

GRAVITY SURVEY IDENTIFIES SIGNIFICANT ANOMALIES AT THE GEIKIE URANIUM PROJECT

Key Highlights

- Large gravity targets identified coincident with key regional structures within the Geikie Uranium Project.
- Series of gravity anomalies identified, coincident with key north south fault identified near drill hole GKI-002 which intersected 0.27% U₃O₈.
- Survey results support interpretation that a large hydrothermal system is active adjacent to the Preston Creek prospect.
- Priority ranking of gravity targets subject to on-going modelling of gravity low anomalies.
- Immediate follow-up drilling program for Geikie scheduled for Q1 2024.

Basin Energy Limited (**ASX:BSN**) ('**Basin**' or the '**Company**') is pleased to advise that the Airborne Gravity Gradiometer ('**AGG**') survey data for its Geikie Uranium Project ('**Geikie**' or the '**Project**') has been received and wishes to provide an update on preliminary results, whilst further modelling is being completed on this data.

The Project is located on the eastern margin of the world-class Athabasca Basin in Canada. Maiden drilling completed in August 2023 successfully identified uranium mineralisation with assays up to $0.27\% U_3O_8$. Uranium mineralisation is located proximal to two regionally significant structures at Aero Lake and Preston Creek, with associated extensive hydrothermal alteration characteristic of large uranium mineralising systems. The AGG survey was designed to target areas of enhanced basement alteration associated with drill defined uranium fertile structural corridors.

The survey has successfully outlined multiple gravity low features (Figure 1, Figure 2) within the Project suggestive of low-density clay-rich alteration zones. Significantly, a number of these gravity anomalies are coincident with fertile structural corridors identified through drilling and airborne magnetic surveys.

Basin's Managing Director, Pete Moorhouse, commented:

"The Geikie Project is a geographically large area within an exciting, previously overlooked part of the prolific Athabasca basin.

Our first phase of drilling identified the key ingredients for Athabasca basement-hosted high-grade uranium, including significant alteration associated with regional structures along with the presence of uranium.



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ASX Code BSN



I'm delighted by the initial results from the survey, which has defined a series of strong coherent gravity lows falling on these structural zones indicating the potential for intense alteration – exactly what you need when looking for these large uranium deposits.

Whilst the technical team is conducting extensive modelling of this data to ensure the maximum effectiveness, we are now working toward the next phase of drilling scheduled for Q1 2024 and are extremely excited to get the rigs restarted at Geikie."

Airborne Gravity Gradiometer Survey Results:

Basin Energy contracted Xcalibur Multiphysics Group to conduct a detailed fixed-wing Falcon AGG survey on the Geikie Project¹ (Figure 3). The survey consisted of a total of 1,838 line kilometres at 200 m flight line spacing. Full survey and levelling parameters are detailed in Appendix 2.



Figure 1: Gravity low anomalies over vertical gravity gradient (left) Figure 2: Gravity low anomalies over reduced to pole magnetic intensity (right)

¹ Refer ASX release dated 22 August 2023



Results from Basin Energy's maiden drilling program conducted in June-July 2023^{2,3} (Figure 4) confirmed the presence of hydrothermal alteration systems hosted within a complex structural framework at Geikie, features which are commonly associated with basement-hosted high-grade uranium deposits elsewhere in the Athabasca Basin. Drillholes intersected graphitic host rocks with large reactivated and brecciated fault zones, associated with hydrothermal alteration, uranium mineralisation up to 0.5m at 0.27% U_3O_8 , and uranium enrichment.

The purpose of the survey was to identify gravity low anomalies coincident with large-scale fertile structures as identified in drilling and through airborne geophysical data. Where these occur, the low-density rocks are indicative of clay alteration caused by intensified fluid movement along these fault zones characteristic of uranium mineralising systems in the Athabasca.

