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Shuttleton Geophysical Survey

First progress report

by

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BUREAU OF MINERAL RESOURCES, GEOLOGY & GEOPHYSICS

SHUTTLETON GEOPHYSICAL SURVEY

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Geophysical surveys have been conducted at Shuttleton (Nymagee District) on behalf of North Broken Hill Ltd. The surveys were made on an area 1½ mile long and of average width about 2000 feet. Crowl Creek and South Shuttleton mine leases are included in the area surveyed.

Methods used consisted of Magnetic and Natural Earth Current, the former being applied by W.H. Oldham, in December, 1948 and the latter by W.D. Keating and assistants, during January-March, 1949.

The outstanding features present in the results are :-

(a) An Earth-Current anomaly in the form of a pronounced negative-potential centre extending from Traverse 150 to Traverse 180 and with less pronounced extensions to the north and south.

(b) A Magnetic anomaly of low intensity centred at about 159/51.

These anomalies are represented by contour lines on the accompanying plans numbered 052-3 and 052-4.

It is believed that the pronounced part of the earth-current anomaly may be due to spontaneous polarisation effects arising from oxidation of a sulphide body of appreciable dimensions.

The magnetic anomaly is probably due to a formation or bed containing magnetite or pyrrhotite which may be of interest as a target for prospecting.

It is recommended that these anomalies be tested by drilling, commencing with a drill hole, (to test the earth current anomaly) at 170/50, depressed 60° westerly in the direction of the traverse line. This site will be near the track and should have good access. A drill hole length of 800 feet may be needed.

It is considered that further recommendations for testing should await the results of the abovementioned drilling.

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Melbourne
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