Rock Tech Lithium
Fast-tracking a hard-rock spodumene play

Rock Tech Lithium (RCK) recently commenced a preliminary economic assessment (PEA) at its wholly-owned Georgia Lake lithium project in Ontario, Canada. Exploration and drilling by RCK confirmed and expanded on historical resource estimates and the emphasis has now switched from exploration to development. Georgia Lake is a shallow pegmatite deposit, located close to infrastructure in Ontario, and RCK believes it can fast-track the deposit into production to coincide with positive lithium market fundamentals. Long-term optionality is provided by the recent acquisition of the Nogalito brine project.

Resource upgraded, PEA underway
RCK released an updated and vastly improved NI 43-101 resource estimate for Georgia Lake in June 2018, representing a 40% increase in tonnes and 47% increase in contained lithium over the previous estimate. 46% of the resource now sits within the higher confidence M&I categories. With the resource having reached critical mass and cognisant of the need to focus on shareholder returns, RCK ceased drilling and has commenced a PEA to scope out production and cost scenarios. The fully funded PEA is expected to be completed in September 2018.

Simple project, attractive low-risk jurisdiction
Along with Georgia Lake’s robust resource, the key investment point is that the project is a simple hard-rock pegmatite, with spodumene mineralisation outcropping at surface, which means simple open-pit mining and short lead times. The location in Ontario, one of the most attractive and supportive locations for mining, is excellent, being located close to infrastructure. Initial metallurgical testwork successfully produced spodumene concentrate, which, critically, was demonstrated to be suitable for the production of a high-grade 99.988% lithium carbonate product (battery grade is >99.5%).

Getting ahead of the curve
Georgia Lake has all the requisite components to support a fast-track route to development, in our view. Given the projected build-out of the electric vehicle industry and expected concomitant increase in lithium demand, the ‘winners’ among lithium developers are likely to be those companies able to get into production in the next three to five years. Georgia Lake is likely to be a readily permittable, low-capex project and, based on RCK’s expectation of a 2–3-year development period, we see potential for RCK to get ahead of the next generation of lithium brine and clay developers and transition into a producer.

Growth play intact
We see significant scope for further resource growth as Georgia Lake has a fragmented ownership history and dearth of modern exploration. RCK has already discovered several new lithium-bearing pegmatites, which are not included in the current resource. We expect RCK to re-examine resource definition and exploration after the publication of the PEA, to support the next iteration of economic study.
Rock Tech Lithium: Refocusing on development

Rock Tech Lithium trades on the Canadian TSX Venture Exchange under the stock symbol ’RCK’ and on the Frankfurt Stock Exchange under the symbol RJIB and WKN code A1XF0V. Rock Tech commenced due diligence on Georgia Lake in 2009 and subsequently acquired the project shortly after.

Rock Tech Lithium has two lithium projects: the wholly-owned Georgia Lake property in Ontario, Canada (hard-rock spodumene) and the Nogalito lithium property (brine) in Sonora, Mexico (option to acquire 100%). Georgia Lake remains the company’s key focus, offering a potentially low capital-intensity opportunity to fast-track a lithium project into production in time to take advantage of the favourable dynamics developing in the lithium market over the short to medium term.

Despite the known presence of numerous lithium-bearing pegmatites in the Georgia Lake area, the claims have seen little exploration activity since the mid-1950s and extensive portions of the claim holding remain underexplored. RCK’s limited drill and trenching programmes have been highly successful, validating and expanding on historical resource estimates and identifying new spodumene pegmatites.

Following a recent resource update at Georgia Lake, RCK believes that it has the critical mass to start investigating production scenarios, and the focus of work has now shifted from exploration and resource expansion to development studies. The company has recently commenced a PEA, which is due for completion in September 2018.

In February 2018, RCK announced the low-cost acquisition of the Nogalito lithium brine project in Mexico. Nogalito provides a cheap entry-point and blue-sky option on a lithium brine exploration play. Despite being at a very early stage of exploration (pre-resource), it provides RCK with a starting position to take advantage of the projected build-out in lithium demand over the medium to long term as the EV and battery markets expand.

