SECOND ANNUAL REPORT ON EL 1703, NORTHERN TERRITORY

BY

BRIDGE MINERALS PTY. LIMITED

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ILLUSTRATIONS

1. INTRODUCTION

1.1 Tenure

Exploration Licence No. 1703 was first granted to Bridge Minerals Pty. Limited for a period of twelve months beginning July 19th 1978. The original area of 49.70 square miles (128.72 square kilometres) was reduced to 18.8 square miles (48.69 square kilometres) at the end of the first year, and renewal of the reduced area was granted for a period of twelve months beginning July 20th 1979. The co-ordinates of EL 1703 during the second year of tenure are shown on Figure 1.

1.2 Location

Figure 1 shows the location of EL 1703, which is situated about 35 miles south-east of Tennant Creek township, and is in the area covered by the Bonney Well 1:250,000 sheet area.

1.3 Access

The main access road into EL 1703 leads from the Stuart Highway south-easterly to Ooradigee Rockhole, to provide access for a group of Aboriginal people who live at the rockhole pending determination of a Land Rights Claim. The Aboriginal people are not keen on use of the road by Bridge Minerals personnel.

Road access is also possible via the Warramunga Seismic Station, but, understandably, use of this road is not permitted because of possible interference with seismic experiments. Therefore overland travel is often necessary, and is relatively easy for four-wheel drive vehicles.

1.4 Topography and Drainage

The land surface consists mostly of a plain, relieved by a few isolated mesas up to 20 metres high, of sediments of the Lower Proterozoic Warramunga Group; boulders of Lower Proterozoic granite are frequent in the northern point of the Licence area.

The area is drained by Turkey Creek and the Gosse River, both of which are deep with steep banks and sandy bottoms. These streams run only after heavy rainfall.

1.5 Water Supplies

Supplies of natural water are found only in isolated waterholes in the Gosse River and in Turkey Creek. These holes are not permanent and the availability of water is governed by rainfall, which is sporadic.

1.6 Air Photograph Coverage

Complete cover is available on photographs at a scale of 1:85000 approximately; the photographs were taken in 1971.

1.7 Aboriginal Sacred Sites

On November 28th 1979 the company lodged a request with the Central Land

2. PREVIOUS INVESTIGATIONS

2.1 Geology.

The Bureau of Mineral Resources, Geology and Geophysics has mapped and published the geology of the Bonney Well 1:250000 Sheet, (Smith, 1968), and (Smith, Stewart & Smith, 1961) reported on the regional geology of the Davenport and Murchison Ranges, which included the area of EL 1703.

In 1979, Bridge Minerals Pty. Limited commissioned an airborne spectrometer and magnetometer survey of EL 1703. The survey was conducted by Geometrics International Corporation of Sydney, New South Wales. The survey had a flight-line spacing of 300 metres, east-west, at an altitude of 80 metres, and used a Geometrics Model GR-800 Gamma Ray Spectrometer, and a Geometrics Model G-803 Proton magnetometer.

The radiometric data showed no anomalies of outstanding merit, but there were 32 anomalies which warranted examination on the groud; 20 of these were located and inspected in 1979, but none showed encouraging results.

The magnetic data, which was displayed as Residual Magnetic Intensity Contours, showed two patterns which were interpreted as representing the Warramunga Group and intrusive Precambrian granite, respectively.

3. SECOND YEAR'S INVESTIGATION 1979/1980

Because of the disappointing results of the ground examination of 20 radiometric anomalies in the first year, more emphasis was placed on magnetometer results in the second year, although the remaining radiometric anomalies were also examined.

The results were as follows:

3.1 Radiometric Anomalies

These are shown on Plate 1, which for completeness also shows Anomolies Nos. 1-20 which were examined in the previous year. Anomalies Nos. 21 to 24 inclusive are located in granite, with low total counts and no sign of uranium mineralisation Likewise, Anomalies 28 to 31 inclusive are also in granite.

Anomaly No. 25 is located in low outcrops of sandstone siltstone and shale of the Warramunga Group. There is no obvious reason for this anomaly, and Total counts are low.

Anomaly No. 26 is located on a thickly-vegetated western slope of a low hill composed of Warramunga Group sediments. No mineralisation was evident, and Total counts are low.

