**ASX Release** **13th October 2022**

# High priority AEM anomalies detected at Narryer Project

- **Interpretation of HeliTEM$^2$ AEM survey has been completed**
- **Multiple high priority anomalies identified in AEM data interpretation**

Buxton Resources Limited (ASX: BUX) ("Buxton" or "the Company") is pleased to update shareholders that interpretation of Airborne EM (AEM) by JV partner IGO Ltd has identified multiple high priority anomalies at the Narryer Project, including at the newly defined Bandito Ranger Prospects (see Figures 1 & 2).

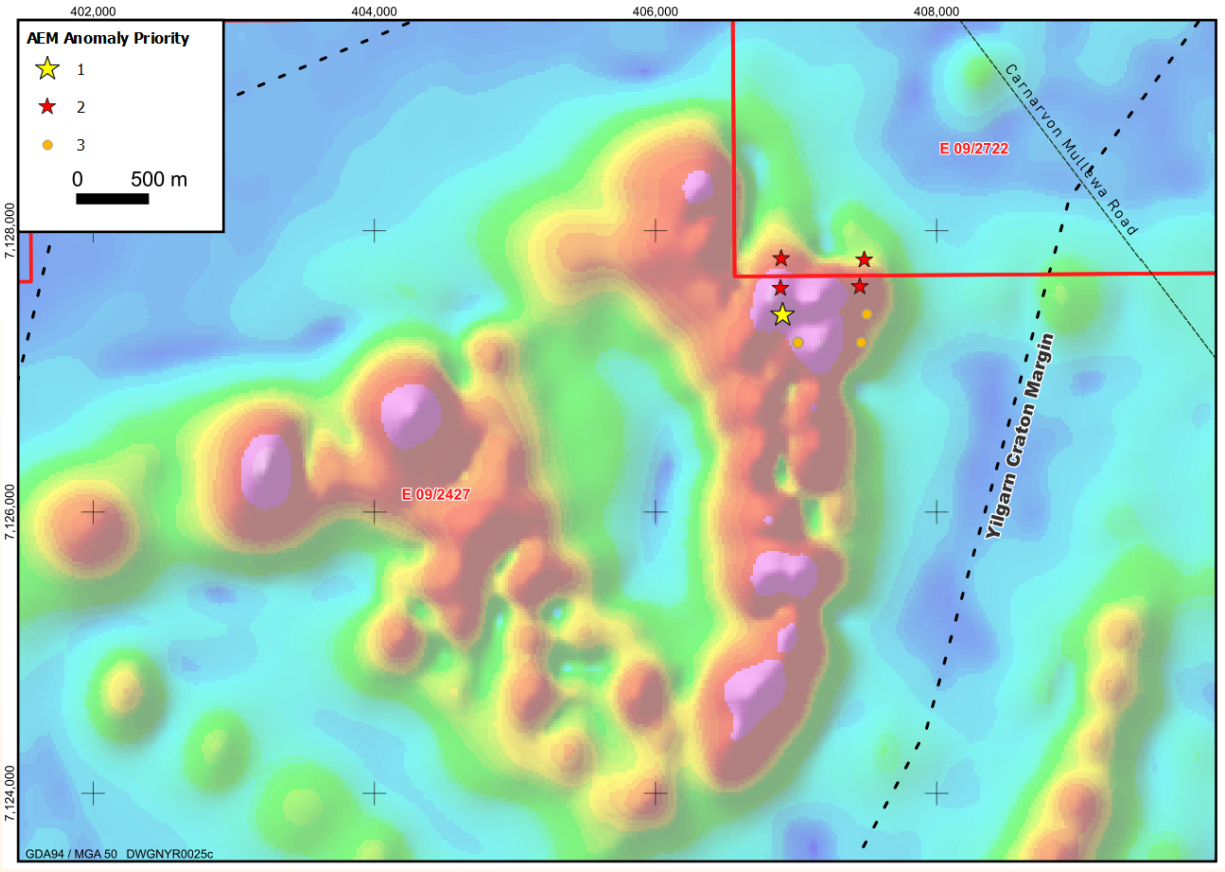


**Figure 1:** Priority AEM anomalies at the Bandit Prospect (analytical signal filter RTP magnetics image).

IGO have identified 21 Priority 1 and 2 anomalies (warranting immediate follow-up) along with 214 Priority 3 anomalies from Buxton AEM survey (See Table 1 for prioritisation criteria). Based on this analysis, IGO have identified the newly defined Bandit and Ranger Prospects as areas for immediate follow-up Ground EM subject to a field reconnaissance visit scheduled for the week of 24th October.

IGO will be required to strike their Option on the Narryer Project for Ground EM to commence. IGO may earn a 51% interest in the Narryer tenements by spending $3,000,000 within a 3-year period.