While there remains some uncertainty on how the future lithium supply–demand fundamentals and build-out of electric vehicles will play out, what appears more certain is that ‘winners’ will be companies that can bring new projects into production over the next three to five years, in our view. Thus, with hard rock lithium (Georgia Lake) providing short- to medium-term exposure to the lithium market, and brines (Nogalito) providing a longer-term optionality, RCK is well positioned ahead of the projected increase in global lithium demand.

Georgia Lake: Potted project history

Lithium was first discovered in the pegmatites of the Georgia Lake area in 1955, during general exploration work by a local prospector. Once the presence of the lithium-bearing mineral spodumene was confirmed, this precipitated a staking rush in the area and several other lithium deposits were discovered.

Many of these deposits were drilled in 1955 and 1956, including the Georgia Lake pegmatites. During this time, various in-house resource estimates (non-code compliant) were compiled for individual pegmatites by several different operators.

Significant work was undertaken up until 1958, but due to adverse market conditions, further exploration activity was curtailed, and the area remained largely inactive until RCK restarted exploration in 2010. Rock Tech commenced drilling in 2010 and released the first NI-43-101 compliant resource estimate in 2012, which was subsequently updated in June 2018.
Location – close to infrastructure in Ontario

**Good access.** RCK’s flagship Georgia Lake property is located in Ontario, Canada, 160km northeast of Thunder Bay, close to the US/Canada border. The area is easily accessible, being located a few kilometres to the east of the TransCanada Highway 11, a major paved road running southwest to Thunder Bay. RCK’s various claim areas can all be accessed via dirt roads from Highway 11. Thunder Bay is a major hub for mining and associated services in the area. Grid power lines run along Highway 11, approximately 10km from the Georgia Lake property, with three hydroelectric power stations located on the adjacent Nipigon River.

**Dominant land position.** RCK has a dominant land position in the area, comprising 283 exploration claims with a combined area of 56.93km² and 81 Dispositions (Crown land) covering 10.42km². All claims for the mining rights are owned 100% by RCK. The Ontario Ministry of Northern Development and Mines is responsible for issuing claims, and the province has robust and transparent mining legislation.

**Exhibit 1: Georgia Lake claims, sub-areas and drilling locations**

![Map of Georgia Lake claims and sub-areas](source: Rock Tech Lithium, DMT)
**Geology – an extensive pegmatite district**

**A hard-rock deposit.** The lithium mineralisation at Georgia Lake occurs as spodumene (LiAlSi$_2$O$_6$) hosted within a pegmatite and is thus classified as a ‘hard-rock’ deposit, one of the two main sources of lithium, the other being brine deposits. A pegmatite is an extremely coarse grained igneous rock, which typically has a composition similar to granite and is formed during fractional crystallisation by some granitic magmas forming volatile-rich, highly mobile, low viscosity melts that promote large crystal growth and the concentration of trace elements including lithium.

**Classic Precambrian geology.** The Georgia Lake area is located within the Quetico Subprovince of the Superior Province, which is predominately composed of a variety of c 2.7Ga Archean metasediments and metavolcanics. The metavolcanics strike east-northeast and dip steeply to the north, originally thought to be wackes, conglomerates and siltstones, but now typically metamorphosed to a biotite-quartz-feldspar schist or gneiss.

**An extensive pegmatite field.** The key geological event responsible for the formation of the Georgia Lake pegmatites was the subsequent intrusion of the metasediments by large masses of granitic rocks, sills and dykes of genetically related porphyry, pegmatite and aplite. The pegmatites are more abundant along the margins and within the granitic rocks, occurring as irregular-shaped bodies and as thin dykes, sills and attenuated lenses. There are two main types of pegmatite, common pegmatites and rare-element pegmatites. It is the latter that are of economic significance, as is the case at Georgia Lake where the rare-element pegmatites contain spodumene, beryl, columbite-tantalite and cassiterite.

