



**CENTURY LITHIUM**

Unlocking Tomorrow's Energy

Corporate Presentation

FEBRUARY 2024

# Cautionary Statement

## TECHNICAL INFORMATION

Scientific and technical information in this presentation about the Clayton Valley Lithium Project was reviewed and approved by William Willoughby, PhD, PE, Century Lithium Corp.'s President, CEO and Director and a qualified person under National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101). More detailed information about the Clayton Valley Lithium Project, including a description of key assumptions, parameters, methods and risks, is presented in the NI 43-101 technical report of Century Lithium Corp. dated effective August 5, 2020 – amended March 15, 2021, titled “NI 43-101 Technical Report Prefeasibility Study Clayton Valley Lithium Project Esmeralda County, Nevada”, available on SEDAR.

The Mineral Resource and Mineral Reserve estimates contained in this presentation were prepared in accordance with the requirements of securities laws in effect in Canada, including NI 43-101, which governs Canadian securities law disclosure requirements for mineral properties. NI 43-101 differs significantly from the requirements of the United States Securities and Exchange Commission (SEC) that are applicable to domestic United States reporting companies. Any mineral reserves and mineral resources reported by the Company herein may not be comparable with information made public by United States companies subject to the SEC's reporting and disclosure requirements.

## ADDITIONAL REFERENCE MATERIALS

This presentation should be read in conjunction with Century Lithium Corp.'s (Company) news releases, latest Management Discussion and Analysis and Financial Statements for the six months ended September 30, 2023, Technical Reports, Annual Information Form and Management Information Circular, for full details of the information referenced throughout this presentation. These documents are available on the Company's website at [www.centurylithium.co](http://www.centurylithium.co) or on SEDAR.

## FORWARD LOOKING STATEMENTS

This document contains forward looking statements and information within the meaning of applicable Canadian and United States securities legislation and readers should read the cautionary notes contained on the slide titled “Forward Looking Statements & Disclaimer” in the Appendix of this document.



# Share & Trading Information

TSX.V: **LCE** | OTCQX: **CYDVF**

Issued & Outstanding	148.7 M
Warrants	11.4 M
Options	8.1 M
Fully Diluted	168.2 M
Market Capitalization	~\$ 60 M
Cash Position*	~\$ 17 M
TSX.V 52 Week High – Low	\$ 1.47 – \$ 0.38
OTCQX 52 Week High – Low	US\$ 1.07 – \$ 0.26

Share Structure as at February 4<sup>th</sup>, 2024  
\* Cash position as at Q3 2023

## ANALYST COVERAGE

PI Financial	Justin Stevens
Alliance Global Partners	Jake Sekelsky
Noble Capital Markets	Mark L. Reichman
Hallgarten & Company	Christopher Ecclestone



## Our Vision

The Clayton Valley Lithium Project is one of the largest lithium deposits in the United States and is located adjacent to Albemarle's Silver Peak Mine: North America's only lithium operation in production.

Century Lithium's vision is to grow into a leading domestic lithium producer for the growing electric vehicle and battery storage market. We aim to achieve excellence in all aspects of our business, including safety, efficiency, shareholder value, environmental and social performance, and to be respected by our investors, employees and communities.



# Investment Highlights



## ADVANCED STAGE

- 3<sup>rd</sup> most advanced lithium project in Nevada
- 40+ year life of mine
- Favorable location & mining jurisdiction – Nevada
- Feasibility Study in progress (Q1 2024)



## PROVEN TECHNOLOGY

- Pilot Plant running for over 2 years
- Unique Chlor-Alkali process
- Direct Lithium Extraction (or “DLE”) via Li-PRO™ from Koch Engineered Solutions  
- Achieved **99.5%** recovery



## WATER PERMIT

- Own water rights permit in Clayton Valley Basin
- Water resources in Nevada are limited
- Essential for the development lithium projects

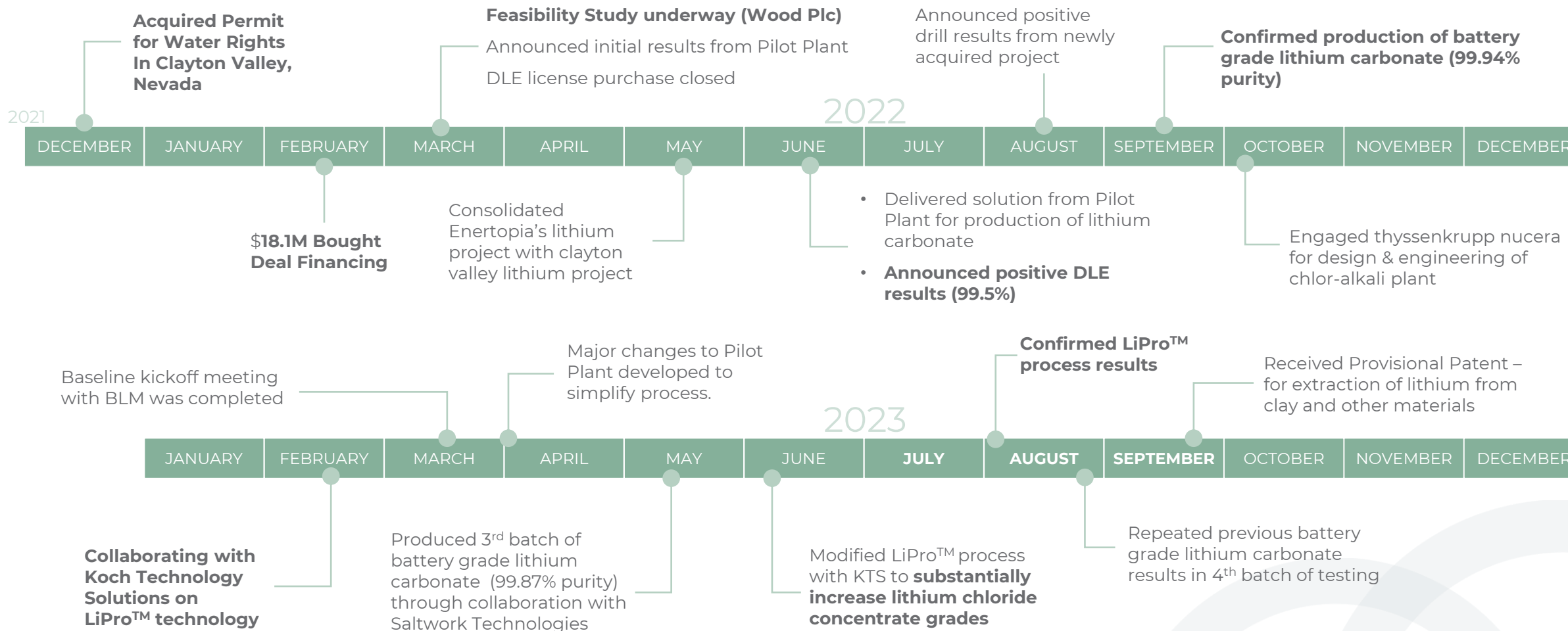


## BATTERY GRADE $\text{Li}_2\text{CO}_3$

- **99.94%** purity  $\text{Li}_2\text{CO}_3$
- Exceeds standard battery grade specs (99.5%)
- Sufficient for use in all EVs (electric vehicles) batteries
- Ability to produce a high purity  $\text{Li}_2\text{CO}_3$  with low level of impurities



# 2022 - 2023 Highlights





## Board of Directors

Bryan Disher

**CHAIR**

37+ years of experience in corporate finance,  
retired partner from PwC Canada, CPA, CA

Ken Owen M.Sc

**DIRECTOR**

40+ years experience in mining management  
including De Beers, Anglo American and SRK

James G. Pettit

**DIRECTOR**

30+ years experience in corporate finance,  
executive management & compliance

William Willoughby, PhD, PE

**PRESIDENT, CEO & DIRECTOR**

45+ years of experience in all aspects of natural resources  
development, production and financing

Corby G. Anderson, PhD, CEng, FIMMM, FIChemE

**DIRECTOR**

+40 years of global experience in engineering, design, industrial plant  
operations, corporate level management, education, research, and  
professional service

Donald G. Myers

**DIRECTOR**

35+ years experience in management and investor relations for  
resource and technology companies



# Management

William Willoughby, PhD, PE  
**PRESIDENT, CEO & DIRECTOR**

45+ years of experience in all aspects of natural resources development, production and financing

Todd S. Fayram, MSc Eng  
**SENIOR VICE PRESIDENT, METTALURGY**

35+ years of experience, focusing on metallurgy, pyrometallurgy and extractive operations for multi-national mining and metals producers.

