Basin ENERGY

For personal use only

AIRBORNE ELECTROMAGNETIC SURVEY COMPLETED AT GEIKIE

Key Highlights

- **Property-wide Airborne Electromagnetic Survey now completed at Geikie**
  - **Data processing underway for target definition and priority ranking**
  - **Additional EM conductor identified in the west of the property**
- **Preparation works well underway for maiden drill program**
- **Fully funded for a significant 2023 exploration program with $7.6m at 31 December 2022**

Basin Energy Limited (**ASX:BSN**) ('**Basin**' or the '**Company**') is pleased to advise that the airborne electromagnetic ('**AEM**') survey is now complete at the Geikie Uranium Project ('**Geikie**' or the '**Project**'). All preliminary data has been received with high priority targets identified. Data processing analysis has commenced which will be used for final target definition to support the maiden drill program. In addition to the significant, newly identified electromagnetic ('**EM**') conductor in the Southeast of the Project *(Refer ASX announcement dated 8th March 2023)* and the multiple conductive anomalies associated with regional structures, the survey has also highlighted an additional conductor in the west of the Project.

Basin's Managing Director, Pete Moorhouse, commented:

"The completion of the AEM survey is a significant milestone for our Geikie project and forms a critical step towards de-risking drill targets. This is the first detailed airborne electromagnetic survey over the entirety of the Project and is a significant step forward in delineating a series of high-quality, high-grade, yet shallow uranium targets.

The survey has identified a series of compelling drill ready targets in the structural intersections of the main conductor and the district scale faults observed in the magnetic data. Whilst the final AEM data is required to allow refinement of these targets, the Company can now continue preparations for inaugural drilling at its Geikie project.

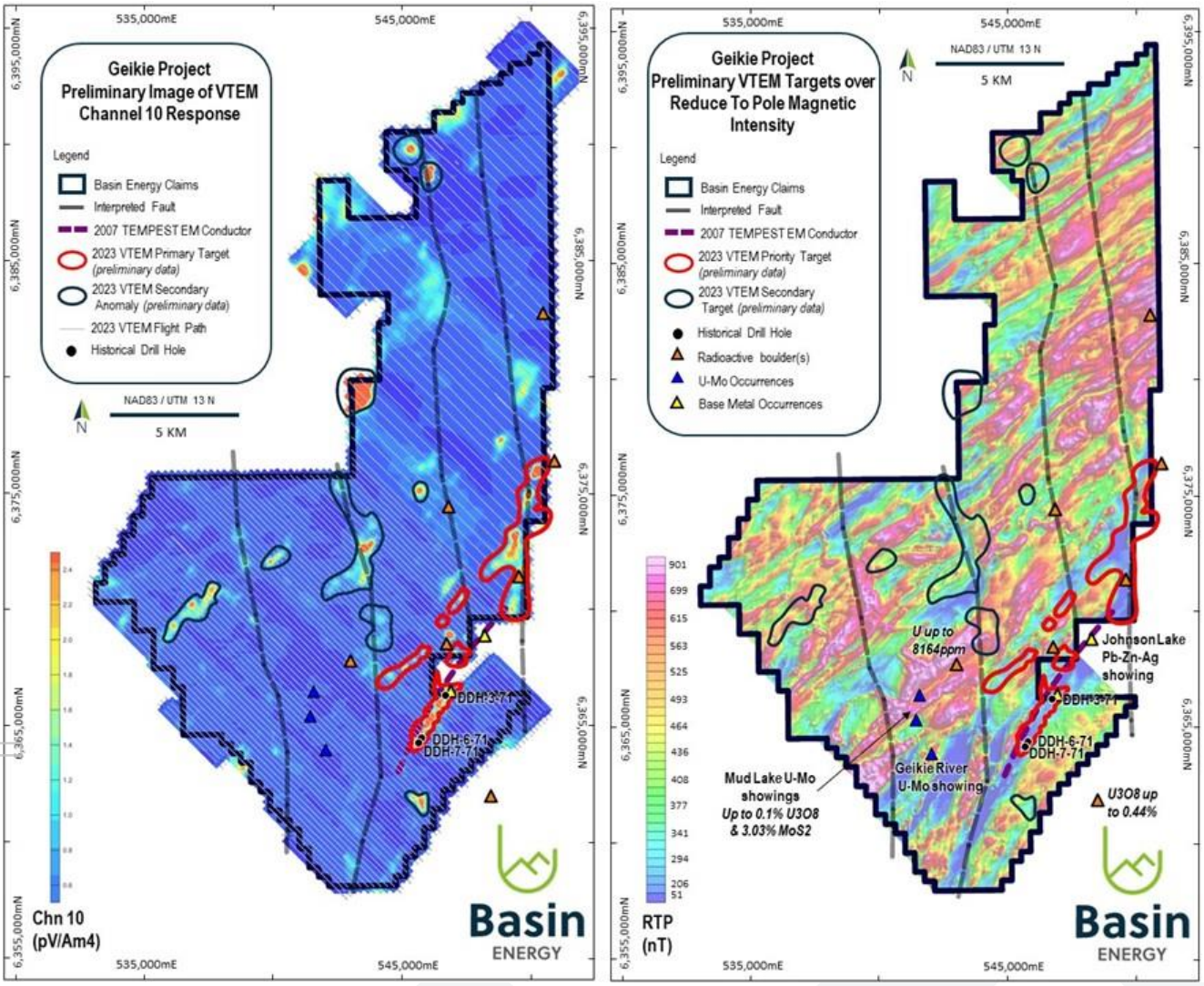
We eagerly await the commencement of the next phase of work. The Company is fully funded for exploration on the Project with a high-quality suite of targets in a proven uranium region in the Athabasca Basin puts the Company in a strong position for the year ahead."

