Basin ENERGY

BASIN PREPARES FOR PHASE 2 DRILLING AT GEIKIE URANIUM PROJECT

Key Highlights

- **2,000 metres planned for a minimum of 8 drill holes.**
- **High priority shallow structural targets with gravity anomalies identified.**
- **Phase one drilling successfully identified active uranium system, including GKI-002 which intersected 0.27% U_3O_8.**
- **Multiple tenders received for key contractor roles, allowing mobilisation to commence in early February.**
- **Positive uranium market sentiment continues to build, with U_3O_8 SPOT price exceeding US$85/Lb.**

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Basin Energy Limited (**ASX:BSN**) ('**Basin**' or the '**Company**') is pleased to provide an update on preparations for its Phase two drilling program at the Geikie Uranium Project ('**Geikie**' or the '**Project**') scheduled to start in Q1 2024.

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[1]. 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[2]. Modelling and integration of the recently completed Airborne Gravity Gradiometer ('**AGG'**) data has provided a series of high priority targets that warrant next phase drill testing. The AGG survey was designed to target areas of enhanced basement alteration associated with drill defined uranium fertile structural corridors[3].

Basin's Managing Director, Pete Moorhouse, commented:

"Basin is preparing for a busy winter exploration season at its Athabasca uranium projects. We are excited to be following up on the success of our phase one drilling at Geikie, which intersected significant uranium mineralisation, with a robust phase two drill program.

Our first phase of drilling identified uranium mineralisation and the key ingredients for an Athabasca basement-hosted high-grade uranium deposit, including significant alteration associated with regional structures. Our AGG survey then defined a series of compelling gravity lows indicating the potential for

[1] *Refer Basin Energy ASX release dated 20/09/2023 "Basin intersects Uranium Mineralisation up to 0.27% in Maiden Drilling at Geikie"*
[2] *Refer Basin Energy ASX release dated 10/08/2023 "Elevated Radioactivity and Significant Hydrothermal Alteration Identified at Geikie"*
[3] *Refer Basin Energy ASX release dated 15/11/2023 "Gravity Survey Identifies Significant Anomalies at Geikie"*

intense alteration. This combined data leaves us with very exciting drill targets that we are eager to move forward on in phase two of drilling.

Also, the recent news of consolidation in the Eastern Athabasca further supports our interpretation of the prospectivity of this previously overlooked part of the prolific Athabasca Basin.

We are continuing to see a very positive sentiment in the uranium space with the uranium spot price now at 15 year highs. Basin is extremely well positioned to capitalise on this through the exploration of its projects in the world-class Athabasca Basin."

