ASX Release

2nd August 2023

EXPLORATION UPDATE

Narryer Project (100% BUX), Gascoyne Region, WA

- **Unprecedented rock chip REE result (0.45% TREO) at Prodigy Prospect**
- **Ground EM survey successful, three conductors defined for drill testing Ni-Cu-PGE and carbonatite related REE targets**
- **EL 09/2722 granted to secure strike extensions of the Bandito Prospect**

Buxton Resources Ltd (ASX:BUX) is pleased to update shareholders on recent progress at the Company's 100% owned Narryer Project in WA's Gascoyne region.

Highly Anomalous REE in Rock Chip at Prodigy Prospect

Field reconnaissance identified a previously unknown outcrop of mafic volcanic rocks at the **Prodigy** Prospect within E09/2427, rocks which are otherwise covered by flat-dipping quartzites. A Total Rare Earth Oxide (TREO) result of 0.45% was returned from a chip sample of relatively fresh basaltic rock (Figure 1).

Figure 1: Field photograph at the Prodigy Prospect of rock chip sample 131465.

PO Box 661
Nedlands WA 6009

Suite 1, First Floor
14-16 Rowland Street
Subiaco WA 6008

T. 08-9380 6063
E. info@buxtonresources.com.au

www.buxtonresources.com.au

These Rare Earth Element (REE) results (Table 1) are an impressive 22 to 93 times higher than background for basaltic rocks, which average 0.01% TREO.
A significant proportion (52%) of the REE is the more valuable Heavy Rare Earth Oxides (HREO) fraction which totals 0.24% of this sample, as per Table 1 below (see Table 4 at end of text for full REE suite assay results).

Table 1: Summary of REE assay results from sample 131465.

Sample ID	Notes	TREO	TREO-Ce	LREO	HREO
131465	Basalt, outcrop, moderately weathered, pillows?	0.46 %	0.37 %	0.22 %	0.24 %

- TREO (Total Rare Earth Oxide) = $La_2O_3 + CeO_2 + Pr_2O_3 + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_2O_3 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Y_2O_3 + Lu_2O_3$.
- TREO-Ce = TREO – CeO_2
- LREO (Light Rare Earth Oxide) = $La_2O_3 + CeO_2 + Pr_2O_3 + Nd_2O_3 + Sm_2O_3$
- HREO (Heavy Rare Earth Oxide) = $Eu_2O_3 + Gd_2O_3 + Tb_2O_3 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Y_2O_3 + Lu_2O_3$

This level of REE enrichment in only moderately weathered rocks suggests to Buxton that there is **potential for carbonatite-type REE mineral systems on the Narryer Project tenure**, which is effectively completely unexplored for REE. Most previous exploration along this part of the Yilgarn Craton margin, and Buxton's focus to date, has been on ortho-magmatic Ni-Cu-PGE potential.

The potential for a carbonatite-type REE mineral system to occur in this area is further supported by;

- Reconnaissance portable XRF analysis of outcropping volcanics at **Prodigy** which returned elevated levels of pathfinder elements such as niobium, phosphorus, barium, and copper.

- The pattern of the airborne magnetic anomaly images (Figure 2), which at **Prodigy** is consistent with the gently dipping volcanics / quartzites observed in outctop, whereas the **Bandito** magnetic anomaly exhibits circular / concentric patterns that resemble the central intrusive core of typical carbonatite complexes.

- Buxton's MLEM results (see below) at **Bandito** which have defined two drill targets at 85-90m depth.

With the granting of E09/2722, Buxton now holds 1,918 km^2 in four granted ELs along the highly prospective Yilgarn Western Margin, including the adjoining Proterozoic Badgeradda Basin. A ~30 km long tectonic sliver of the Badgeradda

Basin has been emplaced here along this craton margin; the full extent of that sliver and margin is now covered by Buxton's exploration licenses E09/2427 and E09/2722. Nothing other than sedimentary rocks had previously been identified in this area.

The broad tectonic and geological setting is conceptually prospective for REE, with the Gascoyne region shaping up as Australia's REE hotspot. REE projects nearby include Yangibana (under construction, ASX: HAS), Mangaroon (ASX: DRE), Mick Well (ASX: KFM), and Innouendy (ASX: DM1). The only REE operation in production in Australia is Mount Weld (ASX: LYC), near Laverton, WA.

