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# Bradda Head Lithium Ltd

("Bradda Head", "BHL" or the "Company")

# Additional Near Surface, High Grade, Lithium Discoveries made at Morning Star Pegmatites in the San Domingo District Play

Bradda Head Lithium Ltd (AIM:BHL, TSX-V:BHLI,), the North America-focused lithium developmentgroup, announces further results from the Phase 2 core drilling at San Domingo ("SD"), Arizona. This is the third and final set of assays released from the Company's 18,950 feet (5,776m) programme, completed December 2, 2023 and focuses on the Morning Star and Morning Star South targets, located southwest of the Central Targets. The programme has delivered an abundance of encouraging results over the December holiday break.

#### Ian Stalker, Executive Chair, commented:

"As we reach the end of this current San Domingo drilling exploration program, our objectives have been met and indeed surpassed and, as a result our expectations heightened. It is worth reflecting that total drilled metres at SD, from both programmes is only 13,076 meters, covering less than 1% of the total property. These were the first two drilling programmes of any note undertaken at this historic and road accessible lithium mining camp in the USA. In today's world the return on investment in these two campaigns has been substantial and we will build on this as we move forward. In other words, when the Lithium market bounces back, as we believe it will, we will be ready to maximise value from our total Lithium Portfolio including of course San Domingo. The strategic location in the USA of our 'ready to move forward projects' should not be discounted. America remains hungry for its own 'home produced lithium!!"

"Our portfolio of pegmatites are emerging as viable and potentially extractable near surface resources. The shallow and high-grade intercepts seen at Morning Star are very exciting and we look forward to building 3-D models that may lead to follow-up drilling later this year. The abundance of tantalum, tin, and beryllium are a bonus, potentially adding value to this maiden drill programme at Morning Star. The obvious LCT (lithium-caesium-tantalum geochemical signature, e.g., Kathleen Valley signature) style of mineralisation confirms our belief that we have a formidable district with massive upside potential."

"The fact that Morning Star contains high grade lithium as well as being rich in tantalum, beryllium, tin with massive zones of potassium feldspar means that we could have an exciting, diverse and economic deposit. We have more 3D modeling to explore and, given what we have discovered to date, this could significantly change the way we examine not only Morning Star, but the rest of the San Domingo pegmatite trend within our 33km<sup>2</sup> property."

"Parallel to our field work, and complements to our team that delivered these results, we have streamlined our corporate overhead. The net effect of this combined effort - business management and technical know how - means that despite a very poor Lithium market back drop we are now well placed financially and geologically to be able to move with speed and with our in-house skills to grow this investment opportunity. In the meantime, we continue with our 'steady as she goes' approach with no superfluous costs and intend to move back on the resource growth plan at Basin, Arizona."

#### Summary:

- High grade lithium mineralisation found at intervals such as **4.14m at 2.07% Li**<sub>2</sub>**O** at a depth of 54.56m in drill hole SD-DH23-104 and **5.40m of 1.70% Li**<sub>2</sub>**O** at a depth of 31.39m in 093, both at the Morning Star pegmatites (all holes are abbreviated from SD-DH23-)
- Again, favoured coarse-grained spodumene crystals are observed as the dominant lithium mineral with minor amounts of lepidolite and montebrasite
- Large, cohesive, and mostly vertical pegmatite bodies were verified at Morning Star, which were strongly zoned with massive quartz, fine-grained albite, and minor schorl as well as massive zones of potassium feldspar
- Pathfinder elements of tin, tantalum ("Ta<sub>2</sub>O<sub>5</sub>"), and beryllium ("BeO") are found to be highly anomalous in the drilling, such as 6.76m at 145ppm Sn in hole 100, 872ppm Ta<sub>2</sub>O<sub>5</sub> with 0.23% BeO in drill hole SD-DH23-088 over 2.90m
- Morning Star drill hole 088 contains high-grade Ta<sub>2</sub>O<sub>5</sub> with an interval of 872ppm Ta<sub>2</sub>O<sub>5</sub> ppm and anomalous tin over 2.90m at a depth of 39.26m and 477 Ta<sub>2</sub>O<sub>5</sub> ppm over 5.34m at 75.74m depth
- Lithium, plus the bonus of ore grade Ta₂O₅with discrete anomalous tin and BeO in the Morning Star drill holes in a shallow environment, bodes well for the potential of open cut mining.

