

ASX Release

24th July 2023

COPPER WOLF PROJECT – Drilling Update

- **Drilling has recommenced. A second hole to test below the first is now at 625.5 m depth and back in mineralisation**
- **Buxton's first hole terminated in mineralisation at 611.67 m. Assays are expected in 4 weeks**
- **Additional tenure has been pegged, doubling Buxton's holding to 29.5 km²**

Buxton Resources Ltd (ASX:BUX) is pleased to update shareholders on the recommencement of drilling at Copper Wolf. The company's first drill hole, CPW0001DD, was unfortunately terminated in mineralisation at 611.67 m. The last 81.93 m of core intersected mineralised basement rocks with veining, alteration, and sulphide mineralisation throughout, consistent with a Laramide Cu-Mo porphyry system (ASX 7 June 2023).

Drilling a second hole (CPW0002DD) with a second contractor was deemed the prudent decision given time and cost to re-enter and wedge from hole CPW0001DD. This second hole was collared adjacent to the first, has now re-entered mineralised geology (see Figure 1), and is planned to a minimum depth of 1,100 m (see Figure 2). The first batch of assay results from CPW0002DD are expected back in approximately 8 weeks.

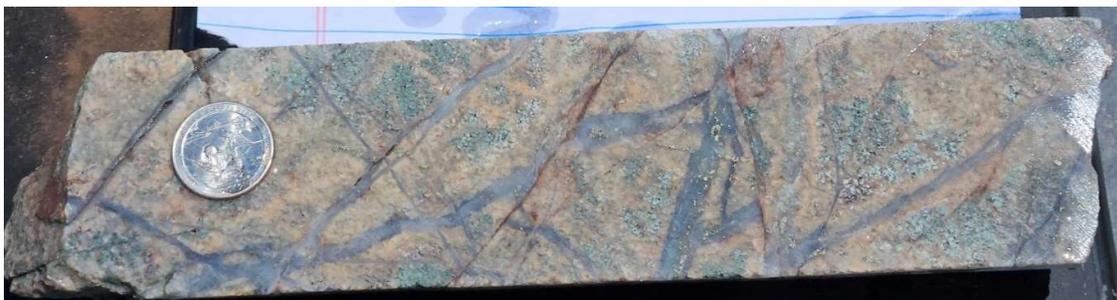


Figure 1: Fine grained schistose rock at 540.45m, significantly altered via sericite-chlorite with later quartz-sulfide mineralisation and K-feldspar alteration via vein selvage. Sulphides are comprised of disseminated and vein hosted pyrite (3%), chalcocopyrite (1%) and molybdenite (0.25%).¹

¹ 'Visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest. Visual estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations.'

Although CPW0001DD did not reach target depth, the hole did verify the presence of a well-developed mineralised Laramide porphyry Cu-Mo system and provided the first core seen in over 30 years. Buxton is highly encouraged by this result, the outcome of four years hard work. This result, coupled with ongoing geological and geophysical work, triggered the pegging of adjoining tenure, doubling the size of the project.

Samples of the entire CPW0001DD mineralised intercept, the last 82 metres of core to EOH, have been submitted for assay. Results are expected within 4 weeks.

