

ABINGDON ARCHAEOLOGICAL GEOPHYSICS

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Short Report form no. 2014-08

Geophysical Survey Details

Name of site: Radcot, Oxfordshire

County: Oxfordshire **District:** west Oxfordshire **Parish:** Grafton and Radcot

NGR grid reference Centred on SU 284 996

Nearest postcode. OX18 2SX

Altitude 70m OD

Start date: 19 March 2006 **End date:** 11 April 2009 **Report date:** 18 August 2014

Geology at site: Oxford clay with Northmoor sand and gravel member above. Alluvium near river.

Crop Grass pasture to centre and south with wheat stubble to north and west.

Known archaeological sites / monuments covered by the survey

Nothing archaeologically certain known before the survey and subsequent excavations. Site known as Garrison Field but not a Scheduled Ancient monument.

Archaeological sites / monument types detected by the survey

This work and the subsequent excavations has revealed stone tower, probably part of a mid 11th century walled complex; a probable chapel; a ring ditch - probably a Bronze Age barrow; other ring ditches which could be prehistoric houses; ditches; a large ditch - probably a 17th century Civil War defence and Roman ditches some of which could possibly have a military context.

Surveyor Abingdon Archaeological Geophysics, Roger Ainslie, Sally Ainslie, Chris Oatley.

Name of client, if any:

Tom Freeman

Acknowledgements

We would like to thank Tom Freeman for getting the project started, John Blair for asking us to do the survey, the landowners and farmers for giving access, the Abingdon Area Archaeological and Historical Society for carrying out a small excavations to test anomalies and John Laker of Archaeology in Marlow for the use of their total station and his assistance in processing the contour survey.

Purpose of survey:

To see if geophysics could reveal whether there was anything in this area.

Previous publications:

The site has been referred to in the Victoria County History Oxfordshire vol 12, 2012.

The geophysics formed the basis for a Time Team television programme broadcast on 15th February 2009 and the Evaluation Report on the work for that programme was reported by Wessex Archaeology in January 2009 (Their ref: 68733).

The geophysics carried out by GSB Prospection for the Time Team is on the ADS grey literature system ref gsbprosp1-64298.

Our original report was on 24 August 2008 but the site has expanded since. This version is to bring it into line with the format which is now useful for the Archaeology Data Service grey literature system and to be a basis for any further researches.

Location of:

a) Primary archive, i.e. raw data, electronic archive etc

Abingdon Archaeological Geophysics.

Also with client

b) Full report:

ditto

Technical Details

Type of survey

A Magnetometer

Area surveyed, if applicable, 7.7 hectares

Traverse separation, if regular: 1metre

Reading / sample interval: 8 per metre

Type, make and model of instrumentation: Bartington Grad 601/2 fluxgate gradiometer.

B Earth Resistance

Area: Approx 1800 sq metres at 1 m sample interval and 1300 sq metres at 0.5 metre sample interval

Instrument: TR Systems resistance meter

Array: Twin probe. 0.5m mobile probe separation

C Earth resistance profiles

Area: 1 x 30metre line

Array: Wenner

Spacing: Variable, smallest was 1 metre.

Land use at the time of survey_

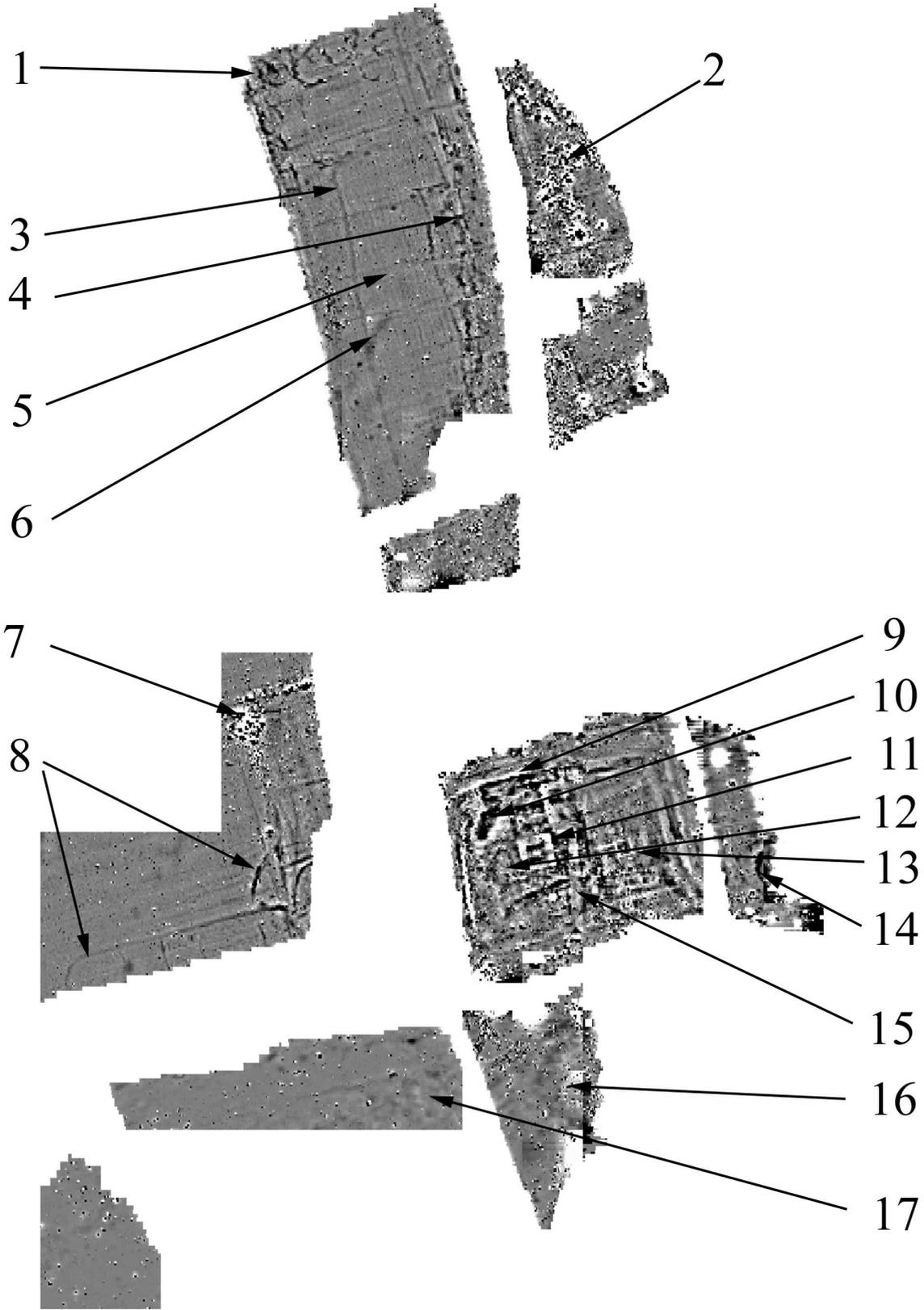
Grass on central and southern areas otherwise wheat stubble

Additional remarks

30 metre grids. First line start SE corner going west zig zag. Rotated in processing to give NW corner start going east. Some grids also surveyed with 0.5 m line spacing and starting SW going N.

Results

Here is the interpretation plan. The other survey plans later in the report should clarify these.



