TODD RIVER RESOURCES

ASX Announcement
13 September 2017

STRONG DOWN-HOLE EM TARGETS IDENTIFIED AT MOUNT HARDY COPPER PROJECT

Compelling new drilling targets defined at EM1 and EM2 prospects, located to the north of existing drill-holes, as exploration advances at other projects

HIGHLIGHTS

- **Two new strong conductor plate targets identified from down-hole electromagnetic (DHEM) surveying of recently completed drill holes at the 100%-owned Mount Hardy Copper Project in the NT:**
  - **EM1**
    - ***Strong new (1000 Siemen) plate modelled – north of existing testing;***
    - ***In-fill also required for shallow plate/mineralisation zone***
  - **EM2**
    - ***Strong new 2000 Siemen plate modelled – below and north of existing holes***

- **Drill testing of these compelling new targets is planned to commence shortly.**

- **Other ongoing exploration activities:**
  - ***QA/QC for the SkyTEM airborne EM survey over the McArthur River tenements is complete and interpretation has commenced;***
  - ***Interpretation of the DHEM data from surveys following the Walabanba RC drilling program is in progress;***
  - ***Field mapping and sampling is in progress on the Soldiers Creek Lithium-Tin Project.***

Todd River Resources Limited (ASX: TRT) is pleased to advise that it has identified strong new conductor plates from the recently completed interpretation of the down-hole electromagnetic (DHEM) survey work at its 100%-owned **Mount Hardy Copper Project** in the Northern Territory. The new DHEM plates represent compelling follow-up drill targets.

DHEM surveys were completed on the holes drilled last quarter (see TRT ASX releases 7 April, 23 May, 26 June, and 10 August 2017). Modelling and interpretation of the DHEM survey data are presented below.

Surveying was completed by contractor Merlin Geophysics using a Pheonix TXU-30 transmission system with 30 kVA/36A power, through 200x200m or 300x300m two-turn loops. A Digi Atlantis probe DHEM controller and receiver was used to collect data from 5/10m spaced stations (Table 1).

Modelling was completed by consultant David McInnes of Montana GIS, using Leroi Algorithm in Maxwell.

EM1 Target

DHEM surveys were conducted on holes 17MHRCDDH021 and 17MHRCDDH025 (Figure 1) during August. 17MHRCDDH022 had the casing collapse and was not accessible and therefore not surveyed. Modelling was completed from the data from these two holes, as well as all previously surveyed holes in the area (2012 and 2013 drilling).

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The resultant complex model required six conductor plates to best match the data (Figure 2). Modelled plate conductances were from 200 to over 1000 Siemens (moderate to very strong values).

Each of these six plates dip at between 55 to 70 degrees towards the W to NW (260-300 degrees), averaging 65 towards 280.

There are two areas highlighted by this modelling work that warrant follow-up:

- The lowermost plate modelled from hole 17MHRCDDH025, a strong late-time anomaly. The deeper plate modelled from hole 17MHRCDDH025 is a **long wavelength late-time strong response (1000 Siemens)**. It dips at 55 degrees towards 295 degrees and is ~100m wide and 100 to 200m long (there are multiple possible model interpretations). It can be seen on Figure 2 as the lower left plate, with a centroid north and above hole 17MHRCDDH025; and

- The up-dip position between holes 12MHRC005 and 13MHRCDDH010. The uppermost modelled plate (Figure 2 upper right) corresponds to the best mineralisation seen in the EM1 area. Hole 13MHRCDDH010 returned an interval of **21m @ 0.5% Cu, 4.4% Zn, 1.9% Pb and 36 g/t Ag** (see TNG ASX Release 20 May 2013). There is 150m between this strong mineralisation and the shallow supergene zone outlined from 12MHRC005.

EM2 Target

Holes 17MHRCDDH023 and 17MHRCDDH029 were surveyed, and modelling was conducted using this data and the information from the 2012/13 DHEM surveys.

Two significant sized plates with high conductance have been modelled, and are shown on Figures 3 and 4. The upper plate has a conductance of 450 Siemens and corresponds closely with the intersected mineralisation.