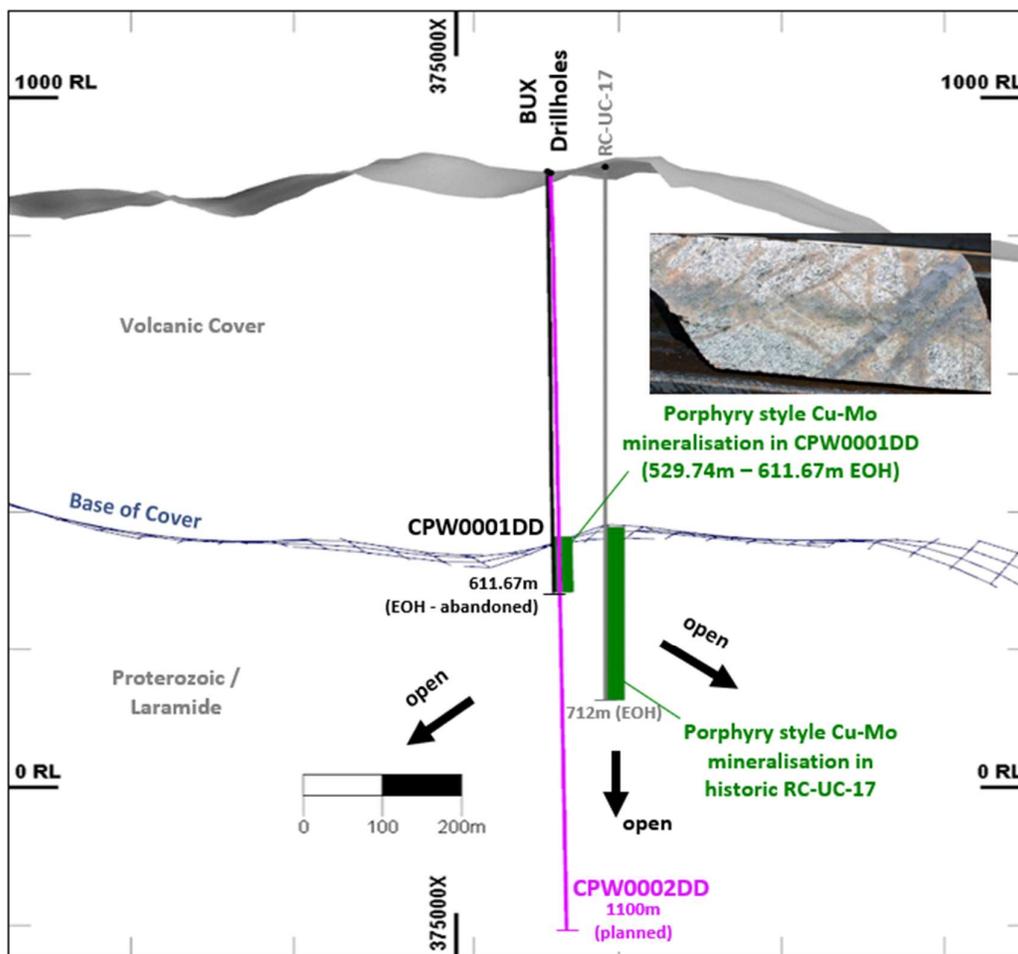


Figure 2: Planned trace of current hole, CPW0002DD displayed relevant to Buxton's first hole CPW0001DD and historical drillhole RC-UC-17. Core photograph from CPW0001DD at 546.6m is from an interval with visually estimated sulphides of 2.25% pyrite, 0.75% chalcopyrite and 0.2 % molybdenite. HQ core is 63.5mm width²

² [ASX announcement 7 June 2023 - Clarification to Copper Wolf Project Drilling](#)

CPW00002DD has progressed smoothly through the post-mineralisation volcanic and sedimentary cover into Laramide-hosted copper-molybdenum mineralisation similar to that in CPW0001DD. The current hole depth is 625.5m, planned to 1,100m. Buxton looks forward to updating shareholders with progress and results.

An additional, adjoining, 169 mining lode claims and 1 additional mineral exploration permit were pegged (Figure 3) and are in process with the US Bureau of Land Management and Arizona State Land Department respectively. This increases Buxton's holdings at Copper Wolf from 13 km² to 29.5 km², all prospective for Laramide-age copper-molybdenum porphyry mineralisation based on previous and new geological and geophysical work.

