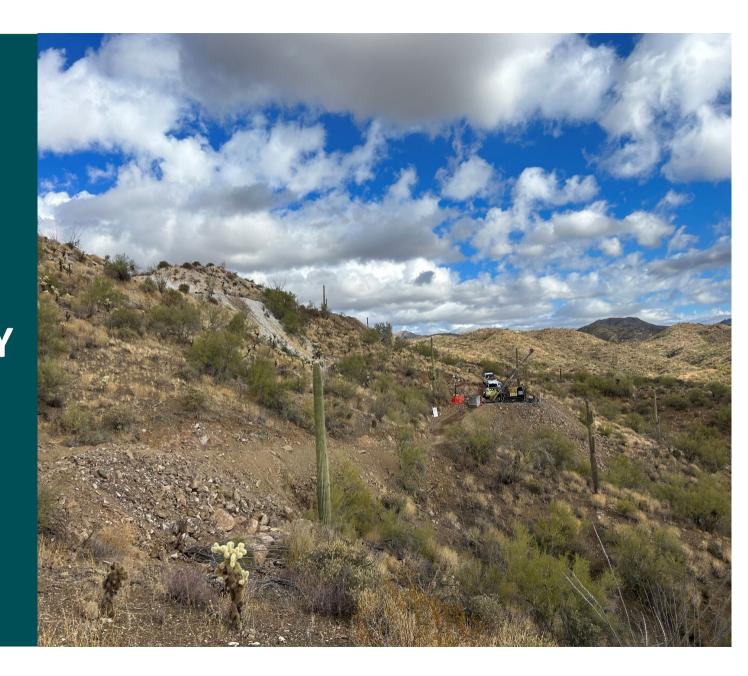
# ADVANCING LITHIUM EXPLORATION IN THE USA BATTERY SUPPLY CHAIN

March 2024





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## **Right Time, Right Place, Right People**



		9	Tier One Political Location	Nevada and Arizona are low risk jurisdictions - ranked #1 and #7 by the Fraser Institute Survey of Mining Companies 2022, <b>no risk of asset nationalization</b>
Investment Case for the USA	2	1	Board and Management Committed	20% of shares held by Board and Management, belief in business model, committed to discovery, and poised to capture lithium market
		67	First-rate Local and Regional Infrastructure	Assets located in Arizona, Nevada, Texas, and Pennsylvania, close to highways and transport links to Gigafactories and developing US battery supply chain
		*	Reduced Geological Risk	Bradda has three types of lithium assets; pegmatites, clays and brines (oil and salar type)
		<b>)</b>	ESG Driven Growth	Implementing community and water conservation initiatives and low- carbon footprint projects is at the core of our development
		X	Right Time, Right Place, Right People	Despite current dip, Lithium supply deficits are forecasted, Bradda and its experien strongly supported by the Board, are focused on the USA and investing into the USA critical minerals supply market chain <sup>(1)</sup>

t dip, Lithium supply deficits are forecasted, Bradda and its experienced team, orted by the Board, are focused on the USA and investing into the US\$135bn Is supply market chain<sup>(1)</sup>