For personal use only

AEM Preliminary Results

Data acquisition for the AEM survey has now been completed at Geikie. The survey objectives were to map suitable lithological and structural settings conducive to high-grade uranium mineralisation. This includes the identification of graphitic lithologies coincident with fault zones, as seen in deposits of the local region. The data in conjunction with existing knowledge will now be used for drill targeting.

Preliminary results from the initial 65% of the survey were released on the ASX on 8 March 2023, "Geophysical Targets Identified at Geikie" and identified a new, significant EM conductor in the southeast of the Project. On completion of the full survey, an additional conductor in the west of the Project was identified.



Figures 1 and 2[1]*: Locations of AEM primary and secondary targets over (left) Channel 10 VTEM data and (right) 2022 magnetic data. Note: potential AEM target zones are based on preliminary data. Final levelled data is yet to be received.*

[1] *See Basin Energy ASX release dated 14/10/2022 "Maiden Geophysical Survey"*

For personal use only

Preliminary data has been categorised into primary and secondary targets, with the next steps for primary targets being the modelling of final AEM data followed by drill testing. The secondary anomalies are potentially significant considering the correlation with regional faults, however further assessment will be conducted as modelling of final data is completed.

A strong coherent northeast trending conductor, classified as a primary target, striking through the southern half of the Project is clearly defined. A series of splays and offsets of this conductor are visible, often in correlation with intersections of regionally significant deep-seated north-south trending faults, part of the Tabbernor Fault System **('Tabbernor', or 'TFS').**

Additional significance is added to this conductor as geological logs from a historic drill hole has identified structural graphite proximal to this main conductor. Basin interprets this as providing confidence in the presence of structurally related graphite in the region, a known key pathfinder for uranium-rich fluid circulation and mineralisation precipitation in the Athabasca Basin.

Furthermore, a series of AEM anomalies have been identified associated with 3 of the prominent regional north south Tabbernor faults, delineated in the airborne magnetic and radiometric survey completed in 2022 *(see ASX announcement dated 13 October 2022)*. Using analogies from known uranium mineralisation both proximal to Geikie and within the broader Athabasca Basin, it is hypothesised Tabbernor faults are structural fluid conduits, allowing deep circulation of uranium ore-forming fluids. Additionally, evidence for a spatial relationship between where the ductile Tabbernor faults intersect regional lithological and structural trends is observed at significant deposits within the Basin. **These include the Dawn Lake, Midwest, Sue and Rabbit Lake's Collins Bay B Zone and Eagle Point uranium deposits** *(see technical references).*

