



10 February 2020

**Market data**

EPIC/TKR	ILC
Price (C\$)	0.06
12m High (C\$)	0.085
12m Low (C\$)	0.025
Shares (m)	132.6
Mkt Cap (C\$m)	7.96
EV (C\$m)	15.51
Market	TSX

**Description**

International Lithium Corp. (ILC) is advancing three lithium exploration assets. Key issues for investors are the new strategic focus on Raleigh Lake, valorising Mariana and the low valuation.

**Company information**

Chairman/CEO	John Wisbey
CFO	Maurice Brooks
COO	Anthony Kovacs
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**Key shareholders**

John Wisbey	37.69%*
Ganfeng Lithium	7.78%*
Other directors/Mgt.	4.31%*

\*incl. convertibles if conv.

**Diary**

Apr'20	Final results
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**Analyst**

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**INTERNATIONAL LITHIUM CORP.****Resource upgrade and happy strategic dilemma**

The new resource estimate for the Mariana lithium brine deposit in Argentina transforms its potential into a world-class project in which ILC has a 13.7% share (and a back-in option for a further 10%), with Chinese lithium major, Ganfeng, owning the balance. Our DCF estimate for ILC, currently based solely on Mariana, is C\$0.18/share (C\$0.23/share with back-in). The company faces a happy strategic dilemma in how to valorise Mariana, as it awaits a maiden resource estimate for its 100%-owned Canadian hard rock lithium project at Raleigh Lake.

- **Strategy:** ILC's strategy is to unlock value from its brine and hard rock lithium projects, as it takes advantage of rapid growth for lithium used in electric vehicles. Funding conditions for lithium companies will determine whether ILC can simultaneously advance Raleigh Lake and Mariana, or likely prioritise the former.
- **Mariana:** The updated estimate for Measured & Indicated (M&I) resources saw a 253% upgrade in lithium carbonate equivalent (LCE) to 4.410m tonnes for 2020, vs. 1.248m tonnes in 2017. This is now a world-class project, which Ganfeng has indicated its intention to fast-track to production (likely by 2024).
- **Raleigh Lake:** The 2019 exploration programme confirmed the existence of a 3km x 1km magnetic body, believed to contain lithium-bearing pegmatites. ILC hopes that this year's drilling programme will confirm a near-continuous seam of mineralisation geologically similar to the huge Tanco mine.
- **Risks:** ILC is subject to the normal risks for a junior miner, notably continuing to achieve successful exploration results, staying ahead of the funding curve and cyclical market conditions for commodities, in this case lithium.
- **Investment summary:** While we lack any geological data on Raleigh Lake with which to estimate the project's value, there is not long to wait, with a maiden resource estimate expected later in 2020. For the time being, our DCF valuation of ILC remains solely based on Mariana, at C\$0.18/share (C\$0.23/share including buy-in). Selling its Mariana stake, e.g. to a company seeking to guarantee long-term lithium supply, remains an option.

**Financial summary and valuation**

Year-end Dec (C\$m)	2017	2018	2019E	2020E	2021E	2022E
Sales	0.000	0.000	0.000	0.000	0.000	0.000
Royalties	0.000	0.000	0.000	0.000	0.000	0.000
Underlying EBIT	-2.354	-1.630	-1.088	-0.955	-0.990	-0.990
Reported EBIT	-2.354	-1.630	-1.088	-0.955	-0.990	-0.990
Underlying PTP	-2.729	-2.446	-1.987	-1.892	-2.719	-4.363
Statutory PTP	-2.729	-2.446	-1.987	-1.892	-2.719	-4.363
Underlying EPS (C\$)	-0.03	-0.03	-0.02	-0.01	-0.01	-0.02
Statutory EPS (C\$)	-0.03	-0.03	-0.02	-0.01	-0.01	-0.02
Net (debt)/cash	-4.627	-7.729	-7.637	-7.964	-21.207	-35.251
Avg. no. shares (m)	89.33	94.52	126.58	139.74	220.41	283.07
P/E (x)	n/a	n/a	n/a	n/a	n/a	n/a
EV/sales (x)	n/a	n/a	n/a	n/a	n/a	n/a

Source: Hardman &amp; Co Research

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## Moving ahead again...

*New resource estimate for Mariana*

ILC has published an updated resource estimate for its Mariana lithium brine project on the Salar de Llullaillaco in Argentina’s Salta province, located in South America’s “Lithium Belt”. Mariana’s is 13.7%-owned by ILC, with the balance owned by Chinese lithium major, Ganfeng. The latter is China’s largest producer of lithium compounds and the third-largest worldwide after SQM and Albemarle.