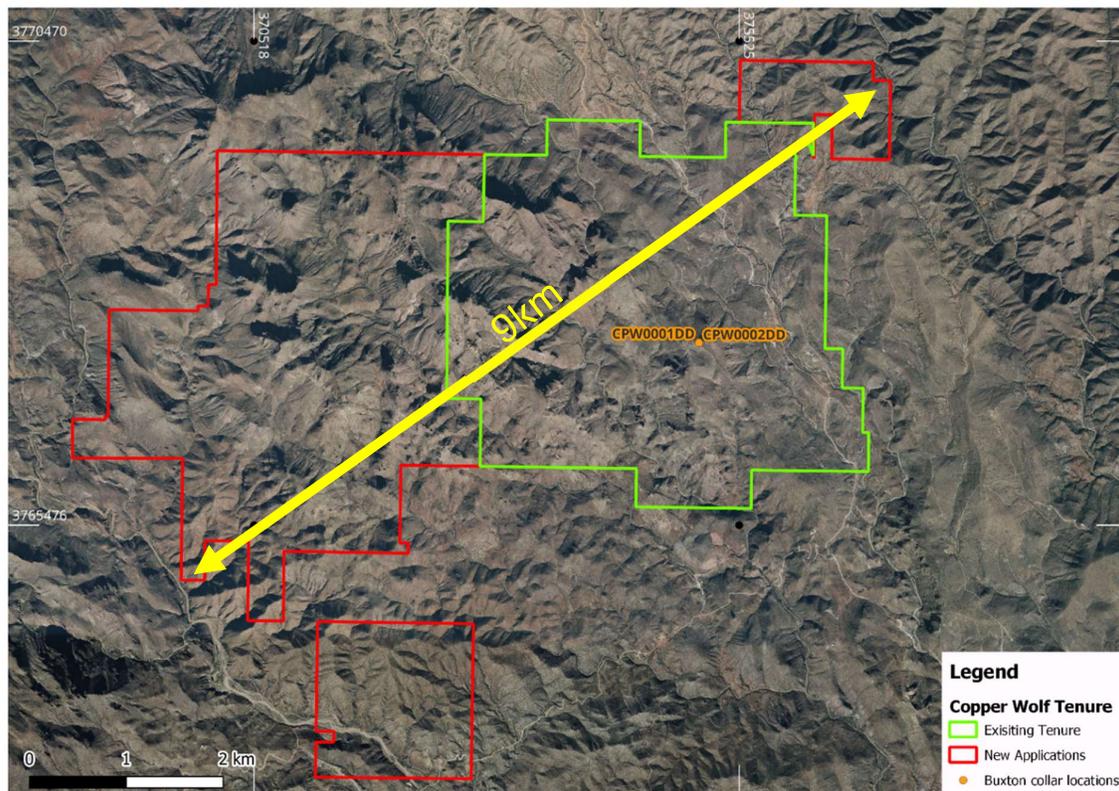


Figure 3: Extended tenure at Copper Wolf shown in red with previously held ground in green. Tenure now covers 9 strike-kms of prospective geology

For further information, please contact:

Eamon Hannon
Managing Director

ehannon@buxtonresources.com.au

Sam Wright
Company Secretary

sam@buxtonresources.com.au

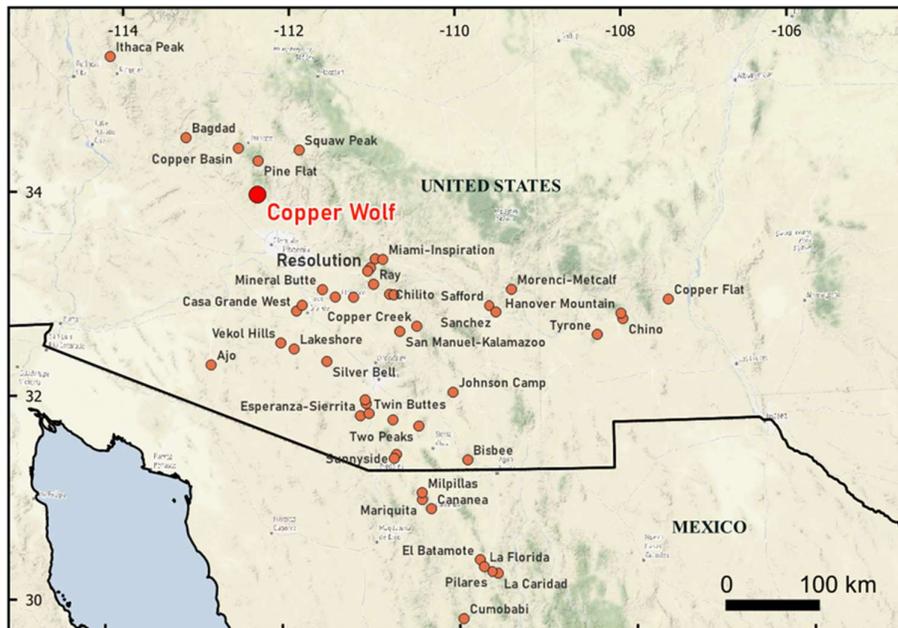
About the Copper Wolf Project

The Copper Wolf Project has multiple historical resource estimates³ available that confirm the presence of a large Laramide porphyry Cu-Mo system see [ASX announcement 25 October 2021 - Copper Wolf Copper Project; Arizona USA](#)

Porphyry Cu-Mo mineralisation at Copper Wolf has been dated at 70.3 Ma⁴ (Laramide age) and 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 focused on significant supergene copper mineralisation located where the NW trending Cow Creek Fault intersects Laramide hypogene porphyry style mineralisation. Buxton is targeting high grade, underground bulk mineable copper-molybdenum mineralisation. In this context, Buxton's exploration approach can leverage the significant advances and ready availability of modern geophysical targeting tools and mineral systems knowledge that have been developed since exploration in this area ceased many decades ago.

