



Rockland's Lithium Butte Property in Utah hosts high lithium grades in claystone.

ROCKLAND: GETTING READY TO ENTER THE LITHIUM RUSH

GO-TIME FOR LITHIUM "CLAY" DEPOSITS IN THE UNITED STATES

Ridiculed in the past decade, sedimentary lithium ("clay") projects are up and coming in this decade. Due to the gigantic dimensions, these "soft-rock" lithium deposits are considered to be the only viable option for the United States to supply enough feedstock for a domestic lithium-ion battery industry. The federal and state governments have recognized that the Western United States is home to an exceptional high number of large, high-grade and near-surface lithium "clay" deposits not seen elsewhere in the world. And now they have started to bring this lithium deposit-type into meaningful production – for the first time in the Western World – in a joint effort involving government and end-users, such as car manufacturers, funding mine development projects which showcased compelling economics and simple flowsheets for conventional processing at competitive costs with minimal environmental impact. Lithium-clays to the rescue!

A lot has happened in the sedimentary lithium ("clay") market since last October, when Rockstone published its first report on **Rockland Resources Ltd.**, which also provided an overview of the major players with projects located in the United States.

The latest developments around sedimentary lithium projects in the United States are positive for the entire exploration and mining industry, in particular for junior exploration

companies such as Rockland focusing on US-based lithium projects within established mining districts. Rockland's shareholders are eagerly awaiting the start of this year's exploration season, including drilling.

According to [Bloomberg](#) last Friday, **Tesla Inc.** is weighing a takeover of **Sigma Lithium Corp.** (market cap: \$4 billion), however Sigma is [said](#) "to not be the only firm that Tesla is considering acquiring".

Company Details



Rockland Resources Ltd.
#1240 – 789 W Pender Street
Vancouver, BC, V6C 1H2 Canada
Phone: +1 604 683 3995
Email: info@rocklandresources.com
www.rocklandresources.com

Listing Date: February 22, 2021
ISIN: CA7736671008 / CUSIP: 773667100

Shares Issued & Outstanding: 54,017,787



↩ Chart Canada (CSE)

Canada Symbol (CSE): [RKL](#)
Current Price: \$0.065 CAD (02/17/2023)
Market Capitalization: \$3.5 Million CAD

German Symbol / WKN: Not listed

All \$-figures in CAD unless otherwise stated



Click above image or [here](#) to watch video.



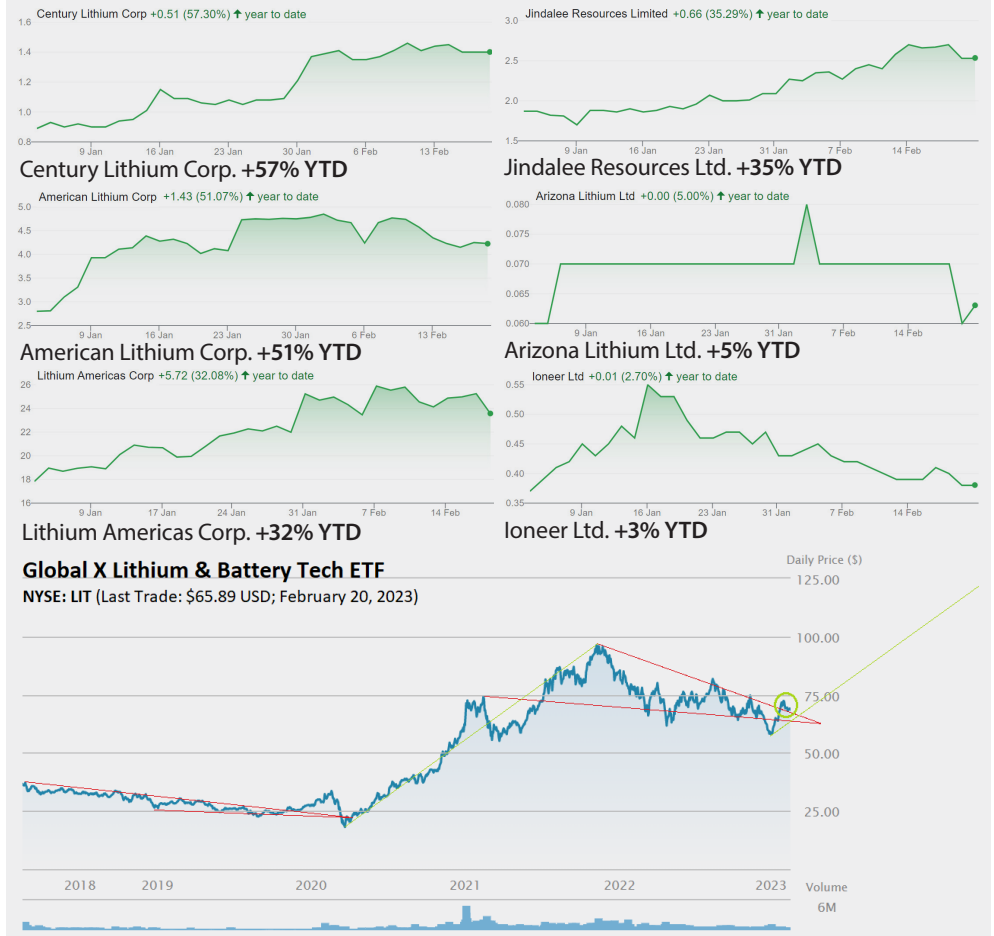
Since Rockstone's [initiating coverage](#) on Rockland Resources Ltd. last October, the "soft-rock" lithium-"clay" space has received a lot of positive attention from media and investors alike.

The share prices of public companies with sedimentary lithium ("clay") projects in the United States have been surging since early January, such as TSX-listed **Century Lithium Corp.** (+57%; formerly Cypress Development Corp.) and **American Lithium Corp.** (+51%), NYSE-listed **Lithium Americas Corp.** (+32%), and ASX-listed **Jindalee Resources Ltd.** (+35%), **Arizona Lithium Ltd.** (+5%) and **loneer Ltd.** (+3%).

With **Rockland** having a closed an over-subscribed private placement financing for gross proceeds of \$900,300 in December, investors are eagerly awaiting the start of exploration activities by Utah's leading lithium-clay exploration company with its district-scale property adjacent to the Be Mine (the world's largest bertrandite ore reserve) from **Materion Corp.** (market capitalization: \$2.3 billion USD) located at Spor Mountain. Back in October, Rockland [announced](#) to begin the drill permitting process on initial high-priority lithium targets at its 100% owned Lithium Butte Project. Newsflow is expected to pick up over the next weeks and months as Rockland starts its 2023 exploration season at its large-scale land package (16,219 hectares) prospective for lithium clay and brine deposits.

LITHIUM-CLAY CREDIBILITY-BOOST

Most recently on January 31, "mining investors [...] might have received the news required to pump some life into the sector", [according to an article by The Deep Dive](#). "General Motors (NYSE: GM) and Lithium Americas (TSX: LAC) [market cap: \$3.3 billion USD] have jointly announced that they will work together to develop the Thacker Pass mine in Nevada, which is currently viewed as the third largest lithium deposit globally. The deal will see General Motors invest a whopping \$650 million in Lithium Americas, which amounts to the largest investment by an auto manu-



facturer into raw materials for batteries... In exchange for the investment, GM will obtain exclusive access to lithium carbonate produced under phase one production at the mine, and will have the right of first offer on phase two production."

Last November, **Lithium Americas Corp.** filed a Feasibility Study on its 100% owned **Thacker Pass Project**, concluding that when the project is fully operational, it could generate average EBITDA of [more than \\$1 billion USD annually](#) for 40 years "based on conservative commodity prices" (Proven & Probable: 217 million t @ 3,158 ppm Li containing [3.65 million t LCE](#); Measured & Indicated: 1.45 billion t @ 2,071 ppm Li containing [16.1 million t LCE](#)), Inferred: 297 million t @ 1,867 ppm Li containing [2.95 million t LCE](#)).

[According to the Deep Dive article "Thacker Pass Gets A Credibility Boost With GM Investment"](#): "[The] GM transaction hinges on a positive decision from the U.S. District Court of the District of Nevada (and on constructive

potential further court rulings if complainants were to appeal that decision). Chief Judge Miranda Du is expected to rule within the next few months on the merits of various environmental groups' contentions that the U.S. Bureau of Land Management erred when it approved Thacker Pass construction in January 2021."

