
# Quarterly Report

## Period ended 30 June 2017

MINOTAUR EXPLORATION LIMITED ACN 108 483 601 – ASX: MEP
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MINOTAUR EXPLORATION

## Corporate

The 2017 financial year operating expenditure totaled $6.3M, of which 78% was applied to exploration and 22% to administration.

The dominance of 'money in the ground' is notable due to active joint venture farm-in arrangements, by which Minotaur maintains above average exploration expenditure levels comparative to its peers.

Recently reported work can be characterised as frontier exploration where drill intersections are the ultimate and only avenue to establish whether mineralisation is expressed as a geophysical anomaly in basement rocks. Often, the source of anomalism is adequately resolved by the presence of non-economic minerals (such as pyrite, graphite, pyrrhotite etc).

Such results, while disappointing, do not diminish the investment rationale, relevance and accuracy of the geoscientific rigour applied to generate and test high quality drill targets.

History shows that major discoveries such as Carapateena, Eloise, Ernest Henry and Cannington have evolved through such methods. Increasingly, exploration under-cover across Australia is needed, more so to reveal blind orebodies for future mine extraction. Minotaur is an active agent in this space and maintains its faith in discovery potential.

Meanwhile, the Company is constantly reviewing openings to expand its field of endeavour and to that end continues to selectively assess advanced stage or operationally capable resource assets in base metals and gold, within Australia.

Minotaur held A$2.3 million in cash at 30 June 2017 (*refer appendix 5B for details*).

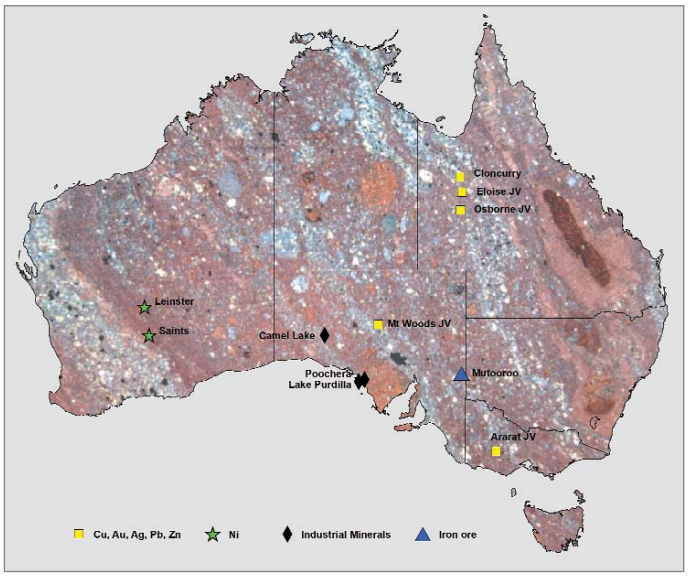


*Figure 1: Minotaur Exploration's project locations*

| Project Location | Tenement Area km² |
|---|---|
| South Australia§ | 6,492 |
| Queensland§ | 3,032 |
| Victoria§ | 295 |
| Western Australia | 273 |
| **Total Area** | **10,092** |

*Table 1: Minotaur Exploration's tenement areas, under application and/or held 100% and/or in joint venture§.*

# Exploration, R&D

## QUEENSLAND

Minotaur is actively exploring along the Cloncurry mineral belt of Northwest Queensland, for iron oxide copper-gold (IOCG), iron sulphide copper-gold (ISCG) and Cannington-style lead-silver-zinc mineral systems (*Figure 2*) obscured by up to 180m of conductive Mesozoic sediment cover.

