



10 November 2021

Bundarra Pluton Soil Sampling Programme Update Four New Discoveries

Duke Exploration (ASX:DEX) ("Duke" or "the Company") is pleased to announce the Bundarra Pluton soil sampling programme has been completed around the Bundarra pluton ridge line (intrusion contact zone). The vast majority of known copper mineralisation occurrences at Bundarra are associated with the pluton contact. This is a significant achievement that has identified an additional four highly anomalous prospective areas to explore, which are comparable in size to the Mt Flora resource area.

HIGHLIGHTS

- The Bundarra Pluton contact zone ridge line has been completely covered by soil samples on an 80m by 80m grid ([Figure 1](#)).
- Four new copper soil anomalies, each averaging 0.69km², have been mapped around the pluton in the accelerated pluton scale soil sampling programme. Mt Flora is approx. 0.67 km²
- A total of 10 priority areas are now identified, including Mt Flora. The average area of each of these is approximately the same as Mt Flora.
- Diamond drilling testing of three of these areas (Quorn, Isens, Rogers) has begun and will be completed by year end.
- One of the new 1.2km² copper soil anomaly discoveries has no evidence of historic mining nor exploration activity and confirms the eastern margin of the pluton is prospective.

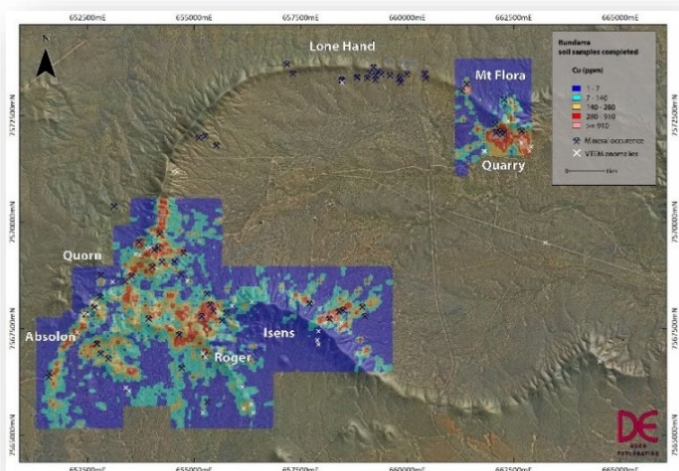
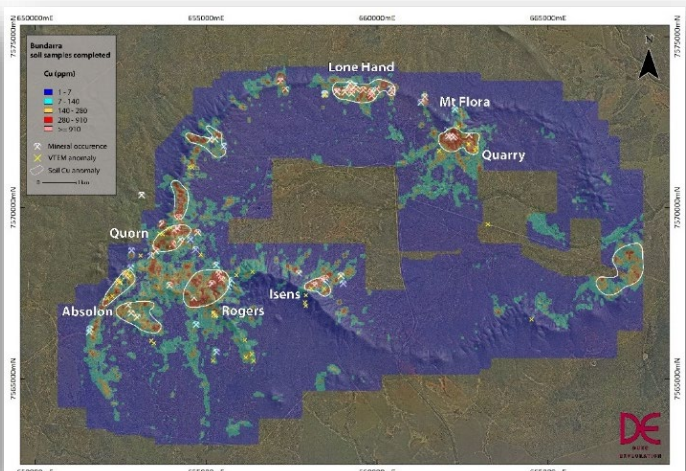


Figure 1: Left – Soil sampling on July 13



Right – Soil sampling on November 08

Managing Director Philip Condon commented:

"The results of the regional soils sampling survey programme are a significant and exciting step forward in our expanded Bundarra resource development strategy. In addition to Mt Flora and the five previously known large anomalous areas in the southwest corner of the pluton, the soils survey has discovered an additional four new copper in soils anomalous areas of comparable size, for a total of nine copper soil targets in addition to Mt Flora. This provides important optionality in our resource development program to ensure the best of the anomalous areas are developed. The results of the VTEM inversion geophysical analysis currently underway, will be combined with the soils to provide high probability targets for test drilling, evaluation and resource development drilling prioritisation. We anticipate the current quarter and next quarter to be very formative for the Company and the development of the Bundarra copper project.

