Anson Resources

9 September 2021

ASX ANNOUNCEMENT
ASX: ASN, ASNOC
OTC: ANSNF

Anson Receives Positive NOVONIX Battery Test Work Results

<u>Highlights:</u>

- **Positive results from test work completed by NOVONIX (ASX: NVX, OTCQX: NVNXF) for high performance lithium-ion batteries using Anson's high purity lithium carbonate (Li_2CO_3) & lithium hydroxide ($LiOH.H_2O$)**
- **NOVONIX compared cathode powder synthesized using commercial metal hydroxide and lithium precursors to Anson's lithium product to provide real-world comparisons**
  - **Cells went through Formation (FM), Ultra-high precision coulometric (UHPC) cycle testing, Long-term (LT) cycle performance testing and High temperature storage (STO) tests**
- **Anson's 99.9% purity Li_2CO_3 performed better relative to commercially available battery grade Li_2CO_3 in lithium-ion battery cells, specifically**
  - **Similar or better first cycle efficiency and lower gas production during formation cycles than reference material**
  - **Less capacity loss and lower impedance growth during NOVONIX UHPC & LT cycling testing**
  - **Lower voltage drop and gas production after STO (possible higher cathode stability than reference material)**
- **Li_2CO_3 test results indicate that Anson product has a longer lifespan compared to commercially available battery grade Li_2CO_3**
- **Anson's lithium hydroxide demonstrated similar performance to existing commercial products in long-term cycle experiments (cycle testing still on-going)**

Anson Resources Limited (ASX: ASN, ASNOC) (Anson or the Company) is pleased to announce the positive results from test work carried out by NOVONIX Battery Technology Solutions Limited (NOVONIX) in Nova Scotia for the production of NMC622-based lithium-ion battery test cells using samples of Anson's high purity lithium products extracted from the supersaturated brines from its Paradox Brine Project, Utah, USA.

Anson's high purity Li_2CO_3 product out-performed the commercial product blend while Anson's $LiOH.H_2O$ performed similarly to the market available product. The main take-aways from the test work are that Anson materials retain more of the available capacity after the first formation cycle and during UHPC tests Anson materials clearly showed lower capacity losses. It is considered that these attributes will be of interest to potential battery manufacturers as these provide a longer life-span of the battery.

Formation cycle is when initial intrinsic material capacity losses occur, as well as the protective interfaces form on the anode and cathode from additives and other electrolyte components. Contaminants and less stable material surfaces also lead to lower coulombic efficiencies. This is further supported by the amount of gas that is generated during formation. Both of Anson's materials had higher "Formation Coulombic Efficiency and less gas than the referenced material indicating better higher capacity retention See figures 1 & 2.