- 1 Curved high anomalies. Prehistoric settlements often produce this type of pattern.
- 2 This field showed little – probably as the upcast from the ditch running N-S through the site had been deposited there.
- 3 North - south ditch which then goes eastwards. This could be related to the medieval settlement rather than later agricultural operations.
- 4 Possible settlement.
- 5 Rectangular marks -probably traces of agricultural activities.
- 6 Broad ditch-like feature. This could be a paleo-channel in the gravel or it could be man made, although if it was a causewayed camp we would expect it to continue.
- 7 A dense area of high readings. Possibly an area where old farm machinery has been left to decay.
- 8 Ditches. Many of these have rounded corners in the manner of Roman marching camps. The magnetometry plot of the central area has some anomalies which are slight and appear to be underneath the medieval remains which could be a continuation of these ditches.
- 9 Low magnetic anomaly. Possibly a wall.
- 10 Low resistance feature. Purpose unknown but possibly a gravel pit.
- 11 Low magnetic response. This was initially thought to be a limestone structure and this has been verified by excavation. The contours of the present field do not indicate its presence.
- 12 A ditch –like magnetic anomaly which did not show well in the resistivity survey. Purpose unknown.
- 13 A low magnetic anomaly. Probably limestone walls. The contours of the ground appear to respect it which indicates that it may have been standing when the earth was built up here during the 17th century civil war. The resistivity plot, whilst not good at revealing this feature, indicates that there is a mass of other features in this vicinity.
- 14 Part of a presumed circular ditch-like anomaly. Possibly a BronzeAge barrow ditch.
- 15 A low magnetic and low resistance anomaly which goes approx N-S but has a kink in it. The Time Team excavation identified it as being a 17th century civil war ditch. The contour survey is useful for indicating the northern edge of the area enclosed by this earthwork.
- 16 There is possibly part of a circular feature here but its proximity to steel fencing and, presumably modern, debris has obscured the results.
- 17 Slight possible features. This area is covered with alluvium which masks any features which are underneath it.

Location Note

The grids were set out on the National grid with a Trimble Pro XR gps and are probably accurate to approx 30cms.

Conclusions

The geophysics has shown that this area responds very well to magnetometry and well to earth resistance surveys. The main irregularity is the ditch (15 above) which produced a low magnetic response where one would expect high readings. This could indicate that it was deliberately backfilled rather than gradually silting up.

The GSB Prospection radar has a depth of footing of the tower as approx 2.3 m deep which compares quite well with the 2.5 metres indicated by the resistivity pseudo section. As to

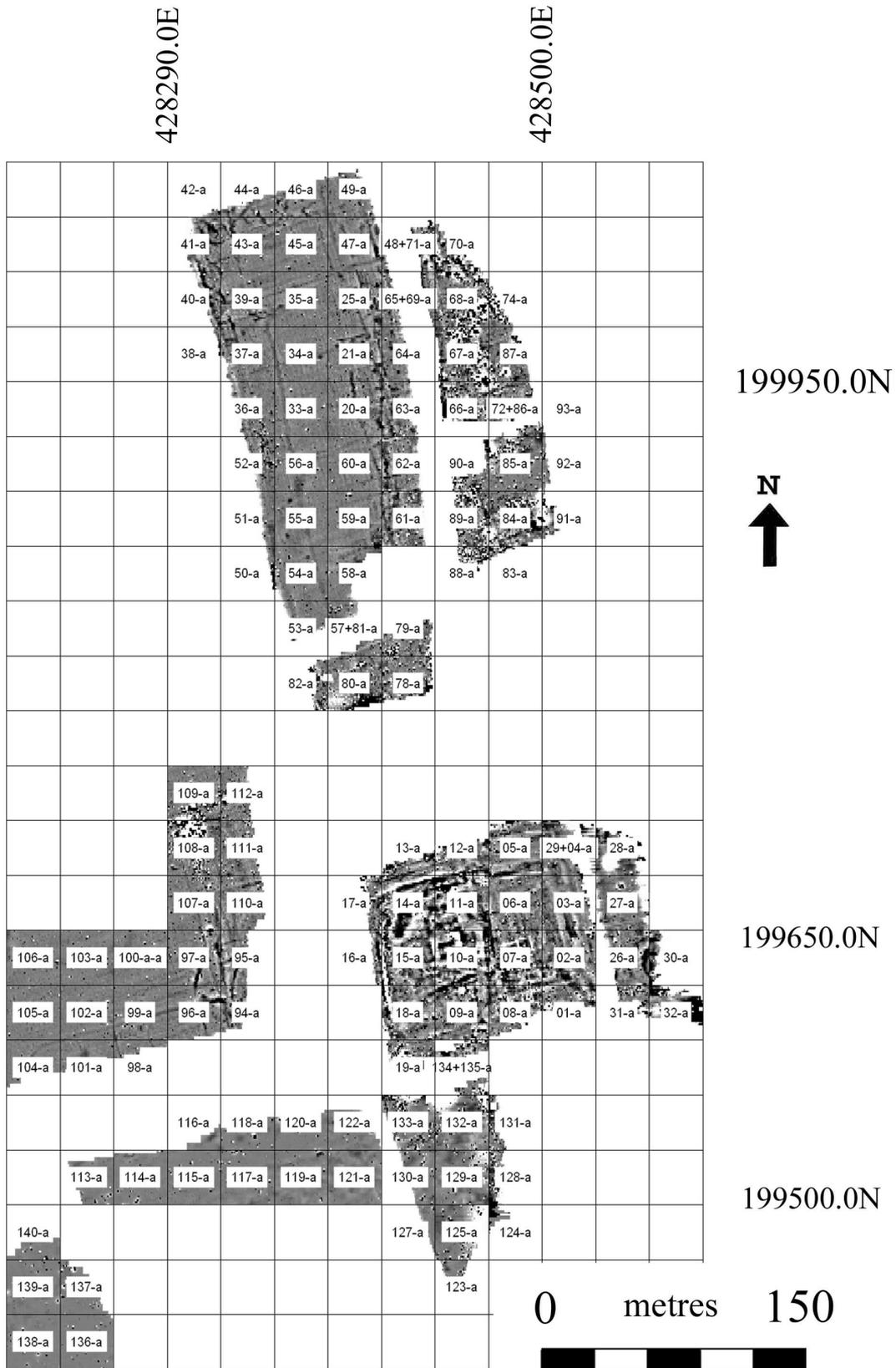
whether either of these is correct is another matter and investigating it may be complicated by the water table being above this level.
The contour survey is useful in indicating the extent of the civil war earthwork and that the structure (13) may have been standing at that time.

REMINDER

Many features cannot be located by using magnetometry or resistivity. Features including flint scatters and burials may well exist which are not detectable by these survey methods. Geophysics alone cannot give a date to anomalies; this will have to be ascertained by other methods.



