Anson Resources

# Paradox Lithium Project

## Stage 1 Target Production Capacity – 10,000tpa of Battery Grade Lithium Carbonate

ASX:ASN 7 June 2022

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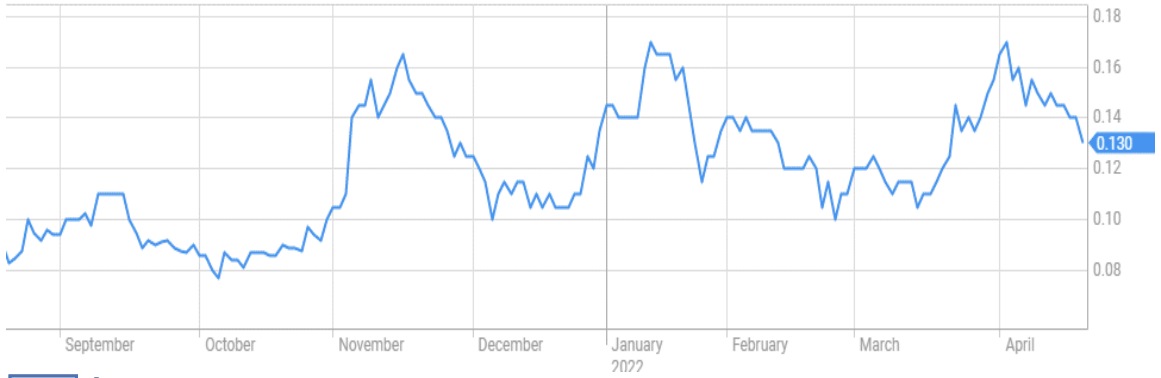
# Corporate Snapshot

| Overview | |
|---|---|
| ASX code | ASN |
| Issued Capital | 1,019 million |
| Market Capitalisation (3 June 2022) | $138 million |
| 52 week high – low | $0.059 – 0.185 |

| Shareholding | |
|---|---|
| Chia Tai Xingye International | 12.5% |
| Directors and Management | 4.4% |
| Top 20 | 30.83% |




**Bruce Richardson, B.A (Hons) – Executive Chairman and CEO**

Proven track record of 13 years in exploration, mining and production in public and private companies. Over 30 years of international business experience. Raised over $170 million of investment for mining projects.

**Peter (Greg) Knox, B.Sc. (Geology) – Director**

Qualified geologist with over 30 years of experience in exploration, mine development and mining operations. Has worked on projects from grass-roots exploration through to mine development and production.

**Michael van Uffelen, B.Com, CA – Director**

Experienced Director, CFO and company secretary. Chartered Accountant with over 30 years experience gained from working with major accounting firms, investment banks and public companies.

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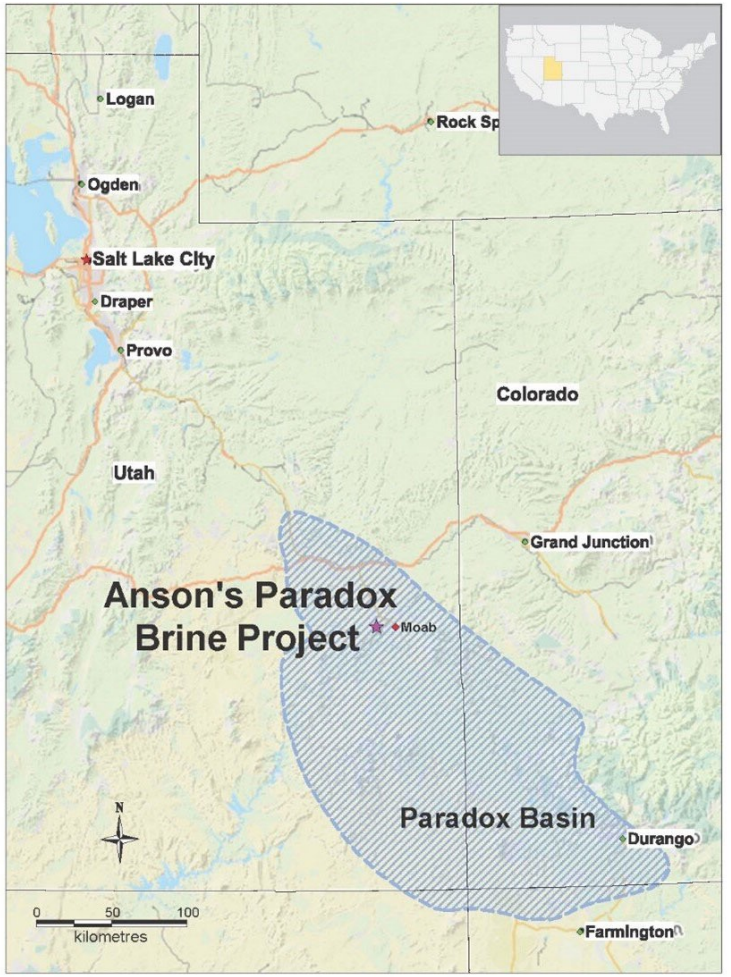
# Paradox Lithium Project, Utah, U.S.A. (100% owned)

- **Large High Quality Brine Resource**
  - High concentration of Li and Bromine
  - JORC Resource of 322 Mt of Brine containing 186kt Lithium Carbonate Equivalent (LCE) and 1,012kt $Br_2$[1]
  - Similar pressure of 4500 psi across the entirety of the 100 sq km project area
  - No pumping required, brine flows to surface under own pressure, reducing fossil fuel emissions – positive ESG impacts
  - Significant resource expansion potential – major resource expansion program ongoing
- **Suited to Direct Lithium Extraction Method**
  - No requirement for time-consuming and water intensive evaporation to extract lithium from brine
  - Processed brine reinjected into original formation
- **Strategic Tier 1 Jurisdiction**
  - USA is a net importer of LCE with growing EV Battery Industry
  - Lower taxes and political risk



Paradox Lithium Project Location

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1 – ASX announcement 30 March 2021

# The Paradox Basin

***The Paradox Basin consists of various formations which host large volumes of brines rich in Lithium and Bromine, among other minerals. It is located within a mature oil and gas district, providing Anson access to valuable historic data.***

