Surge Battery Metals PEA: A Big, Beautiful Lithium Deposit | US$9.4B NPV, 23% IRR

SURGE BATTERY METALS (TSX.V: NILI)

Cash: C$3.9M | Market Cap: C$58M | Share Price: C$0.33

Nevada North, Nevada, USA

Shares Outstanding: 175M	**Avg. Volume 90 Day:** 147K	**CEO & Director:** Greg Reimer
Options: 10.5M (Avg. C$0.44)	**52 Week High:** $0.55	**Chairman & Director:** Graham Harris
Warrants: 29.7M (Avg. C$0.44)	**52 Week Low:** $0.23	**Director:** Dr. Vijay Mehta

Corporate PowerPoint: Surge Battery Metals | Corporate PPT | *Cash, Sh. Out., Option & Warrant based on FQ1 FS & C$3.1M April 2025 Financing

Update - *We are providing a Deep Dive Note for Surge Battery Metals (NILI), a high-grade lithium clay developer in Nevada, which we do not cover; however, we believe they have released significant news. On June 09, Surge announced a maiden PEA for their Nevada North Lithium Clay Deposit (NNLP) in Northeastern Nevada: Unlevered US$9.4B NPV$_{8\%\text{-}24{,}000LCE}$ and 22.8% IRR, average annual production of 86kt Li_2CO_3 (Lithium Carbonate or LCE) over a 42yr mine life, a Life-of-Mine (LOM) Opex/t LCE of US$5,097 and a 4.7yr payback period on Phase 1 (4yr build) and Phase 2 (3yr build) Capex of US$5.3B. At US$15,000/t LCE, the NPV$_{8\%}$ drops to US$2.8B with an IRR of 13%. Using the average LOM production of 86 Kt LCE, Surge would rank as the fifth-largest lithium producer globally and fall in the middle of the pack regarding Opex/t LCE. To put the PEA into further perspective, even at depressed lithium prices and all-time high gold prices, the Nevada North In Situ PEA inventory would be equivalent to an 11.2Moz gold deposit at 1.7 g/t Au using 3,300/oz gold and US$8,400/t LCE.*

Surge has evolved from a drill discovery in Q4 2022 to the highest-grading lithium clay resource in the USA, to what we believe is an apples-to-apples stronger and more economical deposit than the successful US government-funded, GMC- and Orion-backed, and in-construction Thacker Pass lithium clay deposit. The LOM grade is 58% higher than Thacker, Opex per LCE tonne is 58% lower, and Nevada North is expected to produce 30% more LCE in the first 10 years of operation. Nevada North is years behind Thacker in project development. The project still needs to advance through a feasibility study and obtain necessary permits. We don't envision a final investment decision for construction until H2 2028 / 2029.

If you are a contrarian with the entire lithium sector in the doldrums and the LCE price at sub-US$9,000/t, Surge could be an interesting horse to bet on. Surge is advancing Nevada North to feasibility and through permitting in what is the most favourable permitting regime in the US that we have seen in decades. The size and production potential of NNLP make it a strategic asset of national importance in our view. If Nili were to sell at the Latin Resources (Hard rock) takeout Deal Value/PEA tonne of LCE of US$402/t, it would imply a return of more than 4,500%. Even at 1/10th of this, it's still ~375% upside from current levels.

Our calculated NAV$_{8\%\text{-}15{,}000LCE}$ for Nili is C$4.1B or C$4.24/sh, trading at a P/NAV of 0.08. We assume that Surge receives a US$1.5B DOE loan, sells 40% of the asset to a strategic partner for US$1B, and our remaining capital expenditure estimate of US$2.5B required for Phases 1 and 2 is funded through a combination of debt and equity raises. We estimate that Surge will require C$80M to reach a construction decision. The average consensus P/NAV of advanced clay developers, according to S&P Cap IQ as of June 6, is 0.31. To reach this threshold, it would imply 298% of upside for Surge.

Highlights

- **Top Lithium Clay Deposit in USA on Many Metrics, High-Grade and High Average LOM Production:** The Nevada North PEA stands at an after-tax NPV$_{8\%\text{-}24{,}000LCE}$ of US$9.4B, IRR of 22.8%, 4.7yr payback, Opex/t LCE of US$5,097 and 86Ktpa LCE of production over 42 yrs (109Kt LCE yr 6 peak). The deposit will be a free dig (no blasting required), featuring a conventional truck and shovel open pit mine with a low strip ratio of 1.16. 205 Mt at 4,017 ppm Li will be mined, with an average process recovery of 82.8% and a 24% beneficiation upgrade to the mine feed before leaching. The development Capex is broken down into two phases, one after the other, at the start of the mine life, with Phase 1 Capex of US$2.97B and Phase 2 US$2.35B (US$5.3B total). Sustaining capital is estimated to be US$1.5B. On many metrics, Surge is best-in-class when compared to other advanced clay deposits, including grade, NPV-to-development Capex ratio, development Capex-to-average annual LCE production, and payback (Table 3).

Mark Souvenir | MD Institutional Sales | (Mark@3L-capital.com) | 1 (647) 203 5226
Steven Therrien, P.Geo | Senior Mining Analyst | (Steven@3L-capital.com) | 1 (807) 252 2747
Micah Yuen | Associate | (Micah@3L-capital.com)

- **Apples to Apples Comparison to Thacker Pass Looks Promising:** The best comparable for Nevada North is Lithium Americas' Thacker Pass lithium clay deposit in Nevada (US$8.7B NPV$_{8\%\text{-}24,000LCE}$), which is currently under construction. Where does Nevada North outperform? Surge produces an additional 203kt of LCE over the first 10yrs of mine life, the LOM grade is 58% higher, Opex/t LCE of US$5,097 is 37% lower, and the operating margin is 12% higher. Where does Thacker outperform Nevada North? The average LOM production of 135kt LCE is 60% higher, total LOM production is 219% higher, and Thacker has a lower development capital cost per LCE tonne produced over the LOM. Thacker is also much more advanced, being in the construction stage while Nevada North is at the PEA stage. We break down the comparisons in Figures 5, 6 and 7 in the note.
- **Resource Grade Boost, Beneficiation Improvements and LOM Expansion Opportunities:** We see multiple opportunities for Surge to enhance its PEA numbers. The grade is already exceptional for this type of deposit; however, with tighter drill spacing, we believe the grade improves, as there are obvious cross-sections that show lower-grade material between higher-grade composites (Figure 13). On the beneficiation front, Surge has conducted initial work that indicates a potential improvement of ~25% in mine feed grade by filtering out coarse gangue (non-mineralized material) before leaching. For reference, Thacker Pass's latest design criteria assume a 70% grade improvement (Table 4). Even if Surge were to achieve 40% after additional test work, it should have a meaningful impact on operating unit costs. While the mine life is already long at 42yrs, there are areas where higher-grade at surface mineralization can be expanded upon, such as the southeast corner of the property (Figure 14). If Surge can expand at surface higher-grade mineralization, it may improve the already low strip ratio in a PFS or FS.
- **Nevada North Slots Well Globally and With the Macro:** Nevada North could become a top lithium producer, with a projected LOM output of 86kt LCE per year, ranking 5th globally among 2024 producers (Figure 8). With an average Opex of US$5,097/t LCE, the project sits in the middle of the cost curve (Figure 9) amid a deepening supply deficit (Figure 11), as global lithium demand (3.6Mt LCE by 2035) is expected to outpace supply growth (3.1Mt LCE by 2035). Lithium price is forecasted to climb from US$8,884/t in 2025 to over US$21,700/t LCE by 2035, well above our estimated project breakeven price of US$11,116/t LCE at an 8% discount rate (Figure 12).

Upcoming Catalysts

- Continued Discussions with Strategics (Ongoing)
- Infill Drill Program at Nevada North / Resource Upgrade (2025/2026)

Financial Snapshot

- **Current Cash Position (C$3.9M):** The company closed a C$3.1M financing in April 2025; the proceeds were used to complete the PEA and to fund ongoing operations.
- **Recent Financings:**
    - Apr 2025: C$3.106M @ $0.30 Unit (1 full 3-yr warrant @ C$0.45 expiring April 2028)
    - June 2023: C$7.2M @$0.40 Unit (1 Full 3-yr warrant at $0.55 expiring June 2026)
        - Included strategic investment by American Lithium
    - April 2023: C$0.9M @ $0.25 Unit (1 Full 5-yr warrant at $0.24 expiring April 2028)
    - March 2023: C$1.4M @ $0.20 Unit (1 Full 5-yr warrant at $0.30 expiring March 2028)
    - January 2023: C$0.6M @ 0.25 Unit (1 Full 5-yr warrant at $0.30 expiring January 2028)
- **Valuation:** Our NAV for NILI is C$4,109M or C$4.24/sh, implying a current P/NAV of 0.08x (Table 1). The NNLP is modelled at US$15,000/t LCE with an 8% discount rate. We estimate US$5B is required to fund Phase 1 and 2 development Capex of US$5.3B, with ~US$2.5B funded via US gov't loan (US$1.5B, in line with LAC's US$1.97B and Ioneer's US$997M at treasury rates) and a strategic partner coming in for 40% of the project for US$1B. This implies NILI's stake would be reduced to 60%. The remaining US$2.5B is assumed to be split 50:50 between equity and debt. We also estimate that US$60M (C$81M) will be raised via equity to fund work through to a construction decision (2028/29?). We also apply US$7.5/t LCE to resources outside the PEA mine plan, benchmarked to LAC's Thacker Pass (US$8.3/t). If NILI trades at the 0.31x P/NAV average for lithium clay peers, valuation could rise by ~298%.

Mark Souvenir | MD Institutional Sales | (Mark@3L-capital.com) | 1 (647) 203 5226
Steven Therrien, P.Geo | Senior Mining Analyst | (Steven@3L-capital.com) | 1 (807) 252 2747
Micah Yuen | Associate | (Micah@3L-capital.com)

Table 1. Surge Battery Metals - 3L NAV Summary. *Source: 3L Capital.*

		Base Case
Nevada North DCF (60%) (C$M)	NPV8%-15000 LCE	**$2,264**
Resources Outside of PEA Mine Plan (C$M)	6.86Mt LCE @US$7.5/t	**$69**
Cash (C$M)		**$3.9**
Debt (C$M)	Current	**$0**
ITM Options/Warrant Fully Diluted Proceeds (C$M)	Fully exercised	**$4**
Capital to Construction Decision via Equity (C$M)		**$81**
Construction Equity Proceeds (C$M)	50% Equity	**$1,688**
Total NAV (C$M)		**$4,109**
Shares Outstanding	Current	**175**
ITM Options/Warrants		**14**
Capital to Construction Decision via Equity Issue (2.5x Spot SP)		**98**
Construction Equity Issue (7.5x Spot SP)		**682**
Fully Financed and Diluted Share count		**970**
Total NAVPS FD (C$)		**$4.24**
Surge Battery Metals Share Price (C$)	Current	**0.33**
Price/NAV		**0.08**

***$1.00USD = $1.35 CAD**

****Cash position based on FQ1 2025 Financial and C$3.1M Apr 2025 Financing.**

A Brief History of Surge - How Did We Get Here?

