

# **ASX Release**

24<sup>th</sup> October 2016

## MAJOR ANOMALY DEFINED BY DOUBLE MAGIC IP GEOPHYSICAL SURVEY

- Initial results from the 3D IP survey commenced on 29<sup>th</sup> August indicate a very large, previously-unknown body of chargeable material is present at depth under the entire Merlin prospect
- First modelling indicates a flat-lying pipe-like body >2 km long between approximately 60m to 400m below surface, extending to beyond 500m depth at the eastern end
- This body has so far been intersected only at the very top, by 2 holes (DMRC0004, DMDD0003), confirming the presence of Ni-Cu sulphides with 18m @ 0.51% Ni 0.21% Cu, and 9.6m @ 0.59% Ni, 0.21% Cu
- Interpretation and integration of datasets has now commenced

Buxton Resources is pleased to provide an update on the geophysical survey just completed its 100% owned Double Magic nickel-copper project located in the West Kimberley region of Western Australia. For project location, see Figure 1 at the end of this announcement.

#### Results

Results from the Induced Polarisation (IP) survey just completed are considered by Buxton to be outstanding.

This work has detected a previously unknown, very large body of moderately chargeable material at depth, beneath the entire Merlin prospect. The body appears to be >2 km long and at least several hundred metres across, ranging in depth between ~60 to 400m below surface. Adding to potential, this body appears to plunge down and be open beyond 500m depth at the eastern end, possibly indicating a magmatic feeder zone (see Figure 2).

At this early stage, Buxton considers that supporting surface and drillhole geochemistry, supporting geology, geometry and location of the body, as well as the structural/tectonic setting all indicate that the chargeable body will prove to be related to Ni-Cu sulphides within the Ruins Dolerite.

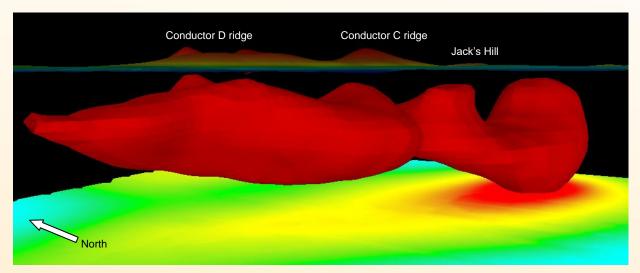


Figure 2 – Merlin IP survey volume looking north-east, chargeability iso-surface 20 mV/V displayed, topography above, horizontal model slice displayed at base is ~530m below surface (-420RL)

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So far, only two drillholes have intersected this chargeability anomaly, being DMRC0004 and DMDD0003 drilled under Conductor C in 2015. Both holes may have just intersected the very top of the chargeable body (see Figure 3), returning intersections of;

- 18 metres @ 0.51% Ni, 0.21% Cu (DMRC0004 152-170m downhole, reported 2/11/15), and;
- 9.6 metres @ 0.59% Ni, 0.21% Cu (DMDD0003 142.4-152.0m downhole, reported 27/11/15).

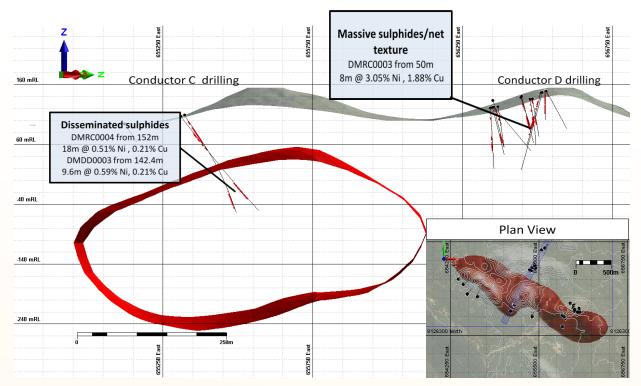


Figure 3 – Cross-section looking north-west showing chargeability iso-surface 20mV/V with drilling

This chargeable body may represent a large volume of mafic rock which is prospective for accumulations of nickel-copper sulphides. It exhibits irregular geometries in places, which may further enhance potential for sulphide accumulations.

Buxton reminds readers that this chargeability anomaly could represent a number of different geological entities, such as;

- Mafic rock with variable grade nickel-copper sulphide mineralisation
- Disseminated magnetite within later mafic rocks, or within surrounding schists, or
- Some other mass of chargeable rock of an unexpected nature.

However, considering the supporting surface and drillhole geochemistry, size, location, geometry, lack of magnetic expression of the body, possible geological model/s as well as the structural and tectonic setting, it is Buxton's opinion that that the chargeable body will prove to be a reflection of nickel-copper sulphides within a large volume of Ruins Dolerite.