Daniel Kalmbach, CPG  
**MANAGER, GEOLOGY & TECHNICAL SERVICES**

23+ years experience in natural resources geology, exploration, mining, and environmental project management

Abraham (Braam) Jonker, CPA, CA  
**CHIEF FINANCIAL OFFICER**

30+ years experience in natural resources and accomplished financial leader in the mining industry

Adam Knight, PE  
**PROJECT MANAGER**

26+ years experience in management and operations of mining corporations

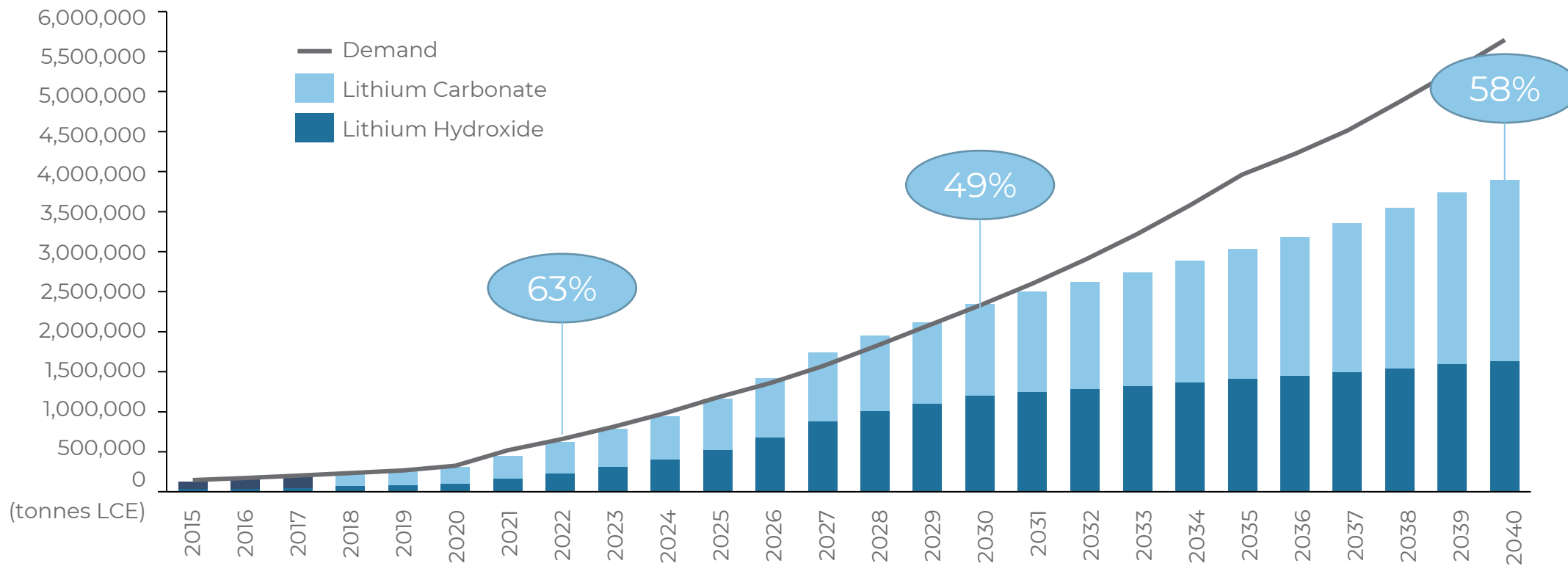
Spiros Cacos, MA  
**VICE PRESIDENT, INVESTOR RELATIONS**

23+ years experience in public markets, ranging from exploration and development to full scale production





