# Excavations at Surt <br> (Medinat al-Sultan) BETwEEN 1977 AND 1981 



The Department of Antiquities, Tripoli and The Society for Libyan Studies

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The Department of Antiquities, Tripoli and The Society for Libyan Studies, London

# Excavations at Surt (Medinat al-Sultan) <br> Between 1977 and 1981 

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## Preface

By Michael Brett

The archaeological and the written record are complementary forms of historical evidence, especially when the writing, as in Ancient Egypt and Mesopotamia, emerges from the excavation. Where it does not, the art lies in their combination. The archaeological record is in principle unassailable: however difficult it may be to understand, it is the product of the event, contemporary, immediate and authentic. So, too, is the written when it is diplomatic, the instrument of the transaction it records. In the case of early Islamic North Africa, this is not the case. The written record is literary, for the most part remote from the subject in time and/or space. It does not even exist before the ninth century CE. It needs to be carefully controlled, not least by archaeology, which furnishes the only contemporary evidence for the first two Islamic centuries. The archaeology of the Islamic period, on the other hand, has up until recently been a poor relation of the written record, dependent for its interpretation upon the fact-finding efforts of the literary historian. As the doubts first cast upon the factual content of the literary evidence by Robert Brunschvig and Roger Le Tourneau some sixty years ago have steadily mounted, it is time for the relationship to change-provided, of course, that the archaeological evidence can be recovered. ${ }^{1}$

The excavation of Surt, described in this volume, is an excellent example of what can be done, as well as a reminder of the problem. The stratigraphic evidence of three stages of construction of the mosque, matching the three levels of occupation revealed in the city itself, documents the evolution of Surt in the period from the seventh to the twelfth century CE, more specifically before, during and after the early Fatimid period. From the mid-tenth to mid-eleventh century CE, this period is by far the most prominent in the archaeological record, and thus presumably the most important in the history of the city. It is also the best described in the literature, in the works of the traveller and geographer Ibn Hawqal, c. 946-980 CE, and al-Bakri, writing in Spain in the 1060s on the basis of information drawn from the tenth-century North African Ibn al-Warraq. These are at the centre of a corpus of four geographical works, beginning with al-Ya'qubi in the second half of the ninth century, and ending with al-Idrisi in the middle of the twelfth. These provide the bulk of the literary information, some of it at first hand, and much of which is confirmed by the excavation. Beyond and even within this essentially limited corpus, however, the literature described by Dr. Hamdani is open to interpretation, and speculation. The history remains far from clear. Where Professor Fehérvári suggests that the original Islamic occupation of the site was in the seventh century, as a staging-post for armies en route to the conquest of North Africa, Dr. Hamdani prefers to think of a Kharijite foundation a hundred years later. Both authors relate its abandonment to the controversial destruction wrought by the Banu Hilal from the middle of the eleventh century onwards. And both are puzzled by the southward orientation of the mosque. Was it indeed an error, or did it simply conform to that of all the early mosques of North Africa and Spain?2

The answers may be in the future; but given that fresh texts for the early Islamic history of North Africa are unlikely to come to light, the future is likely to lie with archaeology. To date, the surface has, literally, only been scratched, not least at Surt itself. The reasons are partly political and partly professional: Islamic archaeology has traditionally taken second place to Classical. But times are changing; and the present volume is a foretaste of what might be expected once the expertise can be marshalled and the effort made. The present volume is certainly a tribute to all those who have made it possible, and an example for their successors.

Notes:
1 For a summary of the problem, cf. M. Brett, 'The Arab conquest and the rise of the Islam in North Africa," in J. D. Fage (ed.). The Cambridge History of Africa, vol. II. (Cambridge, 1978): 490555.

2 For reference to Surt in the context of the Fatimid period, cf. M. Brett, The Rise of the Fatimids. The World of the Mediterranean and the Middle East in the Fourth Century AH, Tenth Century CE (Leiden, 2001). See especially chapter 8, 'The Horizons of Empire', pp. 219-66. For the problem of the Banu Hilal, cf. idem, 'Ibn Khaldun and the History of North Africa'. (Aldershot, 1999) Part two, nos. viii-xi.

## Introduction

By Géza Fehérvári

The ruins of the Islamic city of Surt, or as it is now popularly known, Medinat alSultan, or al-Medina, "The Little City", lie almost in the centre of the Bay of Sirte (fig.1), at a distance of 55 kilometres east of the modern town of Sirt. ${ }^{1}$ Some five kilometres further east is the small village of Sultan. The site is about half way between Tripoli and Benghazi, c.800m north of the modern highway and some 600 m south of the Mediterranean Sea. The city is roughly oval in shape, measuring approximately 500 m across from east to west and 450 m from north to south. It covers an area of $c .184 .000$ square metres. The walls, which once surrounded the city, made a circuit of 1750 m .

West of the walled city lie the remains of the Punic city of Charax, mentioned by classical Greek sources. ${ }^{2}$ In Roman times the city was called Iscina which, apparently had a large Jewish settlement. ${ }^{3}$

Early Islamic sources are not clear when and by whom the Islamic city of Surt
 the Arab armies in Egypt, occupied Ifriqiya in $21 \mathrm{AH} / 642-43 \mathrm{AD}$, life must have continued in the city. ${ }^{\text {cAmr must have left a small garrison there. Iscina after all was }}$ a large town with a harbour. It was essential for ${ }^{\text {c }} \mathrm{Amr}$ to leave guards behind in order to secure his communications with Egypt and Arabia. This small garrison may have stayed outside Iscina and, if so, they could have been the founders of the future Islamic city.

Here we are not concerned with the history of the Islamic city since this will be examined in detail by Professor Abbas Hamdani in Chapter I. It is more appropriate to summarise here the references to the site by Western visitors and to give an account of the archaeological work that was carried out on the site prior to our own excavations which began in 1977.

In modern times the earliest reference was given by the English travellers, the Beechey brothers, who visited the area in 1821. They actually mentioned two sites: Medinat al-Sultan and a second one some two miles southeast which, they said, was called Medina. ${ }^{4}$ Later in 1846, the German traveller Heinrich Barth visited Surt and pointed out that the archaeological remains are those of ancient Charax, Iscina and Islamic Surt. ${ }^{5}$ In 1881, another German visitor to the site, Freund, gave a detailed

[^0]
## FEHÉRVÁRI ET AL



Figure 1. Map of Libya, the Bay of Sirte, showing modern Surt and Medinat Sultan.
description of the remains. ${ }^{6}$ During the Italian occupation, a colonial officer Captain Luigi Cerrata carried out archaeological reconnaissance in the region and published a book based on his observations. ${ }^{7}$ The last and perhaps the most important reference to Surt before World War II was an article by Ettore Rossi in the first edition of the Encyclopedia of Islam where he briefly summarised the historical references to the site and gave some observations. ${ }^{8}$

After World War II, when northern Libya was under British military administration, the Department of Antiquities was reorganised and in this work the late Professor R. G. Goodchild played an eminent role. During the Italian occupation preference was given, for obvious political reasons, to the survey, excavation and conservation of Roman sites. After the war Goodchild intended to carry out extensive archeological surveys in the country, which would include not only the classical but also the Islamic sites. Surt was one of those places which were included in Goodchild's survey. He carried out his archaeological reconnaissance in the Surt region in 1940/50. An aerial survey and aerial photographs were taken by the Royal Air Force in 1952. The results of this survey were published by Goodchild in Libya Antiqua in 1964. ${ }^{9}$ In that article, Goodchild indicated that the Department of Antiquities intended to launch excavations at Medinat al-Sultan.

Goodchild's article contained two sketch plans: the first one showed the entire area of Medinat al-Sultan, indicating the remains of Iscina and the walled city of Surt to the southeast (fig. 2). His second plan was a more detailed sketch of the Islamic city (fig. 3). It showed the remains of the ramparts which once surrounded the city and the three forts, which were also mentioned by early Arab historical and geographical sources. These forts are, respectively, in the southwest and southeast corners of the city, while the third one is outside the walls to the north between the ramparts and the sea. The area of the southwest fort was marked by Goodchild as site " $A$ ", a large rectangular mound in the northeast corner as site " B ". There, Goodchild suspected that the mound may cover the remains of the Great Mosque and indicated this with a question mark. A circular mound, almost in the centre of the site he marked "c"; another small area to the south was site "D"; and finally, another mound to the west was marked as site "E".

Excavations on the site began by the Department of Antiquities under the direction of Mr. Abdulhamid Abdussaid in 1963. He concentrated his attention on Goodchild's site "B", the suspected remains of the Great Mosque. During the preliminary survey in 1963 , site " $B$ " was found to be uncultivated, although the surrounding area was cultivated. Local enquiries revealed that this was due to a hard sub-layer which prevented ploughing. In the central area were signs of collapse, suggesting a breach in the sub-layer and thus prompting investigation.

Abdussaid had marked out places for a few trial trenches there and when these were excavated, they revealed a stone paved level, stone panels with Kufic inscriptions in relief, a column base and an underground chamber of considerable size. Subsequently, systematic excavation was conducted which brought to light the remains of a free-standing building which turned out to be that of the former Great Mosque. ${ }^{10}$

[^1]
## FEHÉRVÁRI ET AL



Figure 2. Goodchild's map of Iscina and Medinat Sultan


Figure 3. Goodchild's map of the town of Surt

The excavated building showed a rhomboid plan, measuring $31 \times 41 \mathrm{~m}$, with a northwest-southeasterly alignment (fig. 4, pl.1). There was an integral courtyard (sahn), measuring $19 \times 21 \mathrm{~m}$. The courtyard was surrounded on its north, east and west sides by a portico (riwaq) and by a porch on its south side. The building had three entrances; one on the east and the others to the north and west sides. The entrance on the west side was a double one with a pier at its centre.

The north wall was considerably thicker than the rest, some 150 cm . The enclosure walls on the east and west sides and also on the eastern half of the south wall, i.e. the qibla wall, were reinforced by stone buttresses laid at an incline filled with rubble. This Abdussaid identified as the base of the minaret.

To the south of the courtyard is the sanctuary preceded by a porch. The facade of the porch is formed by four square piers and two L-shaped pilasters at the corners providing five entrances. Within the porch, in the sanctuary facade, are two semicircular recesses. One of them facing the second opening from the west. This is the larger and deeper. The second recess is much shallower and smaller and is situated just to the left of the central entrance to the sanctuary. According to Abdussaid these recesses, in spite of their similarity to mihrabs, had a different purpose. They served to hold large water-jars, remains of which have been discovered in situ. ${ }^{11}$

The façade wall of the sanctuary shows a definite break on either side, next to the second entrance from the east on its right side and left to the fourth. These breaks, as Abdussaid suggested, may indicate that at a later date the mosque was enlarged to the east and the west. ${ }^{12}$

The sanctuary measures $12 \times 26 \mathrm{~m}$ and is divided into three aisles by two colonnades running parallel with the qibla wall. Each of these colonnades has six rectangular piers, two of which were attached to the enclosure walls. In addition, each colonnade had two L-shaped piers in the centre which were further decorated by two columns forming a transept in the centre towards the mihrab. The sanctuary had a thin concrete floor, but, in front of the mihrab, the pavement was of baked bricks. The mihrab, which is in the axis of the mosque, occupied the central part of the qibla wall and was 1 m deep. It was likewise paved with bricks. Its back wall was not in situ but the bricks and plaster indicated its outline.

On either side of the mihrab, at a distance of $c .50 \mathrm{~cm}$, column bases were found in situ. There was also a capital. The presence of column bases together with the nearest pair of piers opposite form a square. This may suggest that originally there must have been a dome in front of the mihrab. Such a dome was quite common in Islamic religious architecture, particularly in the Maghrib where it was first introduced in the Mosque of Sidi ${ }^{\text {c }}$ Uqba in Qairawan, in the 3rd AH/9th AD century. At the back of the mihrab, the excavators discovered rectangular carved stones decorated with a series of five-lobed palmettes. ${ }^{13}$ These stones were obviously re-used when the mosque was rebuilt at some later date and they were put in upsidedown.

When the orientation of the mihrab was examined, it was found that it faces due south instead of the correct south-easterly direction towards Mecca. The deviation is $51^{\circ}$ to the southwest ( pl .2 ).

[^2]

Figure 4. Plan of the Great Mosque of Surt, prepared after Abdussaid's excavation in 1963-64. (Drawing by A. Abdussaid)


Plate 1. General view of the Great Mosque


Plate 2. General view of the Great Mosque

In the courtyard, a large cistern, measuring $15.5 \times 2.5 \mathrm{~m}$ and 5 m deep, was discovered. The internal surface of this cistern was coated with two layers of plaster. It had a stone-vaulted roof and was directly beneath the paved floor of the courtyard. Abdussaid, at the time of the excavation, considered this to be slightly earlier than the mosque. The location of this cistern is most appropriate since it is in the lowest part of the city where water would easily accumulate. That may also explain the location of the Great Mosque at this area instead of being in the centre of the city.

The date of the mosque was generally accepted as belonging to the early Fatimid period, i.e. 4th-early 5th century $\mathrm{AH} / 10$ th -11 th century AD . The earliest historical reference to the mosque in Surt was given by al-Bakri in the 5th $\mathrm{AH} / 11$ th AD century, as we shall see in Chapter I, who simply mentioned that Surt had a mosque. This dating was further corroborated by Dr. Mohammad Mostafa who mentioned that in $12^{\text {th }}$ December, 1965, he collected a Fatimid silver dirham outside the mosque on its south, i.e. its qibla side. This coin bears the name of the Fatimid Caliph al- $\mathrm{Mu}^{\mathrm{c} i z z}$ al-Din Billah who reigned between 341-65 AH/953-975 AD. ${ }^{14}$

The mosque, however, presented some problems, some of which were mentioned by Mr. Abdussaid in his excavation report. The first such problem was the date of the cistern relative to that of the mosque. The second one, perhaps even more important, was why there were the two breaks at either end of the sanctuary facade? He considered, as we have already seen, that perhaps these indicated an enlargement of the mosque. ${ }^{15}$ One of the major objectives of the joint excavations between the department of Antiquities and the Society for Libyan Studies were to answer these questions, to which we shall return in Chapter II.

Another interesting problem, which concerns this mosque, is the considerable deviation of the qibla direction. Mr. Abdussaid did not raise this problem in his excavation report, but he has mentioned this to the excavators on several occasions in 1977 and 1978. Again we will return to this problem in Chapter II.

In 1964, Abdussaid also opened a cross-shaped trial trench on the mound which was marked on Goodchild's sketch as site "C" (fig. 3). Goodchild suspected the existence of a major building there, probably the remains of a palace. Abdussaid's trial excavations revealed several walls and brought to light several glazed and unglazed pottery fragments. The season was, however, too short and the work limited. He was, therefore, unable to arrive at any definite conclusion. He indicated, however, that it is a very promising area for further work. ${ }^{16}$ The mound is now referred to as the "Central Mound" where excavations started in 1978. ${ }^{17}$

Excavations at Surt continued in 1965/66 under the direction of Dr Mohammad Mostafa, former Director of the Museum of Islamic Art in Cairo. His objectives were to define the walls of the city and to trace the city gates. He intended, as he pointed out in his report, "to enter the city from its gates which inevitably lead to the streets, with the usual combination of houses, baths, market places, etc." ${ }^{18}$

[^3]

Plate 3. View of the "North" or "Sea Gate"


Plate 4. The "Western Gate"

It was again al-Bakri who mentioned that Surt had three gates: the south, or qibli gate, the interior, or west gate and the smallest gate towards the sea. Based on al-Bakri's text, Dr. Mostafa began his work in Surt in July, 1965. They cleared first of all the outer façade of the city wall along the east side. Most of the walls here, as Dr. Mostafa had pointed out, were destroyed by the later removal of stones for re-use and whatever evidence remained was inconclusive for a city gate. Still, he suggested that some remains indicated the presence of the "qibli" gate $c .60 \mathrm{~m}$ to the north of the southeastern fort. ${ }^{19}$

The process of clearing and cleaning, the city walls were found to be constructed of small stones, often irregular in size, clad with rectangular slabs varying in size between $45 \times 50 \mathrm{~cm}$ to $45 \times 65 \mathrm{~cm}$. The walls were strengthened by buttresses at irregular intervals. These buttresses again varied in size between $250 \times 250 \mathrm{~cm}$ squares to $250 \times 380 \mathrm{~cm}$. During the 1965/66 season ten buttresses were discovered. ${ }^{22}$

From the above, we may conclude that Dr. Mohammad Mostafa's excavations revealed the North and Western gateways. For the rest of the walls, Dr. Mostafa laid down concrete slabs to indicate their traces.

In 1967, some of the workers, employed by the department of antiquities from Sultan village, excavated houses which are situated just north of the southeast fort. These houses together with the remains of the mosque and the two gateways were restored up to a height of c.1.50m. In 1975, Professor Lucien Golvin of the University of Aix-en Provence was invited by the Department of Antiquities to visit for the purpose of preparing a survey map of the site and to carry out trial excavations. After a short period, however, this work was abandoned.

It was then in late 1975 that the Department of Antiquities proposed a joint excavation project to the Society of Libyan Studies of Great Britain. This proposal was accepted by the Society and Géza Fehérvári was appointed as Field Director representing the Society. In December, 1976, at the invitation of the then President of the Department, Dr. Salah al-Din Hasan, he visited the site in the company of Mr. Abdulhamid Abdussaid, then Technical Director of the Department. It was at that time that the decision was made that the work would be carried out under the joint directorship of Mr. Abdulhamid Abdussaid, Mr. Masoud Shaghlouf, Controller of the Department of Antiquities, Benghazi and Dr. Géza Fehérvári.

The joint excavation project began in the summer of 1977 , followed by a second summer season in 1978, a third spring season in 1979 and, finally, the fourth season in the summer of 1981 .

We would like to take this opportunity to express our gratitude to the Libyan Authorities, in particular, to the Department of Antiquities and to its former President Dr. Salah al-Din Hasan and his successor President Dr. Abdullah Shayboub for their constant help and assistance. We also wish to thank Mr.

[^4]Abdulhamid Abdussaid for his kindness and advice while we were working in Surt together during the first two seasons in 1977 and 1978. We also had a chance to meet him and discuss some problems when he visited the excavations in 1979. Without his help, advice and kindness, our task would have been considerably more difficult.

I would also like to express my most sincere gratitude to my old and dear friend, the late Dr. Mohammad Mostafa, whom I have always considered as my "mentor". He has come to my help with his publications, advice and assistance in every possible way ever since I first entered the field of Islamic Art and Archaeology well over forty years ago. Dr. Mostafa has very kindly given me all the necessary information regarding his own excavations at Surt in 1965/66. He has also permitted me to summarise his work and to interpret it in a way that will suit this publication best. Unfortunately, Dr. Mohammad Mostafa died in 1988.

We also wish to express our gratitude to the Society for Libyan Studies for the financial help we have received during these four seasons at Surt and for the assistance they have offered during the preparation of this report.

Finally, we would like to express our thanks to all our friends and colleagues, Libyans and British, who were working with us at Surt. First of all thanks are due to our architects, Mrs. Martha Kozary and Mr. Michael Blyth in 1977, Mr. Ernst Chin in 1978 and 1979 and to Mr. Stuart Davies in 1981. Likewise, we are grateful to the conservators, site supervisors and to the workers who were with us during these four seasons. Special thanks are due to Mr Hal Bishop, who has very kindly helped us to prepare the report and the drawings for publication. Finally my thanks to Mr Paul Bennett and Mr Peter Atkinson of the Canterbury Archaeological Trust for help with the fold-out site plan.