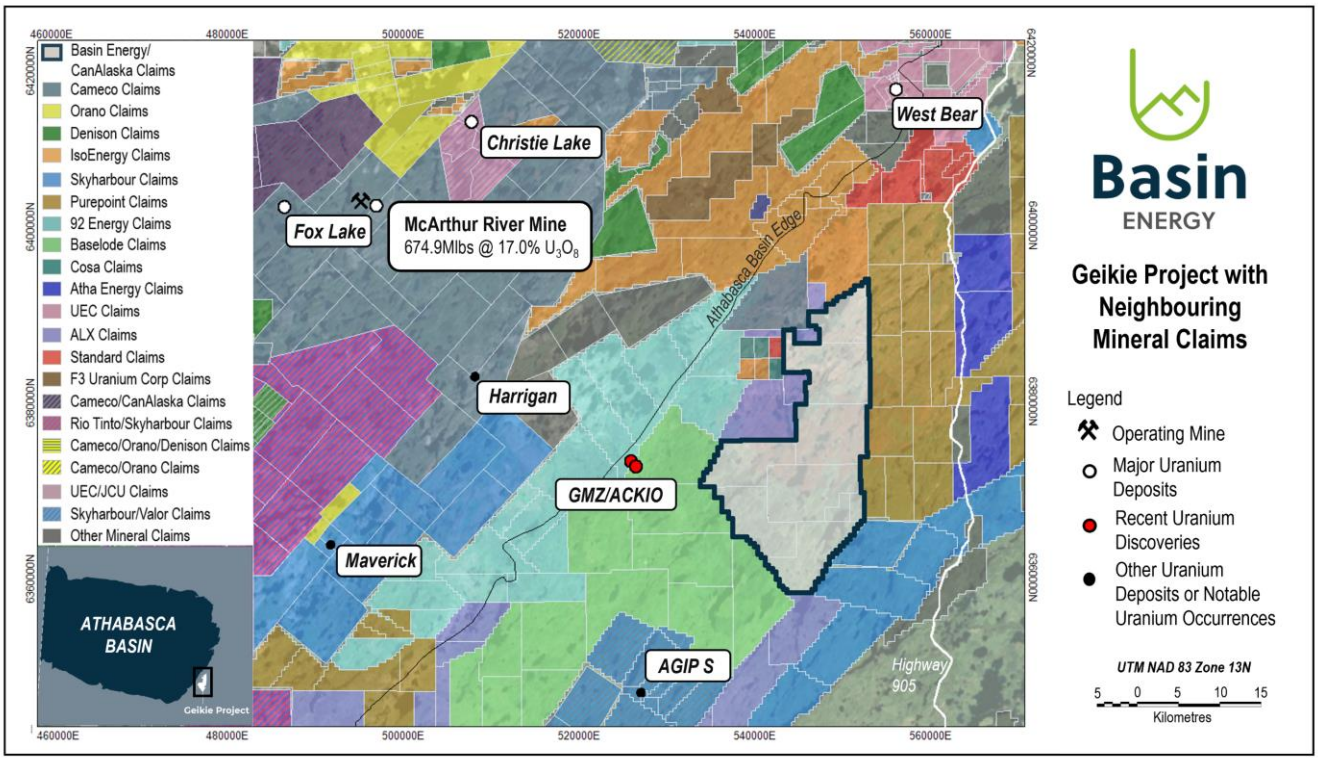

Figure 1: *Geikie project location*

Drilling Scope

The 2,000-metre drill program is scheduled to mobilise in early February, allowing drilling to commence by mid-February and expected to take 6 weeks to complete. Drilling will be split between direct follow up of targets associated with gravity lows adjacent to the anomalism identified in the maiden drilling campaign, along with regional exploration targets derived from the integration of high resolution airborne radiometric, magnetic, electromagnetic and gravity data with geochemical sampling, structural mapping and critical observations from phase one drilling.

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Targeting Rationale

Basin's 2023 maiden drill program successfully identified large complex fault systems associated with locally extensive hydrothermal alteration patterns[4,5]. Assay results returned anomalous uranium intersected in 4 of the 8 holes drilled and pathfinder element anomalism for uranium mineralisation, specifically lead isotopes, in 5 of the 8 holes[2]. Core logging data, combined with previous ground prospecting results[6], allowed increased confidence levels on lithological interpretations in areas of primary interest on the Geikie Project.