The survey successfully outlined multiple gravity low features across the Geikie Property (Figure 1 and Figure 2). Of significance, the AGG survey highlighted:

- Gravity low anomalism coincident to isolated key magnetic structures,
- Gravity low anomalism at the intersection point of several key magnetic structural features,
- Gravity low anomalism marginal to an electromagnetic conductor often coincident to one or more key magnetic structures,
- lsolated gravity low anomalism.



Figure 3: XCalibur Multiphysics Cessna Survey Plane

² Refer ASX release dated 10 August 2023

³ Refer ASX release dated 20 September 2023



Key Findings Adjacent to 2023 Maiden Drilling Prospect Areas:

The AGG survey in the 2023 drilling areas confirmed the potential scale of the hydrothermal systems intersected in drilling at the Preston Creek and Aero Lake Prospects^{2,3}.



Figure 4: 2023 maiden drilling program results

Aero Lake

The AGG survey highlighted several high-priority gravity anomalies adjacent to the Aero Lake prospect (Figure 4) where the highest uranium value of the drilling program was intersected ($0.27\% U_3O_8$ over 0.5 metres starting from 185 metres in GKI-002)³.

The anomalies identified adjacent to Aero Lake appear related to the wide hydrothermal alteration zone intersected in drillhole GKI-002 (Figure 5). Of great interest are a succession of gravity lows which follow this structure extending along an 8000-metre trend to the south of GKI-002 and approximately 3000 metres north of the drillhole. Further modelling of these gravity anomalies is currently on-going.



Preston Creek

Multiple high priority anomalies were identified adjacent to the Preston Creek prospect coincident with a north-northwest striking Tabbernor fault transecting a regional basement conductor trend, as identified in earlier electromagnetics.

Drill holes GKI-004, GKI-005 and GKI-008 were positioned at a bend in the conductor's axis where the electromagnetic data identified potential fault splays and irregularities. Significant zones of hydrothermal alteration were encountered in this drilling, commonly observed within or at the periphery of major structures.

A gravity low anomaly of approximately 800 metre strike length was highlighted near GKI-005 following a north-northwest trending magnetic structure confirmed by drilling. Gravity anomalism is also present in the footwall of the graphitic conductor tested by drillholes GKI-004, GKI-005, GKI-007 and GKI-008. This area warrants immediate follow-up and modelling of the gravity anomalies is currently on-going.

Next steps:

Small scale modelling (3D inversion) of the priority gravity anomalies associated with key structures is currently on-going. This modelling, integrated with the existing airborne magnetic, radiometric and electromagnetic data as well as the drilling data will form the basis for prioritisation of the anomalies for drilling to commence Q1 2024.



Figure 5: Hydrothermal alteration intersected a wide faulted interval in drillhole GKI-002



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

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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
Odile Maufrais	Exploration Manager

Basin Energy

ACN 655 515 110

Projects

North Millennium Geikie Marshall

Shares on Issue 83,479,697

ASX Code BSN





Investment Highlights

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

Walk-up exploration targets with permitting in place to commence exploration concurrently with IPO and to be drilling within 6 months



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

*

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



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



Uranium is a re-emerging clean energy source, leveraged to the global low carbon economy megatrends



Committed to sustainable resource development and minimising environmental impact



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



Appendix 1

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, M.Sc., a competent person who is a Member of the Australian Institute of Mining and Metallurgy. 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 her 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.



