General Rep No 4.

389001

FIELD PROGRAM

November - December + Early 59
1958 - 1959

GORDON AREAS

58-253

Field Programme - Gordon Area

I.E.E. 14/11/58.

# LYELL - E.Z. - EXPLORATIONS

G74

389002



14th November, 1958.

To: Mr. G.F. Hudspeth.

Field Programme - November/December & Early 1959

Gordon Area

The field programme can be broadly divided into two phases, the first taking place in late November and December and continuing into 1959 with the investigation and preparation of geophysical anomalies and areas. The second phase will begin with the introduction of the Bureau of Mineral Resources field party and the equipment from McPhar Geophysics Ltd. in early January. In these latter surveys in thick bush, the cutting and pegging of the traverse lines is the largest single part of the work, consequently the preparation of these areas prior to the arrival of the electromagnetic/gravimetric equipment will considerably accelerate the rate at which these instruments can be used.

I. Phase I

1. Period Late November-December-early 1959.

2. Number of Parties 4

3. Geophysical Equipment One Watts vertical force magnetometer, Two Sharpe D.I.M. dip circles.

4. Programme

A. Party 1 (M. Audley-Charles, 4 bushmen & 1 student)

(a) Anomaly 20/6

Preparation of traverse lines, geological mapping, soil sampling and a magnetic survey with the Watts instrument.

(b) Moore's Valley

Preparation of traverse lines, magnetic survey with Watts instrument to outline trace of Lyell Shear, geological mapping.

B. Party 2 (P. Rodda, 2 bushmen & 1 student)

(a) Anomaly 20/4

Preparation of lines, soil sampling and geological mapping.

(b) Anomaly 20/2

As 20/4.

(c) Anomalies within the ultrabasic belt to the west of Birch Inlet, using a dip circle but otherwise as 20/4.

¢. Party 3 (I.M. Paltridge & 2 bushmen)

(a) Anomaly 20/5

Preparation of lines, soil sampling and geological mapping.

(b) Anomaly 23/1

As 20/5 plus magnetic survey with a dip circle.

(c) Anomaly 23/2

As 23/1.

(d) Lewis River Zone

As 20/5.

(e) Anomalies 9/4 and 18/4

D. Party 4 (R. Elms & 2 bushmen)

(a) Anomalies in the ultrabasic belt to the west of Birch inlet, 10/14 and 10/5.

Preparation of lines, soil sampling, geological mapping, magnetic survey with dip circle.

389004

II. Phase II

1. Period Early January onwards.

2. Number of Parties 4 to 6. The number of parties will vary with the necessity of training personnel in the use of the instruments from the McPhar Geophysics Ltd.

3. Geophysical Equipment As for Phase I, plus a Worden Gravity Meter, the B.M.R. equipment ("Slingram", Turam", Watts vertical force magnetometer and a Worden Gravity Meter) and the McPhar Geophysics equipment (AFMAG, Vertical Coil and Induced Polarisation apparatus in March).

4. Programme

The Phase I programme will become part of Phase II. By the time Phase II commences anomalies 20/6, 20/5, 20/4, 23/2, 23/1, 10/14 and 10/5 will have been prepared as already indicated under the previous section. The use of individual parties will continue, however; the programme is best described as under:

A. Bureau of Mineral Resources Field Party (D. Rowston+, 1 assistant geophysicist+, 2 students+, 1 cook & 1 bushman)

(a) Anomaly 20/6

Turam and gravimetric survey.

(b) Anomaly 9/4

Turam and gravimetric survey.

(c) Moore's Valley

If required, the B.M.R. will carry out a seismic refraction survey of a portion of this area, the area to be covered by the magnetic survey in Phase I. However, prior to this seismic survey, L.E.E. will have to carry out a "reconnaissance"

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+ B.M.R. personnel.

gravity survey in order to obtain an order of magnitude of the thickness of these recent sediments.

B. "AFMAG"

The "Afmag" apparatus will primarily be used, in the first instance, in areas of thick bush.

(a) Anomaly 20/6

(b) Anomaly 20/4

(c) Anomaly 20/2

(d) Other areas - Moore's Valley, ultrabasic belt (10/5 & 10/14)

C. Vertical Coil

This apparatus will primarily be used in areas of open country.

(a) Anomaly 20/5

(b) Anomaly 23/1

(c) Anomaly 23/2

(d) Lewis River Zone

(e) Anomaly 18/4

(f) Pelias Cove

D. Induced Polarisation Apparatus

This apparatus will not be available until March when it will be used over areas of interest which exist under the Tertiary and Recent sediments.

E. Borehole Electromagnetic Survey Apparatus

When this instrument is available the two diamond drill holes at Lake Jukes can be surveyed.

III. General Notes

The programme is entirely flexible and will be modified as the field results become available.

Geologist-in-Charge