

Dakhleh Oasis Project
New York University
Excavations at Amheida, Report 2009

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The 2009 excavation season started on the 20th of February and continued until the 26th of February.¹ Due to time constraints, the season was limited to a test trench in the street running east of a 4th century AD dwelling (B1 in area 2.1), and to excavations in the area of the temple of Thoth (area 4.1). Both areas have been under excavation since 2004. Before the beginning of the excavation period, from January 20th to February 19th, a study season was carried out to update and catalogue all the documentation and objects resulting from previous seasons.²

The project also included a surface survey on a limited area located north-west of Trimithis, where several Old Kingdom potsherds clusters had been identified in 2008; a magnetometric survey of two areas to identify structures hidden below the sand; an integration of the existing topographic records, and the construction of a replica of the dwelling B1 that will host a visitor centre at the entrance of the archaeological site near the road to El Qasr. Finally, the decorated temple blocks found during the 2004-2009 seasons have been moved in an appropriate facility built on site to display them in the future to the public and to provide easy access for study and publication. Restoration to the bronze artifacts found in 2004-2008 seasons is continuing in the general storehouse of SCA located at Ismant el-Kharab.

Area 2.1 (Paola Davoli and Mirjam Bruineberg)

¹ The 2009 team consisted of Roger Bagnall (director, papyrologist); Paola Davoli (archaeological field director); Olaf Kaper (associate director for Egyptology); Mirjam Bruineberg, Roberta Casagrande-Kim, Cristian Craciun, Nicole High, Valentina Liuzzi, Sander Mueskens (archaeologists); Delphine Dixneuf, Clementina Caputo, Andrea Myers (ceramicists); Fabrizio Pavia and Silvia Maggioni (topographers); Carina van den Hoven (Egyptologist); Rodney Ast and Raffaella Cribiore (papyrologists); Bruno Bazzani (computer systems manager and photographer); Ellen Morris (Egyptologist); Johanna Kieniewicz (geologist); David Swiech (magnetometry); Ashraf Senussi (pottery draftsman); Martin Hense (artist); Nicholas Warner (conservation architect); Mohamed Ahmed Sayeed (conservator); and Ashraf Barakat (assistant to the director). Our SCA inspector was Magdy Ibrahim Mohamed.

² On previous seasons see: <http://www.amheida.org/index.php?content=reports>; R.S. Bagnall, P. Davoli, O.E. Kaper, H. Whitehouse, *Roman Amheida: Excavating a Town in Egypt's Dakhleh Oasis*, *Minerva* 17/6 (Nov.-Dec. 2006), pp. 26-29.

During the 2009 season, a trench of 10 by 7 meters was cut in the north-south oriented street running in front of the eastern entrance of building B1 (figs. 1-2). The whole area was covered by a thick layer of collapsed mud bricks and debris which, in turn, had been damaged by the cutting of later medium-sized pits, possibly excavated to recover wood and mud bricks constituting part of the ancient buildings' architecture. Three superimposed floor levels of the street (6 m wide) have been identified: the earliest one is mostly a walking surface formed by compacted debris resulting from the demolition and leveling of the buildings (i.e., the *thermae*) predating the house B1. The foundation trench of building B1 was cut into this stratigraphic unit (F308). The second floor level (F314), a compacted grey mud surface, is preserved only in the southernmost part of the trench and it is in phase with the construction of B1. The latest floor (F313), preserved on the whole street in the trench, consists mainly of loamy sand and a rather compacted mud surface. The impression of three east-west oriented beams was visible on top of this later floor. These impressions together with others of reeds on mud support the hypothesis that at least this portion of the street was covered by a flat roof.

In the street several architectural features delimited the space in front of B1 and once limited the access to the area itself. At the north-east corner of the house B1 a doorway/gate was built to close the space off. Of this door, only the two mud brick jambs, the threshold, and two impressions of wooden beams at the north and south of the threshold remain. At the southern limits of the trench, poorly preserved due to the presence of the above mentioned pits, two small pillars east-west oriented were most probably parts of a structure closing the street toward the south.

At the north-west corner of the trench some features belonging to buildings predating house B1 were found under the street's floor level. One of these features is a white plastered round room similar to the *laconicum* (part of a Roman public baths or *thermae*) discovered under the courtyard (R9) of B1.³ Some Greek *ostraka* and IV century AD coins were among the most significant finds of the season.

³ R. Criboire, P. Davoli, D. Ratzan, *A Teacher's Dipinto from Trimithis (Dakhleh Oasis)*, JRA 21 (2008), pp. 174-75.

Area 4.1 (Paola Davoli and Roberta Casagrande-Kim)

Area 4.1, the location of the Temple of Thoth, has already been investigated during the 2004, 2005, 2006, and 2008 campaigns. This season was focused on the excavation of square AQ48 (10 x 10 m) (fig. 3). The aim of the season was to clarify the possible layout of the temple and to get a better understanding of the underlying layers in which many of the pits disturbing the ancient remains had been dug.

