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S O U T H W E S T

**Land at Moons Hill Quarry,  
Stoke St Michael, Somerset**

**Geophysical Survey (Magnetic)**

**by Tim Dawson**

**Site Code: MHQ12/56**

**(ST 6589 4541)**

# **Land at Moons Hill Quarry, Stoke St Michael, Somerset**

**Geophysical Survey (Magnetic) Report**  
**For John Wainwright and Company Ltd**

by Tim Dawson

Thames Valley Archaeological Services Ltd

Site Code MHQ 12/56

**June 2014**

## Summary

**Site name:** Land at Moons Hill Quarry, Stoke St Michael, Somerset

**Grid reference:** ST 6589 4541

**Site activity:** Magnetometer survey

**Date and duration of project:** 21st May - 9th June 2014

**Project manager:** Steve Ford

**Site supervisor:** Tim Dawson

**Site code:** MHQ 12/56

**Area of site:** Area B: 11.39ha, Area C: 9.83ha

**Summary of results:** A sparse number of anomalies, some possibly of archaeological origin, were recorded across the whole site area, with the most convincing of these occurring in Area C Field 3. Despite the projected line of a Roman road crossing the southern part of the site no magnetic anomalies relating to such a structure were identified. Anomalies relating to existing landscape features, such as footpaths and tracks, were identified as were those reflecting the underlying geology of the site.

**Location of archive:** The archive is presently held at Thames Valley Archaeological Services, Reading in accordance with TVAS digital archiving policies.

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Report edited/checked by: Steve Ford✓ 04.07.14
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Andrew Munding✓ 04.07.14
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# **Land at Moons Hill Quarry, Stoke St Michael, Somerset A Geophysical Survey (Magnetic)**

by Tim Dawson

**Report 12/56b**

## **Introduction**

This report documents the results of a geophysical survey (magnetic) carried out on six fields to the south of Moons Hill Quarry, Long Cross Bottom, Stoke St Michael, Somerset (ST 6589 4541) (Fig. 1). The project was commissioned by Mr Nick Dunn of Land & Mineral Management Ltd, The Roundhouse Cottages, Bridge Street, Frome, Somerset on behalf of John Wainwright and Company Limited, Moons Hill Quarry, Mendip Road, Stoke St Michael, Bath, Somerset, BA3 5JU.

Planning permission is to be sought for the development of a new landscaped storage area for indigenous quarry wastes to the south of the present quarry workings. A geophysical survey was requested in order to inform the planning process. This is in accordance with the Department for Communities and Local Government's National Planning Policy Framework (NPPF 2012) and the County's policies on archaeology. The fieldwork was undertaken by Aiji Castle, Tim Dawson and Lizzi Lewins between 21st May and 9th June 2014 and the site code is MHQ 12/56.

The archive is presently held at Thames Valley Archaeological Services, Reading in accordance with TVAS digital archiving policies.

## **Location, topography and geology**

The site is located to the south of the village of Stoke St Michael, in eastern Somerset between the towns of Shepton Mallet and Frome (Fig. 1). It consists of two survey areas, Area B and Area C in reference to a previous desk-based assessment (Dawson 2014). Area B (Pl. 1-2) comprises two main fields both containing scrub and pasture with their high points in the north and sloping down to the south. The western field has boggy patches across its area and is divided in three by wire fencing with a fenced-off enclosure for two covered reservoirs in the north, and a trackway and several pipes connecting this to the main road in the south. This field also contains earthworks which correspond to the projected line of a Roman road which crosses the southern proposal site. There are, however, no signs of such earthworks in the eastern field although there are signs of a hedgerow which once divided the field in two (west-east). The projected line of the Roman road also crosses the south-western corner of Area C where there appears to be a slight earthwork to reflect this. This area (Pl. 3-4) slopes



steeply uphill from a stream in the centre of the northern field towards Long Cross Farm to the east. All of the fields that make up this area are pasture with the majority of the area also containing dense patches of rushes, suggesting waterlogged ground conditions. Possibly as a result of this a bank has been built along the southern and western boundary of the area along with a causeway leading down the hillside from Long Cross Farm. Areas B and C cover areas of 11.39ha and 9.83ha respectively and are centred on NGRs ST 6570 4540 and ST 6611 4540. The site is located primarily on Portishead Formation sandstone with an area of mixed andesite and tuff/agglomerates immediately to the north, on which stands Moons Hill Quarry (BGS 2000). Both areas are on steeply sloping ground at maximum heights of between 273m in the west and 265m in the east sloping down to a valley in between at a height of *c.*230m above Ordnance Datum.

The weather conditions during the survey period varied with dense fog, and later sun characterising Area B and sunny spells and periods of heavy rain during Area C. This left ground conditions soft although the sun baked a crust on exposed areas making walking in areas of rutting and cattle trample difficult.

## **Site history and archaeological background**

A desk-based assessment has been compiled which details the site's history and archaeological background of the area (Dawson 2014). In summary, cartographic evidence demonstrates that both sites have undergone very little change since 1760 therefore suggesting that any buried archaeological deposits are likely to have been preserved. Stoke St Michael lies on the southern edge of the Mendip Hills, an area from which Lower Palaeolithic flint artefacts and fossilized mammal bones carrying associated cut marks have been found, which may represent some of the earliest evidence for a human presence in Britain (Webster 2007, 34; Webster and Mayberry 2007, 18). Similar finds of tools and butchery marks in animal bones with dates throughout the Palaeolithic, Mesolithic and Neolithic periods have been identified in many cave sites across Mendip (Webster 2007, 34, 50). The Bronze Age is represented by a concentration of round barrows in the region (Adkins 1992, 15), many of which were investigated in a very rudimentary manner by Rev John Skinner and his team of Mendip coal miners in the early 19th century (Webster and Mayberry 2007, 8). The Iron Age and Roman archaeology of the area is dominated by Maesbury Castle, an Iron Age hillfort to the north of Shepton Mallet, the Iron Age and Roman settlements and pottery industry at Shepton Mallet (Gathercole 2003, 3; Webster and Mayberry 2007, 49; 53) and the Roman roads of the Fosse Way and Margary's route 45b (Margary 1955, 74, 93). The two roads, the Fosse Way connecting Lincoln to Axmouth and route 45b connecting the lead mines at Charterhouse on the Mendips to Old Sarum, cross *c.*2km to the west of the survey site with the projected line of

route 45b crossing the southern edge of both Areas B and C. The extensive lead extraction industry began under military control in the AD 40s and continued until the 3rd century AD, producing a highly characteristic series of ingots, after which it passed to private interests and continued as a sizable industry well into the medieval period (Webster 2007, 154–5; 289). Mendip lead has been found on sites in Gaul and beyond, suggesting that the Mendip-Old Sarum road was an important link in the transport network (Webster 2007, 155).

## **Methodology**

### Sample interval

Data collection required a temporary grid to be established across the survey area using wooden pegs at 20m intervals with further subdivision where necessary. Readings were taken at 0.25m intervals along traverses 1m apart. This provides 1600 sampling points across a full 20m × 20m grid (English Heritage 2008), providing an appropriate methodology balancing cost and time with resolution. Grids were aligned on a field by field basis following the longest straight edge of an area where possible in order to reduce the number of partial survey grids. The majority of the fields were aligned north-south. Obstructions were present in most of the survey areas with marsh and scrub being the most disruptive, particularly in Area B Fields 1 A-C and Area C Fields 2 and 3. The softness of the ground and the height of the vegetation prevented surveying from taking place in these areas.

The Grad 601-2 has a typical depth of penetration of 0.5m to 1.0m. This would be increased if strongly magnetic objects have been buried in the site. Under normal operating conditions it can be expected to identify buried features >0.5m in diameter. Features which can be detected include disturbed soil, such as the fill of a ditch, structures that have been heated to high temperatures (magnetic thermoremnance) and objects made from ferro-magnetic materials. The strength of the magnetic field is measured in nano Tesla (nT), equivalent to  $10^{-9}$  Tesla, the SI unit of magnetic flux density.

### Equipment

The purpose of the survey was to identify geophysical anomalies that may be archaeological in origin in order to inform a targeted archaeological investigation of the site prior to development. The survey and report generally follow the recommendations and standards set out by both English Heritage (2008) and the Institute for Archaeologists (2002, 2011).

Magnetometry was chosen as a survey method as it offers the most rapid ground coverage and responds to a wide range of anomalies caused by past human activity. These properties make it ideal for fast yet detailed survey of an area.

The detailed magnetometry survey was carried out using a dual sensor Bartington Instruments Grad 601-2 fluxgate gradiometer. The instrument consists of two fluxgates mounted 1m vertically apart with a second set positioned at 1m horizontal distance. This enables readings to be taken of both the general background magnetic field and any localised anomalies with the difference being plotted as either positive or negative buried features. All sensors are calibrated to cancel out the local magnetic field and react only to anomalies above or below this base line. On this basis, strong magnetic anomalies such as burnt features (kilns and hearths) will give a high response as will buried ferrous objects. More subtle anomalies such as pits and ditches, can be seen from their infilling soils containing higher proportions of humic material, rich in ferrous oxides, compared to the undisturbed subsoil. This will stand out in relation to the background magnetic readings and appear in plan following the course of a linear feature or within a discrete area.

A Trimble GeoXH 6000 handheld GPS system with sub-decimetre accuracy was used to tie the site grid into the Ordnance Survey national grid. This unit offers both real-time correction and post-survey processing; enabling a high level of accuracy to be obtained both in the field and in the final post-processed data.

Data gathered in the field was processed using the TerraSurveyorLite software package. This allows the survey data to be collated and manipulated to enhance the visibility of anomalies, particularly those likely to be of archaeological origin. The table below lists the processes applied to this survey, full survey and data information is recorded in Appendix 1.

<b>Process</b>	<b>Effect</b>
Clip from -4.00 to 4.00 nT	Enhance the contrast of the image to improve the appearance of possible archaeological anomalies.
De-stripe: median, all sensors	Removes the striping effect caused by differences in sensor calibration, enhancing the visibility of potential archaeological anomalies.
De-spike: threshold 1, window size 3×3	Compresses outlying magnetic points caused by interference of metal objects within the survey area.
De-stagger: all grids, both by -1 intervals	Cancels out effects of site's topography on irregularities in the traverse speed.

Once processed, the results are presented as a greyscale plot shown in relation to the site (Figs. 3, 6, 9, 12, 15), followed by a second plan to present the abstraction and interpretation of the magnetic anomalies (Fig. 4, 7, 10, 13, 16). Anomalies are shown as colour-coded lines, points and polygons. The grid layout and

georeferencing information (Fig. 2, 5, 8, 11, 14) is prepared in EasyCAD v.7.22.01, producing a .FC7 file format, and printed as a .PDF for inclusion in the final report.

The greyscale plot of the processed data is exported from TerraSurveyorLite in portable network graphics (.PNG) format, a raster image format chosen for its lossless data compression and support for transparent pixels, enabling it to easily be overlaid onto an existing site plan. The data plot is rotated to orientate it to north and combined with grid and site plans in Adobe InDesign CS5.5, creating .INDD file formats. Once the figures are finalised they are exported in .PDF format for inclusion within the finished report.

## **Results**

### Area B, Field 1A (Figs. 5, 6, 7)

Approximately half of this field was surveyed with the majority of the southern part covered with dense gorse and bracken. A small strip of three partial grids was surveyed along the southern edge in an effort to locate the possible Roman road (Fig. 6). Two anomalies of possible archaeological origin were identified, both in the northern half of the field. A positive linear anomaly [**Fig. 7: 1**], possibly representing a ditch-like feature, and, further to the south, a negative linear anomaly [**2**], possibly a buried earthwork, both appearing to run parallel in an WSW-ENE direction. At the northern end of the field two broad bands of positive anomalies [**3**] most likely reflect a change in the geology underlying the site; while in the south-western area a pair of localised high magnetic spikes [**4**] and are probably the result of buried ferromagnetic objects of unknown date. There are areas of magnetic disturbance along the four edges of the field are caused by the wire fencing that forms the field boundary. This may have the effect of masking any weaker anomalies caused by archaeological features in these areas.

### Area B, Field 1B (Figs. 5, 6, 7)

This area was less overgrown than 1A but the southern edge was significantly more marshy with the soft ground preventing survey along the projected line of the Roman road (Fig. 6). This field contained three discrete linear anomalies which may be the result of archaeological activity. All three are positive, probably indicating ditch-like features, with the first being a short curved section on the field's western boundary [**Fig. 7: 5**], the second is a semi-circular linear further to the east [**6**] while the third is another short section to the south [**7**]. Some of these however, [**7**] in particular, are similar in appearance to the positive anomalies in the same field that probably represent geological features [**8, 9**] and it may be that these too are actually geological in origin. As with Field

1A there is a high degree of magnetic disturbance around the northern, western and eastern field boundaries caused by the wire fencing.

#### Area B, Field 1C (Figs. 5, 6, 7)

With most of the southern half of the field occupied by scrub and marshland only the northern end of Field 1C was surveyed (Fig. 6). This revealed only two dipolar magnetic spikes **[Fig. 7: 10]**, probably caused by buried ferrous objects, and two distinct bipolar linear anomalies **[11]** running parallel with the field's eastern edge and leading northwards to the covered reservoirs. These represent buried services which are recorded on the HER as water pipelines (Dawson 2014).

