

ARCHAEOLOGICAL SURVEY AND EXCAVATIONS AT THE WĀDĪ AL-YUTUM AND AL-MAGAŞŞ AREA-AL-‘AQABA (ASEYM): A PRELIMINARY REPORT ON THE EXCAVATIONS AT TALL HÜJAYRAT AL-GHUZLĀN IN 2006

L. Khalil and R. Eichmann

With contributions by: A. Abar, A. al-Manaseer, S. Ayyoub, I. Fayoumi, G. Heindle, C. Keller, F. Klimscha, R. Maier and K. Pfeiffer.

Introduction

The ASEYM project was established in 1998 as a joint Jordanian-German project with the aim of studying the Prehistory of al-‘Aqaba region, especially the Wādī al-Yutum area (Khalil *et al.* 2003; Bruckner *et al.* 2003; Khalil and Eichmann 1999).

During the previous excavations at Hūjayrat al-Ghuzlān, several stone and or mud brick walls were revealed, at least three building complexes (A-C) were exposed (Khalil *et al.* 2003: 162-164), they consist of rooms and storage installations, few floors were recovered during the previous season.

The excavation this season took place between February 4th and March 16th 2006. The project is sponsored and funded by the Deanship of Research, the University of Jordan, ‘Amman and the Orient-Abteilung of the Deutsches Archäologisches Institut in Berlin, in cooperation with the Department of Antiquities, Jordan. In addition, the Deutsche Forschungsgemeinschaft (Germany) and the Higher Council of Science and Technology (Jordan) funded the project.

The team included the above mentioned authors and contributors. In addition, S. Dressler was the ceramic specialist, D. Bodenmüller and U. Siegel were the architects, M. Khader and A. Wittner were the photographers, D. Depolasky worked as a foreman and field technician and S. al-Fakhri acted as the representative of the Department of Antiquities.

During the season, work was conducted in eight squares (9 x 9 meters each) and two deep soundings (Fig. 1), three trenches F8, H8 and G5 were excavated in the south-west sector of the tall, to investigate any possible stratigraphical information through the north-south sec-

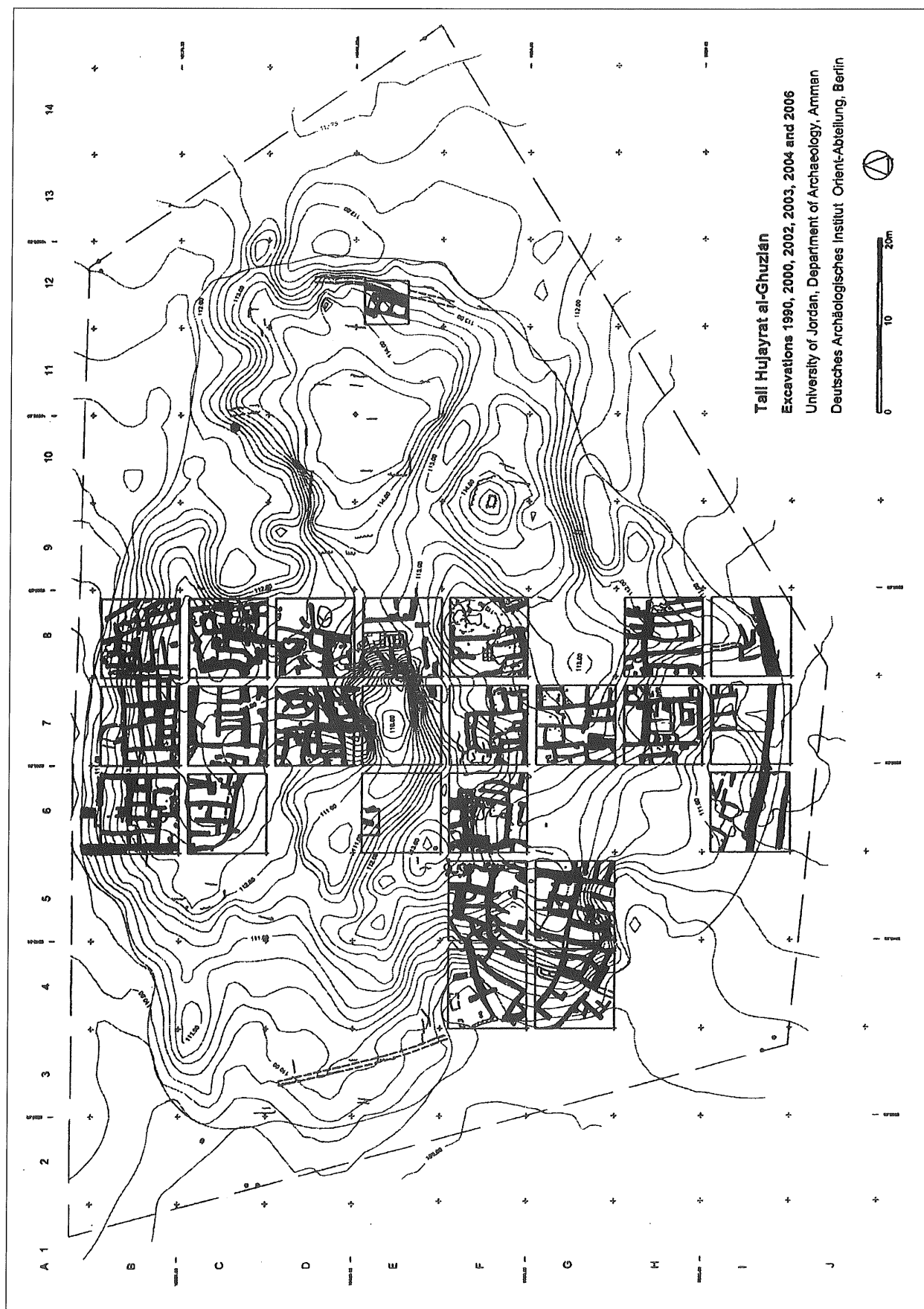
tion of the site. The work was continued in four trenches from previous seasons such as squares C8, E7, G5 and F6, to excavate any floor of the rooms and to determine the deepest occupation layers; especially in C1 and E7. In addition, two deep soundings in squares I6 and J6 were excavated to examine what is supposed to be the “city wall”.

