

000

OPEN FILE

486001

DSG

COMINCO EXPLORATION PTY. LTD.

MICROFILMED

75-1135

PROGRESS REPORT

on

Exploration Licence 22/73

St. Dizier

for the 6 months ending 17/12/75.
D.C. Simpson
15/12/75.

SUMMARY

During the reporting period, the bulk of work carried out has been the interpretation and assessment of data from the airborne survey carried out in the previous period.

The most prominent features of the magnetic contours are two intense anomalies, one centred on the St. Dizier prospect, the other centred on the "Big H" prospect approximately 2km to the east. The second anomaly is the more intense of the two, and it is planned to conduct a ground magnetic survey over this area.

GEOPHYSICS

An airborne geophysical survey was flown over parts of Exploration Licence 22/73 during April, 1975 in order to:-

- i) trace the extent of a known magnetic skarn, and
- ii) locate any other skarn occurrences within the exploration licence.

The survey utilised a helicopter borne electromagnetic system (McPhar H-400, two frequency, out-of-phase system) and proton magnetometer (Geometrics 804).

The survey lines were flown in a north or south direction, with line spacing of 160 metres. A nominal aircraft terrain clearance of 140 metres was maintained for the survey, giving e.m. detector height of 50m and magnetic sensor height of 120m. The magnetic data were computer collated and reduced to contour cuts on the flight path recovery. This information was hand contoured to a 20 gamma contour interval. (See Plan X-StD 38 and 39).

The e.m. data were interpreted, on a line by line basis, according to procedure recommended by McPhar and outlined by Ghosh (1972). The anomalies of significance for mineral occurrences are plotted on the accompanying plan, No. StD 35.

Interpretation

The electromagnetic data show severe surface noise effects due to high saline water content in the glacial cover, as the western edge of the E.L. is the coast line. This severe interference masks over 50% of the survey area.

The strong e.m. and magnetic anomalies on lines #54N and 55N are related to the St. Dizier tin/magnetite occurrence that has been thoroughly investigated in the past. These anomalies form portion of a trend which extends from line #56 to line #43, a distance of three kilometres.

The e.m. and magnetic anomalies recorded on lines #43 to #46 and on lines #53 to #57, inclusive, are typical of those due to tabular (narrow sheet) sources. The combination of good conductivity and high susceptibility for the source is encouraging for the presence of mineralisation. The inferred coincidence of these parameters in one source will have to be confirmed by surface follow-up.

The broad e.m. anomaly pattern between line #47 and #52 is typical of the response due to surface (horizontal sheet) masking effects, say conductive overburden, which does not allow the continuity of the trend to be defined. However, the magnetic data does indicate that the trend exists under alluvial cover.

A broad, deep-seated magnetic anomaly is observed to the south-east of the area mentioned above, over mapped outcrop of the Heemskirk granite. As this granite is normally devoid of magnetic response, the anomalous area will be re-mapped to enable this ambiguity to be resolved.

The magnetic pattern throughout the remainder of the area can be directly related to outcropping geology and does not indicate further potential for mineral occurrences of the type previously encountered.

Recommendations

The current detailed geophysical grid at St. Dizier will be extended to the east at 100 metre line spacing to delineate the extent of the magnetic skarn. Infill lines at 50 metre line spacing should be surveyed, if required. Magnetic and SP techniques will initially be applied to the new grid. Electromagnetic (vertical loop) coverage will also be applied to test the position of the conductor relative to the magnetic source. It may be necessary to apply the induced polarisation technique to the area if the ground e.m. cannot penetrate the conductive overburden in the centre of the area of interest.

003

The above geophysical techniques should be able to delineate the area of interest for evaluation by geological and geochemical methods.

EXPENDITURE

During the period June 18, 1975 to December 17, 1975, the following expenditures were incurred on Exploration Licence 22/73:

Geology	304
Geophysics	778
Legal	12
Miscellaneous	23
	<u> </u>
	\$1,117
	<u> </u>

Submitted by: R. Wood
for D.C. Simpson
Geologist.

Endorsed by: L.V. Gentle
L.V. Gentle
Chief Geologist.

DCS:KMW
15/12/75.

