MINOTAUR EXPLORATION

25 September 2017

ASX Release

Compelling drill targets revealed near Prominent Hill mine

- Ground EM surveys close to Prominent Hill copper-gold mine (South Australia) completed
- Data reveals four strong basement conductors along a regional shear structure
- Conductive bodies are at shallow depths
- Drill planning underway in conjunction with Prominent Hill Alliance partner OZ Minerals; drilling expected to commence in October
- Minotaur entering a period of intense operational activity through to end of calendar year with:
  - drilling to commence at Eloise JV (also with OZ Minerals) around 3 October; and
  - Ground EM and target definition to proceed at Osborne JV (with JOGMEC) in October-November

Minotaur Exploration Ltd (ASX: MEP, Minotaur) advises completion of an extensive ground electromagnetic (EM) survey along parts of the Skylark Shear Zone (SSZ) near the Prominent Hill copper-gold mine, as part of the Minotaur and OZ Minerals Ltd (ASX: OZL) Alliance. The EM survey follows on from 'proof of concept' Iron Sulphide Copper Gold (ISCG) drilling late in 2016 which successfully tested a number of ground EM conductors in the project area[1].

The September 2017 EM survey occurred in three parts: the main survey area comprised a 15km section of the SSZ northwest of Prominent Hill mine, across multiple structures; a small infill survey was completed at 'Bellatrix East' to better define the EM anomaly highlighted there in 2016, just east of ISCG mineralisation intersected in hole DD16TUR016 at 'Bellatrix West'; and a 3km section at the south-eastern end of the SSZ, in a complex structural setting, covered the 'Jindivic' target.

The survey returned two basement conductors northwest of and within 22km of the mine (Figure 1). Separately, at Bellatrix East, new data confirms the status of the EM anomaly defined there from the 2016 survey and, with better resolution, also shows an additional adjacent conductor (both anomalies appear as one in Figure 1). Anomalous responses derived from the EM data potentially indicate the presence of conductive sulphide minerals (such as pyrrhotite and chalcopyrite; the latter a copper sulphide form). No anomalism was located at Jindivik.

1 Refer MEP presentation dated 2 December 2016 released to ASX, *Exploration for IOCG & ISCG copper-gold giants*

Details of the four EM conductors are as follows:

Maverick: comprises a conductor 130m in length, modelled to be 135m below surface, with depth extent of 130m and conductivity of 2000 Siemens (S). The anomaly lies in a favorable structural setting on the edge of the southern margin of the SSZ. No prior drilling is recorded in the vicinity of the anomaly.

Nexus: comprises a single plate conductor 330m in length, modelled to be 180m below surface, with depth extent of 200m and very high conductance of around 4900S. The anomaly also lies in a favorable structural setting at the juncture of an interpreted large northwest striking fault on the southern margin of the SSZ and an east-west linking fault. No prior drilling is recorded in the vicinity of the anomaly.

Bellatrix East: a two-plate anomaly comprising: a larger plate modelled to be 400m in length, at 130m below surface, with depth extent of 400m and a conductivity of 1700S; and a second 'new' plate modelled to be 200m in length, at 115m below surface with depth extent of 150m and very high conductance of around 5000S. Some historic drilling in the area exhibited minor copper mineralisation and strong hydrothermal alteration but no holes intersected the EM conductors.

