

## BANDEIRA RESOURCE UPDATE & PEA

# Bandeira PEA Highlights Robust Economic Potential and Long Mine Life

**OUR TAKE:** This morning, Lithium Ionic delivered a resource update and Preliminary Economic Assessment (PEA) for the Banderia deposit at its Itinga Project in Minas Gerais, Brazil. The resource update integrated significant infill and extensional drilling conducted at the project since the data cut-off for the June 2023 maiden MRE, and we expected this update to include a significant increase in resource confidence. The update did not disappoint, with Measured & Indicated resource tonnes increasing 198%. With the **slight average grade bump reported, the contained LCE in the M&I jumps 209%**. LTH still managed to increase Inferred resources (+29% contained LCE), **netting significant all-categories resource growth at Bandeira overall (+78% contained LCE, all-categories)**. The PEA outlines very robust potential economics (Figure 1) at Bandeira, with low OPEX of just US\$349/t of 5.5% Li<sub>2</sub>O spodumene concentrate equivalent (SC5.5) vs average selling price of assumptions of US\$1,859/t SC5.5 and US\$865/t SC3 suggesting excellent operating margins. The up-front CAPEX hurdle for this 20-year underground mining concept of US\$233M compares favourably to the projected average annual Revenue and Free Cash Flow of US\$337M and US\$243M, respectively, delivering a quick 14-month projected payback on the project (Figure 1). With the company trading at an EV of ~US\$168M vs the PEA Post-Tax NPV<sub>8%</sub> of Bandeira alone coming in at US\$1.6B, the Company appears highly attractive at current levels. LTH is trading at 0.29x EV/consensus NAV vs hard rock peers averaging 0.53x (Figure 7), suggesting excellent re-rating potential as LTH continues to systematically expand and de-risk its portfolio of projects.

### KEY HIGHLIGHTS

- ◆ **Bandeira PEA Indicates Very Robust Economic Potential (Figure 1):**
  - ◆ **Scope:** 1.3Mtpa underground ore mining rate, producing 217.7kt of 5.5% Li<sub>2</sub>O spodumene concentrate equivalent (SC5.5) for 20-years (annual production of 187.2ktpa SC5.5, plus 56.8ktpa SC3 tails concentrate. SC5.5 : SC3 production ratio of 3.293:1). Spodumene concentrate price assumptions of US\$1,859/t SC5.5 and US\$865/t SC3. (Figure 2,5,6)
  - ◆ **CAPEX:** US\$233M
  - ◆ **OPEX (All-in before transportation):** US\$349/t SC5.5 equivalent (plus US\$120/t shipped to Shanghai)
  - ◆ **Post Tax NPV<sub>8%</sub>:** US\$1.6B
  - ◆ **Post Tax IRR:** 121%
  - ◆ **Post Tax Payback:** 14 months
- ◆ **Bandeira Resource Update Highlights:** The Bandeira resource grows 78% overall in contained LCE (all-categories), with a 209% increase in contained LCE in the Measured & Indicated categories, now approaching 1.0Bt LCE (all-categories), based on 204 holes (+84 holes vs June MRE).

Jun-23				Oct-23				% Change tonnage	% Change Contained LCE
Category	tonnes	% Li <sub>2</sub> O	LCE t	Category	tonnes	% Li <sub>2</sub> O	LCE t		
M&I	4,599,102	1.35%	153,798	M&I	13,720,000	1.40%	475,014	198%	209%
inf	11,444,782	1.43%	405,814	inf	15,790,000	1.34%	523,252	38%	29%
	16,043,884	1.41%	559,612		29,510,000	1.37%	998,266	84%	78%

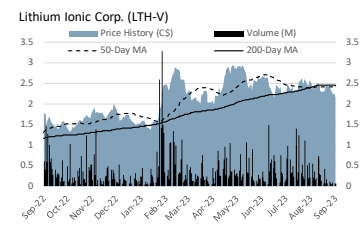
\*Haywood Calculations

- ◆ **Next Steps at Bandeira:** With the PEA on Banderia outlining a robust low-cost, long mine-life spodumene concentrate production concept, Lithium Ionic has a strong pipeline of catalysts moving forward. Banderia was rapidly advanced from drilling, through resource delineation, through to preliminary economics, and LTH plans to deliver a Definitive Feasibility Study (DFS) and Environmental Impact Assessment by year-end, which will lead the commencement of the environmental permitting process.

