

# Cashed up from the POSCO sale – what's next for Galaxy Resources?

Lithium is 3rd element in the periodic table and the lightest solid element. It is a small soft silver grey metal perfectly suited for use as a super light electrolyte (conducts electrical current). The lithium-ion battery sector is one of the largest consumers of lithium, and it is growing very fast spurred on by the electric vehicle (EV) boom.

Lithium-ion batteries have superior energy density and are more efficient and environmentally friendly than traditional lead acid batteries. Originally used in computing and mobile communication devices, lithium-ion batteries are being increasingly used to power electric vehicles (bikes, cars, buses, trucks, boats, ships, and soon trains and planes), and mass energy storage devices to help power our homes and cities.

Galaxy Resources Limited (ASX: GXY) engages in the production of lithium with three 100% owned global projects diversified across spodumene and brine, and across 3 continents.

## **Sal de Vida (SDV) (Argentina) – Development stage**

Sal de Vida is one of the world's largest and highest quality undeveloped lithium brine deposits with significant expansion potential covering more than 385 square km. Galaxy Resources recently sold their northern SDV tenements to POSCO but retained their southern tenements upon which their current resource and Feasibility Study is based on. This means the negative impact from selling the north is minimal, and the positive is US\$280 million.



## **Mt Cattlin Spodumene Mine (Western Australia) – Production stage**

Galaxy Resources owns the Mt Cattlin spodumene Mine, located in Western Australia. Galaxy is currently mining pegmatite ore at Mt Cattlin and processes on site to produce a spodumene concentrate and a tantalum by-product. At full capacity, ore can be processed at a rate of 1.6 million tonnes per annum (tpa) with lithium oxide concentrate production of 180,000 tpa. Galaxy Resources holds a series of tenements surrounding and including the mining lease M74/244, which contains the majority of the spodumene resource identified to date and which hosts the Mt Cattlin mine.



Galaxy Resources' Mt Cattlin Mine in Western Australia

## **James Bay Spodumene Project (Canada) – Development stage**

The James Bay lithium pegmatite Project in Quebec Canada contains Indicated Resources of 40.3 million tonnes grading at 1.4% Li<sub>2</sub>O. The James Bay deposit occurs at surface and resource modelling indicates that the resource is amenable to open pit extraction. There is excellent potential to increase the resources through additional delineation of the pegmatite dykes along strike and at depth and potential to increase grade through infill drilling.

## **Recent big news for Galaxy as POSCO sale successfully completes**

In what started in August of 2018, a deal to buy Galaxy's northern SDV tenements for US\$280 million by South Korean steelmaker POSCO has finally settled.

Galaxy Resources stated: "(Galaxy) is pleased to advise that final settlement of the sale of a package of tenements located on the northern portion of the Salar del Hombre Muerto to POSCO has now been completed....Galaxy will now receive US\$271.6 million (after US\$8.4 million in withholding taxes was paid in November 2018) as follows: US\$257 million consideration held in escrow plus interest accrued will be released by the escrow agent to Galaxy by Tuesday 26 February 2019 and US\$14.6 million will be paid by POSCO directly to Galaxy by Friday 1 March 2019, now that registration of the usufruct transfers has also been completed."

The above sale proceeds will combine with Galaxy's existing cash of ~US\$ 41 million, less tax to form a very nice cash pile heading towards US\$300 million.

## **What will Galaxy do with their new large cash hoard of ~US\$250 million?**

My best hypothesis is the following:

1. ~US\$150 million towards the development of SDV, in combination with a project partner.
2. ~US\$100 million towards a lithium spodumene conversion plant either in Western Australia or China. A JV with Neometals (ASX: NMT) perhaps?
3. Any remaining funds to purchase nearby lithium tenements/projects to bolster the mine life of Mt Cattlin, and to advance James Bay.

My outlier idea is Galaxy may look to diversify away from lithium into other EV metals.

Please note the above is what I think may happen, and purely my own speculation.

What is for sure is that Galaxy Resources will continue to make profits from their Mt Cattlin lithium spodumene mine, focus to advance Sal de Vida to production, and steadily advance James Bay to FS stage completion for now. This makes Galaxy one of the very best pure play lithium miners globally, and definitely on investors radar with plenty of near term catalysts likely in 2019.

Australian based Galaxy Resources Limited has a market cap of A\$910 million, noting they will shortly have ~A\$400 million in cash, and no debt.

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**A pure play lithium miner  
with cash and zero debt**

# attracts Galaxy interest.

The salt flats of Chile, Bolivia and Argentina hold the bulk of the world's supply of lithium. These stunningly beautiful salt flats form a region that has become known as the Lithium Triangle. The demand for lithium is expected to at least triple by 2025.