London, Spring, 2002.

# Chapter I - History of Surt 

By Abbas Hamdani

Medieval Surt was built on, or near the Roman Iscina, ${ }^{1}$ where a Jewish colony had once been established in Roman times. This, in turn, was built probably on the site of a sea-side Punic emporium called Charax. ${ }^{2}$ On examination of the works of medieval Arab geographers, it seems that medieval Surt had four distinct periods in its history:


#### Abstract

A Berber town was established about the time of the transition from the Umayyad to the cAbbasid dynasty as a Kharijite enclave, independant of the central Calpihate of Baghdad. This was in the vicinity of the ruins of the Roman Iscina which may have perished during one of the Berber revolts against Byzantine authority even before the rise of Islam.

This Berber enclave was then taken over and built upon by the early Fatimids until they shifted their headquarters to Egypt. During this period, it existed as a trading and military post.

Decline was subsequently caused by three factors: a) it was no longer needed as a military base by the Fatimids; b) it became insecure and unstable because of Fatimid-Zirid conflict; and c) it suffered heavily during the Hilalian invasion. It finally withered away from the twelfth to the early ninteenth century. It is at this time that western exploration and modern archaeology revived the knowledge of it.


Let us now examine some of the medieval geographers' sources. The earliest is the Kitab al-Buldan of al-Ya ${ }^{\text {c qubi }}(\mathrm{d} .287 \mathrm{AH} / 897 \mathrm{AD}) .{ }^{3} \mathrm{He}$ says that the neighbouring town of Ajdabiya was the western boundary of the Lawata Berbers (a branch of the Butr confederation to which the Zanata also belonged). He mentions a Jami ${ }^{\text {c }}$ Mosque, forts and markets of Ajdabiya. One marhala westwards was the Mazata territory. He says that the Mazata Berbers were all Ibadi Kharijites. Going four marhalas further west was the town of Surt which was dominated by the Mindasah, Mahanha and Fantas Berbers. ${ }^{4}$ Two more marhalas to the west of Surt was the boundary of the Barqa province at the town of Tawarga, after which began the territory of the Hawwara Berbers reaching as far as Tripoli. No mosque or forts are mentioned at Surt, although Ajdabiya has them already in the pre-Fatimid period. Again, Ajdabiya was already a trading town. Ninth century Surt does not seem

[^5]to have developed any commercial reputation. We have here a good description of the Berber distribution and the presence of Ibadi Kharijite influence in the Surt region.

A near contemporary of al-Ya ${ }^{\text {c }}$ qubi, Ibn Khurrdadhbih (d. 300 AH/912 AD), and later al-Muqaddasi ( $375 \mathrm{AH} / 985 \mathrm{AD}$ ), mention Surt and Ajdabiya on the BarqaTripoli route but give no details. ${ }^{5}$ Another $10^{\text {th }}$ century geographer, Ibn Hawqal, who lived in the early Fatimid period provides us, however, with information in his Kitab Surat al-Ard. ${ }^{6}$ Although Ibn Hawqal died after 378AH/988 AD, he began his travels as early as $331 \mathrm{AH} / 943 \mathrm{AD}$ and seems to have passed by Surt en route to the Fatimid capital al-Mahdiyya in 336AH/947 AD, ${ }^{7}$ that is, during the time of the third Fatimid Caliph al-Mansur (334-41 AH/946-53AD). Ibn Hawqal says that the city of Surt lay a bow-shot away from the sea, built on hard sandy ground with strong walls of mud and brick. It was inhabited by Berber tribes who owned farms there. They had cisterns to store rainwater. The town had date-palms from which fresh dates were harvested, but the ripe and dry dates were only sufficient for its own use. It had grapes and other fruit, and the prices of these were reasonable. The town was noted for its goats whose meat was more tender than that of sheep. The Berber tribes in the surrounding area were more numerous than at other places. They were often at war with each other, but during the rainy season they would visit Surt in search of pasture. Visiting ships brought merchandise, and the city exported the famous Surti alum (shabb), wool and mutton. Ibn Hawqal adds that during his time the wealth of Surt, in terms of its produce, its provision for pasture for camels and goats and its total revenue was greater than the wealth of Ajdabiya. The city's governor, an appointee of the Sultan in Ifriqiya (meaning, obviously, the Fatimid caliph) supervised its imports and exports, taxes and custom-duties, services and contributions and maintained registers and records of all monies and goods. This was to safeguard against any tax-evasion on dues owed to Ifriqiya.

Here we have an excellent eye-witness account of a thriving agricultural and trading community, well organised within, and controlled by the Fatimid sovereign power. It was larger and more prosperous than the probably older town of Ajdabiya. The Berbers referred to were presumably the Mindasah, Mahanha and Fantas as noted in al-Yacqubi's account above. Ibn Hawqal mentions the walls but neither the forts nor a mosque. It is indicated below that the forts could have been built during the time of the next Fatimid Caliph, al-Mucizz (341-65 AH /952-75AD). The mosque is not mentioned, but such a community as Surt could not have gone without one.

It is useful to compare the above description with Ibn Hawqal's account of Ajdabiya. ${ }^{8}$ He mentions a mosque distinguished by its cleanness. His attention is attracted simply because it is clean. Al-Bakri, who wrote about a century later and whose account of Surt will be examined presently, spoke of the second Fatimid Caliph al-Qa'im (322-34 AH/934-45AD) as having built the mosque of Ajdabiya. ${ }^{9}$

[^6]We know, however, from al-Ya ${ }^{\text {c }}$ qubi, as noted above, that the mosque of Ajdabiya had existed in pre-Fatimid times. It is possible that the Fatimid al-Qa'im restored or rebuilt the already existing mosque. I presume that the mosque of Surt did exist at an earlier date but was too insignificant a structure for Ibn Hawqal to make a particular note of it. Since al-Bakri mentions it, it was probably rebuilt before his visit to Surt and after that of Ibn Hawqal, most likely in the early years of the reign of the fourth Fatimid Caliph al-Mu ${ }^{\text {cizz }}$. A coin dating from the time of al- $\mathrm{Mu}^{\mathrm{c}} \mathrm{izz}$ was found on the site of the mosque at Surt in a recent excavation. ${ }^{10}$

We have spoken about the rebuilding of the mosque at Ajdabiya by al-Qa'im and that of Surt by al-Mucizz, but the question still remains as to when these mosques were originally built. Two considerations may give us a clue: a) a mosque is an essential element in an Islamic city; it is a primary edifice around which a city is built; and b) at the time when the ${ }^{\text {c }}$ Abbasids took over the Caliphate from the Umayyads in $132 \mathrm{AH} / 750 \mathrm{AD}$, many Kharijite communities established independent townships in North Africa. Such were the towns of Sijilmasa and Tahart, established around 140AH /758Ad. Such must be the case of Ajdabiya and Surt which were in the midst of Ibadi Kharijite settlements, as attested by al-Yacqubi. I, therefore, maintain, on the basis of this inferential evidence, that mid-second century aH eighth century AD was the time when both Ajdabiya and Surt were founded. (Ajdabiya was probably founded first because it was more developed than the latter by the time of al-Yacqubi). Along with their foundation, their mosques would also have been built.

Again in his account of Ajdabiya, Ibn Hawqal speaks of a governor controlling the commerce of that city just as was the case at Surt. This commerce, according to him, connected the Mediterranean trade of Ajdabiya to its caravan-trade with the Sudan. ${ }^{11}$ This must have been the case with Surt since, as Ibn Hawqal remarked, the trading activity of Surt was much larger than that of Ajdabiya.

Turning now to an examination of the city's role in the broader context of Fatimid politics, it may be noted that the first three Fatimid Caliphs made three attempts to conquer Egypt and all of them failed. They realised that the lines of communication were too long and too weak. Troops required food, water and strong fortifications on the invasion route. $\mathrm{Al}-\mathrm{Mu}^{\mathrm{c} i z z}$, on his accession to the Caliphate at al-Mahdiyya in $341 \mathrm{AH} / 952 \mathrm{AD}$, began responding to this need. According to the celebrated Andalusian wazir and man of letters, Lisan al-Din ibn al-Khatib, al-Mucizz built a fortress at every thirty miles between al-Mahdiyya and Egypt. ${ }^{12}{ }^{\mathrm{c}} \mathrm{Ali}$ ibn $\mathrm{Sa}^{\mathrm{c} i d}$ al-Maghribi adds that the route from Surt to Fayyum in Egypt is the shortest and that al- $\mathrm{Mu}^{\mathrm{c}}$ izz built several cisterns along it to store rain-water for his troops and to facilitate their access to Egypt. ${ }^{13}$ Al-Maqrizi gives the date of the building of fortresses and the digging of wells as $355 \mathrm{AH} / 965 \mathrm{AD} .{ }^{14}$ It is likely that the forts at Surt were built at this time, and we can relate the existence of several cisterns and

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wells at Surt and Ajdabiya to al-Mu cizz's Egyptian enterprise and to the year $355 \mathrm{AH} / 965 \mathrm{AD}$. As noted above, al-Mucizz would have had the mosque of Surt rebuilt or restored at some time between his accession in 341AH/952AD and $355 \mathrm{AH} / 965 \mathrm{AD}$. The presence of a large cistern in the precincts of the mosque could be dated to his reconstruction.

Al-Mucizz put great trust in his general, Jawhar, a Sicilian (or Slav) freedman who had previously distinguished himself in wars against the Kharijites. The caliph gave Jawhar command of the fourth and final expedition to Egypt in 357AH/968 AD, when news reached Ifriqiya of the death of Kafur, the Ikhshidid administrator of Egypt. He put at the general's disposal all wealth and facilities, all the men and material available and ordered every amir, prince, governor or administrator to provide for the general's needs. ${ }^{15}$ When the governor of Tripoli, Nusayr al-Khazin, wrote to Ustadh Jawdhar, the chief of al-Mucizz's secretariat informing him that he wished to visit the caliph and report in person on the monies spent on equipping a fleet at Tripoli that had just returned from Sicily, al-Mucizz told the governor that the monies could have been better spent on equipping the army of Jawhar and aiding him in his mission, for "Nothing", said al-Mu"izz, "should be spared in contributing to the efforts of this dear one," ${ }^{16}$

The governor of Barqa, Aflah al-Nashib, attempted to evade orders to pay homage to Jawhar by sending a large gift to al-Mu ${ }^{\text {cizz. However, the latter insisted }}$ that he submit to the general, then en route to Egypt. ${ }^{17}$ Surt and Ajdabiya at last performed the tasks for which the Fatimids had developed them. We can visualise the arrival of Jawhar and his army and their receiving food, water and rest before marching on Egypt.

Egypt fell in $358 \mathrm{AH} / 969 \mathrm{AD}$, and al-Mucizz arrived there four years later in 362 $\mathrm{AH} / 973 \mathrm{AD}$. We have a contemporary report about the caliph, his retinue and his army camping at Ajdabiya on their way to Egypt. ${ }^{18}$ It is likely that their previous stop would have been at Surt.

On his departure, al-Mu'izz left North Africa in charge of his vassal, Bulukkin ibn Ziri ibn Manad al-Sinhaji, but excluded the Libyan region from the latter's direct control. Tripoli, Surt and Ajdabiya were assigned to the Fatimid governor ${ }^{\text {c Abd Allah ibn Yakhlaf (or Khalaf) al-Kutami. The customs and tariffs of all the }}$ territories in North Africa were put under Ziyadat Allah ibn al-Qadim and the taxation on lands under ${ }^{\text {c }}$ Abd al-Jabbar al-Khurasani and Husayn ibn Khalaf al-Marsadi. All those officers would work under Bulukkin's supervision but would be directly responsible to the new centre in Cairo. ${ }^{19}$

On the death of al-Mu ${ }^{\mathrm{c} i z z}$, the next Fatimid caliph al- ${ }^{\mathrm{c}}$ Aziz (365-86 AH/975-96 AD ) was obliged to withdraw his appointed governor of Tripoli, Surt and Ajdabiya and to allow Bulukkin to designate his own governor, Abu 1-Futuh Yahya al-Milyani, in 367AH/977AD. ${ }^{20}$ Previously, Bulukkin had had the Fatimid financial

[^8]administrator in Ifriqiya arrested and had seized control over the finances. ${ }^{21}$ From then on, it was Qairawan and not Cairo that ruled both Surt and Ajdabiya, marking an important step in the gradual Zirid independence from the Fatimids.

The Zirid Bulukkin was succeeded by his son Mansur (374-86 AH /984-96AD). He married a Zanati woman in 379AH /988AD in an effort to bring about a SinhajaZanata alliance against the Fatimids. He also had a Fatimid da ${ }^{\mathrm{c}} \mathrm{i}$, or missionary, Abu 1-Fahm al-Khurasani, killed in the Kutama territory. ${ }^{22}$

Mansur's son, Badis (386-406 Ан /996-1015AD) succeeded to power as the Zirid ruler at Qairawan at the same time as al-Hakim (386-412 AH/996-1021AD) succeeded to the Fatimid Caliphate in Cairo. Badis was obliged to let a Zanati family, the Banu Khazrun, take Tripoli and its dependencies in $391 \mathrm{AH} / 1001 \mathrm{AD}^{23}$ and let Barqa remain with the Fatimids. ${ }^{24}$

Fulful ibn $\mathrm{Sa}^{\mathrm{c}} \mathrm{id}$ ibn Khazrun had previously been given Tubna (Thubunae) by the Zirid Mansur, but now he began to rule Tripoli and its dependencies independently, playing the Fatimids and Zirids against each other. We can, therefore, see the independence of the Syrtic region under the Banu Khazrun beginning in 391AH/1001AD. The Tripoli-Surt-Ajdabiya region was now engaged in a struggle for its separate survival against Qayrawan and the west on the one hand and Cairo and Barqa on the other.

When Tripoli was beseiged by the Fatimid general Yanis and counter beseiged by the Zirid general $\mathrm{Ja}^{\mathrm{c}}$ far ibn Habib, the latter was defeated but the former was killed. It was at this time that Fulful was able to retake the city from Yanis' lieutenant. In $393 \mathrm{AH} / 1002 \mathrm{AD}$, the Fatimids again attempted to take Tripoli by sending an expedition under Yahya ibn ${ }^{\text {c }}$ Ali al-Andalusi, accompanied by Banu Qurra Arabs. Fulful persuaded Yahya to go back. Many of the Banu Qurra returned to Alexandria, their normal place of residence, but some remained in the Surt region. ${ }^{25}$ We can date the beginning of the Arab settlement of Surt from 393Ah/1002AD.

A dangerous revolt started in Barqa, that of Abu Rakwah, in 396AH/1005AD against the Fatimids involving both the Berber Lawata and the Arab Qurra. The Fatimid general Yinal, sent against them, was killed, but Abu Rakwa was ultimately arrested in Nubia and executed in Cairo in 397AH/1006AD. ${ }^{26}$ These events proved of great help to Fulful since he no longer needed to worry about his eastern frontier and was able to consolidate his position in Tripoli against the Zirids.

Fulful died in 400AH/1010AD and was followed in Tripoli by his brother Warru, then by Khalifa ibn Warru, then by the latter's cousin, Sa ${ }^{\text {c }}$ id ibn Khazrun, who died in $429 \mathrm{AH} / 1037 \mathrm{AD}$. Throughout this period, we find the Fatimids siding with the Banu Khazrun against the Zirids. ${ }^{27}$ Thus the Surt region was in alliance with the Fatimid Egypt.

[^9]We have it from Abu Muhammad al-Tijani, one of Ibn Khaldun's sources, who, while speaking of Tripoli, stated that in 429AH/1037AD, the Zughba tribe (of the Bani Hilal) had killed this $\mathrm{Sa}^{\mathrm{c} i d} .^{28}$ From this, we can draw the conclusion that although the Hilal invasion of North Africa began later, a section of the Zughba had settled in the Tripoli region before $429 \mathrm{AH} / 1037 \mathrm{AD}$ and could have arrived originally with the Fatimid forces sent against Abu Rakwah.

It is at this stage that we can read a discription of Surt written by the famous geographer of North Africa, al-Bakri (d.476AH /1083 AD):


#### Abstract

It is a large city situated by the sea and enclosed by a wall of bricks. It has a mosque, a bath and bazaars. It has three gates: Qibli (south-east), Jawfi (landwards) ${ }^{29}$ and a small one facing the sea (north). This city has no suburbs around it but possesses date-palms, gardens, sweet-water springs and many cisterns. Its animals are goats and their meat is juicy ('adhbah) and tender (tayyiba), the like of which is not found in Egypt. ${ }^{30}$


In many ways this description confirms that of Ibn Hawqal. The new elements are the mosque, the bath and bazaars. The question of the mosque has been discussed above. A Fatimid extension and renovation of an earlier existing smaller mosque must have been made after the visit of Ibn Hawqal, and most likely, in the early years of the reign of the Caliph al-Mucizz, i.e. shortly after $341 \mathrm{AH} / 952 \mathrm{AD}$. The bazaars and a public bath were necessary facilities for a commercial community.

Returning to the question of the mosque, the one at Surt has a ground-plan and architectural features similar to that of Ajdabiya, as pointed out by Blake, Hutt and Whitehouse. ${ }^{31}$ Both mosques have a square base for the minaret. ${ }^{32}$ Al-Bakri says quite clearly that the Ajdabiya mosque had an octagonal minaret (sawma ${ }^{c} a$ muthammana) ${ }^{33}$ and Abdulhamid Abdussaid, in an article about the mosque at

[^10]Medinat al-Sultan (i.e. Surt), implies that the Surti mosque also had an octagonal minaret. ${ }^{34}$ One could go further and suggest that this minaret was a square tower at the meeting of the two adjoining walls, topped by an octagonal pavilion. After all, the word sawmaca suggests a high place (originally associated with monks). Blake, Hutt and Whitehouse have drawn attention to the earliest example of such a style, namely the Aghlabid mosque of Susa, dated 236AH/850AD, which has a round tower in the northeastern corner with a domed octagonal pavilion on top of it. ${ }^{35}$ They do not, however, say clearly that they believe that the mosques at Surt and Ajdabiya also had similar pavilions, but I should think they had. Thus, the octagonal shape would not relate to the base of the minaret but to the base of the pavilion (sawma ${ }^{c} a$ ) on top of the minaret. The obliquely-cut Kufic inscriptions found near the minaret would also belong to this pavilion. There is an interesting point to be observed about the mihrab of the mosque. It deviates by as much as $51^{\circ}$ from the direction of Mecca. Goodchild, in another connection, speaks (op.cit., p.138) of the illusion that a traveller from the foot of the gulf has namely, he feels he is going southwards even if he is actually moving eastwards. Could this have been the cause of the mistake?

Dr. Fehérvári, as he will explain below, believes, that the first mosque site here would have been in the time of the original Islamic conquest of the region by the general ${ }^{\mathrm{c}} \mathrm{Amr}$ ibn al- ${ }^{\mathrm{c}} \mathrm{As}$. The force of tradition prevented the mistake in the qibla, made at that time, from being corrected. It is suggested here that the mosque would have been originated much later, in the mid-second century $\mathrm{AH} /$ eighth century AD and the mistake, caused by sheer miscalculation, would have been made at that time and was simply undetected at the time of rebuilding and extension.