**Exhibit 2: Local geology and RCK’s claim boundaries (black boxes)**

Source: Rock Tech Lithium, DMT
Lithium mineralisation

RCK’s claims cover vast areas of prospective geology, and lithium-bearing pegmatites have been identified within several different sub-areas, often outcropping at surface or defined by trenching and drilling. RCK has divided its claims into two main areas (see Exhibit 1):

- Northern Spodumene Pegmatite Area (NSPA)
- Southern Spodumene Pegmatite Area (SSPA)

**Five main pegmatites.** The focus of both historical and RCK’s exploration activity has been on the NSPA, which hosts the main five pegmatites that have been modelled and form the basis of the current Measured and Indicated categories of the Georgia Lake NI-43-101-compliant resource estimate. The pegmatites are: 1. Nama Creek Main Zone North (MZN), 2. Nama Creek Main Zone South-West (MZSW), 3. Harricana (HAR), 4. Line 60 (LIN) and Conway (CON).

**Mineralisation style.** Mineralisation occurs as coarse-grained spodumene, randomly orientated within the inner spodumene zone in simply zoned pegmatite dykes. The pegmatites have thicknesses up to 10m and have been traced over a strike length of up to 1.5km.

**RCK’s exploration strategy is working.** After a five-year hiatus due to flat lithium prices, 2017 saw RCK get the drill rigs turning again with a two-phase drill programme at the Parole Lake and Aumacho areas. The drilling confirmed historical data but also indicated the growth potential of the pegmatites. Furthermore, field sampling in late 2017 discovered three new lithium-bearing outcrops adjacent to the main resource zone, as well as confirming that other known pegmatites in the immediate vicinity are lithium-bearing. Several new targets have been identified for the next round of drilling.

**Exhibit 3: Plan view (top) and cross-sections (below) of main pegmatite wireframes**

Source: Rock Tech Lithium, DMT
Resource upgraded

**Updated Resource.** RCK released an update to the NI 43-101-compliant resource estimate in June 2018, compiled by DMT. The total 2018 resource amounts to 13.29Mt at 1.09% Li₂O, representing a 40% increase in tonnes and a 47% increase in contained Li₂O versus RCK’s previous 2012 resource estimate. The total resource now contains 144kt Li₂O or 357kt on a lithium carbonate equivalent basis (Li₂CO₃ or ‘LCE’), of which 46% lies within the higher confidence Indicated and Measured categories. This represents a significant upgrade over the 2012 resource of Indicated 3.19Mt at 1.10% Li₂O and Inferred 6.31Mt at 1.00% Li₂O. We view the current resource as relatively robust, being based on 175 drill holes totalling more than 29,000m, with a maximum drill hole spacing of 60m in between sections and 40–60m along sections, in addition to extensive trench and channel sampling.

**Exhibit 4: Georgia Lake NI 43-101 Mineral Resource estimate (June 2018)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Tonnes Mt</th>
<th>Grade Li₂O%</th>
<th>Contained kt Li₂O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured</td>
<td>1.89</td>
<td>1.04%</td>
<td>19.7</td>
</tr>
<tr>
<td>Indicated</td>
<td>4.68</td>
<td>1.00%</td>
<td>46.8</td>
</tr>
<tr>
<td>Inferred</td>
<td>6.72</td>
<td>1.16%</td>
<td>78.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13.29</strong></td>
<td><strong>1.09%</strong></td>
<td><strong>144.4</strong></td>
</tr>
</tbody>
</table>

Conservative approach to resource estimation. The Measured and Indicated resources are based on the modelling of five pegmatites in the NSPA, with Inferred resources estimated from the NSPA at depth and from pegmatites in the SSPA. Note that RCK has taken a conservative approach and used a 0.65% Li₂O cut-off grade, above the 0.5% typically used in peer resource calculations. This is in order to keep the resource grade >1% Li₂O and test the economic robustness of the resource, given that RCK’s emphasis has now turned to development, and it also leaves scope for future open-pit optimisation. For example, the DMT technical report indicates that moving down to a 0.6% cut-off adds 2Mt in the Measured category and 5Mt in the Indicated category for minimal loss of grade (measured 1.04% to 1.01%, indicated 1.00% to 0.96% Li₂O).

Room to grow. The main mineralised areas are far from drilled out, with several of the major pegmatites in the area remaining open to depth and along strike. Note that the new pegmatite discoveries made by RCK during the 2016 and 2017 field seasons have not yet been incorporated.
into the latest resource update. Thus, we believe it is likely that the next iteration of the resource is likely to show a further upgrade. Furthermore, RCK believes that there is at least another 2.5Mt to 3Mt of pegmatite mineralisation in the ground, which represents material defined in historical resource estimates, but yet to be drilled and converted to NI 43-101 by RCK.

