

OWMBY, LINCOLNSHIRE

MAGNETOMETER SURVEY OF ROMANO-BRITISH SETTLEMENT.

Survey no. G 17/78

Dates of Survey: 12-22 April, 1978

The purpose of this initial survey was to confirm the general character of the site as known from fieldwork and aerial photographs, and to locate any concentrations of archaeological activity. More detailed selective work might be needed in future to plot individual features.

The site is centered roughly at grid reference SK 969 864 and extends along both sides of Ermine Street, although with more evidence of activity to the E. It measures some 700m N-S and 5-600m E-W at its greatest extent. The survey covered the full length of the site and was extended to E and W to include magnetically active areas located in preliminary scanning with the magnetometer, and the known cropmarks where possible.

Survey Procedure

In a fully detailed magnetic survey the ground is traversed at 1 metre intervals. The time and effort required in this case would be prohibitive and it was therefore necessary to sample the site. This was done by plotting traverses at 5m separation over the complete area, rather than by restricting the survey to sections of the site. Such an approach allow comparison of different parts of the site and provides a guide to future work, but local detail is lost. Some small areas were also surveyed at 1m separation for comparison (30m squares A - G) and the results of this are shown on plan 3.

The magnetometer traverses were located by a grid of 60m squares as shown on plans 1 and 2. The grid lies roughly parallel to Ermine Street on the S half of the site and was measured on the E to the edge of the road surface and the gatepost (measurements 10-11 and 1-2 on plan 1), and on the W to the boundaries of field 5124. Pegs marking grid points were left in place at the edge of the wood at the SW corner of field 2854 and on the road verge 85m to the W.

The results of the main survey are shown on plan 2 with an interpretation added. Each trace represents a graph of the variation of magnetic field strength along the traverse. They were plotted using a Plessey fluxgate gradiometer and chart recorder with a string and pulley driven potentiometer for distance measurement.

Conditions on Jurassic limestone are particularly favourable for magnetic surveying and large numbers of magnetic anomalies were detected. On a site of this nature a good response would be expected from ditches and pits, especially where they are associated with occupation, but not from masonry or the remains of buildings unless burnt material is present.

Precise interpretation of the chart (plan 2) is only possible for strong features perpendicular to the traverses and these are outlined. Because of the separation of the traverses continuity can in other cases only be assumed. Weaker anomalies and those which affect only two neighbouring traverses are therefore shown by dotted lines. Features which affect only a single traverse are shown arbitrarily as circles or ellipses. The traces also to some extent record the presence or absence of general small-scale activity, which might represent magnetic enhancement of the soil due to occupation. Several disturbed areas which may contain occupation remains are shaded.

Results.

1. East of Ermine Street

The general distribution of features corresponds well to that known from aerial photographs. (Cropmarks from a plan supplied by Miss N Field are shown inset on plan 2). There is a lack of activity close to the road except for some ditches parallel to Ermine Street. There is no evidence of rectangular enclosures alongside the road of the kind surveyed at Hibaldstow (AM lab report no. G34/76). Some features may be lost through the coarse traverse spacing but any pattern of ditches and occupation to compare with Hibaldstow would be detected. Instead most of the visible magnetic activity occurs some way to the E away from the road.

The chart shows a number of enclosures of varying completeness linked by ditches, some of them curved. The shaded areas are those most likely to represent occupation, but there is probably occupation elsewhere as well. This pattern of occupation and ditches conforms to the aerial photographs except for some disturbed areas (squares 25, 39) which are not visible as cropmarks.

Scanning with the magnetometer a further 60-100m E of the area plotted showed little activity except immediately to the N & S of squares 27 and 31. The site might additionally extend into the adjoining fields although activity does diminish towards the two ends of the survey, especially the S. The two fields 0005 and 0006 were under cultivation and not investigated.

The circular enclosure which was detected in squares 19 and 20 is associated with Iron Age surface finds. It was also partly surveyed at 1m spacing and plan 3 shows a double ditch around the enclosure and some internal features (squares A, B, C). Another curved ditch appears in square E where only slight general disturbance is visible in the main survey. Square E shows a pattern of possibly regular enclosures where the 5m traverses show only ill-defined anomalies. These results confirm that the large survey shows the presence or absence of features but only partially indicated their plan and character.