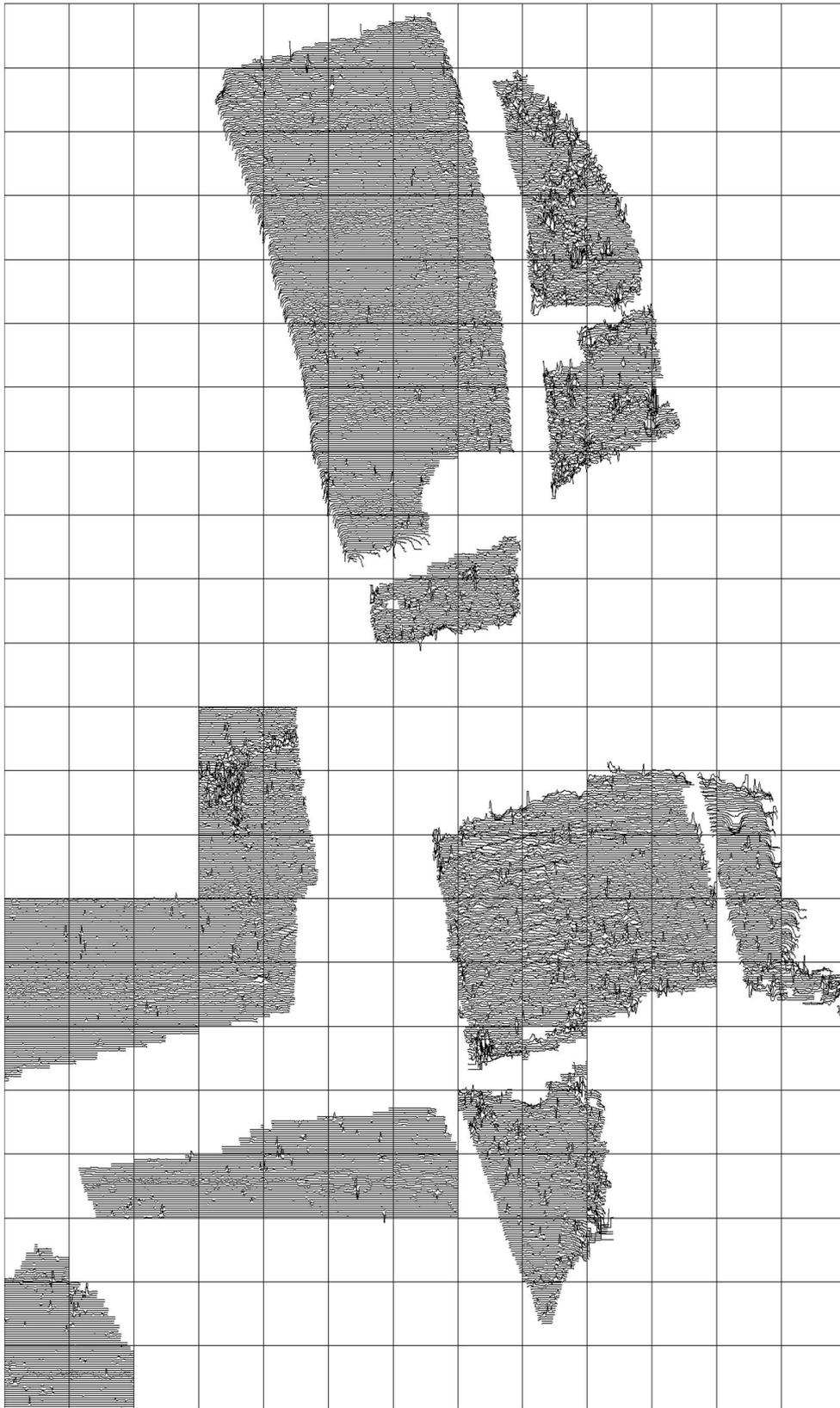
LOCATION on Google Earth base (approximate).



