

GEOPHYSICAL SURVEY REPORT

GOSBECK'S IRON AGE and ROMANO BRITISH SITE, COLCHESTER

ESSEX COUNTY MONUMENT NO.57

"Cunobelin's Farmstead"

by

Aline M Black

March 2002

Introduction

Crop marks have shown a trapezoidal ditch structure, area some 20ha, (TL968225), lying ca. 100m south west and west of the temple and theatre sites respectively at Gosbecks (fig 1, by courtesy of Colchester Archaeological Trust). This ditch system is believed to be Iron Age and the core of Cunobelin's farmstead. Crop marks also show a complex ditch system surrounding and crossing into the trapezoidal structure, suggesting that occupation of the site continued well into the Roman period.

What dating evidence there is for the farmstead enclosure comes from a trench dug across the northern ditch in 1949. The stratification of pottery finds and a late Iron Age brooch suggested that the ditch was already silting up in the late Iron Age and Roman periods. There was no evidence for the date at which the farmstead was set out.

The site is owned by Tarmac Holdings and farmed by tenant farmers who agreed in Autumn 2001 that a geophysical survey of the site by magnetometer could be carried out. A licence to do the work was obtained from English Heritage. The objectives of this first survey were to locate the farmstead precisely in relation to the permanent 100m grid system laid out to the east in Gosbecks Archaeological Park and also to the Ordnance Survey Grid, to confirm the crop marks as indicators of ditches, and to see whether a magnetic survey would reveal additional information about the site and the structure of its ditch systems.

Method

The instrument used was the FM18 Fluxgate Magnetometer with datalogger, made by Geoscan, and owned by Colchester Borough Council.

Using the Gosbecks site grid markers the grid was temporarily extended west into the relevant area. Careful measurement indicated that possible error in extending the Gosbecks grid was at the most extreme edge of the grid 0.5m. Survey squares of side 20m were set out. The operator walked in the south to north direction along tracks 1m apart, taking readings every 0.25m. The data was downloaded into a laptop computer on site, using InSite software from Geoquest. The raw data was also stored for subsequent alternative processing off site.

During December 2001, when the state of the crop growing in the field was such that the farmer was happy to give access, ca. 4 ha were surveyed.

Results

Fig 2 shows the data obtained after processing using InSite. Fig 3 is a copy of fig 2 overlaid with reference marks discussed in the following sections. The raw data was also processed by Dr Tim Dennis of Essex University using his own software (fig 4). Superimposed on the image are the physical features of the site; to the east is the boundary between the Farmstead site and Gosbecks Archaeological Park. The points MI6, M17, M20 and M23 at the intersections of the darker 100m grid are the permanent survey grid points of the Gosbecks site. Fig 5 is a composite of this survey of the farmstead and the previous work on the temple site by Peter Cott, showing their relative locations, again processed by Dr Tim Dennis.

Comments

Using fig.3

1 The trapezoidal ditch structure differs from the crop mark images in several respects.

- (i) The inner ditch on the eastern side, seen as a strong crop mark, is weak and in some places absent from the magnetometer plot; the outer eastern ditch is outwardly bowed.
- (ii) Both outer and inner eastern ditches join the northern ditch at its eastern end (point A fig 3), in contrast to the open crop mark images. This must bring into question previous interpretation of the double ditch as a drove road.
- (iii) The inner southern ditch has a clear break (point B). There is also possibly a break at point C, but this is partially obscured by a strong signal likely to be from agricultural iron. The outer southern ditch has an unexpected 'sine wave' shape towards its eastern end.
- (iv) The ditch structure appears to break up in the south west corner of the trapezium (point D), suggesting that this may have been the main entrance to the site.
- (v) The strong signal at the north west corner, extending some 15m eastwards (point E) is likely to be ferrous metal.

2 Within the trapezoidal ditch system

- (i) the single ditch, *a-b*, running ESE from the centre of the western trapezium ditch has been seen from crop marks and is thought to be of the Roman period. There was no sign of the ditch running from ENE to SSW across the trapezium which has been seen from crop marks. The double ditches, *c-d*, 5m apart, again running ESE across over half the trapezium are new discoveries.
- (ii) the strong singularities in the southern part of the trapezium are likely to be pits.
- (iii) there is some indication of both linear and circular features within the NW corner.
- (iv) There is also indication of circular features in the SW corner.