On the 4th of August 2022 Buxton and IGO Limited entered into an earn-in and joint venture agreement for the Copper Wolf Project (Arizona, USA) then held as 100% by BUX. By that agreement, IGO has an exclusive option to earn a 51% interest in the Copper Wolf Project tenements by incurring and sole funding A\$350,000 of exploration expenditure in a 24-month period from 4/10/2022 (Stage 1 earn-in). Upon IGO incurring the A\$350,000 earn-in expenditure, it may elect to strike the option and form a 51% IGO/49% BUX unincorporated joint venture. During the earn-in period, BUX will be the project manager. IGO will be the initial manager of the joint venture. Within 6 months of the commencement of the joint venture, IGO has the exclusive right to elect to earn a further 19% joint venture interest (to take its joint venture interest to 70%) by sole funding exploration expenditure of A\$5,000,000 over 3 years (stage 2 earn-in).



Buxton's Copper Wolf Project in the prolific porphyry copper belt of SW USA / Northern Mexico.

³ See [ASX announcement 25 October 2021 - Copper Wolf Copper Project; Arizona USA](#)

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. Mr Hannon and Mr Moloney are full-time employees of Buxton Resources. Mr Hannon and Mr Moloney 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 and Mr Moloney consent to the inclusion in this report of the matters based on the information in the form and context in which it appears.

Cautionary Statement

'Visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest. Visual estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations.'

Hole Id	From (m)	To (m)	Length	Pyrite (%)	Chalcopyrite (%)	Molybdenite (%)
CPW0001DD	546.6	546.75	0.15	2.25	0.75	0.2
CPW0002DD	540.45	540.65	0.2	3	1	0.25

Table B: Collar information for Buxton holes at the Copper Wolf Project

Hole Id	UTM Easting	UTM Northing	Elevation (m)	Azimuth	Dip	Current Depth (m)	Hole Status
CPW0001DD	375104	3767349	892	020	-85	611.74	Complete
CPW0002DD	375111	3767357	891	020	-85	625.5	Current

JORC 2012 Table 1: Section 1 – Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<p><i>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.</i></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>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.</i></p>	<p>PQ and HQ diamond core samples have been obtained during drilling.</p> <p>Drill core was geologically logged, and selected intervals were selected for sampling and analysis.</p> <p>The diamond core was cut in half along the long axis using a diamond blade rock saw. Half-core was sampled. The samples lengths ranged from 0.3m to 1.82m to within geological boundaries with all samples submitted to SGS Laboratories in Burnaby.</p>

<i>Drilling techniques</i>	<i>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).</i>	Diamond core was drilled from surface to the end of the hole. HQ diamond core diameter (shown in all photos) is 63.5mm
<i>Drill sample recovery</i>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	Drill core recoveries were routinely recorded by the drilling contractors on core blocks at the end of each core run. Intervals are cross-checked by the Company's geologists.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	No material core loss is recorded in the intervals being reported.
	<i>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.</i>	Insufficient data from the modern drilling program exists to establish a relationship between sample recovery and grade. Historical data indicates there is no relationship between sample recovery and grade.
<i>Logging</i>	<i>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.</i>	Drill core is logged by Company geologists with appropriate detail to support mineral resource estimates.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	Systematic geological and geotechnical logging is being undertaken. Data collected includes:
	<i>The total length and percentage of the relevant intersections logged.</i>	<ul style="list-style-type: none"> - Nature and extent of lithology. - Relationship between lithology and mineralisation - Identification of nature and extent of alteration and mineralisation. - Location, extent and nature of structures such as bedding, cleavage, veins, faults etc. - Structural data (alpha & beta) are recorded for orientated core. - Geotechnical data such as recovery, RQD, fracture frequency, qualitative IRS, microfractures, veinlets and number of defect sets may be collected. - Magnetic susceptibility recorded at 1m intervals <p>Comments on estimates of the proportion of visible sulphides (e.g. chalcopyrite):</p> <ul style="list-style-type: none"> - Systematic logging of HQ diamond drill core with an estimate of the proportion of sulphide species present is completed on an interval basis. - Estimates on an interval basis vary from trace (~0.1%) to 4.5%. - This estimate is a guide only as it is difficult to estimate accurately due to the variable nature of the mineralisation. - Actual metal grade will be determined using analytical method at a certified laboratory. - The sulphide species (pyrite, chalcopyrite, chalcocite, bornite and molybdenite) occur as irregular blebs (~10mm diameter) in fine (~0.1mm) to medium (~0.5mm) disseminations, narrow stringers, irregular