MLEM Survey defines Drill Targets at Bandito and Ranger

A highly targeted moving loop electromagnetic (MLEM) survey has been completed at three sites at the Narryer Project on tenements E09/2427 and E09/2428.

The locations for the MLEM survey were chosen based on Buxton's 2022 AEM survey which identified several high priority targets for magmatic Ni-Cu-PGE sulphide mineralisation at the **Bandito** and **Ranger** prospects. A total of 3 individual plates have been modelled with conductance values between 100 – 2,100 Siemens (Table 2, Ranger prospect shown in Figure 3).

Table 2 Model results of EM plates

Locality	Estimated Size of EM Plate	Conductance (Siemens)
Bandito_A	400m x 400m	250
Bandito_B	700m x 300m	100
Ranger_A	~230m depth, ~870m strike, size unconstrained	2100

The plate modelled at Ranger_A has a high conductance (2,100 Siemens) consistent with the Ni-Cu-PGE target. The Ranger_A plate is ~230 metres in depth and ~870 metres along strike, although the southern side is poorly constrained due to the source plunging to depth. The modelling at **Bandito** resulted in two lower conductance plates likely related to magnetite, and consistent with the carbonatite related REE model.

Results of the EM modelling, and the unprecedented REE rock-chip result, have encouraged Buxton to plan an initial exploration RC drill program of four holes totalling 835 metres (Table 3). These holes would test for carbonatite-associated REE mineralisation at **Bandito,** and Ni-Cu sulphide mineralisation at **Ranger**.