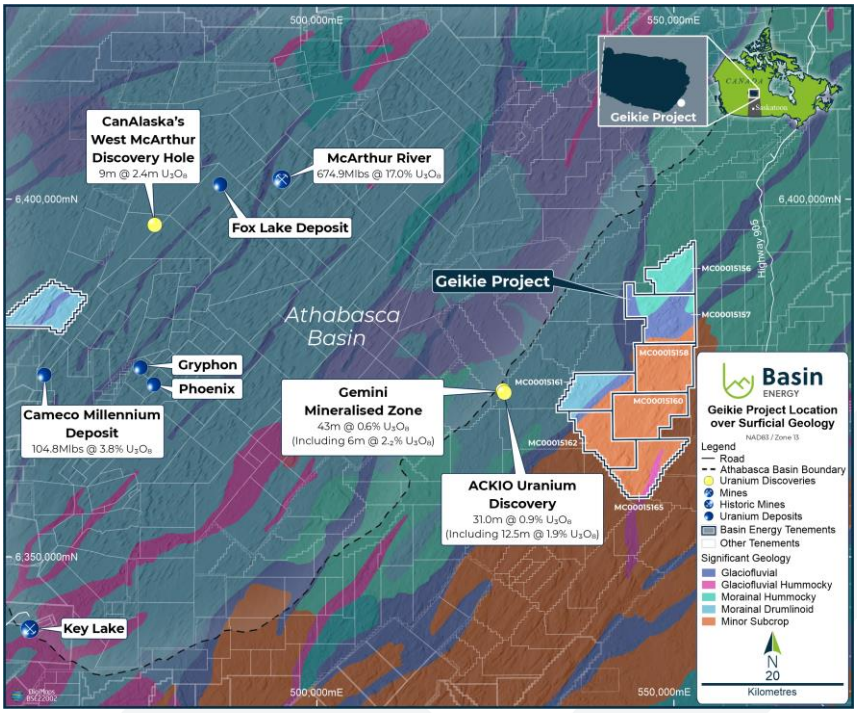


Figure 3[2]*: Geikie Project in relation to nearby significant uranium occurrences*

2 Refer to ASX Prospectus dated 22 August 2022 for quoted mineralisation

For personal use only

AEM Data Acquisition

Basin commissioned the AEM survey in Q4 2022 (Refer *ASX release dated 8 December 2022).* A helicopter-borne Versatile Time-Domain Electromagnetic ('**VTEM**') survey method was selected as most appropriate to achieve the survey objectives. The VTEM system is proven in this style of exploration for uranium within the Athabasca Basin and is excellent for locating discreet conductive anomalies as well as mapping lateral and vertical variations in resistivity.

Geotech Ltd were engaged to conduct the survey, which covered the entire project area, at a combination of 400 m line spacing in the northern part of the property and 200 m line spacing in the south. A total of 1,399-line kilometres of data was acquired. The contractor experienced significant delays in flying this survey due to helicopter mechanical down-time and seasonal weather-related issues out of Basin's control. Final survey specifications are outlined in Appendix 1.

All preliminary data has now been received and released to the market. Final processed and levelled data is expected in Q2 2023.

***Figure 3**: Geotech Limited survey helicopter conducting surveying at Geikie Uranium Project*

For personal use only

Next Steps for Geikie

The Company is now in the process of finalising the summer exploration program for the Geikie project. This is set to include:

- Receipt of the final levelled and processed data from the AEM survey and subsequent modelling of the observed anomalies
- Continued engagement with Traditional Rights Bearing groups and other stakeholders
- Finalising plans for the summer drilling program to test immediate high-quality, shallow depth uranium targets

Other News

The Company will be presenting at the 2023 Brisbane Mining Investor Conference between the 22nd and 23rd March 2023, and attending the 121 Mining Investment Conference in London between 9th and 10th of May 2023.

Basin Energy representatives will be available to discuss the progress of projects at either of these marketing events. Please contact the Company on the details below.