2. West of Ermine Street

Here little is visible in photographs except in field 5500, but surface finds occur. The survey shows that the general level of activity in the S half of the site (field 5124) is similar to the quieter parts of the E side. There are ditches and other features extending some 180m W from the road. Occupation remains may be present but there are no conspicuously disturbed areas. Conditions are again quiet in the 60m strip nearest the road (except in square 9), but this area was once woodland and features may have been disturbed.

Scanning in field 0001, the avenue to Fillingham Castle, showed magnetic activity for about 20m inside the gate, but this may be of recent origin and no other disturbance was found.

Some anomalies appear in the plot of field 5848 close to the edge of Blacklands Wood, although the rest of the field is completely undisturbed. This, together with the activity in squares 2, 3 and 9, might suggest that more archaeology is present in the wood. Magnetic surveying there would not be practicable.

The ditches found in squares 2 and 3 (field 5500) form a more regular pattern than elsewhere and appear to form part of the system of enclosures visible in photographs. Activity again diminishes towards the N of the field.

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November 1978

DWMBY

6 810ha
16 83

Owmbly Cliff
Farm

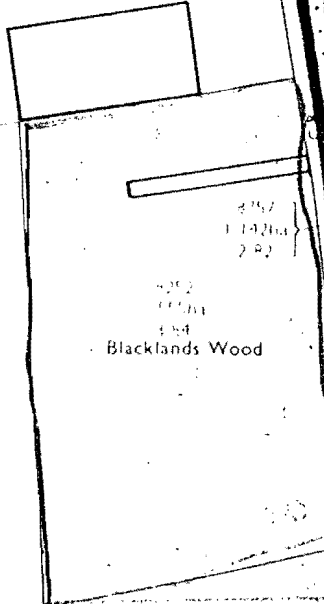
4700
053ha
13

W.B.
Tank

B.M. 48 53m

47.6m

47.3m



R.D. 607
ROMAN ROAD

Settlement
(site of)