Architecture and Stratigraphy

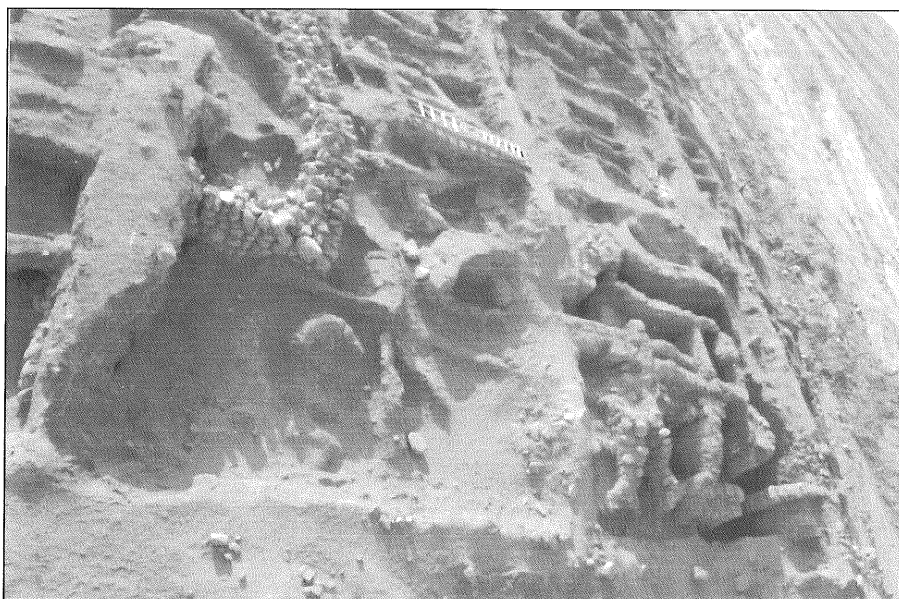
The square C8 is located in the north-west sector of the site (Fig. 2), it was first excavated during 2002 season, when many mud-brick walls were revealed. When removing ashy layers between mud and mud-brick walls, a depth of more than four meters was reached, approximately 40cm above the natural alluvial sand of Wādī al-Yutum (Virgin soil).

Walls which are constructed either from mud or mud-bricks are preserved up to a height of four meters, architectural features such as an entrance, two windows and a column were revealed (Fig. 3: A and B). It can be suggested that those features represent an early phase of occupation, when the mud-brick walls were built on a foundation of stones. This phase of the walls was heavily damaged by an earthquake, which was accompanied by fire, which resulted in the collapse of the wall and many of the rooms being filled with multiple layers of ash.

