Basin ENERGY

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MAIDEN GEOPHYSICAL SURVEY DEFINES MULTIPLE PRIORITY TARGETS AT GEIKIE

Key Highlights

- **Four additional high priority targets identified, displaying significant geophysical anomalies at structural and lithological settings conducive for uranium mineralisation**
  - Mud Lake target expanded that historically recorded rock chips with grades of up to 0.225% U_3O_8 and 0.18% U_3O_8[1]
- **New structural corridors identified at Geikie based on high resolution airborne radiometric and magnetic data, expanding regional potential**
- **Ground follow up reconnaissance mapping and sampling has been initiated to confirm interpretations**
- **Contractor secured to complete fast tracked follow up VTEM airborne electromagnetic survey, scheduled to commence in November 2022**
- **Aggressive exploration strategy planned for Q4 with maiden drilling planned to commence Q1 2023**

Basin Energy Limited (**ASX:BSN**) ('**Basin**', or '**the Company**') is pleased to announce the results of the high resolution airborne radiometric and magnetic survey data **('Data')** at its Geikie Project ('**Geikie**', or '**the Project**'), located near the eastern margin of the world-class Athabasca basin. Analysis of the Data has identified four additional high priority target areas deemed highly prospective for uranium mineralisation. In addition to this, two previously unrecognised structural corridors have been delineated further enhancing the prospectivity of the Geikie Project area.

The results further enhance the Company's initial analysis that the Project is highly prospective for near surface uranium mineralisation which remains completely untested. Given the results, Basin is now planning an aggressive exploration program with ground prospecting now underway. A follow up project wide high resolution airborne electromagnetic survey is being fast tracked, with a contractor now secured for work to commence in November 2022. These works will further refine the drill targeting, allowing drill testing of the highest priority targets to commence in Q1 2023.

Basin Energy's Managing Director, Pete Moorhouse, commented:

"The survey Data received for the Geikie Project is of exceptional quality and has provided a solid exploration foundation for further exploration of uranium at Geikie. The new Data is a significant enhancement of the historical dataset and has not only refined the initial areas of interest but also identified several previously unrecognised prospective zones within the license area.

We have a clear exploration pathway ahead of us, with field exploration underway and further geophysics scheduled to commence next month, culminating in maiden drilling in Q1 2023.

Click here for a brief video of Managing Director, Pete Moorhouse explaining the results.

[1] Refer to ASX Prospectus dated 22 August 2022

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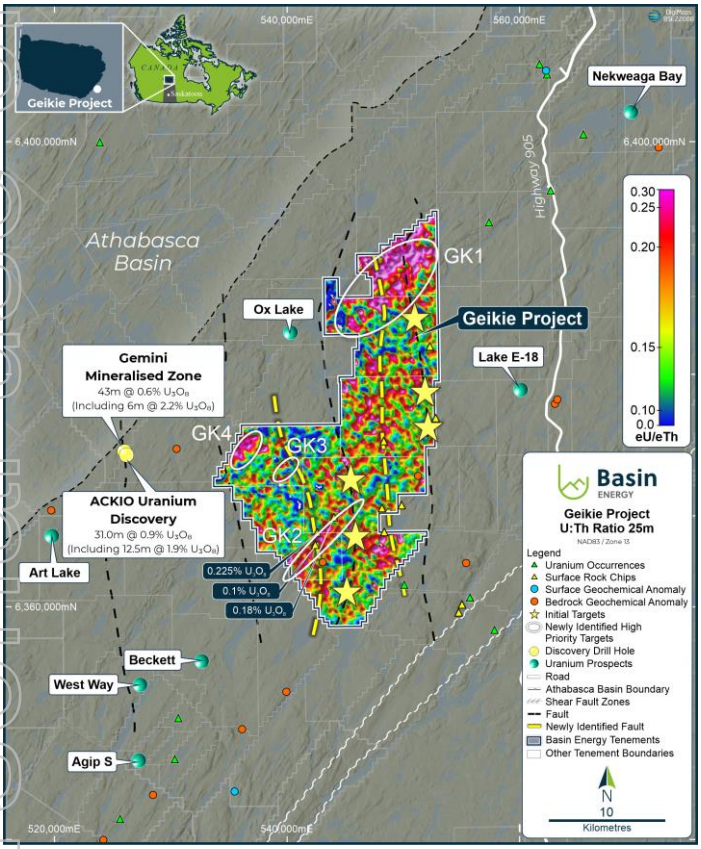
2022 Radiometric & Magnetic Data Results