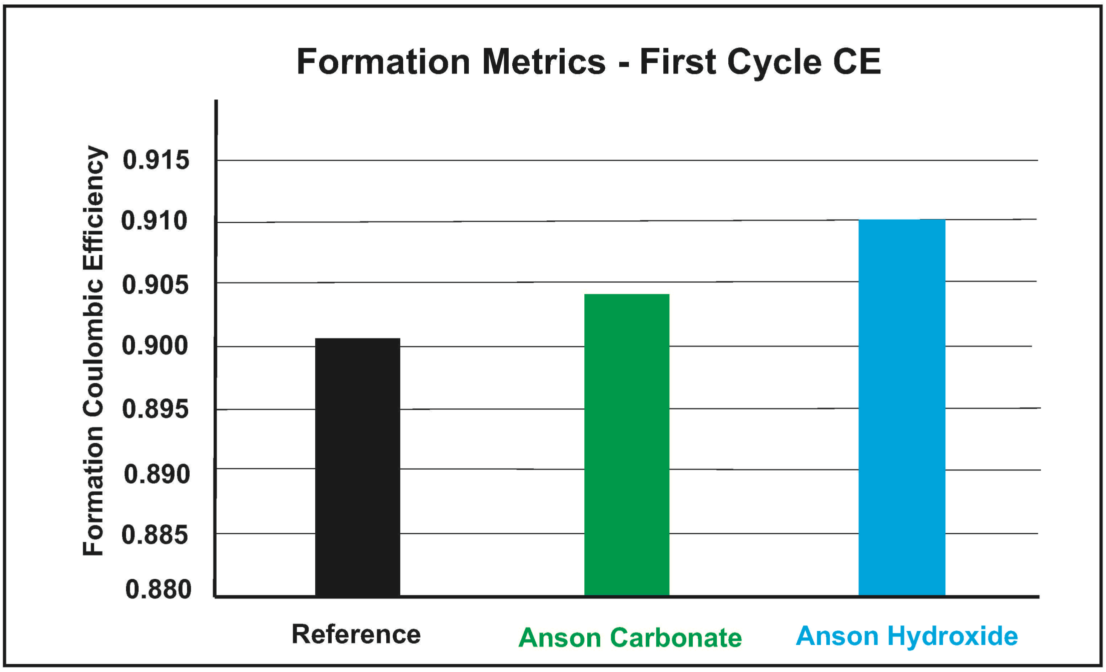

Figure 1: Graph showing the average Formation Coulombic Efficiency for test samples.

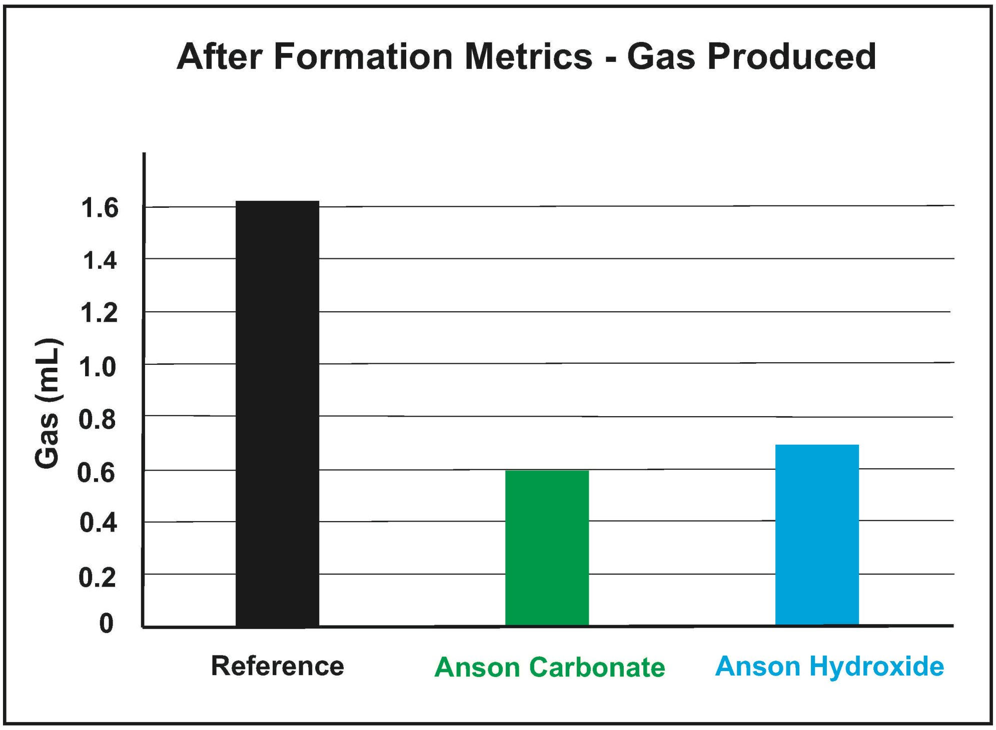

Figure 2: Graph showing the average gas generated in the cells.

Ultra-high precision coulometric (UHPC) and Long Term (LT) cycling test work results indicate that both Anson's Li_2CO_3 & $LiOH.H_2O$ show less impedance growth than the referenced material and much higher capacity retention. see Figure 3.

