

19 June 2024

## Successful Completion of Drill Program at Tallahassee Uranium Project

### HIGHLIGHTS

- GUE's highly successful drill program at its flagship Tallahassee Uranium Project has intersected thick and consistent high-grade uranium mineralisation, enhancing the high-grade core of the Hansen Deposit.
- The thick high-grade uranium results include:
  - 53.6m at 0.157% U<sub>3</sub>O<sub>8</sub> (1,567ppm) from 143.1m
  - 66.8m at 0.127% U<sub>3</sub>O<sub>8</sub> (1,273ppm) from 140.0m
  - 18.2m at 0.134% U<sub>3</sub>O<sub>8</sub> (1,339 ppm) from 152.2m
  - 24.9m at 0.117% U<sub>3</sub>O<sub>8</sub> (1,168 ppm) from 153.5m
  - 32.9m at 0.100% U<sub>3</sub>O<sub>8</sub> (999 ppm) from 181.4m
- Scoping Study well advanced and due for completion in Q3 2024.
- Tallahassee is one of the largest undeveloped uranium projects in the U.S. and contains a JORC 2012 Mineral Resource of 49.8m lbs U<sub>3</sub>O<sub>8</sub>.

Global Uranium and Enrichment Limited (ASX:GUE, OTCQB: GUELF, the Company) is pleased to announce the completion of its highly successful diamond drill program at the Company's flagship Tallahassee Uranium Project ("Tallahassee" or the "Project"), located in Colorado, United States.

The program comprised eight holes for 1,764m and importantly, has successfully demonstrated the cohesive and continuous high-grade core of the Hansen Deposit. Drilling generated thick and high-grade results, which were highlighted by holes TC2405, which intersected **53.6m at 0.157% U<sub>3</sub>O<sub>8</sub>** and TC2406 intersecting **66.8m at 0.127% U<sub>3</sub>O<sub>8</sub>**. The final two drill holes have returned further outstanding, high-grade intercepts including **32.9m at 0.100% U<sub>3</sub>O<sub>8</sub>** in TC2407 and **7.9m at 0.067% U<sub>3</sub>O<sub>8</sub>** in TC2408.

The diamond core from the drill program will now be utilised to generate key data in support of the Tallahassee Scoping Study, which is well underway and on track for completion in Q3 2024.

Commenting on the recent results, Global Uranium’s Managing Director, Mr. Andrew Ferrier said:

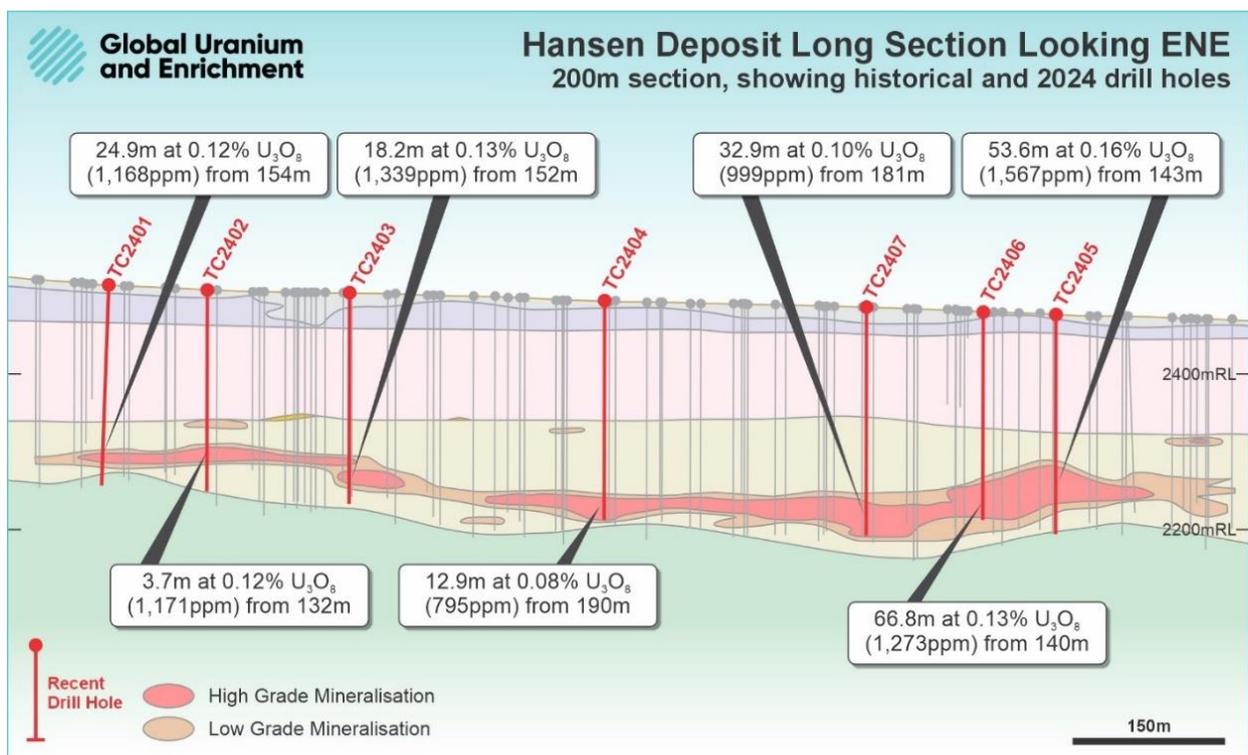
*“We are thrilled to announce the completion of our 8-hole diamond drill program at our flagship Tallahassee Uranium Project. The drill program has generated outstanding results, notably holes TC2405 and TC2406 which exceeded our expectations returning thick high grade mineralisation, coming in much higher than historical grade-thicknesses (“GT”). Tallahassee stands as one of the largest undeveloped uranium projects in the U.S., and these recent results mark a significant leap forward in unlocking the full potential of the Project.*

*With our core samples already in the laboratories for further analysis, we are excited about the progress of our Scoping Study, which remains on schedule for completion in Q3 2024. An interim update of the Scoping Study is expected to be announced in July 2024. Additionally, we are looking forward to an active exploration schedule across our portfolio, with drilling at Maybell set to commence in the coming months.”*

### Diamond Drill Program

The eight hole, 1,764m diamond drill program at Tallahassee has now been completed, two weeks ahead of schedule. The program was a huge success with seven of the eight drill holes delivering thick and consistently high-grade results and expanding the potentially mineable high-grade core of the Hansen Deposit.

Figure 1 shows a long section of the Hansen deposit, focusing on the core of the high-grade shell to illustrate how large, cohesive and continuous the high-grade shell is, measuring approximately 1400m long and 400m across, with an average thickness of approximately 20m.



**Figure 1:** Long Section showing recent drilling results relative to historical drill holes, modelled mineralisation, and the geologic formations.

## Scoping Study Update

This targeted diamond drill program has gathered additional key technical data to support completion of the Scoping Study. The principal objectives of the testing program were:

- **Orebody** - Assess the continuity of the high-grade core of the mineralised zone and once final analyses are completed, GUE will use this data to enhance the 3D geological model of the higher-grade shell core.
- **Mine Method** - Evaluate a variety of geotechnical and rock mechanics parameters in order to support the evaluation of alternative subsurface mining methods and enable conceptual mine designs to be assessed in the Scoping Study.
- **Hydrological Modelling** - Model the volumes of water anticipated in mining scenarios and various other hydrogeological parameters, including hydraulic conductivity, transmissivity and other parameters.

Multiple laboratories are engaged to conduct geotechnical and geochemical/assay testing. Geotech and rock mechanics samples have been sent to Advanced Terra Testing of Lakewood, Colorado for key rock mechanics and strength properties. This data will enable the Company to prepare a more detailed 3D model of rock stability within and above the high-grade core of the Hansen deposit. Geotechnical modelling will make it possible for a more accurate conceptual mine modelling and design for the Scoping Study.