# Lithium Chemicals Balance



Source: Benchmark Mineral Intelligence

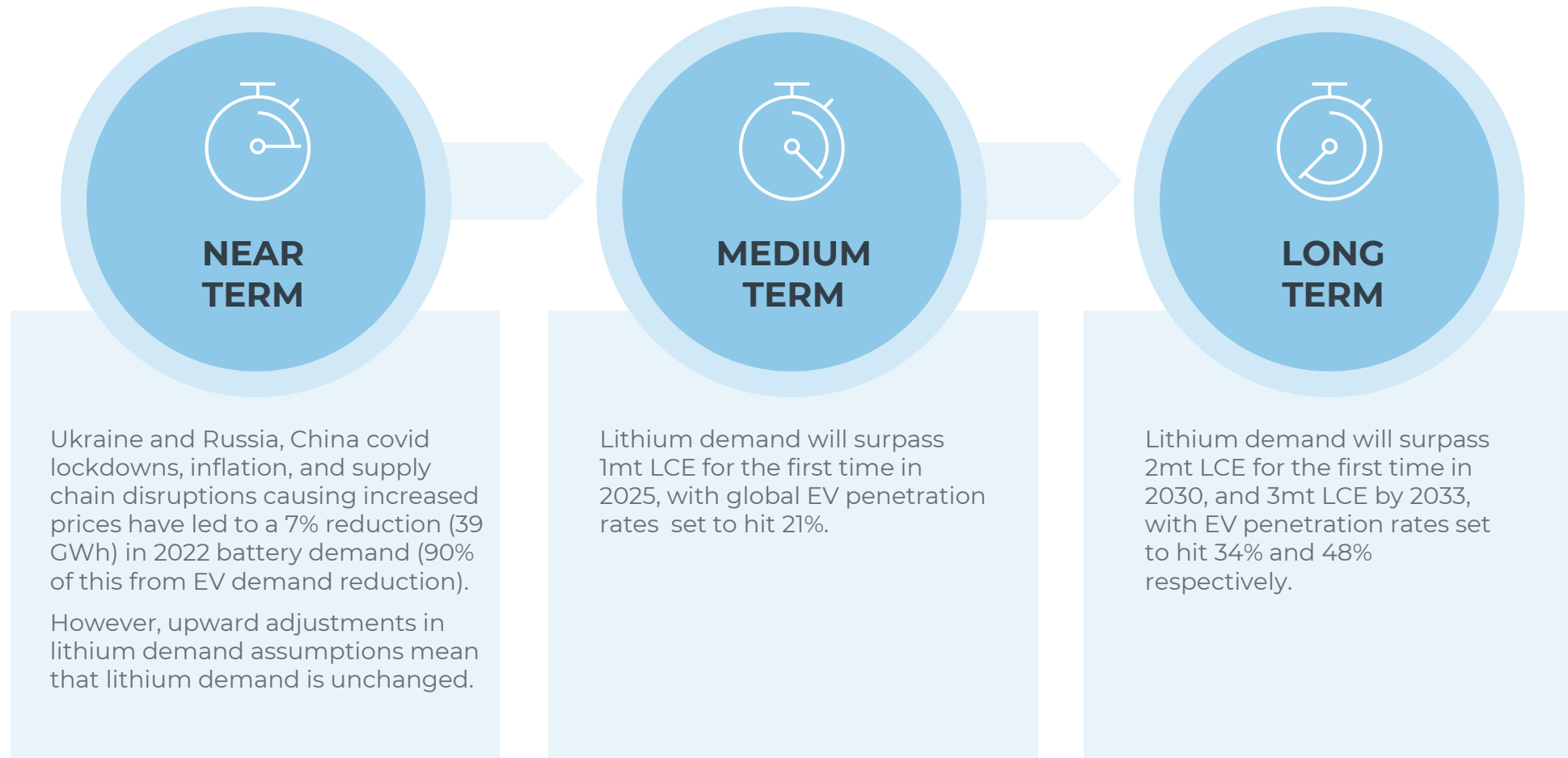


CENTURY LITHIUM

TSX.V: LCE

OTCQX: CYDVF

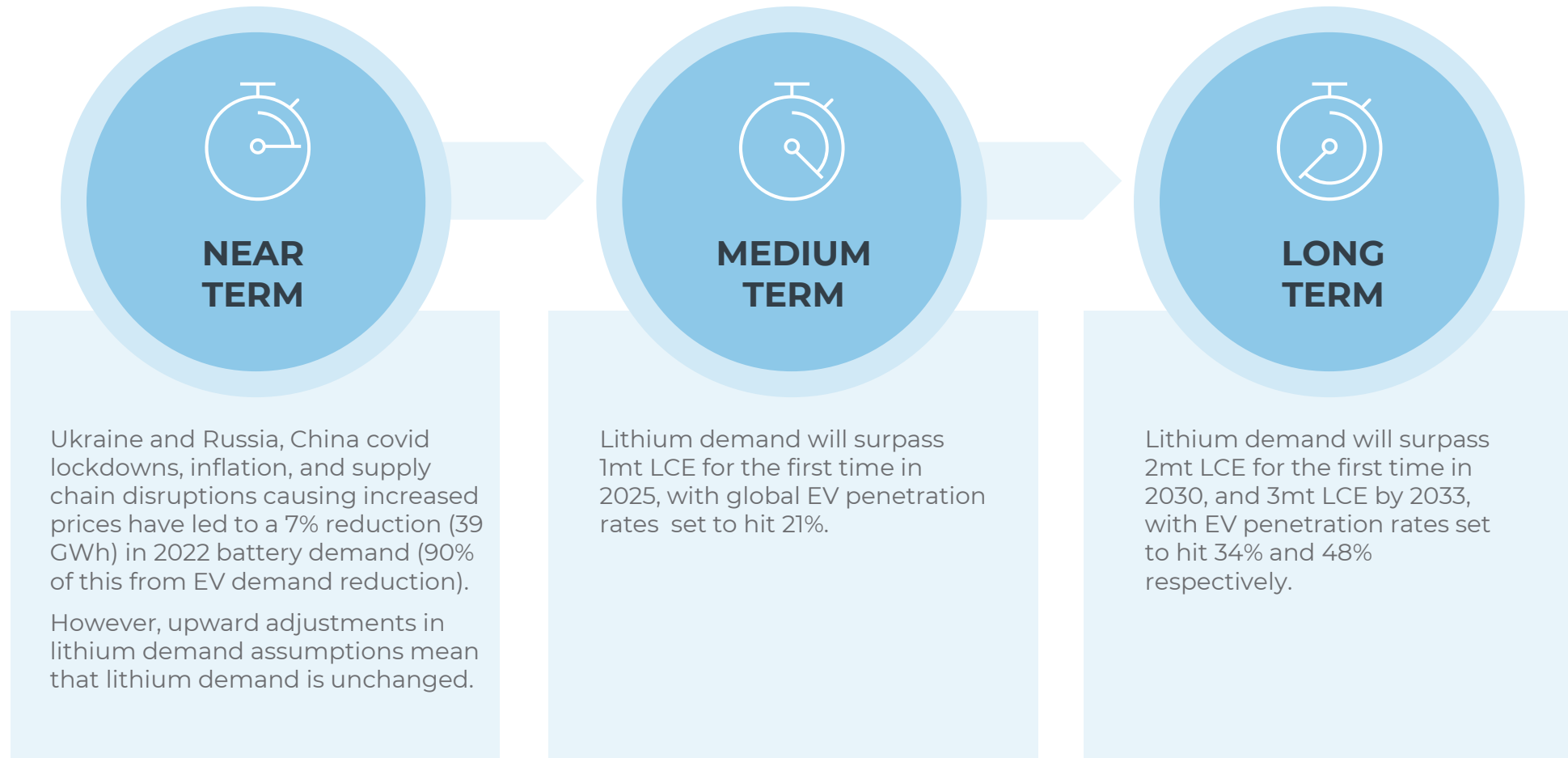
## Demand Forecast: 2020 - 2040



Source: Benchmark Mineral Intelligence



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Source: Benchmark Mineral Intelligence

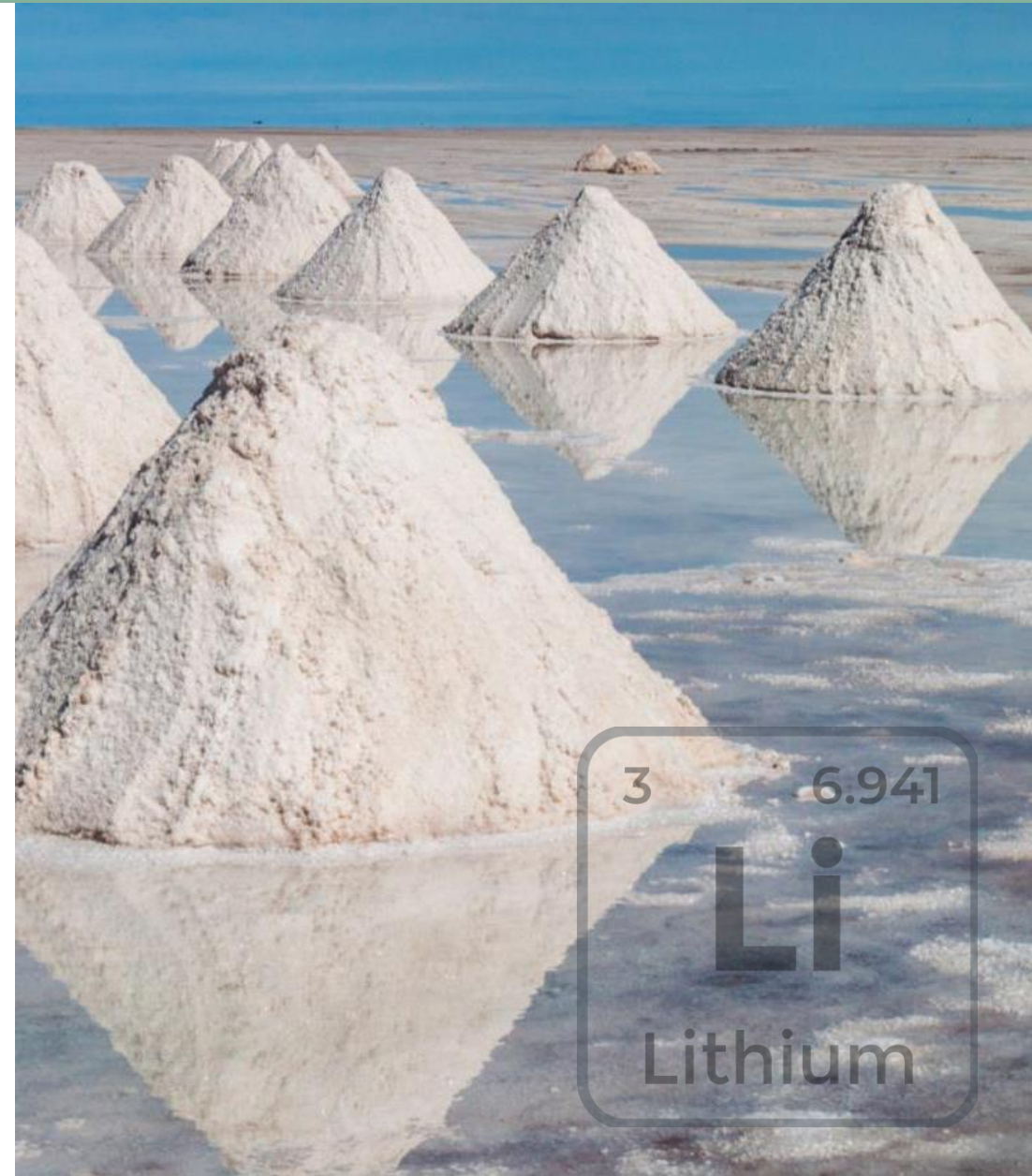




## Lithium: US “Critical Mineral”



- US Government designated lithium as a “**Critical Mineral**” of strategic importance in December 2017. (Executive Order 13817 – A Federal Strategy to Ensure, Secure and Reliable Supplies of Critical Minerals)
- “**Critical Mineral**” designation favors domestic sources of lithium across the supply chain
- Section 3 of the policy calls for identification of new sources of the minerals, **increasing exploration mining and processing and streamlining permitting**



# Policy Updates: The Defense Production Act



## The Defense Production Act

Originating in 1950s during the Korean War, the act specifically grants authority to address the mining and production of minerals critical to U.S security.

U.S president Joe Biden has invoked the Defense Production Act in a bid to boost domestic production and processing of key battery raw materials and reduce the country's dependence on foreign supply.