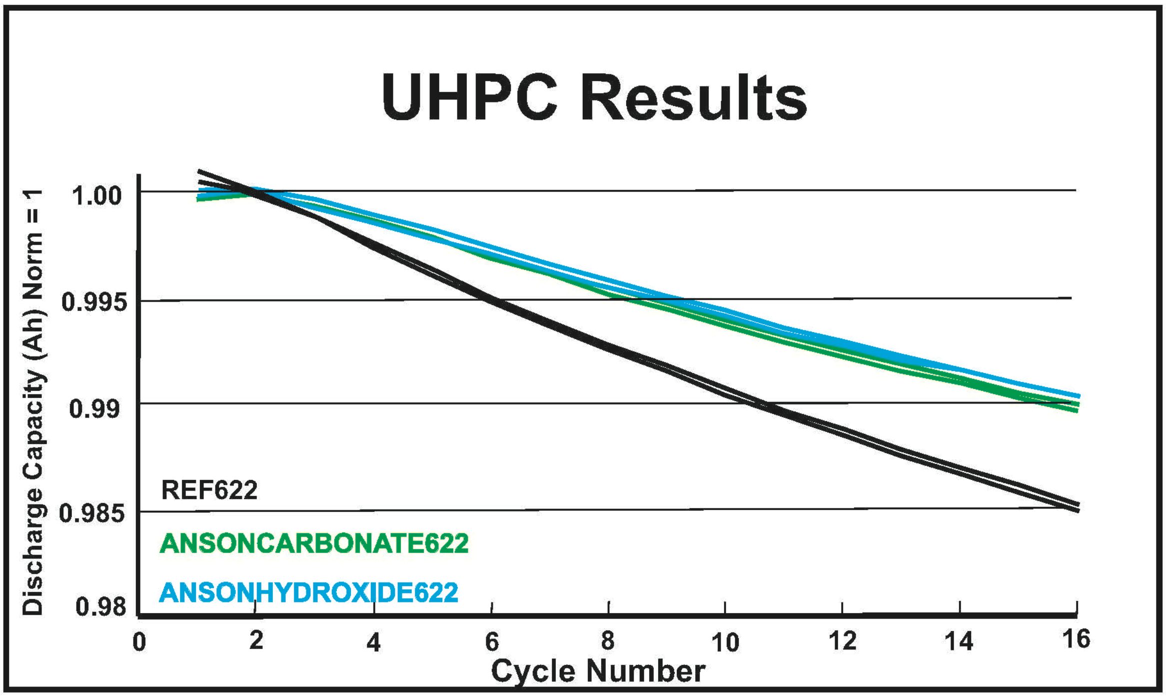

Figure 3: UHPC Results Graph showing both of Anson's Li products have a lower capacity loss over cycles.

Anson materials showed lower impedance growth during cycling than the reference material. Impedance (resistance) growth can occur when irreversible reactions in a cell create by products on surfaces or consume electrolyte components, or the electrode material structures are damaged, both of which increase the resistance of the cell and lead to cell failure. The lower impedance growth suggests a more stable material when Anson products were used.

High temperature storage experiments of fully charged cells showed a lower rate of reaction in cells with Anson products evidenced by a lower rate of self-discharge at elevated temperatures (60 degrees Celsius), and 1.5 to 2 times less gas produced than the referenced materials. These results suggest cell made with Anson materials lead to a more stable battery than that used with the referenced material which is expected to result in a longer lifetime of the battery.

Test work outline

NOVONIX sintered commercial NMC622-hydroxide precursor powders from Tier 1 commercial lithium products, Anson's Li_2CO_3 and $LiOH.H_2O$ and conducted electrochemical evaluation of the respective performance in full lithium-ion "pouch cells". The test work consisted of the "cells" being charged and discharged for 100's of cycles.

Figure 4: NOVONIX's pouch and cylindrical cells.

In addition, it should be noted that "Parasitic" reactions can occur within the electrochemistry, often due to impurities, which prevents the efficiency from reaching 100%. Lithium with a higher purity will have less parasitic reactions leading to improvement in efficiency. As the lithium samples provided by Anson had a purity of 99.95% it was expected that there would be less parasitic reactions.

Previous work had been carried out on Anson's cathode material by NOVONIX to evaluate its electrochemical properties using half-cell testing, *(see ASX Announcement of 8 March 2021)* produced similar results. Both Scanning Electron Microscopy (SEM) and X-ray Diffraction (XRD) analyses were completed to understand the crystal structure of both of Anson's lithium products and the resultant LiNi0.6Mn0.2Co0.2O2 (NMC622) cathode powders. It was shown that both of Anson's lithium products produced a "well ordered structure", see Figure 9, showing phase-purity comparable to commercial lithium products.

