

GALAXY RESOURCES LIMITED (OTCMKTS: GALXF)

Ramping Lithium Production to Meet Expected Market Demand

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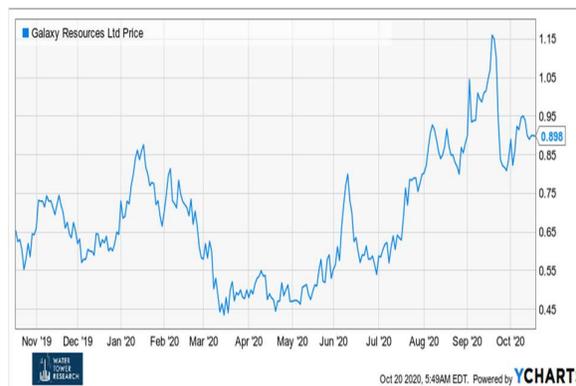
KEY POINTS

- **Galaxy Resources Limited (OTCMKTS: GALXF) is a small-cap growth company and lithium pure-play producer.** GALXF currently produces lithium through its spodumene mine (Mt. Cattlin) in Western Australia and is developing a high-quality brine resource at its Sal de Vida project in Argentina.
- **Sal de Vida's initial production of lithium carbonate is expected in Q4:2022 and could be an inflection point for the company.** Increased lithium production may coincide with a significant increase in lithium demand driven by strong growth in the electric vehicle market. Benchmark Mineral Intelligence (BMI) recently forecast total lithium demand will exceed operational supply beginning in 2022, reportedly causing a lithium supply shortage that is expected to accelerate through 2040.
- **GALXF is well capitalized with ~\$108.6M in cash and liquid assets and no debt, and is in a strong position to handle the near-term oversupply environment.** Management believes they are well positioned to be able to execute on the initial stages of the Sal de Vida project while continuing to fund operations at Mt. Cattlin, given the company's current balance sheet position.
- **Over the longer term (>3 years), GALXF may expand its operations to James Bay, which is a high concentration spodumene deposit near Quebec, Canada.** James Bay might provide a valuable option for GALXF should market demand increase as anticipated.

KEY STATISTICS

Price:	\$0.90
52 Week Range:	\$0.39-\$1.20
Avg. Daily Vol. (30 day):	52,4K
Shares Out (MM):	409.48M
Market Cap (MM):	\$367.7M
Institutional Ownership:	29%
Revenue TTM (MM):	\$64.84M

Source: Yahoo Finance as of Oct.19, 2020



Source: YCharts

COMPANY DESCRIPTION

Galaxy Resources Limited is a lithium producer with global operations in Argentina, Canada, and western Australia. GALXF currently produces lithium through its spodumene mine (Mt. Cattlin) in Western Australia and is developing a high-quality lithium brine resource in Argentina. Additionally, GALXF has access to another hard rock resource, James Bay, in Canada, which it may develop over the longer-term. GALXF is headquartered in Perth, Australia and was founded in 1996.

COMPANY OVERVIEW

Galaxy Resources Limited (OTCMKTS: GALXF) a small-cap growth company and lithium pure-play producer, is working to significantly expand its global operations over the next five years. GALXF currently produces lithium through its spodumene mine (Mt. Cattlin) in Western Australia, and is developing a high quality lithium brine resource in Argentina, which management expects will allow GALXF to compete with market leaders in terms of product quality, purity, and cost. Additionally, GALXF has access to another hard rock resource, James Bay, in Canada, which it may develop over the longer-term. GALXF is headquartered in Perth, Australia and was founded in 1996.

GALXF currently has one lithium producing resource, Mt. Cattlin, which is a wholly-owned project. GALXF has been operating the mine since 2009, and the resource currently produces lithium concentrate from spodumene with up to a 6.0% Li₂O (lithium oxide) grade. GALXF utilizes conventional mining and processing methods while extracting the spodumene, while relying on third parties for drilling, blasting, and hauling. At YE:2019, Mt. Cattlin had an estimated Ore Reserve of 8.2 Mt at 1.29% Li₂O and Mineral Resource of 14.6Mt at 1.29% Li₂O.

