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**SANDBIRE RESOURCES**

## **QUARTERLY REPORT**

**FOR THE PERIOD ENDED 31 DECEMBER 2004**

**ASX CODE: SFR**

## HIGHLIGHTS

- High grade copper intersections returned from Borrooloola
- Work programs vindicate concepts advanced in the IPO Prospectus
- Exploration targets located at Yannarie and Urandy

### ACTIVITY REPORT

#### ***Borrooloola***

As detailed in the Market Update announcement in December, the Company completed a limited drilling program at Borrooloola to test six of the targets generated earlier in the year. Seven holes were drilled in this program. The drilling contractor encountered drilling difficulties resulting in a less than satisfactory outcome from some of the drilling resulting in holes 4 and 7 being abandoned. The location of the holes is shown on figure 2.

Assays have now been received and significant results of the program are summarised below:

Hole BRCD1, drilled to test the induced polarisation ("IP") anomaly near the Gordons prospect, intersected several mineralised zones:

From	To	Interval (m)	Cu%	Co ppm	Ag ppm	Bi ppm
190.2	191.2	1.0	4.94	4200	95	
197.1	198.5	1.4	1.51			
252.5	255.0	2.5	5.93			
269.0	270.0	1.0	5.36			
319.2	320.5	1.3	1.71			3840

BRCD2, drilled to test a weak IP anomaly south of the gravity anomaly, intersected Tawallah Group rocks with pyrite/iron oxides after pyrite.

Hole BRCD3, drilled to test the gravity anomaly adjacent to the Four Archers fault, intersected a wide interval of Tawallah Group rocks which is concluded to be the cause of the gravity anomaly.

BRCD4 and BRCD7, drilled to test the northern most IP anomaly on the Coppermine Creek Fault near the Four Archers Fault, were abandoned (due to drilling issues).

BRCD5, drilled to test the IP anomaly immediately south of the BRCD4 site, failed to produce a result to adequately explain the observed IP data.

BRCD6, drilled to test a weak IP anomaly south of the Coppermine Creek Fault, intersected McArthur Group rocks with the cause of the anomaly possibly due to a more shale rich sequence.

The copper grades from BRCD1 are high and the result is a good one. Wider intervals and continuity of this mineralisation will need to be demonstrated for the mineralisation to have economic significance.

These results are being assessed and a program for 2005 is being formulated. This program will include further ground geophysics (IP) and follow up drilling.

### **Urandy**

Three of the conceptual targets identified from the regional data and included in the IPO Prospectus were confirmed by the airborne geophysical survey completed by SFR in 2004. The location of these targets is shown in figure 3. During January 2005 these sites were investigated.

The interpreted position of the source for target 1 coincides with a basic intrusive within the Ashburton formation. Whether the source of the magnetic anomaly on the other side of the fault F1 is the same will be assessed by modelling. Prospecting along the fault F1 has located copper mineralisation along strike to the west from the Whynot prospect. Values to 1.5% copper and 0.2 ppm gold have been returned from chip samples. The combination of the results from the surface geochemistry and the complex structure inferred from the magnetic data confirms the highly prospective nature of this zone.

The area around targets 2 and 3 is devoid of outcrop and the source of these magnetic anomalies is yet to be established. Between these two targets, surface prospecting has located a chert horizon which has returned anomalous values; zinc to 3,259 ppm, lead 1,897 ppm, silver 1.2 ppm, copper to 338 ppm.

Other structural targets are also evident in the magnetic data and are being assessed.

### **Yannarie**

All of the data from the Yannarie airborne survey have now been received. The survey flown by the Company was far more detailed than the previously existing regional survey thus providing significantly more information about each of the magnetic targets selected from the regional data and included as conceptual targets in the IPO Prospectus.

During January, six of these targets were investigated in the field. The location of these targets is shown on figure 4.

The source of the feature at target 1 located at the northern end of the survey area is meta-dolerite and no further work is planned.

