Kirmington, Humberside. Geophysical survey, 1985. Report No. G 30/85

Plans enclosed : 1 - magnetometer traces, 1 : 500
2 - magnetometer traces with interpretation, 1 : 500
cropmarks and location plans inset.

Dates of survey: 1 - 2 Oct. 1985.

Geophysical survey was required to test for the presence of archaeological features in part of a field threatened by drainage and subsoiling operations. The survey was confined to the western half of the field (for location see plans enclosed) which is scheduled as part of a substantial area of apparently Roman and other activity, identified from cropmarks. Roman coins have been found (1960) and metal detecting is also posing a threat.

The scheduled part of the field was surveyed with fluxgate magnetometer and field recording system. An area 180 x 150 m was covered by magnetometer traverses spaced at 1.0 m intervals : the resultant traces are shown on plans 1 and 2, and in the latter an interpretation is illustrated alongside the aerial photographic evidence.

Results:

Magnetic activity from archaeological features is clearly identifiable and is confined to the southern part of the field, in survey squares A1, A2, A3, B1, B2, B3, C1, C2, D1, D2, and E1. The remainder of the survey area is apparently clear of features, with a possible isolated exception in B5.

The main concentration of archaeological anomalies indicates an elaborate and dense plan of ditches and occupation features. The anomalies intermingle to such an extent that a clear interpretation of the pattern is difficult to achieve. The interpretation on plan 2, therefore, indicates only the more obvious ditches and the surrounding areas of more general 'archaeological disturbance', which will include occupational features. There are, in addition, some 'negative' anomalies, representing a depletion in local magnetic field strength, and therefore suggesting the presence of masonry or stonework. There are reorts, also, of graves having been ploughed up in this part of the field, although these would be unlikely to be detectable in a survey of this kind.

The remainder of the field, to the east, was scanned with the magnetometer to check for further concentrations of activity : only occasional and apparently isolated features were noted, and the response much resembles that from the undisturbed part of the recorded survey area.

Conclusions:

The apparently unambiguous distribution of archaeological features, concentrating clearly in the southern third of the scheduled part of the field, is supported by magnetic susceptibility values taken across the site. These are at their highest within the main double-ditched enclosure to the south of the survey (467 and 465 x 10^{-8} SI Units/kg.), and are also very high within the detected feature concentration (200 SI at the NE corner of sq. A2). Values elsewhere across the field fall off significantly away from the anomalous area and vary from 62 - 100 SI. The good magnetic response to

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archaeological features results from the high magnetic susceptibility of the soil (derived from drift deposits) and its very considerable enhancement when associated with occupational activity : the lack of anomalies over large parts of the area would therefore seem to be a genuine absence of features. Where features are detectable, however, they are abundant and in spite of agricultural activity, are sufficiently well preserved to include small enclosure ditches and possibly the remnants of masonry. A linear feature, perhaps a ditch or trackway, appears to run along the extreme southern edge of the survey area, and may be related to one of the negative cropmarks plotted by D N Riley (see plan 2). Many of the detected ditch alignments are approximately rectilinear with this, and along with the evidence for graves, may represent ribbon or extra-mural development petering out westwards and northwards from a focus to the south.

Surveyed and reported by: A. David. 11th Oct 1985

with: A. Bartlett.

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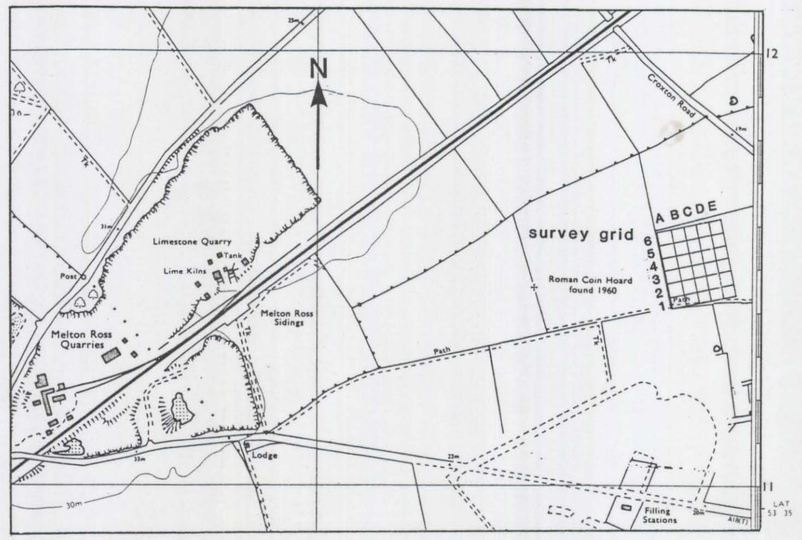
A B C D E