Australian based Galaxy Resources Limited (ASX: GXY) engages in the production of lithium concentrate, with their flagship project Sal de Vida (Salt of Life) located within the Lithium Triangle, in Argentina. The Company also holds 100% interest in both the Mt Cattlin lithium spodumene mine in Western Australia, and the James Bay lithium spodumene project in Quebec, Canada.



Sal De Vida – “Salt of life”

## Sal de Vida

Sal de Vida (SDV) is one of the world's largest and highest quality undeveloped lithium brine deposits with significant expansion potential. Galaxy controls 100% of the brine mineral rights covering more than 385 square km.

The Sal de Vida brines average about 780 mg/L lithium which is good. They also have potassium concentrations averaging around

0.87 mg/L potassium, with low sulfate and magnesium which is also advantageous (high magnesium content can increase the production costs of lithium carbonate).

In May 2018, an updated Feasibility Study (FS) was released supporting a low cost, long life lithium and potash operation. The updated FS estimated a post tax net present value (NPV) of US\$1.48 Billion, with a post-tax IRR of 26.9%, over a 40 year mine life. Average annual revenue was estimated at US\$360M and EBITDA at US\$270M. CapEx was estimated at US\$474M and ongoing expenses at US\$3,144/t LCE. Clearly SDV economics are impressive and it looks like it will be a very profitable project. The planned development can use modular designs giving flexibility to add units to upscale the capacity of 25,000 tonnes per year of lithium carbonate and 95,000 tonnes of potassium chloride.

### **Galaxy's Q3 activities report**

As of the 30th of September 2018 Galaxy had US\$54.7M in cash and liquid securities and zero debt. In addition, a US\$13.3M payment for a shipment completed in late September was received in early October.

During the past quarter, Galaxy entered into a binding agreement with POSCO to sell a package of tenements located on the northern area of the Salar del Hombre Muerto in Argentina, for a cash consideration of US\$280M. In early October, POSCO transferred US\$257M into the designated transaction escrow account at HSBC. These funds will be released to Galaxy upon receipt of the tenement transfer deeds which is expected to be released by the end of October 2018. Note that the sale of the northern tenements does not impact Galaxy's NPV on Sal de Vida as they were not included.

Adding all the cash Galaxy will soon be at about US\$348M, which goes a long way towards the US\$474M to start Sal De Vida.

## **Mt Cattlin Spodumene Mine update**

During Q3, the Galaxy commenced a 30,000 m drill program in support of exploration, resource and reserve development at Mt Cattlin. As the dry season in Western Australia approaches, exploration activities will include a further round of ground penetrating radar (GPR) west of Mt Cattlin and completion of ongoing geochemical sampling programs confirming earlier GPR work. An updated resource and reserve estimate is expected early in Q1, 2019.

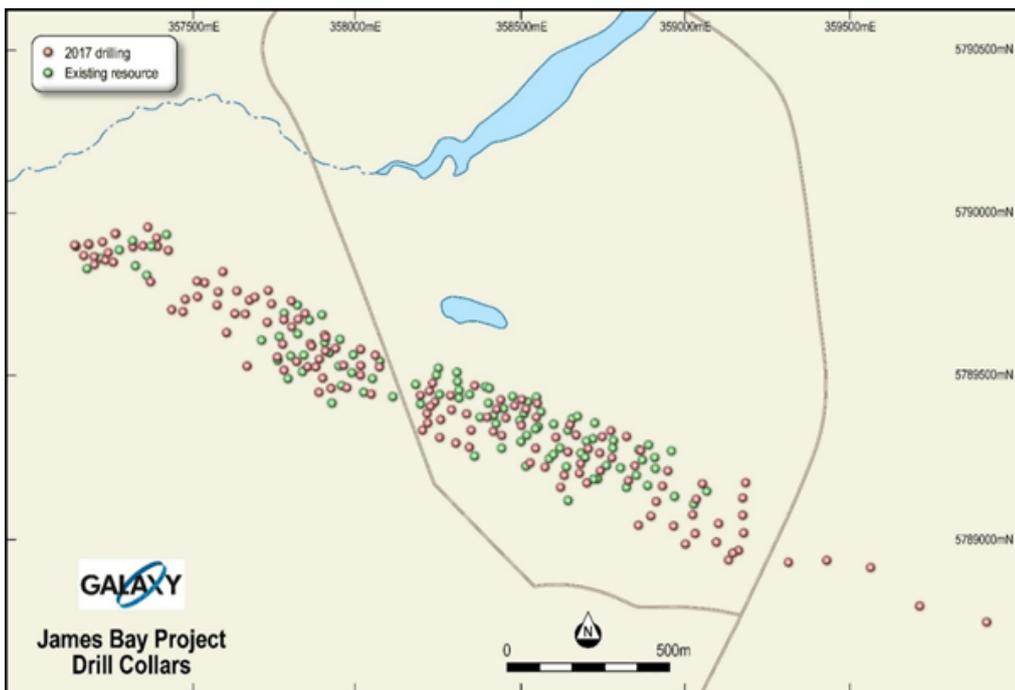


Galaxy Resources' Mt Cattlin lithium mine

## **James Bay Spodumene Project update**

The James Bay lithium pegmatite project contains indicated resources of 40.3 million tonnes grading at 1.4% Li<sub>2</sub>O. The deposit occurs at surface and resource modeling indicates it is amenable to open pit extraction. There is excellent potential to increase the resources through additional delineation of the pegmatite dykes along strike and at depth and potential to increase grade through infill drilling. Galaxy is steadily progressing the project towards a

