CULLEN RESOURCES LIMITED

ABN 46 006 045 790

www.cullenresources.com.au ASX Symbol: CUL

ASX ANNOUNCEMENT 16 January 2018

# Exploration Update

Cullen Exploration Pty Limited ("Cullen" or the "Company"), a wholly-owned subsidiary of Cullen Resources Limited, has:

- completed air core drilling at its Mt Eureka project in December 2017, with assays pending;
- identified two new trends of VTEM anomalies from a review of geophysical database for its Cue project;
- made a new exploration licence application (ELA) near Lake King in south west Western Australia targeting supergene Ni-Co mineralisation; and,
- made a new ELA targeting an undrilled gold-in-auger soil anomaly near Norseman.

## 1. MT EUREKA GOLD (Cullen 100%) - air core drilling completed, assays pending

In December 2017 Cullen completed 2,630m of air core drilling in 43 holes by year-end. The drilling comprised some in-fill and extension drilling of the prospective Galway-Southern-Kilkenny gold system, and tested the interpreted, sheared granite-conglomerate-greenstone boundary, just west of Southern (see Fig.1).

(Drilling at the Eureka NW target area is planned, pending further heritage surveying to allow broader air core traversing.)

Preliminary compilation of this drilling data indicates a prospective setting west of Southern marked by a coincidence of a granite-greenstone contact, a broad shear zone, a marked increased depth to bedrock and a transition from highly foliated, mafic to felsic gneiss.

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Infill drilling at Southern showed a sharp boundary between undeformed ultramafic and sheared ultramafic along the known gold mineralisation trend, with felsic intrusives a distinctive feature.

Assay results are expected in late January, after which further exploration drilling will be prioritised.