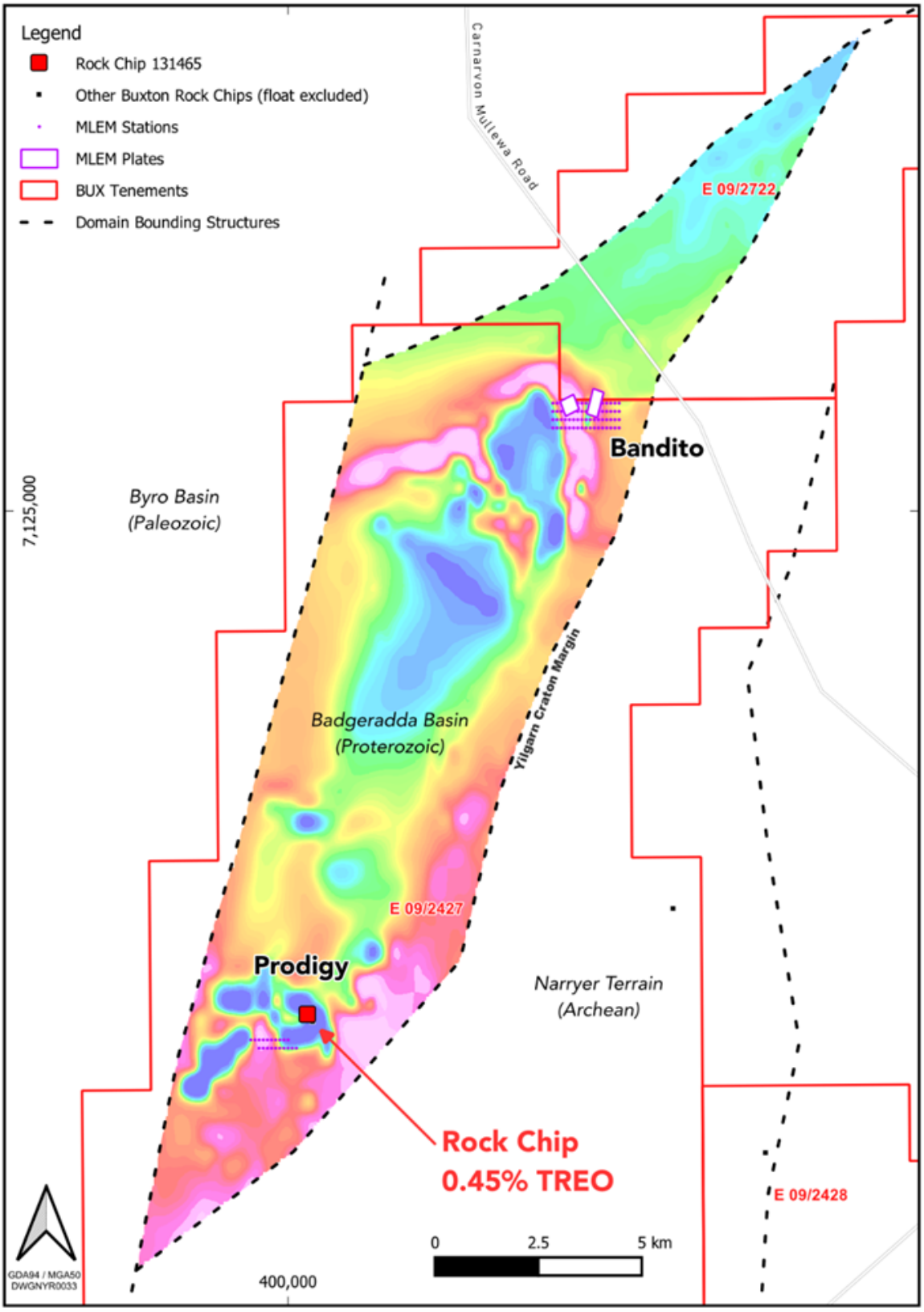

Figure 2: Magnetic image of the Proterozoic Badgeradda Basin (GSWA 2020) showing location of anomalous REE at Prodigy prospect and EM plates at Bandito prospect.

PO Box 661
Nedlands WA 6009

Suite 1, First Floor
14-16 Rowland Street
Subiaco WA 6008

T. 08-9380 6063
E. info@buxtonresources.com.au

www.buxtonresources.com.au

Table 3: Drill collar information for Narryer Project maiden RC drill program planning.

Locality	Tenement	Hole ID	Easting	Northing	Azimuth	Dip	Total Depth (m)	Target Depth (m)
Bandito	E 09/2427	BAND_001	406880	7127580	70	-80	135	85
		BAND_002	407450	7127600	90	-80	140	90
Ranger	E 09/2428	RANGER_001	402100	7081045	290	-75	300	242
		RANGER_002	402075	7081120	290	-75	260	210

Additional Narryer Project progress includes;

- Programme of Work approval by DMIRS for drill testing of MLEM plates modelled at Ranger and Bandito prospects.
- A Heritage Protection Agreement (HPA) has been executed with the Wajarri Yamaji Aboriginal Corporation (WYAC).
- E09/2922 has been granted. This secures the along-strike extension of the Bandito Prospect, and brings Buxton's 100%-owned total Narryer holding to 1,918 km^2 in four granted Els.

Buxton is now engaging with WYAC to conduct a heritage survey at **Bandito** and **Ranger**, along with undertaking additional ground geochemical follow-up of numerous airborne EM and radiometric targets.

Table 4: REE suite results for sample 131465
(ALS ME-MS81 method, 400464mE, 7112820 mN)

Sample ID	Ce_2O_3	Dy_2O_3	Er_2O_3	Eu_2O_3	Gd_2O_3	Ho_2O_3	La_2O_3	Lu_2O_3	Nd_2O_3	Pr_2O_3	Sm_2O_3	Tb_2O_3	Tm_2O_3	Y_2O_3	Yb_2O_3
131465	908	219	135	38	192	49	514	17	511	106	129	33	19	1581	117

