

# Quarterly Report

Period ended 30 September 2016

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## Exploration Highlights

- Maiden JORC 2012 Resource estimate for Chameleon gold deposit near Kalgoorlie (WA)
- Ground geophysical surveys completed near Prominent Hill mine, in collaboration with OZ Minerals (SA); drilling underway
- Ground geophysical surveys completed for Osborne JV (near Cloncurry), in collaboration with JOGMEC (Qld)
- First-pass drilling on Iris EM anomalies at Eloise (near Cloncurry), also in collaboration with OZ Minerals (Qld), reveals encouraging copper intersections

## Corporate Review

An agreement for sale of the Chameleon gold deposit dated 26 October 2016 with Shine Resources Pty Ltd (Shine) provides, subject to due diligence, for transfer of ownership upon the third of three staged payments by 12 December 2017, totaling \$550,000, plus a production payment of up to \$250,000. The agreed consideration of \$800,000 values the inferred resource at approx. \$10.40 per ounce of contained gold, at the mid-range of recent gold inferred resource valuations.

At Quarter end Minotaur held \$2.9 million in cash and forecasts a cash position of \$2.4 million at the end of 2016, assuming the sale of Chameleon does not complete within that timeframe.

The Company's Annual General Meeting will be held on 17 November 2016 at the South Australian Core Reference Library at Tonsley, Adelaide. This new, \$35 million world-class facility houses all reference drill core from within South Australia. The AGM offers shareholders the opportunity to see the development up-close whilst participating in the Company's governance.

Chairman Derek Carter will, at the AGM, vacate his role as a director having served the group continuously for over twenty years.