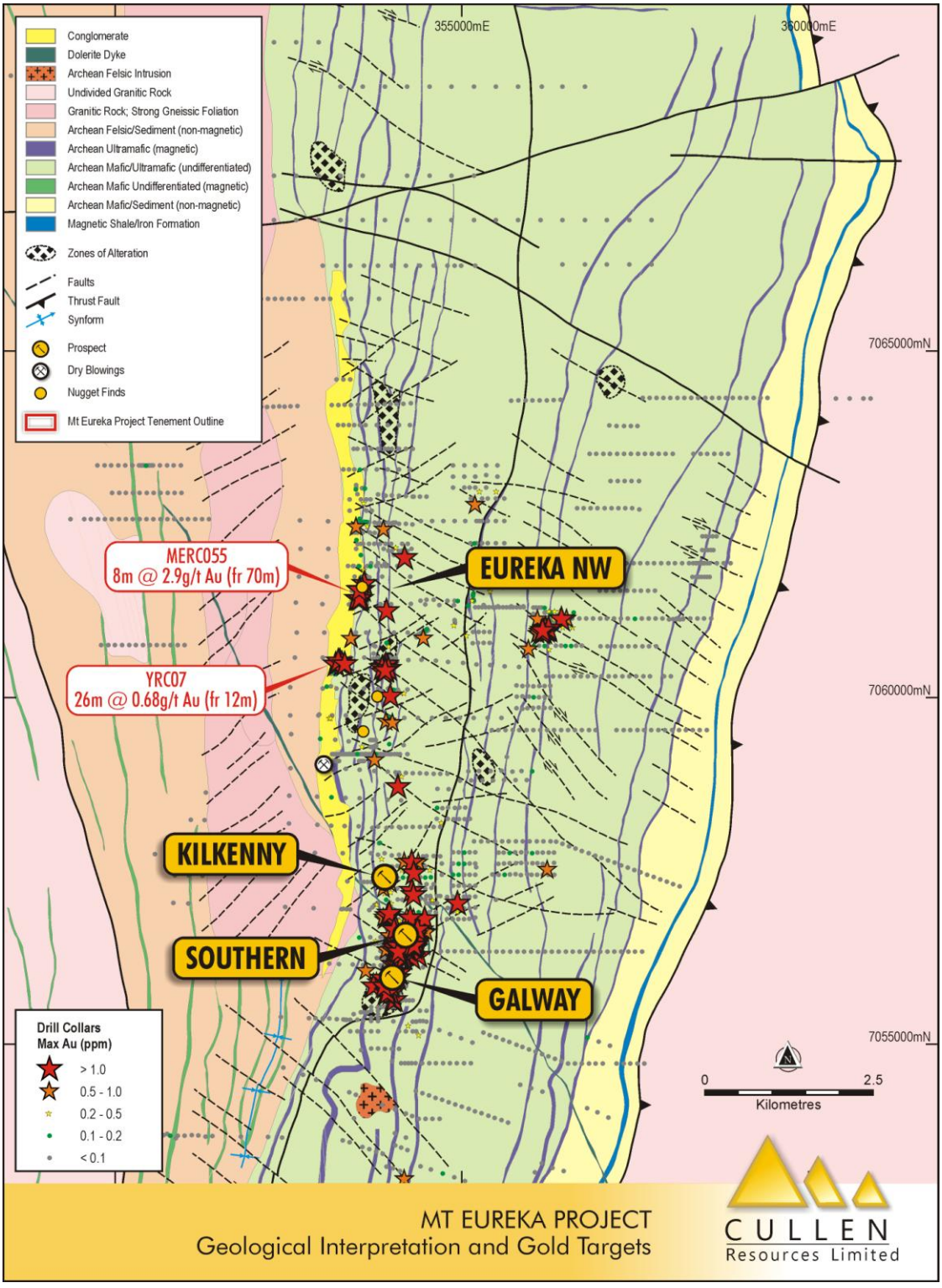


**Figure 1.**

2. **New VTEM anomalies identified from review of geophysics database – E20/714** (Cullen 100%)

Consulting geophysicists Terra Resources has completed a review of the geophysical and drilling database for Cullen's E20/714 tenement near Cue, in the Murchsion Region of W.A. This work has highlighted a previously unrecognised trend of moderate VTEM anomalies located approximately 1.8km directly east of the Hollandaire Copper project (held by Musgrave Minerals Limited, ASX:MGV). This set of anomalies trends NE-SW over a strike length of approximately 800m and parallels regional thrust faulting and stratigraphy. Other strong VTEM anomalies previously tested, but unresolved by Cullen drilling, occur along strike.
A second set of weaker but previously unrecognized VTEM anomalies occur in the north west of E20/714 and just east of the Mt Eelya and Colonel base metal prospects (Fig.2).

Next steps will include Terra Resources modelling the plates for these VTEM anomalies in order to propose drill tests and/or ground EM follow-up, and Cullen undertaking a field review of these new targets.