**Mariana: located in Argentinian sector of South America’s “Lithium Belt”**

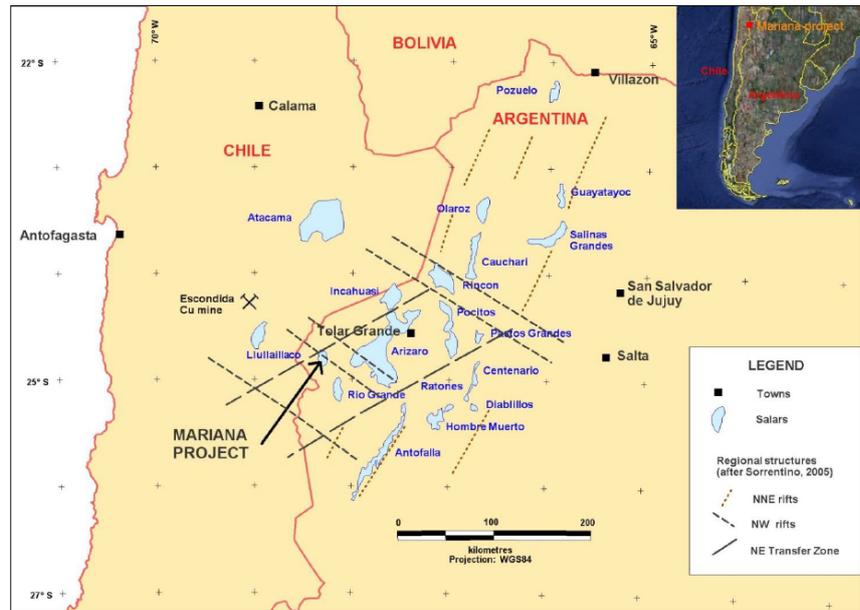


Figure 1: Location of Mariana Project

Source: ILC

*LCE M&I resources increased by 253%*

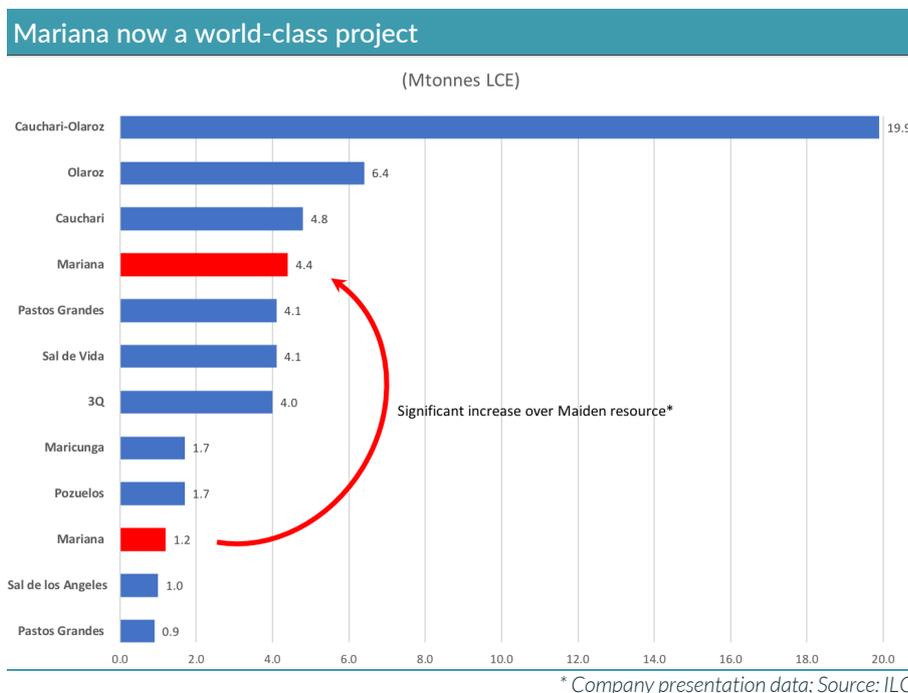
While we had expected a significant increase to M&I resources from the ongoing exploration work, the 253% upgrade in LCE to 4.410m tonnes for January 2020, versus 1.248m tonnes in January 2017, was at the top end of what we thought was possible.

ILC January 2020 resource estimate vs. 2017 (tonnes)			
	Li Mg/L	Li	LCE
<b>January 2020:</b>			
Measured	314	528,000	2,810,000
Indicated	316	303,000	1,600,000
<b>M&amp;I</b>		<b>831,000</b>	<b>4,410,000</b>
Inferred	328	154,000	786,000
<b>January 2017:</b>			
Measured	n/a	n/a	n/a
Indicated	306	234,000	1,248,000
<b>M&amp;I</b>		<b>234,000</b>	<b>1.248.000</b>
Inferred	322	116,000	618,000

Source: ILC

*Mariana transformed into a world-class project*

The new resource estimate transforms Mariana from a subscale to a world-class lithium project, in line with other projects that have 4.0m-5.0m tonnes of M&I LCE, such as Advantage Lithium’s Cauchari project, Millennial Lithium’s Pastos Grandes and Neo Lithium’s 3Q.



*Major steps in ILC's turnaround since 2018*

The publication of the new resource estimate for Mariana is a further milestone in the company’s turnaround since the new management took control in March 2018, with the appointment John Wisbey as Chairman/CEO.

Major steps since then have included:

- ▶ The restoration of a good working relationship with ILC’s strategic partner, Ganfeng. Besides owning the majority stake in Mariana, Ganfeng also owns 11.64% of ILC itself and 55% of the Avalonia hard rock lithium project in Ireland, with ILC owning 45%.
- ▶ The publication of the initial PEA (Preliminary Economic Assessment) for Mariana in December 2018 – when the project was expected to be on a much smaller scale.
- ▶ Capital raisings amounting to C\$6.613m via the issue of new ordinary shares and convertible debentures.
- ▶ The restructuring of ILC’s Canadian assets, including the acquisition of additional acreage at the Raleigh Lake deposit.
- ▶ Initial exploration work at Raleigh Lake, with an aerial survey confirming the presence of a geologic body, which is thought to be a gabbroic intrusive hosting the lithium-bearing pegmatites.

## International Lithium Corp.

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### *Mariana is now a more important project for ILC's partner, Ganfeng*

Now that Mariana is potentially a much bigger project than previously believed, it is likely to have taken on greater significance for Ganfeng, e.g. in terms of being allocated capital. While we await detailed guidance, ILC's CEO noted:

*"We have been informed by Ganfeng that their goal for this year is to fast track a production decision... A production decision is likely to be based on the receipt of an exploitation permit from the Argentinian authorities which would be granted following the submission of a feasibility study and environmental impact report."*

### *Production expected before end of 2024*

ILC is currently expecting the new feasibility study for Mariana during the next 6-12 months, with production beginning before the end of 2024 (we think the beginning of the year is feasible). However, if Ganfeng submits reports that do not meet NI 43-101 standards, ILC may be unable to announce the results, due to Canadian security laws. The way forward, should this happen, is not clear as yet.

The large resource upgrade is obviously very positive news for ILC; nevertheless, it also presents the company with a strategic dilemma – especially with regard to potentially greater capital requirements for developing Mariana going forward.

We expect funding conditions in the lithium sector to improve during 2020, but ILC could be forced into tough decisions – in particular how to allocate capital between Mariana and the 100%-owned Raleigh Lake.