## Review of Activities

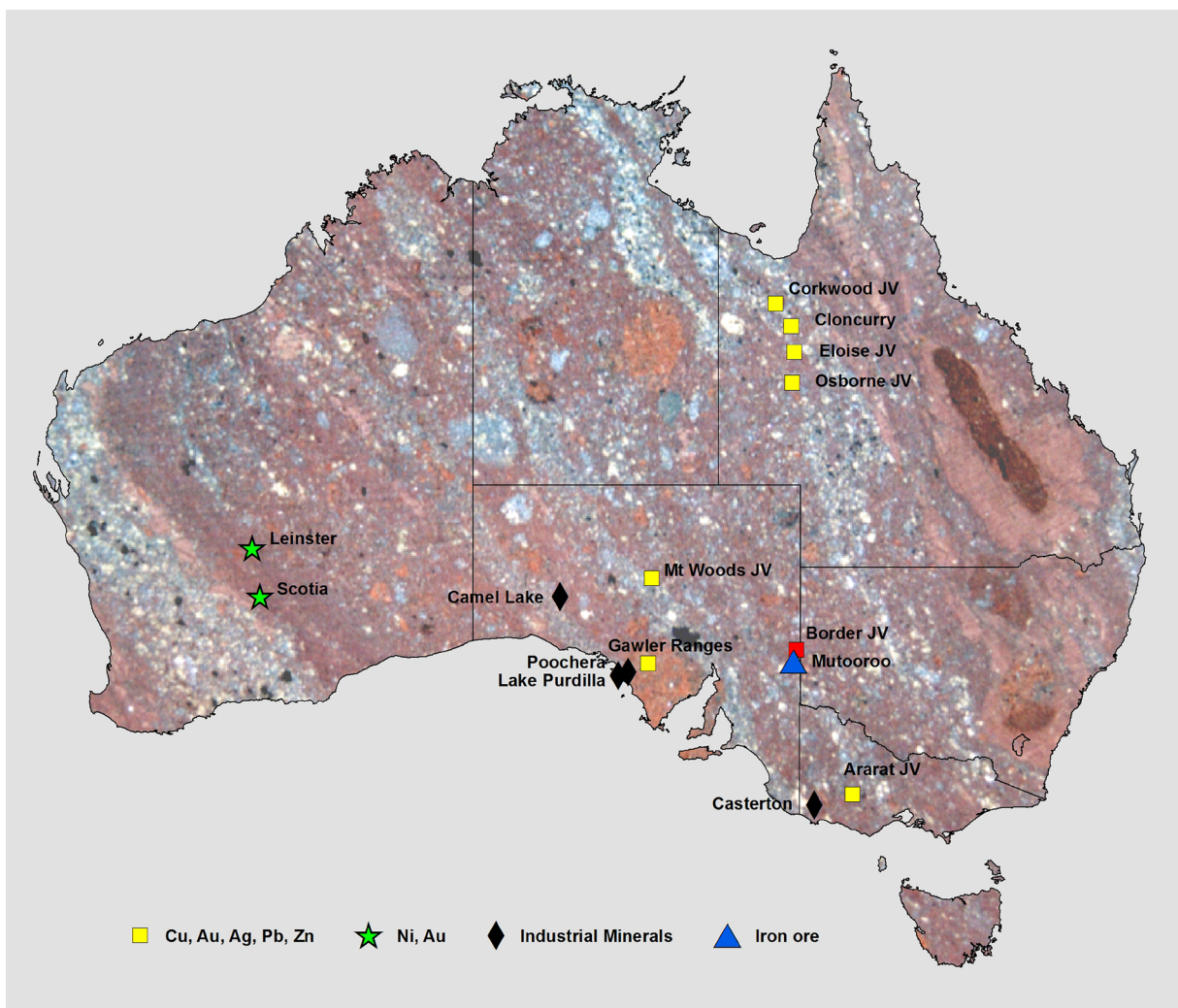


Figure 1: Minotaur Exploration's project locations

Project Location	Tenement Area km <sup>2</sup>
South Australia <sup>§</sup>	13,819
Queensland <sup>§</sup>	3,613
Victoria	415
Western Australia <sup>Ⓓ§</sup>	344
<b>Total Area</b>	<b>18,191</b>

Table 1: Minotaur Exploration Limited's tenement areas, under application and/or held 100% and/or in joint venture<sup>§</sup> or within Minotaur Gold Solutions Ltd<sup>Ⓓ</sup> (Minotaur Exploration as to 99%)

### QUEENSLAND

Minotaur is actively exploring along the Cloncurry mineral belt of Northwest Queensland where an extensive package of iron oxide copper-gold and Cannington-style lead-silver-zinc prospective tenements has been assembled (Figure 2).

Joint venture funded exploration activity continued on two fronts - at the Eloise and Osborne projects - with significant progress made in both areas. Drilling and ground geophysical surveys are ongoing and will continue into November leading up to the onset of the wet season.





## QUEENSLAND

### Eloise Farm-In

EPM 17838, 18442, 18624, 19500, 25237, 25238, 25389, 25801, MDL431; Minotaur 100% (except on those parts of MDL431 and EPM17838 where Sandfire Resources NL can earn 80%), Area 728km<sup>2</sup>

Three drill holes were completed during the Quarter for a combined 977.5m. One hole was drilled into each of Iris North, Iris South and Royal EM conductors (Figures 3 and 4).

The Iris anomalies lie under shallow cover approximately 5km north-east of the Eloise Copper-Gold Mine (Figure 3). The prospect sits along the Levuka Shear Zone within Mt Norna Quartzite, a regionally significant rock unit that hosts the Eloise and Osborne copper-gold mines and the Cannington silver-lead-zinc mine. Minotaur's geological model for Iris is Iron Sulphide Copper Gold (ISCG) mineralisation similar in style to the Eloise copper-gold deposit.

Assays from the holes completed at Iris returned anomalous copper and gold values associated with pyrrhotite over broad intercepts, confirming Iris as a new ISCG discovery. Drill hole EL16D04, testing the Iris North EM conductor (Figure 4), reported 42.1m @ 0.2% Cu and 0.03g/t Au from 199m. Mineralisation is typically hosted in veinlets, both bedding/foliation parallel and in coexisting high-angle tension veins. Drill hole EL16D05, testing the Iris South EM conductor (Figure 4), reported 38m @ 0.47% Cu and 0.08g/t Au from 166m. Mineralisation is hosted in veinlets, like hole EL16D04, but one zone in particular exhibits much stronger breccia-hosted mineralisation, representing a more favorable structural setting. This zone contains 4m @ 1.65% Cu and 0.2g/t Au from 195m.