GALXF is focused on development of its Sal de Vida project, which could allow GALXF to better compete with larger lithium producers. Sal de Vida provides one of the highest-quality lithium brines in the world, with an expected resource life of >40 years and ~4.9M MT lithium carbonate equivalent (LCE) of potential output. Importantly, GALXF has most of the permits in place that are required for the project, and recently de-risked the project by reducing the scope of the initial production phase. First lithium production at Sal de Vida is expected in late 2022.

Over the longer term (>3 years), GALXF may expand its operations to James Bay, which is a high concentration lithium deposit near Quebec, Canada. Similar to Mt. Cattlin, James Bay is a spodumene resource. Notably, it is a much larger resource than Mt. Cattlin with an indicated supply of 564,000 dmt of Li₂O vs. Mt. Cattlin with 127.9 dmt of Li₂O as of YE:19. Although lithium production from spodumene is costlier than brine, James Bay provides a valuable option should lithium demand begin to significantly outpace supply in the coming years, as some industry experts predict.

GALXF is well capitalized which should help the company navigate a challenging near-term lithium price environment while pursuing its expansion goals. GALXF ended Q2 with ~\$108.6M in cash and financial assets, and no debt. Management believes they are well

positioned to be able to execute on the initial stages of the Sal de Vida project given the company's strong financial position. Additionally, GALXF is confident it will be able to secure additional financing to expand production at Sal de Vida once the resource quality and GALXF's production processes have been proven during the initial stage of the project.

GALXF recently secured an offtake extension with Sichuan Yahua Industrial Group. In July, GALXF announced it successfully extended its offtake agreement with Yahua International Investment and Development Co. Ltd. for 120,000 dmt of spodumene annually through 2025. Additionally, Yahua will reportedly purchase an additional 30,000 dmt by year-end 2020. Importantly, the spodumene concentrate contract is on a take-or-pay basis from 2021 to 2025. GALXF also has offtake agreements with Meiwa Corporation (~55,000 dmt annually through 2022) and Yi Chun Yin Li New Energy Co., Ltd. (~45,000 dmt in 2020 and ~60,000 dmt annually in 2021 and 2022), both on a take-or-pay basis.

Management believes recent stimulus packages will help drive demand and strengthen lithium prices over the intermediate-term. Although lithium continues to be in an oversupply environment, resulting in depressed prices, GALXF management recently expressed optimism that government subsidies and stimulus packages will accelerate electric vehicle adoption and lithium demand over time. Management believes the European Union's "Green Recovery Plan", which introduced a 20B EUR purchasing facility for electric vehicles, will be a major driver of EV adoption in the EU. Additionally, Germany is requiring the installation of electric vehicle charging stations at gas stations in the country, which should ease concerns about being able to travel long distances in EVs and could increase EV demand. Moreover, France recently announced a production target of 1M electric vehicles by 2025, and China launched stimulus packages to help the country achieve its target of a 25% penetration rate of alternative energy vehicles by 2025. All of these initiatives should drive demand for EVs and provide tailwinds for the lithium industry.

Although lithium continues to be in an oversupply environment, the cancellation and/or delay of several lithium projects, combined with increasing battery demand for electric vehicles, could support lithium price appreciation over the intermediate term. Importantly, COVID 19 caused the shutdown of many auto OEMs plants globally, which impacted lithium demand and market visibility. That said, many EV manufacturers have restarted production, and there has been a surge in demand for EVs in both China and Europe, which could help alleviate the lithium supply and demand imbalance if demand

for electric vehicles continues to increase. Additionally, COVID 19 has impacted lithium production, particularly in South America, which has helped to further reduce the prior acute market oversupply.

