ANCIENT MONUMENTS LABORATORY GEOPHYSICS SECTION

REPORT ON MAGNETOMETER SURVEY

SURVEY: SHADFORTH **DATE:** 13-15.3.79

Report no. 5/79

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1. SITE

OS grid reference: NZ 339402 **Field no.** 0002

Location: crest of Strawberry Hill, half-a-mile to the SW of Shadforth village.

Geology: Magnesian limestone.

Archaeological evidence: cropmarks

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2. SURVEY

Object: to substantiate the cropmark evidence,aand locate further archaeological features.

(a) Magnetic survey

Type of survey: automatic recording

Magnetometer: fluxgate **Range:** 100 γ

Initial chart recorder settings – **Y:** 16 γ/cm
X: 1:200 **scale**

Logged for computing: ~~yes~~/no

(b) Other tests none

(i) Magnetic susceptibility:
topsoil: **subsoil:** **fill:** **x10^{-4} emu/gm**
(ac bridge readings)

(ii)

Survey grid measured to: field boundary

Plans/charts enclosed: 1 – location plan
2 – magnetometer traces

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3. RESULTS

In the time and conditions available it was only possible to survey a sample strip 30 x 210 m. aligned approximately E-W parallel with the crest of the slope. The magnetometer traces are shown on plan 2 where the major features are outlined in red.

Owing to an instrumental fault there has been an alternate displacement of actual anomaly positions by half a metre or so. Where features are linear, such as the E-W ditch in squares 1 and 2, the effect is noticeable as a slight 'staggering' of the anomaly on each recorded traverse. A change in the directional sensitivity of the magnetometer itself accounts for the unnatural 'bunching' or pairing of the traverses. These problems unfortunately restrict the recognition of discrete weakly magnetic features and their relationships, although the stronger and more continuous anomalies can be plotted with greater confidence.

Of these latter, the most clearly defined is the ditch running diagonally through sqs. 5 and 6. Elsewhere in 5, 6 and 7 features are present - most probably concentrations of pits with portions of subsidiary ditches - but these are difficult to resolve into a clear pattern for the reasons given above, and also the presence of a somewhat exaggerated magnetic background noise.

By contrast, sqs. 1, 2, 3, and 4 have a less erratic background against which the principal archaeological features stand out clearly. The strong anomalies to the extreme W of sq. 1 are more modern in origin.

4. CONCLUSIONS

Conditions for magnetic detection on the site are plainly very good. An extended survey unimpaired by instrumental problems, poor weather and surface conditions, might well be very productive.

Surveyed and reported by: A. David. **with:** P. Mills.

For: P. Clack. **Date of report:** 24.7.79

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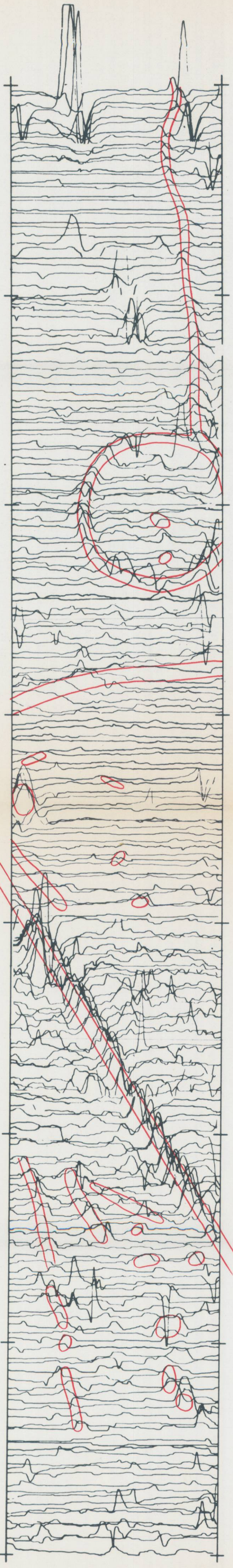