Results from the Morning Star and South Morning Star targets are highlighted by the following intervals:

- 4.14m at 2.07% Li<sub>2</sub>O in drill hole 104 at Morning Star
- 5.40m of 1.70% Li<sub>2</sub>O followed by 4.18m of 1.63% Li<sub>2</sub>O (within 14.63m at 0.54% Li<sub>2</sub>O) plus 0.67m of 1.21% BeO, all above 55.93m depth in drill hole 093 at Morning Star
- 5.55m of 1.03% Li₂O in hole 099 at South Morning Star
- 6.67m at 0.82% Li<sub>2</sub>O in drill hole 100 at South Morning Star
- 2.01m at 1.84% Li<sub>2</sub>O in drill hole 091 at Morning Star
- 2.80m at 0.65% Li<sub>2</sub>O in drill hole 090 at Morning Star
- Morning Star surface samples of 4.35% and 3.67% Li<sub>2</sub>O above holes 093 and 104 highlight open pit potential
- Wide-open potential >100m depth, virtually unexplored by this second program and presents impressive opportunities district wide



Figure 1: Cross section through Morning Star, drill hole SD-DH23-093 and SD-DH23-104 high grade intercepts, surface samples up to 0.92% Li<sub>2</sub>O

Drilling at **Morning Star**, located 1.0km southwest of the Central Targets, commenced in late October with holes 088 through 098 and 104 for a total of 12 holes totalling 2,159m. Most holes were drilled perpendicular to the main northeast trending and steeply dipping pegmatite bodies, all of which encountered variable amounts of pegmatite with visible spodumene and minor segments of lepidolite and montebrasite. Holes **093 and 104** contain the highest-grade intercepts with **5.40m at 1.70%** starting at 31.39m followed by **4.18m at 1.63% Li**<sub>2</sub>**O** at 51.66m in hole 093, and **4.14m at 2.07% Li**<sub>2</sub>**O** at 54.56m followed by **4.57m at 1.12% Li**<sub>2</sub>**O** at 66.75m in hole 104. Theses intercepts are compelling and justification to follow-up on the high-grade intercepts discovered in holes 093 and 104 with future exploration drilling. Notably, two surface samples near the collars of 093 and 104 returned **4.35% and 3.67% Li**<sub>2</sub>**O**, highlighting the potential connectivity with the subsurface drill hole samples and open cut potential.

 $Ta_2O_5$  is highly anomalous at **Morning Star**, occurring with or without lithium mineralisation such as in hole **088** where there is **2.90m of 872**  $Ta_2O_5$  ppm with **0.46%** Li<sub>2</sub>O and **0.23%** BeO including **1.13m of 2,220**  $Ta_2O_5$  represented as fine grained tantalite in drill core.

High potassium values are found as massive potassium feldspar with samples up to **12.00% K** and an interval of **22.52m at 10.72% K** identified drill hole **104**, isolated above the lithium rich intervals

at **Morning Star**. Further investigations into the potassium distribution are planned as this could be a viable source of potassium feldspar.

Immediately to the south is **South Morning Star** where a mine exposes coarse grained spodumene crystals and was the target of holes 099 through 103, cutting multiple zones of lithium mineralization, see *Figure 3* below for target location. Drill hole 099 intersected shallow mineralization with 6.69m of 0.58% Li<sub>2</sub>O at 8.53m depth followed by **5.55m of 1.03% Li<sub>2</sub>O at 31.03m**. Hole 100 was drilled from the same site at a steeper angle (-75 degrees) and cut multiple intervals of lithium mineralization, again quite shallow highlighted by **3.04m at 0.68% Li<sub>2</sub>O and 123ppm Sn at 16.50m** depth, followed by **6.75m at 0.82% Li<sub>2</sub>O and 145ppm Sn** at 32.92m depth, both within 28.77m of 0.36% Li<sub>2</sub>O and 91ppm Sn. New surface work will focus on collecting channel samples across the prospect that will contribute to expansion of this very shallow and potential open cut resource.