Grid location and order



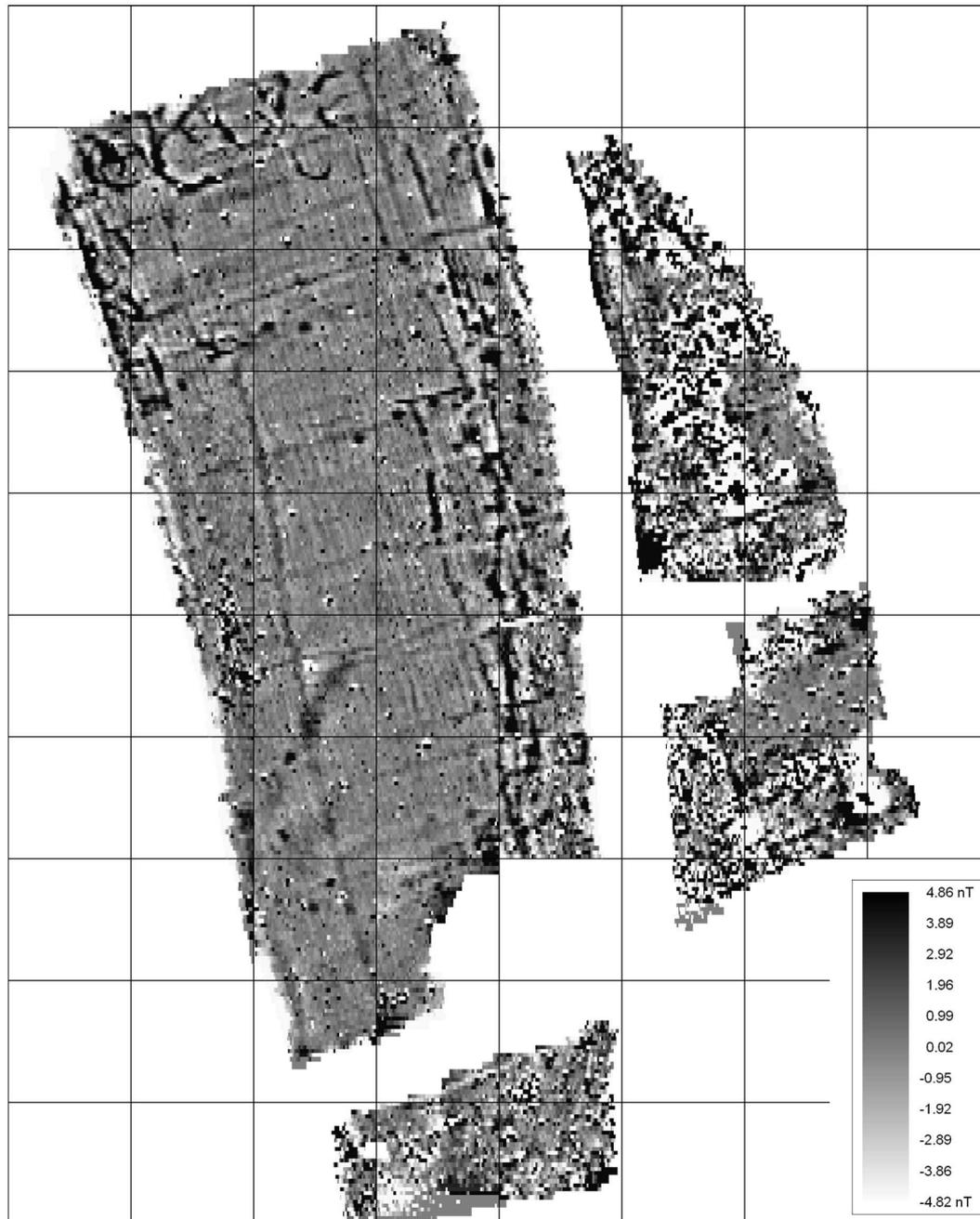
Greyscale plot



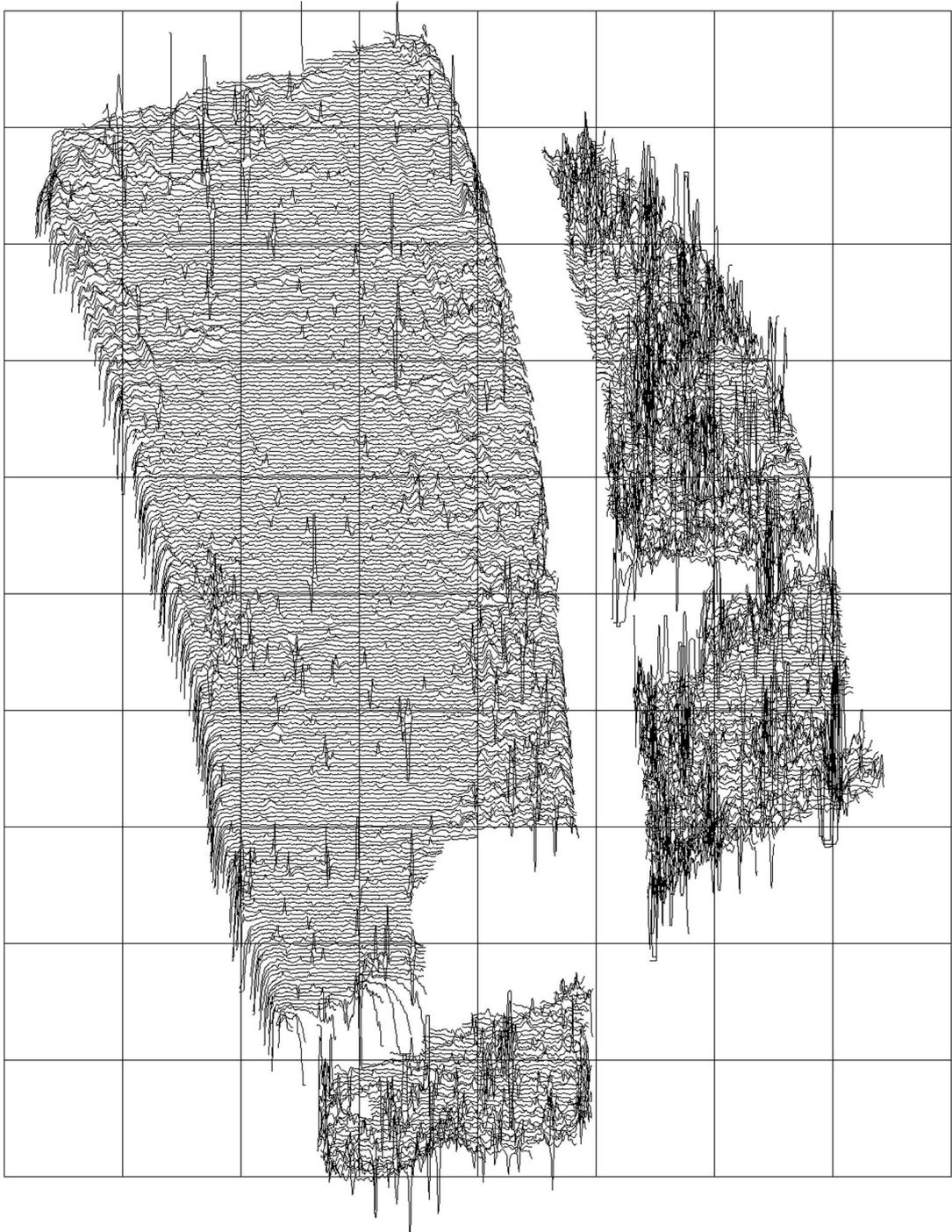
Trace plot clipped to +/-100Nt



Greyscale without grid lines



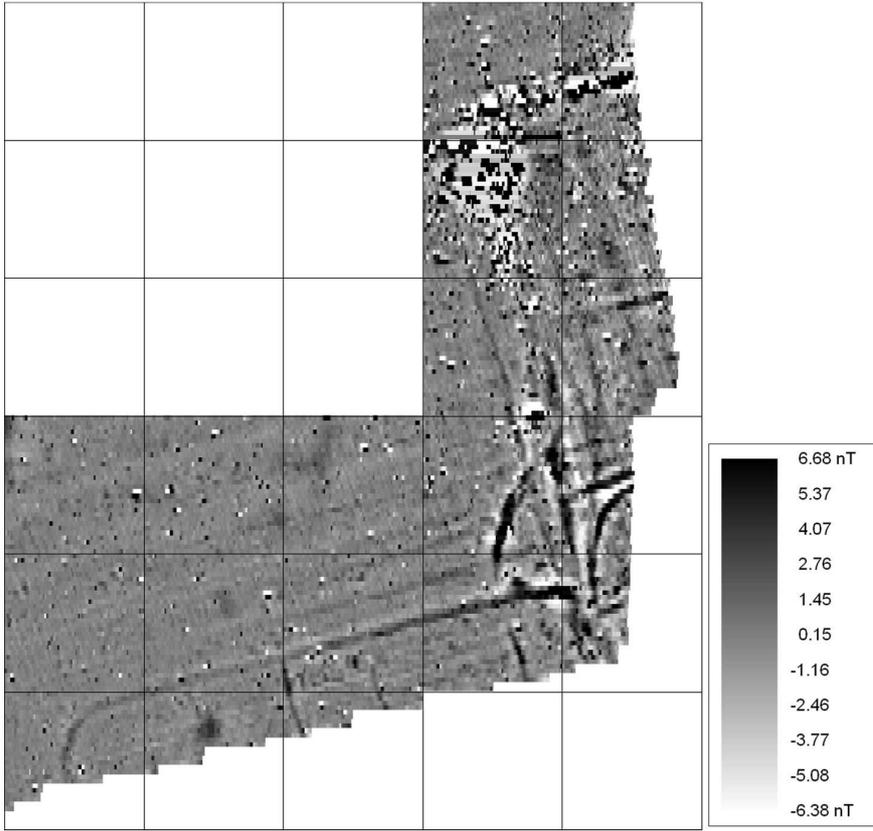
Northern area greyscale



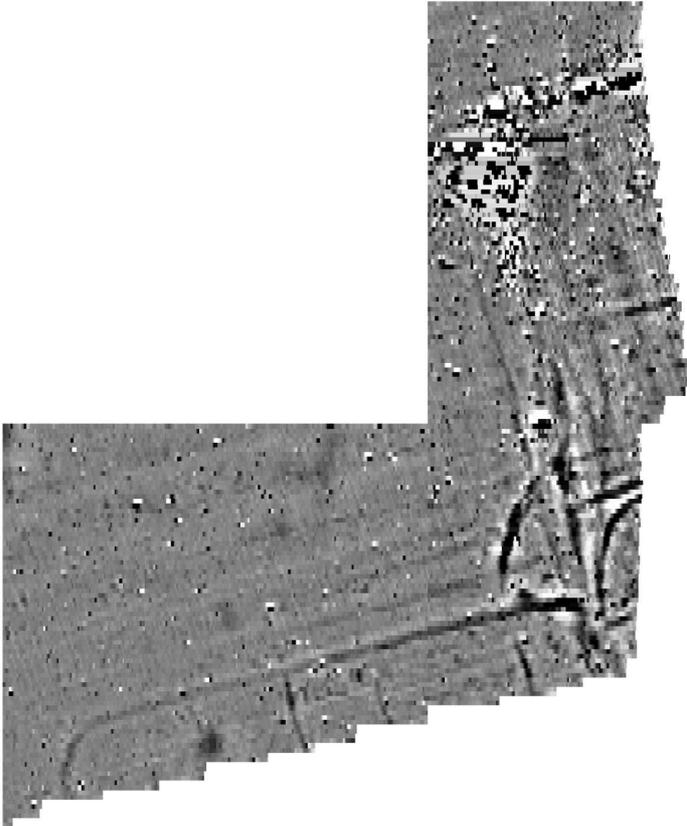
Northern Area Trace plot clipped to +/-100nT



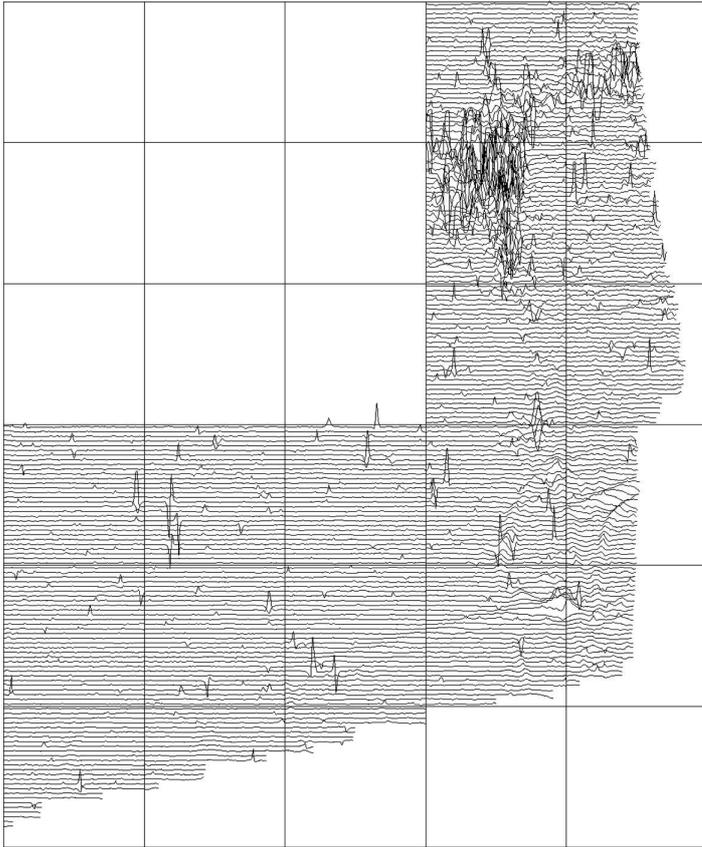
Northern area greyscale without grid lines