## Funding

President Biden's determination specifically cited the need for "lithium, nickel, cobalt, graphite, and manganese for large-capacity batteries, allowing their producers to get assistance under the Defense Production Act's Title III fund.

The White House did not set out plans for direct investment or loans from the government. Instead, the government would fund feasibility studies as Biden said the government would "create, maintain, protect, expand, or restore sustainable and responsible domestic production capabilities of such strategic and critical materials by supporting feasibility studies."



## Feasibility Studies

DPA determination issued on the 31st March authorized the Defense Department to conduct feasibility studies for "mature mining, beneficiation, and value-added processing projects; by-product and co-product production at existing mining, mine waste reclamation, and other industrial facilities; mining, beneficiation and value-added processing modernization to increase productivity, environmental sustainability and workforce safety.



## Benchmark's view

In the near-term Benchmark expects the measures to open up supply from existing infrastructure, such as byproduct from current assets. In the longer-term Benchmark expects the measures to help new projects at the bankable feasibility stage of development to unlock much needed investment.



Source: Benchmark Mineral Intelligence



# Lithium Deposit Types

	CLAYSTONE	BRINE	HARDROCK
Mine Product	<b>Lithium Carbonate (<math>\text{Li}_2\text{CO}_3</math>)</b>	Lithium Carbonate ( $\text{Li}_2\text{CO}_3$ )	Spodumene Concentrate (6% $\text{Li}_2\text{O}$ )
Typical Grade	<b>1,000-3,000 ppm Li</b>	500-1,000 ppm Li	4,500-7,000 ppm Li
Production Steps	<b>Mining Acid Leaching Evaporation Crystallization</b>	Pumping of Brine Evaporation Crystallization	Mining Crushing and Grinding Roasting Acid Leaching Evaporation/Crystallization
Estimated Cash Costs (\$/tonne $\text{Li}_2\text{CO}_3$ )	<b>\$3,387</b> *Century PFS	\$2,500 – 4,000*	+\$6,000*
<div> <b>Century Lithium:</b> <ul style="list-style-type: none"> <li>✓ No crushing, no grinding, no roasting</li> <li>✓ Low to no overburden with simple open pit mine design</li> <li>✓ Unique Chlor-Alkali circuit effectively recycles nearly 100% of required water</li> <li>✓ CCD thickeners effectively manage solids/liquids separation</li> </ul> </div>			

\* Industry and company reports





# Project Location

1 of 3

Advanced lithium projects in Nevada

Adjoining

Silver Peak lithium brine operation of Albemarle

100%

owned

5,585

Acres Federal BLM claims

3%

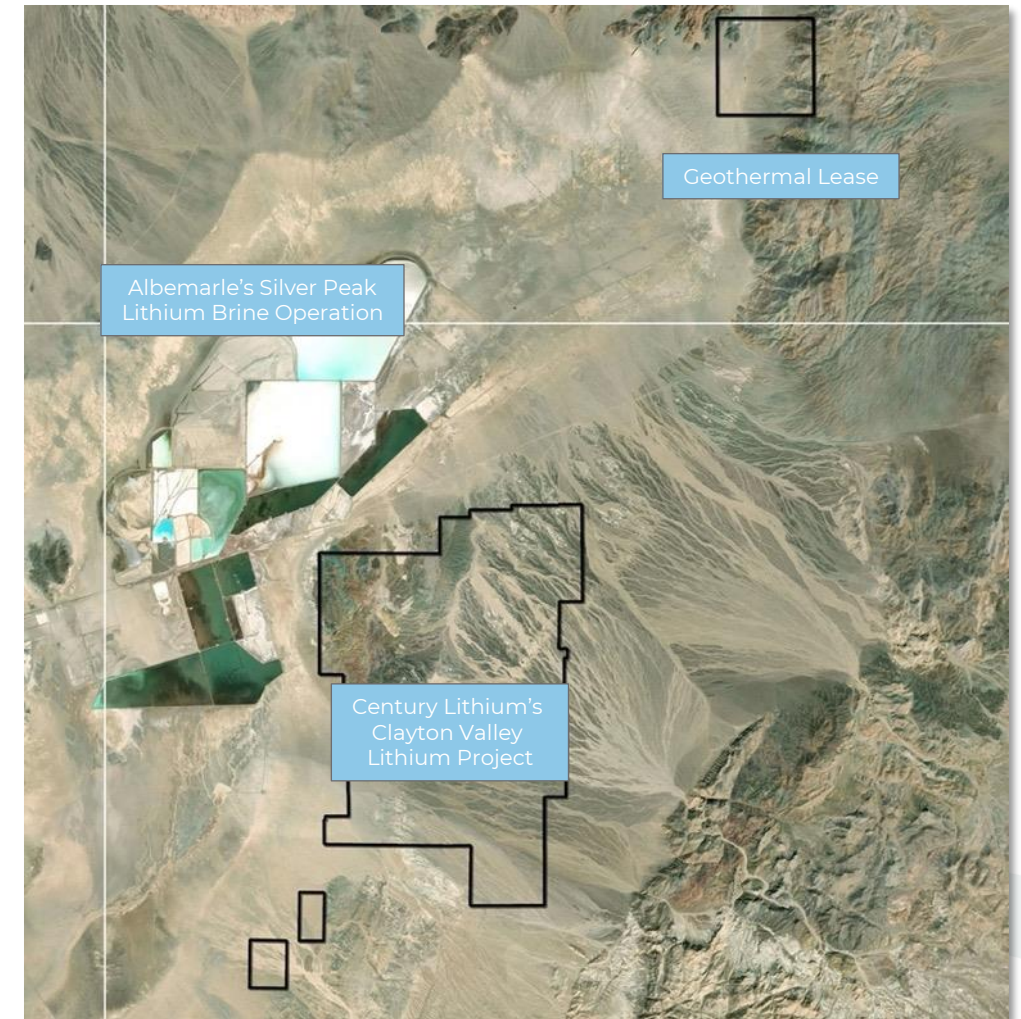
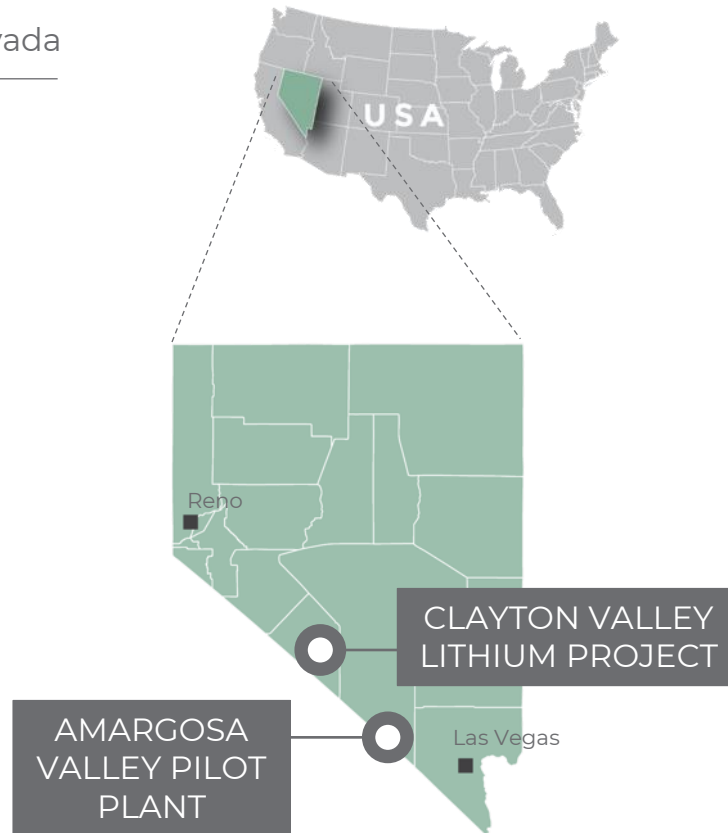
NSR