The contraction and focussing to depth of the chargeability anomaly at the eastern end, extending beyond the depth of investigation, may suggest a magmatic feeder chamber to the more flat-lying portion. Importantly, previous shallow drilling targeting TEM conductivity anomalies appears to have largely missed these deeper targets. See Figure 4 for an isometric view showing all drilling, and Figure 5 for stacked horizontal chargeability slices showing the extent of the anomaly relative to the survey area.

Buxton believes this survey has dramatically enhanced the prospectivity of Double Magic for magmatic nickel-copper sulphide deposits and added a massive amount of information to the evolving 3D geological picture. These results have also validated the innovative use of high-power 3D IP at Merlin.



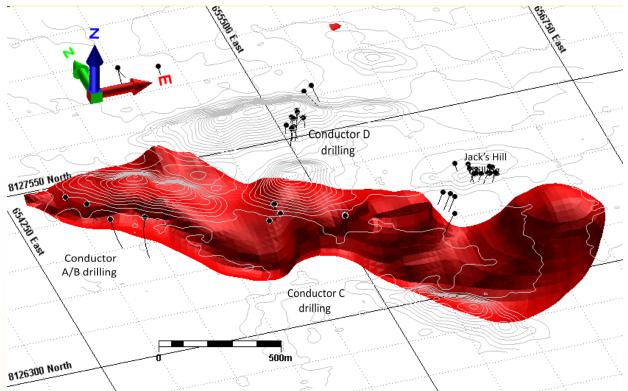


Figure 4 – Isometric view of the Merlin IP survey grid showing existing drilling and chargeability isosurface 20mV/V

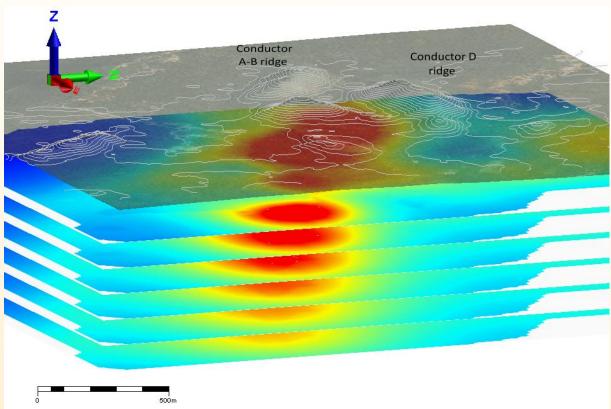


Figure 5 – Stacked horizontal slices from the Merlin chargeability model looking north-west, showing topography and chargeability results at 185, 285, 385, 485, and 585 metres below surface



### Geophysical data acquisition

Acquisition of high-resolution Induced Polarisation chargeability and resistivity data at the Merlin Prospect was completed safely, on time and within budget. No significant technical issues arose during the survey, with low contact resistance, excellent power transmission and depth penetration, low signal noise, very clean data, and repeatable results. Buxton would like to acknowledge the fine work by contractor Moombarriga Geoscience in completing this ambitious survey without incident.

All contractors and Buxton personnel demobilised from site by early October, prior to the annual fire season and lead-up to the Wet season.

The proposed survey area as reported on 29<sup>th</sup> August 2015 was extended 11% to over 5km<sup>2</sup> with the addition of two more transmission spreads on the eastern side, making a total of fifteen 150m-spaced transmission lines. This closed off substantial chargeability anomalies running off the eastern side of the initial planned grid. These additions brought the total survey size up to 353 transmitter stations (33.8 line-km) and 239 receiver stations (42.1 line km, given overlapping receiver lines).

The overlapping double-offset pole-dipole array and high powered equipment utilised meant that very high data density and redundancy resulted, allowing pseudo 3D modelling, production of chargeability and resistivity iso-surfaces, and robust target definition in three dimensions. The effective depth of investigation extended beyond 500 metres below surface, exact parameters to be finalised and documented during November.

Figure 6 shows fieldwork during data acquisition. Survey specifications are detailed in the table below.



Figure 6 – Photographs of field personnel from Moombarriga Geoscience undertaking the Pseudo 3D Induced Polarisation and Resistivity survey at Merlin Prospect, Double Magic Project, September 2015. The two left side images depict transmitter setup, those on the right side, receiver setup.



Data quality control during acquisition, early modelling, ongoing interpretation and documentation was managed and is currently underway by Southern Geoscience Consultants (SGC), with completion of this technical work anticipated during November.

More detailed assessment, interpretation, and integration of all datasets is now underway.