Under the leadership of CEO Greg Reimer and geologist Alan Morris, Surge acquired the initial 38 claims in the Granite Range 73km north of Wells, Elko County, Nevada, in June 2021. The claim package totals 5,216 hectares, and there are no royalties within the Surge Claim Block. A high lithium in stream sediment sample was followed up with a soil sampling program in spring 2022, which returned highly anomalous values over 5,000 ppm Li. These soil anomalies were subsequently followed up with three rounds of drilling, all of which were completed under a Notice of Intent (NOI) permit.

After the first round of drilling, Surge started to stack the board with talent and announced Graham Harris, Iain Scarr and Dr. Vijay Mehta to the board. Graham was the founder, chair and director of Millennial Lithium Corp. which Lithium Americas acquired for $490M, Iain worked for Rio Tinto for 29yrs and was a director and VP of Exploration of Millennial Lithium and Dr. Mehta is a world-renowned expert in lithium mining, extraction and processing with a Ph.D in flotation technology and owner of 12 lithium-related US patents.

After two seasons of drilling in 2022 and 2023, Surge announced their 100% owned maiden resource estimate of 309Mt @ 2,839 ppm Li for 4.67Mt of LCE in February 2024 (An additional 0.58Mt not reported is attributable to Evolution Mining. Added together, they totalled 5.25Mt of LCE @ 2,866 ppm Li). This resource estimate was quickly expanded upon in 2024 after Surge drilled eight additional holes, mainly to the south of the existing resource. Drill results returned favourable intervals, such as 91.4m at 3,800 ppm Li or 80.7m at 4,009 ppm Li, and were generally broader and higher-grade compared to previous programs. That work ultimately led to the updated September 24, 2024 resource update, totalling 11.24Mt of LCE at 3,010 ppm Li (2.59Mt mainly attributable to Evolution Mining). Surge impressively increased the resource by 113% and the grade by 5% between February and September 2024. This resource served as the basis for the initial PEA.

In addition to these milestones, Surge's initial metallurgical testing demonstrated that it can produce technical-grade lithium carbonate (99%+) with ongoing work to further purify it to battery-grade lithium carbonate. Surge also received an exploration plan of operations, which allows for a much larger drilling program compared to the Notice of Intent permit they had been operating under, and permits 5 acres of disturbance. With this permit, Surge can complete all necessary drilling required to advance through a feasibility study.

Mark Souvenir | MD Institutional Sales | (Mark@3L-capital.com) **|** 1 (647) 203 5226
Steven Therrien, P.Geo | Senior Mining Analyst | (Steven@3L-capital.com) **|** 1 (807) 252 2747
Micah Yuen | Associate | (Micah@3L-capital.com)

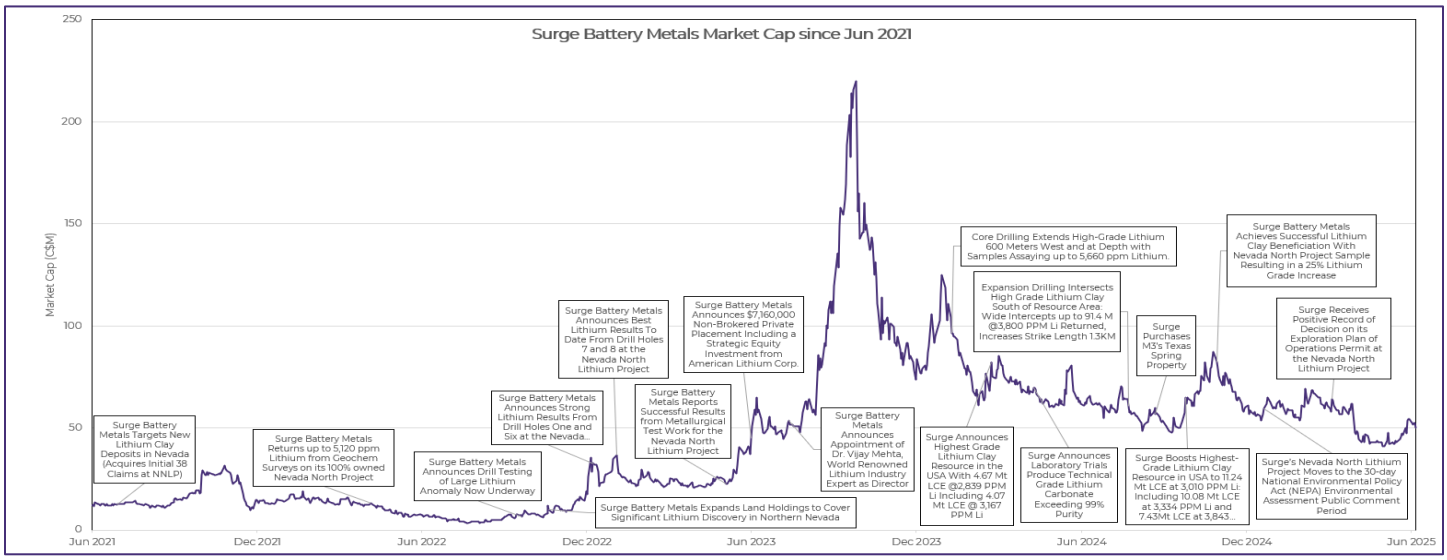

Figure 1. Nili market cap history, price return from June 2021 & significant news events. Zoom to Read. *Source: 3L Capital & FactSet.*

Lithium Clay and Surge's Nevada North Deposit

Here is what you need to know about Lithium Clay Deposits:

- Sediment-hosted lithium resources are often found in dry lakebeds or volcanic calderas, with lithium typically found in smectite or hectorite clays. Resources are typically larger, ranging from 400 Mt to 3,000 Mt+ at 900 to 3,000+ ppm Li.
- Lithium is chemically leached using sulfuric acid or sodium hydroxide, different from brines, which are pumped to the surface and evaporated or hard rock spodumene or lepidolite deposits that are crushed and concentrated before chemical processing (acid or alkaline leaching).
- Although successful processing has been demonstrated at a small scale, no commercial lithium clay mines exist (Lithium America's Thacker Pass in Nevada is set to be the first). Recovery rates, reagent costs and impurity control are key technical hurdles. The final on-site product is battery-grade lithium carbonate or hydroxide.

Here is what you need to know about the Nevada North Lithium Deposit:

- Lithium is hosted in shallow dipping and laterally extensive clay beds separated by tuff units (All free dig).
- The highest grading clay unit is the closest unit to surface and outcrops across the property. It is typically 25m wide and has an average grade of 3,872 ppm Li at a 1,250 ppm Li cutoff, containing over 4Mt of LCE.
- The drill spacing required to reach Measured, Indicated, and Inferred Resources is very wide; the current drill spacing for Inferred Resources is 600m. A 250m spacing is likely to classify Indicated Resources.
- The deposit is still open for expansion in multiple directions.

Table 2. Nevada North 2024 resource estimate. 8.65Mt of the 11.24 is attributable to Surge. *Source: Surge Battery Metals website.*

Cutoff (Li ppm)	Tonnes (Mt)	Grade (Li ppm)	Lithium (Mt)	LCE (Mt)
1,000	707.4	2,995	2.12	11.28
1,250	**701.4**	**3,010**	**2.07**	**11.24**
1,500	653.7	3,129	2.04	10.89
1,750	611.2	3,231	1.97	10.51
2,000	567.9	3,334	1.89	10.08
3,000	363.3	3,843	1.40	7.43
4,000	119.9	4,532	0.54	2.89

Mark Souvenir | MD Institutional Sales | (Mark@3L-capital.com) **|** 1 (647) 203 5226
Steven Therrien, P.Geo | Senior Mining Analyst | (Steven@3L-capital.com) **|** 1 (807) 252 2747
Micah Yuen | Associate | (Micah@3L-capital.com)