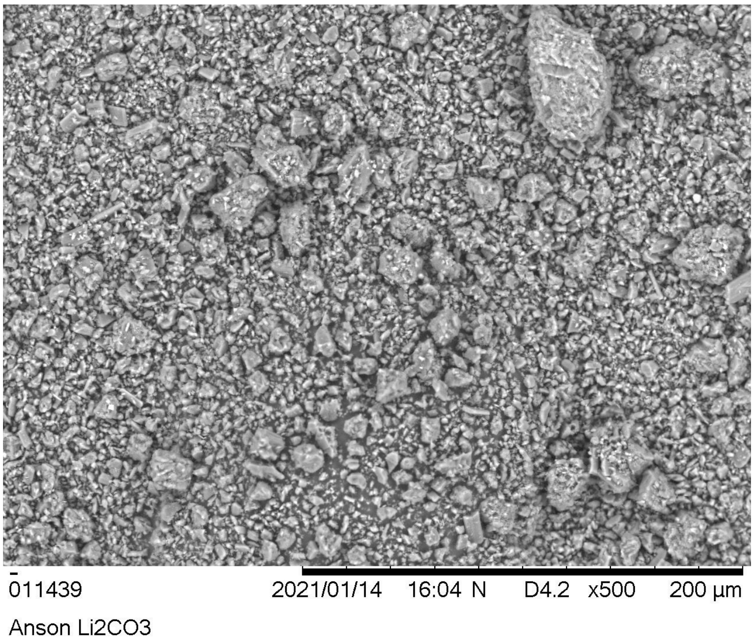

Figure 9: SEM image showing Anson's lithium carbonate particles.

Anson's Executive Chairman and CEO, Bruce Richardson, commented:

"The results from NOVONIX's test work clearly demonstrates that the lithium carbonate and lithium hydroxide produced from the Paradox brines have the necessary specifications that Tier 1 battery makers may require. In layman terms the test work performed on Anson lithium indicate a longer battery life.

The results confirm and enhance the results for the earlier test work conducted by NOVONIX on behalf of Anson. The purity of the Anson product provides it with a performance advantage over existing commercial products which is expected to attract lithium-ion producers that are aiming to provide a high-performance product. As well, demand for such a sustainably-produced and responsibly-sourced product is growing in North America and Europe as electric vehicle makers look to bolster their ESG credentials.

The results of this test work will be shared with potential offtake partners and potential customers during Anson future marketing campaigns.

He added that "As NOVONIX Battery Technology Solutions is a provider of high precision battery testing equipment and advanced R&D services to several Tier 1 battery makers and OEM's around the world, giving Anson a platform for global exposure which are expected to greatly assist opening discussions with potential off-take partners."

The lithium hydroxide and lithium carbonate samples used in the testing were produced by Anson from brine extracted from its Paradox Brine Project located in Utah, USA in March 2020 and December 2019, respectively. See ASX Announcements of 5 March 2020 and 12 December 2019 for details.

About Novonix

NOVONIX Limited (ASX: NVX, OTCQX: NVNXF) is an integrated developer and supplier of high-performance materials, equipment and services for the global lithium-ion battery industry with operations in the U.S. and Canada and sales in more than 14 countries. NOVONIX's mission is to enable a clean energy future by producing longer-life and lower-cost battery materials and technologies.

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

ENDS

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Competent Person's Statement: 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. Mr Knox has reviewed and validated the test work data produced and consents to the inclusion in this announcement of this information in the form and context in which it appears. Mr Knox is a director of Anson and a consultant to Anson.

About Anson

Anson Resources Limited (ASX: ASN) is an Australian-based exploration and development company, focused on the discovery, acquisition, and development of natural resources that will meet the demand from rapidly growing new energy and technology markets.

A key component of this strategy is the development of the Paradox Basin Brine Project in southern Utah, USA, where Anson is targeting the recovery of valuable chemicals from a unique salt brine resource. The Paradox Project is targeting the supply of lithium chemicals to the rapidly growing battery market, while extracting additional value from by-products, including bromine, iodine, and boron, contained within the brine.

Anson has also established a portfolio of base metals projects covering 458km² in the highly prospective Yilgarn Craton of Western Australia. A key near-term focus within the WA portfolio is on The Bull Project which covers 82km² and adjoins the high-grade Julimar Ni-Cu-PGE discovery made by Chalice Gold Mines Limited (ASX: CHN).