004

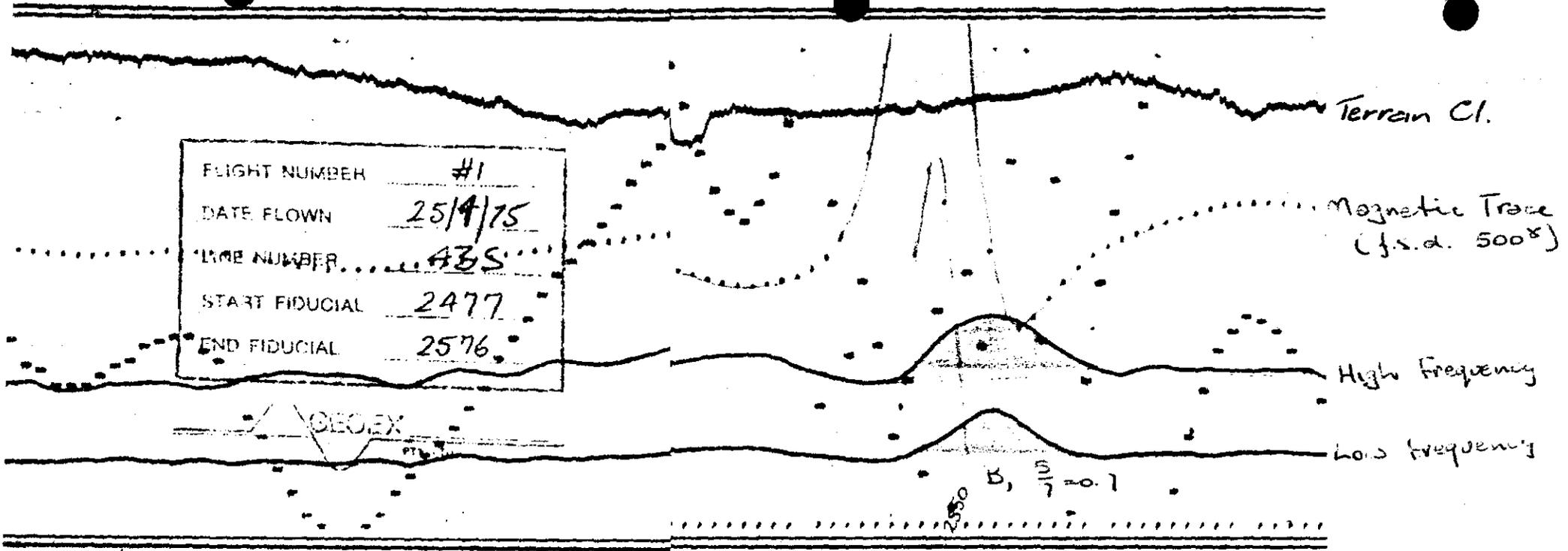
ATTACHMENTS

Plan StD. 35	Flight path plot	1:10,000
X-StD. 38 and 39	Aeromagnetic contours	1:10,000