Anomaly No. 27 occurs in sheared granite which has been cut by numerous quartz veins trending at 330 degrees; There are several thin bands of sandstone of the Warramunga Group, trending 330 degrees, and Total counts on this sandstone are 50-100 cpm, compared with 150-175 on the surrounding granite. It is doubtful if this contrast is the cause of the anomaly, but in any case the anomaly does not warrant further work.

Anomaly No. 32 is on a soil-covered plain which, according to magnetic data is underlain by granite. Total counts were very low.

3.2 Airborne Magnetometer Results

The aeromagnetic data were examined by a consultant geophysicist, who selected

3.2 Airborne Magnetometer Results (Cont'd.)

These anomalies are labelled A - F on Plate 2; only these anomalies which were proven by a flight-line were considered, and although there may be others on trend between Anomalies E and F, confirmation would require an airborne survey flown in a different direction from the east-west lines of the original Bridge Minerals survey.

Anomalies A, C, and D lie just outside the eastern boundary of EL 1703 and were not examined apart from a brief ground inspection to ascertain if any outcrops were present. Anomalies C and D are on an alluvial plain, but A is located on a low ridge where the Warramunga Group crops out poorly.

The magnetic pattern indicated that Anomalies E and F were on the Warramunga Group, and ground examination confirmed this in the case of Anomaly E, whilst F is on a soil-covered plain. Other ground checks confirmed that the broad swirling pattern north of the E to F trend was due to granite. Anomaly B is located on a soil-covered plain, but the magnetic pattern there also indicates the presence of the Warramunga Group.

Depth calculations on Anomaly F indicated a source about 150 metres below the surface and therefore the shallower Anomalies B and E were chosen as test cases for ground magnetometer surveys, i.e., the selection included the anomaly on a soil-covered plain and one where the Warramunga Group crops out.

3.3 Ground Magnetometer Surveys

Geological staff of Bridge Minerals Pty. Limited located Anomalies B and E on the ground, gridded them and conducted ground surveys, using a Geometrics portable Proton Magnetometer, Model G - 816. The survey results were then processed by Wongela Geophysical Pty. Ltd. of Sydney, who produced the contour maps shown on Plate 3, and have calculated the following depths to the sources using an empirical factor of 1.2 to the straight slope determinations:

Anomaly B,	51 metres
" E	81 "

In the case of Anomaly B, it is now obvious that the ground survey should have been extended southwards for 100 metres in order to close the anomaly.

There are no outcrops at Anomaly B, but the western half of Anomaly E covers a mesa of sandstone, shale chert and interbedded/ volcanic rocks of the Warramunga Group. These rocks are strongly jointed and the beds are contorted, with rapid changes of strike from west to north and back again to west, approximately in the shape of the letter S. The beds dip steeply and are strongly weathered. In the eastern part of the anomaly (i.e., east of the 200W line) the only outcrops consist of several long parallel quartz veins, all striking at 330 degrees. Therefore because of the contortions in the beds on the mesa it is impossible to predict which beds, if any, are within the anomalous area centred at 00/300N.

4. CONCLUSIONS

4.1 Radiometric Results These are not sufficiently encouraging to warrant additional investigations.

4.2 Magnometer Survey Results Anomalies E and B warrant drilling, to determine the nature of the source material and its mineral content.

6. REFERENCES

Bridge Minerals Pty. Limited, 1979 - First Annual Report on EL.1703, Northern Territory

Smith, K.G., Stewart J.R., and Smith, J.W., 1961 - The Regional Geology of the Davenport and Murchison Ranges, Northern Territory. BMR Report 58.

Smith, K.G., 1968 - Bonney Well, Northern Territory. 1:250,000 Geological Series Explanatory Notes. BMR, SF/53-2

T.L.2N

T.L.1S

M. R. 244

E. L. 1703

21° 5' S

CREEK

TURKEY

GOSSE

RIVER

134° E

134° 30' E

25' S

21° 10' S

T.1.W
T.2E
T.3W
T.3E
T.4.W
T.5E
T.6.W
T.7.E
T.8.W
T.9E
T.10.W
T.11E
T.12.W
T.13.E
T.14.N
T.15.E
T.16.W
T.17E
T.18.W
T.19.E
T.20.W
T.21.E
T.22.W
T.23.E
T.24.W
T.25.E
T.26.W
T.27.E
T.28.W
T.29.E
T.30.W
T.31.E
T.32.W
T.33.E
T.34.W
T.35.E
T.36.W
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T.43.E
T.44.W
T.45.E
T.46.W
T.47.E
T.48.W
T.49.E
T.50.W
T.51.E
T.52.W
T.53.E
T.54.W
T.55.E
T.56.W
T.57.E
T.58.W
T.59.E

T.L.2N

T.L.1S

NORTHERN TERRITORY GEOLOGICAL SURVEY

NORTHERN TERRITORY GEOLOGICAL SURVEY

CR80/208

BRIDGE MINERALS PTY. LTD.

