

# Partnership with MetalsTech to advance Lithium Australia's technology

✘ Lithium Australia NL (ASX: LIT) has been extremely busy since the beginning of the month culminating in a partnership with MetalsTech Ltd., which was revealed on the 19<sup>th</sup> of October.

MetalsTech is focused on developing a portfolio of new hard rock projects that are in various stages of development in Quebec. These projects all have access to infrastructure, including low cost power and hydropower. The portfolio includes the following projects:

- **Wells-Lacourciere Lithium Projects** (NI-43-101 compliant: Measured and Indicated resource of 33.24 Mt at 1.19% Li20 and an Inferred resource of 13.76 Mt at 1.21% Li20)
- **Cancet Lithium Project** (1.71%, 1.85%, 1.94% and 3.79% Li20 from surface assays)
- **Terre Des Montagnes Project** (contiguous with Whabouchi Deposit which has a NI 43-101 Measured, Indicated and Inferred resource of 37.6Mt @ 1.56% Li20)
- **Adina Lithium Project** (up to 3.12% Li20 in surface assays)

In terms of the partnership with Lithium Australia , the idea is for Lithium Australia to provide MetalsTech with the exclusive right to use and apply Lithium Australia's extraction technologies including its Sileach™ and LieNA™ processes for the processing of spodumene concentrates.

In return for the technology leverage, Lithium Australia will be rewarded with \$1m priority offer in MetalsTech IPO as well as 2% gross revenue on royalty on any products that are

produced using Lithium Australia's lithium extraction technologies as well as equity in MetalsTech. As such, the partnership enables Lithium Australia to become a shareholder in a company that controls several lithium pegmatite projects as well as potentially lucrative royalty income.

In addition to the partnership with MetalsTech, Lithium Australia has completed the transfer of lithium rights from Lefroy Exploration, continuing to consolidate its lithium interests in Lake Johnston area. In terms of the arrangement, Lithium Australia issued 9m shares to Lefroy Exploration for the company's lithium rights. This arrangement grants Lithium Australia the rights to access most of Lake Johnston's lithium pegmatite fields.

Moreover, the company announced that it gained permission to drill at Sonora in Mexico. The plan is to test two target areas on their Tecolote concession. This follows the announcement on the 1 July 2016 that Lithium Australia had discovered lithium-bearing clays on the Tecolote concession of the Electra Project. Lithium Australia holds 25% of the joint venture with Sonora and is anticipating that funding the planned drill program would increase its shareholding to 49% equity.

Lithium Australia's share price closed at \$0.185 on the 21<sup>st</sup> of October.

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## **Alix and Lithium Australia Announce Definitive Agreement**

✘ Alix Resources Corp. (TSXV: AIX) and Lithium Australia

(ASX: LIT) updated the market on their progress at their Electra Project in Sonora, Mexico. Sonora is Mexico's second largest state and the project is located to the northwest of the country.

The Electra Project comprises two concessions, namely the Tule and Tecolote Concession, spanning 22,625 hectares.

Both concessions are thought to contain lithium-bearing clays that extend from the Sonora Lithium Project, a JV between Bacanora Minerals and Rare Earth Minerals (REM). One of the Electra Project concessions is contiguous to the Sonora Lithium Project to the north and the hope is that, through the exploration programme, the Company will be able to prove the existence of lithium-rich clays similar to that of Bacanora/REM. The aim of the partnership between Lithium Australia (LIT) and Alix Resources (Alix) is to provide a superior processing alternative to enhance the value of the lithium-bearing clays.

Consequently, LIT and Alix have signed a definitive agreement to explore the Electra Project, the terms of which entitle Lithium Australia to 49% interest in the Project through the issuance of 1m shares to Alix and expenditures of \$400,000.

In addition, Lithium Australia has the option to increase its share in the Electra Project to 65% through a further issuance of 1.5 million ordinary shares to Alix and a cash payment of \$250,000.

On the 14<sup>th</sup> of October, Alix reported that it had achieved its objective on its Tecolote concession. The Company identified two target areas on the said concession. The first target, on the eastern area, is approximately 1,100m long by 250-to-400m wide. The second target measures around 400m by 150m.