### *Funding conditions may determine Mariana's future in ILC*

If capital remains scarce, ILC could decide to allocate most, or even all, of its capital on the relatively inexpensive next phase (see below) in developing Raleigh Lake. Alternatively, if capital is less scarce, it could contribute to the next economic/feasibility study for Mariana, thereby avoiding or reducing any dilution to its 13.7% stake. That would give ILC's management time to decide the role that Mariana will have in the company's portfolio of lithium assets going forward.

In the meantime, we would expect ILC's management to consider approaches to acquire its Mariana stake, e.g. from companies wanting to guarantee lithium supply.

### *ILC's 10% buy-in option is now potentially more valuable*

A further attraction to potential purchases, especially now that the project is much larger, is that the ILC has the right to increase its stake by an additional 10% (from 13.7% currently to 23.7%) for 10% of the project's costs to date. This option is available up to the point at which the decision is taken to construct the project. Currently, we believe that the additional 10% ownership would cost a relatively modest C\$7.0m.

## Mariana – updating the model

### *New assumptions vs. those based on PEA*

The publication of the updated resource estimate for Mariana necessitates a re-evaluation of our model, in which many of the assumptions had been based on the PEA from December 2018. The table below summarises several key variables in our new “post resource update” model and compares them with our prior assumptions.

Mariana – new vs. old assumptions			
	Denominator	Old est.	New est.
LCE production	Tonnes	10,000	25,000
SOP* (by-product)	Tonnes	84,000	84,000
Selling price LCE (long-term)	US\$/t	12,700	12,000
Capital cost	US\$m	243.4	475.0
Life of mine	Years	40	40

\*Sulphate of Potash; Source: ILC, Hardman & Co Research

### *25,000 tonnes of LCE production is in line with peer comparisons*

Our production estimate of 25,000 tonnes p.a. of LCE during a life of mine (LOM) of 40 years amounts to just under 23% of Mariana’s new M&I resource estimate. While this might seem – and prove to be conservative – it is in line with projects belonging to ILC’s peers, as the next table shows.

Estimated LOM production vs. M&I resources					
Company	Project	Prodn. x Life	LOM prodn.	M&I res.	LOM/M&I
Lithium Americas	Cauchari-Olaroz	40 kt x 40 yrs	1,600 kt	19,850 kt	<b>8.1%</b>
Adv. Lithium	Cauchari	25 kt x 30 yrs	750 kt	4,800 kt	<b>15.6%</b>
Millennial Lithium	Pastos Grandes	24 kt x 40 yrs	960 kt	4,120 kt	<b>23.3%</b>
Neo Lithium	3Q	20 kt x 35 yrs	700 kt	4,000 kt	<b>17.5%</b>
Lithium Power	Maricunga	20 kt x 20 yrs	400 kt	2,070 kt	<b>19.3%</b>
ILC	Mariana	25 kt x 40 yrs	1,000 kt	4,410 kt	<b>22.7%</b>

Source: Company data

### *Current assumptions for long-term LCE prices are around US\$12,000/tonne*

When the PEA was published, we calculated an average LCE price used in comparable projects of approximately US\$12,700/tonne. We note that most current long-term assumptions for the LCE price that we have seen are closely grouped around US\$12,000/tonne, which we have incorporated in our latest model.

Lithium carbonate price assumptions: Mariana vs. other brine projects		
US\$/tonne	Project	LCE price est. (US\$/tonne)
Lithium Americas	Cauchari-Olaroz	<b>12,000</b>
Adv. Lithium	Cauchari	<b>12,166</b>
Millennial Lithium	Pastos Grandes	<b>13,199</b>
Neo Lithium	3Q	<b>11,882</b>
Lithium Power	Maricunga	<b>13,262</b>
ILC	Mariana	<b>12,000</b>

Source: Hardman & Co Research

Switching from LCE selling prices to operating costs at Mariana, we should emphasise that the latter might be significantly impacted by the potential for by-product revenue.

Until a new feasibility study for Mariana is completed, estimating operating costs remains speculative, albeit vital, in assessing ILC. However, we will briefly address three issues that have changed with the publication of the bigger resource estimate versus the situation when the PEA was published in December 2018.

- ▶ by-product revenue as a downward adjustment to operating costs;
- ▶ downstream processing of lithium brine; and
- ▶ improvement in recovery of fixed costs per tonne of LCE due to larger project.

In chemical terms, sulphate of potash (SOP) is potassium sulphate and is used as a premium fertiliser in agriculture. During the exploration work, the Mariana project was noteworthy for high levels of SOP contained in the brine samples. However, we had no idea how significant potash by-product might be prior to the publication of the PEA in December 2018.

The PEA estimated annual SOP production of 84,000 tonnes p.a., and we are currently assuming that the same level is incorporated in a re-worked plan for Mariana. It is possible that Ganfeng decides against recovering SOP as a by-product, which would eliminate the need to spend about US\$41.7m on an SOP process plant. However, we continue to expect SOP to be recovered, given its beneficial impact on the project's operating costs, i.e. if SOP revenues are treated as an offset (see below).

*SOP may account for 12.3% of revenue*

Since 2010, SOP has been priced in the range of US\$450-US\$600/tonne. The PEA assumed an average SOP selling price of US\$550/tonne, although we have reduced the estimate to US\$500/tonne, which is in line with the current price. Based on these assumptions, we estimate that SOP revenue will account for more than 10% (actually 12.3%) of Mariana's annual revenue in steady state operation.

*SOP could provide an offset to operating costs of nearly US\$1,700/tonne of LCE*

Owing to the potential significance of SOP revenues at Mariana, the conventional method of looking at operating costs per tonne of LCE is less relevant compared with other lithium projects. Using our estimate of 84,000 tonnes p.a. of SOP production at an average price of US\$500/tonnes adds US\$42.0m of annual revenue. Dividing this SOP revenue by 25,000 tonnes p.a. of LCE production provides an offset to LCE operating costs of US\$1,680/tonne. In Mariana's case, SOP revenues compensate for higher concentrations of impurities, such as magnesium and other sulphates, and a lower lithium grade versus some rival projects.

