STANWICK, RAUNDS, MAGNETOMETER SURVEY

NOTES ON COMPUTER PLOTS

Report no. G 5/81

This fluxgate magnetometer survey of a Romano-British site was carried out by the Northamptonshire Archaeology Unit on 9th January 1979, and the results sent to the AM Laboratory for computer plotting in September 1979.

A plan showing three alternative presentations of the data, each at 1:250 scale, is enclosed. The 20 x 30m and 20 x 20m sections are numbered as for the initial data sheets.

1. Plot of initial data; vertical scale 18.75 gamma/cm

   The data as displayed in this plot is untreated except for suppression of extreme values (iron spikes), and interpolation to fill in missing readings. (Spatial filtering to extract features of given width is sometimes of use in survey processing, but it is not necessarily so for the differential fluxgate magnetometer which has a limited range and is relatively unaffected by background variations. Filtered treatments of this survey were not found to offer any improvement and are not included here.)

   The plot shows a considerable number of local magnetic anomalies of probable archaeological significance. Some of them, especially near the centre of the survey and at the S side of square 2, are of a strength typical of occupation sites (20 gamma +) and could represent the sites of buildings or accummulations of domestic debris. Other weaker anomalies are likely to be caused by ditches, and represent a perhaps incomplete response to a system of enclosures.

2. Contour plot; range mean + $\frac{1}{2}$ standard deviation to maximum; contour interval 1.5 gamma

   The actual plan of features is more easily seen in a contour plot than it is when the readings are displayed as graphs as in plot 1. For clarity only contours starting at a value above the mean are shown. This tends to fragment some of the weaker linear features, but the stronger anomalies are clearly identifiable.

3. Dot density plot; range mean + $\frac{1}{4}$ to mean + $1\frac{1}{2}$ standard deviations

   The plot saturates at a low level and so the relative strengths of features are obscured, but in comparison with the contour plot the weaker anomalies are reinforced and there is some improvement in the apparent continuity of the ditches. There are ditches forming roughly rectangular enclosures to the E, SE and SW of the strong central anomalies. To the E and S there are also lengths of double parallel ditches which may define trackways between the enclosures.

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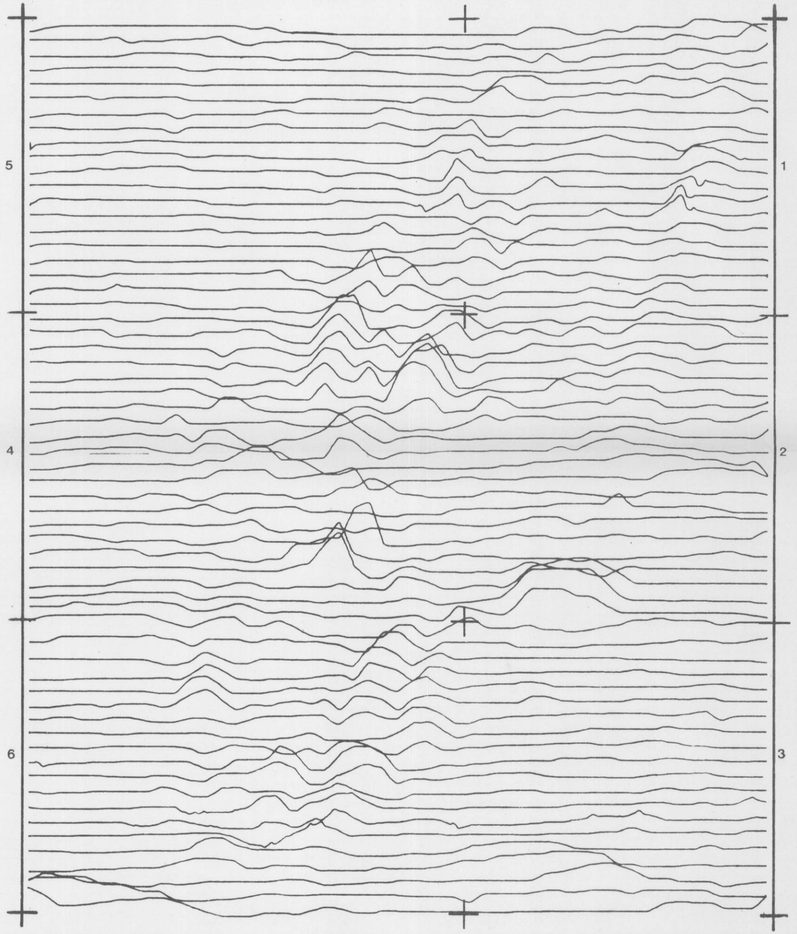