**BOTTOM LINE:** Lithium Ionic continues to rapidly advance its Itinga Project, with further de-risking milestones on the horizon, including a DFS on Bandeira later this year, with the PEA showing world class low-cost operating costs, a manageable CAPEX hurdle and robust economics. The PEA is just the tip of the iceberg for LTH, covering just one of its evolving projects within its growing portfolio. We expect LTH to continue to identify, define and grow resources at Itinga and across its portfolio and systematically de-risk these assets with similar efficiency we have witnessed at Bandeira. We also expect further drill results from the exploration drill programs at both Itira and Salinas, where initial results look promising as LTH develops the projects within its growing portfolio. The Environmental Impact Assessment studies for both the Bandeira and Outro Lado deposits are expected to be complete by the end of the year at which time the applications are expected to be submitted for environmental and social licenses.

### KEY STATISTICS AND METRICS

52-Week High/Low	\$3.05 / \$1.28	Debt	\$ 0.0 M
YTD Performance	10.2%	Enterprise Value	\$ 216.7 M
Dividend Yield	NA	Daily Volume (30 days)	386,892
Shares O/S	138.2 M	Currency	C\$ unless noted
Market Capitalization	\$ 246.7 M	Website	www.lithiumionic.com
Cash	\$ 30.0 M	CEO	Blake Hylands



Source: Capital IQ, and Haywood Securities

Figure 1: Bandeira PEA Financial Highlights (US\$)

<b>Project Economics</b>	
Post - Tax NPV <sub>8</sub>	\$1.6 billion
Post - Tax IRR	121%
Pre - Tax NPV <sub>8</sub>	\$2.3 billion
Pre - Tax IRR	163%
Annual Revenue – Average	\$337 million
Annual Free Cash Flow	\$243 million
Payback	14 months
<b>Economic Assumptions &amp; Parameters</b>	
SPO 5.5% Li <sub>2</sub> O Price, CIF China	\$1,859/t
SPO 3.0% Li <sub>2</sub> O Price, CIF China	\$865/t
Exchange rate	US\$5.00 /R\$
Discount Rate	8%

Source: Lithium Ionic Corp.

Figure 2: Bandeira PEA Operating Concept

<b>Production Profile</b>	
Total Project Life (LOM)	20 years
Total LOM production (ore mined)	22.9 Mt
Nominal Plant Capacity	1.3 Mtpa
Average plant throughput	1.26 Mtpa
Run-of-Mine grade, Li <sub>2</sub> O (ore diluted)	1.23%
Run-of-Mine underground mine dilution	16.8%
Waste generation Average	439 ktpa
SPO Annual Production @ 5,5% Li <sub>2</sub> O	187 ktpa
SPO Annual Production @ 3,0% Li <sub>2</sub> O	56 ktpa
SPO Annual Production @ 5.5% Li <sub>2</sub> O Equivalent	218 ktpa
SPO 5,5% Li <sub>2</sub> O metallurgical recovery	67.0%
SPO 3,0% Li <sub>2</sub> O metallurgical recovery	10.7%
SPO 5,5% Li <sub>2</sub> O mass recovery	15.2%
SPO 3,0% Li <sub>2</sub> O mass recovery	4.5%
<b>Project Capital Costs</b>	
Mine (Development + Equipment's + Pre-Production)	\$72.5 million
Plant	\$80.5 million
Environmental	\$2.9 million
Engineering Services	\$20.0 million
General Infrastructure & Others	\$10.3 million
Contingency (25%)	\$46.6 million
Total Capital Cost Estimate	\$232.8 million
SUDENE Incentive tax benefit over first 10 years	75%
<b>Operating Costs (OPEX)</b>	
Operating costs (based on ore processed)	\$61/t ore
Mining	\$45/ t ore
Processing + Tailings handling	\$12/ t ore
SG&A	\$4/t ore
Operating costs (based on SPO 5.5 concentrate produced)	\$349/t SPO 5.5E
Mining	\$258/t SPO 5.5E
Processing + Tailings handling	\$68/t SPO 5.5E
SG&A	\$23/t SPO 5.5E
Transportation costs to customer destination (Mine in Itinga - Araçuaí to Shanghai Port, China)	\$120/t SPO

Source: Lithium Ionic Corp.



