

# Anson Successfully Completes Drilling of Bosydaba #1 Well to a Depth of 3,417m at the Green River Lithium Project

#### **Highlights:**

- Bosydaba#1 well successfully completed to a total vertical depth of 3,416.81m (11,210 feet)
- Boysdaba#1 drilling program is the first phase of the Green River Lithium Project JORC Mineral Resource definition plan
- Drilling results indicate Clastic Zones 31 is 55% thicker and Leadville Formation, Mississippian Units are 85% thicker compared to the Paradox Lithium Project
  - o Paradox Formation, Clastic Zone 31 is 9.45m (31 ft thick),
  - Leadville Formation, Mississippian Units is >225.55m (>740 ft thick),
  - o The target zones consist of similar lithological units at both projectst,
- Work-over rig to collect bulk brine samples of the target brines for assaying and metallurgical testing now replacing the drill rig

Anson Resources Limited (ASX: ASN) (Anson or the Company) is pleased to announce that it has successfully completed the Green River exploration program after drilling the Leadville Formation to a depth of 11,210 ft at the Bosydaba#1 well which is located on the recently purchased private property at its Green River Lithium Project (the Project) in the Paradox Basin, in south-eastern Utah, USA. Drilling intersected the limestone units at a depth of 3,191.26m (10,470ft). Drilling was stopped before penetrating through the Leadville Formation indicating Leadville Formation, Mississippian Unit is likely to continue deeper than the recorded depth of 3,416.81m (11,210 feet). Thickness is important as it is one of the factors in calculating brine volume used for JORC Resource estimates.



Figure 1: Brine separated from the heavy drilling muds in the Leadville Formation, Mississippian Units, at Bosydaba#1 well.



Drilling the Bosydaba #1 deep well required the use of oil based muds (OBM), which is a heavy drilling fluid, used to prevent possible blow outs due to the pressures in some of the deep lithological units, especially those containing hydrocarbon gases. However, while drilling through the Mississippian Units lighter muds were able to be used. At the bottom of the hole it was detected that a small amount of chloride had entered the oil based muds. A sample was collected and fluid (water and brine) separated from the muds, see Figure 1.

With the completion of the well, it has been demostrated that the target brine zones are thicker at the Green Lithium Project compared to those at the Paradox Lithium Project, see Table 1. Clastic Zone 31 is 55% thicker while the Leadville Formation is greater than greater than 85% thicker.

	Rock Unit	Paradox Lithium Project	Green River Lithium Project
Thickness (ft)	CZ 31	20	31
	Mississippian	400	>740
Rock Units	CZ 31	Anhydride, Black shale, Dolomite	Anhydride, Black shale, Dolomite
	Mississippian	Dolomite, Limestone	Dolomite, Limestone

Table 1: Table showing the similar geological characteristics between Anson's lithium brine projects

The Leadville Formation intersected in the Bosydaba#1 well consists of limestone, dolomite with minor sandstone, shale and anhydrite. The Mississippian units intersected have the same lithological units at the Paradox project 50km to the south-east of the Green River Lithium Project indicating that the horizons are continuous between the two projects.

The large drilling rig that was utilized for the deep drilling program is in the process of being replace with a smaller "work-over" rig that will take brine samples from both the Paradox Formation Clastic Zone 31 and Leadville Formation, Mississippian Units. Once collected, the brine samples from Clastic Zone 31 and Leadville will be sent to certified laboratories to assay for lithium and other minerals.

#### **About the Green River Lithium Project Geology**

At the Green River Lithium Project there are many large geological structures such as the Ten Mile Graben, Little Grand Wash Fault, Green River Anticline and the Salt Wash Anticline which have resulted in advantageous attributes for extraction of brines, *see ASX Announcement 21 September 2023*. These strucures, along with the lithological units within the target clastic zones, are similar geological conditions to the Paradox Lithium Project which are beneficial factors for the project in the extraction zones including:

- High pressure,
- Increased porosity,
- Increased permeability.



These factors provide strong indicators of low extraction costs and beneficial ESG outcomes, *see ASX Announcement, 30 May 2022.* 

The Bosydaba #1 geological logs show that the Mississippian units are deeper but also show that the target unit is thicker than that at the Paradox project, see Figure 2.

