representatives will be available to discuss the Company's exciting progress;

- 📅 RIU Explorers Conference (RIU), Fremantle, 13<sup>th</sup> to 15<sup>th</sup> February 2024.
- 📅 Prospectors and Developers Association of Canada Convention (PDAC), Toronto, Canada, 3<sup>rd</sup> to 6<sup>th</sup> March 2024.
- 📅 Brisbane Mining Investor Conference, 13<sup>th</sup> March 2024.

## Corporate and Other Business

The Company was successfully admitted to the ASX on 30 September 2022 and commenced trading on 4 October 2022.

- 📅 As of 31 December 2023, the Company held A\$3.4 million in cash. Full details of the Company's cash movements during the Quarter are detailed in the attached Appendix 5B.
- 📅 As per ASX Listing Rule 5.3.1, incurred exploration expenditures were primarily related to preparations for geophysical surveys and technical surveys at the North Millennium and Marshall Projects, and technical studies along with preparation for exploration drilling at the

Geikie Project. Exploration expenditures incurred during the Quarter are reported at A\$370,000.

- ☞ As per ASX Listing Rule 5.3.2, there were no substantive mining production and development activities undertaken during the Quarter.
- ☞ In accordance with Listing Rule 5.3.5, the Company advises that payments made to related parties as disclosed in the Appendix 5B for the Quarter were A\$248,000 for Director fees and Managing Director salary.
- ☞ In accordance with Listing Rule 5.3.4, below is a comparison of the Company's actual expenditure to 31 December 2023 against the estimated expenditure in the 'use of funds' statement:

Use of Funds	Per IPO Prospectus (2 year period)	Expenditure to date
Direct Exploration Costs	\$ 7,176,321	\$ 4,096,368
Working Capital	\$ 1,489,960	\$ 1,615,279
Costs of the Offer	\$ 958,367	\$ 834,995
<b>TOTAL</b>	<b>\$ 9,624,648</b>	<b>\$ 6,546,642</b>

*Table 1: Use of funds*

The Company confirms that the use of funds is consistent with statements made in the prospectus.

## Mining Tenement Status

The Company holds interests in three Projects located within or adjacent to the Athabasca Basin in Northern Saskatchewan, Canada. The following information is provided pursuant of Rule 5.3.3 for the current Reporting Period:

Project	Permit Number	Basin Ownership <sup>1</sup> at 1 October 2023	Basin Ownership <sup>1</sup> at 31 December 2023	Area, ha
<b>Geikie</b>	MC00015156	60%	60%	3,312
	MC00015157	60%	60%	5,998
	MC00015158	60%	60%	5,548
	MC00015160	60%	60%	5,788
	MC00015161	60%	60%	4,308
	MC00015162	60%	60%	4,468
	MC00015165	60%	60%	4,475
	MC00017352	60%	60%	661
	MC00017353	60%	60%	526
<b>Marshall</b>	MC00015073	100%	100%	4,232
	MC00015074	100%	100%	2,417



	MC00015075	100%	100%	4,576
<b>North Millennium</b>	MC00014967	40%	40%	5,873

**Table 2:** Basin Energy mining tenement / mineral claim status

<sup>1</sup>Basin entered a property option agreement for 100% of the Marshall Project, and a joint venture agreement to earn up to 80% of the Geikie and North Millennium Projects on 22 April 2022.

This announcement has been approved for release by the Board of Basin Energy.

## Enquiries

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## Company Overview

### About Basin Energy

Basin Energy (ASX: **BSN**) is a uranium exploration and development company with an interest in three highly prospective projects positioned in the southeast corner and margins of the world-renowned Athabasca Basin in Canada.

### Directors & Management

<b>Pete Moorhouse</b>	<b>Managing Director</b>
<b>Blake Steele</b>	<b>Non-executive Chairman</b>
<b>Cory Belyk</b>	<b>Non-executive Director</b>
<b>Jeremy Clark</b>	<b>Non-executive Director</b>
<b>Peter Bird</b>	<b>Non-executive Director</b>
<b>Ben Donovan</b>	<b>NED &amp; Company Secretary</b>
<b>Odile Maufrais</b>	<b>Exploration Manager</b>

### Basin Energy

ACN 655 515 110

### Projects

North Millennium  
 Geikie  
 Marshall

### Shares on Issue

83,479,697

### ASX Code

BSN



## Investment Highlights



**Pureplay Uranium Company** Leveraged to the global low carbon economy megatrends, with a North American focus



**Well funded** – Cash in bank to complete ongoing work, and conduct follow up drilling at Geikie to advance initial success exploring for shallow high-grade uranium



**Direct exposure to high grade uranium** within the world class uranium mining district of the Athabasca Basin, Saskatchewan, Canada – a top three global uranium producer for over 45 years



**Strategically located** near world-class high-grade uranium discoveries, mining and processing operations with a constant uranium mining industry for 65 years



**Located in Saskatchewan, a globally attractive and proven mining jurisdiction** – Ranked 2<sup>nd</sup> in Fraser Institute 2021 global mining investment attractiveness index



**Systematic exploration approach** Clear exploration strategy allowing a gated approach to target generation and testing



**Leveraging an extensive high-quality geological database** assembled over decades, with significant recent exploration success



**Experienced and dedicated team** with relevant uranium exploration and development track record

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## Competent Persons Statement, Resource Figure Notes and Forward-Looking Statement

The information in this announcement that relates to exploration results was first reported by the Company in accordance with ASX listing rule 5.7 in the Company's prospectus dated 22nd August 2022 and announced on the ASX market platform on 30th September 2022, and data announced in subsequent ASX press releases by Basin Energy relating to exploration activities. The information included within this release is a fair representation of available information compiled by Odile Maufrais, a competent person who is a Member of the Australian Institute of Geoscientists. Odile Maufrais is employed by Basin Energy Ltd as Exploration Manager. Odile Maufrais has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves. Odile Maufrais consents to the inclusion in this presentation of the matters based on his work in the form and context in which it appears.

All resource figures shown within this document of deposits within the Athabasca, unless stated are quoted from the International Atomic Energy Agency (IAEA) Tecdoc 1857. Resources are global and include mined resource and all classification of remaining resource. Resource Size (U3O8) is the amount of contained uranium (in Mlbs U3O8) and average grade (in % U3O8) of the deposit/system. This number is presented without a specific cut-off grade, as the cut-off value differs from deposit to deposit and is dependent on resource calculation specifications. Discrepancies between values in this field and other values in the public domain may be due to separate cut-off values used, or updated values since the writing of this document. For system entries, the values for the size were obtained by adding the individual deposits values whereas average grade values were derived using a weighted average of the individual deposits.

This announcement includes certain "Forward-looking Statements". The words "forecast", "estimate", "like", "anticipate", "project", "opinion", "should", "could", "may", "target" and other similar expressions are intended to identify forward looking statements. All statements, other than statements of historical fact, included herein, including without limitation, statements regarding forecast cash flows and future expansion plans and development objectives of Basin Energy involve various risks and uncertainties. There can be no assurance that such statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such statements.

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