



**CENTURY LITHIUM**

Unlocking Tomorrow's Energy

Corporate Presentation

MAY 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). Further information about the Project, including a description of the key assumptions, parameters, description of sampling methods, data verification and quality assurance (QA) / quality control (QC) programs, methods relating to Mineral Resources and Mineral Reserves and factors that may affect those estimates will be contained in a NI 43-101 Technical Report on the Feasibility Study of the Clayton Valley Lithium Project. Following Section 3.4 of NI 43-101 the report will be available on SEDAR+ and on the Company's website within 45 days of the date the news release dated April 29, 2024, *Century Lithium Announces Positive Feasibility Study on the Clayton Valley Lithium Project*.

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 news releases, latest Management Discussion and Analysis and Financial Statements for the Three Months Ended March 31, 2024, 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.com](http://www.centurylithium.com) or on Company's profile at [www.sedarplus.com](http://www.sedarplus.com).

## FORWARD LOOKING STATEMENTS

This presentation contains certain forward-looking statements within the meaning of applicable Canadian securities legislation. In certain cases, forward-looking statements can be identified by the use of words such as "plans", "expects" or "does not anticipate", or "believes", or variations of such words and phrases or statements that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur" or "be achieved" and similar expressions suggesting future outcomes or statements regarding an outlook.

Forward-looking statements relate to any matters that are not historical facts and statements of our beliefs, intentions and expectations about developments, results and events which will or may occur in the future, without limitation, statements with respect to the potential development and value of the Project and benefits associated therewith, statements with respect to the expected project economics for the Project, such as estimates of life of mine, lithium prices, production and recoveries, capital and operating costs, IRR, NPV and cash flows, any projections outlined in the Feasibility Study in respect of the Project, the permitting status of the Project and the Company's future development plans.



## 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 which is 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.



## 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

Abraham (Braam) Jonker, CPA, CA

**CHIEF FINANCIAL OFFICER**

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

Spiros Cacos, MA

**VICE PRESIDENT, INVESTOR RELATIONS**

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

Todd 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**

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

Adam Knight, PE

**PROJECT MANAGER**

28+ years experience in management and operations of mining corporations



# Share & Trading Information

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

Issued & Outstanding	148.7 M
Warrants	nil M
Options	8.1 M
Fully Diluted	156.8 M
Market Capitalization	~\$80 M
Cash Position*	~\$13 M
TSX.V 52 Week High – Low	\$ 1.06 – \$ 0.36
OTCQX 52 Week High – Low	US\$ 0.79 – \$ 0.26

Share Structure as at May 1<sup>st</sup>, 2024

\* Cash position as at Q1 2024

## ANALYST COVERAGE

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



## Lithium: U.S. “Critical Mineral”



- The United States 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](#)



# U.S. Government Policy Themes

## Objectives & Programs

- Government has recognized importance of a domestic supply chain and is allocating significant funding to the energy transition movement

## Inflation Reduction Act (IRA)

- Groundbreaking legislation providing material funding to miners and automakers to onshore critical mineral supply chain; following passing of the law in 2022 we have seen a material change in strategy and aggressiveness to secure supply among Western manufacturers
- 10% production tax credit for critical minerals produced within the U.S. or a possession of the U.S.
- For new EV vehicles, consumers are eligible for up to US\$3,750 tax in credits if at least 40% of the value of the critical minerals were extracted or processed in the U.S. or countries with which U.S. has a free trade agreement, or recycled in North America

## Department of Energy (DoE)

- The DoE is aiming to develop a robust domestic electric vehicle supply chain to compete with China
- Over US\$120 bn has been announced in U.S. battery manufacturing and supply chain announcements and over 200 new expanded minerals, materials processing and manufacturing facilities
- The long-term objectives of the DoE remain to invest in R&D to find new ways to develop infrastructure with the minerals it has available, and to invest in ways to recycle existing used

Source: Department of Energy, Inflation Reduction Act





# Investment Highlights



## ADVANCED STAGE

- One of the largest lithium deposits in the USA
- Feasibility Study
- 40+ year life of mine
- Favorable location & mining jurisdiction – Nevada
- Adjacent to Albemarle's Silver Peak Mine



## PROVEN TECHNOLOGY

- Pilot Plant entering 3<sup>rd</sup> year of operation with proven processing flowsheet
- 78% average lithium recovery
- Chloride-based process
- Direct Lithium Extraction (DLE) via Li-PRO™ from Koch Technology Solutions