High resolution radiometric and magnetic survey Data was acquired over the entire Geikie Project area. Survey lines were flown at 100 metres spaced, with 1,000 metre spaced tie lines. A total of 3,831-line kilometres of survey Data was collected, at a nominal flight height of 35 metres.



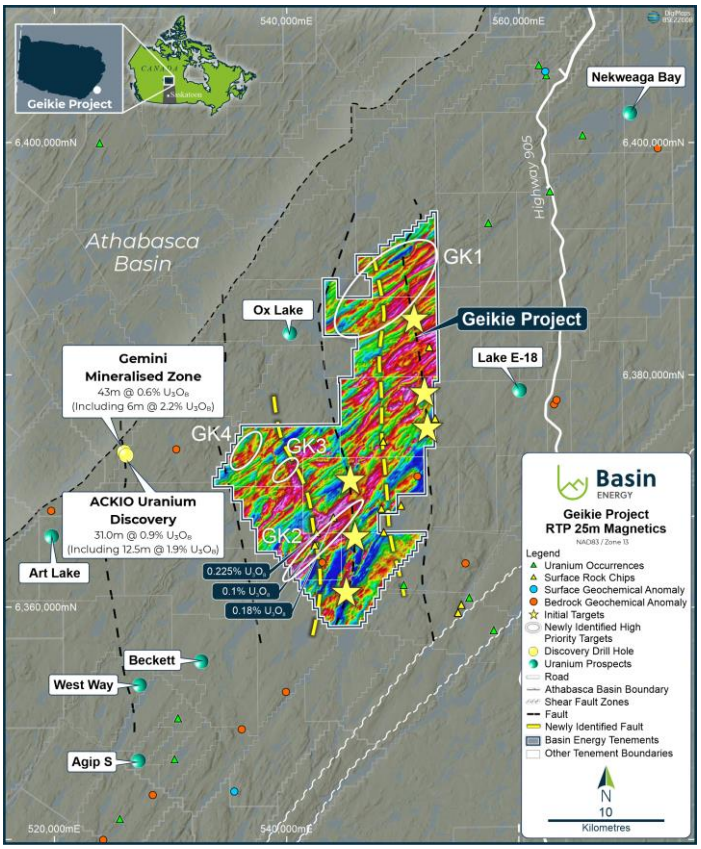


Figure 1 (left) – High priority exploration targets over U:Th ratio image,

Figure 2 (right) - High priority exploration targets over RTP magnetic image

Overview

The objective of the program was three-fold;

- To utilise radiometric data as a targeting vector to refine areas of interest;
- To aid with structural mapping as a direct targeting tool for identifying potential mineralising structural corridors; and
- To act as a lithological mapping tool for refining the geological framework to identify favourable host mineralisation conditions.

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Analysis of the results was completed using a number of geophysical and structural interpretations. Radiometric anomalies were delineated using a combination of Uranium, Thorium and Potassium ratio analysis which allowed for the confirmation of previously known structural corridors and the delineation of two new additional corridors. Prior to this survey and utilising historical data, two major north-south features were recognised with prominent coincident magnetic and topographic trends, which are interpreted as part of the Tabbernor Crustal Fault Zone, interpreted as host to several recent high grade uranium discoveries. In addition to this, the survey Data clearly identifies a third and fourth feature of potential equal prospectivity which allowed for a comprehensive structural interpretation of the Project. When overlayed with the element ratios and geophysical surveys this structural interpretation resulted in four additional priority areas being identified, including the expansion of the Mud Lake trend. Figures 1 and 2 show these areas, and further details are provided below.