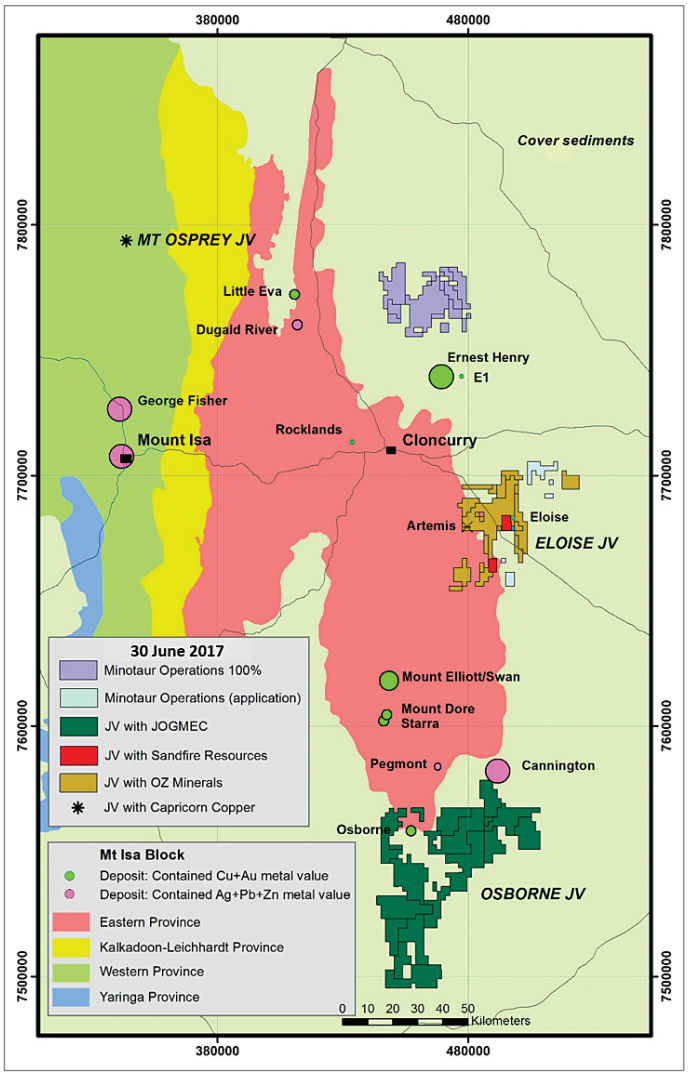


*Figure 2: Location of Minotaur tenements in the Cloncurry region of Northwest Queensland.*

The 2017 field exploration season commenced early in the Quarter with diamond drilling and ground geophysical surveys at both the Eloise and Osborne joint venture projects.

### Eloise Farm-In (OZ Minerals)

*Minotaur 100% (except on those parts of MDL431 and EPM17838 where Sandfire Resources NL can earn 80%), Area 670km²*

OZ Minerals committed $1.5 million to the joint venture program January through to June, enabling a third phase drill program at Iris-Electra (*Figure 3*) (ASX: MEP 16/06/17 and 10/07/17). Two holes probed the large Electra EM conductor and a further two holes tested each side of Iris where drilling in 2016 identified encouraging Eloise-style copper-gold mineralisation (*Figure 4*). All four holes intersected copper-gold mineralisation including; EL17D01: 25m @ 0.23% copper and 0.03g/t gold from 832m, EL17D02: 7m at 0.23% copper and 0.08g/t gold from 836m, EL17D03: 27m @ 0.26% copper and 0.09g/t gold from 536m, and EL17D04: 5m @ 1.00% copper and 0.11g/t gold from 439m within a broader zone of 37m @ 0.31% copper and 0.04g/t gold from 438m. These grades and thicknesses are consistent with results from inaugural 2016 holes intersecting the EM plates at Iris.

Geophysical techniques have clearly proven their value in generating prospective targets in close proximity to the Eloise mine. While drill assays are sub economic, they build confidence that an extensively mineralised structural system exists beyond the known Eloise deposit and could conceivably host a repetition. The 2km long Iris-Electra system remains open to the north and south and at depth.

## QUEENSLAND

### Eloise Farm-In (OZ Minerals)

The results of the drill program reinforce the targeting methodology for locating mineralisation under highly conductive cover. An extensive ground EM survey covering some 17km of strike along the Levuka Shear, south of the Eloise mine (*Figure 3*), is underway. This zone is interpreted to be a continuation of the Mt Norna Quartzite that hosts Eloise, Iris-Electra and Altia locally and Artemis, Sandy Creek, Maronan and Cannington deposits regionally.