#### Area B, Field 2 (Figs. 8, 9, 10)

This large, undulating field dipped steeply in the centre towards an old boundary that once divided the area in two but was now largely overgrown (Fig. 9). The southern and western edges, too, were overgrown with nettles which dramatically increased the thickness of the hedgerow which divided Field 2 from Field 1C. Two parallel strong positive linear anomalies were recorded extending eastwards from the centre of the field's western boundary **[Fig. 10: 12, 13]**. These are probably archaeological in origin although they are similar in orientation to the several broader, more organic-looking, positive anomalies **[15]** which most likely represent underlying geological changes. There is a cluster of magnetic spikes in the field's south-western corner **[14]** but whether they represent archaeological activity or just scattered ferromagnetic debris it is unclear. There are several dipolar magnetic spikes across the length of the field **[16-23]**, with a pair occurring on the projected line of the Roman road **[16]** and two larger examples in the northern part of the field **[22, 23]**. A strong bipolar linear anomaly cut along the northern edge of the field **[24]** representing another pipe connecting to the reservoirs to the west.

#### Area C, Field 1 (Figs. 11, 12, 13)

Aside from patches of marsh and scrub along the northern and southern edges of the field and farm buildings in the east the majority of this field was surveyed. (Fig. 12) Despite the projected line of the Roman road passing across the southern corner of the area only two anomalies of possible archaeological origin were identified. A positive linear anomaly extends eastward for a short distance from the south-western corner of the field **[Fig. 13: 25]** while in the centre of the field a negative linear anomaly runs north-east - south-west **[26]**. The latter anomaly, however, approximately coincides with a potential dry watercourse which runs north-east into the marshy area on the field's northern boundary. Another weak negative anomaly **[27]** extends from the field entrance to the south northward towards the field's north-western corner, corresponding to a vehicle-worn track

visible in the ground surface. Immediately to the west, again in close proximity to the field entrance, is an anomaly indicating an area of scattered ferromagnetic debris of unknown age [28] while to the south-west, on the projected line of the Roman road, a series of five dipolar magnetic spikes form a rough circle [29], possibly caused by a series of buried ferrous objects. Similar magnetic spikes were recorded in the central [30] and eastern [31] areas of the field with a larger pair of anomalies between them [32]. A slightly raised bank along the western edge of the field appears to have caused a strong positive linear anomaly with associated negative response along its length [33]. A similar anomaly was recorded along the length of a raised footpath that cuts across the hillside from the north-eastern corner of the site towards the field entrance in the south [34]. The entrance itself consisted of a rectangular enclosure within the field separated by a wire fence and steel gates. The magnetic response of this can be seen in the large area of magnetic disturbance in the southern part of the field [35]. As noted previously, this disturbance may mask underlying anomalies caused by archaeological features.

#### Area C, Field 2 (Figs. 11, 12, 13)

With most of the eastern part of Field 2 consisting of marsh only the western part was available for survey (Fig. 12). The only anomalies recorded in this field were a group of three negative linears [Fig. 13: 36], which, like [27] in Field 1, corresponded to vehicle tracks visible on the ground surface and a single dipolar magnetic spike at the southern end [39]. The raised bank and its associated positive and negative magnetic signature seen in Field 1 [33] continued north along the western edge of Field 2 [37] while the east-west pipeline seen at the northern end of Area B's Field 2 [24] continues under the road into Area C Field 2 where it turns and heads off in a north-easterly direction [38].

#### Area C, Field 3 (Figs. 11, 12, 13)

One of the more challenging fields to survey, Field 3 slopes steeply downhill from the east levelling out half way across the area and then quickly becoming marshy towards the western and southern sides (Fig. 12). Despite this, Field 3 contained the most archaeological-like anomalies. A pair of parallel linear positive anomalies, probably representing ditches, extend southward's from the field's northern border [Fig. 13: 40] but appear to stop quite abruptly after 30-40m. Another positive linear anomaly [41] appears in the centre of the field and extends south-west where it meets a complex of positive linear anomalies [42] which cross almost perpendicularly to its course. This group of anomalies forms two enclosed areas although these are of shapes and sizes which leave their possible uses unclear. From their position at the base of the hill on the borders of a marshy area it may be that these are caused by buried drainage ditches. The field also contains two localised magnetic spikes, one dipolar

[43] and the second a much larger and stronger bipolar response [44]. The latter obscures the northern end of the eastern-most positive linear anomaly.

#### Area C, Field 4 (Figs. 14, 15, 16)

This hilltop field was the most clear of obstructions with only a single patch of nettles in the east and an area too steep to survey in the northern corner (Fig. 15). Of the anomalies recorded in this field there are three groups which possibly represent buried cut features (ditches and pits) of archaeological origin, although all are somewhat dubious, due to the weak response and the similarity to other geological anomalies in this field. The first is a short linear feature [Fig. 14: 45] in the northern part of the site which may be archaeological or, because of its orientation, may be associated with another anomaly of likely geological origin further to the east [48] or those of agricultural origin that appear faintly in the eastern half of the field (Fig. 15). To the south-west are a collection of four stronger, larger discrete positive anomalies which may represent in-filled pits [46] with another example in the south-eastern part of the field [47]. There are two much more diffuse areas of positive magnetic anomaly in the eastern area [48, 49] which are probably caused by changes in the underlying geology and two dipolar ferrous spikes, one in the west [50] and the other in the east [51]. In addition to the small areas of magnetic disturbance in the south and along the field's eastern fence-line there is a large patch in the north [51] caused by an electricity mast and its associated wire.

## **Conclusion**

Aside from the areas of marsh and scrub that prevented work from being undertaken in certain parts of the site the geophysical survey of the land at Moons Hill Quarry was undertaken successfully. A small number of anomalies possibly caused by discrete archaeological features were recorded across the whole area of the site, with the most convincing possibly forming an enclosure in Area C Field 3. Despite the projected line of a Roman road crossing the southern part of the site no magnetic anomalies relating to such a road structure were identified. Anomalies relating to existing landscape features, such as footpaths and tracks, were identified as were those reflecting the underlying geology of the site. There were several areas of magnetic disturbance, particularly along the pipelines in Fields 1C and 2 of Area B and around the entrance to Area C Field 1 and these may have had a masking effect on any archaeologically-caused anomalies in the area.

## References

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## Appendix 1. Survey and data information



## **AREA B**

### **Field 1A**

#### **Raw data**

Instrument Type: Bartington (Gradiometer)  
Units: nT  
Direction of 1st Traverse: 354.606 deg  
Collection Method: ZigZag  
Sensors: 2 @ 1.00 m spacing.  
Dummy Value: 32000

#### Dimensions

Composite Size (readings): 720 x 120  
Survey Size (meters): 180 m x 120 m  
Grid Size: 20 m x 20 m  
X Interval: 0.25 m  
Y Interval: 1 m

#### Stats

Max: 100.00  
Min: -100.00  
Std Dev: 9.16  
Mean: -0.85  
Median: 0.11  
Composite Area: 2.16 ha  
Surveyed Area: 1.1222 ha

#### Source Grids: 36

1 Col:0 Row:1 grids\01.xgd  
2 Col:1 Row:0 grids\02.xgd  
3 Col:1 Row:1 grids\03.xgd  
4 Col:2 Row:0 grids\04.xgd  
5 Col:2 Row:1 grids\05.xgd  
6 Col:3 Row:0 grids\06.xgd  
7 Col:3 Row:1 grids\07.xgd  
8 Col:4 Row:0 grids\08.xgd  
9 Col:4 Row:1 grids\09.xgd  
10 Col:4 Row:2 grids\10.xgd  
11 Col:4 Row:3 grids\11.xgd  
12 Col:4 Row:4 grids\12.xgd  
13 Col:5 Row:0 grids\13.xgd  
14 Col:5 Row:1 grids\14.xgd  
15 Col:5 Row:2 grids\15.xgd  
16 Col:5 Row:3 grids\16.xgd  
17 Col:5 Row:4 grids\17.xgd  
18 Col:5 Row:5 grids\18.xgd  
19 Col:6 Row:0 grids\19.xgd  
20 Col:6 Row:1 grids\20.xgd  
21 Col:6 Row:2 grids\21.xgd  
22 Col:6 Row:3 grids\22.xgd  
23 Col:6 Row:4 grids\23.xgd  
24 Col:6 Row:5 grids\24.xgd  
25 Col:7 Row:0 grids\25.xgd  
26 Col:7 Row:1 grids\26.xgd  
27 Col:7 Row:2 grids\27.xgd  
28 Col:7 Row:3 grids\28.xgd  
29 Col:7 Row:4 grids\29.xgd  
30 Col:7 Row:5 grids\30.xgd  
31 Col:8 Row:0 grids\31.xgd  
32 Col:8 Row:1 grids\32.xgd  
33 Col:8 Row:2 grids\33.xgd  
34 Col:8 Row:3 grids\34.xgd  
35 Col:8 Row:4 grids\35.xgd  
36 Col:8 Row:5 grids\36.xgd

#### **Processed data**

Max: 4.00  
Min: -4.00  
Std Dev: 1.32  
Mean: -0.03  
Median: 0.00

3 Col:1 Row:3 grids\25.xgd  
4 Col:1 Row:4 grids\36.xgd  
5 Col:2 Row:2 grids\15.xgd

#### Processes: 4

- 1 Base Layer
- 2 DeStripe Median Sensors: All
- 3 De Stagger: Grids: All Mode: Both By: -4 intervals
- 4 Clip from -4.00 to 4.00 nT

### **Field 1A road**

#### **Raw data**

Direction of 1st Traverse: 21.015 deg  
Collection Method: ZigZag  
Sensors: 2 @ 1.00 m spacing.  
Dummy Value: 32000

#### Dimensions

Composite Size (readings): 80 x 60  
Survey Size (meters): 20 m x 60 m  
Grid Size: 20 m x 20 m  
X Interval: 0.25 m  
Y Interval: 1 m

#### Stats

Max: 74.06  
Min: -100.00  
Std Dev: 29.97  
Mean: -14.30  
Median: -0.73  
Composite Area: 0.12 ha  
Surveyed Area: 0.0522 ha

#### Source Grids: 3

1 Col:0 Row:0 grids\01.xgd  
2 Col:0 Row:1 grids\02.xgd  
3 Col:0 Row:2 grids\03.xgd

#### **Processed data**

Max: 4.00  
Min: -4.00  
Std Dev: 2.60  
Mean: -0.52  
Median: 0.00

#### Processes: 4

- 1 Base Layer
- 2 DeStripe Median Sensors: All
- 3 De Stagger: Grids: All Mode: Outbound By: -4 intervals
- 5 Clip from -4.00 to 4.00 nT

### **Field 1B**

#### **Raw data**

Direction of 1st Traverse: 14.6 deg  
Collection Method: ZigZag  
Sensors: 2 @ 1.00 m spacing.  
Dummy Value: 32000

#### Dimensions

Composite Size (readings): 1120 x 140  
Survey Size (meters): 280 m x 140 m  
Grid Size: 20 m x 20 m  
X Interval: 0.25 m  
Y Interval: 1 m

#### Stats

Max: 4.00  
Min: -4.00  
Std Dev: 1.39  
Mean: -0.08  
Median: 0.00  
Composite Area: 3.92 ha  
Surveyed Area: 1.2695 ha

#### Source Grids: 50

1 Col:1 Row:1 grids\01.xgd  
2 Col:1 Row:2 grids\14.xgd

#### Stats

Max: 100.00  
Min: -100.00

6 Col:2 Row:3 grids\26.xgd  
 7 Col:3 Row:2 grids\16.xgd  
 8 Col:3 Row:3 grids\27.xgd  
 9 Col:3 Row:4 grids\37.xgd  
 10 Col:4 Row:2 grids\17.xgd  
 11 Col:4 Row:3 grids\28.xgd  
 12 Col:4 Row:4 grids\38.xgd  
 13 Col:4 Row:5 grids\47.xgd  
 14 Col:5 Row:2 grids\18.xgd  
 15 Col:5 Row:3 grids\29.xgd  
 16 Col:5 Row:4 grids\39.xgd  
 17 Col:5 Row:5 grids\48.xgd  
 18 Col:6 Row:0 grids\02.xgd  
 19 Col:6 Row:1 grids\08.xgd  
 20 Col:6 Row:2 grids\19.xgd  
 21 Col:6 Row:3 grids\30.xgd  
 22 Col:6 Row:4 grids\40.xgd  
 23 Col:6 Row:5 grids\49.xgd  
 24 Col:7 Row:0 grids\03.xgd  
 25 Col:7 Row:1 grids\09.xgd  
 26 Col:7 Row:2 grids\20.xgd  
 27 Col:7 Row:3 grids\31.xgd  
 28 Col:7 Row:4 grids\41.xgd  
 29 Col:7 Row:5 grids\50.xgd  
 30 Col:8 Row:0 grids\04.xgd  
 31 Col:8 Row:1 grids\10.xgd  
 32 Col:8 Row:2 grids\21.xgd  
 33 Col:8 Row:3 grids\32.xgd  
 34 Col:8 Row:4 grids\42.xgd  
 35 Col:9 Row:0 grids\05.xgd  
 36 Col:9 Row:1 grids\11.xgd  
 37 Col:9 Row:2 grids\22.xgd  
 38 Col:9 Row:3 grids\33.xgd  
 39 Col:9 Row:4 grids\43.xgd  
 40 Col:10 Row:0 grids\06.xgd  
 41 Col:10 Row:1 grids\12.xgd  
 42 Col:10 Row:2 grids\23.xgd  
 43 Col:10 Row:3 grids\34.xgd  
 44 Col:10 Row:4 grids\44.xgd  
 45 Col:11 Row:0 grids\07.xgd  
 46 Col:11 Row:1 grids\13.xgd  
 47 Col:11 Row:2 grids\24.xgd  
 48 Col:11 Row:3 grids\35.xgd  
 49 Col:11 Row:4 grids\45.xgd  
 50 Col:12 Row:4 grids\46.xgd

