

6 September 2018

ASX Release

First EM generates positive drill targets at Highlands Cu project, Mt Isa, Queensland

Highlights

- Minotaur's inaugural work produces positive results
- Ground EM confirms strong conductors at Gospel and Coolibah
- Elevated copper, gold and cobalt in rock chips associated with EM conductors
- RC drilling at each target to commence late September
- 5 scout holes planned

Minotaur Exploration Ltd (ASX: MEP, 'Minotaur') has completed its inaugural ground work at the recently acquired Highlands project, located 50km northeast of Mount Isa and 80km northwest of Cloncurry in northwest Queensland (Figures 1 and 2). The work culminated in ground EM surveys at Gospel and Coolibah, refining VTEM targets.

Rock chip samples from Gospel and Coolibah provide strong geochemical support that the EM conductors are associated with sulphide mineralisation.

Three reverse circulation drill holes are planned to test the Gospel conductor and initial drilling at Coolibah will comprise 2 holes.

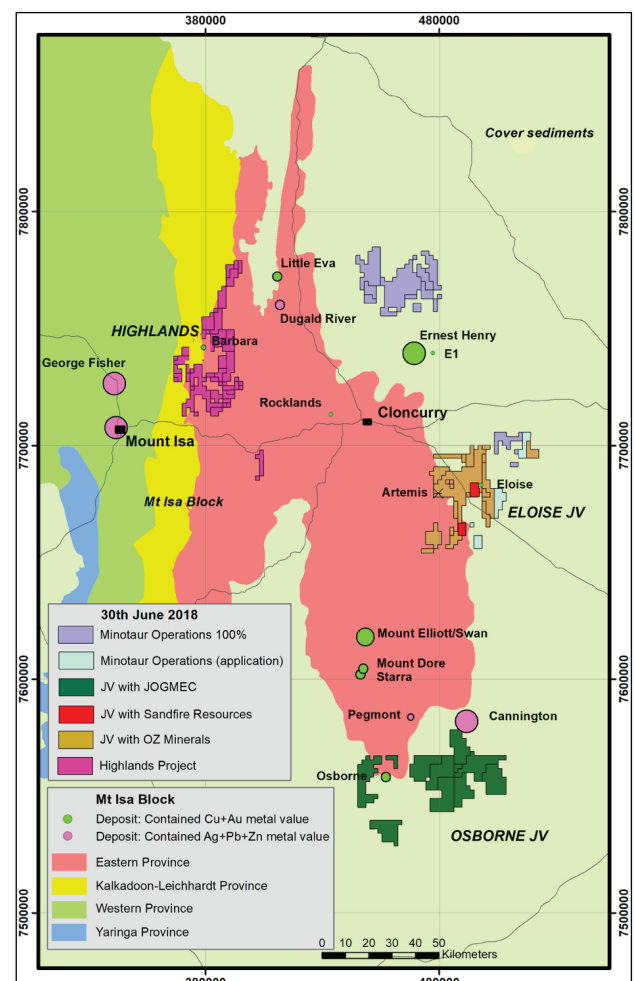


Figure 1: Location of Highlands Project relative to other Minotaur projects in the Cloncurry – Mt Isa region.

