

QUARTERLY ACTIVITIES REPORT for the period ending 31 December 2023

Graphite Bull Project (100% BUX)

- Dual-stream electrochemical testwork to test multiple process options continued with ProGraphite and Dorfner Anzaplan GmbH
- Loupe Ground EM survey reveals numerous graphite targets for shallow resource extension

Copper Wolf Project; Arizona USA (100% BUX, IGO option to earn 70%)

- Assay results reported from CPW0002DD, including 405.38m @ 0.35% Cu and 0.05% Mo.
- Site visit by an independent expert, which confirmed a large, mineralised porphyry Cu-Mo system

Dogleg Prospect, West Kimberley JV (16% BUX)

- High-grade nickel sulphide assays (13.85m at 4.35% Ni, 0.34% Cu and 0.15% Co) confirm significant magmatic nickel sulphide discovery 13km along strike from Merlin

Narryer Project (100% BUX)

- Coincident soil sample anomalies (Ni/Cu) over gravity high along strike from existing ground EM conductor at Ranger

Centurion Project (100% BUX)

- Agreements signed with three Native Title groups to allow for heritage surveys and track construction in 2024 field season.

Corporate

- AGM held 17 November 2023, all resolutions that were put to shareholders were passed by a poll
- Cash balance (31 December 2023) of approximately \$1.6 million
- \$579k Copper Wolf exploration cash call received from IGO Limited post balance date (and not included in the Appendix 5B)

Buxton Resources Limited (ASX: BUX or “Buxton”) is pleased to release the Quarterly activities report and Appendix 5B for the period ended 31 December 2023 (the Quarter).

Graphite Bull Project (BUX 100%)

The Graphite Bull Project (Exploration License E09/1985) is located 280 km East of Carnarvon in the Murchison Region of Western Australia. In 2014, Buxton released an updated, JORC 2012 compliant, Mineral Resource Estimate for the main zone of graphite mineralisation. The Inferred Mineral Resource is 4.0Mt @ 16.2% TGC, using a 4% TGC cut-off (see [ASX announcement 24th October 2014](#)).

During the Quarter, continued the dual-stream electrochemical testwork aimed at evaluating multiple process options for the Graphite Bull concentrate material.

Initial results from ProGraphite on the first bulk concentrate sample directed toward the assessment of Li-ion battery quality benchmarks were exceeded by simple caustic bake purification achieving 99.97% TGC. Spheronising gave excellent shape and size distribution, yield also above average. Concentrate micronised well with relatively little energy input – see [ASX Announcement 7th August 2023](#) for further details.

During the Quarter Buxton announced the results of an extensive high-resolution ground EM survey (Loupe EM) which detected [numerous shallow conductors which represent shallow targets for additional graphite resources](#).

During the Quarter a heritage survey scheduled for early November was deferred due to a death in the community. Buxton continues to engage with the Wajarri Yamaji Aboriginal Corporation and the Burringurrah Land Committee with a view to undertaking this survey in H1, 2024.

Copper Wolf Project (BUX 100% / IGO option to earn 70%)

Buxton’s Copper Wolf Project consists of Lode Mining Claims and Mineral Exploration Permits in Yavapai County, Arizona. The Copper Wolf Project has multiple historical resource estimates available that confirm the presence of a large Laramide porphyry Cu-Mo system (see [ASX Announcement 25 October 2021](#)).

Porphyry Cu-Mo mineralisation at Copper Wolf is largely concealed by a post-mineral (Tertiary) sequence of volcanic and sedimentary rocks. The Project is located within one of the most prolifically endowed copper belts in the world, yet it has not seen any drilling since the early 1990s. Buxton's 2022 airborne magnetic survey was the first geophysical work undertaken since the early 1960s. Historic exploration has consisted of relatively wide spaced drilling which focussed on significant supergene copper mineralisation. Buxton is targeting high grade, underground bulk mineable copper-molybdenum mineralisation.

On the 4th October August 2022, Buxton received shareholder approval for Buxton and IGO to enter into an earn-in and joint venture agreement for the Copper Wolf Project (Arizona, USA).

During the Quarter Buxton completed the first drilling campaign in the Project in over 30 years and [reported assay results from CPW0002DD](#), including 405.38m @ 0.35% Cu and 0.05% Mo.