2654
45.042ha
100 94

52.0m

B.M. 53 29m

51.2m

46.5m

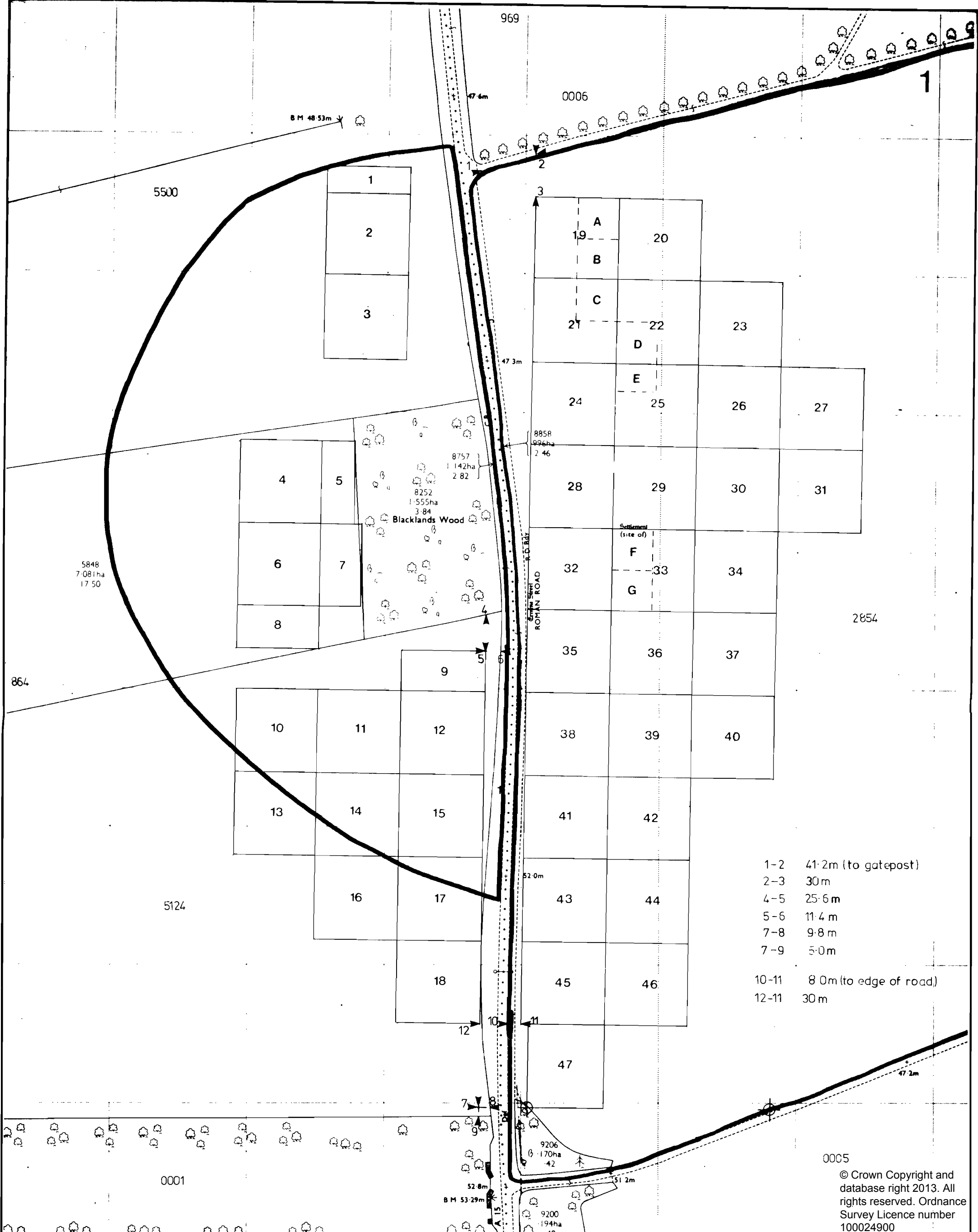
47.2m