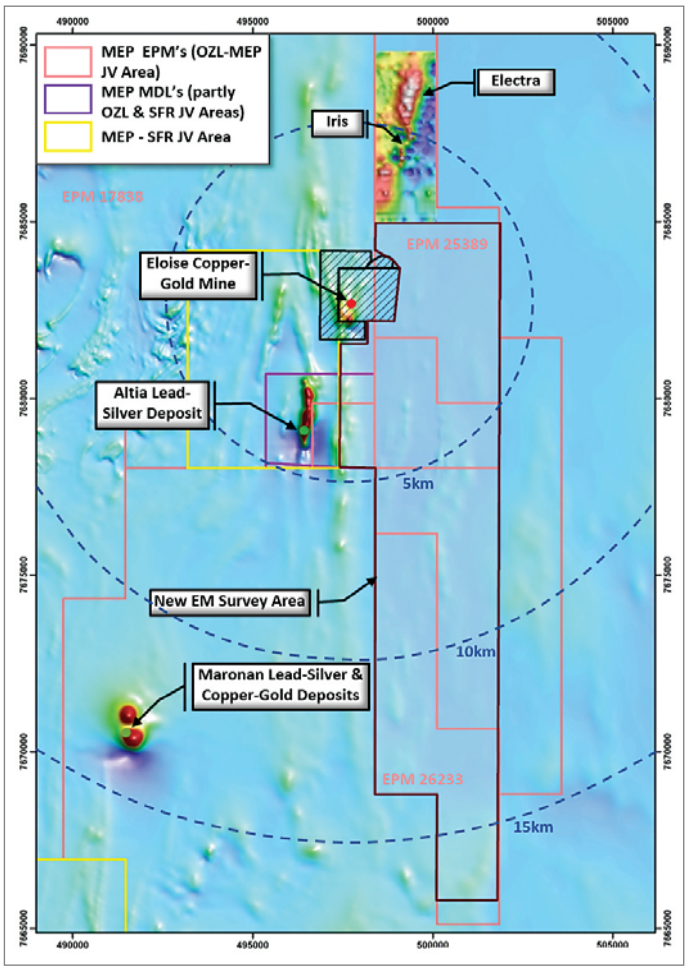


*Figure 3: Eloise project depicting the Iris and Electra Cu-Au prospects and new ground EM survey area on EPM 26233, over RTP1VD magnetics (and Channel 35 X-component EM at Iris/Electra). Locations of the Sandfire JV 'Altia' Pb-Ag deposit, the Maronan Pb-Ag and Cu-Au deposits and the Eloise Mine shown for reference.*

The survey commenced early June and is expected to be completed mid-August.

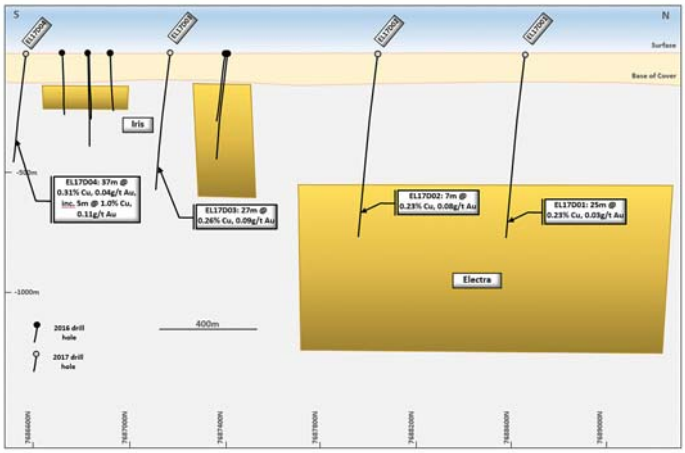


*Figure 4: Long-section looking west showing Iris and Electra modelled EM conductors and drill traces.*

### Altia Joint Venture

*Sandfire 60%, Minotaur 40%*

No activity reported for the Quarter by Sandfire Resources (Operator).

### JOGMEC Osborne Joint Venture

*Minotaur 100%, Area 1,686km²*

The Osborne project is a joint venture between Minotaur and Japan Oil, Gas and Metals National Corporation (JOGMEC). JOGMEC may earn up to 51% equity in the project by spending up to A$3.5M. Project expenditure to date is A$2.1M with further A$1M budgeted through to March 2018.

