



# **DIATREME RESOURCES LIMITED** ABN 33 061 267 061

Subsidiary Companies: Lost Sands Pty Ltd ABN 27 101 269 747  
Chalcophile Resources Pty Ltd ABN 41 090 712 217  
Regional Exploration Management Pty Ltd ABN 55 093 739 336



ASX Code: DRX

## **Exploration Activities Report Quarter ended 31 March 2009**

### **Highlights**

#### **HEAVY MINERAL SANDS PROJECTS**

- Drilling was commenced and is continuing over the Cyclone Deposit in Western Australia.
- Mineralogy over Cyclone continues to produce encouraging results including 33% Zircon, 12% Rutile, and 44% Leucoxene/Altered Ilmenite.

#### **COPPER, GOLD & BASE METALS PROJECTS**

- Drilling commences at the Anabama Copper Project in South Australia.
- 3D IP survey completed over the Rosevale Porphyry Corridor at the Clermont Copper Project in Queensland, outlining eight (8) highly anomalous geophysical targets to be drill tested.

#### **CORPORATE AND FINANCE**

- Mr Andrew Tsang appointed as a non-executive director.
- Reduced exploration expenditure during the quarter.
- Next Quarter drilling expenditure to be substantially increased.

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## EXPLORATION

### **Eucla Basin Mineral Sands (Zircon) Project - WA and SA (DRX 75%, Zircon Resources Ltd 25%)**

Aircore drilling commenced on the Cyclone Deposit in the Eucla Basin within EL69/1920, Wanna Lakes. (Figure 1). A total of 17 holes for 645m were drilled in the deposit and drilling is continuing. On completion of the current drilling at Cyclone, the rig will test the Hurricane system in the north and the northern extensions to the Wanna East mineralisation, which lies adjacent to the eastern section of the Cyclone Prospect. The rig will then be mobilised to the Jubilee Lakes North area to test this very large southeast facing bay.

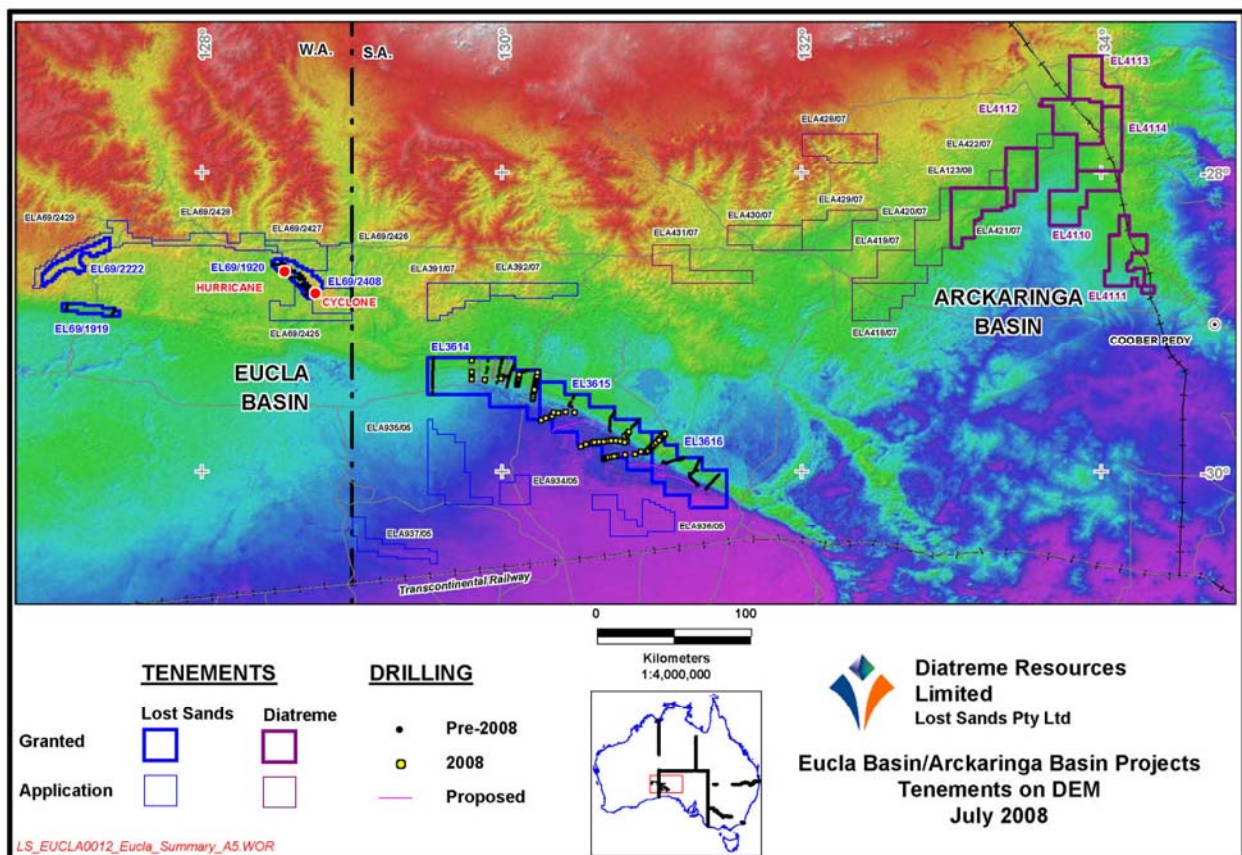
The current round of exploration includes the drilling of bulk samples for test work on the Cyclone Deposit, to be used for ore characterization test work and infill resource drilling. The Directors believe there is high potential to increase the size of the current Cyclone resource, along with a strong possibility of establishing further mineralisation to the south, east and north of the deposit.