Al-Bakri, like Ibn Hawqal before him, mentions the walls around Surt but not the forts. Nevertheless, we know that there are three forts at Surt. It was al-Idrisi, writing in the sixth century $\mathrm{AH} /$ twelfth century AD , who for the first time mentioned forts near Surt; and we shall examine his report presently. The forts, however, were built much earlier, probably around $355 \mathrm{AH} / 965 \mathrm{AD}$, the date given by al-Maqrizi when there was a great deal of fortress-building and well-digging in preparation for the final Fatimid military expedition to Egypt. ${ }^{36}$

Al-Bakri also mentions the three city gates which have been attested by recent excavations. These were not described by Ibn Hawqal. Of the three forts, the first was the north fort discovered by Mohammad Mostafa. It would have guarded the port area to the north of the gate. This gate would probably have passed between the mosque and the city-centre towards the fruit-gardens outside the city limits in the south. The remains of these gardens have been discovered. The second fort is on the high ground in the south-west, guarding the road entering the town by the west (i.e. the Jawfi) gate and proceeding past the town centre to the south-east fort and the Qibli gate. This third fort is closer to the town than was shown in Mohammad Mostafa's map. The road cutting across the town from the Jawfi to the Qibli gate would have been part of the Great North African highway between al-Mahdiyya and Egypt via Ajdabiya. Part of the city's defence from any incursion from the coast was also the wall adjoining the north and Jawfi gates. This wall was discovered by Mohammad Mostafa. In addition, the city was entirely enclosed by a wall whose

[^11]traces, including the watch tower areas, are visible and were the basis of Mohammad Mostafa's demarcation of the city-limits. As far as the port is concerned, there is no trace of it today; Mostafa and Fehérvári believe it must have been in the nearby lagoon area on the coastline. The sea must have completely obliterated all traces of it. Indulging in marine archaeology may prove to be an unproductive exercise. Seeing the lagoon area as it is today, one cannot help but feel that Surt's port facility must have been quite meagre.

Al-Bakri calls Surt a large city, but at the same time points out that it has no suburbs. Surt, therefore, in his time must have been large in area but have declined in population, no longer visited by neighbouring tribes as during the time of Ibn Hawqal. Indeed, the enclosed city (as marked by Dr. Mostafa) encompasses 184.003 square metres. ${ }^{37}$ Outside, according to al-Bakri, there were date plantations, gardens and bazaars. A large area must have been set aside as a military camping ground. Surt, with all its cisterns, wells, farms and trade was capable of providing and servicing the troops. It was, in short, a good military base. It had been described by ${ }^{\text {c Ali b.Sa'id al-Magribi (d. } 685 \mathrm{AH} / 1286 \mathrm{AD} \text { ) as one of the qawa'id (military bases) of }}$ the early Fatimids. ${ }^{38}$

Whatever civilian population there was at Surt is described by al-Bakri as consisting of traders. He says about the speech of the local people: "Their talk is a babble, not (entirely) Arabic or Persian; Berber or Coptic. Others would not understand it." ${ }^{39}$ This, I think, furnishes evidence of the presence of all these elements in the city. Of particular interest in the presence of the Egyptian Copts. In fact, according to al-Bakri, most of the people in neighbouring Ajdabiya were Copts. ${ }^{40}$ This should be noted in the context of the commercial prosperity of the minorities under the Fatimid rule. The Berbers, as we were previously informed by al-Ya'qubi were the Mindasah, Mahanha and Fantas, closely related to the Mazata and the Lawata of the Butr confederation. The presence of the Persian element is not strange. After all, the Persian Kharijite dynasty of the Rustamids ruled at Tahart from 144-296 AD/761908 ad. Their founder previously resident at Tripoli and was supported by the Mindasa. The Arabs of the city, at the time al-Bakri was writing, must have belonged to the Qurra, the Zughba and the Riyah tribes of the Hilalian group. AlMaqrizi speaks of the Qurra as having come to the Barqa and the Tarabulus region with the army of Yahya b. ${ }^{\text {c Ali al-Andalusi, a general of the Fatimid Caliph al- }}$ Hakim in $393 \mathrm{AH} / 1002 \mathrm{AD} .^{41} \mathrm{He}$ also informs us of the presence of the Zughba and the Riyah in the region and of their internecine warfare long before $443 \mathrm{AH} / 1051 \mathrm{AD}$ when the big wave of the Hilalian invasion hit North Africa. ${ }^{42}$

According to al-Bakri, the people of Tripoli "are the best of God's people in their living, the most straight forward in their dealings and the kindest to a stranger." ${ }^{43}$ But about Surt, he cites the following satirical verses:

[^12]They are the slaves of Qirillah, the worst people on the earth in their transactions and the ugliest in their actions. May God not have mercy on the people of Surt and may he not bless them with sweet fresh water. ${ }^{44}$ (The Qirillah is a small bird related to the eagle which preys on fish).

Al-Bakri seems to have little regard for the merchants of Surt, despite their cosmopolitanism. He cites the following verses addressed to them:

> Oh people of Surt, you do not please the souls of men. I would be dumb if I were to praise you. You are clothed with ugliness. Neither your faces nor your dress become you. You have devalued every noble deed (referring to good commercial transaction), but you do not devalue abusing and fault-finding.

As an example of Surti commercial malpractice, al-Bakri notes that the people of the city would not buy from or sell to any outsider anything on which they had not previously agreed among themselves. When a ship reached their port laiden with oil which they needed badly, they would pretend in front of the outsider that they had good stocks of oil. They would inflate skins with air and hang them in front of their shops as if the inflated skins were full of oil. When they bought, they did so at their own terms. ${ }^{45}$

Speaking of the commercial contacts of Tripoli, Surt and Ajdabiya in the eleventh century and later, Blake, Hutt and Whitehouse state that they were with the Maghrib rather than with Cairo and Alexandria on the grounds that no Fatimid lustre-ware was found at Surt and Ajdabiya. ${ }^{46}$ After Fatimid Egypt diverted its trade in the eleventh century and neglected North Africa, ${ }^{47}$ this could have been so. However, it would be wrong to conclude that in earlier periods there was no trade from the Surt region with Egypt. The presence of Egyptian Coptic merchants at Surt and Ajdabiya itself would indicate that there must have been trade with Egypt alongside trade with Maghrib and across the Mediterranean with Europe. Later events would indeed have diminished commercial contacts between Surt and Egypt leading to the decline of Surt and the Syrtic region.

In Cairo, al-Hakim was followed by Al-Zahir (r.412-27 AH/1021-35 AD) and then by al-Mustansir (r. 427-87 AH/1035-94 AD). In Qairawan, the Zirid Badis was succeeded by his son al-Mu ${ }^{\text {cizz }}$ (r. 406-53 AH/1015-61 AD). The ${ }^{\text {c Abbasid Caliph of }}$ Baghdad had invited the Seljuqs to take over from the Buyids and proceed against the Byzantines and the Fatimids, the ${ }^{\mathrm{c}} \mathrm{Abbasid}$-Seljuq entente sought to win over the Zirid ruler al-Mucizz. In $433 \mathrm{AH} / 1041 \mathrm{AD}$ al- $\mathrm{Mu}^{\mathrm{c}} \mathrm{izz}$ received a robe of honour from the ${ }^{\text {c }}$ Abbasids and ordered the reading of the ${ }^{\text {c }}$ Abbasid khutba. In $441 \mathrm{AH} / 1049 \mathrm{AD}$, he replaced Fatimid coinage with his own and adopted the ${ }^{c}$ Abbasid ceremonial

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colour, black, at his court. In $443 \mathrm{AH} / 1051 \mathrm{AD}$, he asked the ${ }^{\mathrm{c}}$ Abbasid caliph to send him an official investiture which was subsequently sent. Al-Mucizz ordered the massacre of 3,000 Shi'a Muslims. He also received the homage of the governor of Barqa, Jabara b. Mukhtar al-Arabi, who was asked to read the ${ }^{\text {c }}$ Abbasid khutba. The Banu Khazrun of Tripoli, who were themselves trapped between Qairawan and Barqa, succumbed to the Zirids and their last known amir, al-Muntasir, joined forces with the ruler of Qairawan. ${ }^{48}$ Thus the Surt region shifted its allegiance from Cairo to Qayrawan.

The Fatimids reacted by letting loose an Arab Bedouin invasion of North Africa. Their wazir, al-Yazuri, sent an envoy, Makin al-Dawla Abu ${ }^{c}$ Ali al-Husayn b. ${ }^{c}$ Ali al-Uqayli, who came to the Tripoli region and by presents and blood-money established peace between the warring Zughba and Riyah, encouraging them to invade Qairawan. The Zughba and Riyah were later joined by the Athbaj and Adi whose passage was facilitated by the Qurra and Talha. This collection of tribes, popularly known as Banu Hilal and Banu Sulaym, are the descendants of the northern Arabian Qays Aylan b. Mudar. These were the tribes behind the Qarmatian attacks in Syria. They were later settled by the Caliph al- ${ }^{\mathrm{c}} \mathrm{Aziz}$ in the south-eastern corner of Egypt. Before this time, a few clans of the Qurra Zughba and Riyah had come to north Africa, all with different Fatimid expeditions, but now they came in full force in the punitive invasion of $443 \mathrm{AH} / 1051 \mathrm{AD} .{ }^{49}$ In this connection, al-Maqrizi writes: "The Arabs (bedouins) proceeded to (the province) of Barqa and conquered its towns. They wrote to their brethren who were in the eastern Sa'id (i.e. south-eastern Egypt) encouraging them to come. The (Fatimid) state gave every individual two dinars and they (i.e. the bulk of the Hilal and Sulaym of the Sa'id) joined their brethren (in North Africa). Sulaym took the east, Hilal, the west. They destroyed the cities of al-Hamra (i.e. Barqa), Ajdabiya and Surt. The progeny of Sulaym and their allies remained in Barqa. The Hilalian clans of Diyab, ${ }^{\text {c Araq, Zaghab and others spread }}$ over Ifriqiya like locusts. Wherever they passed, they brought ruin."50 Again "The Arabs divided Ifriqiya in $446 \mathrm{AH} / 1054 \mathrm{AD}$. To Zughba went Tripoli and its dependencies. ${ }^{51}$ Here, we have the description of the destruction of Surt along with the whole surrounding region. We are also told of the continuation of the Zughba in and around it.

As for the Banu Khazrun, it was noted above that Muntasir ibn $\mathrm{Sa}^{\mathrm{c} i d}$ ibn Khazrun had joined the Zirid Mu ${ }^{\text {cizz }}$ ibn Badis in $443 \mathrm{AH} / 1051 \mathrm{AD}$. He was later assasinated between $460 \mathrm{AH} / 1067 \mathrm{AD}$ and $470 \mathrm{AH} / 1077 \mathrm{AD}$ at Biskra. Another individual or two from the Banu Khazrun, whose names have not been determined by Ibn Khaldun, appear to have revived their connection with the Tripoli region and they ruled until $540 \mathrm{AH} / 1145-46 \mathrm{AD}$. The Fatimids, once their punitive purpose was achieved, had no longer any interest in the region. In fact, their own rule in Egypt was coming to an end. At this time, the Surt region suffered from a severe famine and, consequently, depopulation. The dynasty of Banu Khazrun ended with the conquest of their region, along with al-Mahdiyya and Sfax by Roger II, the King of Sicily (110354 AD ). ${ }^{52}$

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## MEDINAT AL-SULTAN

The celebrated Muslim geographer at Roger's court, al-Idrisi (d.561AH/1166AD) seems to have visited the Surt region about this time. He writes: "On the Mediterranean shore there are beautiful forts with demarcation lines around them. Here are the cities of Surt and Ajdabiya, once well-known but, in our times, in a state of great weakness and with cultivation neglected. Only the memories of their traces and repute have remained. Ships come to them with goods which are profitable in proportion to their capacity. As far as Ajdabiya, nothing remains now except two forts in the desert and by the sea, four miles away. There are no trees around it. Its people are dominated by Jews and Muslim merchants. And many people from the Berber quarters visit it." ${ }^{\circ}$

In the next century, ${ }^{c}$ Ali ibn $\mathrm{Sa}^{\mathrm{c}} \mathrm{id}$ al-Maghribi ( $610-85 \mathrm{AH} / 1213-86 \mathrm{AD}$ ) wrote about Surt during the early Hafsid period: "Surt is among the old military bases (qawa' id) reported in books. The Arab bedouin had destroyed it. They now live in the forts that have survived." ${ }^{54}$

Between the thirteenth and ninteenth centuries, oblivion descended on the Surt region. Abu l-Fida in the early fourteenth century merely quoted from ${ }^{\mathrm{c}} \mathrm{Ali}$ ibn $\mathrm{Sa}^{\mathrm{c} i d}$ al-Maghribi and added no further information. ${ }^{55}$ Unfortunately, the geography of the Maghrib written by Ibn Khaldun in 1401 for Timur has not survived and so we miss the keen observation of that great scholar.

In the sixteenth century, Libya became Ottoman territory and remained so until conquered by Italy in 1911. An Ottoman writer of the ninteenth century, Ahmad al- $\mathrm{Na}^{\mathrm{c} i b}$ al-Ansari, described Surt as part of the great Surt region, halfway between Misurata and Benghazi. He said that the name Surt applied also to the big stretch of coast, the eastern part of it being the Jawn al-Kibrit (i.e. the Gulf of Sulphur). Ansari, then, quoted from al-Bakri and incorrectly at that, thus misleading those archaeologists who used al-Bakri in the Ansari version, particularly on the question of the gates of the city of Surt. ${ }^{56}$ What is noteworthy is that the name of the city and knowledge about it survived until the time when the first western explorers, the Beechey brothers, visited it in 1821 marking the beginning of modern archaeology in that region.

I may conclude by raising the question: Was the Hilalian invasion really responsible for the destruction of Surt? It may have dealt it a blow but certainly that was not the only factor. The approximately eighty-year period of Fatimid-Zirid conflict between $358 \mathrm{AH} / 969 \mathrm{AD}$ and $443 \mathrm{AH} / 1051 \mathrm{AD}$ should be considered the principal cause of the slow and lingering death of the Surt region, which was not only a buffer zone but a battlefield. Such was also later the case of the Zayyanid Algeria between Hafsid Tunisia and Marinid Morocco. The real question to be asked is: why did the city of Surt not revive, as other cities did? Was the water supply insufficient? Was cultivation not possible? Was the port too meagre a facility? Did not Surt's trade supply its hinterland? Would things have been different if an important north-south trade-route crossed its east-west route as was the case with Ajdabiya? All these could be valid reasons but only partially. To my mind there are two basic reasons that could be added to the long drawn Fatimid-Zirid conflict mentioned above. The first is the sudden diversion of the Fatimid Mediterranean trade to the east in the

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eleventh century. When it did pick up in the Hafsid times, much damage had already been done to the city. The second reason relates to Surt's original development. It was a town developed by the Fatimids for their conquest of Egypt. Once that purpose was achieved, its prosperity did not figure in Fatimid thinking.

The Banu Khazrun could have taken more interest, but they remained concerned with and embroiled in the politics of Tripoli. Surt and Ajdabiya became mere appendages to the city. Surt lived an unnatural life, deriving only from the momentum generated earlier during the Fatimid times due to the city's usefulness as a military base. Once the city was destroyed, it was not felt there was a sufficiently good reason for its revival.

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# Chapter II - Archeological work at Surt (Medinat al-Sultan) between 1977 and 1981 

By Géza Fehérvári and Masoud Shaghlouf

The archeological work which took place at Surt (Medinat al-Sultan) between 1977 and 1981, was a joint project between the Department of Antiquities, Libya and the Society for Libyan Studies, Great Britain. Four seasons of excavations have taken place:

First season, July - August, 1977
Second season, July - August, 1978. These two seasons' work were under the joint directorship of Mr. Abdulhamid Abdussaid, then Technical Director of the Department of Antiquities, Tripoli, Mr. Masoud Shaghlouf, Controller of Antiquities, Benghazi and Dr, Géza Fehérvári, School of Oriental and African Studies, University of London, on behalf of the Society for Libyan Studies.
Third season, March - April, 1979
Fourth season, August - September, 1981. During these last two seasons the directors of the excavations were Mr Masoud Shaghlouf and Géza Fehérvári.

## 1. The Survey in 1977

As a first and essential step, before any systematic archeological work could be carried out on the site of Surt, the excavators considered it important to carry out a detailed survey and to prepare an overall map of the site. A limited survey had already been carried out by Professor Lucien Golvin, of the University of Aix-en-Provence in June, 1975. He laid down a number of reference points on a 50 m grid. These points were all in situ when the team began its work in July, 1977. It was, therefore, decided that the survey should be based on Professor Golvin's grid and implemented as necessary. At the same time a new reference system was evolved which was used throughout our four seasons work at Surt. This system can be easily applied in any future work on the site.

The survey work was carried out by two architects, Mr. Michael Blyth and Mrs. Marta Kozary. As a result, they produced a contour map of 1:1000 (fig.5). This map goes beyond the suggested lines of the city walls as they were set out by the Department of Antiquities under the direction of Dr. Mohammad Mostafa in 1965 and 1966. At that time, parts of the city walls were exposed, namely between the West and the North gateways. In fact, they have cleared the walls $c .10 \mathrm{~m}$ further east beyond the North gateway. The rest of the walls have much deteriorated but contours of these were visible here and there. Dr. Mohammad Mostafa, during his work in 1965 and ' 66 marked the outline of the city walls with concrete points, which were laid down at 50 m intervals to indicate their possible location. These concrete points are marked M1 to M35. They start at the north flanking tower of the Western gateway, which is marked M1 and end, after running all round the city, as M35 at the southern tower of the same gateway. All these concrete points marked on the contour map. From this we can see the Northern gateway, or Bab al-Bahari, "The Sea Gate", is situated at M8. We can also see on this plan that Mostafa's excavations continued the clearance of the walls until M11.

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Figure 5. Contour map of Surt, prepared during the Society's first season of excavations in 1977. (Prepared by Mr. Michael Blythe and Mrs. Martha Kozary during the first season in 1977).

Between M11 and M16 the contours of the walls are hardly visible. In spite of that, it was in this area, between M15 and M16 where Dr. Mostafa claimed that they were able to identify the place of the "Qibli Gate" in Summer, 1965. ${ }^{1}$ Indeed, traces of a trial trench are still visible in that area but still there is no sign of a gateway. As we shall suggest later, the third or "Qibli Gate", was located not here but further south, just below M17.

The new survey map depicts the contours at 50 cm intervals and includes all the previously excavated areas and visible features on the site. It considerably alters the shape of the site as compared to those published by the late Professor Goodchild (nos. 2 and 3), ${ }^{2}$ and by Dr. Mohammad Mostafa. ${ }^{3}$ At the same time, however, it confirms their theories about the position of the three forts, namely the Southwest Fort (marked as site "A" by Goodchild), the Southeast Fort and the North Fort, which lies outside the city walls, some 100 m from the North Gateway.

The mosque, which was marked as site "B" by Goodchild, lies in the northeast corner of the city, some 50 m from points M11 and M12 of the city walls. As was already mentioned in the Introduction, it is situated in one of the lowest parts of the site, which could have been a natural reservoir in ancient times. That may indeed be one of the reasons why the Muslims selected this particular area for the mosque and not a central one, where congregational mosques are usually built.

Goodchild's site "C" lies some 100 m west-southwest of the mosque. It is a large mound and it is partially for this reason that Goodchild suspected that an important building or buildings lie here underneath. Furthermore, a number of walls are visible on the surface and countless number of sherds were scattered around. Mr. Abdulhamid Abdussaid carried out a trial excavation here, opening a cross-shaped trench, the arms of which were approximately 50 m long and 1 m wide. Site " C " is almost in the centre of the site and point 0 of the new survey map was fixed there at its northeast corner. Today, this area is referred to as the "Central Mound".