In light of these encouraging results, where copper sulphides are clearly associated with the EM conductors, Minotaur re-processed its local ground EM lines north and south of the Iris targets to look for additional anomalies along strike, under cover. Close analysis of the data revealed subtle conductive anomalies, north of the Iris North target, on two of those recent 800m-spaced

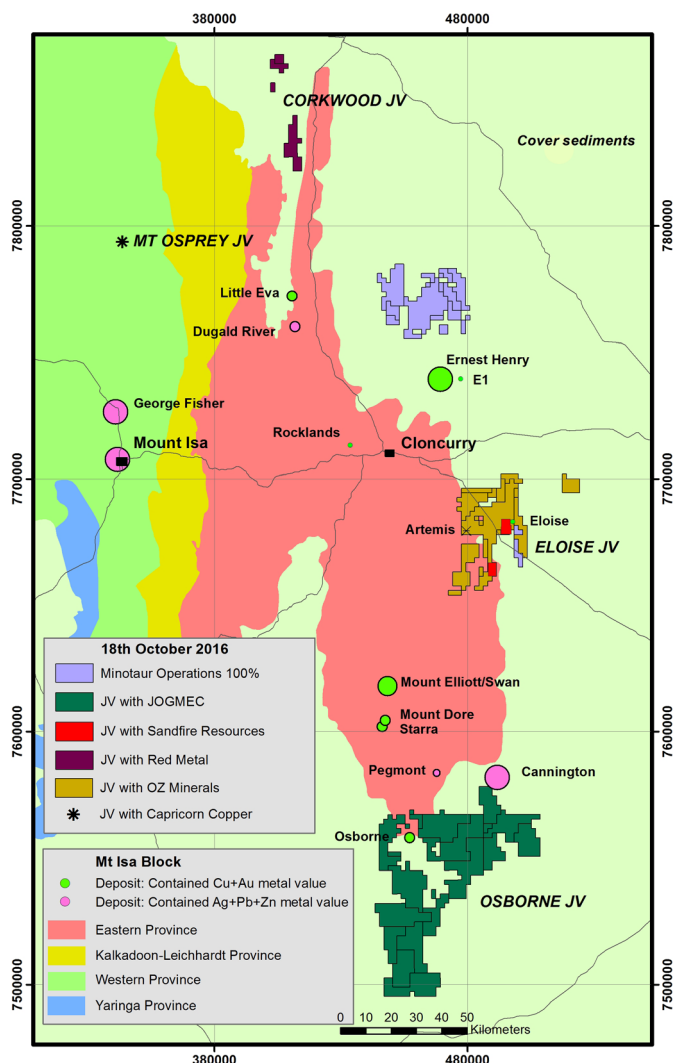


Figure 2: Location of Minotaur tenements in the Cloncurry region of Northwest Queensland

lines at 'Electra'. The data on both lines is relatively coarse given the specifications of the original survey, however the modelled plates show a preferred northerly strike and westerly dip that is consistent with the Iris North conductor. The northern conductive zone may represent a north-trending brittle fault zone that cuts across the geological and magnetic trends, as depicted in Figure 5; if this is a fault, it could host structurally-controlled sulphide mineralisation, as evidenced at Iris North and Iris South.



## QUEENSLAND

The Minotaur-OZ Minerals joint venture committed to 4 additional diamond holes to test for extensions to the breccia zones. These holes (EL16D07 to 10) are underway (Figure 4), with the aim of mapping the sulphide system to aid drill vectoring toward higher-grade mineralisation in more structurally complex areas and provide multiple platforms for down-hole EM surveys. Follow-up infill ground EM will proceed in November, along strike north and south of Iris, with particular focus across the Electra anomalies (Figure 5).

Drill hole EL16D06 tested the Royal EM conductor located approximately 5km northwest of the Eloise mine (Figure 3). The anomaly is a relatively large modelled conductor up to 1200m long and was considered prospective for base metal mineralisation. The hole was completed at a depth of 361.3m and intersected graphitic shale and schist in the target position but does not contain base metal mineralisation.

### Altia Joint Venture

MDL432, parts of MDL431 and parts of EPM17838; Sandfire Resources NL earning 80%, Area 43.7km<sup>2</sup>,

A follow up diamond hole was drilled at the Capricorn North prospect to target an off-hole conductor and intersected narrow zones of copper mineralisation. A follow up moving loop EM survey has not identified any prospective anomalies. A deep diamond hole targeting the down plunge extension of the Altia resource intersected similar grades and thicknesses to those within the resources indicating that the ore zone extends at depth.