#### Processed data

Max: 4.00  
 Min: -4.00  
 Std Dev: 1.39  
 Mean: -0.08  
 Median: 0.00

Processes: 4

- 1 Base Layer
- 2 DeStripe Median Sensors: All
- 3 De Stagger: Grids: All Mode: Both By: -2 intervals
- 4 Clip from -4.00 to 4.00 nT

#### Field 1C

##### Raw data

Direction of 1st Traverse: 8.1494 deg  
 Collection Method: ZigZag  
 Sensors: 2 @ 1.00 m spacing.  
 Dummy Value: 32000

##### Dimensions

Composite Size (readings): 560 x 100  
 Survey Size (meters): 140 m x 100 m  
 Grid Size: 20 m x 20 m  
 X Interval: 0.25 m  
 Y Interval: 1 m

- 4 Col:1 Row:1 grids\15.xgd
- 5 Col:1 Row:2 grids\30.xgd
- 6 Col:1 Row:3 grids\46.xgd

Std Dev: 25.76  
 Mean: -2.02  
 Median: 0.79  
 Composite Area: 1.4 ha  
 Surveyed Area: 0.701 ha

#### Source Grids: 25

- 1 Col:0 Row:4 grids\19.xgd
- 2 Col:1 Row:2 grids\08.xgd
- 3 Col:1 Row:3 grids\13.xgd
- 4 Col:1 Row:4 grids\20.xgd
- 5 Col:2 Row:1 grids\04.xgd
- 6 Col:2 Row:2 grids\09.xgd
- 7 Col:2 Row:3 grids\14.xgd
- 8 Col:2 Row:4 grids\21.xgd
- 9 Col:3 Row:0 grids\01.xgd
- 10 Col:3 Row:1 grids\05.xgd
- 11 Col:3 Row:2 grids\10.xgd
- 12 Col:3 Row:3 grids\15.xgd
- 13 Col:3 Row:4 grids\22.xgd
- 14 Col:4 Row:0 grids\02.xgd
- 15 Col:4 Row:1 grids\06.xgd
- 16 Col:4 Row:2 grids\11.xgd
- 17 Col:4 Row:3 grids\16.xgd
- 18 Col:4 Row:4 grids\23.xgd
- 19 Col:5 Row:0 grids\03.xgd
- 20 Col:5 Row:1 grids\07.xgd
- 21 Col:5 Row:2 grids\12.xgd
- 22 Col:5 Row:3 grids\17.xgd
- 23 Col:5 Row:4 grids\24.xgd
- 24 Col:6 Row:3 grids\18.xgd
- 25 Col:6 Row:4 grids\25.xgd

#### Processed data

Max: 4.00  
 Min: -4.00  
 Std Dev: 2.41  
 Mean: -0.20  
 Median: 0.00

Processes: 4

- 1 Base Layer
- 2 DeStripe Median Sensors: All
- 3 De Stagger: Grids: All Mode: Both By: -2 intervals
- 4 Clip from -4.00 to 4.00 nT

#### Field 2

##### Raw data

Direction of 1st Traverse: 8.138 deg  
 Collection Method: ZigZag  
 Sensors: 2 @ 1.00 m spacing.  
 Dummy Value: 32000

##### Dimensions

Composite Size (readings): 1360 x 180  
 Survey Size (meters): 340 m x 180 m  
 Grid Size: 20 m x 20 m  
 X Interval: 0.25 m  
 Y Interval: 1 m

##### Stats

Max: 100.00  
 Min: -100.00  
 Std Dev: 9.49  
 Mean: -0.41  
 Median: -0.33  
 Composite Area: 6.12 ha  
 Surveyed Area: 4.6325 ha

#### Source Grids: 137

- 1 Col:0 Row:6 grids\94.xgd
- 2 Col:0 Row:7 grids\111.xgd
- 3 Col:0 Row:8 grids\137.xgd
- 80 Col:9 Row:7 grids\120.xgd
- 81 Col:10 Row:0 grids\09.xgd
- 82 Col:10 Row:1 grids\24.xgd

7 Col:1 Row:4 grids\62.xgd  
 8 Col:1 Row:5 grids\78.xgd  
 9 Col:1 Row:6 grids\95.xgd  
 10 Col:1 Row:7 grids\112.xgd  
 11 Col:1 Row:8 grids\136.xgd  
 12 Col:2 Row:0 grids\01.xgd  
 13 Col:2 Row:1 grids\16.xgd  
 14 Col:2 Row:2 grids\31.xgd  
 15 Col:2 Row:3 grids\47.xgd  
 16 Col:2 Row:4 grids\63.xgd  
 17 Col:2 Row:5 grids\79.xgd  
 18 Col:2 Row:6 grids\96.xgd  
 19 Col:2 Row:7 grids\113.xgd  
 20 Col:2 Row:8 grids\135.xgd  
 21 Col:3 Row:0 grids\02.xgd  
 22 Col:3 Row:1 grids\17.xgd  
 23 Col:3 Row:2 grids\32.xgd  
 24 Col:3 Row:3 grids\48.xgd  
 25 Col:3 Row:4 grids\64.xgd  
 26 Col:3 Row:5 grids\80.xgd  
 27 Col:3 Row:6 grids\97.xgd  
 28 Col:3 Row:7 grids\114.xgd  
 29 Col:3 Row:8 grids\134.xgd  
 30 Col:4 Row:0 grids\03.xgd  
 31 Col:4 Row:1 grids\18.xgd  
 32 Col:4 Row:2 grids\33.xgd  
 33 Col:4 Row:3 grids\49.xgd  
 34 Col:4 Row:4 grids\65.xgd  
 35 Col:4 Row:5 grids\81.xgd  
 36 Col:4 Row:6 grids\98.xgd  
 37 Col:4 Row:7 grids\115.xgd  
 38 Col:4 Row:8 grids\133.xgd  
 39 Col:5 Row:0 grids\04.xgd  
 40 Col:5 Row:1 grids\19.xgd  
 41 Col:5 Row:2 grids\34.xgd  
 42 Col:5 Row:3 grids\50.xgd  
 43 Col:5 Row:4 grids\66.xgd  
 44 Col:5 Row:5 grids\82.xgd  
 45 Col:5 Row:6 grids\99.xgd  
 46 Col:5 Row:7 grids\116.xgd  
 47 Col:5 Row:8 grids\132.xgd  
 48 Col:6 Row:0 grids\05.xgd  
 49 Col:6 Row:1 grids\20.xgd  
 50 Col:6 Row:2 grids\35.xgd  
 51 Col:6 Row:3 grids\51.xgd  
 52 Col:6 Row:4 grids\67.xgd  
 53 Col:6 Row:5 grids\83.xgd  
 54 Col:6 Row:6 grids\100.xgd  
 55 Col:6 Row:7 grids\117.xgd  
 56 Col:6 Row:8 grids\131.xgd  
 57 Col:7 Row:0 grids\06.xgd  
 58 Col:7 Row:1 grids\21.xgd  
 59 Col:7 Row:2 grids\36.xgd  
 60 Col:7 Row:3 grids\52.xgd  
 61 Col:7 Row:4 grids\68.xgd  
 62 Col:7 Row:5 grids\84.xgd  
 63 Col:7 Row:6 grids\101.xgd  
 64 Col:7 Row:7 grids\118.xgd  
 65 Col:8 Row:0 grids\07.xgd  
 66 Col:8 Row:1 grids\22.xgd  
 67 Col:8 Row:2 grids\37.xgd  
 68 Col:8 Row:3 grids\53.xgd  
 69 Col:8 Row:4 grids\69.xgd  
 70 Col:8 Row:5 grids\85.xgd  
 71 Col:8 Row:6 grids\102.xgd  
 72 Col:8 Row:7 grids\119.xgd  
 73 Col:9 Row:0 grids\08.xgd  
 74 Col:9 Row:1 grids\23.xgd  
 75 Col:9 Row:2 grids\38.xgd  
 76 Col:9 Row:3 grids\54.xgd  
 77 Col:9 Row:4 grids\70.xgd  
 78 Col:9 Row:5 grids\86.xgd  
 79 Col:9 Row:6 grids\103.xgd

## AREA C

### Field 1

83 Col:10 Row:2 grids\39.xgd  
 84 Col:10 Row:3 grids\55.xgd  
 85 Col:10 Row:4 grids\71.xgd  
 86 Col:10 Row:5 grids\87.xgd  
 87 Col:10 Row:6 grids\104.xgd  
 88 Col:10 Row:7 grids\121.xgd  
 89 Col:11 Row:0 grids\10.xgd  
 90 Col:11 Row:1 grids\25.xgd  
 91 Col:11 Row:2 grids\40.xgd  
 92 Col:11 Row:3 grids\56.xgd  
 93 Col:11 Row:4 grids\72.xgd  
 94 Col:11 Row:5 grids\88.xgd  
 95 Col:11 Row:6 grids\105.xgd  
 96 Col:11 Row:7 grids\122.xgd  
 97 Col:12 Row:0 grids\11.xgd  
 98 Col:12 Row:1 grids\26.xgd  
 99 Col:12 Row:2 grids\41.xgd  
 100 Col:12 Row:3 grids\57.xgd  
 101 Col:12 Row:4 grids\73.xgd  
 102 Col:12 Row:5 grids\89.xgd  
 103 Col:12 Row:6 grids\106.xgd  
 104 Col:12 Row:7 grids\123.xgd  
 105 Col:13 Row:0 grids\12.xgd  
 106 Col:13 Row:1 grids\27.xgd  
 107 Col:13 Row:2 grids\42.xgd  
 108 Col:13 Row:3 grids\58.xgd  
 109 Col:13 Row:4 grids\74.xgd  
 110 Col:13 Row:5 grids\90.xgd  
 111 Col:13 Row:6 grids\107.xgd  
 112 Col:13 Row:7 grids\124.xgd  
 113 Col:14 Row:0 grids\13.xgd  
 114 Col:14 Row:1 grids\28.xgd  
 115 Col:14 Row:2 grids\43.xgd  
 116 Col:14 Row:3 grids\59.xgd  
 117 Col:14 Row:4 grids\75.xgd  
 118 Col:14 Row:5 grids\91.xgd  
 119 Col:14 Row:6 grids\108.xgd  
 120 Col:14 Row:7 grids\125.xgd  
 121 Col:14 Row:8 grids\130.xgd  
 122 Col:15 Row:0 grids\14.xgd  
 123 Col:15 Row:1 grids\29.xgd  
 124 Col:15 Row:2 grids\44.xgd  
 125 Col:15 Row:3 grids\60.xgd  
 126 Col:15 Row:4 grids\76.xgd  
 127 Col:15 Row:5 grids\92.xgd  
 128 Col:15 Row:6 grids\109.xgd  
 129 Col:15 Row:7 grids\126.xgd  
 130 Col:15 Row:8 grids\129.xgd  
 131 Col:16 Row:2 grids\45.xgd  
 132 Col:16 Row:3 grids\61.xgd  
 133 Col:16 Row:4 grids\77.xgd  
 134 Col:16 Row:5 grids\93.xgd  
 135 Col:16 Row:6 grids\110.xgd  
 136 Col:16 Row:7 grids\127.xgd  
 137 Col:16 Row:8 grids\128.xgd

### Processed data

Max: 4.00  
 Min: -4.00  
 Std Dev: 1.29  
 Mean: 0.00  
 Median: 0.00

### Processes: 4

- 1 Base Layer
- 2 DeStripe Median Sensors: All
- 3 De Stagger Grids: All Mode: Both By: -2 intervals
- 4 Clip from -4.00 to 4.00 nT

51 Col:6 Row:6 grids\30.xgd  
 52 Col:6 Row:7 grids\31.xgd  
 53 Col:6 Row:8 grids\32.xgd

**Raw data**

Direction of 1st Traverse: 272.965 deg  
Collection Method: ZigZag  
Sensors: 2 @ 1.00 m spacing.  
Dummy Value: 32000

**Dimensions**

Composite Size (readings): 800 x 180  
Survey Size (meters): 200 m x 180 m  
Grid Size: 20 m x 20 m  
X Interval: 0.25 m  
Y Interval: 1 m

**Stats**

Max: 100.00  
Min: -100.00  
Std Dev: 10.28  
Mean: 0.60  
Median: 1.26  
Composite Area: 3.6 ha  
Surveyed Area: 2.488 ha

**Source Grids: 76**

1 Col:0 Row:2 grids\74.xgd  
2 Col:0 Row:3 grids\75.xgd  
3 Col:0 Row:4 grids\76.xgd  
4 Col:0 Row:5 grids\77.xgd  
5 Col:1 Row:2 grids\67.xgd  
6 Col:1 Row:3 grids\68.xgd  
7 Col:1 Row:4 grids\69.xgd  
8 Col:1 Row:5 grids\70.xgd  
9 Col:1 Row:6 grids\71.xgd  
10 Col:1 Row:7 grids\72.xgd  
11 Col:2 Row:0 grids\59.xgd  
12 Col:2 Row:1 grids\60.xgd  
13 Col:2 Row:2 grids\61.xgd  
14 Col:2 Row:3 grids\62.xgd  
15 Col:2 Row:4 grids\63.xgd  
16 Col:2 Row:5 grids\64.xgd  
17 Col:2 Row:6 grids\65.xgd  
18 Col:2 Row:7 grids\66.xgd  
19 Col:3 Row:0 grids\51.xgd  
20 Col:3 Row:1 grids\52.xgd  
21 Col:3 Row:2 grids\53.xgd  
22 Col:3 Row:3 grids\54.xgd  
23 Col:3 Row:4 grids\55.xgd  
24 Col:3 Row:5 grids\56.xgd  
25 Col:3 Row:6 grids\57.xgd  
26 Col:3 Row:7 grids\58.xgd  
27 Col:4 Row:0 grids\42.xgd  
28 Col:4 Row:1 grids\43.xgd  
29 Col:4 Row:2 grids\44.xgd  
30 Col:4 Row:3 grids\45.xgd  
31 Col:4 Row:4 grids\46.xgd  
32 Col:4 Row:5 grids\47.xgd  
33 Col:4 Row:6 grids\48.xgd  
34 Col:4 Row:7 grids\49.xgd  
35 Col:4 Row:8 grids\50.xgd  
36 Col:5 Row:0 grids\33.xgd  
37 Col:5 Row:1 grids\34.xgd  
38 Col:5 Row:2 grids\35.xgd  
39 Col:5 Row:3 grids\36.xgd  
40 Col:5 Row:4 grids\37.xgd  
41 Col:5 Row:5 grids\38.xgd  
42 Col:5 Row:6 grids\39.xgd  
43 Col:5 Row:7 grids\40.xgd  
44 Col:5 Row:8 grids\41.xgd  
45 Col:6 Row:0 grids\24.xgd  
46 Col:6 Row:1 grids\25.xgd  
47 Col:6 Row:2 grids\26.xgd  
48 Col:6 Row:3 grids\27.xgd  
49 Col:6 Row:4 grids\28.xgd  
50 Col:6 Row:5 grids\29.xgd  
12 Col:1 Row:8 grids\29.xgd  
13 Col:1 Row:9 grids\30.xgd  
14 Col:1 Row:10 grids\31.xgd

