

Ancient Monuments Laboratory
Report 119/90

ECKWEEK DESERTED MEDIEVAL
SETTLEMENT
AVON GEOPHYSICAL SURVEY, 1989

Andy Payne

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Summary

This survey was undertaken to establish the character of the remains of a deserted medieval settlement situated in fields around Eckweek House, Avon. The site had been partially excavated by Avon County Council in advance of housing and road development. It was hoped that geophysical survey of unexcavated areas would assist the targetting of further sample excavation and also provide additional information on areas left unrecorded by excavation. The survey therefore covered the majority of the remaining undisturbed areas of the site, and was successful in the detection of evidence for further buried remains and patterns of past land division. These results significantly improved upon existing knowledge of the site.

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ECKWEEK DESERTED MEDIEVAL SETTLEMENT, AVON

Report on geophysical survey, 1989

Introduction

The purpose of this survey was to supplement rescue excavations on the site of the deserted medieval settlement (SMR 2296) situated in the fields around Eckweek House on the eastern fringe of Peasedown St John, Avon. The excavations were mainly restricted to the north-eastern area of the site (Area A), where the earthworks were more readily interpreted from topographic survey. The aim of the geophysical survey was to provide more precise detail of the form of the settlement in the remaining fields north and south of Eckweek House (Areas B and C). In these areas the earthworks were less easily interpreted due to loss of definition from past ploughing. Sample excavations in Area A have demonstrated that the site consists of trackways and stone buildings with associated yards and enclosures - provisionally dated to c. 1350 AD. The site lies on a clayey subsoil overlying limestone (Inferior Oolite).

Method

Geophysical survey was carried out in two separate areas of the site (see location plan): in the field directly to the north of Eckweek House (Area B) and in the field to the south of the house (Area C). The majority of Area B (120m x 60m) was covered by resistivity survey, within which a smaller area (60m x 60m) - overlying anomalous resistivity activity - was also given magnetometer coverage. Area C was covered by magnetometer survey only.

In each area a 30m grid was set out and subdivided into 30m-length traverses oriented north-south and spaced at 1m intervals. Resistivity readings using a Geoscan RM4 Resistivity Meter were recorded at 1m intervals along each successive traverse. The Twin Electrode probe array was used, with a mobile probe spacing of 0.5m. Readings were logged on a Geoscan DL10 datalogger.

The magnetometer survey was conducted with a Geoscan FM36 fluxgate gradiometer, with readings logged at 0.25m intervals along each traverse. The data resulting from both these survey methods was reconstructed by computer to produce the grey-tone and trace plots illustrated.

Results

Area B

Resistivity Survey

Resistivity values are relatively subdued over much of this area owing to water retention by the clay subsoil. However, they show a significant increase along the southern side of the field adjacent to the mid-nineteenth century farm. The higher readings here may suggest the accumulation of building material or rubble from former structures related to the present farm, or associated with house platforms of the medieval settlement. Interpretation of this anomalous zone is precluded by the absence of structural definition - for instance any

evidence for wall alignments or internal patterning. More conspicuous, but also lacking any obvious patterning, is a grouping of high resistance anomalies at A, B and C (see Interpretation plan). The earthwork survey indicates boundaries enclosing this area, and a possible interpretation of these anomalies is that they may represent wall footings.

Unusually, the resistivity survey has not detected visible earthwork remains very clearly in Area B, although an exception is the high resistance linear anomaly at F, which represents a bank.

Weak linear 'features' rectilinear with the survey grid, in squares 7 and 6 (plot 1), are spurious effects resulting from an instrumentation fault.

Magnetometer Survey

Magnetometer survey in Area B was restricted to the grid squares (9-12) in which the possible presence of structures was suspected from observation of the resistivity results (anomalies A-C, above). Distinctive magnetic activity, characteristic of buried iron litter, bricks or burnt stone, was located (plots 3-5) and coincides with the latter area, confirming its potential significance.

In addition, the magnetometer survey has also detected a faint linear alignment at D, perhaps representing a drain, and some clusters of small localised anomalies (D and E) which may represent pits.