Goodchild had noted two other areas close to site "C". He marked them "D" and "E". These simply identify large mounds. One of these two is approximately 50 m west of the area, while the other one is to the northwest.

In order to avoid confusion, it was decided that the letters identifying the various sites, i.e. sites "A" to "E", would not be used in the future, since the new survey map offers a far better and more precise identification of the different areas. The new map divides the site into four sectors: Sector "A", "B", "C" and "D". The centre being the 0 point in the northeastern corner of the Central Mound. Thus the northeastern part becomes sector "A", the southeastern part sector "B", the southwest sector "C" and the northwest becomes sector "D". The grids within each sector are then identified by the letter which appears on top of the map and by the number which is given alongside. The main division lines always crossing through point 0 . Then each 50 m grid is further subdivided into 5 m squares and identified, as the example square shows in the upper right corner of the map, according to the letters a to $\mathbf{j}$ vertically and from $\mathbf{1}$ to $\mathbf{0}$ horizontally.

Thus the new survey map clearly shows the visible features of the site and likewise indicates the contours. At the same time it made possible the accurate recording of every future trench.

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## 2. Excavations in the Mosque

The great mosque of Surt, which was excavated by Mr. Abdulhamid Abdussaid in 1964, is situated, according to the new survey map, in Sector "A", grids B2-C2 and B1-C1. Its plan has quite clearly shown that this mosque is related to the so-called "Arab type" mosques, particularly those that were built by the Fatimids in Tunisia, like the great mosques of al-Mahdiyya, ${ }^{4}$ Susa $^{5}$ and Sfax, ${ }^{6}$ or like those in Libya, like that in Ajdabiya, ${ }^{7}$ or the recently excavated Great Mosque at Zawila. ${ }^{8}$ Abdulhamid's excavations, as he himself pointed out in his report, have left a few problems unanswered. He posed two questions: Was the cistern earlier than the mosque itself, and are the breaks in the porch of the sanctuary façade indications that the mosque was, at some time, enlarged?

To these two problems we would like to add a few more, namely: What was the purpose of the extra thickness of the north wall and, why were the east and west walls and the eastern part of the qibla strengthened?

What was the original function of the two semicircular recesses embedded in the sanctuary façade? Why is there such a large difference in their size and shape?

Why is there such a large deviation of the qibla and, if at the foundation of the mosque such a mistake was made, why was it never corrected? And finally: what is the actual date of the mosque?

## a) The trial trench in the sanctuary in 1977

In order to answer at least some of these questions, it was decided that our first and main task should be to carry out further but limited excavations within the mosque. Our immediate interest were the two breaks on either end of the sanctuary façade which, as Mr. Abdussaid suggested, may indicate an enlargement of the mosque at an indeterminate date. Furthermore, we also believed that the investigation of these two breaks would throw some light on other questions such as the original purpose of the recesses on the sanctuary façade and the date or dates of the mosque.

It was therefore decided in 1977 that a trial trench should be opened within the sanctuary, behind its façade wall, next to a place where one of these two breaks is located. If Abdussaid's theory was correct, namely that these two breaks indicate an enlargement of the mosque, then the enlargement was towards both west and east. This, we presumed, should be visible by the trench.

The site selected for this small trial was at the western half of the sanctuary façade but inside the sanctuary rather than in the porch (plate 5 ). Initially a $2 \times 2 \mathrm{~m}$ trench was opened, which was later reduced to $2 \times 1 \mathrm{~m}$. The trench was excavated right down to the natural soil, which was reached at -2.25 m . The north section of this trench confirmed Abdussaid's theory about the break in the façade wall (plate 6 ). The break is apparent, as can be seen in the illustration, not only in the wall but also in its foundation. The break at the top is $c .2 \mathrm{~cm}$ wide, while further down it

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Plate 5. The mosque, sanctuary, view of the west side


Plate 6. North section of the test trench
widens to 10 cm . The foundation of the wall (layer 1) varies from 24 to 38 cm in depth. Layers 2 and 3 were made up of loose sand. From these layers numerous glazed and unglazed sherds were excavated. The more important finds included a polychrome-painted fragment, decorated with palmettes (MS77-243), a fired clay bead (MS77-242) and a fragment of a pottery lamp (MS77-244). There was also a plaster fragment (MS77-248), which could have been part of a decorative panel. These two layers have also included animal bones. Layer 2 was from 46 to 63 cm depth, while layer 3 varied from 65 to 90 cm .

What was more significant was that from layers 3 and 4 a large number of unglazed pottery came to light which was Roman, some of it terra sigilatta. Layer 4 was again of loose sand over the natural bedrock. We should add, however, that even here, at this depth, we found a few pieces of unglazed sherds which are characteristic of the early Islamic period.

From the above we could conclude the following: the break in the wall of the sanctuary façade, at least here at its western end, gives support to Abdussaid's theory that the mosque was enlarged towards the west. This surmise is further corroborated by layers 2 to 4, below the floor level of the sanctuary. All three layers were of loose sand, suggesting that either this sand was blown here over many centuries or, more likely, that it was carried here intentionally in order to fill up the deep depression which must have been here prior to the building or of the enlargement of the mosque. The latter possibility not only seems more plausible but also logical since, for the building of the sanctuary, the entire area had to be filled up and levelled. That this was the case is also indicated by the large number of glazed and unglazed shards, some of which are early Islamic, while others, among them the terra sigillata, of Roman provenance. This may suggest that the sand was carried here from outside, possibly from the vicinity of the Roman site, just west of the Islamic city of Surt. That would explain the presence of Roman pottery in layers 3 and 4.

The question still remains: at approximately what date was the mosque enlarged? Or when did they level the site of the sanctuary, one may even say, of the new sanctuary?

The presence of some glazed wares in layers 2 to 4, particularly of the poly-chrome-painted type which was found in layers 2 and 3, may indicate that it must date well after this type of polychrome ware was introduced into North Africa. From our present available archeological knowledge from Raqqada, Qayrawan, Carthage, Ajdabiya, Barqa, Sidi Khrebish and Qal'a Banu Hammad in Algeria, we may presume that this was sometime during the first half of the 4 th $\mathrm{AH} / \mathrm{AD} 10$ th century. By the mid 10th century, this ware was well-established all over the Maghrib and Ifriqiya. Professor Abbas Hamdani, in Chapter I, suggested, that the mosque of Surt must have been rebuilt during the time of the fourth Fatimid Caliph Al-Mucizz during the third quarter of the 4 th $\mathrm{AH} / 10$ th AD century. This theory seems to be further corroborated by the silver dirham which was discovered by Dr. Mohammad Mostafa just outside the southern, i.e. the qibla wall of the mosque. This coin bears the name of this same Fatimid Caliph. Thus, we may suggest, therefore, that the possible enlargement or rebuilding of the Great Mosque of Surt took place during the reign of the Fatimid Caliph al-Mucizz, who reigned between 341-65 AH/ 953-75 AD.

While this limited excavation in 1977 has answered some of our questions, others still remained open and, accordingly, further investigation within the mosque was necessary. This we carried out during the second season in 1978.

## b) Investigation in the porch in 1978

The second trial trench in the mosque was opened within the porch at the east side where another vertical break appears on the sanctuary façade (plate 7). After removing the stone pavement and clearing the earth, a seriously damaged floor of hard composite material was revealed. In order to establish the relationship of this composite floor to the piers, it was decided that the trench should be extended north towards the courtyard. It was then found that this floor continued under the foundations of the pier (plate 8). There is evidence of a subsequent lime layer above both the hard floor and the foundation of this pier, suggesting a second, i.e. a later floor. This lime layer also runs up against the base of the façade wall of the sanctuary. In the foundation of the façade wall, the break is again clearly visible.

Therefore, we were able to establish that the mosque, at least in this area, had three floor levels:

Floor level 1: the existing stone pavement, which must have been laid after the extension of the mosque;
Floor level 2: a lime surfaced level, put over the uneven composite earlier floor;
Floor level 3: the earliest hard-composite material over which the piers were erected. It is uneven, probably due to earth tremors.


Plate 7. East side of the mosque porch, excavated in 1978


Plate 8. Excavated area in the east side of the mosque porch, showing an earlier floor continuing under the floor.

Thus the work in this trench produced two facts:

1) that the break here continues below the foundation of the sanctuary façade and
2) that the earliest floor level is under the foundations of the pier. That at once suggests that probably all piers, and most likely the façade of the sanctuary were constructed upon an earlier structure. We may also add that the uneven, undulating shape of floor level 3 indicated destruction by earth tremors. Later on, we found more evidence of these tremors in the Central Mound. This must have taken place before the enlargement and rebuilding of the mosque.
c) Discussion

After the completion of our work in these two trial trenches in the mosque, we could arrive at certain conclusions and answer some of the questions that were outlined above. First of all, we have to answer the two questions that were raised by Abdussaid, namely:

1) Was the cistern earlier than the mosque?
2) Do the breaks in the porch of the sanctuary façade indicate a later extension of the building?

As regards to the first question, Abdussaid has already pointed out that the mosque lies at the lowest part of the site and, therefore, it was most likely already a natural reservoir. After the Arab conquest, its importance must have significantly increased, since the Arabs did not settle in the nearby Roman/Byzantine city of Iscina, but stayed outside in the area of later Surt. This must have been from the beginning a fortified camp; such a reservoir would be essential even for a small garrison. When the Arabs built their first mosque in Surt, we may presume that it
was built in the same place, around the reservoir. It should be noted, however, that the early and most likely smaller mosque required that the reservoir should be altered, or at least modified, in order to accommodate the sahn of the mosque.

Accordingly, the answer to this first question could be a cautious yes. There had to be a reservoir prior to the mosque, but the cistern that we know today must be of a later date.

The second question that Abdussaid was faced with were the two breaks in the porch of the façade of the sanctuary. Do they indicate a later extension to the mosque?

The answer to this question is perhaps somewhat easier, particularly since we feel that our trial trench provided the necessary evidence. The excavations at the west and the east end of the façade have shown that the breaks continue right down to the foundations. Thus, the continuation of this façade at either end must be the result of a later extension, i.e. towards the west and east. This theory is further corroborated by the loose sand fill under the sanctuary. The first floor level, which was encountered at the east side of the porch and runs under the piers, gives further and decisive support to this surmise.

There are other questions regarding this mosque which require further clarification. First of all, the purpose of the extra thickness of the north wall and the strengthening of the east and west walls and the eastern part of the qibla wall.

We should perhaps divide this problem into two parts. First we have to examine the extra thickness of the north wall. Abdussaid in his excavation report stated that it was found in a badly damaged state, so that it had to be strengthened, just as those on the east, west or part of the qibla wall. The extra thickness of the north wall, however, was an integral part of this wall; thus, it was not due to any strengthening. For an explanation of the thickness of this wall, we should turn our attention to the Great or "White" Mosque of Zawila. ${ }^{12}$ The Zawila Mosque has also a double thickness in its northern wall. This was due, however, not to any later strengthening of this wall. It was used as a staircase to the minaret which, just as Surt and Ajdabiya, was standing in the northwest corner of the mosque. We may assume, therefore, that the extra thickness of the north wall at Surt was erected on purpose for the same reason.

The second part of this problem, namely the extra thickness of the east and west walls and part of the wall, was a later construction whose sole purpose was to give strength to these walls. They could have been damaged by an earth tremor, fire or by war. We may recall that our trial trench in the porch revealed the earliest floor level, level 3 , showing excessive damage caused by an earth tremor. The damage to these walls, however, was not by the same tremor but a considerably later one.

Another problem which was raised by Abdussaid, was connected with the two semicircular recesses in the façade of the sanctuary. What was their original function? Abdussaid, as we have pointed out, claimed that they were used for storing large water jars and one such jar was found in situ in the larger recess.

We feel that while Abdussaid's explanation for the larger recess is satisfactory, it does not answer the purpose of the shallower one. For this perhaps the explanation is provided in the two breaks of this wall. If we accept the fact that the two breaks,

[^19]namely at the west and at the east ends of the façade, were due to a later extension, then it could also mean that the area between these two breaks represented the qibla wall of the earlier smaller mosque. Measuring the length of this portion, we find that the small recess is exactly in the centre and was in the axis of the earlier building. Therefore, it could have served as a mihrab during phase I of the mosque's history.

Another interesting problem that remains to be answered is the large deviation of the qibla. If such a mistake was made at the foundation of the mosque why was it never corrected?

Plate 2 clearly shows the qibla direction of the mosque as facing due south and, the correct one, towards the southeast. The deviation according to our measurement, is $51^{\circ}$ to the south. One may say, an intolerable error. Yet, it was never corrected. For this the only plausible explanation seems to be that the outline of the first mosque was most likely laid down by ${ }^{\text {c }} \mathrm{Amr}$ ibn al- ${ }^{\mathrm{c}}$ As during his campaign for the conquest of Ifriqiya. It was probably at that time when the error was made. ${ }^{\text {c }}$ Amr must have prayed in this new mosque. Since he was an ashab, a "companion to the Prophet", then, according to the eminent cannon lawyer, Taju al-Din al-Subki (who died in 1370 AD ), no mihrab could be touched or corrected in which the Prophet, or any of his ashab has ever prayed. ${ }^{13}$ It was most likely that this principle was respected at Surt.

Finally, the date or dates of the mosque should be discussed. As regard to this problem, Abdussaid was non-committal. He simply compared this building with two other mosques. One of them the Umayyad mosque within the large enclosure at Qasr al-Hayr al-Sharqi which, according to an inscription was dated 110AH/728-29AD. ${ }^{14}$ The second mosque Abdussaid quoted was the Mosque of al-Hakim in Cairo,built by al-Mucizz and al-Hakim between 380AH/990AD and $403 \mathrm{AH} / 1013 \mathrm{AD} .{ }^{15}$

These two mosques are far removed geographically from the mosque at Surt and have no bearing on its style or its date. There are much closer examples we can turn to. Firstly to the Great Mosque of Ajdabiya ${ }^{16}$ and the Great or "White" Mosque of Zawila, to which reference has already been made. ${ }^{17}$ Unfortunately, neither of these two mosques are dated, but it is reasonable to presume that both were built in Fatimid times. As the ground plan of these two mosques are almost identical to that of Surt, then we may presume that all three must have been erected about the same time.

But what kind of evidence is at our disposal for dating the building at Surt? Earlier, we have referred to Mohammad Mostafa's statement, that in 1965 he collected a Fatimid silver dirham of al-Mucizz outside the qibla wall. That may be one indication for a date, but unfortunately the coin was found outside and not inside the building. Furthermore, the coin could have been dropped long after the mosque was completed. Yet, this coin may prove to be significant. Particularly, if we accept the theory that was put forward by Professor Abbas Hamdani in Chapter I. Namely, that the mosque of Surt, just as that of Ajdabiya, was re-built during the reign of al-Mucizz, sometime between his accession in $341 \mathrm{AH} / 953 \mathrm{AD}$ and prior to the invasion of Egypt 355AH/965AD.

[^20]This surmise appears to be acceptable since it was during that period, when the Fatimids were preparing for the invasion of Egypt, that Tripoli, Surt, Ajdabiya and Barqa were important bases for military operations in the Egyptian campaign. The population of the city must have been drastically increased and its harbour must have assumed a new and important role in the supply of the Fatimid army. If this theory is correct, then the mosque, as we know it today, must have been built during that time. There was, however, an earlier and most likely a smaller mosque. First of all, every Muslim settlement had to have at least a small one and secondly, because Ibn Hawqal, who probably visited Surt in 336aH/947ad, claimed that it was a much larger and more prosperous city than Ajdabiya yet, he failed to mention the mosque but referred to that of Ajdabiya. Professor Hamdani explains that was so because the first mosque of Surt must have been small and insignificant. Al-Bakri, however, when he referred to Surt in the early, or mid-11th century AD, remarked that Surt had a mosque. So by then the enlarged mosque must have been completed.

From the above we may conclude that we can distinguish three phases in the history of the mosque:

Phase I: it was a considerably smaller building, built around the reservoir. Its qibla wall was the present sanctuary façade but without the extensions to the east and to the west. The smaller and shallower recess must have served as the mihrab, while the deeper recess to the right or towards the west was used, as Abdussaid correctly suggested, for storing a large water jar. Floor level 3, which was found damaged by an earth tremor, belonged to this phase. Floor level 2, represents the reconstruction after the tremor but still within this phase. That is corroborated by the fact that the piers of the later mosque are standing above these two floor levels.
What was the date of this early mosque? We have neither written evidence nor any finds that could assist us for giving even an approximate date. The presence of a semicircular mihrab, however, if our supposition that the small and shallow central recess was a mihrab is correct, suggests that it must have been built after that feature was introduced into the rebuilt Prophet's Mosque at Medina in $90 \mathrm{AH} / 709 \mathrm{AD} .{ }^{20}$

Phase II: represents the period when al-Mucizz rebuilt the entire mosque in the mid-10th century AD. He probably retained part of the enclosure walls, but the qibla wall was extended towards the east and the west, as we have already pointed out. The new sanctuary was built behind the façade with its three isles running parallel with the qibla wall and which are interrupted by a transept. The considerably deeper mihrab recess faithfully kept the direction of the earlier one. The carved stone stucco decoration with the palmettes and floriated Kufic also dates from this period. The north wall with the minaret, which is fully integrated into the northwest corner of the building, most likely dates from this period.

Phase III: represents only minor alterations, all of which must have been carried out after the invasion and destruction of the Beni Hilal and Beni Suleym in the middle of the 11th century AD. These alterations included the blocking of one of the western entrances as well as the blocking of the central entrance and the two extreme ones on the sanctuary façade. Towards the end of Phase III, when the mosque and perhaps the city was completely
abandoned, the side riwaqs were subdivided into smaller units, probably for habitation of local nomads. It must have been the same nomads who dug nine graves into the southern part of the mosque.

## 3. Work in the northeast corner of the mosque in 1977 and 1978

Outside the mosque at its northeast corner, walls were visible on the surface which indicated the possible existence of a building or buildings. We assumed that these buildings, whatever they were, must have been connected to the mosque. Thus, it seemed important to investigate this area. Furthermore it was hoped that we would find traces of a pre-Fatimid mosque, which could have been situated outside the limits of the existing one.

It was decided therefore to open the first trench in Sector A, grid B2j6 (cf. fig. 5). Soon a small rectangular room was unearthed (Room 1, plate 9), measuring $3 \times$ 1 m . The north end of the room had previously been destroyed. The walls were built of undressed sandstone and limestone blocks and were set in mud. The east wall was stripped down to its foundation course. This east wall measured 48 cm in width and after a gap of 60 cm , runs for 143 cm in length. The western wall ranges from 50 to 32 cm in width and runs for $c .260 \mathrm{~cm}$, with a gap in the northeast corner, giving access to the next room. Inside this room on the floor we found a wash-basin, sloping towards the south, and coated with water-resistant material. This basin has a narrow drainage channel at its southern tip. On the floor a small tin-glazed decorated rim sherd (MS77-179) and a polychrome-painted lead-glazed sherd (MS77-180) were recovered.


Plate 9. Excavated area outside the NE corner of the mosque, showing an excavated small room in area B2j6, excavated in 1977.