Source: (1) www.whitehouse.gov



**lan Stalker** Executive Chairman



**Denham Eke** Finance Director



**Jim Mellon** Non-Executive Director





**Alex Borrelli** Independent NED

Plus a strong operational



**Euan** Jenkins Independent NED

Piota CFO



**Joey Wilkins** COO



**Don Hains, P.Geo, MBA** Technical Consultant

Adam Hawkins, MBA

Global External



TECHNICAL

ESG



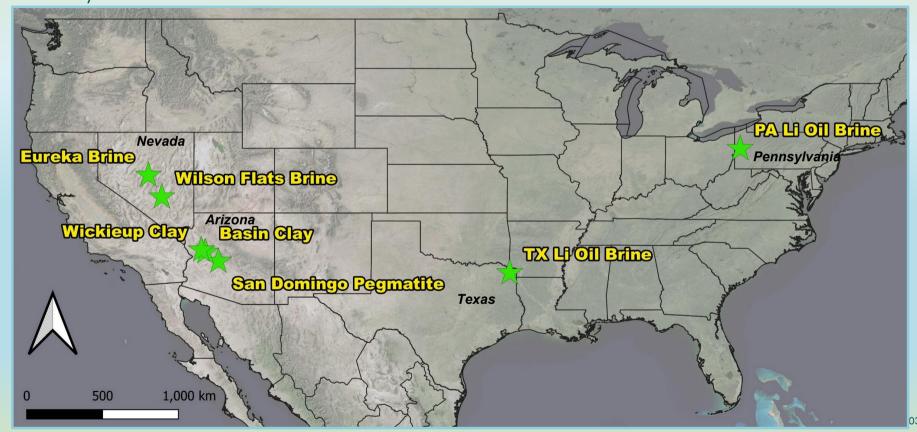
Dr Yatendra Sharma BSc Hons, MSc, PhD, CChem, MRACI, MAusIMM Lithium Processing Consultant

#### Bradda Head Lithium and the USA Battery Supply Chain, Project Distribution

Seven Projects, Four States:

- San Domingo Pegmatite, AZ •
- Basin & Wickieup Clay, AZ ٠
- Wilson & Eureka Brine, NV
- Pennsylvania and Texas Lithium Oil-Field Brines





Projects in the USA 0 (1) Developir 0  $\overline{\mathbf{o}}$ ບາ  $\overline{\mathbf{n}}$ 

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## **Location Critical to Low Carbon Footprint: Western US**





Low carbon footprint by bridging lithium supply gap for USA domestic users, location critical



All 100% owned projects



Clear vision to an additional **US\$3.0M** due when we reach 2.5MT of LCE at Basin



Diverse Portfolio of Lithium Assets For the Sophisticated Investor





#### Source: The White House<sup>(2)</sup>

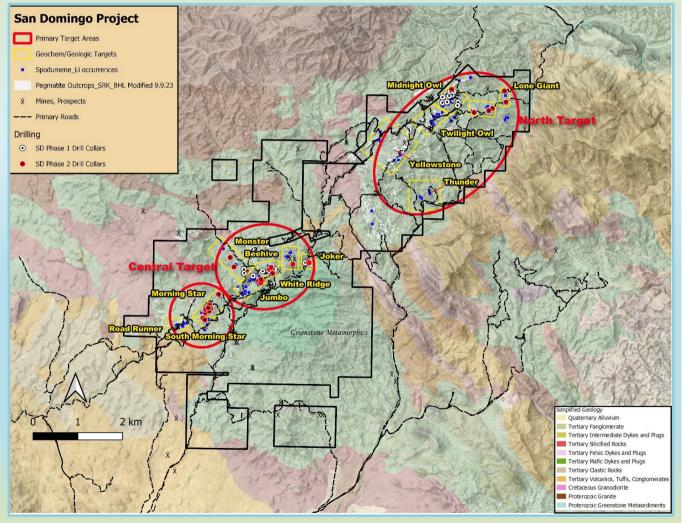
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Source: (1) Benchmark Mineral Intelligence., National Renewable Energy Laboratory. (2) whitehouse.gov. (3) MinEx Consulting Pty, Western World 2012 to 2021 average

#### San Domingo - Developing a World Class Lithium District in Arizona

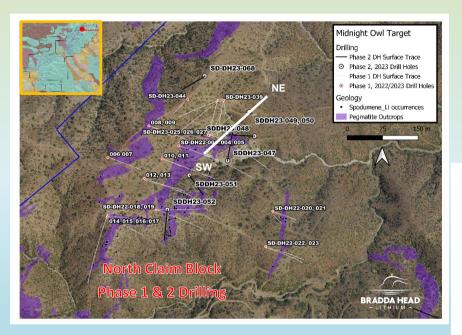


- **33.6km**<sup>2</sup> land position, 7 historic lithium mines on our claims, strong LCT signature
- Li-bearing pegmatite dykes and sill throughout belt, greenstone host rock
- 2 Phases of core drilling, **107 holes** and **13,092m**
- Shallow (<100m) Li-Intercepts, example is SD-DH22-024 with
  32m @ 1.60% Li<sub>2</sub>0 from 27m depth
- Prominent LCT signature of L plus, Ta, Sn, & Cs
- **No** environmental or social **roadblocks,** permitting with BLM and State of AZ
- Metallurgical test results on Phase 1 drill core from Jumbo target indicate up to 6.0% Li20 concentrate with ¼" crush by HLS