Area C

The magnetometer survey carried out in this field has detected elements of a field system or a system of enclosures and droeways suggestive of past agricultural landuse. Clearly detected are several curving ditches (interrupted in places), which appear to subdivide the area into various constituent plots or enclosures. Smaller discrete anomalies are interspersed amongst these, in particular in grid squares 2 and 5, and may represent pits. Ridge and furrow cultivation, with a similar orientation to the ditches, has been faintly detected in the eastern part of the survey area.

Conclusions

The survey has been successful in defining buried features in Area B, although it has not been possible to interpret their nature with confidence. In Area C, magnetometer survey has substantially supplemented the evidence of earthwork survey by identifying unsuspected ditch alignments.

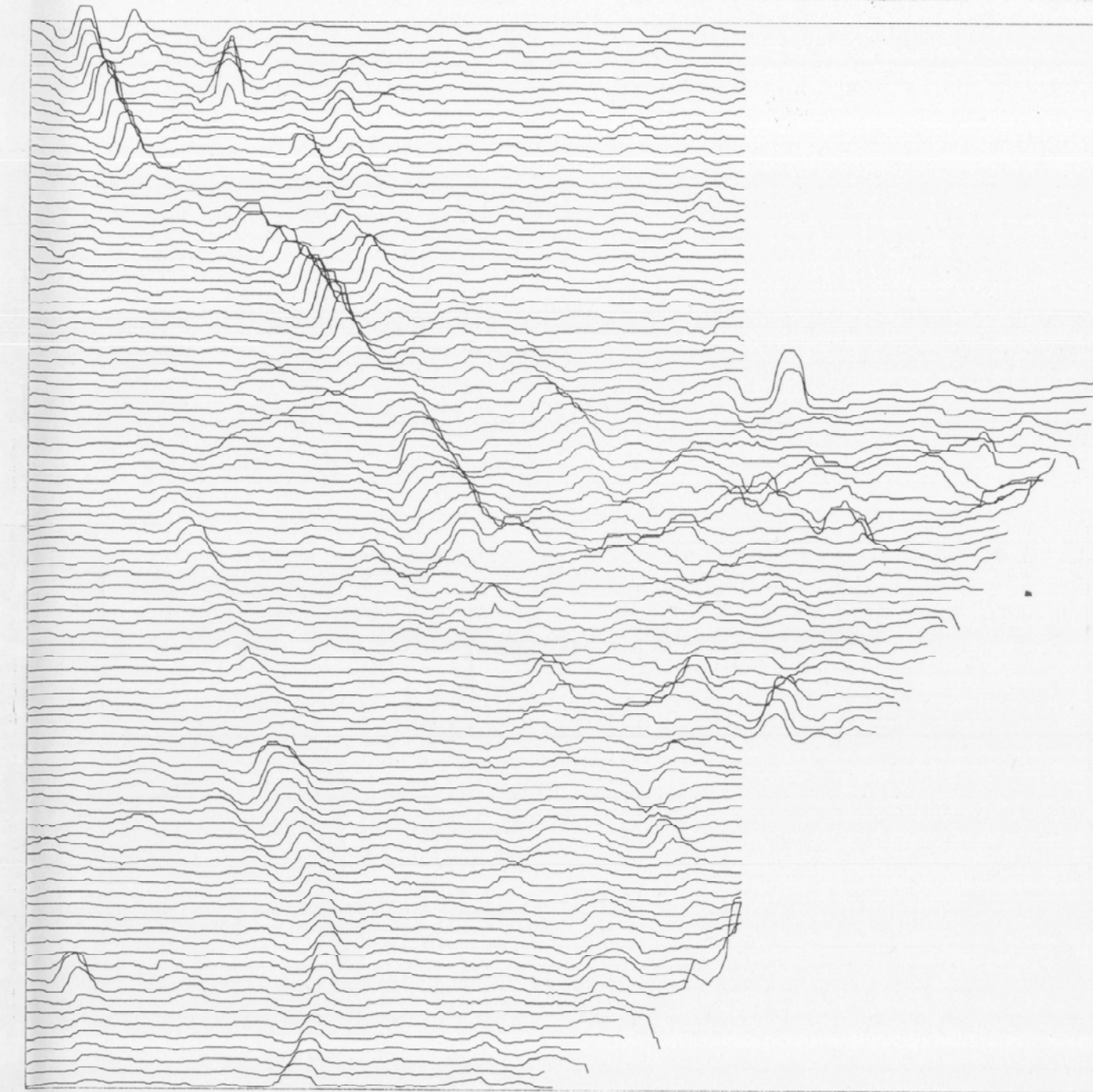
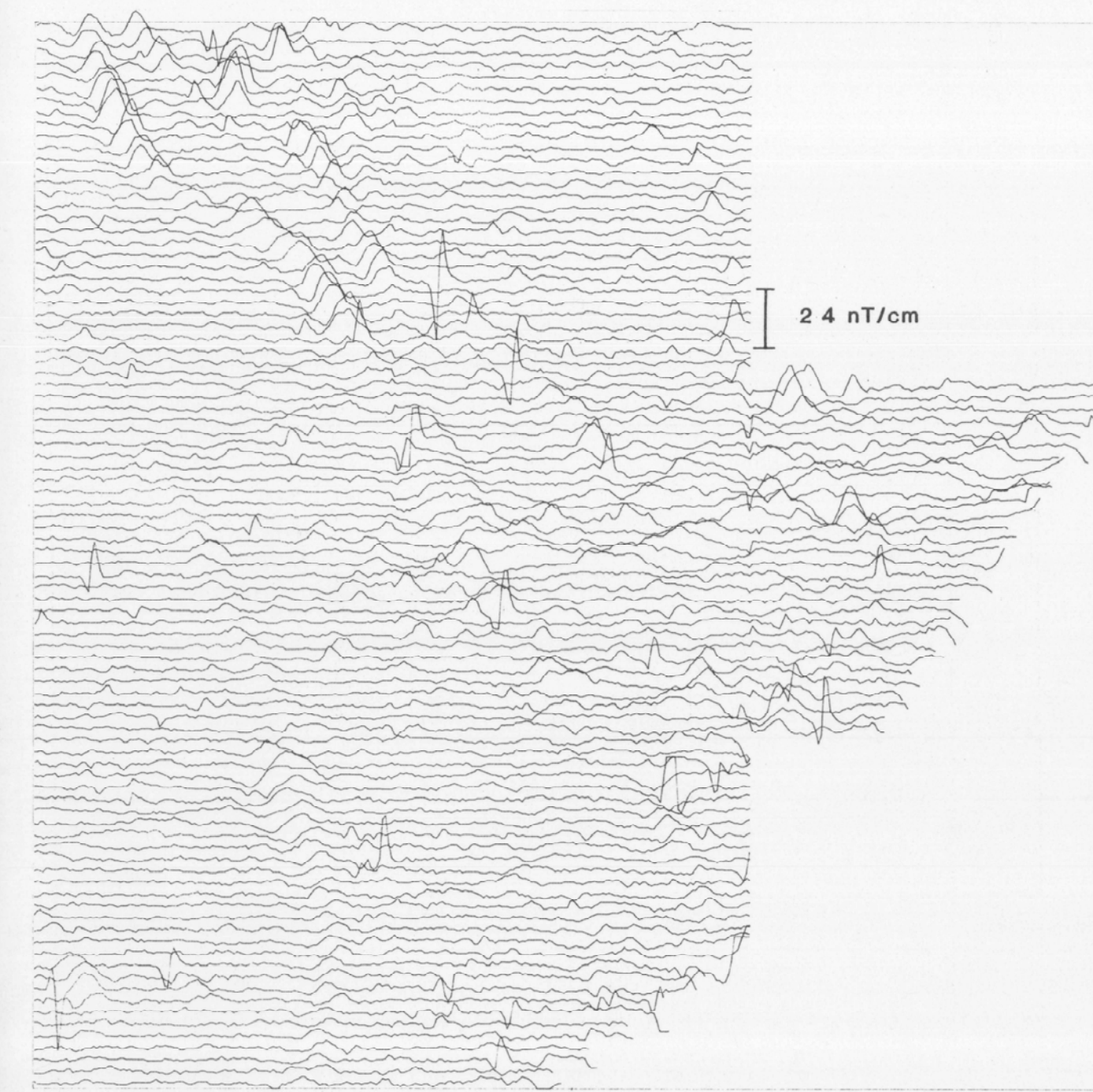
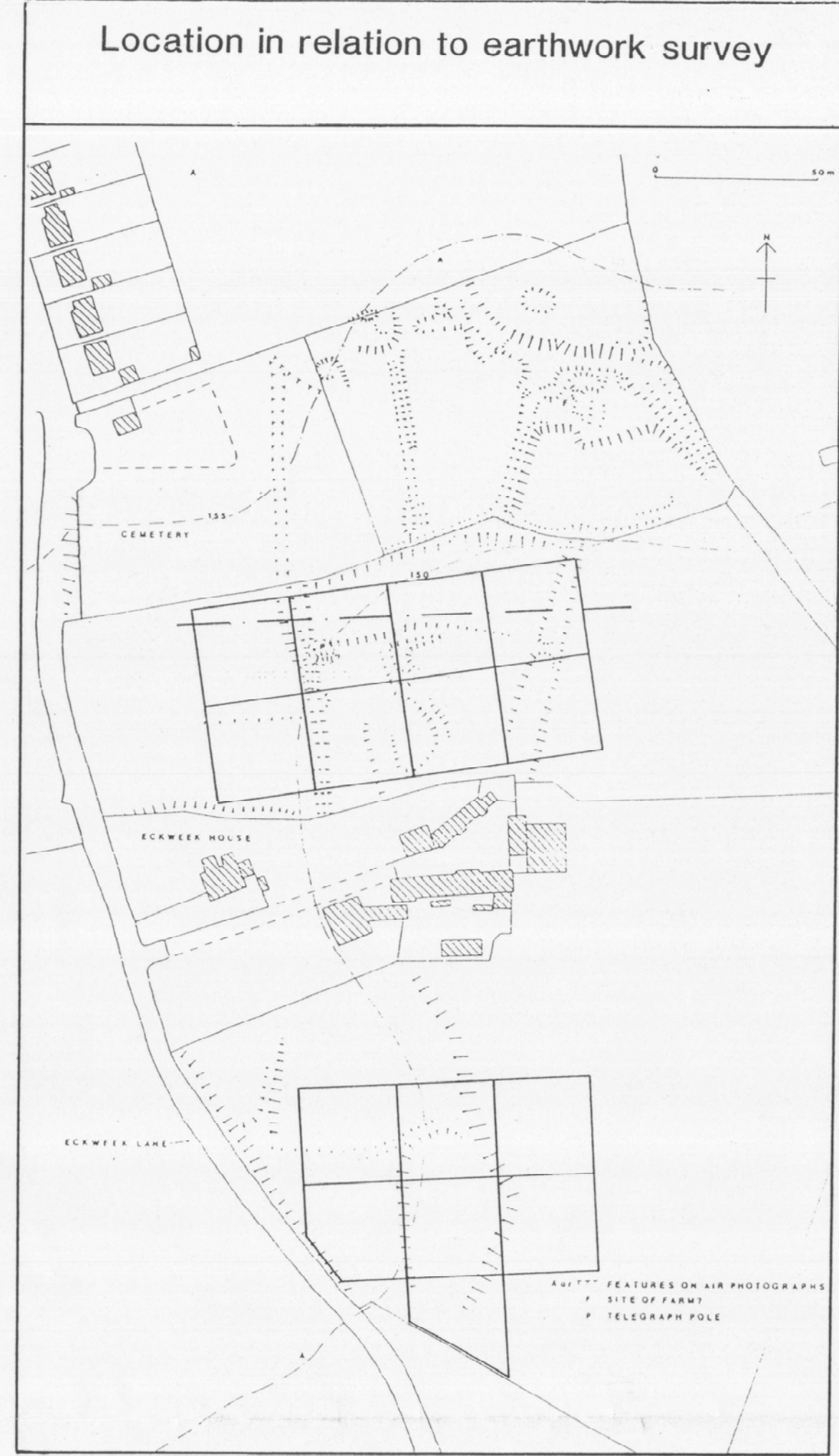
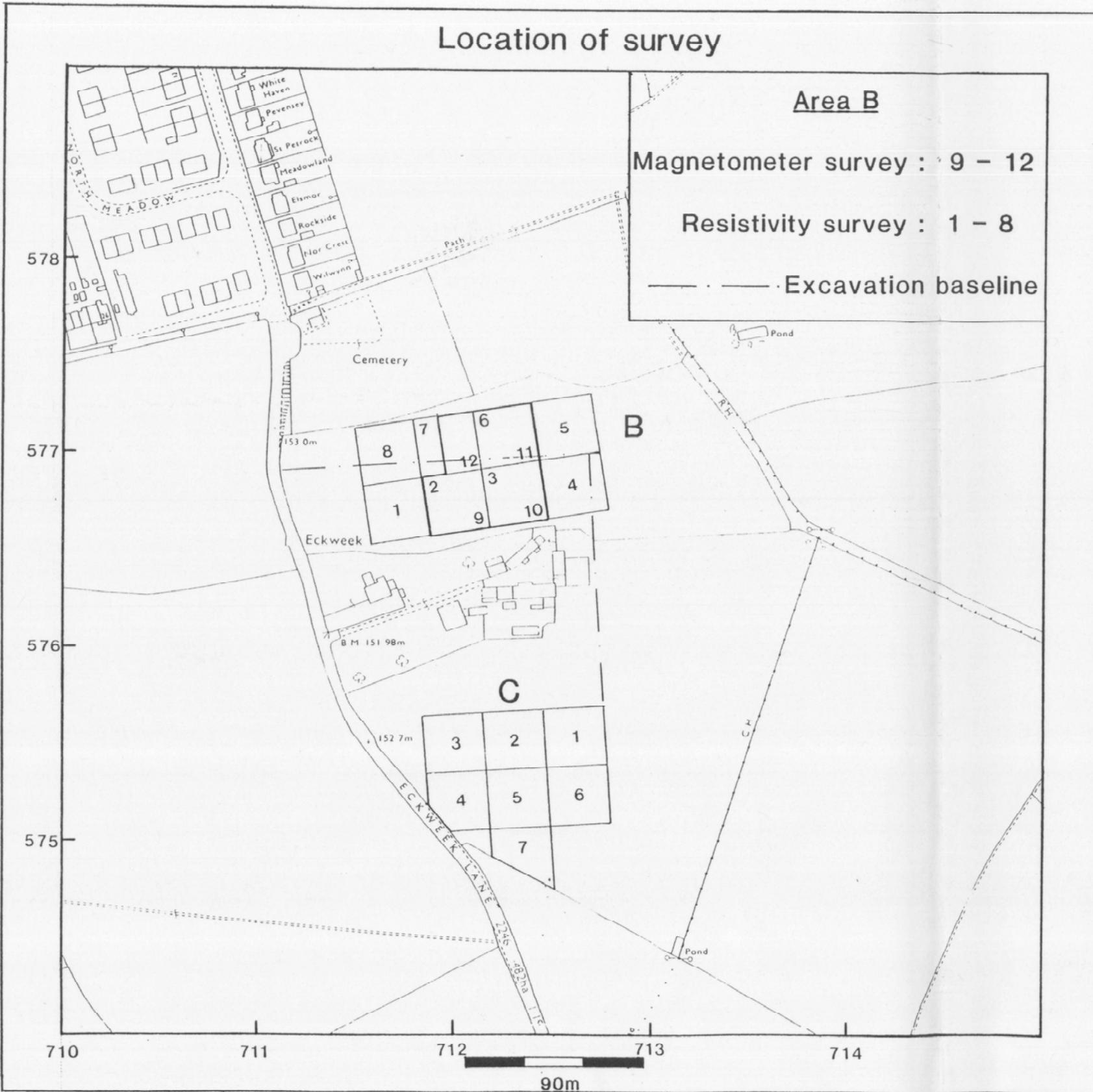
Surveyed by: A. Payne.
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