



ASX Release 2<sup>nd</sup> March 2023

### **EXPLORATION UPDATE**

# Graphite Bull 100% BUX, Gascoyne Region, Western Australia

- Visual grade estimation confirms all five recent RC holes intersected graphite
- Multiple and substantial zones of graphite mineralisation extend along at least 1,880 metres of strike and remain open along strike and at depth
- Buxton's 2014 Inferred Resource of 4 Mt @ 16.2 % TGC occupies a strike length of just 460 metres
- Drilling results confirm EM is a reliable indicator of graphite mineralisation implying significant potential to expand the resource base at Graphite Bull
- Buxton is delighted with this outcome, which coupled with recent and ongoing outstanding metallurgical testwork results, positions Graphite Bull as the most attractive graphite project in WA, possibly Australia
- Buxton proceeding with bulk sample run for anode testwork

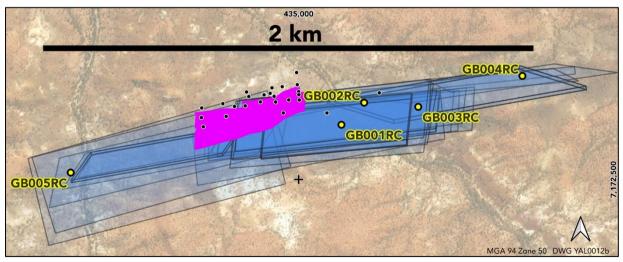


Figure 1: Plan view of potion of E09/1985 showing modelled EM plates (blue, all South dipping), the extent of Buxton's previous drilling (small back dots) and 2014 Inferred Resource (magenta), along with the recently completed exploration RC drilling.



Buxton Resources Ltd (ASX:BUX) is pleased to update shareholders on progress at Buxton's 100% owned Graphite Bull project, Gascoyne Region, WA. This release clarifies and expands on information released 22<sup>nd</sup> February with visual estimates of graphite grades intersected in the recently completed exploration Reverse Circulation (RC) drill program (see Table A).

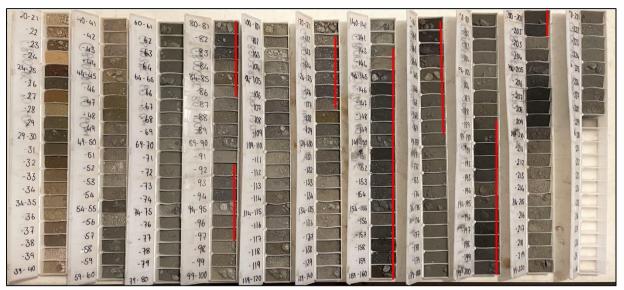


Figure 2: Site photograph of RC chips from hole GB003RC. Shown here is 0 - 228 metres and highlighted in red are zones of intersections reported in Table A below (note that additional samples have been selected for assay).

The RC drill program consisted of five wide-spaced RC holes for 991m to test recent ground EM modelling. See Figure 1 for drillhole locations, and Table B for drillhole details.

The visual estimates indicate that all holes intersected graphite mineralisation and that several zones of thick and high-grade mineralisation (10m thick dominated by > 10% visually estimated TGC) have been intersected. These have been highlighted in Table A. This outstanding graphite mineralisation remains open along strike and depth.



Table A: Significant Graphite Intervals – visual estimates

HoleID	From	To (m)	Interval (m)	0-5% TGC (m)	5-10% TGC (m)	>10% TGC (m)
	(m)					
GB001RC	28	36	8		2	6
GB001RC	38	60	22		3	19
GB001RC	161	191	30	3	6	21
GB001RC	215	221	6		2	4
GB001RC	226	236	10		5	5
GB001RC	240	252	12	1	8	3
		Total	88			
GB002RC	47	63	16		8	8
GB002RC	87	92	5		2	3
GB002RC	122	124	2			2
GB002RC	171	177	6	1	3	2
		Total	29			
GB003RC	80	86	6		4	2
GB003RC	92	97	5		3	2
GB003RC	122	127	5		4	1
GB003RC	143	169	26		8	18
GB003RC	189	202	13	1	7	5
GB003RC	205	210	5		2	3
		Total	60			
GB004RC	20	24	4		2	2
GB004RC	33	39	6		3	3
GB004RC	49	80	31	3	10	18
Total		41				
GB005RC	122	128	6		3	3
		Total	6			•

<sup>\*</sup>Any reference to visual estimates of graphite mineralisation in this report should not be considered a proxy or substitute for laboratory analysis for Total Graphitic Carbon (TGC), which are required to determine the widths and grade of the graphite mineralisation. Assays are pending and subject to laboratory performance will be available in approximately eight weeks. True thickness of the reported intersections is calculated to be approximately 85 to 100% of the measured thickness. The intercepts listed in Table A contain material with visually estimated graphite content above 5% and which also contain material with visually estimated graphite content above 10% over intervals longer than 2-metres. The intercepts may contain internal dilution (material less than 5% visually estimated graphite) to a maximum of 1-metre in a 6-metre length. See Figure 2 for an example of intersections from GB003RC presented on a chip tray photo.