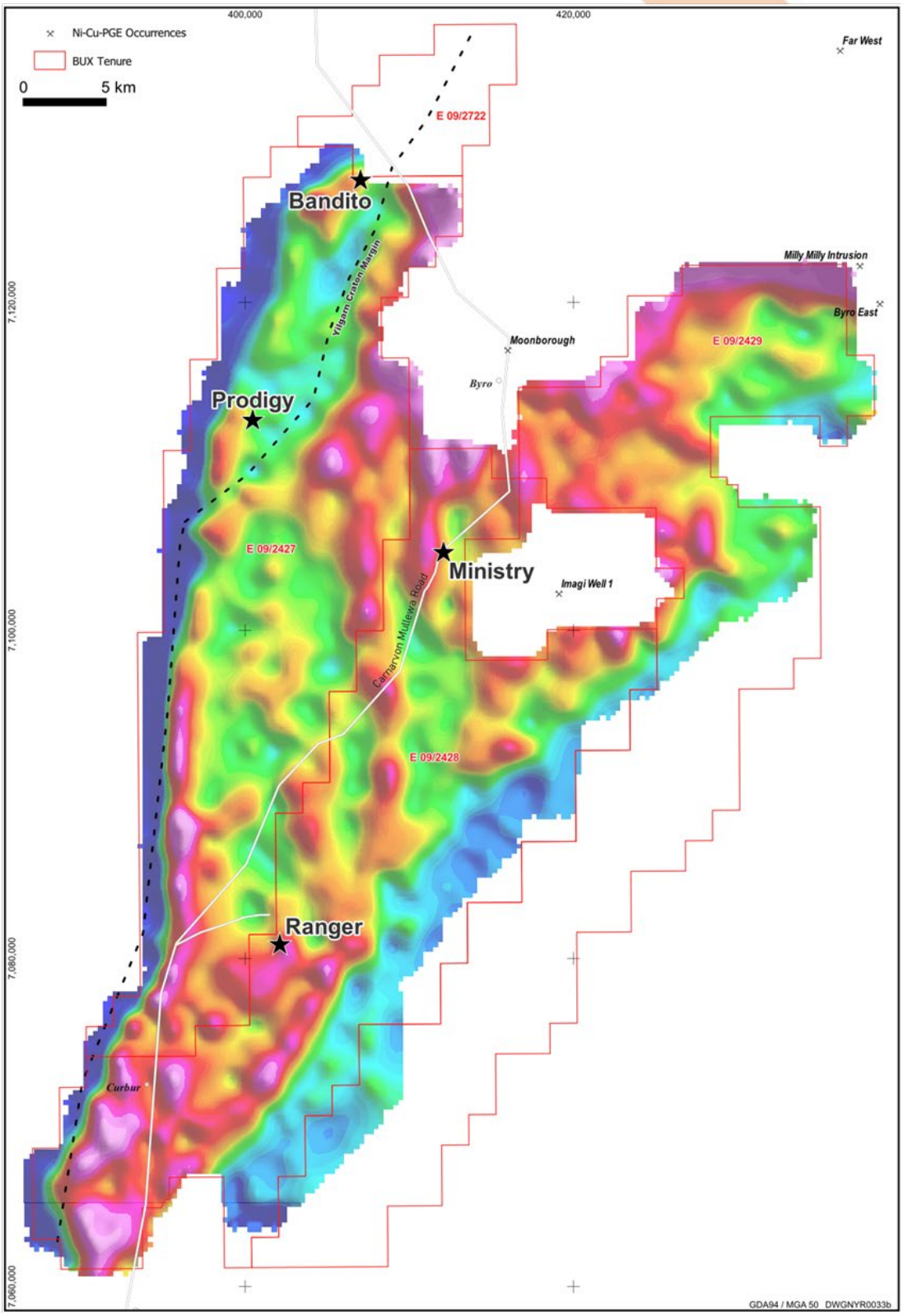

Figure 3: Narryer Project Prospect locations on 1VD gravity image from Buxton's 2022 ground survey.

PO Box 661
Nedlands WA 6009

Suite 1, First Floor
14-16 Rowland Street
Subiaco WA 6008

T. 08-9380 6063
E. info@buxtonresources.com.au

www.buxtonresources.com.au

For further information, please contact:

Eamon Hannon
Managing Director
ehannon@buxtonresources.com.au

Sam Wright
Company Secretary
sam@buxtonresources.com.au

About the Narryer Project

The Narryer Terrane forms part of the Archean Yilgarn Craton margin which hosts the recently discovered, world-class Julimar Ni-Cu-PGE Project. This new discovery by Chalice Mining Ltd and the presence of numerous Ni-Cu-PGE occurrences along a >1,000km strike length defines the West Yilgarn Ni-Cu-PGE Province - a highly prospective new exploration frontier now subject to intense exploration activity. Buxton has also now identified that the Narryer Project has potential for carbonatite-related Rare Earth Element (REE) style deposits in the Proterozoic Badgeradda Basin rocks which have been accreted to the Yilgarn Craton. The Narryer Project also has potential for regolith-hosted REE within both Proteroxoic and Archean successions.

During 2021 & 2022, Buxton completed ground reconnaissance, a regionally extensive 1-km spaced ground gravity survey and a highly targeted 2566.6-line km Airborne EM survey. Interpretation of the AEM data has identified multiple high priority anomalies, three of which warranted immediate follow-up by moving loop EM.