Six targets were drilled at three prospects, being Lark, Winter and Robin (Figure 5). Deep drilling such as this represents frontier exploration in a poorly investigated region very prospective for Cannington-style silver-lead-zinc and Eloise-style copper-gold mineralisation.

## QUEENSLAND

### JOGMEC Osborne Joint Venture

Depth to basement, conductive cover and scarcity of previous drill history raise significant challenges.

The Lark targets comprises two EM conductors; a western plate lying parallel to but adjacent a linear magnetic anomaly and an eastern conductor occurring along strike northwest of a discrete moderate-amplitude magnetic anomaly. Two diamond holes, OS17D07 and OS17D08, successfully tested both EM conductors; graphite-rich lithologies adequately explain the source of each anomaly at the modelled conductor position.

The Winter targets, a discrete low to moderate-amplitude magnetic anomaly with two coincident and subjacent EM conductors, was tested with one diamond drill hole OS17D06. The drill intersected a sequence of metasediments with weakly disseminated and vein-hosted sphalerite (zinc sulphide) noted within graphitic lithologies. Field portable XRF (fpXRF) readings indicate the level of anomalism to be minor. The upper conductor is explained by graphite-rich lithologies, while the lower conductor source is thin concordant pyrrhotite veins.

The Robin targets comprises two EM conductors; a western conductor lying adjacent a discrete moderate-amplitude magnetic anomaly and an eastern conductor occurring coincident with the magnetic anomaly. Two diamond holes, OS17D09 and OS17D10 tested the conductors. Graphite-rich lithologies adequately explain the eastern conductor tested by drill hole OS17D09. The source of the western conductor in drill hole OS17D10 appears due to a clay-rich fault zone, approximately 5m wide, where fpXRF readings show weakly anomalous Zn and Pb only.

While the outcome of this campaign was mostly unrewarding Minotaur remains positive about the regional potential for discovery and notes the unequivocal success of its targeting techniques. Further target generation across the tenements using ground geophysical techniques, given their positive performance in this terrain, is being considered.

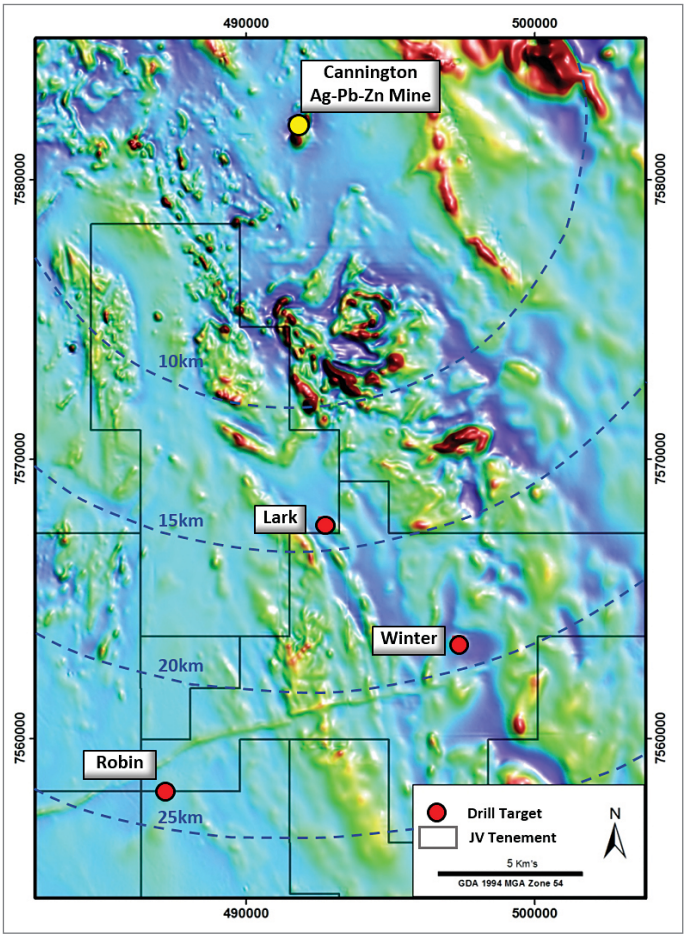


*Figure 5: Osborne project - prospect locations for recent drilling over RTP magnetics image.*

### Regional Cloncurry Project

*Minotaur 100%, except in relation to EPM 8608 which has a net smelter royalty of 2% payable to South 32; Area 676km²*

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

## SOUTH AUSTRALIA

### Prominent Hill Project

*OZ Minerals 100% (Minotaur testing selected targets in collaboration with OZ Minerals), Area 3,532km²*

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

Access and clearance preparations for a large ground EM survey over the Skylark Shear Zone (SSZ) were finalised. The EM survey will test around 15km of strike of the SSZ, mostly NW of the Bellatrix target (*Figure 6*), searching for ISCG style mineralisation under conductive cover. The survey is scheduled to start in August.