MT. CATTLIN OVERVIEW AND RECENT STATISTICS

To adapt to soft market conditions, Galaxy has adopted a market driven strategy to produce at half of Mt. Catlin's nameplate capacity. Lithium production was impacted as the Mt. Cattlin mine and plant operated at ~50% capacity, which was a planned capacity reduction originally announced by management in October 2019. Given the current market oversupply and low-price environment, GALXF decided to reduce mining at Mt. Cattlin and to focus on processing stockpiled ore and reducing inventory. Ore processed through June, 2020 was 650,547 wmt with ~45,248 dmt of concentrate produce vs. 836,695 wmt of ore processed and 98,334 dmt of concentrate produced through June, 2019, representing y/y declines of ~43% and ~54%, respectively.

GALXF is on track to meet its annual production targets in 2020. Due to GALXF's planned shutdown in Q1:20, production guidance was 2H weighted. Notably, GALXF had strong Q2 production, and positioned its annual production target. For FY:2020, GALXF forecast 1.6M-1.8M MT of total material mined (versus 1H:20 production of 651k MT, including ~578k in Q2), ore processed of ~900k-1M MT (versus ~479k MT processed in 1H:20, including 325k MT in Q2), and ~90k-105k MT of concentrate produced (versus ~45k dmt produced in 1H:20, including ~31k dmt produced in Q2). For Q3:20, GALXF has guided to 26k-31k dmt of concentrate production, and management is confident its planned production in 2H:20 combined with its current inventory of final product stocks should enable the company to meet its 2020 customer requirements.

Figure 1: Mt. Cattlin Production, Sales, and Costs

	Units	Q1 2020 ¹	Q2 2020	H1 2020	2020 Forecast Production Metrics
Mining					
Total material mined	bcm	72,640	577,907	650,547	1,600,000 – 1,800,000
Ore mined	bcm	29,115	124,096	153,211	-
Processing					
Ore processed	wmt	154,457	324,503	478,960	900,000 – 1,000,000
Grade of ore processed	% Li ₂ O	1.03	1.04	1.04	1.0 – 1.2
Mass yield	%	9.5	9.7	9.6	-
Recovery	%	55	55	55	58 – 62
Concentrate produced	dmt	14,306	30,942	45,248	90,000 – 105,000
Grade of concentrate produced	% Li ₂ O	6.06	5.93	5.97	6.0
Sales					
Concentrate shipped	dmt	32,512	26,030 ²	58,542	-
Grade of concentrate shipped	% Li ₂ O	5.9	5.9	5.9	-
Production Costs					
Cash cost per tonne produced	US\$/t FOB	592	412	469	-

¹ Mining and processing operations recommenced sequentially from mid-February through to early March.

² Does not include 15,758 dmt sold in late 2019 and shipped in April 2020.

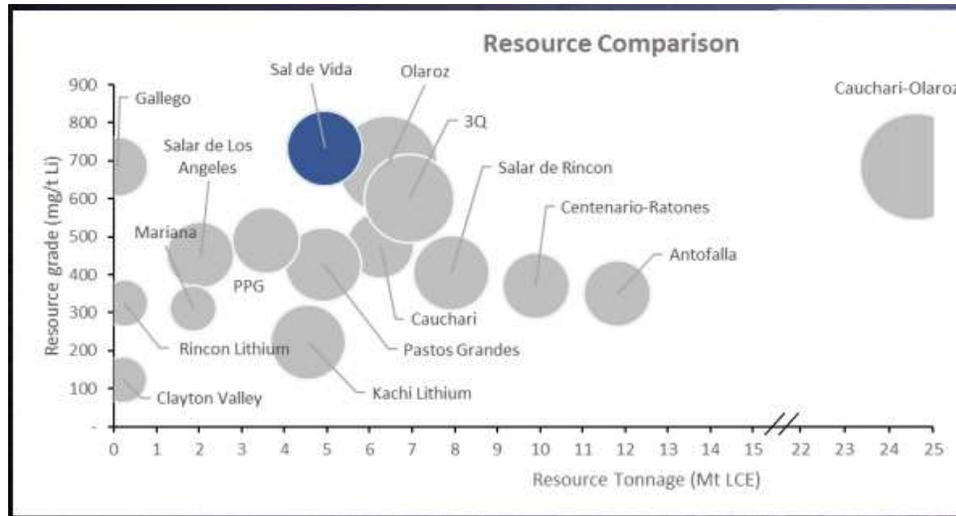
Source: GALXF company reports, Water Tower Research