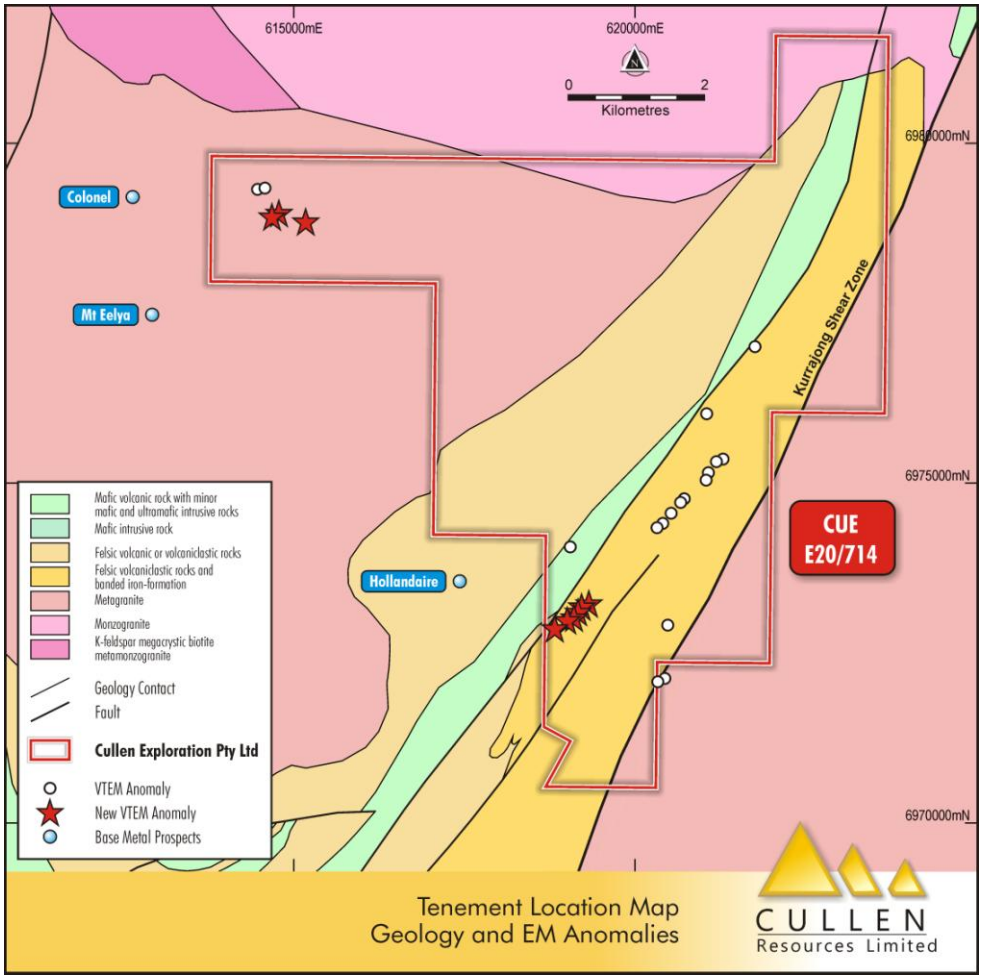


**Figure 2. Bedrock interpretation, 1:500k on Geoview.**

3. **New ELA – targeting supergene Ni-Co mineralisation, Lake King, W.A.** (Cullen 100%)

Cullen has made an exploration licence application (ELA) of ~80 sq. kms centred approximately 50km north west of Ravensthorpe, in south west W.A. (ELA 70/5066) – see Fig. 3.

The application covers the Lake King greenstone belt over 20km of strike trending NW-SE, where bedrock includes mafic and ultramafic granulite, and banded amphibolite hosted by foliated meta-granite (GSWA 1:500,000 interpreted bedrock geology from "Geoview"). Historic exploration by Western Mining Corporation (WMC), Aberfoyle Resources Limited (Aberfoyle) and Western Areas (WSA) for the period 1975-2014 is available for most of the application area. This work mainly targeted gold, base metals and nickel mineralisation in fresh rock but some drilling data for the regolith (see Table 1. below) suggests potential for supergene Ni-Co mineralisation, similar to the recent Quicksilver discovery by Golden Mile Resources Ltd (ASX:G88 – 6/11/2017).

Exploration by WSA, in particular, outlined significant supergene Ni-Co mineralisation at the Hurricane Hollows Prospect with an interpreted strike extent of approximately 800m. This mineralisation is dominantly saprolite-hosted, and occurs at depths of 32-65m with grades of about 0.5% Ni and 0.04-0.06% Co over intervals averaging 5m (3-12m), (Table 1). Hurricane Hollows Prospect, centrally located along the 20km strike trend of the belt, offers encouragement for further exploration for Ni-Co mineralisation.

Cullen also notes the possibility that the Lake King greenstone belt may be prospective for lithium in pegmatites given its position between the Forrestania and Ravensthorpe greenstone belts which each hosts a significant lithium in pegmatite deposit.