San Domingo – Overview

#### Midnight Owl — Extending Mineralization at Depth, Opportunities Remain



#### Phase 2 Highlights:

- + 6.35m @ 0.83%  $\rm Li_2O$  followed by 3.05m @ 1.03%  $\rm Li_2O$  in SD-DH23-049
- Including 5.16m of 80 ppm Ta2O5 starting at 89.18m (LCT signature)
- 16.82m @ 73 ppm Ta2O5 with 105ppm Ta2O5 over 9.12m (LCT Signature)



#### Hole 049 Spodumene

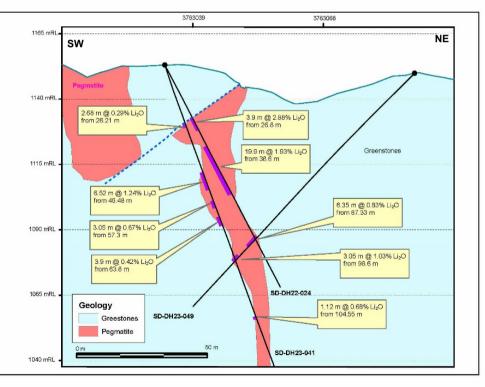
#### Phase 1 Highlights:

- 31.85m @ 1.60% Li<sub>2</sub>O in SD-DH22-024
- 6.52m @ 1.24% Li<sub>2</sub>O in SD-DH22-041
- 4.27m @ 1.86% Li<sub>2</sub>O in SD-DH22-005
- 2.74m @ 2.12% Li<sub>2</sub>O in SD-DH22-042



Hole 024 Spodumene



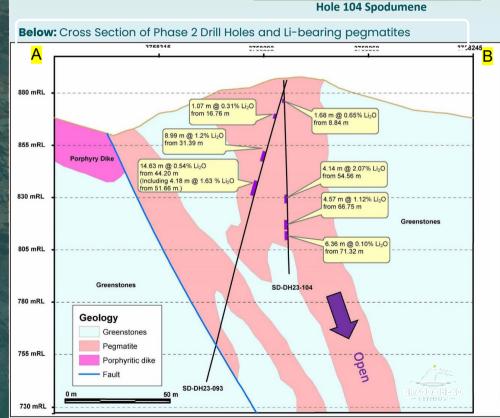


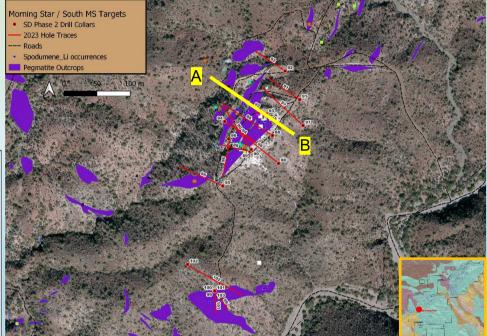
#### Morning Star Target: Spodumene-Pegmatites Encountered in all holes



#### Morning Star Highlights:

- 8.99m @ 1.20 % Li<sub>2</sub>O in hole 093 with **5.40m @ 1.70% :Li2O**
- **4.18m @ 1.63 %** Li<sub>2</sub>O in hole 093
- **4.14m @ 2.07%** Li<sub>2</sub>O in hole 104
- 4.57m @ 1.12% Li<sub>2</sub>O in hole 104