In addition, further samples have been sent to Pace Laboratories of Sheridan, Wyoming, USA for physical testing and for detailed geochemical characterisation of ore and gangue materials.

Historical hydrologic data from Cyprus and Black Range have been compiled to enable ground water modelling to be conducted. Petrotek Engineering is conducting the evaluation and modelling. The modelling is anticipated to produce a conceptual model of the ground water flow system at Hansen, including all recognised aquifers; assess conceptual hydrologic requirements for alternative mining methods; and evaluate various scenarios for mine dewatering and management.

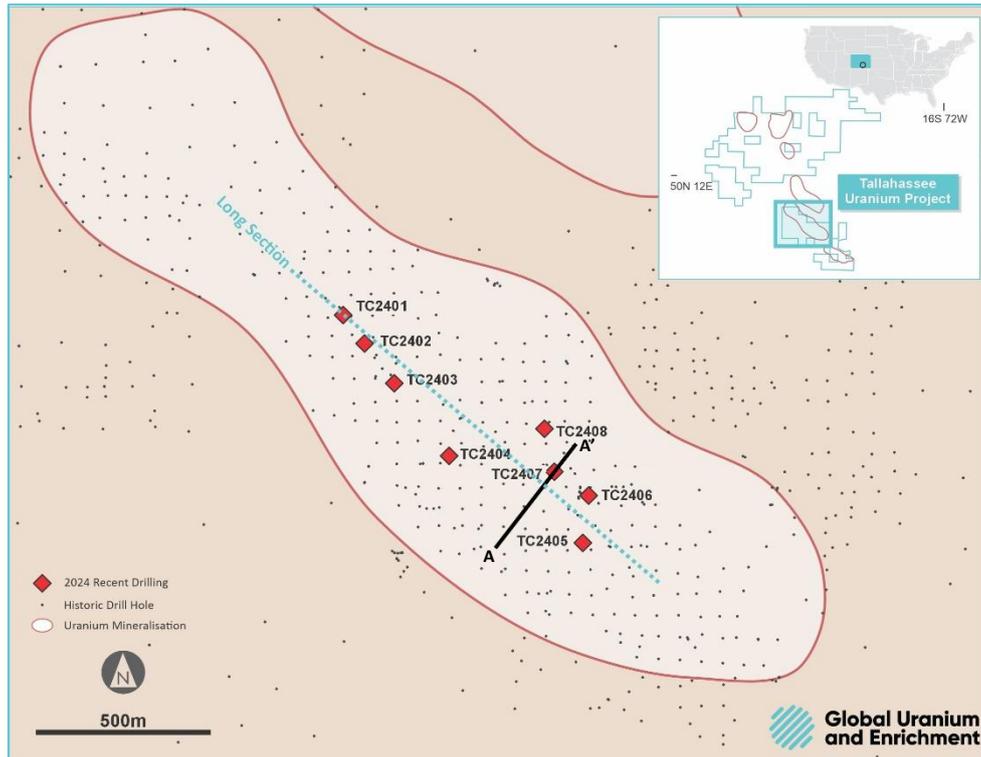
Underground mine investigations are being conducted by Dr. Douglas Hambley of Golden, Colorado and by Kinley Exploration of Overland, Kansas which will include preparation of conceptual designs for inclusion into the Scoping Study.

Western Water Consultants (WWC), Sheridan, Wyoming, has been engaged to compile and consolidate the Scoping Study.