Aside from SOP, another key variable in estimating Mariana's operating costs is the downstream processing of the brine after it has been concentrated in the evaporation ponds. With the publication of the new resource estimate, ILC has also signalled a major change compared with the operation of Mariana outlined in the PEA. The latter was based on the assumption that lithium brine would be concentrated to a level of 4.7% before being transported by railroad to the port of Antofagasta in Chile. From there, it was to be shipped to Ganfeng's facilities in Shanghai for refining into battery-grade lithium carbonate. We disagreed with this plan.

*Now likely that brine will be processed on site*

Based on ILC's comments, it is now likely that brine will be treated via a solvent extraction process at the Mariana site. The PEA included an estimate for lithium carbonate refining costs of US\$2,900/tonne, which should be reduced somewhat by onsite processing (albeit at a higher capital cost).

At this stage, we have decided to reduce the total operating cost per tonne of LCE in the PEA of US\$7,566/tonne by US\$1,000/tonne to reflect the switch to onsite processing. This might be far too conservative; we also need to take account of the higher concentrations of impurities, such as magnesium, and lower lithium.

*Better fixed cost recovery with larger project*

Finally, with the bigger resource estimate in terms of LCE, some of the fixed costs will now be spread over 25,000 tonnes p.a. (our estimate), versus the PEA's projected production of 10,000 tonnes p.a. Consequently, we have reduced estimated costs per tonne of LCE by US\$500/tonne.

The next table shows how making these adjustments, treating SOP revenue as an offset to operating costs, significantly improves the economics of Mariana in terms of cost per tonne.

Lithium carbonate cost assumptions – other brine projects	
US\$m	Est. annual cost
Total operating costs	4,667
Lithium carbonate refining cost	2,900
<b>Gross cost per tonne LCE from PEA excl. SOP</b>	<b>7,567</b>
Less:	
Est. SOP revenue per tonne LCE	-1,680
Saving on refining cost	-1,000
Better fixed cost recovery	-500
<b>LCE net cost per tonne</b>	<b>4,387</b>

Source: Hardman & Co Research

#### New estimate for Mariana's capital cost

Turning to the capital cost of Mariana, the total cost was estimated at US\$243.1m in the PEA. At US\$24,310/tonne of LCE, this seemed high in comparison with other projects. In our new model, we have assumed an above-average US\$19,000/tonne for a total capital cost of US\$475.0m.

Estimated LOM production vs. M&I resources				
Company	Project	Capital cost (US\$m)	Prodn p.a.	Cost/tonne, (US\$)
Lithium Americas	Cauch-Olaroz	565	40 kt	<b>14,125</b>
Adv. Lithium	Cauchari	446	25 kt	<b>17,840</b>
Millennial Lithium	Pastos Grandes	448	24 kt	<b>18,667</b>
Neo Lithium	3Q	319	20 kt	<b>15,950</b>
Lithium Power	Maricunga	563	20 kt	<b>28,150</b>
ILC (estimated)	Mariana	475	25 kt	<b>19,000</b>

Source: company data

However, we have identified other factors that make Mariana an attractive project.

The PEA confirmed positive hydrological factors, which should lead to high productivity of wells drawing brine from Mariana's aquifers. One factor supporting Mariana's productivity that was mentioned in the PEA was high transmissivity. Transmissivity is defined as the rate of flow through a cross-section of unit width of aquifer of a given saturated thickness. In other words, it is the product of an aquifer's thickness and its hydraulic conductivity, the latter being a measure of a material's capacity to transmit water (which is related to its permeability).

Two characteristics are key to this:

- ▶ high porosity: the percentage of void space in a rock, defined as the ratio of the volume of the voids to the total volume; and
- ▶ high specific yield: the ratio of the brine contained in an aquifer that can be liberated economically by conventional pumping techniques from a salar under the influence of gravity.

Commenting on transmissivity estimates from pump tests within the indicated resource area, the PEA notes that they imply:

*"a high level of hydraulic conductivity (K), permeability and hence, specific yield (Sy)."*

ILC's lithium resource estimate is based on a specific yield of 15%, which the PEA acknowledged as being "conservative". The report goes on to explain why, in geological terms, the specific yield at Mariana is likely to be higher:

*"Brine resources for Salar de Llullaillaco have been estimated using a conservative specific yield 15% value derived from porosity analyses results and comparison to analogous salars in the region. Such analogues for specific yield are not directly applicable to the current Project. Salar de Llullaillaco differs from 'analogue' salars in having a more halite and sand dominated lithofacies sequence and only minor clay facies within the aquifers, particularly within the northern portion of the salar. The specific yield for dominant halite and sand aquifers should potentially be notably higher than that from other salars throughout the region; however, specific yield for solid halite will be negligible."*

In the long-distant past, it is possible that the drainage basin for the salar at Mariana was connected to that of the nearby Salar de Atacama, the world's most productive lithium brine asset, operated by SQM and Albemarle. While lithium concentrations are significantly lower at Mariana, the report comments on the similarities in sediments, which will have a positive impact on the specific yield. The PEA notes:

*"Specific yield values at Salar de Atacama and Uyuni, which are more direct sediment sequence analogues, are not readily available."*

The PEA also highlighted the relative attraction of Mariana with regard to the evaporation stages of the lithium extraction process. It noted a

*"high pan evaporation rate"*

due to its altitude (3,754m above sea level), favourable temperature range and high wind factor, which exceeds

*"all other salars in the region".*

## Refocusing on Raleigh Lake

### *Strategic refocus announced in April 2019*

ILC announced a change in its strategy in April 2019 regarding the prioritisation of its lithium exploration projects. Going forward, investment would be focused on its 100%-owned Raleigh Lake hard lithium project in Ontario, Canada, if capital were scarce.

The company embarked on an aerial survey of the Raleigh Lake deposit, the results of which were announced on 1 October 2019 (see below). As a result of not contributing to the development of Mariana in 2019, the company's shareholding declined from 17.246% to 13.703%.

