

BIRDLIP BY-PASS, GLOUCS. MAGNETOMETER SURVEY, 1984. REPORT NO.G31/84

On the basis of detailed fieldwalking evidence, the Western Archaeological Trust recommended two separate portions of the by-pass route as a priority for survey. A 30m grid was therefore laid out over each of these (see plan 1) and surveyed with fluxgate gradiometer and field recording system. 30m traverses with the magnetometer were repeated over the grid at 1.0m intervals, and the resultant traces are reproduced on plan 2 where significant anomalies have been outlined in red.

RESULTS

Squares 1-12:

This area covers part of a flint scatter and is near to the assumed find-spot of the Birdlip Iron Age mirror. The magnetometer traces are characterised by an exaggerated background noise caused by the very high magnetic susceptibility of the soil here (229×10^{-8} SI units/kg.), but some more substantial features, especially ditches, are plainly visible on the plot. Most notable of these are the pair of ditches in sqs. 1 and 3 which are also associated at this northern end of the survey with several smaller anomalies that may relate to pits or other occupation-type features. The linear anomaly running E-W through Sqs. 5 is also a ditch but is perhaps unrelated to the others and may even be of more recent rather than ancient origin. The other anomalies within this survey are give the impression of partial or fragmentary features either poorly preserved or too weakly magnetised to be discernible from the natural background.

Square 13-32:

Although magnetic susceptibility here is much less than in the previous area (at 14.5×10^{-8} SI units/kg.), archaeological features are nevertheless clearly detectable indicating a considerable concentration of activity in this field.

This activity, especially in sqs. 20-32, corresponds well with a southward extension of a major focus of Roman pottery identified by fieldwalking between the by-pass route and the northeastern corner of the field. Linear anomalies are frequent and, although fragmentary, suggest an approximately rectilinear pattern of enclosure or boundary ditches with a very general alignment in a N-S, E-W direction. Interspersed amongst these linear elements are isolated pits and hearths and a more general disturbance (shaded on plan 2) where anomalies coalesce and separate features cannot be distinguished. These latter areas indicate occupation and/or industrial activity: for instance in sq.30 considerable magnetic disturbance to the north is close to a relatively dense extension of the main pottery scatter, and in the southern corner of the square there is a localised concentration of pits, hearths or ovens.

Elsewhere over the survey area soil noise is sufficiently great to be confused with anomalies from archaeological features, and the interpretation on plan 2 is therefore almost certainly incomplete: minor features near to the threshold of discrimination may have been missed. In Sq.23 a ring ditch has been faintly detected.

CONCLUSIONS:

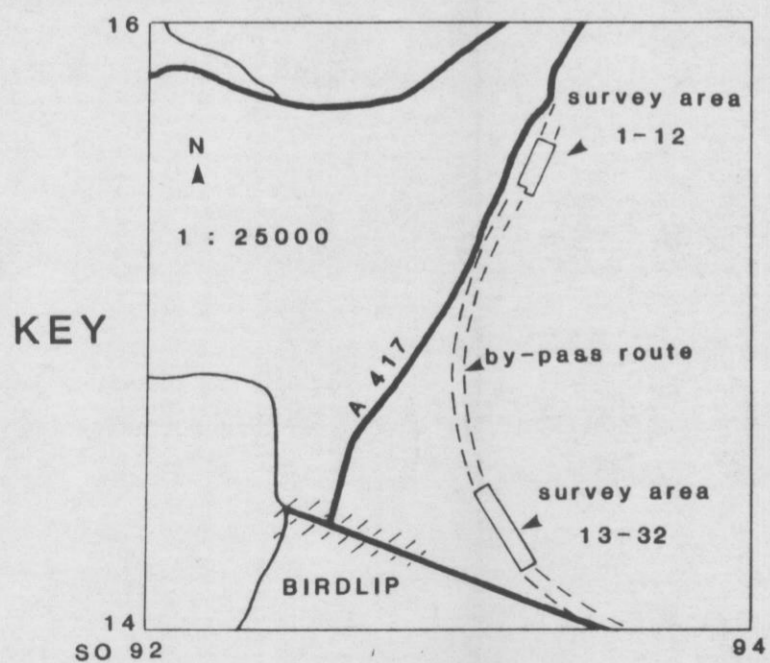
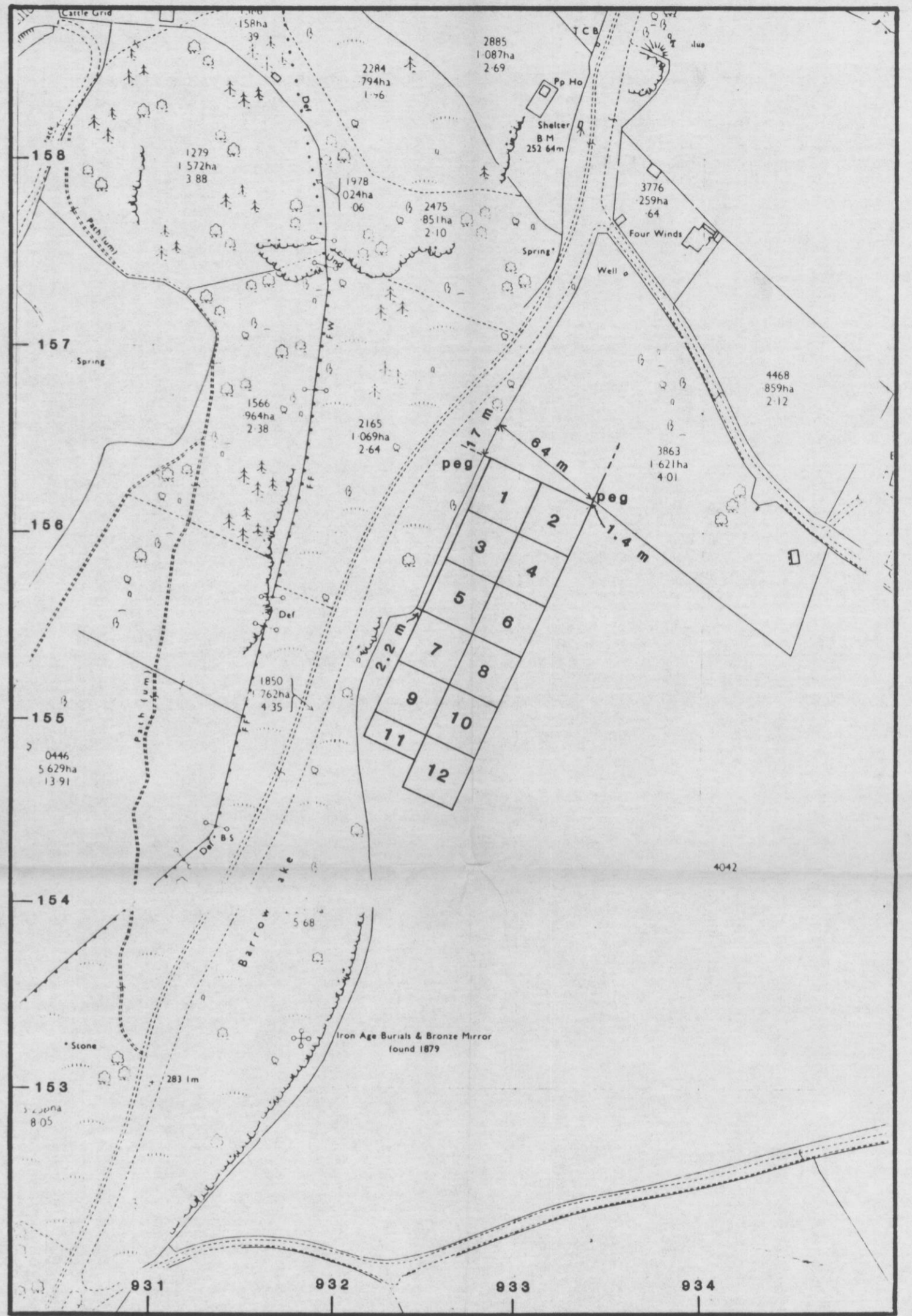
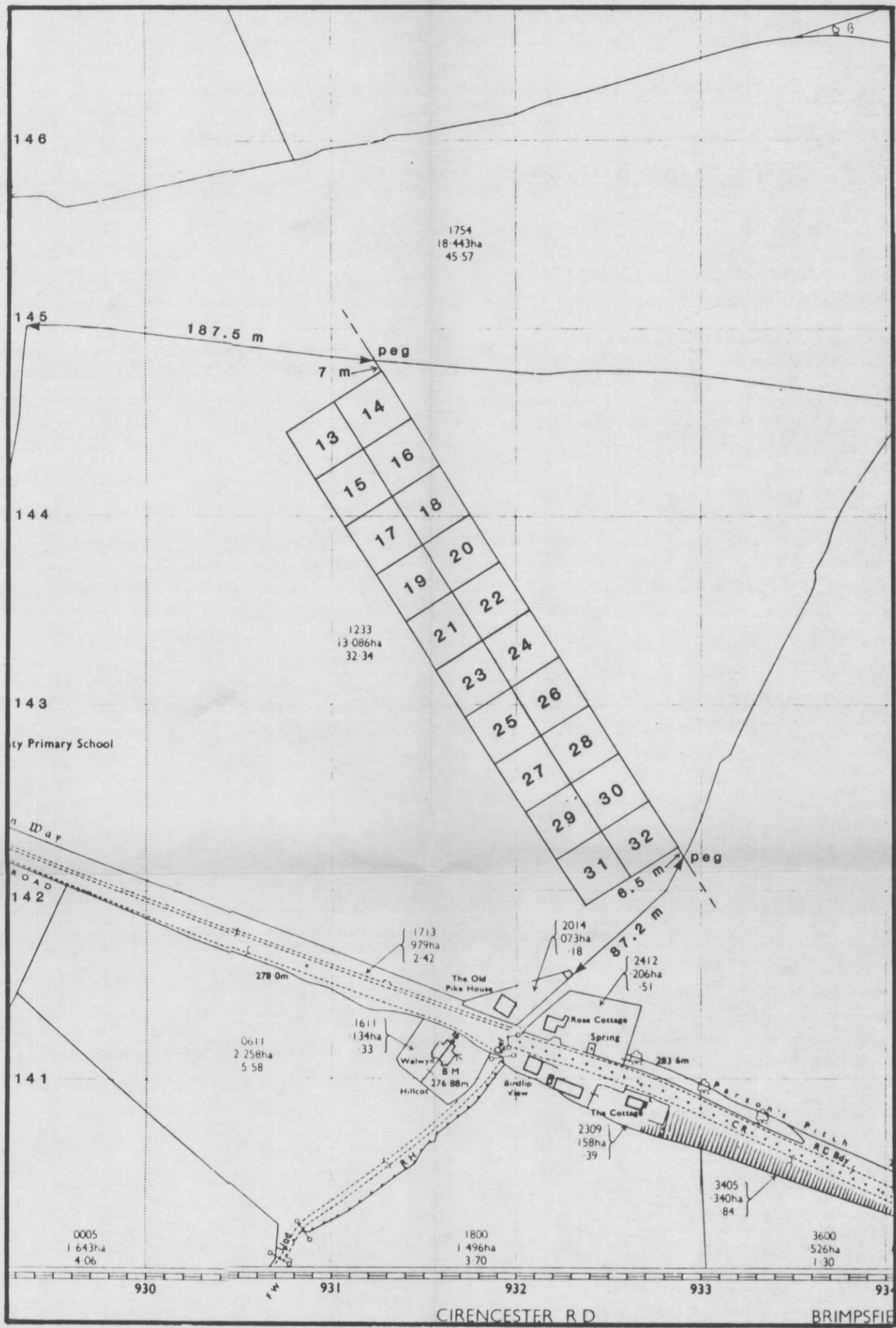
Conditions for magnetic detection on the Cotswolds are usually very good, owing to the rich iron content of the underlying Jurassic limestone, and the Birdlip by-pass appears to be no exception. Features have been detected in both surveyed areas on the route and especially at its southeastern end where a profusion of anomalies suggests a considerable concentration of buried remains. Plainly a more extensive site, of at least the Roman period, exists and is well preserved here, although the survey coverage has been too narrow to fully define its extent and pattern which on the evidence of fieldwalking may focus more to the northeast.