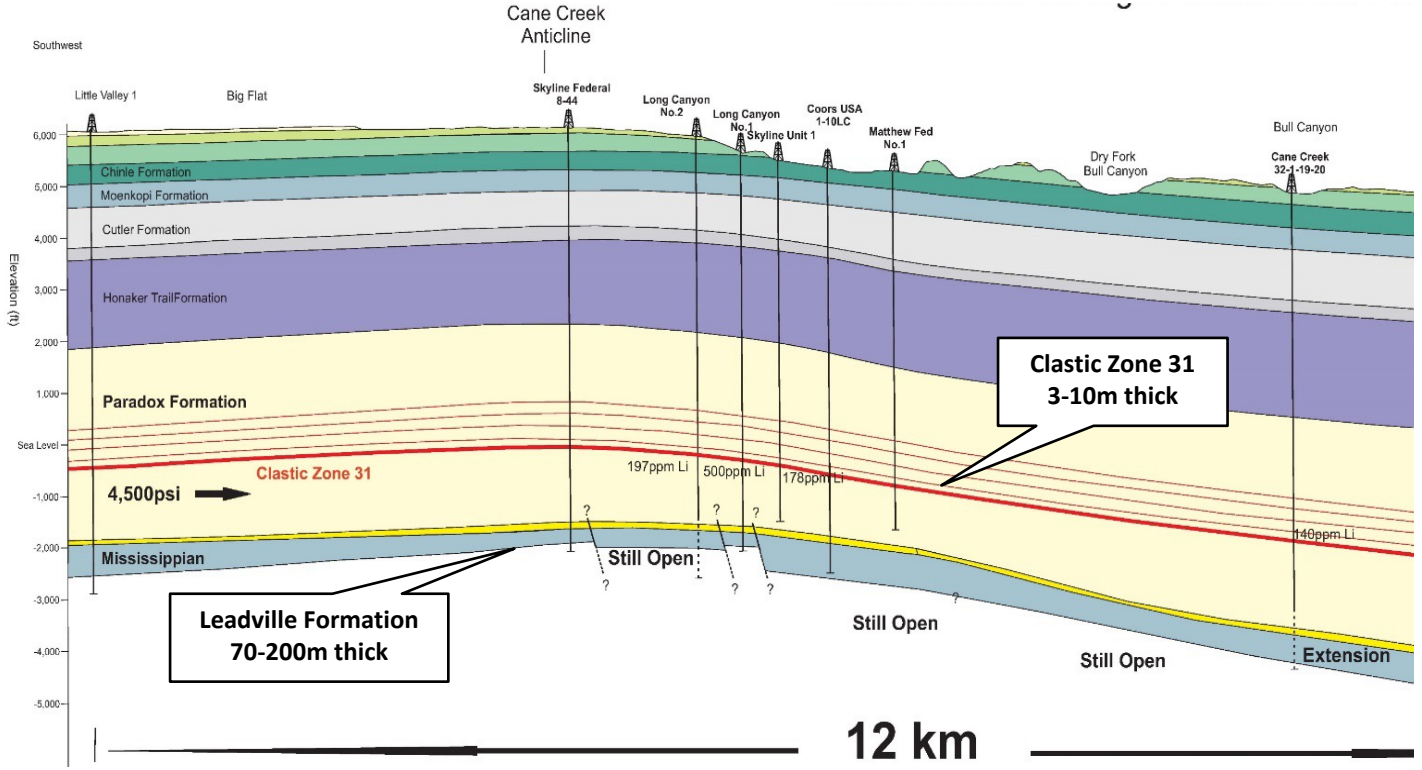
Target horizons comprise:

## Paradox Formation

- 6,500 ft below the surface, has been the target of Anson's exploration activities to date.
- **Current Mineral Resource Estimate is based on clastic zones within the Paradox Formation only.**

## Mississippian (Leadville) Formation

- 1,500 ft below Paradox and **significantly thicker** than the Paradox Formation (70-110m versus 3-10m).
- Historical data confirms **massive supersaturated brine aquifer** in the Mississippian (Leadville) Formation similar to the Paradox Formation.
- Current phase of resource expansion program is focused here




Schematic Cross Section through the Paradox Basin Project

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# First Brine Flows achieved from Thick, Minerals-Rich Mississippian Zone

Brine being collected for sampling from the Mississippian units at the Paradox Lithium Project Long Canyon #2 Well.

Large amount of salt coming out of the Paradox Lithium Project Long Canyon Long Canyon #2 well (an indicator of the presence of brine) on approaching the start of Mississippian Zone, at a depth of 2346m.

Drilling at the at the Long Canyon #2 well at the Paradox Lithium Project.

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# Stage 1 Target Production Capacity:

## 10,000tpa Battery Grade Lithium Carbonate

# Production Capacity: 10,000tpa Lithium Carbonate

*Substantial developments in the lithium market, combined with the unique attributes of the Paradox Lithium Project, have driven* ***plans to increase Stage 1 Lithium Carbonate production capacity to 10,000tpa.***

*This represents a* ***275% increase in production capacity*** *from the 2,674tpa published in the Project's Updated Preliminary Economic Assessment.*[1]

## Key Drivers for expanded Lithium Carbonate Production Capacity:

**1** Expected upgrades to the Project Resource resulting from the **Resource Expansion program**

**2** **Higher (91.5%) lithium recoveries** achieved from Anson's Direct Lithium Extraction test work

**3** **+1,000%** demand driven Lithium Price Increase in past 24 months

**4** Continued investment into planned **battery manufacturing facilities in the United States**

**5** **Superior performance** of Anson's 99.95% purity Lithium Carbonate indicating longer battery lifespan

**6** Lithium has been designated a **Critical Mineral** by the US Government

**7** **US Government commits to >US$20 Billion of low interest financing** for development of US lithium battery supply chain and energy transition