GALXF experienced lower prices and volumes in 1H:20, which were impacted by the market oversupply environment. GALXF's 1H:20 revenue declined to ~\$23.29M vs. \$27.96M in 1H:19, which was largely driven by lower prices from market oversupply and reduced demand due to COVID-19. Revenue was impacted by declining spodumene prices, which averaged ~\$398 per tonne of concentrate in 1H:20 vs. \$627 in 1H:19. The FOB cash cost was \$469/dmt in 1H:20 vs. \$387/dmt in 1H:19, with the increase driven by lower production volumes due to Mt. Cattlin's reduced operations in Q1:20.

SAL DE VIDA PROJECT DETAILS

Sal De Vida is reportedly one of the highest concentration brine resources with ~700 mg/t li expected. This is higher than Salar de Olaroz, the brine resource used by Orocobre, which has a concentration of ~690 mg/t li. Once developed, Sal De Vida could facilitate the production of high-quality lithium products at a substantially reduced cost compared to GALXF's spodumene mine at Mt. Cattlin.

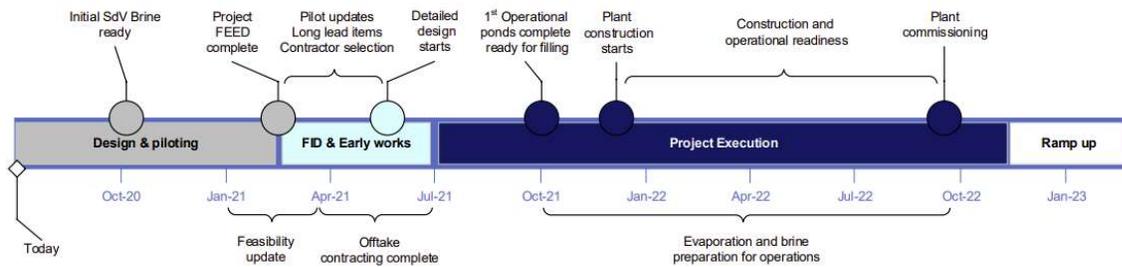
Figure 2: Global Lithium Resource Comparison



Source: Benchmark Mineral Intelligence and GALXF company reports

Sal De Vida advanced to design phase in July of 2020 with the commencement of front-end engineering design (FEED). The design of the brine ponds and distribution is currently underway, and the second FEED package was awarded in Q3 2020, which will cover the process plant and non-process infrastructure. GALXF plans to complete its design and piloting phase by Q1:2021 and FID and preliminary work by July of 2021. This includes pilot updates and contractor selection, and the start of detailed designs for the plants. In October of 2021, management expects the first operational ponds to be complete, and to start plant construction prior to YE:2021. If things remain on schedule, GALXF anticipates plant commissioning to occur prior to October of 2022, with the plant ramping production through Q1:2023. That said, COVID-19 cases have been accelerating in Argentina, and government restrictions could remain in place longer than expected, which could impact the overall project timeline, according to the company.