**Fragmented ownership and underexplored.** RCK has a large landholding in the area and we view the potential for further discoveries and resource growth as excellent. The Georgia Lake area remains relatively underexplored, with little work undertaken between 1956 and RCK’s involvement in 2010. Fragmented claim ownership, with several different historical operators often hampers exploration progress, but RCK has now consolidated the district and is able to assess the geological potential of the main prospective trends. Furthermore, geological knowledge and exploration techniques have improved exponentially since the 1950s. This has already been demonstrated by RCK, which has discovered several new pegmatites with only limited drilling and trenching undertaken over the last few years due to funding constraints. In addition, most of RCK’s exploration strategy has focused on confirming and modernising historical data in order to produce a code-compliant mineral resource, as opposed to greenfield exploration work on the broader package of claims.

**Next development steps, inflection point reached**

**PEA underway.** The latest resource estimate provided the critical mass for RCK to pursue a fundamental change of strategy. The Georgia Lake project now contains a resource of sufficient magnitude to start evaluating production scenarios. Consequently, RCK has stopped exploration drilling on the property and engaged DMT to complete a PEA on the project. We concur with this rationale, beyond a certain point in the exploration phase it makes little economic sense to continually expand the project’s resource base without recourse to development options. Further resource work can be done incrementally during PFS (Pre-Feasibility Study) or feasibility stages, and long-term resource replacement work can potentially be subsidised by cash flow from any potential future mining operation.

**PEA due in September.** The PEA will include open-pit optimisation and metallurgy work, and should provide the first benchmark of production scale and potential capital and operating costs. RCK anticipates that the PEA will be completed by September 2018. The company has initiated several steps to demonstrate its commitment to production including commencing discussion with battery manufacturers, car makers and other investors.

**Development options; mining and metallurgy**

**Simple open pit mining.** Georgia Lake is still at a relatively early stage of development and a study on mining methods has not yet been undertaken. Nevertheless, it is clear from the work completed so far that Georgia Lake will initially support an open-pit mining operation. Historical work, along with the drilling and trenching undertaken by RCK has demonstrated that spodumene-bearing pegmatites outcrop at surface. A historic mine shaft was sunk in 1956 on the Nama Creek concessions on the MZN pegmatite, but there is no evidence of other mine workings.

Given the shallow nature of the pegmatites, we believe that initial exploitation could be undertaken by relatively low-cost open-pit techniques. It is worth noting that the pegmatites are highly visually distinct from the host rocks, and we anticipate that grade control would be straightforward, allowing highly selective mining to be undertaken (ie minimal dilution). Given the relatively steep dip of the pegmatites (c 70°), underground mining may be a future option depending on economics. Prior to the publication of the PEA, RCK has not given an indication of likely production scale.
Fast-track development. Without wishing to pre-empt the PEA, we see potential for Georgia Lake to be fast-tracked into production. The project area is located close to infrastructure including roads and power, the permitting process in Ontario is transparent and there are minimal regulatory issues. RCK also has a good relationship with the relevant First Nations. As Georgia Lake is a hard-rock deposit, the development lead times are generally much shorter than lithium brine deposits. As such, RCK believes that a two- to three-year development period is reasonable, potentially equating to first production in late-2020.

Metallurgy and processing

Spodumene concentrate. Work undertaken to date by RCK indicates that a spodumene concentrate can be produced, the industry standard for this type of deposit. Nevertheless, lab-scale metallurgical work by SGS has produced multiple flowsheets that demonstrate that it is potentially possible to produce not only a spodumene concentrate, but also a Li$_2$CO$_3$ product.

Increased vertical integration. Historically, due to the capex of conversion and the complex process involved, hard rock lithium producers have seldom been vertically integrated. However, the move to vertical integration is likely to be a key trend moving forward.