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SHADFORTH

MAGNETOMETER SURVEY

Interpretation

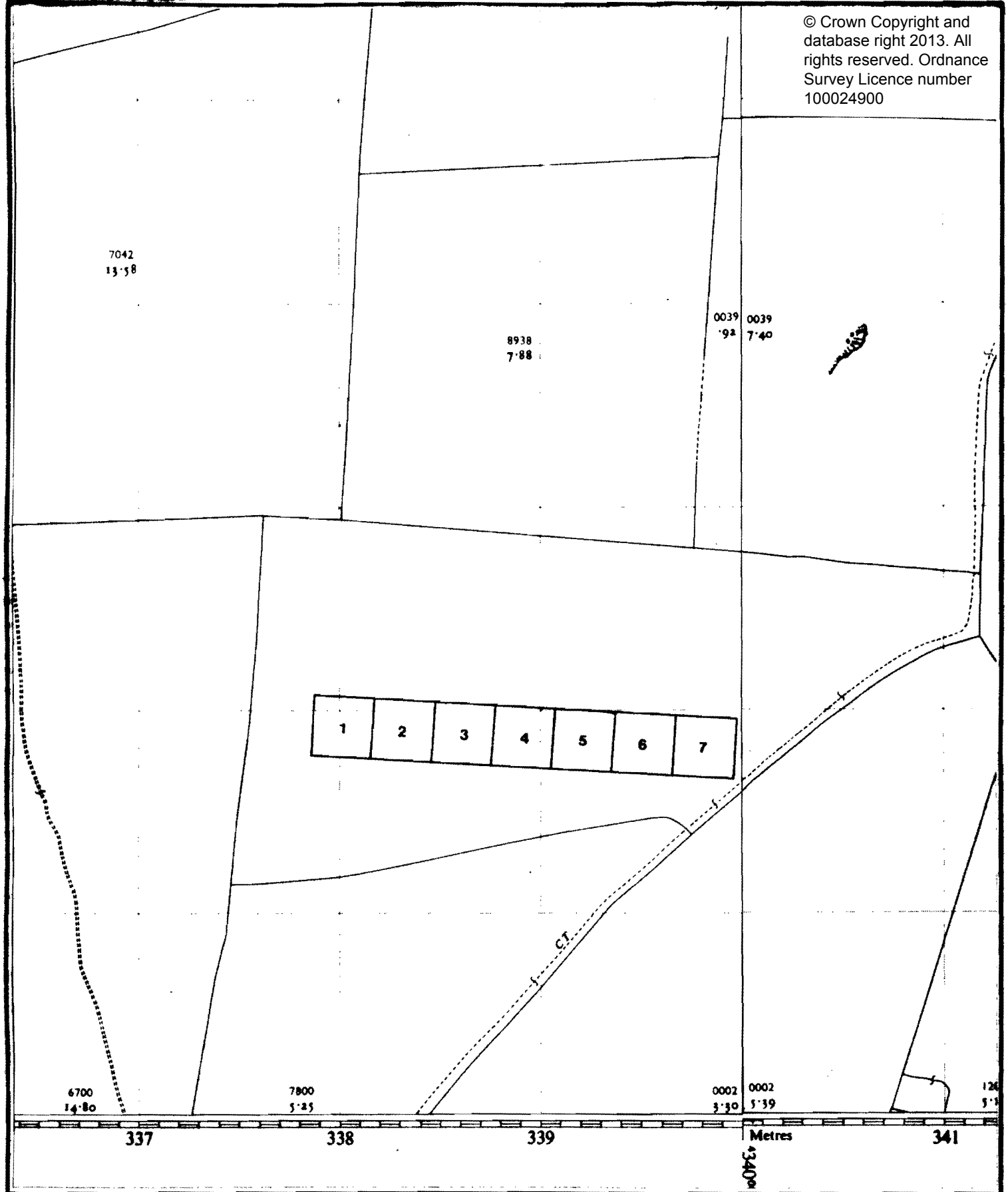
magnetic traverses plotted at 16 gamma/cm

grid pegs

anomalies

0 1:500 30m

Survey no. 7/79 Plan no. 2 of 2	DoE A.M. Laboratory Geophysics Section	



STRAWBERRY HILL, SHADFORTH

MAGNETOMETER SURVEY
Location

NG ref. NZ 339402
Based on 1:2500 OS sheets NZ3340 & 3440

Survey no. 5/79
Plan no. 1 of 2

1:2500 0 60 120m

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Geophysics Section