ANCIENT MONUMENTS LABORATORY GEOPHYSICS SECTION

REPORT ON MAGNETOMETER SURVEY

SURVEY: DEAN BOTTOM, MARLBOROUGH **DATE:** 1-2 September, 1977

Report no. 28/77

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1. SITE

OS grid reference: SU 148741 **Field no.** -

Location: On S side of valley below Wooton Basset - Marlborough road 4 miles NE of Marlborough.

Geology: chalk

Archaeological evidence: A rectangular Bronze Age enclosure which has been levelled by ploughing was under excavation at the time of the survey.

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2. SURVEY

Object: To test for any magnetic response from the enclosure and if possible to locate any internal features.

(a) Magnetic survey

Type of survey: traverses plotted with chart recorder

Magnetometer: Plessey fluxgate **Range:** 0-100 γ

Initial chart recorder settings – **Y:** 16 γ/cm (reduced to 32 gamma/cm on plan)
X: 1:200 **scale** " " 1:400 " "

Logged for computing: ~~yes~~/no

(b) Other tests

(i) Magnetic susceptibility:

topsoil: 13.5 **subsoil:** - **fill:** - **$\times 10^{-6}$ emu/gm (ac bridge readings)**

(ii)

Survey grid measured to: Pegs marking excavation baseline. Survey coincides with site pegs at centre of grid but was not corrected for slope. Errors are less than 2 m at extreme N and S of survey.

Plans/charts enclosed:

1. Plot of magnetometer traces with interpretation showing location of survey in relation to site baseline and excavation trench.

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3. RESULTS

An area 90m square centered on the assumed position of the enclosure was surveyed with traverses at 1 m separation. The enclosure measures some 40m x 60m and a trench was cut through the S side of the earthwork at the time of the survey.

The response from the site was weak and the plotted traces show no strong or distinct magnetic anomalies and only a few which are distinguishable from the background noise. A number of anomalies which are either comparatively well-defined or which affect two neighbouring traverses are circled on the chart. They may not all be significant but some of the stronger ones could represent pits or other occupation features. Alternatively the weaker archaeological anomalies might merge with the noise so that the interpretation is not exhaustive. The anomalies numbered 1–4 were marked on the ground by pegs during the survey.

Other still weaker anomalies which fall below the noise level but happen to align with each other are outlined on the chart by rows of dashes 50m apart. This is an attempt to impose preconceptions on the possibly random plot and any suggestion that the anomalies represent the enclosure ditch, or sections of a double ditch, would not be justified unless checked by excavation. Weak anomalies corresponding to features which lie parallel to the traverses cannot normally be identified in a survey plot and none are marked here.

The lack of response from the site means either that the features are severely eroded, or that they are magnetically identical to the subsoil. The topsoil gave a measurable susceptibility reading which means that any surviving feature cut into the chalk with a silted earth fill should in principle be detectable. The fill of any substantial feature which may occur must therefore contain chalk in a similar proportion to the subsoil. A lynchet may partly overlap the site and the response would be weakened wherever the depth of overburden is increased by a later accumulation of soil.

The anomalies circled on the plot do not suggest the presence of remains of occupation substantial enough to cause magnetic enhancement of the soil of the kind which usually occurs around past settlements.

Surveyed and reported by: [illegible] **with:** [illegible]

For: [illegible] **Date of report:** 10th Oct, 1979

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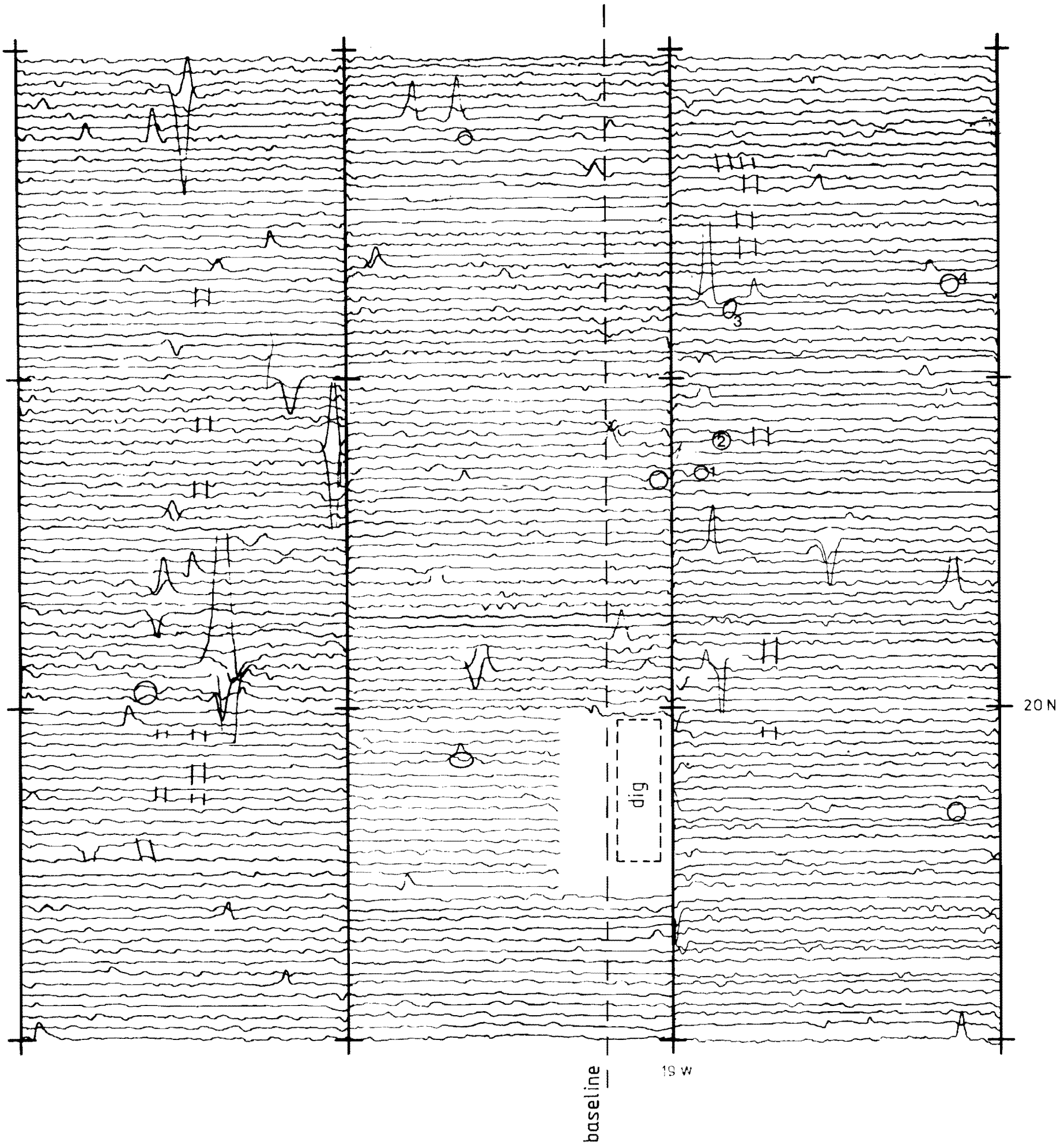

Survey no. 28/77	DEAN BOTTOM	**NG ref.** SU 148 741
magnetic traverses plotted at 32 **gamma/cm**	MAGNETOMETER SURVEY	○ // **magnetic anomalies**
0 1:400 30m	**DoE Ancient Monuments Laboratory Geophysics Section**	