

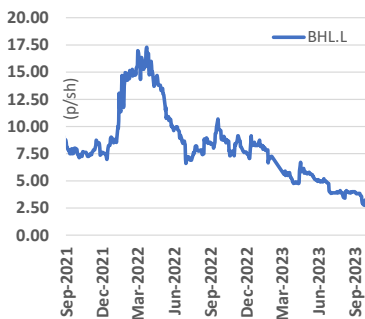
28th September 2023

Sector: Mining / Lithium

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)	3.25
12m High (p/sh)	9.15
12m Low (p/sh)	2.75
Ordinary shares (m)	390.6
Market Cap (£m)	12.69



Source: Alpha

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

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Non-Exec Deputy Chairman	Jim Mellon
NED	Euan Jenkins
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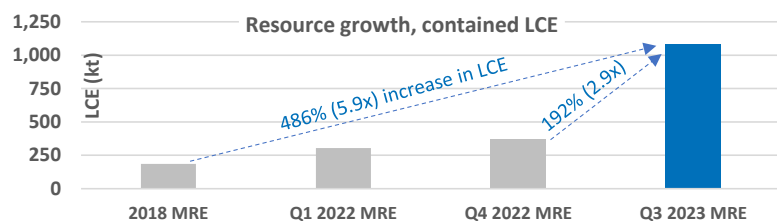
Phil Swinfen

Bradda Head Lithium Ltd

Basin resource upgraded; royalty payment triggered

Bradda has reported an update to the Mineral Resource Estimate (MRE) at the company's Basin sedimentary lithium project in Arizona. The updated MRE now stands at total contained lithium carbonate equivalent (LCE) of 1,085kt, a 192% increase in LCE over the prior MRE of 371kt. Furthermore, the grade of the Inferred resource has increase by 30% from 694ppm to 900ppm Li. The new resource, being over 1Mt contained LCE triggers the next US\$2.5m royalty payment from Lithium Royalty Corp (LRC). The pace of resource growth looks set to continue with the next round of drilling due to kick off in early 2024.

- ▶ **Basin MRE update summary.** Bradda has updated the resource at Basin to 227Mt at 898ppm Li for 1,085kt contained LCE. This represents a 192% increase (+714kt LCE) in contained LCE over the previous resource (Q4 2022) of 94.5Mt at 738ppm Li for 371kt contained LCE. The MRE update was compiled by SRK Consulting and based on additional drilling undertaken by the company this year; namely a 14-hole, 2,355.2m sonic drill programme completed in Q2 2023. Significantly, this programme extended the footprint of drilling from Basin East to the Basin East Extension and Basin North prospects and doubling the area of drilling compared with the previous estimate.
- ▶ **MRE details, a robust resource.** The new resource comprises 17Mt at 940ppm Li for 85kt contained LCE in the Indicated category and 210Mt at 900ppm Li for 1,000kt LCE in the Inferred category. SRK has applied a higher cut-off grade of 550ppm Li (300ppm Li previously) to reflect the recognised metallurgical processing input parameters and taking into account operating costs presented in the public domain by more advanced peer group projects. In combination with lower in-situ density assumptions, the higher cut-off grade results in a more robust resource estimate. The cut-off grade is an important assumption in resource estimation that determines what part of the mineral deposit to include in the MRE. In the typical grade-tonnage curve, as the cut-off grade is increased, the tonnes available for mining decreases, as does the contained metal, but the resource grade increases. As such, it is reassuring that even at a much higher cut-off grade of 550ppm Li, the contained LCE in the MRE has increased significantly versus the previous MRE.



- ▶ **High-grade and upside.** Importantly, over a third (34%) of the contained LCE is contained within the high-grade layer that sits within the Upper Clay zone. This zone has an average grade of 1,300ppm Li. The high grade in combination with shallow occurrence (low strip ratio) could have some compelling economic advantages for a potential future mining operation. This target upper clay and high-grade layer have shown remarkable continuity throughout the Basin project and remain open to the north and thus, Bradda sees significant exploration potential in the Basin North licence. Furthermore, mapping, geophysics and geochemical sampling suggests that these clay layers are present throughout the majority of the Basin West licence area, representing compelling drill targets to support further resource expansion. Indeed, SRK has estimated a JORC compliant Exploration Target equivalent to a range of between 1 to 4 Mt contained LCE for the prospective parts of Basin East, Basin West, Basin West Extension and Basin North claims.
- ▶ **Royalty unlocked.** By exceeded the milestone of a 1Mt LCE resource with a minimum grade of 800ppm Li, Bradda has met the conditions to trigger the second US\$2.5m tranche of the \$8m royalty agreement with LRC in return for a 2% gross overriding royalty over the company's sedimentary claims in Arizona (see RNS 15/11/2021). The remaining US\$3m payment is contingent on Bradda outlining a 2.5Mt LCE (>800ppm Li) resource. Given the success of the recent drilling and lateral continuity of mineralised intercepts seen in wide-spaced holes in step-out drilling, the potential to grow the resource to this 2.5Mt LCE level and beyond looks excellent in our view.

The new MRE reinforces Bradda's steep resource growth trajectory with the new resource achieved at a low discovery cost (only 62 holes for >1Mt LCE). There is clearly more resource upside to come which should unlock further non-dilutive royalty funding. This should help prompt a recovery in the company's share price to reflect the company's true potential.