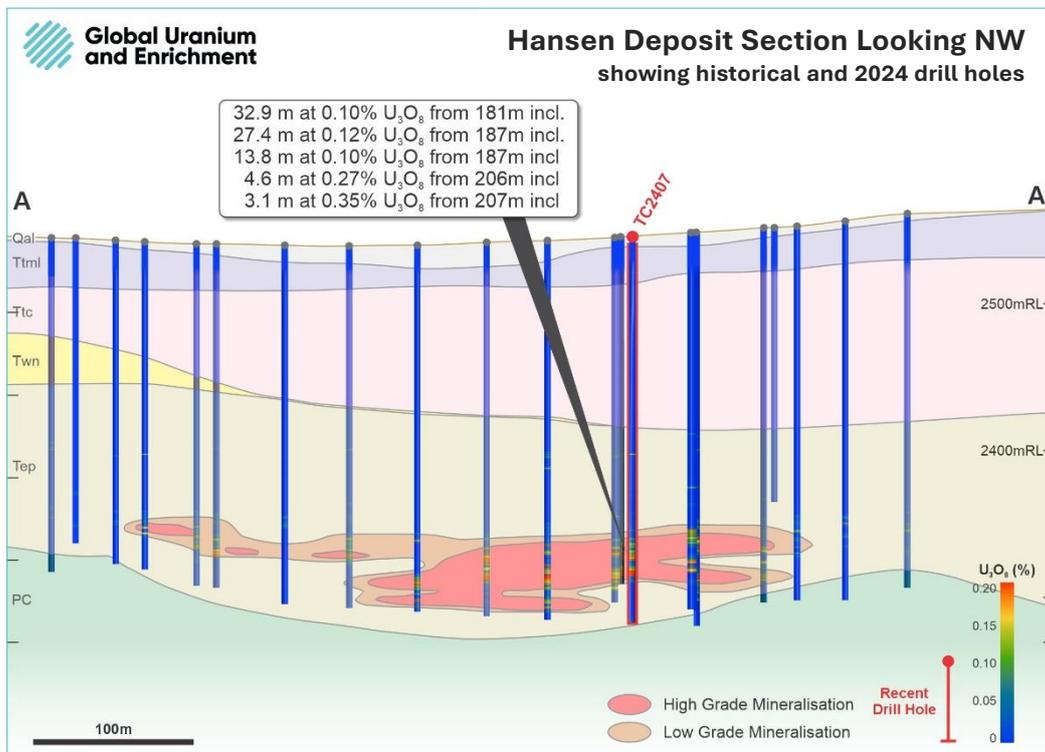
## Drill Results from TC2407 and TC2408

The final holes have returned further standout results including **32.9m at 0.100% U<sub>3</sub>O<sub>8</sub>** in TC2407, which included exceptionally high-grade zones of **27.4m at 0.115% U<sub>3</sub>O<sub>8</sub>** and **3.1m at 0.349% U<sub>3</sub>O<sub>8</sub>** shown in the cross section (Figure 3).

Hole TC2408 targeted the fringe of the Hansen Deposit to acquire valuable geotechnical information at the flanks of the deposit. Despite this, significant mineralisation was intersected including **7.9m at 0.067% U<sub>3</sub>O<sub>8</sub>**, including a high-grade core of **2.9m at 0.123%**.



**Figure 2:** Map of the Hansen Deposit showing the historical drill hole locations, the 2024 completed holes (red diamonds) and the location of the Section A-A' and the Long Section.



**Figure 3:** Cross Section A-A' showing results of TC2407 and TC2408 relative to historical drill holes, modelled mineralisation, and the geologic formations.

This announcement has been authorised for release by the board of Global Uranium and Enrichment Limited.

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**Competent Persons Statement**

The information in this announcement that relates to the exploration results is based on, and fairly reflects, information reviewed by Mr Ben Vallerine, who is a consultant and shareholder of Global Uranium and Enrichment Ltd. Mr Vallerine is a Member of the Australian Institute of Geoscientists. Mr Vallerine has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and the activity he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves” (JORC Code). Mr Vallerine consents to the inclusion in the announcement of the matters based on the information in the form and context in which it appears.