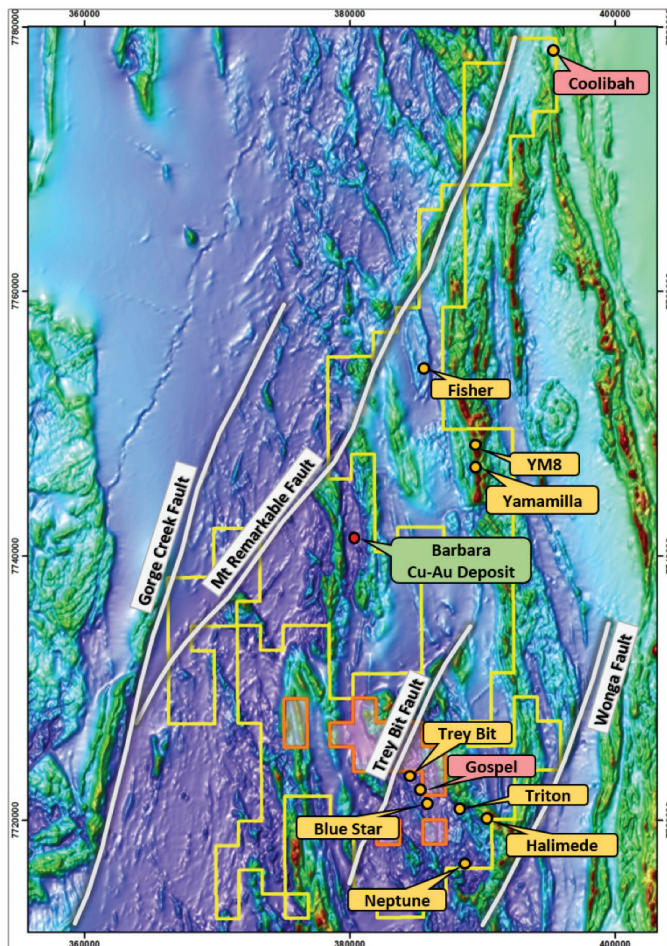


Figure 2: Main prospects in the Highlands Project area.

Exploration Results

Gospel Prospect

Ground EM data was acquired on 4 lines covering the central portion of the Gospel prospect where a previously defined VTEM anomaly is coincident with an outcropping fault. Modelling of the EM data produced strong conductor plates up to 7900Siemens (S) over 600m of plunge extent (Figure 3). The trend of the modelled EM conductors coincides with the strike of the fault zone at surface, which is mapped with a near-vertical dip; however the dip and plunge of the conductors is much shallower, possibly representing a flexure in the fault at depth (Figure 4).

Rock chip samples collected along the fault zone contain highly elevated copper to 16.9%, gold to 1.6g/t, silver to 7.6 g/t and cobalt to 454ppm (Table 1). This geochemical association, along with geological and geophysical features, shows strong similarities with the nearby Barbara Deposit^{1,2}.

Three drill holes are planned to test the Gospel conductor, targeting Iron Sulphide Copper Gold (ISCG) style mineralisation. One hole will test the strongest and shallowest part of the EM conductor; the other two holes are targeting the interpreted flexure in the fault down plunge.

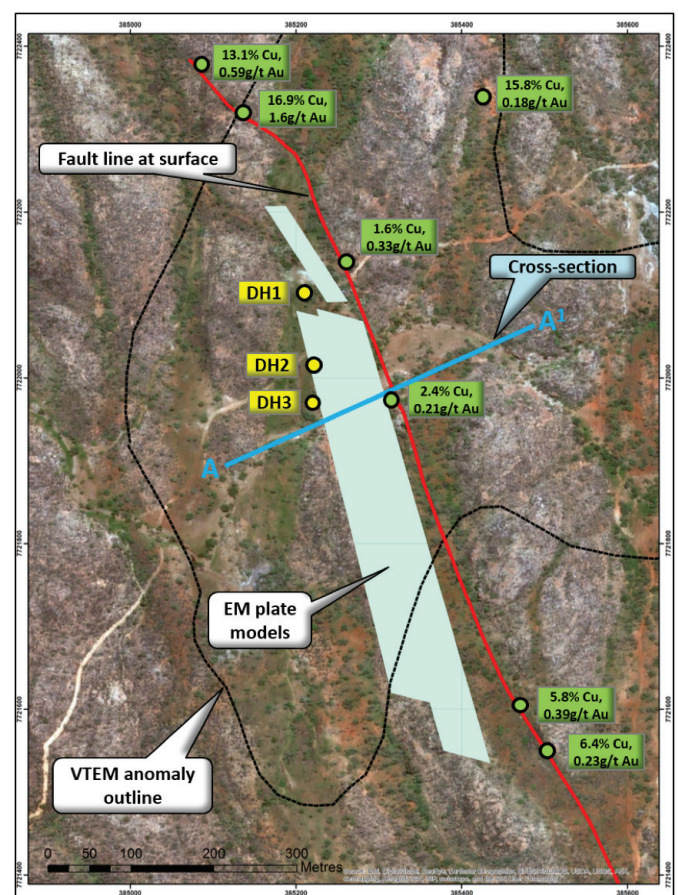


Figure 3: Gospel prospect showing VTEM anomaly outline, ground EM plate models, rock chip samples with Cu-Au assays (green dots) and proposed drill hole locations (yellow dots). The location of the X-section in Figure 4 is superimposed. Projection: GDA94, zone 54.