## WATER PERMIT

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

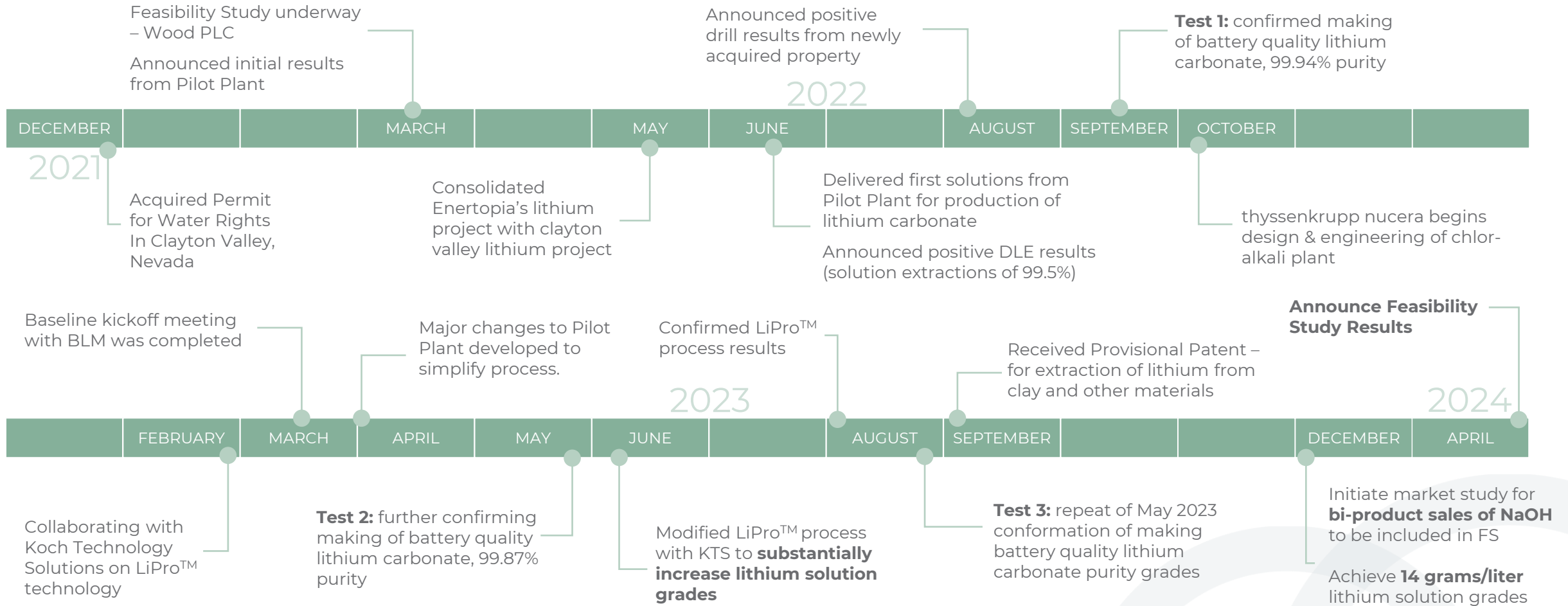


## BATTERY QUALITY Li<sub>2</sub>CO<sub>3</sub>

- Tests exceed industry standard battery grade specs of 99.5%
- Quality meets general standards for use in electric vehicle batteries
- Ability to repeatedly make a high purity Li<sub>2</sub>CO<sub>3</sub>



# Executing Key Milestones



# 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>Feasibility, Pilot Plant</b>
	Lithium Americas	Thacker Pass	In construction
	Ioneer	Rhyolite Ridge	Feasibility, Pilot Plant