An example of this is demonstrated by Finnish company, Keliber Oy which recently completed a positive DFS based on annual average production of 10,745tpa battery-grade Li$_2$CO$_3$. Keliber’s DFS indicates a post-tax NPV8% of €225m and 22% IRR. We note that this was predicted on a relatively small mining operation; input ROM ore of only 570ktpa and based on open-pit Ore reserves of 4.67Mt at 1.07% Li$_2$O defined from a total mineral resource of 10Mt at 1.16% Li$_2$O. For reference, RCK’s total resource is currently 13.29Mt at 1.09% Li$_2$O of which 6.57Mt is Measured and Indicated.

As such, as development studies progress, we understand that RCK will undertake a trade-off study to evaluate the economics of constructing a standalone conversion facility as an alternative to simply producing spodumene concentrate.

Conversion facilities typically convert spodumene into lithium carbonate (Li$_2$CO$_3$), or increasingly lithium hydroxide (LiOH). The industry standard feed for convertors is a 6% spodumene concentrate, which is considered the optimum balance between grade and recovery. Lower concentrate grades result in poorer economics for the conversion process, while higher grades are also not desirable as the market is much smaller (except for ceramics), and in any case, producing a 7%+ concentrate is measurably harder.

The key is often producing a clean concentrate, with low deleterious elements. High iron or mica contents are particularly undesirable in spodumene concentrates.

Note that an increase in vertical integration in hard-rock industry is likely to increase competition for available spodumene concentrate, especially by standalone convertors in China, which should be supportive for spodumene concentrate pricing.

RCK’s metallurgical testing. In 2011, RCK sent a 770kg bulk sample to SGS Lakefield in Ontario for metallurgical testwork. The material was sourced from three drill holes on the MZN pegmatite, and blasted grab samples from the MZN and MZSW pegmatites, which were deemed to be representative of the style and type of mineralisation and the mineral deposit as a whole. The composite sample produced a head-grade of 1.49% Li$_2$O, which is in excess of the average grade of the current resource estimate (1.09% Li$_2$O).
Battery-grade lithium carbonate. The testwork successfully produced spodumene concentrates using standard flotation and heavy liquid separation techniques. Furthermore, the testwork demonstrated that a lithium carbonate product could be produced by processing the Georgia Lake spodumene concentrate through a standard lithium carbonate hydrometallurgical flow sheet. This produced a high-grade (99.988%) Li₂CO₃ product, meeting typical product specs for all impurities except calcium, although process optimisation is expected to improve this. For reference, battery grade is defined as >99.5%. If RCK goes for a concentrate only route, we would anticipate that any spodumene concentrate produced from Georgia Lake would preferably be sold domestically into the US market to negate the high transport costs that would be incurred shipping concentrate to China.

Hard rock and brines; it’s a timing thing…

Hard-rock (eg spodumene, mica) lithium deposits are a different beast to brines, the other main source of lithium. The resource types are fundamentally different, brines are typically large-tonnage, low-grade resources, while pegmatites are small-tonnage but higher grade, and each requires a distinct processing technique. The risks and opportunities are vastly different, necessitating a contrasting development approach constrained by its own set of economic parameters. Georgia Lake is a hard-rock pegmatite that offers several development advantages for a junior company such as RCK. For RCK, the key consideration now is to move from exploration to development with a view to putting Georgia Lake into production as soon as possible to hopefully coincide with the projected uptick in lithium demand and favourable pricing.

Shorter lead-times. Foremost, pegmatite deposits typically have much shorter development lead-times, being easier to permit, having a small footprint and requiring only conventional open-pit or underground mining. While easier to explore for, brines have a large footprint and require careful environmental planning (and permitting). Pegmatites have much lower capital costs than brines, which tend to be more capital-intensive and thus can be harder to fund, adding to the development lead-time.

The flipside is that brine deposits generally have low operating costs (no mining, crushing, grinding, etc) once up and running. Both types of lithium deposit have process challenges: brines are sensitive to weather events and can be chemically complex, while spodumene projects produce a lower-value concentrate, which can require significant metallurgical optimisation, especially to manage gangue minerals such as mica, which affects concentrate saleability. Fortunately for RCK, mica is rare at Georgia Lake, with spodumene being the main lithium-bearing mineral.

