ASX Release

20th September 2017

# DOUBLE MAGIC Ni-Cu PROJECT EXPLORATION UPDATE

- Assay results received for the first 13 holes show widespread Ni-Cu sulphide mineralisation at the Merlin Prospect
- A strong off-hole conductor was identified during DHTEM surveying of DMDD0012, the modelled conductive plate (~12,000-28,000S) is currently being targeted with DMDD0014
- Nickel-copper sulphide mineralisation at Merlin observed over >1500m strike and >600m down dip within the Ruins Dolerite
- Massive and disseminated sulphides have recently been intersected in diamond hole DMDD0012, ~400m SE of Conductor D
- Thirty (30) drill holes completed since mid-July at Buxton's 100% owned Double Magic Project

Buxton Resources Limited (ASX: BUX & BUXO) is pleased to provide an update on exploration activities from the Double Magic project. Drilling at Merlin is continuing, with most planned holes completed.

DMDD0014 testing the highly conductive offhole anomaly (~12,000-28,000S) is underway with the target horizon anticipated to intersect the anomaly late this week/weekend. The company would like to remind readers that the original discovery hole, DMRC003, drilled by Buxton in 2015 was targeting an EM plate with a conductance of 10,000-15,000S and returned 8m @3.05% Ni and 1.88% Cu. Further explanation on this target is available later within this release.

Thirty drillholes have been completed since mid-July, 9 diamond holes and 20 RC holes, one with a diamond tail. Visible sulphides have been intersected in all but one hole at the Merlin Prospect, confirming the presence of a large magmatic Ni-Cu sulphide mineralised system, with multiple mineralised horizons identified extending over more than 1,500m of strike and greater than 600m down-dip.

40 50 60 70 80 90 1300 10 20 30 40 50 60 70 80 90 1400 10 20 30 40 50 60 70 80 90 1500



Figure 1 – Stringer and massive sulphide vein in Ruins Dolerite intercepted in DMDD0012, photo is of uncut HQ core, 305.41m to 305.68m downhole



For a plan of drillhole locations, see Figure 2. For a cross-section through the centre of Merlin, see Figure 3. A summary of >0.25% Ni intersections from the 13 holes for which assays are available is included as Table 1, location details of all 2017 drillholes are listed in Table 2.

All 13 holes for which assays are available, have returned intersections >0.1% Ni with associated Cu, demonstrating the widespread and pervasive nature of Ni-Cu sulphide mineralisation at Merlin. Multiple mineralised horizons have been intersected within Ruins Dolerite mafic and ultramafic units.

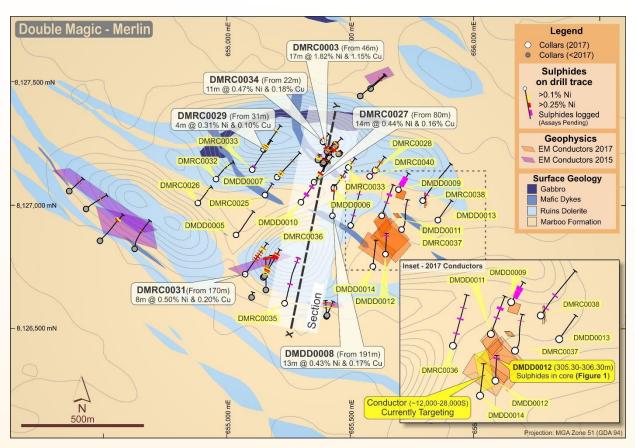


Figure 2 - Plan of previous and 2017 drillhole locations



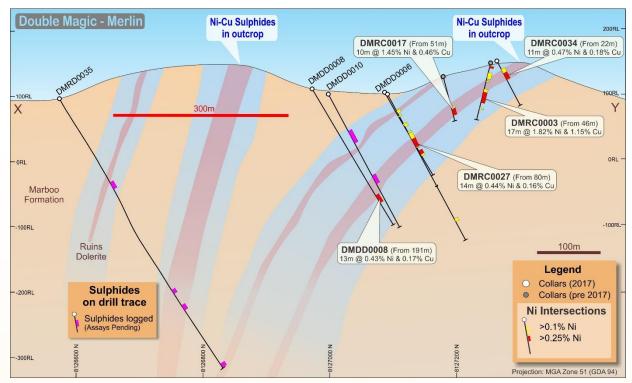


Figure 3 – Cross-section of the central Merlin area

#### **Emerging Targets, Technical Discussion**

Three recent holes (DMRC0038, DMDD0009 and DMDD0012, SE of the 2015 conductor D drilling) have intersected well developed sulphides (pyrrhotite with probable pentlandite, chalcopyrite) in multiple zones within the Ruins Dolerite.