Refer to ASX announcements dated 22<sup>nd</sup> May 2024, 30<sup>th</sup> May 2024 and 5<sup>th</sup> June 2024 for previous drill hole results referred in this announcement. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements.

Where the Company refers to Mineral Resources in this announcement (referencing previous releases made to the ASX), it confirms that it is not aware of any new information or data that materially affects the information included in that announcement and all material assumptions and technical parameters underpinning the Mineral Resource estimate with that announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons findings are presented have not materially changed from the original announcement.

**Table 1: Tallahassee Uranium Resource Estimate by Deposit.**

JORC 2012 Mineral Resource Estimate for the Tallahassee Uranium Project												
Deposit	Measured			Indicated			Inferred			Total		
	Tonnes (000)	Grade U <sub>3</sub> O <sub>8</sub> (ppm)	lbs U <sub>3</sub> O <sub>8</sub> (000)	Tonnes (000)	Grade U <sub>3</sub> O <sub>8</sub> (ppm)	lbs U <sub>3</sub> O <sub>8</sub> (000)	Tonnes (000)	Grade U <sub>3</sub> O <sub>8</sub> (ppm)	lbs U <sub>3</sub> O <sub>8</sub> (000)	Tonnes (000)	Grade U <sub>3</sub> O <sub>8</sub> (ppm)	lbs U <sub>3</sub> O <sub>8</sub> (000)
Hansen & Picnic Tree	-	-	-	7,309	640	10,360	9,277	580	11,874	16,586	610	22,234
Taylor & Boyer	-	-	-	7,641	520	8,705	14,869	460	15,172	22,513	480	23,877
High Park	2,451	550	2,960	24	590	30	434	770	734	2,907	580	3,724
<b>Total</b>	<b>2,451</b>	<b>550</b>	<b>2,960</b>	<b>14,976</b>	<b>580</b>	<b>19,095</b>	<b>24,580</b>	<b>510</b>	<b>27,780</b>	<b>42,007</b>	<b>540</b>	<b>49,835</b>

Note: Figures for Hansen & Picnic Tree represent 51% of the total JORC Resource for these deposits reflecting Global Uranium's 51% ownership interest. Calculated applying a cut-off grade of 250ppm U<sub>3</sub>O<sub>8</sub>. Numbers may not sum due to rounding. Grade rounded to nearest 10ppm.

**Table 2: Drill collar information and results for drillholes TC-2407 and TC-2408**

Drill Hole	E (83_13)	N (83_13)	Elev. (m)	Azi.	Dip	Depth	From (m)	To (m)	Thickness (m)	U <sub>3</sub> O <sub>8</sub> (%)	U <sub>3</sub> O <sub>8</sub> ppm	G x T (m%)	Cutoff %
<b>TC-2407</b>	451842	4267139	2510	0	-90	243.8							
							181.4	214.3	32.9	0.100	999	3.29	0.025
<i>including</i>							186.8	214.3	27.4	0.115	1,151	3.15	0.050
<i>including</i>							186.8	200.7	13.9	0.104	1,041	1.44	0.100
<i>including</i>							205.8	210.4	4.6	0.272	2,721	1.26	0.100
<i>including</i>							207.2	210.3	3.1	0.349	3,490	1.08	0.200
<b>TC-2408</b>	451805	4267276	2519	0	-90	221.6							
							141.1	145.3	4.2	0.032	320	0.13	0.025
							193.3	201.2	7.9	0.067	669	0.53	0.025
<i>including</i>							197.8	200.7	2.9	0.123	1232	0.36	0.050
							205.2	207.0	1.8	0.080	800	0.14	0.025

