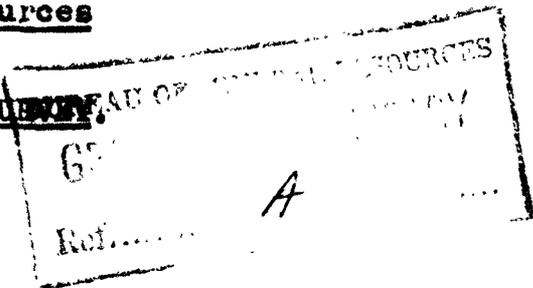


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The geophysical test survey of this field was commenced on 5/6/46 and operations were terminated on 6/8/46 when it was considered advisable to await the results of the drilling campaign for guidance in planning the future geophysical programme.

The accompanying plan shows the areas covered by survey. The most intense work was done on the south-east gossan area where the methods used included, electromagnetic, potential-ratio, spontaneous polarisation, magnetic and resistivity.

No anomalies were obtained from the known and partly-stopped orebodies at Greenwoods and Southern workings. A few anomalies were obtained on the south-east gossan area but they do not seem to be very important. The areas surveyed embrace the sites for exploration drilling, selected on geological grounds by Mr. E. Broadhurst and it is considered that the results of this drilling may provide data essential for assessment of the usefulness in this project of the geophysical survey methods applied to date.

A detailed report of the survey is in preparation and at this stage it is possible to refer in detail only to some of the results on the south-east gossan area.

(a) The accompanying plan shows two lines of electromagnetic anomaly. The No.1 line is adjacent to the outcropping gossan zone on the hanging wall side. If it is related to the flatly dipping gossan zone its origin must be shallow seated and unless it is due to a particular part of the gossan zone exhibiting stronger mineralisation than elsewhere, it is of little value for exploration purposes. The southern end of this anomaly terminates near the southern end of the gossan zone outcrop. The No.2 line of anomaly is of similar strike but it is stepped back westerly. Geological features show a more or less conformable step back.

Both lines of anomaly occur near the bottom edge of the limestone escarpment and it is possible that their existence is due to the change from limestone of high resistivity to the outcropping transition beds of lower resistivity. Both anomalies are of low intensity.

These anomalies were discussed with Mr. Broadhurst and it was agreed that if the drilling at 5500S/00 and 6500S/00 failed to reveal ore, then the No.2 anomaly should be tested by drilling at 6800S/370E.

(b) Resistivity depth probes were made at 5500S/00 and 6500S/00 (drill sites). An analysis of the curve obtained at 5500S/00 gives the following as a possible interpretation.

| <u>Depth.</u> | <u>Resistivity.</u> | <u>Possible identity.</u> |
|---------------|---------------------|-----------------------------------|
| 0- 80 feet | 40,000 ohm cm. | Limestone |
| 80-280 " | 18,000 " " | Transition beds and sandstone. |
| 280- ? " | 2,500 " " | Salt water zone. |

At 6500s/00 the curve is generally similar but more complexity at a depth of about 100 feet is suggested. This may be due to the effect of lateral surface irregularities in the measurements.

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