Figure 3: Sal de Vida Project Timeline

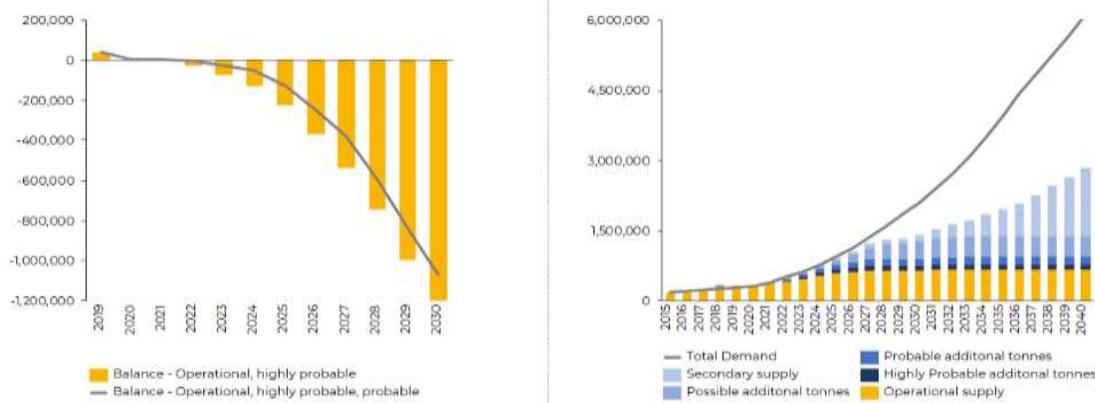


Source: GALXF company reports

GALXF has de-risked its development strategy at Sal de Vida by adopting a staged, scalable approach for production to accelerate earnings and smooth capital expenditures. The first stage of development targets the initial production of primary grade lithium carbonate to sell to the purification industry and the second stage targets a direct duplication of stage 1. Coinciding with the expansion of production, GALXF plans to buildout the infrastructure on an offsite location to purify the lithium into battery-grade products. Over the longer-term, GALXF plans to build purification capacity to match its output from the evaporation ponds at Sal de Vida.

Sal de Vida’s initial production of lithium carbonate is expected in Q4:2022, which may coincide with a significant increase in lithium demand driven by strong growth in the electric vehicle market. Benchmark Mineral Intelligence (BMI) recently forecast total lithium demand will exceed operational supply beginning in 2022, causing a lithium supply shortage that it believes will accelerate through 2040. BMI anticipates this will cause a favorable pricing environment for lithium producers, which should benefit GALXF.

Figure 4: Benchmark Mineral Intelligence Lithium Supply and Demand Forecast



Source: Benchmark Mineral Intelligence and GALXF company reports

Sal de Vida also provides a large ore reserve with an estimated ~1.1M tonnes of lithium carbonate equivalent. The proven reserves could last 1-6 years and provide ~181k tonnes LCE, with the probable reserves potentially lasting up to 40 years with ~958k tonnes LCE. This could support future revenue growth for GALXF, assuming market demand for lithium increases.

Figure 5: Sal De Vida Resource Statistics:

Table 1: Sal de Vida Mineral Resource

Category	Brine Volume (m ³)	Avg. Li (mg/L)	In-situ Li (Tonnes)	Li ₂ CO ₃ Equivalent (Tonnes)	Avg. K (mg/L)	In-situ K (Tonnes)	KCl Equivalent (Tonnes)
Measured	490,000,000	759	369,000	1,964,000	8,126	3,952,000	7,536,000
Indicated	680,000,000	717	485,000	2,583,000	8,051	5,446,000	10,385,000
Inferred	100,000,000	706	71,000	376,000	6,747	676,000	1,289,000
Total	1,300,000,000	732	925,000	4,923,000	7,976	10,073,000	19,210,000

Note: Assumes 500 mg/L Li cut off.

Table 2: Sal de Vida Ore Reserve

Category	Time Period	Li Total Mass (Tonnes)	Equivalent Li ₂ CO ₃ (Tonnes)	K Total Mass (Tonnes)	Equivalent KCl (Tonnes)
Proven	1 - 6	34,000	181,000	332,000	633,000
Probable	7 - 40	180,000	958,000	1,869,000	3,564,000
Total	40 years total	214,000	1,139,000	2,201,000	4,197,000

Note: Assumes 500 mg/L Li cut off. Total tonnages for the economic Ore Reserve values above account for anticipated leakage and process losses of lithium and potassium. The results above are Proven and Probable Reserves from the Southwest and East well-fields when these percent estimated processing losses are factored in, assuming a continuous average brine extraction rate of 30,000 m³/d. The conversion factor for Lithium to Lithium Carbonate is: x 5.3228. The conversion factor for Potassium to Potassium Chloride is: x 1.907. Minor discrepancies may occur due to rounding to appropriate significant figures.