Hole number	From (m)	<b>To</b> (m)	Int (m)	Li₂O (%)	<b>Sn</b> (ppm)	<b>Ta₂O</b> ₅ (ppm)	BeO (%)	Target
SD-DH23-						620		
088	28.80	31.09	2.28	0.41			0.06	
	28.80	45.63	16.82	0.19		164		
	39.26	42.15	2.90	0.46		872	0.23	
	46.51	49.62	3.11			223		
	48.77	49.62	0.85	0.49		259		
	75.74	102.02	21.45	0.03				
	75.74	81.08	5.34			477		
SD-DH23- 089	21.95	39.78	17.82	0.04				
	29.32	32.31	2.98		80			
	44.96	51.21	6.23		76	147		
	48.01	50.9	2.89			298		Morning Star
SD-DH23-						42		Ū
090	6.10	22.52	17.43	0.17	75			
	6.10	10.82	4.73		116			
	16.25	19.05	2.80	0.65	109	48		
SD-DH23-	42.20	FF 47	7 45	0.00		91		
091	43.28	55.17	7.45	0.06		404		
	61.57	63.58	2.01	1.84				
SD-DH23-						151		
093	5.64	11.67	6.04			-		
	16.76	17.83	1.07	0.31				
	31.39	40.39	8.99	1.20				
with	31.39	36.79	5.40	1.70				
	44.20	58.83	14.63	0.54	71			

#### Table 1: San Domingo, Morning Star and South Morning Star Drill Hole Highlights

with	51.66	55.93	4.18	1.63	100	52	
	78.64	83.39	4.75	0.04		82	
SD-DH23- 094	17.22	23.16	5.93	0.07			
	52.12	53.80	1.68	0.89	80	80	
	66.75	72.09	5.33	0.05			
SD-DH23- 095	68.64	72.24	3.6	0.04		62	Morning Star
SD-DH23- 096	48.37	56.39	7.05	0.03			
SD-DH23- 097	75.29	76.23	0.94	0.12			
	97.99	101.59	3.60	0.04			
SD-DH23- 098	78.46	90.22	11.75	0.05			

SD-DH23-						23	
099	8.53	15.24	6.69	0.58	89		
	26.27	27.37	1.10	0.10	160	266	
	31.03	36.58	5.55	1.03	99		
SD-DH23-						367	
100	7.10	9.36	2.26				
	10.91	39.68	28.77	0.36	91		
with	10.91	13.11	2.20	0.64	81		
plus	16.15	19.20	3.05	0.68	123		
and	32.92	39.68	6.76	0.82	145		South Morning Star
SD-DH23-						48	
100	5.03	6.71	1.68	0.49	55		
SD-DH23-						58	
101	13.56	15.85	2.29	0.30	80		
	18.80	20.85	1.37	0.12	58		
SD-DH23-							
102	39.08	42.37	3.29	0.04			
SD-DH23-						41	
103	7.32	14.02	6.70	0.07	77		

SD-DH23-							
104	8.84	10.52	1.68	0.65			
	54.56	58.70	4.14	2.07		67	Morning Star
	66.75	71.32	4.57	1.12	76	32	
	71.32	77.69	6.36	0.10		149	
	90.83	91.78	1.23	0.14			

\*All drill depths are from surface



Figure 2: San Domingo Project, Target Locations



Figure 3: Morning Star and South Morning Star drill holes, pegmatites, targets and land

To close out the programme, the Company drill-tested two distinct and unusually strong, soil geochemical anomalies (Li-Cs-Rb) with holes collaring in greenstone, but the source of the anomalies was not determined as no pegmatites were encountered. One hole was located to the northeast of Morning Star (see *Figures* 3) and the other on the Monster target (*Figure* 2), northwest of Jumbo.