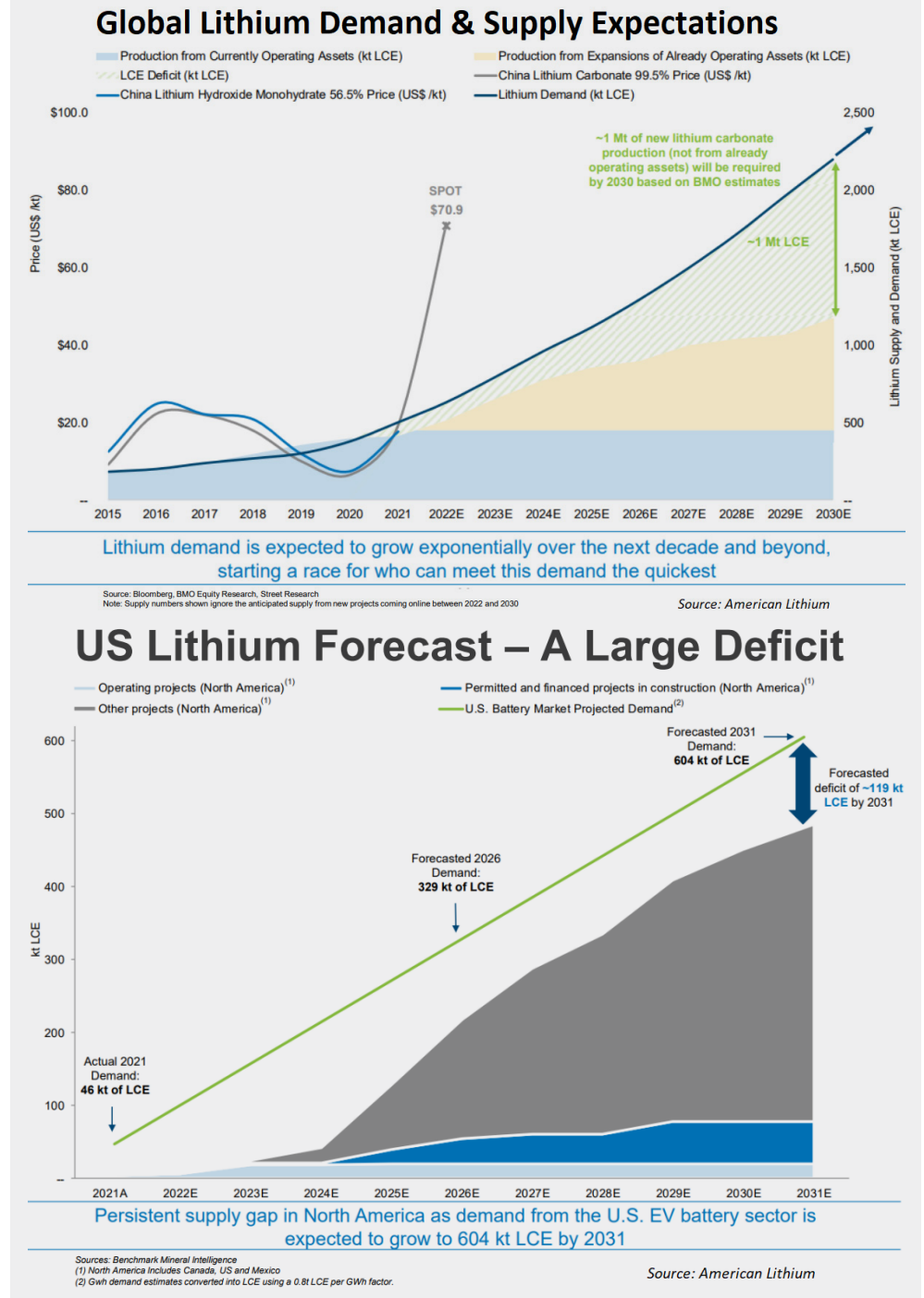
On February 6, shares of Lithium Americas jumped 10.3% in New York after a [US court decision](#) gave permission to **begin construction**, whereas there is still a chance of appeal (however unlikely to yield a different ruling).

[According to "Lithium Americas Soars After GM Invests \\$650 Million. The EV War Is Escalating"](#) (Barron's, January 31, 2023): "The Thacker Pass investment should amount to all the lithium GM needs to meet its goal of selling 1 million electric vehicles in North America by mid-decade... Now auto makers are going further up the supply chain to ensure those battery plants have all the materials they need at prices they can afford."



According to [“Making the Entire U.S. Car Fleet Electric Could Cause Lithium Shortages”](#) (Scientific American, January 25, 2023): “The transition to electric vehicles could lead to lithium shortages... Simply converting the existing U.S. car fleet to battery-powered electric vehicles, for example, would require three times more lithium by 2050 than the world currently produces, according to new research from the University of California, Davis, and the Climate and Community Project... The world currently produces a little more than 100,000 tons of lithium a year. Under the base case scenario the researchers established, the United States alone would require 306,000 tons a year by 2050... In the worst-case scenario – in which the system remains unchanged and battery sizes grow significantly – the United States could consume 483,000 tons of lithium a year by 2050... Globally, demand for lithium is expected to skyrocket by as much as six times the current level, requiring 50 new mines, the International Energy Agency concluded in a report last year. The Biden administration has made moves recently to shore up the nation’s access to minerals such as lithium, both at home and abroad.”

On January 13, the **U.S. Department of Energy’s Loan Programs Office (LPO)** has offered a conditional commitment to lend [up to \\$700 million USD](#) to **loneer Ltd.** to develop a domestic lithium supply from the **Rhyolite Ridge Project** in Esmeralda County, Nevada. [Rhyolite Ridge](#) is a deposit formed by diagenesis of volcanic sediments deposited in an alkaline lake, characterized by very fine boron-rich searlesite crystals (up to 30,000 ppm boron) and lithium in illite-smectite layers (about 1,500-2,500 ppm lithium). It hosts 60 million t @ 1,800 ppm Li containing 0.58 million t LCE (Proved & Probable Stage 1 + 2 Quarry, 2020) with a current mine life of 26 years to produce 20,600 t LCE annually, making it the most-advanced lithium project in the US (CAPEX: \$785 million USD) and expected to be one of the lowest-cost lithium producers in the world (only \$2,510 USD/t LCE) in part due to boron as a by-product (revenue



generated from boron production is estimated to cover all operating costs for lithium production). Rhyolite Ridge is “anticipated to come onstream in 2025”, according to the company. A completed Feasibility Study (2020) makes it “the most advanced lithium project in the US and expected to be the lowest cost lithium producer, in part due to the valuable boron co-product.” **loneer is up 3% YTD and has a current market capitalization of \$797 million AUD.**

According to the **U.S. Department of Energy’s Loan Programs Office**: “This year alone, the Biden-Harris Administration awarded \$2.8 billion in funding to supercharge battery-related mining, processing, and manufacturing in the United States, and an additional \$74 million in funding to advance domestic battery reuse and recycling. The urgency to secure critical materials for batteries is expected to rapidly increase in the coming years as demand for lithium is projected to exceed current global

production by 2030. This is subsequently causing U.S. auto manufacturers to seek a robust domestic supply of critical materials to keep pace with the increased demand. The Rhyolite Ridge project has executed offtake agreements with Ford, Prime Planet Energy & Solutions (a joint venture battery company between Toyota Motor Corporation and Panasonic Corporation), and EcoPro Innovation (the world’s second largest lithium nickel-cobalt-aluminum oxide cathode materials manufacturer and a major cathode supplier for global battery manufacturers)…”

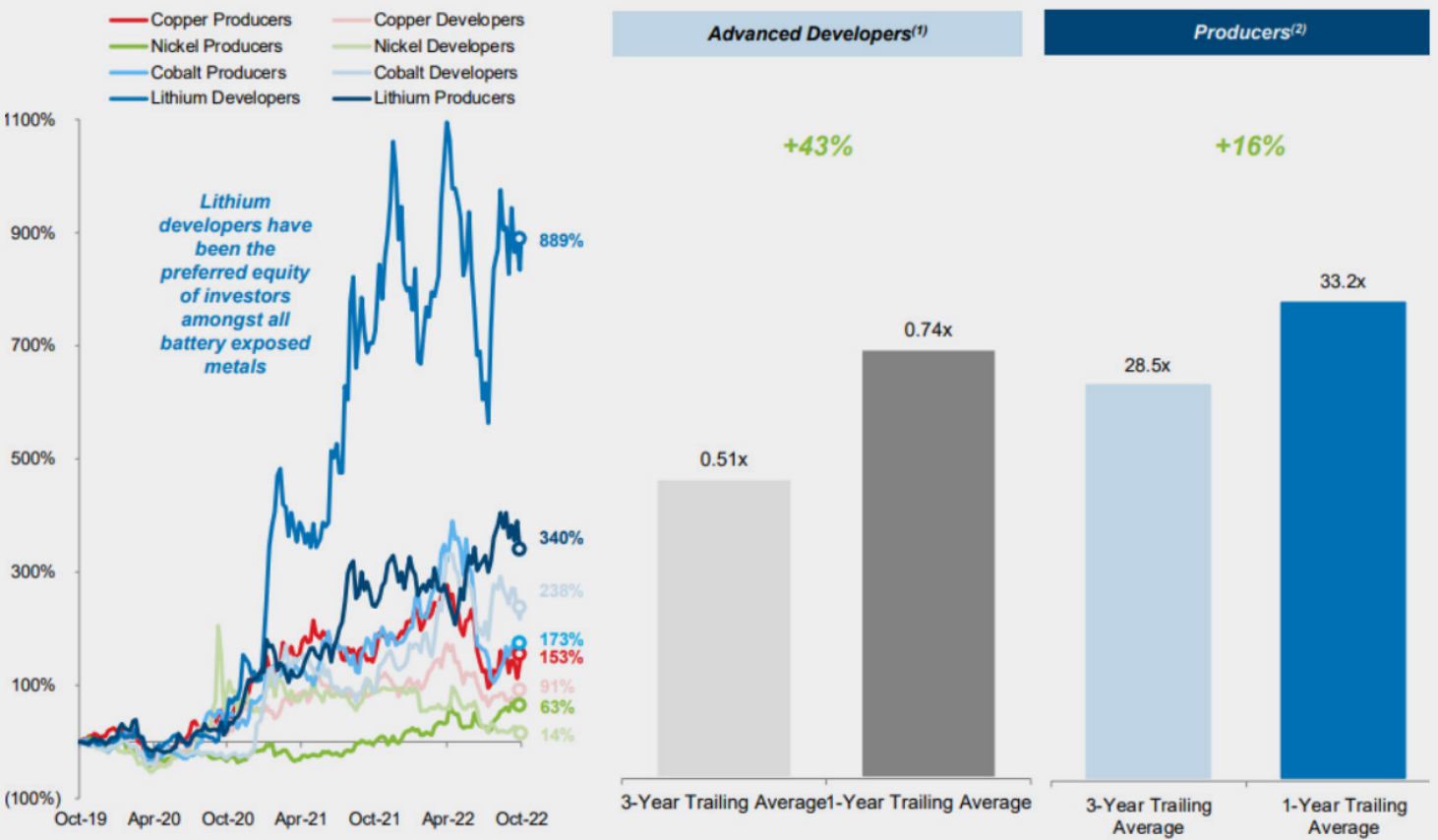
In late January, Cypress Development Corp. changed its name to **Century Lithium Corp.** Also in January, the company provided a progress update on its ongoing Feasibility Study on its **Clayton Valley Project**, immediately east of Albermarle Corp.’s Silver Peak Mine, North

