

Dates of fieldwork: 26 - 28 October, 1983.

NG: SE 237 745

Plans enclosed: 1. Survey location
2. Magnetic and resistivity plots.

This survey was carried out to test for evidence of archaeological features within the earthwork which represents the bailey of the 12th Century castle. A site grid was measured to the field boundaries as shown on plan 1, and surveyed using magnetic and resistivity detection techniques.

Magnetic survey:

The magnetometer will usually respond to such features as ditches or pits which have a silted earth fill, but not to masonry. Conditions at this site, which is on boulder clay, appear to be favourable: relatively high magnetic susceptibility values were obtained from samples of topsoil and subsoil (48.5 & 35.5×10^{-8} SI units/Kg respectively), and the difference in these two figures means that features containing topsoil in the fill should be visible against the subsoil background. The effect should be enhanced in the presence of any accumulated debris from domestic or industrial activities.

A fluxgate magnetometer was used to record traverses at 0.5 m intervals in squares 1 and 2, and at 1.0 m intervals elsewhere, as shown on plan 2(i). The features detected include the ditch which encircles the bailey. The approximate position of the visible bank is indicated on the plan, but this was not detected. Extant features of this kind which lack a distinct silted fill are not usually detectable, although the furrows of the ridge and furrow cultivation pattern which is visible in the field can be seen in the survey plot.

Features detected within the earthwork include a narrow ditch or trench through squares 3 and 4, and a number of localized magnetic anomalies which might represent pits 1 - 2 m in diameter. These anomalies are only of moderate strength (5 - 10 nT), and so any smaller pits present would not be distinguishable against the general noise level of the site. There is additional noise caused by the fence at the left-hand edge of the survey.

Resistivity survey:

A resistivity survey can detect masonry foundations as well as some of the earth-filled features visible to the magnetometer. Only an area lying within the earthwork was surveyed, as shown on plan 2(ii). This is a computer drawn plot showing traverses which were again surveyed at 0.5 m intervals for improved resolution in squares 1 and 2, and at 1.0 m intervals in squares 3 and 4. Readings were taken at 1.0 m intervals along the traverses in each case (but offset 0.5 m laterally on alternate traverses in squares 1 and 2). The ridge and furrow pattern is again visible in the plot, but the narrow ditch seen with the magnetometer in square 3 was not detected.

Two conspicuous features are labelled A and B in square 2. The particularly strong anomaly at A could be a mass of stonework, or perhaps a pit with a loose stony fill. It might be archaeologically significant, but the fact that it aligns with the magnetic trench across square 3 suggests that an alternative explanation might be that the trench represents a drain leading to a pit or other structure at A.

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The feature at B does not correspond to any magnetic anomaly, and so could also indicate the presence of masonry or stonework. The plan of the feature however cannot readily be seen to form part of a structure having a regular plan, and so further investigation would be needed to confirm this possibility.

Conclusions:

The site appears to respond satisfactorily to the techniques used, but findings were limited. The ridge and furrow cultivation was detected both magnetically and by resistivity, and the outer ditch of the bailey was located in the more extensive magnetic survey. Otherwise only some weak magnetic anomalies which could represent pits and a ditch of uncertain significance were found within the bailey, together with some resistivity anomalies which, although strong, failed to provide clear evidence that masonry foundations are present.

Evidence both of substantial buildings and intensive occupation is therefore lacking, and this would be consistent with the accepted history of the site, which was in use only for a limited time. The survey findings leave open the question of whether less conspicuous features representing activity over a short period might be present. Post-holes and shallow foundation trenches would only exceptionally be detectable and no conclusion can be drawn from these results concerning their presence.