The surface layer in square AQ48 (DSU 141) consists of wind-blown sand, mainly characterized by the presence of small block fragments, clumps of gypsum mortar, grinding stones, and a great quantity of pottery sherds.

Immediately below the surface, we excavated eleven pits (F67 to F77) (fig. 4) and we recognized other two that were left with their original fills. Apart from pit F67, all pits were cut into an earlier anthropic stratigraphy identifiable by a series of horizontal layers alternating thick strata of dark ash, and red compacted clay very similar in nature and composition to the layers found in previous seasons.

The fill of the pits consisted predominantly of temple blocks, slid inside from the immediate vicinity, and sand accumulated between them. In overall, 75 complete blocks and several other medium to small block fragments were found inside the pits and removed. Four of the blocks were decorated and dated to the Saite Period (26th Dynasty). One carried part of the cartouche of king Amasis (fig. 5), while two others were decorated with parts of an arm and the legs of a king. All four were in a rather good state of preservation, despite their small dimensions. In pit F76 three large portions of collapsed wall (over 1 by 1 meter in size) each composed of several complete blocks, suggest that, as it was also the case in the evidence found during the previous seasons, Saite blocks were reused in Roman time assembling them in a bed of thick white mortar.

Toward the eastern limits of the square and its south-west corner spoil heap layers (DSU 142) were visible, mainly characterized by the presence of large clusters of mud bricks. Some of these clusters suggest the presence of mud brick structures in the area now identifiable only as collapses partially fallen in or around the pits.

As it was the case for the previous campaigns, the pottery sherds, dating from the Old Kingdom to Islamic period, confirm the very disturbed nature of the area.

Topographic Survey (Fabrizio Pavia and Silvia Maggioni)

The topographic work carried out during the 2009 excavation season continued on the basis of what was already elaborated in 2007 and 2008 (fig. 6). It was necessary to replace one fixed point, called S200, at the top of the temple, area 4.1.

Topographic Assistance in the Fieldwork

Following the evolution of the work on the field, daily updates were prepared in area 2.1 to provide total station references (fixed points, sections, and photogrammetry) in order to assist and facilitate the work of the archaeologists as excavations progressed at the eastern entrance of the house B1. The result of the work generated a comprehensive 2D plans of the area, reflecting the architectural situation visible on the ground.

Considering the lack of architectural structures in Area 4.1, the work there was mainly focused on providing fixed points according to the staff's needs and on measuring the outlines of some of the pits.

Fixed points were also necessary in the areas where the magnetometer investigations were done: 50 sticks were positioned to the west of the main settlement (area 9.1), outside the current limits of the SCA protected territory, and 20 in a square north of area 2.1.

Site Survey (fig. 7)

The surface mapping of the site in the areas not yet excavated continued during this season. The area surveyed, roughly 65 by 65 meters, is located south of area 2.1 and is delimited toward the east by a 35 meter long north-south oriented wall, most probably constituting the perimeter of the city, and toward the west by a 4.5 meter-wide street oriented north-south. The map reveals a regular district characterized by big buildings, some with pillars, and several vaulted rooms already visible on the surface. A taller building, preserved toward the north, suggests the presence of a second floor.

Graphic Elaboration of Collected Data (fig. 8)

Using the data collected during the previous season, a 3D MODEL of three different archaeological phases discovered in the building of area 2.1 (the house B1, the school, and the *thermae*) was elaborated. All the photogrammetry was imported in a 3D MODEL recreating a realistic and virtual view of building B1. The walls of all the buildings identified in the city were extruded to elaborate a movie recreating an imaginary virtual walk along the streets of ancient Roman Trimithis.

Magnetic Survey (Dawid Świąch)

Method of Survey and Presentation of Results

The survey was made using magnetometer (gradiometer) of the fluxgate type, Geoscan Research FM256. Measurements were taken in a grid 0.5 by 0.25 m (measurement every 0.25 m on lines 0.5 m apart). Grid density was determined by the size of the expected structures (at least one of the distances between measurement points should be equal to the width of the narrowest mud brick wall).

Measurements were taken inside squares of 20 by 20 m and using the 0.1 nT range. The traverses followed a west–east orientation in area 9.1 and north-west/south-east orientation in area north of 2.1. Survey was taken in parallel mode, moving the apparatus in a single direction.