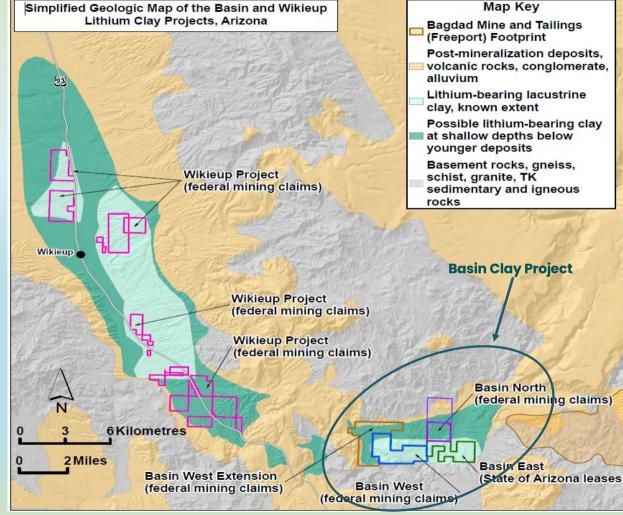
**Above**: Drill Hole Layout, Morning Star. All holes encountering spodumene, minor lepidolite and montebrasite

#### South Morning Star Highlights:

- 5.55m @ 1.03% Li<sub>2</sub>O in hole 099
- 6.76m @ 0.82% Li<sub>2</sub>O in hole 100



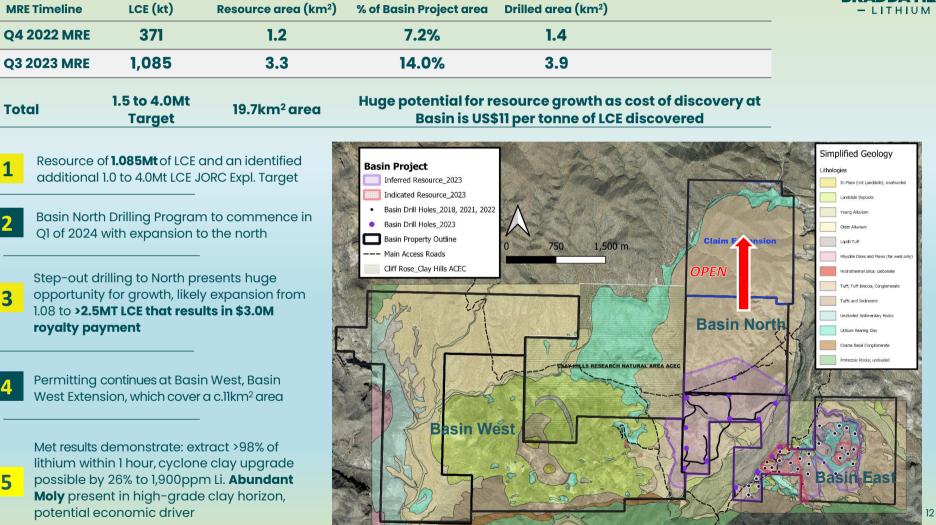
# Basin: Lithium in Clays





- Basin Clay MRE published 1.08MT LCE November, 2023; new 2.5MT LCE target at Basin North drilling, drill permit is pending
- Extensive land package at 19.7km<sup>2</sup>
- LRC Royalty payment of US \$2.5M received in 2023, additional \$3.0M in cross hairs by expanding MRE by 1.5MT LCE
- Exploration plan of operation (EPO) permit with BLM to expand drilling footprint in Basin West anticipated for end of Q4