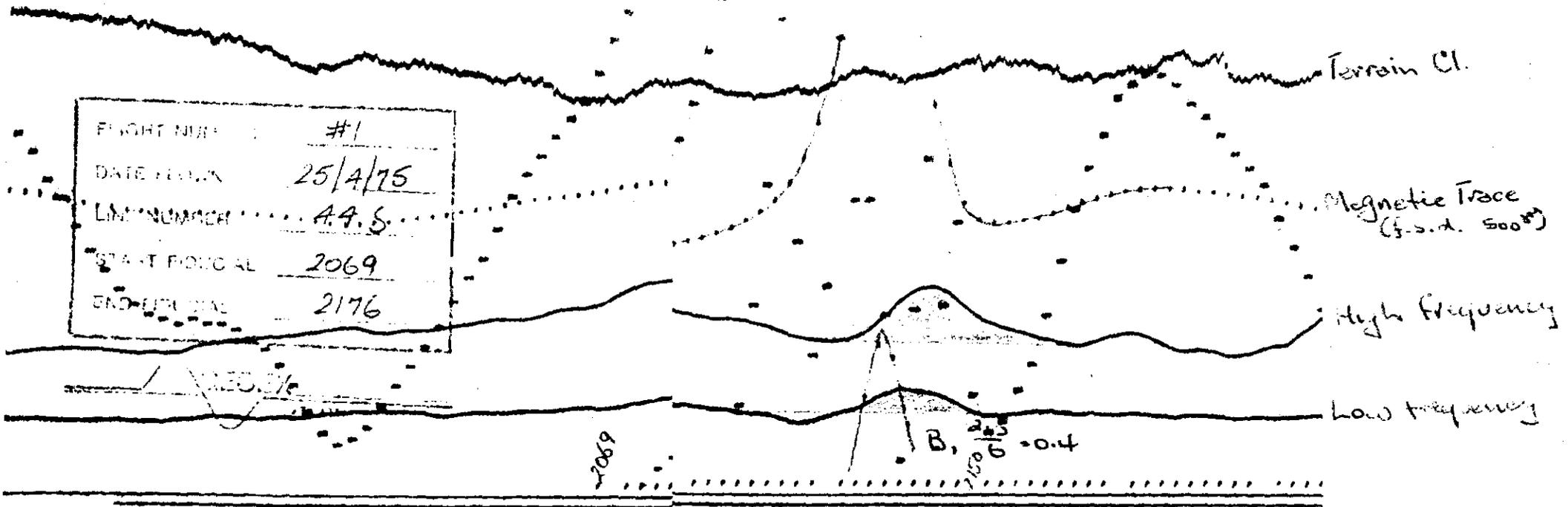
REFERENCE

Ghosh, M.K., 1972. "Interpretation of Airborne E.M. Measurements Based on Thin Sheet Models". Unpublished Ph.D. Thesis, University of Toronto.

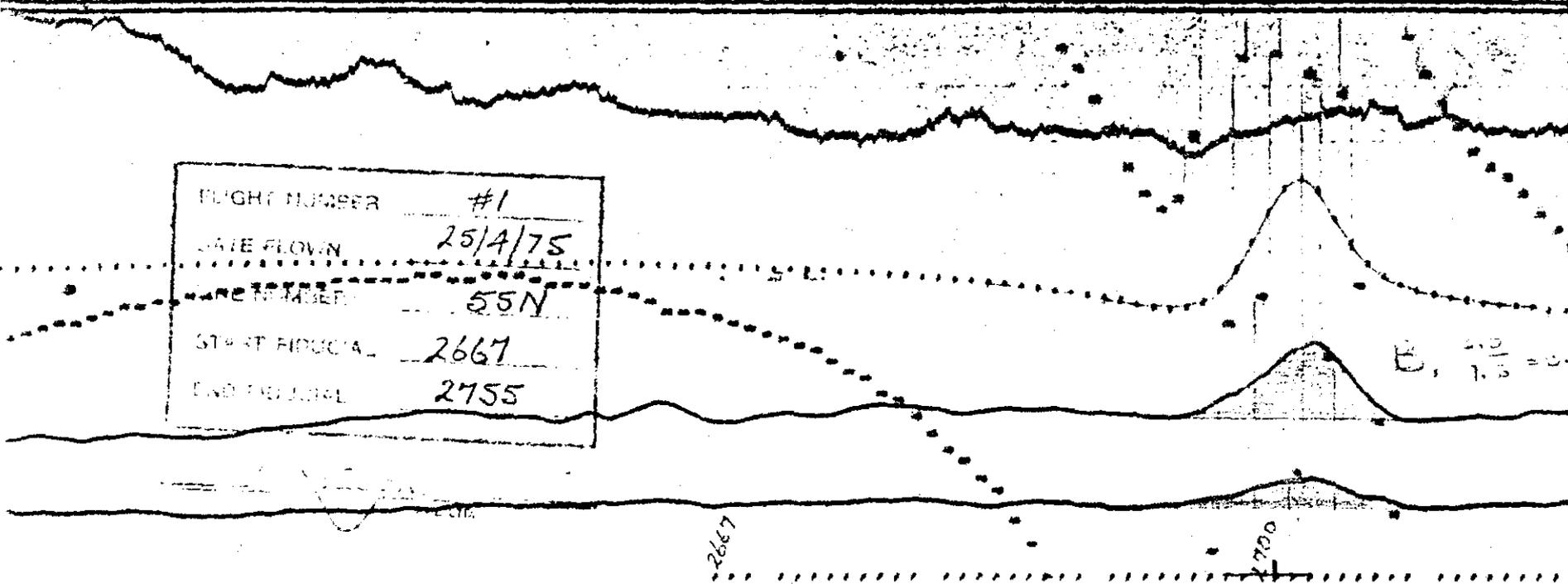
FLIGHT NUMBER	#1
DATE FLOWN	25/4/75
LINE NUMBER	435
START FIDUCIAL	2477
END FIDUCIAL	2576