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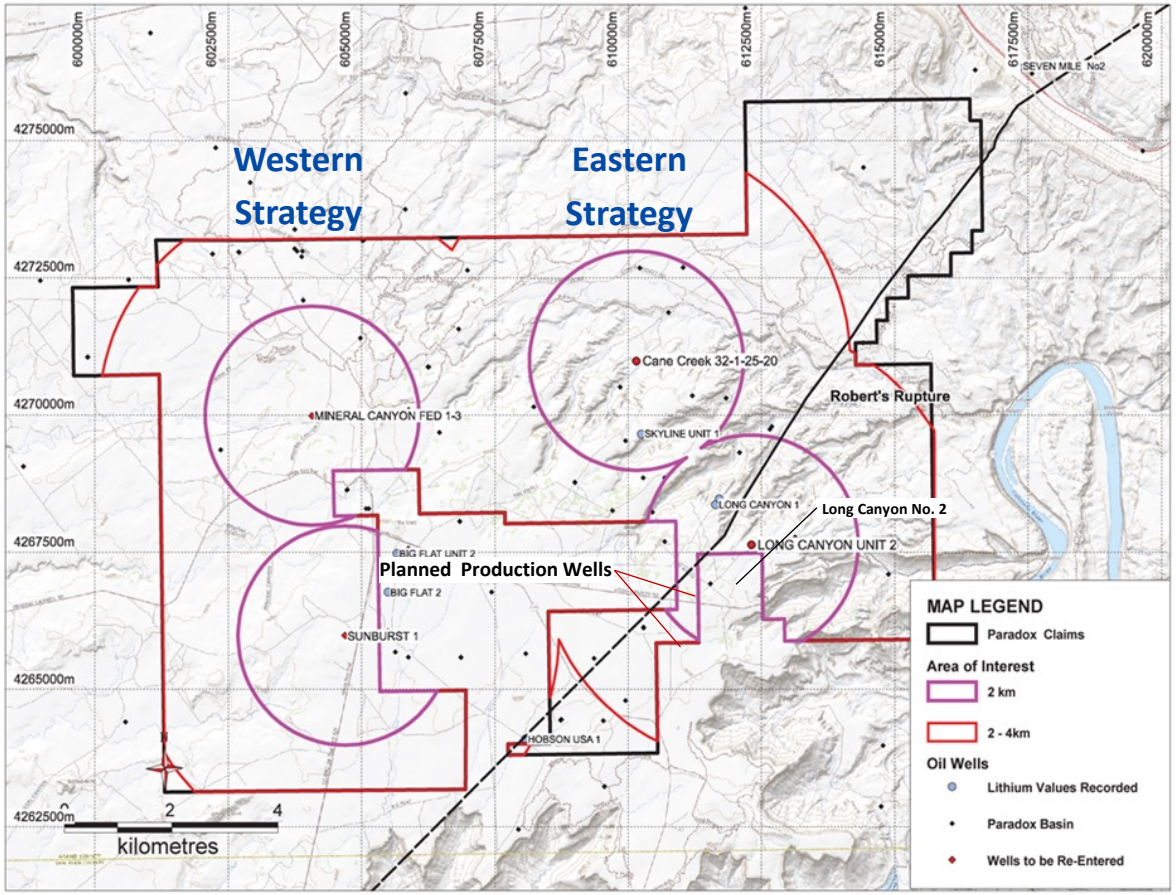
1. *See ASX Announcement 1 September 2021*

# 1 Resource Expansion Program

- The Mississippian (Leadville) and the Paradox Formations have a combined **Exploration Target of 0.65 – 1.9Mt LCE and 3.3 – 6.5Mt of Bromine**[1].
- Anson is targeting a Resource upgrade in size and category on the back of:
  - ✓ **A 20% increase in the Paradox Basin project area** via the pegging of 128 new claims (18.4km$^2$) along the western margin. 8.5km$^2$ of new area within existing Area of Influence, to be included in Resource update.
    *ASX announcement 18 October 2021*
  - ✓ **Successful execution of the Eastern Strategy** –
    - **Drilling at Long Canyon No.2 well, reaches massive Mississippian brine source** – first brine flows achieved
      *ASX announcement 2 June 2022*
    - **Approval for Drilling granted at priority Cane Creek re-entry, to commence on completion of Long Canyon No.2 drilling**
      *ASX announcements 17 January 2022, 28 March 2022, 23 May 2022 & 1 June 2022*
- **New core data from the above drilling program will allow a Resource update to include the Mississippian formation (previously unexplored for lithium).**




Projected anticipated Resource for Mississippian Formation upon completion of Western and Eastern Strategy.

1. ASX Announcement 6 April 2021, see appendix for JORC Resource Estimate

# 2 Direct Lithium Extraction (DLE) Process

***Industry leading 91.5% Lithium recovery from brine confirmed by pilot plant test work[1]***

**De-risked, Proven Process - 91.5% Li recoveries**

- ✓ Existing extraction technology, commercialised by **established chemicals company**
- ✓ Brine based lithium carbonate **plants using DLE already in operation[1]**
- ✓ Batch testing and lab scale pilot plant test work completed
- ✓ Superior result to ~50% Li recovery via evaporation and 80% Li recovery via Lilac (previously tested by Anson) and other DLE methods.