GK1

This priority area is a large cluster of radiometric anomalies within a 9km by 3km area with a north-easterly trend, located in the northern quarter of the license package. A historic electromagnetic survey exists for the western portion of the identified target which appears to show a strong conductor running parallel with the anomalous cluster. Two significant northerly trending Tabbernor fault corridor intersects this target area.

GK2 *– Mud Lake*

This priority area is one of the few localities on the license with historical prospecting information, with historic grab samples recorded up to 0.225% U_3O_8 and 0.18% U_3O_8,[2] within mapped Wollaston calcsilicate rocks. The radiometric data shows a north-easterly trend of anomalies being crosscut by two regional north north-westerly trending Tabbernor faults, that appear coincident with the historic anomalous rock chips.

The priority area is located approximately 10km along strike from drilling completed by Baselode Energy Corp (FIND:TSXV) that identified basement hosted mineralisation at Beckett in first pass drilling, and within a fertile corridor of biotite gneiss which hosts the high grade (58.0% U_3O_8) Agip-S uranium prospect[3]. The Data has significantly expanded this target beyond what was initially identified in the Basin Energy prospectus.

GK3

GK3 has a discrete coherent radiometric anomaly, located at an interpreted structural confluence. Geology appears disrupted by a north-westerly trending structure that is coincident with the anomalous uranium grab samples from GK2 to the south.

GK4

The GK4 target is a strong coherent radiometric anomaly striking north-easterly and mapped as Wollaston calcsilicate rocks.

[2] Refer to ASX Prospectus dated 22 August 2022
[3] Refer to ASX Prospectus dated 22 August 2022

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Next steps – Geikie

A systematic exploration strategy has been developed for Geikie, with the expected pathway and timeline as follows:

- On ground follow up reconnaissance mapping and sampling of the high priority targets – **Commenced**
- Search, review and capture of any additional relevant historical data that has been completed in the Geikie region – **Ongoing**.
- Complete high resolution airborne electromagnetics, critical to the refinement of drill targets. **Survey scheduled November 2022**
- Diamond drilling – **Proposed to commence Q1 2023**

Geikie Project Overview

Basin Energy's Geikie Project is located just outside the Eastern Boundary of the Athabasca Basin within the Wollaston Belt. Traditional uranium exploration models target mineralisation at or near the unconformity between The Athabasca sandstone and basement rocks, whereas at Geikie no sandstone is exposed at surface, however prior to erosion, the Athabasca sandstones would have covered this entire project. Geikie is now partially covered in glacial deposits which are estimated to be up to 20 metres thick.

The Project area has been subject to minimal exploration for uranium, with most work targeting base metals within a 3km zone of the Geikie River between 1967 and 1980. During this regional work, a series of mineralised showings were discovered in the Mud Lake and Marina areas. The Mud Lake uranium-molybdenum showing recorded a series of anomalous rock chips with grades of up to 0.23% U_3O_8, 5.2% Mo, and 1.4% Cu; the Marina lead-zinc prospect recorded anomalous mineralisation in outcrop of up to 2.03% Pb, 7.2% Zn and 0.93 oz/t Ag [4].