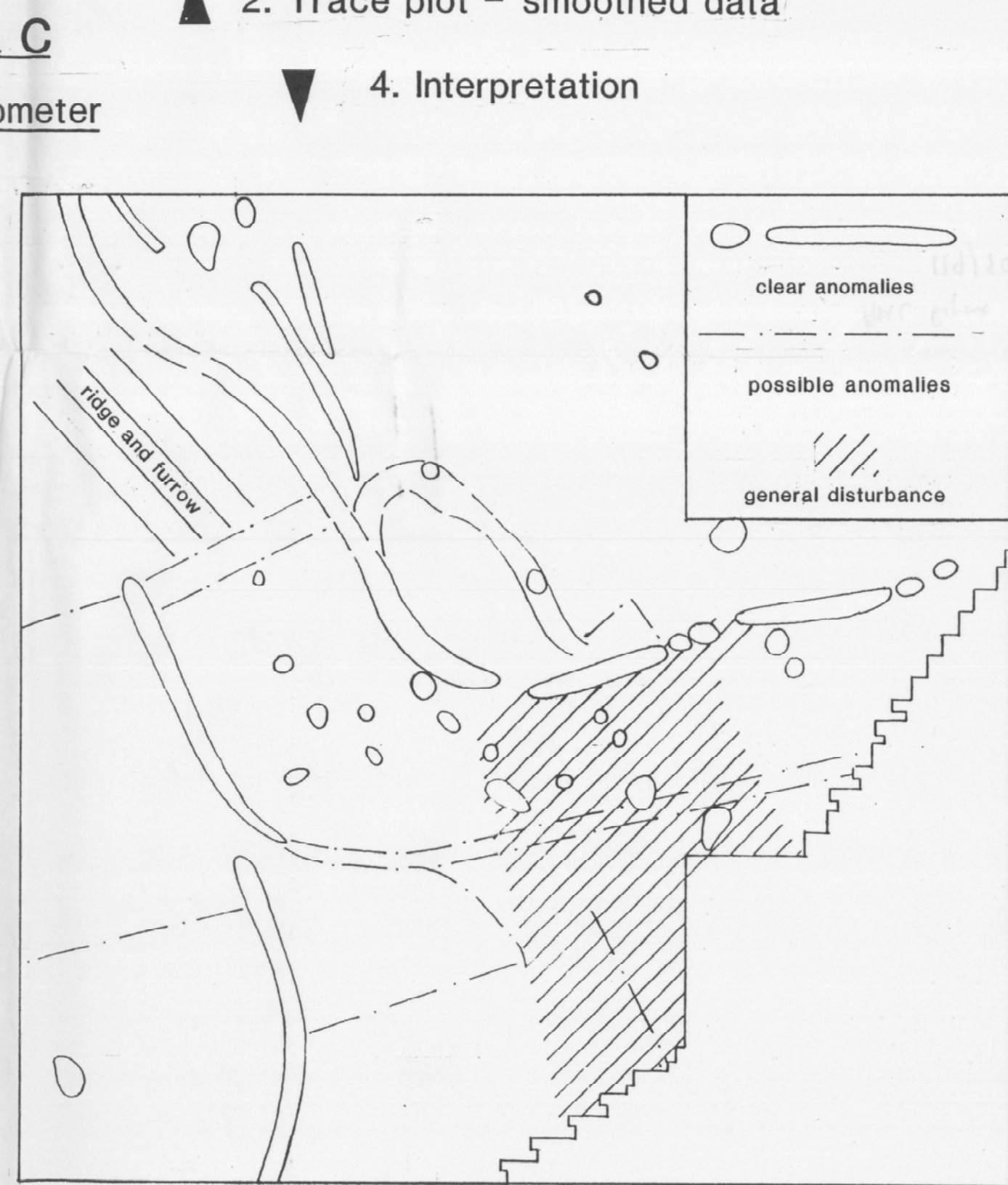
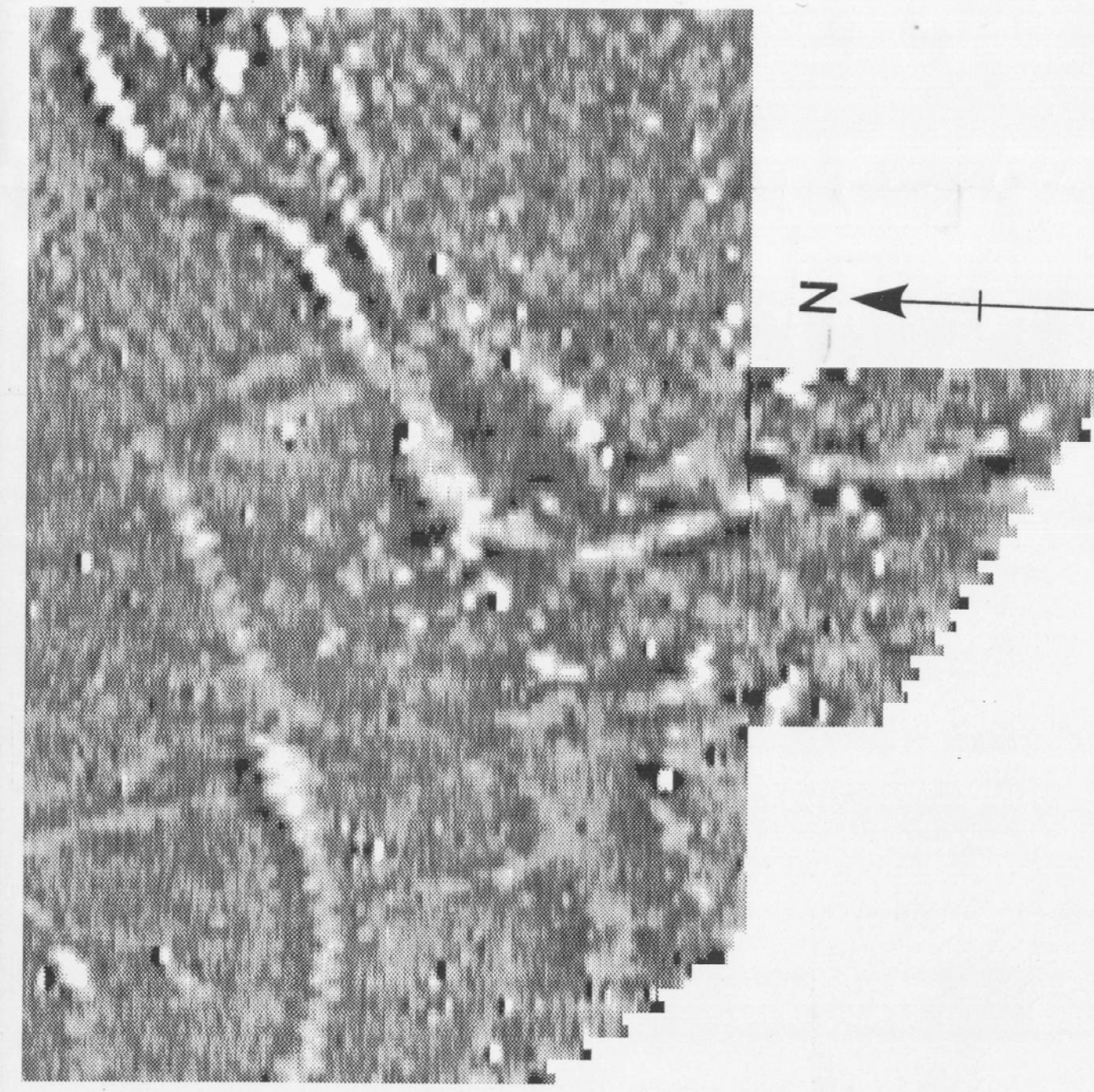
Acknowledgements: we are grateful for the help received in carrying out this survey by Andrew Young and his staff of the Eckweek Excavation Project.