¹ Barbara contains a JORC 2012 Indicated and Inferred Resource of 4.75Mt grading 1.6% Cu, 0.15g/t Au, 2.57g/t Ag, 309ppm Co. Source: Syndicated Metals Ltd 2015 Annual Report, lodged with ASX 20 August 2015

² The Barbara Cu-Au resource is owned by Round Oak Minerals Pty Ltd, a subsidiary of WH Soul Pattinson and Company Limited (ASX: SOL)

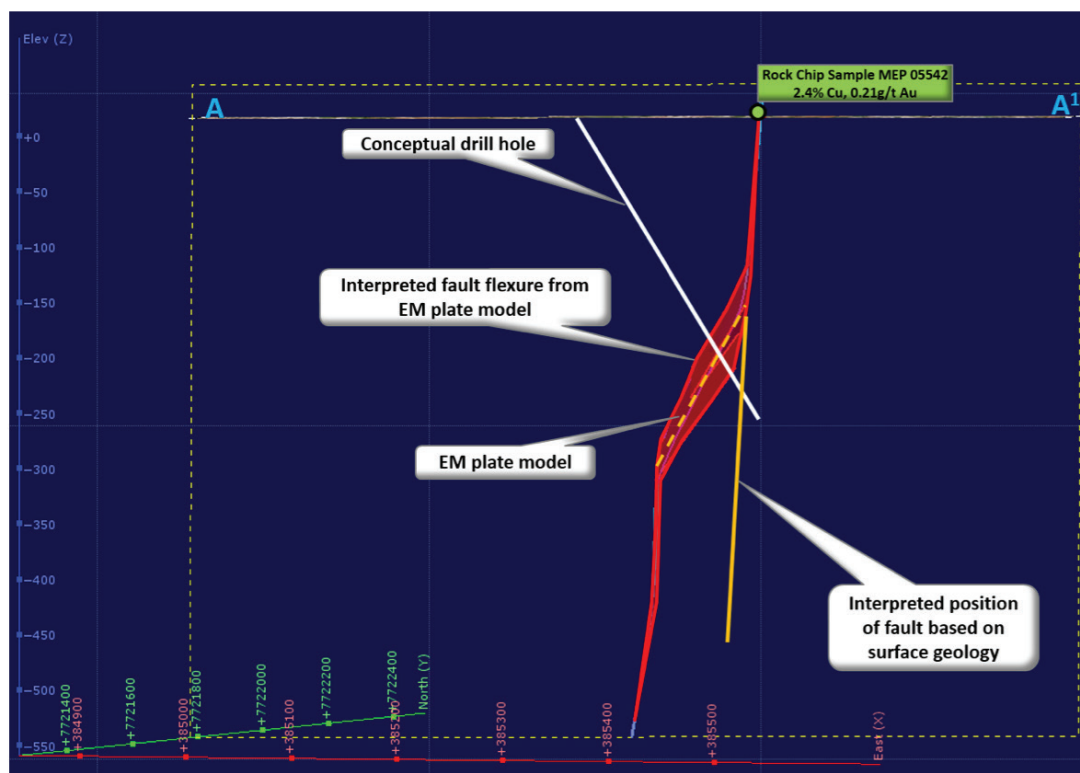


Figure 4: Gospel prospect, cross-section A-A1 from Figure 3, with conceptual model for mineralisation based on surface mapping and recent ground EM data. Note the location of a rock chip from the fault at surface with Cu-Au grades displayed (green dot).