Target 2 is located near Mt Tucker. The structure is interpreted to be a syncline with the magnetic anomaly restricted to the closure. A potassium anomaly is located immediately in the footwall of the magnetic anomaly and follows it around the fold. No source for the magnetic anomaly was located in the field. The juxtaposition of the magnetic and potassium anomalies is considered to be consistent with a base metal mineralised system.

Target 3 is located near Coria Springs and is underlain by shales. The source of the anomaly does not outcrop although there are several ironstone outcrops within the area of the anomaly.

No source for the target 4 at Winning Hill was found in the field.

Target 5 is located north of Two Peaks and is contained within shales. As with the anomaly near Coria Springs, several ferruginous outcrops are located near the inferred source of the anomaly.

Target 6 is an isolated pipe like intrusive type magnetic anomaly at the southern end of the survey. The source of this anomaly is meta-gabbro.

Four of the anomalies investigated in the field require further investigation. Assuming any base metal mineralisation present is not totally blind, each of the targets can be assessed initially with surface geochemistry. The characteristic features of each of the anomalies investigated - shales, magnetic and radiometric anomalies, and ironstones – are typical indicator features that may be observed near and over ore deposits.

### ***Sandfire***

The seismic reprocessing is proceeding and the results to date have led to significantly clearer seismograms. This phase of the project should be complete in early February and will form the basis for the model building.

### ***Doolgunna***

Compilation of existing exploration data has been completed. Preparation for the next phase of work, an auger geochemistry program over the main structural zone, is underway. This program will be preceded by an aboriginal heritage survey.

### ***Mt Augustus***

Preliminary mapping undertaken over the recent months has located a stratigraphic horizon near the base of the sequence anomalous in base metals. Further geological work is planned to investigate this occurrence. The available aeromagnetic data covering the area has been compiled to assist in this phase of work.

During January, orientation samples were collected to establish parameters for further geochemical sampling.

The option over E09/997 was terminated. Under the terms of the agreement with Lithos Exploration Pty Ltd, the area of influence remains.

***Mt Boggola***

An agreement was signed with Faustus Nominees Pty Ltd, a company associated with Mr G Hutton (a Director of Sandfire) to acquire six tenements at Mt Boggola. The location of the tenements is shown on figure 1. The tenement numbers are E08/1433, 1460 and E52/1736, 1780, 1781, 1782. The consideration is \$44,000 being reimbursement for the cost of application. The area is considered prospective for gold and base metals.

***Tangadee***

Compilation of existing exploration data commenced and field reconnaissance was undertaken.

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**GREG STEEMSON  
MANAGING DIRECTOR**

31<sup>st</sup> January 2005

The geological information in this report is based on data compiled by Greg Steemson. Mr Steemson is a fellow of the Australasian Institute of Mining and Metallurgy. He has consented to the inclusion of this information in the form and context in which it appears in this report.

The Australian Stock Exchange has not reviewed and does not accept responsibility for the accuracy or adequacy of this release.