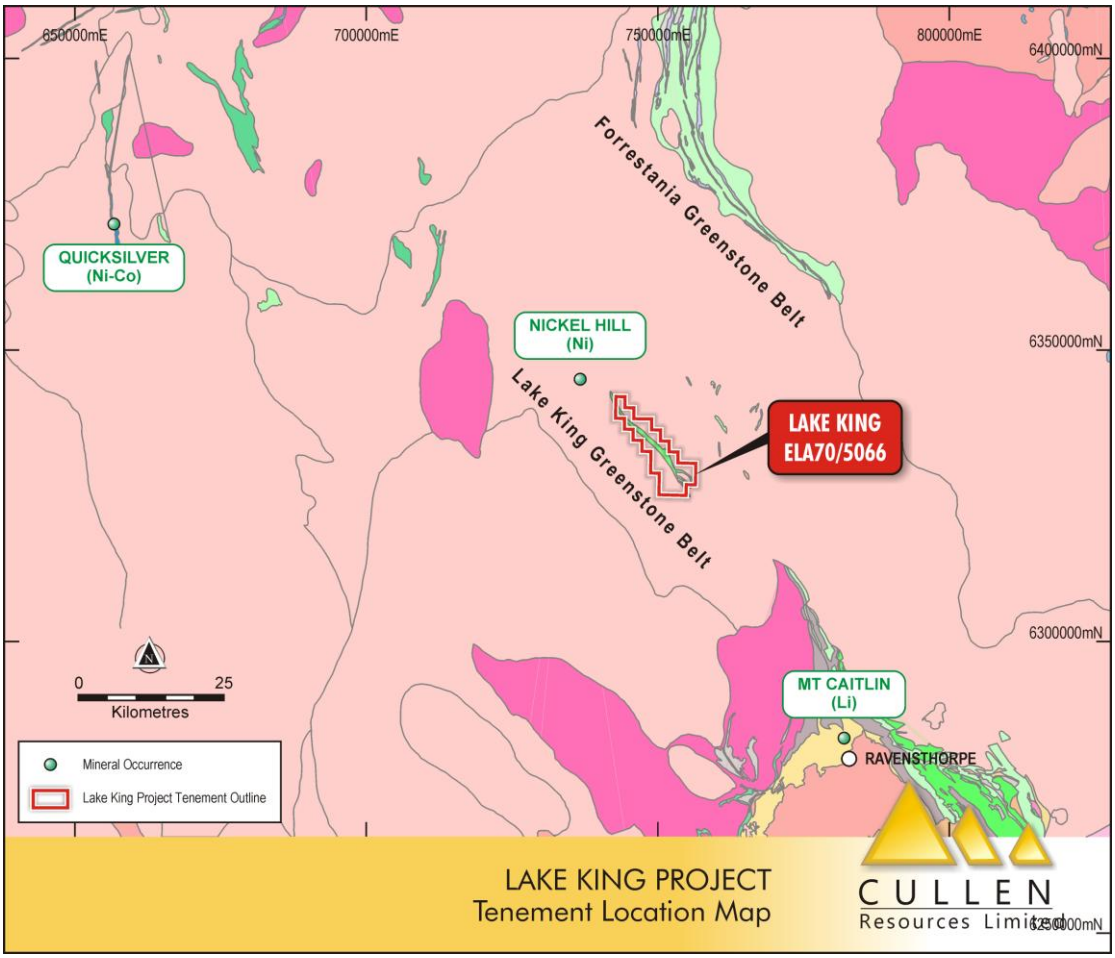


**Figure 3.**

Table 1: Historical assay results for selected, angled (-60º) air core drillholes from the Hurricane Hollows Prospect (Reference below).

| Hole ID | Easting | Northing | From | To | m** | Ni* | Co* |
|---|---|---|---|---|---|---|---|
| LKA185 | 749097 | 6333447 | 62 | 65 | 3 | 7096 | 419 |
| LKA186 | 749047 | 6333352 | 42 | 54 | 12 | 5200 | 450 |
| LKA187 | 749088 | 6333351 | 42 | 48 | 6 | 7929 | 595 |
| LKA190 | 748892 | 6333557 | 32 | 43 | 11 | 4938 | 422 |
| LKA197 | 749438 | 6332958 | 44 | 47 | 3 | 1128 | 459 |

*Assays by four acid digest, ICP finish (ppm). ** thickness may include 1m samples, and 2m,4m and 5m composite samples.

Reference for drill results above (Hurricane Hollows Prospect):
Lake King Project, Annual Report for the period 04/10/2012 to 25/10/2013, E70/2148, 4028-4029, 4428-4430; E74/532 & 533. [C189/2012] (WAMEX report – A100361) Author: P. Dreverman

4. **New ELA targeting untested gold-in-auger soil anomaly near Norseman, W.A.** (Cullen 100%)

Cullen has made an ELA of ~100 sq. kms centred 20km south west of Norseman in the Eastern Goldfields of W.A. (ELA 63/1882) – see Fig.4. The application covers the "Bromus" gold prospect, (see: https://geoview.dmp.wa.gov.au/GeoViews/?Viewer=GeoVIEW), and a mixed granite-greenstone terrane (as interpreted by Cullen from aeromagnetic images) which Cullen considers is prospective for greenstone-hosted gold, and also lithium in pegmatites.