[4] Refer to ASX Prospectus dated 22 August 2022

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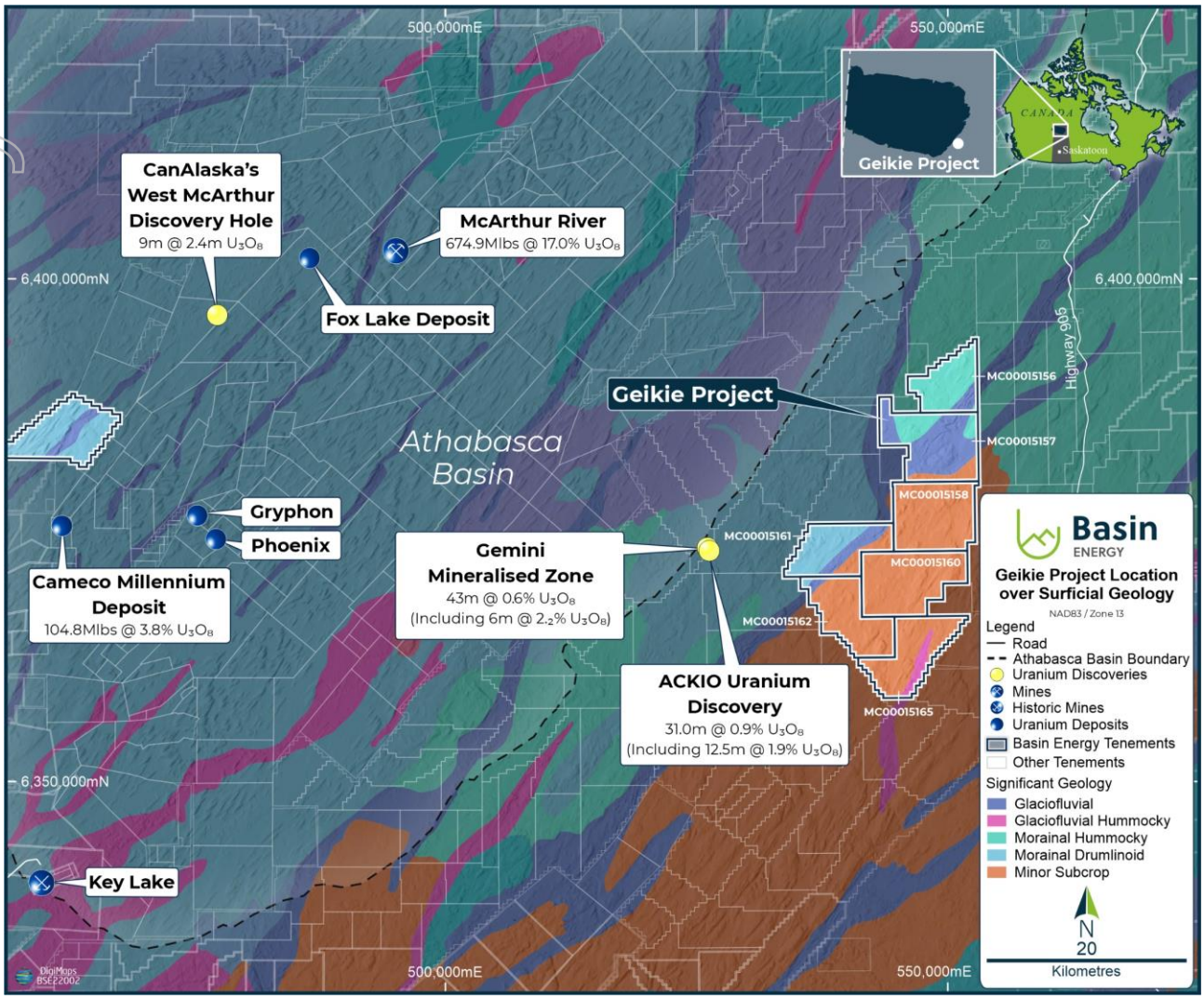

Figure 2: Location of Geikie Project

The primary target is for basement hosted uranium mineralisation where uranium bearing structures intersect favourable intercalated pelitic and calc-silicate host rocks. Calc-silicates may well offer a key reductant barrier necessary for uranium deposition. Recent discoveries of basement-hosted uranium mineralisation including at the Gemini Mineralised Zone, ACKIO and Beckett, along with known mineralisation at Agip S and West Way prospects all underscore the prospectivity of this portion of the Wollaston Belt.

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North Millennium & Marshall Project Updates

Whilst initial field work is focussed on Geikie, Basin continues its exploration strategy to advance its North Millennium and Marshall projects through data collation and target development.