**99.95% $Li_2CO_3$**

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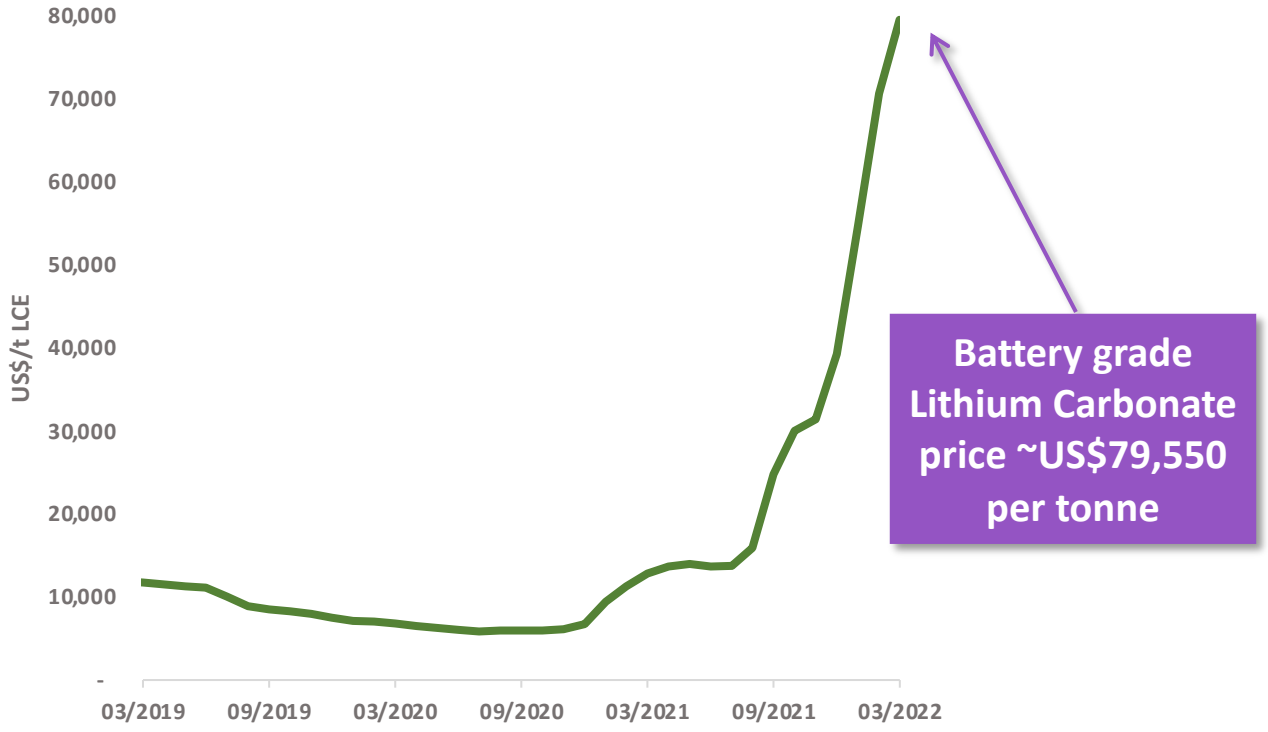
1 – ASX announcement 13 August 2021

# 3 +1000% demand driven increase in price

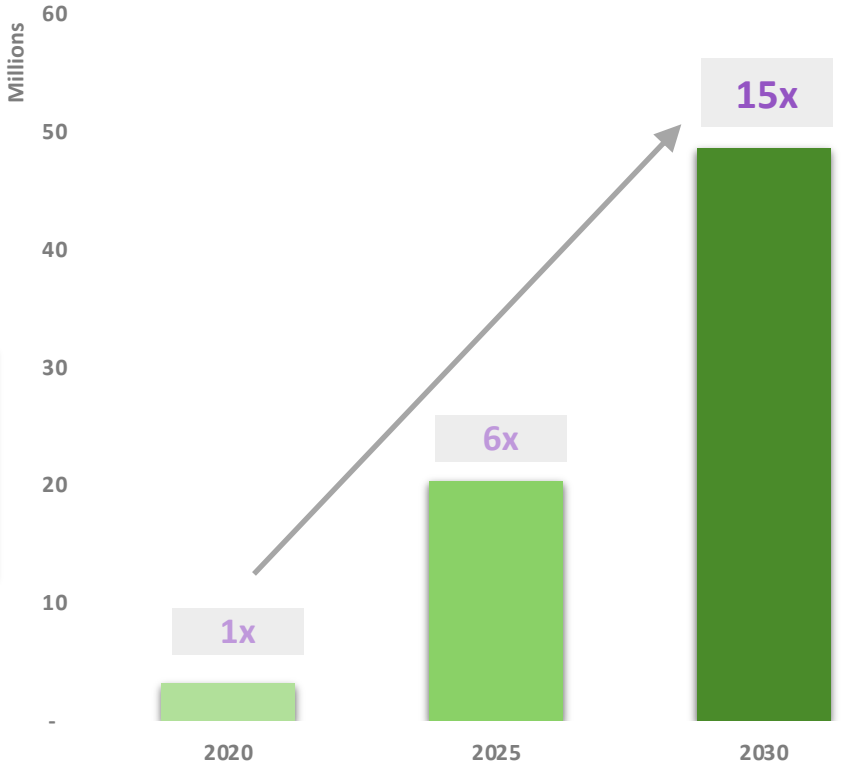
***Lithium production must quadruple to 2Mt Lithium Carbonate Equivalent (LCE) between 2020 and 2030 to meet growing demand[1].***