Future Work Programme

- Finalise the timing of step-out extension RC resource drilling at the Mt Flora resource to test the new mineralisation discovered to the north.
- Continue accelerated pXRF soil sampling, to be completed by the end of the year, to sample the entire Bundarra Pluton to help prioritise resource development work.
- Accelerate and extend collection of electrical geophysical data over the entire Bundarra Pluton.
- Complete exploration diamond drilling to collect geological data to confirm targets mapped to date and help prioritise resource development work (started).
- Start RC drilling to determine the highest priority target for resource development drilling.
- Provide all exploration diamond drilling assay results from the Prairie Creek gold project November.

This announcement has been authorised for release by the Board.

For further information please contact:



Philip Condon
Managing Director

p.condon@duke-exploration.com.au
Ph +61 417 574 730



Toko Kapea
Chairman

t.kapea@duke-exploration.com.au
Ph+64 27 534 2886

Technical Information

Bundarra Project Pluton-scale pXRF Soil Sampling Results Update

The accelerated regional pXRF soil sampling program has reached a significant milestone, covering the entire Bundarra Pluton contact zone ridge line (Figure 2). A total of 18,979 soil samples have now been collected to date across the entire Bundarra Pluton, which is an additional 6,843 samples to those reported previously (see announcement on 15 September, 2021). The area with pXRF soil data now covers 118 km², which is 76% of the prospective area of the Bundarra Pluton and surrounding contact metamorphic halo (Figure 2). The soil sampling is planned to extend the anomalous areas identified on the boundaries of previously surveyed areas and to extend the sample coverage to cover the entire prospective area within and around the Bundarra Pluton. Three soil sample collection teams are now operating, with the aim of completing sampling over the entire prospective area of the Bundarra Pluton by the end of November, depending on weather and land access.