E.L. 1703 N.T.

LOCATION OF AIRBORNE ANOMALIES

FLIGHT LINES

Scale 1:25 000 (approx.)

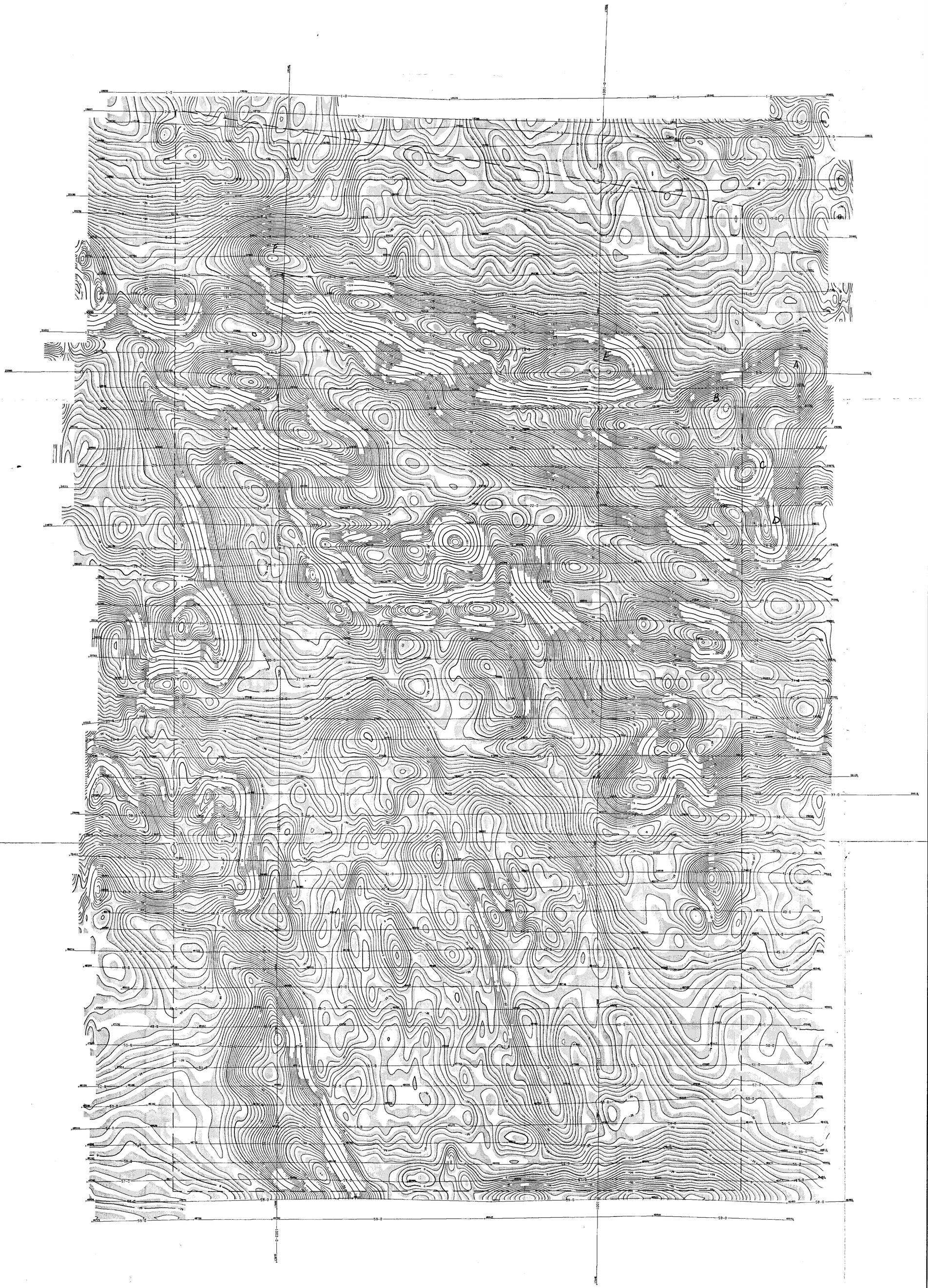
OCTOBER, 1979

PLATE 1

RESIDUAL MAGNETIC INTENSITY

EL 1703 NORTHERN TERRITORY

BRIDGE MINERALS PTY. LIMITED



APPROXIMATE SCALE 1 : 25,000