## Lithium Carbonate Price




**Source**: Battery Grade Lithium Carbonate Price China EXW as at 31 March 2022, Source S&P Capital IQ

## Annual EV sales 15x that of 2020

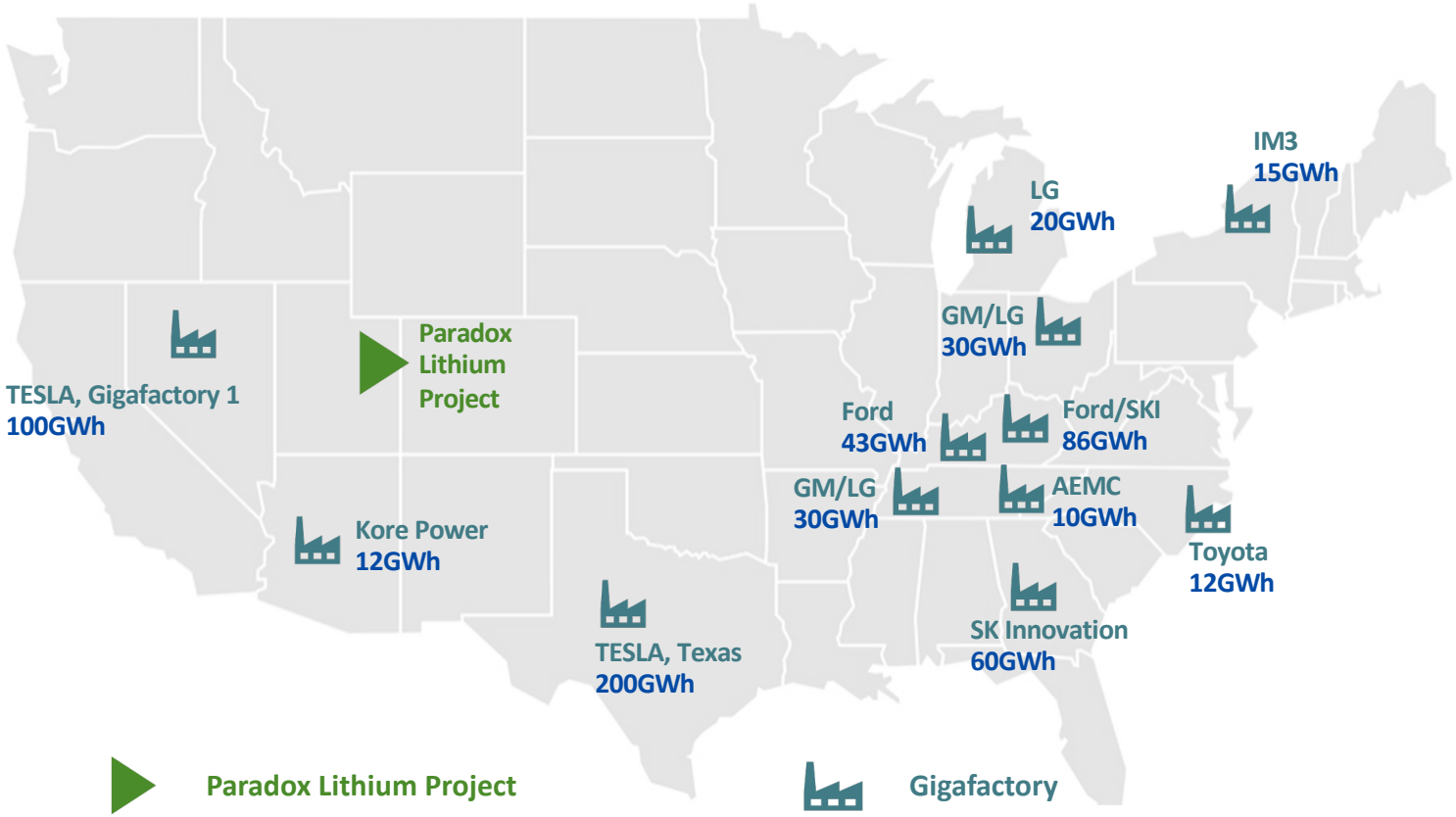



**Source**: IEA (2021), Global EV Outlook 2021, IEA, Paris https://www.iea.org/reports/global-ev-outlook-2021

1. Fastmarkets, Lithium Supply and Demand to 2030 (22 July 2021)

# 4 Greater Battery Manufacturing Capacity

***Investment into U.S. battery manufacturing facilities continues to increase, with US car manufacturers committing to an all-electric product range.***




## U.S. Lithium Advantage

Lithium listed as critical mineral in the U.S. Greater focus towards **supply chain security** and local assets

12 battery mega factories in operations, **10 new giga factories in pipeline[1] to produce by 2025**

Albemarle's Silver Peak Mine is the **only producing lithium mine in the U.S.[1]**

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1 – S&P Market Intelligence, Benchmark Mineral Intelligence

# 5 Superior Performance – Li Battery Testing

- Anson's Lithium Carbonate demonstrates lower capacity loss during initial charge cycles
  - Lower resistance growth in Anson Li battery[1]
- Anson's Lithium Carbonate supports a **more stable battery**
  - 1.5 - 2x less gas production within battery
  - Lower rate of self discharge at high temperature (60°C)
- **Improved battery efficiency** expected due to low impurities
  - Less unwanted "parasitic" reactions – 99.95% pure

NOVONIX

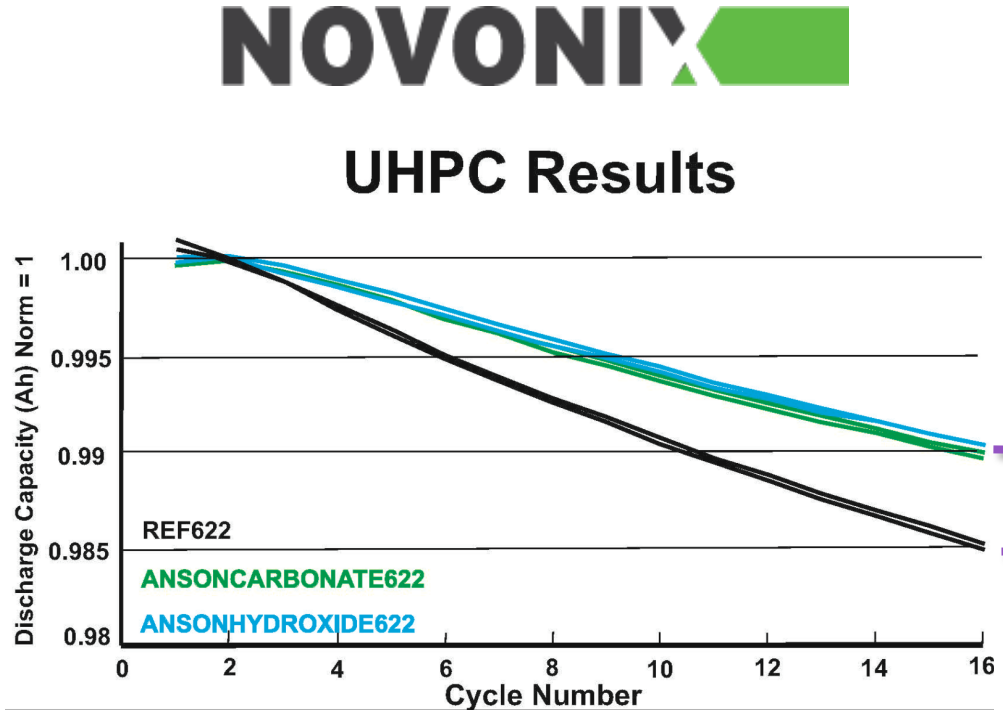


Figure: Ultra-high precision coulometric (UHPC) cycling test, ASX release 9 September 2021

**Lower loss of battery capacity during charge cycles[1]**

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1 – ASX Announcement 9 September 2021

# 6 Lithium – A Critical Mineral in the USA

- Lithium designated a “critical mineral” by the US Government

- Only 750,000 tons of Lithium Reserves in the United States[1]
  - <3.5% of world’s lithium reserves

- US lithium-ion battery manufacturing capacity[2] is forecast to rise –
  - **By 2025 – 10x to 382GWh p.a.**
  - **By 2030 – 17x to 620GWh p.a.**

USGS science for a changing world

United States Geological Survey

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1 – United States Geological Survey (USGS), Mineral Commodity Summaries, January 2022
2 – S&P Global Market Intelligence, 12 April 2022.