		<p>vein infill, irregular to laminated, narrow (1-10mm but up to 50mm+) pyrite-chalcopyrite-molybdenite veins, as well as narrow (2-15mm) centreline quartz-pyrite-chalcopyrite veins.</p> <ul style="list-style-type: none"> - Identification of sulphide species is completed by or under supervision of experienced geologists and supported by a handheld portable XRF. <p>To assist with the selection of intervals for reporting visual sulphides, Buxton records visual intersections of porphyry vein style mineralisation by estimating for each foot of core:</p> <p>1) the average width of the veins (<i>w</i>), and 2) the number of veins (<i>n</i>).</p> <p>The equation $w * n / interval\ length$ yields the volume percent of the rock that is constituted by veins.</p>
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	<p>Drill core has been halved with a core saw; with one half of the core sent to a laboratory for assay and the other half retained on site in ordered core storage trays for future reference.</p> <p>If core is broken, then a representative selection of half the core is taken.</p> <p>Core is photographed wet at site prior to transport.</p> <p>Further sample preparation in advance of assay (weighing, crushing, splitting, pulverising) is then undertaken at SGS Burnaby.</p> <p>Buxton retains all residual laboratory pulps in a secure storage facility.</p> <p>This procedure, including the sample sizes, meets industry standards where 50% of the total sample taken from the diamond core is submitted.</p> <p>The sample sizes are appropriate for the style of mineralisation encountered.</p> <p>The retention of the remaining half-core is an important control as it allows assay values to be viewed against the actual geology; and, where required, further samples may be submitted for quality assurance. No resampling of quarter core or duplicated samples have been completed at the project to date.</p>
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	
	<i>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</i>	
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	
Quality of assay data and laboratory tests	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	Not applicable – no assays are reported in this announcement.
	<i>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.</i>	<p>Not applicable – no assays are reported in this announcement.</p> <p>Magnetic susceptibility was taken for every foot using a Terraplus KT-10 magnetic susceptibility</p>

		meter. No geophysical tools or other handheld XRF instruments were used to determine grade. Handheld PXRF was used only to confirm presence of minerals and not to determine grade.
	<i>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.</i>	Blanks, duplicates and standards are included in every 10 samples submitted to the laboratory for analysis.
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Not applicable – no assays are reported in this announcement.
	<i>The use of twinned holes.</i>	Drillholes CPW0001DD and CPW0002DD is located within 100m of historic hole RC-UC-17, drilled to 774.19 m (2540 feet) and for which historical logs and assays are available.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	All drillhole data is entered to spread sheets by Company personnel and validated by Company geologists. This data is then imported into the Leapfrog software where additional validation is completed. Digital data is securely archived on and off-site.
	<i>Discuss any adjustment to assay data.</i>	Not applicable – no assays are reported in this announcement.
Location of data points	<i>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.</i>	Handheld GPS (+/-5m) as well as reference to topographical, remote sensing and known reference points (e.g., previously surveyed holes). Previous drill collars were pickup by licensed surveyor.
	<i>Specification of the grid system used.</i>	Location reported here use NAD83 zone 12, elevations are reported as NAVD 88
	<i>Quality and adequacy of topographic control.</i>	Topographic control is USGS NED 1/3 arc-second n35w113 1 x 1 degree ArcGrid 2019.
Data spacing and distribution	<i>Data spacing for reporting of Exploration Results.</i>	CW0001DD is the first drillhole in several decades at the Copper Wolf project and is designed to establish short range continuity of mineralisation with RC-UC-17.
	<i>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.</i>	No Mineral Resource and Ore Reserve estimation procedures / classifications have been applied in this Announcement.
	<i>Whether sample compositing has been applied.</i>	No sample compositing has been applied at this stage.
Orientation of data in relation to geological structure	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	The assessment of sampling bias in relation to drilling orientation will require additional drilling.
	<i>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.</i>	
Sample security	<i>The measures taken to ensure sample security.</i>	Drill core is being stored and processed within a secure workshop facility. Samples are regularly dispatched to a laboratory for analysis as they are processed.