America’s only lithium brine operation (in continuous operation since 1966). At Century Lithium’s Clayton Valley Deposit, lithium occurs within montmorillonite clays, which can be cheaper to process than refractory clay minerals (e.g. hectorite) requiring roasting and/or higher acid consumption to liberate the lithium. The Feasibility Study is anticipated to be completed in the second quarter 2023. The company is assessing future project financing opportunities and structures, which may include government grants and loans. A Pre-feasibility Study (2020) shows Indicated Resources of 1.3 billion t @ 905 ppm Li containing 6.3 million t LCE. CAPEX was estimated at \$493 million USD with production cash-costs of 3,387 USD/t LCE. In early January, Century Lithium’s share price stood at \$0.90 and reached \$1.50 in early February, enjoying a current market cap of \$207 million.

In early January, **American Lithium Corp.** received approval to list on NASDAQ. In mid-January, the Vancouver-based company announced an updated resource estimate on its **TLC Project** located in the Esmerelda Lithium District northwest of Tonopah, Nevada. In early February, the results of a maiden Preliminary Economic Assessment (PEA) were announced. The TLC lithium claystone deposit (with potential to produce magnesium sulfates as by-products now hosts Measured & Indicated Resources of 2 billion t @ 809 ppm Li containing 8.83 million t LCE (Inferred: 489 million t @ 713 ppm Li containing 1.89 million t LCE), making it the third largest sedimentary lithium resource in the United States (after Lithium America’s Thacker Pass and Jindalee’s McDermit). American Lithium’s share price increased by 51% YTD, currently with a market value of \$904 million.

Market Sentiment and Strengthening Fundamentals Have Led to Significant Gains

Lithium developers and producers have outperformed other battery metal exposed peers over the past 3 years... with investors changing how they look at lithium developers on a P / NAV ... and EV / LTM EBITDA multiples basis



Source: Bloomberg, British Geological Survey, S&P Platts, street research
 Note: Battery exposed metal companies shown can be provided as requested.
 1. Includes Bacanora (prior to acquisition by Ganfeng), Core Lithium, Critical Elements, Ioneer, Lithium Americas, Millennial Lithium (prior to acquisition by Lithium Americas), Neo Lithium (prior to acquisition by Zijin), Piedmont, Sayona and Sigma Lithium.
 2. Includes Albermarle, Alkem, Galaxy (prior to merger with Orocobre), Ganfeng, Livent, Pilbara, SQM and Tianqi.



In December, **Jindalee Resources Ltd.** announced final assays from its 2022 drilling program at its **McDermitt Project** in southeast Oregon, including multiple wide lithium intercepts, such as 47.4 m @ 1,449 ppm Li (from 26.8 m) including 10.2 m @ 2,631 ppm Li (from 55.5 m). An updated resource estimate is “expected to be announced early 2023”. The 2022-drilling was designed to infill and extend the 2022 resource estimate of 1.82 billion t @ 1,370 ppm Li containing 13.3 million t LCE, making it the second largest sedimentary lithium resource in the United States. **Jindalee’s share price appreciated by 35% YTD (market cap: \$145 million AUD).**

In early December, **Arizona Lithium Ltd.** announced a strategic alliance with **Navajo Transitional Energy Company LLC (NTEC)**, wholly owned by the Navajo Nation. NTEC will take over the operational development of the **Big Sandy Project** and will manage all aspects from the permitting requirements for additional exploratory drilling process through to mine design, environmental assessments, construction, and contract mining operations for the project. NTEC owns the Navajo Mine, currently holds a 7% interest in the Four Corners Power Plant, and also owns and operates mines in Montana and Wyoming. NTEC will be designated as Big Sandy’s mine operator and will manage and execute all programs and spending. NTEC would be entitled to the issue of up to 192 million shares of Arizona Lithium (currently issued & outstanding: 2.48 billion shares). 2019-drilling at Big Sandy resulted in Indicated & Inferred Resources of 32.5 million t @ 1,850 ppm Li containing 0.32 million t LCE, which represents 4% of the Big Sandy Project area that contains an estimated exploration target of between 271-483 million t @ 1,000-2,000 ppm Li, according to the company. In late November, Arizona Lithium announced the start of a Feasibility Study at Big Sandy, projected to be completed at the end of 2023. In early November, Arizona Lithium announced a strategic investment of \$1.25 million USD in **Midwest Lithium AG**, which company holds a land position in the Black Hills of South Dakota, one of North America’s hard-rock (spodumene) lithium producing

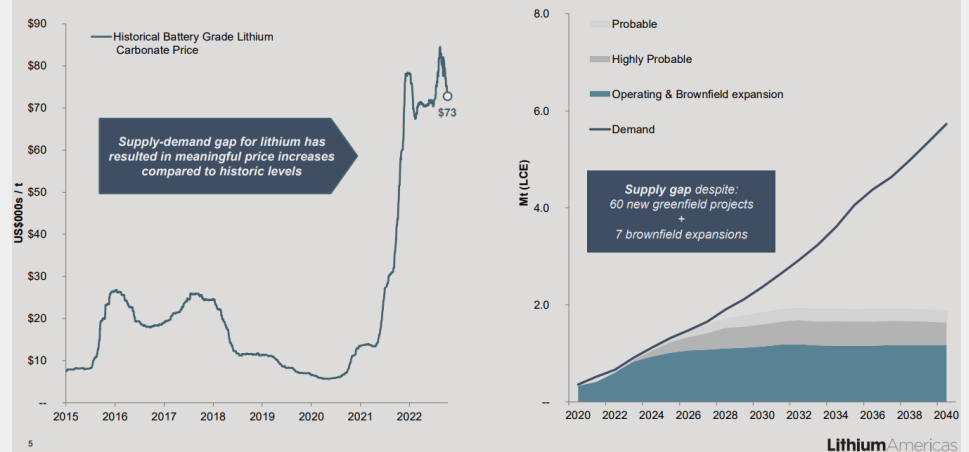
The money needs to go into mining, into modern extraction that's environmentally responsible, and everything needs to go in that direction. Otherwise, all these gigafactories won't have the raw material, they won't have the lithium to make the batteries.

MCJ Collective
UNLEASHING CLIMATE INNOVATION

- Simon Moores
Benchmark Mineral Intelligence

Lithium Supply Risk Requires Action

Investment in new sources of lithium supply needed to meet demand



Lithium Deposit Types

	CLAYSTONE	BRINE	HARDROCK
Mine Product	Lithium Carbonate (Li ₂ CO ₃)	Lithium Carbonate (Li ₂ CO ₃)	Spodumene Concentrate (6% Li ₂ O)
Typical Grade	1,000-3,000 ppm Li	500-1,000 ppm Li	4,500-7,000 ppm Li
Production Steps	Mining Acid Leaching Evaporation Crystallization	Pumping of Brine Evaporation Crystallization	Mining Crushing and Grinding Roasting Acid Leaching Evaporation/Crystallization
Estimated Cash Costs (\$/tonne Li ₂ CO ₃)	\$3,387 *Century PFS	\$2,500 – 4,000*	+\$6,000*

Century Lithium:
 ✓ No crushing, no grinding, no roasting
 ✓ Low to no overburden with simple open pit mine design
 ✓ Unique Chlor-Alkali circuit effectively recycles nearly 100% of required water
 ✓ CCD thickeners effectively manage solids/liquids separation

* Industry and company reports
Source: Century Lithium

districts including numerous historical mines. In late December, Arizona Lithium announced an agreement to acquire 100% of the private company **Prairie Lithium Corp.**, one of Canada’s most advanced lithium brine companies and one of the most advanced Direct

Lithium Extraction (DLE) projects globally, according to the company (Inferred Resource: 111 mg/L Li containing 4.1 million t LCE; located in Saskatchewan). **Shares of Arizona Lithium are up 5% YTD, with a current market cap of \$147 million AUD.**



ROCKLAND: UTAH'S LEADING LITHIUM EXPLORER

- The geologic setting and history of volcanism and mineralization at Utah's Spor Mountain is highly prospective for lithium-enriched claystone units: "Feldspathic and montmorillonitic (smectite) clay alteration zones, including lithium-bearing trioctahedral smectite, closely follow and enclose beryllium ore..." (Source)

- Spor Mountain has similar geology to Nevada's hotbed of activity in the Clayton Valley, where [Albemarle Corp.](#) produces lithium from brine and started looking at its clay deposits in 2021.