### *Driven by need to prioritise capital allocation*

ILC's Chairman, John Wisbey, explained the rationale for the strategic realignment as follows:

*"One of the most important decisions a Board has to make is about the allocation of capital, and at this point we feel that if we are successful in proving the scale of the Raleigh Lake deposit, the investment in that project is likely to bring a bigger gain to shareholder value than investment in any of our other projects. We continue to have confidence in the Mariana project following a successful PEA in December 2018, and we will be liaising closely with our partner, Ganfeng Lithium, on its plans for Mariana over the next few months."*

### *Reorientation followed Canadian restructuring*

The decision to re-orientate ILC's strategy towards Raleigh Lake followed the restructuring of ILC's activities in Canada in September 2018. After reassessing its three Canadian assets, the company announced:

- ▶ the disposal of the 100%-owned Forgan Lake property at Thunder Bay;
- ▶ a downgrading of the 49%-owned Mavis Lake deposit in terms of capital allocation; and
- ▶ the focus on Raleigh Lake, which included the acquisition of additional acreage adjacent to ILC's existing site.

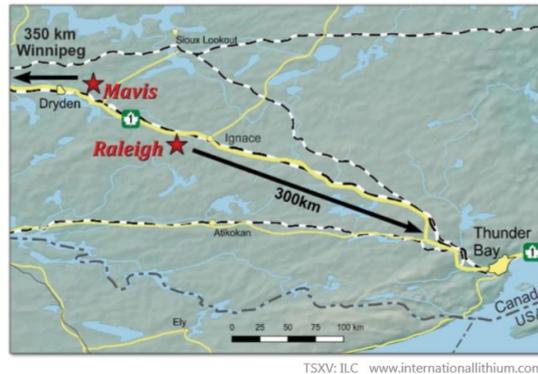
ILC acquired the Raleigh Lake property in March 2016, following this with the purchase of 55 adjacent claims in 2018. These purchases doubled the size of the property to 3,027 hectares.

### *Company believes there is a continuous seam of mineralisation*

The decision to prioritise the development of Raleigh Lake was based partly on a geological analysis by ILC's Chief Operating Officer, Anthony Kovacs. The company is optimistic that the lithium-bearing pegmatite mineralisation found at the legacy Raleigh Lake claims continues as a "seam" across the newly acquired claims.

In terms of ILC's legacy claim, rare metal mineralisation at Raleigh was identified in 1966, and further categorised during 1993-99 by the Ontario Geological Survey. This led to two periods of exploration: the first, from 1999 to 2001, focused on tantalum; the second, in 2010, encompassed lithium. These exploration campaigns included mapping, litho-geochemistry, trenching (1,500 metres) and diamond core drilling (2,818 metres in 17 holes). They resulted in the identification of several large lithium and tantalum-bearing pegmatites, and numerous smaller ones.

ILC – location of Canadian assets



- 10 kilometres from Trans-Canada Highway
- 300km to Thunder Bay, Ontario

- Major rail network
- Electric power grid
- Skilled labour force

TSXV: ILC www.internationallithium.com

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Source: ILC

*Revisiting historical exploration results...*

When ILC revisited the exploration results at Raleigh Lake, Anthony Kovacs noted how the intersections of pegmatites over hundreds of metres were almost continuous. The intersections were every 5-10 metres, with lithium-oxide grades of more than 2% in most cases. Furthermore, the drilling over a 300m x 600m area confirmed that the resource was open in all directions.

*...suggested similarities with the famous Tanco mine*

The upside potential at Raleigh Lake is based on Kovacs' view that Raleigh Lake shares geological similarities with the large and "storied" Tanco mine to the west of Raleigh. Tanco is an underground mine on the north-western shore of Bernic Lake, which is owned by Cabot Corporation. The pegmatite ore body at Tanco is unique, having a very thick zone of mineralisation (essentially a single unit), which is shallow and flat-lying.

The "LCT" (lithium, caesium, tantalum) mineralisation at Tanco includes:

- ▶ lithium-containing spodumene;
- ▶ caesium-containing pollucite; and
- ▶ tantalum-containing simpsonite and tantalite.

*Tanco is the world's largest producer of caesium*

While mining at Tanco began in 1929 and focused initially on tantalum, the full potential of the ore body was not understood for another three decades. After acquiring the Tanco mine in 1993, Cabot ramped up production of caesium brines, making the Tanco mine the world's largest source of caesium.

*One of the three largest pegmatite ore bodies discovered*

The following comment is sourced from a paper given at the Geological Association of Canada's annual meeting in 1996, *Petrology and Mineralization of the Tanco Rare-Element Pegmatite, Southeastern Manitoba* (by Petr Cerny, T.S. Ercit and P.T. Vanstone), which put Tanco's economic value into perspective with other huge pegmatite ore bodies:

*"Among pegmatites of its petrological and geochemical type, the size of this pegmatite is surpassed, to the best of our knowledge, only by the Bikita deposit in Southern Rhodesia and the metamorphosed Greenbushes pegmatite system in western Australia...The Tanco pegmatite contains the largest and highest-grade pollucite concentration known to date."*