Option to buy-down to 1% for

\$2M

640 acres

Geothermal lease



# Nevada Lithium Projects

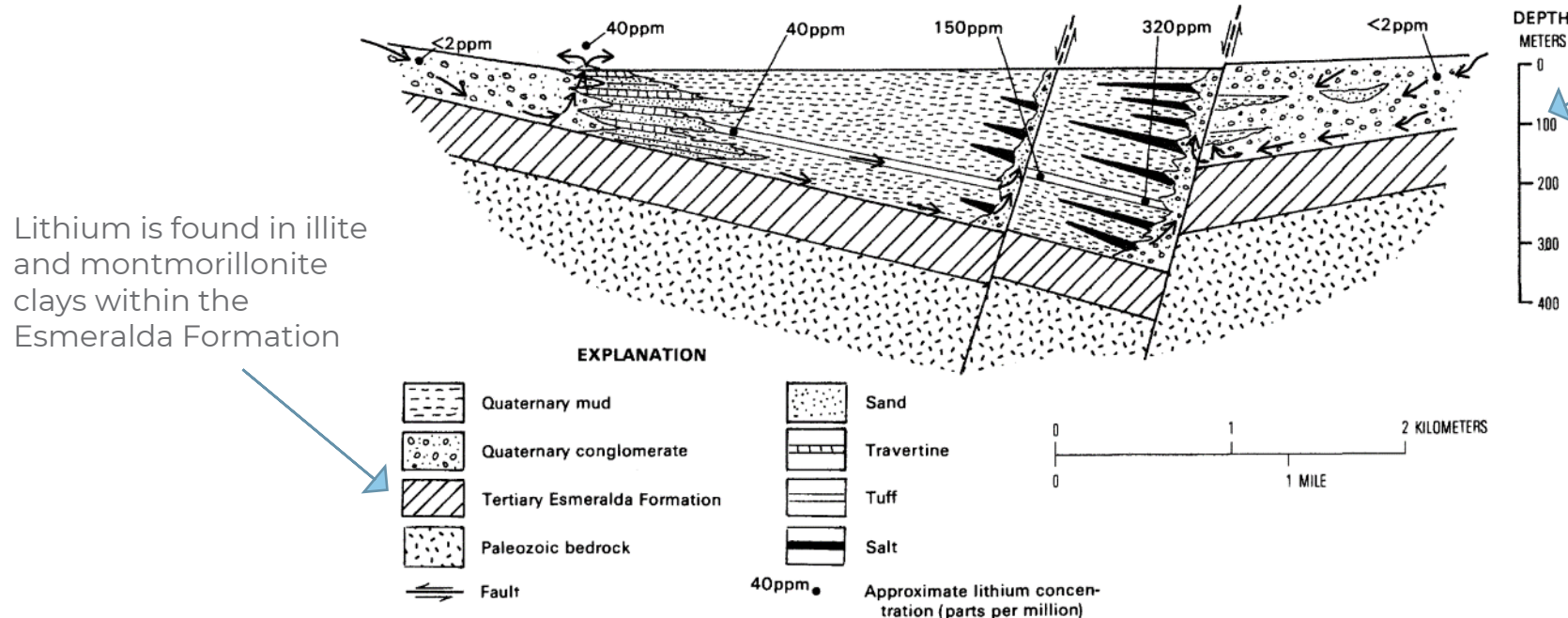
HOST	COMPANY	PROJECT	PROJECT STATUS
<b>Brine</b>	Albemarle*	Silver Peak Operation	Producing
	Schlumberger/Pure Energy*	Clayton Valley	PEA, Pilot Plant
<b>Clay/Claystone</b>	<b>Century Lithium</b>	<b>Clayton Valley</b>	<b>PFS, Pilot Plant</b>
	Lithium Americas	Thacker Pass	Feasibility, POO, Pilot Plant
	Ioneer	Rhyolite Ridge	Feasibility, Pilot Plant

\* Adjoining Century Lithium





# Century Lithium Deposit Setting



At Century Lithium's property, the lithium-bearing units are exposed at surface or with minimal overburden to depths of 150 meters



**Figure L3.** Generalized cross section of Clayton Valley playa, showing structural position of the major tuff-bed aquifer and inferred directions of ground-water movement.

From Davis, Friedman and Gleason, 1986. USGS Bulletin 1622, Origin of the Lithium-Rich Brine, Clayton Valley, Nevada.



## Resources

INDICATED		
Tonnes (Million)	Li ppm	Tonnes LCE (million)
1,304	905	6.3

## Reserves

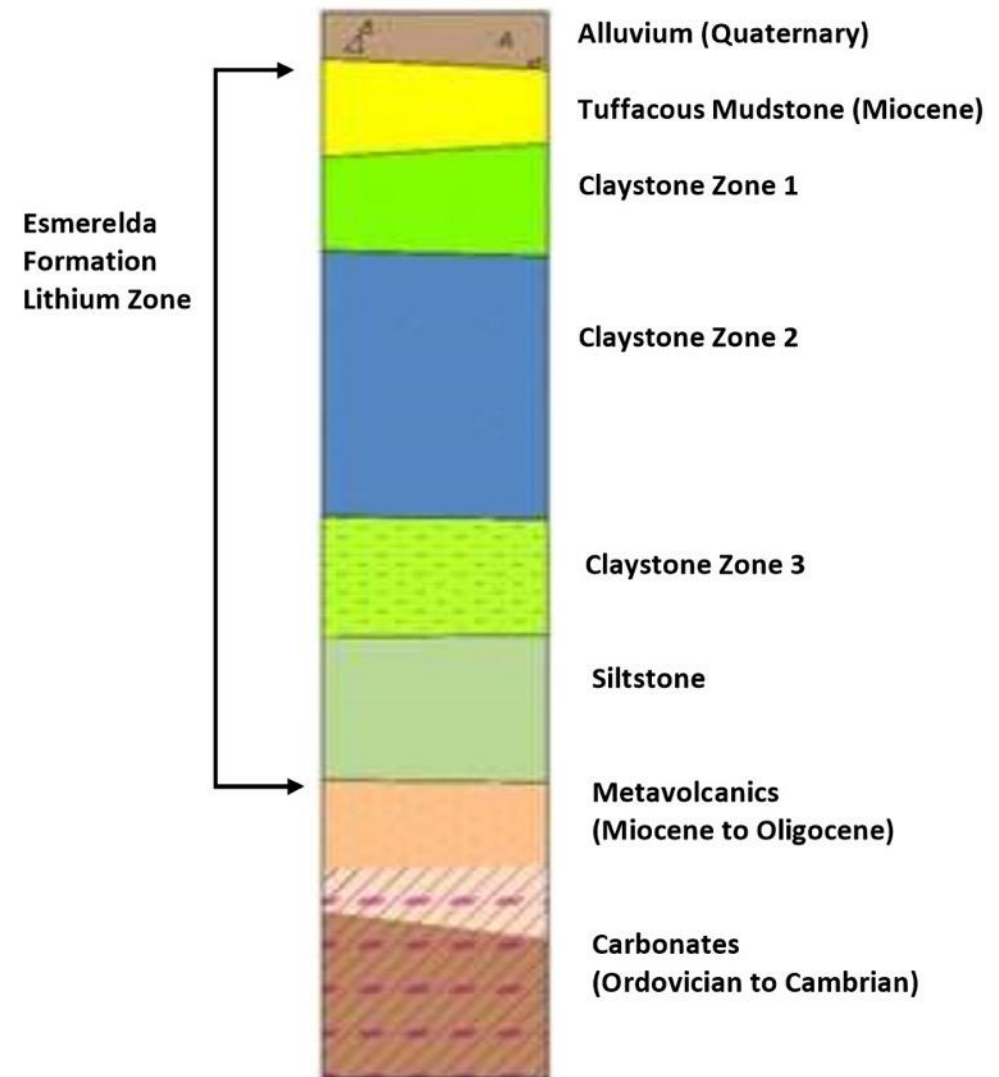
PROBABLE RESERVE		
Tonnes (Million)	Li ppm	Tonnes LCE (million)
213	1,129	1.28

Note: See footnotes on determination of Resources and Reserves in the Appendix and the Prefeasibility Study; effective date August 5, 2020 – amended March 15, 2021.