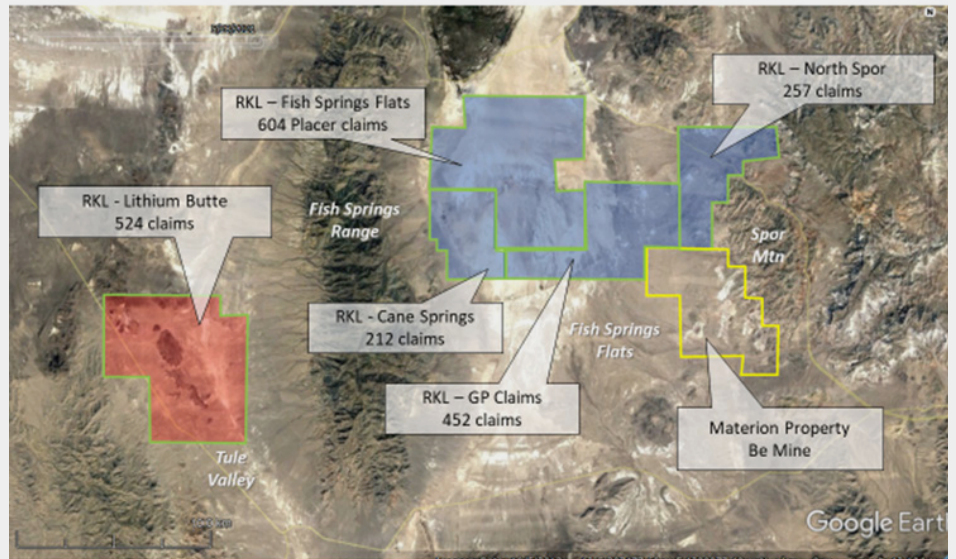
- In [September 2022](#), Rockland announced a major expansion of its property holdings to **16,219 hectares**, a district-scale land package prospective for lithium clay and brine deposits. The newly acquired claims contain beryllium (Be) mineralization with grades up to 4,810 ppm Be and are **contiguous with Materion Corp.'s producing Be Mine**.

- Rockland's newly acquired **Fish Springs Flat** claims "cover an area interpreted to be prospective for lithium brine mineralization." (Utah Geological Survey, 2020).

- Rockland's original claims, the **Lithium Butte Property** (4,460 hectares; ~10 km east of newly acquired claims), host highly elevated lithium grades in the primary Spor Mountain Formation (Volcanic Beryllium-Tuff Formation).

- **Alteration** of Lithium Butte's claystone has further enriched lithium concentrations. Rockland's sampling in May 2022 and a historic (2010) database indicate **widespread lithium mineralization** hosted in clay or claystone volcanic tuff units. Initial grab samples at Lithium Butte showed lithium grades of **up to 4,080 ppm** in [June 2022](#). In [August](#), Rockland reported additional grab sample assays, showing significant beryllium grades **between 1,790 and 4,810 ppm Be**. These samples also contain anomalous lithium with grades **between 380 and 440 ppm Li**. The Be-mineralized samples were collected from an outcrop of bedded tuff-breccia approximately **340 m east-**

Rockland Resources Ltd. – Lithium Portfolio, Juab County, Utah



Rockland Original Claims

Rockland New Claim Acquisitions

Property outlines are for indicative purposes only and intended to show approximate relative positions



"Our early work at Lithium Butte is demonstrating that the Property hosts a volcanic formation that has a unique endowment in light metals including lithium and beryllium. This formation exhibits strong similarities with the Miocene Spor Mountain Formation that hosts currently mined Be deposits. Our initial results at Lithium Butte suggests that the Spor Mountain Formation may be **more widespread than previously thought** and has encouraged Rockland to significantly extend its property position in this region." (Dr. Richard Sutcliffe, Rockland's President, on [August 4, 2022](#))

southeast of the claystone tuff-breccia samples that contained previously reported high lithium values ranging from **1,200 to 4,080 ppm Li**. Channel sampling in [July](#) revealed **25.2 m @ 1,388**

ppm Li including **8 m @ 2,155 ppm Li** and **0.7 m @ 3,540 ppm**. The sampled section represents the upper part of the prospective unit and the mineralization is open at depth.



Rockland's large property package (16,219 hectares) is highly prospective for **both lithium claystone and brine deposits**. The above picture shows the Volcanic Beryllium-Tuff Formation with **widespread lithium mineralization hosted in clay or claystone** and initial grab samples indicate **high lithium grades of up to 4,080 ppm**. Below picture shows Rockland's newly acquired **Fish Springs Flat** claims which cover an area interpreted to be prospective for lithium **brine** mineralization, according to the Utah Geological Survey (2020). For more pictures, watch Rockland's latest drone video: <https://youtu.be/HcRxWnen8I>

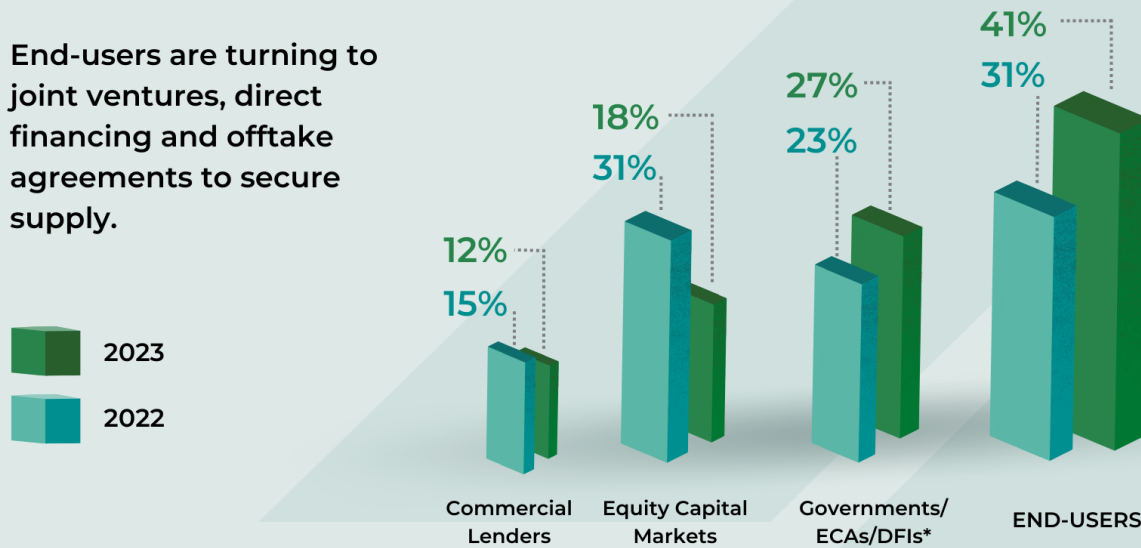




BATTERY METALS

End-users Expected to Increase Role in Financing Battery Metals in 2023

End-users are turning to joint ventures, direct financing and offtake agreements to secure supply.



SECURING SUPPLY

Automakers and battery manufacturers entered a number of project financing and offtake agreements with lithium, copper and nickel developers.

LITHIUM



\$650 MILLION



COPPER



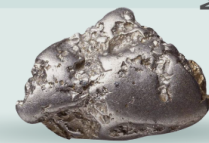
\$300 MILLION



NICKEL



\$69 MILLION



* Export Credit Agencies (ECAs); Development finance institutions (DFIs). Source: White & Case, 2023; Company announcements and media reports, 2021-2023.

Disconnect between demand and capital invested: Wood Mackenzie Vice President of Metals and Mining Markets Nick Pickens said there was a significant disconnect between the material demand of the energy transition and the capital invested in mining projects. “There is an obvious shortage of mining projects and for many markets the pool of metal is not sufficient enough, he said. “Recycling is part of the solution but still needs investment in projects.” BMO Capital Markets Managing Director of Commodities Research Colin Hamilton said the energy transition would cause markets for critical metals to become supply-constrained, with end-users forced to compromise by reducing the metal intensity within their products, such as the manufacture of smaller batteries. “The cost of risk must take into account risk of not taking risk when considering the development of new mining projects,” he said. (Source: [“Decarbonization can’t happen without more investment in mining projects”](#), S&P Global Commodity Insights, February 8, 2023)



“The long term path for lithium is set, yet the supply chain scaling challenge has just begun,” Simon Moores, chief executive of Benchmark, explained.