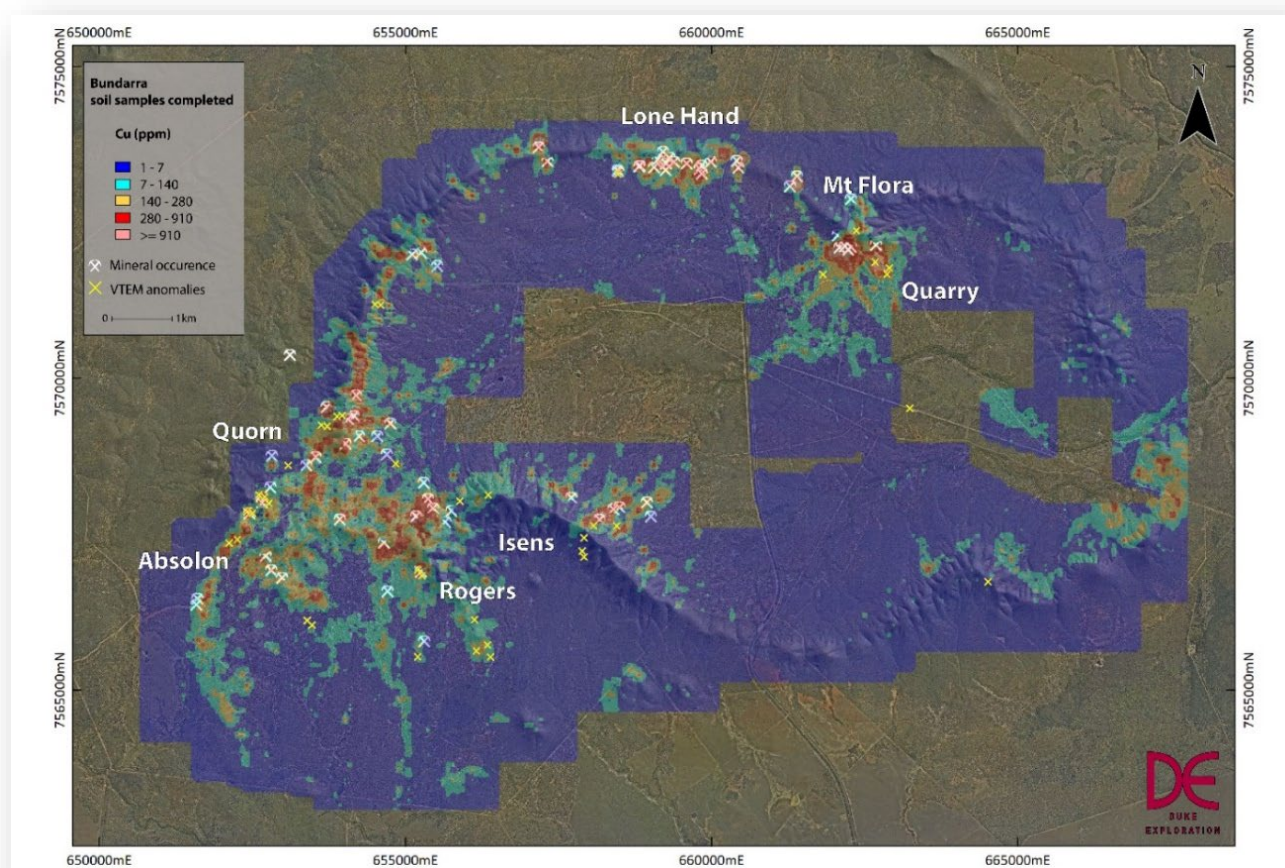


Figure 2: Grid map of pXRF copper soil values from the data collected to October 31 over the Bundarra Pluton compared to VTEM targets and historic mines and prospects

The soil samples were analysed using the same techniques as the previous surveys, using a Vanta m-series pXRF that provided multi-element geochemistry, including pathfinder element useful for mapping porphyry mineralisation like silver, molybdenum and zinc. The soil samples were collected from 20 cm below the surface in C Horizon soils with the samples sieved to 60 micron and compressed using a 4 cm by 4 cm small plumbing cap for analysis. The pXRF beam was set to 10 seconds for a total of 30 second analysis, with 39 elements analysed for each sample.

Copper is the main element used to map potential near surface copper bearing massive sulphide veins like those that define the resource at Mt Flora. Certain areas around the steeper parts of the hills proved difficult to sample due to significant scree slopes. The scree resulted in a sample being taken that may not accurately represent the true soil profile at the given location and areas with low copper soil values may host bedrock mineralised veins that are covered by barren scree.

Copper data from the pXRF soil survey have been mapped using the same cut off values that map the historic and outcropping chalcopyrite sulphide mineralisation at Mt Flora, with the 140 ppm Cu cut off mapping the presence of bed rock copper sulphide mineralisation at Mt Flora, the Quarry Lode and Quorn (Figure 2). Mt Flora has an inferred resource estimate of 16 Mt at an average grade of 0.5% Cu and 6.9 ppm, Ag, reported at a 0.2% Cu cut-off grade as classified and reported in accordance with the JORC Code (2012), which equates to 78,000 tonnes of copper and 3.6 million ounces of silver.