Survey Areas and Objectives

Area 9.1

The magnetic survey registered a series of narrow, longitudinal structures characterized by high negative values. The structures are very distinctive in the eastern part of the surveyed area (east of E8-G8, fig. 9) and less distinctive in the central part, in F4, F5, E5 and G6. Structures run along irregular, unparallel lines. The shape of structures might suggest the presence of narrow (less than 2 m wide) ditches. Other much wider (up to 4 m) longitudinal anomalies were registered in the north-west corner of the surveyed area (in squares B2, A2-A4, fig. 9). Once more, the shape suggests that the structures underneath could be interpreted as ditches. The area of these structures is characterized by dominance of positive values; the western part of the southern structure is characterized by very high amplitude of values (-30/+50 nT). Such amplitude (high negative value) may suggest the presence of materials of high iron contents.

Area north of 2.1

This area is covered in very numerous pottery sherds and a rather thick layer of windblown sand that interferes with seeing possible underlying structures. The magnetic prospecting registered a series of narrow and straight anomalies characterized by low positive values. Some of the anomalies are at a 90 degree angle, and some form straight corners (in A3, A4, A5, B4, B6, C2, fig. 10). A very distinctive and wide anomaly (3-5 m) crosses the surveyed area in east-west direction (in D3, C3, C4, B4). Its shape suggests the presence of

remains of a street. Moreover, all registered anomalies support the hypothesis that in this area architectural remains of the city are still extant, though not visible.

Epigraphic work at Amheida in 2009 (Olaf E. Kaper)

Work on the relief decoration⁴ from the temple at Amheida was continued during this field season. From the previous seasons 2004, 2005 and 2006 some relief blocks and fragments remained which had not been photographed, recorded or drawn. In total, around 700 pieces of relief have been recovered from the temple, the recording of which was virtually finished at the end of this season.

All blocks and fragments were retrieved from storage at Ain Birbiyeh and moved to the new purpose-built block room at Amheida mentioned above, where they were sorted according to date and provisionally displayed.⁵ Owing to the delay in receiving permission, only the days from 21 to 25 February could be spent sorting the material chronologically. Much work still remains to be done in studying the blocks and fragments, many of which can be reassembled into larger scenes. The reconstructed scenes will be assembled in the future for public display inside the block room.

The excavations in the temple area described above were located in square AQ48 because the adjacent square to the south, AQ49, had yielded much material in 2005, which included some of the earliest temple reliefs from the site as well as a stela from the reign of Takeloth III.⁶ Surprisingly, the new square proved to be largely devoid of temple reliefs. Only eight significant fragments of temple relief were found, none of which were complete building blocks. Seven relief fragments could be dated to the 26th Dynasty, and one to the Roman period. No material from earlier periods was found. Three of the fragments could be associated with earlier finds, two of which may be dated to the reign of Amasis. One of these forms part of a dedication inscription from a doorway of this king, in which the cartouche of Amasis is included (figs. 5, 11).

⁴ P. Davoli, O. Kaper, *A New Temple for Thoth in the Dakhleh Oasis*, EA 28 (2006), pp. 12-14.

⁵ Ms. C. van den Hoven assisted in this work.

⁶ O.E. Kaper, R.J. Demarée, *A Donation Stela in the Name of Takelot III from Amheida, Dakhleh Oasis*, *Ex Oriente Lux* 39 (2005), pp. 19-37.