Source: GALXF company reports

MANAGEMENT

Simon Hay, Chief Executive Officer

Prior to GALXF, Mr. Hay held a variety of roles at Iluka resources, including Head of Resource Development, General Manager Zircon Sale, VP of Sales and Marketing for Asia Pacific, and Operations Manager of the South West region. Before Iluka, Mr. Hay was the Maintenance manager and Production Manager at BHP Billiton. Mr. Hay holds a B.Sc. in Chemistry and a Masters in Chemical Engineering from the University of Melbourne.

Alan Rule, Chief Financial Officer

Prior to GALXF Mr. Rule was the Chief Financial Officer for Sundance Resources, Paladin Energy, and Mount Gibson Limited, Western Metals Limited and St. Barbara Mines Limited. Mr. Rule has over 20 years of experience in the mining industry with a focus on financing mining projects and overseeing and implementing accounting controls and procedures. Mr. Rule holds a Bachelor of Accounting degree and a Bachelor of Commerce degree from the University of Witwatersrand, and is a Chartered Accountant.

Brian Talbot, Chief Operations Officer

Mr. Talbot has held several positions at GALXF including General Manager, where he managed Mt. Cattlin and significantly expanded production. Prior to GALXF, Mr. Talbot held various positions at various mining operations in Egypt and South America, and significantly increased capacity and yield at a lithium operation in Zimbabwe while at Bikita Minerals. Mr. Talbot holds a Bachelor's degree in Chemical Engineering from the University of Witwatersrand.

Tom Blackwell, Executive – Major Projects

Prior to GALXF, Mr. Blackwell oversaw strategic mineral and technological developments at Iluka Resources (ASX:ILU) Mr. Blackwell has over 20 years of experience in the development of brown and green field projects, and has managed projects across all stages including feasibility, execution and commissioning. Mr. Blackwell holds an MBA from Deakin University and completed business management courses at INSEAD.

RISKS

Demand growth for GALXF's high performance lithium compounds is dependent on growth of the electric vehicle market. The EV market may not grow as quickly as anticipated if there are changes in tax and economic incentives, regulations, lower rates of adoption for higher performance compounds, or lower than expected EV adoption rates by consumers. Additionally, competing alternative fuel vehicles could also adversely impact EV demand.

The development and project ramp up at Sal de Vida may take longer than expected or cost more than originally estimated. This could require GALXF to have to raise additional capital in order to complete the project. GALXF's ability to raise capital could be dependent on lithium market and/or global economic conditions.

Lithium prices can be volatile dependent on global market supply / demand conditions. The lithium market has been in an oversupply environment since 2018, which many believe will continue in the intermediate-term. Although GALXF is working to secure long-term contracts with customers, lithium prices can be volatile based on fluctuations in global production and demand.