Figure 3: Bandeira PEA NPV<sub>8%</sub> Sensitivities – Post Tax

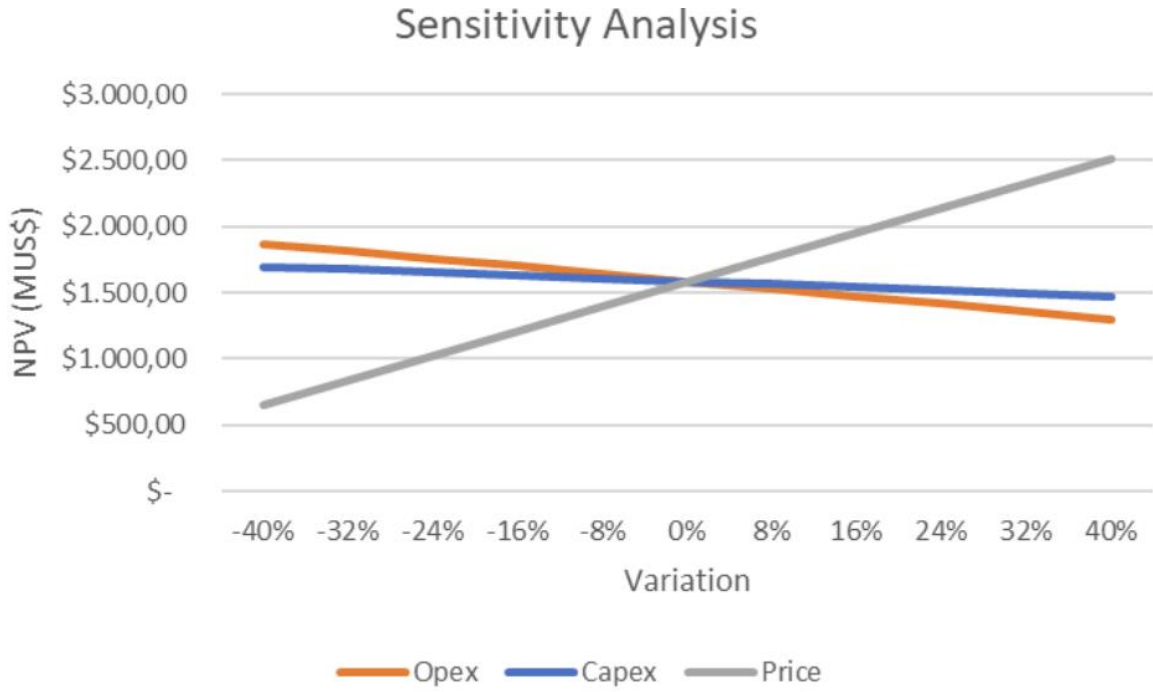


Figure 4: Bandeira PEA Mine Production Plan (RoM tonnes and Head Grade)