967

968

969

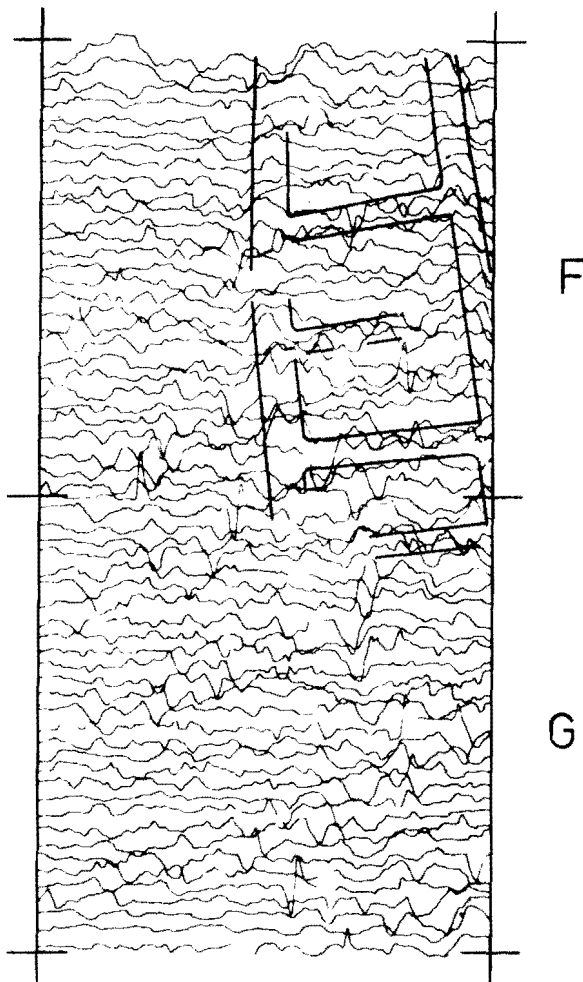
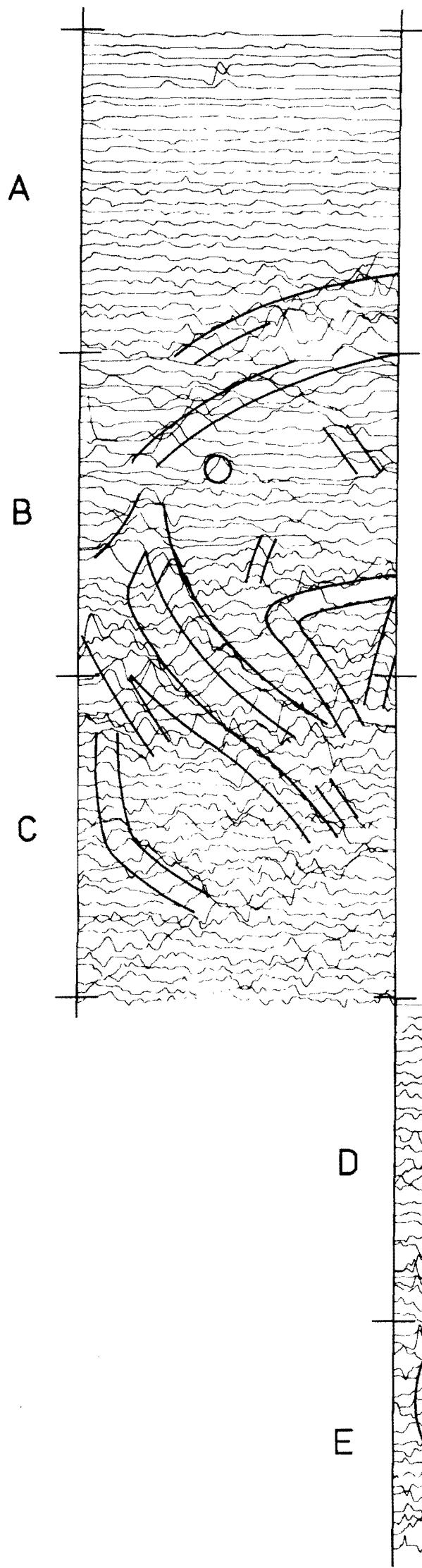
970