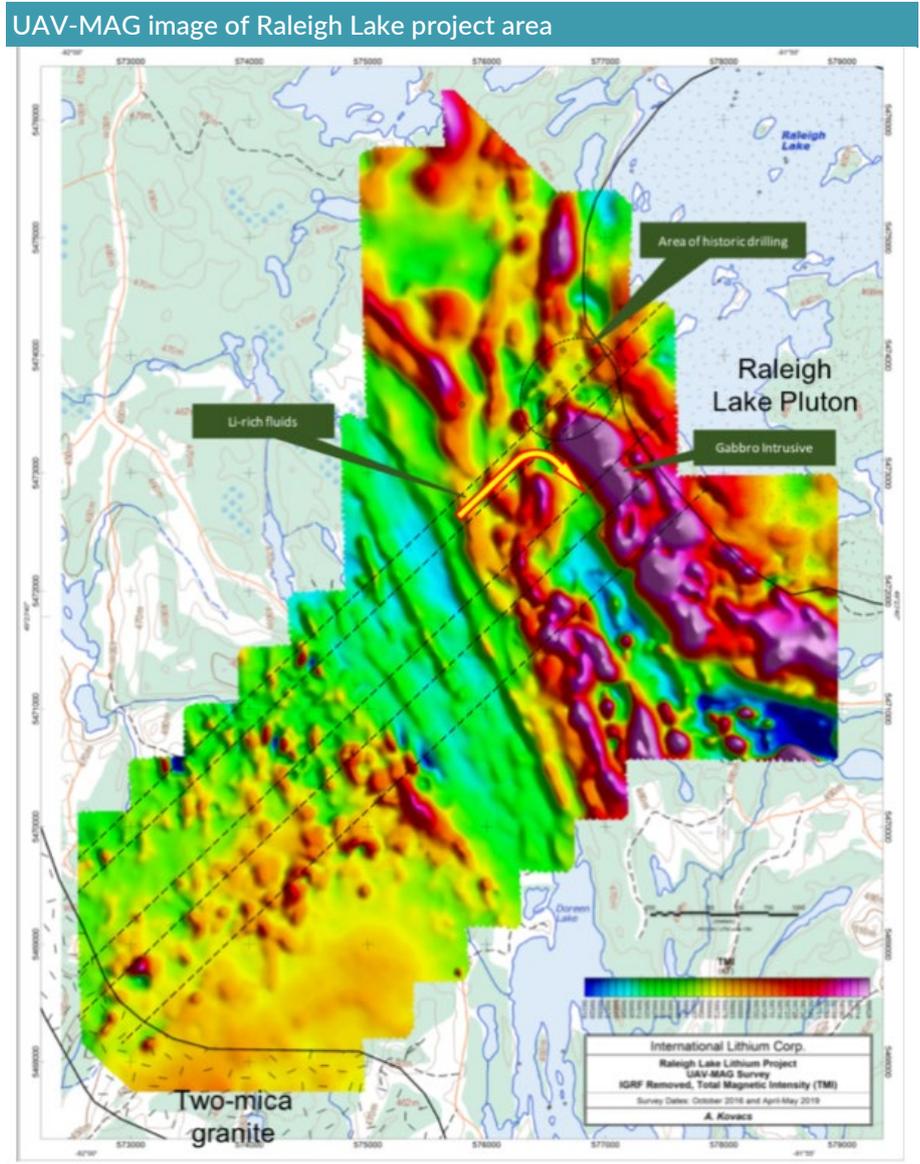
While the Tanco mine is the world’s largest producer of caesium, Greenbushes is the world’s largest hard rock lithium mine, and Bikita is another large lithium mine in what is now Zimbabwe. Consequently, it would be potentially advantageous if there were geological similarities between Raleigh Lake and these other huge pegmatite ore bodies, notably the Tanco mine. Please see our November 2018 report, *Canada restructured, key announcements pending*, for a more detailed exploration of the geographical similarities between Raleigh Lake and the Tanco mine.

*ILC undertook UAV-MAG survey of Raleigh Lake in 2019*

During 2019, ILC conducted an unmanned aerial vehicle magnetometer (UAV-MAG) survey of the Raleigh Lake project. The survey covered nearly 500 line-kilometres with 40 metre line spacing. The results were added to those from a 2016 UAV-MAG survey that covered 189 line-kilometres.

*Magnetic body measured ca. 3km x 1km*

The results showed a geologic magnetic body, believed to be the gabbroic intrusive that hosts the lithium-bearing pegmatites. The magnetic body, measuring approximately 3km x 1km, is visible in the eastern section of the image below.



Source: ILC

*Similarities with Tanco identified*

The ILC news release noted that the magnetic body:

*“is comparable in size to the gabbroic rocks hosting the mineralized pegmatites at the Tanco mine.”*

It also noted:

*“There is a striking resemblance to the emplacement style of mineralized pegmatites at Tanco making the Raleigh Lake gabbro a highly prospective target.”*

*Historical drilling did not test main gabbro body*

A key point to note from the chart is that none of the historical drill holes have tested the main gabbro body, although all of them intersected spodumene-bearing pegmatites.

*Maiden resource estimate expected in autumn 2020*

A drilling programme in 2020, likely about 2,000 metres and costing about C\$0.6m, will target the area from the known mineralisation towards the southwest into what the UAV-MAG identified as the main part of the gabbroic body. If successful, the results of the drilling programme will form the basis of a maiden resource estimate for Raleigh Lake. Publication is expected by autumn of this year.

## Cashflow and valuation

### *Strategic refocus announced in April 2019*

In previous reports, our valuation of ILC shares was based entirely on valuing the company's holding in Mariana, as it was the most advanced project, had a resource estimate and, since December 2018, a PEA.

The change in strategic emphasis towards Raleigh Lake presents us with a conundrum, as we are lacking any geological data with which to estimate the project's value. However, if ILC's management can execute on this exploration work and resource estimate, it is a relatively short time to wait for the potential of a significant uplift in shareholder value.

In the meantime, we have re-worked our model and valuation for ILC on the basis that the company does not fund its share of the investment in Mariana in 2020, and that its share of the project declines from 13.7% to 10.0%. After that, we assume that funding conditions improve markedly and that ILC could fund its share of the project's construction costs.

We have also looked at the valuation of some very early-stage hard rock lithium companies to provide some benchmarks for Raleigh Lake while we await the drilling results.

Besides executing on the Raleigh Lake resource estimate, it is imperative for ILC's management to remain ahead of the company's funding requirements to unlock the value of its lithium assets.

For the time being, we are assuming that funding for lithium companies remains challenging and that the company raises C\$1.20m in 2020, which will allow it to cover the cost of general overheads and the drilling programme at Raleigh Lake. Our assumption is that the C\$1.20m is equity funding, of which C\$0.50m is priced at C\$0.07/share and C\$0.70m at C\$0.10/share.

During the three years from 2021-23, we are assuming that ILC will be able to contribute 10% of the \$475.0m construction cost for the Mariana project. From a financing perspective, we have assumed that ILC will fund this capex on a debt:equity basis of 60:40. Excluding the back-in, we estimate that ILC's funding requirement (debt plus equity) would peak at approximately C\$28.2m in 2023.

*We expect funding requirements to rise sharply beginning in 2021*

Below are our cashflow estimates through to the end of 2022.