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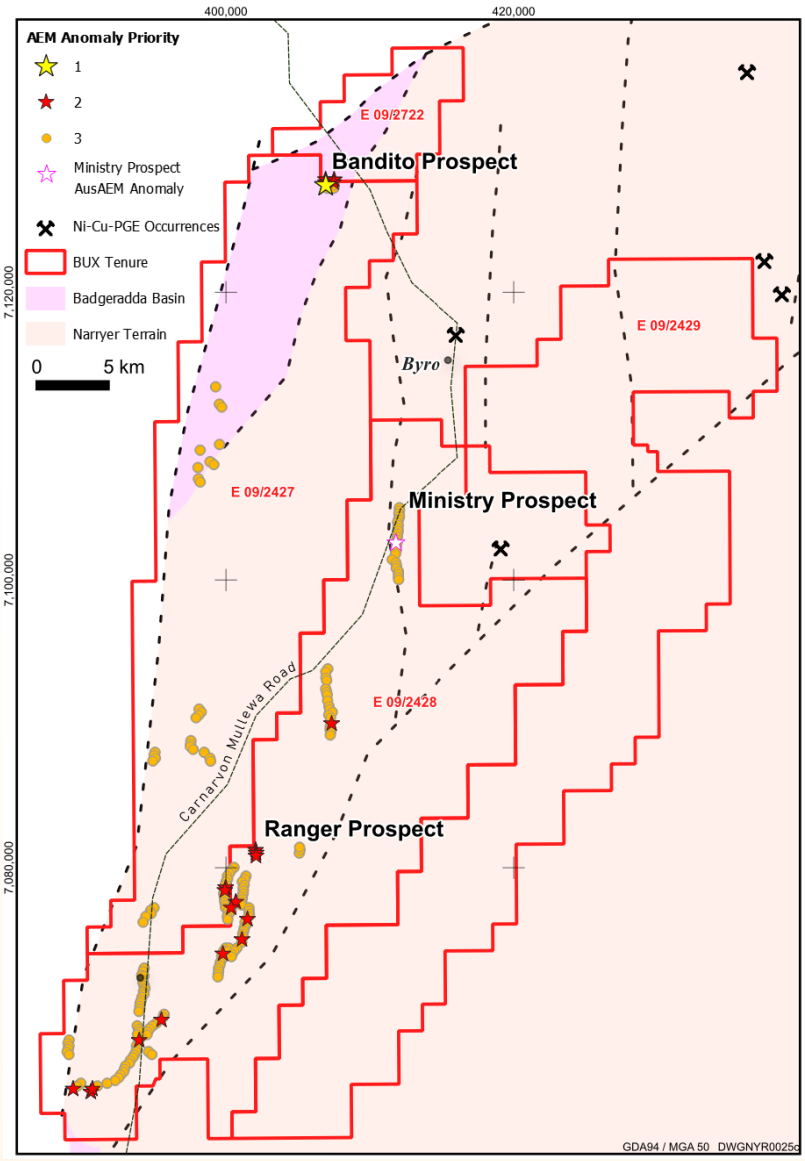


**Figure 2:** Buxton's Narryer Project tenements highlighting the completed AEM blocks and outlining new tenement application E 09/2722.

The highest priority target is associated with several anomalies at the Bandit Prospect, located in the Proterozoic Badgeradda Basin. The northern extension of this area has been covered with exploration license application E09/2722. This target is also associated with a discrete magnetic anomaly (Figure 1).

Many Priority 2 anomalies have high Time Constant and are located within a string of Priority 3 anomalies interpreted to represent conductive Archean lithologies. The elevated conductivity of these Priority 2 anomalies may be related to mineralisation, and these areas will be also subject to ground follow-up.

*There is information in this announcement relating to exploration results previously announced on:*

1) *26 October 2021 - Narryer Project - Gravity Survey Complete*
2) *23 March 2021 - Airborne EM detects bedrock conductor at Narryer Project*
3) *31 August /2022 - AEM survey commenced at Narryer Project*

**This announcement is authorised by the Board.**

**For further information, please contact:**

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## 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. 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 |
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| *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.* | A HeliTEM2 survey was flown across parts of E09/2427, E09/2429 and E09/2722, covering a total of 2566.6 line km.<br><br>Survey lines were flown by helicopter along 200m spaced lines as shown on the included figure in the body of the report. The acquisition sampling rate for all sensors was 0.1 seconds and average sensor terrain clearance height was 35m.<br><br>The HeliTEM2 system was calibrated by the contractor (Xcalibur Multiiphysics) prior to commencement of the survey. All digital data was inspected daily by the survey crew and the Company's consultant geophysicist. No bad data was noted, and no lines were required to be re-sampled. The Company's consultant geophysicist has completed QAQC of the data and advised that it is suitable for public domain release.<br><br>HeliTEM2 surveys are an industry standard practice in exploration massive sulphide accumulations. |
| | *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.* | |
| *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 airborne geophysics. |
| *Drill sample recovery* | *Method of recording and assessing core and chip sample recoveries and results assessed.* | Not applicable for airborne geophysics. |
| | *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.* | |