Appendix 2

1 JORC CODE, 2012 EDITION – TABLE 1 REPORT

1.1 Section 1 Sampling Techniques and Data

New data in this Table 1 refers to airborne gravity gradiometry results from a Falcon survey completed on the Geikie project in August-September 2023. 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 (e.g., 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 (e.g., '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 (e.g., submarine nodules) may warrant disclosure of detailed information. Drill type (e.g., core, reverse 	 Results reported in this announcement relate to a high-sensitivity aeromagnetic and FALCON Airborne Gravity Gradiometer survey conducted by Xcalibur Multiphysics. The survey comprised a total of 1,838 line kilometer at 200 m traverse line spacing. Direction of the traverse lines was 315°. The following instrumentation was used for this survey: FALCON® AGG System (Kepler), Scintrex CS-3. The following parameters were recorded during the survey: FALCON® AGG data: recorded at different intervals. Airborne total magnetic field: recorded with a 0.1 s sampling rate. Terrain clearance: provided by altimeter at intervals of 0.1 s. Airborne GPS positional data (latitude, longitude, height, time and raw range from each satellite being tracked): recorded at intervals of 1 s. Time markers: in digital data. Ground total magnetic field: recorded with a 1 s sampling rate. Ground based GPS positional data (latitude, longitude, height, time and raw range from each satellite being tracked): recorded at intervals of 1 s. Ground surface below aircraft: mapped by the laser scanner system (when within range of the instrument and in the absence of thick vegetation), scanning at 36 times per second, recording 276 returns per scan.
Junny		• Not applicable to this release.

techniques

circulation, open-hole



Criteria	JORC Code explanation	Commentary
	hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g., 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.).	
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 this release.
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 this release.
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. 	Not applicable to this release.



Criteria	JORC Code explanation	Commentary
	 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. 	
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 (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established. 	 Data processors completed daily Quality Control of each flight specifications (along with other quality indicators) and produced a range of QC products for quality control monitoring. The gravity data was analysed to verify disturbance, speed, position and noise for each data stream. Any lines found to exceed specified tolerances are noted for potential reflight. No refight was necessary.
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. 	 Data was reviewed by Xcalibur Multiphysics field contractors and Convolutions Geoscience on completion of the survey. Mitre Geophysics Pty, who is contracted to work on the post-processing of the gravity data, has also reviewed and QC the data. Terrain corrections were derived from the digital terrain model grid for every data point in the survey. A terrain density of 1.00 g/cm3 was used to compute the terrain correction channels, which were then multiplied by the chosen correction density before being subtracted from the data. Correction density of 2.1 g/cm3 was selected as the most suitable density of the terrain in the survey area, respectively. As standard the density of 2.67 g/cm3 was also applied and these data are also included. Laser scanner returns were recorded at a rate of 13.2845 scans per second with each scan



Criteria JORC Code explanation

Commentary

returning 1291 data points. Each return was converted to ground surface elevation by combining scanner range and angle data with aircraft position and attitude data. Computed elevations were then sub sampled by first dividing each scan into ten segments and combining five adjacent scans per segment, then using a special algorithm to select the optimum return within each data "bin" thus formed. Sub-sampled laser scanner data were edited to remove spikes prior to gridding.

- The NE and UV data were then passed through a regional levelling process as described in White 2015. A subset of the Canadian Gravity Anomaly database was used in this case as the regional data. The data were iteratively passed through a series of low pass filters which were optimised for the survey. The difference between the low pass filtered data and the original input data were then de-trended using a 1st order polynomial. The de-trended difference data was then subtracted from the originally input data to produce levelled NE and UV components.
- **Micro-levelling** was applied to the levelled data to remove residual levelling errors.
- enhanced processing technique The improves the noise amplitude density (as discussed by Christensen et al, 2015) by 25-50% for surveys with line spacing of less than 1 km. The method exploits the different spatial frequencies of system noise and geologic signal. After converting the data into the 2D spatial domain, a custom spatial filter is applied that removes the system noise, while retaining the remaining geologic signal. The process will limit the data resolution to the survey line spacing. The Falcon Difference Noise of the standard product is 1.57 E at 159 m resolution after applving and the processing enhancement, the Falcon Difference Noise is 1.41 E at 200 m resolution. Calculating the noise amplitude density is a more appropriate means to evaluate noise with data at different resolutions. The standard product has a noise amplitude density of 0.89 E√km and the enhanced product has a noise amplitude density of 0.63 E \sqrt{km} .
- The transformation into GDD and gD was accomplished using Fourier domain transformation. The transformation uses a smoothed surface onto which the output data are projected. These surfaces are smoother