Phase 1 reverse circulation (RC) drill program to test the two target areas recently received approval and authorization from

the Ejido community regarding the owner/co-op rights. In addition, the Company received an application for the environmental permit on the Tecolote concession to complete up to 25 RC drill holes and rehabilitation of existing roads as needed.

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## Lithium mine back in action as China demand stays strong



Poor old lithium, they're trying to rain on your parade – and on a day when two Australian companies have revived a major mine project there.

As reported here on InvestorIntel, **Galaxy Resources (ASX:GXY)** and **General Mining (ASX:GMM)** have announced that the Mt Cattlin mine in Western Australia has resumed production. Yet today my colleague John Petersen follows up his earlier ground-breaking work on cobalt, essentially pointing out that the shortages of that metal (a vital component of the lithium-ion battery technology) will curtail the growth of the technology in terms of making those batteries cheap and plentiful and thus appealing to technology users. His headline, Cobalt – a coffin nail for cheap lithium-ion batteries sums up his concern.

Others attack the technology itself. The Austin, Texas, based geopolitical strategy analysts Stratfor have doubts about the whole lithium-ion battery story. “To assume that lithium will be the primary battery type in the long term, or even the sole energy storage technology in the near term is shortsighted,” their new report says. But then there are some important

caveats. Caveat No. 1: “What exactly could replace lithium is unknown at this point”. To which we might respond, “OK, but in the absence of something better let’s keep on making lithium-ion batteries as people seem to want them”. Caveat No. 2: “In the meantime, lithium-ion batteries will advance and become more prevalent”. So, phew, no need for immediate panic; that means we can relax for the moment.

Stratfor also asserts this: “Lithium will never have the same geopolitical importance as oil”. Can anyone say that for certain given the increasing number of predictions that battery technology will replace oil in many applications in the motor vehicle sector? And even if it doesn’t acquire the same importance as oil, so what? As long as there is increasing demand for lithium, that will propel the story.

Because the markets still seem to like the lithium story. After all, Galaxy shares have gone from 4c at the beginning of October to 25.5c now (that is in Australian dollars) and General Mining from 10.5c to 38c. As the companies point out, Mt Cattlin is the only producing hard rock mine owned by Australian listed companies (GMM is now entitled to a 14% stake having met production deadlines), so it is not exactly a market that is being overcrowded by producers. They also point out the spodumene continues to play a critical role in feeding demand in China.

As if on cue, Bloomberg is reporting that BYD Co., China’s largest electric car and bus manufacturer, “plans to obtain supplies of lithium to guard against spiraling costs of the raw material used in vehicle batteries, amid rising pressure on automakers to lower prices”. In other words, the company is looking to becoming part of the lithium supply chain. As Bloomberg notes, the prices of lithium carbonate – a key element in lithium-ion batteries – tripled in China last year and have continued to surge in 2016. “Prices are rising as Chinese automakers step up their production of new-energy vehicles even as domestic lithium-mining capacity remains

restrained,” the report says.

And research firm Marketsandmarkets says in a report from India it expects overall battery demand to grow by a compound annual growth rate of 37% between 2016 and 2022.

Of course, lithium-ion faces challenges from new technologies. But then innovation is the whole point of technology. Today Singapore-based *Asian Scientist* magazine reports that a research team from the Shenzhen Institutes of Advanced Technology of the Chinese Academy of Sciences has developed an environmentally friendly, low-cost battery that overcomes many of what they see as the problems of lithium ion batteries. The new aluminum-graphite dual-ion battery (AGDIB) offers significantly reduced weight, volume, and fabrication cost, as well as higher energy density, compared to conventional lithium ion batteries. The electrode materials comprise low cost aluminum and graphite only, while its electrolyte is composed of conventional lithium salt and carbonate solvent.

In the meantime, the potential lithium miners keep on aiming to get into production, and are not deterred by any pessimism about the future of lithium-ion batteries. Just a few kilometres from the Mt Cattlin mine, **Lithium Australia (ASX:LIT)** reports it has uncovered several additional lithium pegmatities at its Ravensthorpe project. (That announcement is also to be found here on InvestorIntel.)

As someone who has reported on many forecasts in the metals business – the collapse of gold, the end of silver, “peak oil”, “peak iron ore”, you name it – it seems to me that any early predictions of lithium-ion’s demise should be treated with caution. In the meantime, the miners will keep looking for lithium as it remains one of the better performing mining investment stories.