Holes 12MHRC006, 13MHDDH012, 17MHRCDDH023 and 17MHRCDDH029 all have mineralisation within 20m of the down-hole pierce point position. This upper plate highlights the success DHEM modelling has had in outlining base metal mineralisation at Mount Hardy.

More significantly, a large 110m x 200m plate with **1800-2000 Siemens** conductance has been modelled below and to the north-east of hole 17MHRCDDH029 (the red plate in Figures 3 and 4). This plate dips at 68 degrees towards 310, has the strongest conductance of any modelled plate at Mount Hardy to date, but has not been tested by any drilling.

Interpretation of the DHEM surveys from the holes at the Browns and Mount Hardy Prospects did not outline significant conductor bodies.

Recent announcements by other companies working in the Arunta area of the Northern Territory have also successfully used DHEM geophysics to define significant economic grade base metal mineralisation.

For example, Independence Group (ASX: IGO), as operator with ABM Resources (ASX: ABU), has outlined the Grapple Prospect, 100km to the west of Mount Hardy using DHEM (see ABU ASX releases 20/12/2017 and 7/9/2017).

KGL Resources has had considerable success at Jervois with DHEM surveying. The deep but high-grade Rockface Prospect is being defined and extended by DHEM (see KGL ASX release 4/9/2017) while DHEM is generating new discoveries at Reward (see KGL ASX release 30/8/2017), with DHEM “delivering on its potential to identify zones of high grade mineralisation”.

The interpretation of the August 2017 DHEM survey at Mount Hardy has confirmed the practicality of the EM technique, and highlighted two new high conductance plates that have no drill holes that require further investigation.

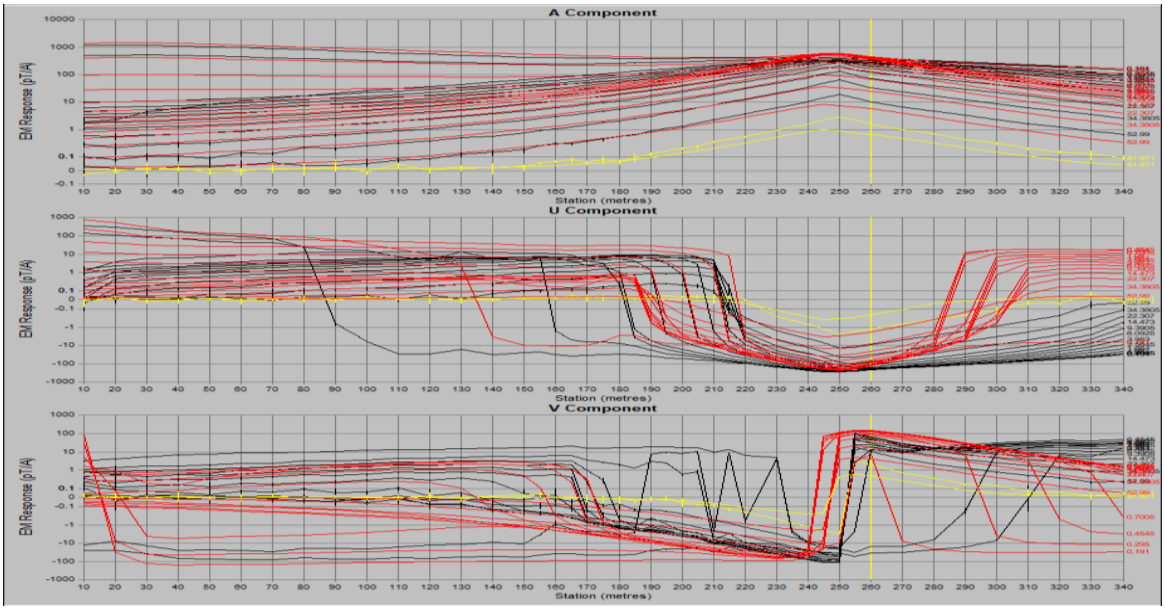

Figure 1. Three component DHEM data from hole 17MHRCDDH025, showing the observed (black lines) and modelled (coloured lines).