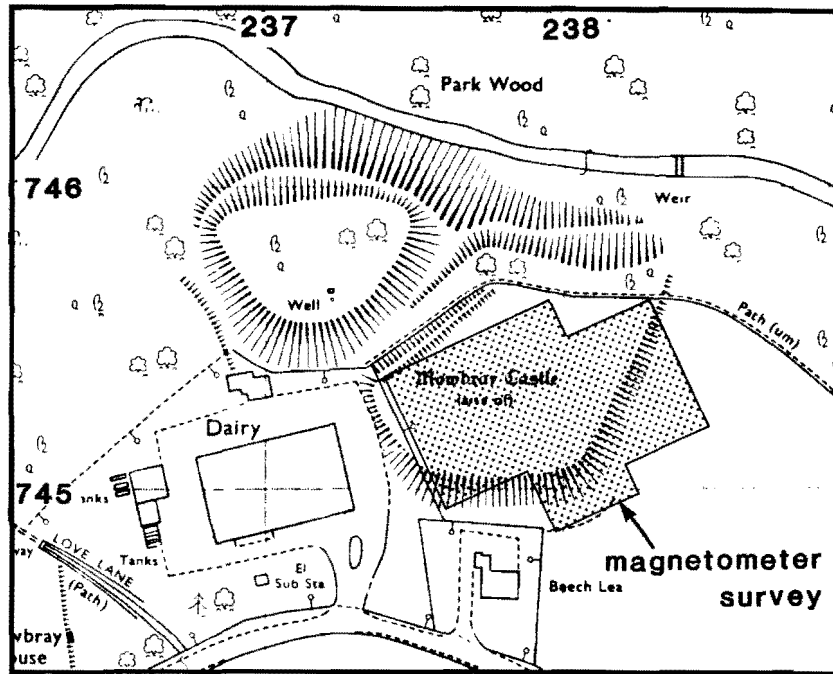
Surveyed and reported by: A. Bartlett.

