ACME Lithium targets the fuel of the new, green economy – lithium

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In today's volatile market, one commodity is performing quite well, the fuel of the new, green economy – lithium. Lithium appears to have the greatest leverage for hard rock mining investors right now, likely due to current sentiment, as well as, its long term supply/demand picture. SIGMA Lithium Corporation (NASDAQ: SGML | TSXV: SGML) is the poster child for lithium explorers having gone from a market cap of next to nothing to roughly US$4 billion in a little over two years. Lithium prices are high enough now that a small amount of drilling can create a valuable resource fairly quickly. Tack on security of supply issues and President Biden's Inflation Reduction Act and one needs to start looking even closer to home than the current sources of the majority of lithium resources like the Salar's of Chile, Argentina and Bolivia (the Lithium Triangle) or Brazil (home of SIGMA's deposit). Even Australia's large hard rock reserves aren't exactly convenient for the burgeoning North American EV market.

It's time to find a legitimate, home grown solution if there is any hope of economically meeting the growth projections for lithium demand. Fortunately, there is no shortage of North American explorers out there trying to fill this need and perhaps ACME Lithium Inc. (CSE: ACME | OTCQX: ACLHF) could fit the bill. Led by an experienced team, ACME Lithium is a mineral exploration company focused on acquiring, exploring, and developing battery metal projects in partnership with leading technology and commodity companies. The Company has multiple

North American projects in areas known for lithium development and exploration. Two are found in a highly prospective region for lithium production in Clayton Valley and Fish Lake Valley, Esmeralda County, Nevada, USA, and another three are in the pegmatite fields of the Bird River Greenstone Belt in southeastern Manitoba, Canada.

Today we'll have a quick look at the two most advanced projects for ACME – Clayton Valley and Fish Lake Valley. The Clayton Valley project claims are located directly north of the only lithium brine production operation in North America, Albemarle Corporation's (NYSE: ALB) Silver Peak Lithium mine, which has been in production since 1966. Clayton Valley has the potential to host lithium brines similar to Silver Peak, where samples analyzed up to 228 ppm lithium and concentrations up to +1,000 ppm have been found to occur within specific horizons of fine sediments. In June 2022, ACME commenced its Phase 1 Drill Program in Clayton Valley where the first drill hole (DH-1) was completed at 1,400 feet depth below ground surface to assess lithology, permeability features, clay, sand and gravel content, and lithium brine potential. Results announced August 17th reported lithium was detected from all brine samples at concentrations ranging between 38 and 130 mg/L with the highest concentrations from samples collected in the deep gravels at 1,350 feet and at 1,400 feet. The results strongly indicate the existence of a bicarbonate rich groundwater quality affinity which is typical in the Clayton Valley lithium brine aquifers.

The Company's Fish Lake Valley (FLV) Project is located about four miles west-northwest of Australia-based Pioneer Ltd.'s Rhyolite Ridge Project where a 2020 resource of 146.5 million metric tons at 1,600 ppm lithium and 14,200 ppm boron was reported. On October 11th ACME announced it had mobilized a crew and equipment for a geophysical profile across a newly

recognized conceptual target for mineralized tuff at the property. Field work is expected to be complete in two weeks, with data collected to test the graben concept and to be used to locate drilling test holes. The FLV geology and geomorphology are interpreted as a possible gravel covered graben while scattered outcrop samples assaying up to 600 ppm lithium and 1,270 ppm boron suggesting a mineral system is present.

It's still early days for ACME Lithium but they are well funded to pursue their lithium dreams with approximately C$12 million in working capital which includes strategic investor Lithium Royalty Corporation and Waratah Capital Advisors Ltd. After all, we've seen what SIGMA was able to convert approximately US$19 million in exploration expenditures into.

Lithium demand is poised to

create a supercycle of supply deficits and lasting high prices

written by Matt Bohlsen | October 21, 2022
The past two years has seen lithium prices rise about ten times from US$7,000/t to US$70,000/t both for lithium hydroxide and carbonate. Meanwhile, the lithium spodumene price has enjoyed a similar 10 fold increase from US$500/t to US$5,000/t. This has been caused by EV sales booming, resulting in a huge demand wave for lithium that literally swamped the small lithium industry.