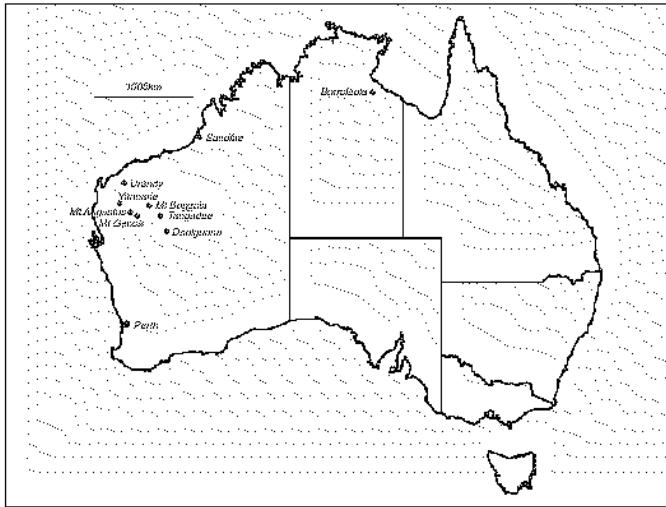


Figure 1 : Sandfire Resources - Project locations

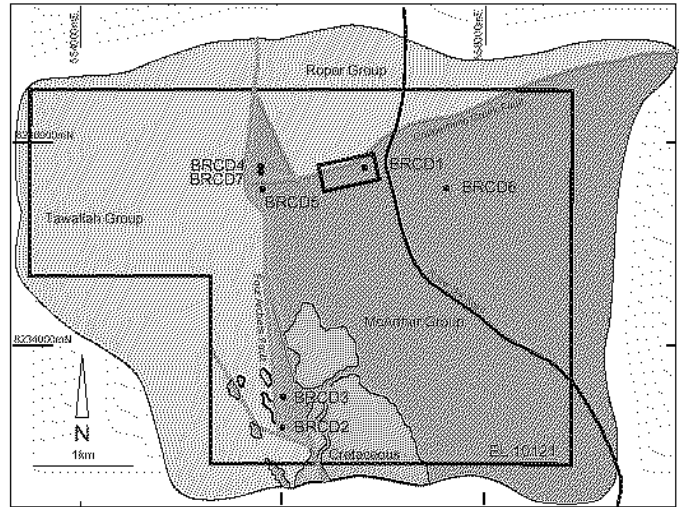


Figure 2 : Borroloola Project - Drill hole locations

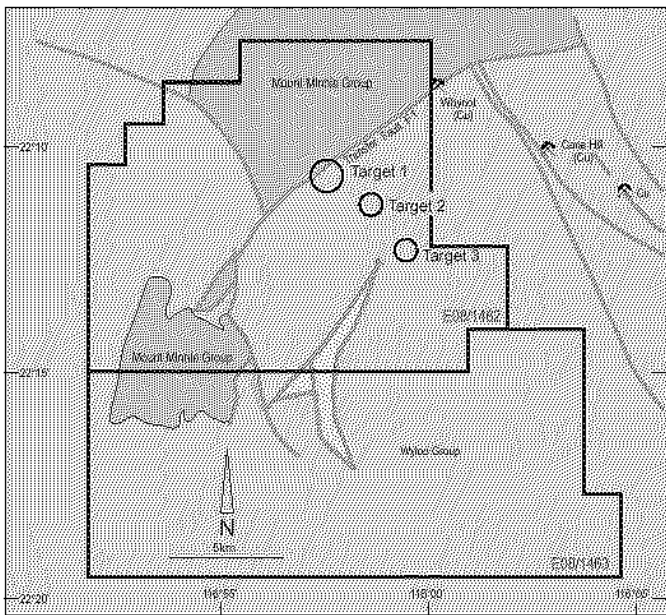


Figure 3 : Urandy Project - Airborne magnetic targets

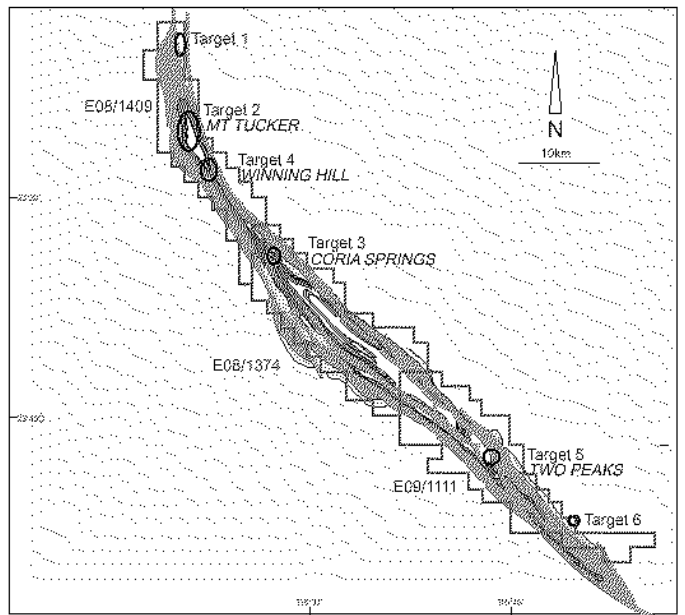


Figure 4 : Yannarie Project - Airborne magnetic targets