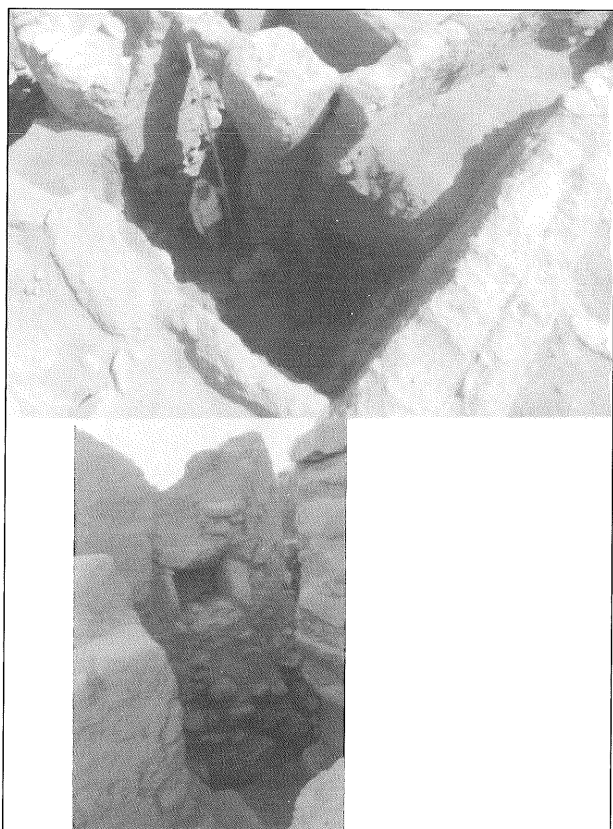
The remaining architectural elements of the early phase were integrated in to the architecture of the latter phase, where floor levels of this phase are located approximately three meters above the foundation stone of the early stage. Standing pottery vessels were associated with the floor level which corresponds to the foundation of the mud-brick wall (loc. 6). Between the walls, thick layers of ash were excavated, the



1. Contour map of the site showing excavated trenches during various seasons and the discovered architectural features.



2. *Hujayrat al-Ghuzlān from above, looking south.*



3. *Square C8.*

disturbance in the alignment of the walls and the thick ashy layers illustrate that the site had been abandoned by the second earthquake.

Square E7 lies almost in the middle of the tall, where it was heavily bulldozed, and a large pit was located (Fig. 4).

A: Architectural features measure ca. 4m

height.

B: Window in the stone wall Loc. 32.

It was essential to continue digging in this part of the site for three main reasons, as follows:

1. To reach the lower stratigraphy at the middle of the site.
2. To find out the nature of the relation between the stone walls of what is called “Building A” and the mud and mud-brick walls in the area.
3. To clean up the dump and beautify the center of the site.

The northern, eastern and southern sections of the pit were cleaned, its depth measured in some parts approximately four meters. Many ashy layers and eleven walls can be seen in both the northern and eastern sections, especially, where both sections are connected. In the eastern section, a large platform is located, this platform is flat and built with mud-bricks, it is clear in this section that it was constructed on top of walls and layers of debris. This construction is related, from the stratigraphical point of view, to the stone foundation of “Building A”.

Square G5 is divided into two parts; northern and southern by the wall (loc. 8), they represent two different levels such as the northern part is 111.05 meters a.s.l., meanwhile, the southern part is 111.07 meters a.s.l. The wall (loc. 8) is built by using a mixture of stones and mud bricks, it is still well preserved and it continues its alignment in squares G4 and F4.

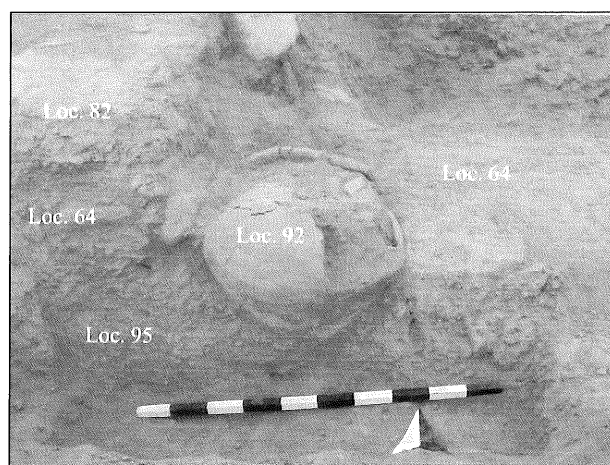


4. Square E7, a large pit was caused by destruction, looking north, shows stones and mud-brick walls and layers.

The foundation of the above mentioned wall have not yet been reached, but all the walls in the square G5 are joined to this wall, therefore, it can be suggested that they belong to the latest phase of occupation at the site.