3 Outside the trapezoidal ditch system

- (i) ditches *e-f*, *g-h* and *i-j* (fig 3) are known from crop marks. They are perpendicular to ditch *k-l* which cuts the western edge of the outer southern ditch of the trapezium. They are all thought to be Roman. There are two additional ditches on the eastern side of the plot, *m-n* and *p-q*, each parallel to *i-j* and each 20m to the west and east of *i-j* respectively.
- (ii) the singularities F and G appear to be connected with the Iron Age ditch system.
- (iii) the singularity H is likely to be agricultural iron.
- (iv) to the west of the plot the strong signal I has been seen in crop marks, but J is new. The very strong singularity just SW of I is likely to be agricultural iron. There is possibly some structure extending some 20 to 25m S from J.
- (v) the curved ditches K in the NW corner of the plot are known from crop marks and believed to be Iron Age.

Conclusions

This survey has confirmed the location of the trapezoidal structure believed to be the core of Cunobelin's farmstead and confirmed many of the ditches previously only identified from crop marks.

Several new features have been observed.

Further work

It would be desirable to extend the magnetometer plot both to the north west to follow the strong ditch signals picked up there and to see if possible how the curved ditch structure (point K, fig 3), relates to the linear ditches; also to extend the plot to the south east to link the ditch system there to that in the adjacent Archaeological Park. Several features should be rescanned at a higher sampling density:

- the 'gateway' area D
- the breaks in the inner southern ditch B and C
- the singularities F, G, I and J
- the possible structures - south of J
 - in the NW corner of the trapezium
 - north of the double trackway in the trapezium
 - and in the southern part of the trapezium.

Acknowledgements

I am grateful to Mr and Mrs R Davidson of Brick House Farm, Peldon, for permission to survey the site.

I am indebted to my husband David and to Tim Dennis who shared the surveying with me and between them were responsible for all the data processing, and to Peter Cott for his advice and encouragement and overall supervision of the work.