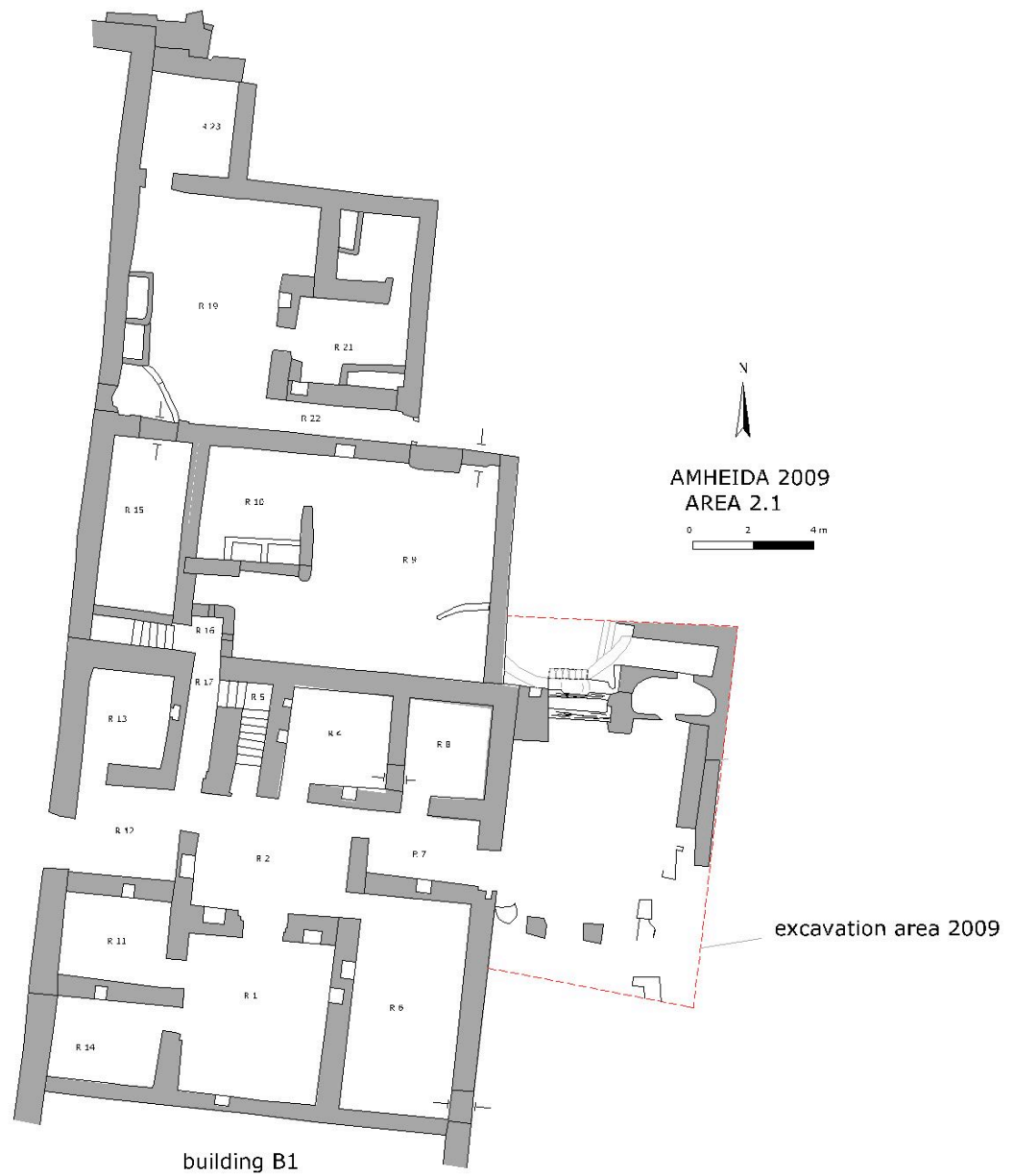


Fig. 1: area 2.1 with house B1 and the trench in the street east of it.



Fig. 2: area 2.1 with house B1 and the trench in the street east of it (final situation).

