Amalgamated Report – GR389

Title holder and author: Tom Oates

Year 1 Annual Report
5 March 2015 to 4 March 2016

Dated 11 May 2016

EL 30323 / EL 30324 / EL 30325

1:250,000 Waterloo SE5203,
1:100,000 Waterloo 4764, Kimon 4864
EL 30323, EL 30324, EL 30325

Exploration Licence details and history
Mineral Exploration Licences EL 30323, EL 30324, EL 30325 were granted to the title holder, Tom Oates, on 5 March 2015.
This annual report relates to the 1st operational year of the Mineral Exploration Licences – 5 March 2015 – 4 March 2016.

Activities conducted under the title during the operational year

• Preparation for drilling.

  See item A in Expenditure Reports for 1st operational year 5 March 2015 to 4 March 2016

• Geological desktop review of public data

  See item A in Expenditure Reports for 1st operational year 5 March 2015 to 4 March 2016

• Drilling programs:

  o Track and drilling preparation – earthworks

    See item E in Expenditure Reports for 1st operational year 5 March 2015 to 4 March 2016

  o Drilling

    See item D in Expenditure Reports for 1st operational year 5 March 2015 to 4 March 2016

• Technical investigations related to exploration – preparation of MMP, technical review of data, reports and literature.

  See item A in Expenditure Reports for 1st operational year 5 March 2015 to 4 March 2016

Summary of exploration rationale and activities

EXPLORATION RATIONALE
EL30324 covers a near coincident gravity and magnetic anomaly, similar in character to those found over Olympic Dam and Prominent Hill in South Australia. As is the case with these two IOCG (Iron Oxide Copper Gold) deposits there is a horizontal offset between the apparent centre of mass of the anomaly and the apparent magnetic centre. There may also be a vertical separation between the causative bodies, just as there is in South Australia. In 1983 BHP acquired two orthogonal lines of gravity over the single station BMR anomaly and confirmed its existence as well as establishing that its shape was not dissimilar to that suggested by the coarse regional gravity coverage. They modelled both the gravity and a partial aeromagnetic data set and
concluded that the most likely source was a mafic plug and too deep to be of economic interest for IOCG mineralisation at the time.

In the general area of EL30324, it appears that there have been at least 4 previous Exploration Licences granted which have all since ceased; i.e. EL2295 ceased in 1982; EL4186 ceased in 1989; EL7658 Ceased in 1995 and the most recent was EL25520 which ceased on 2011. The following abstract has been taken from the Annual Report developed by C Martin and D Cherry on behalf of the Licence holder A Martin:

In mid 2011 exploration for diamonds and base metals was undertaken, this mainly involved reconnaissance sampling of stream, soil and rock. This report details the findings of this activity and examines base metal potential of EL 25520. Since granting of the Exploration License, a review of previous exploration activities in the area was conducted. A consultant geophysicist, Grant Boxer reviewed the geophysical data. This data as well as geological data and stream-sediment sampling data have been processed and assessed. The tenement has been covered by heavy mineral stream and loam sampling. A review was undertaken of the past diamond exploration which indicated that although there were recoveries of microdiamonds in the southern two EL's (EL 25084 and EL 25085), no source could be identified. No kimberlitic indicator minerals, for example, chrome diopside and pyrope garnet have been recovered from the tenements in previous sampling. Data from the recent airborne magnetic surveys flown by the Northern Territory Geological Survey (NTGS) over the tenement was processed for targets that may represent kimberlite or lamproite. Fifteen targets were selected for ground inspection, with ground magnetic surveys recommended for those targets that are unexplained after surface inspection. These targets and the immediate surrounding hills were recently investigated and systematically sampled. Selected soil and rock chip samples were collected during a number of recent visits to the tenements in 2011. These samples have been assayed and the results and interpretation are contained herein.

Target is either alteration consistent with IOCG mineralisation or support for a mafic magma chamber.