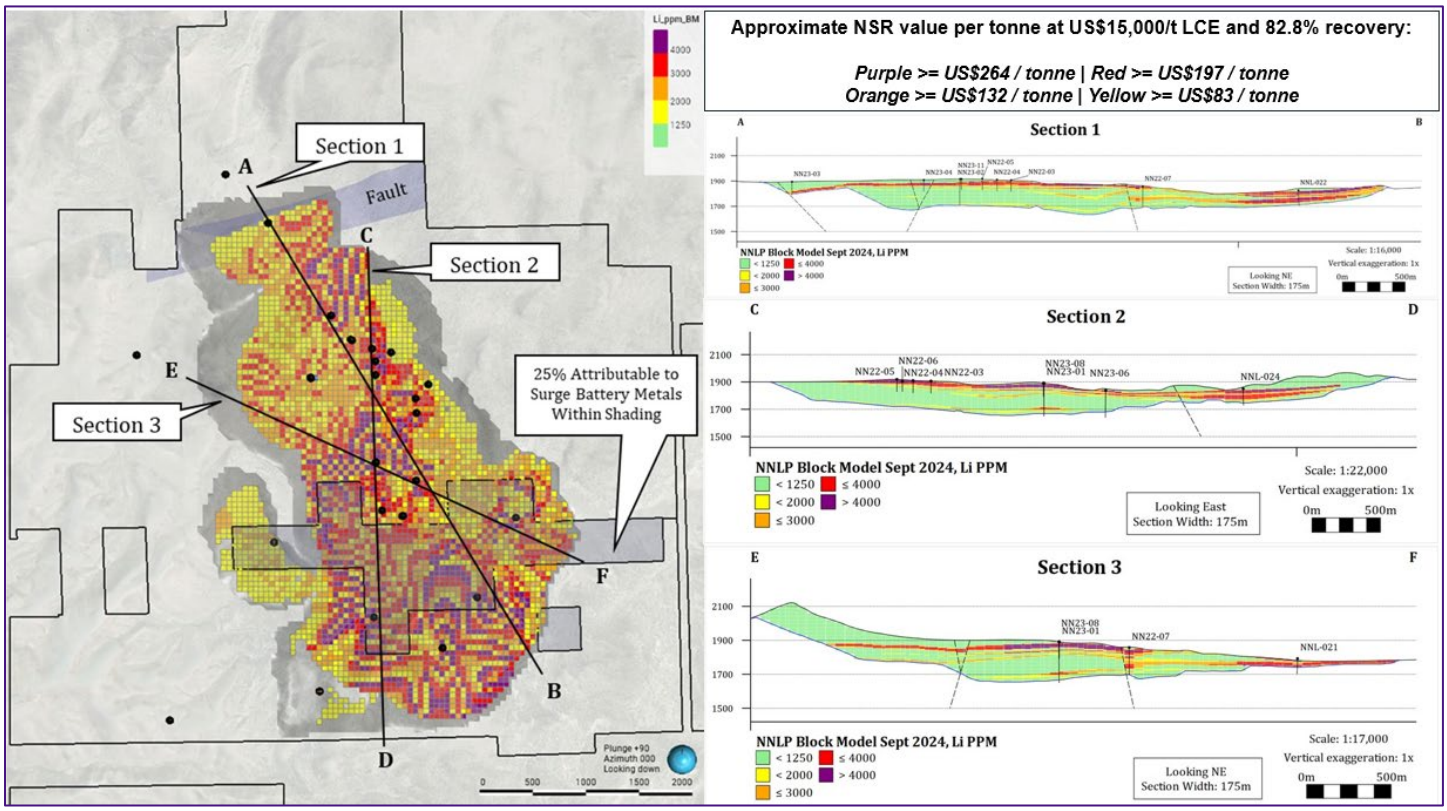

Figure 2. Plan view showing the location of 2022, 2023 and 2024 drilling and the updated September 2024 resource estimate at a 1,250 ppm Li cutoff that totaled: 701.4Mt at 3,010 ppm Li for 11.24Mt LCE. Within the shaded blocks, Surge owns 25% of the subsurface mineral rights, and Evolution Mining owns most of the rest. The cross sections through the September 2024 resource are shown on the right. The primary horizon ("Cu3") contains the highest grades and is typically the first horizon intersected in drilling. Note where the highest grades are and the NSR value per tonne after recovery. *Source: 3L Capital and Surge Battery Metals website.*

How Does the NNLP Resource Compare to Other Clay Deposits

In Figure 3 below, we have plotted Nevada North on a Grade x M+I+I LCE tonnage plot, sizing the bubbles by resource tonnes. Surge has the highest grade of its resource class. Although in terms of LCE tonnes it is not the biggest, keep in mind that 2-4Mt of LCE often correlates to between 20 and 100 years of mine life. Surge's new PEA has a 42yr mine life incorporating 4.4 Mt of LCE. What is not reflected in this chart, and is key, is what we mentioned above: Surge's highest grades start at the surface, which is not the case for most other deposits.

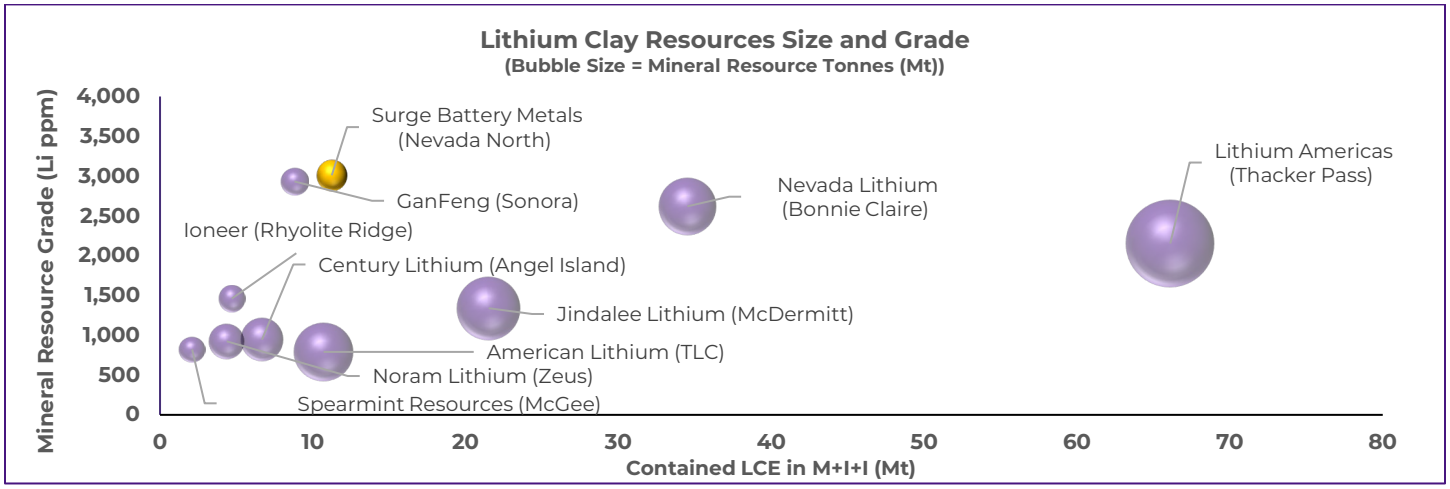

Figure 3. Size and grade bubble chart of prominent US lithium clay deposits. Source: 3L Capital and Company Filings.

Mark Souvenir | MD Institutional Sales | (Mark@3L-capital.com) **|** 1 (647) 203 5226
Steven Therrien, P.Geo | Senior Mining Analyst | (Steven@3L-capital.com) **|** 1 (807) 252 2747
Micah Yuen | Associate | (Micah@3L-capital.com)

The Nevada North PEA

Surge's Nevada North Lithium Project screens as the most compelling lithium clay asset in the USA based on today's PEA (Table 3). Despite a smaller processing footprint (4.9Mtpa avg.), the project delivers the highest NPV ($9.2B) and IRR (23%) in the peer group—driven by a standout lithium grade (4,017 ppm), low Opex ($5,097/t LCE), and sector-leading capital efficiency. With a Phase 1 and Phase 2 Capex of US$5.3B, the NPV-to-Capex ratio (1.7x) is the best of the group, and development Capex per annual tonne of LCE production ($62K/t) is also the lowest, supporting a quick 4.7yr payback. The strip ratio (1.16:1) is attractive, recoveries (82.8%) are competitive, and the 42yr mine life offers longevity without requiring additional phased expansions to achieve scale. While still at the PEA stage, the early economics suggest that NNLP could become one of the USA's most strategic lithium assets.

Key things to point out about the PEA:

- At US$15,000/t LCE, the after-tax NPV8% is US$2.8B with an IRR of 8.8%.
- We calculate a breakeven lithium carbonate price of US$11.116/t LCE using an 8% discount rate.
- Surge currently owns 25% of the subsurface rights on the private land. The PEA assumes a 2% gross revenue royalty to reflect hypothetical terms to attain full ownership. No commercial agreement exists as of this note. We estimate that 50-60% of the mine plan is on 100% Surge-owned land, and the remaining 40-50% is on private land.
- The PEA is unlevered, i.e. it does not consider receiving a Department of Energy (DOE) loan, which Lithium America's Thacker Pass and Ioneer's Rhyolite Ridge received for part of their Capex. The DOE loan interest rate is fixed to the US Treasury Rate. If Surge were to receive a similar loan, project economics would improve.
- The contained lithium within the PEA mine plan (4.38 Mt) only represents 39% of the overall resource. Note that there are over 7.43Mt of LCE at 3,843 Li ppm above a cutoff grade of 3,000ppm. At a mining rate of 5.15Mtpa, the remaining 3Mt of LCE would theoretically take another 31 years to mine.
- The resource that informed the PEA is 100% Inferred. We expect a very high conversion rate as mineralization is very continuous, and grade variability is low.
- The PEA was completed jointly by M3 Engineering and Technology and Independent Mining Consultants (IMC). M3 was the lead firm for the November 2022 Lithium Americas' Thacker Pass Feasibility Study.
- The PEA assumes mine feed grade through beneficiation can be upgraded by 24% with ~90% recovery before leaching, based on initial testing. There is an opportunity to improve this based on Thacker's progress over time.
- Processing is based on sulfuric acid leaching. On-site acid production from elemental sulphur is planned.
- 83.6% of the US$ 5,097/t LCE Opex is processing (62.6% reagents), with mining (8.1%), tailings (5.6%) and G&A (2.7%) making up the remainder.
- We estimate an All-in-Sustaining-Cost (AISC) per tonne LCE of $5,720 for the LOM.
- Peak production falls in year 6, with 109Kt of LCE production.
- Mined material is free dig. No blasting is required.

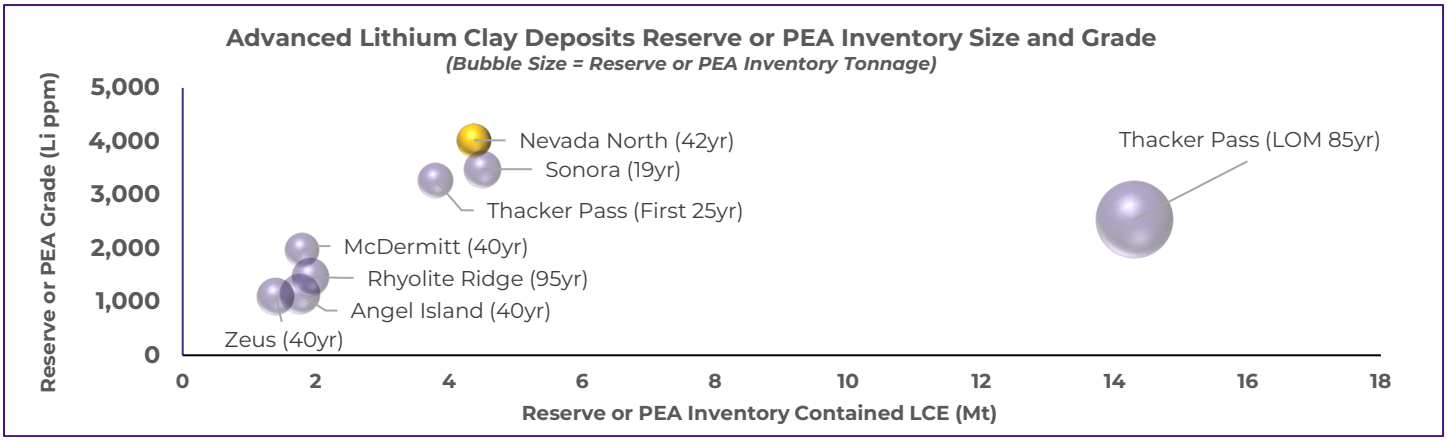

Figure 4. Size and grade bubble chart of prominent US lithium clay deposits. Source: 3L Capital and company filings.