At the north end of the route, substantial ditches and at least some other smaller features indicate the presence of part of another perhaps more dispersed and fragmented site.

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Date: 20/2/85

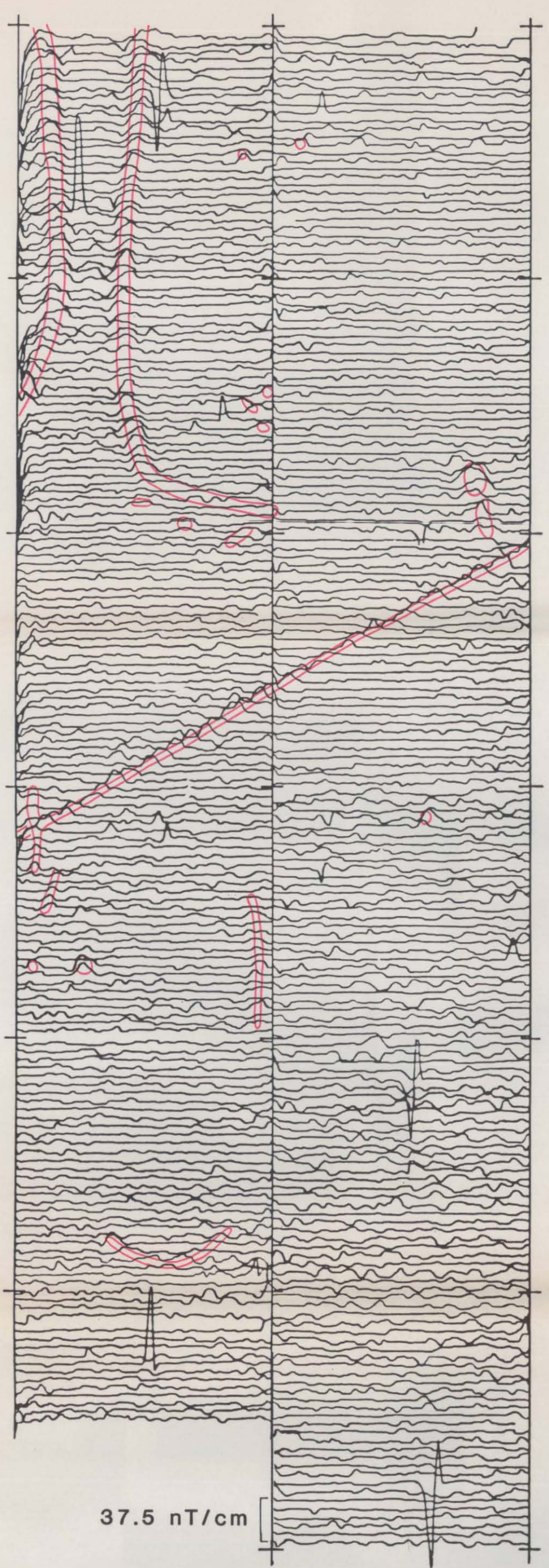
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BIRDLIP BY-PASS

Location of magnetometer survey areas, 1984

1 : 2500

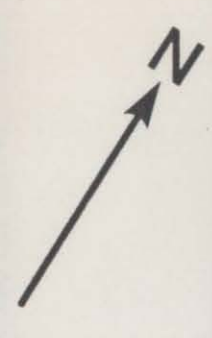
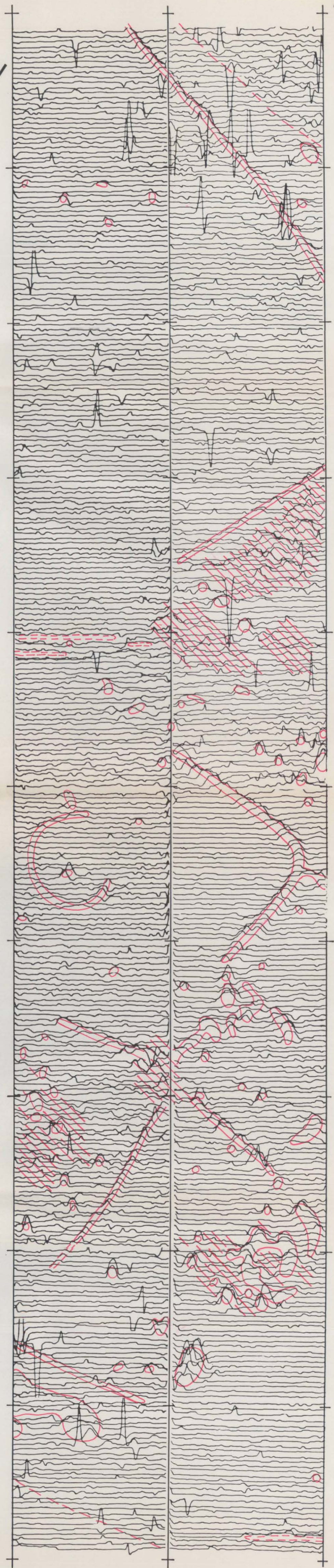


37.5 nT/cm



1	2
3	4
5	6
7	8
9	10
11	12

KEY



KEY

13	14
15	16
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19	20
21	22
23	24
25	26
27	28
29	30
31	32

BIRDLIP BY-PASS, GLOUCS.
Magnetometer survey, 1984.

1 : 500

Archaeological anomalies indicated in red