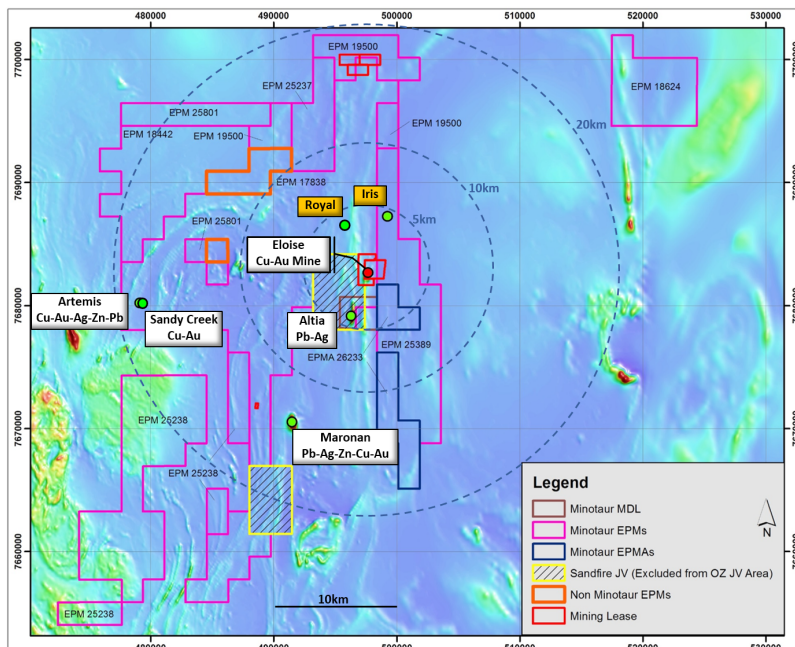


Figure 3: Eloise project magnetics with tenements and main prospects including Artemis, Sandy Creek and the new Iris EM targets. Locations of Sandfire JV and the Eloise Mine shown for reference.

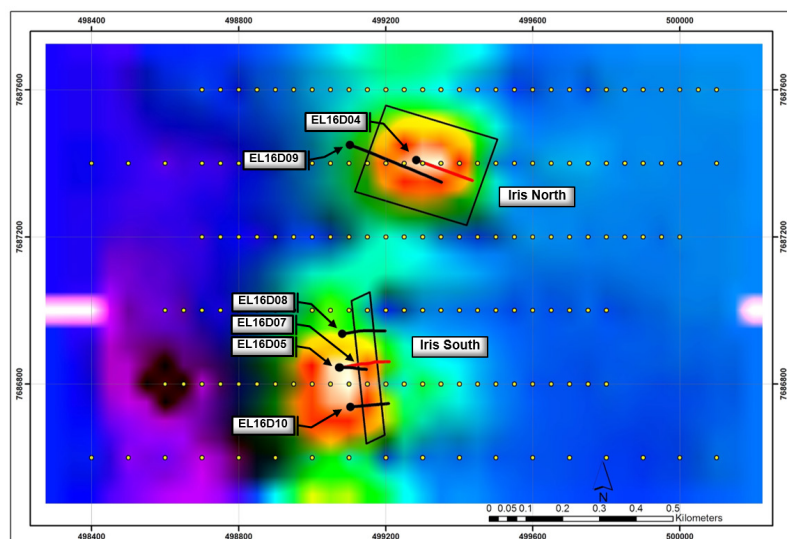


Figure 4: Late time Z-component EM image (plan view) of Iris conductors with reported drill holes EL16D04 – 05 and planned drill holes EL16D07 – 10.





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## QUEENSLAND

### JOGMEC Osborne Joint Venture

EPMs 18571, 18574, 18575, 18576, 18720, 19061, 19066, 25197, 25699, 25856, 25886, 25888, 25960 and EPMA26230; Minotaur 100%, Area 2,038km<sup>2</sup>

Ground EM and IP geophysical surveys are complete after extensive access delays due to unseasonal rain events; a total of 7 areas were surveyed (Figure 6). Data processing is underway with anomalous responses evident at Winter, Lark and Robin. Arrangements for a single 800m drill hole to test the Yeti gravity anomaly are complete. Yeti, located 60km south of the Osborne copper-gold mine, is a 3mgal gravity anomaly interpreted to lie under approximately 400m of cover and represents a potential IOCG style target.