The North Millennium project is located 7km north of Cameco Corporation's Millennium deposit (**104.8Mlb at 3.8% U_3O_8**)[5]. Basin's exploration is focused on the interpreted extension of the Millennium Mother fault. Whilst no drilling data is known to exist within the North Millennium Project area, the review of historic ZTEM, VTEM and MEGATEM data which partially cover the project area, as well as lake and sandstone geochemistry will be completed prior to the proposed 1H 2023 ground geophysics program, leading into a summer drill campaign.

The Marshall project is located 11km west of the Millennium deposit. Basin's exploration is focused on a significant basement conductor identified in historic ZTEM and VTEM data, corresponding to a magnetic low. Whilst no drilling data is known to exist within the Marshall Project area, the review of historic ZTEM and VTEM data which partially cover the project area, as well as lake and sandstone geochemistry will be completed prior to proposed winter 1H 2023 ground geophysics program, leading into a 2H drill campaign.

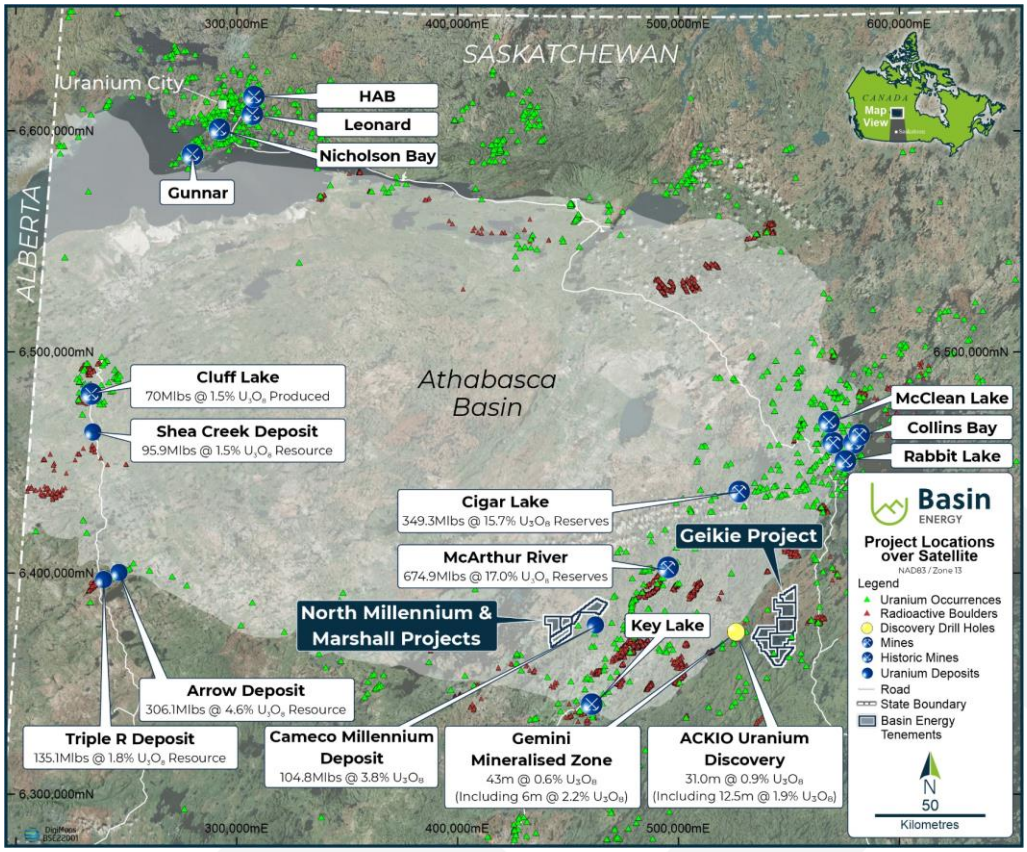

Figure 3: Location of Basin Energy's Athabasca Project Portfolio

[5] Refer to ASX Prospectus dated 22 August 2022

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

Enquiries

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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. Additional information included within this release but not included in the prospectus relates solely to the high resolution magnetic and radiometric data and is based on and fairly represents information compiled by Jeremy Clark, a competent person who is a member of the AusIMM. Jeremy Clark is a non-executive Director of Basin Energy. Ltd. Jeremy Clark 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. Jeremy Clark 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 presentation 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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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