54 Col:7 Row:0 grids\15.xgd  
55 Col:7 Row:1 grids\16.xgd  
56 Col:7 Row:2 grids\17.xgd  
57 Col:7 Row:3 grids\18.xgd  
58 Col:7 Row:4 grids\19.xgd  
59 Col:7 Row:5 grids\20.xgd  
60 Col:7 Row:6 grids\21.xgd  
61 Col:7 Row:7 grids\22.xgd  
62 Col:7 Row:8 grids\23.xgd  
63 Col:8 Row:0 grids\01.xgd  
64 Col:8 Row:1 grids\02.xgd  
65 Col:8 Row:2 grids\03.xgd  
66 Col:8 Row:3 grids\04.xgd  
67 Col:8 Row:4 grids\06.xgd  
68 Col:8 Row:5 grids\08.xgd  
69 Col:8 Row:6 grids\10.xgd  
70 Col:8 Row:7 grids\12.xgd  
71 Col:8 Row:8 grids\14.xgd  
72 Col:9 Row:3 grids\05.xgd  
73 Col:9 Row:4 grids\07.xgd  
74 Col:9 Row:5 grids\09.xgd  
75 Col:9 Row:6 grids\11.xgd  
76 Col:9 Row:7 grids\13.xgd

**Processed data**

Max: 4.00  
Min: -4.00  
Std Dev: 1.37  
Mean: -0.06  
Median: 0.00

**Processes: 5**

1 Base Layer  
2 De Stagger: Grids: All Mode: Both By: -2 intervals  
3 DeStripe Median Sensors: All  
4 Despike Threshold: 1 Window size: 3x3  
5 Clip from -4.00 to 4.00 nT

**Field 2****Raw data**

Direction of 1st Traverse: 278.277 deg  
Collection Method: ZigZag  
Sensors: 2 @ 1.00 m spacing.  
Dummy Value: 32000

**Dimensions**

Composite Size (readings): 400 x 220  
Survey Size (meters): 100 m x 220 m  
Grid Size: 20 m x 20 m  
X Interval: 0.25 m  
Y Interval: 1 m

**Stats**

Max: 100.00  
Min: -100.00  
Std Dev: 16.12  
Mean: 1.38  
Median: 1.35  
Composite Area: 2.2 ha  
Surveyed Area: 1.0403 ha

**Source Grids: 38**

1 Col:0 Row:3 grids\32.xgd  
2 Col:0 Row:4 grids\33.xgd  
3 Col:0 Row:5 grids\34.xgd  
4 Col:0 Row:6 grids\35.xgd  
5 Col:0 Row:7 grids\36.xgd  
6 Col:0 Row:8 grids\37.xgd  
7 Col:0 Row:9 grids\38.xgd  
8 Col:1 Row:4 grids\25.xgd  
9 Col:1 Row:5 grids\26.xgd  
10 Col:1 Row:6 grids\27.xgd  
11 Col:1 Row:7 grids\28.xgd  
10 Col:2 Row:0 grids\10.xgd  
11 Col:2 Row:1 grids\11.xgd  
12 Col:2 Row:2 grids\12.xgd

15 Col:2 Row:0 grids\15.xgd  
 16 Col:2 Row:1 grids\16.xgd  
 17 Col:2 Row:2 grids\17.xgd  
 18 Col:2 Row:3 grids\18.xgd  
 19 Col:2 Row:4 grids\19.xgd  
 20 Col:2 Row:5 grids\20.xgd  
 21 Col:2 Row:6 grids\21.xgd  
 22 Col:2 Row:7 grids\22.xgd  
 23 Col:2 Row:8 grids\23.xgd  
 24 Col:2 Row:9 grids\24.xgd  
 25 Col:3 Row:0 grids\07.xgd  
 26 Col:3 Row:1 grids\09.xgd  
 27 Col:3 Row:2 grids\08.xgd  
 28 Col:3 Row:3 grids\10.xgd  
 29 Col:3 Row:4 grids\11.xgd  
 30 Col:3 Row:5 grids\12.xgd  
 31 Col:3 Row:6 grids\13.xgd  
 32 Col:3 Row:7 grids\14.xgd  
 33 Col:4 Row:0 grids\01.xgd  
 34 Col:4 Row:1 grids\02.xgd  
 35 Col:4 Row:2 grids\03.xgd  
 36 Col:4 Row:3 grids\04.xgd  
 37 Col:4 Row:4 grids\05.xgd  
 38 Col:4 Row:5 grids\06.xgd

#### Processed data

Stats  
 Max: 4.00  
 Min: -4.00  
 Std Dev: 1.63  
 Mean: -0.09  
 Median: 0.00

Processes: 4

- 1 Base Layer
- 2 De Stagger: Grids: All Mode: Both By: -1 intervals
- 3 DeStripe Median Sensors: All
- 4 Clip from -4.00 to 4.00 nT

#### Field 3

##### Raw data

Direction of 1st Traverse: 291.8675 deg  
 Collection Method: ZigZag  
 Sensors: 2 @ 1.00 m spacing.  
 Dummy Value: 32000  
 Y Interval: 1 m

##### Dimensions

Composite Size (readings): 480 x 140  
 Survey Size (meters): 120 m x 140 m  
 Grid Size: 20 m x 20 m  
 X Interval: 0.25 m  
 Y Interval: 1 m

##### Stats

Max: 100.00  
 Min: -92.68  
 Std Dev: 4.37  
 Mean: -0.07  
 Median: 0.04  
 Composite Area: 1.68 ha  
 Surveyed Area: 0.9795 ha

Source Grids: 36

- 1 Col:0 Row:4 grids\05.xgd
- 2 Col:0 Row:5 grids\07.xgd
- 3 Col:1 Row:0 grids\01.xgd
- 4 Col:1 Row:1 grids\02.xgd
- 5 Col:1 Row:2 grids\03.xgd
- 6 Col:1 Row:3 grids\04.xgd
- 7 Col:1 Row:4 grids\06.xgd
- 8 Col:1 Row:5 grids\08.xgd
- 9 Col:1 Row:6 grids\09.xgd
- 11 Col:2 Row:5 grids\11.xgd
- 12 Col:3 Row:0 grids\12.xgd
- 13 Col:3 Row:1 grids\13.xgd

13 Col:2 Row:3 grids\13.xgd  
 14 Col:2 Row:4 grids\14.xgd  
 15 Col:2 Row:5 grids\15.xgd  
 16 Col:2 Row:6 grids\16.xgd  
 17 Col:3 Row:0 grids\17.xgd  
 18 Col:3 Row:1 grids\18.xgd  
 19 Col:3 Row:2 grids\19.xgd  
 20 Col:3 Row:3 grids\20.xgd  
 21 Col:3 Row:4 grids\21.xgd  
 22 Col:3 Row:5 grids\22.xgd  
 23 Col:3 Row:6 grids\23.xgd  
 24 Col:4 Row:0 grids\24.xgd  
 25 Col:4 Row:1 grids\25.xgd  
 26 Col:4 Row:2 grids\26.xgd  
 27 Col:4 Row:3 grids\27.xgd  
 28 Col:4 Row:4 grids\28.xgd  
 29 Col:4 Row:5 grids\29.xgd  
 30 Col:4 Row:6 grids\30.xgd  
 31 Col:5 Row:1 grids\31.xgd  
 32 Col:5 Row:2 grids\32.xgd  
 33 Col:5 Row:3 grids\33.xgd  
 34 Col:5 Row:4 grids\34.xgd  
 35 Col:5 Row:5 grids\35.xgd  
 36 Col:5 Row:6 grids\36.xgd

#### Processed data

Max: 4.00  
 Min: -4.00  
 Std Dev: 1.07  
 Mean: 0.02  
 Median: 0.00

Processes: 6

- 1 Base Layer
- 2 De Stagger: Grids: All Mode: Both By: -2 intervals
- 3 DeStripe Median Sensors: All
- 4 De Stagger: Grids: 28.xgd 29.xgd 30.xgd Mode: Both By: -2 intervals
- 5 Despike Threshold: 1 Window size: 3x3
- 6 Clip from -4.00 to 4.00 nT

#### Field 4

##### Raw data

Direction of 1st Traverse: 272.8742 deg  
 Collection Method: ZigZag  
 Sensors: 2 @ 1.00 m spacing.  
 Dummy Value: 32000

##### Dimensions

Composite Size (readings): 1040 x 160  
 Survey Size (meters): 260 m x 160 m  
 Grid Size: 20 m x 20 m  
 X Interval: 0.25 m

##### Stats

Max: 100.00  
 Min: -100.00  
 Std Dev: 6.30  
 Mean: -0.92  
 Median: -0.65  
 Composite Area: 4.16 ha  
 Surveyed Area: 2.2374 ha

Source Grids: 70

- 1 Col:0 Row:4 grids\01.xgd
- 2 Col:0 Row:5 grids\02.xgd
- 3 Col:1 Row:2 grids\03.xgd
- 4 Col:1 Row:3 grids\04.xgd
- 5 Col:1 Row:4 grids\05.xgd
- 6 Col:1 Row:5 grids\06.xgd
- 7 Col:2 Row:1 grids\07-a.xgd
- 8 Col:2 Row:2 grids\08.xgd
- 9 Col:2 Row:3 grids\09.xgd
- 10 Col:2 Row:4 grids\10.xgd