\* Adjoining Century Lithium



# Clayton Valley Overview

## Nevada

A prominent jurisdiction for mining

## 100% owned

Billion tonne lithium clay resource on Federal U.S. mining claims

## Access

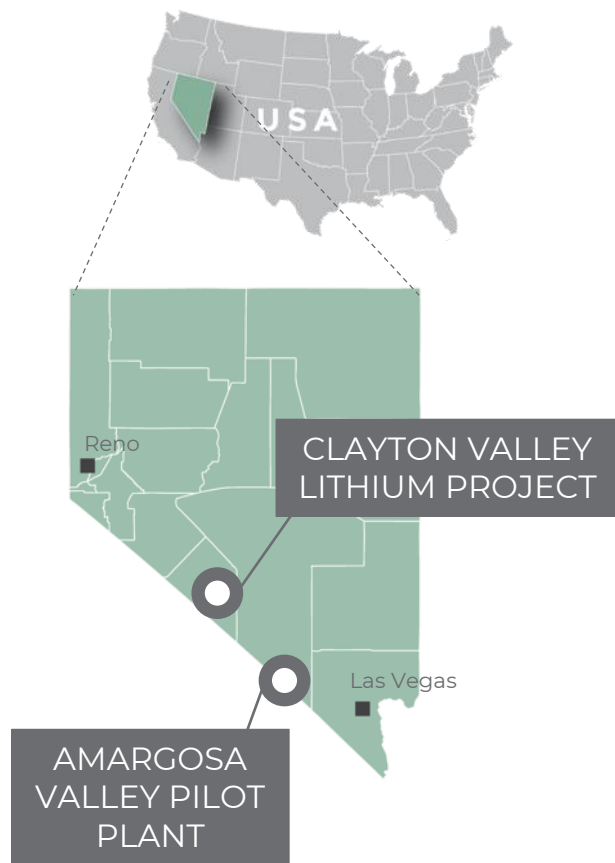
In a chloride basin adjoining Silver Peak, an established producer of lithium brine

## Water

Own water rights permit 1,770 acre-feet/year

## Power

Adjacent to Greenlink West, a planned 525 KV power corridor



# Project Highlights

## Shallow Surface Mine

- low strip ratio, soft sedimentary deposit, mining without drilling or blasting

## Large-Scale Nevada-based Lithium Project

- production plan to generate a life-of-mine average of **34,000 tonnes per annum of battery-quality Li<sub>2</sub>CO<sub>3</sub>**

## Innovative Approach in Processing

- using sustainable chloride-based leaching and DLE

## Long 40-Year Mine Life

- **Proven & Probable** Mineral Reserve of **287 Mt** at an average grade of **1,149 ppm Li** containing 0.330 Mt of Li or **1.76 Mt of LCE**
- Measured & Indicated Mineral Resource of 1.207 Bt at an average grade of 957 ppm Li containing 1.155 Mt of Li or 6.14 Mt LCE

## Designed for Expansion

- **initial Project** capital cost \$1.54 billion
- expansion **Phase 2** \$651 million, expansion **Phase 3** \$1.39 billion – Project expansions are capitalized with Project cash flow

## Low Operating Cost

- average OPEX \$8,223/t of Li<sub>2</sub>CO<sub>3</sub> produced, or **\$2,766/t** after sales of surplus **sodium hydroxide** (NaOH), a biproduct of the chlor-alkali plant



# Resources & Reserves\*

## Mineral Resource Estimate

	Tonnes Above Cut-off (millions)	Li Grade (ppm)	Li Contained (million t)	LCE (million t)
Measured	858.38	990	0.849	4.524
Indicated	348.95	875	0.305	1.625
<b>Measured &amp; Indicated</b>	<b>1,207.33</b>	<b>957</b>	<b>1.155</b>	<b>6.148</b>
Inferred	119.03	827	0.098	0.524

The effective date of the Mineral Resource Estimate is December 15, 2022. The QP for the estimate is Ms. Terre Lane, MMSA, an employee of GRE and independent of Century. The Mineral Resources are constrained by a pit shell with a 200 ppm Li cut-off and density of 1.505 g/cm<sup>3</sup>. The cut-off grade considers an operating cost of \$16.90/t mill feed, process recovery of 83% and a long-term lithium carbonate price of \$20,000/t. The Mineral Resource estimate was prepared in accordance with CIM Definition Standards (CIM, 2014) and the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (CIM, 2019). Mineral Resource figures were rounded. One tonne of lithium = 5.323 tonnes lithium carbonate. Mineral Resources are inclusive of Mineral Reserves.