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# Tesla's Supply Chain – Triumph of Hope over Experience?

They say that second marriages are the triumph of hope over experience but we can't help thinking the same of Tesla's "belief" that when miners said to it that they would be able to provide enough Lithium, Cobalt and Graphite for its Gigafactory it actually believed them. We can't escape the feeling that the texting acronym ROFL (Rolling On the Floor Laughing) was made for exactly this situation.

However for a long time Tesla have painted themselves as being "the smartest guy in the room" and yet are we really supposed to swallow the line that Tesla actually believed that a whole swathe of projects in metals critical to their project would come to fruition when educated and informed people in the mining space knew that they would not? It would appear to be more of a case of didn't want to know rather than didn't know...

In this piece we shall follow on from the firestorm that John Peterson created in his piece last week with a specific look at how credible the chance of any of the many projects in the three metals of import actually becoming productive was over the last five years.

## **Lithium**

We have been covering this metal since late last decade. Prior to that point (like Rare Earths) there had been so few players that they were well below any analyst's radar. Moreover, with the pre-2008 focus on staples like precious metals and base metals, the specialty metals scarcely got a look-in. Our first

exposure was the Rincon asset then embedded in an ASX-listed entity Admiralty Resources. Lingering effects of the 2008 crisis eventually forced Admiralty to divest this is to Cayman Island based resource fund, Sentient, who have held it ever since. At the time we thought this was the vanguard of the Lithium push that would break the Cartel and fill the demand gap in the middle of this decade. Instead the asset appears to be totally becalmed and it most definitely has not filled any gap, real or imagined.

Then came the Lithium boom. The great star performer was Talison Lithium which was cobbled together out of the old Greenbushes asset (ergo, a past-producer) and the assets of Salares Lithium in Chile. The high-point of the first flush was this company being bought for over \$600mn by a Chinese group in league with Rockwood (one of the Cartel).

What was an initial field of around twenty lithium wannabes has shrunk by half over the last five years and is only now showing an uptick in interested new entrants. But as they say in the classics, "too little too late" to save Tesla's bacon. It's probably worth repeating here our Lithium Lifecycle chart, as a picture tells a thousand words:



An interesting microcosm of Tesla's dilemma is that it signed a much vaunted deal with Bacanora Minerals. That fired up the stock price of BCN but did not bring in a single dime from Tesla in terms of investment. The attitude seemed to be "announce the deal, lift the price, go finance yourself".

Easier said than done as we all know when the capex is north of \$100mn. Understandably BCN has started to lose some of its rosy glow and the task of raising all the funds has now fallen upon the company. However even with the best will in the world (and easy money) this project would be years away from production.



If Tesla had really believed in this project or any other one, it should have taken a strategic stake and made funds available to move things along. Frankly, it did not.

## **Cobalt**

This metal has until recently been one of the least talked about in the battery supply chain probably because it has an LME quoted price and thus this has given many the illusion that it is a “major trade metal”. Wrong! To put this in perspective the LME warehouses only have 614 tonnes of this metal in stock. Not exactly a base on which to build a major battery industry and still get a good night’s sleep.

But doesn’t it come as a by-product of major mines in other base metals? Oh, you mean the copper mines of the DRC with their on-again, off-again restrictions on exports and conflict mineral overtones? Or do you mean the big nickel mines, such as Ambartovy and Moa Bay that are scarcely fountains of cashflow for their owners (e.g. Sherritt et al.)? It is most correct to say that any manufacturer of size relying upon major base metals mines to continue providing them with cheap by-product Cobalt had better dust off their candles and light them to the Gods of Mining. The quantities produced from these mines is essentially driven by demand for the major metals and no major is going to ramp up copper or nickel production at a loss, or at breakeven, just to keep Tesla supplied with the Cobalt it needs.

As can be seen below has been on a long slide and has only just started to tick up. Frankly its price could double, but if the prices of nickel and copper have not moved commensurately, then it is unlikely majors will ramp up production.



This brings us then to the subject of primary Cobalt mines. These are rare unicorns indeed. Much air has been expended on

this subject over the last fifteen years but little has been achieved in terms of bringing mines to production. The USGS produced a report on the Cobalt production outlook in 2013 and it included a frighteningly long table with the names of Cobalt projects that had been stopped in their tracks, mothballed or permanently decommissioned.