These holes are 300-450 metres south-east of Conductor D in an area with no previous drilling. Preliminary DHTEM results from an earlier hole (DMDD0008) then indicated deep, complex off-hole conductor/s at extreme range 200-250m to the east or south-east. Follow-up DHTEM in holes DMRC0037, 38 and DMDD0009 enabled preliminary modelling of a series of moderately conductive plates between 200-300m below surface, centred 450 m south-east of Conductor D. Later channel modelling of this data indicated a stronger conductive source deeper again and further south or south-west.

A diamond drillhole (DMDD0012) tested these new modelled conductors and provided a platform for further DHTEM to better resolve any deeper conductors. Variable trace to massive sulphide was observed over a 38.1m intersection (288.2-326.3m downhole) within the Ruins Dolerite. For the majority of the intercept the visual mineralisation was <1% total sulphide (classified as trace), however several better developed zones classified as disseminated sulphide, and two zones with predominantly vein sulphide. The best sulphide intersection in the hole was a metre-long intersection of stringer and vein sulphide (305.3-306.3m downhole), including a 10cm vein of massive sulphide (Figure 1).

DMDD0012 was subsequently surveyed by DHTEM, with the thin massive sulphide vein observed at 305.6m downhole apparent as a minor in-hole anomaly. More importantly a highly conductive off-hole source has been identified down dip from the massive sulphide intercept. A robust model fit has been achieved with conductance levels ranging from ~12,000-28,000S, with an interpreted aerial extent of ~50x150m. This is a highly encouraging drill target with all geological indications pointing towards a well-developed, highly conductive Fe-Ni-Cu sulphide accumulation within Ruins Dolerite.



A new diamond drill hole (DMDD0014) has been collared with the intent of intersecting the modelled offhole conductive target ~65m Southwest of the massive sulphide intercept in DMDD0012.

### **High Power Down-hole TEM surveys ongoing**

Wireline Services Group has been on-site since 18<sup>th</sup> August, running high-power DHTEM surveys using three differently-configured transmitter loops. All holes are also being routinely gyro surveyed and electrically logged for conductivity and magnetic susceptibility. Selected holes are being logged for chargeability and density. Work is ongoing, with flexibility in the work program coupled with rapid turn-around of results enhancing exploration targeting on a day-by-day basis.



Table 1. Intersections + 0.25 % Ni

	From		Thickness	Ni	Cu	Со
Hole ID	(m)	To (m)	(m)	%	%	ppm
DMDD0006	106	113	7	0.33	0.13	155
DMDD0007	39	41	2	0.36	0.13	140
	58	61	3	0.35	0.12	151
	178	180	2	0.41	0.16	208
DMDD0008	191	204	13	0.43	0.17	160
DMRC0025	250	252	2	0.26	0.16	169
DMRC0027	80	94	14	0.48	0.16	195
DMRC0028	23	27	4	0.34	0.12	138
	70	72	2	0.36	0.13	150
	80	83	3	0.36	0.13	160
DMRC0029	16	19	3	0.26	0.08	121
	31	35	4	0.31	0.10	127
F 10	173	175	2	0.29	0.19	204
DMRC0031	133	136	3	0.41	0.14	162
	148	151	3	0.39	0.16	188
	153	155	2	0.36	0.13	178
	170	178	8	0.50	0.20	207
	195	199	4	0.35	0.13	145
	218	222	4	0.29	0.07	117
	255	260	5	0.34	0.11	137
DMRC0033	51	53	2	0.31	0.11	130
DMRC0034	22	33	11	0.47	0.18	181



# Table 2. 2017 Drilling Details

Hole Type	Hole ID	Easting	Northing	RL (m)	Azimuth	Inclination	EOH Depth
Diamond	DMDD0005	655035	8126878	95	35	-80	434.4
Diamond	DMDD0006	655431	8127068	106	35	-60	150.4
Diamond	DMDD0007	655202	8127111	104	35	-60	261.0
Diamond	DMDD0008	655425	8126955	111	0	-60	243.6
Diamond	DMDD0009	655692	8127061	101	35	-60	150.6
Diamond	DMDD0010	655298	8127010	103	35	-60	235.4
Diamond	DMDD0011	655625	8126955	105	15	-65	273.7
Diamond Tail	DMRD0035	655232	8126601	96	15	-60	486.5
Diamond	DMDD0012	655640	8126800	102	0	-75	397.0
Diamond	DMDD0013	655846	8126934	104	30	-60	147.5
Diamond	DMDD0014	655584	8126747	102	7	-75	In progress
RC	DMRC0025	655152	8127039	96	35	-80	316
RC	DMRC0026	654881	8127007	90	35	-90	385
RC	DMRC0027	655351	8127091	103	35	-60	258
RC	DMRC0028	655598	8127139	108	35	-60	132
RC	DMRC0029	655147	8127224	155	35	-60	234
RC	DMRC0030	656240	8126351	102	35	-60	240
RC	DMRC0031	655072	8126719	99	35	-60	306
RC	DMRC0032	654954	8127104	93	35	-60	265
RC	DMRC0033	655490	8127151	117	35	-60	90
RC	DMRC0034	655387	8127255	154	35	-60	78
RC	DMRC0035	655232	8126601	96	15	-60	378
RC	DMRC0036	655499	8126916	119	15	-60	336
RC	DMRC0037	655705	8126900	105	35	-60	252
RC	DMRC0038	655791	8127017	105	35	-60	168
RC	DMRC0039	655101	8127142	123	35	-60	230
RC	DMRC0040	655576	8127115	95	0	-75	163
RC	DMRC0041	660891	8125893	97	10	-60	109
RC	DMRC0042	661395	8125631	102	20	-60	120
RC	DMRC0043	663791	8125233	118	15	-70	198
RC	DMRC0044	668338	8119764	85	20	-60	70