## Mineral Reserve Estimate

	Tonnes Above Cut-off (millions)	Li Grade (ppm)	Li Contained (million t)	LCE (million t)
Proven	266.39	1,147	0.306	1.626
Probable	21.26	1,174	0.025	0.133
<b>Proven &amp; Probable</b>	<b>287.65</b>	<b>1,149</b>	<b>0.330</b>	<b>1.759</b>

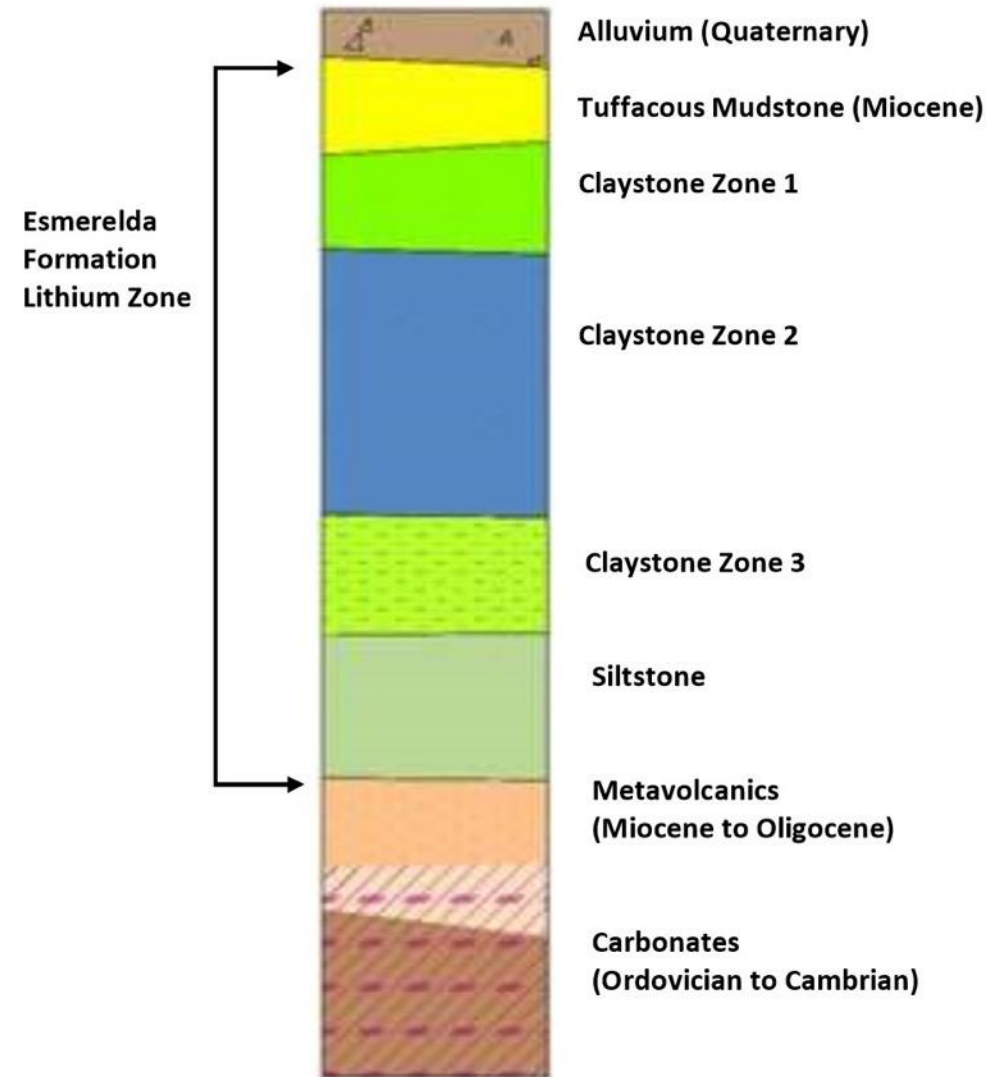
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\*Note: see news release dated April 29, 2024, Century Lithium Announces Positive Feasibility Study on the Clayton Valley Lithium Project



# 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



# Feasibility Study Results\*

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

	Initial Phase 1	Expansion Phase 2	Expansion Phase 3
Years	1 - 5	6 - 10	11+
Mining Rate	7,500 tpd	15,000 tpd	22,500 tpd
Average Annual Li <sub>2</sub> CO <sub>3</sub> Production	13,000 t	27,000 t	41,000 t
Capital Costs	\$1.537 billion	\$651 million	\$1.336 billion
Average Operating Costs		\$8,223/tonne	
Average Operating Costs w/NaOH credit		<b>\$2,766/tonne</b>	
Net Present Value (NPV 8%)		\$3.01 billion	
Internal Rate of Return (IRR)		17.1%	
Base Case Price for Li <sub>2</sub> CO <sub>3</sub>		\$24,000/tonne	

\*Note: see news release dated April 29, 2024, Century Lithium Announces Positive Feasibility Study on the Clayton Valley Lithium Project