Further mineralogical test work was also completed on the Cyclone Deposit during the quarter. The results from this work highlight the deposit as being particularly valuable in terms of its mineral species.

A spread of mineralogy samples were selected across the mineral resource and analysed by SGS Australia Pty Ltd using the "QEMSCAN" method. Results are presented in Table 1 below:

Mineral	% Mass	% Mass Range
Zircon	33	18-42
Rutile	12	5-24
Leucoxene	27	14-43
Altered Ilmenite	17	4-30
Others	11	

**Table 1: Average Mineralogy (QEMSCAN) result from Cyclone Deposit, WA.**



**Figure 1: Eucla Basin/Arckaringa Basin Projects**

Previous mineral assemblage test work by Diamantina Laboratories using point counting over a single central drill line of the deposit indicated that the deposit contained Zircon (41%), Rutile (3%), Leucosene (42%), Ilmenite (10%) and valueless trash minerals (4%). The recent work is more exhaustive, covering a larger area of the resource along with the different stratigraphic levels of the deposit. It uses a more accurate method of analysis than the more subjective point counting.

### **Arckaringa Basin Project - SA (DRX 100%)**

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No fieldwork was conducted during the quarter. However, plans are in place to commence work during winter following the completion of cultural heritage clearance surveys across a number of the granted licences.

### **Anabama Copper Project - SA (DRX 100%)**

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The Anabama Project is a prospect for copper and gold, and possibly mineral sands from the northern Murray Basin.

During the quarter, 22 holes for a total of 679m were drilled using a rotary air blast (RAB) drill rig over EL3548 (Anabama North) and EL3932 (Anabama). Samples from this program are currently being processed through laboratories and/or compiled and are yet to be reported.

A further 84 RAB holes, totalling 3400m, are planned for the next drill program commencing in the second quarter. This program will target the following:

- 16 holes at either 60 or 120m depth on the Anabama Grid area, targeting existing zones of mineralization.
- 64 shallow bedrock RAB holes drilled to blade refusal, (estimated at 20m) to track the Anabama mineralised trend to the grid east and west.
- 4 holes at 120m depth for a total of 480m to target the shallower VTEM anomalies.

The existing RAB coverage at Anabama Mine has not closed off the copper geochemical anomaly to the grid east or west. Several lines of bedrock RAB holes are planned over the postulated extensions to mineralisation with line spacing 200-400m and hole spacing 40m. Holes may be infilled if a copper feeder is suspected.

### **Clermont Copper Project – QLD (DRX 100%)**

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#### **3DIP SURVEY - ROSEVALE PORPHYRY CORRIDOR**