# 7 >US$20 Billion Funding by US Government

- The United States Department of Energy is proposing to deploy **US$17.7 billion in financing** to support development of domestic US based lithium-ion battery supply chain
- Dept of Energy loans available at low interest for long tenors under the Advanced Technology Vehicles Manufacturing Loan (ATVM) program.
- Additionally, the **Biden government has announced >US$3 billion of grant funding for fast-tracking** the development of the domestic battery supply.

# Bromine Production Capacity:

## Providing Anson with outstanding opportunity to access the growing US renewable energy storage market

# Bromine Production Capacity

***Bromine production capacity at the Paradox Project is to be added progressively, to align with forecast substantial increase in demand for zinc-bromine batteries (to support electricity networks and renewable energy storage) and other bromine derivative products such as calcium-bromide (CaBr) and sodium-bromide (NaBr), which are used in multiple industrial applications.***

- Strong demand anticipated for zinc-bromine batteries being deployed at large scale in the United States
- Lithium Carbonate and Bromine plant to **share infrastructure**
- **High Grade Resource** with over 3,500 ppm of Br in Paradox Basin[1], one of the highest grades among existing producers
- Anson's Updated Preliminary Economic Assessment included Prefeasibility Study (PFS) work for a **15,000tpa sodium bromine plant**. *See ASX announcement 1 September 2021.*
- TETRA Technologies (NYSE:TTI) MoU has been extended[2] and expanded to include TETRA's proprietary technology to **produce TETRA PureFlow™ ultra-pure zinc-bromide used in stationary storage batteries**

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1 – ASX announcement 20 October 2021
2 – ASX announcement 6 April 2022

# Stationary Energy Storage – Flow Batteries

| | |
|---|---|
| **Bloomberg New Energy Forum** | A 122-fold boom in stationary energy storage over the next two decades will require **US$662 billion of investment** |
| **100% Renewable Energy needs lots of storage**. 278GWh of grid storage required in the US alone for a 100% renewable power generation | **Inside Climate News** |
| **US. Dept of Energy** | Flow cells are potentially cost-effective and viable for widespread adoption as they are **not limited by natural earth abundance** |
| Zinc-Bromine flow battery technology **addresses safety issues** with other storage solution technologies | **Engineers Australia** |

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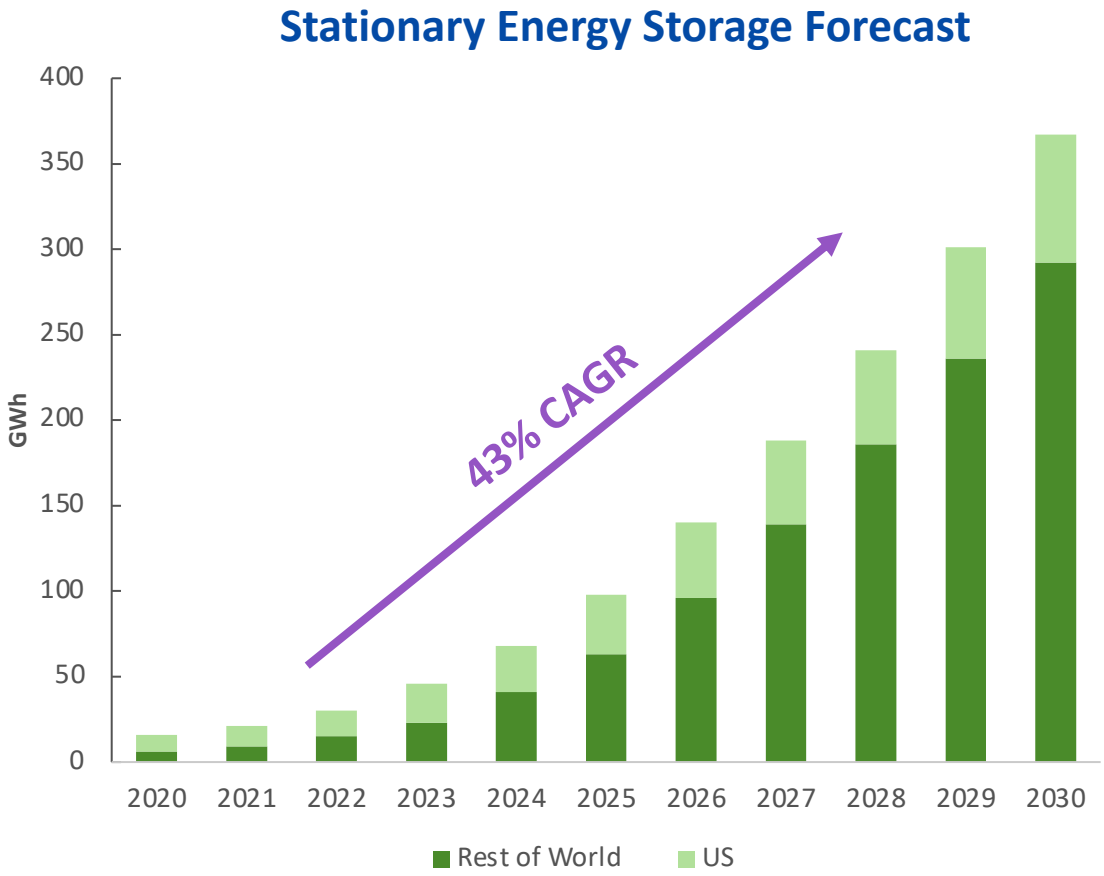
# Energy Storage – Flow Batteries

Global Energy Storage Market expected to be **36x larger in 2030 compared to 2020**

**Cairn Energy Research Advisors (US)**

"**Flow batteries** are potentially going to be a big contributor in stationary energy storage, like the grid level stationary energy storage"