Mark Souvenir | MD Institutional Sales | (Mark@3L-capital.com) **|** 1 (647) 203 5226
Steven Therrien, P.Geo | Senior Mining Analyst | (Steven@3L-capital.com) **|** 1 (807) 252 2747
Micah Yuen | Associate | (Micah@3L-capital.com)

Table 3. Comparison of advanced Nevada lithium clay deposits studies. Figures are rounded. *Source: 3L Capital and Company Filings.*

Description	Surge Battery Metals *(Nevada North)*	Lithium Americas *(Thacker Pass)*	Jindalee Lithium *(McDermitt)*	Century Lithium *(Angel Island)*	Ioneer *(Rhyolite Ridge)*
Study Level	PEA	FS	PFS	FS	FS
Year	Q2 2025	Q1 2025	Q4 2024	Q2 2024	Q2 2025
Li_2CO_3 (LC) or LiOH (LH) / t (US$)	24,000 LC	24,000 LC	24,000 LC	24,000 LC	23,011 LH
NPV 8% (US$M)	9,214	8,691	3,229	3,160	1,499
IRR (%)	23%	20%	18%	17%	18%
Pay Back (Yrs)	4.7	8.7	5	9	8
Development Capex (US$M)	5,322	12,441	3,021	3,552	1,668
Sustaining Capex (US$M)	1,513	7,590	508	315	1,830
Opex / Ore t (US$)	90	87	77	40	71
Opex / LCE t (US$)	5,097	8,039	8,673	*2,833	6,237
LOM Grade (Li PPM)	4,017	2,540	1,967	1,149	1,464
Avg. Ore Processed (Mtpa)	4.9	12.4	5.1	7.2	2.6
Recovery (%)	82.8	80.4	84.4	78	***84.9
LOM (Yrs)	42	85	**40	40	95
Average Production (LCE)	86	135	44	34	17
Strip Ratio (tw:to)	1.2	5.3	1.3	0.2	3.1
NPV to Capex Ratio	1.7	0.7	1.1	0.9	0.9
Dev. Capex per Average Annual Li_2CO_3 Produced (US$K)	62	92	69	105	97
Dev. Capex to LOM Li_2CO_3 Produced (US$K)	1.47	1.08	1.68	2.55	1.02

*$8,240 Without NaOH Credit
**Mine Life is 63years, PFS Economic Evaluation for First 40
***Lithium Carbonate Recovery, Lithium Hydroxide Recovery = 96% (Yr3 onwards)

How Does Nevada North Compare to Lithium America's Thacker Pass Lithium Clay Deposit

In Figures 5, 6 and 7 below, we compare Surge's Nevada North Project to Lithium America's Thacker Pass across multiple metrics. Nevada North stacks up well against Thacker Pass, particularly in terms of grade, recovery, Opex per tonne LCE, and operating margin. We'll let the charts speak for themselves from here. Bottom line — Although smaller, Nevada North delivers stronger grades, lower operating costs, and higher up-front production, which are exactly the levers investors should be looking for.

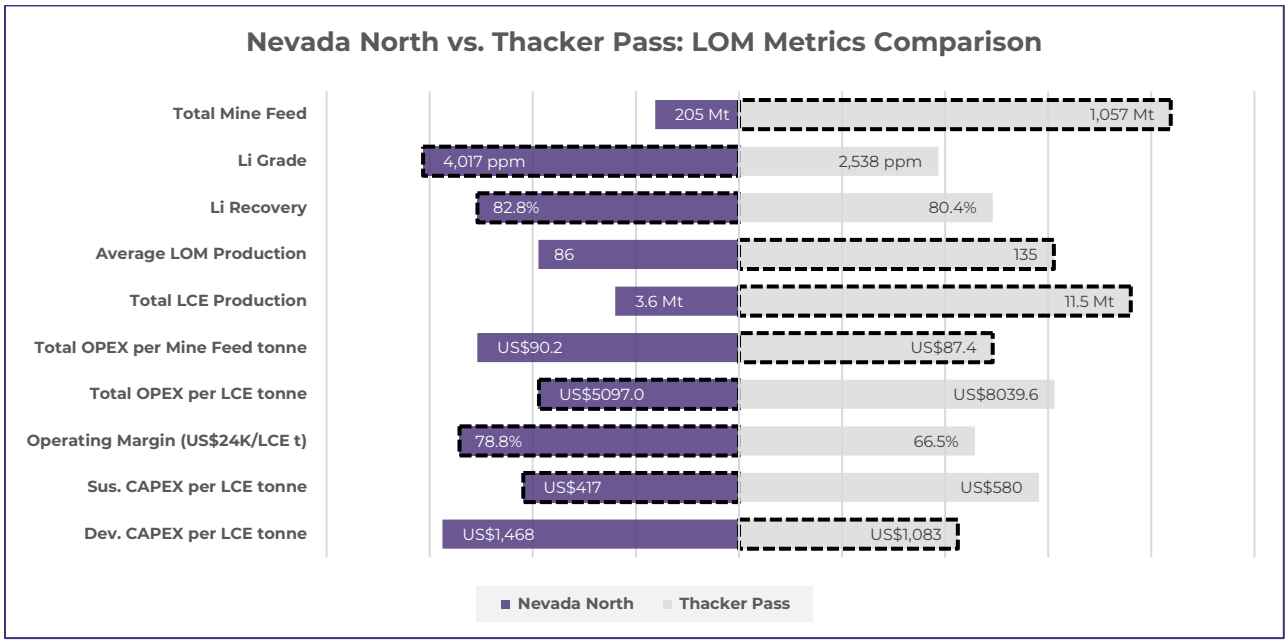

Figure 5. Nili's Nevada North vs Lithium Americas' Thacker Pass comparison. *Source: 3L Capital and Company Filings.*

Mark Souvenir | MD Institutional Sales | (Mark@3L-capital.com) | 1 (647) 203 5226
Steven Therrien, P.Geo | Senior Mining Analyst | (Steven@3L-capital.com) | 1 (807) 252 2747
Micah Yuen | Associate | (Micah@3L-capital.com)

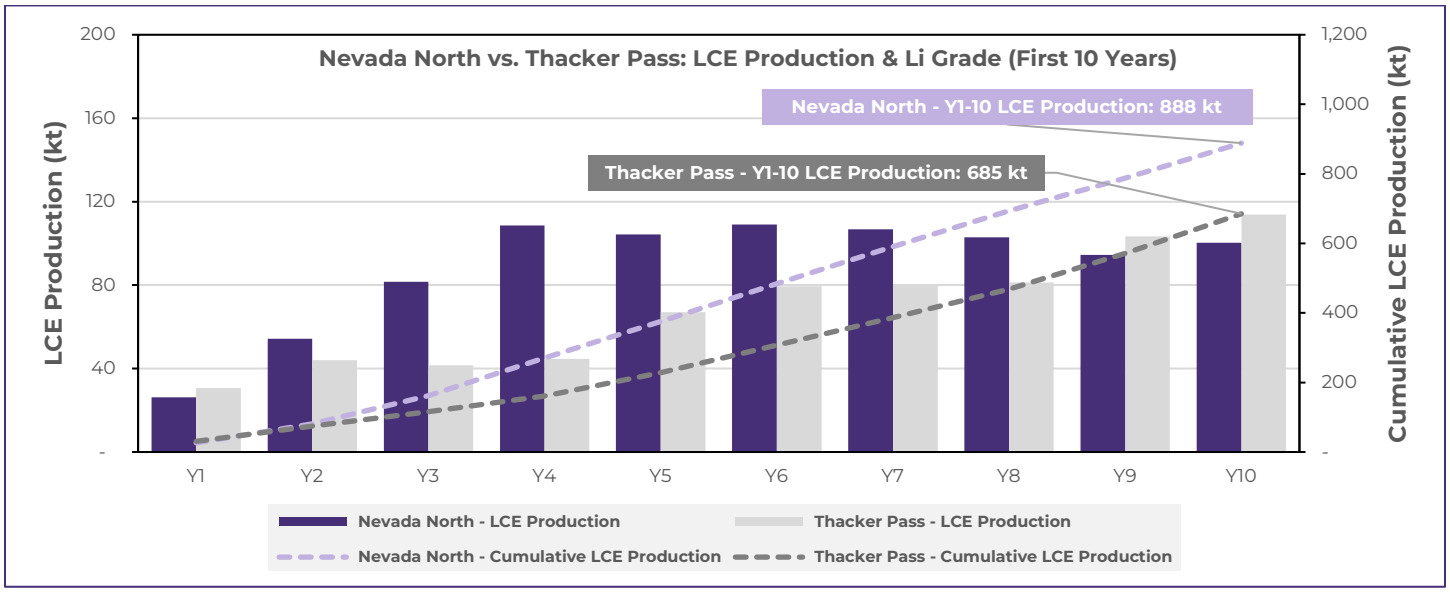

Figure 6. First 10 years of LCE production from Nevada North and Thacker Pass. Nevada North produces 203Kt more Lithium Carbonate in the first 10 years vs Thacker Pass. *Source: 3L Capital & Company Filings.*