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.

JORC Table: Section 1 – Sampling Techniques and Data

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.*	The Ground Electromagnetic (EM) survey was undertaken by Wireline Services Group using GeoResults DRTX TX4 high power transmitter (~90 Amps), highly sensitive EMIT Fluxgate B-field sensors and single-turn 16 mm copper cable. The SMTFluxgate B-field receiver used an In-loop Position. The moving loop EM used a 200m square loop.
	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.	Rock chip samples were collected as representative samples from the above locations. Each individual grab sample weighs between 0.5 - 1 kg
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).*	Not applicable for geophysics / rock chip sampling.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	Not applicable for geophysics / rock chip sampling.
	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.	
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.*	All rock chips are geologically logged onsite by qualified and experienced geologists, recording relevant data and photographs to a set template.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	
	The total length and percentage of the relevant intersections logged.	
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	Not applicable for geophysics / rock chip sampling.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	
	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 sampling.	
	Whether sample sizes are appropriate to the grain size of the material being sampled.	
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 for geophysics. Australian Laboratory Services (Perth) – "ALS" prepares each sample by oven drying the entire sample for 12 hours at 100°C (DRY-21). Samples are then crushed in a jaw-crusher to 70% passing 6 mm (CRU-21). The entire sample is then pulverized in LM5 grinding robotic mills with low Cr-steel pulverising bowls (particle size distribution (PSD) target of 85% passing 75 m; PUL-23). A 300g master pulp is collected for analysis, with the remaining "reject" pulp being retained in storage. ALS laboratories, Perth complete pulveriser size checks every 50th sample to ensure particle size distribution compliance as part of routine internal quality procedures

		to ensure the target PSD of 85% passing 75 µm is achieved. Laboratory quality control processes include the use of internal lab standards using certified reference materials (CRMs) and duplicates. Quality control procedures involve insertion of certified reference materials, blanks, and collection of duplicates at the pulverisation stage. Results were within acceptable limits of certified reported values. Company CRMs were not used Rock Chip analysed by lithium borate fusion and multi acid digestion, with inductively coupled plasma atomic emission spectroscopy (ICP-AES; ME-ICP06) finish for Al, Fe, Na, Ti, Ba, K, P, Ca, Cr, Mg, Mn, Si, and Sr, or an inductively coupled plasma mass spectrometry (ICP-MS; ME-MS81D) finish for Ba, Ce, Cr, Cs, Dy, Er, Eu, Ga, Gd, Hf, Ho, La, Lu, Nb, Nd, Pr, Rb, SM, Sn, Sr, Ta, Tb, Th, Tm, U, V, W, Y, Yb, and Zr. Four- acid digestion of samples, with ICP-AES finish (ME-ICP61) for Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sr, Th, Ti, Tl, U, V, W, and Zn. Platinum, Pd and Au were analysed by fire assay and ICP-AES finish (PGM-ICP23). Loss on ignition (LOI) was determined by robotic thermo gravimetric analysis at 1000°C (ME-GRA05). The combination of digestion methods can be considered near total for all elements.
	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.	The EM survey was undertaken by Wireline Services Group using the following key components: - EMIT SMARTem 24 Receiver - EMIT SMARTem Fluxgate - GeoResults DRTX TX4 Transmitter - 100 Amp / 250 Voltage output - EMIT Tx controller
	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.	EM data is recorded digitally and displayed live in the field, enabling operators to review the raw data for live data quality assessment. EM data was reviewed daily by an experienced independent geophysicist. The field data collection contractor Wireline Services Group operates under the following accredited systems: - ISO 14001:2015 Environmental Management Systems - ISO 45001:2018 Occupational Health & Safety Management Systems - ISO 9001:2008 Quality Management Systems
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Not applicable for geophysics. Significant rock chips and EM anomalies were checked and compiled by senior Buxton geological personnel.
	The use of twinned holes.	Not applicable for geophysics / rock chip sampling.