## Feasibility Study.



If you look from a distance it spells. "Invest in Galaxy"

Galaxy Resources continue to give investors a lower risk, high reward, pure play lithium miner with an achievable pathway ahead which should significantly reward long term investors. Cash flow and reserves are excellent, and several near term catalysts exist. The big one would be a project partner or funding decision on Sal De Vida. Put simply, Galaxy is a great buy.

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**Lithium investors need look  
no further than Galaxy**

# Resources

Galaxy Resources Limited (ASX: GXY) is an Australian lithium miner with three lithium projects globally. Unlike their much larger peers, they are a pure play lithium miner. Galaxy recently agreed to sell their northern Sal De Vida tenements to POSCO for US\$280m, thereby boosting Galaxy's balance sheet and de-risking the Company once the sale completes in Q3, 2018.

## **Mt Cattlin lithium spodumene mine – Western Australia**

The Mt Cattlin mine has ramped up lithium spodumene production to reach 47,901 tonnes in Q2 2018, at an average cash margin of US\$534/t. On a yearly basis that works out to be ~US\$100m just from Mt Cattlin.



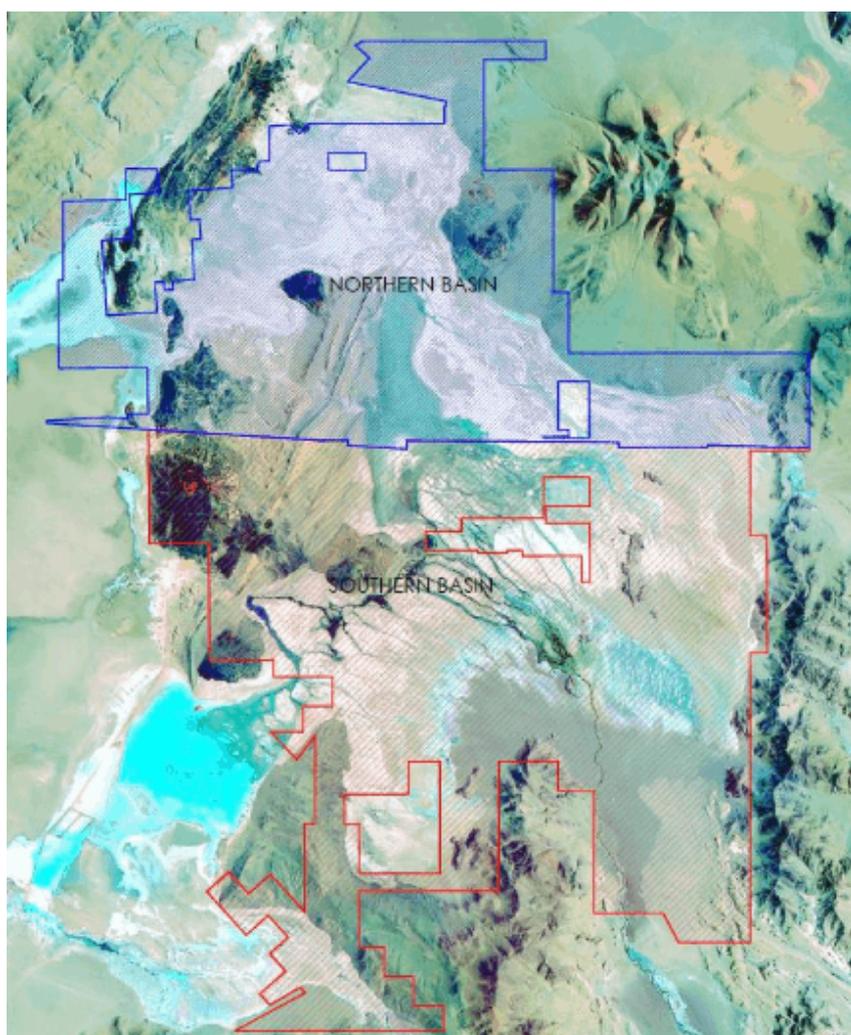
Mt Cattlin

## **Sal De Vida (SDV) lithium brine project – Argentina**

After the sale of the northern tenements of Sal De Vida to POSCO the total resource estimate for Galaxy's retained SDV falls to 4.09 million tonnes LCE (at a grade of 780mg/L), as Galaxy retains the southern tenements. The reserves estimate

of 1.14 million tonnes also remains unchanged. The key point here is that Galaxy still has a very large high quality resource. The latest Feasibility Study results (post tax NPV8% of US\$1.48 billion) is therefore unchanged as it did not include the northern tenements.