"Bromus" is a 4.6km long and up to 600m wide, low-level gold-in-auger anomaly (to 8.4ppb), as determined by previous explorers (see References below). This anomaly appears to parallel a granite-greenstone contact and possibly an ultramafic unit, as suggested by aeromagnetics images and the nearby "Bromus North" nickel prospect located along strike. This gold anomaly is supported by elevated As, Mo, Bi and Te values (important gold pathfinder elements) and is undrilled. In Cullen's opinion, "Bromus" is worthy of further investigation. The prospectivity of the target area for lithium in pegmatites is supported by the regional setting and the presence of strike-extensive granite contacts (Fig.4).

REFERENCES:

BAXTER, C., 2014: Annual Report for EL63/1368 Bromus South for the Period 3 August 2013 to 2 August 2014 (WAMEX report – A103452)

CRYAN, G., 2015: Final Surrender Report for EL63/1368 Bromus South Project for the period 3 August 2010 to 2 August 2015 (WAMEX report – A107016)

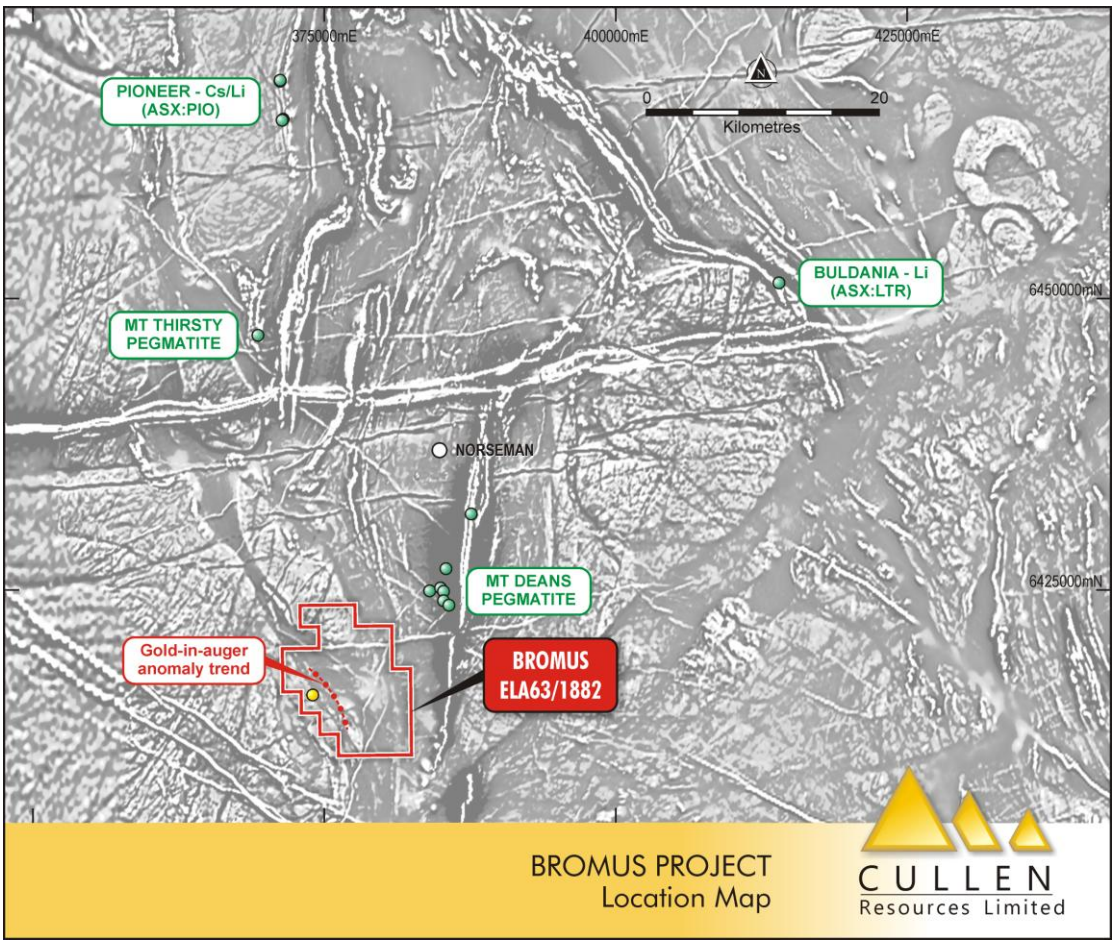


**Figure 4.** Location of new ELA centred ~20km south-west of Norseman. Cullen considers this area is prospective for gold, and lithium in pegmatites. The red dotted line marks approximate position of gold-in-auger soil anomaly (historical exploration but undrilled); green dots highlight lithium-pegmatite occurrences in the region; and background aeromagnetics image (1VD, from "Geoview") suggests Cullen's ELA overlies granite-greenstone terrane, rather than granite as published maps show ("Geoview").