Below is our Lifecycle graph for the listed Cobalt developers, that we know of. This is the scantiest population of any of our “lifecycle graphs”.



Formation Metals (FCO.to) is the obvious candidate for Tesla to “take out” if Tesla starts getting serious but even then, the project would probably not fully supply Tesla’s needs. Then it might need to move on to the NiCoCo project of Fortune Minerals (FT.to) to be fully self-sufficient. The others are all too early stage or too small to be realistic help in ameliorating Tesla’s looming Cobalt crunch.

## **Graphite**

For a mineral that is literally as common as dirt, the surprising thing is how little has been achieved by the “wannabes” which makes us think that they just “wannabe bought”. The most suspicious thing is that for a mineral that has minimal processing requirements and very simple mining requirements (quarrying, pretty much) the capexes being touted are truly eye-popping. This brings us to our usual suspicion (very prevalent in the glory days of REEs) that the companies pump up the capexes because if the capexes were smaller than their cash-pile or financing ability then cheeky investors (and offtakers) might say “well, why aren’t you building it?”. This impolite stating of the obvious is a sure conversation killer.

In any case this is all history now as most graphite companies that did not speed towards development now find themselves short of cash and staring the Grim Reaper in the face. Names like Elcora and Flinders are either in production or on the cusp, while some of those that most vigorously played the “Tesla card” in their promotional efforts are down to their last shilling with little hope of reviving their credibility.

Tesla should move on one of the more stricken players, take it over and then announce that it has satisfied all its foreseeable needs. The mind boggles as to what that will do to the valuations of the other “wannabe Tesla suppliers”.

## **Conclusion**

There is an old adage of “put your money where your mouth is” and frankly Tesla has shown zero sign of expediting any of the projects that it has waved its magic wand over. That nothing has happened to move these projects forward thus makes us feel that Tesla’s magic wand is limp indeed.

If this failure to abide by the commandment “Secure Thy Supply Chain” has gone unheeded then whatever the market dishes up to the company once it starts to explain away sourcing difficulties will be well-deserved. Did Tesla seriously think it was going to get a free ride from beaten down miners who can scarcely afford to pay their light-bills let alone developing mines with capexes north of \$100mn. With Tesla still having a market cap of over \$26bn, it could acquire for stock the most likely player in each of the Lithium, Graphite and Cobalt spaces for less than 1% dilution. Think about it..

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# Alix Resources – Outdoing Bacanora?

My view that Bacanora (TSXV:BCN) was a Short has been borne out by the long slide in its stock price. As the Lithium space has become hotter, the enthusiasm for BCN has become cooler. As we have said before “he who lives by the Tesla, dies by the Tesla”. We never liked the ramping associated with the deal “done” with Tesla as it essentially meant nothing. If Tesla were not putting up any money the onus still fell back on the marketplace and investors to fund this project and it is indeed a worthy project.

The Sonora Lithium project is in a good location to service US needs for Lithium and indeed extrapolating past experience with NAFTA it may be the basis for North American processing of Lithium to be established south of the border in a big way.

Ironically with our hedge fund manager thinking cap on we would have said that Bacanora was a potential for a classic Pairs trade, going Short Bacanora and Long its close and undervalued neighbor in same zone, Alix Resources (TSXV:AIX). Alix Resources main asset is the Electra Project, which borders Bacanora’s territory to both the north and the south. This first came to our attention via our work on Lithium Australia (ASX:LIT) that has bought in just at the cusp of Alix beginning work here.



## **The Deal with LIT**

In recent weeks, Alix Resources has announced the signing with Lithium Australia of an option agreement to jointly to develop lithium extraction technologies applicable to advancing Alix’s lithium concessions in Mexico. The deal is multi-stage with the terms being a first phase in which LIT may earn a 25%

interest in the project by:

- Issue of 500,000 ordinary LIT shares to Alix
- Issue of 500,000 partly paid LIT contributing shares paid to A\$0.0001 each (A\$0.2499 unpaid) to Alix
- Expenditure of AUD\$150,000, spent entirely on phase one work
- LIT to subscribe for CAD\$100,000 private placement in Alix Resources at CAD\$0.05 per share with a full CAD\$0.075 one-year warrant

During this phase Alix will be the operator. Then in a subsequent phase LIT can earn a 49% interest in the project by:

- Issue of 500,000 ordinary LIT shares to Alix
- Issue of 500,000 partly paid LIT contributing shares paid to A\$0.0001 each (A\$0.2499 unpaid) to Alix
- Expenditure of a further AUD\$250,000 within 12 months of signing. Alix – LIT combined board to agree on scope of work, LIT to have deciding vote.