On July 9 the Company announced (regarding the POSCO sale): “The Company advises that the agreed timetable for completion of this transaction continues to be met, with notice received from POSCO on 6 July that their investment review had been completed satisfactorily. The transaction remains conditional on execution of definitive documentation and final POSCO Board approval which is still expected during the third quarter of 2018.”



SDV tenements map – Blue sold to POSCO, and red retained by Galaxy

## **James Bay spodumene mine – Ontario, Canada**

Galaxy Resources continues to slowly advance their final project at James Bay. The Feasibility Study is in progress as is further metallurgical test work and ongoing engagement with the local Cree community.

### **Valuation**

As of June 30, 2018 Galaxy had US\$84.8 million in cash, and no debt. Current market cap is AUD 1.25b and enterprise value is estimated to fall to AUD 860m or lower (after the POSCO sale completes). 2018 PE is 10.4. Analyst's consensus target price is AU\$4.04.

With the POSCO sale due to complete sometime in Q3 2018 Galaxy Resources should receive a significant re-rating given the fact the sale proceeds of US\$280m (plus ~US\$200m retained Mt Cattlin earnings) will be enough to allow Galaxy to self fund Sal De Vida (CapEx US\$474million). Looking ahead once Sal De Vida is up and running it is projected to earn an EBITDA of US\$270 million for a project life of 40 years (40 years x 25,000tpa). Finally James Bay could be brought on quite easily using existing retained earnings say by mid 2020's as global lithium demand requires. Once all three projects are running Galaxy Resources could be looking at combined EBITDA of ~US\$500m pa (100m + 280m + 120m). Applying a 10x multiple to this would suggest Galaxy is headed towards an Enterprise Value of ~US\$5b by the mid 2020's, which would be 5.8x higher than now.

Investors need look no further than Galaxy Resources for a lower risk, high reward, pure play lithium miner. The pathway ahead looks very achievable, and should significantly reward the long term investor looking to buy and hold until 2025 and beyond.

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# Galaxy Resources – Achieving Lithium Liftoff

As may be remembered we divided the Lithium world into various generations some while back. There was the Lithium 1.0 world of Neometals, Talison, Galaxy, Orocobre and Nemaska and then the Lithium 2.0 group of rising entrants that appeared in 2016. We also declared 2017 to be the lost year in Lithium. Months have gone by and nothing has happened to change our mind on the “lost year” thesis as valuations still largely remain near 18 month lows for many players from both “generations”.

While the market torpor has impinged upon the movements and progress of the industry’s wannabes those that are already advanced from the first generation either are in production, are fully funded or have firm offtakers. Galaxy Resources Limited (ASX: GXY) (Galaxy) is amongst those showing rising production numbers and should shortly be showing a positive bottom line. In this piece I shall look at progress in recent times.

## Backstory

Galaxy has gone full circle. It was the outlier hard rock Lithium story at the start of the Lithium boom with its focus being the Mt Cattlin spodumene deposit in Western Australia when everyone else was off chasing LatAm *salares*. After bringing that to production, then focusing on the downstream with a processing plant in China, then disposing of that plant and then refocussing on the Australian mine, it has parallel processed an Argentine *salar* in recent years and that has now moved into poll position in its list of foci.