The layers on both sides of wall loc. 8 were separately excavated; at the northern part, a floor made of whitish calcareous mortar was revealed, on top of the floor various artifacts were found. The colour and the material of the floor in the southern part is different from the northern; it is hard brownish mud. The two floors are not at the same level; the northern floor is 110.99 meters and the southern is 108.60 meters a.s.l., this may be due to the fact that each floor belongs to a different building, which might be contemporary or of different dates.

Square F6 had been excavated in previous seasons, during this season, a subsidiary balk was excavated in order to study the stratigraphy between a complete pottery pot, the debris inside a room in the center of the square, a mudbrick structure and the stone wall (loc. 85). Three soil layers (loci 64, 82 and 95) had accumulated inside the room, all those loci are later than the mudbrick walls of the room, as well as the complete pottery vessels (Fig. 5). At the eastern part of the square a layer of ash debris was excavated, the layer is very rich in charcoal and copper metallurgical remains, such as frag-



5. Square F6, complete pottery jar in its stratigraphical context.

ments of pottery crucibles and moulds; beneath the above mentioned soil layers a mud floor was revealed. The excavation in the southern part discovered three mudbrick walls, they might date to the same phase as the room in the center of the square.

Square F8 was excavated this season in order to expose more architectural features horizontally and to complete the picture of the north-south section through the site and to connect the squares E8 and F7. The excavation at the north-western part of the square revealed a number of mudbrick walls, they are in parallel, orientated east to west and form three rectangular rooms,

they are also in line with rooms discovered during previous seasons. The excavated layer between the mudbrick walls contained many pottery sherds, lithic artifacts, copper metallurgical remains, shell and bone artifacts and animal bones.

Square H8 is located east of square H7 where the wooden beam of the ceiling was discovered during a previous season¹. A number of mudbrick walls were revealed, they formed two different sized rooms, the type of rooms found in the northern part of the square are smaller than the rooms of the southern part. The walls of the northern rooms continue underneath the balk and towards the square F8. At the southern part five rooms were excavated, only one room (loc. 28) is completely excavated, meanwhile, the walls of the other rooms continue to extend in to the balks; those rooms measure on the average 6 x 1.40 meters. The walls of the rooms are constructed of mudbricks, sometimes they are plastered on both sides. One wall shows different methods of construction, its two lowest courses are built of medium sized stones and above that a mixture of stone and mudbrick was used to continue building the wall. Two holes (loci 31

and 32) curved into the mudbrick wall loc. 11, indicate that wooden beams were used for the ceiling of the room; as was excavated in square H7. Many finds were collected, they include pottery, flint artifacts, a shell bracelet and copper metallurgical remains.

Squares I6 and J6 are located on the southern foot of the tall, two trenches (2 x 2.5 meters each) were excavated to examine what is called the “city wall” from both sides. Excavating in I6 revealed five courses of the “city wall”, and beneath the wall a number of clay and sand layers were accumulated above another wall. The lower wall was built using two sizes of stone and seven courses were constructed. It was built on mixed layers of sand and clay, they contain numerous artifacts (**Fig. 6: A and B**).

The architectural features at squares C8 and E7 make it possible to suggest at least two phases of occupation at the site. It is recognizable that the later phase is represented by buildings which are mostly constructed by undressed stones and sometimes by mudbricks, e.g. “Building A”. The buildings of the earlier phase are mostly constructed from mudbricks and their walls stand on stone foundations.



6. A and B are two views showing deep soundings.

1. The beam was subjected to dating analysis; three rings were sampled and dated by the Leibniz Labor für Altersbestimmung und Isotopenforschung of the Christian-Albrechts-Universität Kiel. The suggested date for the beginning of the tree is ca. 4200BC, and the last ring dates to ca. 3850BC.

A paper prepared in title: “Radiocarbonates from Prehistoric ‘Aqaba and other related sites from the Chalcolithic Period” by F. Klimscha, is to be published in the forthcoming book: “Prehistoric ‘Aqaba I” edited by L. Khalil and K. Schmidt.