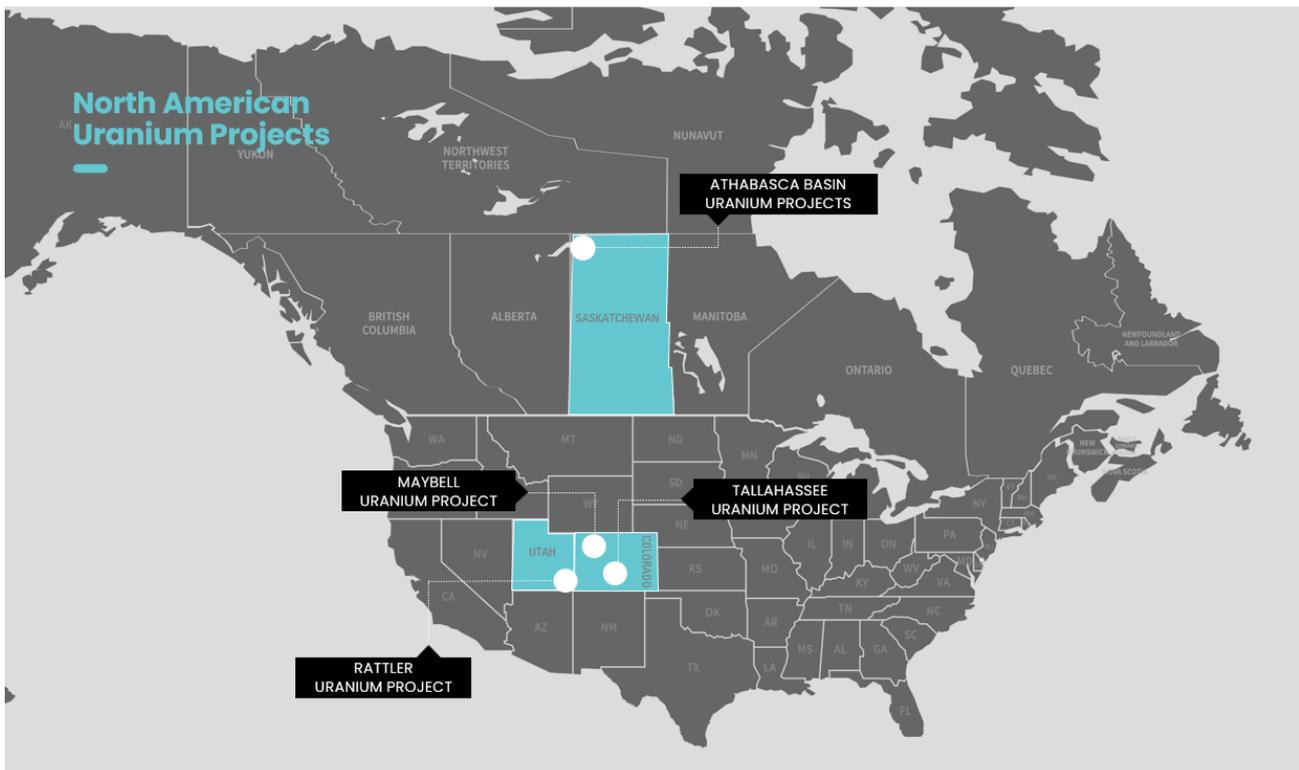
Note: Primary intersections were calculated by applying a cutoff grade of 0.025% U<sub>3</sub>O<sub>8</sub> with up to 8.8m of internal waste included in the largest interval.

## An Emerging Uranium Powerhouse

Global Uranium and Enrichment Limited is an Australian public listed company providing unique exposure to not only uranium exploration and development but the uranium enrichment space. Amid a nuclear energy renaissance, Global Uranium is developing a portfolio of advanced, high grade uranium assets in prolific uranium districts in the U.S. and Canada, and has established a cornerstone position in Ubaryon, an Australian uranium enrichment technology.