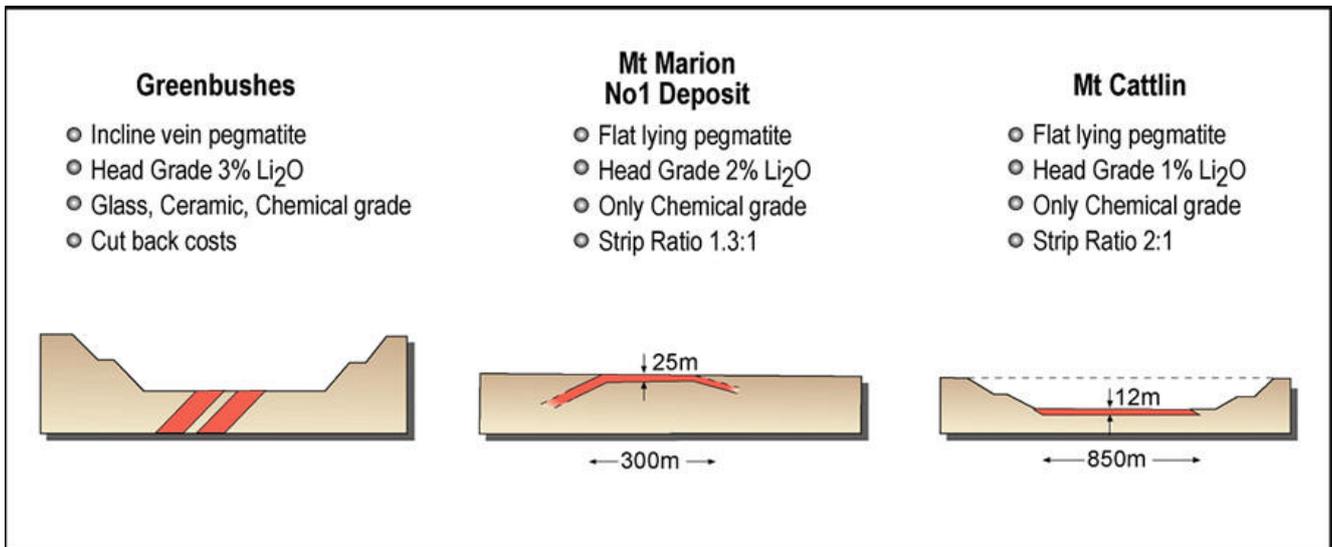
Nevertheless with its burgeoning production from Mt Cattlin and now its evolving Latin brine focus, Galaxy is one of the few listed companies we can think of (though Talison used to be an example) that straddles the two types of mineralisation (and the two continents). Clearly it hopes the ultimate outcome will be as profitable for shareholders as the ultimate fate of Talison.

### **Mt Cattlin – on the Move Again**

When first mooted the Mt Cattlin project was aiming to produce 137,000 tonnes of 6% spodumene concentrate per annum. The mine also has a Tantalum by-product credit which was expected to be 56,000 lbs per annum of Tantalum Oxide if production reached the aforementioned spodumene tonnages. In its current manifestation the target is 160,000 tonnes per annum of 5.5% spodumene concentrate with a goal of getting to the 6% grade. We have not seen much lately on the strategy regarding the Tantalum component.

For a couple of years Mt Cattlin was mothballed. It was for a brief period the “other” Australian Lithium producer from spodumene with the “big” producer being the Greenbushes mine, which was owned by Talison, until that company was taken over for around \$760mn by a consortium of the Chinese producer, Tianqi, and Rockwood (now Albemarle).

As for Mt Cattlin, the comparative cross-sections below are a good visualisation.



Greenbushes is the long-producing property of Talison and is the most problematical property logistically but is compensated with a good grade. Neometals' Mt Marion has the advantage of a minimal strip ratio and a grade that is double Mt Cattlin's. Strip ratios for the Mt Marion deposits range from 1:1 to 2:1. Meanwhile Mt Cattlin has the Tantalum credits.

## The Restart

All long lead items required for the restart were ordered in late December 2015, with the 2016 production timeline comprising:

- Fines circuit commissioning – late March 2016
- Coarse circuit commissioning – late June 2016
- First export of concentrate – estimated July 2016
- Plant optimisation process – completed December 2016

The completed plant can be seen below:



The first shipment of product left port in the first days of January of this year.

In October of 2016 it was announced that Mitsubishi would buy 100% of the spodumene output of Mt Cattlin and Mitsubishi did indeed buy the first shipment. The March quarterly statement announced that Galaxy had signed binding agreements with Chinese offtakers for 120,000 tpa during the December quarter, which seemingly gazumped the Mitsubishi transaction. In the June quarterly report the company reported that it has satisfied all offtake supply obligations from 2016 priced at US\$600 per tonne and that henceforth the 2017 pricing terms would kick in at a much more lucrative \$830 per tonne for 5.5% lithium concentrate (rising to \$905 per tonne for 6% concentrate).

### **Production Progress**

Output is ramping up nicely at Mt Cattlin. Production still has to hit higher targets though as forecast production was supposed to be 160,000 tonnes of spodumene in FY17 and it

stands at around one third of that level, halfway through the year. An undershoot seems probable but nevertheless Galaxy is now a world-ranking producer and on the way towards meeting its targeted run-rate in the first half of 2018.

<b>Mt Cattlin Production</b>				
	<b>FY16</b>	<b>March Qtr</b>	<b>June Qtr</b>	<b>FY17 YTD</b>
Ore Mined (wmt)		233,193	303,394	536,587
Grade		0.96%	1.12%	1.05%
Spodumene Produced (dmt)	10,000	23,467	32,998	56,465
Spodumene Sold (dmt)		23,455	20,135	53,590
Spodumene Grade sold		5.38%	5.77%	5.60%

## **Financials**

With volumes rising and the low priced initial offtake satisfied and replaced by the more lucrative contracts at a price a full third higher the revenues should expand substantially in the second half of FY17 as well as margins widening out. Here are the financial for the recent past and some projections looking forward.