It is still early to draw an outline and distinguish an unambiguous plan for each phase, this is due to the fact that the walls of the late phase are cut into and built on top of the destroyed and collapsed walls of the early phase. In addition, more excavation of the early phase is essential for a better understanding this phase.

Finds

A number of complete vessels and a large quantity of sherds were uncovered during this seasons excavation (**Fig. 7: A and B**). The pottery is handmade and mostly of a coarse ware, there are few burnished vessels and the most common decoration is incising.

The fabrics and the forms of the pottery from this season, are almost similar to the fabrics and forms of the pottery which was discovered in the previous season (Kerner 2003: 175-182). The forms include: open form - such as different types of bowls, cups and platters; closed form - consisting of hole-mouth jars and the common type of jars and a jar with a short neck.

It might be possible to recognize the difference between the pottery in association with the suggested two phases of occupation, above. For

example, at square C8, the fabric A15 is of coarse ware and the fabric N is of fine ware, both wares were found at the layers belonging to the later phase, but at the lower strata which represent the earlier phase, e.g. loci 91-116, a new fabric was found which is an intermediary between fabrics A15 and N. However, further investigations will no doubt clarify our understanding of the relationship between the phases of occupation and the pottery fabrics at the site.

The flint artifacts are mostly made of flint of mid-brown and darker colours, they have a dorsal cortical cover; "cortex tools" are typical flint tools during the Chalcolithic and the Early Bronze Age in the Levant (Herling 2002: 257-269). The blades show large variations in shape and size and were widespread. The tabular-like scrapers were also common tools at the site, they are of different forms; such as oval, oblong or fan. In addition, borers were also found during the excavation; they were used for various functions and are of different shapes and sizes. In general, the flint collection discovered this season is similar to the collections discovered during previous seasons at the site.

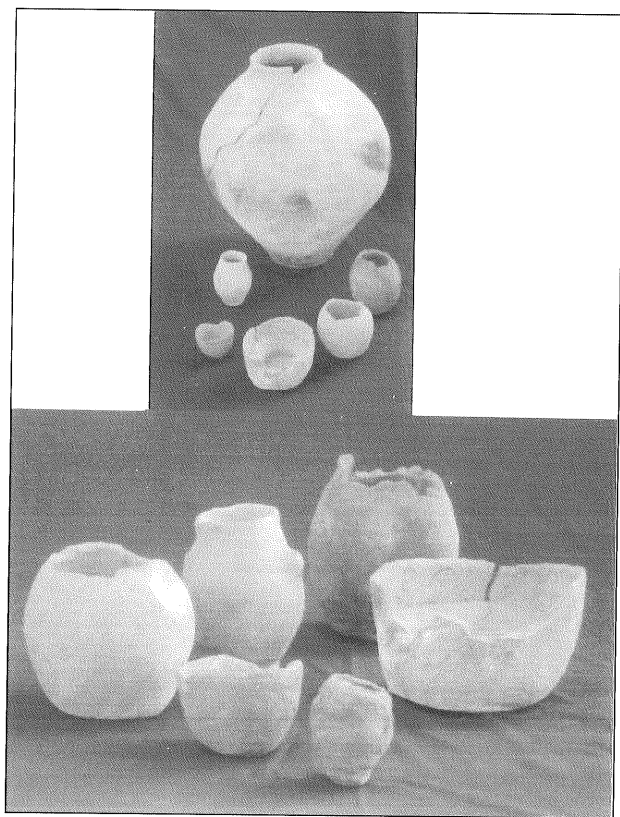
Various types of stone tools and vessels were uncovered, they are made of different raw materials, and include mace heads, hammers, grinding stones and few fragments of stone vessels.

The excavation discovered other artifacts which are similar to those found during previous seasons; such as copper metallurgical remains, bones, shell artifacts and ornaments. The cultural assemblage of the different finds at Ḥujayrat al-Ghuzlān can be dated between the Chalcolithic period and the early Bronze Age I.

Hydrology of Wādī al-Yutum

During the 1998 season of ASEYM, a survey to the east, southeast and south of Ḥujayrat al-Ghuzlān was conducted. Eleven locations were recorded, various shapes of structural features were observed; such as horseshoe shapes, circular and boat shapes and a drainage system (Khalil and Eichmann 1999: 507-509 and **Fig. 7**).