The copper soil anomaly mapping the Mt Flora resource covers an area of 0.67km² using a 140ppm Cu cut off. A total of four new copper anomalies have now been mapped around the Bundarra Pluton ridge line with a footprint larger than 0.25km² in addition to the six copper anomalies identified in previous soil programmes (Figure 3). The average area of each soil anomaly is 0.66km², comparable to Mt Flora. All holes drilled to date around the Bundarra Pluton which have targeted anomalous copper mineralisation of more than 140ppm Cu in the soil have intersected copper, silver and gold mineralisation in the bed rock below the soil anomalies. The largest copper soil anomaly mapped to date is along the eastern contact ridge line of the Bundarra pluton, covering an area of 1.2km² (Figure 3). This is a new discovery with no evidence of historic mining nor exploration activity, which confirms that the eastern contact of the Bundarra pluton is also prospective for new discoveries of copper, silver and gold mineralisation like Mt Flora. This has the potential to further increase the scale of the mining development opportunity at the Bundarra project. The new copper soil anomaly mapped to the east has not been fully defined and is expected to increase in size when additional extensions samples are collected.

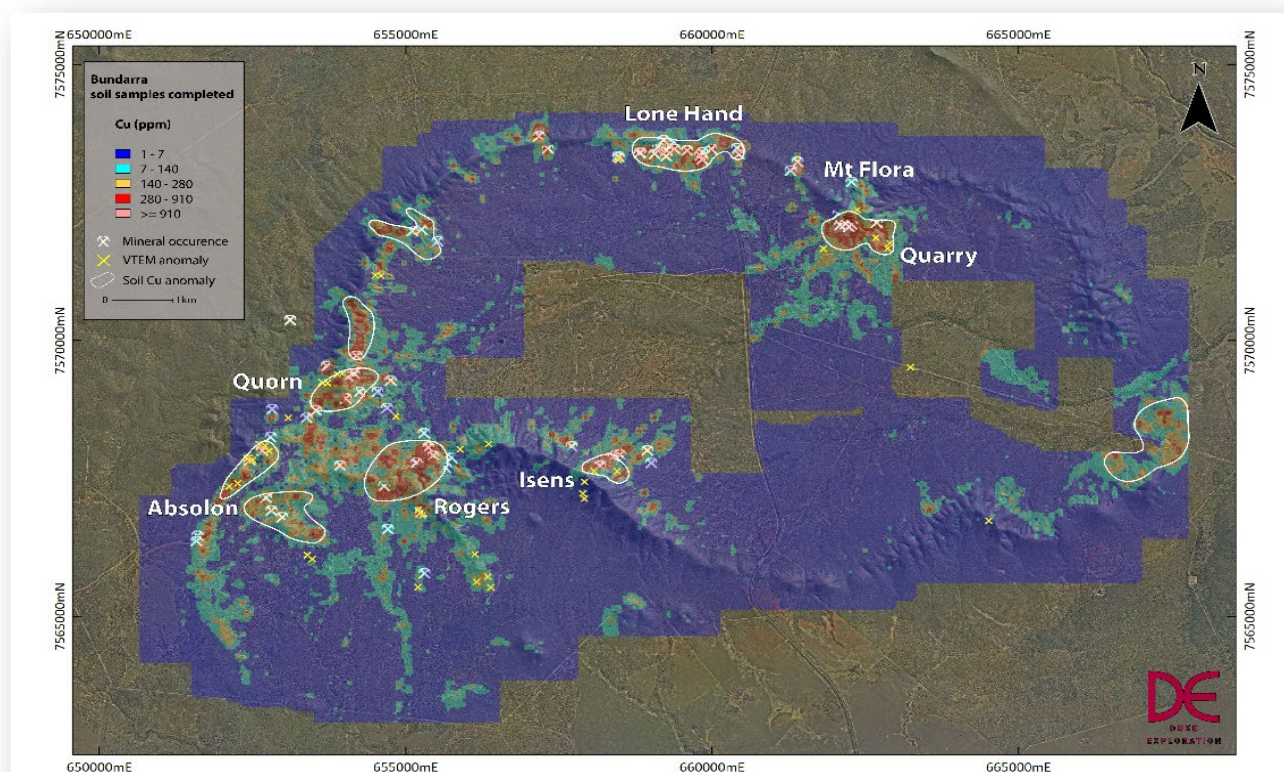


Figure 3: Grid map of pXRF copper soil values highlighting mapped copper anomalies greater than 0.25km²