CONTOUR INTERVAL	5.0 GAMMAS
SHADING ON LOW SIDE	2.5 GAMMAS
DATUM	1975 IGRF UPDATED TO 1979
FLIGHT LINE SPACING	300 METRES
FLIGHT ALTITUDE	80 METRES MTC
FLOWN AND COMPILED	1979
INSTRUMENT	GEOMETRICS G-803 PROTON MAGNETOMETER

N

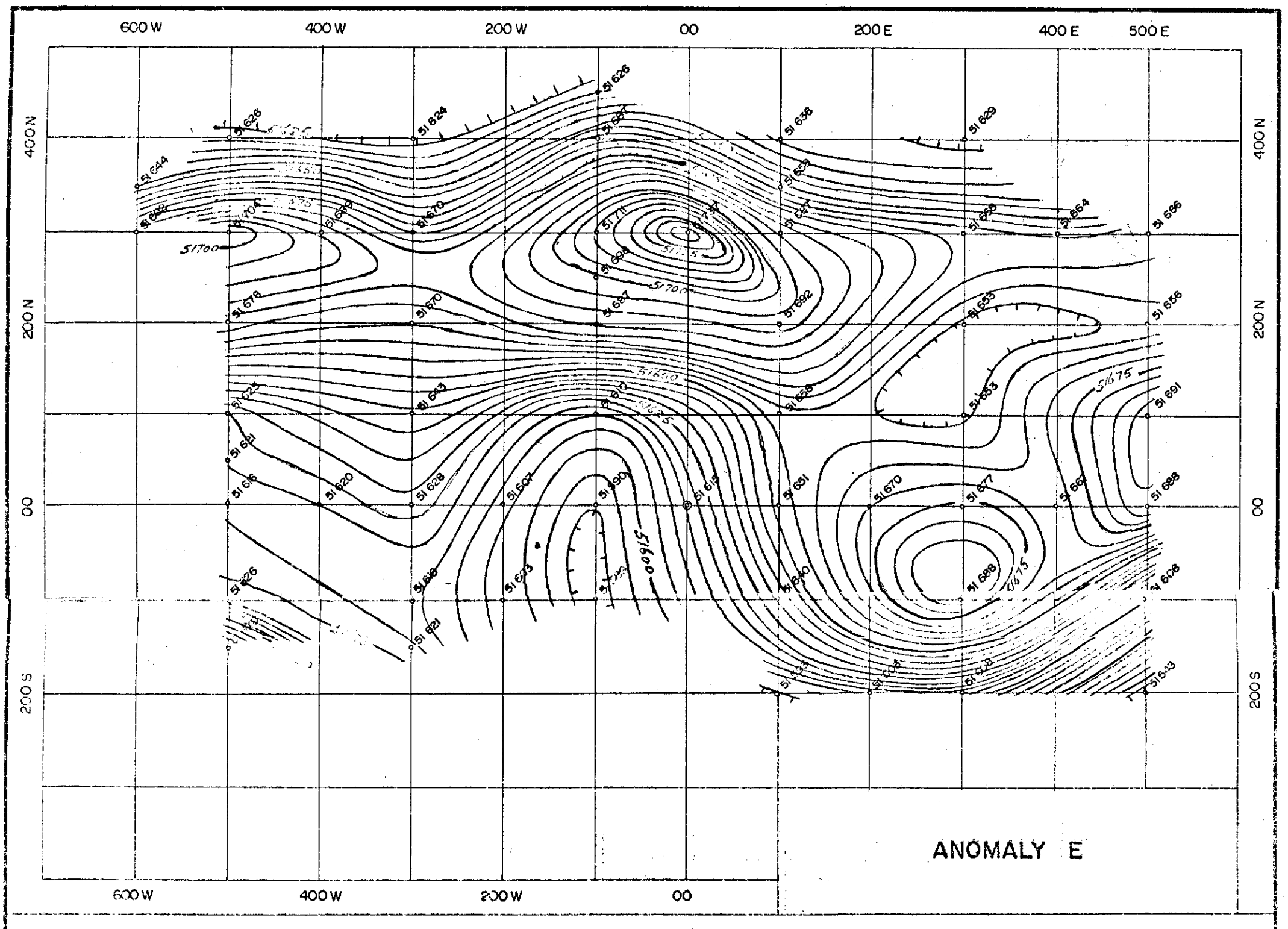
SURVEY AND COMPILATION BY:

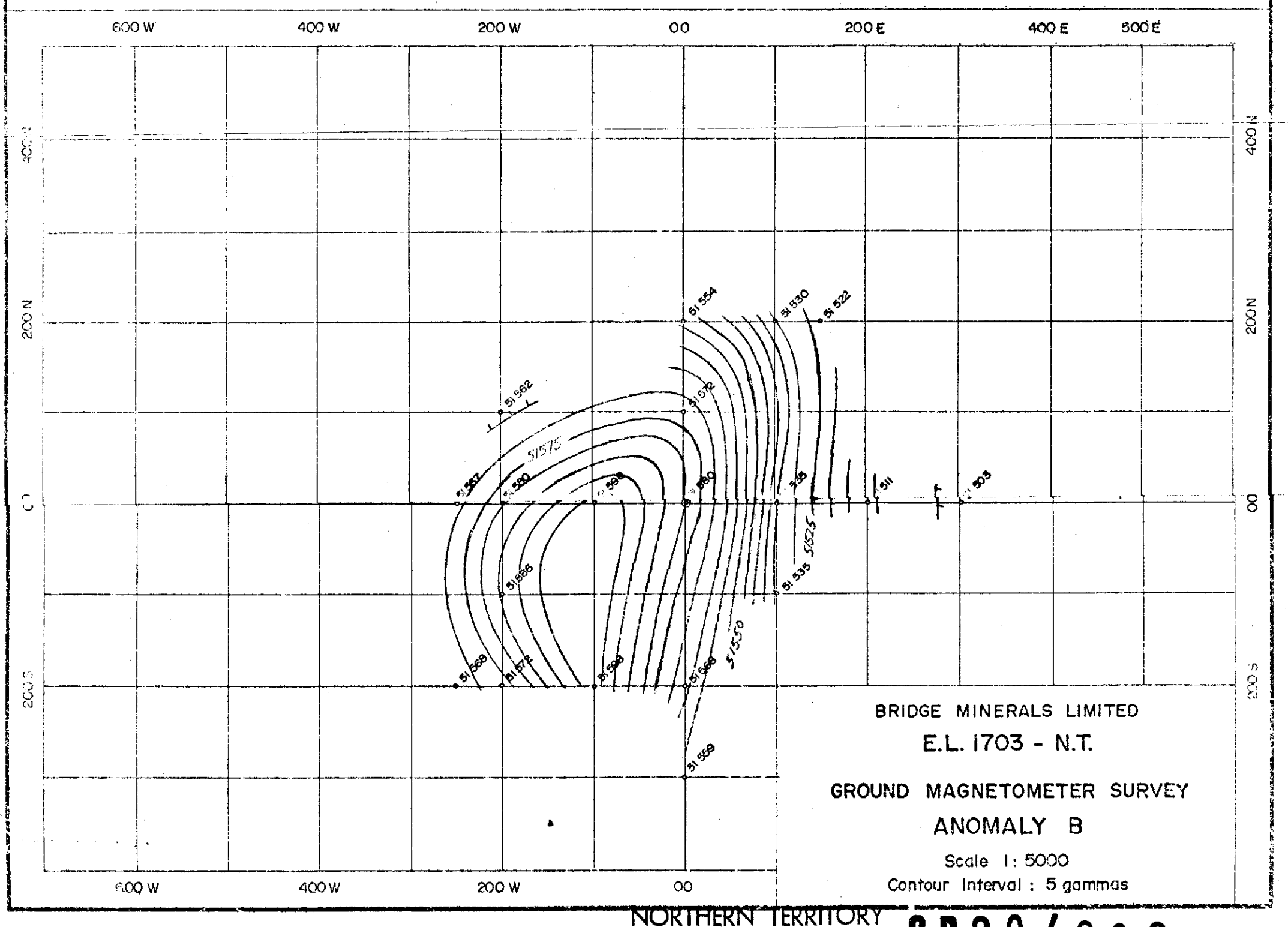
geoMetrics

NORTHERN TERRITORY GEOLOGICAL SURVEY

CR80/208

PLATE 2





NORTHERN TERRITORY GEOLOGICAL SURVEY **CR80/208** PLATE 3.