A team from the ASEYM project excavated two areas south of Ḥujayrat al-Ghuzlān in the years of 2004 and 2005. Four squares (A68-A69 and O268-O269) are located to east, and eight squares (AF26-AF33 and AE28) are located to



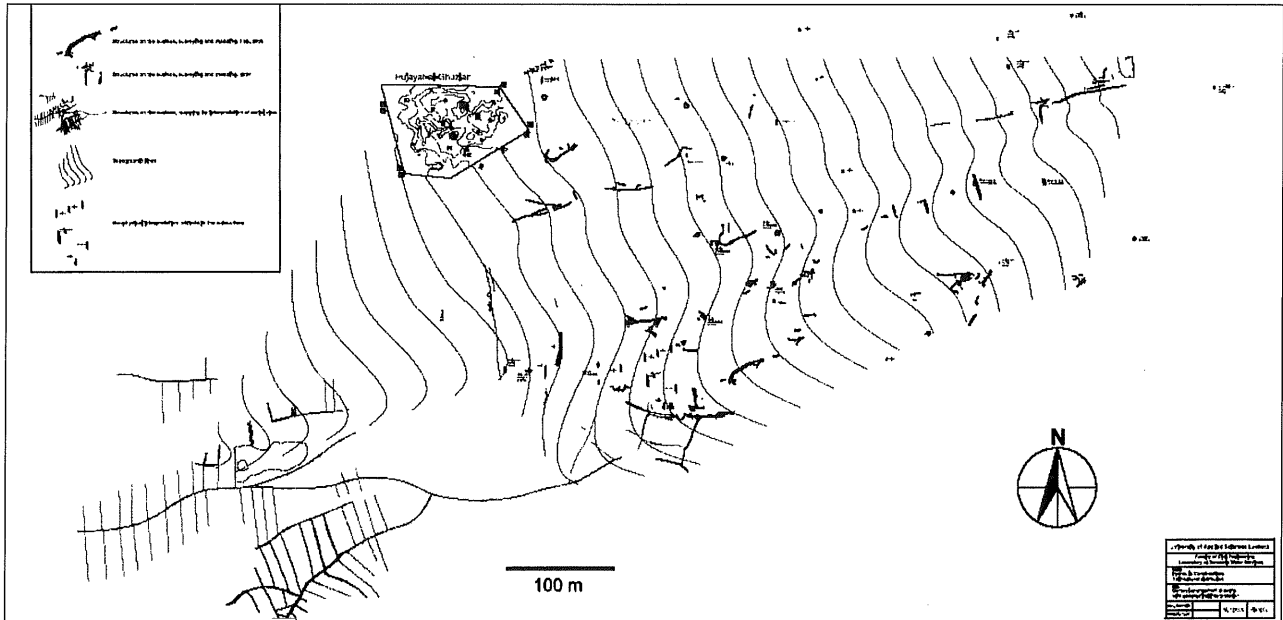
7. A and B showing different types of pottery vessels.

the south².

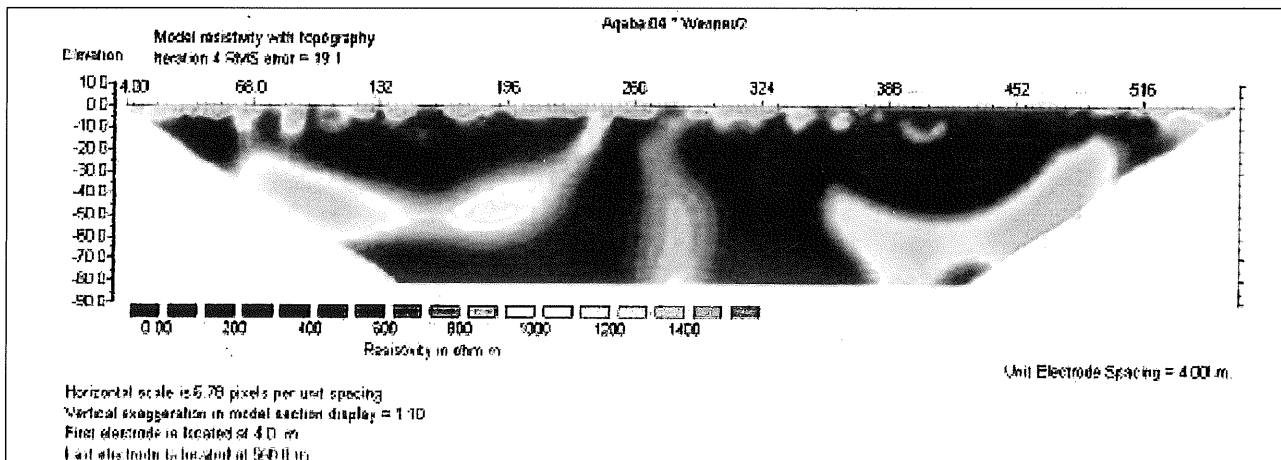
The construction of the walls and the shape of the structure indicates that these structures belong to a developed irrigation system. The features include channels, basins and the enclosure walls of a “*Hafayir*”, which is a hole dug into the ground to obtain and retain water. As part of ASEYM, an archaeological and hydrological survey of the above mentioned areas surrounding Hujayrat al-Ghuzlān, took place during 2004, 2005 and 2006, conducted by a team from the University Applied Sciences, Lübeck