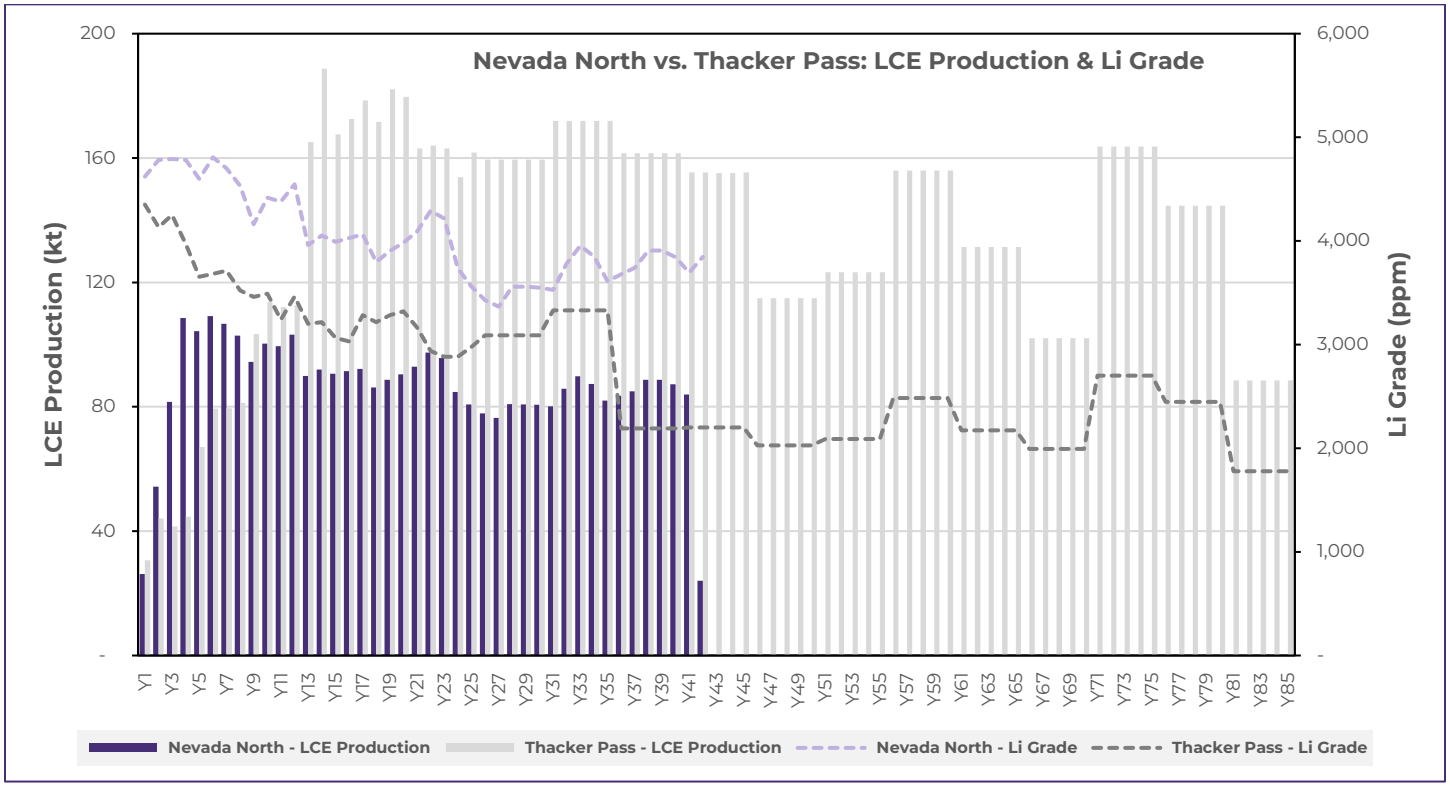

Figure 7. LOM LCE production for the 42yr Nevada North and 85yr Thacker Pass deposits. Note the grade of production between the two deposits and consider that there are 7.43Mt LCE above a 3,000ppm Li cutoff at Nevada North, whereas only 4.38Mt LCE at 4,017 ppm Li is contained in the PEA mine plan. To mine the difference at the same processing rate planned in the PEA would take an additional 30+ years, by our estimate. *Source: 3L Capital and Company Filings.*

Mark Souvenir | MD Institutional Sales | (Mark@3L-capital.com) **|** 1 (647) 203 5226
Steven Therrien, P.Geo | Senior Mining Analyst | (Steven@3L-capital.com) **|** 1 (807) 252 2747
Micah Yuen | Associate | (Micah@3L-capital.com)

How Does Nevada North Fit into the Global Picture

Nevada North demonstrates strong potential to become one of the world's top-producing lithium projects. If developed according to the PEA plan, NNLP would rank as the 5th largest lithium producer worldwide among 2024 lithium companies/projects based on LOM average production at 86 kt LCE per year. Even in its initial year, the project is projected to deliver 26 kt LCE, placing it among the top 16 producers globally in 2024. Should a construction decision be made, NNLP has the potential to become a competitive and globally impactful lithium operation in the world.

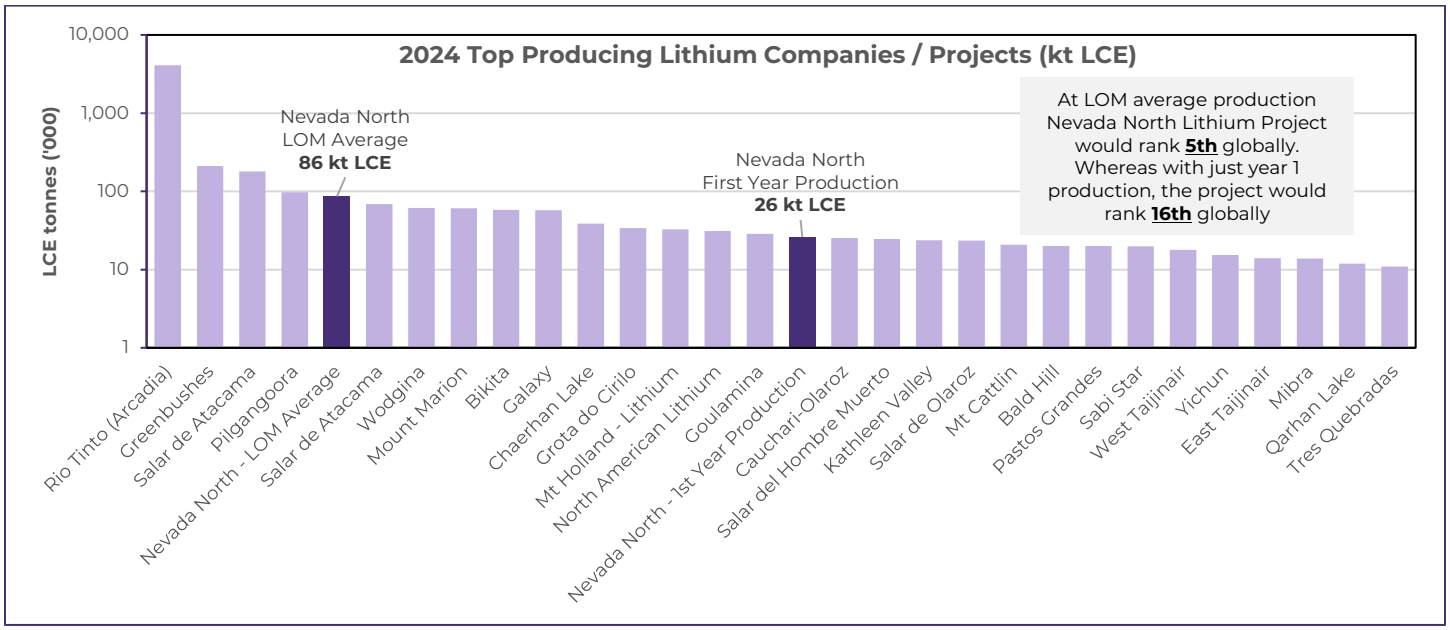

Figure 8. 2024 top producing lithium companies/projects. Nevada North's LOM and first-year production are included for comparison. *Source: 3L Capital & S&P Cap IQ.*

The PEA indicates Nevada North Lithium Project has an average Opex of US$5,097/LCE t over a 42yr LOM. Of this total, 84% (US$4,260) is attributed to process plant, 8% (US$413) to mining, 6% (US$287) to tailings/salt/coarse gangue management & 3% (US$137) to G&A. Compared to 2024 lithium-producing companies and projects, NNLP stands out as a high-volume producer with a well-balanced cost structure. While its Opex is mid-range relative to peers, its strong production scale of 86 kt LCE per year positions it as one of the largest projects globally.

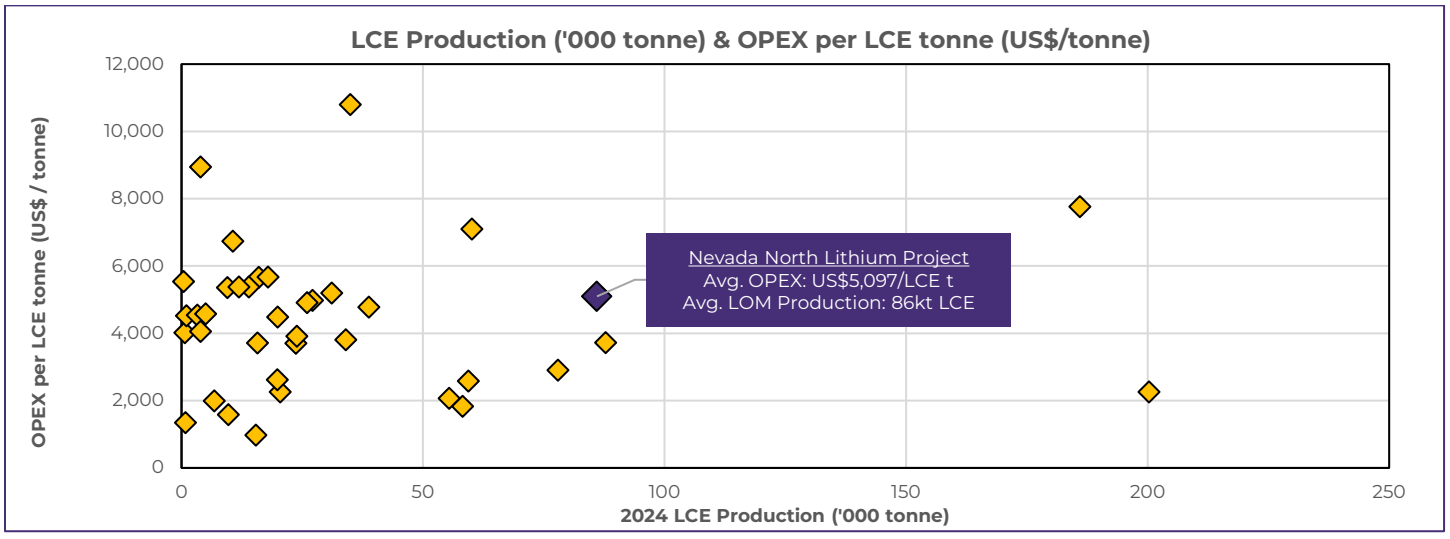

Figure 9. 2024 Lithium mine operating costs (not including royalty). *Source: 3L Capital & S&P Cap IQ.*

Mark Souvenir | MD Institutional Sales | (Mark@3L-capital.com) **|** 1 (647) 203 5226
Steven Therrien, P.Geo | Senior Mining Analyst | (Steven@3L-capital.com) **|** 1 (807) 252 2747
Micah Yuen | Associate | (Micah@3L-capital.com)

According to S&P Cap IQ consensus estimates, global lithium chemical supply is projected to grow steadily from 1.1Mt LCE in 2024 to over 3.1Mt LCE by 2035, representing a CAGR of 8.9%. The supply mix continues to be dominated by lithium brine and hardrock sources, growing at a CAGR of 9.9% and 7.6%, respectively, over the same period. While lithium clay remains a small contributor, its role is expected to expand gradually, with its share of total supply rising from zero in 2024 to ~4% by 2035.