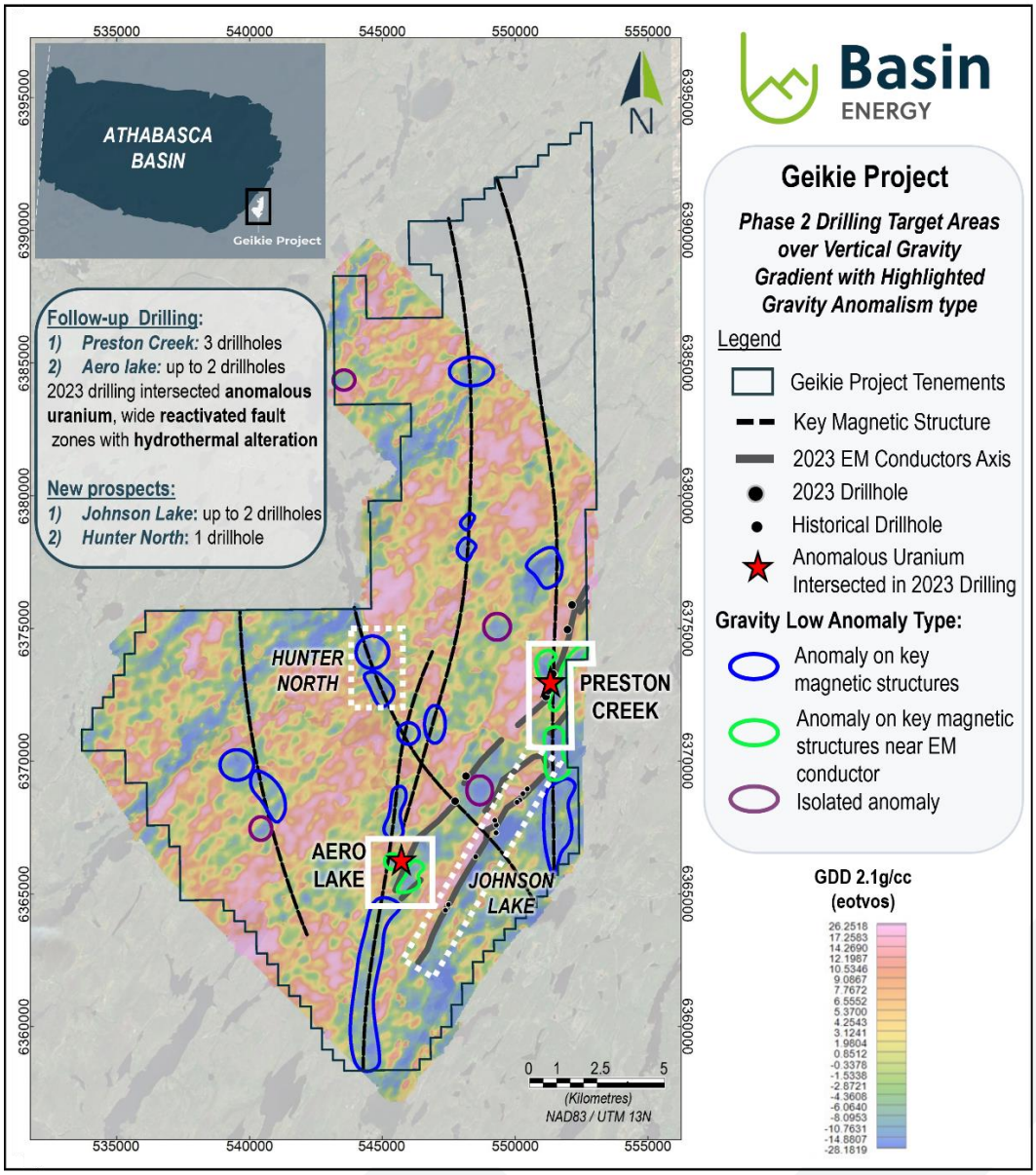

Figure 2: *Phase 2 drill target areas (white borders) over vertical gravity gradient.*

[4] *Refer Basin Energy ASX release dated 10/08/2023 "Elevated Radioactivity and Significant Hydrothermal Alteration Identified at Geikie"*
[5] *Refer Basin Energy ASX release dated 20/09/2023 "Basin Energy Intersects Uranium Mineralisation up to 0.27% in Maiden Drilling at Geikie"*
[6] *Refer Basin Energy ASX release dated 14/12/2022 "Airborne EM survey commence at Geikie"*

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The AGG data highlight a series of gravity low anomalies[7] coincident with key structural features identified through high-resolution magnetic data[8], 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.

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 uranium in optimum trap sites (i.e. rheology contrast, reductant lithologies). This is evidenced by the nearby GMZ-ACKIO mineralised zone discovery on neighbouring tenements owned by 92 Energy and Baselode Energy. Basin's Geikie Project is located less than 10 kilometres east of the GMZ-ACKIO mineralised zone.

Follow up Drilling – Existing Prospects

The Company proposes to follow-up on the encouraging results intersected at the Preston Creek and Aero Lake prospects[1,2] with up to 5 drill holes. The target areas, in order of priority, are defined as follow:

1. ***Preston Creek:*** drilling at Preston Creek identified anomalous uranium enrichment (Figure 1, Figure 2, Figure 3) in a zone of structural disruption, where north-south and northwest trending faults intersect the graphitic conductor trend. Large, reactivated faults of up to 30 metres in width were intersected in drilling and hydrothermal alteration (hematite, chlorite, clay and structurally enhanced graphitic clays) was noted enveloping the major fault zones. Gravity low anomalies were highlighted by the AGG survey both in the footwall and hanging wall lithologies at the intersection with major north-south and northwest trending faults, and a graphitic conductor. **3 drillholes are proposed to follow-up on the 2023 drill holes GKI-004, GKI-005 and GKI-008.**