The results of the exploration drilling program confirm the interpretation of the ground EM survey (ASX 7 Feb 2023) which indicates significant potential to expand the resource base at Graphite Bull.

The visual graphite grade estimates also confirm that EM modelling is a reliable indicator of the presence of graphite mineralisation along at least 1,880m of strike length and that Buxton can use this information to target infill drilling along strike and at depth from the current Resource.

Table B: Details of all RC drillholes completed in the 2023 exploration program

HoleID	Easting (m)	Northing (m)	RL (m)	Azimuth (grid)	Incl.	EOH (m)
GB001RC	435175	7172723	376	330	-55	252
GB002RC	435268	7172813	377	345	-60	180
GB003RC	435489	7172796	385	345	-75	228
GB004RC	435915	7172922	393	345	-70	120
GB005RC	434068	7172528	377	345	-80	211

Samples have arrived at the laboratory in Perth for analysis with an anticipated turnaround of 4 to 8 weeks. Concurrently Buxton will commence with a bulk metallurgical run to produce concentrate for anode test work.

Buxton will keep shareholders updated on progress as results come to hand.

Demand for Li-ion batteries, fuel cells and other graphite-intensive renewables technology continues to escalate, pushing the global graphite market into deficit for the first time in modern history. Buxton looks forward to providing regular updates to shareholders on this exciting 100% Buxton-owned graphite project. For location, see Figure 3 below.

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#### About the Graphite Bull Project

The outcropping, high-grade Graphite Bull project, (formerly Yalbra Project) is located in the Tier 1 jurisdiction of Western Australia, Gascoyne region, on granted Exploration License E09/1985. Graphite Bull was acquired by Buxton in 2012 and by 2014 Buxton had completed an airborne EM survey, several drilling programs and two resource estimates. The Graphite Bull project currently has a JORC (2012) compliant inferred resource of 4 Mt @ 16.2 % TGC. In 2015 Buxton completed a detailed metallurgical program with SGS laboratories in Canada which targeted coarse flake recovery.

Due to projected growth of the global Lithium-ion battery market, and the essential part graphite will play in that – graphite is the single largest component of Li-ion batteries – Buxton accelerated work at Graphite Bull earlier in 2022. Metallurgical test work through to final product, and increasing the Resource size, are early priorities.

According to Benchmark Mineral Intelligence, by 2040 the mining industry needs to be producing nearly 8 times as much graphite as it currently does to supply the world's lithium-ion battery anode market. Graphite Bull is therefore a very attractive investment proposition, being a high-grade deposit located in a Tier 1 mining jurisdiction, with outstanding Resource growth potential.

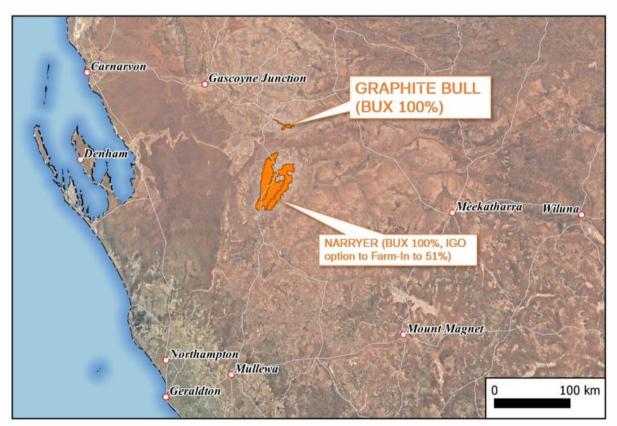


Figure 3: Graphite Bull Project Location Map



#### Competent Persons

The information in this report that relates to Exploration Results is based on information compiled by Mr Eamon Hannon, Fellow of the Australasian Institute of Mining and Metallurgy, and Mr Martin Moloney, Member of the Australian Institute of Geoscientists and Society of Economic Geologist, and Samantha Callander, Member of the Australian Institute of Geoscientists and Australasian Institute of Mining and Metallurgy. Mr Hannon, Mr Moloney and Ms Callander are full-time employees of Buxton Resources. Mr Hannon, Mr Moloney and Ms Callander have sufficient experience which is relevant to the activity being undertaken to qualify as a "Competent Person", as defined in the 2012 edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Hannon, Mr Moloney and Ms Callander consent to the inclusion in this report of the matters based on the information in the form and context in which it appears.