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	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	**Long Canyon No2 well** • Mud Rotary (historic oil well). • On re-entry, sampling of the supersaturated brines was carried out. • The well was re-opened, and the brine from Clastic Zone 31 allowed to flow into the sump to provide a representative sample. • Samples were collected in IBC containers.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Mud Rotary Drilling (18 ½" roller bit).
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.*	**Long Canyon No2 well** • Sampling of the targeted horizon was carried out at the depths interpreted from the newly completed geophysical logs. • Brine from the Clastic Zone 31 was sampled for the test work.

JORC CODE 2012 "TABLE 1" REPORT

Criteria	JORC Code Explanation	Commentary
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.*	**Long Canyon Historic Wells** • All cuttings from the historic oil wells were geologically logged in the field by a qualified geologist
	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	• Geological logging is qualitative in nature. • All the drillhole were logged.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled,*	**Long Canyon No2 well** • Sampling followed the protocols produced by SRK for lithium brine sampling. • Samples were collected in IBC containers and samples taken from them. • Duplicate samples kept Storage samples were also collected and securely stored. • Sample sizes were appropriate for the program being completed. • Bulk sample (10,000l) was sent for lithium carbonate and lithium hydroxide production.
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.*	**Long Canyon No2 well** • The assays were carried out at SGS Laboratories in Lakefield, Ontario which is a certified laboratory with experience in lithium carbonate analysis. • Assays were carried out using an ICP-AES instrument. • Quality and assay procedures are considered appropriate. • The analysis carried out on the samples includes determination of both physical and chemical properties. • All equipment is calibrated with externally certified samples. • Quality control procedures include the use of duplicates and standards in the extraction processes. • Bulk sample (1,000l) will be sent off for bench top test work.

Criteria	JORC Code explanation	Commentary
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.*	**Long Canyon No2 well** • Documentation has been recorded and sampling protocols followed. • The samples received at the laboratory and electronically recorded in the laboratory's central database.
Location of data points	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* *Whether sample compositing has been applied.*	**Long Canyon No2 well** • Locations surveyed using hand held GPS. • The grid system is NAD 83, UTM Zone 12. • The project is at an early stage and information is insufficient at this stage in regards to sample spacing and distribution. No sample compositing has occurred.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* *Whether sample compositing has been applied.*	• NA (Long Canyon No2 well was a wildcat oil well) • Data spacing is considered acceptable for a brine sample but has not been used in any Resource calculations • No sample compositing has occurred.
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.*	• All drill holes were drilled vertically (dip -90). • The lithium bearing brines are sub-horizontal. • Orientation has not biased the sampling.

Criteria	JORC Code explanation	Commentary
Sample security	The measures taken to ensure sample security.	**Long Canyon No2 well** • Sampling protocols were followed and chain of custody recorded. • Samples shipped directly to laboratory for test work.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	**Long Canyon No2** • No audits or reviews of the data have been conducted at this stage.

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	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	**Long Canyon Wells** • The Paradox Basin Brine Project is located approximately 12 km west of Moab, Utah, USA, and encompasses a land position of 8,947 hectares. • The land position is constructed from 1,097 Federal placer mineral claims, and one mineral lease from the State of Utah. • A1 Lithium has 50% ownership of 87 of the 1,097 mineral claims through a earn-in joint venture with Voyageur Mineral Ltd. All other claims and leases are held 100% by Anson's U.S. based subsidiary, A1 Lithium Inc. • The claims/leases are in good standing, with payment current to the relevant governmental agencies.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Past exploration in the region was for oil exploration. • Brine analysis only carried out where flowed to surface during oil drilling.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Oil was targeted within clastic layers (mainly Clastic Zone 43) • Lithium is being targeted within the clastic layers in the Paradox Formation.

JORC CODE 2012 "TABLE 1" REPORT

Criteria	JORC Code explanation	Commentary

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.*
		Drillhole Summary:
		Long Canyon No2
		• 612,308E, 4,267,637N
		• 5,846 RL
		• 7,386 TD

	• *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.*	• Not applicable, information has been included.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	**Long Canyon Wells** • No weighting or cut-off grades have been applied. • No metal equivalent values are being used for reporting exploration results.
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').*	**Long Canyon Wells and Long Canyon No2** • Exploration is at an early stage and information is insufficient at this stage. • Drill hole angle (-90) does not affect the true width of the brine

JORC CODE 2012 “TABLE 1” REPORT

Criteria	JORC Code explanation	Commentary
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	Not applicable.
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.*	• Not applicable.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• Not applicable.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Continue battery test work.