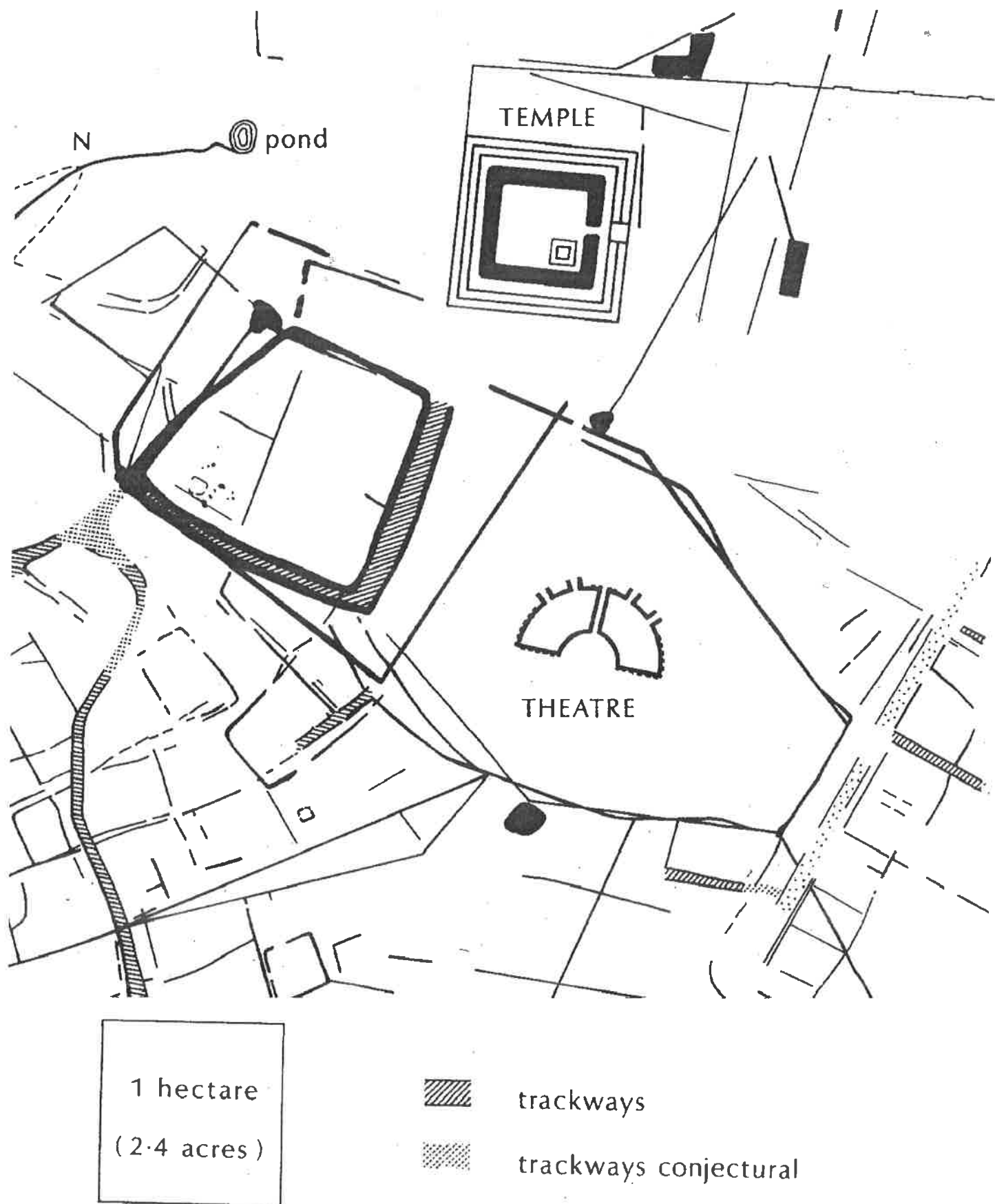


Fig 1



Fig 2

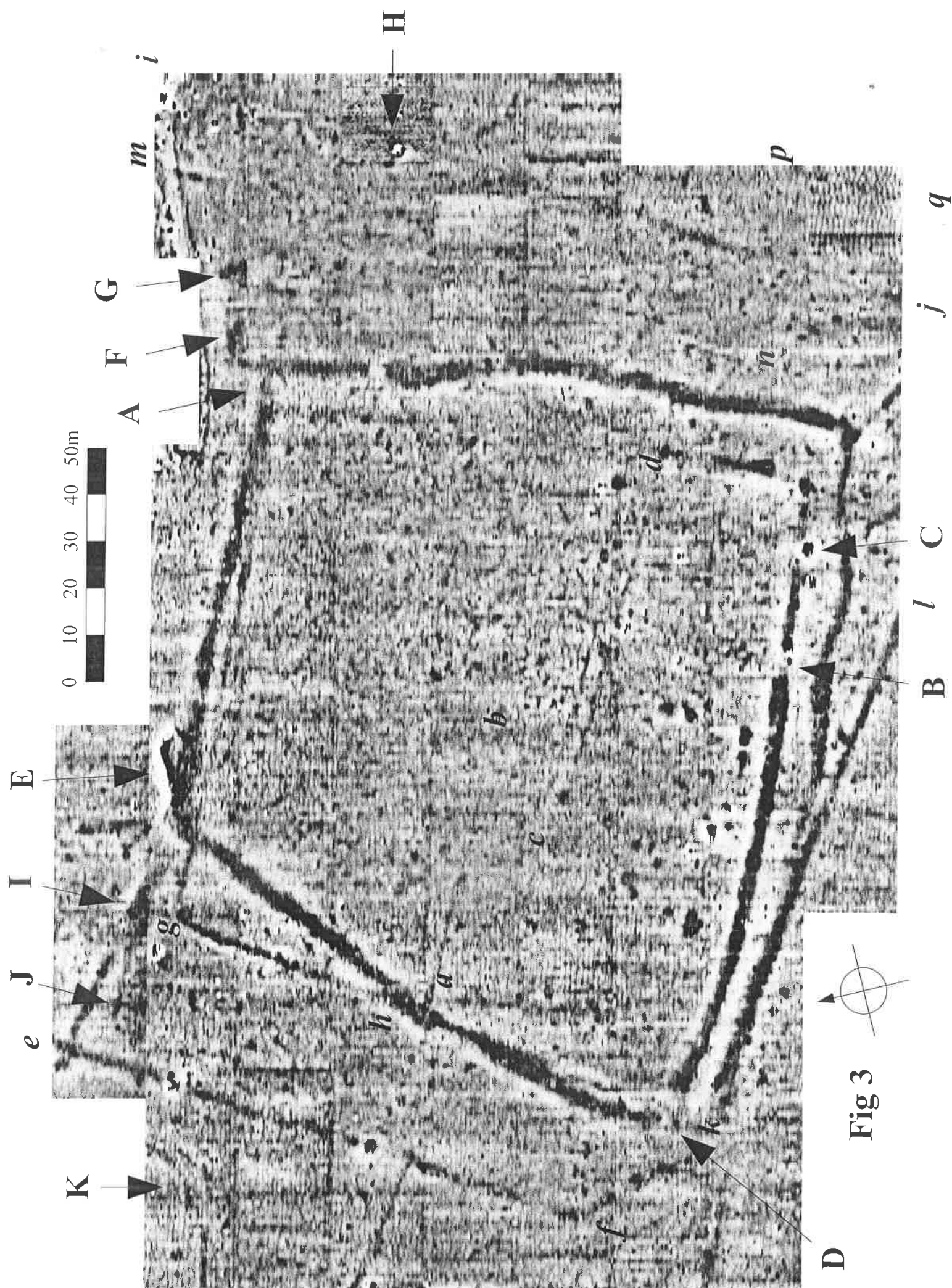


