

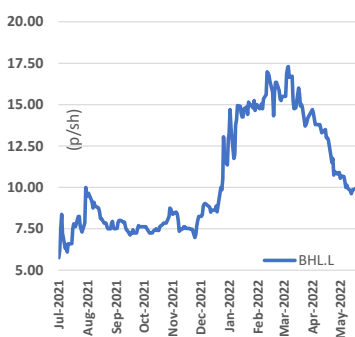
8th June 2022

Sector: Mining

Diversified lithium assets in the US, having all three common mineralised lithium style deposits within its portfolio.

Market

Market	AIM-LSE
Ticker	BHL
Price (p/sh)	9.8
12m High (p/sh)	17.6
12m Low (p/sh)	5.1
Ordinary shares (m)	390.6
Market Cap (£m)	38.3



Source: IRESS

Description

Bradda Head has exposure to sedimentary, pegmatite and brine lithium assets located in Arizona and Nevada. Bradda Head aims to develop assets to support the growing requirement for US-based lithium.

www.braddaheadltd.com

Board

Non-Exec Chairman	Ian Stalker
CEO	Charles FitzRoy
COO	Jim Guilinger
CFO	Denham Eke
NED	Jim Mellon
I-NED	Euan Jenkins
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Phase 2 metallurgical testwork underway

Bradda Head Lithium (BHL) has announced that Phase 2 metallurgical testwork has commenced at the company's Basin East sedimentary lithium project in Arizona. The aim of this next round of testwork is to work towards the production of a battery-quality lithium chemical product and further investigate the potential to produce economic by-products. The results from this three-month work programme are expected in H2-2022 and should dovetail into a potential resource update (end of year) followed by the first Preliminary Economic Assessment (PEA) for the Basin project in 2023.

- ▶ **Background.** This second round of detailed metallurgical testwork at Bradda's Basin project follows the natural progression as part of the company's comprehensive exploration and development programme in Arizona. Firstly, the updated JORC-compliant MRE for the Basin East Project, 75.2Mt at 763ppm Li for total contained LCE of 305kt and an Exploration Target of 1-6Mt of LCE (RNS 29-3-2022) and secondly the 1st phase metallurgical testwork conducted on drill core from the Basin East project (RNS 12-1-2022). To re-cap, this 1st Phase testwork demonstrated the potential for exceptionally high lithium extraction (99%) with a residence time of only one hour.
- ▶ **Phase 2 testwork.** Bradda has awarded the Phase 2 metallurgical testwork contract to industry experts, Resource Development Inc. The plan is to carry out bulk tests on about 150kg of lithium-bearing clay sourced from the Basin East project. The clay will be beneficiated and leached in order to generate sufficient lithium sulphate Pregnant Leach Solution (PLS) to proceed with further impurity purification steps, and ultimately to work towards the production of a final lithium carbonate or lithium hydroxide product.
- ▶ **Co-products.** With one-eye on the potential to maximise future revenue streams, this round of testwork will also investigate the possibility of extracting economic quantities of co-products/by-products which could provide reduced net operating costs for any future potential operation.
- ▶ **Moving in the right direction.** We continue to be impressed by Bradda's comprehensive exploration and development work at the company's sedimentary lithium assets. It is encouraging to see a focused commitment to detailed metallurgical testwork at this stage of the programme. Given that sedimentary lithium deposits are a "relatively" recent deposit type in the sector (barring Thacker Pass and Sonora in development) then it goes that **comprehensive and successful metallurgical testwork is critical in enabling a commercial development pathway and unlocking value**. Thus, we see Bradda as striking a good balance between resource growth activities and commercially focused testwork. Significantly, this 2nd Phase test work is being conducted on much larger representative sample (150kg) which should provide further confidence in the test results. The aim of this new round of metallurgical testing is to provide enough PLS for detailing testing which should ultimately start to shape potential flowsheet parameters and process routes. It's worth noting that at this stage, **Bradda retains flexibility to produce either a lithium hydroxide or lithium carbonate product** depending on the flowsheet selected. This may also be determined by prevailing market dynamics at the time. There is no right or wrong answer here as both carbonate and hydroxide will continue to be required for EV Li-ion cathode material. The selection for Bradda may come down to final testwork results and costs or it may instead be dictated by EV build-out and the evolving domestic US Gigafactory landscape. i.e., if nickel-rich cathode chemistry continues to gain traction then hydroxide production could make sense. Either way, this inherent flexibility could be extremely valuable for Bradda.
- ▶ **Next steps.** The 2nd Phase testwork should take 3 months to complete, with **results due in H2-2022**. Simultaneously, Bradda has a 44-hole drill programme planned at its Basin project for 2022 which will cover parts of the Basin East, Basin East Extension and Basin North claims. The expectation by Bradda is that this drilling will then feed into an **updated Mineral Resource Estimate** towards the end of the year. This will then be combined with the latest metallurgical testwork results to produce the first iteration of economic study for the project; a **PEA** which Bradda hopes to complete in 2023.

It is encouraging to see Bradda maintain the momentum of exploration and development work at the Basin project. Whilst multiple workstreams are focused on resource growth activities, it is reassuring that the company continues to focus on detailed work to support potential development and commercial considerations further down the line. The rational to develop US domestic sources of lithium chemicals remains highly compelling in our view.

Figure 1 - Project location map - all projects



Source: Bradda Head Lithium

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