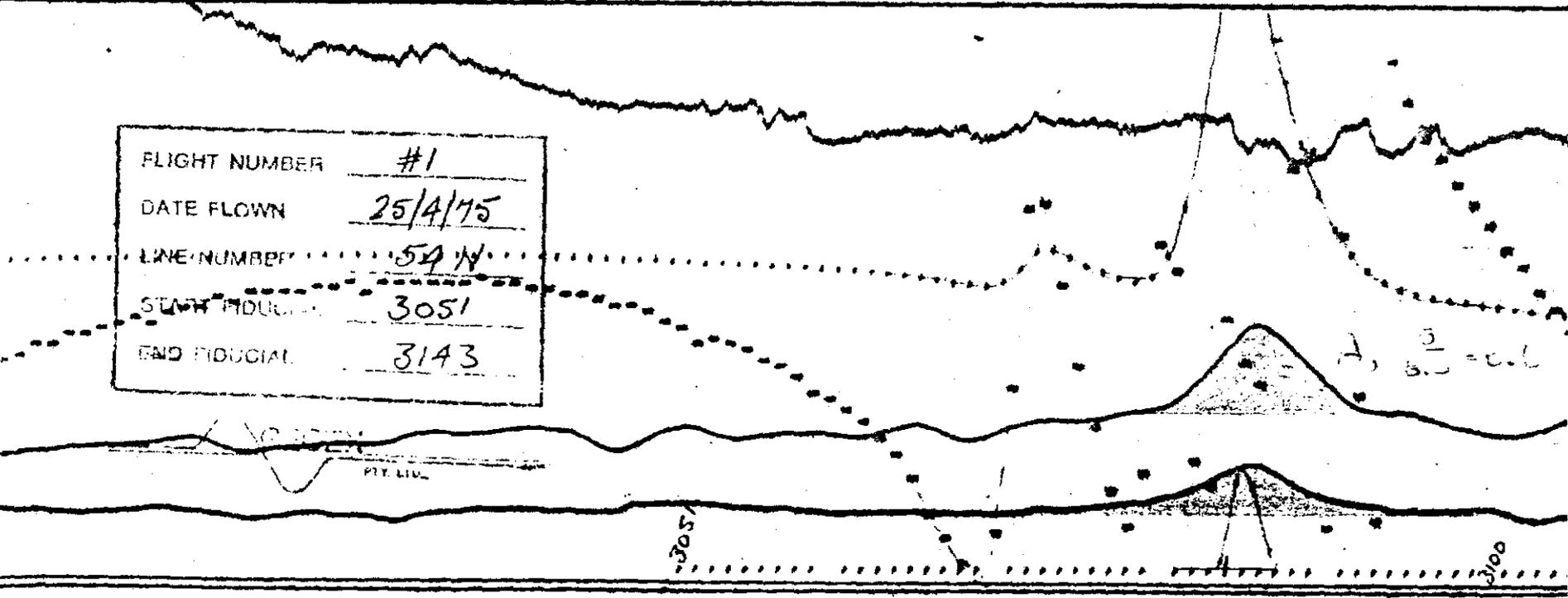
FLIGHT NUMBER	#1
DATE FLOWN	25/4/75
LINE NUMBER	445
START FIDUCIAL	2069
END FIDUCIAL	2176