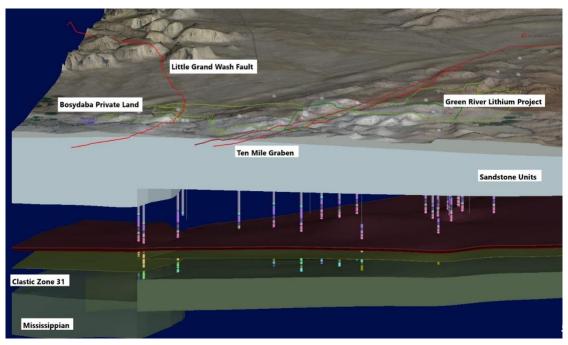


Figure 2: The 3D geological model showing the location of the Little Grand Wash Fault in relation to the Green River Project.

#### **About the Green River Drilling Program**

The Bosydaba #1 drillhole pad is located on Anson's private property at Green River which was recently rezoned as a Conditional Use Permit (CUP) from the Green River City Planning & Zoning Commission allowing exploration drilling and mineral processing to be carried out on the land parcels, see *ASX Announcement 23 January 2024*. The land parcels are located on flat, sparsely vegetated ground that required minimal earthworks prior to the commencement of drilling reducing the environmental impact of the region.

The priority targets are the saline aquifers of the highly porous clastic horizons of the Pennsylvannian Formation and the Mississippian Units. The Pennsylvannian Formation consists of 29 separate evaporite cycles.

It has previously been recorded that both the Clastic Zones and the Mississippian Units contain supersaturated brines, but no assaying for lithium has been carried out. Anson's drilling through these zones of supersaturated brines, and sampling of the horizons which host the brines, will allow the brines to be collected.

With the completion of the well, it is expected that brine will be able to flow directly to the Sample Demonstration Plant which consists of both the Direct Lithium Extraction (DLE) system and the downstream purification process. This will result in the plant being capable of operating 24/7 and producing a high purity lithium carbonate product.

#### **Conservation of Water Aquifers**



The exploration drilling program has been designed to ensure that there is no interaction between the surface waters and the supersaturated lithium brines with the well being steel cased and cemented in place.

The majority of the water-yielding rock units in the area are part of either an upper or lower hydrologic system. The two systems are separated by the impermeable salt beds of the Pennsylvanian Paradox Formation, which underlies the counties in the region (Weir, Maxwell & Zimmerman, 1983) which is further supported by the salinity values intersected in this "surface" drilling recently completed by Anson.

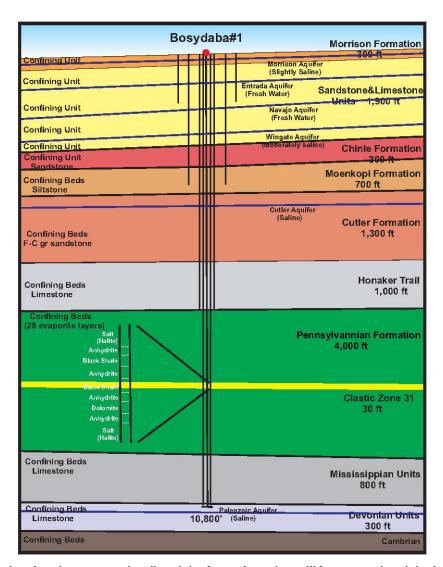


Figure 3: Section showing the proposed well and the formations that will intersected and the impermeable layers

The evaporites of the entire Pennsylvannian Formation act as an impermeable layer, see Figure 3, constituting a sealed water boundary between the ground water flow systems. The salts within each evaporite cycle are plastic, flows and then re-seals\*. Research has shown that as little as 150 metres of overburden is sufficient to start plastic deformation of the halite and as a result they don't transmit water between these layers and do not interact with surface waters\*\*.



The majority of the geological rock units above the evaporite beds, which are mostly sandstone and limestone, are unsaturated containing minimal volumes of water. Consequently, the aquifers that are located in the area are overlain by impermeable rock units.