#### Basin: Tripled Resource in less than 12 months, Targeting > 2.5MT LCE



1.09MT LCE Resource + 4.0 Mt Exploration Target Project Basin

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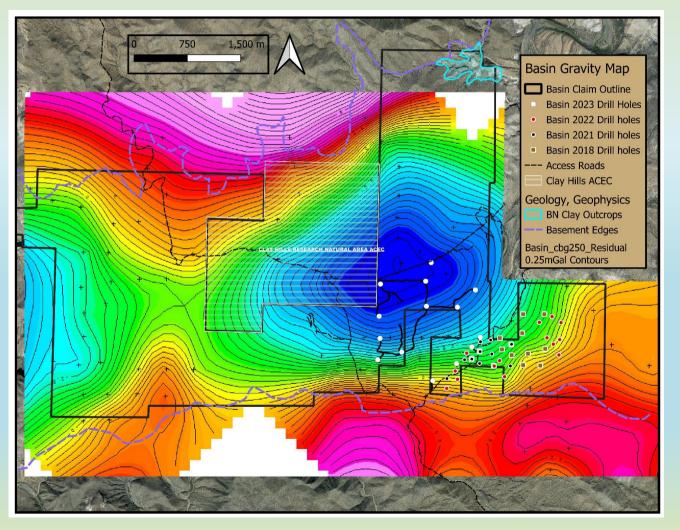
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#### **Basin Gravity Survey**

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- Gravity survey conducted in 2023, 130 stations, post-processing produced excellent results
- Profound gravity low corresponds to thickening Upper clay
- Lower clay could also be significantly thicker—To Be Tested in the 2024 Basin North drill program
  - Moderate gravity lows detected over Basin West, interpreted as good indication of extensive clays across lithium anomalous targets



Basin West Significant Resource Expansion Potential

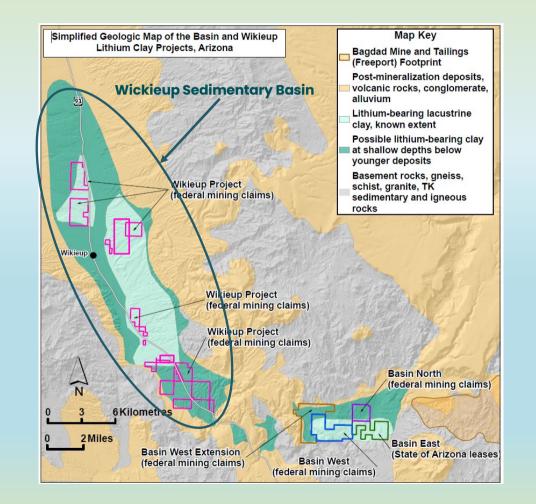
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#### Lithium in Clay Overview of Wickieup - Neighbor to Basin

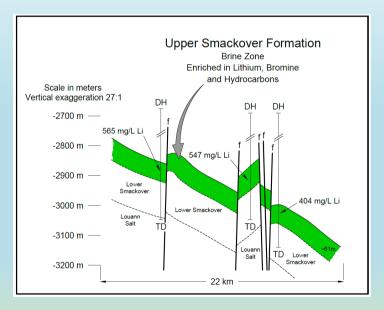


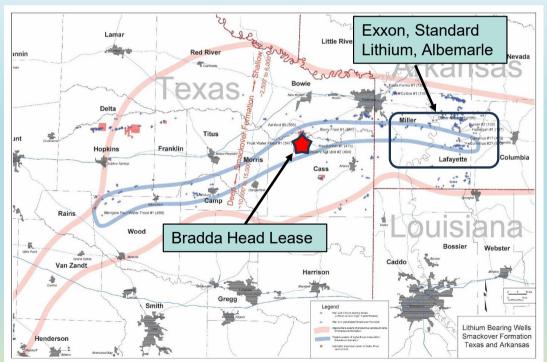


- Sedimentary assets across Wickieup have shared geology, lacustrine environment with district-scale potential for Li
- Extensive land package covering c.24km<sup>2</sup> funded to pursue additional drilling as targets emerge from surface work
- Completed land exchange, added 5.27 km<sup>2</sup> of unpatented lode claims, less than 1.0km from Arizona Lithium's Big Sandy clay deposit
- LRC Royalty transaction applicable to the Wickieup Property, room to grow and capture second royalty payment
- 2024 targeting work to include surface mapping, geochemical sampling, tectonic modelling

#### Lithium Oil Brine Asset in Smackover Fm—Texas, USA

- Eastern Texas at Arkansas border, 40 acres under lease for exploration, at center of cross section
- Well on lease measured **561 mg/litre** Li by USGS
- Numerous tracts of land targeted for lease, negotiations ongoing
- Standard Lithium/Exxon/Albemarle properties 80km to east in Arkansas, covering similar lithium grades in brines