The next stage of exploration to help prioritise areas for resource drilling will include:

- Map profile targets using the new pXRF soil data in conjunction with new 3D block models of conductivity and chargeability from the 2011 VTEM survey.
- Ground truth all targets and consider the geological context, but not disregard any anomalies based on geological interpretations.
- Drill diamond core into selected targets to collect geological data to confirm the interpreted geometry of any bed rock mineralisation and understand the geology, geochemistry, the petrophysics and geometry of any mineralisation intersected.
- Use these data to plan preliminary RC scout drilling to assess the endowment potential for each target.

About Duke Exploration

Duke is an Australian exploration company with majority interests in five granted exploration tenements for copper, gold and silver exploration areas located in Queensland and New South Wales, Australia.

Duke's key assets comprise:

- EPM 26499, EPM 27474 and EPM 27609 – Bundarra project (100% owned copper exploration project near Mackay, Queensland);
- EPM 26852 – Prairie Creek Project (91% owned (9% Capgold) gold exploration project near Rockhampton, Queensland); and
- EL 8568 – Red Hill Project (100% owned copper exploration project near Red Hill, New South Wales).

In addition, Duke also has an interest in four New South Wales Cu-Au porphyry tenements currently operated by Lachlan Resources Pty Ltd, a wholly owned subsidiary of ASX listed Emmerson Resources (ASX: ERM). Duke currently holds a 5% interest in two of these tenements and a 10% interest in the other two tenements that is free carried to BFS.

The most advanced target for the Company is the Bundarra project Mt Flora prospect, which has resource development potential for copper, silver and gold, and a recently announced Inferred resource of 16 Mt at an average grade of 0.5% Cu and 6.9 ppm, Ag, reported at a 0.2% Cu cut-off grade as classified and reported in accordance with the JORC Code (2012), which equates to 78,000 tonnes of copper and 3.6 million ounces of silver (Table 3). There are currently five other target areas with similar development potential on the Bundarra project as defined by historical mining, geology and geophysics.

		Tonnes (Mt)	Cu%	Ag g/t	Cu tonnes	Ag ounces
Inferred	Oxide	1	0.3	4.2	2,000	87,000
	Sulphide	15	0.5	7.0	76,000	3,500,000
	Total	16	0.5	6.9	78,000	3,600,000

Notes:

- Reported at a 0.2% Cu-equivalent cut-off grade (Cu & Ag)
- The Mineral Resource is classified in accordance with JORC, 2012 edition.
- The effective date of the Mineral Resource estimate is 25 June 2021.
- The Mineral Resource is contained within EMP 26499.
- Estimates are rounded to reflect the level of confidence in these resources at the present time. All resources have been rounded to the nearest million tonnes.
- The Mineral Resource is reported as a global resource

Table 3. Mount Flora Mineral Resource Summary

The exploration and development strategy is to define sufficient resources at Mt Flora and the other prospective targets in the Bundarra project area as a priority to allow feasibility studies to be undertaken to establish an economic mining operation and to delineate additional mineral resources from the current known exploration target areas to grow the project into the future. The Company has also started to test the more conceptual exploration targets on the Prairie Creek project and Red Hill project (see www.duke-exploration.com.au for more project details). The business development strategy for the Company is to focus on the Bundarra project and simultaneously carry out resource development work on those targets evaluated and ranked as high priority, starting at Mt Flora, while exploring the regional potential of the Bundarra pluton. The aim is to discover a pipeline of resource development projects around the Bundarra pluton to add to the Mt Flora project organically.

pXRF soil sampling and gradient array resistivity and induced polarization (GAIP) surveys continue to be carried out to the north, south and east of the current survey areas around the northern and eastern contacts of the Bundarra pluton. The aim is to accelerate the collection of pXRF soil data and electrical geophysical data to map the entire prospective area of the Bundarra pluton to allow computer-based machine learning statistical analysis to be carried out to help target the highest priority targets for resource development drilling into the future.