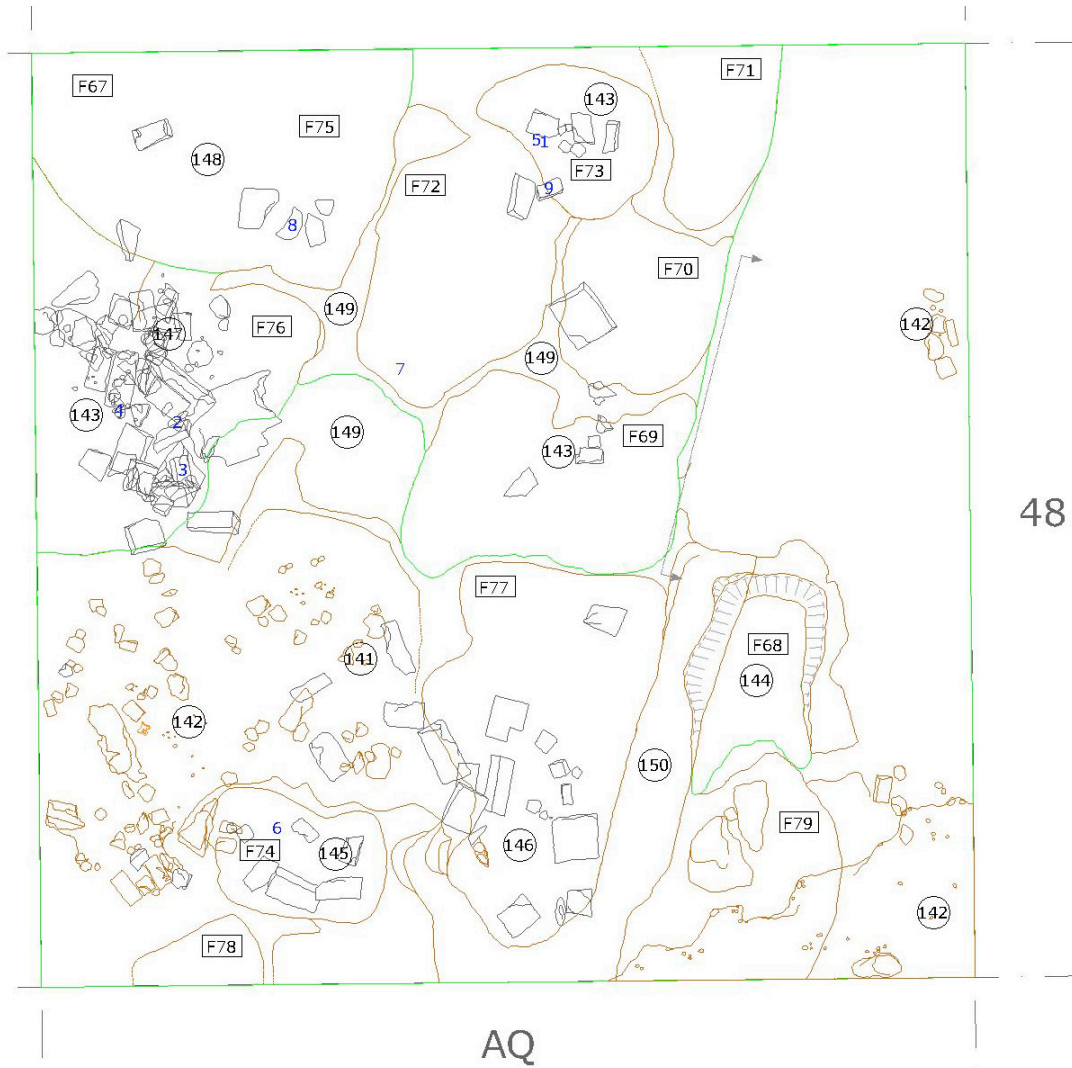


Fig. 3: area 4.1 square AQ48.



Fig. 4: area 4.1 square AQ48 (final situation).



Fig. 5: area 4.1 square AQ48, block with cartouche of King Amasis.

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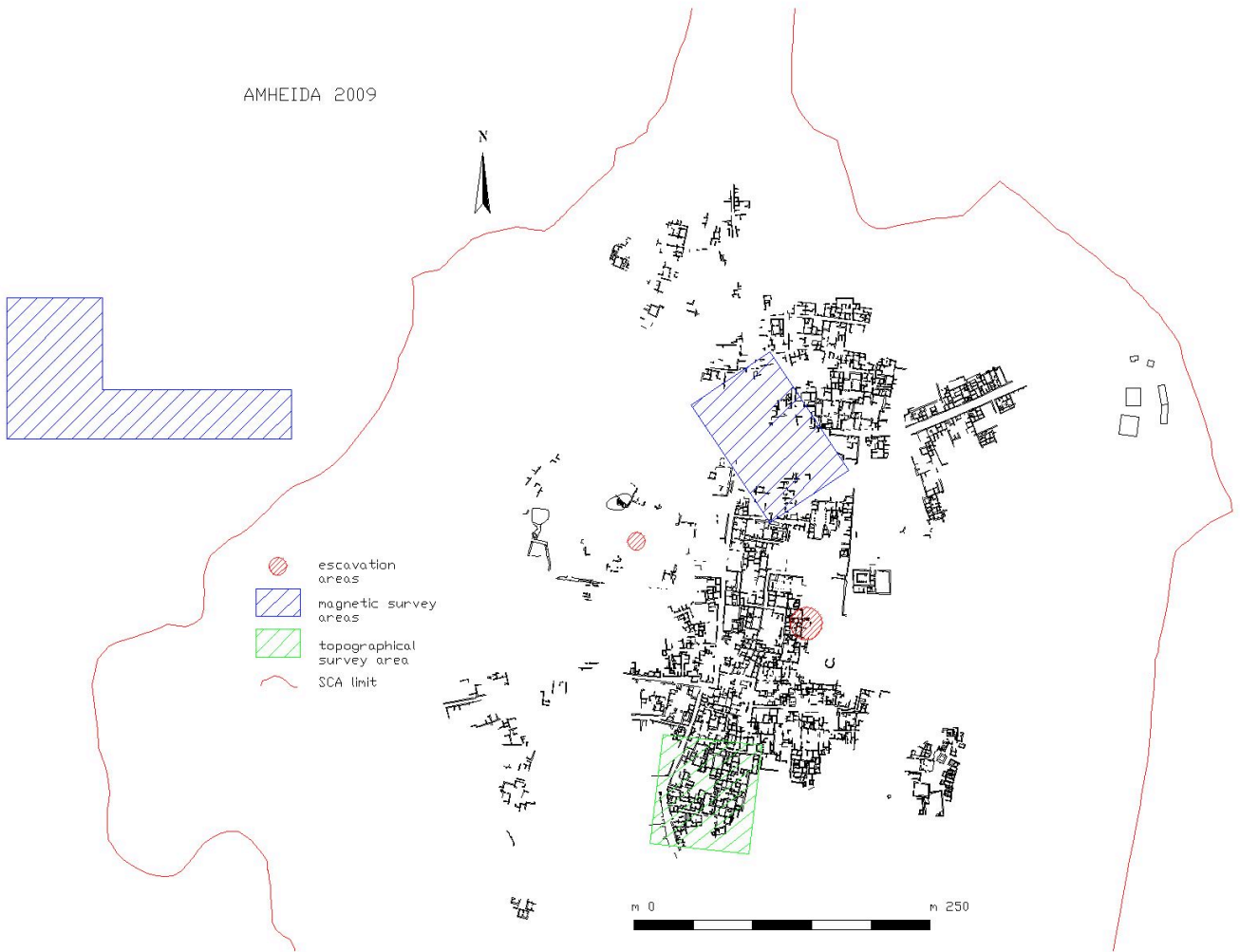