Faster ramp-up. Another key advantage for pegmatite deposits is that they are generally much quicker to ramp up to full production from commissioning, typically around three months. In contrast, because lithium production from brines is predicated on evaporation, the ramp-up time can be as long as 18–24 months, which incurs significant working capital – not always ideal for cash-constrained junior companies.
Nogalito – medium- to long-term brine optionality

In February 2018, RCK announced that it had signed a letter of intent through its wholly owned subsidiary, Minerales de Baterias, for an option to acquire a 100% interest in the Nogalito lithium property in Sonora, Mexico. Following due diligence, RCK opted to proceed with the acquisition in March 2018.

We believe the acquisition makes sense if you consider that lithium (and electric vehicles) is likely to be a 30–40-year growth story even if new low-lithium or non-lithium battery technology is developed. A medium- to long-term brine project at an early stage of exploration gives RCK the ability to stay in the game for longer, beyond the typical 10–15-year mine life of a pegmatite deposit.

Nogalito. The project is located in a Tertiary age geologic basin with favourable rocks situated within a fault-bounded graben, where lithium has been identified within a 16km by 5km basin. RCK believes that the region has geological similarities to lithium-hosting areas in Chile, Argentina and Nevada. Lithium was initially discovered on the Nogalito property in 1990 by US Borax, identifying concentrations of lithium with highly anomalous values up to and exceeding 1,000 ppm lithium in rock chip sampling of 1m channels across exposed stratigraphy. 108 sediment samples also returned anomalous lithium values.

Low-cost option. The acquisition was low cost, with the initial payment being a mere US$20,000. Subsequent payments are also low, being $20,000 on issuance of a mining concession, $20,000 on each of the next two anniversaries and $50,000 on the third anniversary, plus the issue of common shares at these milestones. These cash payments sum to only $130,000, in addition to a minimum spend requirement of $500,000 by the third anniversary. Thus, the acquisition provides shareholders with blue-sky optionality for minimal upfront cash outlay.

Financial position

As of the end of March 2018, the last reporting date, the company had C$2.55m in cash on the balance sheet. The RCK board runs a tight ship and the current burn rate is approximately C$100,000 to C$110,000 per month. This includes the current activities that are required to fund the recently commenced PEA. This relatively low burn rate also reflects that exploration drilling has ceased while the company focuses on development activities.

On the basis of the current burn rate and the company’s plans, RCK expects the current treasury to last 18–20 months. Firstly, this means that the company is fully funded well beyond the expected completion of the PEA (in September 2018) and on to the commencement of the next iteration of economic study; PFS or similar. Secondly, this means that RCK has no immediate plans to raise funds in the equity markets and issue more shares until the next development steps are known. Thus, any future equity dilution is likely to be undertaken post-PEA when there is better visibility on development options and project economics.
**Georgia Lake and RCK in context**

**Resource and grade.** Exhibit 5 below provides a visual overview of lithium project resource sizes and grades, all on an LCE basis, i.e. we have converted\(^1\) from Li\(_2\)O as typically reported in resource estimates to Li\(_2\)CO\(_3\). Dark grey indicates a hard-rock deposit, either pegmatite (Georgia Lake) or clay (e.g. Sonora) and green represents brine deposits. We have capped the graph at 10Mt contained LCE. The differentiation between large-size, low-grade brines and smaller-size, higher-grade hard-rock deposits is clear.

On a resource grade basis, Georgia Lake’s LCE grade of 2.69% sits just below the 2.94% mean for hard-rock deposits in the group. Note that the combined weighted average of all brine and hard-rock deposits in the dataset is 0.85%. Georgia Lake’s resource size is about on par with other junior hard-rock spodumene peers and this partly reflects the company’s strategy of moving the focus from resource expansion to development studies and minimising drilling costs.

As we cover elsewhere in this note, we rate the potential for resource expansion and additional discoveries at Georgia Lake as excellent and would expect to see the resource base grow with further drilling, given the potential for further conversion of historical resources, pegmatite discoveries already made and potential for new discoveries.

**Exhibit 5: Lithium project resource sizes (x-axis and bubble sizes) and LCE grade (y-axis)**

Source: Edison Investment Research

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\(^1\) Lithium oxide (Li\(_2\)O) multiplied by 2.473 to convert to lithium carbonate (Li\(_2\)CO\(_3\)).
**EV/t benchmarking.** An assessment of EV/t values is provided in Exhibit 6, based on the enterprise value (EV) for various lithium development companies with hard-rock lithium deposits, and total resources of contained LCE.