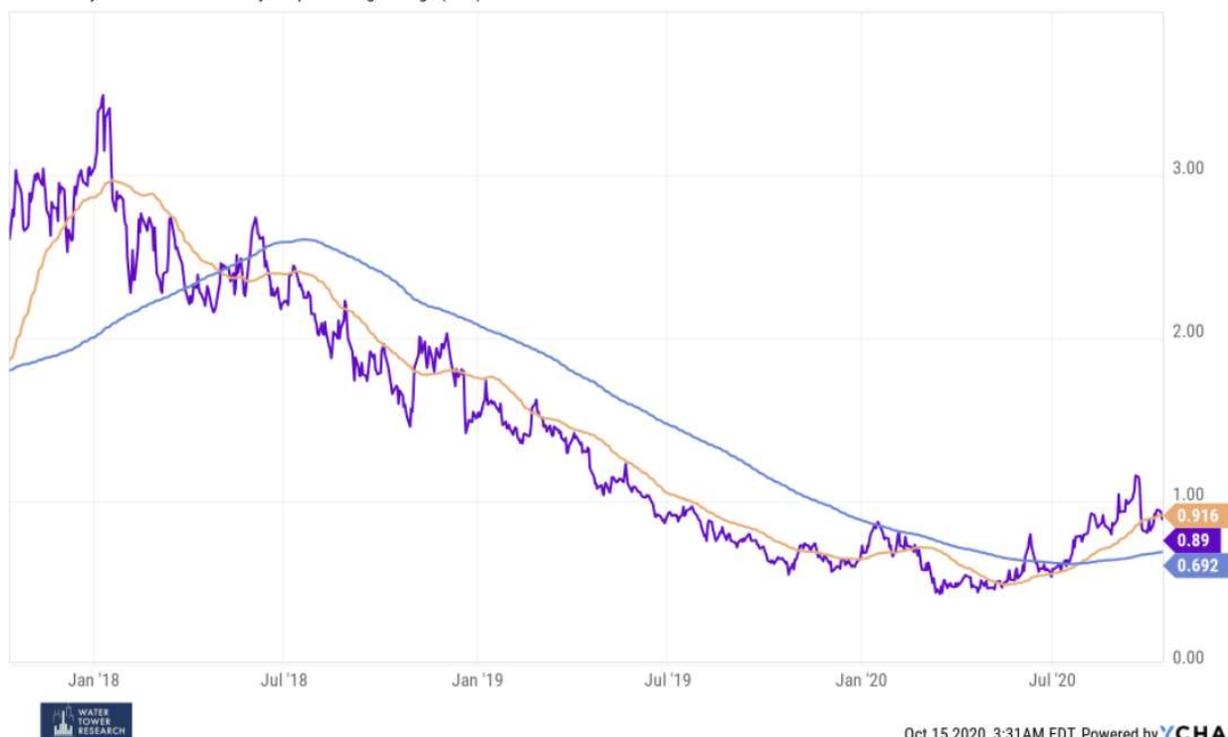
Expansion of production capacity requires significant capital expenditures and could be deemed unnecessary dependent on future demand. Additionally, several projects globally are currently on hold given impacts from COVID-19.

New battery technologies requiring less or no lithium could impact future demand. Several new battery technologies are in research and development, some of which could rely less on lithium hydroxide or other compounds. This could materially adversely impact future demand for GALXF's products and thus negatively impact GALXF's revenue and earnings, although there is no clarity to know if or when this could occur.

GALXF HISTORICAL PRICE PERFORMANCE

GALXF Three-Year Price Performance and Moving Averages

- Galaxy Resources Ltd Price (USD)
- Galaxy Resources Ltd 50-Day Simple Moving Average (USD)
- Galaxy Resources Ltd 200-Day Simple Moving Average (USD)



Source: YCharts, Water Tower Research

ABOUT THE ANALYST

Tyler Frank – Managing Director

Chemicals & Materials Technology

Tyler Frank is a Managing Director and Senior Analyst covering the Chemicals and Materials Technology sector. Prior to Water Tower Research, Tyler was a Senior Equity Research Associate at Robert W. Baird, providing investment recommendations and

stock analysis to institutional clients, including mutual funds, hedge funds, and pension funds.

Tyler's multisector coverage included companies in the renewable energy, disruptive technology, agriculture, and specialty chemical industries, and his team ranked in the top 5 for stock picking among all Baird research multiple times from 2013-2017. Additionally, Tyler has been quoted by Barron's, Business Insider, MarketWatch, and other financial publications due to his industry expertise. Prior to Baird, Tyler held several positions in wealth management, and provided investment services to ultra-high net worth clients at Hall Capital Partners and Fisher Investments.

Tyler received a BA, cum laude, with majors in Business Economics with an Accounting Emphasis, and Communications, from the University of California, Santa Barbara. Additionally, Tyler received a MA in International Economics and International Relations, with specializations in International Finance and Energy, Resources, and the Environment, from Johns Hopkins, School of Advanced International Studies (SAIS).

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