Further west, adjoining room 1, another room was cleared (Room 2). It was an irregular rectangle, since its eastern walls run obliquely. This east wall was 155 cm in length, while that on the west was only 150 cm long. The south wall was 170 cm in length and that on the north 200 cm . In the northeast corner was the doorway to Room 1 which was 70 cm wide. The walls of this room were of similar construction to those of Room 1. It should be remarked that the wall, which divides these two rooms, was not bonded to the south wall. It was also noticed that the south wall in Room 1 had two layers of plaster coating in the area opposite the basin which continued under the coating of the basin shoulder. Furthermore the south wall in Room 2 breaks at a distance of 40 cm from the southeast corner and the continuation of this wall has somewhat subsided and again it is not bonded to its first part.

At the southwest corner of Room 2 on the floor two large blocks of stone were found. One of these stones had a semicircular cut on one edge. Both of these stones were lying partly under the south wall. When one of these stones was removed, a rectangular pit was revealed, $c .100 \mathrm{~cm}$ deep, faced with cut stones in several courses (plate 9). This was obviously a latrine.

Room 2 apparently had two floor levels. The upper one was above the level of the two large stones above the pit. This floor was made of compact mud. On this floor level fragments of two unglazed jars were resting, both of which were dark red coarse paste (MS77-211) and were possibly parts of large storage jars.

We have to recall that the walls of rooms 1 and 2 were not bonded to the south wall. This south wall must have been part of a larger enclosure since it continues in both directions: towards the west and towards the east. We did not continue the work towards the east in 1977, but we could see that the upper part of this wall on the surface for another 250 cm . Further east we continued the excavation to uncover this wall, which we have called "the south wall". It soon became clear that the lower courses were of better dressed stones and were well constructed, while the upper part was of the same material and construction as the walls of rooms 1 and 2.

Part of this "south wall", which is adjacent to the east wall of Room 1, revealed some later disturbance. When we cleared this area here, under the disturbance and below the floor level of Room 1, on its south face, we found the remains of a drainage channel which continued for $c .65 \mathrm{~cm}$. This channel was made of grey plaster and coated with a water-resistant material, identical to that on the surface of the basin inside Room 1. This drainage channel supported our original theory that this room was used for ablution. Therefore, Room 2, being a latrine and Room 1 an ablution space, were essential parts of the mosque (plate 10).

When work continued on the "south wall", further east beyond Room 1, a 50 cm wide gap was found on its upper course. Most likely this was a doorway since on the north and east face of this wall square cut stone sockets were found in situ, both measuring $30 \times 30 \mathrm{~cm}$. They were supported by three flat stones set vertically (plate 11). Next to the socket, on its north side was found a circular mill-stone (MS77-215).

Beyond this gap the "south wall" continued for another 180 cm and then it met another major wall which runs in a north-southwesterly direction (this wall in the future will be called simply "north-south" wall) and will shortly be described in detail. The "south wall" here, in its lower part is well-constructed and appears to be of an earlier period. The upper courses, however, are of the same material and works as the walls of rooms 1 and 2 , indicating a later period construction.


Plate 10. The latrine in Room 2, outside the NE corner of the mosque.


Plate 11. Stone socket on the east of area B2j6 and a mill-stone.


Plate 12. The "north-south" wall with supporting buttress.

As to the second major wall, i.e. the "north-south" wall, which runs in a northsouthwesterly direction, we found again that the lower courses were made of welldressed stones and were much better constructed than the upper ones (plate 12). The upper courses revealed later additions, just as we have already noticed in the "south wall". At a distance of 195 cm from the junction, there was a gap of $c .40 \mathrm{~cm}$ in width. This second major wall was found to be 55 cm in width and runs for $c .360 \mathrm{~cm}$ further south. The remains of this wall appeared to be leaning towards the east, and perhaps, it was for this reason that it was supported by a buttress, clearly, at some later date (plate 12). The buttress is 310 cm long. In the northern part it is 165 cm wide, while on the south it is only 150 cm . This buttress was faced with undressed stones set in mud and eight courses were visible on its east side. Inside it was filled with compacted soil. In order to fully investigate the buttress, it was essential to continue the trench by 150 cm northwards to grid C 2 a 7 and into the south by 100 cm into grid C2a5.


Plate 13. The "north-south" wall B1Ob viewed from the south showing second drainage channel next to the buttress.

At the corner of the junction of the "south" and the "north-south" walls, a platform was formed, most likely at a later date. It measures $80 \times 130 \mathrm{~cm}$. The foundation of this platform appears to be contemporary with the buttress opposite on the eastern face of the "north-south" wall, and it may have likewise served the same purpose, namely, to give support to the wall which was leaning to the east.

Along the west side of this platform, a second drainage channel was uncovered (plate 13), which was constructed of the same material as the first one that we have already described. This channel runs for 105 cm towards the south-southeast and there are remains of it even beyond that. In this second channel, at a depth of 25 cm below the surface, a small lustre-painted sherd (MS77-224) was found together with bones, iron fragments and charcoal. Alongside the channel, two more glazed fragments were also recovered: one of them was a splashed ware (MS77-225), typical of the 9 th and 10 th centuries AD. The second one was a polychrome painted and lead-glazed ware (MS77-226) but too small to distinguish its decoration.

The area north of the "south" wall, the northern part of the "north-south" wall, and the eastern wall of Room 1 formed an irregular rectangular area, which we designated as Room 3. Its north wall has also been excavated. It was found that this north wall was stripped down to its foundation course, just like the north walls of room 1 and 2. The most prominent feature in this room was a door-sill in the northwest corner and a child's burial some 125 cm from there. This must be a considerably later date. We assumed that it must have been dug here at the same time as the nine graves were dug in the mosque.

A north-south section across Room 3 clearly indicated three layers here:
Layer 1: was of fallen material
Layer 2: was the floor level made of compact mud and
Layer 3: a second, lower level floor of a similar material and construction. The mm child's burial was found in layer 2.
Further east from Room 3, we found what appeared to be a platform to which there was an entrance 80 cm wide from this room. This platform, which could have been the doorway into this area, measured $72 \times 130 \mathrm{~cm}$. This area was filled with a mixture of small stones and compacted mud. At the northeast corner, flat stones were seen on the floor probably indicating that the floor, or maybe the steps, were covered this way.

The area further east, i.e. along the eastern side of the buttress and north of it, outside the above mentioned doorway, was excavated in two parts, leaving a dividing baulk of 40 cm wide between them. In the northern half, we reached a depth of -150 cm . From here a large number of unglazed sherds of red, white and black coarse paste were recovered, together with small rim fragments of lustre-painted vessel (MS77-223), most likely from the Abbasid period, i.e. late 9th or early 10th century AD , rather than Fatimid. Another important find from here was a glass weight (MS77-236, plate 44e) and a small bronze nail (MS77-239).

In the southern half of the trench the maximum depth reached was -205 cm . From here, again, numerous unglazed fragments came to light and from layer 3, a small polychrome-painted, lead-glazed fragment (MS77-247). The section of this trench along its eastern side (section A-A) revealed the following four distinct layers:

Layer 1: was of soft sand, $c .70 \mathrm{~cm}$ deep,
Layer 2: was of fallen building material, mainly of stones, c. 60 cm
Layer 3: was a compacted floor, its depth varying from 25 to 35 cm ;
Layer 4: was natural.
By the end of the first season in September, 1977, we were able to conclude that the excavated area revealed remains of the buildings which served the mosque (fig. 6). The so called "south" and the "north-south" walls were, however, differently and better constructed. Furthermore, their alignment was in no way connected to that of the mosque. The "north-south" wall appeared to be running towards or rather under the mosque. That indicated an earlier date for these walls. Looking at the ground-plan of the excavated areas and taking into consideration the building material of the walls, their construction and finally, the finds, we felt that we could distinguish three distinct periods with confidence (fig. 7):

Period I: the lower courses of the so-called "south" and "north-south" walls. They must have been part of an early building or buildings, certainly pre-dating the standing mosque and the earlier cistern. This early date is corro-borated by some of the finds, such as the splashed ware fragment (MS77-225) and the Abbasid lustre-painted pottery (MS77-223). At some later date but most likely within period I, the "north-south" wall had to be strengthened by a rectangular buttress and a platform on its western side at the junction where it meets the "south" wall. It is almost impossible to set a date for this period, but it is most likely earlier than the Fatimid period i.e. 9th or early 10 th century AD.


Figure 6. Plan of the excavated area B2j6 outside the northeast corner of the mosque showing rooms 1-3 at the end of the first season in 1977.


Figure 7. Plan of the mosque; showing the excavated trenches in the sancturary, the porch and the excavated areas outside at the northeast corner of the mosque at the end of the second season in 1978.

Period II: this period is represented by the standing mosque, that we have already considered to be of the early Fatimid period, i.e. the mid-10th century AD. The Fatimid activity and the presence here in the north-east corner outside the mosque was supported by the glass weight (MS77-236, plate 44e), by the small fragment of Fatimid lustre in Channel 2 (MS77-224), and by the numerous polychrome-painted lead-glazed fragments, which were typical of the Fatimid period. The second drainage channel and possibly even the first one could have been built during that time.
Period III: the coarser walls of rooms 1-3 (fig. 6) and the upper courses of the "south and "north-south" walls may belong to this era, which can be dated to the period long after the destruction of Surt by the Beni Hilal and Beni Suleym. Nomads living in this area may have built living quarters on top of the earlier walls. While certain parts of the mosque and this area outside of it must have also been used as a burial by them. The child's burial in Room 3 gives support to this theory. As there were no distinguishable finds from this period, except the very coarse red, white and black underglazed fragments, it would underline the fact that the people living here could well have been nomadic who were not accustomed to finer glazed pottery.

The 1977 excavations still left a few questions unanswered. First of all, in which direction did the major "north-south" wall continue? Its alignment suggested that it ran under the existing Fatimid mosque. If that was the case, then it contradicts our theory that the earlier, pre-Fatimid mosque was situated at the same place where the mosque stands now.

If this wall did not run under the mosque, then in which direction did it turn and what could have been its function?

To find satisfactory answers to these questions, we had to extend our excavations in this area. That took place during our second season. Our first concern was the course of the "north-south" wall that we discovered during the first season. As mentioned above, the alignment of the wall indicated that it may run under the mosque, reaching it about half way on its eastern side, just north of the east door to the mosque. Accordingly, we began our work in two areas: 1) we extended the previous year's trench towards the south to follow the course of the wall and 2) we opened a small trench within the mosque at a place where we have expected that the wall would appear below the floor level.

Inside the mosque there was no trace of this wall. Later we discovered the reason since the excavation was not fruitful. The wall was found to end in a collapse and a further stone wall was uncovered continuing not towards the mosque as we expected, but turning at a right angle towards the east. The course of this wall was then followed by exposing its south and north faces. It ran for a short distance and then it continued as a pise construction. This pise wall was discovered in a collapsed state yet, we were able to identify four courses. A considerable amount of collapsed masonry and building material formed a layer above the pise wall, and it likewise continued eastwards. We followed this course for $c .200 \mathrm{~cm}$. Then it was found that both pise and the building material on top ended in a complete collapse. Thus the work was stopped here.

Work has also resumed north of the mosque, where our excavation had begun in 1977 and where rooms 1 and 2 were excavated. Our intention was to follow the
major "south" wall towards the west. That was essential if we wanted to discover the purpose of this wall. The "south" wall was found to continue for $c .250 \mathrm{~cm}$ with the remains of a later wall on top. Then it came to an abrupt halt and also ended in a complete collapse.

While we were unable to find a satisfactory answer to the original function of the two major walls namely, the "south" and the "north-south" walls, the 1978 excavations in this area confirmed our previous thinking regarding the three periods of construction. The buildings here, namely the latrine in Room 2 and the ablution area in Room 1 and the room next to them, i.e. Room 3, could have been a store room. Thus, all these buildings were closely connected with the mosque. The shabby construction of some of the walls, just as the child's burial, must be the remains of nomadic activity.

The complete collapse of the two major walls and that of the pise wall, which must have been the continuation of the "north-south" wall, may have been caused not by natural disaster, but by war, possibly by the invasion of the Beni Hilal and the Beni Suleym in $443 \mathrm{AH} / 1051 \mathrm{Ad}$. Because of the extent of that damage, the function of these walls can probably never be answered, only theories can be offered. We may, however, presume that the wall, when it turned towards the east and continued as a pise, perhaps ran straight to the eastern part of the city wall, which here is not very far away (cf. the contour map, figs. 5 and 11). Thus the area to the north and the northeastern part of the mosque could have been a secluded part of the city. An extensive excavation may throw light on this problem.

## 4. Excavations on the Central Mound

The Central Mound, which was marked, as we have shown, by Goodchild as site "B", lies some 130 m southwest of the mosque in Sector C between grid lines A1 and B1. The aim of the operation here was to excavate the entire mound, which, as it was assumed by Goodchild and Abdussaid, covered either an important building or a group of buildings. Work started here in Summer, 1978 and continued in 1979 and in 1981 (fig. 8). The 50 m grid was subdivided into further 5 m squares. Thus during the second season in 1978, squares $\mathbf{a}$ to $\mathbf{c}$ and $\mathbf{f}$ to $\mathbf{j}$ were excavated in the northernmost strip, i.e. in horizontal line 0 . The remaining two squares, i.e. $\mathbf{d}$ and $\mathbf{e}$ were uncovered during the third season in 1979 together with the squares a to din line 9; while the remaining squares in this line, i.e. e to $\mathbf{j}$ and squares $\mathbf{d}$ to $\mathbf{h}$ in line 8 , were excavated during the fourth season in Summer, 1981. It should be mentioned that a baulk of 50 cm was left around in all squares. These baulks were removed only during the last season in 1981.

## The trenches in line 0

Work began at the two opposite ends of this line namely, in squares a and $\mathbf{j}$. Subsequently, the other squares were opened between them.

In square $\mathbf{0 a}$ in the second layer a massive pise wall was located which ran across from the northwest corner in a slightly southeasterly direction. This pise wall was joined at two points by walls running at right angles to it, made up of stones and mudbricks. At the northeast corner of the trench, a circular stone and plastered cistern was found with a drainage channel leading into it at the northeast rim (plate 14). This well was cleared to a depth of 180 cm and was found to contain fragments

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Figure 8. Grid plan of the Central Mound, showing the various trenches excavted in three seasons: 1978, 1979 and 1981.


Figure 14. Central Mound: square Oc showing a wall, a cistern and a drainage channel.


Plate 15. Central Mound: square Oc showing rectangular pit and duct.
of unglazed pottery, bones, shells and loose sand. Other finds from this trench included a number of bronze and iron fragments, a polychrome-painted sherd and part of an unglazed pottery lamp; all found in the second layer next to the pise wall.

The pise wall continued into the next square, $\mathbf{0 b}$. Along the west baulk, a later stone wall was built over the pise, running across it at a right angle. This stone wall was abutted by another one of which only one course remained. This runs parallel to the pise wall on its south side. Part of a collapsed third stone wall runs in a northsouth direction in the southeast corner of the trench. This trench was cleared down to the floor of compacted soil, a short distance below the first one. In the second floor, between the top surface of the pise and the first stone wall, a small hearth was discovered with thick ash accumulation on the bottom. In the fallen debris of this trench were found two mill-stones and the fragment of a cut glass vessel.

The next trench $\mathbf{0 c}$, is bisected by a wall running east-west. The top layer of this consisted of remains of a stone wall laid over an earlier mud structure. Half way along, on the south face, it was joined by another wall of the same nature running north-south. On this second structure the surfaces of two plaster floors and a duct were exposed. The duct was constructed of stones except for the channel floor which was made of plaster. This fed into a deep stone-lined circular cess-pit in the southwest part of the trench. In the southeast quarter, another large pit was found, rectangular in plan (plate 15). The structures in this square do not seem to relate to the previous trench.

In trench 0d, which was excavated in 1979, the remains of a wall, running roughly in a north-south direction was found in the second layer. This wall was abutted by a pise wall approximately at its mid-point, running at right angles to it from the east baulk. In the western part of the trench were the remains of a stone wall, laid over a pise structure, both running roughly parallel with the baulk. These stone courses may have been part of the stone wall at the northwest corner. At the southwest corner were the remains of another stone wall where the courses were inclined at an angle. This was most likely the result of earth movement rather than an intentional construction, as was the case with the buttresses of the mosque. The floor level, which was reached on the west side of the north-south wall, was composed of mudbricks. There are fracture lines clearly visible on the surface. The southeast quarter of the trench, which was bordered by stone and pise walls, was not excavated below the first level.

The next square $\mathbf{0 e}$, also contained part of Abdussaid's trial trench of 1964, in its eastern half. The first layer revealed a vast quantity of pottery sherds, while the second layer consisted mainly of scattered stones with collapsed material and a big fire pit. From the section of the baulks and from the finds recovered from this trench, it became apparent that the area was disturbed prior to the trial trench of 1964, and that in all probability it was a refuse pit.

The next excavated square 0f, revealed a primary stone wall running east-west and the remains of another parallel to it along the north baulk (plate 16, at the back of the picture). These were linked by a partly collapsed north-south wall. The south face of the primary wall was abutted by two other walls possibly of later construction. Three floor levels were encountered. The first one was left intact for future reference in the southwest corner of the square, while in the northeast corner the second floor was cleared to expose the third floor level a short distance beneath. Within the first level were polychrome-painted sherds, while in the second level two


Plate 16. Central Mound: square Of.


Plate 17. Central Mound: square Oh
bronze hair pins (MS78-326), MS78-331) and vast quantities of broken cooking pots were recovered. The third level produced a small glass fragment with a mould design, probably of a bird (MS78-353).

In square 0 g , the excavation was limited to the first level which exposed a compacted mud floor and the base of a stone wall, which is a continuation of the primary stone wall from the adjacent square $\mathbf{0 f}$. This wall continues towards the east for $c .150 \mathrm{~cm}$, then turns to the north. This part of the wall then has an opening, clearly a doorway, $c .80 \mathrm{~cm}$ wide. It has vertical stone slabs for jambs and the threshold was paved with large slabs. This level produced the largest number of glazed and unglazed pottery fragments. There were also a few glass and iron fragments and a small piece of celadon (78-359).

In square $\mathbf{0 h}$ (plate 17), the excavation went through two floor levels revealing cross walls of two periods. The main structure consisted of an earlier wall of welldressed stones with a latter stone and rubble wall above, running in an east-west direction. The eastern continuation of this structure had collapsed, while at its western end it was joined by a stone wall running in a north-south direction. On the second level, another wall runs parallel to the primary wall before turning to the north and thus forming a corner. Both levels produced a large number of pottery, both glazed and unglazed, two pottery lamps, two fragments of bronze bracelets (78-310/a-b) and the base of a glass faceted bottle (78-301). A silver dirham was also found here (MS78-315) in the second level near to the primary east wall. The coin gives the name of the Fatimid Caliph al-Hakim (386-411 AH/966-1021AD).

In the next square, $\mathbf{0} \mathbf{i}$ (plate 18), the first level exposed the top of several walls. At the south side of the square runs an east-west wall, which was the extension of


Plate 18. Central Mound: square Oi.


Plate 19.
Central Mound: squares Of to $\mathbf{O j}$.
that from square $\mathbf{0 h}$. This was abutted by another stone wall running north-south which has two cross walls, each running east-west, but joining at different points, one of them running towards the west, the other running towards the east. The west lateral wall enclosed a deep stone-lined circular pit, which must have been a latrine. A certain amount of glazed and unglazed pottery shards, iron nails and bones were found in this trench.