Following upon that, LIT might up the ante to a 65% interest in the project by:

- Issue of 1,500,000 fully paid ordinary LIT shares to Alix
- Expenditure of a further AUD\$1.1mn within 24 months of signing. Alix – LIT to manage all work program facets.
- Cash Payment of AUD\$250,000

LIT will have to gain shareholder approval for the stock issuances in the first phase due to no placement capacity, EGM to be held within 60 days of this term sheet.

Clearly if there is something to be found here then for a relatively modest price LIT will get its hands on control and Alix will be along for the ride.

Lithium Australia is clearly trying to leverage its rather

unique work with Lithium silicates (particularly micas) in Australia onto a broader stage. The opportunity to partner on a deposit with a similar mineralogy in Mexico was too good to let pass, and clearly Alix, as very much a junior in the exploration space needed a big brother to supply the skill sets and technology to augment its credibility.

## **Work Plans & Geology**

The first phase of the work program will commence on the Tule Concession this month and will focus on two initial, high priority targets determined by Alix geologists.

Alix reported the discovery of sedimentary beds on its Tule Concession similar to, on trend and correlating with, geological units which host Bacanora's La Ventana deposit. The exploration program completed by Alix on the property in December included sampling which returned moderately anomalous lithium values from the portion of the concession area that Alix has prospected to date.

The Electra Project consists of two large exploration concession applications covering 22,625 hectares, with one adjoining Bacanora Minerals' Sonora Lithium Project to the north and one to the southern end, as shown in the map below:



Alix's Tule Concession, comprises 18,125 hectares (approximately 15 kms east-west by 12 kms north-south), covers the extension of three lithium-bearing horizons, as outlined in recent Bacanora presentations.

The mineralised trend on the Bacanora property has been interpreted as extending approximately 15 kms SSE from the La Ventana Lithium deposit to the location of another lithium prospect, and at least an additional 12 kms from this point, towards Alix's Tule Concession.

Alix's Tecolote concession is located north of the Buenavista Concession at Bacanora's Sonora Project and north of the village of Huasabas. The property covers approximately 4,500 hectares. Intercepts from 11 of the 24 reverse-circulation holes drilled at the Buenavista Concession returned values in excess of 1,018 ppm Li and as high as 2,210 ppm Li (equivalent to 0.54% and 1.18% LCE respectively) in a lithium-rich stratigraphic trend interpreted by Bacanora to extend north, through Alix's Tecolote concession. This concession covers approximately 7 kms of this interpreted stratigraphic trend.

The host rocks on the Buenavista concession are calcareous, fine-grained sandstone to mudstone intercalated with tuffaceous bands that are locally gypsiferous. The stratigraphic controls and strong bedding of the volcano-sedimentary sequences are projected to be traceable for long distances north of the Buenavista concession.

### **Mexican Lithium Geology**

In 1992, US Borax commenced an exploration program in the area, which led to the discovery of some weakly anomalous boron showings which also were high in lithium. US Borax abandoned exploration in the area shortly thereafter.

The project area is underlain by Oligocene to Miocene age rhyolitic tuffs, ignimbrites and breccias of the upper volcanic complex of the Sierra Madre Occidental. This succession was subjected to Basin and Range extensional normal faulting during Miocene times that resulted in the development of a series of half-grabens. The half-grabens are locally filled with fluvial-lacustrine sediments and intercalated tuffs that contain lithium-bearing clay units. Quaternary basalt flows cover the basinal sediment-volcaniclastic succession.

In Mexico, Lithium-bearing hectorite and polyolithionite clays crop out of a volcano-sedimentary sequence located near the

towns of Bacadehuachi and Huasabas.

## **The Sonora Lithium Project**

It is useful to look across the boundary line at the Sonora project to get an idea of what might await the AIX/LIT JV. The Bacanora package consists of ten mining concession areas covering approximately 100,000 hectares in the northeast of Sonora State. It is managed by a Joint Venture between Bacanora Minerals and the AIM-listed Rare Earth Minerals.