<b>ILC – cashflow statement</b>					
<b>Year-end Dec (C\$m)</b>	<b>2018</b>	<b>2019E</b>	<b>2020E</b>	<b>2021E</b>	<b>2022E</b>
Operating profit	-1.630	-1.088	-0.955	-0.990	-0.990
Non-cash items:					
Accrued interest	0.805	0.875	1.000	1.400	1.700
Forex	0.287	0.000	0.000	0.000	0.000
Share-based payment	0.122	0.125	0.000	0.000	0.000
Other	0.044	-0.024	0.001	0.001	0.001
<b>Operating cashflow</b>	<b>-0.372</b>	<b>-0.112</b>	<b>0.046</b>	<b>0.411</b>	<b>0.711</b>
Change in receivables	0.026	0.000	0.000	0.000	0.000
Change in prepaids	-0.013	0.000	0.000	0.000	0.000
Change in payables	-0.140	0.100	0.000	0.000	0.000
<b>Cash from operations</b>	<b>-0.499</b>	<b>-0.012</b>	<b>0.046</b>	<b>0.411</b>	<b>0.711</b>
Tax paid	0.000	0.000	0.000	0.000	0.000
<b>Net cash from ops.</b>	<b>-0.499</b>	<b>-0.012</b>	<b>0.046</b>	<b>0.411</b>	<b>0.711</b>
Exploration expenditure	-0.005	-0.043	-0.600	-0.500	-0.500
Investment in Mariana	-0.748	0.000	0.000	-20.000	-20.000
Other	0.073	0.094	0.000	0.000	0.000
<b>Net cash for investing</b>	<b>-0.680</b>	<b>0.051</b>	<b>-0.600</b>	<b>-20.500</b>	<b>-20.500</b>
Increase in loans	0.160	0.084	0.000	13.260	14.100
Shares issued	0.782	0.632	1.200	8.840	9.400
Conv. debentures issued	1.682	1.750	0.000	0.000	0.000
Conv. debentures red.	-0.274	-0.715	0.000	0.000	0.000
Share issue costs	0.000	0.000	-0.036	-0.265	-0.282
Net interest	-1.044	-0.899	-0.937	-1.729	-3.373
Other	0.033	0.000	0.000	0.000	0.000
<b>Net cash for financing</b>	<b>1.339</b>	<b>0.852</b>	<b>0.227</b>	<b>20.106</b>	<b>19.845</b>
<b>Net change in cash</b>	<b>0.159</b>	<b>0.891</b>	<b>-0.327</b>	<b>0.017</b>	<b>0.056</b>
<b>Cash: end of year</b>	<b>0.163</b>	<b>1.054</b>	<b>0.727</b>	<b>0.744</b>	<b>0.800</b>
<b>Debt: end of year</b>	<b>-7.892</b>	<b>-8.691</b>	<b>-8.691</b>	<b>-21.951</b>	<b>-36.051</b>
<b>Net debt: end of year</b>	<b>-7.729</b>	<b>-7.637</b>	<b>-7.964</b>	<b>-21.207</b>	<b>-35.251</b>

Source: Hardman & Co Research

*We expect ILC to remain loss-making through 2023*

Switching to the P&L account, we expect ILC to make operating losses in the range of C\$0.9m-C\$1.0m during 2020-23, due mainly to corporate overheads and professional costs. Below the operating line, pre-tax losses are expected to rise, due to rising interest costs, relating mainly to the debt part of funding the Mariana project.

Our P&L projections through to the end of 2022 are shown in the table below.

<b>ILC – profit &amp; loss account</b>					
<b>Year-end Dec (C\$m)</b>	<b>2018</b>	<b>2019E</b>	<b>2020E</b>	<b>2021E</b>	<b>2022E</b>
Sales	0.000	0.000	0.000	0.000	0.000
Cost of sales	0.000	0.000	0.000	0.000	0.000
Gross profit	0.000	0.000	0.000	0.000	0.000
Margin (%)	n/a	n/a	n/a	n/a	n/a
Operating income	0.000	0.000	0.000	0.000	0.000
Operating expenses:					
Consulting fees	-0.436	-0.420	-0.300	-0.300	-0.300
Forex	-0.279	0.100	0.000	0.000	0.000
Loss on equity inv.	-0.040	-0.030	-0.020	0.000	0.000
Office and misc.	-0.097	-0.110	-0.110	-0.115	-0.115
Professional fees	-0.158	-0.115	-0.150	-0.150	-0.150
Shareholders' comms.	-0.343	-0.200	-0.200	-0.200	-0.200
Share-based payments	-0.122	-0.125	0.000	0.000	0.000
Directors' fees	-0.113	-0.150	-0.150	-0.150	-0.150
Other	-0.042	-0.039	-0.076	-0.076	-0.076
<b>EBIT</b>	<b>-1.630</b>	<b>-1.088</b>	<b>-0.955</b>	<b>-0.990</b>	<b>-0.990</b>
Interest charges	-0.816	-0.899	-0.937	-1.729	-3.373
<b>Pre-tax profit</b>	<b>-2.446</b>	<b>-1.987</b>	<b>-1.892</b>	<b>-2.719</b>	<b>-4.363</b>
Taxation	0.000	0.000	0.000	0.000	0.000
Tax rate (%)	n/a	n/a	n/a	n/a	n/a
<b>Attributable profit</b>	<b>-2.446</b>	<b>-1.988</b>	<b>-1,893</b>	<b>-2.720</b>	<b>-4.364</b>
Basic no. of shares (m)	94.519	126.584	139.742	220.405	283.072
<b>Basic EPS (C\$)</b>	<b>-0.03</b>	<b>-0.02</b>	<b>-0.01</b>	<b>-0.01</b>	<b>-0.02</b>

Source: Hardman & Co Research

*Moving into profit with the ramp-up in Mariana production in 2024*

Under both scenarios, ILC's losses should reverse into profits in 2024, with the initial ramp-up in Mariana production.

We currently expect Mariana to reach full production of 25,000 tonnes p.a. of LCE in its fourth full year of operation in 2027. The PEA expected full production in its second year of operation, but we feel this is overly optimistic, given the delays we have seen in ramping production at other lithium brine projects.