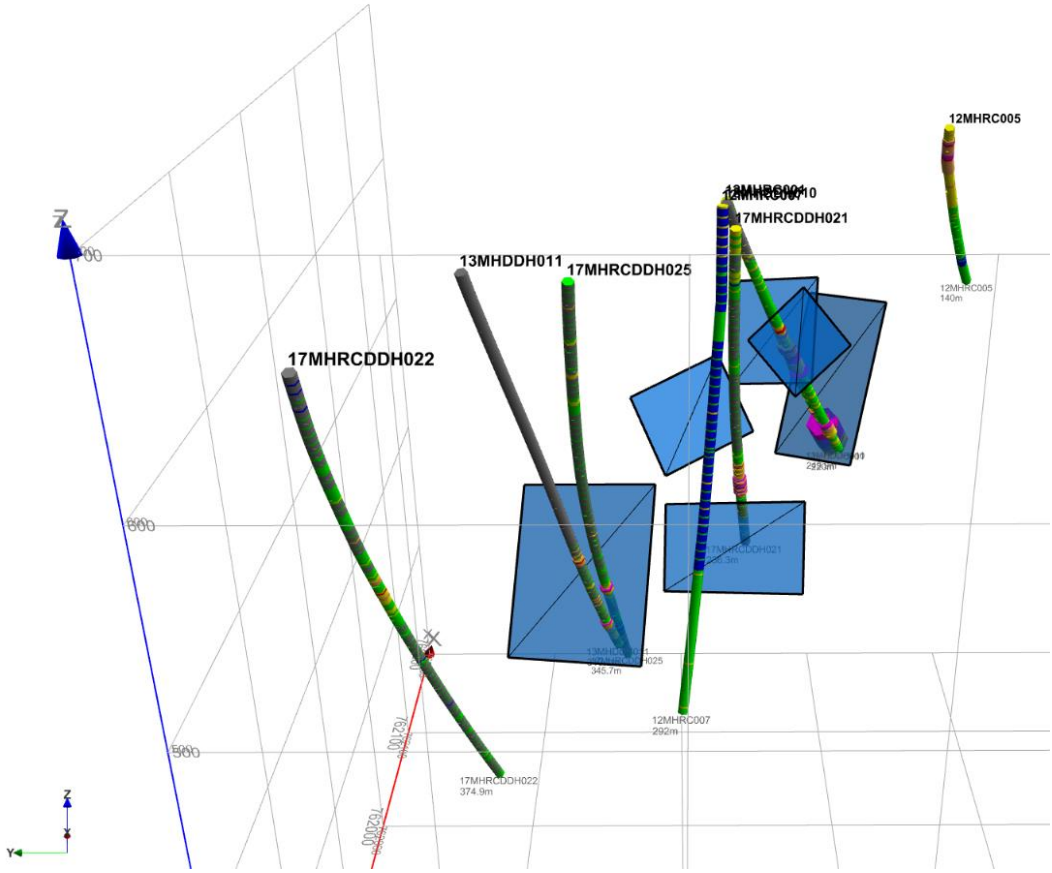

Figure 2. EM1 area oblique sectional view showing the drill hole traces and conductor plates modelled from the DHEM data. View looking down to the east, approximately perpendicular to the plate surfaces.