Competent Person Statement

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Dr Greg Partington, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy and a Member of The Australian Institute of Geologists.

Dr Partington is employed by Duke Exploration Pty Ltd as a consultant through Kenex Pty Ltd. He has over 30 years of experience that is relevant to the style of mineralisation and type of deposit under consideration, and to the activity being undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Partington consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Appendix 1 - JORC Code, 2012 Edition, Checklist of Assessment and Reporting Criteria

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	- Nature and quality of sampling (e.g., 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 (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.	Soil samples were collected on an 80m by 80m grid, no less than 20 cm below the surface in C Horizon. Samples are sieved to 60 micron and transferred into paper sample bag to avoid contamination and retain a large enough sample to allow re-testing.
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.
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	Not applicable.

Criteria	JORC Code explanation	Commentary
	<i>samples.</i> - Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. - 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. - 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. - Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.	- The pXRF Vanta m-series analysed each sample using 3 beams in geochemistry mode. Each beam was set to 10 seconds for a total of 30 seconds and targeting 39 elements, specifically anomalous copper. The pXRF Vanta m-series was calibrated once a week and the prolene pXRF windows were changed upon noticing any imperfection on the surface. - All samples are dry and compressed into a small 4cm by 4cm plumbing cap ensuring a consistent fine grainsize for a comparable analysis between points.
Verification of sampling and assaying	- The verification of significant intersections by either independent or alternative company personnel. - The use of twinned holes. - Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. - Discuss any adjustment to assay data.	No data has been adjusted.
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. - Specification of the grid system used. - Quality and adequacy of topographic control.	A Garmin 64x GPS was used to locate all survey points.
Data spacing and distribution	- Data spacing for reporting of Exploration Results. - 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.	Each pXRF surface geochemistry location was spaced 80m apart. When a location could not be reached due to challenging terrain this was documented in the survey notes and the point location updated. Due to the mobility of the target elements of interest this spacing was adequate for the targeting method and aim of the survey.
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.	Not applicable.
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.	Not applicable.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

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 to operate in the area.	- EPM 26499 'Bundarra' is located south of Nebo, QLD, and is held 100% by Duke Exploration Ltd. Parts of the tenement have native title interests with the Barada Barna people. - No known impediments.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	- Production at Mt Flora began in the 1880s. Numerous shafts, to a maximum depth of 38 m, adits and surface workings were developed. Mining continued during the 1970s. Exploration since the 1960s included geological mapping (Endeavour Oil 1974-75) soil surveys (CRA Exploration 1962, Endeavour Oil 1974-75, Regency Resources 2005), rock chip sampling (Endeavour Oil 1974-75, Chesterfield Mining and Exploration 1983, Elliot Exploration 1987, Dominion Gold Operations 1991, Queensland Metals Corporation 1994), Geophysics (magnetics by Planet Metals in 1967 and Elliot Exploration 1987, gravity by Carpentaria Gold in 1984, IP by Endeavour Oil in 1975, and VTEM by Regency in 2014). Endeavour Oil drilled six diamond drillholes in 1975, and Queensland Metals Corporation drilled two percussion holes in 1994. Endeavour Oil 1974-75 carried out trial underground mining, metallurgical test work and resource estimation. Endeavour Oil did extensive work at Mt Flora from 1974-76, including detailed 1:500 scale mapping, rock chip sampling, geophysics, drilling and extending adits and shaft sinking. Petrology was done on ore material taken from the base of a shaft sunk on the Flora lode in 1972 (Endeavour Oil, 1974). Near surface narrow lode mineralisation was detected in the Mt Flora area using IP geophysics, and Endeavour Oil considered IP to be a useful reconnaissance tool. Six diamond holes were drilled to successfully test IP anomalies at depth. In 1974-75 Endeavour Oil undertook a mining exploration programme and used this work to complete a resource estimate for the Mt Flora lodes. - Elliot Exploration re-assayed the Endeavour Oil core for gold in 1987. In 1994 Normandy drilled two holes: MFP 01 and MFP 02 near the top of Mt Flora, and Regency Mines 2001-2013 did mapping and soil sampling, and apparently drilled RC holes in 2001, although no data were reported.
Geology	Deposit type, geological setting and style of mineralisation.	Copper, gold, silver and molybdenum mineralisation at Bundarra is located within 300 m of the contact zone between the Bundarra Granodiorite and Back Creek Group sediments. Argillite, mudstone, siltstone and sandstone has been contact metamorphosed to an andalusite hornfels for a 800m wide zone surrounding the Bundarra pluton. Mineralisation at Mt Flora occurs in structurally controlled lodes, which crosscut the granodiorite-sediment contact, with mineralisation occurring on both sides of the contact. Mineralisation is hosted by faults and fractures, associated with sheeted quartz veins, hematite, limonite and pyrite. The lodes have massive sulphides with high copper percentages (>10%). Silver and zinc are present, as well as molybdenum and gold. It is interpreted the