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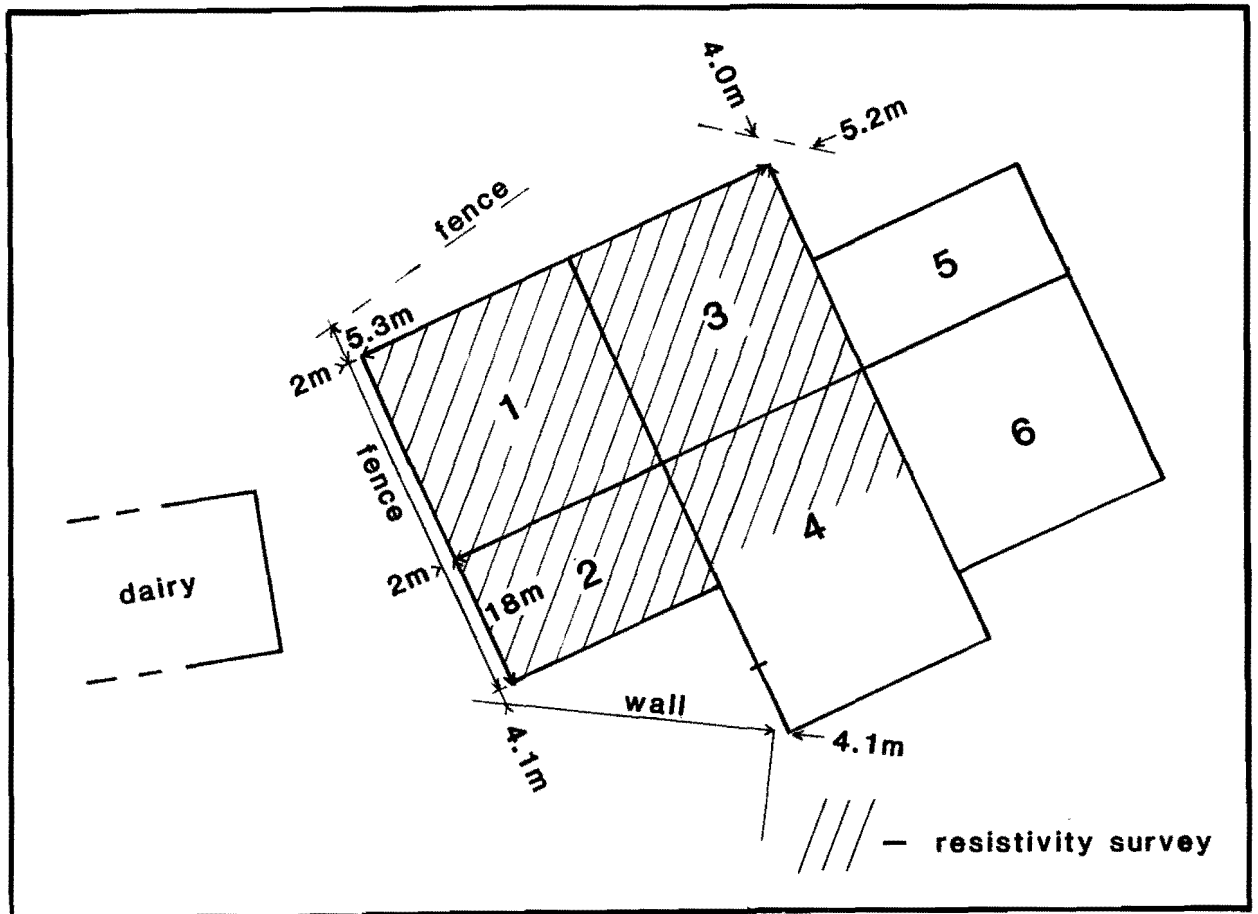
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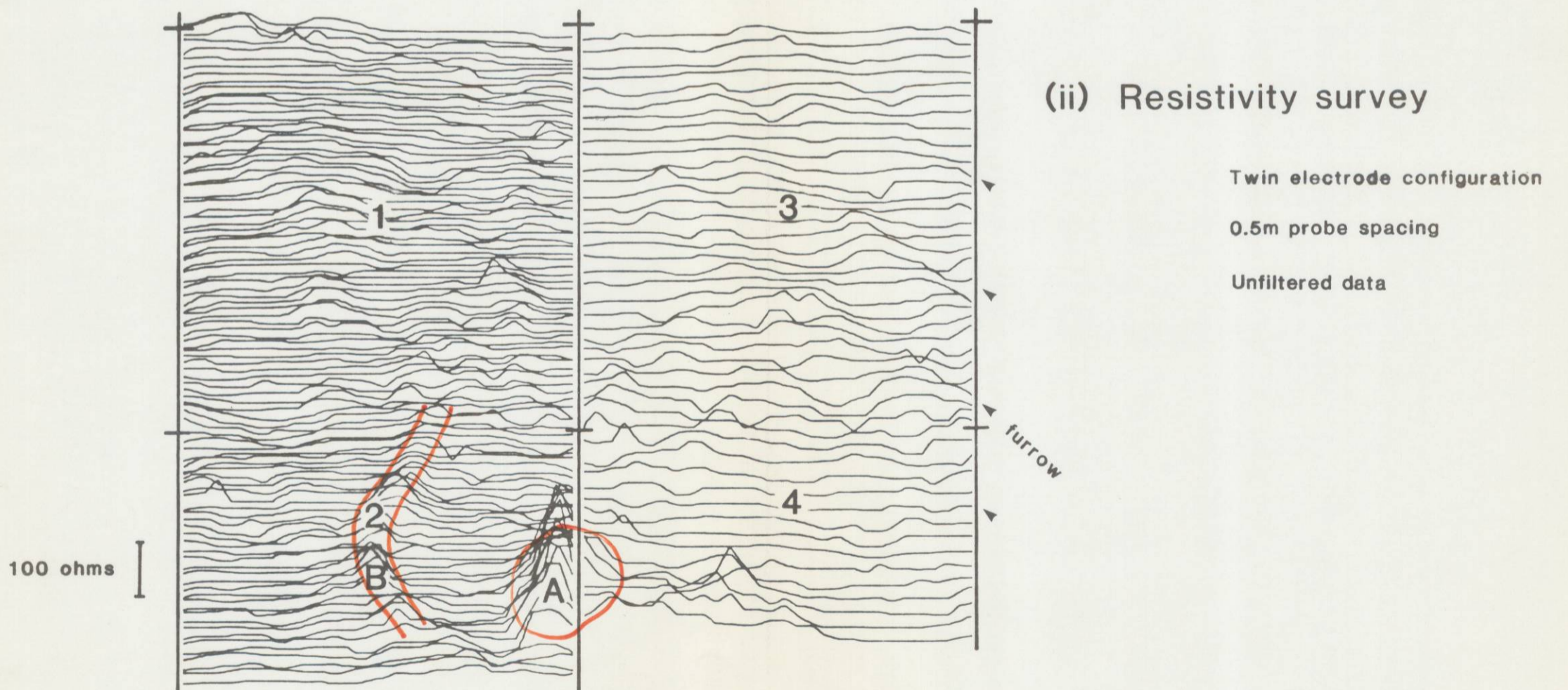