### Regional Cloncurry Project

EPMs 8608, 16975, 18068, 18861, 19412, 19530, 25889, EPMA 26233 Minotaur 100%, except in relation to EPM 8608 which has a net smelter royalty of 2% payable to BHP Billiton Limited; Area 969km<sup>2</sup>

Minotaur seeks to introduce a new JV partner into the tenement package.

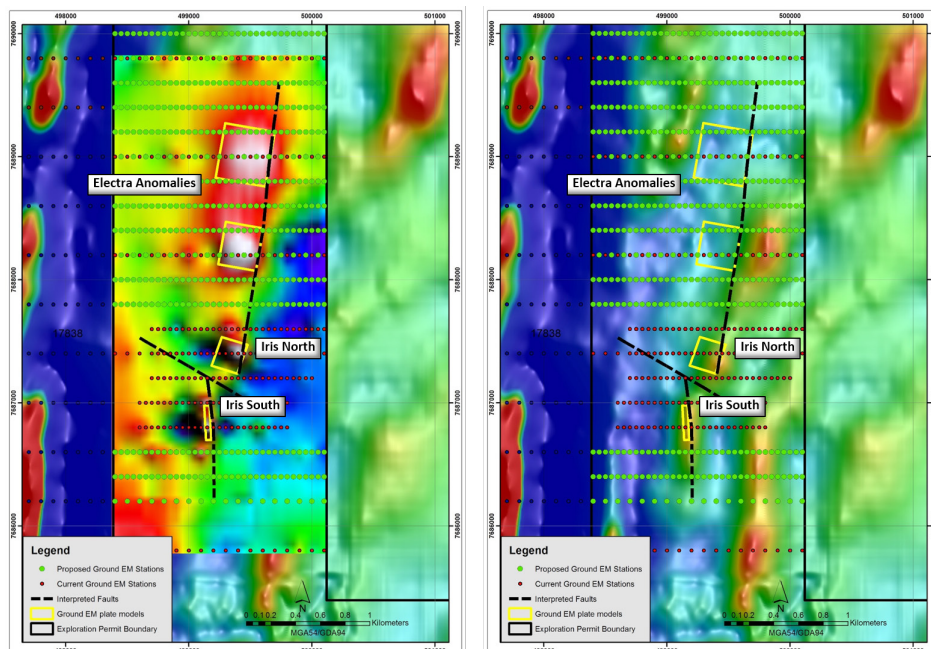


Figure 5: a) left image shows gridded conductivity (red and white zones are conductive) of the X-component EM data of channel 35. Yellow polygons are the modelled conductive plates; b) right image shows conductive plates over RTP1VD magnetics.

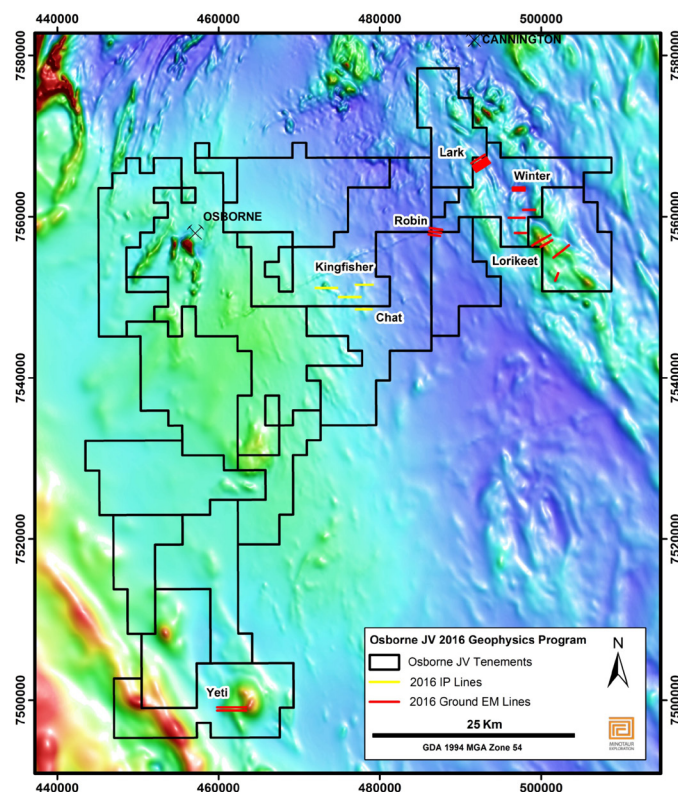


Figure 6: Osborne project magnetics with tenements and main targets for geophysical testing