The last square, $\mathbf{0} \mathbf{j}$ (plate 19), because of the topography of the site was so eroded that only part of the first layer could be excavated, which exposed the remains of a stone wall running approximately east-west and a compacted mud floor coated with buff-green local clay. The wall was constructed of well-dressed stones with a corner turning towards the south. A later wall, differently constructed of rough stones and rubble, joined the main wall as an extension. This square produced mainly unglazed pottery sherds, animal bones and a second coin. It was of bronze, very much worn and illegible (MS78-268). There was also a terra sigillata fragment with stamped decoration (MS78-327).

## The trenches in line 9

In the second horizontal strip, i.e. in line 9, four squares were excavated in 1979, namely, a to d. In the first square, in 9a, the removal of the top soil revealed the surface of a pise wall running roughly in a north-south direction with a considerable amount of collapsed material and fallen plaster. Clearance of the fallen material finally produced two other stone walls at the north and at the south baulks. Floor levels were located at either side of the pise wall. That to the east was at a consid-
erably higher level. The floor to the west was made of an extremely compact "concrete" in two layers; the lower layer was coated with gypsum. An ash-pit was located above the first "concrete" floor level at the corner between the pise wall and the south stone wall. This pit penetrated both floor layers indicating a later date than that on the floors.

The next square 9b, also produced a wall running roughly in a north-south direction, but it was built of stones. The northern third of this wall suffered excessive collapse. At its southern quarter, it was joined by another stone wall, which ran parallel to the south baulk towards the east continuing into the next trench, 9c. A third wall of mud-brick construction reinforced with stone quoins projected from the west baulk close to the west baulk of the northwest corner of the trench. However, it was found in a severely damaged state with collapsed stones. This made it almost impossible to define its structure. The floor surface to the west side of the north-south wall suffered from fracture lines which ran in an east-west direction. This level corresponded to the floor of the previous trench in 9a. The floor level to the east of the wall was higher and uneven. There appeared to be shallow channels on the surface; the precise functions of which were uncertain at this stage.

In the third trench, in 9c (plate 20), there was again a major north-south wall butted at the north end by the remains of a stone wall running along the north baulk towards the east, but this wall did not continue through to the other trench (9d). At the east baulk, just offset from this wall and at a higher level, there were three slabs of stones piled on top of each other. The section showed the fill around it to be the same as the top soil, thus indicating a later structure. However, this did not continue into the trench. At the southwest corner of the trench, there was the stone wall, which was a continuation from the previous trench, $\mathbf{9 b}$. This wall then turned into a corner and continued towards the south baulk. At the southeast corner of this trench, a cistern was found covered by a large slab of stone. This was not opened because part of it was under the baulks. Between the north-south wall and the east baulk were the remains of two bread ovens. The first one was near the corner of the wall at the north end and the other was in the middle of the east baulk. A glass weight (MS79-425), the base fragment of a polychrome painted bowl, showing a peacock (MS79-448) and a very interesting decorated bronze plaque with pin (MS79-456) were recovered from this trench.

The next trench, 9d, turned out to be a most complex one. Immediately below the top soil was a mudbrick floor partially covered with collapsed mudbrick material. This floor was uneven with a fracture running lengthways, almost parallel to the west baulk. A section was taken through the north half of the trench and the result confirmed a previous conclusion of two occupation periods. The earlier period, approximately 1.8 m below the surface. It had part of a well constructed stone wall at the northwest corner of the trench. This seemed to end abruptly. Within this layer, we also found an accumulation of iron slag just east of the wall. However, attempts at tracing an iron furnace were not successful. Between this and the later occupation level was considerable collapsed mudbrick material. The later period was represented by the fractured mudbrick floor which was the second of four successive floor layers, each being approximately 10 to 15 cm thick. Two of these layers were surfaced with a plastered finish made from the local buff-green clay. (A similar finish was found on the floor at the northeast quarter of trenches $\mathbf{0 d}$ and 0 j .) Below the second floor layer were found a series of small fire pits, seven in number,


Plate 20. Central Mound: two bread ovens in square 9c.


Plate 21. Excavated trenches, Central Mound in areas A and B.

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Figure 10. Plan of the third or "Qibli" gate and inset showing its location in relation to the southeast fort.


Plate 22. Central Mound: square 9 f with three bread ovens
arranged roughly in a circle. The layer below the second floor level. The layer below the second floor level consisted of collapsed mudbricks which showed up clearly in the section (plate 21).

The next trench, square $9 \mathbf{9}$, was partly investigated by Mr. Abdussaid in 1965, when he opened the cross-shaped trench across the Central Mound. The outlines of his trenches are clearly marked on the enclosed plan (fig. 9). Abdussaid's 2 m wide trench cut across 9 e in a southeast-northwesterly direction. During his excavations, Abdussaid had already revealed a stone wall which enters the trench from the east, almost in the centre of this square, and, then, it runs towards the west but disappears abruptly and no trace of its continuation was discovered. In the northeast corner of the trench, traces of a second wall became visible. This was also partly exposed by Abdussaid in 1965. This wall was mainly hidden by the central baulk, which was still in situ at the beginning of our work but was later removed.

Finds from this trench were not numerous, but they included a number of unglazed pottery fragments, some iron nails. The only remarkable find from here was the base of a glass bottle (MS81-493).

In the neighbouring trench, in $\mathbf{9 f}$, three distinct floor levels were encountered. In the uppermost level, on floor level 3, remains of two circular ovens were discovered, situated almost in the centre of the trench. When these were removed and the second floor level was reached, three more circular ovens were found and next to them, on the west side, a kidney-shaped recess was located which was full of ashes (plate 22).


Figure 11. Plan of the site, showing all the excavated features, including those which were uncovered pre-1977.

The lower part of a wall became visible at this level in the western part of the trench, along the west baulk. It runs in a north-southwest alignment. The eastern end of the wall that runs from trench $9 \mathbf{e}$ is bonded into this latter one (cf. fig. 9).

The circular ovens and the kidney-shaped recess were preserved, but the area around was cleared down to the earlier level, i.e. floor level 1. In the northern part of the trench, under the northern baulk, runs the wall that was already observed in trench 9e. Between this wall and the previously described features, but on level 1 , another circular oven was found. It was recorded but was filled back again. The finds from this trench included some glazed and unglazed pottery, some iron nails and glass fragments.
The wall that was already located by Abdussaid in 1965 and, which was further cleared along its southern side in trenches 9 e and 9 f , enters the next trench 9 g and runs almost parallel with the north baulk, except that it has a slight southeasterly alignment (cf. fig. 9). A second wall became visible along the southeastern baulk of the trench (trench 9 g ), which runs in a northeast-southwesterly direction. A large number of finds came to light in this trench, which included a sherd of unglazed red ware with inscription inscribed in Kufic, reading ibqal, "prosperity" (MS81-475); fragments of a black cooking-pot (MS81-479) were also excavated.

The work in the square, in $\mathbf{9 h}$, was most rewarding. It was found that a large number of features concentrated in this small area. First of all, it was discovered that the wall, which starts in 9 e under the north baulk and has a southeasterly alignment, turns at a right angle in the northwest corner of this trench and runs towards the south (fig. 9). After $c .2 \mathrm{~m}$, it turns again to the west and after another 1 m , it turns towards the southwest. Thus this major, or central wall, forms a corner here. Inside this corner there is a cistern, which is partly situated in $9 \mathbf{g}$. This cistern is marked C3 on figure 9. It was cleared down to its base at -267 cm .

A second cistern (C4) was located some 2 m from the previous one, almost at the centre of the trench (plate 23). The cistern was cleared and its base was reached at -250 cm . On the eastern side of this cistern, a well-preserved plastered channel was discovered leading into it. About 30 cm to the west, between the cistern and the wall, traces of yet another water channel were located. This latter channel enters the trench in the northwest corner and then runs towards a long collection channel just to the southwest corner of this trench situated in Abdussaid's sondage of 1965. Work in 9 h actually was extended to clear Abdussaid's trench completely and that also included the clearing of the long channel.

About 1 m from cistern 4 towards the south, a third cistern (C5) was cleared down to its base at -200 cm (plate 24). Due east of this a small rectangular pit appeared, which is situated within the boundaries of Abdussaid's trench. A further rectangular opening was found further east by $c .50 \mathrm{~cm}$. It was hidden by a mill-stone (MS81-474). When this pit was excavated, it was found to be a well, built in stones in 52 courses on all four sides. The walls include foot-holes, at an average of 35 cm intervals. The well was cleared down to -635 cm , but the bottom was not reached by the end of the season.

The central wall, which starts in $9 \mathbf{e}$ and runs in a southwesterly direction and forms the corner, just described above, then continues towards the southwest. At this point, on the eastern side of the wall, there is a circular oven with a fire-hole on its south side (visible on plate 24). The wall then continues further south and, after 2 m turns east and after a further 2 m , there is a doorway (situated in square $\mathbf{8 h}$ ), which gives access to the area in trench $\mathbf{9 h}$.


Plate 23. Central Mound: square 9 h with a cistern


Plate 24. Central Mound: the well in 9 h covered by a mill-stone.

There appear to be two secondary walls in $\mathbf{9 h}$, both connected with cistern 4 . One of them runs towards the north and ends at the long west-southeasterly wall which is situated there and part of which was already uncovered by our excavations in trench 0 h in 1978. The second of these two later walls runs towards the east. Several floor levels were located in this trench, all of them made from compact clay; the lowest one, which was cleared in the northwest corner of cistern 4 , is of a greenish clay so characteristic on the site.

The cistern and the well, just as the floor levels of this trench, produced a large number of sherds, both glazed and unglazed, large number of animal bones, including those of camels and also a number of other outstanding objects. Of these, an amber seal with Kufic inscription, Muhammad, incised on it (MS81-522) should be mentioned. There was also an illegible copper coin (MS81-538), a complete unglazed pottery jug from cistern 4 (MS81-53, plate 41b), an unglazed pottery lamp (MS81-535, plate 41c), an animal skull (MS81-534) and a lid fragment of an unglazed cooking-pot (MS81-587, plate 43f). There were also several mill- and quern-stones in this trench. Some of the quern-stones were small, like MS81-561, measuring only 30 cm in diameter.

In trench $9 \mathbf{i}$ a wall, built of well-cut stones, was discovered which runs across the trench in a north-southwesterly direction. It is well-preserved up to six courses. In the centre of this wall, there is a second one abutting it and running towards the east but only for $c .1 \mathrm{~m}$ then it suddenly disappears. There may have been a second wall starting from that north-south wall since traces of this can be seen in the northwest corner of the trench. Three floor levels were located in this trench. The lowest, floor level 1 , continues into trench $\mathbf{9 j}$ and also into $\mathbf{0 i}$ and $\mathbf{0 j}$. In trench $\mathbf{9 j}$, this was the only feature encountered.


Plate 25. Central Mound: square 8d: remains of a possible glass furnace and a pit filled with calcite.


Plate 26. Central Mound: square $\mathbf{8 h}$, a doorway with Kufic inscription.


Plate 27. Central Mound: the Kufic inscription from square $\mathbf{8 h}$.

The most interesting find from $\mathbf{9 i}$ was an unglazed filtered red water jug excavated at the corner of the north-south wall and the east wall. It was found in several fragments and then restored. There was also the top part of an unglazed lamp (MS81-513, plate 41d) and the base of a large jar (MS81-675).

## The trenches in line 8

In line 8 excavations concentrated in the central areas. The work began in trench $\mathbf{8 d}$ (plate 25). Some collapsed stone walls or some other stone structural debris were found in the southwest and northwest corners of the trench. It was at a considerably lower level, at 80 cm , where a circular stone structure was located in the centre of the trench. The shape was well-defined, having in its uppermost course an opening. The purpose of this structure was not clear, but its function may be indicated by the presence of the large quantity of calcite. Calcite was found all over this trench but particularly in its northwest corner, in a pit. The presence of such a large quantity of calcite was most likely connected with the structure in the centre of this trench. Calcite, as is well-known, is used in glass manufacture. Therefore, it is, not illogical to suggest that the circular structure in the centre of the trench was perhaps a glass furnace.

Trench 8e included a major stone wall, already uncovered by Abdussaid in 1965. It runs from the east to the northwest but abruptly ends, then continues on the same alignment as a secondary structure. Remains of a considerably later wall are to be seen in the southwest corner of the trench. Here the top of a well-built pise floor was discovered which has two shallow recesses on top. Between the pise floor and the east-west stone wall, two round ovens and a clay floor were uncovered.

In trench 8f, which was mostly investigated by Abdussaid, the only outstanding feature was the large cistern ( C 1 ), which still functions collecting water. The trench produced the largest number of potsherds, all together 1377 pieces. These included some remarkable specimens, such as a fragment of a large splashed jar (MS81-653, plate 37a), rim part of a "Fayyum" ware (MS81-649, plate 37c) and several small lustre-painted fragments.

In 8 g , the lower course of a stone wall was encountered, which suddenly appears from the west and then runs towards the southeast and turns at a right angle towards the north and comes to an end after $c .2 \mathrm{~m}$. From this wall another one abuts and goes towards the southeast for $c .2 \mathrm{~m}$, then there is a doorway. In the doorway, on its northwest corner, a small grey stone was found with an engraved Kufic inscription, reading bismalah (plates 26-27). This doorway is already in trench $\mathbf{8 h}$. The wall here then continues beyond the doorway and after 67 cm turns to the north and again after $c .1 \mathrm{~m}$ turns westward and forms the doorway that was already mentioned and which leads to 9 h . It was here that the base of a small lustre-painted bowl was discovered (MS81-571). There were also fragments of an unglazed red ware with Kufic graffiti, reading "....kullama..", most likely a quotation from the Qur'an.

In the concluding work on the Central Mound, the baulks were removed between the already excavated trenches. This work began in trenches $\mathbf{0 i}$ and $\mathbf{0 j}$. Under the baulk, remains of a circular oven and the fire-hole of a second one were discovered. When this floor was followed up to the wall which abuts from the west wall and runs towards the north, on its western side a cistern (C6) was located. This was cleared down to a depth of -360 cm (plate 28).


Plate 28. The Central Mound viewed from the east after the removal of the baulks.


Plate 29. The Central Mound viewed from the west after the removal of the baulks.


Plate 30. The Central Mound viewed from the west after the removal of the baulks
A large piece of jade, in the shape of an egg, but with a break at one end, was discovered under the baulk of $\mathbf{0 i}$ and $9 \mathbf{i}$ (MS81-618). Its place is marked with a triangle on fig. 9. It is a remarkable find from a Fatimid site, but it should be mentioned that during the excavations at Ajdabiya in spring, 1981, a similar jade piece came to light.

Under the baulk of 0 g and $9 \mathbf{g}$, a lustre-painted fragment, perhaps of a waster (MS81-604), was found. Another interesting feature was discovered after the removal of the baulks between $0 \mathbf{d}$ and $9 \mathbf{d}$. In $0 d$, there is a wall which runs in a north-south direction. In 1979, we discovered a well-built stone wall but at a considerably lower level. The excavations have shown that the two walls were not connected. The lower one must be of an earlier date.

## Discussion

After the three seasons work on the Central Mound, it became apparent that we were in the centre of the city, what may be called the madina, with its workshops, bakeries and water supplies (fig. 9, plates 29-30). The trenches in the central area in the south, namely $9 \mathbf{9 f}, 9 \mathrm{~g}$ and 8 ff and 8 g , may represent a square of this part of the town or perhaps a private garden, well-defined on three sides, open only in the south in trench $\mathbf{8 f}$, with an access to it through the doorway with the stone bismalah written on it in square 8 h (fig. 11, plate 25). The date of this area is well substantiated by the two dated Fatimid coins of Al-Hakim, which came to light in 1978 and 1979. The three Fatimid glass weights and the fragments of another further corroborate this dating. (The find spots of these glass weights are clearly marked on fig. 9).


Plate 31. View of the Third or "Qibli" Gate before excavation in 1981.


Plate 32. "Qibli" Gate after excavation viewed from the south.

It also became clear that the different floor levels and, in particular, the two walls between squares 0 d and 9 d , which were not connected, indicate two periods of occupation. But evidence for two periods of occupation was visible in other parts of the Central Mound as well. One of these occupation periods may be of the earlier Fatimid period and that is attested by the two coins bearing al-Hakim's name. The splashed and "Fayyum" wares belong to this earlier period.

The second period of occupation may represent the later Fatimid period, or to be more precise, the period after the destruction of the Beni Hilal and Beni Suleym invasion in 443Ah/1051-52AD. The abrupt disappearance of walls, the fragmentary state of most of the polychrome-painted wares may be due to the destruction by these tribes.

## 5. The Third, or "Qibli" Gate, excavations near the southeast corner of the city wall

It has already been mentioned that Arab historians reported that Surt had three gateways and that Dr. Mohammad Mostafa claimed that he discovered the Third or the Qibli gate $c .60 \mathrm{~m}$ north of the southeast fort. 21 We found no traces of a gateway in that area, but some 50 m southeast from the fort, a corner of a tower became visible after the hard winter in 1980-81 (plate 31). The actual place of this tower is between marking M17 and M18 on the city wall (cf. the inset key on fig. 11.). The corner indicated the presence either of a large buttress here or a possible third gateway to the city.

The trenches were marked out here in sector B, square E4, trenches $\mathbf{8 h} \mathbf{- 8 j}$ and 9h-9j (fig. 11). When the corner was cleared on its outer or eastern side, it was apparent that some of the stones facing the wall were robbed in recent times. It was


Plate 33. "Qibli" Gate and street surface.
also clear that there was deep and wide recess or an opening in the wall, measuring 5 m in depth (fig. 11, plate 32). The surface of the recess (or opening) has compact hard pise, built directly on the bedrock. When the trench was extended, or rather opened on the opposite or west side of the wall, it was found that there was a wall there built of stones at the back of the secondary wall on the outside. The pise surface, how-ever, continued here. It was found to be 10 cm in thickness over a stone foundation. It appeared to be a street surface running in a westerly direction (plate 33).

The finds from here included unglazed sherds, identical to those which were found in large quantities in excavations in and around the mosque and on the Central Mound. There were also fragments of a modern Italian perfume bottle. That may explain when and how did some of the stones disappear from this gateway. According to our workers from Sultan, when the Italians built the modern motorway between Tripoli and Benghazi in the 30s, they removed a large number of stones from the site for the foundation of the road. That may be the reason that we were unable to find the tower on the northern corner of the recess. In future archeological work, it would be important to continue the work in this area and to clarify the course of the road.

# Chapter III - Early Islamic Glazed Pottery of North Africa 

By Géza Fehérvári

While the early Islamic glazed pottery of the eastern part of the Islamic world (the mashriq) is well-known, those of North Africa and Umayyad Spain (the maghrib) are neither so well researched nor are they so familiar. This unsatisfactory situation, however, is slowly changing. Many excavations have taken place in this vast area during the past two or three decades and they brought to light large quantities of glazed pottery. This chapter deals with two types of early Islamic glazed wares and only from North Africa. These two types are the lustre-painted wares and the North African polychrome-painted or the so-called 'in-glaze painted' wares.

From the first century of the Islamic period two major religious and cultural centres emerged in North Africa: Qayrawan in Tunisia and Fez in Morocco. It was in Qayrawan where one of the earliest and most beautiful mosques was built, the Great Mosque. The earliest mosque there was built in Umayyad times during the late seventh or early eighth century AD, but the Aghlabid ruler Ziyadat Allah demolished it in $221 \mathrm{AH} / 836 \mathrm{AD}$. According to some early historians, the people of the town had asked the ruler to keep its mihrab. It appears that indeed this was preserved, but a new one was erected in front of it in $248 \mathrm{AH} / 862-63 \mathrm{AD}$. Thus, it is claimed that the old mihrab is hidden behind the new one. It is this new mihrab which holds the key to our first type of glazed ware, the lustre-painted pottery. The outer flanking walls of this prayer-niche and its archivolt are covered with lustrepainted tiles.