Coolibah

Ground EM data was acquired over 5 lines covering the Coolibah prospect where a previously defined VTEM anomaly is coincident with copper gossans. Modelling of the ground EM data shows two discrete trends (Figure 5). The main set of conductor plates trend northwest along 450m of strike, are up to 3000S, and lie broadly coincident with zones of copper gossan. The other conductor, with a high conductance of 2580S, lies in a north-south orientation and sits under cover with no surface exposure.

Rock chip samples collected along the gossan zone contain strongly elevated copper to 13.2% and cobalt to 1460ppm, plus elevated gold to 0.24g/t and silver to 5.4 g/t (Table 1).

Drilling at Coolibah will comprise 2 holes; 1 hole will test the main northwest-trending conductor coincident with the mapped gossans and 1 hole will investigate the conductor under cover further west.

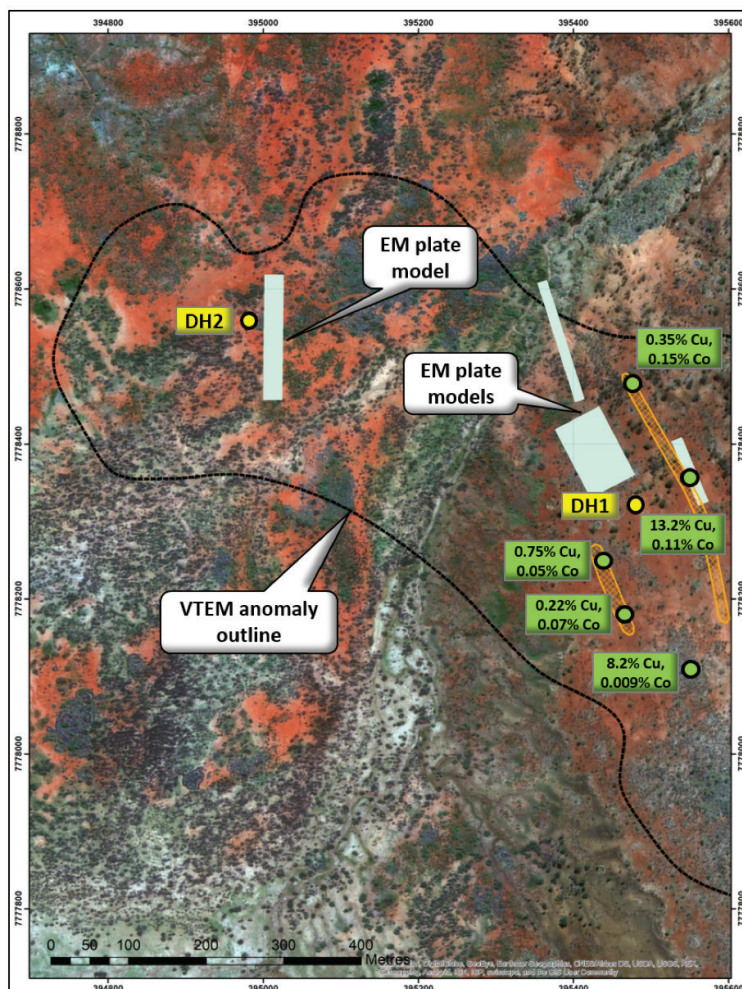


Figure 5: Coolibah prospect showing VTEM anomaly outline, ground EM plate models, rock chip samples with Cu-Co assays (green dots), and proposed drill hole locations. Projection: GDA94, zone 54.