The information in this Report that relates to Mineral Resources is based on, and fairly represents, information compiled by Mr David Williams, a Competent Person, who is a Member of The Australian Institute of Geoscientists. Mr Williams is employed by CSA Global Pty Ltd, an independent consulting company. Mr Williams has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Williams consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### **Previously Reported Results**

There is information in this announcement relating to results (including those relating to historical drilling) previously announced on:

- 1) <u>24<sup>th</sup> October 2014 Buxton Significantly Expands Graphite Resource at Yalbra</u>
- 2) <u>23<sup>rd</sup> January 2023 Breakthrough metallurgical results at Graphite Bull</u>
- 3) 7<sup>th</sup> February 2023 Exploration Update Graphite Bull Project
- 4) <u>22<sup>nd</sup> February 2023 Exploration Update Graphite Bull Project</u>



## JORC Table: Section 1 – Sampling Techniques and Data

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Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down-hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.  Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.  Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	Reverse circulation drilling produced samples that were collected at one-metre intervals. A one metre 'split' sample was collected in pre-numbered calico bags at the time of drilling using a cone splitter integrated into the drill cyclone to produce an approximate 1.5kg sample, which is considered representative of the full drill metre. The residual material from each metre interval was collected in 600mm x 900mm biodegradable bags preserved at the drill sites whilst laboratory analysis is ongoing.  Drill samples selected for analysis were limited to those containing visible graphite (using the one metre split samples) alongside composites containing either a two, three or four-metre buffer either side of the visible intervals.  Analyses will be undertaken by ALS Geochemistry, samples received 278/02/23, in Wangara and include Total Graphitic Carbon and Total Carbon.
Drilling techniques	Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	RC drill holes were completed by Orlando Drilling using a Schramm T685 WS with an onboard Sullair 500psi / 1350cfm compressor. An auxiliary booster was used on all holes.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.  Measures taken to maximise sample recovery and ensure representative nature of the samples.  Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	RC recoveries were considered good with available air for drill sample recovery being deemed adequate for the ground conditions and depth of sampling undertaken.  Appropriate measures have been undertaken to maximise sample recovery and ensure the representative nature of samples, including:  - Terminating RC holes when recovery amounts are reduced at depth.  No apparent relationship is seen between sample recovery and grade.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.  Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.  The total length and percentage of the relevant intersections logged.	Chip trays were collected from each one metre interval this was used to log lithology, oxidation and visual graphite content estimate a streak test was used to assist with visual estimates alongside historical samples.  Visual estimates for TGC were based on comparison with historic samples from Buxton's 2014 program, YBRC0018 and YBRC0019 which constituted 276 metres of previously assayed material with grades from 0.1% to 30.9% TGC. This included 52 samples greater than 10% TGC. 19 samples from 5-10% and 87 samples from 0-5%.  Samples were noted if they were wet or where recovery was significantly impacted.  Logging is considered to be semi-quantitative.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.  If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	All RC one-metre sub-samples from drill holes were collected from a cone splitter respectively, to produce an ~15% routine split sample for analysis.

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	For all sample types, the nature, quality and appropriateness of the sample preparation technique.  Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.  Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half	Quality Control and Quality Assurance (QA/QC) procedures implemented to check sampling and assaying precision included duplicate samples using the same sub-sampling technique. Standards and blanks were also included to ensure sampling quality which were inserted every 20 metres.  The two, three and four metre composites were collected on site using a 50mm PVC spear from the
	sampling.  Whether sample sizes are appropriate to the grain size of the material being sampled.	600mm x 900mm biodegradable bags to produce a 1.5kg sample.
		This sampling procedure is considered to be representative of the in-situ material intersected during the drilling program. Sample sizes are considered to be appropriate to the grain size of the material being sampled.
		A total of 459 samples have been submitted to ALS Geochemistry for sample preparation.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	Not applicable, the release does not include laboratory assay results.
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	Not applicable, the release does not include data from geophysical or handheld XRF tools.
	Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	In addition to duplicate samples (detailed above), Quality Control and Quality Assurance (QA/QC) procedures included insertion of standards (three different standards each certified for TGC at three different abundance levels appropriate for the Graphite Bull mineralisation) and blanks which were inserted every 20 metres.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Senior company personnel onsite for the entirety of the drilling and logging process.
	The use of twinned holes.	No historic holes were twinned as part of this program.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Logging and sampling were recorded directly onto paper logs, visual estimates were recorded directly into a digital database.
	Discuss any adjustment to assay data.	Not applicable, the release does not include laboratory assay results.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	Buxton have recorded hand-held GPS positions for all hole collars.
	Specification of the grid system used.	All surface surveying was completed using a handheld GPS to MGA94 / Zone 50 South grid system.
	Quality and adequacy of topographic control.	Topographic control was provided by a Digital Elevation Model (DEM) derived from the 2013 VTEM survey.