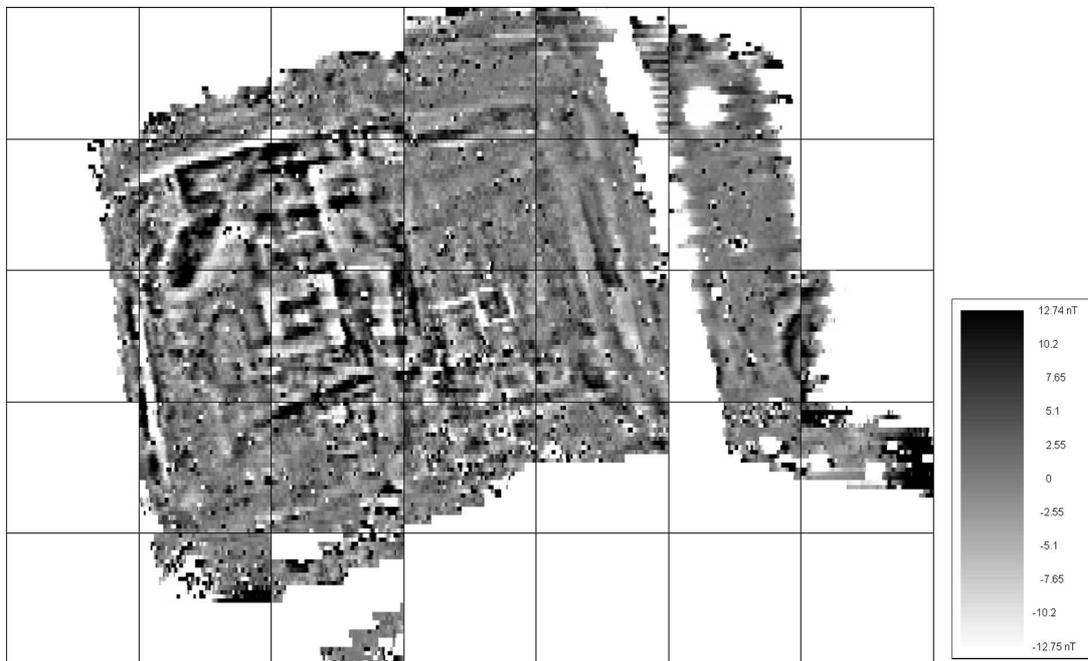
Western Area greyscale



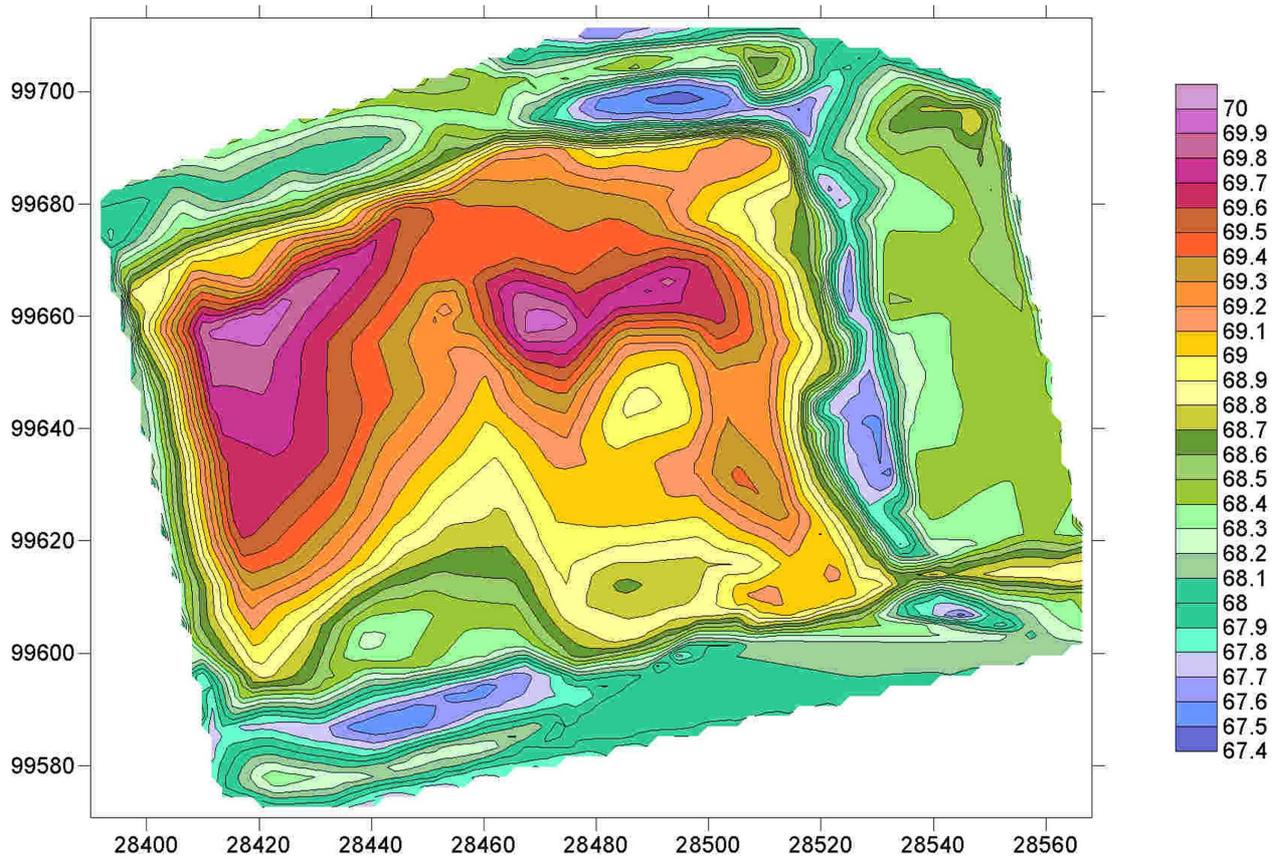
Western Area greyscale without grid lines