# Deposit Features

- Extensive flat-lying deposit
- Lithium in illite and montmorillonite clays to depth of at least 150m below surface
- Minimal gravel overburden
- Soft clay, requires no drilling & blasting
- Leachable clay, low acid consumption
- Potential by-products, including Rare Earth Elements (“REEs”)



## Pre-Feasibility Study Results \*

### After-Tax Cash Flow Analysis (\$US)

Internal Rate of Return (IRR)

25.8%

Net Present Value (NPV 8%)

\$1.03 billion

Base Case Price for Lithium Carbonate

\$9,500/tonne

Payback Period

4.4 years

Operating Rate

15,000 tpd  
for 40 years

Average Production Lithium Carbonate  
Equivalent (LCE)

27,400 tonnes

Capital Cost Estimate

\$493 million  
over 2 years

Net Lithium Recovery

83%

Operating Cost for Lithium

\$3,387/tonne

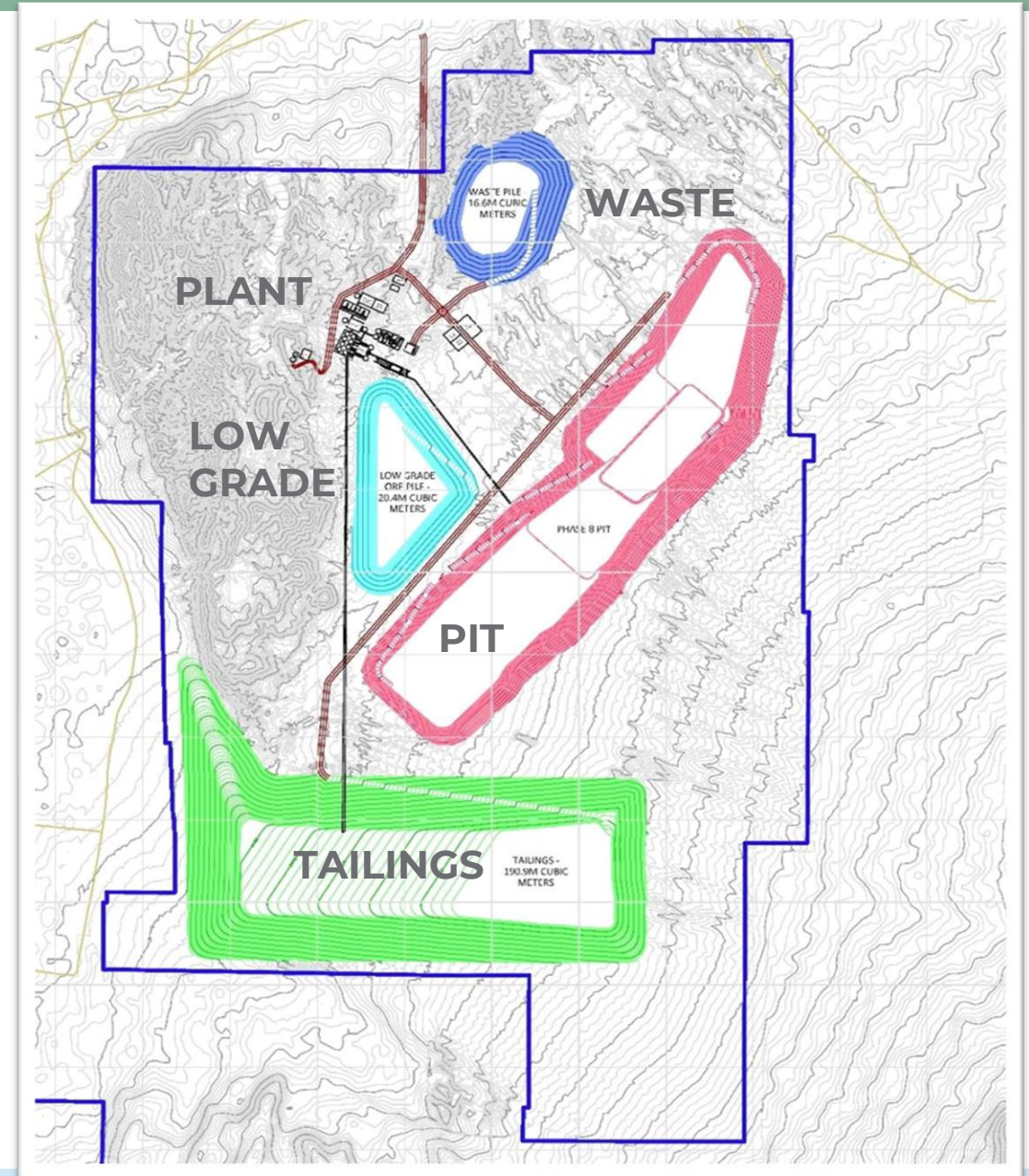
\* Effective Date August 5, 2020; amended March 15, 2021





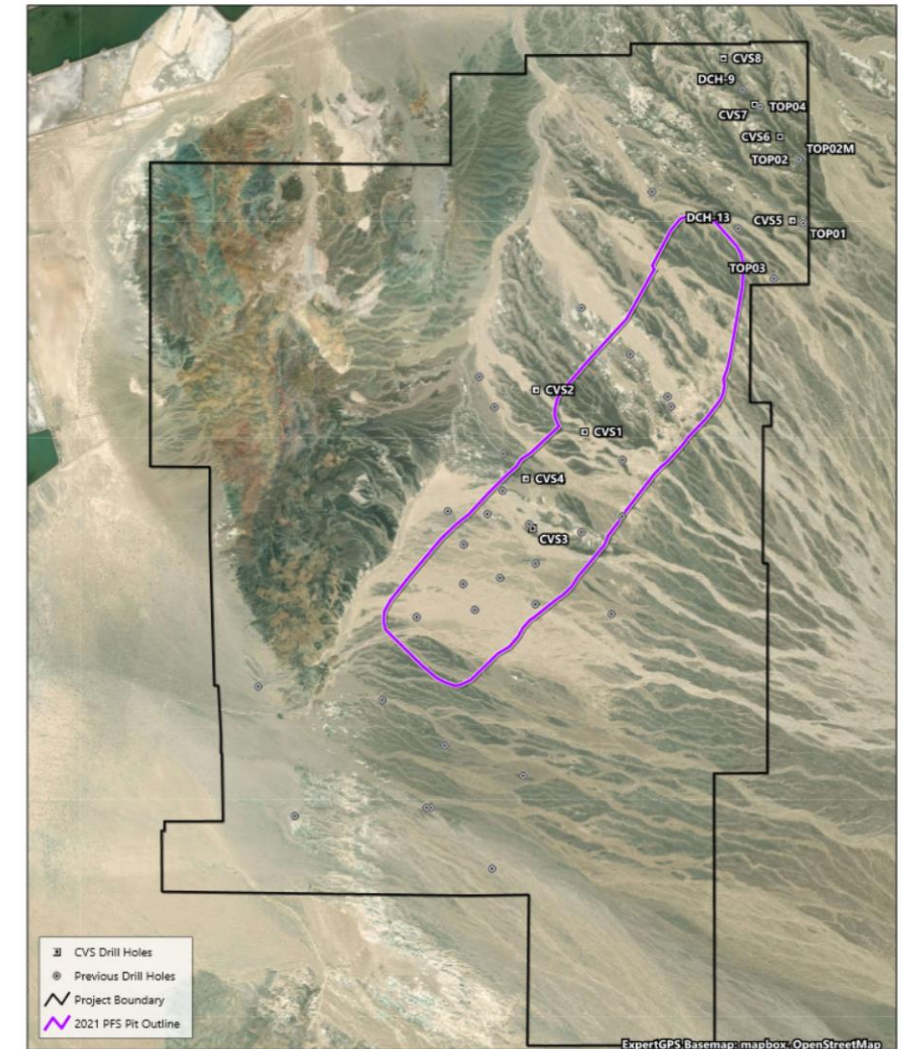
# PFS Design Assumptions

- Operating rate of 15,000 tpd
  - 5.5 million tpy mill feed @ 1100 ppm Li
  - 40-year mine life
  - < 0.3 : 1 strip ratio (O/B to feed)
  - Conveyor from pit to leach plant
- 2,500 tpd sulfuric acid plant on site
- Agitated tank leaching followed by DLE recovery of lithium
- Production of LCE on-site
- Production estimate of 27,400 tonnes LCE



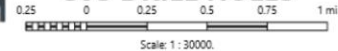
# Results from 2022 Sonic Drill Program

- 70.1 meters of 1,336 parts per million lithium
- Successful use of sonic drilling to obtain six- and four-inch diameter cores
- Completed 580 meters in eight drill holes – 61 to 76 meters in depth
- Acquired 15 tonnes of claystone for testing at the Company's Pilot Plant
- Confirmed resource model built by Global Resource Engineering
- Confirmed drill data obtained in the acquisition of Enertopia Corporation's property