ATTRIBUTION: Competent Person Statement

The information in this report that relates to exploration activities is based on information compiled by Dr. Chris Ringrose, Managing Director, Cullen Resources Limited who is a Member of the Australasian Institute of Mining and Metallurgy. Dr. Ringrose is a full-time employee of Cullen Resources Limited. He has sufficient experience which is relevant to the style of mineralisation and types of deposits under consideration, and to the activity which has been undertaken, to qualify as a Competent Person as defined by the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Dr. Ringrose consents to the report being issued in the form and context in which it appears.

Information in this report may also reflect past exploration results, and Cullen's assessment of exploration completed by past explorers, which has not been updated to comply with the JORC 2012 Code. The Company confirms it is not aware of any new information or data which materially affects the information included in this announcement.

## FORWARD-LOOKING STATEMENTS

This document may contain certain forward-looking statements which have not been based solely on historical facts but rather on Cullen's expectations about future events and on a number of assumptions which are subject to significant risks, uncertainties and contingencies many of which are outside the control of Cullen and its directors, officers and advisers. Forward-looking statements include, but are not necessarily limited to, statements concerning Cullen's planned exploration program, strategies and objectives of management, anticipated dates and expected costs or outputs. When used in this document, words such as "could", "plan", "estimate" "expect", "intend", "may", "potential", "should" and similar expressions are forward-looking statements. Due care and attention has been taken in the preparation of this document and although Cullen believes that its expectations reflected in any forward looking statements made in this document are reasonable, no assurance can be given that actual results will be consistent with these forward-looking statements. This document should not be relied upon as providing any recommendation or forecast by Cullen or its directors, officers or advisers. To the fullest extent permitted by law, no liability, however arising, will be accepted by Cullen or its directors, officers or advisers, as a result of any reliance upon any forward looking statement contained in this document.

ABOUT CULLEN: Cullen is a Perth-based minerals explorer with a multi-commodity portfolio including projects managed through a number of JVs with key partners (Fortescue, Hannans Reward, and Matsa), and a number of projects in its own right. The Company's strategy is to identify and build targets based on data compilation, field reconnaissance and early-stage exploration, and to pursue further testing of targets itself or farm-out opportunities to larger companies. Projects are sought for most commodities mainly in Australia but with selected consideration of overseas opportunities. Cullen also holds two iron ore royalties: one with Baosteel on certain tenements of the proposed West Pilbara Iron Ore Project; and a second with Fortescue over the Wyloo North deposit, part of Fortescue's proposed Western Hub/Eliwana project.

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## Section 1: Sampling Techniques and Data (E20/714 – VTEM data review)

| 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.<br>• Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used<br>• Aspects of the determination of mineralisation that are Material to the Public Report.<br>• 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. | • In March 2012, Cullen Resources Limited commissioned Geotech Airborne (Australia) Pty Ltd to complete helicopter-borne EM survey using the Versatile Time-Domain Electromagnetic Plus (VTEM$^{plus}$) system, and in addition, airborne magnetics, over four separate areas over favourable areas within its Cue gold projects in Western Australia.<br>The four separate survey areas include: Central-1, Central-2, Western and Southern blocks situated approximately 30km east of Cue, Western Australia. A total of 441 line-km of geophysical data were acquired during the survey.<br>The line spacing for the helicopter-borne VTEM and magnetics survey was 200 metres with transmitter and receivers at mean terrain clearance (MTC) of 33m, and 62m MTC for magnetic sensor.<br>Quality assurance and quality control (QA/QC) of the helicopter-borne VTEM and magnetics data at the time of acquisition was independently verified by Southern Geoscience Consultants in Perth. |
| **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.) | • This report does not contain any new drill-related results. |
| **Drill sample recovery** | • Method of recording and assessing core and chip sample recoveries and results assessed.<br>• Measures taken to maximise sample recovery and ensure representative nature of the samples. | • This report does not contain any new drill-related results. |