FLIGHT NUMBER	#1
DATE FLOWN	25/4/75
LINE NUMBER	55N
START FIDUCIAL	2667
END FIDUCIAL	2755



FLIGHT NUMBER	#1
DATE FLOWN	25/4/75
LINE NUMBER	54N
START FIDUCIAL	3051
END FIDUCIAL	3143



1064

1300

1350

207

486008

#1
14/75
47S
419
522

419

450

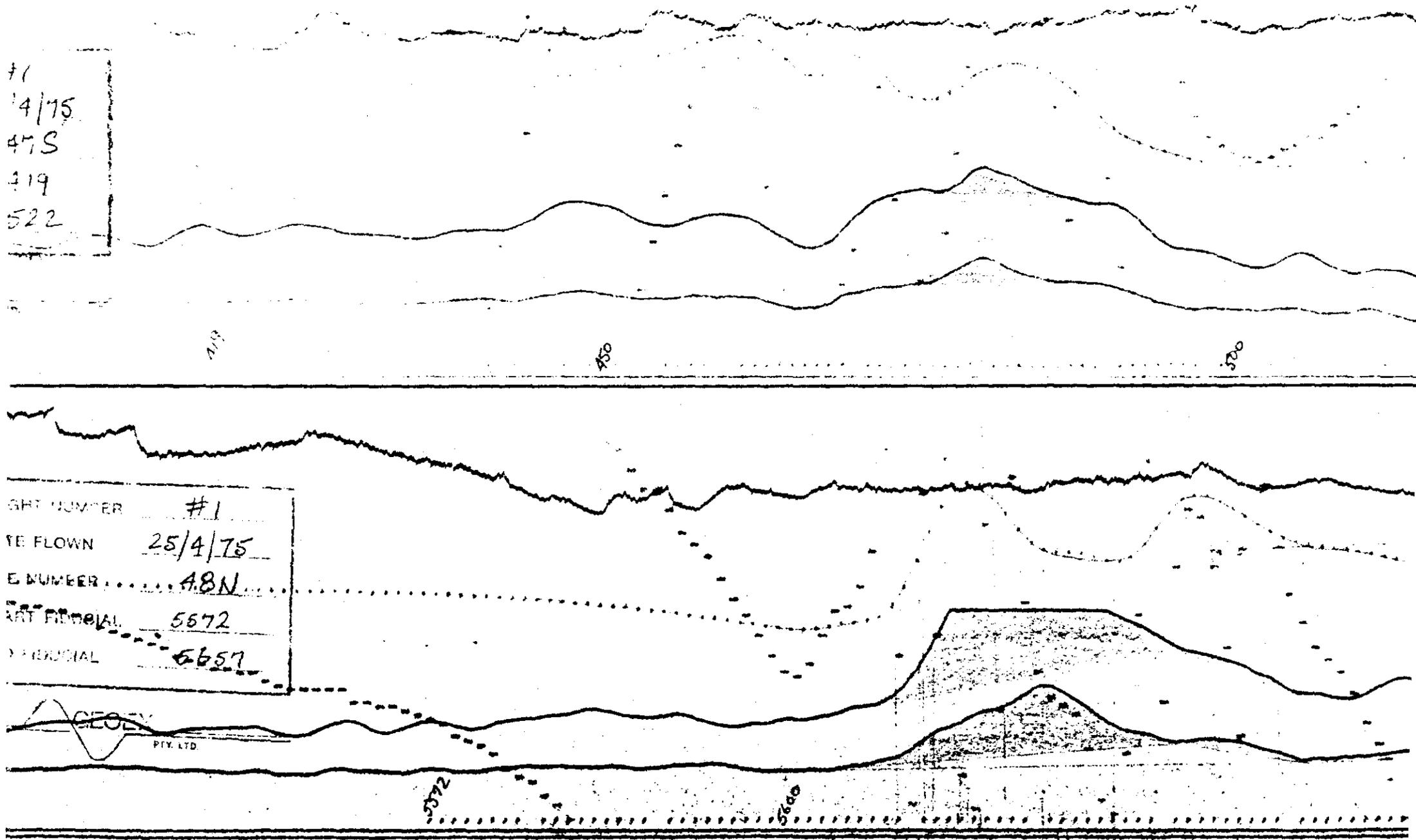
500

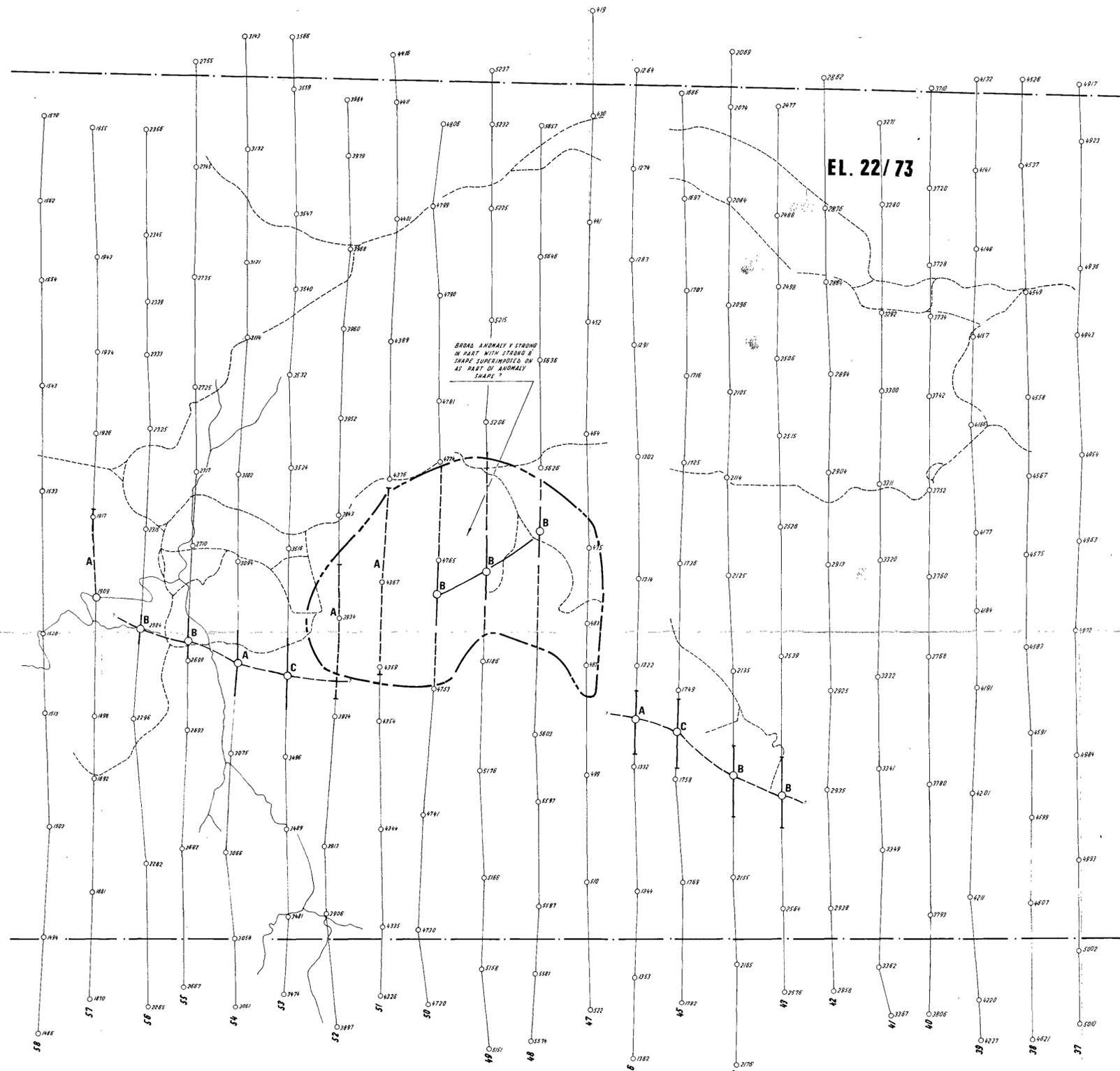
GHF NUMBER	#1
YE FLOWN	25/4/75
E NUMBER	48N
ART FIDUCIAL	5572
Y FIDUCIAL	5657

GEOLY
PIV. LTD.