The lithium carbonate price has risen as EV demand has taken off – Currently at CNY 510,500/t (~US$70,000/t)

Source: Trading Economics

What's next for the lithium sector?

Conventional commodity booms typically follow a rather fast boom and bust cycle as the cure for deficits is high prices, thereby encouraging new supply. However, every once in a while we get a commodity supercycle. That's where the demand wave is so big that it takes as long as a decade for supply to eventually catch up or for demand to subside. New mines can take 5-10 years to come online, yet a new EV and battery factory can be built in 1-2 years.

In the case of lithium, many EV metals experts agree we have only just entered a lithium supercycle. To better understand the size of the demand wave investors need to get a feel for how much lithium will be needed to feed the electric vehicle boom.

A typical 50kWh battery electric car (roughly the global average size in 2022) requires about 45kgs of lithium carbonate equivalent. In 2022 global plugin electric car sales look set to grow by at least 50%+ year over year. Given 2021 global plugin electric car sales were 6.75 million, 2022 will likely end up at about 10.125 million, or 3.375 million additional new electric cars. This means lithium demand, only from plugin electric cars, will increase by roughly 152,000 tonnes ("t") of lithium carbonate equivalent ("LCE") in 2022 ((45/1000) x 3,375,000)). If we add in other sources of lithium the global lithium market will roughly increase by about 185,000t LCE in 2022, or about a 34% increase on 2021 levels of approximately 540,000t LCE.

Looking at lithium supply a typical new mine or mine expansion could possibly bring on 20,000t LCE in a year. This means the market needs about 9 new mines or expansion of existing mines, just to catch up with demand. This will be needed – and will grow larger – each year.

The scary part is that in a good year electric car demand can grow at 100%pa, as we saw with a 108% increase in 2021, which sent the lithium market into deficit. These days the demand is there but the supply is not, hence the global EV waiting list is now in the order of 3 million vehicles.

A lithium deficit can only mean lithium prices stay 'stronger for longer' this decade

Provided electric car sales growth remains at 30-50%+pa, all of this suggests we are likely to see constant lithium deficits this decade. Strong stationary energy storage sales are also pulling on lithium demand.

A lithium deficit can only mean lithium prices stay 'stronger for longer', meaning about US$50,000/t plus for lithium carbonate and lithium hydroxide and above US$5,000/t for

spodumene.

Yet despite this, some analysts are forecasting lithium prices to fall over the next 5 years. This completely contradicts forecasts of continual lithium deficits this decade. In a deficit, prices do not fall.

A contradiction: Many analysts currently forecast lithium prices to fall as lithium deficits continue this decade

Source: Morningstar

What can go wrong with this forecast?

EV demand looks strong but in 2022 sales have been relying heavily on China, which has been responsible for 50-60% of global sales. This means any sales collapse in China will be heavily felt. European EV sales growth has weakened in 2022 due to events in Europe weakening their economy. USA EV sales have been growing quite well from a lower base, but the U.S economy is now slowing as interest rates are rapidly rising.

One plus for lithium demand is in the USA in 2023-24 we can expect to see new demand coming on from electric pickup trucks, which typically have a battery almost twice the size of an electric sedan, thereby requiring almost twice as much lithium.

Closing remarks

2022 has seen the West wake up to the need to source critical minerals and establish their own supply chain, or risk being left behind, as China grabs global electric car market share. The Inflation Reduction Act and the EU Critical Raw Materials Act are designed to address this problem and bring supply chains back home or at least with free trade agreement countries.

Again this is further evidence to suggest that the rest of this decade will see a fight to source critical minerals, none more important than lithium.

We may need to get used to lithium chemical prices at, or north of, US$50,000/t for the foreseeable future. This stronger for longer lithium pricing narrative should also flow through to the lithium miners many of which are currently priced at extremely low 2023 and 2024 earnings multiples, based on lithium prices falling back to US$20,000/t. If analysts become a little braver and use US$40-50,000/t in their models expect some very significant price target increases over the next year or two. Stay tuned.