(FHL) (Fig. 8).

A geophysical examination to determinate the level of the underground water was conducted this season at Wādī al-Yutum. It indicated that the groundwater probably could have reached the surface in the ancient times, especially, at the area nearby the site (Fig. 9). In addition, several stone structures of the basins have bright white-yellowish residue. This material is probably sinter, which is a siliceous or calcareous rock, formed by deposits from springs or by flowing water³.



8. Contour map of the area surrounding Hujayrat al-Ghuzlān with the location of the hydrological features.



9. Geo-electrical resistance of the underground in Wādī al-Yutum and nearby Hujayrat al-Ghuzlān. Different colours demonstrate the level of the groundwater, e.g. yellow means the water is close to the surface.

2. A full report in title “Excavations of the Hydrological features at Wādī al-Yutum” by G. Heindle and K. Pfeiffer, is to be published in the forthcoming book: “Prehistoric

Aqaba I” edited by L. Khalil and K. Schmidt.

3. A detailed report: “Investigation of the Hydraulic System at Tall Hujayrat al-Ghuzlān” is in preparation.

Acknowledgements

We are thankful for the generous support of Dr. Fawwaz al-Khraysheh, Director General of the Department of Antiquities, Jordan. Also, we would like to thank Sawsan al-Fakhri, the Director of 'Aqaba office of the Department of Antiquities, for her kind help and assistance.

We gratefully acknowledge the financial support of the Deutsche Forschungsgemeinschaft (Germany) and the Higher Council of Science and Technology (Jordan). In addition, many thanks to the Director and employees of the German Protestant Institute for Archaeology, 'Amman, for their help and cooperation.

L. Khalil
Departement of Archaeology
University of Jordan
Amman-Jordan
lakhalil@ju.edu.jo

R. Eichmann
Orient-Abteilung
Deutsches Archäologisches Institut
Podbielskiallee 69-71
14195 Berlin-Germany
re@orient.dainst.de

Bibliography

Brückner, H., Eichmann, R., Herlin, L., Kallweit, H., Kerner, S., Khalil, L. and Miqdadi, R.

- 2002 Chalcolithic and Early Bronze Age sites near 'Aqaba, Jordan. Pp. 217-339 in R. Eichmann (ed.), *Neuere Forschungen im Vorderen Orient*. Or 5.

Herling, L.

- 2002 The lithic Artefacts from Tall Hujayrat al-Ghuzlan. Pp. 257-269 in H. Brückner *et al.* (eds.), *Chalcolithic and Early Bronze Age sites near 'Aqaba, Jordan*.

Khalil, L. and Eichmann, R.

- 1999 Archaeological Survey and Excavation at Wadi al-Yutum and Tall al-Magass Area 'Aqaba (ASEYM). A Preliminary Report on the First Season 1998. *ADAJ* 43: 501-520.

Khalil, L., Eichmann, R. and Schmidt, K.

- 2003 Archaeological Survey and Excavations at the Wadi al-Yutum and al-Magass Area al-'Aqaba (ASEYM). A Preliminary Report on the Third and Fourth Seasons; Excavations at Tall Hujayrat al-Ghuzlan in 2002 and 2003; Wadi al-Yutum. *ADAJ* 47: 159-175.

Kerner, S.

- 2003 Appendix: The Pottery of Hujayrat al-Ghuzlan 2002 to 2003. A First Summary. *ADAJ* 47: 175-182.