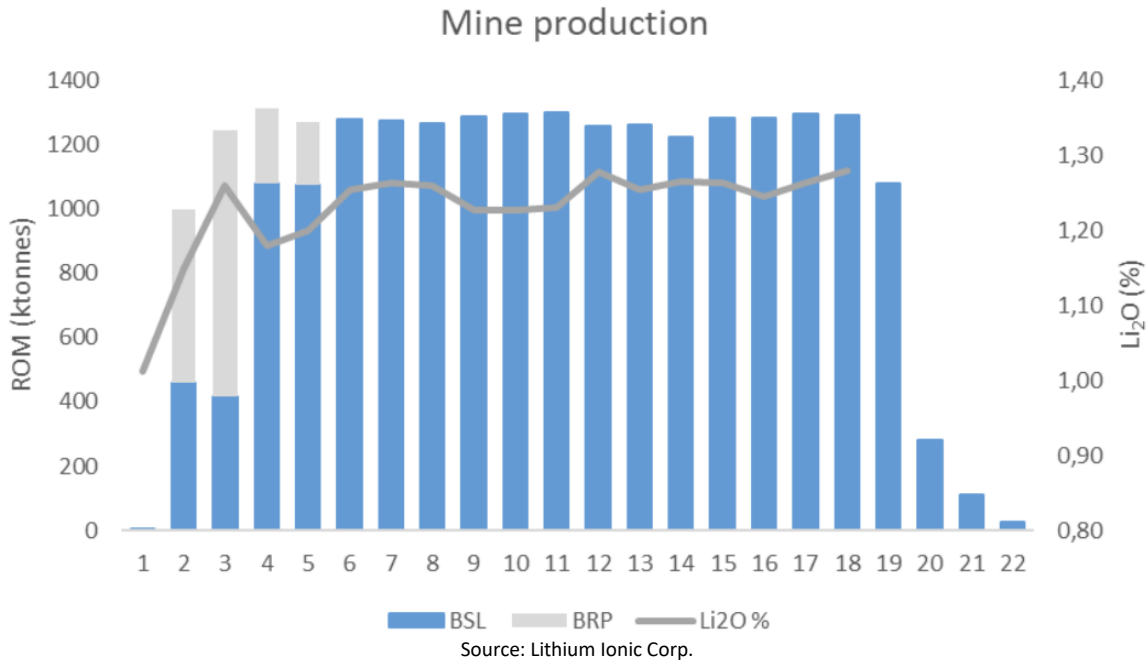
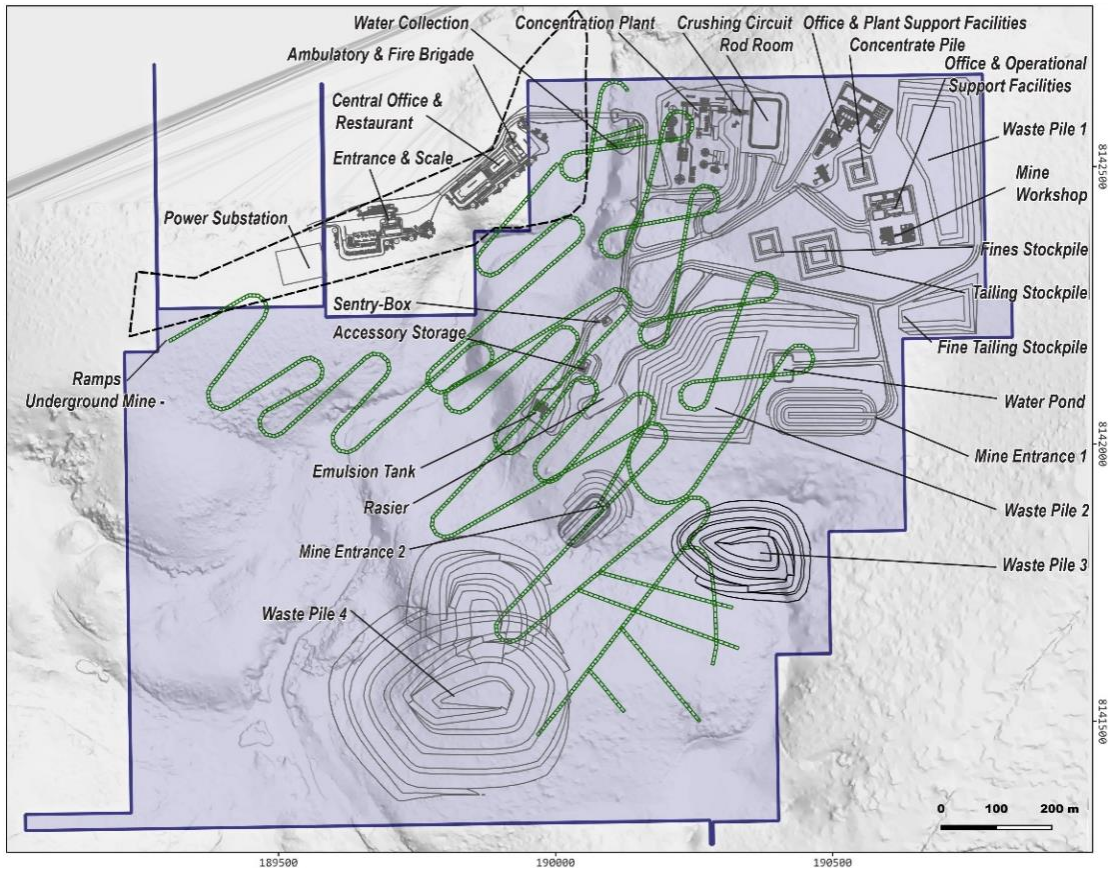
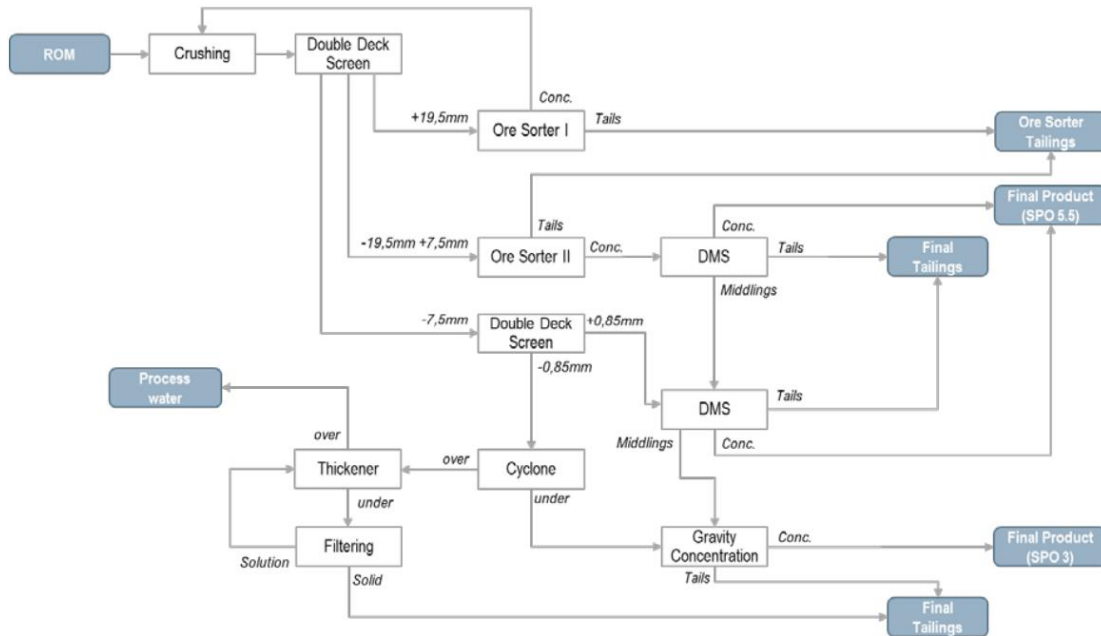


Figure 5: Bandeira PEA Project Layout



Source: Lithium Ionic Corp.

Figure 6: Bandeira PEA Simplified Process Flow Sheet



Source: Lithium Ionic Corp.





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	%	#	IB Clients (TTM)
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<b>Hold</b>	7.9%	7	14.3%
<b>Sell</b>	0.0%	0	0.0%
<b>Tender</b>	0.0%	0	0.0%
<b>UR (Buy)</b>	0.0%	0	0.0%
<b>UR (Hold)</b>	0.0%	0	0.0%
<b>UR (Sell)</b>	0.0%	0	0.0%
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