We view EV/t resource metrics as a bit of a blunt instrument, as market value is a consequence of many quantitative and qualitative factors (not least development stage) over and above a simple correlation with resource size. Nevertheless, it is still useful as a broad-brush indicator of market value and trends for peer companies. We have annotated the chart with the development stage of each project.

On an undifferentiated basis (Measured+Indicated+Inferred) the data indicates that RCK currently trades at $65/t LCE, well below the simple unweighted mean of $160/t for the group, perhaps reflecting that Georgia Lake is still at an early stage (pre-PEA) of development. Typically, the market awards higher ratings to more advanced projects, e.g. Pilangoora and similar projects that are either fully funded or in commissioning/production are gaining premium valuations.

We consider that RCK’s current market valuation reflects investor confidence in Georgia Lake’s resource base but as yet, the market appears not to be fully cognisant of RCK’s potential for fast track development, in our view. Consequently, as RCK transitions into a developer, we would expect the company to receive a re-rating by the market, presuming that the PEA sets out an attractive economic case for development for a straightforward project close to existing infrastructure.

**Exhibit 6: EV/t Lithium metrics, development stage peers**

Source: Edison Investment Research, company reports
Directors and management: Lean, experienced team

Dirk Harbecke MBA, chairman. More than twenty years’ international experience as an entrepreneur and investor in Africa, China, the Middle East, Europe and the US. He worked at the Boston Consulting Group, where he planned the establishment of new financial services institutions in Western Europe and the Middle East. Mr Harbecke was the founder and CEO of ADC African Development Corporation (ADC), a German-listed investment company focused on private equity investments in the sub-Saharan African financial services sector and was acquired by Atlas Mara in 2014, a company co-founded by Barclay’s ex-CEO, Robert Diamond.

Dr. Peter Kausch PhD, director. Dr Kausch holds a PhD and MSc in Mining Engineering and has over 40 years’ experience in the natural resources sector. He has served as an adviser to the UN Seabed Committee and held senior positions with RWE Power, where he built uranium divisions in North America and Australia. Dr Kausch has served as the chairman of the German–Chinese Coal Group and the German Association of Foreign Mining. He has served on the boards of Uranerz Exploration and Mining, Consol Energy, Energy Resources of Australia and SSM Rotterdam (a hard coal trading company). Dr Kausch was a lecturer and honorary professor of International Management of Resources and Environment, at the Technical University, Bergakademie, in Freiberg, Germany.

Martin Stephan, director and CEO. Mr Stephan is a successful investment advisor with twenty-five years’ experience in the natural resources and exploration sector, particularly in North America. In the late 1990s, Mr. Stephan founded one of Germany’s most popular internet companies providing stock market analysis, which was subsequently purchased by one of the largest telecommunications companies in Germany.

Brad Barnett MSc, director, CFO and corporate secretary. Mr. Barnett has extensive experience in the fields of regulatory filings, compliance and finance. He holds an MSc in Corporate Finance, a Bachelor of Business Administration (Honours) and a Diploma in Financial Management (Honours).

Advisory board adds industry clout

In addition to RCK’s lean, but highly experienced management team, the company assembled a high-quality advisory board in January 2018. The advisory board is composed of individuals with extensive experience in the lithium and automobile sectors, particularly in the fields of market and industry trends, strategic directions, risk and production. Given the inherent challenges in developing a lithium deposit, producing a marketable product and navigating the lithium markets, we see the advisory board as an important cog in the development of the Georgia Lake project.

Professor Heinz Riesenhuber. Former German Minister of Scientific Research and Technology. President of the German Parliamentary Society.

Mr Carl-Peter Forster. Sits on the boards of Geely Automobile Holdings, Volvo Cars Group. Chairman of Chemring and London Taxi Company (Black Cabs). Former president of General Motors Europe and the CEO of Tata Motors, including Jaguar-LandRover.

Professor Jens Gutzmer. Professor of economic geology and petrology at Technical University Bergakademie, Freiberg. Founding director of Helmholtz-Institute Freiberg for Resource Technology.