Reviewing the results of the Boysdaba #1 well, Executive Chairman & CEO Bruce Richardson said "The massive increase in thickness of both Clastic 31, Paradox Formation and the Leadville Formation, Mississippian Units bodes well for the calculation of the JORC resource. We are moving onto the next stage of this exploration program with the sampling and testing of the brine in the targeted areas. We are very pleased with the results with the Boysdaba#1 drilling program which despite the depth was conducted using government approved engineering proceedures that were not only safe but had minimal impact upon the environment, which are the major considerations for this Company in any drilling program. A large amount of geological and geophysical data was collected during the program which will be combined with the assay results in the estimation of a JORC Resource. Congratulations to the Anson exploration team that worked on this drilling program and ensured its success! Since purchasing the private land at Green River, the Company has moved at a rapid pace in developing the opportunity presented and aims to continue to work at the same pace in quickly developing this project. The Boysdaba#1 is a significant asset that has been added to the Company and has further increased shareholder value, our main objective."

This announcement has been authorised for release by the Executive Chairman and CEO.

**ENDS** 

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<sup>\*</sup> Kite, R. J., and Lohman, S. W., 1973, Geologic appraisal of Paradox basin salt deposits for waste emplacement: U.S. Geological Survey Open-File Report

<sup>\*\*</sup> Cater, F. W., 1970, Geology of the salt anticline region in southwestern Colorado: U.S. Geological Survey Professional Paper 637.



#### **About Anson Resources Ltd**

Anson Resources (ASX: ASN) is an ASX-listed junior mineral resources company with a portfolio of minerals projects in key demand-driven commodities. Its core asset is the Paradox Lithium Project in Utah, in the USA. Anson is focused on developing the Paradox Project into a significant lithium producing operation. The Company's goal is to create long-term shareholder value through the discovery, acquisition and development of natural resources that meet the demand of tomorrow's new energy and technology markets.

**Forward Looking Statements:** Statements regarding plans with respect to Anson's mineral projects are forward looking statements. There can be no assurance that Anson's plans for development of its projects will proceed as expected and there can be no assurance that Anson will be able to confirm the presence of mineral deposits, that mineralisation may prove to be economic or that a project will be developed.

**Competent Person's Statement 1:** The information in this announcement that relates to exploration results and geology is based on information compiled and/or reviewed by Mr Greg Knox, a member in good standing of the Australasian Institute of Mining and Metallurgy. Mr Knox is a geologist who has sufficient experience which is relevant to the style of mineralisation under consideration and to the activity being undertaken 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 and consents to the inclusion in this report of the matters based on information in the form and context in which they appear. Mr Knox is a director of Anson.



## JORC Code 2012 "Table 1" Report

## **Section 1 Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code Explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialized 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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralization that are Material to the Public Report.</li> <li>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 pulverized 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 mineralization types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Sampling will follow the protocols produced by SRK for lithium brine sampling.</li> <li>Samples will be collected in 1,000 litre IBC containers and samples taken from them to provide representative samples of the complete volume of brine collected.</li> <li>The brine samples to be assayed will be collected in clean plastic bottles. Each bottle will be marked with the location and sample interval.</li> <li>Duplicate samples will also be collected and securely stored.</li> <li>Bulk samples will also be collected for future use.</li> <li>Sample sizes will be appropriate for the program being completed.</li> </ul>
Drilling Techniques	<ul> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is oriented and if so, by what method, etc.).</li> </ul>	Air drilling
Drill Sample Recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	Chips will be recovered over the shaker table and collected by mudloggers.
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>All samples were geologically logged in the field by a qualified geologist.</li> <li>Geological logging is qualitative in nature.</li> </ul>



Criteria	JORC Code Explanation	Commentary
Sub-sampling Techniques and Preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximize representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/secondhalf sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Samples will be submitted to Laboratories in Texas, USA that are certified and experienced with oilfield brines.</li> <li>Sample preparation techniques represent industry good practice.</li> <li>The sample sizes are considered to be appropriate for the material being sampled.</li> </ul>
	<ul> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximize representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/secondhalf sampling.         Whether sample sizes are appropriate to the grain size of the material being sampled.     </li> </ul>	New Wells  Sampling will follow the protocols produced by SRK for lithium brine sampling.  Samples will be collected in IBC containers and samples taken from them.  Duplicate samples kept Storage samples will also be collected and securely stored.  Bulk samples will also be collected for future use.  Sample sizes will be appropriate for the program being completed.
Quality of Assay Data and Laboratory Tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	Analysis will be carried out by a certified laboratory.
Verification of Sampling and Assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	Historical assays are recorded in Concentrated Subsurface Brines, UGS Special Publication 13, printed in 1965
Location of Data Points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>The grid system used is UTM Zone 12 (NAD83).</li> <li>Location of drillhole was positioned by a qualified land surveyor.</li> </ul>