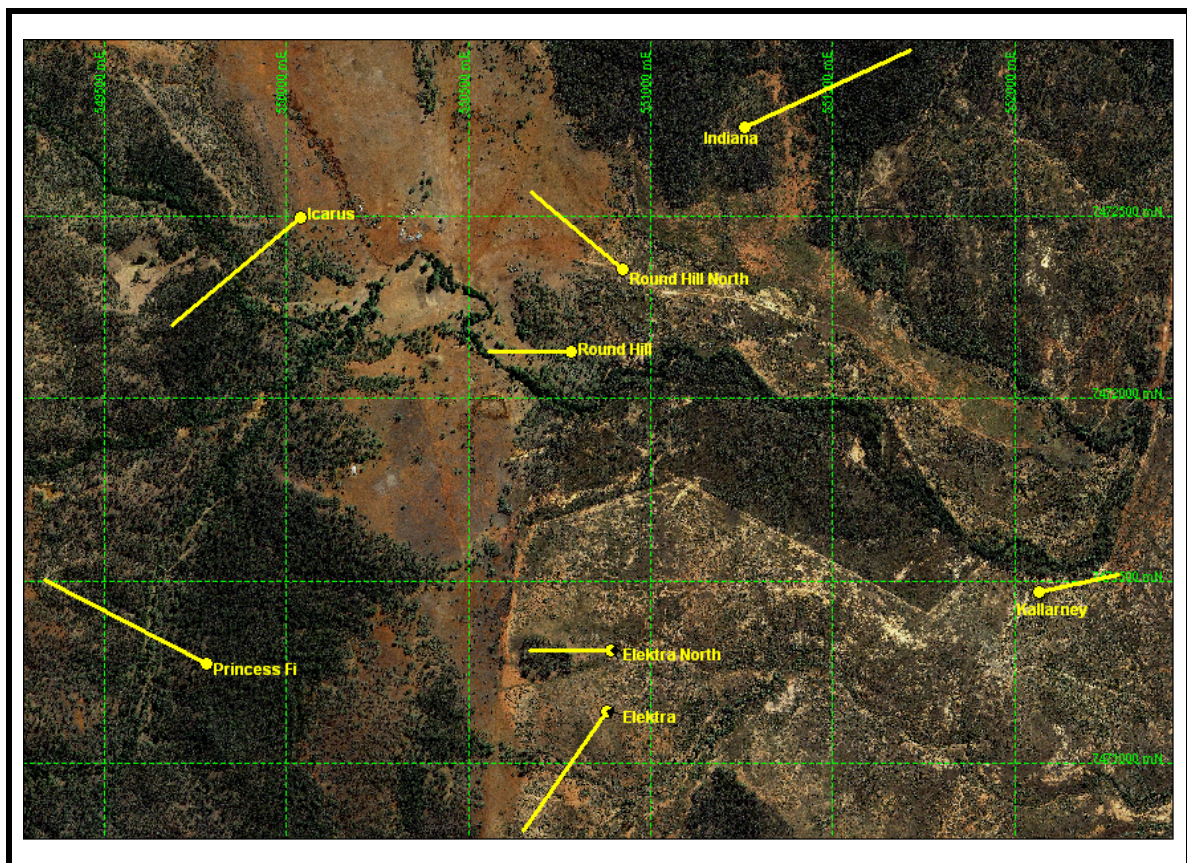
During the quarter, the Company conducted a 3D offset pole-dipole induced polarization (3DIP) survey at the Rosevale Porphyry Corridor (RPC). Amongst other targets, the 3DIP survey has identified a total of eight (8) high priority drill targets for early follow up: Elektra, Round Hill North, Princess Fi, Icarus, Elektra North, Indiana, Round Hill & Kallarney (refer Table1 and Figure 2).

The survey encompassed a total of 10 spreads and covered an area of approximately 10km<sup>2</sup>. Chargeability and Resistivity data has been modeled, with peak chargeability values in excess of 100mV/v. Background values were determined to be in the order of 6mV/v. The final model extends from the surface to 900m depth, with acceptable data extending from surface to 500-600m depth based on the model sensitivities. The large size of some of the anomalies, combined with the magnitude of the chargeability response, and the positive correlation to other local geological, surface geochemical and geophysical features, has led the Company to believe that the IP responses represent significant accumulations of sulphides, potentially reflecting the possibility of porphyry-style mineralisation below the surface.

Target	Target Characteristics	Planned Target Hole Depth (m)
Elektra	Chargeability high, resistivity low, mag low.	800
Round Hill North	Chargeability high, resistivity low, geochemical high	650
Princess Fi	Chargeability high, resistivity low, mag low.	1,000
Indiana	Chargeability high, resistivity mod, mag low.	1,000
Round Hill	Chargeability high. Known Au-bearing breccias pipe	450
Icarus	Chargeability high, resistivity low	800
Elektra North	Chargeability high, resistivity low, mag low.	450
Kallarney	Chargeability high, res low/mod, mag low.	450

**Table 1: Newly identified prospects, their characteristics and planned drill depths for the targets**

A deep diamond drilling program (as identified in Table 1) has commenced during the second quarter.



**Figure 2: Location of Planned Drill Holes over eight 3DIP Survey Targets within the Rosevale Porphyry Corridor – Clermont Copper Project**



## **CORPORATE AND FINANCE**

### **General**

In January 2009, Mr Andrew Tsang, the Company's largest shareholder at the time with 10.7%, was appointed to the Board as a non-executive director. Mr Tsang has advised that his investment in DRX is seen as long term and that he intends to support the Company over time by maintaining his level of shareholding and, subject to Australian law, to increase that shareholding when circumstances permit.

Mr Tsang is a naturalised Australian citizen who was born and educated in China and who has successfully established and run construction, engineering and property development businesses in China and Australia as well as establishing successful import agencies for Australian manufactured goods into China. He has sound commercial connections with many leading Chinese heavy industry producers. In view of Mr Tsang's successful business background and his relationships with Chinese industry players, the Directors of DRX consider that his appointment will be of considerable benefit to the Company.

Exploration and evaluation expenditure for the quarter was less than normal, totalling \$604,000. This was due to summer weather conditions and delays in gaining access to land along with the development of the Company's own drill rig. The Company held \$1.72million cash at the end the quarter.

Dated 28 April 2009

**Anthony J Fawdon**  
Executive Chairman/CEO

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The information in this report, insofar as it relates to Exploration Results and Mineral Resources, is based on information compiled by Mr David Jelley, of David Jelley Pty Ltd, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Jelley has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Jelley consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.