Buxton expects to be providing ongoing market updates for this exciting project during the coming months.

Item	Details
Operator	Moombarriga Geoscience
Survey type/array	Pseudo 3D – overlapping double offset pole-dipole
Transmitter	50Kva Search Exploration (4000V) – WB50
Current	3.5-19.5A (averaging >10A)
Receiver	16 channel SMARTem24
Station spacing (receiver) (dipole spacing)	100 metres
Station spacing (transmitter) (pole spacing)	100 metres
Line spacing	150 metres – overlapping receiver lines for each IP transmitter spread
Transmitter lines/spreads	15
Base Frequency	0.125Hz
Max n level	19 (averaging 16-18)
Highest amplitude chargeability response	30 mV/V
Current electrodes	Aluminium plate
Potential electrodes	Porous pot
Cables	Multicore receiver cables
Location data	Individual stations, by handheld GPS units with an accuracy of +/-5m
Survey design and processing	Southern Geoscience Consultants (SGC)
Data quality control protocols	Field data QC checked using TQIPdb/ZOND/LOKE. Data was checked for repeatability, telluric offsets, coupling, spherics and random outliers
Modelling software	Geotomo Software (LOKE) – RES3DINVx64 and SGC internal software



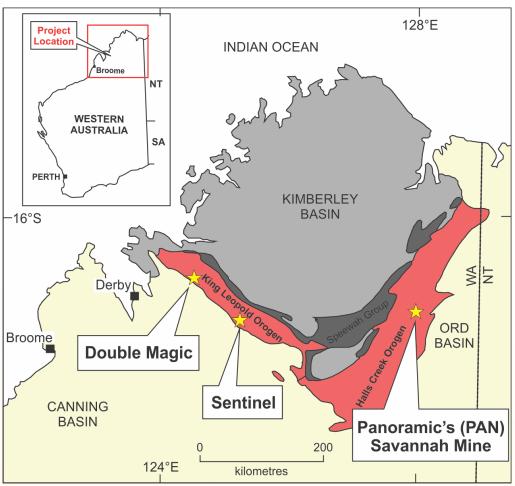


Figure 1 – Location of Buxton's two West Kimberley projects, also showing the location of Panoramic's Savannah Ni-Cu Mine

## 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 Rolf Forster, Member of the Australasian Institute of Mining and Metallurgy, and Mr Derek Marshall, Member of the Australian Institute of Geoscientists. Mr Forster is an Independent Consultant to Buxton Resources Limited and Mr Marshall is a full-time employee. Mr Forster and Mr Marshall 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 Forster and Mr Marshall 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 announcement that relates to Geophysical Exploration Results is based on information compiled by Mr Russell Mortimer, who is employed as a Consultant to the Company through geophysical consultancy Southern Geoscience Consultants Pty Ltd. Mr Mortimer is a member of the Australian Institute of Geoscientists and a member of the Australian Society of Exploration Geophysicists and has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and activities 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 Mortimer consents to the inclusion in the report of matters based on information in the form and context in which it appears.

# 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.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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed	<ul> <li>Double-offset pole-dipole Induced Polaraisation (IP) geophysical survey completed with a SMARTem-24 receiver</li> <li>Search Exploration 50kVa, 4000V transmitter</li> <li>Survey was conducted at ground level</li> <li>Rx dipole separation (a-spacing) = 100m</li> <li>150m line spacing – overlapping Rx lines</li> <li>Field data was quality control checked using TQIPdb/ZOND/LOKE. Data was checked for repeatability, telluric offsets, coupling, spherics and random outliers</li> <li>Inversion modelling completed using Geotomo Software (LOKE) – RES3DINVx64 and SGC internal software</li> <li>Location of individual stations was recorded with handheld GPS systems with an accuracy of +/- 5 metres</li> </ul>
Drilling techniques	information. Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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 as no exploration drilling techniques are utilised during IP geophysical surveying. Any drillhole data referenced has been previously reported as referenced in the text
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.	Not applicable
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.	Not applicable
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.         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.	Not applicable