SAMPLE ID	Easting	Northing	EPM	Prospect	Cu %	Au g/t	Ag g/t	Co ppm
ER19010	385084	7722380	16197	Gospel	13.1	0.59	11.25	454
ER19013	385468	7721607	16197	Gospel	5.8	0.39	5.24	374
ER19014	385501	7721551	16197	Gospel	6.4	0.23	4.23	108
ER19017	385422	7722344	16197	Gospel	15.8	0.18	1.18	34
MEP05539	385258	7722142	16197	Gospel	1.6	0.33	2.31	113
MEP05540	385134	7722325	16197	Gospel	16.9	1.6	7.59	80
MEP05542	385315	7721972	16197	Gospel	2.4	0.21	2.47	27
ER19042	395461	7778182	18492	Coolibah	0.2	0.17	0.04	656
ER19043	395434	7778249	18492	Coolibah	0.8	0.02	0.32	505
MEP05548	395542	7778358	18492	Coolibah	13.2	0.02	5.35	1135
MEP05549	395470	7778481	18492	Coolibah	0.4	<0.01	0.50	1460
MEP05550	395544	7778110	18492	Coolibah	8.2	0.23	17.20	88

Table 1: Rock chip assays for Gospel and Coolibah prospects. Sample locations are in GDA94, Zone 54.

Site establishment work is complete for the drilling which will commence at Gospel before moving to Coolibah. Drilling is expected to commence in late September subject to rig availability. This work is sole funded by Minotaur.

Minotaur Exploration's Methodology

Minotaur is actively building its base metals exploration portfolio in Queensland and South Australia, primarily where copper potential prevails and also where zinc-lead systems are prevalent.

Minotaur successfully combines surface geophysical tools and geological interpretation of obscured basement mineralisation in the Cloncurry copper belt of north-west Queensland, resulting in identification of 'blind' base metal occurrences. These techniques are to be applied to known, near-surface copper prospects at Highlands enabling their refinement to drill ready status for reconnaissance drilling.

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 mineralization 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 in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<i>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.</i>	<p>The ground EM survey within the Highlands Project area was conducted by GEM Geophysics, an external geophysical contractor.</p> <p>The EM system used Transmitter Technologies TTX-1 transmitter (using 1Hz frequency) and a 3-component Jessy Deep SQUID EM sensor for the Coolibah survey and a 3-Component Fluxgate Magnetometer for the Gospel survey.</p> <p>At Coolibah, EM receiver stations were spaced at 50m intervals along NE-SW lines and each NE-SW line was spaced at 200m intervals over the wider survey area.</p> <p>At Gospel, EM data receiver stations were spaced at 25m intervals along NE-SW lines and each NE-SW line was spaced at 200m intervals over the wider survey area.</p> <p>Data quality was of a high standard for the whole of the survey and consistent with the type of target being sort.</p> <p>Assay results and related comments in the body of this document pertain to rock chip samples collected at Gospel and Coolibah prospects by Minotaur during field mapping. The rock chips were taken from surface exposure in areas mapped that are spatially associated with the VTEM conductors to help ascertain the element association of the visual mineralisation.</p>
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	<p>Internal checks of equipment were conducted prior to and during commencement of the EM survey to ensure the SQUID and Fluxgate sensors were calibrated and measuring correctly and would therefore give the best representative sample results for this type of survey.</p> <p>Assay data presented for the rock chips are derived from standard laboratory assay techniques. The samples collected from the field are indicative of the mineralisation at surface only and do not necessarily</p>

Criteria	JORC Code explanation	Commentary
		reflect what mineralisation may be in fresh material at depth.
	<i>Aspects of the determination of mineralisation that are Material to the Public Report.</i>	Assays of rock chip data presented in this report may not reflect the nature of any mineralisation at depth. This is due to the processes of weathering at surface that can increase the grade of mineralisation. The rock chip samples were taken in order to ascertain the element association of the surface exposures in structures near to the EM anomalies to help understand the potential of the prospects before drill testing. Information presented in this report relating to rock chip assays should be read as being indicative only.
	<i>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.</i>	<p>At Coolibah, EM Transmitter loops were 200m x 200m in size using a moving-loop survey method. This type of system and loop configuration is considered appropriate for the survey area for the target size of any potential mineralisation.</p> <p>At Gospel, an EM Transmitter Loop of 400m by 700m was used in a fixed loop survey method. This type of system and loop configuration is considered appropriate for the survey area where the targeted basement rocks are exposed and topographic relief is significant.</p> <p>All rock chip samples were sent to ALS laboratories for assay. The samples are considered appropriate for the laboratory analysis to show the general tenor and element association of the mineralisation as surface. 30g charges were prepared for fire assay for gold and 0.25g charges were prepared for multi-element analyses; in both instances the sub-sample size used for assay is 'industry standard'.</p> <p>All rock chip samples were sent to ALS laboratory in Mount Isa for sample preparation (documentation, crushing, pulverizing and subsampling). Geochemical analysis for gold was undertaken at ALS Townsville laboratory and analysis of a multi-element suite including base metals was undertaken at the ALS laboratory in Brisbane.</p>