**Australia Chief Scientist Alan Finkel**




**Source:** Cairn Energy Research Advisors, 2021

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# Sustainability

# What is Clean Lithium?

## Direct Lithium Extraction
## High Purity, Low Footprint

### Production of High Purity >99.95% $Li_2CO_3$

Delivery of Longer Battery Life

### Direct Lithium Extraction

No mining / reduced ground disturbance

Processed brine to be returned

### Low Energy and Water Consumption

Lowering emissions

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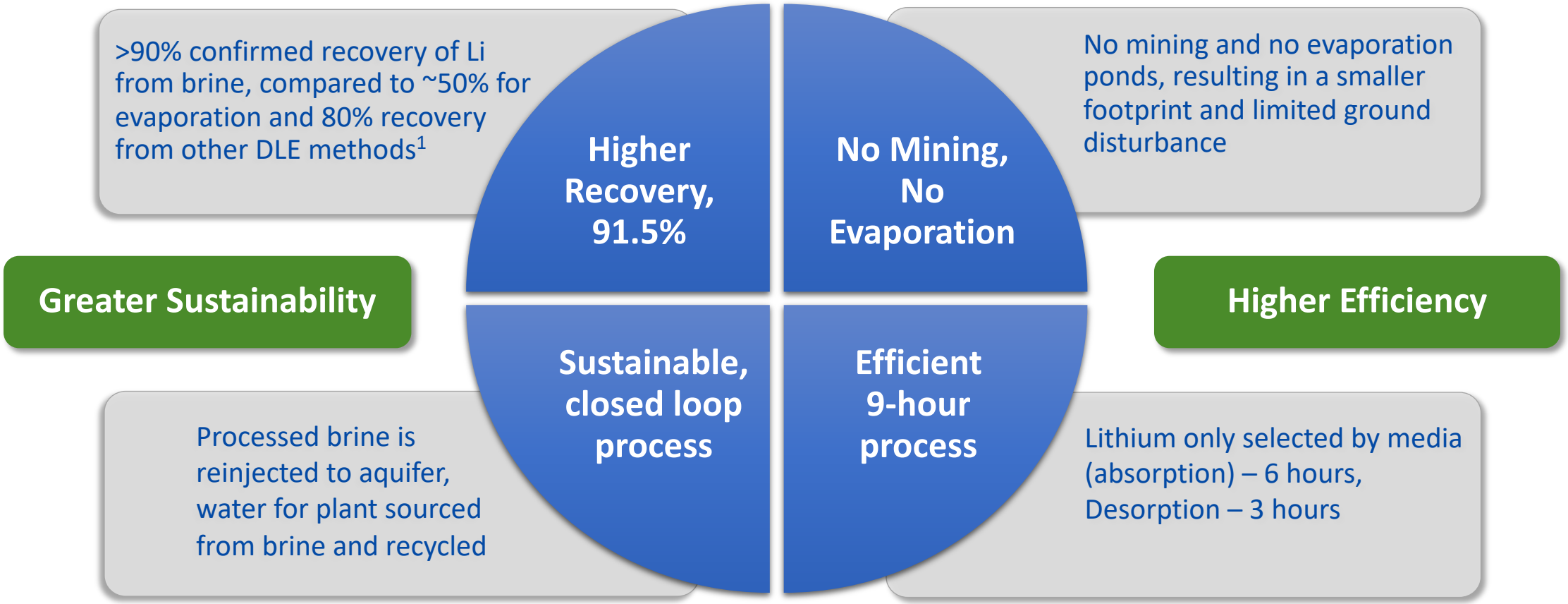
# Direct Lithium Extraction (DLE)

***Low-cost production of High Purity Lithium with lower emissions***




1 – ASX announcement 13 August 2021

# Next Steps

# Indicative Timeline

## H2 2021

- ✓ Updated Lithium / NaBr PEA delivered
- ✓ DLE testwork achieving high lithium recoveries
- ✓ Positive NOVONIX Battery Test Work Results
- ✓ Worley appointed for Lithium DFS

## H1 2022

- ✓ Commenced Resource Expansion Program
- ✓ Updated Bromine MOU with TETRA
- ✓ First brine flows from Mississippian Zone

## H2 2022

- JORC Resource upgrade
- Paradox Lithium Project Feasibility Study
- Lithium Offtake
- Project Financing
- Target Final Investment Decision ("FID")

## 2023

Commence Construction of Paradox Lithium Project

## 2024

Commence Stage 1 Operations

10,000 tpa LCE Production

Integrate Bromine Production Capacity

# Thank You

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Australia

# Paradox Lithium Project: Resource & Exploration Target

| Resource Category | Formation | Clastic Zone | Brine (Mt) | Contained ('000 t) | |
|---|---|---|---|---|---|
| | | | | $Li_2CO_3$ | $Br_2$ |
| Indicated | Pennsylvanian, Paradox Formation | 31 | 38 | 35 | 126 |
| Inferred | | | 73 | 68 | 185 |
| **Total Resource** | | **31** | **111** | **103** | **311** |
| Indicated | Pennsylvanian, Paradox Formation | 17, 19, 29, 33 | 39 | 15 | 131 |
| Inferred | | | 172 | 68 | 570 |
| **Total Resource** | | **17, 19, 29, 33** | **211** | **83** | **701** |
| **Total Resource** | | | **322** | **186** | **1,012** |

| Exploration Target | | Porosity (%) | Density | Brine (Mt) | Li Grade (ppm) | Li ('000 t) | $Li_2CO_3$ ('000 t) | Br (ppm) | $Br_2$ ('000 t) |
|---|---|---|---|---|---|---|---|---|---|
| Mississippian, Leadville Formation | **MIN** | 14 | 1.27 | 1,300 | 80 | 104 | 553 | 2,000 | 2,600 |
| | **MAX** | 14 | 1.27 | 1,800 | 140 | 252 | 1,340 | 3,000 | 5,400 |
| Pennsylvanian, Paradox Formation | **MIN** | 14 | 1.27 | 365 | 50 | 18 | 97 | 2,000 | 730 |
| | **MAX** | 14 | 1.27 | 700 | 300 | 110 | 582 | 3,000 | 1,095 |
| **Total Exploration Target** | **MIN** | | | **1,655** | | | **650** | | **3,330** |
| | **MAX** | | | **2,500** | | | **1,922** | | **6,495** |

The Exploration Target is conceptual in nature as there has been insufficient exploration undertaken to define a mineral resource for the Leadville Limestone. It is uncertain that future exploration will result in a mineral resource.