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 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.	Data acquired using SMARTem-24 receiver system Data read two or three times for each investigation
	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.	Field data was quality control checked by Moombarriga Geoscience and Southern Geoscience Corporation during acquisition using TQIPdb/ZOND/LOKE. Data was checked for repeatability, telluric offsets, coupling, spherics and random outliers
Verification of sampling and	The verification of significant intersections by either independent or alternative company personnel.	Not applicable
assaying	The use of twinned holes.	Not applicable
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Data were processed, verified and presented using a variety of programs written by Scientific Computing and Processing Pty Ltd including TQIPdb to compile and verify the data, and Geotomo Software Pty Ltd's RES3DINVx64 for inversion modelling. Raw and processed data is held separately by Moombarriga Geoscience, SGC, and Buxton.
	Discuss any adjustment to assay data.	No adjustments to assay data have been made.
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.	Station locations were planned using a combination of GIS software packages. Stations were located on the ground using multiple handheld GPS units with an accuracy of +/-5 metres. Drill collars were physically surveyed in 2015 by Registered Surveyor
	Specification of the grid system used.	Geocentric Datum of Australia 1994, Australia Zone 51K
	Quality and adequacy of topographic control.	A range of topographic DTMs are available including SRTM30m, radar altimeter data from airborne surveys 2010-2015, averaged handheld GPS unit elevations, drill collars and selected traverses physically surveyed by Registered Surveyor in 2015 using Trimble differential GPS equipment
Data spacing and	Data spacing for reporting of Exploration Results.	At least two readings were recorded per station. Stations
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. Whether sample compositing has been applied.	were spaced 100m along lines (north-south) Line spacing was 150m, with each 150 m-spaced north- south transmission spread consisting of a central transmitter line and two parallel receiver lines 75 metres off to each side.
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.	Survey was oriented north-south (360°), sub- perpendicular to the main lithological trend to enable robust identification of interpreted perpendicular structures
Sample security	The measures taken to ensure sample security.	Data was acquired by Moombarriga Geoscience and reported to the Consulting Geophysicist (Southern Geoscience Consultants). Raw data was also separately provided directly to Buxton by Moombarriga
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	All results were reviewed and discussed by Buxton personnel, SGC, and Moombarriga, several times each week during data acquisition, and subsequently during final processing. External benchmarking was also conducted by Buxton. No negative issues were identified by these reviews, in fact, data is of exceptionally high quality



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. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence	The Double Magic Project is located in the Kimberley region of Western Australia and consists of four exploration licences (E04/1533, E04/2142, E04/2026 & E04/2060) held by Alexander Creek Pty Ltd. Alexander Creek Pty Ltd is a wholly (100%) owned subsidiary of Buxton Resources Limited. The tenements are in good standing with the DMP and there are no known impediments for exploration on
	to operate in the area.	these tenements.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Data used during the appraisal of the Double Magic Project (previously known as the Alexander Creek Project, Clara Hills, Jack's Hill, Limestone Springs & Maura's Reward) has been collected by numerous exploration parties, including Alexander Creek Pty Ltd, Victory Mines Limited (ASX:VIC), Proto Resources and Investments Limited (ASX:PRW), and Ram Resources Limited (ASX:RMR). All geophysical data has been independently reviewed by Southern Geoscience Consultants. All historical data presented has been previously reported under JORC 2004 and there has been no material change.
Geology	Deposit type, geological setting and style of mineralisation.	The Project areas lie within the Palaeoproterozoic Hooper Province of the King Leopold Orogen in the Kimberley region of Western Australia. The geology of the Project is characterized by mica schists of the Marboo Formation which are intruded by thick sills of the Ruins Dolerite. The Ruins Dolerite is a medium- to fine-grained mafic-ultramafic intrusive that is host to the known nickel-copper sulphide mineralization. This mineralization is interpreted to represent primary orthomagmatic sulphide mineralization, however there appears to be significant re-mobilisation and alteration of the mineralization in places (in particular at the Jack's Hill Gossan where the mineralization is dominated by copper carbonates and contains limited nickel).
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:	Included in full in multiple ASX releases during the second half of 2015, most recently on 27 <sup>th</sup> November 2015.
	<ul> <li>o easting and northing of the drill hole collar</li> <li>o elevation or RL (Reduced Level – elevation above sea</li> </ul>	
	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 (eg cutting of high grades) and cut-off grades are usually Material and should be stated.	No weighting, truncations, aggregates or metal equivalents were used.
	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.	

# Section 2 – Reporting of Exploration Results



	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.	Due to the locally complex geometry of high-grade zones observed in orientated drillcore (particularly remobilised massive sulphides) true widths of intersections are difficult to determine with full confidence. However, the true width estimates provided represent the best possible estimate, based on gross orientation of mineralised zones as interpreted from drilling, geophysical data, and surface mapping
	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.	Refer to figures/tables 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.	All currently available exploration results have been reported.
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.	There is no other exploration data that is deemed to be meaningful or material.
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step- out drilling).	See text 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.	Additional zones of interest are currently being identified based on new information (such as mapping, drilling, geochemical or geophysical data). Regionally, the extensive land package containing significant exposure of the nickeliferous host Ruin's Dolerite are of exploration interest.