The origin of lustre painting has been much debated for nearly a century. Egypt, Iraq or Iran have been suggested as possible origins of this technique. It is known, however, that the Copts used it in Egypt before the advent of Islam, but solely for glass decoration. On pottery, it was used from the ninth century AD onwards and probably in Egypt. Nevertheless, it soon spread to Iraq and the palaces and mosques of Samarra, erected during the ninth century and decorated with such tiles. According to some early sources, when the new mihrab was built and decorated in Qayrawan, the tiles were imported from 'Baghdad'. Most likely, they meant from Iraq, since Baghdad was never a pottery centre. Recent archeological research, however, suggests a different theory. At Raqqada, near Qayrawan, where the Aghlabids and later the Fatimids built their palaces, more lustre-painted tiles were discovered, together with evidence of local production. Certainly, it would have been more logical and practical to invite the potters from Iraq or Egypt and asked them to produce these tiles locally, rather than transport them from such a great distance.

The production of lustre-painted pottery in North Africa is further supported by archeological finds from another important archeological site, Qal ${ }^{c}$ a Banu Hammad in Algeria. After the Fatimids occupied Egypt in $360 \mathrm{AH} / 969 \mathrm{AD}$, they appointed a Berber, Yusuf ibn Buluggin ibn Ziri, the founder of the Zirid dynasty, as their governor of the North African provinces. Buluggin's son Hammad, founded a new capital, Qal ${ }^{\text {ca }}$ Banu Hammad high up in the mountains of Central Algeria in 398 AH / 1007-8 AD. A large and beautiful mosque was built there and two palaces:
the Qasr al-Bahari, or 'Sea Palace' because it had a large pool and the Qasr alManar, or 'Tower Palace'. All three buildings were decorated with glazed tiles including lustre-painted ones. Furthermore, among the excavated finds several lustre-painted vessels were also discovered and kilns with kiln-wasters, providing convincing evidence for local production. When the Zirids, during the reign of the Fatimid Caliph al-Mu ${ }^{\text {cizz }}(406 \mathrm{AH} / 1016 \mathrm{AD}-454 \mathrm{AH} / 1062 \mathrm{AD}$ ) revolted against his suzerainty, he unleashed the Banu Hilal and Banu Sulaym tribes to destroy the cities of North Africa. That was in 444 AH/1052 AD. Among the cities destroyed was Qal ${ }^{\text {c a Banu Hammad. It appears that after the destruction of that city, the potters }}$ moved to a place called Bougie on the Mediterranean coast. Subsequently, they crossed over to Spain and established the new pottery centre at Malaga.

The lustre-painted pottery and tiles, which were made in Tunisia and Algeria, were painted in ruby red lustre or in polychrome using yellow, green and brown colours. But by the end of the tenth century AD, the monochrome lustre was introduced as it also was in the East. The designs decorating the ninth and early tenth century vessels and tiles were almost identical to those that were made in Egypt and Iraq. One of the most common patterns was the so-called 'peacock-eye' motive. Other designs included leaf-forms, herringbones, while on the reverse strokes and the 'lines and dots' patterns were applied.

Qal ${ }^{c}$ a Banu Hammad also provided the earliest excavated evidence for the second type of pottery under discussion, the North African polychrome-painted or 'in-glaze painted' ware. This was a new type of pottery. The designs were painted in green or yellow and were outlined in manganese-purple, which actually appears black. The background is usually mustard yellow. The decoration included human and animal figures, flowers, palmettes and inscriptions. They were similar to those of the Nishapur polychrome painted wares and, accordingly, it is easy to erroneously identify them as such. Indeed, quite recently such a North African bowl was sold in the London antique market identified as Nishapur, tenth century. It bears the signature of the artist. The inscription reads: "amala ${ }^{\text {c }} A b b a s "$ ", the work of ${ }^{\text {c }}$ Abbas. However, the extremely dark red colour of its paste, the mustard-yellow background over which the design is painted is typically North Africa. It depicts a human figure riding a human-headed quadruped. The cross-hatched background design and the semi-palmettes below show close similarity to those fragments which were excavated at Qal ${ }^{c}$ a Banu Hammad and at several other places in North Africa. Another, closely related bowl is in the Gemente Museum in The Hague, depicting a mythical animal. It was discovered at Qayrawan and dated to the ninth and tenth centuries. A bowl in a private collection in London is decorated with a peacock. It is also attributed to Tunisia and dated to the same period.

The walls of several churches and towers in Italy, were decorated with North African polychrome painted bowls. They are known in Italian as bacini. Because of the known dates of construction of these buildings, the bowls decorating them can likewise be attributed to the same period. One of the most important buildings with such decoration is the San Sisto in Pisa, which was built during the eleventh century. The decoration of these bacini are very similar to the above examples. They depict human figures, animals and sailing boats. The rims of these vessels are decorated with heart-shaped motifs or with a series of overlapping ovals. (Colour Plate 1, MS78-371).


Colour Plate 1. (MS78-371)

Apart from Qal ${ }^{\mathrm{c}}$ a Banu Hammad, several other excavations in Algeria, Tunisia and also in Libya brought to light numerous polychrome painted vessels and fragments. In Libya, Dr. David Whitehouse and the late Anthony Hutt carried out excavations at Ajdabiya in the southeast corner of the Bay of Sirte. Their excavations concentrated in two areas: the fortress and a Fatimid palace inside it and the Great Mosque. The majority of the excavated glazed pottery belonged to this North African polychrome-painted ware.

Medinat Sultan, particularly the mosque and the town centre, produced a large number of North African polychrome-painted wares. One of these was the base of a large bowl decorated with a standing peacock (Colour plate 2, MS78-369). A further interesting example, unfortunately only a small fragment, depicts the right hand of a human figure, holding an object, probably a cup (Colour plate 3, MS78-289).

Upon examining these North African polychrome-painted wares immediately two questions arise: firstly, what was the origin of this type of pottery; and secondly, what was the connection, if any, with the Nishapur polychrome wares?

As regards to the origin, we may find the answer in the so-called "splashed" or "mottled" wares of the early Islamic period. On this type of pottery the decoration was rather simple: they applied green, brown or yellow colours under a transparent glaze. Since they were unable to control the colours they started to run in the kiln and produced a splashed or mottled effect. Somewhat later, however, the potters learned that if they applied the colours over a ground slip and have also added some

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Colour Plate 2. (MS78-369)


Colour Plate 3. (MS78-289)


Colour Plate 4. (MS78-290)
clay to the pigment, the colours could be controlled. As a result, a second type of splashed ware was developed. On these vessels the colours were radiating from the centre or, occasionally, from the side of the vessel. Frequently, these radiating lines or wedge-shaped patterns were outlined with manganese (Colour plate 4, MS78290). These were the first steps for the more sophisticated designs.

As to the possible connection with Nishapur, it can be easily explained, since there was a strong contact, in spite of the political differences of the time, between the eastern and the western part of the Islamic world. Furthermore, large number of people from Iraq and Iran settled in North Africa, among them potters. Furthermore, during the yearly Meccan pilgrimage, people may have acquired Persian pottery vessels, among them Nishapur polychrome painted wares and took them home to North Africa.

# Chapter IV - The Small Finds from Medinet Sultan 

By Géza Fehérvári and Hal Bishop

The excavations at Surt, those which were carried out under the directions of Mr. Abdulhamid Abdussaid and Dr. Mohammad Mostafa, between 1962 and 1966 and the Society for Libyan Studies and the Department of Antiquities joint works between 1977 and 1981, produced large quantities of finds. Apart from a few pieces, like e.g. a polychrome-painted lead-glazed sherd, which was reported by Dr. Mohammad Mostafa, ${ }^{1}$ and a few items published in the Annual Reports of the Society for Libyan Studies, ${ }^{2}$ the majority of them remained unpublished. It is because of this and also because of the importance of the excavated finds, that we considered it to be essential to present here all the finds from the site, irrespective of whether they came to light before or after 1977.

When writing this report, the authors were in London, far removed from the actual objects, which are stored at present in the Archaeological Rest House on the site together with the card index, monochrome photographs and pottery drawings. Only the colour slides were at our disposal in London together with the Small Finds Register and a Classified list of the excavated objects. The Department of Antiquities in 1977 did kindly allow us to bring back a few small glazed fragments for chemical analyses. These examinations were carried out by Dr. John Riley at the University of Southampton and by Mr. Muhammad Hamid and Mr. Ted Hughes at the West Surrey College of Art and Design. Their reports are included here under the relevant section. ${ }^{3}$

During the first session's work in 1977, all the excavated finds which came to light in previous seasons were registered. We introduced a system that was carried out through all our seasons. Every item registered has two letters: MS, standing for Medinet Sultan, followed by the last two digits of the year when it was excavated. These two numbers are then followed by a dash and by the individual registration number which, at the end of the fourth season in 1981 reached 685.

The excavated finds are presented here under the following categories:
A) Pottery
B) Metalwork
C) Glass
D) Coins
E) Miscellaneous objects

[^21]
## A) Pottery

The excavated pottery at Surt falls into two major and one small groups:
A Glazed wares
AB Unglazed wares and
AC Miscellaneous, non-Islamic wares.

## A Glazed Wares

The glazed wares, which were quite numerous, fall into five different types:
A1 - Splashed wares
A2 - The so-called "Fayyum" wares
A3 - Wares painted in polychrome under clear lead glaze
A4 - Monochrome-glazed wares and
A5 - Lustre-painted wares.
The first three types, namely A1, A2 and A3 were achieved by the same colour combination, namely: green, yellow, brown and manganese-purple and all these used lead glaze for covering the vessels. They also come under the term, which Mrs. Helen Philon has coined "wares decorated with different coloured glazes". ${ }^{4}$ In spite of that, we feel that they represent three different phases of development and, accordingly, three different periods, although some of them have been produced simultaneously with the later group.


#### Abstract

A1 Splashed wares If there is any chronology amongst these three groups of "polychrome glazed wares", then the splashed wares are the earliest. This type is well known. For a long time, they were erroneously called "Samarra" wares because a large number of these were excavated by Sarre and Herzfeld in the palaces of Samarra. They were also believed to have been introduced into the Near East by Chinese potters during the 8 th or early 9 th century. ${ }^{5}$ Today it is generally accepted that the introduction of this type of pottery had nothing to do with Far Eastern ceramics, that its invention and development was quite independent from those of Chinese T'ang splashed wares. ${ }^{6}$ It is clear that they were in use in Iran and Iraq during the ninth and tenth centuries. They have also been discovered in Central Asia and on the Indian subcontinent. These can be dated about the same period. Splashed wares were also known in pre-Fatimid Egypt, ${ }^{7}$ likewise in Syria the excavations at al-Mina ${ }^{8}$ and other sites produced large numbers of splashed wares.


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At Surt several fragments of splashed pottery came to light. Most of them were small except one piece (MS81-653, Plate 37a) which must have been part of a large jar. Most of these splashed fragments were excavated inside the mosque in 1963, either in its north side (MS63-30, 63-33,63-39) or from the cistern (MS63-48). One piece was discovered on the surface of the Central Mound.

The first splashed fragment in our excavations came to light during the 1977 season, outside the mosque (MS77-225). On the Central Mound, the first piece was excavated in 1978 (MS78-381), a second piece during the third season in 1979 (MS79-418). Finally three more fragments came to light in 1981: MS81-492, MS81-651 and the fragment of the large jar already mentioned above (MS81-653) (Plate 37a).

All these fragments were of buff or red paste, decorated mostly with green and yellow splashes. As regards to their possible date, the archaeological evidence, namely that they were recovered from the northern part and from the cistern of the mosque, but not a single piece from the southern part, either in the porch or the sanctuary, may indicate that they were used and popular on the site during Period I in the mosque's history, i.e. in the early pre-Fatimid mosque.

## Catalogue

MS63-30 Base of a splashed vessel; splashes of brown and green, outside monochrome green glaze. Excavated in the northern part of the mosque. $5 \times 4.7 \mathrm{~cm}$.

MS63-31 Fragment of a splashed vessel; splashes of brown and green. Excavated in the northern part of the mosque. $5 \times 4.7 \mathrm{~cm}$.

MS63-32 Base of a splashed vessel; yellow and green splashes. Excavated in the northern part of the mosque. $8 \times 2.3 \mathrm{~cm}$.

MS63-33 Fragment of a splashed vessel; green and brown splashes. Excavated in the northern part of the mosque. $10.4 \times 5.7 \mathrm{~cm}$.

MS63-39 Handle of a splashed vessel; green and yellow splashes. Excavated in the northern part of the mosque. $4.3 \times 1.3 \mathrm{~cm}$.

MS63-48 Handle and back fragment of an oil-lamp; green and yellow splashes. Excavated from the lower level of the cistern. $4.5 \times 4.2 \times 3.2 \mathrm{~cm}$.

MS63-64 Half of a beaker; splashes of green, manganese and yellow. Found on the surface of site "C", the Central Mound. Ht. 6.4 cm ; Diam. 7.7 cm .

MS77-225 Small splashed fragment; splashes of green and yellow. Exc. B26j, layer 2.
MS78-381 Rim and side fragment of a splashed vessel; inside green, outside yellow splashes. Excavated square 0 g , layer 1.

MS79-418 Rim fragment of a splashed ware; green splashes. Excavated 0e, top layer. $6.5 \times 5.7 \mathrm{~cm}$.
MS81-492 Fragment of a splashed vessel; green and manganese sulphates. 9i, layer $3.6 .5 \times 5 \mathrm{~cm}$.
MS81-651 Base fragment of a splashed bowl; green and manganese splashes. 8f, top layer. Ht: 18 cm ; Diam. 10.3 cm

MS81-653 Fragment of a large splashed jar; green, yellow and manganese splashes outside, inside green glaze. 8 f , top layer. $11.8 \times 9 \mathrm{~cm}$. (Plate 37a)

## A2 The so-called "Fayyum" wares

The term "Fayyum" ware is certainly not proper for this group. The application of this name may give the impression that they were made in Fayyum and then exported to Ifriqiya. That was certainly not the case. Yet, the term will be retained since that is how the literature refers to these wares which have the manganese, brown, yellow, green and sometimes white lines radiating from the centre. It perhaps could be regarded as the second phase in the development of splashed wares, when the potters were able to control, at least up to a certain extent, the coloured glazes so that they did not run when fired in the kiln. Chronologically, they may be later than the splashed wares; archaeological evidence, mainly from Egypt, points to the early Fatimid period, i.e. second half of the tenth or early eleventh century AD. ${ }^{9}$

This type of polychrome painted ware was not well represented in Surt. All together four such fragments came to light. The first piece was excavated in the mosque (MS63-65) a second piece was found on site "A", i.e. in the southwest fort (MSpre-75-106). The third fragment was on the Central Mound (MS78-290)(Plate 37b). The most significant fragment came to light in our fourth season in 1981 (MS81-649)(Plate 37c).

## Catalogue

MS63-65
Part of a large plate; decorated with green and brown circles of manganese lines and cross-hatchings. Excavated in the mosque. $13 \times 12.5 \mathrm{~cm}$.

MSpre-75-106 Fragment of a glazed vessel; decorated with radiating brown and manganese lines. Surface of site "A". $7.2 \times 6 \mathrm{~cm}$.

MS78-290 Base fragment; radiating green and manganese lines. Central Mound, 0 j. 8 x 2 cm . (Plate 37 b and Colour Plate 4)

MS81-649 Rim part of a vessel; yellow, manganese and white stripes. $8 \mathrm{f} .7 \times 6.5 \mathrm{~cm}$. (Plate 37c)

## A3 Wares painted in polychrome under clear lead glaze

This is perhaps the most interesting and the most numerous glazed pottery that was discovered at Surt. The type is well known, since similar wares came to light almost everywhere in Ifriqiya and the Maghrib. In Libya the excavations at Sidi Khrebish and Ajdabiya ${ }^{10}$ produced this type of pottery. Others were collected in the Fezzan. ${ }^{11}$ They were also discovered in Tunisia, particularly in Raqqada ${ }^{12}$ and in Carthage, ${ }^{13}$ while in Algeria in the former Hammadid capital of Qal ${ }^{\mathrm{C}}$ a Banu Hammad they were excavated in large numbers. ${ }^{14}$ At Surt they were discovered in every part of the site. Well before the excavations they were collected in larger number from the surface and later, they were excavated in the mosque.
${ }^{9}$ Philion, op. cit, p. 35.
${ }^{10}$ J. A. Riley, "The Pottery from Ajdabiyah," Libya Antiqua, (forthcoming); summary in Libyan Studies, Thirteenth Annual Report, 1981-82.
${ }^{11}$ Mostafa, no. 1, p. 123, fig. 1, plate LI/a.
${ }^{12}$ Marilyn Jenkins, "Western Islamic Influences on Fatimid Egyptian Iconography," Kunst des Orients, vol. X, 1975, pp. 81-107.
${ }^{13}$ Giovanna Vitelli, Islamic Carthage, the archaeological, historical and ceramic evidence, Carthage, 1981, pp. 57 \& f.
${ }^{14}$ Lucien Golvin, Recherches Archeologiques a la Qal ${ }^{\text {co Banu Hammad, Paris, 1965, Livre II, Ch. I; Golvin, pls. }}$ LXXX, LXXXII.

As we have already mentioned, this type of polychrome painted pottery was found in the fill of the sanctuary, in our trenches outside the northeast corner of the mosque. On the Central Mound, other than unglazed pottery, this type was the most numerous find. Unfortunately, most of our finds are fragmentary, except one piece (MS81-770), which was found in two pieces and which was part of a large plate. Otherwise the fragments, as far as we can judge from their shapes, were bowls. There are also a few pieces which were parts of lamps, like e.g. the spouts (MS81-491, MS81-644). There is also the lower part of a vessel which retains one of its conical legs (MS81-668). But apart from bowls, plates and lamps there must have been also jugs and vases of this type, since such vessels were known from other sites. As to the paste and glaze of these wares, the detailed chemical reports are enclosed. Here we confine our remarks to the decoration of the fragments. These fall into three major groups:
a) decorated with inscriptions
b) decorated with floral motifs
c) decorated with figural motifs.

As to the first group, i.e. fragments with inscriptions, they were not so numerous at Surt and, whenever they were discovered, they were too small to read the inscription or to say whether they had any other decoration as well. Frequently the word Allah is given and easily readable, as e.g. on a small piece which was excavated in the mosque in 1963 (MS63-57) or on a base of a bowl which was excavated on the Central Mound in 1978 (MS78-382)(Plate 37d). On another piece, perhaps the word $f i$ can be read (MS78-416)(Plate 37e). On other pieces the inscriptions are only decorative. The script is always in foliated Kufic, which was characteristic of the early Fatimid period.

The second group with the floral motifs was more numerous and we were able to discover a wide variety of decorations. The most elegant and finely drawn pieces are those which have palmettes, usually within a circular medallion (MS63-68, 75-91, 78-318 (Plate 37f), 78-347, 79-442, 81-487 and 81-683). Others have cypress tree motifs, rosettes or just scroll-work mostly in manganese-purple.