Criteria	JORC Code explanation	Commentary
<i>Drilling techniques</i>	<i>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).</i>	Not applicable
<i>Drill sample recovery</i>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	Not applicable
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	Not applicable
	<i>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.</i>	Not applicable
<i>Logging</i>	<i>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.</i>	Brief geological information for rock chip samples was recorded that included rock type, any visible alteration, nature and extent of weathering, size of sample area and strike and dip of any host structure.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	Geological information recorded is qualitative.
	<i>The total length and percentage of the relevant intersections logged.</i>	Not applicable
<i>Sub-sampling techniques and sample preparation</i>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	Not applicable
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	Not applicable
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Rock chip samples were collected in sufficient quantity for each sample to be representative of the location where they were acquired and to allow sufficient sample for laboratory analyses. The rock chip samples were

Criteria	JORC Code explanation	Commentary
		taken in order to ascertain the element association of the surface exposures in structures near to the EM anomalies to help understand the potential of the prospects before drill testing. Information presented in this report should be read as being indicative only.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Not applicable
	<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.</i>	The rock chip samples collected from the field are indicative of the mineralisation at surface only and do not necessarily reflect what mineralisation may be in fresh material at depth.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Not applicable
<i>Quality of assay data and laboratory tests</i>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	<p>Assay results reported in the body of this document pertain to rock chip samples analysed by ALS Laboratories.</p> <p>All samples were submitted to ALS laboratory in Mount Isa for sample preparation (crushed and pulverized to ensure >90% passing 4mm). From ALS Mount Isa a 70-80g pulp subsample from every submitted sample was sent to ALS Townsville laboratory for gold analyses of a 30g subsample by fire assay fusion (lead flux with Ag collector) with AAS finish (method Au-AA25). A 10-20g pulp subsample from each submitted sample was sent from ALS Mount Isa to ALS Brisbane laboratory for multi-element analyses of 0.25g subsamples using four acid digest (HF-HNO₃-HClO₄) with an ICP-MS/ICP-AES finish (method ME-MS61). Samples reporting above detection limit copper results with method ME-MS61 trigger the subsequent four acid digestion of an additional 0.4g subsample made up to 100mL solution and finished with ICP-AES (method Cu-OG62).</p> <p>Analytical methods Au-AA25, ME-MS61 and Cu-OG62 are considered to provide 'near-total' analyses and are typically used more for drill samples; these methods</p>

Criteria	JORC Code explanation	Commentary
		provide more than adequate detail for regional exploration mapping and sampling.
	<i>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.</i>	The EM system used Transmitter Technologies TTX-1 transmitter (using 1Hz frequency) and a 3-component Jessy Deep SQUID EM sensor for the Coolibah survey and a 3-Component Fluxgate Magnetometer for the Gospel survey.
	<i>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.</i>	Given the early stage of exploration and high variability expected for rock chip assay results no external standards were included in the assaying. Internal checks were completed by the assaying laboratory with no issues raised by the lab when final analyses were released. Minotaur is of the opinion the assay results are representative of the surface samples as presented in this report.
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Not required for rock chip sample data in early stage exploration
	<i>The use of twinned holes.</i>	Not applicable
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	All geological logging data and sampling data for rock chips have been validated using Minotaur's data entry procedures and uploaded to Minotaur's geological database for further validation and data storage.
	<i>Discuss any adjustment to assay data.</i>	No adjustments to assay data have been undertaken.
Location of data points	<i>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.</i>	Rock chip locations were acquired with a handheld GPS. The level of accuracy of the GPS is approximately +/- 3m and is considered adequate for this early level of exploration drilling.
	<i>Specification of the grid system used.</i>	Grid system used is GDA94, Zone 54.
	<i>Quality and adequacy of topographic control.</i>	The area where the Gospel Prospect occurs is steep but this has no bearing on the data presented here for both the EM and rock chip data. Coolibah is flat lying with approximately 5m of elevation variation over the