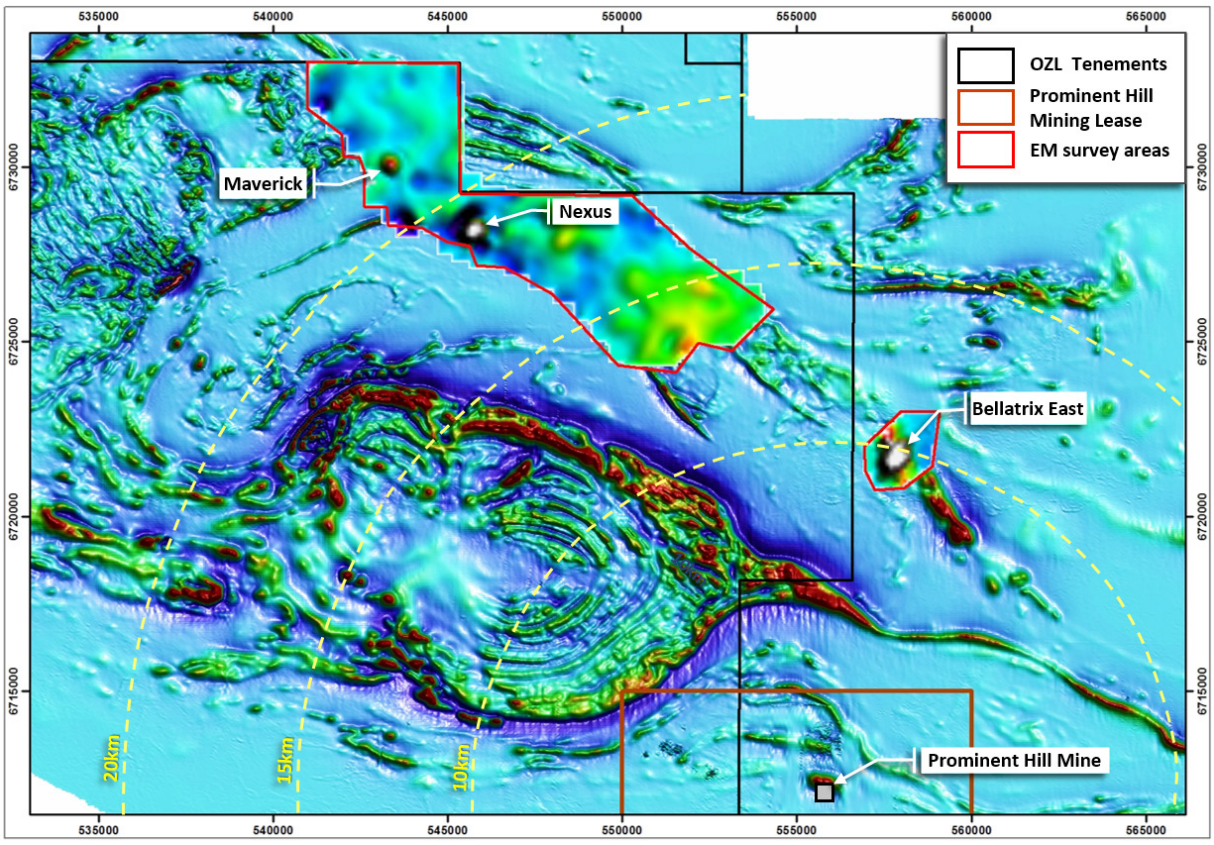

Figure 1: EM anomalies from the September 2017 geophysical survey. The EM image within the red boundaries is gridded Z component, channel 30 data. The remainder of the image is magnetics

Next Steps

The Alliance partners are currently reviewing the inversion models and considering target selection for drilling. A drilling budget and work plan will be developed with intentions that rig mobilisation can be secured during October.

About the OZL – MEP Alliance

Minotaur Exploration and OZ Minerals have a collaboration arrangement whereby each contributes up to $1.5 million to proof test agreed targets for base metal mineralisation within OZ Minerals' Mt Woods exploration tenements in the Prominent Hill area. In 2016 a review of OZ Minerals' exploration database for the Mt Woods Inlier and subsequent geophysical surveys by the Alliance, led to initial drill testing of the Bellatrix, Jupiter and Orion anomalies. In 2017 the search criteria honed in on the Skylark Shear Zone, a significant regional structure and focus of the September 2017 EM survey.

COMPETENT PERSON'S STATEMENT

Information in this report that relates to Exploration Results is based on information compiled by Mr. Glen Little, who is a full-time employee of the Company and a Member of the Australian Institute of Geoscientists (AIG). Mr. Little has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity that 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 (JORC Code). Mr. Little consents to inclusion in this document of the information in the form and context in which it appears.

Andrew Woskett
Managing Director
Minotaur Exploration Ltd
T +61 8 8132 3400
www.minotaurexploration.com.au

JORC Code, 2012 Edition, Table 1

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.*	• The EM survey was conducted by GEM Geophysics, an external geophysical contractor. • The EM system used Transmitter Technologies TTX-1 transmitter (using 0.25Hz frequency) and a 3-component Jessy Deep SQUID EM sensor. • EM data receiver stations were spaced at 100m intervals along NE-SW lines and each line was spaced at 800m intervals over the wider survey area. For infill survey lines EM data receiver stations were spaced at 50m intervals along NE-SW lines over EM anomalies at Maverick and Nexus and at 25m intervals along NE-SW lines at Bellatrix East. • Data quality was of a high standard for the whole of the survey and consistent with the type of target being sort.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	• Internal checks of equipment was conducted prior to and during commencement of the survey to enquire the SQUID sensor was calibrated and measuring correctly and would therefore give the best representative sample results for this type of survey.
	Aspects of the determination of mineralisation that are Material to the Public Report.	• Not relevant to this report
	In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1m samples from which 3kg was pulverised to produce a 30g 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.	• EM Transmitter loops were 200m x 200m in size using a moving-loop survey method for the wider survey area and for infill over Maverick and Nexus. The EM Transmitter loop was 600m x 400m in size using a fixed-loop survey method for the infill over Bellatrix East. This type of system and loop configurations are considered appropriate for the survey area where the targeted basement rocks are covered by 50-100m of younger conductive cover and for the target size of any potential mineralisation.
Drilling techniques	*Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core*	• Not relevant to this report