**CENTURY LITHIUM**

**CVS DRILL HOLES**



**CENTURY LITHIUM**

TSX.V: LCE

OTCQX: CYDVF



# Lithium Extraction Facility

## AMARGOSA VALLEY SITE

Sodium salt-based chemistry

Metallurgically advanced – utilizing DLE

- Average lithium recovery – 85%
- Average DLE recovery > 99.5%

Operating safely for over 2 years

Producing high-purity lithium carbonate



# Pilot Plant Objectives

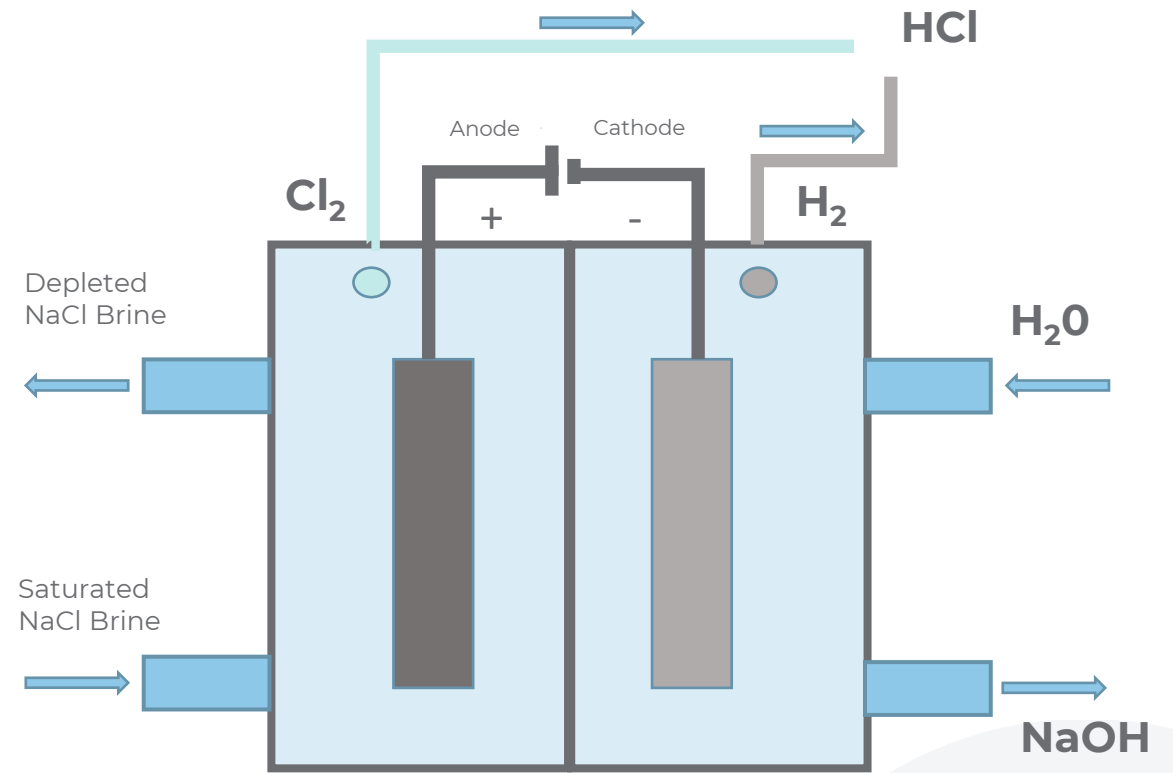
PLANT AREA	OBJECTIVE	RESULTS
Overall	Optimize lithium extraction	✓ Positive results from DLE
Leaching	Feed size, time and conditions	✓ Good initial results – up to 85%
Tailings	Washing, moisture content	✓ Achieved <40% moisture content
Solution Treatment	PIR/SIR/TIR performance	✓ Assimilated into CCD circuit
Lionex Process (DLE)	Test process, determine if effective	✓ Obtained <b>99.5%</b> recovery of lithium; Currently collaborating with Koch
Lithium Carbonate	Achieve battery grade in purity	✓ Achieved <b>99.94% <math>\text{Li}_2\text{CO}_3</math></b>
Chlor-Alkali	Determine brine quality for feed	✓ thyssenkrupp nucera contracted



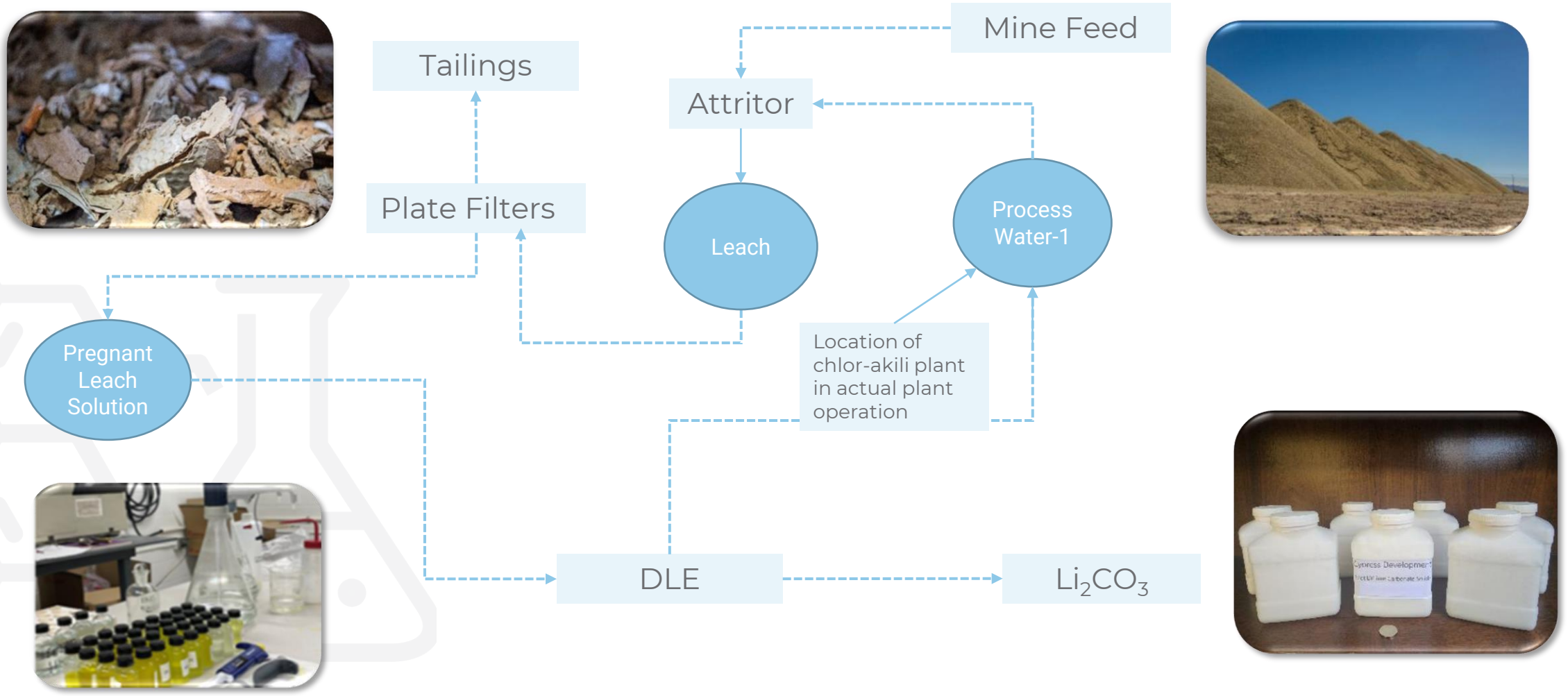


# Chlor-Alkali Plant in Feasibility Study

- Why Chlor-Alkali?
- Clayton Valley brine is source of sodium chloride
- Chlor-alkali process supports ESG goals
- Chlor-alkali allows on-site generation of key reagents: hydrochloric acid & sodium hydroxide through recycle of sodium and chlorine created within the process
- Most major components for process developed on site through robust recycling of water and salt components back to process and reused which in-turn supplies chlor-alkali
- Allows sale of surplus products (sodium hydroxide)
- Haulage and supply of sulfur possibly problematic as Frasch facilities are shut down