Criteria	JORC Code Explanation	Commentary
Data Spacing and	Data spacing for reporting of Exploration Results.	The grid system used is UTM Zone 12 (NAD83).
Distribution	<ul> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Data spacing is considered acceptable for a brine sample but has not been used in any Resource calculations.</li> <li>There has been no compositing of brine samples.</li> </ul>
Orientation of Data in Relation to Geological Structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralized structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>The Paradox Basin hosts bromine and lithium bearing brines within a sub-horizontal sequence of salts, anhydrite, shale and dolomite.</li> <li>The Bosydaba#1 well has a vertical (dip -90), perpendicular to the target brine hosting sedimentary rocks.</li> </ul>
Sample Security	The measures taken to ensure sample security.	• N/A
Audits or Reviews	The results of any audits or reviews of sampling techniques and data	No audits or reviews have been conducted at this point in time.

### **Section 2 Reporting of Exploration Results**

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code Explanation	Commentary
Mineral Tenement and Land Tenure Status	<ul> <li>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.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</li> </ul>	<ul> <li>The Green River Lithium Project is located in southeastern Utah, USA, consisting of 1,251 placer claims that encompasses a land position of 10,620 hectares.</li> <li>Purchased private property consists of a 55 hectare land parcel</li> <li>All claims are held 100% by Anson's U.S. based subsidiary, Blackstone Minerals NV LLC.</li> <li>The claims/leases are in good standing, with payment current to the relevant governmental agencies.</li> </ul>
Exploration Done by Other Parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Historical exploration for brines within the Paradox Basin includes only limited work in the 1960s. No brine resource estimates had been completed in the area, nor has there been any historical economic production of bromine or lithium from these fluids.</li> <li>The historical data generated through oil and gas development in the Paradox Formation has supplied some information on brine chemistry.</li> </ul>



Criteria	JORC Code Explanation	Commentary
Geology	Deposit type, geological setting and style of mineralization.	<ul> <li>The geology of the Paradox Formation indicates a restricted marine basin, marked by 29 evaporite sequences. Brines that host bromine and lithium mineralization occur within the saline facies of the Paradox Formation and are generally hosted in the more permeable dolomite sediments.</li> <li>Controls on the spatial distribution of certain salts (boron, bromine, lithium, magnesium, etc.) within the clastic aquifers of the Paradox Basin is poorly understood but believed to be in part dictated by the geochemistry of the surrounding depositional cycles, with each likely associated with a unique geochemical signature.</li> <li>The source and age of the brine requires further investigation.</li> </ul>
Drill Hole Information	<ul> <li>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:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in meters) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	Drillhole collar     LAT: 38°58′56.85510″     LON: 110°08′35.14421″     EL: 4070.1′
Data Aggregation Methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade</li> <li>Brine samples taken in holes were averaged (arithmetic average) without 14 Criteria JORC Code explanation Commentary truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	• N/A
Relationship Between Mineralization Widths and Intercept Lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralization with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul> <li>The sediments hosting the brine aquifer are interpreted to be essentially perpendicular to the vertical oil wells. Therefore, all reported thicknesses are believed to be accurate.</li> <li>Brines are collected and sampled over the entire perforated width of the zone.</li> <li>The Mississippian Units are assumed to be porous and permeable over its entire vertical width based on drilling records.</li> </ul>



Criteria	JORC Code Explanation	Commentary
Diagrams	<ul> <li>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.</li> </ul>	• N/A
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.	• N/A
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.	All available current exploration data has been presented.
Further Work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>The wells and sampling planned will cover the Paradox Formation and Leadville Limestone.</li> <li>Future wells will focus on wells surrounding the proposed locations to upgrade future JORC resources.</li> </ul>