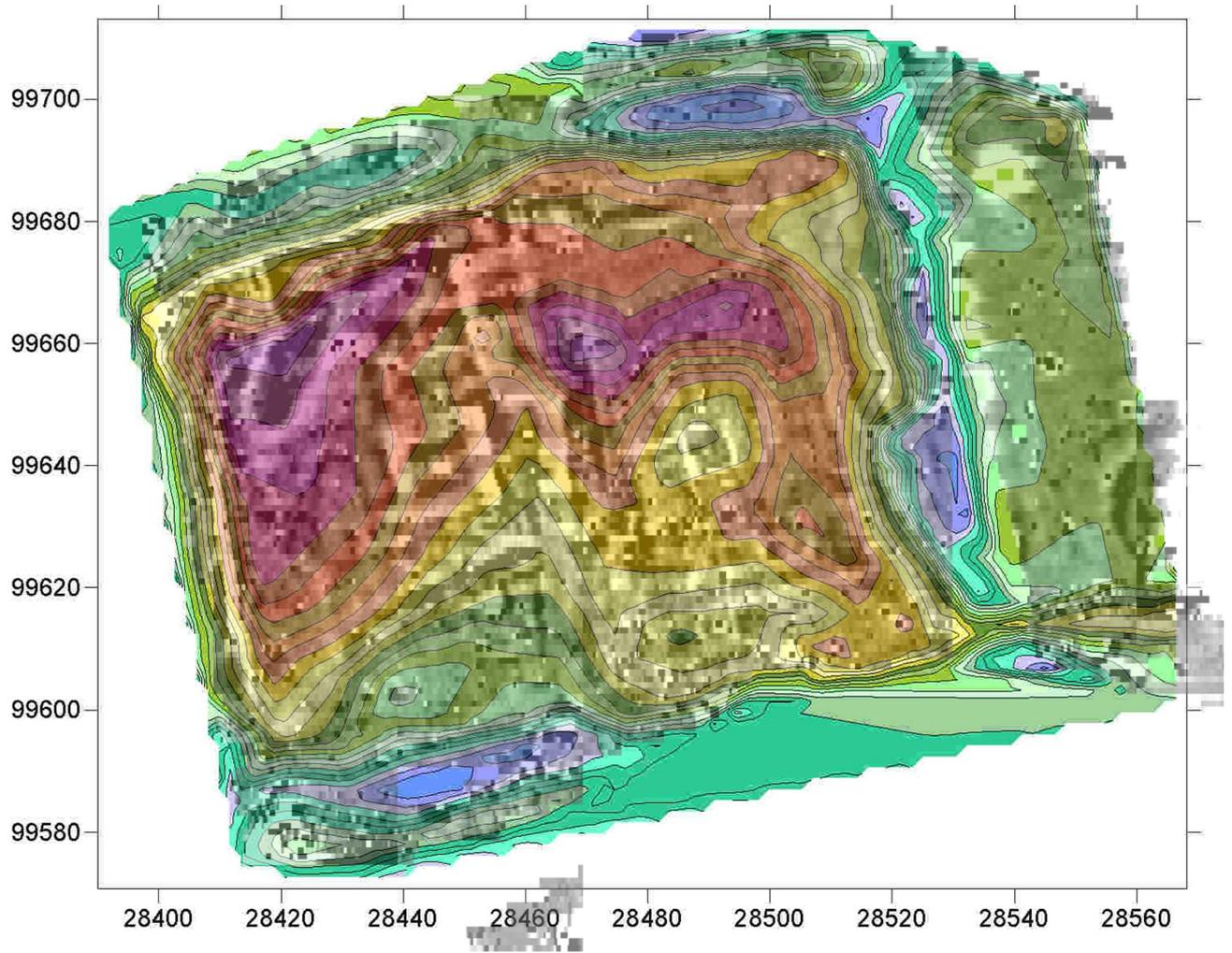
Western Area trace clipped to +/-100nT



Central Area Greyscale



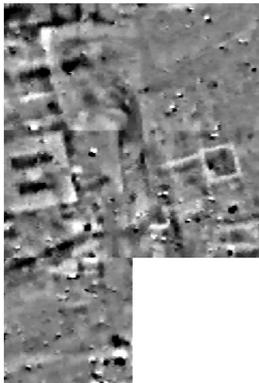
Central area contours



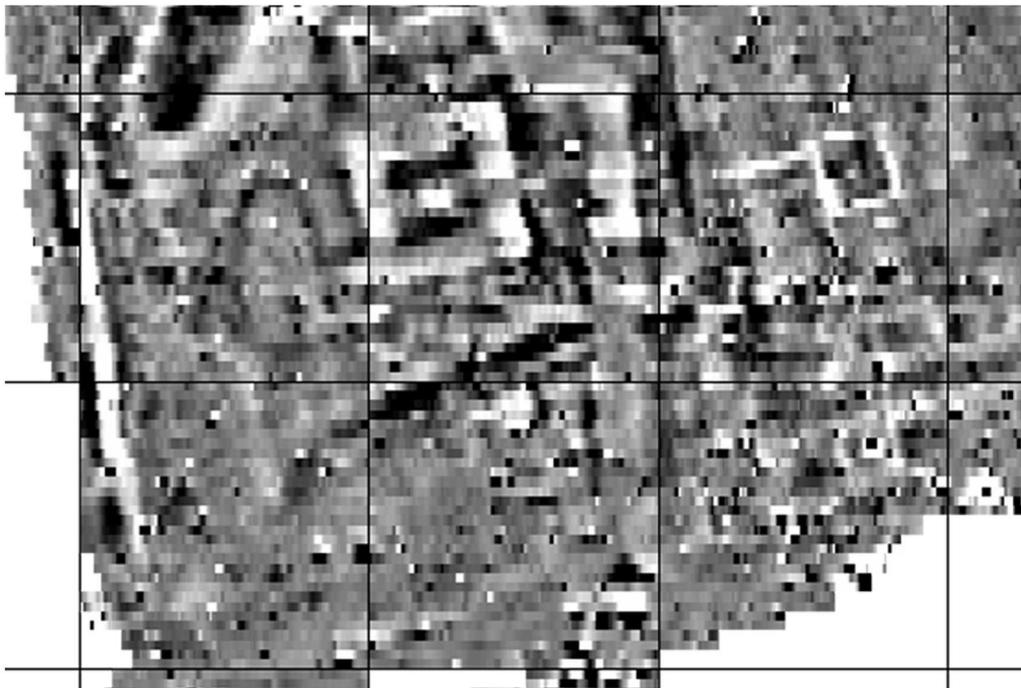
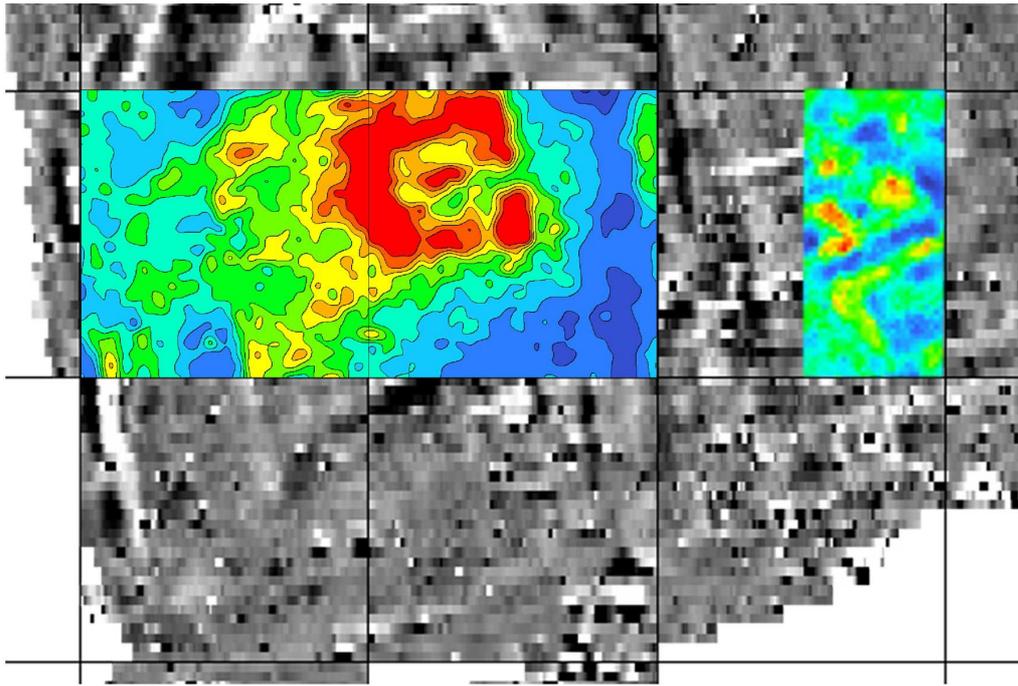
Central area magnetometry on contours