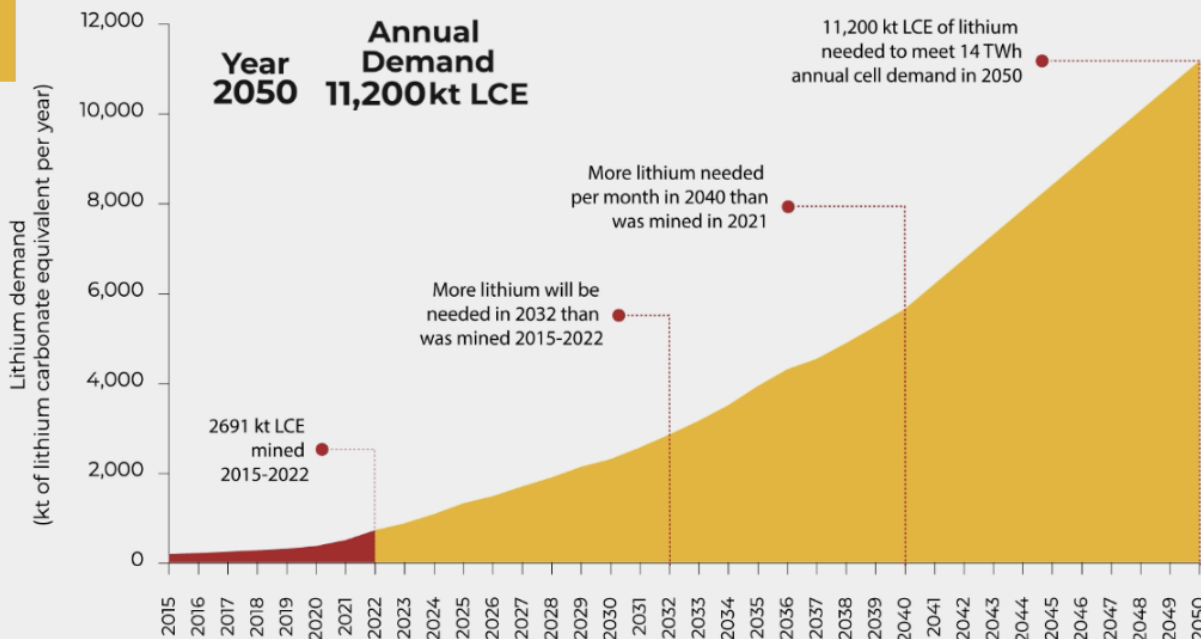
“What this data shows is that we are at just the beginning of a generational challenge, not one that’s going to be solved in the 2020s.” Benchmark is aware of 40 lithium mines that have been in operation – producing lithium – in 2022. By 2050, the company sees a need for 234 more lithium mines if there’s no battery recycling underway (which, of course, is completely unrealistic but is a place to start from for such an analysis)...

“It’s crucial that legacy OEMs, EV producers, and battery cell makers make the big and at times uncomfortable decisions in investing in long term generational critical minerals supply, especially for lithium,” Moores said.

“If not, Automakers won’t hit their EVs, governments won’t achieve Net Zero by 2050, and market volatility will be here to stay for much longer.” (Source: [CleanTechnica](#), October 2022)

Lithium demand skyrockets to 2050

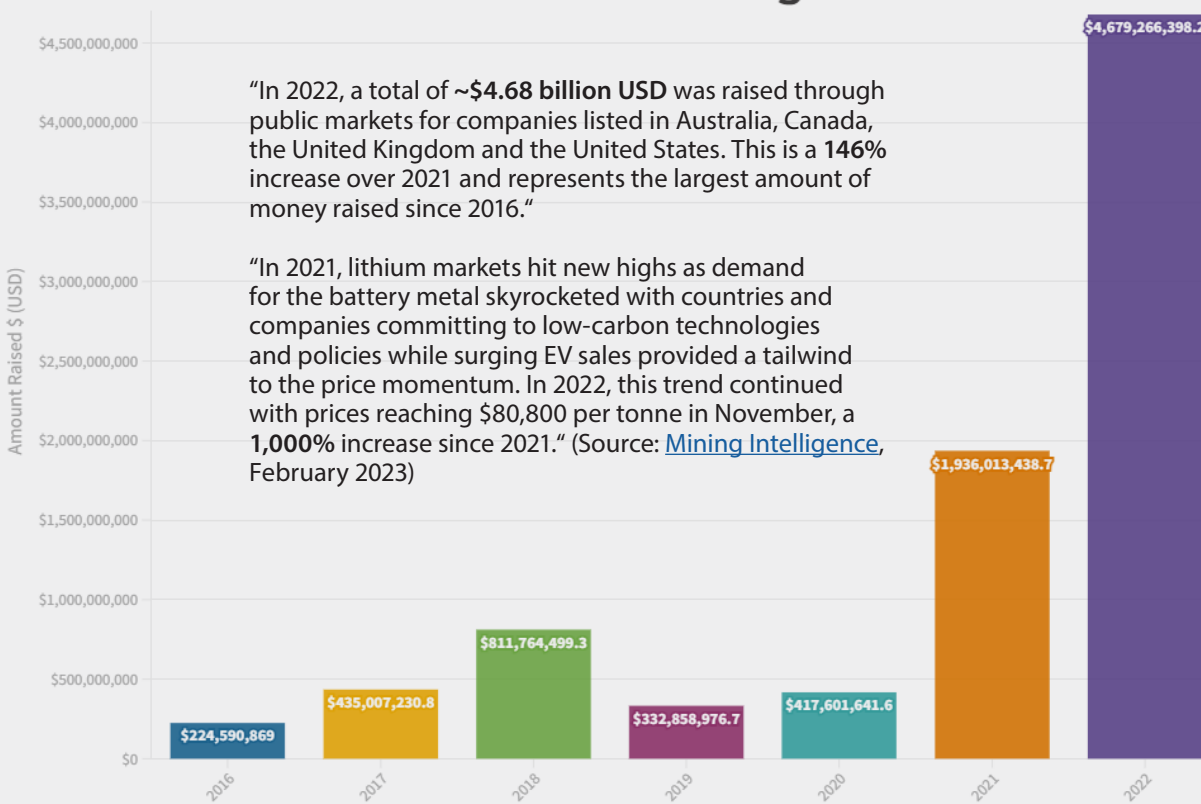
The scale of today’s lithium mining dwarfs in comparison to what is needed in the coming decades as world needs 300 TWh of batteries by 2050.



Source: Benchmark Lithium Forecast

The lithium market needs to scale up to 25 times or more of the 2021 level by 2050... Analysts from Benchmark Mineral Intelligence forecast 2.9 million tonnes of LCE (Lithium Carbonate Equivalent) a year by 2032. Consider that, in total, 2.7 million tonnes of LCE were produced from 2015 through 2022 so far. In 2040, one month’s lithium needs are expected to be equal to all of the battery-grade lithium produced in 2021. (Source: [CleanTechnica](#), October 2022)

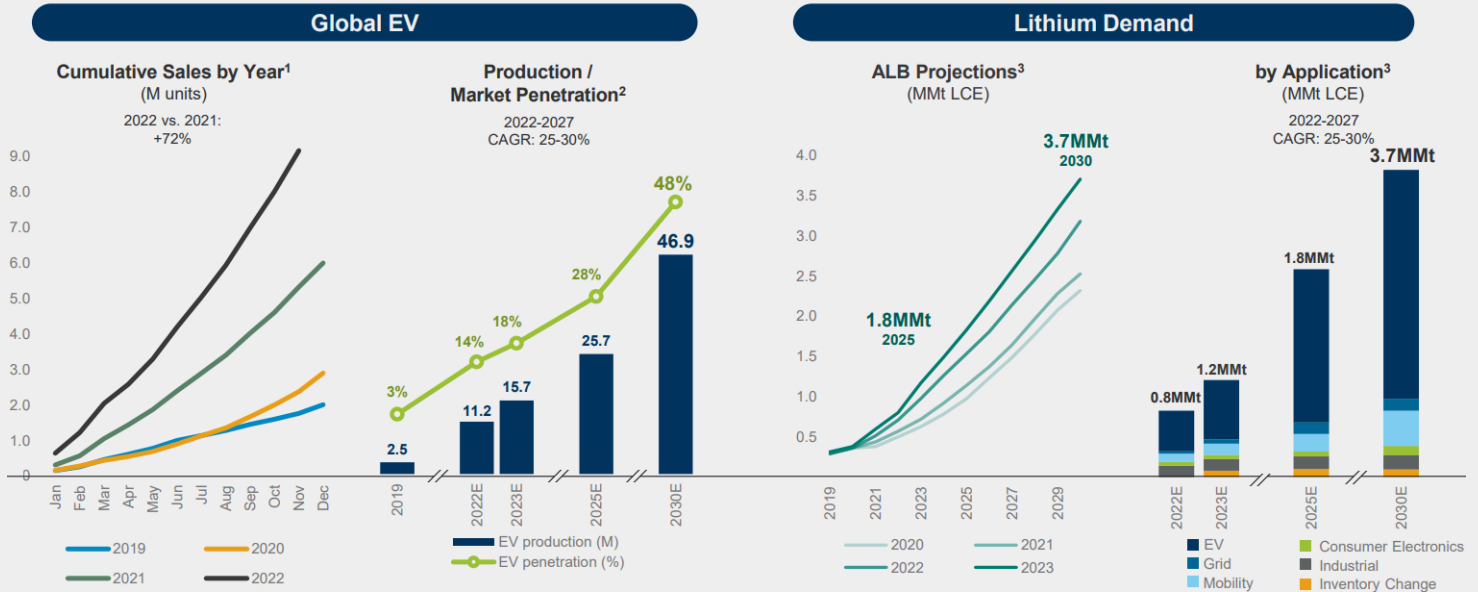
An Electric Market: Lithium Financings 2016 to 2022