# Economic Model & Sensitivity\*

The cash flow model developed using \$24,000/t price for lithium carbonate generates a 17.1% after-tax IRR and NPV-8% of \$3.01 billion

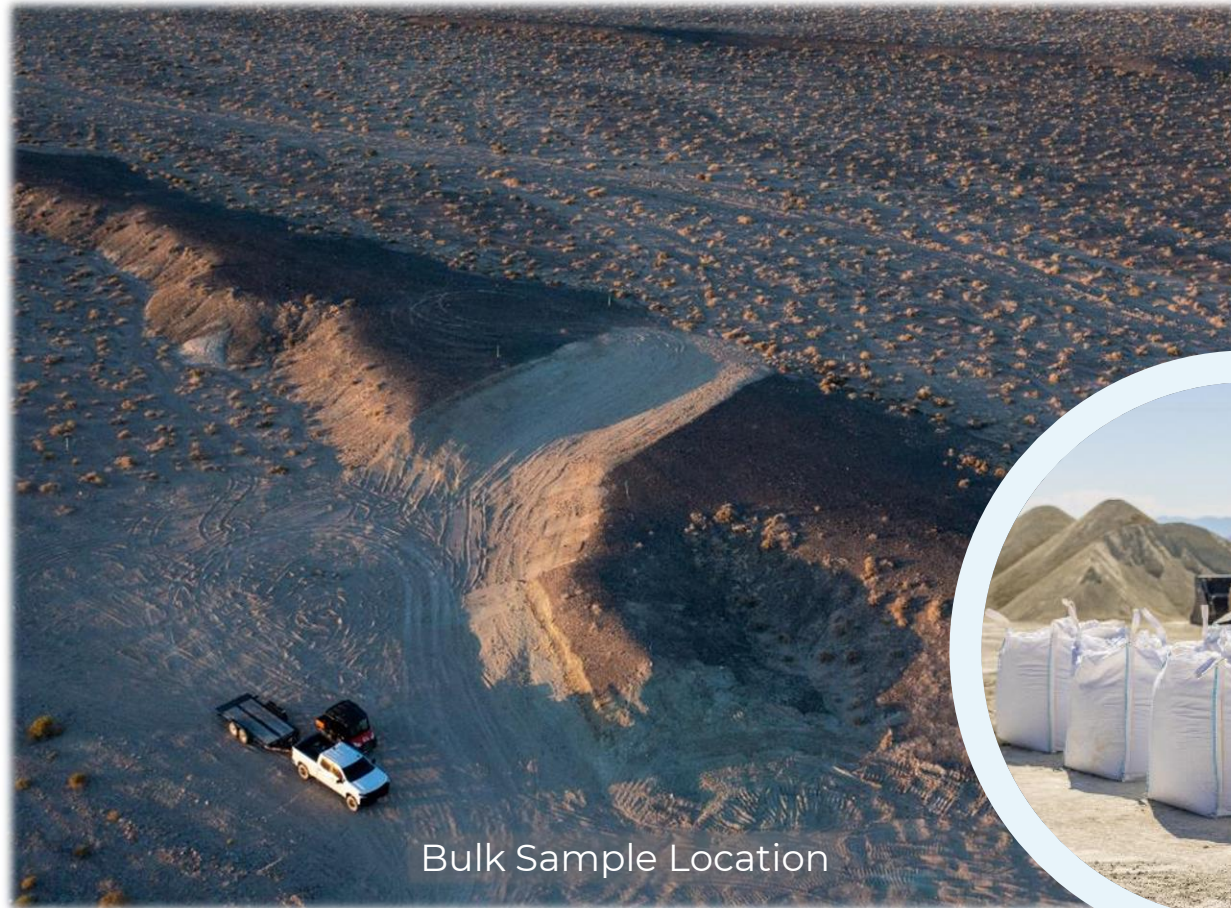
Project Sensitivity	75%	Base Case	125%
Lithium Price (\$/t LCE)	\$18,000	\$24,000	\$30,000
NPV-8% (\$billion)	\$1.52	\$3.01	\$4.47
IRR (%)	12.9%	17.1%	20.9%



\*Note: see news release dated April 29, 2024, Century Lithium Announces Positive Feasibility Study on the Clayton Valley Lithium Project