By way of background, EL30324 covers a near coincident gravity and magnetic anomaly, similar in character to those found over Olympic Dam and Prominent Hill in South Australia. As is the case with these two IOCG (Iron Oxide Copper Gold) deposits there is a horizontal offset between the apparent centre of mass of the anomaly and the apparent magnetic centre.

The near coincident gravity and magnetic anomaly at EL30324 is similar in character to those found over Olympic Dam and Prominent Hill in South Australia. As is the case with these two IOCG (Iron Oxide Copper Gold) deposits there is a horizontal offset between the apparent centre of mass of the anomaly and the apparent magnetic centre. There may also be a vertical separation between the causative bodies, just as there is in South Australia.

In 1983 BHP acquired two orthogonal lines of gravity over the single station BMR anomaly and confirmed its existence as well as establishing that its shape was not dissimilar to that suggested by the coarse regional gravity coverage. They modelled both the gravity and a partial aeromagnetic data set and concluded that the most likely source was a mafic plug and too deep to be of economic interest for IOCG mineralisation at the time.

Modelling of the 2001 Waterloo aeromagnetic data, acquired on behalf of the NTGS, however suggests that the magnetic body is depth limited rather than plug like. The gravity and magnetic anomalies could therefore be consistent with an IOCG style deposit. They are also consistent with the response one might expect from a deep mafic magma chamber feeding the Antrim Plateau Volcanics, although the magnetic field would have to include a component of remanence in order to explain the horizontal offset between the centres of the two modelled bodies.
Previous explorers (e.g. Ausquest, Proto Resources) have spent considerable energy in locating such a magma chamber as it would form a target for Voisey Bay style massive nickel sulphide mineralisation and the vent from it to the surface would be a target for Norilsk Style massive nickel sulphide mineralisation.

**EXPLORATION ACTIVITIES**

In late 2015, WLMB001B was drilled to a depth of 793.6m, with the core being provided to NTGS in January 2016.

In late 2015, EM soundings were taken around WLMB001B as per the attached memo from Kim Frankcombe dated 26 February, 2016.

Maps (showing the location, in relation to the boundaries of the title area, of the exploration, survey boundaries and proposed drilling)

Map of EL30323, EL30324 and EL30325 and drillhole is as follows:

Please refer to the attached map dated 11 May 2016.

Survey and analytical results

In relation to the EM Soundings at Limbunya Station around drill hole WLMB1B – refer to attached memo from Kim Frankcombe dated 26 February, 2016.

In relation to the drilling results, refer to the attached memo from Kim Frankcombe dated 4 March 2016 with SUBJECT: Reconciliation of down-hole density and magnetic data from hole WLMB1B with

Descriptions of survey, drilling and sampling methodology, logistics, data processing and modelling:

In relation to the EM soundings, refer to the attached memo from Kim Frankcombe dated 26 February, 2016.

In relation to the drilling of diamond hole WLMB001B, refer to the attached memo from Kim Frankcombe dated 4 March 2016 with SUBJECT: Reconciliation of down hole density and magnetic data from hole WLMB1B and the attached letter from Tracey Rogers to Tom Oates dated 20 January 2016.

**1st Year Expenditure Report**

Submitted on 11 May 2016 for each of:

1. EL30323
2. EL30324
3. EL30325
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Attachments to this report:

1. Memo from Kim Frankcombe dated 26 February, 2016
2. Map of EL30323, EL30324, EL30325 and drill hole WLMB001B location
3. Memo from Kim Frankcombe dated 4 March 2016
4. Letter from Tracey Rogers to Tom Oates dated 20 January 2016

Note - 30/8/2016 - there is no assay file with the drilling data as the core was not sampled in relation to the exploration activities carried out under EL30323, EL30324 and/or EL30325. However, the core was assayed in relation to petroleum exploration under petroleum permit EP304 and the assay file can be found in the reporting documents for EP304.