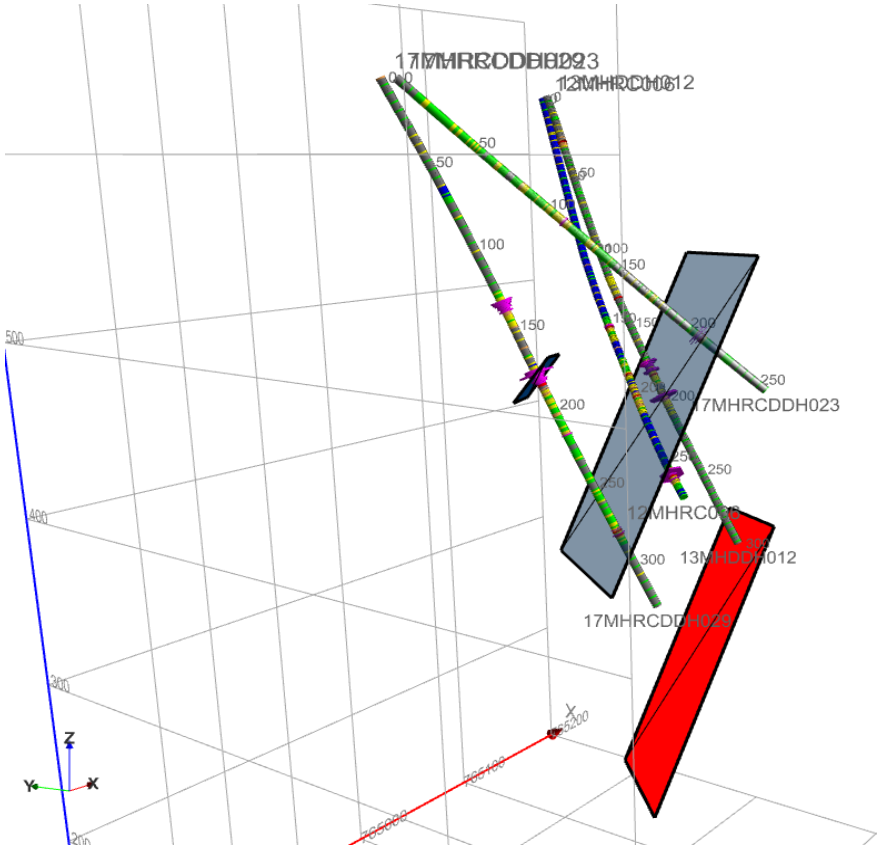

Figure 3. EM2 area oblique sectional view showing the drill hole traces and conductor plates modelled from the DHEM data. View looking horizontally northeast and across the plates.

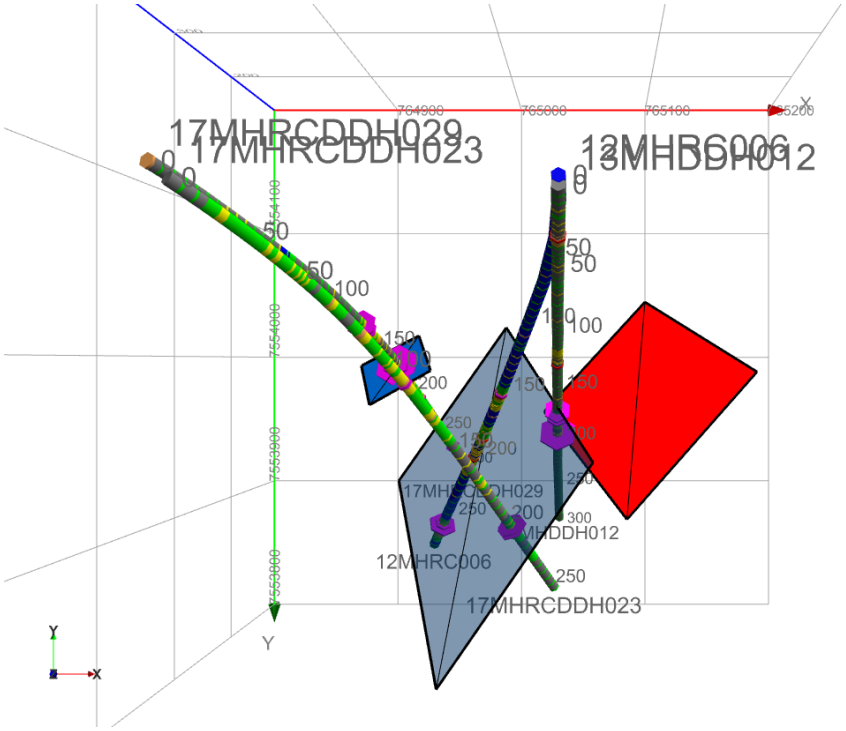

Figure 4. EM2 area plan view showing the drill-hole traces and conductor plates modelled from the DHEM data.