## SOUTH AUSTRALIA

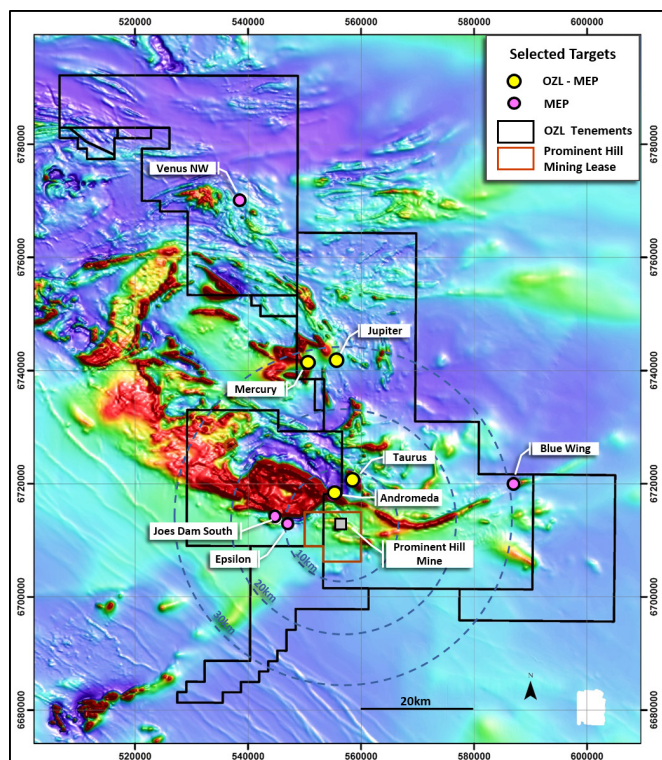


Figure 7: Location of copper-gold targets generated by Minotaur showing those selected by OZ Minerals for joint work and those self-selected by Minotaur; background image is RTP magnetics

### Prominent Hill Project

EL 5019, 5210, 5263, 5554, 5573; OZ Minerals 100% (Minotaur testing selected targets in collaboration with OZ Minerals), Area 3,532km<sup>2</sup>

Minotaur and OZ Minerals are collaborating in exploration around the Prominent Hill mine, through an alliance agreement.

The inaugural ground based geophysical program was completed in the Quarter. EM and IP surveys focussed on the Andromeda, Taurus (encompasses Orion and Bellatrix anomalies), Mercury and Jupiter prospects, all within 30km of the mine operation.

Diamond drilling on targets selected from the geophysics commenced late in the Quarter, directed at four geophysical features (Figure 7). The first of two drill holes targeting the Orion geophysical anomaly were completed, intersecting wide bands of graphitic schist with pyrite and pyrrhotite but showing no appreciable base metal mineralisation. The rig moved to drill the second hole at Orion and will then continue to drill the Bellatrix and Jupiter prospects.

### Gawler Ranges Project

EL 4776, 5232, 5647, 5708, 5709, 5710, 5711, 5743; Minotaur 100%, Area 4,959km<sup>2</sup>

A collaborative project of advanced magnetic processing through geophysical specialists Archimedes Consulting provides new data on Gawler Range Volcanic thickness variations and sub volcanic structures. This will assist the regional alteration interpretation arising from the MSDP drill program.

Data from the range of new technologies deployed as part of the MSDP continues to be evaluated, in particular the real time assay data for quality and regulatory issues.

### Border Base Metal Project

EL 5831, 4844, 5079, 5437 & 5502; Sumitomo 53%, Minotaur 47%, Area 1,126km<sup>2</sup>

No activity during the Quarter.

### Industrial Minerals Project

EL 4575, 5016, 5095, 5308, 5395, 5398, 5787 & ELA 5502, 2016/037, 2016/038, 2016/039, 2016/067, 2016/095, 2016/096; Minotaur 100%, Area 4,271km<sup>2</sup>

A range of halloysite – kaolinite blends were prepared for testwork by University of Adelaide researchers on strengthening filler applications.