5372

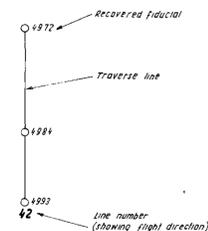
5400



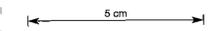


EL. 22/73

BROAD ANOMALY STRONG
IN PART WITH STRONG S
SHAPE SUPERIMPOSED ON Q 26338
AS PART OF ANOMALY
SHAPE 1



EM SURVEY FLOWN BY GODEX APRIL 1975

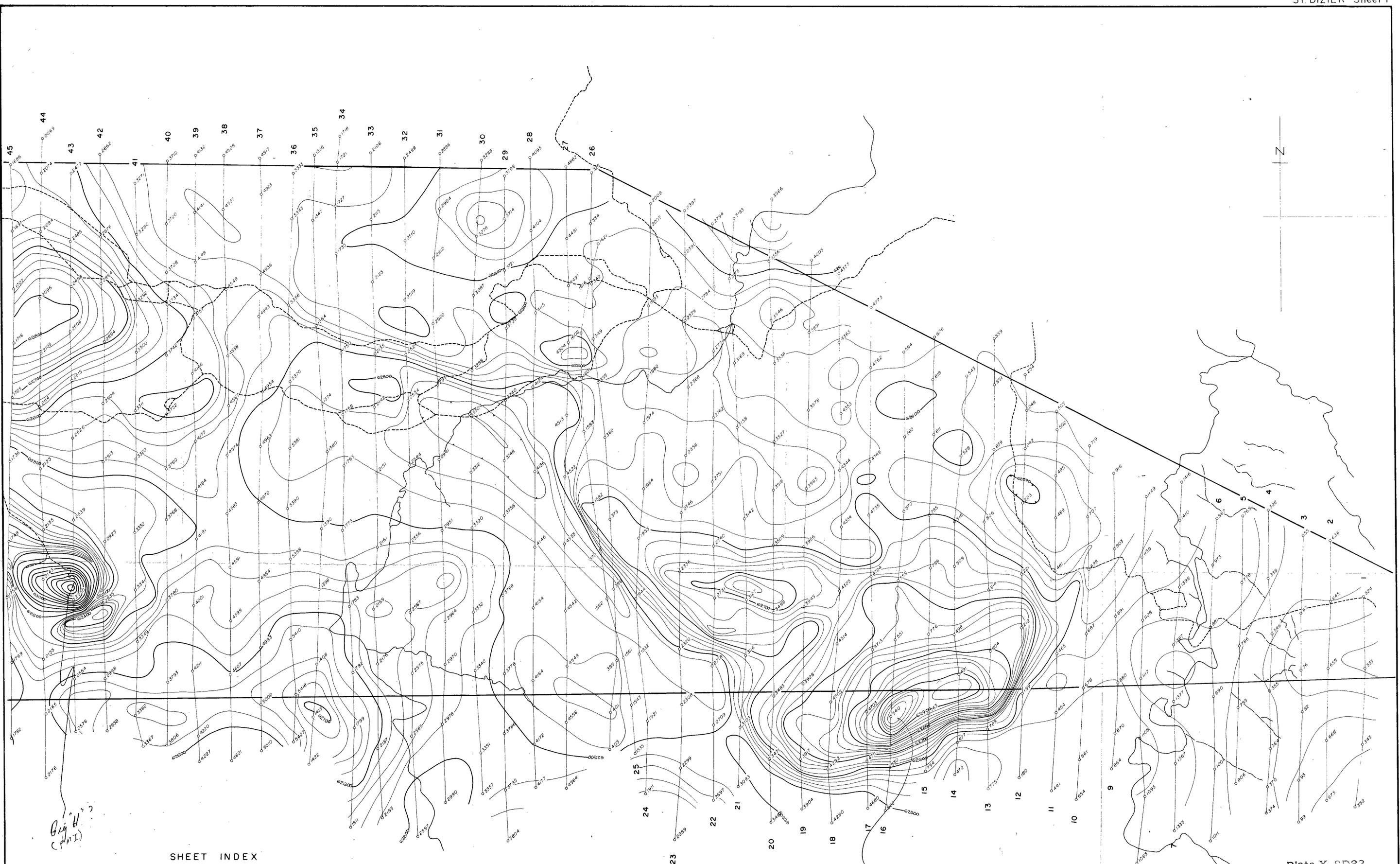


486009

75-1135

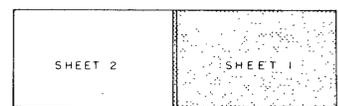
DRAWN BY J.B.		TRACED BY F.D.		COMINCO EXPLORATION PTY. LTD.	
CHECKED BY	REVISOR	DATE	DATE		
LOCATION CODE		SCALE 1:10000	DATE DEC 1975	PLATE NO 970 35	003

NORTH WEST TASMANIA
ST DIZIER EL 22/73
FLIGHT PATH PLOT WITH
MINOR E.M. INTERPRETATION



*Big H's
(M.I.)*

SHEET INDEX



Sobits?