# Extraction Process



## thyssenkrupp nucera Engaged to Design & Engineer Chlor-Alkali Plant in Feasibility Study

- thyssenkrupp nucera offers world leading technologies for high-efficiency electrolysis plants
  - Including chlor-alkali electrolysis, HCl electrolysis & alkaline water electrolysis
- The Chlor-Alkali Plant allows on-site generation of key reagents: hydrochloric acid & sodium hydroxide in order to produce lithium carbonate
- Design required to ensure compatibility of brine stream with the membrane cells of the Chlor-Alkali Plant facility concept for treatment of recovered brine stream from process



## Century Lithium & Koch Technology Solutions (KTS) Collaborate on Li-Pro™ Process for Commercial Direct Lithium Extraction



- Equipment for KTS' Li-Pro™ process for Direct Lithium Extraction (DLE) has been installed and is now operating at Century Lithium's Lithium Extraction Facility ("Pilot Plant")
- KTS is also providing engineering design and cost data for the full-scale DLE portion of the processing plant for Century Lithium's Project
- Independent from the Project's ongoing Feasibility Study
- Century Lithium is funding the study and operating the equipment at the Pilot Plant
- KTS is providing training and technical support





## Extraction Testing of Lithium-Bearing Claystone



# Lithium Extraction Pilot Plant Results

- Continuous 24-hr per day operation achieved
- Extractions of lithium in leaching up to 85%
- Flowsheet simplified
- Magnesium, iron, aluminum and other impurities removed in PIR/SIR
- DLE process recovering 99.5% lithium from the DLE portion of the Pilot Plant
- Intermediate solution produced containing 2,700 ppm lithium and insignificant impurities - suitable for further concentration
- On-site evaporation to further concentrate Intermediate Solution to 30 – 50 gpl for off-site production of lithium product
- $\text{Li}_2\text{CO}_3$  made off-site with 99.94% purity in September 2022





## Extraction Testing of Lithium-Bearing Claystone



## CONFIRMED: Battery Grade Lithium Carbonate 99.94% Purity

- Enhanced battery grade  $\text{Li}_2\text{CO}_3$  (lithium carbonate) made
  - 99.94% or “Three Nines” purity
- Exceeded the standard for battery grade (99.5%)
- $\text{Li}_2\text{CO}_3$  derived from 7 gram/liter intermediate concentrated lithium solution
- Saltworks Technologies completed the processing system design and pilot work to make the  $\text{Li}_2\text{CO}_3$
- Independent analyses of product samples completed by SGS Canada
- Saltworks to integrate designs into our Lithium Extraction Facility





# Feasibility Study Summary

## Feasibility Study Highlights

- AACE Class 3 Estimate
- 15,000 tons/day of ore processed, 40-year mine life
- 27,000 tons/year lithium carbonate produced
- Salt and energy in, lithium, caustic soda, and HCl out, with recycling of goods and services

## Engineering

- Base engineering near complete
- Plant Site on Angle Island with underlying competent base rock
- Capital and Operating Cost Estimate being completed and reviewed
- All water recycled where possible

## Resource Friendly

- Efficient use of water, salt, and land
- Tailings facility to backfill a portion of pit
- Potential use of solar and geothermal energy sources under development near project
- Population centers close enough for labor pool

## Permitting

- Favorable jurisdiction – Nevada, USA
- Environmental baseline studies progressing with some completed
- Permitting ongoing as data comes available
- Away from population centers and community of Silver Peak
- Water rights permit in place



# Environmental & Social Governance



Initial baseline studies completed



Project design will minimize environmental and cultural impact



Opportunities for **Renewable Energy**

- Solar and Geothermal



Focus on effective water and land management



Commitment to working with **local communities** for an economic, **safe** and **sustainable** operation



# Moving Forward – The Year Ahead

- Complete Feasibility Study – Q1 2024
- ESG Improvements
  - Connect with and support our local community
  - Study alternatives to recycle sodium, chlorine, and water
  - Pursue solar and geothermal energy solutions
- Optimize lithium carbonate production
- Examine marketing of **sodium hydroxide** biproduct
- Pursue Financial Opportunities
  - **Strategic Partnership & Federal Funding** (grants / loans)
- Complete Plan of Operations
- Continue NEPA permitting process with BLM and state of Nevada
  - Begin EA or EIS
  - Begin state and local permitting process
- Pursue on-site production of lithium carbonate



# Summary

## Advanced Stage Project

- Fully financed to production decision
- Feasibility stage lithium clay project
- **40+ year** life of mine
- Advanced extractive metallurgy

## Pilot Plant Program

- Metallurgically advanced – utilizing DLE
  - Average lithium recovery - **99.5% in DLE**
- Continuous operations achieved
- Data generated for support of Feasibility Study

## Confirmed Battery Grade $\text{Li}_2\text{CO}_3$

- Successfully produced **99.94%  $\text{Li}_2\text{CO}_3$**  battery grade purity with low level impurities
- Integrate designs into Lithium Extraction Program

## Permitting

- Favorable jurisdiction – Nevada, USA
- Away from population centers & community of Silver Peak
- Environmental baseline studies ongoing
- Opportunities for renewable energy:
  - Solar & Geothermal
- **Water rights permit** in place





## Claystone Sample Crushed & Screened

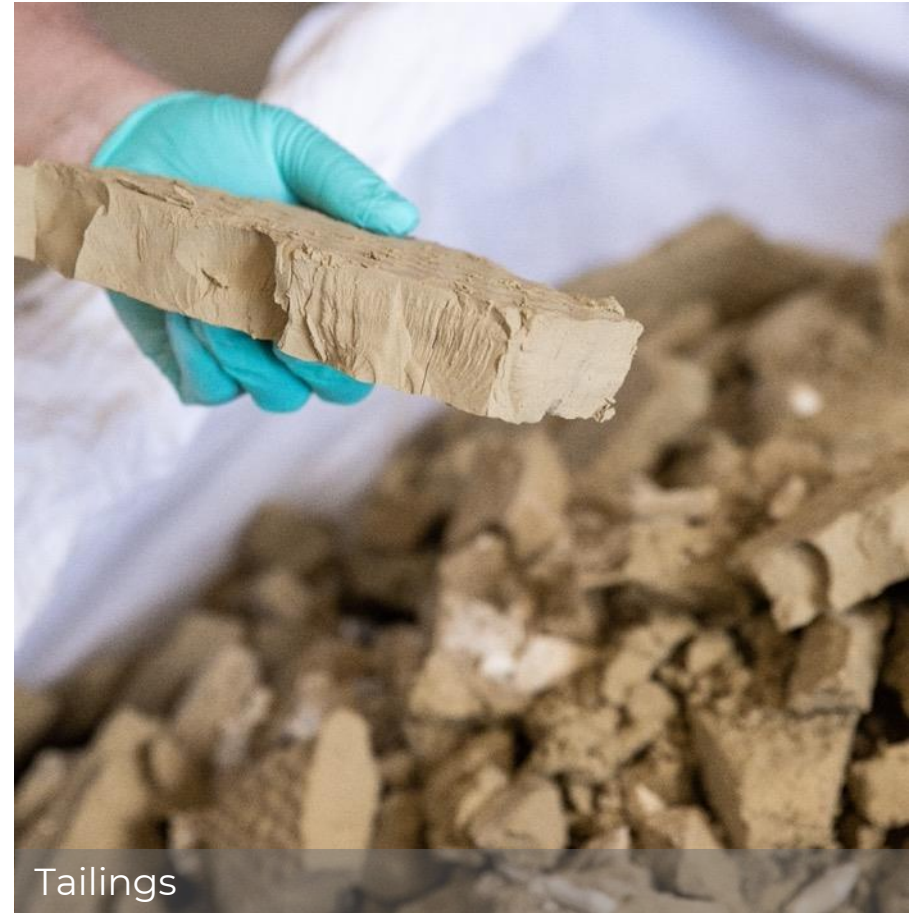




## Filtration System & Tailings



Plate Filters



Tailings





Leaching System



CCD Thickeners





**CENTURY LITHIUM**

TSXV LCE | OTCQX CYDVF

## Contact

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