<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	Not undertaken.
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JORC 2012 Table 1: Section 2 – Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i>	<p>BUX have a 100% interest in 29.5 km² of tenure consisting of Federal Lode Mining Claims SM1-SM54 and CW01-CW215 issued by the Bureau of Land Management (BLM) covering 21.9 km² and Arizona State Lands Department (ASLD) Mineral Exploration Permits 008-121028 and 1213390 covering 5.1 km².</p> <p>On the 4th of October August 2022, Buxton satisfied all conditions precedent for Buxton and IGO to enter into an earn-in and joint venture agreement for the Copper Wolf Project (Arizona, USA) then held as 100% by BUX. By that agreement, IGO has an exclusive right to earn a 51% interest in the initial Copper Wolf Project tenements (SM1-SM54, CW01-CW44, 008-121028 and 008-1213390) by incurring and sole funding A\$350,000 of exploration expenditure in a 24-month period from 4/10/2022. Upon IGO incurring the A\$350,000 earn-in expenditure, it may elect to earn-in and form a 51% IGO/49% BUX unincorporated joint venture. During the earn-in period, BUX will be the project manager. IGO will be the initial manager of the joint venture. Within 6 months of the commencement of the joint venture, IGO has the exclusive right to elect to earn a further 19% joint venture interest (to take its joint venture interest to 70%) by sole funding exploration expenditure of A\$5,000,000 over 3 years (stage 2 earn-in).</p> <p>There is a long history of exploration and mining in the project area, so it is considered likely requisite permits will be obtained as and when they are required.</p> <p>The Copper Wolf project does not intersect or lie adjacent to areas with native title interests, historical cultural sites, wilderness or national park and otherwise sensitive environmental settings.</p>
	<i>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.</i>	The tenements are in good standing with the Federal / State government agencies.
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<p>A summary of the history of previous exploration activities is included in this announcement.</p> <p>The Competent Person has reviewed previous reports on drilling at the Copper Wolf Project and confirmed in the field and from discussions with a PD site geologist that historic drilling has been undertaken. Practices employed appear</p>

		to have been consistent with those adopted at other projects in North America around the same time.
<i>Geology</i>	<i>Deposit type, geological setting and style of mineralisation.</i>	The mineralisation at the Copper Wolf Project comprises porphyry copper-molybdenum type, with both hypogene (primary) and supergene (secondary) variants. This type of mineralisation is widely distributed in the region around the Project
<i>Drill hole Information</i>	<i>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:</i>	Drill hole collar details and significant intersections of mineralisation in drilling are tabulated in this announcement.
	<i>o easting and northing of the drill hole collar</i>	
	<i>o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i>	
	<i>o dip and azimuth of the hole</i>	
	<i>o down hole length and interception depth</i>	
	<i>o hole length</i>	
	<i>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.</i>	
<i>Data aggregation methods</i>	<i>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.</i>	Visual estimated intercepts have been selected to have internally consistent grade distributions, and these have not been aggregated.
	<i>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.</i>	Metal equivalent values have not been reported in this Announcement.
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	
<i>Relationship between mineralisation widths and intercept lengths</i>	<i>These relationships are particularly important in the reporting of Exploration Results.</i>	All intersections of mineralisation in drill holes reported in this announcement refer to down-hole thicknesses of mineralisation as, to date, Buxton has had insufficient time to evaluate the data to estimate true thicknesses.
	<i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i>	
	<i>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').</i>	
<i>Diagrams</i>	<i>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.</i>	Maps and cross sections in the announcement illustrates the proximity of CW0001DD with respect to the closest zones of historical mineralisation intersected in RC-UC-17.
<i>Balanced reporting</i>	<i>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.</i>	Results of all available significant historical work have been summarised and reported in this announcement.

<i>Other substantive exploration data</i>	<i>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.</i>	All relevant, meaningful and material exploration data pertinent to the reported observations has been presented in this announcement.
<i>Further work</i>	<i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	The nature and scale of further exploration will be determined at the completion of the current drill program.
	<i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	See diagrams in the body of the text.