Criteria	JORC Code explanation	Commentary
		mineralisation at Quorn is similar.
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: - easting and northing of the drill hole collar - elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar - dip and azimuth of the hole - down hole length and interception depth - 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.	Not applicable.
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. - 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.	Intervals were composited in Micromine, using a weighted average technique at a 0.2% Cu cut off, allowing 3 m of internal dilution and a 1 m minimum width.
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 (e.g., 'down hole length, true width not known').	These are the first holes drilled into the prospects and the orientation of the copper mineralisation is not known. The holes are thought to be drilling perpendicular to the mineralisation based off 3D IP models and mapping surrounding outcrops.
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.	Not applicable.
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 drill holes assays returned to date from the current drill programme 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.	- A desktop study was completed by Core Metallurgy Pty Ltd, using the most recent drill data and flotation test work results to perform an order-of magnitude assessment of processing and operating options for a mine at Mt Flora. The goal of the study was to produce indicative flowsheets and the associated capital and operating costs to subsequently evaluate the feasibility and economic viability of producing a copper concentrate via conventional open pit mining and processing methods from deposits in the Bundarra project area. - The cost estimates provided within the review are of a

Criteria	JORC Code explanation	Commentary
		preliminary nature and should have an expected accuracy range of 25% to 45%. Scoping test work to assess metallurgical processing options was conducted by Core in May and June 2019 and these data were used to constrain the review. • Key assumptions include all mining will be from an open-pit, throughput rate will be 500,000 tonnes per annum of sulphide ore, a concentrate grade for copper of 24% and silver of 398 g/t Ag, concentrate filter cake delivered to Mt Isa by road transport and a locally based drive in/out workforce is available at Mackay or in the surrounding area. • The study considered twelve processing options with the Base Case capital cost estimate for the supply and construction of a concentrator with a nominal capacity of 500,000 dry tonnes per annum to produce a saleable rougher copper concentrate is estimated at approximately A\$56.3 million. • Order of magnitude operating costs for a greenfield EPCM and second-hand process plant, at A\$31-34 per tonne, were significantly lower compared to Builder Owner Operator (A\$47-51 per tonne) and Contract Crushing / Direct Shipped Ore (A\$65-89 per tonne) options. • A copper cut-off grade of 0.2% Cu represents the economic cut-off grade for the project using the current copper price and cost estimates above.
Further work	• <i>The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> • <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	• Further work will include drilling other prospects around the Bundarra Pluton to test results returned from GAIP, MLEM and 3D IP geophysical surveys and pXRF soil surveys. • The regional scale pXRF soil survey mapping Cu anomalies on a 80x80 grid is ongoing and eventually planned to cover the 160km² area of the prospective Bundarra Pluton zone.