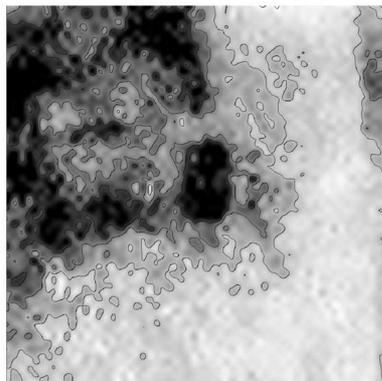
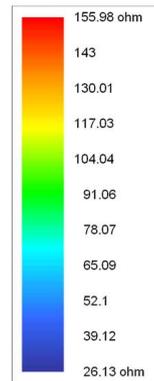
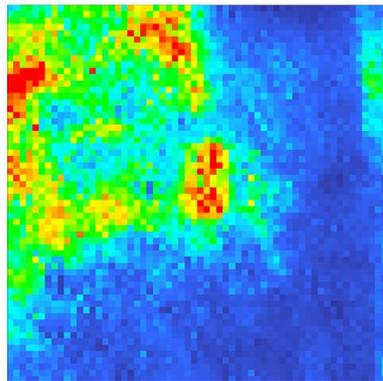
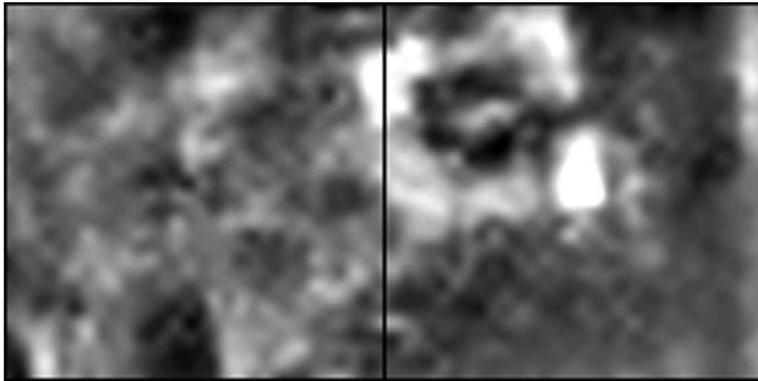
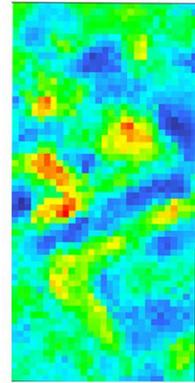
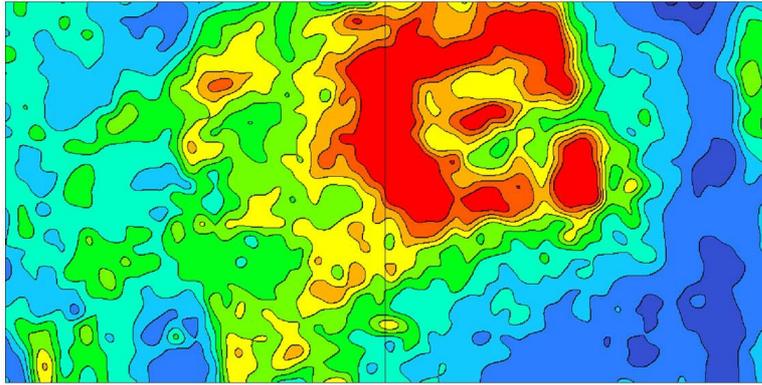
Central Area Greyscale without grid lines



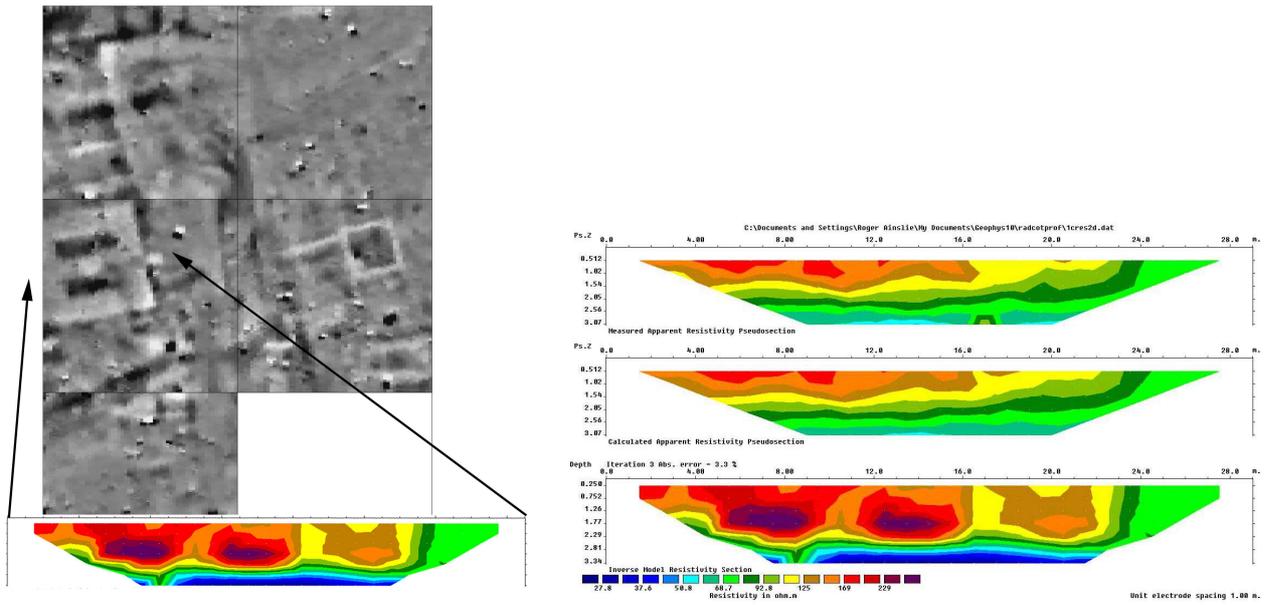
Part of central area surveyed with survey lines going N-S.



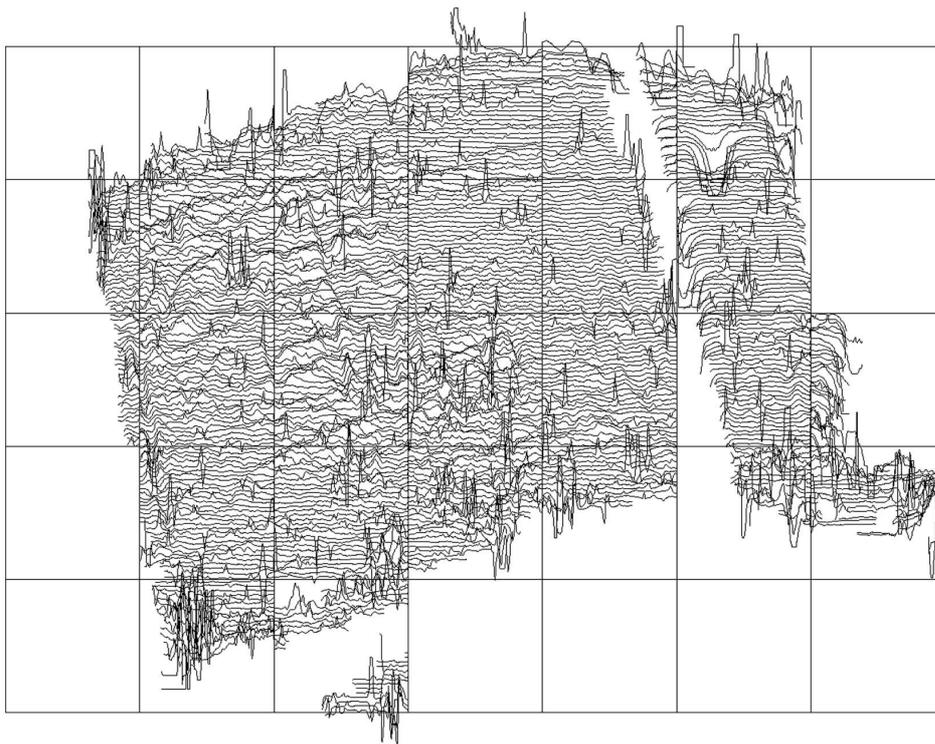
Part of Central Area showing resistivity survey locations