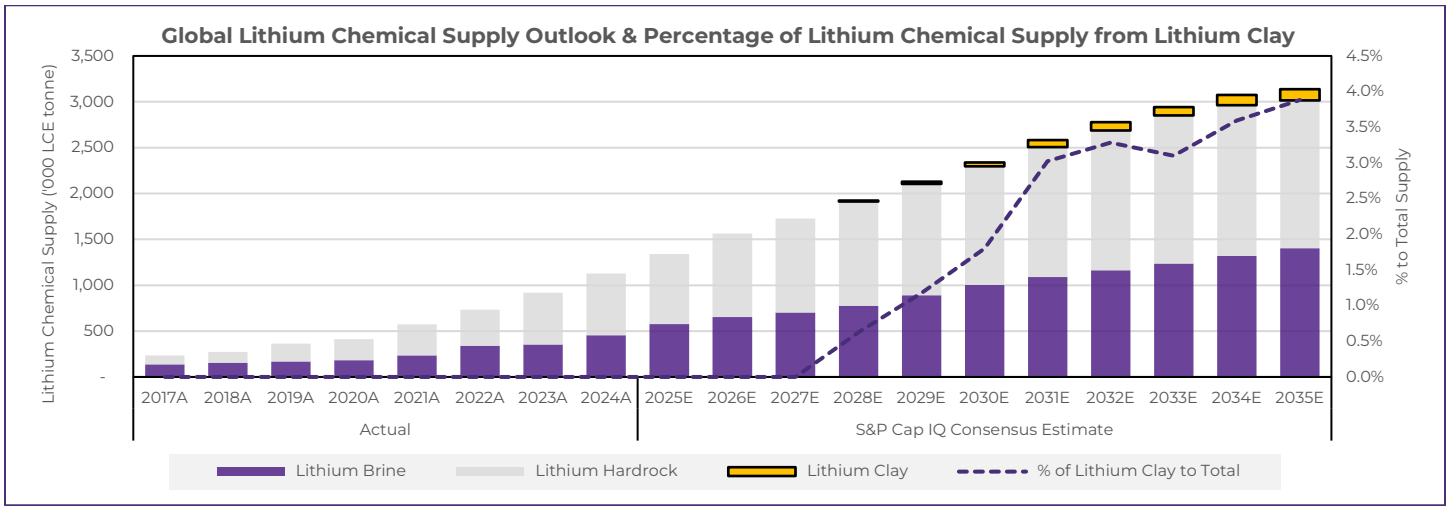

Figure 10. Actual and forecasted Lithium supply by source type. *Source: 3L Capital & S&P Cap IQ.*

S&P Cap IQ consensus estimates highlight a growing structural imbalance in the lithium market, driven by increasing global demand. While the lithium chemical supply is expected to grow from 1.1Mt LCE in 2024 to 3.1Mt LCE by 2035, demand is projected to increase at an even faster pace, from 1Mt LCE to 3.6Mt LCE by 2035 or a CAGR of 10.7%, resulting in a shift from supply surplus to growing deficits. After peaking at a modest surplus of 92kt LCE in 2026, the market is forecast to swing into deficit by 2032, widening sharply to a shortfall of 416kt LCE by 2035. This deepening supply gap underscores the need for new lithium projects. It points to upward pressure on lithium prices in the coming years, as supply struggles to keep pace with the accelerating demand.

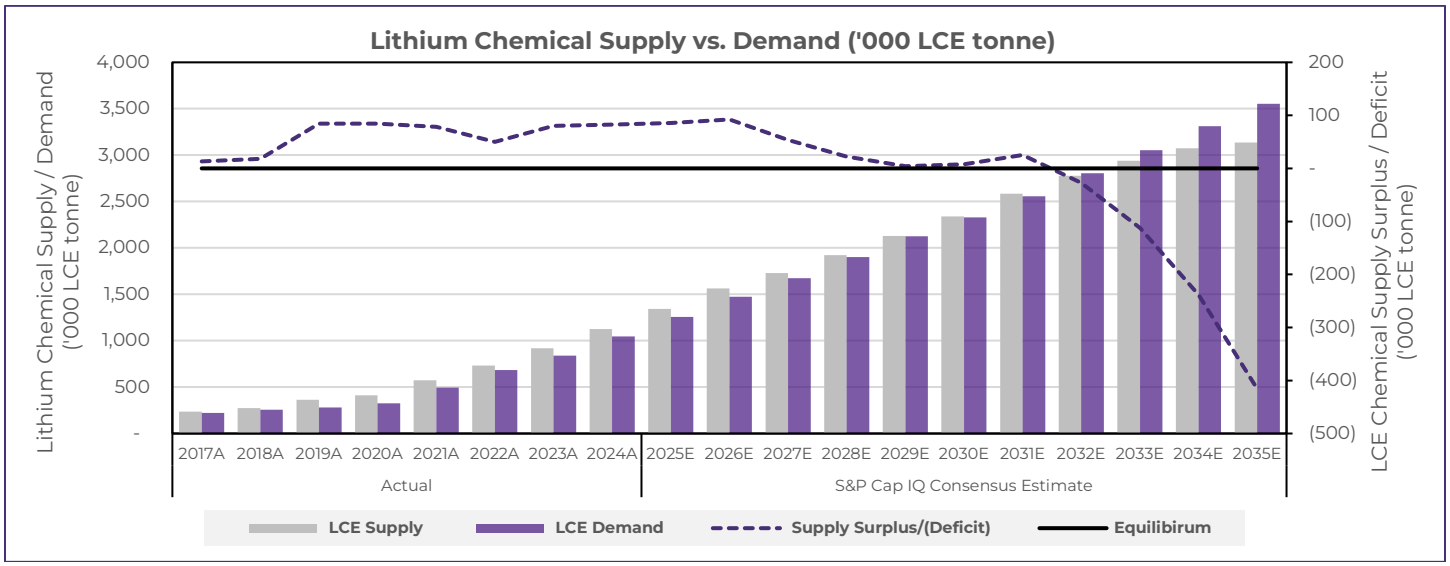

Figure 11. Actual and forecasted Lithium supply vs demand. *Source: 3L Capital & S&P Cap IQ.*

Mark Souvenir | MD Institutional Sales | (Mark@3L-capital.com) **|** 1 (647) 203 5226
Steven Therrien, P.Geo | Senior Mining Analyst | (Steven@3L-capital.com) **|** 1 (807) 252 2747
Micah Yuen | Associate | (Micah@3L-capital.com)

Consensus forecasts show a clear upward trend in lithium prices, rising from US$8,884/t LCE in 2025 to US$21,735/t LCE by 2035. This increase aligns with the projected structural supply deficit in the lithium market, driven by accelerating demand. Our model suggests a breakeven price of US$11,116/t LCE using an 8% discount rate, with breakeven thresholds of US$12,484/t & US$9,361/t at 10% & 5% discount rates, respectively. These breakeven prices represent the minimum long-term pricing required to justify project development (i.e., 0 NPV with a 5%, 8%, or 10% IRR). With consensus prices forecast to exceed these breakeven levels after 2031 under all scenarios, the outlook supports positive project economics for NILI long term.

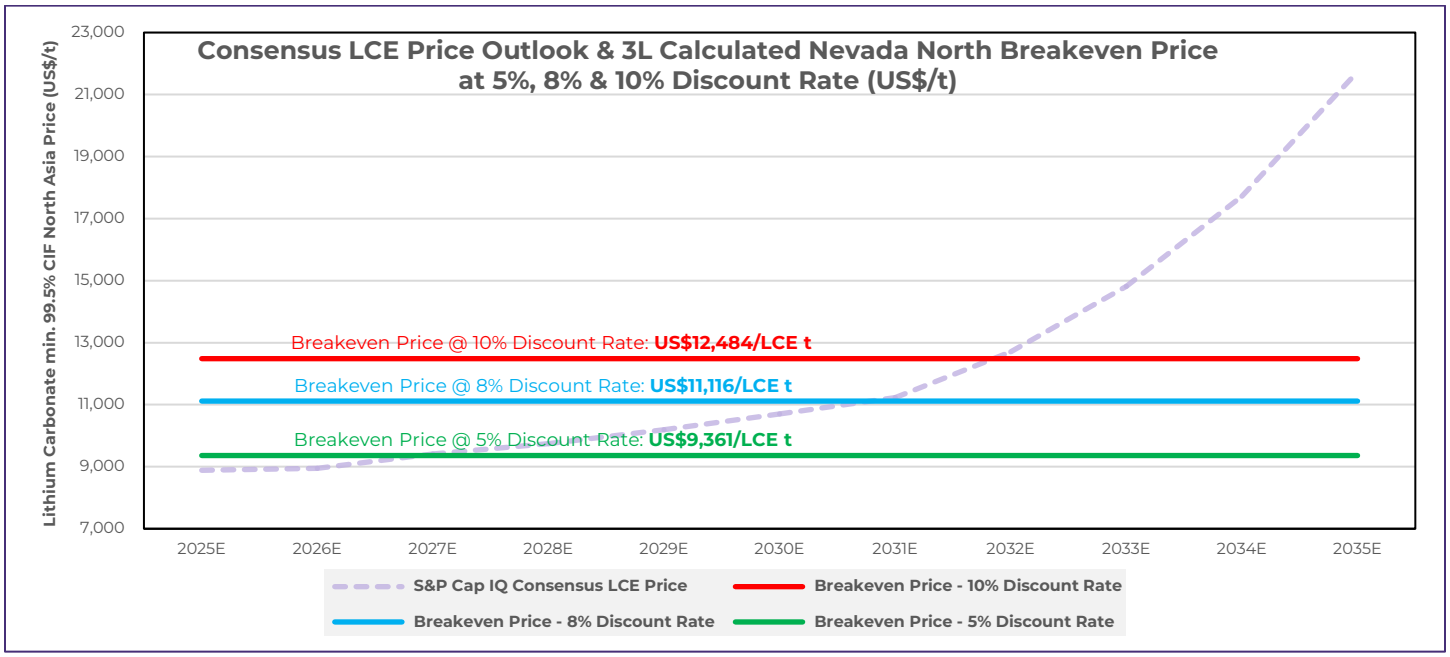

Figure 12. Consensus LCE price outlook and 3L Capital's calculated breakeven LCE price for Nevada North. *Source: 3L Capital and S&P Cap IQ.*

Opportunities for Upside

We identify three primary opportunities to enhance the Nevada North economics in a future PFS or FS: Beneficiation, Resource Grade Improvement, and High-Grade Resource Expansion.

Beneficiation

The purpose of mineral beneficiation is to concentrate lithium-bearing clay by discarding coarse gangue material that is either non-lithium bearing or low grade. Beneficiation at Thacker Pass has progressed from no improvement in feed grade in 2018 to a Q4 2024 design criterion that plans for a 70% increase in feed grade before leaching (Table 4), leading to less mass being processed for the same lithium output. While a beneficiation plant adds Capex, it reduces downstream Capex and Opex, thereby improving unit economics for lithium carbonate production. Without it, you'd face much higher leach circuit sizes, reagent costs, and energy use per tonne of lithium output.