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

Enquiries

Pete Moorhouse
Managing Director
pete.m@basinenergy.com.au
+61 7 3667 7449

Chloe Hayes
Investor & Media Relations
chloe@janemorganmanagement.com.au
+61 458 619 317

For personal use only

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**
Odile Maufrais	**Exploration Manager**

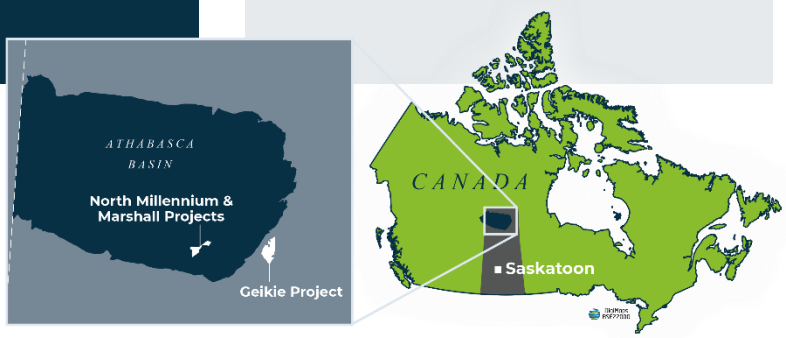
Basin Energy
ACN 655 515 110

Projects
North Millennium
Geikie
Marshall

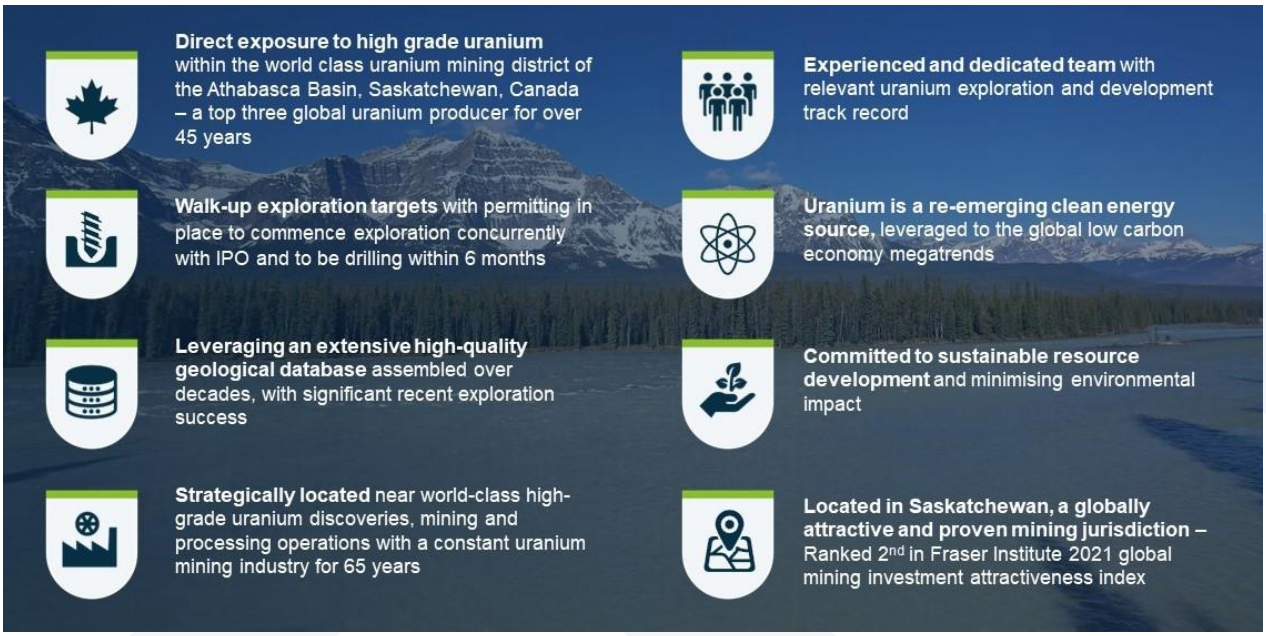
Shares on Issue
81,229,697

Options
13,300,000

ASX Code
BSN



Investment Highlights



For personal use only

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 (U_3O_8) is the amount of contained uranium (in Mlbs U_3O_8) and average grade (in % U_3O_8) 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.

Technical References

DAVIES, J.R., The origin, structural style, and reactivation history of the Tabbernor fault zone, Saskatchewan, Canada; Masters thesis, McGill University, Montreal, Quebec, 105p, (1998).