### Asset Portfolio:

- **Tallahassee Uranium Project (Colorado, USA):** JORC 2012 Mineral Resource estimate of 49.8 MLbs  $U_3O_8$  at a grade of 540ppm  $U_3O_8$ <sup>1</sup> with significant exploration upside. Located in Colorado's Tallahassee Creek Uranium District, host to more than 100 MLbs  $U_3O_8$ .
- **Athabasca Basin Projects (Saskatchewan, Canada):** Portfolio of six high-grade exploration assets in the Athabasca Basin, home to the world's largest and highest-grade uranium mines. Portfolio includes the Newnham Lake Project with grades of up to 1,953ppm  $U_3O_8$  in historic drilling and the Middle Lake Project with boulder-trains with grades of up to 16.9%  $U_3O_8$ .<sup>2</sup>
- **Ubaryon Investment (Australia):** Cornerstone position in Ubaryon, an Australian uranium enrichment technology.
- **Maybell Uranium Project (Colorado, USA):** High grade Exploration Target of 4.3-13.3 MLbs  $U_3O_8$  at a grade of 587 to 1,137ppm  $U_3O_8$  established at the project.<sup>3</sup> Historical production of 5.3 million pounds of  $U_3O_8$  (average grade 1,300ppm).
- **Rattler Uranium Project (Utah, USA):** Located within La Sal Uranium District, Utah, 85km north of White Mesa Uranium/Vanadium mill, the only operating conventional uranium mill in the USA.



<sup>1</sup> Competent Persons Statement - Information on the Mineral Resources presented, together with JORC Table 1 information, is contained in the ASX announcement dated 7 April 2022 and titled "Okapi to acquire Hansen Deposit – Resource increased by 81%". Measured 2.96MLbs of 550 ppm  $U_3O_8$ , Indicated 19.095MLbs of 580 ppm  $U_3O_8$ , Inferred 27.78MLbs of 510 ppm  $U_3O_8$  calculated applying a cut-off grade of 250ppm  $U_3O_8$ . Numbers may not sum due to rounding. Grade rounded to nearest 10ppm. The Company confirms that it is not aware of any new information or data that materially affects the information in the relevant market announcements, and that the form and context in which the Competent Persons findings are presented have not been materially modified from the original announcements. Where the Company refers to Mineral Resources in this announcement (referencing previous releases made to the ASX), it confirms that it is not aware of any new information or data that materially affects the information included in that announcement and all material assumptions and technical parameters underpinning the Mineral Resource estimate with that announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons findings are presented have not materially changed from the original announcement.

<sup>2</sup> Refer to the Company's ASX announcement dated 9 November 2021 for the JORC details of the Athabasca Projects and other historical information. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement of 9 November 2021.

<sup>3</sup> Refer to the Company's ASX announcement dated 14 December 2023 for the Exploration Target and JORC details. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement of 14 December 2023. Historical production data has been sourced from an article in Rocky Mountain Association of Geologists (1986) titled "Geology and Production History of the Uranium Deposits in the Maybell, Colorado Area" from W. L. Chenoweth.