Table 4. Thacker Pass planned feed upgrade through beneficiation over time. *Source: 3L Capital & 2018, 2022 and 2025 Lithium Americas Thacker Pass technical reports.*

Study	ROM Li Content (ppm)	Feed Solids Li Content (ppm)	Feed Grade Improvement (%)
2018	3,283	3,283	0%
2022	3,270	4,563	40%
2025	3,559	6,044	70%

Mark Souvenir | MD Institutional Sales | (Mark@3L-capital.com) | 1 (647) 203 5226
Steven Therrien, P.Geo | Senior Mining Analyst | (Steven@3L-capital.com) | 1 (807) 252 2747
Micah Yuen | Associate | (Micah@3L-capital.com)

Surge's 2025 PEA assumes a 24% improvement in feed grade through beneficiation, based on six months of Falcon C concentrator test work. The October 2024 news demonstrated a 25% improvement in grade from 4,105 ppm to 5,124ppm while retaining 87% of the lithium. These are very positive initial results, and we believe there is room for improvement based on Lithium America's progress between 2018 and 2025. Even if Surge were able to achieve a 40% grade improvement compared to the current 25%, it would be a significant development and have a meaningful impact on lowering unit operating costs per tonne LCE.

Grade Improvement from Infill Drilling

The resource grades are already top of class, but we think they can improve even further. Look at the two cross sections in Figure 13 below. Most of the composites in this section are 4,000ppm+ (Purple), yet the block model between the composites is lower grade. We believe that tighter-spaced drilling will lead to grade improvement in areas like these, which should enhance the economics in a future study.

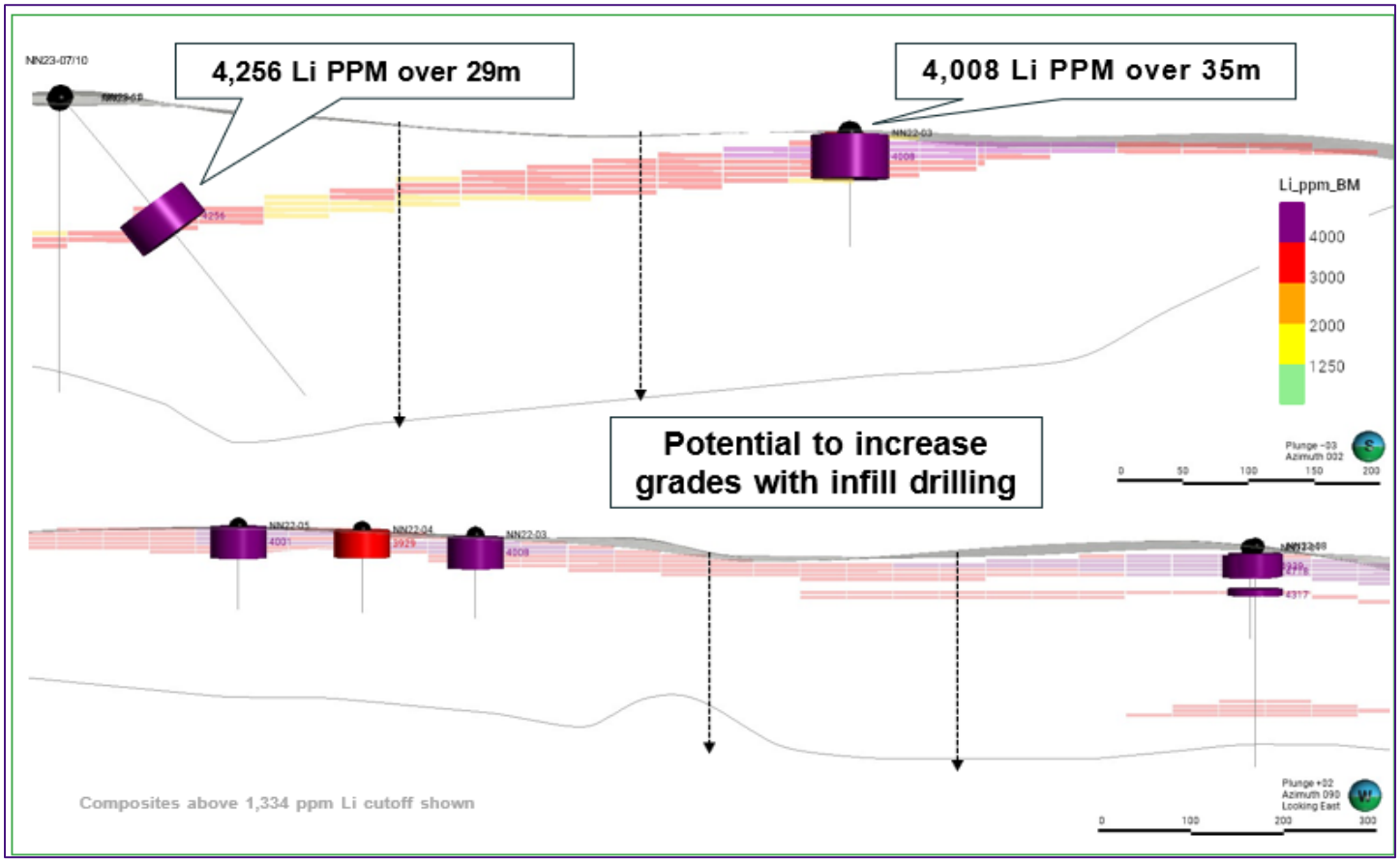

Figure 13. Cross sections through the Nevada North block model highlight areas where we believe infill drilling will enhance block model grades and future mined grades. Composite grades on both sections are predominantly above 4,000 ppm Li. However, block model grades are noticeably lower. *Source: Surge Battery Metals website.*

Mark Souvenir | MD Institutional Sales | (Mark@3L-capital.com) **|** 1 (647) 203 5226
Steven Therrien, P.Geo | Senior Mining Analyst | (Steven@3L-capital.com) **|** 1 (807) 252 2747
Micah Yuen | Associate | (Micah@3L-capital.com)

High-Grade Expansion

There is already plenty of mine life at high grades, no question. However, there are some obvious areas on the property where high-grade resource tonnes are limited by drill spacing. In Figure 14 below, you can see the resource at a 3,000 ppm Li cutoff and how it is limited to a 600m drill radius around holes. We expect stepping out from these holes will yield additional high-grade resources. In particular, the area in the southeast corner of the land package is likely to be higher grade, based on the presence of high-grade lithium in the soils in that area.

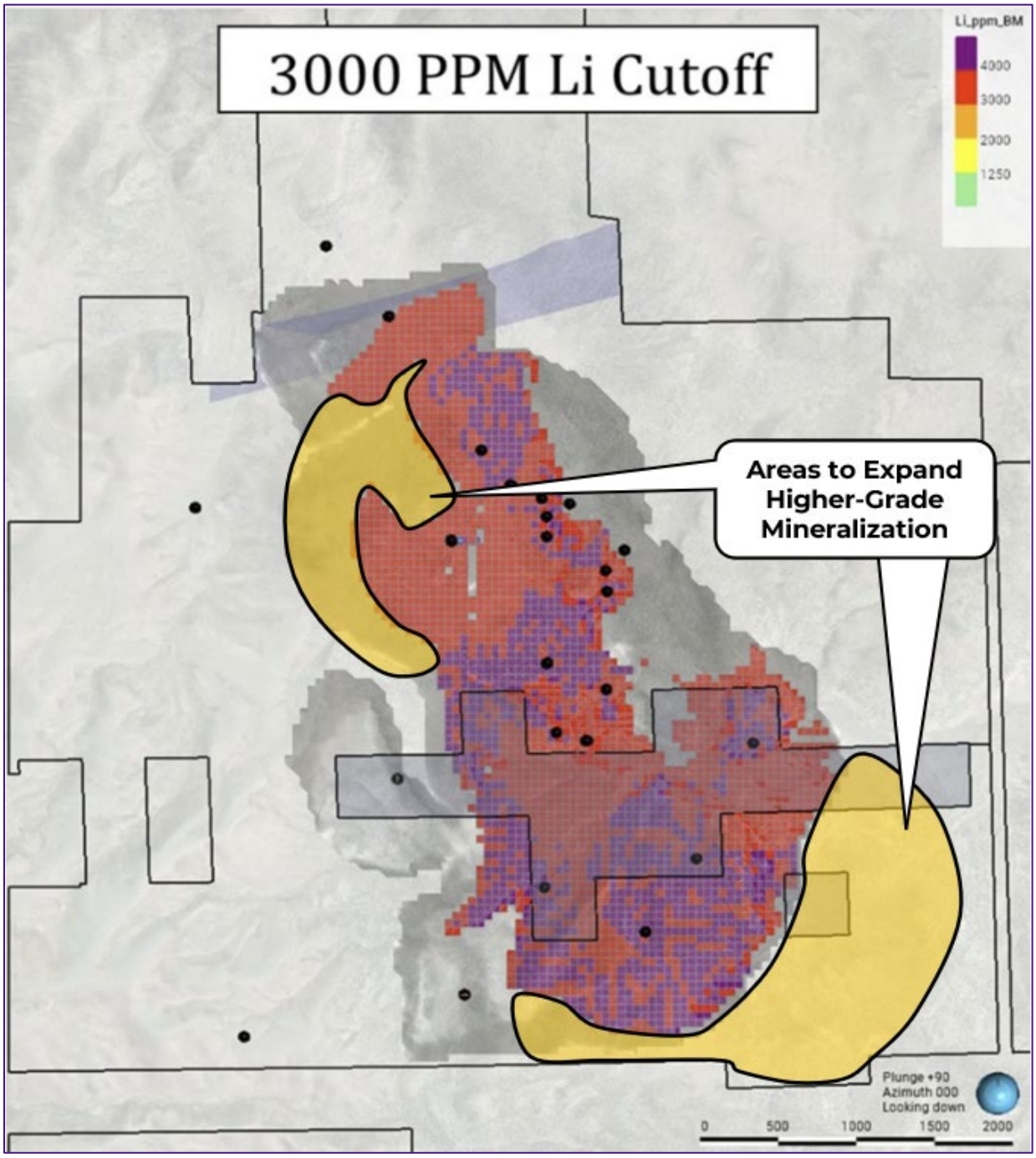

Figure 14. 2024 Nevada North block model in plan view with blocks filtered above 3,000 ppm Li. Higher grade mineralization can be expanded into the areas of orange with more drilling, in our opinion. *Source: 3L Capital & Company Filings.*

Mark Souvenir | MD Institutional Sales | (Mark@3L-capital.com) **|** 1 (647) 203 5226
Steven Therrien, P.Geo | Senior Mining Analyst | (Steven@3L-capital.com) **|** 1 (807) 252 2747
Micah Yuen | Associate | (Micah@3L-capital.com)

Upside to Valuation

There are several ways to look at it, but the data suggests that Surge should be valued higher, whatever way you cut it.

As of June 6, Surge trades an EV/resource tonne LCE of US$4.2 and an EV/Reserve or PEA tonne LCE of US$8.4, whereas Thacker trades an EV/resource tonne LCE of US$8.9 and an EV/reserve tonne LCE of US$41.1 (Ioneer US$30.2 and US$73.6, respectively). As Surge continues to derisk the project and advance through studies, we expect both EV ratios to improve. For Surge to reach Lithium America's multiples, it would imply between 110% and 400% upside.