For further information please visit the Company's website: <u>www.braddaheadltd.com</u>.

# QAQC

Core samples were split on site and bagged with sample tracking tags. Samples were shipped by the Company directly to SGS Laboratories in Burnaby, B.C., Canada where SGS prepped then analysed all samples using sodium peroxide fusion combined ICP-AES and ICP-MS, method GE\_ICM90A50. Certified standards were inserted into the sample stream and reviewed by the Qualified Person. Mr. Wilkins consents to the inclusion of the technical information in this release and context in which it appears.

# **Qualified Person (BHL)**

Joey Wilkins, B.Sc., P.Geo., is Chief Operating Officer at BHL and the Qualified Person who reviewed and approved the technical disclosures in this news release. Mr. Wilkins is a graduate of the University of Arizona with a B.Sc. in Geology with more than 38 years of experience in mineral exploration and is a qualified person under the AIM Rules and a Qualified Person as defined under NI-43-101. Mr. Wilkins consents to the inclusion of the technical information in this release and context in which it appears.

THIS ANNOUNCEMENT CONTAINS INSIDE INFORMATION FOR THE PURPOSES OF THE MARKET ABUSE REGULATION (EU No. 596/2014) AS IT FORMS PART OF UK DOMESTIC LAW BY VIRTUE OF THE EUROPEAN UNION (WITHDRAWAL) ACT 2018. UPON THE PUBLICATION OF THIS ANNOUNCEMENT VIA A REGULATORY INFORMATION SERVICE, THIS INSIDE INFORMATION IS NOW CONSIDERED TO BE IN THE PUBLIC DOMAIN AND SUCH PERSONS SHALL THEREFORE CEASE TO BE IN POSSESSION OF INSIDE INFORMATION.

#### ENDS

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# About Bradda Head Lithium Ltd.

Bradda Head Lithium Ltd. is a North America-focused lithium development group. The Company currently has interests in a variety of projects, the most advanced of which are in Central and Western Arizona: The Basin Project (Basin East Project, and the Basin West Project) and the Wikieup Project.

The Basin East Project has an Indicated Mineral Resource of 17 Mt at an average grade of 940 ppm Li and 3.4% K for a total of 85 kt LCE and an Inferred Mineral Resource of 210 Mt at an average grade of 900 ppm Li and 2.8% K (potassium) for a total of 1.09 Mt LCE. In the rest of the Basin Project SRK has determined an Exploration Target of 250 to 830 Mt of material grading between 750 to 900 ppm Li, which is equivalent to a range of between 1 to 4 Mt contained LCE. The Group intends to continue to develop its three phase one projects in Arizona, whilst endeavouring to unlock value at its other prospective pegmatite and brine assets in Arizona, Nevada, and Pennsylvania. All of Bradda Head's licences are held on a 100% equity basis and are in close proximity to the required infrastructure. Bradda

Head is quoted on the AIM of the London Stock Exchange with the ticker of BHL and on the TSX Venture Exchange with a ticker of BHLI.

#### **Technical Glossary**

Kt	Thousand tonnes
Ррт	Parts per million
Exploration Target	An estimate of the exploration potential of a mineral deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and a range of grade (or quality), relates to mineralisation for which there has been insufficient exploration to estimate a Mineral Resource.
Inferred Mineral Resource	That part of a Mineral Resource for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological grade (or quality) continuity. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings, and drill holes. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to an Ore Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.
Indicated Mineral Resource	That part of a Mineral Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings, and drill holes, and is sufficient to assume geological and grade (or quality) continuity between points of observation where data and samples are gathered.
Sn	Tin
Ta <sub>2</sub> O <sub>5</sub>	Tantalum pentoxide

# **Forward-Looking Statements**

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