Also during the Quarter, a site visit was undertaken by an independent expert, which confirmed a large, mineralised porphyry Cu-Mo system, the hypogene Cu-Mo grades equalling or higher than those reported by previous explorers and recognition of multiple Cu-Mo mineralising vein events and associated potassic alteration over a vertical extent of >600 m. The scale and continuity of mineralisation provides evidence of a large multi-phase porphyry copper-molybdenum mineral system.

Narryer Project (BUX 100%)

The Narryer Project is targeting magmatic Ni-Cu-PGE sulphide mineralisation along the Yilgarn Craton margin within the Murchison Region of WA. The Narryer Project consists of four ELs covering > 1800 km². Buxton has completed substantive systematic exploration programs since 2021.

During the Quarter Buxton received results from the soil sampling program undertaken in the previous Quarter. A soil sample anomaly was detected coincident with a gravity high and along strike from existing ground EM conductor at Ranger.

An additional MLEM program to cover this gravity high is scheduled for Q1 2024.

West Kimberley Project (BUX / IGO JV)

The West Kimberley Project is targeting Nova-style magmatic Ni-Cu sulphide mineralisation in Proterozoic belts of the West Kimberley Region of Western Australia. Buxton have Farm-In and JV agreements over three separate Project areas (Merlin Project, Quickshears Project and West Kimberley Regional Project) which fall within the overall West Kimberley Project.

During the Quarter, IGO [intersected massive sulphides in the maiden drillhole at the Dogleg prospect](#). A second hole [intersected semi-massive sulphides](#).

[Assays received for the first Dogleg hole contained 13.85m \(true width 13.24m\) at 4.35% Ni, 0.34% Cu, 0.15% Co from 177.34m, including: 5.86m \(true width 5.60m\) at 7.47% Ni, 0.31% Cu, 0.25% Co from 179.08m.](#)

Assay results for the second hole are pending.

Fraser Range Project (BUX 10% / IGO 90%)

Exploration The Fraser Range Project is targeting magmatic Ni-Cu sulphide mineralisation along strike from IGO's operating Nova mining operation. During the Quarter IGO have continued their thorough exploration of these licenses. Buxton remain free carried until completion of a feasibility study with Buxton retaining an exclusive right to explore and develop iron ore on the Tenements.

During the Quarter, IGO reported having undertaken the following work programs;

- interpretation of pseudo-3D seismic data within E28/2201 to generate potential drill targets.
- completed MLEM program was completed at Valetudo, in the northern portion of tenement E28/1959.
- Geophysical review of V5 Mag target within E28/2201.

Centurion Project (BUX 100%)

The Centurion Project consists of Exploration License E80/5579 located approximately 180 km south-southwest of Balgo Western Australia on unclaimed crown land and accessible via shire roads and several 1960s-1980s seismic lines. This

license covers a prominent dipolar and offset magnetic and gravity gradiometer anomalies characteristic of Iron Oxide Copper Gold deposits including Olympic Dam and Prominent Hill. Magnetic data indicate that the target is located approximately 700 metres beneath ground level under post mineral cover sequences of the Canning Basin.

During the Quarter, Buxton executed three native title agreements to allow for heritage surveys to be undertaken during the 2024 field season.

Shogun & Royale Projects (BUX 100%)

The Shogun and Royale Projects form a contiguous package covering 2617 km² located in the Paterson Region of Western Australia. Exploration on the two (2) Shogun Project ELA 45/6533 and 45/6534 is targeting magmatic Ni-Cu-Co-PGE sulphide deposits. The five (5) Royale Project ELAs (E45/6228 through E45/6232) cover exploration targets for hydrothermal Cu +/- Au - Mo deposits.

During the Quarter, Buxton continued to undertake negotiations with the Native Title group with a view to executing a Heritage Agreement.

Lateron Project (BUX 100%)

The Lateron Project consists of Exploration License E80/5545 located on unclaimed crown land close to the Tanami Road, approximately 10 km East of Billiluna and 150 km South of Halls Creek in Western Australia. During the Quarter Buxton received the results of petrological analysis on fragments of diamond drill core recovered from the site of AFMECO's 1982 diamond drillhole S19. The report indicates the core fragments consist of "biotite hornblende quartz diorite, with coarse titanite and sericite / muscovite pyrite-magnetite-chalcopyrite overprint" - such rocks are typically associated with magmatic-hydrothermal Cu-Au mineralisation. Airborne mag indicates these intrusive rocks cover > 7 km².