2. ***Aero Lake:*** drilling at Aero Lake (one drillhole) intersected 0.27% U_3O_8 over 0.5 metres from 185.0 metres. Drilling also intersected hydrothermal alteration (chlorite, clay) associated with large scale faulting where multiple stages of reactivation were noted. The AGG survey highlighted several gravity low anomalies along a major north-south to north-northeast structural zone previously identified through high-resolution magnetic data. Further gravity anomalism is noted within an interpreted fold hinge part of a broader system of intercalated folds of the Johnson Lake Inlier. Unlike the remainder of the conductive trend, electromagnetic anomalies at Aero Lake are modelled shallow to flat lying. **1 to 2 drillholes are proposed to continue testing this prospect and follow-up of 2023 drill hole GKI-002.**

[7] *Refer Basin Energy ASX release dated 15/11/2023 "Gravity Survey Identifies Significant Anomalies at the Geikie Uranium Project"*
[8] *Refer Basin Energy ASX release dated 13/10/2022 "Maiden geophysical survey defines multiple priority targets at Geikie"*

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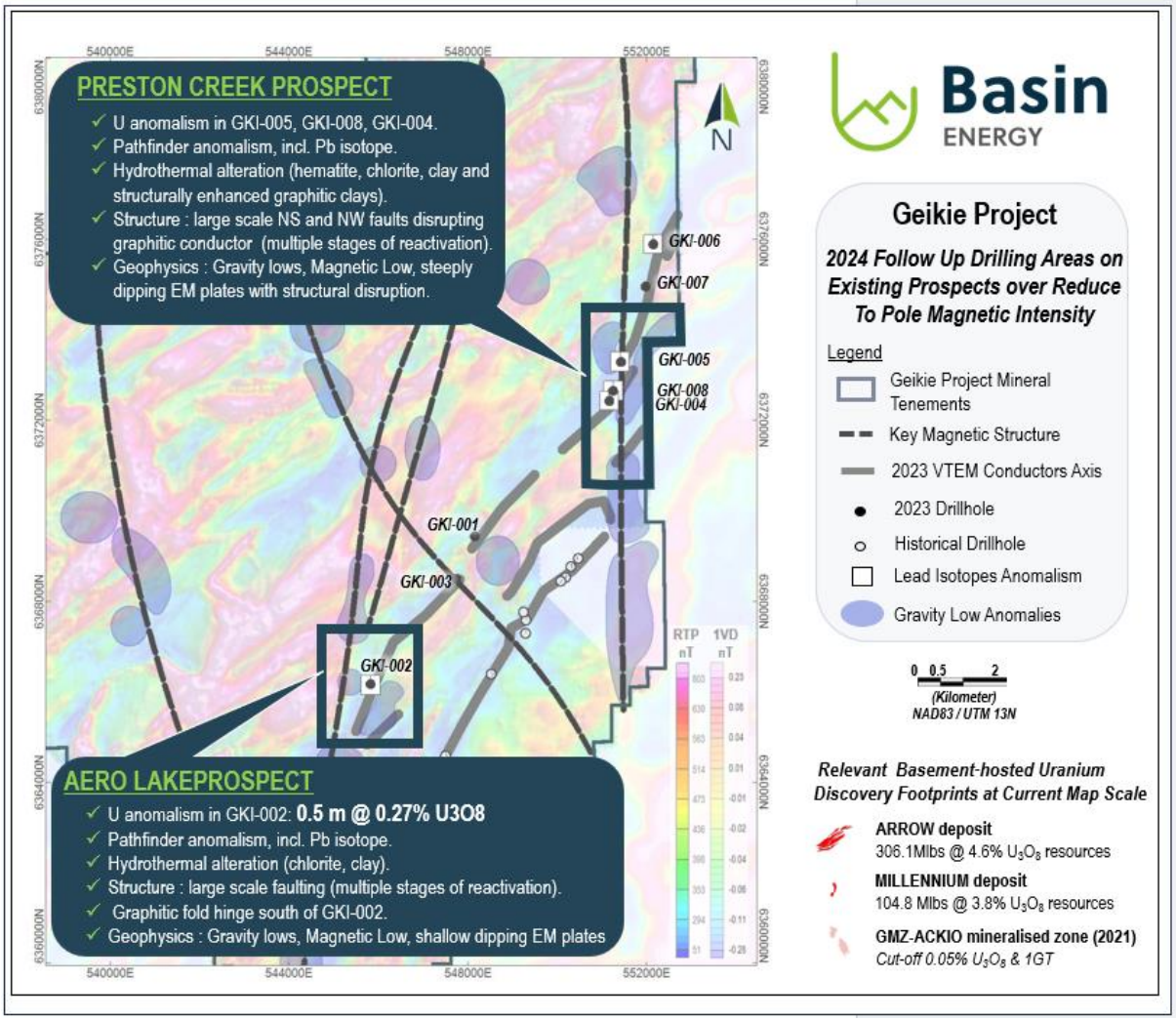