# Mining – Bulk Sample

## From Resource to Process Ready



Bulk Sample Location



Crushing Claystone



# Lithium Extraction Facility – Armargosa Valley

## Acid Leach Extraction of Lithium from Claystone



Pilot Plant Campus



Leach Tank



# Lithium Extraction Facility

## AMARGOSA VALLEY SITE

Sodium salt-based chemistry

Metallurgically advanced – utilizing DLE

- Average lithium recovery – 78%

3<sup>rd</sup> year of safe operations

Producing high-purity lithium carbonate



# Filtration System & Tailings

## From Leach Slurry to PLS & Tailings



## Capital Cost Estimates (\$M)\*

Installed Capital Costs (\$M)	Initial Phase 1	Expansion Phase 2	Expansion Phase 3
Mining & Site Preparation	\$64	\$7	\$27
Process Facilities	\$517	\$205	\$477
Chlor-Alkali Plant	\$496	\$336	\$496
Buildings, Services & Infrastructure	\$130	\$5	\$42
Indirect & Owners Costs	\$234	\$72	\$190
Contingency	\$96	\$27	\$105
<b>Total Installed Cost</b>	<b>\$1,537</b>	<b>\$651</b>	<b>\$1,336</b>



\*Notes: see news release dated April 29, 2024, Century Lithium Announces Positive Feasibility Study on the Clayton Valley Lithium Project, and Totals may not sum due to rounding, Contingency and site Indirects for chlor-alkali plant is included in the Chlor-Alkali Plant line item, contingency for mining is included in the Contingency line item, indirect costs for mining are not included in the Indirects and Owner's Costs line item



## Direct Lithium Extraction & $\text{Li}_2\text{CO}_3$ Production

- Data from over 2 years of Pilot Plant operations
- Feed material grades average 1,100 ppm
- Leach solution concentrations have ranged from 200 to 320 ppm Li
- Lithium extractions average 88% and have ranged from 80 to 95%
- DLE lithium recoveries are typically above 90%
- Approximately 10% of the lithium in solution is retained in the moisture in the tailings
- Average lithium recovery is 78%