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Figure 1 - New Mineral Resource Statement (NI-43-101) for Basin East, Basin East Extension and Basin North effective 1 September 2023

Classification	Domain	Tonnes	Mean Grade		Contained Metal	
		Mt	Li (ppm)	K (%)	LCE (kt)	K (kt)
Indicated	Upper Clay	11	720	3.5	42	380
	Upper Clay HG	6	1350	3.2	43	190
	Lower Clay	-	-	-	-	-
	SubTotal	17	940	3.4	85	570
Inferred	Upper Clay	143	790	2.7	600	3,800
	Upper Clay HG	48	1290	3.1	330	1,500
	Lower Clay	19	690	2.8	70	530
	SubTotal	210	900	2.8	1,000	5,800
Total		227	898	2.8	1,085	6,370

- o Mineral Resource statement has an effective date of 1 September 2023.
- o The Mineral Resource is reported using a cut-off grade of 550 ppm Li and is constrained to an optimised open pit shell, which was generated using the following assumptions: lithium carbonate metal prices of 22,000 USD/tLCE; State of Arizona royalty (selling cost) of 6%; operating costs of 40 USD/tore; Li recovery of 72%; mining dilution and recovery of 0% and 100%; and pit slope angle of 45°.
- o Tonnages are reported in metric units.
- o Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content which are not considered material.
- o Conversion factor of Li metal to lithium carbonate equivalent (LCE) = 5.323
- o The figures above are reported on a gross basis given Bradda's 100% interest in the property

Source: Bradda Head Lithium, "Total" row added by Shard Capital

Figure 2 - Previous (effective date 13/10/2022, RNS 16/01/2023) Mineral Resource Statement for Basin East for comparison

Classification	Domain	Tonnes	Mean Grade		Contained Metal	
		Mt	Li (ppm)	K (%)	LCE (kt)	K (Mt)
Indicated	Upper Clay	16	738	3.6	63	0.6
	Upper Clay HG	5.2	1,354	3	38	0.2
	Lower Clay	-	-	-	-	-
	SubTotal	21.2	891	3.5	100	0.7
Inferred	Upper Clay	31.7	767	3.6	129	1.2
	Upper Clay HG	2.3	1,448	3.5	18	0.1
	Lower Clay	39.3	592	2.9	124	1.1
	SubTotal	73.3	694	3.2	271	2.4
Total		94.5	738	3.3	371	3.1

Mineral Resource statement has an effective date of 13 October 2022.

A Mineral Resource is reported using a cut-off grade of 300 ppm Li and constraining the model to an optimised open pit shell, which was generated using the following assumptions: lithium carbonate metal prices of 18,000 USD/t_{LCE}; State of Arizona royalty (selling cost) of 6%; operating costs of 5,000 USD/ t_{LCE} or 27 USD/ t_{ore}; Li recovery of 75%; mining dilution and recovery of 5% and 95%; and pit slope angle of 45°.

Tonnages are reported in metric units.

Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content.

Conversion factor of Li metal to lithium carbonate equivalent (LCE) = 5.323

Source: Bradda Head Lithium

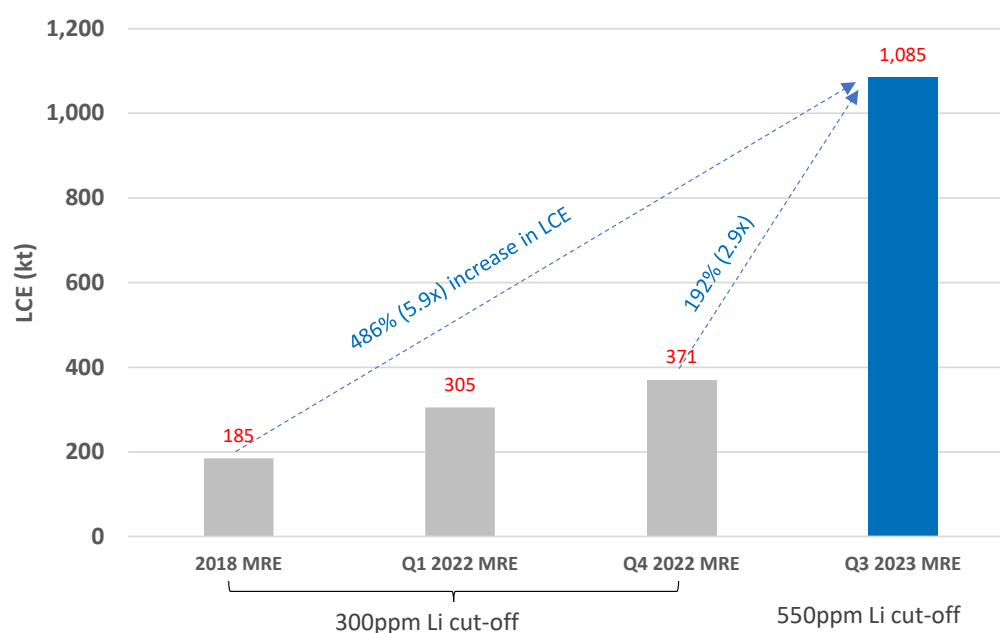
Figure 3 - Q3 2023 model, grade-tonnage sensitivity of LCE to cut-off grade*

Li cut-off grade (ppm)	Indicated			Inferred		
	Tonnage above cut-off	Average grade above cut-off	Contained metal above cut-off	Tonnage above cut-off	Average grade above cut-off	Contained metal above cut-off
	Mt	Li (ppm)	LCE (kt)	Mt	Li (ppm)	LCE (kt)
650	15	990	77	190	910	940
750	11	1100	61	140	990	750
850	8	1220	49	80	1120	500
1000	6	1290	42	50	1270	340

*This table does not constitute a Mineral Resource, as defined by the JORC Code, but is an expression of the sensitivity of the average grade and contained tonnage of LCE to a selection of different Li cut-off grades

Source: Bradda Head Lithium

Figure 4 - Comparison of updated Q3 2023 MRE to previous resource estimates at Basin



Source: Shard Capital

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