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| | • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. | |
| **Logging** | • Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.<br>• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.<br>• The total length and percentage of the relevant intersections logged. | • This report does not contain any new drill-related results. |
| **Sub-sampling techniques and sample preparation** | • If core, whether cut or sawn and whether quarter, half or all core taken.<br>• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.<br>• For all sample types, the nature, quality and appropriateness of the sample preparation technique.<br>• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.<br>• 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.<br>• Whether sample sizes are appropriate to the grain size of the material being sampled. | • This report does not contain any new drill-related results. |
| **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 survey parameters and geophysical equipment used by Geotech Airborne (Australia) Pty Ltd for the helicopter-borne VTEM and magnetics survey at the Cue prospect areas includes: |

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| | • 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.<br><br>• 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. | **Survey Parameters**<br><br>Configuration:<br><br>Versatile Time-Domain Electromagnetics (VTEM) system acquiring B-field and dB/dt Z-component data (14-45 time gates), and a caesium vapour magnetometer for Total Magnetic Field data.<br><br>Survey direction:<br><br>Central-1 – North-South (N 0° E azimuth)<br><br>Central-2 – Southeast-Northwest (N 135° E azimuth)<br><br>Western – East-West (N 90° E azimuth)<br><br>Southern – East-West (N 90° E azimuth)<br><br>Survey line spacing: 200 metres<br><br>**Survey Equipment**<br><br>VTEM$^{plus}$ system specifications:<br><br>Transmitter:<br><br>- Transmitter loop diameter: 26m<br>- Effective coil area: 2123m$^2$<br>- Number of turns: 4<br>- Transmitter base frequency: 30Hz<br>- Peak current: 186A<br>- Pulse width: 8.36ms<br>- Waveform shape: trapezoid<br>- Peak dipole moment: 395,011 nIA<br>- Actual sensor MTC: 33m<br><br>Receiver:<br><br>- Z-Coil diameter: 1.2m<br>- Number of turns: 100<br>- Effect coil area: 113.04m$^2$<br><br>Magnetic Sensor<br><br>- Geometric caesium vapour magnetic field sensor |
| **Verification of sampling and assaying** | • The verification of significant intersections by either independent or alternative company personnel.<br><br>• The use of twinned holes.<br><br>• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.<br><br>• Discuss any adjustment to assay data. | • All primary analytical data acquired by Geotech Airborne (Australia) Pty Ltd during the helicopter-borne VTEM and magnetics survey were recorded digitally and sent in electronic format to Southern Geoscience Consultants for independent quality control and evaluation. |

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| **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.<br>• Specification of the grid system used.<br>• Quality and adequacy of topographic control. | • The flight path all data points of the Geotech Airborne (Australia) Pty Ltd helicopter-borne VTEM and magnetics survey were recorded by the on-board GPS in WGS84 latitude/longitude, and was converted into GDA Map Grid of Australia (MGA) Zone 50 datum/projection coordinate system.<br>• Survey heights for each data point along line were derived from the on-board radar altimeter heights.<br>• The survey expected accuracy is +/- 5 metres for easting and northings and 10 metres for elevation coordinates. Final elevation values were in AHD.<br>• The datum and projection coordinate system used is GDA94 MGA Zone 50. |
| **Data spacing and distribution** | • Data spacing for reporting of Exploration Results.<br>• 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.<br>• Whether sample compositing has been applied. | • The line spacing for the helicopter-borne VTEM and magnetics survey was 200m. Along line sampling is as follows:<br>VTEM$^{plus}$ system sampling rate: 0.1 sec<br>Magnetometer sampling rate: 0.1 sec |

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| **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.<br><br>• 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. | • This report does not contain any new drill-related results.<br><br>• The orientation of the Company's helicopter-borne VTEM and magnetics survey was designed to cross the targeted geology and mineralised structures at right angles in an attempt to minimise the risk of biased or inaccurate sampling.<br><br>. |
| **Sample security** | • The measures taken to ensure sample security. | • The chain of custody is managed by Cullen Resources Ltd, and Southern Geoscience Consultants, custodians of these data. |
| **Audits or reviews** | • The results of any audits or reviews of sampling techniques and data. | • Experienced geophysicists at Terra Resources in Perth independently reviewed all data acquired from the helicopter-borne VTEM and magnetics survey at the Cue Project areas outlined. |