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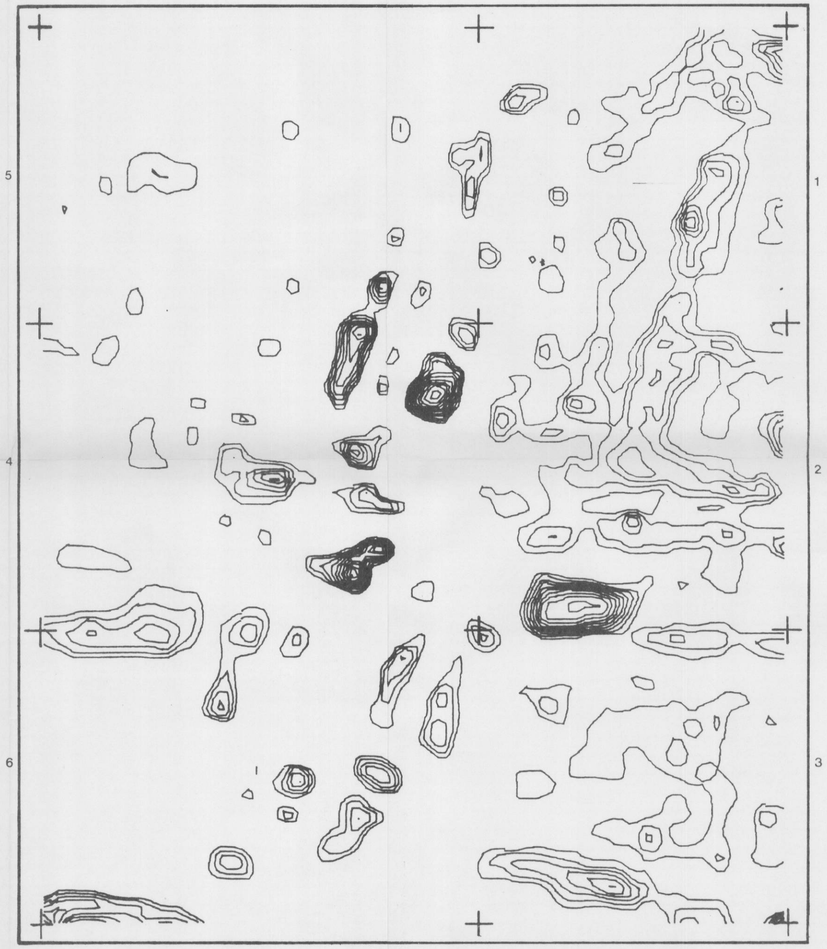

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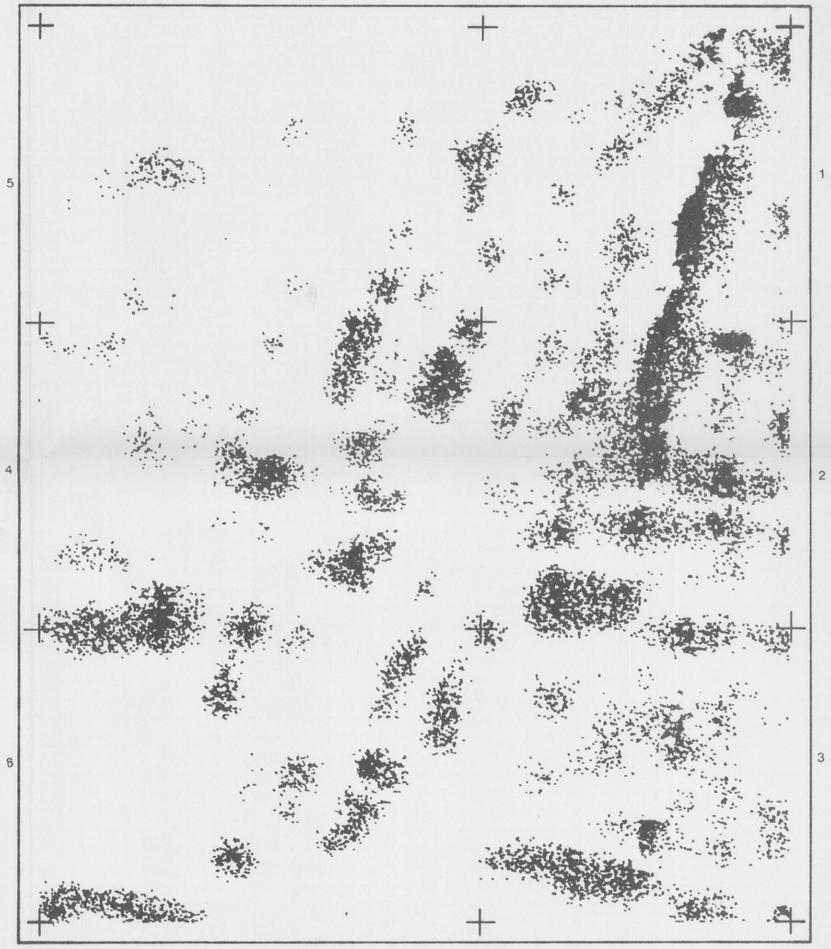

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AM LABORATORY 1981 (SURVEY DATA SUPPLIED BY NORTHAMPTONSHIRE ARCHAEOLOGY UNIT)

1:250