		A Terra TRA 3000/TRI 40 radar altimeter was used to record terrain clearance. The antenna was mounted beneath the bubble of the helicopter cockpit producing the DEM with a 25m resolution which is considered adequate for this program.
Data spacing and	Data spacing for reporting of Exploration Results.	See drill tables for holes positions.
distribution	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	This spacing and distribution is considered not suitable for mineral resource estimations as the program was designed to test the relationship between EM conductors and graphite mineralisation along strike from
	Whether sample compositing has been applied.	the known resource.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.  If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	The orientation of the drilling is not expected to introduce sampling bias. All drill holes have intersected the mineralisation at a sufficient angle to the strike and dip of the mineralised units.
Sample security	The measures taken to ensure sample security.	All samples were collected in calico sample bags with sample number identification on the bag, supervised by Buxton personnel.  Bags were then loaded into polyweave bags into bulka
		bags for transport from the Project to ALS in Wangara.  Security over sample dispatch is considered adequate for these samples at this time.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Sampling procedures are identical to those followed by Buxton in 2013/14 which have previously been reviewed and found to be adequate by an independent resource geologist.

### JORC Table: Section 2 – Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties,	BUX have a 100% interest in exploration license E09/1985.
	native title interests, historical sites, wilderness or national park and environmental settings.	A 0.75% Gross Revenue Royalty was granted under a Tenement Sale Agreement dated 31 March 2016, between Montezuma Mining Company Ltd ("Montezuma") and Buxton Resources Limited. This royalty is currently held by Electric Royalties Ltd
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	(TSXV:ELEC & OTCQB:ELECF).  The tenement is in good standing with DMIRS and there are no known impediments for exploration on this tenement.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Numerous exploration parties have held portions of the area covered by BUX tenure previously. The only substantive historical exploration for graphite was undertaken by CEC in 1974 – see WAMEX report A6556.
		No other parties were involved in the exploration program that generated data that was used in this release.
Geology	Deposit type, geological setting and style of mineralisation.	The Graphite Bull Project area lies within the Errabiddy Shear Zone, situated at the contact between the Glenburgh Terrane of the Gascoyne Province and the Narryer Terrane of the Yilgarn Carton, on the southwestern margin of the Capricorn Orogen.



	T	Th. 1
		The known graphitic mineralisation occurs as lenses in graphitic paragneiss assigned to the Quartpot Pelite. This unit has been interpreted to have been deposited between 2000 Ma and 1985 Ma in a fore-arc setting to the Dalgaringa continental margin arc (part of the Glenburgh Terrain), and subsequently deformed between 1965–1950 Ma during the Glenburgh Orogeny within the Errabiddy Shear Zone which represents the suture between the colliding Pilbara–Glenburgh and Yilgarn Cratons.  All units at Graphite Bull show evidence for metamorphism in the amphibolite to granulite facies, with the production of voluminous leucosomes and leucogranites within the pelitic lithologies
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:  o easting and northing of the drill hole collar	See the body of the release for drillhole data as compiled by Buxton.
	o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar o dip and azimuth of the hole	
	o down hole length and interception depth o hole length	
	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.  Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.  The assumptions used for any reporting of metal equivalent values should be clearly stated.	The visual estimates of graphite abundance were used to manually select the intercepts listed in Table A, which contain material with estimated graphite content above 5% and which contain material above 10% and are longer than 2-metres. The intercepts may contain internal dilution (material less than 5% visual estimated TGC) to a maximum of 1-metre in a 6-metre intercept.  No weighted averages are reported and a high-grade cutoff of 10% visually estimated TGC has been used.
	equivalent values snould be clearly stated.	No reporting of metal equivalent values has been included in this release.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results.  If the geometry of the mineralisation with respect to the	Drillholes reported in this announcement were drilled at between 48 and 80 degrees toward the northnorthwest, with graphite mineralisation having a
	drill hole angle is known, its nature should be reported.  If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	consistently steep dip 75-85 degrees toward the south- southeast. The resulting true thickness of these intersections are approximately 85 to 100% of the measured thickness in drilling (respective to the dip angle of the drill hole).
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	See text and figures in body of release.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	The announcement does not relate to assay data.  The release contains information relating to visual estimates which were estimated on each metre drilled.  The basis of reporting mineralised intervals (Table A) is

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		described above. Therefore, the report is comprehensive and balanced with respect to visually estimated grades and widths intersected in the drilling program.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	All exploration data which may be meaningful and material to the interpretation of the drilling results is presented within this release.
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	See text and figures in body of release.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	See figures in body of release.