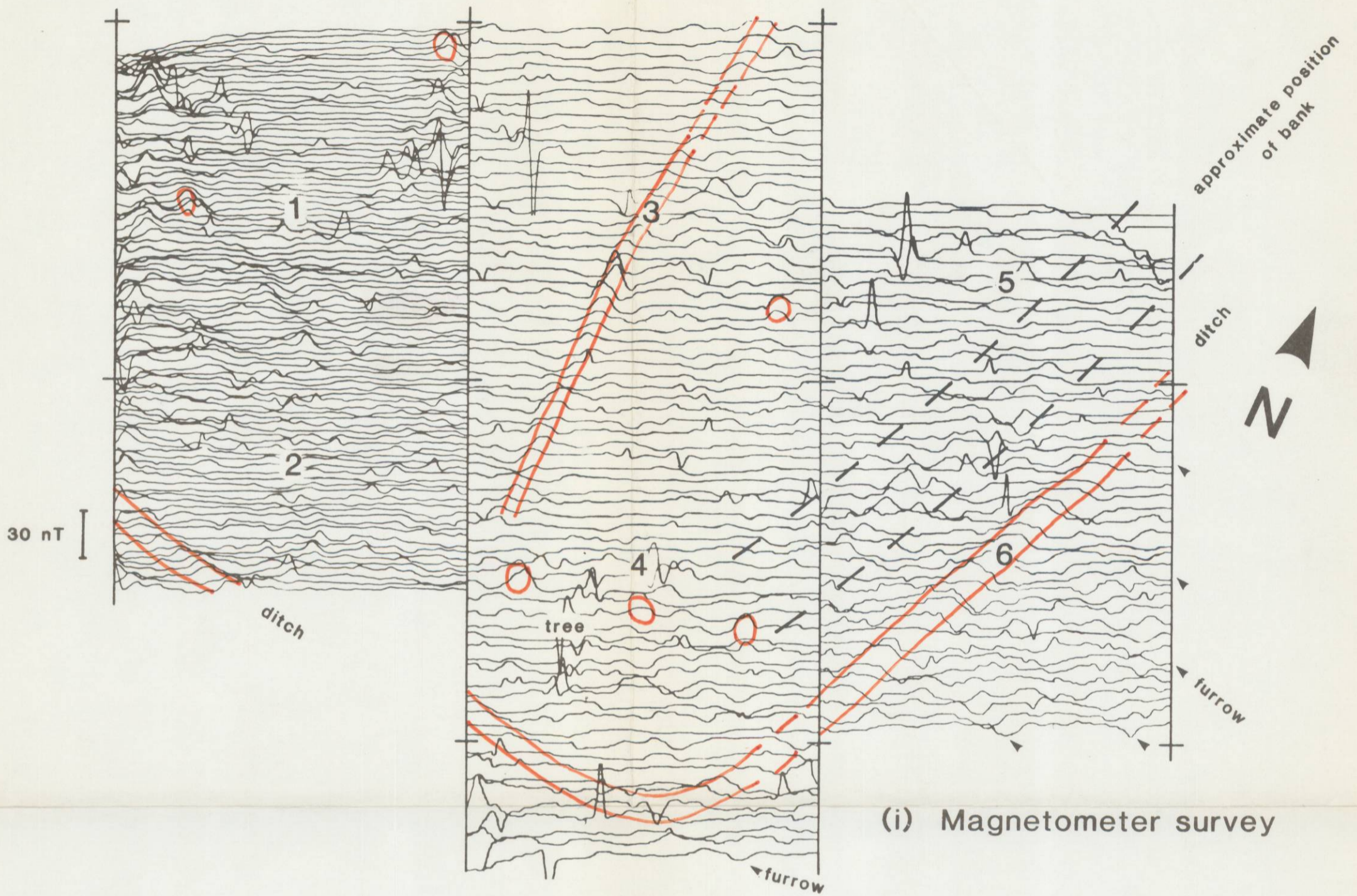
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(i) Site plan 1:2500



(ii) Location of survey grid 1:1000



Anomalies outlined in red

1:400

0 30m