Fig. 6: investigation areas 2009

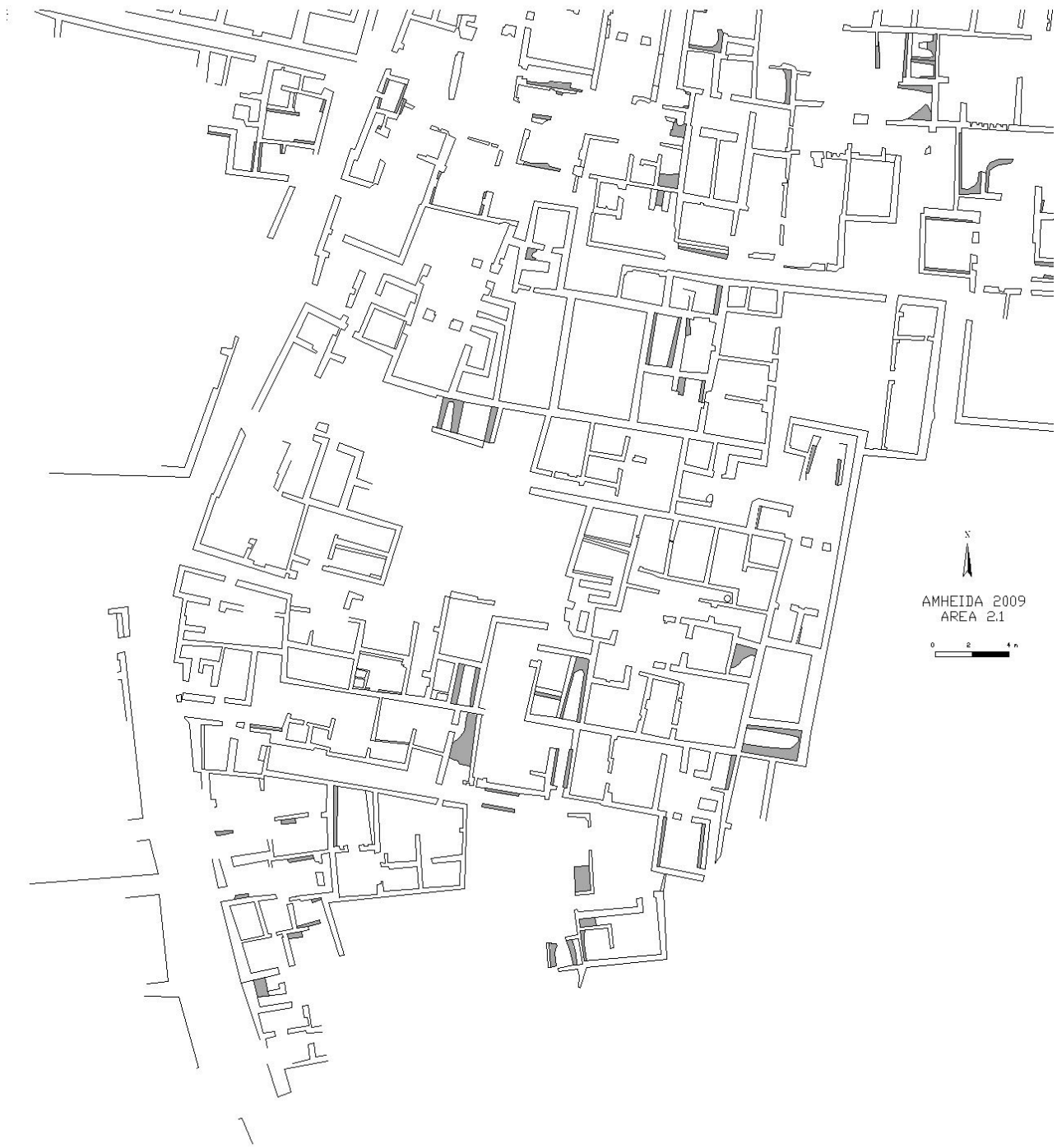


Fig. 7: topographic survey 2009.