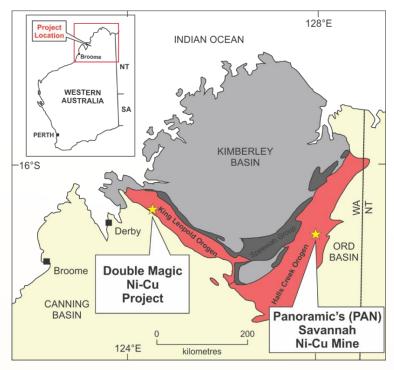


Figure 4 – Location of the Double Magic Ni-Cu Project in Western Australia. Also shown is the location of Panoramic's Savannah Ni-Cu Mine.

Buxton looks forward to progressively updating investors in coming weeks and months as results come to hand. For further information regarding Buxton Resources Limited please contact:

### Sam Wright

Company Secretary sam@buxtonresources.com.au

#### **Competent Persons**

The information in this report that relates to Exploration Results is based on information compiled by Mr Mark Glassock, Member of the Australasian Institute of Mining and Metallurgy, and Mr Derek Marshall, Member of the Australian Institute of Geoscientists. Mr Glassock is an Independent Consultant to Buxton Resources Limited and Mr Marshall is a full-time employee. Mr Glassock 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 Glassock 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.



## 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.  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 information.	Early stage exploration drilling at the Double Magic project has been undertaken utilizing a Reverse Circulation Percussion (RC) rig, and an HQ diamond core wireline rig equipped with core orientation equipment.  The drillhole locations are picked up by handheld GPS. Surveying by licensed surveyor will take place at the end of the program, previous drill programs holes have been surveyed by licensed surveyors. Sampling was carried out under Buxton protocols and QAQC procedures are per industry best practice.  RC drilling was sampled on 1m intervals. A rig mounted cyclone and cone splitter was used to provide a bulk sample and a representative split sample for assay. Core sample lengths vary up to 1 metre, quarter HQ core submitted for analysis.  Samples have been submitted to Intertek Genalysis in Perth for analysis. A standard dry, crush and pulverize was followed by a four-acid digestion finished with ICP-MS for a suite of 48 elements.
Drilling techniques	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).	The 2017 drilling drill programs are being drilled By Core Drilling. Reverse Circulation drilling is using a Schramm T685 drilling rig with Auxiliary and Booster using a 150 mm face hammer. Diamond drilling is using an EDM 2000 truck mounted rig, drilling HQ core from surface. RC hole DMRC0035 was extended with NQ core. All core orientated using a TruCore orientation device on each drill run. All drill holes are being surveyed by downhole gyro to determine accurate hole trajectories.
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.	The RC 's sample recovery and moisture are routinely recorded. All samples show good recovery and are dry. It is not believed that any bias has occurred due to loss or gain of sample.  All core was measured on-site, recoveries calculated and reconciled with driller's plods.
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.	All drill holes are geologically logged in real time by qualified and experienced geologists, recording relevant data to a set template. All logging included lithological features, mineral assemblages and estimated mineralisation percentages. All data was codified to a set of company code systems. All core is orientated, RQD logged, all structural data measured and recorded. All chips and core are photographed.
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.	All RC 1m intervals were split with a rig mounted cone splitter. All HQ core was sawn at a constant angle to orientation markings, sampled to geological boundaries, up to a maximum of 1 metre in length. Quarter core submitted for assay. Sample preparation is consistent with industry best practice. Field QC procedures involved the use of certified reference material assay standards, blanks and duplicates for company QC measures, and laboratory standards, replicate assaying and barren washes for laboratory QC measures. The insertion rate of each of these QAQC measures averaged 1:20. The sample size is deemed appropriate for the material and analysis method.