During the Quarter Buxton commenced negotiations with the new Native Title Representative Body for the Tjurabalan (Jura-palan) People with a view to executing a Heritage Agreement.

Corporate

The Company's Quarterly Cashflow Report (Appendix 5B) follows this activities report. The Company had \$1.583 million in cash as 31 December 2023. A further \$0.579 million was received from IGO Limited in January 2024 and is not included in the Appendix 5B. Exploration Expenditure for the Quarter was \$0.733 million with most of this expenditure being associated with field work in support of the Copper Wolf Project, metallurgical studies in support of the Graphite Bull Project, along with other ongoing project assessment. Buxton is also continuing to actively pursue copper and other commodity opportunities in the USA.

The aggregate amount of payments to related parties and their associates included in the current Quarter cash flows from operating activities were approximately \$47k comprising directors fees, salaries and superannuation. Corporate and other administration expenditure was \$222k for the Quarter which represents general costs associated with running the Company, including ASX fees, legal fees, rent, marketing, etc. Cash outflows for the Quarter were in line with management expectations. The company is adequately funded to continue its current activities and will continue to demonstrate appropriate fiscal management.

Annual General Meeting

On 17 November 2023, Buxton held its Annual General Meeting of Shareholders at Suite 1, First Floor 14 - 16 Rowland Street, Subiaco, Western Australia. All resolutions that were put to shareholders were passed by a poll.

Resignation of Non-Executive Director

Subsequent to the end of the Quarter, Buxton announced that non-executive director, Eamon Hannon, had resigned from the Board with effect from 15 January 2024.

This announcement is authorised by the Board.

For further information, please contact:

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Chief Executive Officer
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Sam Wright
Company Secretary
sam@buxtonresources.com.au

Appendix 1: Changes in interests in mining tenements - Buxton Resources Ltd 1/10/23 – 31/12/23

	Tenement	Location / Project	% at beginning of Quarter	% at end of Quarter
Interests in mining tenements relinquished, reduced or lapsed				

Interest in mining tenements acquired or increased	Copper Chief #1-5 & Copper Chief #18-19	Copper Wolf Project, Yavapai Co, Arizona (Federal Lode Mining Claims)	0	option for 100
	CW-216 through CW-342 *	Copper Wolf Project, Yavapai Co, Arizona (Federal Lode Mining Claims)	0	100
	ELA69/4182	Madman Project	0	100

** changes occurred between end of the Quarter and issuing this report*

	E04/2451	West Kimberley - Baracus / IGO JV	16	16
	E04/2060	West Kimberley Regional - IGO JV	20	20
	E04/2407	West Kimberley Regional - IGO JV	20	20
	E04/2408	West Kimberley Regional - IGO JV	20	20
	E04/2411	West Kimberley Regional - IGO JV	20	20
	E04/2527	West Kimberley Regional - IGO JV	20	20
	E04/2530	West Kimberley Regional - IGO JV	20	20
	E04/2536	West Kimberley Regional - IGO JV	20	20
	E04/2549	West Kimberley Regional - IGO JV	20	20
	E04/2550	West Kimberley Regional - IGO JV	20	20
	E04/2578	West Kimberley Regional - IGO JV	20	20
	E04/2579	West Kimberley Regional - IGO JV	20	20
	E04/2580	West Kimberley Regional - IGO JV	20	20
	E04/2581	West Kimberley Regional - IGO JV	20	20
	E04/2584	West Kimberley Regional - IGO JV	20	20
	E04/2585	West Kimberley Regional - IGO JV	20	20
	E04/2609	West Kimberley Regional - IGO JV	20	20
	E04/2611	West Kimberley Regional - IGO JV	20	20
	E04/2612	West Kimberley Regional - IGO JV	20	20
	E04/2613	West Kimberley Regional - IGO JV	20	20
	E04/2614	West Kimberley Regional - IGO JV	20	20
	E04/2615	West Kimberley Regional - IGO JV	20	20
	E04/2617	West Kimberley Regional - IGO JV	20	20
	E04/2629	West Kimberley Regional - IGO JV	20	20