Figure 3: *Follow up targets at Preston Creek and Aero Lake*[9]

Regional Drilling – New Prospects

Basin is planning to conduct initial drilling on two new regional drill targets. The initial drillholes will be at the Johnson Lake and Hunter Lake prospects (Figure 2). Additional meterage allocation will be made after field drilling observations.

1. ***Johnson Lake:*** this target area consists of 9 km of prospective graphitic conductor, which has never been tested for uranium. Erratic narrow intervals of quartzite-hosted Pb-Zn-Ag mineralisation were recorded in historical drilling and outcrop sampling (Johnson Lake showings). Historical drilling intersected graphitic shear zones, non-graphitic faults zones, localised alteration (hematite, sericite, chlorite) and zones of high rheology contrast with intermittent quartzite lenses noted between the metasedimentary stratigraphy and the footwall Johnson Lake Granite. **Up to 2 drillholes are proposed, targeting zones of structural disruption within the conductive trend in areas of enhanced gravity low.**

[9] *Refer Basin Energy ASX release dated 20/09/2023 "Basin intersects Uranium Mineralisation up to 0.27% in Maiden Drilling at Geikie"*

2. ***Hunter North:*** historical mapping in this target area highlighted favourable host-rocks including localised disseminations of sulphide and graphite. **1 drillhole is proposed targeting wide gravity low anomalies coincident with a major north-northwest trending magnetic structure.**

Other News

Basin acknowledges and congratulates all parties involved in the recently announced transaction that sees the three-way merger between Atha Energy (CSE:SASK), 92 Energy (ASX:92E) and Latitude Uranium (CSE:LUR)[10]. The acquisition includes 92 Energy's Gemini Discovery, located approximately 8km west of the Geikie Uranium Project. Basin considers the acquisition to further validate the prospectivity of the Eastern Athabasca Basin and demonstrate the heightened interest in this historically overlooked part of the Athabasca Basin.

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

Enquiries

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[10] *Refer 92 Energy ASX Release dated 08/12/2023 "92E and Atha enter into a Scheme as part of three-way Merger"*

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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

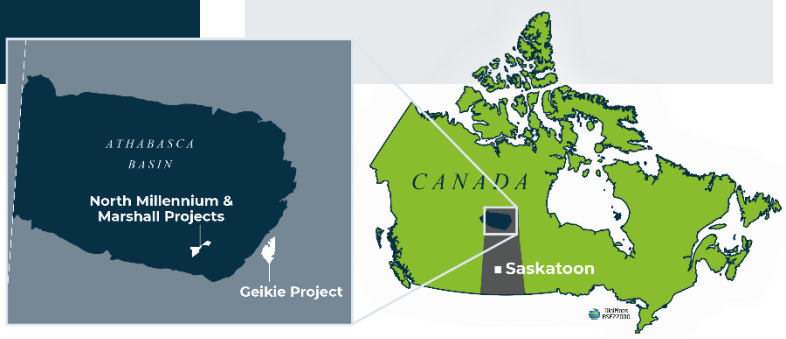
Pete Moorhouse	**Managing Director**
Blake Steele	**Non-executive Chairman**
Cory Belyk	**Non-executive Director**
Jeremy Clark	**Non-executive Director**
Peter Bird	**Non-executive Director**
Ben Donovan	**NED & Company Secretary**
Odile Maufrais	**Exploration Manager**

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

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

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

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

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

Committed to sustainable resource development and minimising environmental impact

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 2nd in Fraser Institute 2021 global mining investment attractiveness index

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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.