## Galaxy Resources

In Millions of AUD (End-Dec FY)

	FY18e	FY17e	1H17	FY16	FY15
Mine revenue	68.00	45.00	14.975		
Cost of production	41.00	33.00	13.008	(0.278)	(0.11)
Gross Profit	27.00	12.00	1.967	0.278	0.11
Other Income	3.50	3.50	2.416	0.013	0.050
Other Expenses	(12.00)	(13.00)	(6.002)	(7.673)	
Finance Income	0.20	0.22	0.116	0.029	4.277
Finance Expenses	(9.00)	(10.80)	(5.481)	(9.432)	(9.611)
Operating Income	9.70	(8.08)	(6.984)	(17.341)	(15.580)
Loss from discontinued ops					
Resinstatement (Impairment) of assets				75.691	
Misc gains (losses)				(0.330)	
Income Before Tax	9.70	(8.08)	(6.984)	58.020	(15.58)
Tax (credit)	0.00	0.81	0.503	64.686	0.00
Net Income (loss)	9.70	(7.28)	(6.481)	122.706	(15.58)
Minority Interest				(0.08)	
Net Income adj Minorities	9.70	(7.28)	(6.481)	122.706	
Weighted Average Shares	400.0	396.0	395.8	1,832.545	1,264.433
EPS	0.0243	-0.0184	-0.0227	0.083	-0.014

Adjusted EPS for consolidation

Cementing its reputation as a reliable producer should be key in Galaxy negotiating higher its prices in coming years and hopefully bettering these projections.

## Conclusion

Galaxy was “first in, best dressed” in the Lithium space and learnt the lessons before many of the others. At least from the outside it appears a lesson to learn is to be wary of “Chinese bearing gifts”. Fortunately Galaxy eventually succeeded in escaping from that relationship and managed to get the “money and the house” in the form of the Mt Cattlin asset plus the cash to get it finally into production.

With product churning out at an increasing rate, Galaxy and its near- and distant-neighbours in Western Australia have put spodumene back into contention in the Lithium race when it looked in 2010 as if *salares* would conquer the world. With Tianqi and Ganfeng having got their grips on the two other

main deposits, Galaxy looks ripe for the “Empire Strikes Back” and a Japanese move to defend territory against Chinese encroachment, dare we say, domination. Galaxy with Mt Cattlin and the advancing Salar de Vida project in Argentina looks like prime takeover fodder in the game of international Lithium chess currently being played.

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## **Another Galaxy milestone in Lithium production**

Galaxy Resources Limited (ASX: GXY) (“Galaxy”) has long been a favourite of ours; their assets are robust, their partners strong and their team evidently driven. Whether they are motivated entirely by a love of grinding myriad rock-types into valuable commodities is unclear, but Galaxy continue to prove that they are fast movers in an already quick-paced game with landmark progress at multiple sites.

Not only did they reach full production earlier this year, but the completed shipments have so far both departed northward, the most recent of which was 14,000wmt of spodumene concentrate bound for Mitsubishi Corporation in China, for which payment is now imminent. This has left the guys at Galaxy a little extra free-time, and more cash to focus on finishing up exploration work at the James Bay pegmatite project in Quebec, Canada. Additionally, the product coming off the belt at Mt Cattlin has exceeded the 5.5% Lithium Oxide concentration originally stipulated by the company.

As if this weren’t enough, Galaxy are the proud owners of a total of three world class lithium deposits, and one of the greatest things about having multiple assets is the ability to

bring the most valuable to production first and use the resulting cash-flow to make progress on other resources without having to beg for additional capital.

Having shelved progress on the Definitive Feasibility Study (DFS) at James Bay back in 2012 to focus on Mt Cattlin, Galaxy are keen to return to Canada to demonstrate that the James Bay resources are up-to-scratch. Interestingly, there are still many spodumene-bearing pegmatites at the site that have not yet been fully explored, which could reveal valuable additions to Galaxy's growing collection of James Bay DFS data.

Currently, the asset comes in at 22.2Mt inferred and indicated, with a grade of 1.28% Lithium Oxide, and metallurgical work conducted in 2012 revealed that a lithium concentrate could be produced with grades of up to 6.53%, which is not to be sniffed at. The DFS will confirm or deny the ultimate value of the project, but the company wouldn't be reactivating the area if things weren't looking good.

In today's hyper-competitive junior mining world, any company that wishes to reach production must do so with cost refined downward about as far as it can go. This leads to a multitude of geological, metallurgical and logistical considerations that can truly make or break a project on efficiency alone. The James Bay deposit occurs at surface, and modelling has indicated that the site is good for a simple open pit extraction, which keeps costs much lower and logistics far less nightmarish, and yet there still remains excellent potential to use the drilling programs, studies and pilot-plant testing to add significantly to resource estimates. Getting involved with Galaxy now might seem a little late, but they may still have a few underground surprises in-store for us yet.