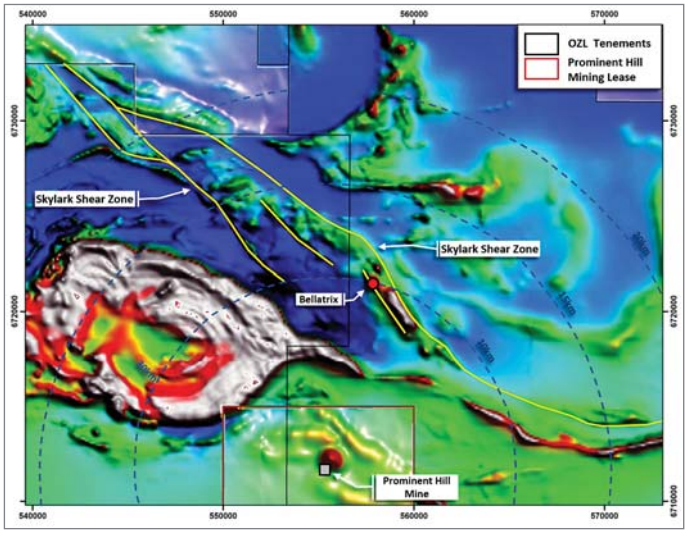


*Figure 6: Location of Bellatrix and Skylark Shear Zone relative to Prominent Hill mine; background image is RTP magnetics.*

### Gawler Ranges Project

*Minotaur 100%, Area 311km²*

No activity during the reporting period.

### Border Base Metal JV

*Sumitomo 52.9%, Minotaur 47.1%, Area 443km²*

The sale of four tenements was completed with the JV now comprising EL5079 hosting the substantial Mutooroo magnetite deposit.

### Industrial Minerals Project

*Minotaur 100%, Area 5,068km²*

Advanced testwork on halloysite nanotube characterisation commenced through a collaborative project with the University of South Australia's Future Industries Institute. This work is looking at nanotubular properties and potential new technology applications of natural halloysite and halloysite-kaolin admixtures, including new energy storage applications. Additional studies are to be undertaken into purification procedures and upgrading of halloysite.

A PACE drilling supported project to investigate potash potential of groundwater brines in the Coober Pedy area remains stymied by Native Title heritage access issues.

### North Flinders Project

*Minotaur 10%, Perilya 90%, Area 670km²*

Portable XRF soil sampling was conducted by Perliya within EL5542. Infill sampling confirmed zinc anomalism over Callana Group breccia and Wilkawillina Limestone with the anomalous area open to the east.


## VICTORIA

### Victorian Copper Project

*Minotaur 100%, Stavely Minerals earning 51%, Area 295km²*

No activity reported for the Quarter by Stavely Minerals (Operator).

## WESTERN AUSTRALIA

### Saints Nickel Project, Leinster Nickel-Gold Prospects

*Minotaur 100%: Saints Area 97km²; Leinster Area 176km²*

A maiden JORC resource for the Saints nickel deposits was published (ASX: MEP 4/05/17). Minotaur seeks to divest this project and has invited market interest in Saints and the nearby package of nickel-gold prospective tenements south of Leinster.

### 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: June 2017 Quarter ASX Announcements

The following significant announcements were lodged with ASX during and since the June Quarter:

- Eloise JV drilling resumes, 18 April 2017
- Saints JORC Resource, 4 May 2017
- Drilling update at Eloise JV, 16 June 2017
- Drilling underway at Osborne JV, 22 June 2017
- Eloise JV drill results, 10 July 2017
- Drilling completed at Osborne JV, 26 July 2017

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