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| *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.* | Not applicable for airborne geophysics. |
| | *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 airborne geophysics. |
| | *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 airborne geophysics. |
| | *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 electromagnetic system was a Time Domain EM (HeliTEM2) full receiver-waveform streamed data recorded system. The "full waveform VTEM system" uses the streamed halfcycle recording of transmitter and receiver waveforms to obtain a complete system response calibration throughout the entire survey flight. HeliTEM2 system specification:<br><br>Transmitter<br>Transmitter loop diameter: 35m<br>Effective Transmitter loop area: 962m2<br>Number of turns: 4<br>Transmitter base frequency: 12.5 Hz<br>Peak current: 147A<br>Pulse end (true time): 20.127ms<br>Pulse width: 19.8730ms<br>Dipole moment: 566000Am2<br>Average transmitter-receiver loop terrain clearance: 35m<br>Helicopter – Loop separation: 35.5m<br><br>Receiver:<br>Multicoil system (X, Y and Z) with a final recording rate of 10 samples per second, 25 channels of X, Y and Z component data.<br>Magnetometer: CS-3 Scintrex Cesium Vapour, mounted in the plane of the transmitter loop;<br>Operating Range: 15,000 to 100,000 nT<br>Operating Limit: -40°C to 50°C<br>Accuracy: ±0.002 nT<br>Measurement Precision: 0.001 nT<br>Sampling rate: 10.0 Hz |
| | *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.* | Digital data for each flight were transferred to the office, in order to verify data quality and completeness. A database was created and updated using Geosoft Oasis Montaj and proprietary Xcalibur Atlas software.<br><br>This allowed the processor to calculate, display and verify both the positional (flight path) and geophysical data. |

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| | | The initial database was examined as a preliminary assessment of the data acquired for each flight. Daily processing of Xcalibur survey data consists of differential corrections to the airborne GPS data, verification of EM calibrations, drift correction of the raw airborne EM data, spike rejection and filtering of all geophysical and ancillary data, verification of the digital video, calculation of preliminary resistivity data, and diurnal correction of magnetic data.<br><br>Review by the IGO geophysicist looked at:<br>1. Planned flight path vs actual<br>2. Late time noise levels within contract specifications<br>3. Terrain clearance within contract specifications<br>4. Appropriate infill and extensional surveying was completed where appropriate |
| *Verification of sampling and assaying* | *The verification of significant intersections by either independent or alternative company personnel.* | Not applicable for airborne geophysics. |
| | *The use of twinned holes.* | Not applicable for airborne geophysics. |
| | *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* | Not applicable for airborne geophysics. |
| | *Discuss any adjustment to assay data.* | Not applicable for airborne geophysics. |
| *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.* | The HeliTEM2 survey used a UTS PC104 based navigation system utilizing a NovAtel WAAS (Wide Area Augmentation System) enabled GPS receiver, UTS navigate software, a full screen display with controls in front of the pilot to direct the flight and a NovAtel GPS antenna mounted on the helicopter tail. As many as 11 GPS and two WAAS satellites may be monitored at any one time. The positional accuracy or circular error probability (CEP) is 1.8m |
| | *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.* | Topographic control is provided by a Digital Terrain Model (DTM) collected during the survey and is considered accurate to sub-meter scale which is more than adequate for the work being performed. |
| *Data spacing and distribution* | *Data spacing for reporting of Exploration Results.* | The line spacing and along-line sample spacing are considered appropriate for the detection of massive sulphide accumulations in the shallow subsurface.<br><br>Survey flight lines were orientated East-West in order to be approximately perpendicular to the known geological structures. |
| | *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.* | Not applicable. |
| | *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.* | Not applicable. |
| *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. |

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| | | IGO's geophysicist has defined a prioritisation scheme for AEM anomalies based on the following criteria;<br><br>Priority 1: discrete and short to moderate strike length (~600-1000m) and excellent anomaly shape, with the EM response persisting to late times with clear exponential decay.<br><br>Priority 2: discrete anomaly which persists mid to late times and exponential decay, but may be part of a stratigraphic conductor if conductor has generally low tau and anomaly has Tau >12<br><br>Priority 3: early to mid time response and / or strike extensive (clearly stratigraphic) response and / or time constant (Tau) very low |

## 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 Pending exploration license E09/2722. No material issues with land access are known at this stage.<br><br>These Live ELs are subject to a Subscription Agreement, Option Agreement and Earn-In and Joint Venture Agreement as detailed in ASX Announcement 22 October 2022.<br><br>Under that agreement, Buxton will grant IGO an exclusive option to enter into an Earn-In and Joint Venture Agreement for a period of 3 months from IGO receiving the airborne EM survey data (detailed herein) and ground follow-up program reports.<br><br>By the Earn-In and Joint Venture Agreement (upon exercise of the option), IGO may earn a 51% interest in the Narryer tenements by spending $3,000,000 within a 3-year period. Upon IGO incurring the $3,000,000 of earn-in expenditure and electing to exercise the earn-in, Buxton and IGO will form an unincorporated Joint Venture with the interests being IGO 51% and Buxton 49%. |
| | *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 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. 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.<br><br>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.<br><br>The Project is situated on the (NW) margin of the Yilgarn Craton which - a deep-seated structural configuration |

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| | | 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* | |
| | 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 have been omitted for clarity.<br><br>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. |

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| | *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. |