#### Processed data

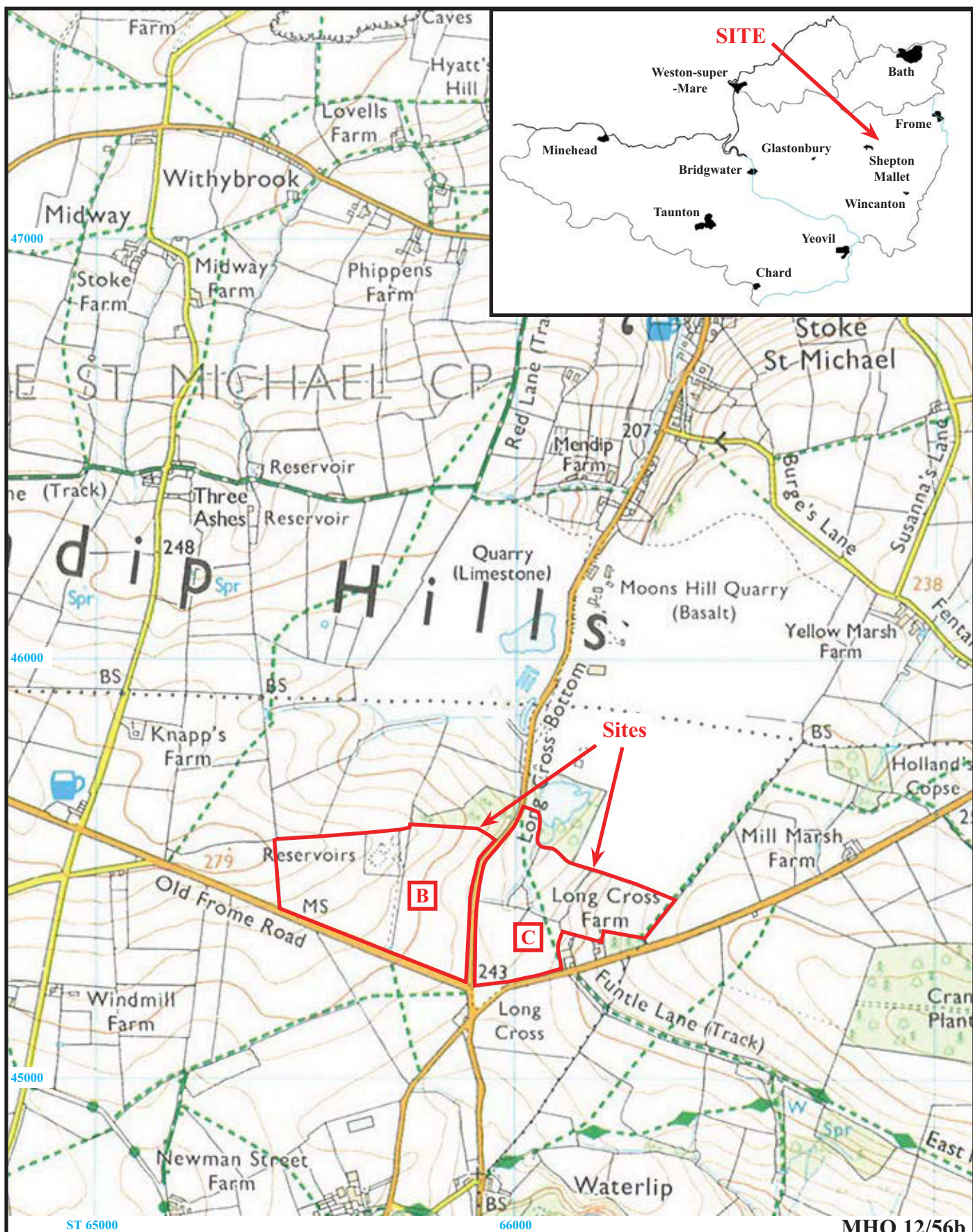
Max: 4.00  
 Min: -4.00

14 Col:3 Row:2 grids\14.xgd  
 15 Col:3 Row:3 grids\15.xgd  
 16 Col:3 Row:4 grids\16.xgd  
 17 Col:3 Row:5 grids\17.xgd  
 18 Col:3 Row:6 grids\18.xgd  
 19 Col:4 Row:1 grids\19.xgd  
 20 Col:4 Row:2 grids\20.xgd  
 21 Col:4 Row:3 grids\21.xgd  
 22 Col:4 Row:4 grids\22.xgd  
 23 Col:4 Row:5 grids\23.xgd  
 24 Col:4 Row:6 grids\24.xgd  
 25 Col:5 Row:1 grids\25.xgd  
 26 Col:5 Row:2 grids\26.xgd  
 27 Col:5 Row:3 grids\27.xgd  
 28 Col:5 Row:4 grids\28.xgd  
 29 Col:5 Row:5 grids\29.xgd  
 30 Col:5 Row:6 grids\30.xgd  
 31 Col:6 Row:1 grids\31.xgd  
 32 Col:6 Row:2 grids\32.xgd  
 33 Col:6 Row:3 grids\33.xgd  
 34 Col:6 Row:4 grids\34.xgd  
 35 Col:6 Row:5 grids\35.xgd  
 36 Col:6 Row:6 grids\36.xgd  
 37 Col:6 Row:7 grids\37.xgd  
 38 Col:7 Row:1 grids\38.xgd  
 39 Col:7 Row:2 grids\39.xgd  
 40 Col:7 Row:3 grids\40.xgd  
 41 Col:7 Row:4 grids\41.xgd  
 42 Col:7 Row:5 grids\42.xgd  
 43 Col:7 Row:6 grids\43.xgd  
 44 Col:7 Row:7 grids\44.xgd  
 45 Col:8 Row:1 grids\45.xgd  
 46 Col:8 Row:2 grids\46.xgd  
 47 Col:8 Row:3 grids\47.xgd  
 48 Col:8 Row:4 grids\48.xgd  
 49 Col:8 Row:5 grids\49.xgd  
 50 Col:8 Row:6 grids\50.xgd  
 51 Col:8 Row:7 grids\51.xgd  
 52 Col:9 Row:1 grids\52.xgd  
 53 Col:9 Row:2 grids\53.xgd  
 54 Col:9 Row:3 grids\54.xgd  
 55 Col:9 Row:4 grids\55.xgd  
 56 Col:9 Row:5 grids\56.xgd  
 57 Col:9 Row:6 grids\57.xgd  
 58 Col:9 Row:7 grids\58.xgd  
 59 Col:10 Row:1 grids\59.xgd  
 60 Col:10 Row:2 grids\60.xgd  
 61 Col:10 Row:3 grids\61.xgd  
 62 Col:10 Row:4 grids\62.xgd  
 63 Col:10 Row:5 grids\63.xgd  
 64 Col:10 Row:6 grids\64.xgd  
 65 Col:11 Row:2 grids\65.xgd  
 66 Col:11 Row:3 grids\66.xgd  
 67 Col:11 Row:4 grids\67.xgd  
 68 Col:11 Row:5 grids\68.xgd  
 69 Col:11 Row:6 grids\69.xgd  
 70 Col:12 Row:2 grids\70.xgd

Std Dev: 1.18  
 Mean: 0.02  
 Median: 0.01

Processes: 7  
 1 Base Layer  
 2 De Stagger: Grids: All Mode: Both By: -2 intervals  
 3 DeStripe Median Sensors: All  
 4 Clip from -5.00 to 5.00 nT  
 5 Despike Threshold: 1 Window size: 3x3  
 6 Move (Area: Top 20, Left 160, Bottom 39, Right 239) to X 0, Y 2  
 7 Clip from -4.00 to 4.00 nT



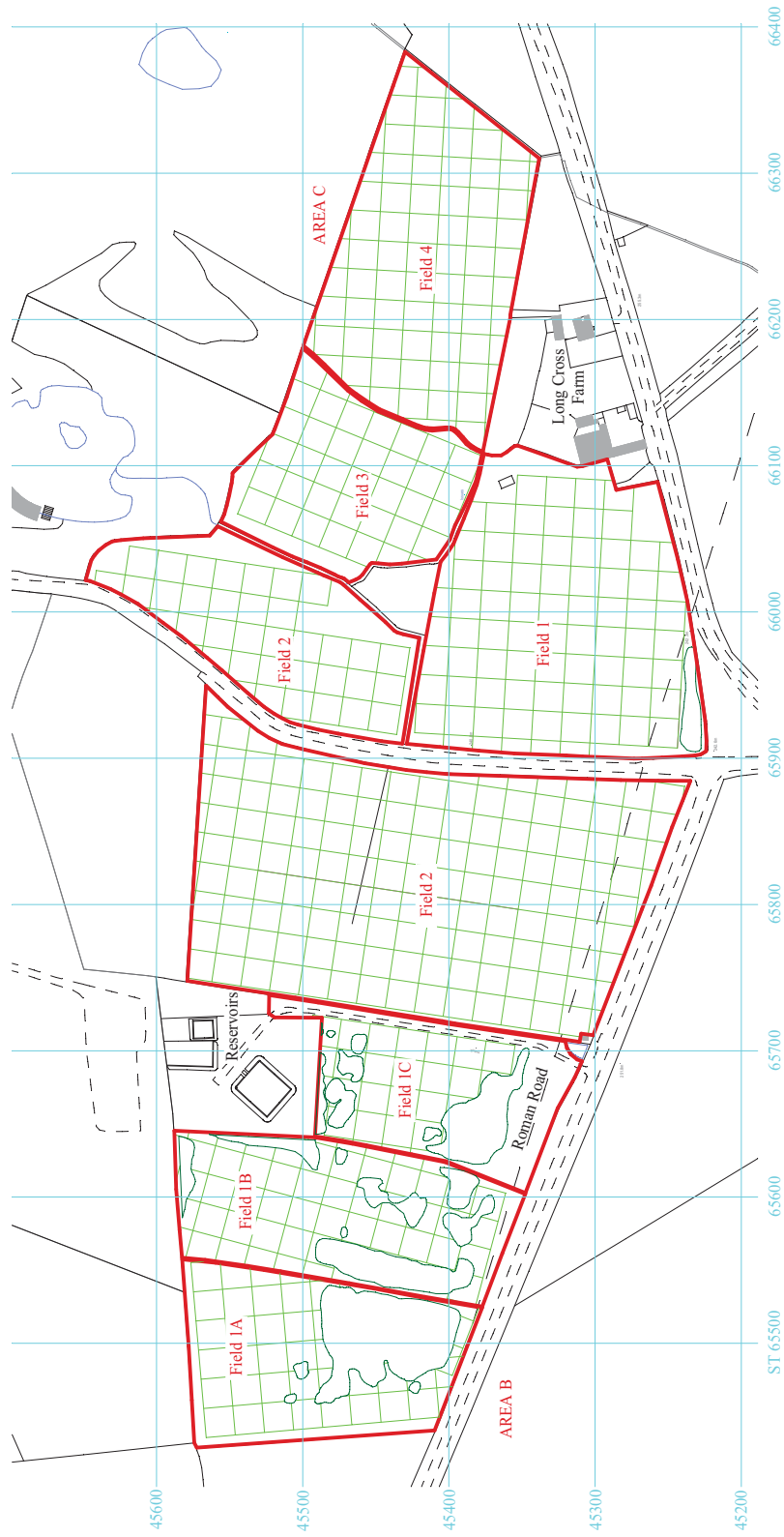


**Land at Moons Hill Quarry,  
Stoke St Michael, Somerset, 2014  
Geophysical Survey (Magnetic)**

Figure 1. Location of site within Stoke St Michael and Somerset.

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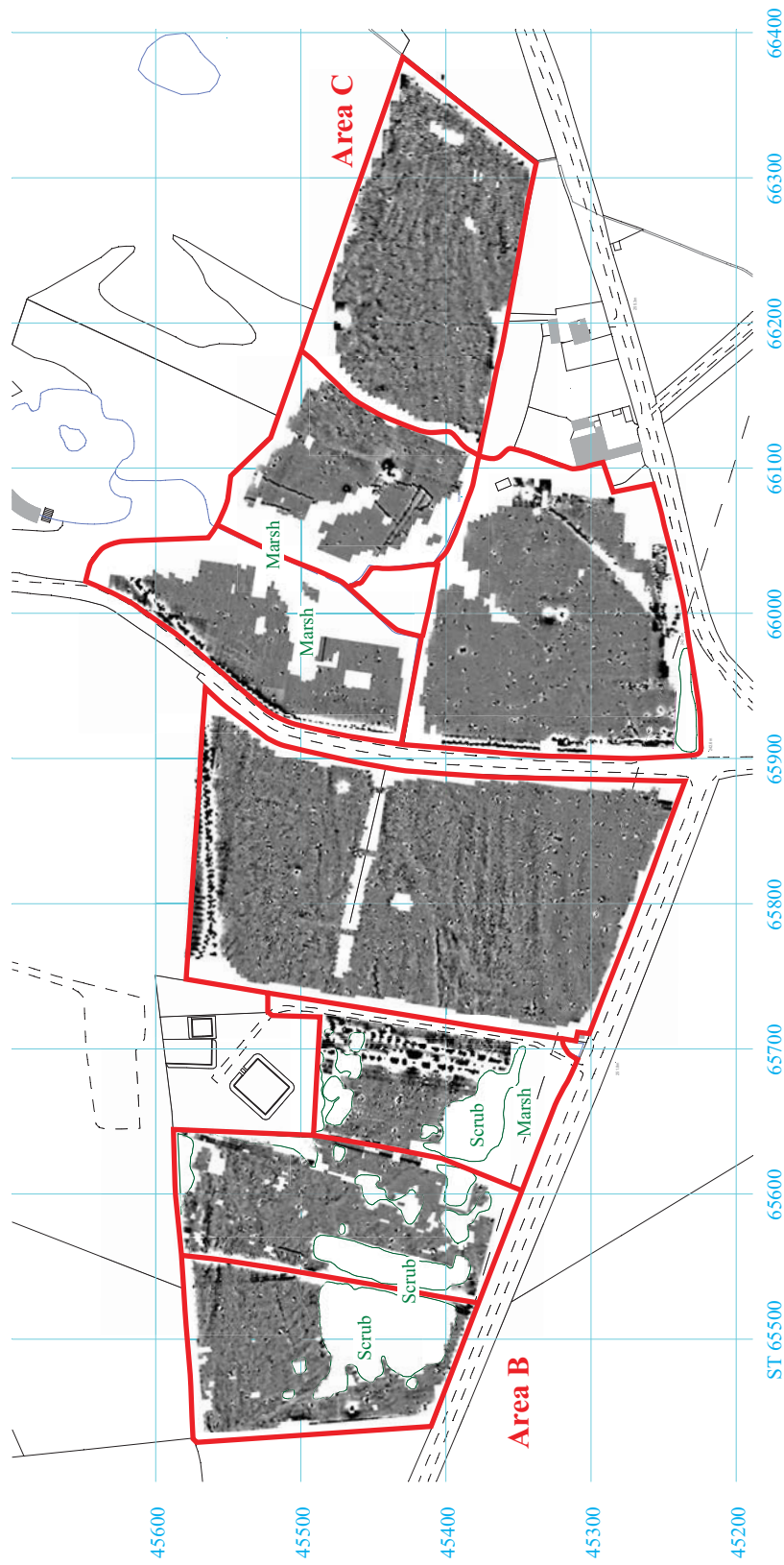


**Land at Moons Hill Quarry,  
Stoke St Michael, Somerset, 2014  
Geophysical Survey (Magnetic)**

Figure 2. Survey grid layout.







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**Land at Moons Hill Quarry,  
Stoke St Michael, Somerset, 2014  
Geophysical Survey (Magnetic)**

Figure 3. Plot of minimally processed gradiometer data.