Pete Moorhouse	**Managing Director**
Blake Steele	**Non-executive Chairman**
Cory Belyk	**Non-executive Director**
Jeremy Clark	**Non-executive Director**
Peter Bird	**Non-executive Director**
Ben Donovan	**NED & Company Secretary**

Basin Energy
ACN 655 515 110

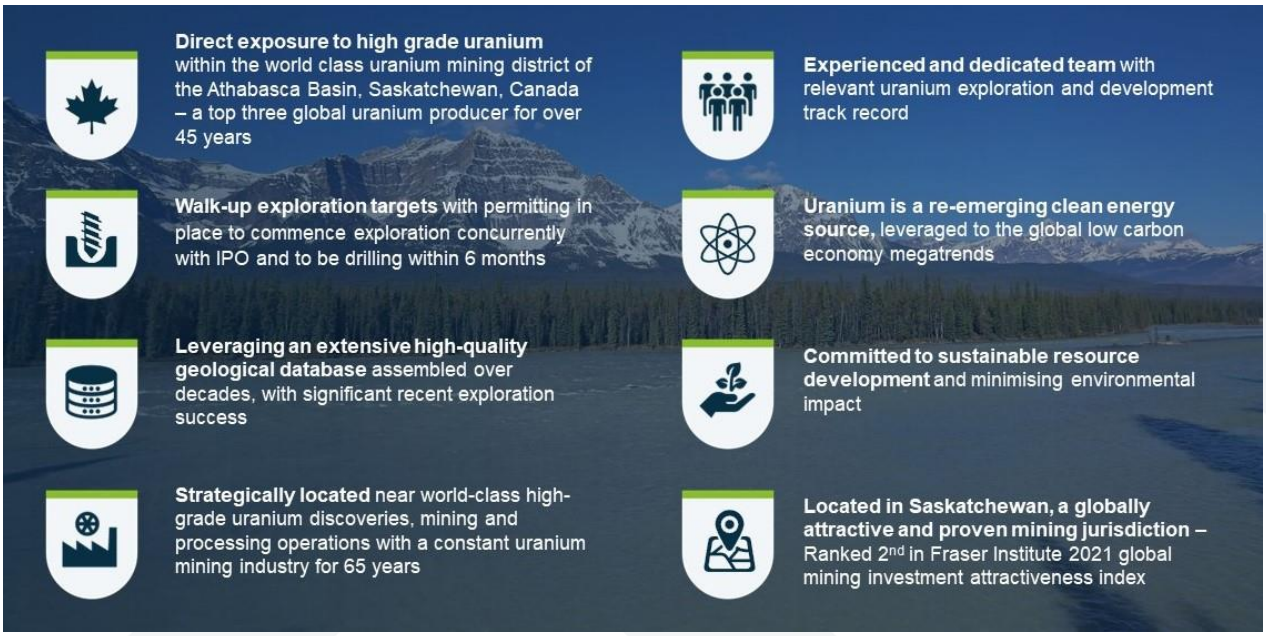
Projects
North Millennium
Geikie
Marshall

Shares on Issue
81,229,697

Options
13,300,000

ASX Code
BSN

Investment Highlights



1 JORC CODE, 2012 EDITION – TABLE 1 REPORT

1.1 Section 1 Sampling Techniques and Data

New data within this release relates to airborne magnetic and radiometric data only. All other information referenced was disclosed within the Basin Energy prospectus lodged with the ASX 22/08/2022.