Other Exploration Program Activity

On other fronts, the Company is pleased to provide the following update:

- **McArthur River Project**
  - The SkyTEM data has been delivered by the contractor and processing/modelling and interpretation has commenced

- **Walabanba Project**
  - DHEM surveys from drilling are currently being interpreted, and assay results will be reported shortly.

Next Steps

- Completion of mapping at sampling on the Soldiers Creek Lithium-Tin Project.
- Field work at the McArthur River Project.
- CSA report on the Sandy Creek Zn-Ag Resource at the Manbarrum Project.
- Drilling at Mount Hard

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Competent Person Statement

The information in this report that relates to Exploration Results is based on, and fairly represents, information and supporting documentation compiled by Exploration Manager Mr Kim Grey B.Sc. and M. Econ. Geol. Mr Grey is a member of the Australian Institute of Geoscientists, and an employee of Todd River Resources Limited. Mr Grey has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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'. Mr Grey consents to the inclusion in the report of the matters based on his information in the form and context in which it appear.

Forward-Looking Statements

This announcement has been prepared by Todd River Resources Ltd. This announcement is in summary form and does not purport to be all inclusive or complete. Recipients should conduct their own investigations and perform their own analysis in order to satisfy themselves as to the accuracy and completeness of the information, statements and opinions contained.
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Table 1. **DHEM Survey Specifications – Merlin Geophysics**

DHEM Survey Parameters:
DHEM Receiver – Digi Atlantis DHEM System Probe SN 156
DHEM Controller – Digi Atlantis Controller with GPS timing and Sync SN 1481
Station spacing – 5m or 10m
Readings per station – minimum of 3 per station with more if required.
Stacks – 256 per reading
Transmitter Ramp – 0.6 mSec
Transmitter System – Phoenix TXU-30 with GPS timing and Sync
Transmitter power Supply – 30KVA 3 phase CAT Diesel on Trailer
Transmitter Freq – 50% duty cycle at 2.5Hz
Transmitter output – 36.0 Amps into 2 turns
Transmitter Loop size 200m x 200m or 300m x 300m
Winch System – Auslog 2000m with Digital and mechanical counter

Appendix One - JORC Table One - Sampling Techniques and Data

Mount Hardy DHEM Geophysical Surveying

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.	Not relevant
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).	Not relevant
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 relevant
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 relevant
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 relevant
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	See Table 1
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Not relevant

	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.	
Locations 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.	All sampling locations were located up using a standard GPS unit to an accuracy of ca. 3-5m for Easting, Northing and RL. All coordinate data for the Mount Hardy project are in MGA_GDA94 Zone 52.
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.	Sampling was of an exploratory and reconnaissance nature and spacings are insufficient to establish continuity or define Resources.
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 relevant
Sample security	The measures taken to ensure sample security.	Not relevant
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No sampling audits have been conducted at the Mount Hardy project to date.

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 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 drilling at Mount Hardy is located on tenement EL 27892 held by Todd River Metals Pty Ltd, which is wholly-owned subsidiary of Todd River Resources Limited. All tenements are in good standing with no know impediments
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Refer to TNG work reported since 2012
Geology	Deposit type, geological setting and style of mineralisation.	Base metal mineralisation encountered at Mount Hardy appears to be structurally controlled and is hosted by the Lander Rock Formation Paleoproterozoic schists and gneisses.
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 collar o Elevation of RL (Reduced Level – elevation above sea level in metres) of the drill collar o Dip and azimuth of the hole o Down hole length and interception depth o Hole length	Not relevant
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.	Not relevant

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').	No new drill intersections are reported here. The orientation of the EM1 and EM2 mineralisation is interpreted as parallel with the plates modelled.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	See Figures 1, 2, 3 and 4
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.	Not relevant
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.	No substantial new information is available other than that reported above.
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out 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.	These results will be assessed for follow up work in early 2018.