*Key assumptions for DCF valuation*

Our discounted cashflow valuation assumes a 40-year mine life for Mariana from 2024-63, and other key assumptions used in calculating our DCF valuation are shown in the table below.

<b>ILC – DCF model – key assumptions</b>		
	<b>Denominator</b>	
Annual LCE production capacity	Tonnes	25,000
Annual SOP production capacity	Tonnes	84,000
Time to achieve full production	Years	4
Life of mine	Years	40
Selling price LCE	US\$/tonne	12,000
Selling price SOP	US\$/tonne	500
Operating cost LCE	US\$/tonne	4,387
Royalty	% of revenue	1.0
Corporate tax rate	% of pre-tax profit	25.0
Maintenance capex	C\$m	7.5
NPV discount rate	%	8.0
Fully-diluted shares, end-2023	Million	345.7
US\$/C\$	Ratio	0.76

Source: Hardman & Co Research

*DCF valuation of C\$0.18 per share  
excluding back-in option*

Below is a summary table for our DCF estimate for ILC, showing the steady state for the Mariana project after reaching full production in 2027. The lower segment of the table shows that our base-case valuation for ILC is C\$0.18 per share.

<b>ILC – DCF analysis, base case</b>				
<b>Year-end Dec (C\$m)</b>	<b>2020E</b>	<b>2021E</b>	<b>2022E</b>	<b>2027-63E*</b>
Sales				45.000
Royalties				-0.450
Production costs				-21.599
Less: tax				-5.738
<b>NOPAT</b>	<b>-1.892</b>	<b>-2.719</b>	<b>-4.364</b>	<b>17.213</b>
Change in working capital	0.000	0.000	0.000	0.000
Less: capex	-0.600	-20.500	-20.500	-0.750
Other	-0.036	-0.265	-0.282	0.000
<b>Free cashflow</b>	<b>-2.528</b>	<b>-23.484</b>	<b>-25.145</b>	<b>16.463</b>
Discount rate	8.0%	8.0%	8.0%	8.0%
Discount factor	1.00	0.93	0.86	
NPV of free cashflow	-2.528	-21.745	-21.558	

### Valuation

Cumulative free cashflow	553.3
NPV of free cashflow	69.5
Less: net debt	-7.6
Market cap.	61.8
No. shares (m)	345.7
<b>Valuation per share (C\$)</b>	<b>0.18</b>

\*Mariana full production steady state; Source: Hardman & Co Research

*DCF valuation if ILC exercises back-in  
option to acquire an additional 10% of  
Mariana*

We noted above that ILC has an option to increase its share in Mariana by an additional 10% by paying 10% of the development costs to date until construction of the project is green-lighted. Now that Mariana is likely to be a world class project, the option to acquire an additional 10% for a price of about C\$7.0m could create substantial shareholder value for ILC.

<b>ILC – DCF analysis, including Mariana back-in</b>				
<b>Year-end Dec (C\$m)</b>	<b>2020E</b>	<b>2021E</b>	<b>2022E</b>	<b>2027-63E*</b>
Sales				90.000
Royalties				-0.900
Production costs				-43.197
Less: tax				-11.476
<b>NOPAT</b>	<b>-1.892</b>	<b>-3.493</b>	<b>-6.739</b>	<b>34.427</b>
Change in working capital	0.000	0.000	0.000	0.000
Less: capex	-0.600	-40.500	-40.500	-1.500
Other	-0.036	-0.733	-0.558	0.000
<b>Free cashflow</b>	<b>-2.528</b>	<b>-44.726</b>	<b>-47.797</b>	<b>32.927</b>
Discount rate	8.0%	8.0%	8.0%	8.0%
Discount factor	1.00	0.93	0.86	
NPV of free cashflow	-2.528	-41.413	-40.978	

### Valuation

Cumulative free cashflow	1,116.7
NPV of free cashflow	147.8
Less: net debt	-7.6
Market cap.	140.2
No. shares (m)	604.3
<b>Valuation per share (C\$)</b>	<b>0.23</b>

\*Mariana full production steady state; Source: Hardman & Co Research,

*DCF valuation of C\$0.23 per share  
including back-in option*

The table above shows that our DCF valuation for ILC is C\$0.23 per share **assuming that the 10% back-in option on Mariana is exercised on 1 January 2021.**

At the current ILC share price of C\$0.06, ILC is trading on an EV/tonne in terms of LCE tonnes in the range of US\$17.7/tonne. As the table below shows, ILC is currently trading at a discount to most of its peer group in terms of EV/resources.

ILC – EV/resource valuation comparison (Measured, Indicated, Inferred)		
US\$/tonne	Project	
Lithium Power	Maricunga	49.4
Lithium Americas	Cauchari-Olaroz	22.7
Millennial Lithium	Pastos Grandes	15.9
Neo Lithium	3Q	9.0
Advantage Lithium	Cauchari	7.0
<b>Average</b>		<b>20.8</b>
<b>ILC excluding Mariana back-in</b>		<b>15.4</b>

*Source: Hardman & Co Research*

While the future of Mariana's position within ILC's lithium portfolio is yet to be decided, the publication of the maiden resource estimate for Raleigh Lake could provide a significant uplift to shareholder value.

A maiden resource estimate at Raleigh Lake will prompt comparisons with other hard-rock lithium development companies based in Canada. Two good examples of the latter are Frontier Lithium and Critical Elements Lithium Corp. Both companies have resource estimate and feasibility studies. The table below shows the total tonnage of lithium oxide-containing ore in the measured, indicated and inferred categories, the grade and the fully diluted market capitalisations.

Raleigh Lake potential peer group - Canadian hard rock lithium projects				
Company	Project	Total resource (tonnes)	Grade Li2O%	FD mkt cap, (C\$m)
Frontier Lithium	PAK	15,476,000	1.41%	52.8
Critical Elements	Rose	34,700,000	1.01%	58.0
ILC	Raleigh Lake	n/a	n/a	9.3

*Source: company data*

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