### North Flinders Project

ELs 5542, 5723 & 5117; ML 4386; Minotaur 10%, Perilya 90%, Area 670km<sup>2</sup>

Perilya conducted XRF soil sampling and initiated a 9 hole RC campaign over the Third Plain prospect on EL5723 and ML4386. Results will be reported in the coming Quarter.

## VICTORIA

### Victorian Copper Project

EL 5403 & 5450; Minotaur 100%, Stavelly Minerals earning 51%, Area 295km<sup>2</sup>

No activity during the Quarter due to seasonal winter rains preventing access.





## WESTERN AUSTRALIA

### Scotia Project

E29/661; P29/2121; M24/336, M29/245 & M29/246; Minotaur Gold Solutions Ltd 100% (of which Minotaur 99%, GFR 1% and diluting), Area 97km<sup>2</sup>

Drill and assay data acquired for the Chameleon gold deposit through the June Quarter was reviewed and modelled by independent consultants RungePincockMinarco Limited (RPM). RPM provided Competent Person preparation of a maiden Mineral Resource estimate according to JORC 2012 guidelines. The total Resource, classified as Inferred and reported above 1.0 g/t Au cut-off, contains 1.1Mt @ 2.1 g/t Au for 77,000 ounces of gold (Figure 8; Table 2).

Minotaur sought to divest the project and remain focused on copper-gold exploration in Queensland and South Australia. To that end, Minotaur continues to seek buying interest in its package of nickel-gold prospective tenements at Scotia and south of Leinster.

### Leinster Project

E36/235 & E37/909; M36/475, M36/548, & M37/877; P37/7370 & P37/7371; Minotaur 100%, Area 230km<sup>2</sup>

No activity during the Quarter.

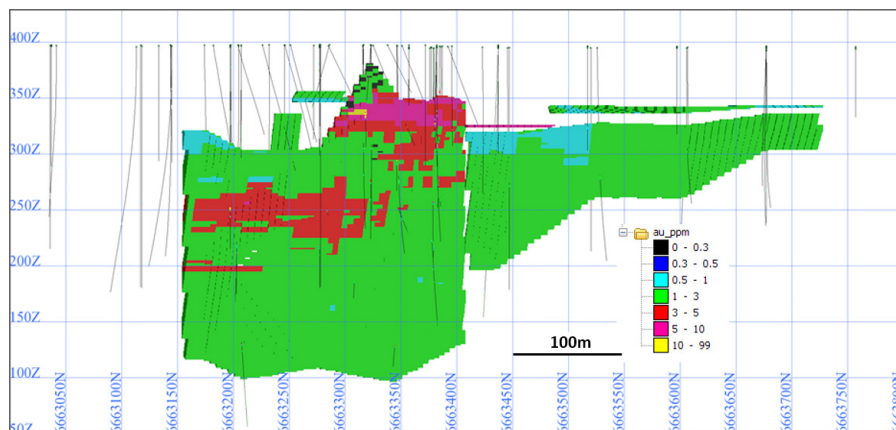


Figure 8: Chameleon gold resource block model (long section looking west) showing distribution of estimated gold values

Inferred			
Type	Tonnes	Au	Au
	Mt	g/t	Ounces
Oxide	0.1	2.9	12,000
Transitional	0.1	2.1	8,000
Fresh	0.9	2.0	56,000
<b>Total</b>	<b>1.1</b>	<b>2.1</b>	<b>77,000</b>

Table 2: Inferred Mineral Resource estimated tonnes, grade and contained ounces as at 29th July 2016.



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## COMPETENT PERSON'S STATEMENT

Information in this report that relates to Exploration Results is based on information compiled by Mr G. Little, a Competent Person and a Member of Australian Institute of Geoscientists (AIG). Mr Little is a full time employee of the Company and 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.

## Note: September 2016 Quarter ASX Announcements

The following significant announcements were lodged with ASX during the September Quarter:

- Attractive gold assays from Chameleon deposit (4 July 2016)
- Inaugural JORC Resource for Chameleon gold deposit (29 July 2016)
- Company Update (24 August 2016)
- Minotaur drilling cracking Copper targets in 2 States (15 September 2016)
- Follow-up work underway at Iris (29 September 2016)

## INVESTMENTS

At the end of September 2016 Minotaur held listed company investments valued at market at \$0.7 million. Minotaur is progressively reducing its various holdings as liquidity allows.

### Andrew Woskett

*Managing Director*

Minotaur Exploration Ltd

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