In our valuation section, we calculate a current P/NAV multiple of 0.08 for Surge and explain the inputs used in that calculation. Looking at S&P Cap IQ consensus P/NAV ratios for other clay developers, the average is 0.31x. For Surge to reach this multiple, it would imply 298% of upside.

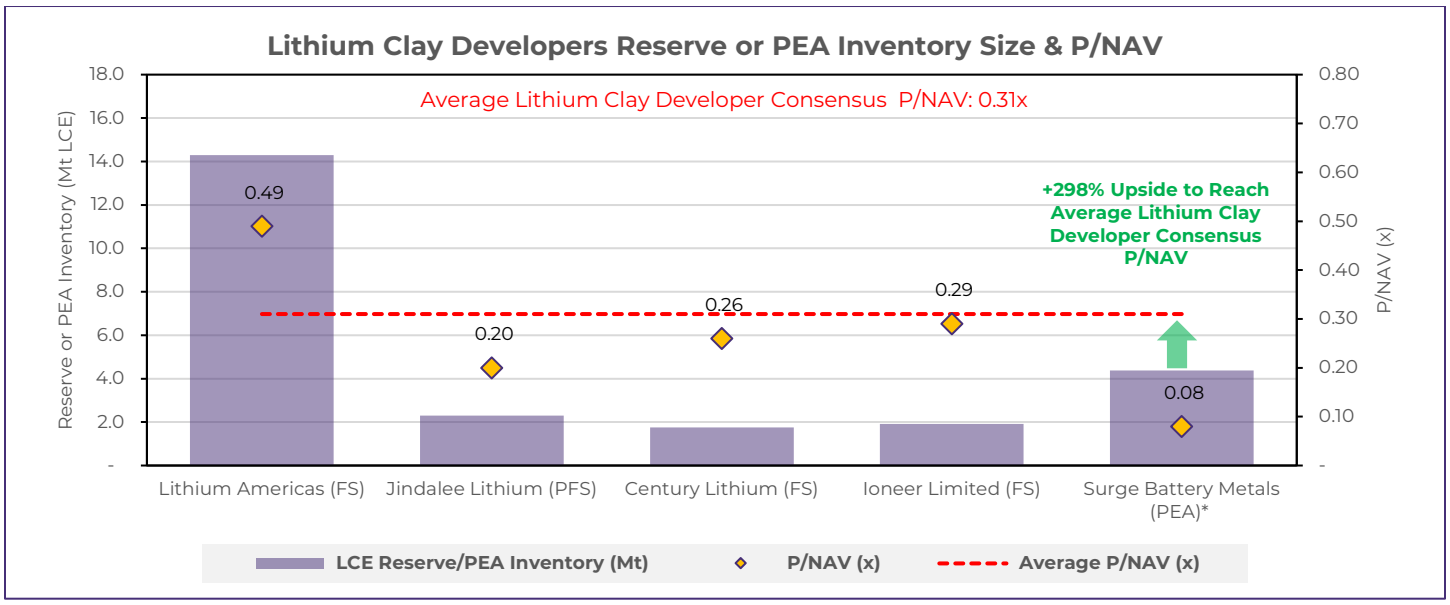

Figure 15. Advanced lithium clay developers' reserve or PEA inventory size and S&P Cap IQ consensus P/NAV as of June 6, 2025. Surge Battery Metals P/NAV calculated by 3L Capital. *Source: 3L Capital, FactSet, and S&P Cap IQ.*

What's Next for Surge

Contingent on additional funding, these are some of the key next steps we see for Surge:

- **Additional Metallurgical and Flowsheet Test Work:** Surge has already demonstrated that they can generate 99% purity lithium carbonate from their clays with low impurities. Subsequent tests will prove the steps required to purify the LCE to battery-grade concentration and impurity levels. They will also optimize the process design to reduce reagents and water consumption while improving recovery. Beneficiation work to improve on the initial 25% grade increase will also be key to lowering unit Opex costs.
- **Infill and Expansion Drilling Program (Requires Funding):** Surge was granted an exploration plan of operations permit from the BLM in Q2 2025, allowing for 250 acres of disturbance, compared to the 5 acres previously allowed on the NOI permit. The permit enables Surge to complete all necessary infill / expansion / geotech / metallurgical drilling required to inform a PFS or FS. We estimate an additional 30-60 holes (5,000-10,000m) are required to convert Inferred resources to M+I before a PFS or FS and to expand higher-grade resources.
- **Resource Update and PFS Study or FS Study (Requires Funding):** Following the results of an infill drill program, Surge can update its resource estimate. The updated resource, following infill, will contain the first M+I resources and serve as the basis for a PFS or FS. Once a PFS or FS is published, Surge can officially declare reserves.

Mark Souvenir | MD Institutional Sales | (Mark@3L-capital.com) | 1 (647) 203 5226
Steven Therrien, P.Geo | Senior Mining Analyst | (Steven@3L-capital.com) | 1 (807) 252 2747
Micah Yuen | Associate | (Micah@3L-capital.com)

Risks

Lithium Price: The project's economics are highly sensitive to lithium pricing; a sustained downturn in lithium carbonate prices could materially reduce project returns or delay development decisions. At sub US$10,000/t LCE, the project returns a negative NPV.

Table 5. 2025 Nevada North PEA sensitivity analysis. *Source: Surge Battery Metals website.*

Sensitivity ($)/t LCE	$15,000	$18,000	$21,000	Base Case $24,000	$27,000	$30,000	$33,000
Post-tax $NPV_{8\%}$ (millions)	2,792	4,983	7,099	9,214	11,314	13,354	15,394
Post-tax IRR (%)	13.0%	16.6%	19.8%	22.8%	25.7%	28.2%	30.6%

Processing / Metallurgical Risk: The viability of recovering lithium from claystone at commercial scale remains a risk; if planned processing methods underperform or require costly refinement, capital and operating costs could escalate beyond current PEA assumptions. Future metallurgical testing will be key in demonstrating that low-impurity battery-grade lithium carbonate can be produced from Nevada North lithium-bearing clays. There is a risk that the 82.8% recovery rate will not be achieved, and the recovery rate in future studies will drop.

Water Rights: Securing adequate water rights remains a key permitting and operational hurdle in Nevada; any delays or denials could constrain future processing capacity or necessitate costly alternatives. Surge has applied for water rights but has not yet been granted any as of this date. For reference, 2,850 acre/ft per year is required for Thacker Pass's Phase 1 plan.

Financing Risk: As a pre-revenue exploration-stage company, Surge will require significant external funding to advance Nevada North through feasibility and development. There is no guarantee the company will be able to raise the necessary capital on acceptable terms—or at all—particularly in volatile equity or commodity markets.

Bulk Density: The current resource estimate uses the same bulk density as Thacker Pass (1.79 t/m3 rather than a value based on direct measurements. Limited bulk density sampling has occurred. Bulk density sampling in the future could indicate mineralization has a lower bulk density than 1.79 t/m3, leading to a reduction in tonnes. It could also lead to an increase. Additional sampling will be completed ahead of a PFS or FS study to mitigate this aspect of the project's risk.

Resource / Geological Modelling: There is a risk that infill drilling reveals greater variability, lower grades, and lower resource-to-reserve conversion in the future. However, due to the supporting evidence from electromagnetic geophysics, mapping, and geostatistics, we believe this risk to be low.

Mark Souvenir | MD Institutional Sales | (Mark@3L-capital.com) **|** 1 (647) 203 5226
Steven Therrien, P.Geo | Senior Mining Analyst | (Steven@3L-capital.com) **|** 1 (807) 252 2747
Micah Yuen | Associate | (Micah@3L-capital.com)

Company Overview

Surge Battery Metals (NILI) is a Canadian junior exploration and development company focused on advancing critical mineral assets in North America, with a primary emphasis on lithium. Its flagship asset is the Nevada North Lithium Project (NNLP), located in northeastern Nevada. The NNLP hosts lithium-rich claystone mineralization across a large, contiguous land package. Early exploration and drilling programs have returned consistently high lithium grades, with favourable metallurgy indicating strong recovery potential using conventional processing techniques. The project has advanced rapidly, and a PEA has been completed, outlining a long-life, high-margin operation with a LOM production of 86kt LCE per year over 42 years. The company continues to expand the mineralized footprint through drilling and is actively advancing the project toward prefeasibility.

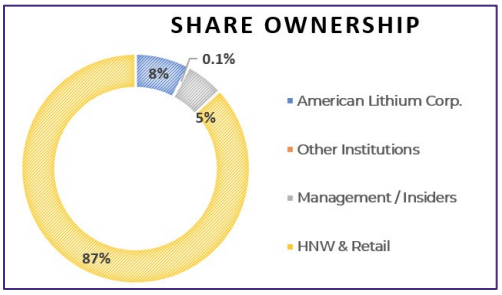

Figure 16. Share ownership of Surge Battery Metals. *Source: Company website/FactSet.*

Figure 17. Surge Battery Metals' one-year share price performance vs. the LITP and RSI. *Source: Trading View.*

Mark Souvenir | MD Institutional Sales | (Mark@3L-capital.com) **|** 1 (647) 203 5226
Steven Therrien, P.Geo | Senior Mining Analyst | (Steven@3L-capital.com) **|** 1 (807) 252 2747
Micah Yuen | Associate | (Micah@3L-capital.com)

Disclosures & Disclaimers

3L Capital has prepared this report for informational purposes only. It is intended to provide general information and should not be interpreted as a solicitation to engage in securities transactions, a recommendation to buy or sell securities, or investment advice. The opinions expressed in this report reflect the author's views as of the report's date. It is strongly advised that recipients conduct their independent investigations and seek professional advice before making any investment decisions. While the information contained in this report is derived from sources believed to be reliable, its accuracy cannot be assured.

It should be noted that 3L Capital, along with its affiliates and associates (collectively known as "3L Capital"), may have provided financial advisory and other services to the companies mentioned in this report in the past or may do so in the future. As a result of rendering such services, 3L Capital may receive financial and other incentives from these companies. 3L Capital employees and affiliates may hold positions in and may buy or sell securities of companies mentioned in this report.

For a detailed discussion of company-specific risks, please refer to the "Risk Factors" segment in the company's MD&A section.

Steven Therrien, Senior Mining Analyst, also serves as a consultant to Surge Battery Metals.

Mark Souvenir | MD Institutional Sales | (Mark@3L-capital.com) **|** 1 (647) 203 5226
Steven Therrien, P.Geo | Senior Mining Analyst | (Steven@3L-capital.com) **|** 1 (807) 252 2747
Micah Yuen | Associate | (Micah@3L-capital.com)