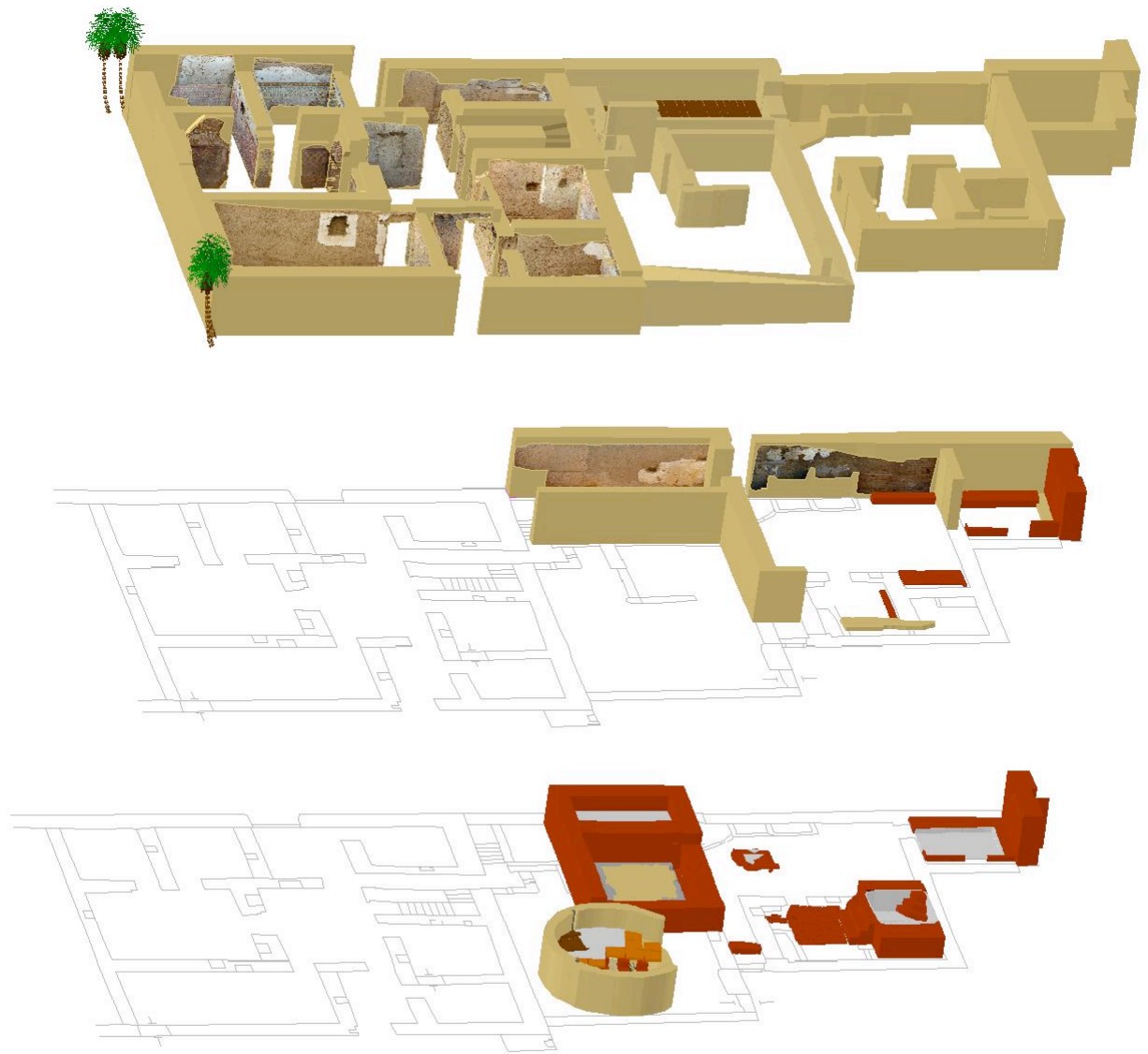


Fig. 8: 3D reconstruction of building B1 in area 2.1.