Source: www.miningintelligence.com



Increasing Our Lithium Market Demand Outlook: 5x Growth by 2030

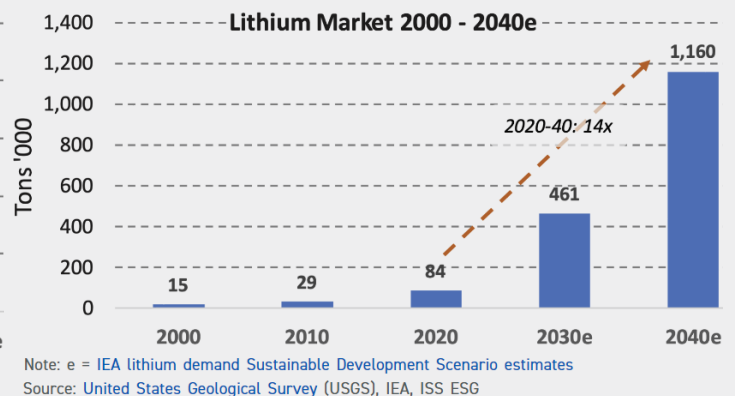
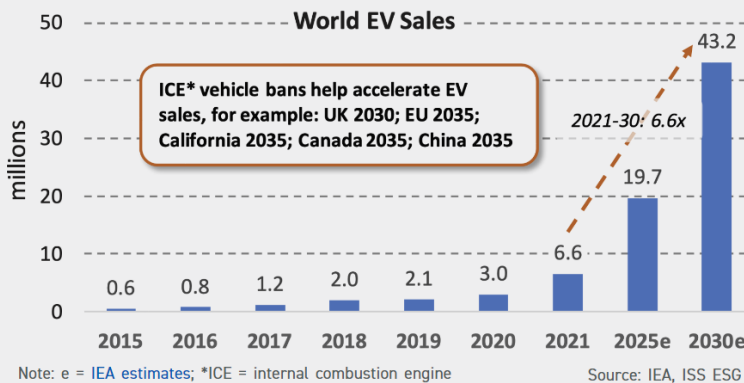


2030E lithium demand of 3.7MMt LCE +15% from previous forecast due to IRA and strong EV demand

¹ Marklines data as of 01/03/2023, FY 2022 vehicle sales are preliminary and do not include December data
² S&P Global Mobility, Global Production based Alternative Propulsion Forecast, November 2022 ³ Albemarle analysis



LG Chem Ltd. is prioritizing efforts to secure raw materials used in electric-vehicle batteries and establishing a self-sufficient global supply chain, including via potential partnerships and investments in mining companies. “We are preparing ourselves first of all to secure supply of raw material, which is more important than the price,” LG Chem Chief Executive Officer Shin Hak-cheol said in an interview with Bloomberg Television in Seoul. “Our first and foremost priority is to secure enough raw material for the future. LG Chem makes cathode-active materials, a key ingredient for EV batteries. It is the parent of LG Energy Solution, the world’s second-largest battery cell maker and supplier for automakers including Tesla Inc., General Motors Co., Ford Motor Co. and Stellantis NV. The South Korean company is doing “a lot of projects” to ensure it has a stable source of supply, according to Shin. “I don’t think we’ll ever be a mining company. However, if there’s a project that makes sense, maybe we can invest.” (Source: [“Battery Giant LG Chem Prepares to Lock In Mineral Supplies”](#), Bloomberg, February 12, 2023)



Automakers are starting to realize that the only way to guarantee lithium supplies is to own or have a controlling stake in the source... General Motors’ announcement on Tuesday that it plans to invest \$650 million into Lithium Americas to secure access to lithium is the first of what surely will be more to come, according to Simon Moores, the CEO of Benchmark Mineral Intelligence. “EV companies, especially the auto majors, have learnt the hard way over the last five years that scaling batteries – giga factories – is much easier and quicker than scaling mining,” Moores said... Going forward, automakers will need to make even larger investments in mining, according to Moores. “This \$650 million is a significant investment,” but “what the industry really needs” is checks in the billions of dollars, Moores said, “otherwise these EV goals will not be met.” GM’s investment in Lithium America “is only literally one piece of an ever-growing puzzle,” he added... “The rush for lithium has just started. It is a land grab,” Moores told CNBC. “This land grab will last the next decade. I don’t think this is a two- or three-year thing. I think this is a decadelong process.” (Source: [“The ‘land grab’ for lithium is just getting started with GM deal, says EV materials expert”](#), CNBC, January 31, 2023)



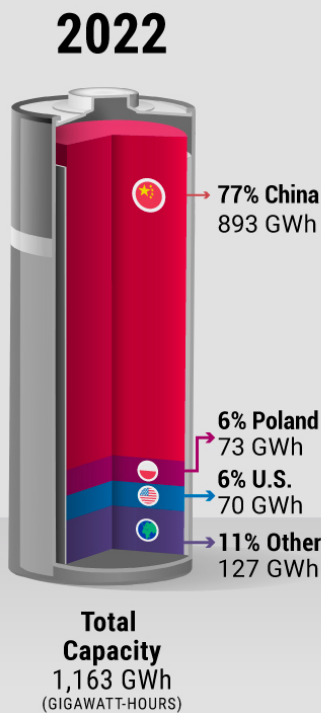
BATTERY MANUFACTURING CAPACITY BY COUNTRY

Global lithium-ion battery production capacity is [projected to increase eightfold by 2027](#).

Here's a look at the top countries for battery manufacturing in 2022 and 2027, based on BloombergNEF's lithium-ion supply chain rankings.

Six of the top 10 battery manufacturing companies are headquartered in China.

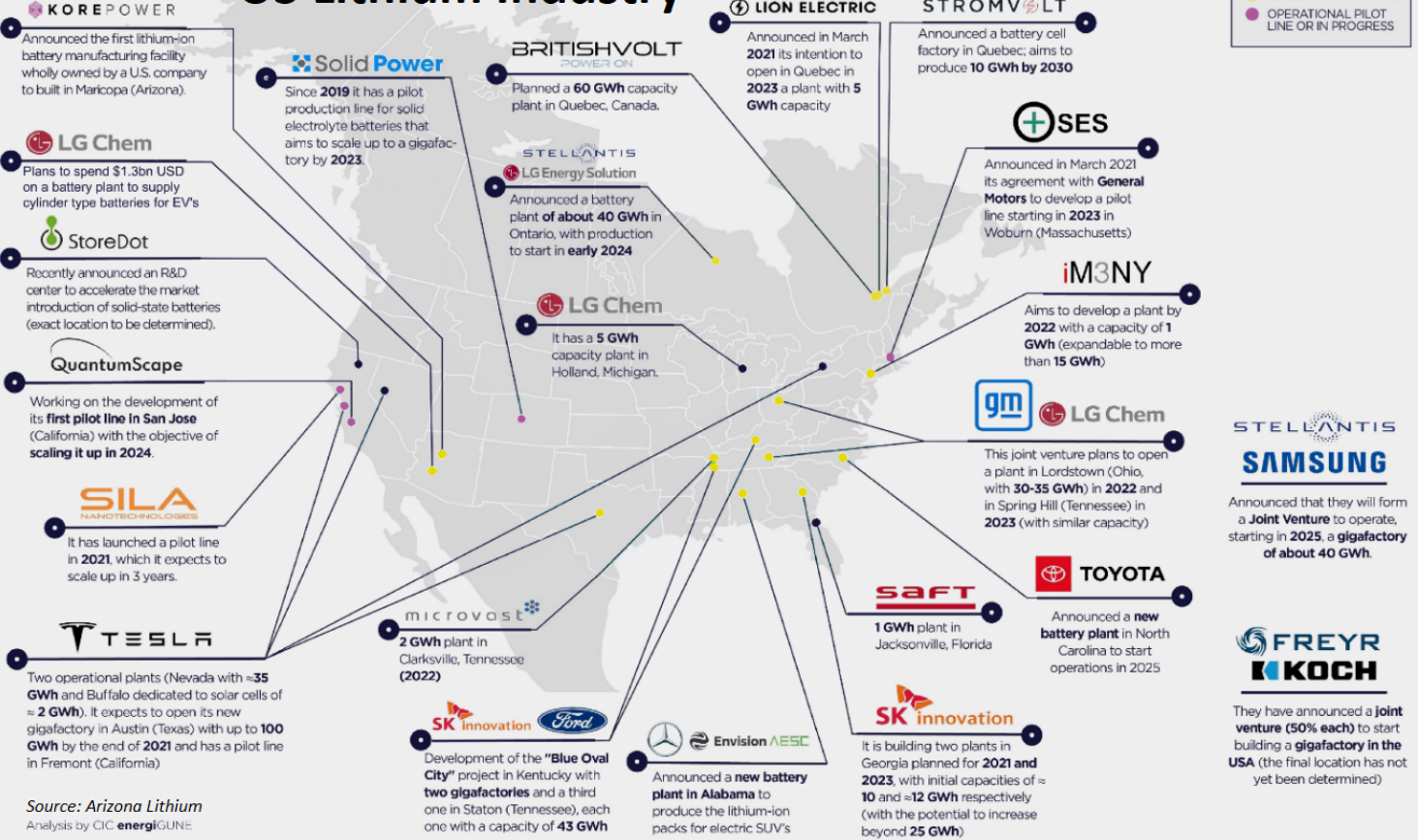
U.S. battery production capacity is projected to grow over 10x by 2027.