Total magnetic field contour interval

- 20 gammas
- 100 gammas

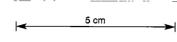


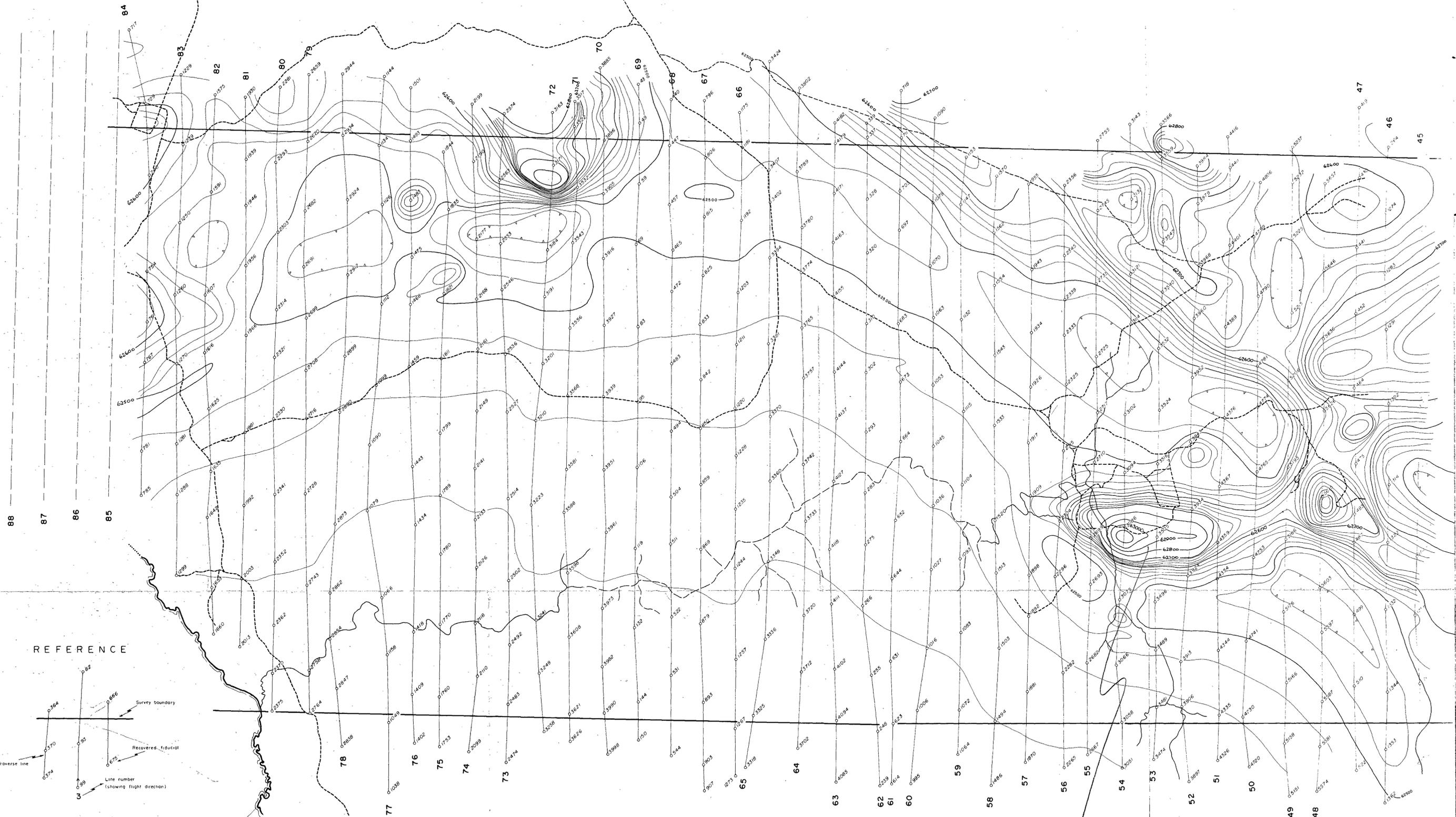
Plate X-3D33
75-1135

COMINCO EXPLORATION PTY. LTD.

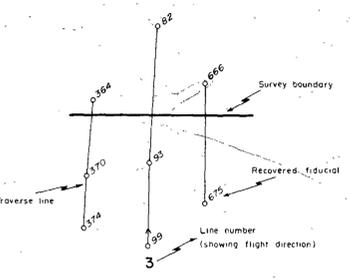
ST. DIZIER
AEROMAGNETIC CONTOURS

SCALE 1:10000 008

SURVEYED APRIL 1975 APPROVED J. E. HAIGH
DRAWN BY I. B. PROJECT NO. AFP 75/09-1



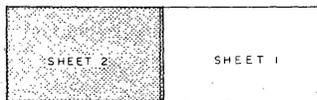
REFERENCE



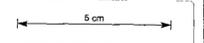
SURVEY SPECIFICATIONS

- HELICOPTER: Bell Jet Ranger 206B VH-BLR
- EM SYSTEM: McPhar H400 dual frequency sequential transmission 340Hz and 1070 Hz
- MAGNETOMETER: Geometrics G803 proton precession (reading accuracy ± 1 gamma)
- DIURNAL RECORDER: Geometrics G806 proton precession magnetometer with Rutrack recorder and crystal clock
- ALTIMETER: Bonzer radar
- ANCILLARY EQUIPMENT: Geox intervalometer, Century 444 analogue light beam recorder, Geox film digital recorder, Vinten 16 mm ground tracking camera
- READING INTERVAL: 1/023 seconds
- NOMINAL AIRCRAFT SPEED: 90 knots (Mean reading spacing 47 metres)
- NOMINAL AIRCRAFT SURVEY ALTITUDE: 140 metres (E.M. bird 50 metres, Mag bird 120 metres)

SHEET INDEX



*Ab. Dignin?
Chaffer*



75-1135 Plate X-SD33

COMINCO EXPLORATION PTY. LTD.
ST. DIZIER
AEROMAGNETIC CONTOURS
SCALE 1:10000 010

SURVEYED APRIL 1975 APPROVED J.C.
DRAWN BY I.B. PROJECT "M. 44"