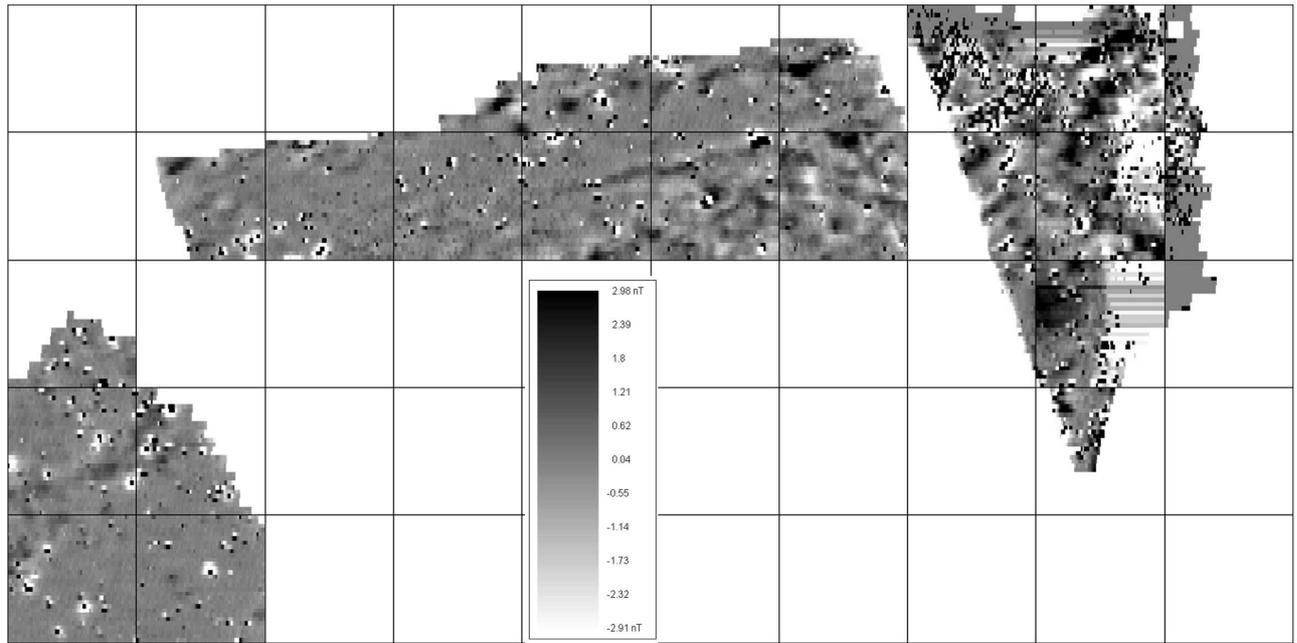
Central Area resistivity. 1 metre and 0.5 metre surveys and various presentation types.



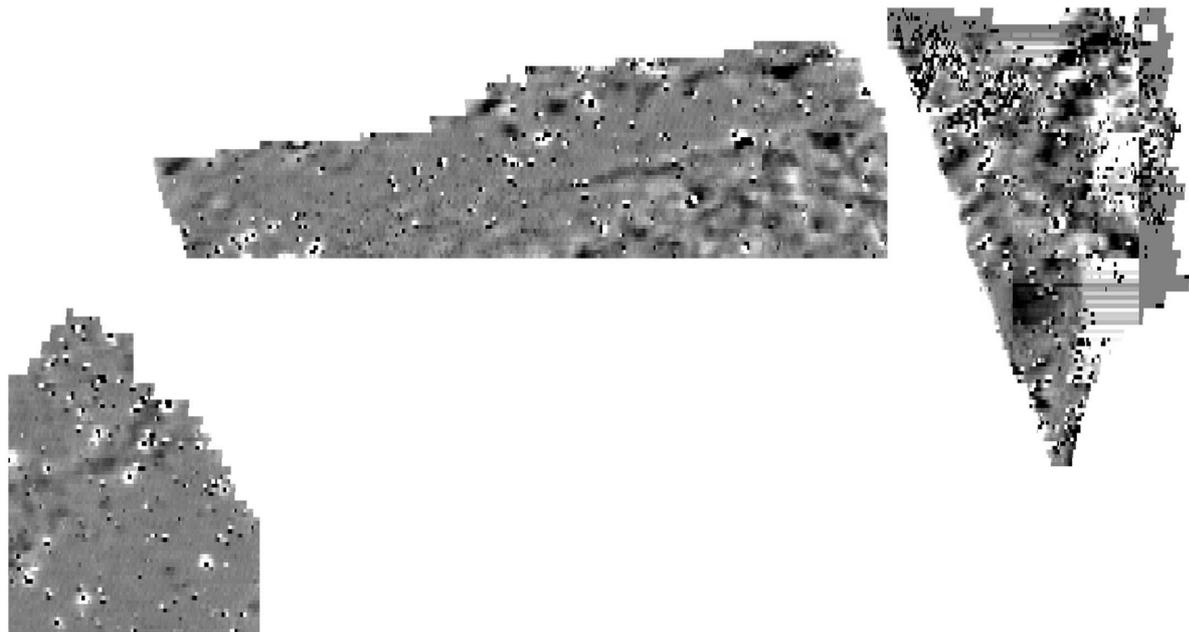
Resistivity pseudo-section across apart of central area



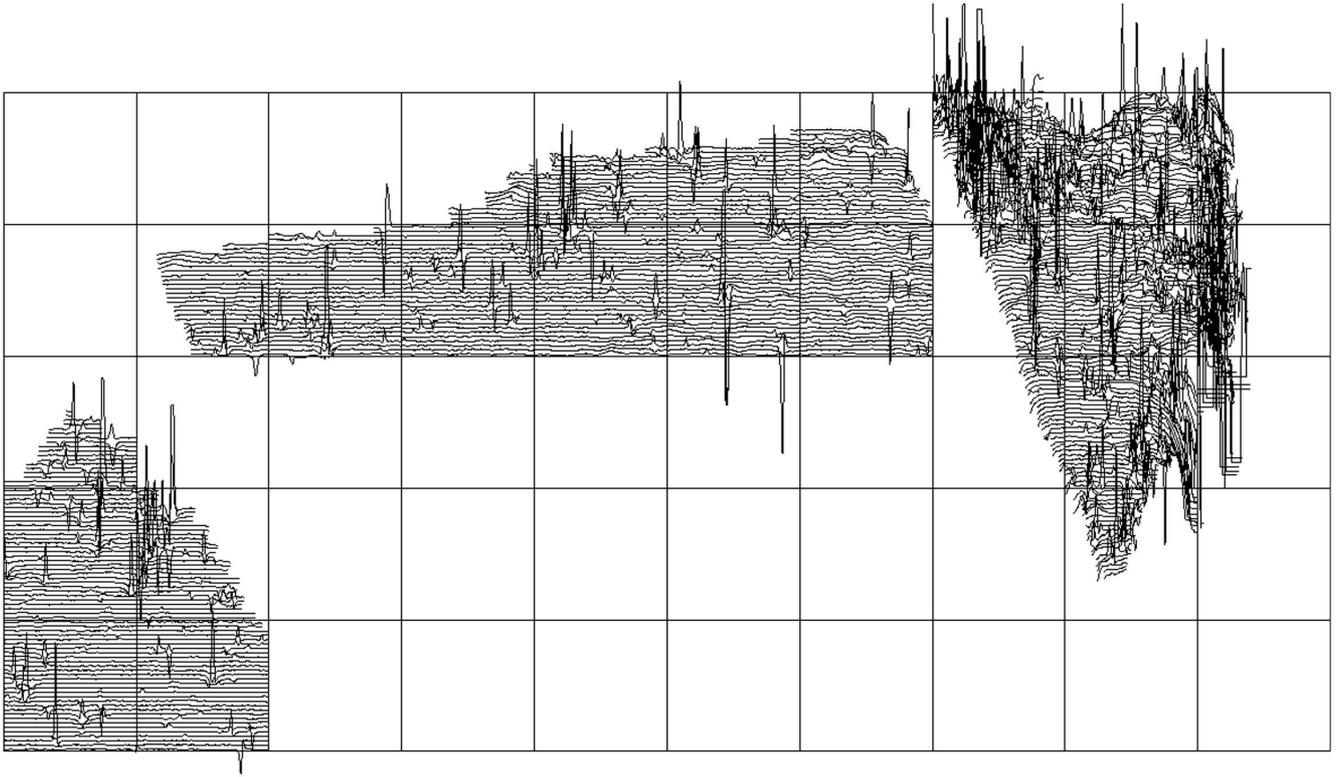
Central Area Trace clipped to +/-100nT



Southern Area Greyscale



Southern Area Greyscale without grid lines



Southern Area Trace clipped to +/-100nT