ALLEN, T., MAUFRAIS-SMITH, O., MCKEE, K., QUIRT, D., HARRISON, G., The Midwest Project, East Athabasca Basin, Northern Canada: Reviving old deposits to prepare for the future, International Symposium on Uranium Raw Material for the Nuclear Fuel Cycle (URAM-2018), (2018).

LI, Z., Geometric and hydrodynamic modelling of fluid-structural relationships in the southeastern Athabasca Basin, Saskatchewan, Canada, with implications for uranium ore genesis; PHD thesis, University of Regina, Saskatchewan, (2016).

For personal use only

Appendix 1

1 JORC CODE, 2012 EDITION – TABLE 1 REPORT

1.1 Section 1 Sampling Techniques and Data

New data within this release relates to airborne electromagnetic data. All other information referenced was disclosed within the Basin Energy prospectus lodged with the ASX 22/08/2022 and subsequent ASX exploration updates

.

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.*	• Results reported relate to an airborne electromagnetic survey conducted by Geotech Ltd of Ontario, Canada, an independent geophysical contractor. • Survey is using the proprietary Versatile Time Domain Electro Magnetic (VTEM Plus) system with the following parameters: • AS350B3 Helicopter at a flying height of 70 m (EM sensor 35 m). • Transmitter loop diameter: 26 m. • Peak dipole moment: 425,000 NIA. • Transmitter Pulse Width: 7 ms • VTEM Plus Receiver: Z,X coils, Y optional • Full waveform recording for improved early time system performance. Features of full waveform technology are: streamed half-cycle recording of transmitter/receiver waveform data and system response calibration. • Sensor calibration procedure uses the measured calibration waveform for correction of half-cycle waveforms acquired on a survey flight. The half-cycle waveforms of each channel are corrected to obtain the waveforms that would be recorded if the time-domain responses of all the channels, including the reference channel, were the same ideal Gaussian-like response. The ideal response is defined by its bandwidth. • A streamed current monitor and streamed receiver data are used for transmitter drift and parasitic noise corrections and ideal waveform deconvolution. The deconvolution procedure corrects one complete period for linear system imperfections including transmitter current drift.
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 to VTEM Plus survey

Criteria	JORC Code explanation	Commentary
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.* • *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.*	Not Applicable to VTEM Plus survey
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 to VTEM Plus survey
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 to VTEM Plus survey
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*	Not Applicable to VTEM Plus survey

For personal use only

For personal use only

Criteria	JORC Code explanation	Commentary
	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.*	
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 to VTEM Plus survey
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.*	Geodetic system used for the survey is NAD83, 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.*	VTEM data was collected at 400 m line spacing in the north or the property and 200m line spacing in the south following a NW-SE orientation. This orientation is perpendicular to the principal strike direction inferred from regional magnetic data.
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*	See above

Criteria	JORC Code explanation	Commentary
	introduced a sampling bias, this should be assessed and reported if material.	
Sample security	• *The measures taken to ensure sample security.*	Not Applicable to VTEM Plus survey
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	Data is preliminary and consequently being reviewed by CanAlaska Uranium and an independent consultant. Results will be reported in a forthcoming announcement.

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 up to 80%
		  • Upon Basin reaching 80% ownership, CVV will hold a 2.75% nsr with a buy back option of 0.5%

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, minor trenching and drilling. Data for which is referenced as classified as historical in nature. • 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

For personal use only

For personal use only

Criteria	JORC Code explanation	Commentary
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The project is deemed prospective for basement hosted unconformity 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.*	• Little historical drilling has been completed. None of these drillholes are considered to have sufficiently tested the area that is the subject of this announcement. •
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 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 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').*	Not Applicable – No uranium mineralisation is being reported
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

Criteria	JORC Code explanation	Commentary
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.*	• Search, review and capture of any additional relevant historical data that has been completed in the Geikie region – ongoing. • Complete data processing and plate modeling of the high resolution airborne electromagnetics survey. This next level of data is seen as critical to the refinement of drill targets – ***ongoing*** • Consider the need for targeted ground or airborne geophysics – Q1 2023 • Diamond drilling – contingent to completion of final VTEM survey data processing.

For personal use only