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning 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.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	The industry standard airborne radiometric and magnetic survey was conducted by Precision Geosurveys Inc. <u>Survey Specifications</u> • Aircraft type: Bell 206 Helicopter • Aircraft registration: C-FZHK • An IMPAC console was used data recording • Scintrex CS-3 split-beam cesium vapor magnetometer was used for magnetic surveying • A Billingsley TFM100G2 triaxial fluxgate magnetometer was used to record magnetic variation with pitch, roll, and yaw • A GEM GSM-19T proton precession magnetometer was used for a magnetic base station • A Medusa GR-820.1 gamma ray spectrometer was used for radiometric surveying, with thallium-activated synthetic sodium iodide crystals configured with four crystals of 4.2 litres each downward-looking and one crystal of 4.2 litres upward-looking • A Hemisphere R330 GPS receiver, coupled to a Novatel GPS antenna integrated with the AGIS navigation system and pilot display was used for navigation • Terrain clearance was measured by an Opti-Logic RS800 Rangefinder laser altimeter attached to the magnetometer boom
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	Not Applicable – No drilling was undertaken
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.*	Not Applicable – No drilling was undertaken

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Criteria	JORC Code explanation	Commentary
	• *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	Not Applicable – No drilling was undertaken
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or 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 material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Not Applicable – No drilling was undertaken
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 assaying or laboratory testwork was undertaken
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.*	Not Applicable – No assaying was undertaken

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Criteria	JORC Code explanation	Commentary

Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*
	• *Specification of the grid system used.*
	• *Quality and adequacy of topographic control.*
		• Locational data was collected using a Hemisphere R330 GPS Receiver
		  • 10Hz sampling
		  • Sub metre 3D accuracy
		• Geodetic system used was WGS84, UTM zone 13N

Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Flight lines were 100 metres spaced • Tie lines were 1000 metre spaced • Survey height was nominally 35 metres • It is the company's opinion that a suitable survey spacing was designed to achieve the objective for mineral exploration
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The flight lines were planned to 135 degrees UTM grid which is approximately perpendicular to the regional geological strike. • Tie lines were flown 045 degrees UTM grid
Sample security	• *The measures taken to ensure sample security.*	• Not Applicable – No physical sampling was undertaken
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits were performed

1.2 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 such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*
	• *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 Geikie Project consists of 7 permit numbers (MC00015156-MC00015158 and MC00015160-MC00015162 and MC00015165, located in Northern Saskatchewan, Canada.
		• All permits are understood to be in good standing and subject to the standard and transparent renewal processes.
		• The project is currently held 40% by Basin Energy and 60% by TSX-V listed CanAlaska
		  • Basin has an Earn in agreement upto 80%
		  • Upon Basin reaching 80% ownership, CVV will hold a 2.75% nsr with a by back option of 0.5%

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Criteria	JORC Code explanation	Commentary
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The property has had limited uranium exploration, and some base metal exploration work. Work includes • 1967-1980 Great Plains and Marline Oil focussed on base metals and conducted rock chips and minor trenching • 1990's Saskatchewan geological survey conducted mapping • 2000's the project was owned by Northwind Resources and CanAm Uranium Corp, who completed a electromagnetic survey over the western portion of the project area, and reconnaissance mapping
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The project is deemed prospective for unconformity and basement hosted uranium mineralisation
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• The company is aware of no historic drilling on the property • Should data reviews uncover drillhole details, this information will be disclosed.
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.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	Not Applicable– No data aggregation of assay results was undertaken
Relationship between mineralisation	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with*	Not Applicable – No mineralisation is being reported

Criteria	JORC Code explanation	Commentary
widths and intercept lengths	*respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	
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.*	Not Applicable – No significant discoveries are being reported
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 to avoid misleading reporting of Exploration Results.*	It is the company's opinion that A balanced representation of the early-stage exploration data is being presented
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.*	Not Applicable – No other substantive exploration data is available
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, provided this information is not commercially sensitive.*	• On ground follow up reconnaissance mapping and sampling of the initial targets - ***commenced.*** • Search, review and capture of any additional relevant historical data that has been completed in the Geikie region – ***ongoing.*** • Complete high resolution airborne electromagnetics. A contract has now been entered into to complete this survey. This next level of data is seen as critical to the refinement of drill targets – ***Survey scheduled November 2022*** • Consider the need for targeted ground geophysics – Q1 2023 • Diamond drilling – ***Proposed to commence Q1 2023***

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