	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	MLEM data was recorded digitally using EMIT SMARTem 24 Receiver. The digital data was backed-up via email from the field camp to head office and the consulting geophysicist.
	Discuss any adjustment to assay data.	Not applicable for geophysics. Rock chip sample results were converted to oxide abundances prior to reporting using standard stoichiometric factors as follows… Ce to Ce_2O_3 1.171 Dy to Dy_2O_3 1.148 Er to Er_2O_3 1.144 Eu to Eu_2O_3 1.158 Gd to Gd_2O_3 1.153 Ho to Ho_2O_3 1.145 La to La_2O_3 1.137 Lu to Lu_2O_3 1.137 Nd to Nd_2O_3 1.166 Pr to Pr_2O_3 1.170 Sm to Sm_2O_3 1.160 Tb to Tb_2O_3 1.151 Tm to Tm_2O_3 1.142 Y to Y_2O_3 1.270 Yb to Yb_2O_3 1.139
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.*	Positional control for the MLEM survey and rock chip sampling was via handheld GPS (+/-5m).
	Specification of the grid system used.	All coordinates are based on Map Grid Australia Zone 50, Geodetic Datum of Australia 1994
	Quality and adequacy of topographic control.	The MLEM crew used handheld Garmin GPS units for topographic control. The estimated accuracy of this system is 1-2m which his deemed sufficient for this type of survey.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	The MLEM survey consisted of 212 stations conducted on 200m spaced lines with 100m spaced acquisition centres. Rock chip sampling programs are reconnaissance in nature and sample spacing is deemed appropriate for this stage of exploration. No Mineral Resource or Ore Reserve calculations have been performed. No sample compositing has been undertaken.
	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.	
	Whether sample compositing has been applied.	
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.*	The MLEM survey achieves an unbiased sampling of the EM field by constantly moving the transmitter loop.
	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.	
Sample security	*The measures taken to ensure sample security.*	The EM data was maintained on secure servers managed by WSG and the independent contractor. Final data as received by Buxton is also stored on a secure network. The chain-of-sample custody is managed by BUX staff. Samples were stored at the field camp and sampled in the field by BUX staff and contractors. Samples were placed in calico bags and further secured in green plastic

		sample bags with cable ties. The samples are further secured in a bulk bag and delivered to the laboratory by freight contractor. A sample reconciliation advice is sent by the laboratory to BUX's Geological Database Administrator on receipt of the samples. Sample preparation and analysis is completed at the one analytical laboratory (ALS). The risk of deliberate or accidental loss or contamination of samples is considered very low.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	Data was reviewed by a third-party qualified geophysicist at IGO Ltd and determined to have been collected and processed in a satisfactory manner. IGO's geophysicist has provided plate models as reported. No specific external audits or reviews have been undertaken.

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, native title interests, historical sites, wilderness or national park and environmental settings.*	BUX have a 100% interest in Live exploration licenses E09/2427, E09/2428, E09/2429 and E09/2722. No material issues with land access are known at this stage.
	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.	The tenements are 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. Buxton has undertaken a detailed review of 140 previous exploration reports as held in the DMIRS WAMEX system, along with a compilation of other relevant open file data.
Geology	*Deposit type, geological setting and style of mineralisation.*	The primary target mineralisation style in the Project area is interpreted to be primary orthomagmatic intrusion related Ni-Cu-Co-PGE sulphide type. The Project covers regions of the Narryer Terrane in the Yilgarn Craton, which includes reworked remnants of Archean greenstone sequences and layered mafic-ultramafic complexes that are prospective for intrusion-hosted Ni-Cu-(Co)-(PGEs). The Project also covers a sliver of Badgeradda Basin – a poorly characterised sequence of volcanics and sedimentary rocks which may be Neoproterozoic – Mesoproterozoic in age. The Project is situated on the (NW) margin of the Yilgarn Craton which - a deep-seated structural configuration that is favourable for the focussing of magmatic intrusions and related sulphide deposits.
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:*	Not applicable.
	o *easting and northing of the drill hole collar*	

PO Box 661
Nedlands WA 6009

Suite 1, First Floor
14-16 Rowland Street
Subiaco WA 6008

T. 08-9380 6063
E. info@buxtonresources.com.au

www.buxtonresources.com.au

	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.*	Not applicable.
	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.	
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.*	Not applicable.
	If the geometry of the mineralisation with respect to the 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').	
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.*	Reporting of BUX's rock chip sampling is limited areas of outcrop or subcrop, float samples and highly weathered samples have been omitted for clarity & relevance. This is not deemed to misrepresent the indicated prospectivity of the tenement package.
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.*	Not applicable.
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 text in body of release.