Mt Cattlin is not only generating revenue these days, but moving ever-closer to its nameplate capacity of processing around a million tonnes of ore per annum. With the Australian

mine currently exceeding its own quality specifications, I'm left wondering what treasures will be revealed at James Bay. In addition to the two mentioned projects, let's not forget Galaxy's Sal de Vida claim in the Argentina section of the renowned "lithium triangle" – host to more than half of the world's lithium reserves.

A few years ago, you could have looked at Galaxy and passed them over quite readily, but like an archaeologist carefully brushing away the sand long-accumulated atop a valuable artifact, they have revealed some truly great finds from not much more than piles of dust.

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## **The “unstoppable” Galaxy Resources, bullish about global lithium demand**

An outstretched hand is often bitten; unless that hand belongs to Galaxy Resources Limited (ASX: GXY) (“Galaxy”), in which case it apparently gets filled with cash. Since the first lithium shipment left its Mt. Cattlin spodumene project only last month, Galaxy has moved to advance its South-American brine deposits, raising A\$61m in a massive show of confidence.

It's really no surprise that people would slam bets down on these guys; they just get stuff done. Despite 240mm of unseasonal rainfall in the second week of February causing minor damages and a two-day shutdown, production rates were entirely unaffected and the second 15,000mt shipment is expected to depart Esperance Port for China any day now.

The processing plant has already reached 90% of nameplate

throughput, with a peak feed rate at 95% of design. By the end of this month, Galaxy expects to have met its stated nameplate design of 210tph of processed material. It's this sort of smooth running in spite of hiccups that drives confidence in the company; in some countries, snow stops trains.

Their planned developments in the lithium triangle of Latin-America have attracted considerable interest, not surprising since the region Galaxy is meddling in produces 60% of the world's lithium. Galaxy's Sal de Vida lithium and potash brine project in Argentina is a large salt flat, or salar. The salar lies approximately 1,400 kilometres north-west of Buenos Aires at an altitude of 4,025 metres and is accessible from the city of Salta. A Definitive Feasibility Study has already been completed on the property, concluding that Sal de Vida has the potential to generate total annual revenues in the region of US\$215m.

Galaxy's capital raising was primarily to advance the Sal de Vida project as well as their lithium pegmatite project in James Bay, Quebec. The capital raising was significantly oversubscribed, with support shown by both existing shareholders and new investors. The Sal de Vida project in particular has excellent potential as a low cost production facility; Salars, essentially dry lake beds, are so expansive that all processing equipment can normally be housed on site. Drying out a brine pond takes quite some time as it can only be done naturally, and not having to haul massive volumes of liquid down mountains is a logistical win.

The company is expecting significant cash flows from Mt Cattlin, with initial offtake prepayments of US\$13.5 million already received. The strong demand for the recent share placement confirms that people really believe in the way that Galaxy have spread their bets. This particular set of assets, owned by this particular company, as they exist today, is a prime choice in the lithium game, and everyone seems to know it.

Lithium compounds are an essential cathode material for long life lithium-ion batteries used in hybrid and electric vehicles (EVs), as well as mass energy storage systems. Galaxy has always been bullish about the global lithium demand outlook and is set on becoming a major producer of lithium products. The market shows no signs of slowing, and EV demand over the coming years is still driving investment in this sector.

With full pockets and projects in three continents, it is almost certainly going to be a busy year for Galaxy Resources. The Australian company has grown in many respects over the last couple of orbits, and they continue to play a well-focused and hard-working game.

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## LIT's Lithium Splurge

✘ As the race intensifies for Lithium positioning in the first phases of what looks like a renaissance in interest in Lithium, we can dust off our old horse race analogy. As anyone in the racing business knows there are hundred-percent owners of thoroughbreds and other horses in which “investors” own shares. Lithium Australia NL (“LIT”, ASX:LIT) in its former guise as Cobre Montana got itself positioned during the down days when pretty much no-one gave a damn about Lithium. In the process it ended up with three “shared” ownerships:

- Cinovec (with EMH)
- Sonora (with Alix Resources)
- Lepidolite Hills (with Focus Minerals Ltd on an 80/20 basis)

Beyond these three “runners” in the Lithium Stakes, LIT also has a 100% owned prospect in the form of what it calls the

Ravensthorpe project, but which is also sometimes called Cocanarup. Frankly we prefer the latter name as Ravensthorpe is also synonymous with nickel mining.

In any case the general area has the Mt Cattlin mine, thus making the area more than just prospective for lithium, but an actual production zone. Indeed, the Ravensthorpe region is well-endowed with mineral deposits of many types and includes a broad range of mineral commodities. Indeed, like at Mt Cattlin, previous explorers mostly focussed upon the tantalum-potential of the pegmatites.

In this piece we shall review some recent results out of LIT's Ravensthorpe territory.