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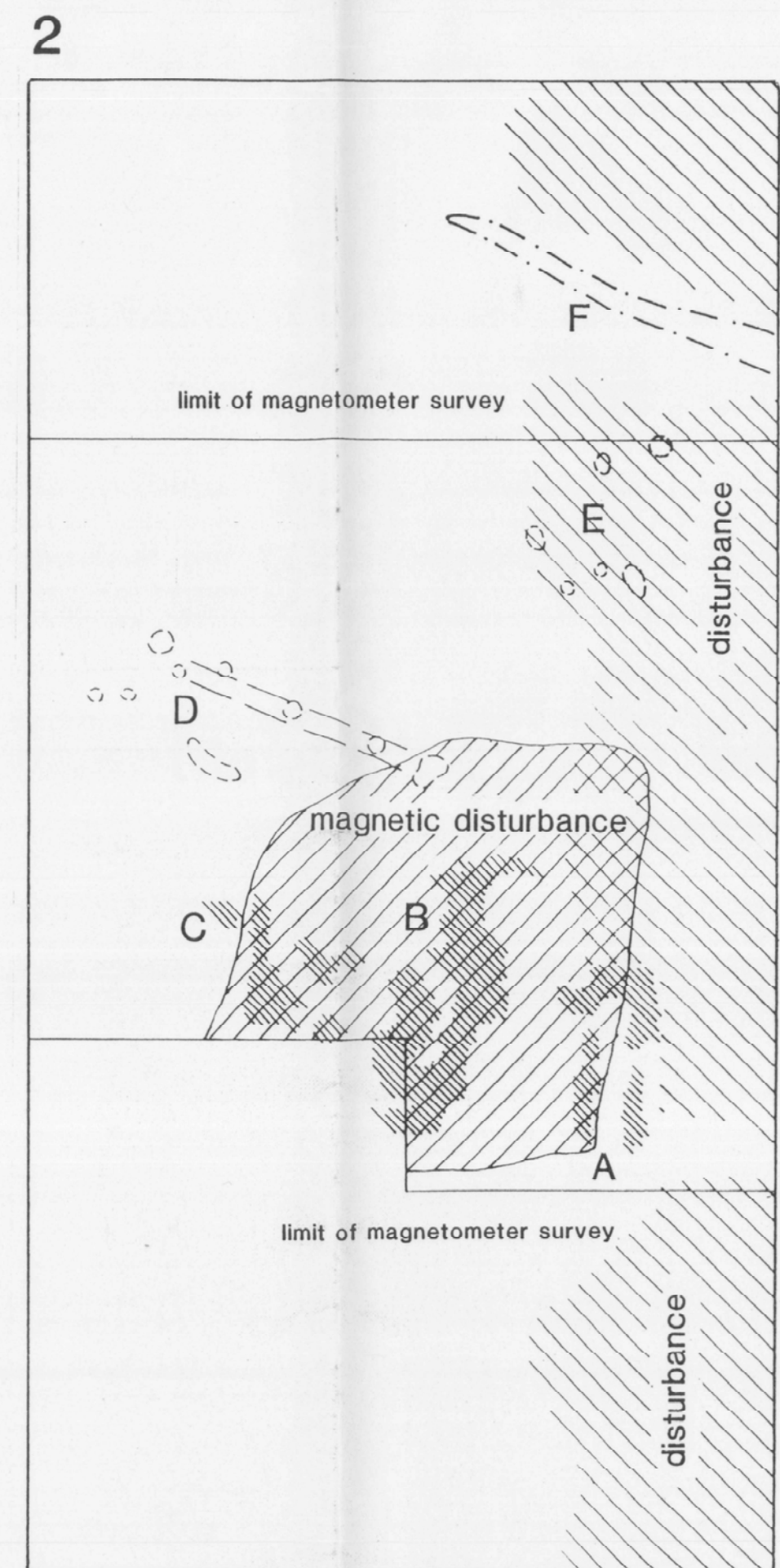
Geophysical survey 1989



- ▲ 1. Trace plot - raw data
- ▼ 2. Trace plot - smoothed data
- ▲ 3. Grey-tone plot of raw data
- ▼ 4. Interpretation



Area B



- 1. Resistivity grey-tone plot
max. value (white) - 110 Ohms
min. value (black) - 0 Ohms
- 2. Interpretation resistivity anomalies
 - /// possible buildings/wall footings
 - disturbed areas
 - other anomalies
 - /// magnetic anomalies
 - /// occupation related disturbance
 - - - other anomalies
- 3 - 5. Magnetometer plots

SCALE
for all plots
1 : 500

30m