Fig 3

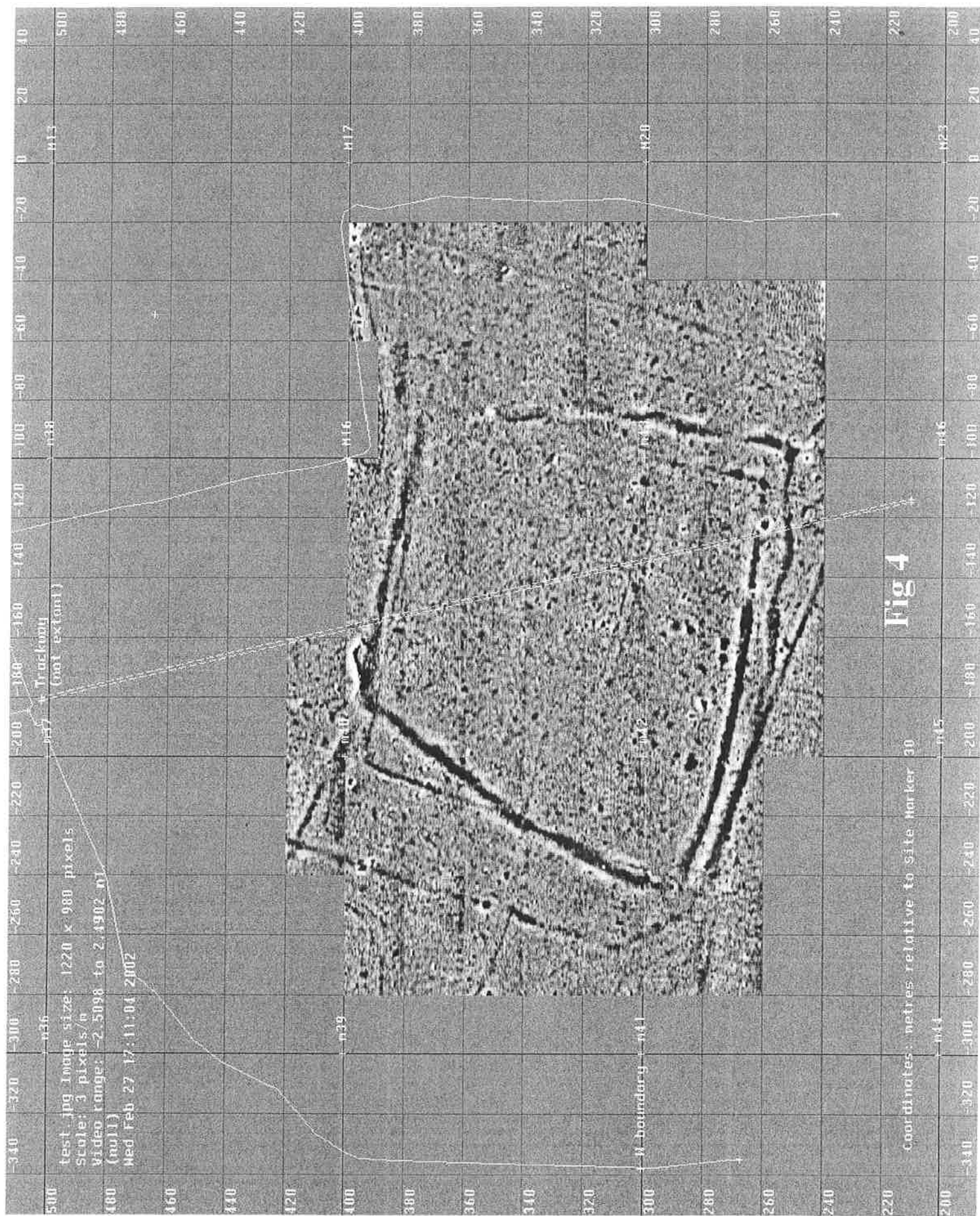


Fig. 4