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#### Lithium Oil Brine Assets—Pennsylvania, USA



- Western Pennsylvania near Ohio state line and 55km north of Pittsburg
- Oil Brine Reservoir in Oriskany Fm @ 1,600m (5,250 ft)
- 589 acres leased, consolidated over 5 targets
- Former Oil wells sampled **490 and 489 mg/l** Lithium adjacent or very proximal to leased properties

Table 5-20:	Pennsylvania Project: Historical Brine Assays (Dresel & Rose)							
Well	Li (mg/L)	Br (mg/L)	l (mg/L)	Ca (mg/L)	Na (mg/L)	CI (mg/L)	S.G.	
Well #1	490	1,880	64	24,720	49,000	133,800	1.151	
Well #2	489	1,570	31	23,400	34,200	115,900	1.130	



#### Lithium Brine Assets, Nevada

#### Wilson

**Summary** Nye County, 81 Miles East of Clayton Valley, 13.6 km<sup>2</sup> Clayton

Surface sedimentary sampling and follow up studies

MT (magnetotellurics) Geophysics Completed

Shallow and Deeper sub-horizontal conductors

Compelling Targets, Require Drill Testing

#### **Exploration plans**

Drilling programme designed for 2024 to test clay geochemistry 0-200m and brine geochemistry at 600-700m

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#### **Eureka**

Summary

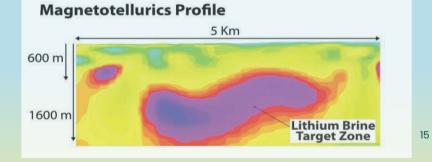
Lander County, 106 Miles Northeast of Clayton Valle, 11.8 km<sup>2</sup>

MT geophysics conducted 2021, with positive results identifying conductors at 700–900m depth, 6km strike, untested to date

Shallow RC conducted on shallow geophysical conductors and proximal to lithium bearing hot spring

#### **Exploration plans**

Drilling programme designed for 2024, test brine geochemistry at 700 to 900m depths



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### **Environmental, Social, and Governance**



Environment 🤒	Social 👐	Governance						
Enhanced and continuous environmental stewardship is our core attribute	Ensure social license to operate with our host communities and neighbours is obtained and maintained	Create a culture of respect and accountability for our management and workforce						
Protect ground and surface water resources	Respect local culture and traditions	Operate ethically, respectfully, and responsibly						
Operate with respect for the land, sensitive environment, and cultural resources	Partner with host communities to find ways to support programs that increase quality of life and educate	Obtain all required permits, take proactive approach in permit requirements and front-load with cultural and environmental studies						
Water Conservation Initiatives Proposed for Basin and Wickieup								

- 2024 ESG Initiatives
- Consultation with Potentially Affected First Nations
- Community Website Created for Access and Input From Stakeholders

#### Low Carbon Footprint By Sourcing Lithium in the USA for the USA Battery Market





San Domingo pegmatite asset: 13,092m drilled in two campaigns, dozens of high grade  $Li_2O'$  intercepts



New Indicated and Inferred Resource of 1.085MT LCE at Basin within clays, triggers US\$2.5M payment to BHL by LRC. 2.5MT Target Possible - Potential to add US\$3.0M Royalty Payment



Lithium oil brines in Pennsylvania and Texas offer excellent opportunities for growth, no other Juniors exploring, competitive advantage with history of work since 2016 and local landman



Investment Summary

Low carbon footprint lithium for the US domestic market. Strong ESG focus, with new water conservation initiatives focused on drill methods and drill site design



Supportive mining jurisdiction for Basin; the nearby Freeport Bagdad copper mine has been in operation since 1928 and currently proceeding with an expansion



Experienced management with proven track-record of returning value to shareholders

AIM: BHL | TSXV: BHLI | OTCQB: BHLIF

# Thank you for your attention