+4 nT

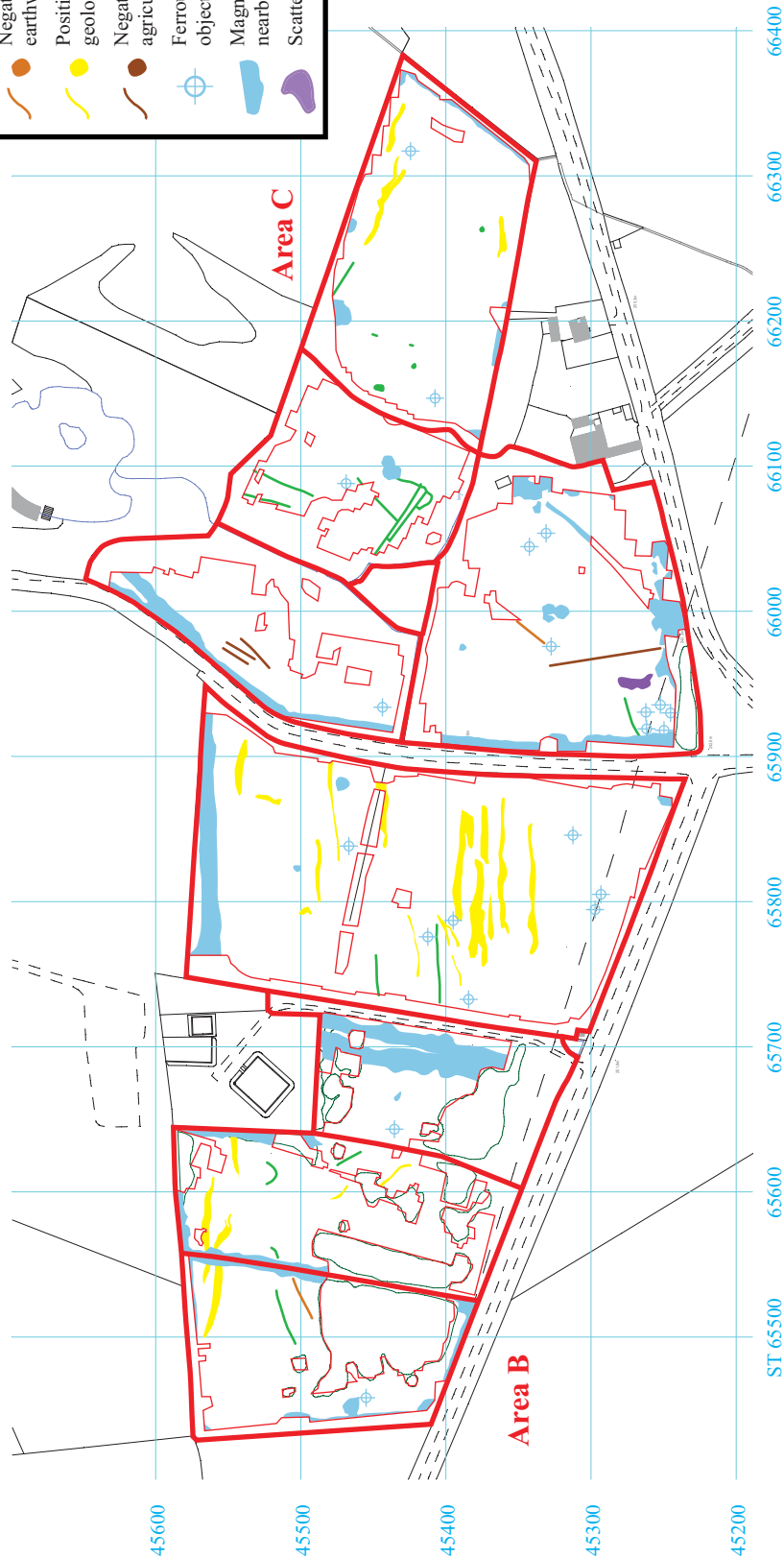


-4 nT



# Legend

- Positive anomaly - possible cut feature (archaeology)
- Weak positive anomaly - possible cut feature
- Negative anomaly - possible earthwork (archaeology)
- Positive anomaly - probably of geological origin
- Negative anomaly - probably of agricultural origin
- Ferrous spike - probable ferrous object
- Magnetic disturbance caused by nearby metal objects/services
- Scattered ferromagnetic debris



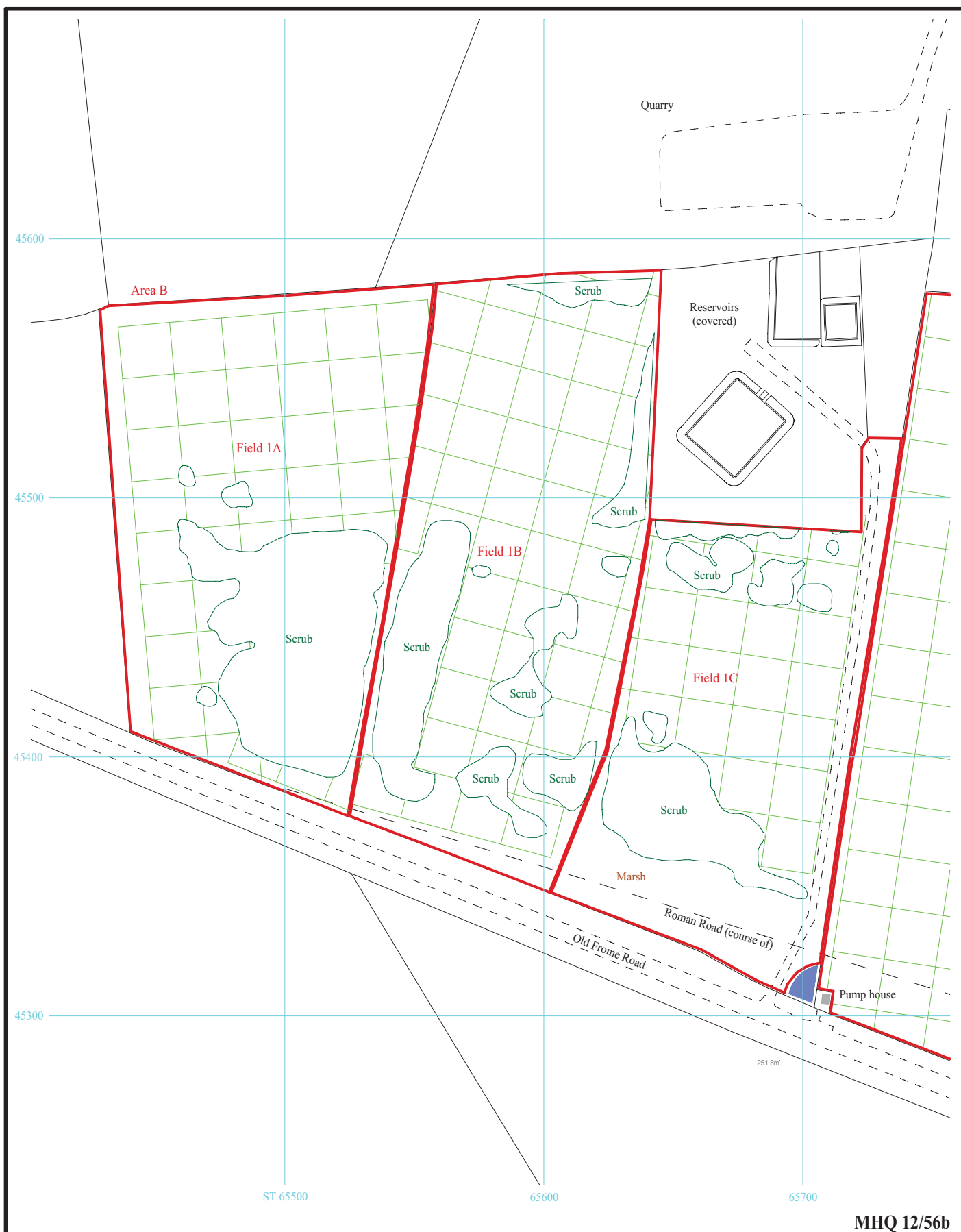
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## Land at Moons Hill Quarry, Stoke St Michael, Somerset, 2014 Geophysical Survey (Magnetic)

Figure 4. Interpretation plot.

0m 250m





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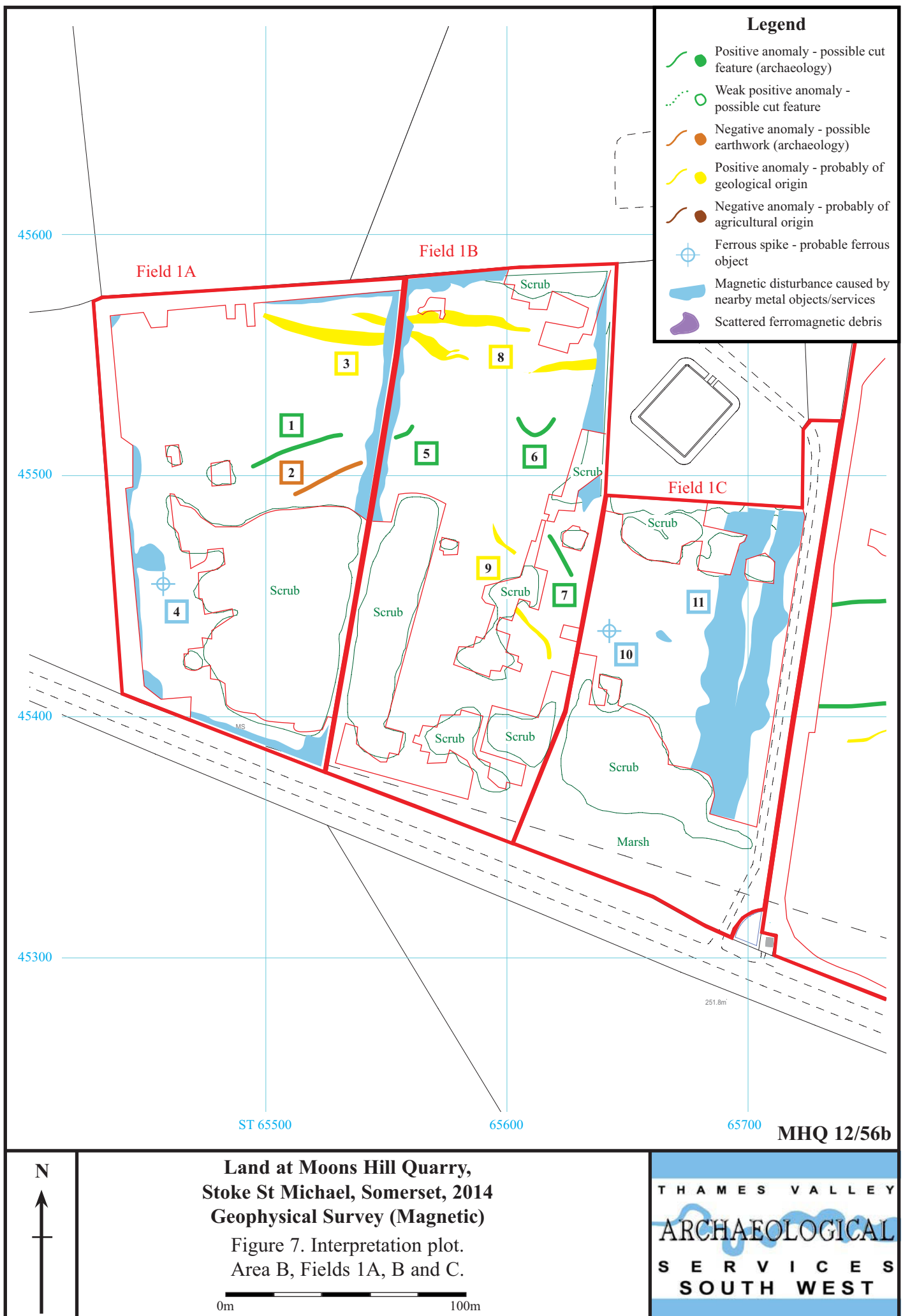
**Land at Moons Hill Quarry,  
Stoke St Michael, Somerset, 2014  
Geophysical Survey (Magnetic)**

Figure 5. Survey grid layout. Area B, Fields 1A, 1B and 1C.

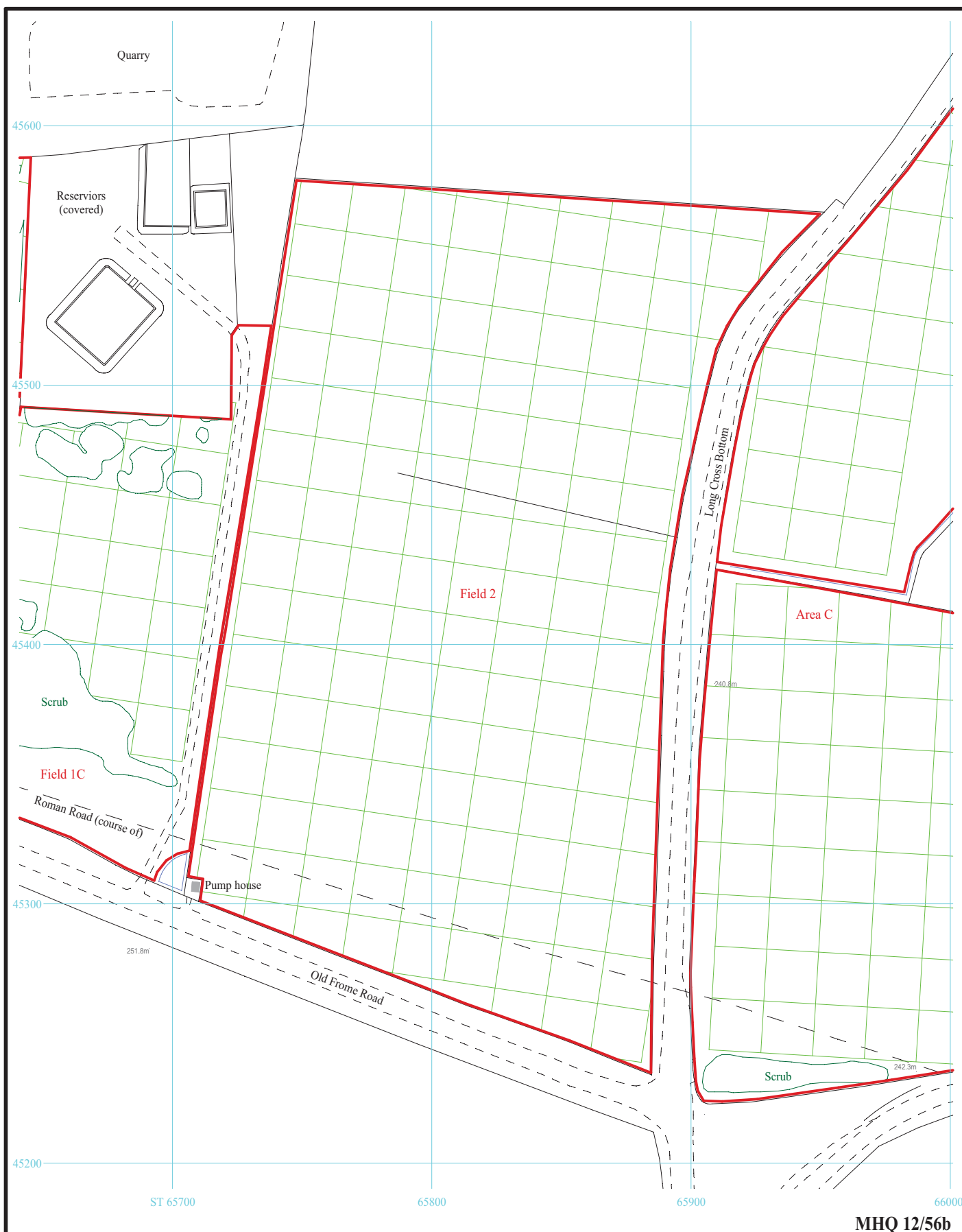
0 100m

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**Land at Moons Hill Quarry,  
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Geophysical Survey (Magnetic)**

Figure 8. Survey grid layout. Area B, Field 2.