E04/2630	West Kimberley Regional - IGO JV	20	20
E04/2631	West Kimberley Regional - IGO JV	20	20
E04/2648	West Kimberley Regional - IGO JV	20	20
E04/2649	West Kimberley Regional - IGO JV	20	20
E04/2650	West Kimberley Regional - IGO JV	20	20
E04/2651	West Kimberley Regional - IGO JV	20	20
E04/1972	West Kimberley – IGO/NWC/TT JV	16	16
E04/2314	West Kimberley – IGO/NWC/TT JV	16	16
E04/2423	West Kimberley – IGO/NWC/TT JV	20	20
E28/1959	Fraser Range - IGO JV	10	10
E28/2201	Fraser Range - IGO JV	10	10
E09/2427	Narryer Project	100	100
E09/2428	Narryer Project	100	100
E09/2429	Narryer Project	100	100
E09/2922	Narryer Project	100	100
E09/1985	Graphite Bull Project	100	100
LA09/102	Graphite Bull Project	100	100
LA09/103	Graphite Bull Project	100	100
EL80/5545	Lateron	100	100
EL80/5579	Centurion Project	100	100
MEP 008-121028	Copper Wolf Project (Section 16 T8NR1W G&SR Meridian)	100	100
MEP 008-123390	Copper Wolf Project (Section 9 T8NR1W G&SR Meridian)	100	100
MEP 008-124215	Copper Wolf Project (Section 29 T8NR1W G&SR Meridian)	100	100
SM-01 through SM-54	Copper Wolf Project, Yavapai Co, Arizona (Federal Lode Mining Claims)	100	100
CW-01 through CW-215	Copper Wolf Project, Yavapai Co, Arizona (Federal Lode Mining Claims)	100	100
Copper Chief #1-5 & Copper Chief #18-19	Copper Wolf Project, Yavapai Co, Arizona (Federal Lode Mining Claims)	0	100 (option)
CW-216 through CW-342	Copper Wolf Project, Yavapai Co, Arizona (Federal Lode Mining Claims)	0	100
ELA45/6228	Royale Project	100	100
ELA45/6229	Royale Project	100	100
ELA45/6230	Royale Project	100	100
ELA45/6231	Royale Project	100	100
ELA45/6232	Royale Project	100	100

	ELA45/6233	Shogun Project	100	100
	ELA45/6234	Shogun Project	100	100

Abbreviations and Definitions used in Tenement Schedule:

E = Exploration Licence (WA), ELA = Exploration Licence Application (WA), LA – Miscellaneous License Application (WA),
MEP = Mineral Exploration Permit (Arizona)

Appendix 5B

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

Buxton Resources Limited

ABN

86 125 049 550

Quarter ended ("current quarter")

31 December 2023

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	500	898
1.2 Payments for		
(a) exploration & evaluation	(733)	(2,512)
(b) development	-	-
(c) production	-	-
(d) staff costs	(336)	(562)
(e) administration and corporate costs	(222)	(424)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	7	19
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other - GST	66	51
1.9 Net cash provided by/(used in) operating activities	(718)	(2,530)

2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) tenements	(44)	(44)
(c) property, plant and equipment	(1)	(4)
(d) exploration & evaluation	-	-
(e) investments	-	-
(f) other non-current assets	-	-

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements interests	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	Net cash provided by/(used in) investing activities	(45)	(48)
3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other	-	-
3.10	Net cash from financing activities	-	-
4.	Net increase/(decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	2,349	4,145
4.2	Net cash provided by/(used in) operating activities (item 1.9 above)	(718)	(2,530)
4.3	Net cash provided by/(used in) investing activities (item 2.6 above)	(45)	(48)
4.4	Net cash from financing activities (item 3.10 above)	-	-

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	(3)	16
444.6	Cash and cash equivalents at end of period	1,583	1,583

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	1,479	2,249
5.2	Call deposits	-	-
5.3	Term deposits	128	128
5.4	Credit card	(28)	(28)
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	1,583	2,349

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	47
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

7. Financing facilities	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
<i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>		
7.1 Loan facilities	-	-
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
7.4 Total financing facilities	-	-
7.5 Unused financing facilities available at quarter end		-
7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from operating activities (item 1.9)	(718)
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	-
8.3 Total relevant net cash inflow (item 8.1 + item 8.2)	(718)
8.4 Cash and cash equivalents at quarter end (item 4.6)	1,583
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	1,583
8.7 Estimated quarters of funding available (item 8.6 divided by item 8.3)	2.20
<i>Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.</i>	
8.8 If item 8.7 is less than 2 quarters, please provide answers to the following questions:	
8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
Answer:	
8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
Answer:	
8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
Answer:	
<i>Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.</i>	

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

30/01/2024

Date:

By the Board

Authorised by:
(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.