“With the world gearing up for the electric vehicle era, battery manufacturing has become a priority for many nations, including the United States. However, having entered the race for batteries early, China is far and away in the lead. Using the data and projections behind BloombergNEF’s [lithium-ion supply chain rankings](#), this infographic visualizes battery manufacturing capacity by country in 2022 and 2027p, highlighting the extent of China’s battery dominance. With nearly 900 gigawatt-hours of manufacturing capacity or 77% of the global total, China is home to six of the world’s [10 biggest battery makers](#). Behind China’s battery dominance is its vertical integration across the rest of the EV supply chain, from mining the metals to producing the EVs. It’s also the [largest EV market](#), accounting for 52% of global sales in 2021... Although it lives in China’s shadow when it comes to batteries, the U.S. is also among the world’s lithium-ion powerhouses. As of 2022, it had eight major operational battery factories, concentrated in the Midwest and the South.” [\(Source\)](#)

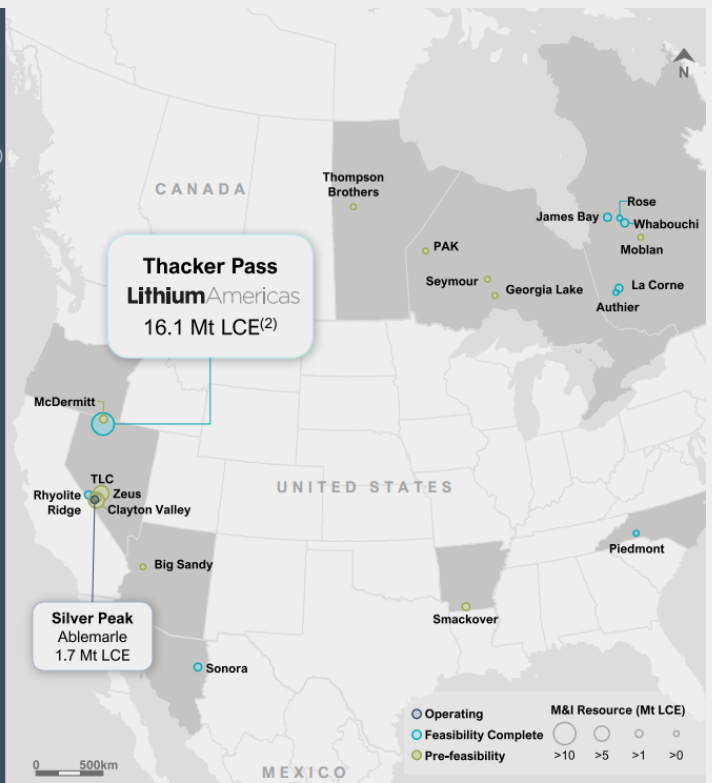
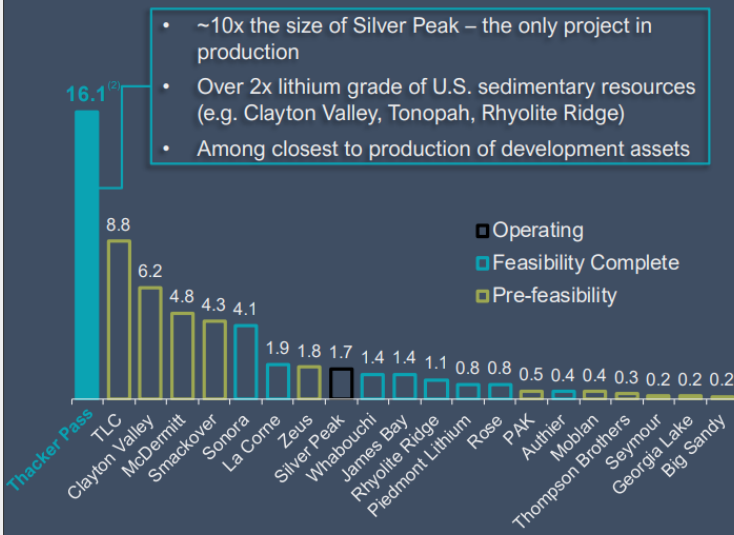


US Lithium Industry



Developing America's Next Lithium Producer

Lithium projects in North America by mineral resource (Mt LCE)⁽¹⁾



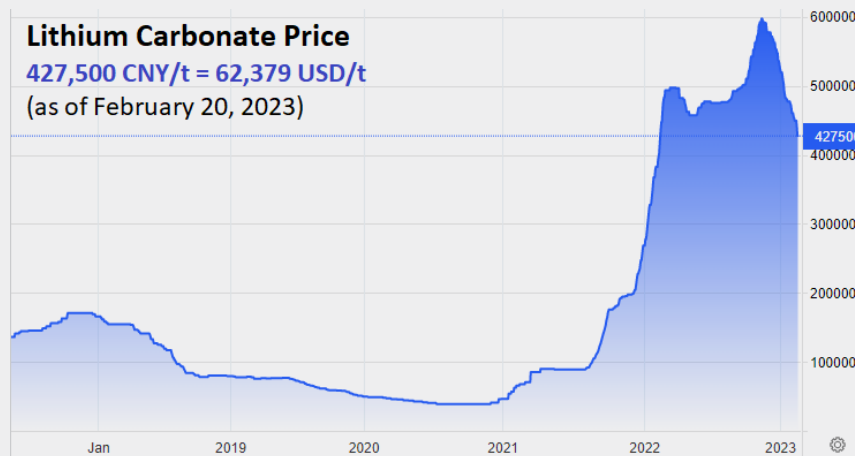
8 (1) See End Notes for sources.
 (2) See End Notes.



Select Sediment-Hosted Lithium Deposits

Deposit	Location	Cut-Off Grade	Tonnage x Grade = Contained LCE	Projected Mine Life	Projected Average Annual Production	Projected Cash-Costs	Projected CAPEX	Owner	Stock Symbol	Market Cap.
Thacker Pass	Nevada, USA	1,047 ppm Li	1.45 billion t @ 2,071 ppm Li = 16.1 million t LCE (Measured & Indicated, 2022)	>40 years	40,000 t LCE in Phase-1, 80,000 t LCE in Phase-2	6,743 USD/t LCE (first 25 years)	2.3 billion USD (Phase-1)	Lithium Americas Corp.	NYSE: LAC	3.2 billion USD
TLC	Nevada, USA	500 ppm Li	2 billion t @ 809 ppm Li = 8.83 million t LCE (Measured & Indicated, 2023)	>40 years	38,000 t LCE for 40 years	7,443 USD/t LCE (including power credits)	819 million USD (Initial) and 1.43 billion USD (Total)	American Lithium Corp.	TSX.V: LI	904 million CAD
Rhyolite Ridge	Nevada, USA	5,000 ppm B	147 million t @ 1,600 ppm Li + 14,200 ppm B = 1.3 million t LCE (Measured & Indicated & Inferred, 2020)	>26 years	20,600 t LCE	2,510 USD/t LCE	785 million USD	Ioneer Ltd.	ASX: INR	797 million AUD
Clayton Valley	Nevada, USA	900 ppm Li	1,304 million t @ 905 ppm Li = 6.3 million t LCE (Indicated, 2020)	40 years with reserves of 213 million t @ 1,129 ppm Li = 1.3 million t LCE (cut-off: 400 ppm Li)	27,400 t LCE	3,387 USD/t LCE	493 million USD	Century Lithium Corp.	TSX.V: LCE	207 million CAD
Big Sandy	Arizona, USA	800 ppm Li	32.5 million t @ 1,850 ppm Li = 0.32 million t LCE (Indicated & Inferred, 2019)	—	—	—	—	Arizona Lithium Ltd.	ASX: AZL	147 million AUD
McDermitt	Oregon, USA	1,000 ppm Li	1,820 million t @ 1,370 ppm Li = 13.3 million t LCE (Indicated & Inferred, 2022)	—	—	Low, in part due to potential for by-product credits (sulfate of potash)	—	Jindalee Resources Ltd.	ASX: JRL	145 million AUD
Sonora	Sonora, Mexico	1,000 ppm Li	244 million t @ 3,480 ppm Li = 4.5 million t LCE (Proven & Probable, 2017)	>250 years with Resources (Measured & Indicated & Inferred: 559 million t @ ~3,000 ppm Li = 8.8 million t LCE)	17,500 t LCE with Stage-1 and 35,000 t LCE with Stage-2	3,910 USD/t LCE (3,418 USD/t LCE with potash by-product credits)	420 million USD (Stage-1) plus 380 million USD for Stage-2	Ganfeng Lithium Co Ltd.	SZ: 002460	21 billion CAD (142 billion CNY)

NOTE: Yellow highlighted market valuations based on practically all of the referenced lithium-clay deposits. Some companies' market capitalizations are not only based on the referenced projects: **Arizona Lithium Ltd.** announced to acquire a lithium brine project in Saskatchewan, Canada, and invested \$1.25 million USD into a hard-rock exploration company in South Dakota, however both announcements without any notable impact on its valuation yet; **Ganfeng** focuses on brine projects in Argentina and also has stakes in hard-rock projects in Mali and Ireland; **Jindalee Resources Ltd.** also owns the Clayton North lithium-clay project in Nevada and 3 other projects in Australia (gold, iron ore, magnesite). **Lithium Americas Corp.**'s majority valuation due to brine projects in Argentina (spinout of Rhyolite Ridge planned); **American Lithium Corp.**'s flagship project is not only TLC but also its advanced-stage Falchani Project ("the 6th largest hard-rock lithium deposit globally") and the spinout-planned Macusani Uranium Project ("one of the world's largest and lowest-cost uranium deposits"), both located in Peru. (Source: Rockstone Research, public company reports and financial company information as of February 20, 2023)