### **In a Good Neighbourhood**

It was only recently that we highlighted the reactivation of the Mt Cattlin lithium mine by General Mining (ASX:GMM) in a Joint Venture with Galaxy Resources (ASX:GXY). The Mt Cattlin is about 2km north of the Ravensthorpe townsite, as can be seen marked on the map below:.



Lithium Australia's Ravensthorpe project, some 20 km southwest of the historic mining centre of Ravensthorpe, is comprised of granted Exploration Licence E74/543, is in close proximity to both services and infrastructure and contains a large number of pegmatites, broadly referred to as the Cocanarup pegmatites, some of which contain lithium minerals.

The Cocanarup pegmatites were reported in 1900, during the same phase of prospecting activity that led to the discovery of the Mt Cattlin pegmatites nearby.

The Cocanarup pegmatite field is comprised of three discrete pegmatite occurrences that intrude the greenstones of the Yilgarn Craton. These occurrences are the Quarry Pegmatite,

Horseshoe Pegmatite and Eastern Pegmatite.

### **Quarry Pegmatite**

The Quarry Pegmatite is the best known of the Cocanarup lithium pegmatites and a small pit (hence the "quarry" in its name) was excavated into its northern end, apparently to mine tantalite.

This deposit consists of two bodies that together outcrop for more than 1400 m along a north-south axis. Mapping by previous operators shows that the unit is between 15 and 40 m wide with a shallow, 20-degree dip to the west. Exposures in the quarry contain purplish lepidolite and coarse-grained rosettes of zinnwaldite (a type of Li mica, which ironically is named for LIT's Cinovec deposit in the Czech Republic, which is known as Zinnwald in German), along with quartz and feldspar.

The tantalite has been proven to be columbite containing a high proportion of tantalum. The columbite occurs as discreet masses associated with zinnwaldite.

### **Horseshoe Pegmatite**

With dimensions of 700 m by 500 m and a thickness of between 40 and 100 m, this is a U-shaped body in outcrop. Previous mapping observations reveal that the unit contains abundant masses of lepidolite, while recent field inspections have confirmed the presence of lepidolite masses at surface, where they weather to a pinkish colour.

### **Eastern Pegmatite**

Exposed discontinuously for more than 2000 m along the eastern edge of the tenement, the Eastern Pegmatite has mapped thicknesses between 10 and 70 m. As with the Horseshoe Pegmatite, there are no fresh exposures; however, field observations indicate that the body contains rich segregations of zinnwaldite.

Irregular outcrop of the Horseshoe Pegmatite marked by changes in vegetation Looking west across the outcropping Eastern Pegmatite.

Samples of zinnwaldite and lepidolite, taken by LIT from historic excavations in the Quarry Pegmatite, as well as other areas in the region have been sent for leach testing and carbonate production.

### **Recent Exploration Results**

It should be noted that the main work here thus far has been surface sampling. This naturally has a tendency towards cherry-picking the most propitious looking samples from outcrops or loose material. That said the outcropping is not just isolated but rather on a massive scale. This can be noted from the photo of part of the Horseshoe Pegmatite.



Initial results from across the property have confirmed the presence of at least seven lithium pegmatites. Assay results from 19 samples of lithium mineralisation from the lithium core-zones of all pegmatites range from 1.26% Li<sub>2</sub>O to 4.23% Li<sub>2</sub>O, with a mean of a very rich 2.96% Li<sub>2</sub>O.

These have lead the company to interpret these as early indications that the grade and scale of lithium mineralisation is of economic significance and warrants follow-up investigation. We would presume this means trenching and drilling.

### **When All Said and Done**

In this business one sees a lot of news releases and they can become all somewhat of a blur of maps and tables. However, the latest release of LIT has a photograph that pokes you in the eye on mineralisation at the Quarry Pegmatite.



Combining this image with the grades that were yielded by the latest sampling makes the Cocanarup pegmatites start to look like a potentially very rich source of not only Lithium, but Tantalum as well.

## **Conclusion**

To dust off one of our other analogies LIT is charging around the Monopoly board snapping up properties in all the best streets. Verily as we wrote this note it added another one in Western Australia cheek by jowl with Pilbara Resources Pilgangoora Lithium project, which has driven that stock to stratospheric heights. Not all these properties will move forward or not even move forward at the same speed but LIT is making sure it is positioned on prime real estate.

The latest exploration results show that LIT is a good "talent-spotter" and that the potential of Western Australia to become one of the two global hotspots for Lithium (the other being the Argentine *salares*) is far from exhausted. Now it's time for LIT to repeat the trajectory of Galaxy and Neometals, drill Cocanarup into a resource status that will provide a fast path to production. The question then is what sort of economies of scale might be achieved by collaboration with its relative near-neighbour, Mt Cattlin.

We await more news on the work program on Cocanarup with high expectations.