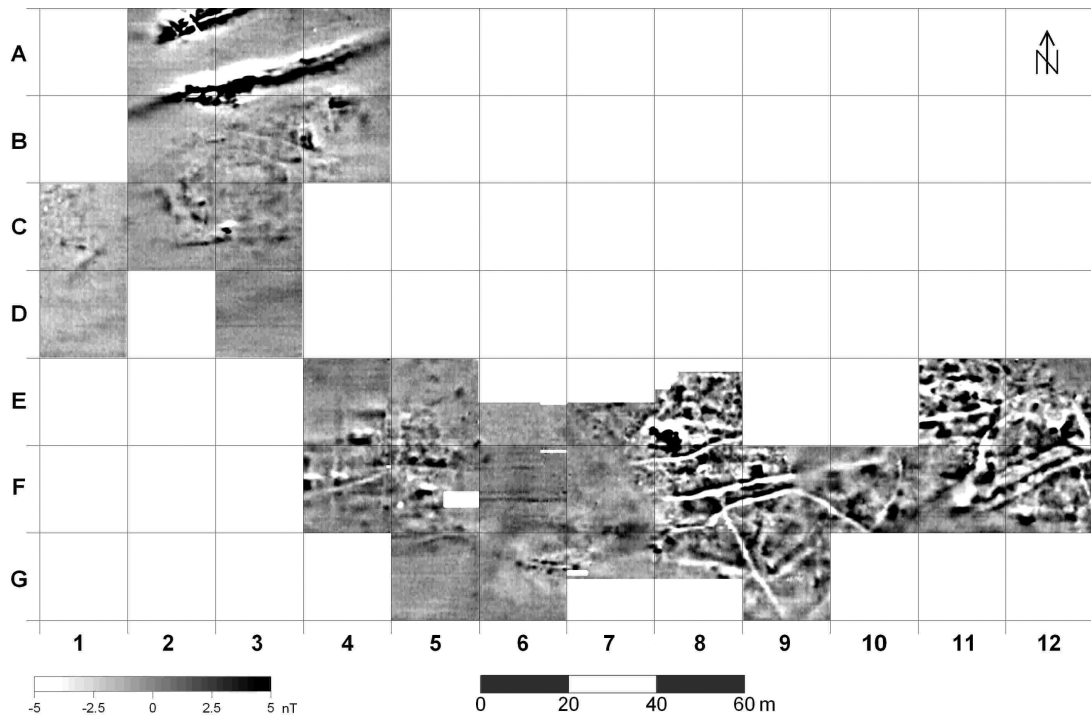


Fig. 9: area 9.1, magnetometric survey

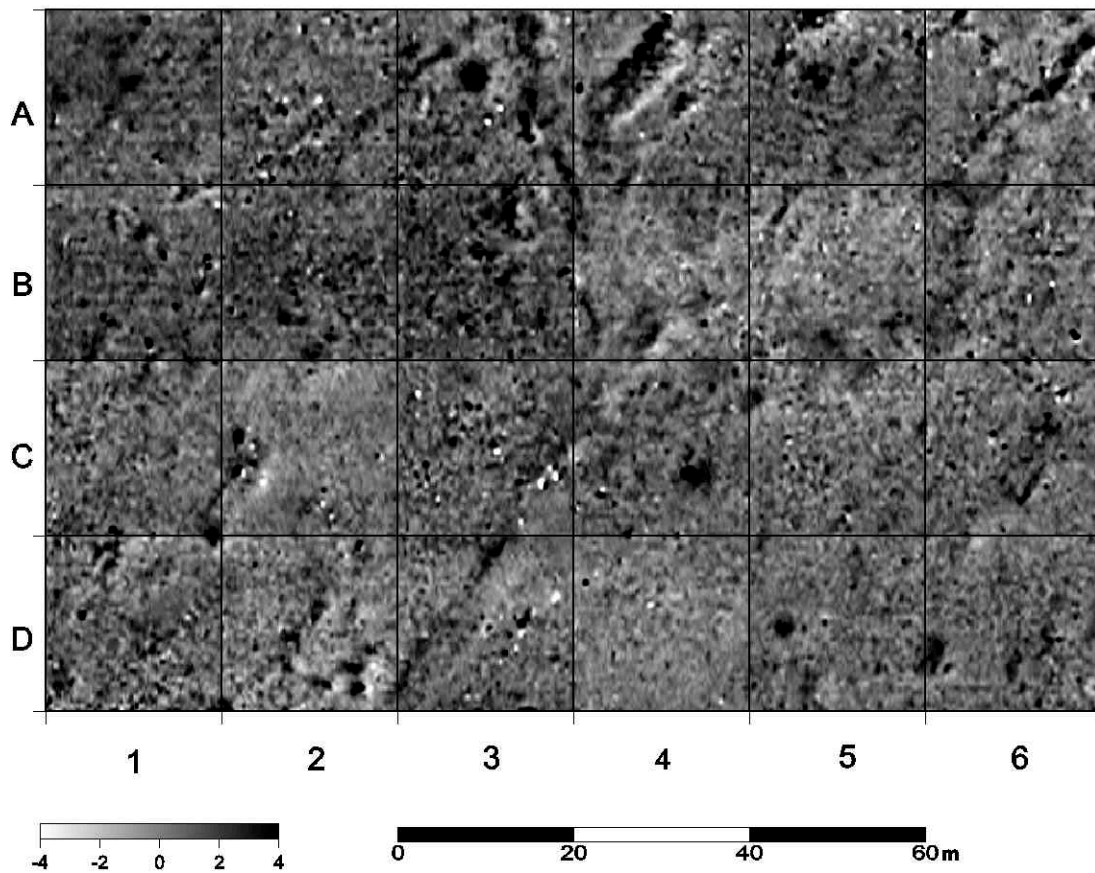


Fig. 10: area north of 2.1, magnetometric survey



Fig. 11: dedication inscription from a doorway with a cartouche of Amasis.