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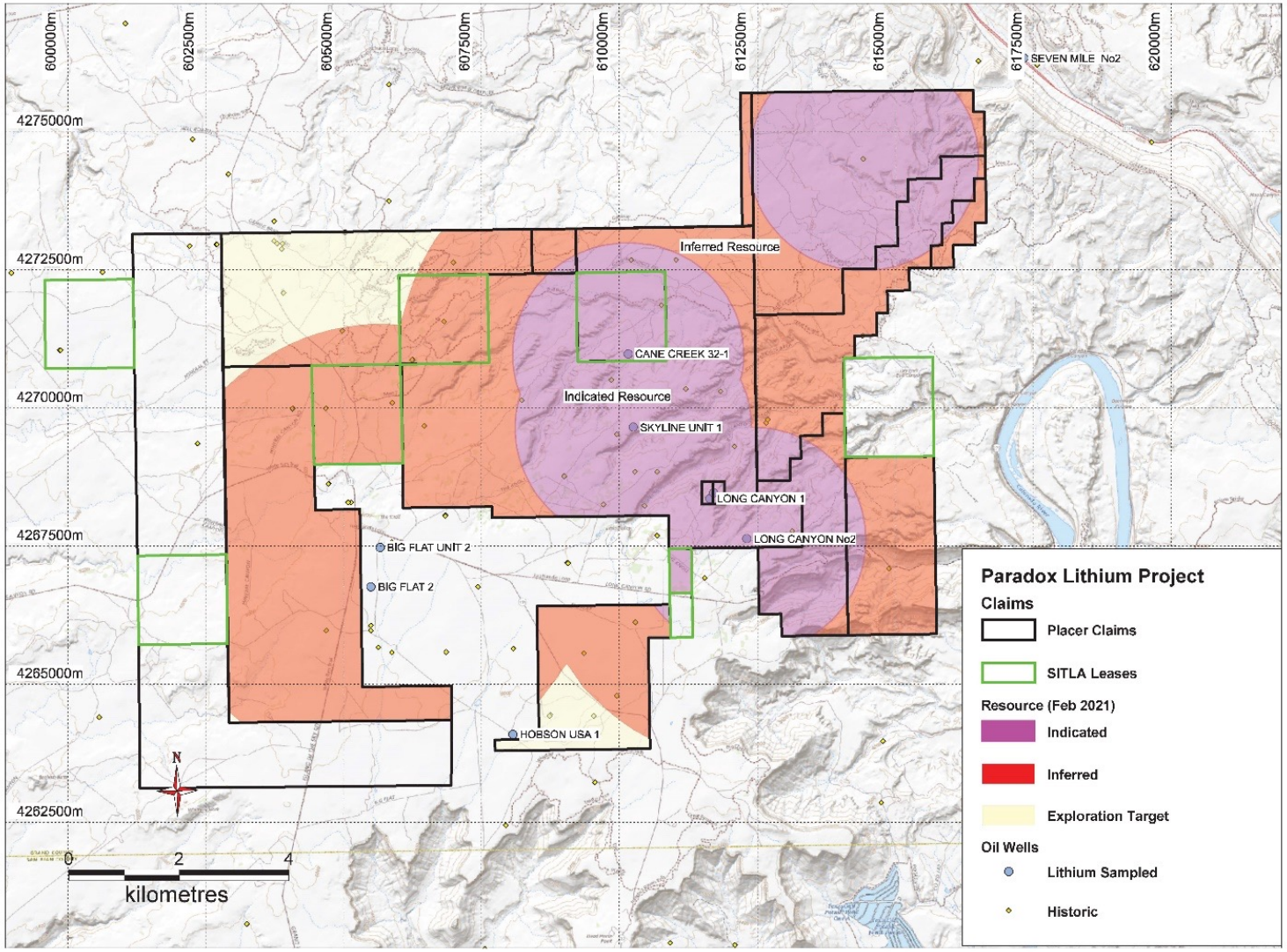
Refer to ASX announcements of 30 March 2021 (Resource) and 6 April 2021 (Exploration Target)

# Paradox Lithium Project: Resource & Exploration Target

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Resource Classification for Clastic Zone 31 of the Paradox Formation.

# Competent Person's Statement

**Competent Person's Statement 1:** The information in this presentation 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 and a consultant to Anson.

Mr Knox has reviewed and validated the Exploration Target that was based on an audit and review completed by Auralia Mining Consulting, using historical data used by Anson to calculate the Exploration Target and consents to the inclusion in this report of the matters based on information in the form and context in which they appear.

**Competent Person's Statement 2:** The information contained in this presentation relating to Exploration Results and Mineral Resource Estimates has been prepared by Mr Richard Maddocks, MSc in Mineral Economics, BSc in Geology and Grad Dip in Applied Finance. Mr Maddocks is a Fellow of the Australasian Institute of Mining and Metallurgy with over 30 years of experience. Mr Maddocks has sufficient experience that is relevant to the style of mineralisation and type of deposit 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 Maddocks is an independent consultant to Auralia Mining Consulting Pty Ltd. Mr Maddocks consents to the inclusion in this announcement of this information in the form and context in which it appears. The information in this announcement is an accurate representation of the available data from exploration at the Paradox Brine Project.

Information is extracted from reports entitled 'Anson Obtains a Lithium Grade of 235ppm at Long Canyon No 2' created on 1 April 2019, 'Anson Estimates Exploration Target For Additional Zones' created on 12 June 2019, 'Anson Estimates Maiden JORC Mineral Resource' created on 17 June 2019, 'Anson Re-enters Skyline Well to Increase Br-Li Resource' created on 19 September 2019, 'Anson Confirms Li, Br for Additional Clastic Zones' created on 23 October 2019, 'Anson Granted Additional Paradox Brine Project Claims' created 30 March 2021, 'Paradox Brine Stage 1 Sodium Bromide/Lithium Updated PEA' created 1 September 2021, and all are available to view on the ASX website under the ticker code ASN.

The Group confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Group confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.