The JV partners, through drilling and exploration work to date, published in November of 2015 an NI43-101 Indicated Mineral Resource estimated at 364 Mt, averaging 2,600 ppm Li for 5.0 Mt of LCE, in addition to an Inferred Mineral Resource estimated at 355 Mt averaging 2,000 ppm Li for 3.9 Mt of LCE.

The attractions of the Sonora project are various but its main advantage is the clay nature of the mineralisation and the fact that this is relatively near surface (though with a basalt cap over much, but not all, of the deposit).

Below is a cross-section of Bacanora's deposit, which shows that the clay zones were created as per the previously mentioned weathering and breakdown of the mica, and then overlain by volcanic activity with a basalt cap.



Clearly, Alix and LIT are targeting the same type of occurrence on their adjoining concessions.

## **Girding the Loins with a Financing**

In recent weeks the company announced a non-brokered private placement of up to four million units at a price of \$0.05 per Unit for aggregate gross proceeds of \$200,000. Each Unit will be comprised of one common share and a full warrant. Each warrant is exercisable at \$0.075 per Share for a period of 12 months. Proceeds will be used for general working capital and



to advance the Mexican assets.

At the same time Alix announced it had licked its balance sheet into shape as it settled a total of \$80,000 of debt with a non-arm's length creditor in the amount of \$50,000 and an arm's length creditor in the amount of \$30,000. These matters were settled by issuing an aggregate of 1,600,000 Shares at a deemed price of \$0.05 per share to the creditors.

## **Conclusion**

Much to our surprise running a one year comparative chart of Alix against Bacanora shows Alix coming out on top. This looks rather like a Hare & the Tortoise-type story. Tesla is obviously something of a two-edged sword for Bacanora's promotional efforts.



At this point we are looking forward to Bacanora getting back to basics and moving its project forward. There is clearly potential to move Mexico into the column of Lithium producing nations and now the race is on to see if Alix can overhaul Bacanora or whether Bacanora will move on Alix to consolidate its territory further. Either way, Alix shareholders win...not to mention LIT coming out a winner also. Then again we might speculate on Alix being folded into LIT at some juncture.

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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.

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## Top 10 InvestorIntel Videos of the Year

✘ In an **InvestorIntel** story published earlier this week titled *The year that was a "challenge"* I promised to highlight public company stories that "defied gravity in 2015, and the ones we learned from". Through literally dozens of hours of analysis this last couple of weeks, I can confirm that we do see a correlation between marketing initiatives and companies who fared better relative to their peers. This said, there are no guarantees and as one of our members called me today and concluded so aptly: **"It's never just one person."** Indeed, and *here's to teamwork*, and our members whose dedicated hours in airports en route to road shows, endless hours on news releases reflecting benchmarks achieved by management while struggling with patience with shareholders on the phones frustrated by market performance -- Congratulations, here are the results from our audience on the top 10 InvestorIntel videos they enjoyed best in 2015!

**#1 Most Viewed Interview of 2015:** NioCorp's recent niobium

resource updates and “outstanding” titanium and scandium deposits

**#2 Most Viewed Interview of 2015:** MMPR licensee Aurora Cannabis on being first to build a new marijuana facility in Canada

**#3 Most Viewed Interview of 2015:** China tightens control on the world’s supply of rare earths in 2015

**#4 Most Viewed Interview of 2015:** Neometals’ on lithium, vanadium and building a better battery

**#5 Most Viewed Interview of 2015:** Lifton on why this is ‘the very best time ever’ to invest in rare earths

**#6 Most Viewed Interview of 2015:** Global mining expert Joseph Carrabba discusses NioCorp’s niobium project PEA results

**#7 Most Viewed Interview of 2015:** Adrian Griffin on the Rare Earth, Lithium and Graphite Market

**#8 Most Viewed Interview of 2015:** Lifton on how the market has chosen the survivors

**#9 Most Viewed Interview of 2015:** Talga Resources’ on breaking the cost barrier for producing grapheme

**#10 Most Viewed Interview of 2015:** Professor Kingsnorth on the ‘Real State’ of the Global Rare Earth Market