Criteria	JORC Code explanation	Commentary
		extended prospective area. Detailed elevation data are not required for this early stage of exploration in flat-lying topography.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Not applicable
	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 applicable
	Whether sample compositing has been applied.	Not applicable
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.	The orientation of the EM survey lines were as close as possible to being perpendicular to the strike of the interpreted mineralised structure.
	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.	Rock chip samples were securely transported from site to the receiving ALS laboratory in Mt Isa by Minotaur.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews of geochemical sampling techniques and EM data have been undertaken at this time.

Section 2: Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<i>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.</i>	<p>The data reported herein were collected from within tenements EPM 16197 and EPM 18492 which are 100% owned by Minotaur Operation Pty Ltd, a subsidiary of Minotaur Exploration Ltd</p> <p>A registered native title claim exists over both EPMS (Kalkadoon Native Title Claim Group).</p> <p>Conduct and Compensation Agreements are in place with the relevant landholders.</p>
	<i>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.</i>	EPM's 16197 and 18492 are secure and compliant with the Conditions of Grant. There are no known impediments to obtaining a licence to operate in the prospect areas.
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	Historical exploration by other companies across parts of the EM survey area includes airborne magnetic surveys and airborne EM surveys. The airborne EM was conducted by UTS Geophysics for Syndicated Metals in June of 2015. The survey was conducted using the VTEM Supermax helicopter EM system. Survey lines were oriented SE-NW at a line spacing of 200 metres and Z and X Component data were collected. The Peak dipole moment (power) of the system is 1,105,730 nIA. The average transmitter-receiver loop clearance was 46 metres above the ground.
<i>Geology</i>	<i>Deposit type, geological setting and style of mineralisation.</i>	Minotaur are seeking Cu-Au mineralisation similar in style to other known occurrences in the district, particularly like that at the Eloise and Barbara deposits. The principal target style of mineralisation for these types of deposits is Iron Sulphide Copper Gold (ISCG) type where pyrrhotite forms a significant part of the mineral assemblage. These are typically structurally-controlled, vein, breccia and replacement type systems usually with high sulphide content.

Criteria	JORC Code explanation	Commentary
<i>Drill hole Information</i>	<p>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:</p> <ul style="list-style-type: none"> ▪ 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. 	Not applicable
	<p>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.</p>	Not applicable
<i>Data aggregation methods</i>	<p>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.</p>	Not applicable
	<p>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.</p>	Not applicable
	<p>The assumptions used for any reporting of metal equivalent values should be clearly stated.</p>	Not applicable
<i>Relationship between mineralisation</i>	<p>These relationships are particularly important in the reporting of Exploration Results.</p>	Not applicable

Criteria	JORC Code explanation	Commentary
<i>widths and intercept lengths</i>	<i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i>	Not applicable
	<i>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').</i>	Not applicable
<i>Diagrams</i>	<i>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.</i>	The location of the Highlands project is included in Figures 1 and 2. The details of the Gospel prospect EM conductors and rock chip assays are provided in Figures 3 and 4. The details of the Coolibah prospect EM conductors and rock chip assays are provided in Figure 5.
<i>Balanced reporting</i>	<i>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.</i>	All relevant information of the recent work conducted by Minotaur at the Highlands project is presented in the report
<i>Other substantive exploration data</i>	<i>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.</i>	No meaningful and material exploration data have been omitted.
<i>Further work</i>	<i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	Minotaur has reported that 5 RC drill holes are planned to test the Gospel and Coolibah targets; information from those holes will be reported once available.



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Criteria	JORC Code explanation	Commentary
	<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>	Not applicable