- 1-2 41.2m (to gatepost)
- 2-3 30m
- 4-5 25.6m
- 5-6 11.4m
- 7-8 9.8m
- 7-9 5.0m
- 10-11 8.0m (to edge of road)
- 12-11 30m

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Survey no. 17/78 Plan no. 1 of 3	<h2 style="margin: 0;">OWMBY, LINCS</h2> <h3 style="margin: 0;">MAGNETOMETER SURVEY</h3> <p style="margin: 0;">Location</p>	NG ref. SK 969864 OS sheet SK 9686-9786
— 60m grid squares - - - 30m grid squares		scheduled area grid pegs left in place
1:2500	DoE Ancient Monuments Laboratory Geophysics Section	



Survey no. 17178
Plan no. 3 of 3

OWMBY, LINCS

NG ref. SK 959864

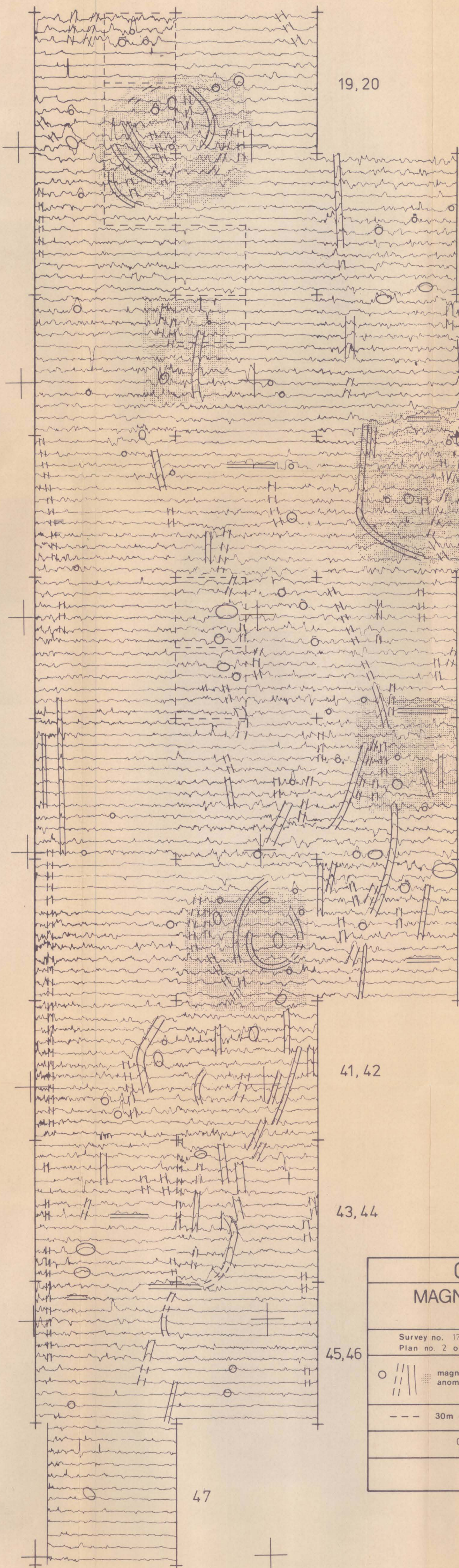
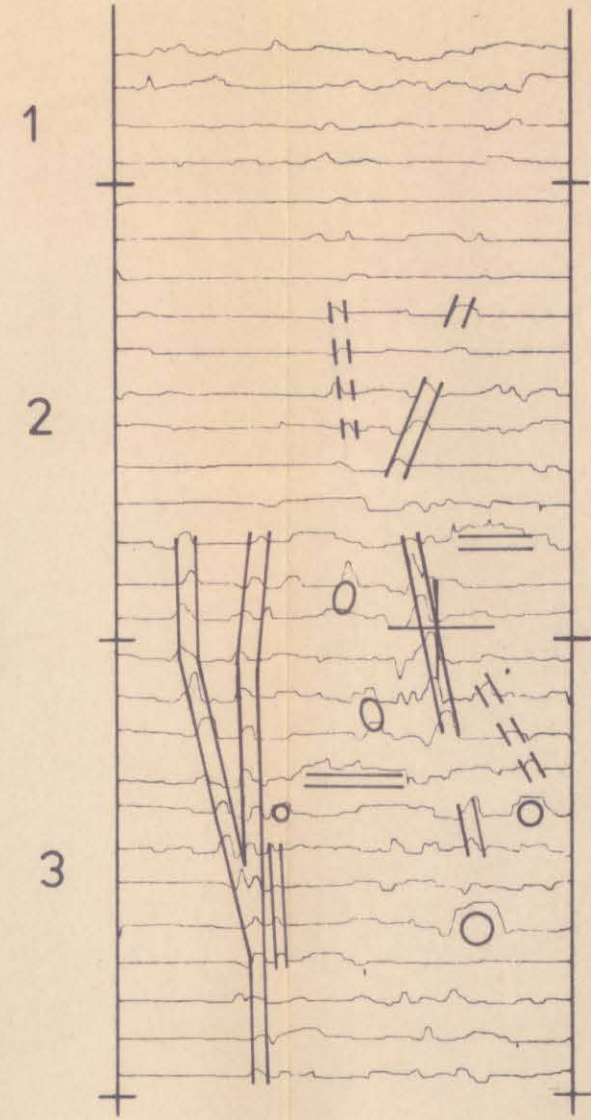
traverse spacing 1m
magnetic traverses plotted
at 25 gamma/cm

MAGNETOMETER SURVEY
30m SQUARES

// magnetic anomalies



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Geophysics Section



21, 22, 23

24, 25, 26, 27

28, 29, 30, 31

32, 33, 34

35, 36, 37

38, 39, 40

41, 42

43, 44

45, 46

47

4, 5

6, 7

8

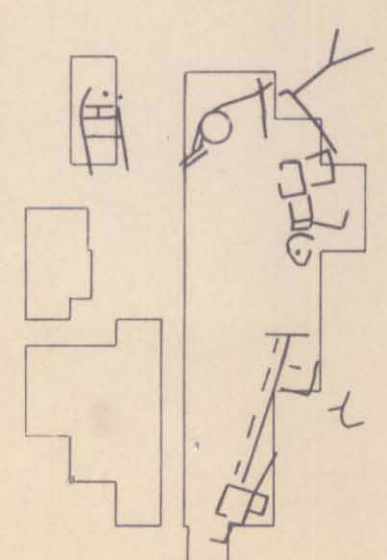
9

10, 11, 12

13, 14, 15

16, 17

18



OWMBY, LINCS MAGNETOMETER SURVEY	
Survey no. 17/78 Plan no. 2 of 3	100m NG points
magnetic anomalies	magnetic traverses plotted at 60 gamma/cm
30m grid squares	traverse spacing 5m
DoE Ancient Monuments Laboratory Geophysics Section	