## APPENDIX 1 - JORC Code, 2012 Edition – Table 1 Report

### Section 1 Sampling Techniques and Data

Criteria	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>The equivalent <math>U_3O_8</math> (<math>eU_3O_8</math>) grades obtained from the 2024 phase of drilling were calculated by COLOG based in Lakewood, Colorado, USA. The employed tools were calibrated on May 12, 2024 at a United States Department of Energy facility in Grand Junction, CO, following industry standards. Calibration of the tools allow for the calculation of <math>eU_3O_8</math> directly from the total gamma count measured downhole. Calculated <math>eU_3O_8</math> can be a reliable measure of uranium content, but on occasion can be subject to disequilibrium if radioactive elements other than uranium and its natural daughter isotopes are present. Disequilibrium studies in the 1970's and 80's concluded that no adjustments are required for the gamma calculated <math>eU_3O_8</math> values.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>HQ Core drilling from top to bottom of the holes.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Sample recovery ranges from good to very good in the 2024 program as recoveries were near 100%.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>Core was logged in a qualitative nature and all core was photographed.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>As described in "Sampling Techniques" gamma probes were used to calculate the <math>eU_3O_8</math> reported. The gamma probes have been calibrated in accordance with industry standards.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>As described in "Sampling Techniques", gamma probes were used. The calibration of the tool allows for the calculation of <math>eU_3O_8</math> directly from the total gamma count. <math>eU_3O_8</math> can be a reliable measure of uranium content, but on occasion can be subject to disequilibrium if radioactive elements other than uranium are present.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>Disequilibrium studies in the 1970's and 80's concluded that no adjustments are required for the gamma calculated <math>eU_3O_8</math> values.</li> <li>No additional sampling has been completed on the 2024 holes beyond the gamma survey as yet.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>Hole locations were acquired using a hand-held GPS and all coordinates are in UTM NAD83, Zone 13.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>The two holes reported herein are confirmatory and data spacing is not relevant.</li> <li>However, drilling at the Hansen deposit has been completed at 200 foot (61m) spacings.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>Vertical drilling has exclusively been used as the target strata is sub-horizontal in a Tertiary paleochannel. Therefore, drilling intercepted the target strata very close to perpendicular.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>Wireline gamma logging is used to estimate uranium grade therefore sample security is not applicable.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The Company's CP has reviewed the data.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section)

Criteria	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>• Within the Hansen Project area, there are two private Mineral Leases whereby the company has leased the privately owned mineral interests along with the right to explore and develop these minerals.</li> <li>• The company also has a total of 10 Surface Use Agreements (SUAs) with various land owners in the district.</li> <li>• The Company has also entered into an “Option to Purchase” agreement with STB Minerals who own 51% of the private Mineral Interests covering parts of the Hansen and Picnic Tree deposits.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>• Cyprus Mines Corp (Cyprus) conducted an extensive amount of drilling in the region from 1976 through until 1983. They drilled over 1,250 drill holes and over 110,000 meters with the majority inside the Global Uranium controlled Project areas. Black Range Minerals drilled 64 mud rotary holes for over 20,000 metres on the Global Uranium Leases between 2007 and 2009 and 10 core holes during 2010. Cyprus also conducted 3 feasibility studies at the Hansen Project, including mine designs, process designs and had all permits in place to commence mining in 1982.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>• The deposits that make up the Project are tabular sandstone deposits associated with redox interfaces. The mineralisation is hosted in Tertiary sandstones and/or clay bearing conglomerates within an extinct braided stream, fluvial system or paleochannel. Mineralisation occurred post deposition when oxygenated uraniferous groundwater moving through the host rocks came into contact with redox interfaces, the resultant chemical change caused the precipitation of uranium oxides. The most common cause of redox interfaces is the presence of carbonaceous material that was deposited simultaneously with the host sediments. In parts of the Project, the paleochannel has been covered by Tertiary volcanics and throughout the Project, the basement consists of Pre-Cambrian plutonic and metamorphic rocks. The volcanic and Pre-Cambrian rocks are believed to be the source of the uranium.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>• The Company has tabulated the drill hole result information for those holes reported in the announcement.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>• The drilling results were aggregated using a simple length-weighted average for all reported drill holes, see Table 2.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• All drillholes at the Project are vertical and intersecting sub-horizontal, tabular mineralisation and therefore reported intersections are close to true widths.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• The Company has included a project-wide map showing the distribution of all drilling completed in the Hansen area.</li> <li>• The Company has also included a single cross section to give an indication of the geometry, thickness and grades of mineralisation through the centre of the Hansen Deposit including the two holes reported.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>• The Company has reported all the significant intercepts within.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>• Hansen is an advanced Project that was permitted for mining in the 1980’s and has received over 750 drill holes and 3 feasibility studies.</li> <li>• The Project also has a JORC 2012 compliant resource estimate.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>• The company plans to complete two additional holes beyond the six that are currently reported. The geological, geotechnical and metallurgical data will be used to complete a Scoping Study later this year.</li> </ul>