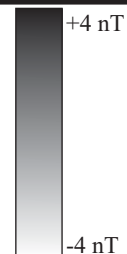
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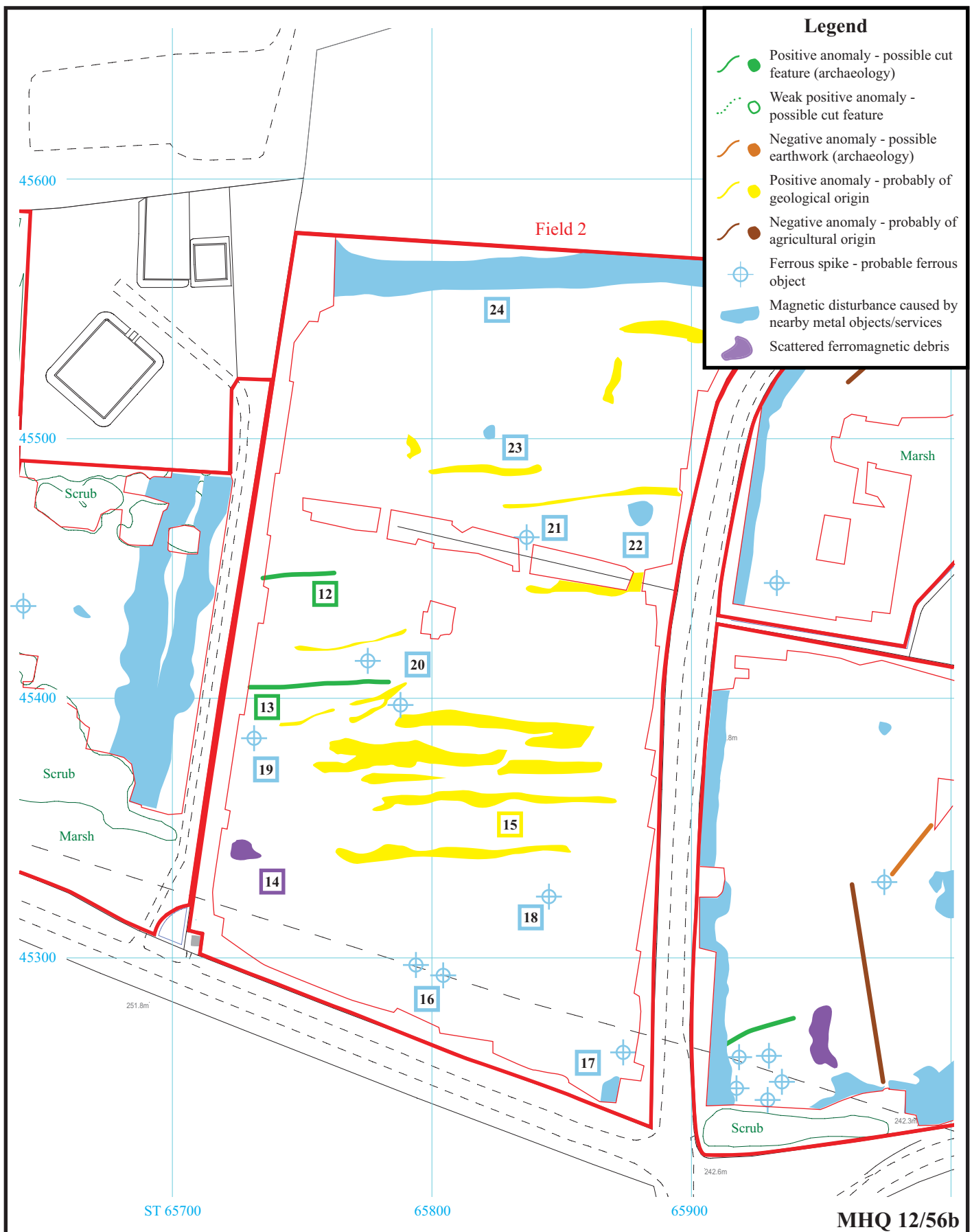


**Land at Moons Hill Quarry,  
Stoke St Michael, Somerset, 2014  
Geophysical Survey (Magnetic)**

Figure 9. Plot of minimally processed gradiometer data.  
Area B, Field 2.

0m 100m

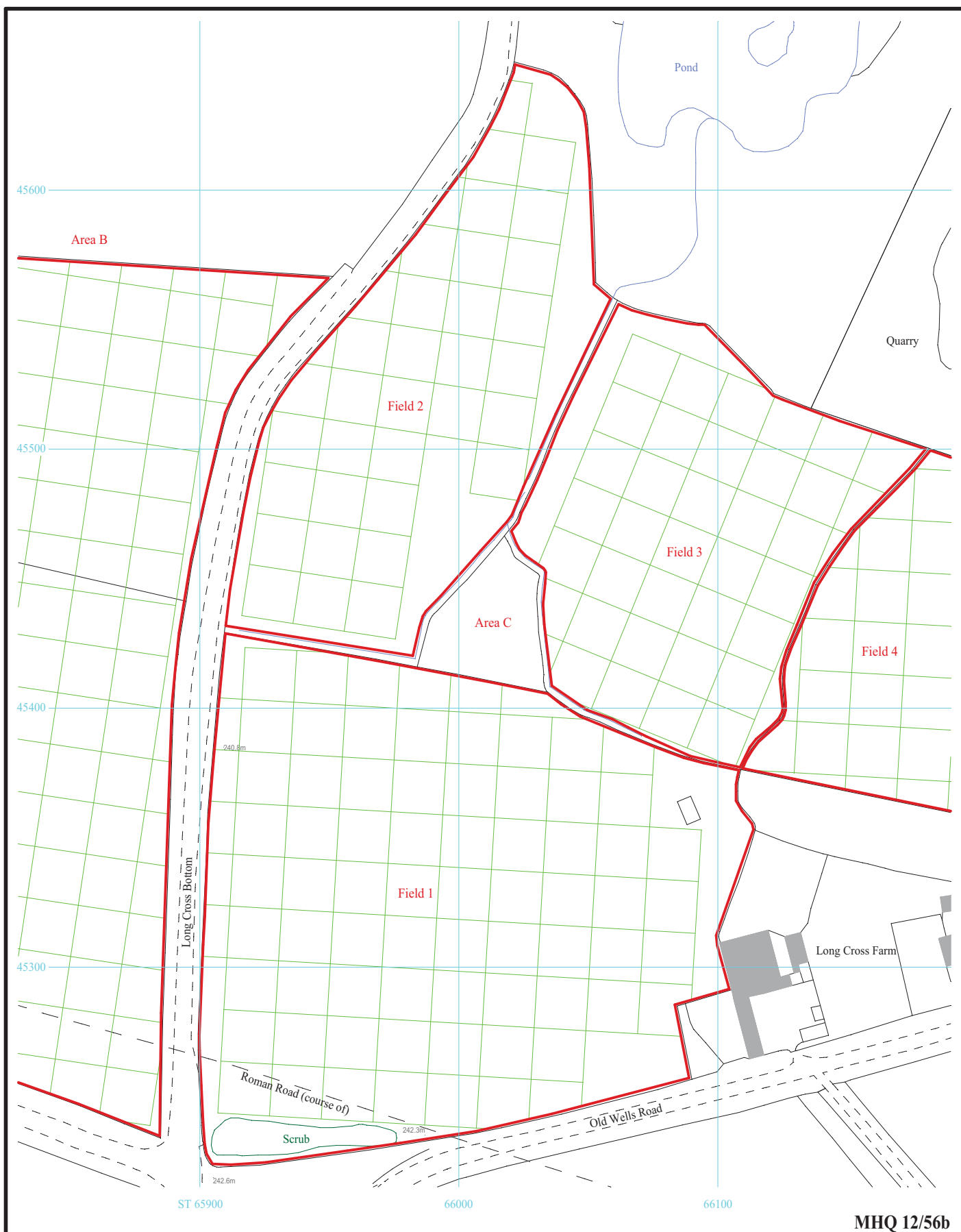




**Land at Moons Hill Quarry,  
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Geophysical Survey (Magnetic)**

Figure 10. Plot of minimally processed gradiometer data.  
Area B, Field 2.



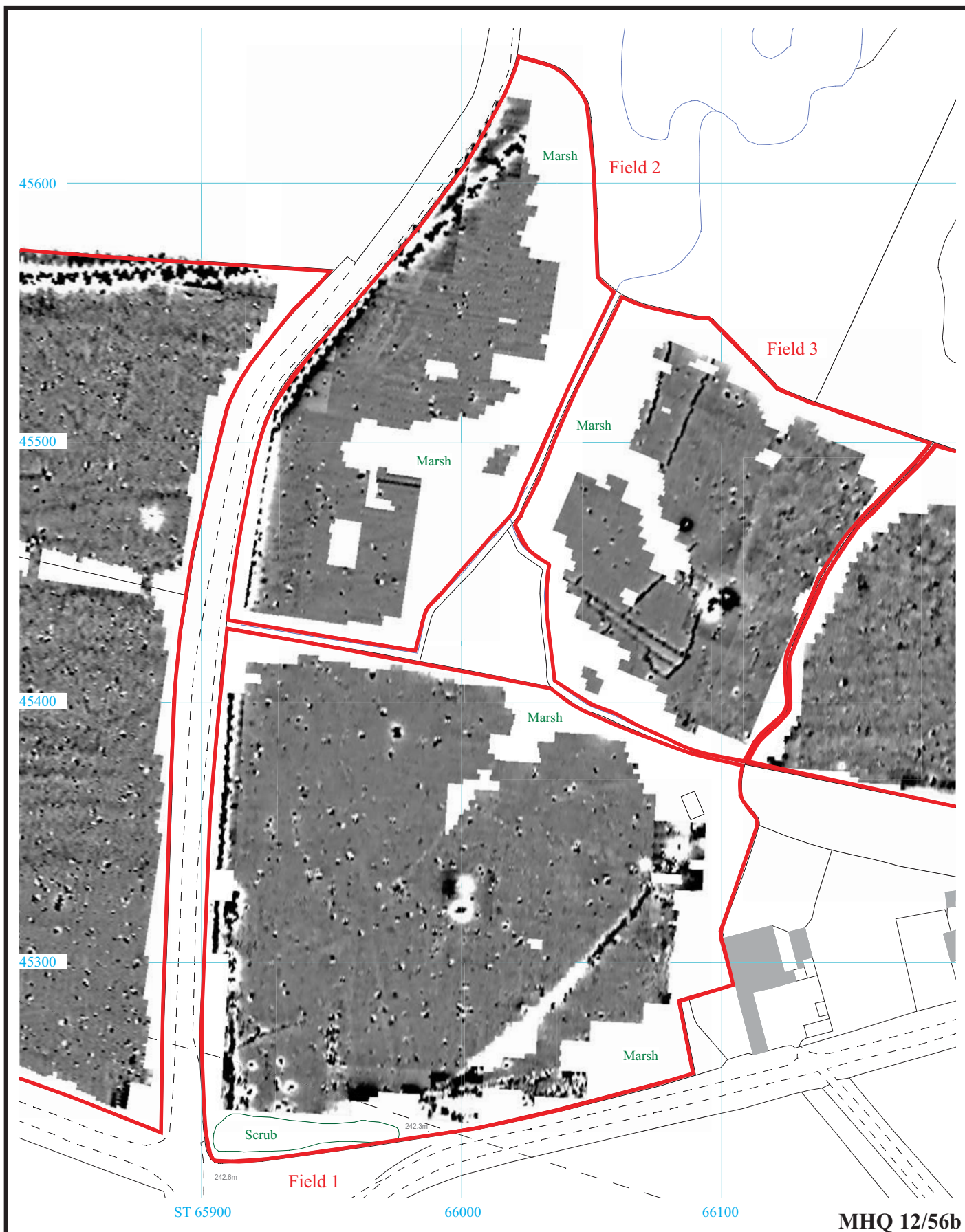


**Land at Moons Hill Quarry,  
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Geophysical Survey (Magnetic)**

Figure 11. Survey grid layout. Area C, Fields 1, 2 and 3.