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.	The exploration samples will be analysed at Intertek Genalysis in Perth, Australia. Sample preparation included drying, crushing, splitting and pulverizing. A four acid digest followed by a 48 element MS. Previous drill used a 4 acid digest with an OE finish and a 25 g fire assay for Pt and Pd.  Metallurgical flotation testing was carried out by ALS on three 12 kg samples on ¼ and or ½ core from the 2015 drilling. Core was crushed and ground to 106um with natural pH with excess collector Sodium Ethyl Xanthate (SEX) and A3477 with MIBC (frother) added as froth stability required.  The laboratories procedures are considered to be appropriate for reporting according to industry best practice.
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	Not applicable.
	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.	Not applicable.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Significant mineralisation has been verified by independent consultants and alternative company personnel.
, -	The use of twinned holes.	Two RC holes for the 2015 drill program (DMRC0003 and 17) have been twinned by HQ diamond core holes DMDD0001 and 2 respectively, confirming mineralisation in both cases. Core has been logged but not sawn for sampling as geological work is ongoing.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All data is collected initially on paper and handheld GPS. This data is hand entered to spread sheets and validated by Company geologists. This data is then imported into the company database and extra validation is carried out. Physical data sheets are stored at the company office. Digital data is securely archived on and off-site.
	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.	Handheld GPS (+/-5m) as well as reference to topographical and remote sensing data. Drillhole collars from the 2015 drill program were pickup by licensed surveyor.
	Specification of the grid system used.  Quality and adequacy of topographic control.	MGA51 (GDA94).  A DEM (digital terrain model) was created from the altimeter data from the aerial magnetic survey and is deemed sufficient for this stage of exploration.
Data spacing and	Data spacing for reporting of Exploration Results.	The current drill program is reconnaissance and step out
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	from the 2015 drilling program, spacing is deemed appropriate for this stage of exploration.
	estimation procedure(s) and classifications applied.  Whether sample compositing has been applied.	Not applicable – No Mineral Resource or Ore Reserve calculations have been performed.
		The 2015 drilling had some RC composite samples taken in non mineralised material into 2 or 4 metre composites from one metre bags using a spear. No sample compositing has taken place in the 2017 drilling to date. Metallurgical samples were composite samples from drill core.
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	Information from orientated core indicates that drillhole orientation is appropriate for disseminated and massive matrix mineralisation.
	the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	All mineralized intervals are down hole intervals, not true width.



Sample security	The measures taken to ensure sample security.	Samples were packaged and stored in secure storage from the time of gathering through to submission.  Laboratory best practice methods were employed by the laboratory upon receipt. Returned pulps will be stored at a secure company warehouse.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits of the sampling techniques or data were carried out due to the early stage of exploration. It is considered by the Company that industry best practice methods have been employed at all stages of the exploration.

## 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.	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 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 the DMP and there are no known impediments for exploration on 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. Any 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 area lies 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 mineralisation. This mineralisation is interpreted to represent primary orthomagmatic sulphide mineralisation, however there appears to be significant re-working and alteration of the mineralisation in places (in particular at the Jack's Hill Gossan where the mineralisation is dominated by copper carbonates and contains limited nickel). Importantly the gossan at Jack's Hill does not have an electromagnetic (EM) signature, whereas the EM targets tested to date all appear to be due to nickel and copper enriched sulphide mineralisation.
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:  o easting and northing of the drill hole collar	See Tables in body of release.
	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 (eg cutting of high grades) and cut-off grades are usually Material and should be stated.  Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.  The assumptions used for any reporting of metal equivalent values should be clearly stated.	No weighting, truncations, aggregates or metal equivalents were used.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results.  If the geometry of the mineralisation with respect to the 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').	The relationship between the true mineralisation width and intercept length is not known at this early stage of drilling, however true width of the intercepts in most holes is interpreted to be less than intercept length.
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.	Wireline Services Group have undertaken high powered downhole electromagnetic surveying (DHTEM) over Merlin at the Double Magic Project to assist with drill hole targeting.  DHTEM details Loop sizes: 500x300m to 1050x1050m single turn Stn spacing: 5-10m intervals with limited 2m infill Transmitter: TEX3 Current: 70-80A Receiver: DigiAtlantis system Sensor: DigiAtlantis B-field Fluxgate ZXY Probe Time base/frequency: 500ms time base/0.5Hz base frequency Stacking/readings: 32-128 stacks, 2-3 repeatable readings  All data QAQC checks and modelling efforts have been performed using Maxwell.
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale stepout drilling).  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.  See modelled conductors in Figures within the text of this report. Additional zones of interest may be established based on geological information (such as drilling or downhole data). Regionally, the extensive land package containing significant exposure of the nickeliferous host lithology the Ruin's Dolerite are of exploration interest.