Mr Norbert Steiner. Former CEO of K+S, a German MDAX company and the largest salt/potash producer in the world.
Appendix 1: Key events over the past two years

The following bullet points provide a summary of recent and key events for RCK and Georgia Lake:

- **5 July 2016**: closing of oversubscribed C$1.1m non-brokered private placement at C$0.30/share. Funds to be used for the exploration and development of Georgia Lake.
- **8 August 2016**: exploration programme launched at Georgia Lake – trenching channel sampling programme.
- **11 October 2016**: assays from outcrop and boulder grab samples at Georgia Lake confirm presence of high-grade lithium oxide mineralisation in the Jean Lake and McVittie areas.
- **27 October 2016**: C$3m non-brokered private placement announced, closed on 22 December.
- **14 November 2016**: grab samples from Nama Creek area return grades up to 2.82% Li₂O.
- **1 March 2017**: channel sample results from McVittie pegmatite, grades up to 1.71 Li₂O.
- **30 March 2017**: further channel sample results extend length and width of pegmatites – presence of multiple dike system suggested.
- **20 April 2017**: highest grade channel samples to date; 4.42% Li₂O from the Aumacho pegmatite.
- **3 May 2017**: final channel sample assays (Parole Lake pegmatite) suggest surface continuation of the high-grade mineralisation encountered at depth.
- **30 May 2017**: first phase of winter drilling completed (Parole Lake area), 7 holes, 1,382m.
- **7 June 2017**: second phase of drilling completed in the Aumacho area, 7 holes, 584m.
- **29 June 2017**: Parole Lake assays confirm historic data.
- **11 July 2017**: Aumacho assays; continuation of high-grade to depth, best intersection: 5.03m at 2.76% Li₂O.
- **26 July 2017**: Georgia Lake summer field sampling programme commences.
- **15 August 2017**: field programme update, location of third Aumacho pegmatite identified, two additional claims staked.
- **31 August 2017**: new spodumene-bearing pegmatites discovered adjacent to main Nama Creek resource zone.
- **28 September, 5 October and 10 October 2017**: assays from sampling programme, grades up to 2.47% Li₂O.
- **13 November 2017**: trenching programme commences, targeting areas adjacent to main resource zone.
- **24 January 2018**: trench samples identify additional Lithium pegmatite; and 31 January – results suggest main resource may not narrow as previously thought.
- **20 February 2018**: letter of intent to acquire 100% interest in Nogalito lithium property in Sonora, Mexico.
- **12 March 2018**: DD completed, RCK to proceed with Nogalito transaction.
- **4 June 2018**: Georgia Lake PEA commences.
- **27 June 2018**: NI-43-101 resource update, lithium tonnage increased by 40%.
Appendix 2: Ontario, an ideal location for mining

Ontario consistently ranks as an attractive jurisdiction for mining. In the 2017 edition of the Fraser Institute Annual Survey of Mining Companies, Ontario ranks seventh out of 91 jurisdictions in terms of investment attractiveness. The ranking is based on a variety of detailed rankings, with the overall Investment Attractiveness Index constructed by combining the Best Practices Mineral Potential index, which rates regions based on their geological attractiveness, and the Policy Perception Index, a composite index that measures the effects of government policy on attitudes toward exploration investment, e.g., onerous regulations, taxation levels or the quality of infrastructure.

The mining code in Ontario is robust and transparent, and despite being revised in 2017 (Aggregate Resources and Mining Modernisation Act), there were no changes to the fiscal terms. Instead, amendments focused on the introduction of electronic staking and administration system, but with the introduction of a slightly more onerous system of permissions and reporting. Ontario Mining tax is imposed on taxable profit from mining at 10% for non-remote mines and 5% for remote mines. A mining tax exemption of $10m of profit during an exempt period (three years for non-remote, 10 years for remote) is available for each new mine. This provincial tax rate is in addition to the 15% federal tax rate, but still gives Ontario the lowest overall tax rate out of all the Canadian provinces.

Exhibit 7: Fraser Institute Investment Attractiveness rankings – Ontario #7

Source: Fraser Institute (2017 survey data)