Criteria	JORC Code explanation	Commentary
		 equivalents of the actual flying surface. The long wavelength information in gD and GDD can be improved by incorporating ancillary information. However, this is normally only done for larger survey areas. Due to the small size of the survey area no conformed grids were made.
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. 	 All processing was performed using WGS84/UTM Zone 13N coordinates. Dual frequency GPS base station was set up in Points North Landing Airport to correct the raw GPS data collected in the aircraft. A secondary GPS base station was available but was not required. Differential GPS processing was applied to compute accurate aircraft positions once per second. Waypoint's GrafNav GPS processing software calculated DGPS positions using raw range data obtained from receivers in the aircraft and at a fixed ground base station. The GPS ground station position was determined by sending several hours of collected data to an online GPS processing service to obtain a differentially corrected computed position. The service selected was CSRS-PPP, which is provided by Natural Resources Canada. The GPS data were processed, and quality controlled using the WGS84 datum. Parameters for the WGS84 datum are: Ellipsoid: WGS84 Semi-major axis: 6,378,137.0 m 1/flattening: 298.257 GPS Base Station Location: Points North Landing Airport Date: August 22nd, 2023 Latitude: 104° 4' 57.16903" W Height: 442.1 m ellipsoidal Magnetometer Base Station (CF1) Location: Points North Landing Airport Date: August 22nd, 2023 Used for flights: All Base: 57,418 nT
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 	 Line spacing of the Falcon airborne gravity survey was 200m, which is considered suitable for the level of geological and structural knowledge of the area. Flight line direction was 315 deg and minimum drape height was 80 m. Tie lines spacing was 2000m. Tie line direction was 45 deg. The extent of the survey is shown in the figures.



Criteria	JORC Code explanation	Commentary
	procedure(s) and classifications applied.Whether sample compositing has been applied.	in the release.
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. 	 Survey was flown at a direction compatible with the broader regional geological knowledge of the area.
Sample security	The measures taken to ensure sample security.	 Not applicable to this release.
Audits or reviews	 The results of any audits or reviews of sampling techniques and data. 	 Not applicable to this release.

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 The Geikie Project, located in Northern Type, reference tenement and Saskatchewan, Canada, consists of 9 mineral name/number, location and land tenure ownership including claims: status agreements or material MC00015156 • issues with third parties such MC00015157 • as joint ventures, MC00015158 partnerships, overriding MC00015160 • royalties, native title MC00015161 interests, historical sites, MC00015162 wilderness or national park MC00015165 and environmental settings. MC00017352 • The security of the tenure MC00017353 • held at the time of reporting All claims are in good standing and subject to along with any known the standard and transparent renewal impediments to obtaining a processes. license to operate in the The project is currently held 60% by Basin area. Energy and 40% 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



Criteria	JORC Code explanation	Commentary
		back option of 0.5%
Exploration done by other parties	 Acknowledgment and appraisal of exploration by other parties. 	 Historical exploration on the Geikie property consisted of limited uranium exploration, and some base metal exploration work. Work includes: 1967-1980 Great Plains and Marline Oil focused 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 an 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 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. 	 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. No material information has been excluded.
Data aggregation methods	 In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) 	Not applicable to this release.



Criteria	JORC Code explanation	Commentary
	 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. 	
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 (e.g., 'down hole length, true width not known'). 	Not applicable to this release.
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. 	Refer to figures in the announcement.
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	 Other exploration data, if meaningful and material, should be reported including (but not limited to): geological 	 All relevant exploration data has been reported.



Criteria	JORC Code explanation	Commentary
exploration data	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.	
Further work	 The nature and scale of planned further work (e.g., 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. 	 Planning is underway to follow-up on the results reported in this release (drilling program Q1 2024).