## 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 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

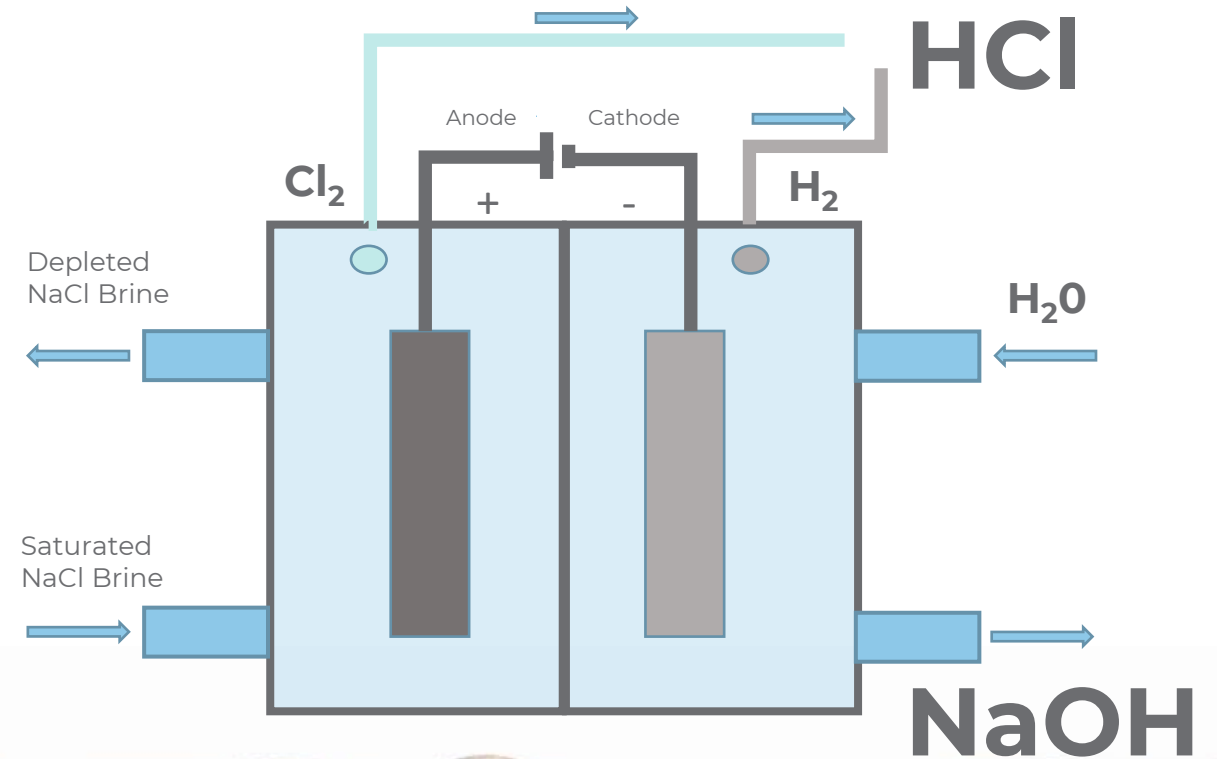




# Innovative Application of Chlor-Alkali Process

## Salt is the Key

- Clayton Valley brine is a potential source of NaCl (sodium chloride)
  - Salt sources abundant in western U.S.
- On-site generation of reagents
  - HCL (hydrochloric acid)
  - NaOH (sodium hydroxide)
  - Sodium and chlorine are recycled in the process
- Primary components for process developed on site
  - Water and salt components are recycled and reused
- Supports company and project ESG goals
  - Process not tied to hydrocarbon production or oil fields
- Excess NaOH (sodium hydroxide) available for sale



## Lithium Extraction Pilot Plant Results

- 24-hr per day operation in 7-day sample runs
- Lithium extractions average 88%
- Expected lithium recoveries of 78% after losses
- Flowsheet simplified with elimination of evaporation stages
- PIR/SIR stage removes magnesium, iron, aluminum & other impurities
- Lithium solutions grades exceed 14 grams/liter
- Repeated making battery quality  $\text{Li}_2\text{CO}_3$  in 2022 & 2023 with Li concentrations greater than 99.8%



## Extraction Testing of Lithium-Bearing Claystone



Pilot Plant Components



Crushed Claystone Ready to Process

# Extraction Testing of Lithium-Bearing Claystone



## Battery Quality Lithium Carbonate

- Battery quality  $\text{Li}_2\text{CO}_3$  made & repeated in 2022 & 2023 with Li concentrations > 99.8%
- Exceeded the industry standard for battery grade of 99.5%
- $\text{Li}_2\text{CO}_3$  derived from concentrated lithium solutions exceeding 14 gram/liter
- 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



# Feasibility Study Summary

## Feasibility Study Highlights

- AACE Class 3 Estimate for a 40-year mine life
- 7,500 tons/day mined increases to 22,500 t/d by Year 11 in three-phased mine plan
- 34,000 average tons/year of  $\text{Li}_2\text{CO}_3$  produced
- Lithium bearing claystone, salt and energy in,  $\text{Li}_2\text{CO}_3$  and NaOH out, and recycling and reuse where possible

## Engineering

- Base engineering complete
- Plant to be constructed on-site
- Capital & Operating Cost Estimates complete
- Water recycled where possible

## Resource Friendly

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

## Permitting

- Favorable jurisdiction – Nevada, USA
- Project baseline studies progressing with several submitted and accepted
- Permitting efforts parallel to project advancement
- Water rights permit owned



# Environmental & Social Governance



Initial baseline studies completed



Project design will minimize environmental and cultural impact



Opportunities for use of **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 a Plan of Operations
- Begin state and local permitting process
- ESG Improvements
  - Connect with and support our local community
  - Study alternatives to recycle sodium, chlorine, and water
  - Pursue solar and geothermal energy solutions
- Market **sodium hydroxide** biproduct
- Pursue Financial Opportunities
  - **Strategic Partnership & Federal Funding** (grants / loans)
- Optimize lithium carbonate production
- Pursue on-site production of lithium carbonate at Pilot Plant





# Summary

## Advanced Stage Project

- Feasibility stage lithium claystone project
- **40+ year** life of mine
- Advanced extractive metallurgy

## Pilot Plant Program

- Metallurgically advanced – using chloride system coupled with DLE
- Expected lithium recovery – **78%**
- 7-day, 24hr continuous operation testing runs
- Operating for over two years

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

- Ability to repeatedly make a **high purity  $\text{Li}_2\text{CO}_3$**
- Integrate designs into Pilot Plant Program

## Permitting

- Favorable jurisdiction – Nevada, USA
- Environmental baseline studies ongoing
- Opportunities for renewable energy
  - Solar & Geothermal
- **Water rights permit** owned





**CENTURY LITHIUM**

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## Contact

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