DISCLAIMER AND INFORMATION ON FORWARD LOOKING STATEMENTS

Rockstone Research, Zimtu Capital Corp. ("Zimtu") and Rockland Resources Ltd. ("Rockland") caution investors that any forward-looking information provided herein is not a guarantee of future results or performance, and that actual results may differ materially from those in forward-looking information as a result of various factors. The reader is referred to the Rockland's public filings for a more complete discussion of such risk factors and their potential effects which may be accessed through their documents filed on SEDAR at www.sedar.com. All statements in this report, other than statements of historical fact should be considered forward-looking statements. Much of this report is comprised of statements of projection. **Statements in this report that are forward looking include** that Rockland, or any other company or market will perform as expected; that exploration has or will discover a mineable deposit; that sedimentary lithium ("clay") projects are up and coming in this decade; that due to the gigantic dimensions, these "soft-rock" lithium deposits are considered to be the only viable option for the United States to supply enough feedstock for a domestic lithium-ion battery industry; that the latest developments around sedimentary lithium projects in the United States are positive for the entire exploration and mining industry, in particular for junior exploration companies such as Rockland focusing on US-based lithium projects within established mining districts; that Rockland will start its 2023 exploration season; that newsflow is expected to pick up over the next weeks and months as Rockland starts its 2023 exploration season at its large-scale land package (16,219 hectares) prospective for lithium clay and brine deposits; that mining investors might have received the news required to pump some life into the sector; that General Motors and Lithium Americas have jointly announced that they will work together to develop the Thacker Pass mine in Nevada, and that the deal will see General Motors invest a whopping \$650 million in Lithium Americas,

and that in exchange for the investment, GM will obtain exclusive access to lithium carbonate produced under phase one production at the mine, and will have the right of first offer on phase two production; that Thacker Pass could generate average EBITDA of more than \$1 billion USD annually for 40 years based on conservative commodity prices; that a US court decision gave permission to begin construction, whereas there is still a chance of appeal (however unlikely to yield a different ruling); that the Thacker Pass investment should amount to all the lithium GM needs to meet its goal of selling 1 million electric vehicles in North America by mid-decade; that the transition to electric vehicles could lead to lithium shortages; that globally, demand for lithium is expected to skyrocket by as much as six times the current level, requiring 50 new mines; that Rhyolite Ridge is anticipated to come onstream in 2025, and expected to be the lowest cost lithium producer; that the urgency to secure critical materials for batteries is expected to rapidly increase in the coming years as demand for lithium is projected to exceed current global production by 2030; that NTEC will take over the operational development of the Big Sandy Project and will manage all aspects from the permitting requirements for additional exploratory drilling process through to mine design, environmental assessments, construction, and contract mining operations for the project; that NTEC will be designated as Big Sandy's mine operator and will manage and execute all programs and spending. NTEC would be entitled to the issue of up to 192 million shares of Arizona Lithium; that the Big Sandy Project area contains an estimated exploration target of between 271-483 million t @ 1,000-2,000 ppm Li; that Rockland's newly acquired Fish Springs Flat claims cover an area interpreted to be prospective for lithium brine mineralization; that initial results at Lithium Butte suggests that the Spor Mountain Formation may be more widespread than previously thought; that Rockland's large property package (16,219 hectares) is highly prospective for both lithium claystone and brine deposits; that excellent outcrop exposure allows

for rapid characterization of lithium mineralization at Rockland's Lithium Butte Property; that by 2050, the company sees a need for 234 more lithium mines; that in 2040, one month's lithium needs are expected to be equal to all of the battery-grade lithium produced in 2021; that the energy transition would cause markets for critical metals to become supply-constrained; that General Motors' announcement on Tuesday that it plans to invest \$650 million into Lithium Americas to secure access to lithium is the first of what surely will be more to come; that going forward, automakers will need to make even larger investments in mining; that this land grab will last the next decade; that the geologic setting and history of volcanism and mineralization at Spor Mountain is highly prospective for lithium-enriched claystone units. **Such statements involve known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those anticipated in these forward-looking statements. There can be no assurance that such statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Risks and uncertainties include:** The receipt of all necessary approvals for exploration and mining; the ability to find sufficient mineralization to mine; uncertainty of future production, uncertain capital expenditures and other costs; financing and additional capital requirements for exploration, development and construction of a mine may not be available at reasonable cost or at all; mineral grades and quantities on the projects may not be as high as expected; samples found to date and historical drilling may not be indicative of any further potential on the properties; that mineralization encountered with sampling and drilling will be uneconomic; that the targeted prospects can not be reached; the receipt in a timely fashion of further permitting; legislative, political, social or economic developments in the jurisdictions in which Rockland carries on business may hinder progress; there may be no agreement with neighbors, partners or government on developing infrastructure; operating or technical



difficulties or cost increases in connection with exploration and mining or development activities; the ability to keep key employees and operations financed; what appear at first to be similarities with operating mines and projects may not be substantially similar; share prices of these companies may fall as a result of many factors, including those listed here and others listed in the companies' and other mining exploration company disclosure; and the resource prices available when the resource is mined may not be sufficient to mine economically. **Accordingly, readers should not place undue reliance on forward-looking information.** Rockstone and the author of this report do not undertake any obligation to update any statements made in this report except as required by law. Note that lithium values and mineralization described in similar rocks on other properties are not representative of the mineralization on Rockland's properties, and historical work and activities on its properties have not been verified and should not be relied upon.

DISCLOSURE OF INTEREST AND ADVISORY CAUTIONS

Nothing in this report should be construed as a solicitation to buy or sell any securities mentioned. Rockstone, its owners and the author of this report are not registered broker-dealers or financial advisors. Before investing in any securities, you should consult with your financial advisor and a registered broker-dealer. Never make an investment based solely on what you read in an online or printed report, including Rockstone's report, especially if the investment involves a small, thinly-traded company that isn't well known. **The author of this report, Stephan Bogner, is paid by Zimtu Capital, a TSX Venture Exchange listed investment company.** Part of the author's responsibilities at Zimtu Capital is to research and report on companies in which Zimtu Capital has an investment. So while the author of this report is not paid directly by Rockland Resources Ltd., the author's employer Zimtu Capital will benefit from appreciation of Rockland's stock prices. The author currently does not own any equity of Rockland, but he

holds a long position in Zimtu Capital Corp., and thus may also benefit from volume and price appreciation of those stocks. Rockland pays Zimtu to provide this report and other investor awareness services. As per Rockland's [news \(10/13/2022\)](#): "Rockland further announces it has signed an agreement with Zimtu Capital Corp. to provide select aspects of its ZimtuADVANTAGE marketing program (<https://www.zimtu.com/zimtu-advantage/>). Zimtu shall receive a one-time sum of \$65,000 from Rockland Resources for 3- months of coverage and reports from Rockstone Research, and for attendance in the 2022 Zimtu European Road Trip." **Thus, multiple conflicts of interests exist.** Therefore, the information provided in this report should not be construed as a financial analysis or recommendation but as an advertisement. In some cases, the companies the author features have one or more common directors with Zimtu Capital. Rockstone's and the author's views and opinions regarding the companies that are featured in the reports are the author's own views and are based on information that was received or found in the public domain, which is assumed to be reliable. Rockstone and the author have not undertaken independent due diligence of the information received or found in the public domain. Rockstone and the author of this report do not guarantee the accuracy, completeness, or usefulness of any content of this report, nor its fitness for any particular purpose. Lastly, Rockstone and the author do not guarantee that any of the companies mentioned in the reports will perform as expected, and any comparisons that were made to other companies may not be valid or come into effect. Please read the [entire Disclaimer](#) carefully. If you do not agree to all of the Disclaimer, do not access this website or any of its pages including this report in form of a PDF. By using this website and/or report, and whether or not you actually read the Disclaimer, you are deemed to have accepted it. Information provided is educational and general in nature. Data, tables, figures and pictures, if not labeled or hyper-linked otherwise, have been obtained from Stockwatch.com, Rockland Resources Ltd. and the public domain.

Author Profile & Contact

Stephan Bogner (Dipl. Kfm., FH)
Rockstone Research
8260 Stein am Rhein, Switzerland
Phone: +41 44 5862323
Email: sb@rockstone-research.com



Stephan Bogner studied Economics, with specialization in Finance & Asset Management, Production & Operations, and Entrepreneurship & International Law, at the International School of Management (Dortmund, Germany), the European Business School (London, UK) and the University of Queensland (Brisbane, Australia). Under Prof. Dr. Hans J. Bocker, Stephan completed his diploma thesis ("Gold In A Macroeconomic Context With Special Consideration Of The Price Formation Process") in 2002. A year later, he marketed and translated into German Ferdinand Lips' bestseller "Gold Wars". After working in Dubai's commodity markets for 5 years, he now lives in Switzerland and is the CEO of [Elementum International AG](#) specialized in the storage of gold and silver bullion in a high-security vaulting facility within the St. Gotthard Mountain in central Switzerland.

Rockstone Research is specialized in capital markets and publicly listed companies. The focus is set on exploration, development, and production of resource deposits, as well as technology ventures. Through the publication of basic geological, technological, and stock market knowledge, the individual company and sector reports receive a background in order for the reader to be inspired to conduct further due diligence and to consult with a financial advisor.

All Rockstone reports are being made accessible free of charge, whereas it is always to be construed as non-binding research addressed solely to a readership that is knowledgeable about the risks, experienced with stock markets, and acting on one's own responsibility.

For more information and sign-up for free email newsletter, please visit:
www.rockstone-research.com