6 5 4 3 2 1

N

1 : 500



LOCATION 1 : 10,000

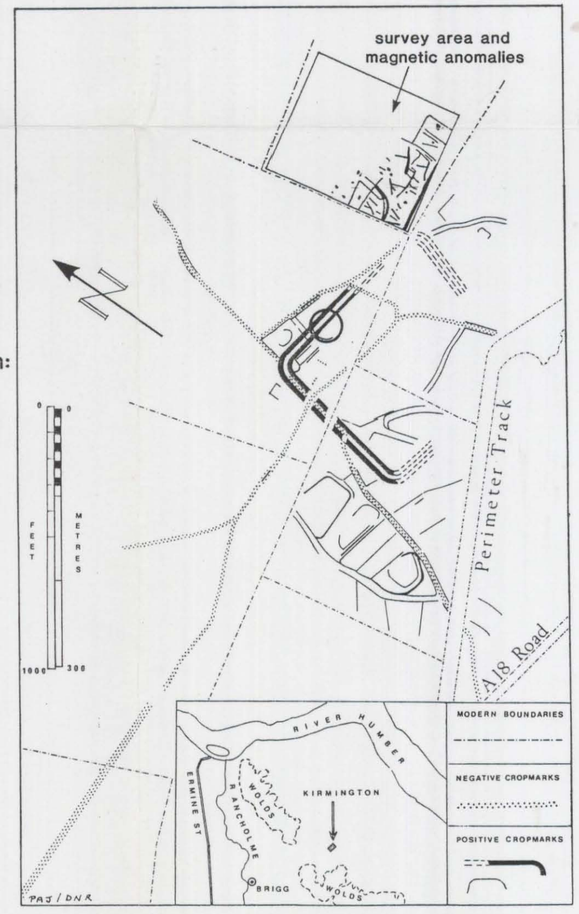
Survey interpretation:

archaeological disturbance

features

negative anomalies

37.5 nT/cm



CROPMARKS & MAGNETIC ANOMALIES

cropmarks after D N Riley

KIRMINGTON, HUMBERSIDE Magnetometer survey, 1985

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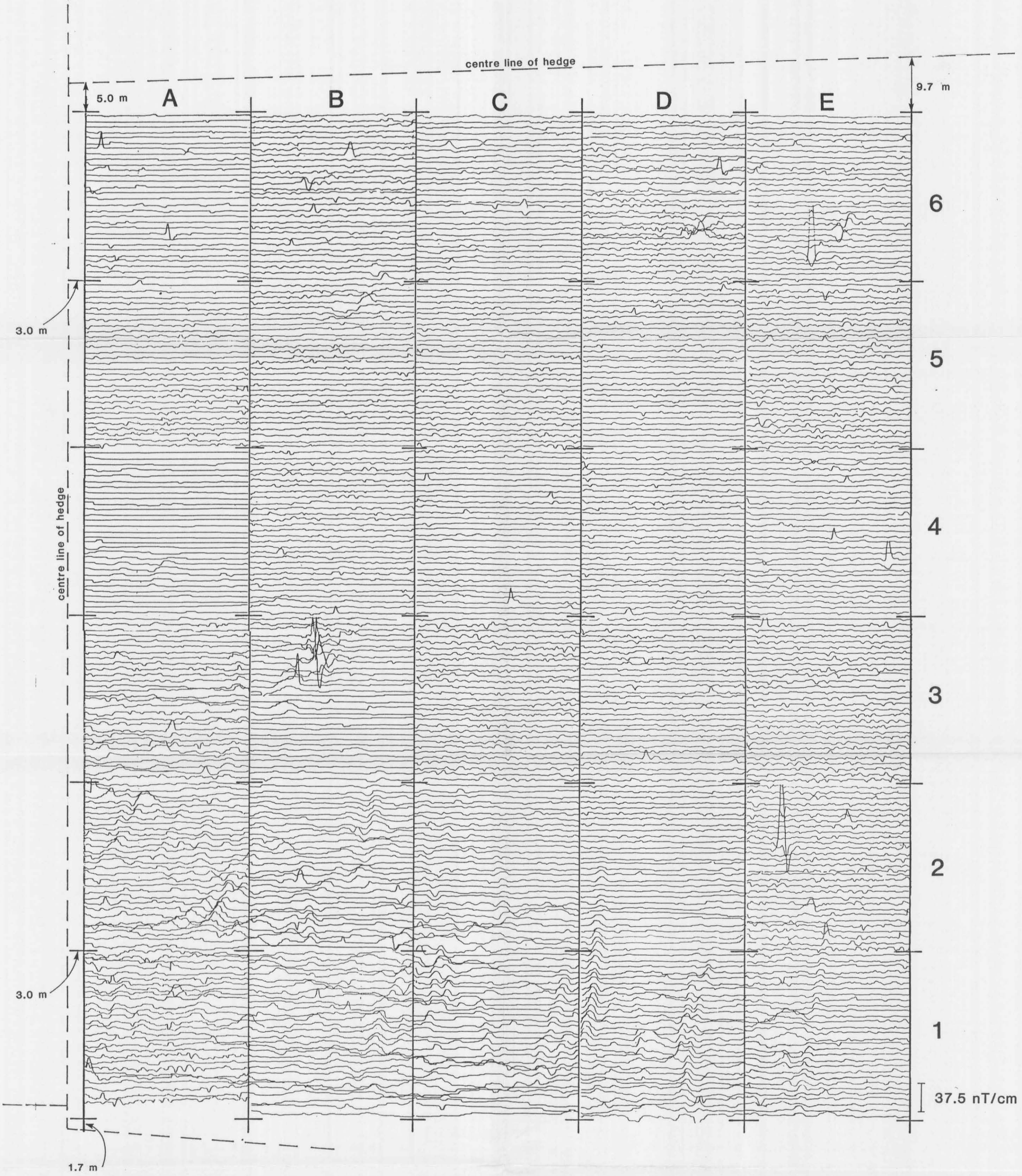

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Magnetometer survey, 1985

1 : 500

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