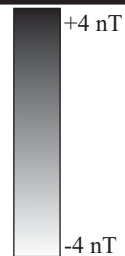
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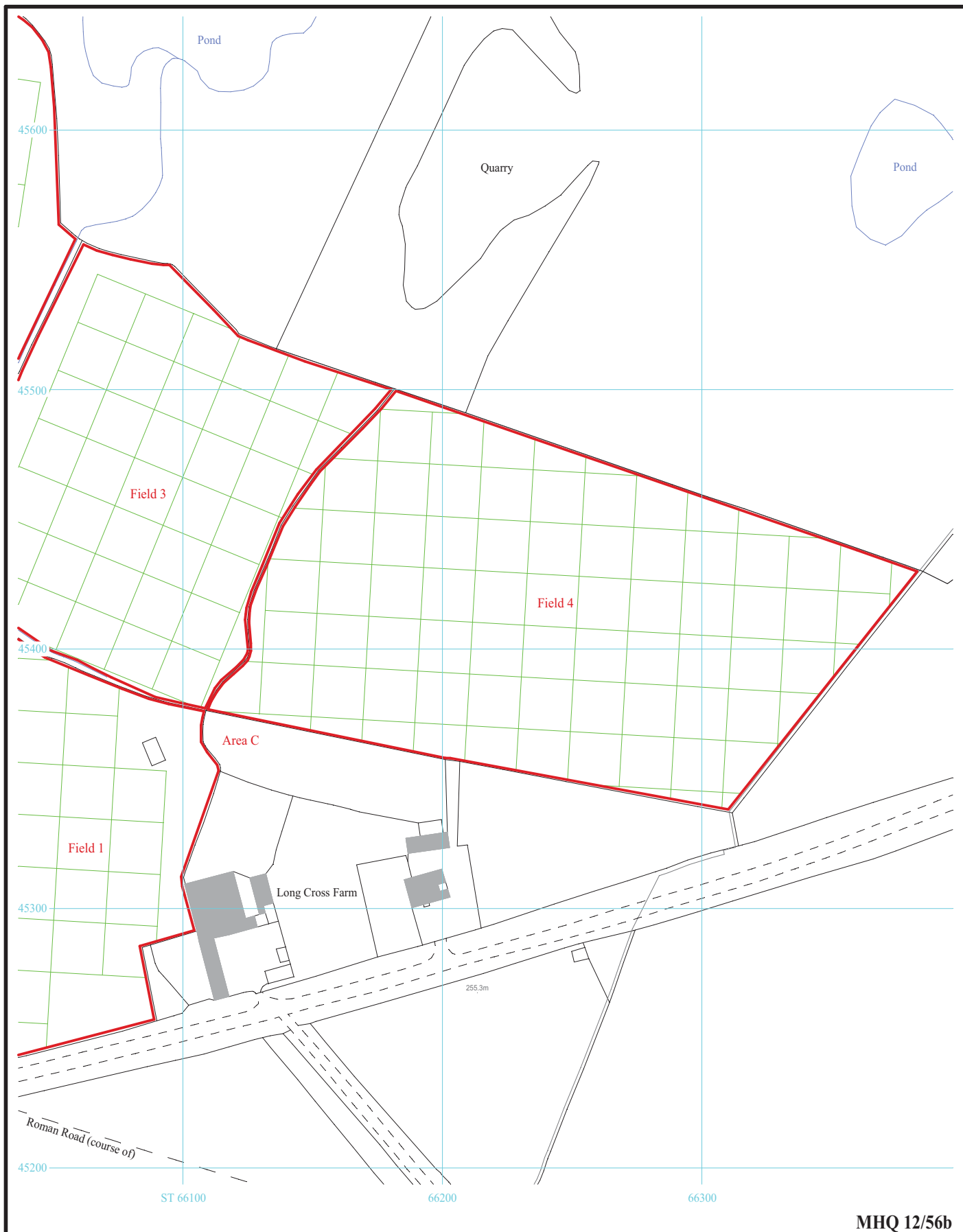
**Land at Moons Hill Quarry,  
Stoke St Michael, Somerset, 2014  
Geophysical Survey (Magnetic)**

Figure 12. Plot of minimally processed gradiometer data.  
Area C, Fields 1, 2 and 3.

0m 100m







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**Land at Moons Hill Quarry,  
Stoke St Michael, Somerset, 2014  
Geophysical Survey (Magnetic)**

Figure 14. Survey grid layout. Area C, Field 4.

0 100m

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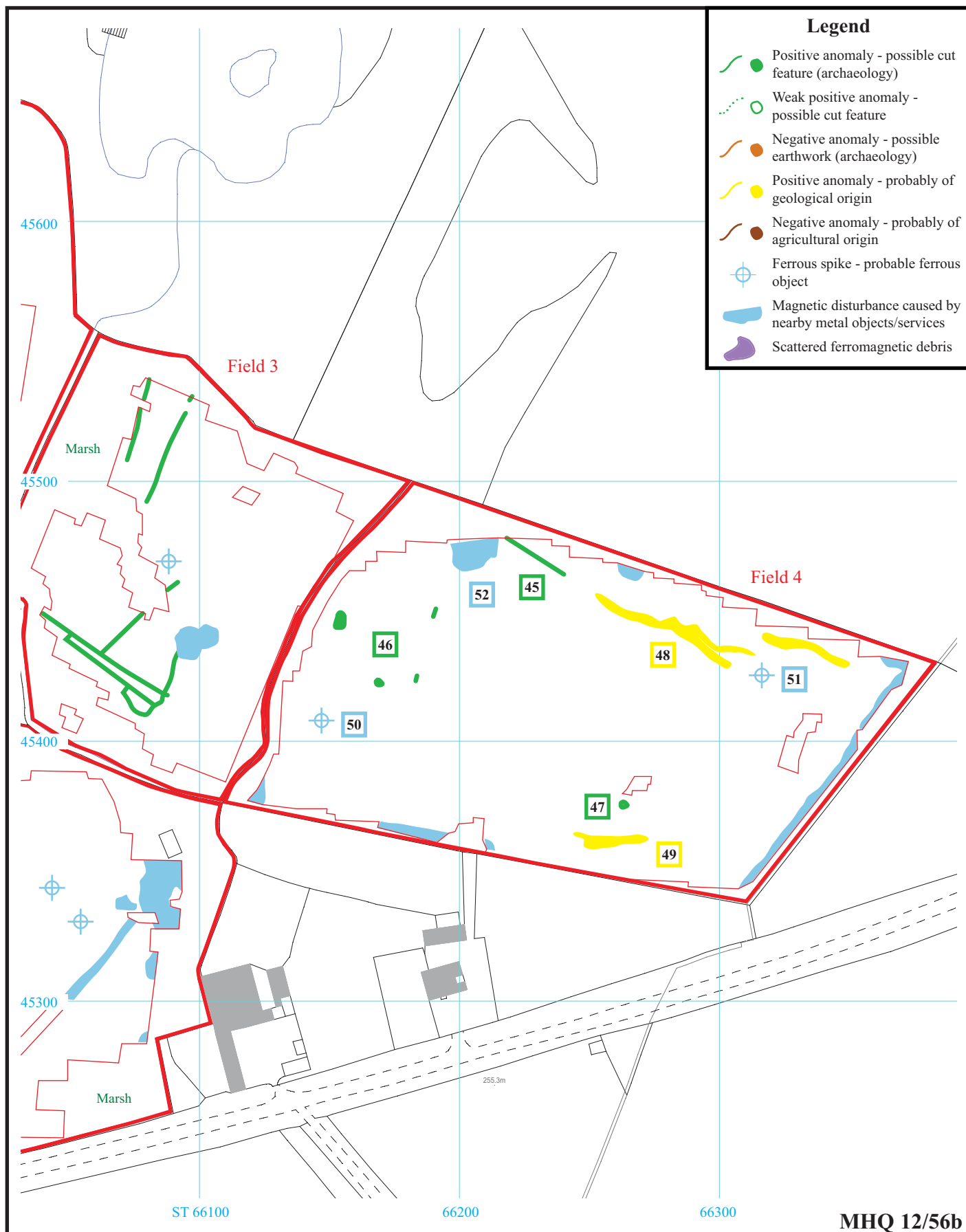


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Geophysical Survey (Magnetic)**

Figure 15. Plot of minimally processed gradiometer data.  
Area C, Field 4.

0m 100m





**Land at Moons Hill Quarry,  
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Geophysical Survey (Magnetic)**

Figure 16. Plot of minimally processed gradiometer data.  
Area C, Field 4.

0m 100m

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Plate 1. Area B, Field 1B, looking south towards scrub.



Plate 2. Area B, Field 2, looking south across old field boundary.



Plate 3. Area C, Field 1, looking north showing vehicle tracks.



Plate 4. Area C, Field 4, looking west across the valley with Field 3, Field 2, the road and Area B, Field 1 on the opposite side.

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**Land at Moons Hil Quarry,  
Stoke St Michael, Somerset, 2014  
Geophysical Survey (Magnetic)**  
Plates 1 - 4.

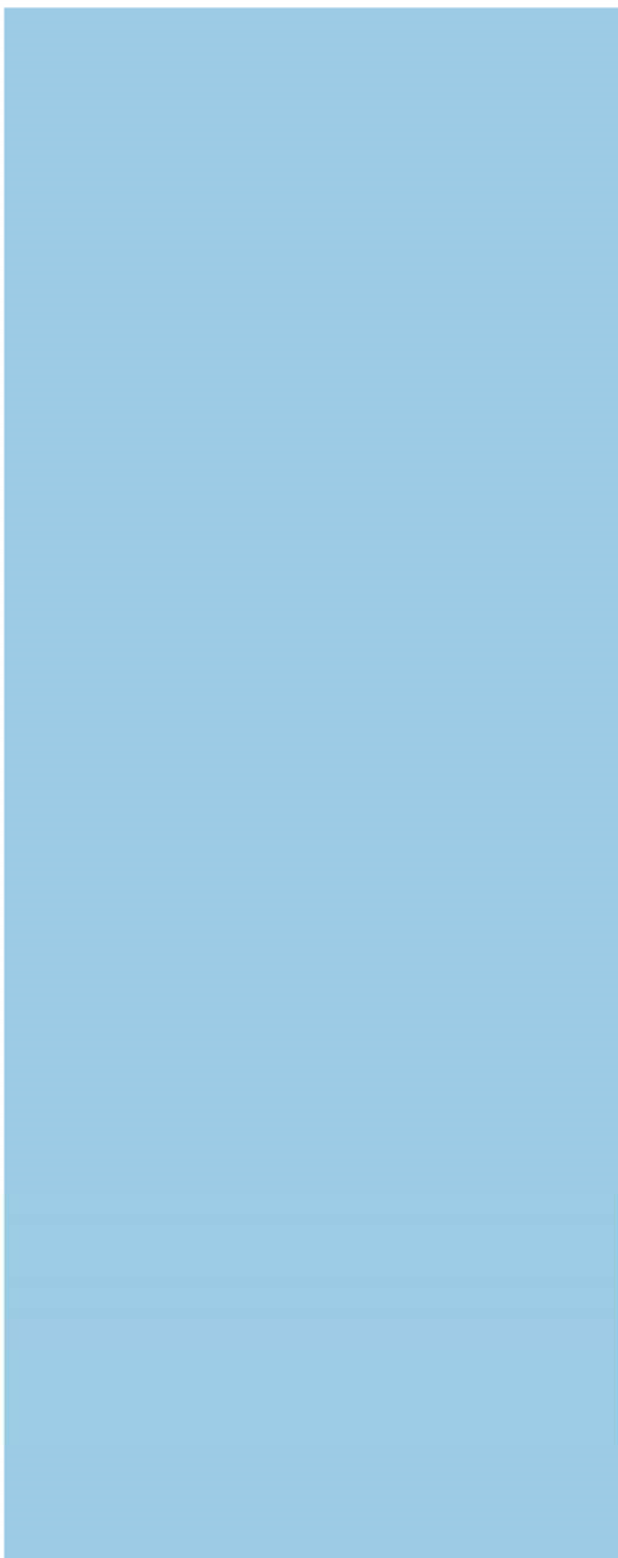
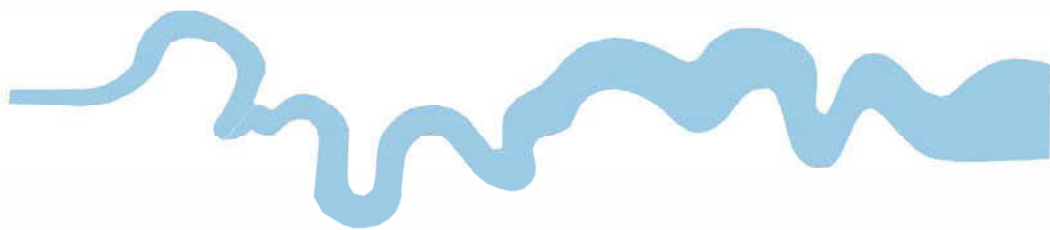
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## TIME CHART

### Calendar Years

Modern _____	AD 1901
Victorian _____	AD 1837
Post Medieval _____	AD 1500
Medieval _____	AD 1066
Saxon _____	AD 410
Roman _____	AD 43
Iron Age _____	BC/AD 750 BC
Bronze Age: Late -----	1300 BC
Bronze Age: Middle -----	1700 BC
Bronze Age: Early -----	2100 BC
Neolithic: Late .....	3300 BC
Neolithic: Early .....	4300 BC
Mesolithic: Late .....	6000 BC
Mesolithic: Early .....	10000 BC
Palaeolithic: Upper .....	30000 BC
Palaeolithic: Middle .....	70000 BC
Palaeolithic: Lower .....	2,000,000 BC





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