Criteria	JORC Code explanation	Commentary
	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).	
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	• Not relevant to this report
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	• Not relevant to this report
	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 to this report
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.*	• Not relevant to this report
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	• Not relevant to this report
	The total length and percentage of the relevant intersections logged.	• Not relevant to this report
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	• Not relevant to this report
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	• Not relevant to this report
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	• Not relevant to this report
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	• Not relevant to this report

Criteria	JORC Code explanation	Commentary
	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.	• Not relevant to this report
	Whether sample sizes are appropriate to the grain size of the material being sampled.	• Not relevant to this report
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• Not relevant to this report
	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.	• The EM system used Transmitter Technologies TTX-1 transmitter (using 0.25Hz frequency) and a 3-component Jessy Deep SQUID EM sensor. EM Transmitter loops were 200m x 200m in size using a moving-loop survey method and 600m x 400m for the fixed loop survey method.
	Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	• Not relevant to this report
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	• Not relevant to this report
	The use of twinned holes.	• Not relevant to this report
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	• Not relevant to this report
	Discuss any adjustment to assay data.	• Not relevant to this report
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.*	• Not relevant to this report

Criteria	JORC Code explanation	Commentary
	Specification of the grid system used.	• Not relevant to this report
	Quality and adequacy of topographic control.	• Not relevant to this report
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	• Not relevant to this report
	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.	• Not relevant to this report
	Whether sample compositing has been applied.	• Not relevant to this report
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.*	• Not relevant to this report
	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 to this report
Sample security	*The measures taken to ensure sample security.*	• Not relevant to this report
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	• No external audits have been undertaken however data has been peer reviewed in-house.

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 information that relates to the ground EM survey conducted by Minotaur Exploration Ltd is from EL's 5210 and 5439 that are 100% owned by Oz Minerals Prominent Hill Operations Pty Ltd, as part of an exploration agreement with Minotaur Exploration (MEP) which is yet to earn any equity in the tenement. • Registered native title claims exists over sections of the EL's (Antakirinja Native Title Claimant and Arabanna Native Title Claimant).
	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.	• All tenements related to information in this table are secure and compliant with their respective Conditions of Grant. There are no impediments to obtaining a licence to operate
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	• Historical exploration by other companies across parts of the EM survey area includes airborne magnetic surveys, ground gravity surveys and minimal RC/DD drilling. None of the EM targets have been tested by historical drilling however the historical drill data has been used to assist with interpretation of the basement lithologies as the whole of the EM survey area is under younger cover sediments.
Geology	*Deposit type, geological setting and style of mineralisation.*	• Within the eastern portion of the Mt Woods Inlier, targeted mineralisation styles are iron oxide Cu-Au (IOCG) and iron sulphide Cu-Au (ISCG) mineralisation associated with ~1595–1585Ma volcanism (Gawler Range Volcanics) and emplacement of mafic–granitic plutons (Hiltaba Suite).
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.*	• No drill data is presented in this report. Data relating to the EM survey results is sufficiently explained in other sections above.

Criteria	JORC Code explanation	Commentary
	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.	• No drill data is presented in this report. Data relating to the EM survey results is sufficiently explained in other sections above.
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.*	• Not relevant to this report
	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.	• Not relevant to this report
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	• Not relevant to this report
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').*	• Not relevant to this report
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.*	• The location of the EM survey area and the main targets of interest at Maverick, Nexus and Bellatrix East are presented in Figure 1 of this report.

Criteria	JORC Code explanation	Commentary
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.*	• Information presented in this report is relatively brief due to the nature of the geophysical data collected and models produced. The only way to test the EM "targets" is to drill test them and those results will be reported once drilling is completed and the drill data becomes available.
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 substantive exploration data has been omitted
Further work	*The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	• Follow-up work is yet to be determined as the EM targets are yet to be drill tested. Any further work requirements will be reported once the proposed drilling has been completed, assessed and reported.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• Refer to Figure 1 in the report that shows the size and location of the EM targets. No other images are supplied due to the early stage of exploration. More detailed diagrams will be provided once the proposed drilling has been completed, assessed and reported.