Although not having floral designs, a group of fragments with cross-hatchings, or even with checkered designs should be considered within this second group. One of the most interesting pieces is MS78-340 (Plate 38a) which was found in the top layer of $\mathbf{0 f}$. Another piece has a cross-shaped design in white which divides the inner surface of the bowl into four equal parts, the areas between the arms of the cross are filled with cross-hatchings in manganese with some patches in green (MS78-304).

The third group with the figural decoration is perhaps the most interesting, although only a few and small fragmentary pieces were found on the site. One of these is a base and rim fragment showing a peacock (MS63-84)(Plate 38b). It was found on the surface of the Central Mound in 1963. A second piece shows the tail of a fish (MS75-86) which was discovered on the surface of the southwest fort (site"A"). The most interesting piece of all is, however, the fragment showing the raised right hand of a human figure, holding an object (MS78-289)(Plate 36a, Colour Plate 3). It was found on the Central Mound. Another piece, again from the Central Mound, depicts the head of a human
figure in profile. Unfortunately, the rest of the human body is missing (MS78346)(Plate 36c). A small fragment, excavated in 1979, shows a peacock (MS79-441). In the same year, the second fragment was discovered with peacock design (MS79-448). All these figural fragments are closely related to those which were excavated a Raqqada and in Qal ${ }^{\text {c a B Banu Hammad. }}{ }^{15}$

Judging from the numerous rim fragments which came to light at Surt, the majority of the vessels had vertical or sloping rims covered with a wide variety of decorations. None of the designs is unique to Surt since all of the motifs are known from the rims of related pottery that have been discovered at other site in Northern Africa. One of the interesting and most frequently used rim decoration includes the application of a series of intertwined ovals, painted in manganese and in the centre in dark brown, while above and below there are green semi-circles. Dr. Mohammad Mostafa has already discussed this design and illustrated such a rim fragment from Surt. ${ }^{16}$ Somewhat similar borders appear on ceramics from $\mathrm{Qal}^{\mathrm{c}} \mathrm{a}$ Banu Hammad.The second, most frequently encountered rim decoration is composed of a series of heart-motifs which are again outlined in manganese and in their centres have green patches. This "heart-motif" border can be found again on ceramics that were excavated at Qal ${ }^{\text {c a }}$ Banu Hammad. ${ }^{17}$ Perhaps the origin of this motif should be sought in the east. Marilyn Jenkins, in her studies on polychrome North African and Andalusian wares suggested that they rely on what she calls "Abbasid popular tradition". ${ }^{18}$ Maybe we have to look even further east, to Khurasan an even on earlier examples than the Abbasid period. Heart-motifs frequently occur in Sasanian and post-Sasanian times on metalwork and textiles. Is it not possible that these wares were actually inspired by and borrowed motifs from late Sasanian and post-Sasanian artistic traditions? It is a possibility that should be fully investigated.

A third border decoration is composed of two intertwined "rope", or ribbon motifs. This type of rim decoration has already been observed by Helen Philon on a piece which is in the Benaki Museum in Athens. ${ }^{19}$ Though it is worth pointing out that this type of border design was very much at home in Khurasan, particularly on slip-painted wares, metalwork and woodwork of the late tenth to twelfth centuries. Thus once more we notice the possible connection with the contemporary Khurasan. A variety of rope patterns were also used on the polychrome wares at Qal ${ }^{\mathrm{c}}$ a Banu Hammad. ${ }^{26}$

Before we draw any conclusion, it is essential to refer to the chemical examinations which were carried out at Southampton University by Dr. John Riley and by Mr. Muhammad Hamid and Ted Hughes at the West Surrey College of Art and Design at Farnham. These reports were based on seven small fragments of these type of wares which were lent to us by the Department of Antiquities in 1978.

[^23]
## Select Catalogue

MS63-52 Fragment of a vessel, with heart motifs. Mosque, cistern, lower level. $10.3 \times 5.6 \mathrm{~cm}$.
MS63-53 Fragment, with leaves and semicircles. Mosque, north side. $6.8 \times 4.8 \mathrm{~cm}$.
MS63-54 Rim and side fragment of a vessel, heart motifs. Mosque. $9 \times 9 \mathrm{~cm}$.
MS63-57 Base of a vessel, foliated Kufic: "Allah." Mosque. $8.8 \times 2.6 \mathrm{~cm}$.
MS63-58 Base fragment, cross-shaped pattern and circles. Mosque. $9.5 \times 3.7 \mathrm{~cm}$.
MS63-59 Base fragment, floral design. Mosque. $6.7 \times 4 \mathrm{~cm}$.
MS63-62 Base fragment, decor. faded. Mosque, cistern, lower level. $7 \times 6 \mathrm{~cm}$.
MS63-68 Rim and side fragment, heart motifs and semi-palmettes. Site "C", surface $12 \times 8 \mathrm{~cm}$. (Plate 36d)

MS63-69 Rim and side fragment, rosettes. Site "C". $9.5 \times 5.7 \mathrm{~cm}$.
MS63-71 Base fragment, floral motifs. Site "C". $9.5 \times 7 \mathrm{~cm}$.
MSpre-75-83 Base fragment, female figure. Site " A ", surface. $8.5 \times 3 \mathrm{~cm}$.
MS63-84 Base fragment, peacock. Site "C". $15 \times 3.8 \mathrm{~cm}$. (Plate 38b)
MSpre-75-86 Bowl fragment, fish. Site "A", surface. $6 \times 4.7 \mathrm{~cm}$.
MSpre-75-87 Small fragment, palmette. Site "A", surface. $8.3 \times 4.7 \mathrm{~cm}$.
MSpre-75-89 Two frgs., pseudo-Kufic. Site "A", surface.
MSpre-75-90 Base fragment, checked pattern. Site "A", surface. $6.1 \times 3 \mathrm{~cm}$.
MSpre-75-91 Base fragment, five lobed palmettes. Site "A". $7.8 \times 4.3 \mathrm{~cm}$.
MSpre-75-94 Fragment, pseudo-Kufic. Site "A". $1.4 \times 8 \mathrm{~cm}$. (Plate 38c)
MSpre-75-95/a-b Two frgs., pseudo-Kufic. Site "A".
MS77-180 Small fragment, decor. decayed. B26j, layer $2.2 \times 1 \mathrm{~cm}$
MS78-280 Fragments of a jar, A10i, layer 1.
MS78-289 Fragment, part of a human figure, showing raised hand. A10j, layer $1.6 \times 4.5 \times 2 \mathrm{~cm}$. (Plate 36a)

MS78-292 Fragment, with scrollwork. A10j, layer $1.7 \times 5.7 \mathrm{~cm}$. (Plate 38d)
MS78-293 Base fragment, floral design. A10f, layer $1.11 \times 7.5 \mathrm{~cm}$.
MS78-297 Base fragment, floral design. A10i, layer $2.11 .5 \times 3 \mathrm{~cm}$. (Plate 36b)
MS78-308 Rim fragment, heart motifs. B26j, surface layer. $4 \times 3 \mathrm{~cm}$. (Plate 38e)
MS78-317 Rim fragment, heart motifs. C25a, layer 1. $4.1 \times 3.3 \mathrm{~cm}$.
MS78-318 Fragment with circles and part of a palmette. C25a, ext. $7 \times 5 \mathrm{~cm}$. (Plate 37f)
MS78-320 Rim fragment with heart motifs. A10h, top layer. $7.3 \times 4.8 \mathrm{~cm}$.

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MS78-329 Base fragment, with peacock. A10h, layer 1.
MS78-338 Fragment with row of arcades and intertwined scrolls. A10f, layer 1.
MS78-340 Base fragment, with checked pattern. A10f, layer 1. (Plate 38a)
MS78-346 Rim fragment, with human head in profile. A10h, top layer. (Plate 36c)
MS78-347 Fragment, with palmette. A10h, layer 1.
MS78-354 Rim fragment, with intertwined ovals. A10c, layer 1. (Plate 38f)
MS78-361 Rim fragment, with pseudo inscription. A10g, layer 1.
MS78-369 Base fragment, with peacock and scroll-work. A10g, layer 1. (Plate 40a)
MS78-370 Rim fragment with heart motifs. A10g, layer 1.
MS78-371 Rim and side fragment, intertwined ovals and palmettes. A10g, layer 1. (Plate 40b)
MS78-372 Base fragment, with fish and cross-hatchings. A10g, layer 1.
MS78-382 Base fragment, w. inscription reading: "Allah". A10i, layer 3. (Plate 37d)
MS78-416 Fragment with inscription "fi". A10c, layer 1. (Plate 37e)
MS79-441 Fragment with peacock? A19d, layer 1.
MS79-442 Fragment with part of palmette. A19d, layer 1.
MS79-447 Jar fragment A19c, layer 2. $4.5 \times 4 \mathrm{~cm}$
MS79-448 Fragment with peacock. A19c, layer $2.4 .5 \times 4 \mathrm{~cm}$
MS79-453 Base fragment, overlapping ovals. A19e, layer 1.
MS79-472 Handle fragment A10e, layer 2. Length 6 cm
MS81-487 Rim fragment, intertwined scrolls and palmettes. A19g.
MS81-488 Rim fragment with human figure. A19g.
MS81-494 Rim fragment, heart motifs. A19f.
`MS81-528 Spout of a lamp. A19g. Length: 5.6 cm .
MS81-541 Rim fragment with heart motifs. A19g.
MS81-543 Rim and side fragment, heart motif and scroll-work. A19g.
MS81-570 Fragment of a large plate with heart motifs and floral design. A1, baulk 0f-9f. Diam. 17 cm , ht. 3.6 cm . (Plate 40c)

MS81-593 Rim fragment with heart motifs. A19g.
MS81-628 Base fragment with a lion's paw. A18f. (Plate 40d)
MS81-639 Base fragment with rosettes. A18g.
MS81-641 Rim fragment with circles and lines. A18h.

MS81-644 Fragment of a lamp with handle. A19h, well $1.5 .8 \times 4.8 \times 3.9 \mathrm{~cm}$.
MS81-645 Base fragment with animal. A19h, well $1.9 \times 6 \mathrm{~cm}$.
MS81-647 Rim fragment with roundels and floral motifs. A19h. $8 \times 7 \mathrm{~cm}$.
MS81-648 Rim fragment w. lines. A18f. $5.4 \times 5 \mathrm{~cm}$.
MS81-652 Rim fragment with intertwined scrolls. A18f. $7 \times 7 \mathrm{~cm}$.
MS81-667 Rim fragment with heart motifs. A1, baulk $0 \mathrm{~h}-9 \mathrm{~h} .8 .8 \times 6.7 \mathrm{~cm}$.
MS81-668 Lower part of vessel with conical leg. A19h. Diam. 9.5 cm ; ht. 5 cm .
MS81-683 Base of a bowl, with palmettes, cypress tree and cornucopia. A1, baulk $0 \mathrm{j}-9 \mathrm{j}$. Diam. 13.5 cm ; ht. 2.3 cm .

## A4 Monochrome glazed wares

Monochrome glazed wares were not numerous on the site, but they present a wide variety both in their glazes and in their chronology. The earliest among them appears to be a small blue-green piece, probably of alkaline glaze which has a lustrous surface and is decorated with pressed wedge-shaped patterns and with a zig-zag line (MS63-4). It was excavated from the lowest level of the cistern. This type is very similar to the so-called Sasano-Islamic or bluegreen alkaline glazed vessels and it may be of early date, possibly of the Umayyad or early ${ }^{\mathrm{c}}$ Abassid period.

A similar early piece is the rim fragment which was found in our excavations outside the northwest corner of the mosque in 1977. It has a light blue glaze, which again could be alkaline and is decorated with series of pressed lines forming chevron patterns (MS77-179) (Plate 40e).

Several green glazed fragments were excavated in the mosque. One of these was found in the same lowest level in the cistern (MS63-36), while the base of a green glazed bowl came to light in the sanctuary (MS63-40)(Plate 40f). Two more such fragments were also found in the courtyard. An interesting find in the courtyard was the lump of green glaze (MS63-43). It could be a kiln waster which may have been brought into the mosque from the city. That is perhaps the first indication that glazed wares were produced at Surt. Four fragmentary green glazed lamps have also been excavated in the mosque (MS63-45 to 6349). Another lamp of similar shape and glaze was found on the surface of the southwest fort (site "A", MS75-79).

The upper part of a jug, which still retains traces of green glaze was found on the site (MS63-41)(Plate 40 g ). It has a tall cylindrical neck, tall handle, attached to the edge of the shoulder and to the middle part of the body.

Most of the other pieces were coated with green glaze and came to light in the excavations either outside of the mosque, at its northeast corner or on the Central Mound. There were only a few exceptions, like MS78-358 and MS81515, which were covered with a brownish-yellow glaze.

In 1981 a much finer green glazed fragment came to light from the baulk of $0 \mathrm{~h}-0 \mathrm{~g}$ (MS81-477). Both the paste and the glaze are similar to twelfththirteenth century monochrome glazed wares of Iran and Egypt. It was most likely part of an imported object.

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## Catalogue

MS63-04 Fragment of a green glazed vessel, lustrous surface. Mosque, cistern, lower level.
MS63-36
Fragment of a green glazed vessel. Mosque, cistern, lower level. $5 \times 4.8 \mathrm{~cm}$.
MS63-37/a-b Two small green glazed fragments. Mosque. $3.6 \times 4.2$ and $4 \times 2.9 \mathrm{~cm}$.
MS63-38
Fragment of a green glazed plate. Mosque. $15.7 \times 3.6 \mathrm{~cm}$ small separate piece $3.7 \times 7 \mathrm{~cm}$.
MS63-40
Base of a green glazed vessel. Mosque, south side. $5.6 \times 3.5 \mathrm{~cm}$. (Plate 40 f )
MS63-41
Neck, shoulder and handle fragment of a green glazed jug. Mosque. Ht. 11.7; Diam. 7 cm . (Plate 40g)

MS63-42 Fragment of a green glazed vessel. Mosque. $5.5 \times 5 \mathrm{~cm}$.
MS63-43 Lump of green glaze. Kiln waster? Mosque. $4.5 \times 4 \mathrm{~cm}$.
MS63-44 Fragment of a green glazed vessel. Mosque. $6.7 \times 2.5 \mathrm{~cm}$.
MS63-45 Pottery lamp, traces of green glaze, spout broken. Mosque. $9 \times 5.1 \times 2.5 \mathrm{~cm}$.
MS63-46 Pottery lamp, traces of green glaze, spout missing. Mosque. $6.3 \times 6 \times 2.6 \mathrm{~cm}$.
MS63-47 Pottery lamp, traces of green glaze, spout missing. Mosque. $7 \times 6.6 \times 3.6 \mathrm{~cm}$.
MS63-49 Fragment of pottery lamp, green glazed. Mosque, west corner. $7.4 \times 3.6 \mathrm{~cm}$.
MS63-74 Button, green glazed, broken into two, repaired. Site "A". Diam. 3.3cm.
MSpre-75-79 Lamp fragment, traces of green glaze. Site " $A$ ". $8.7 \times 3 \mathrm{~cm}$.
MSpre-75-81 Base fragment of a tin glazed vessel. Site "A". $4.2 \times 4 \mathrm{~cm}$.
MS77-179 Rim fragment of a tin glazed vessel. Sector A, B26a, layer $2.7 .5 \times 2.7 \mathrm{~cm}$. (Plate 40e)
MS77-185 Glazed fragment, green glaze. Sector A, C26a, layer $1.3 .5 \times 2.3 \mathrm{~cm}$.
MS77-212 Small glazed fragment. Sector A, C26a, layer 2. $2.2 \times 1.7 \mathrm{~cm}$.
MS77-221 Tin glazed fragment. Sector A, C26a, layer $3.4 \times 4 \mathrm{~cm}$.
MS77-227 Neck fragment of a monochrome glazed vessel. Surface find, mosque area.
MS78-271 Base of a green glazed vessel. Sector A, C25a, top layer.
MS78-335 Base and side fragment of small green glazed bowl.Central Mound, A10i, top layer.
MS78-358 Monochrome glazed fragment with brownish-yellow glaze and relief decoration. A10i, layer 1.

MS78-368 Fragment of a green glazed bowl. A10g, layer 2.
MS78-413 Fragment of a large green glazed dish, found in two pieces; restored. A109c, pit 1.
MS79-423 Base of green glazed vessel. A10e, layer 1. Diam. 10.5 cm .
MS79-440 Four pieces of a green glazed vessel. A19e, layer 1.
MS81-477 Fragment of a green glazed vessel, alkaline glaze, probably imported from Egypt or Iran. A10h-0g. $9.5 \times 9 \mathrm{~cm}$.

MS81-515 Handle fragment with a brownish glaze. A19f, layer $3.5 .2 \times 4 \mathrm{~cm}$.
MS81-539 Rim fragment of a green glazed vessel, found in two pieces. A19e. $6.7 \times 5.5$ and $3.5 \times 3 \mathrm{~cm}$.
MS81-540 Fragment of a green glazed vessel, with remains of a handle. Al9g. $6.8 \times 5.5 \mathrm{~cm}$.
MS81-542 Base fragment of a green glazed bowl. A19g. Diam. 6.7 cm .
MS81-545 Knob, green glazed. A19h, well 1.3 cm .
MS81-546 Rim fragment of a green glazed vessel. A19g, cistern $3.3 .2 \times 3.2 \mathrm{~cm}$.
MS81-566 Base fragment of a green glazed vessel. A19h, cistern 5. Diam. $4.8 \mathrm{~cm}, \mathrm{Ht} .2 .4 \mathrm{~cm}$.
MS81-650 Fragment of a lamp, yellowish-green glaze. A18f. $5 \times 3.5 \mathrm{~cm}$.
MS81-661 Base fragment of a yellow-brown glazed bowl. A19h, well 1.

## A5 Lustre-painted wares

One would justifiably expect a large number of lustre wares from a Fatimid site. Unfortunately that was not the case at Surt, and we could add, at any other Fatimid site in Libya. Fatimid lustre-painted pottery is either completely absent or is represented only by tiny fragments. At Surt, prior to our investigations, no example of this ware was discovered. Our first two fragments came to light in summer, 1977. The first piece was a tiny fragment (MS77-224), but its paste was similar to those of Fatimid lustre from Egypt. It was found in the trench on the east side of the major "north-south" wall in layer 4 (MS77-223). Although it is again a small piece, but its body differs from those of Fatimid lustre wares of Egypt, so perhaps we are faced here with a Mesopotamian monochrome lustre piece.

There are no lustre finds either in 1978 or in 1979, but several small pieces came to light in the excavations on the Central Mound in 1981. The first example was a comparatively large piece, the base of a bowl (MS81-571). The second piece was more interesting, since the shape of the vessel indicates that perhaps it was a waster. It seems to be part of a jug or a cup (MS81-604). The third specimen was discovered in three small fragments (MS81-605/a-c), but they were found close to the previous example and they may have been part of the same vessel. The next two pieces could have been part of a lustre-painted vessel (MS81-662/a-b). Although no traces of lustre decoration was visible on their surfaces, their paste and glaze was identical to the previous examples, therefore they could have been decorated this way.

## Catalogue

MS77-223 Small lustre fragment, Sector A, C26a, layer $4.3 .2 \times 2.2 \times 0.6 \mathrm{~cm}$.
MS77-224 Small lustre fragment, Sector A, B26j, layer $2.3 .8 \times 3 \times 0.5 \mathrm{~cm}$.
MS81-571 Fragment of a lustre-painted bowl. A18g, layer 2. Diam. 4.7 cm ; Ht. 1.6 cm .
MS81-604 Fragment of a lustre-painted vessel, probably of a jug. Waster? A1/baulk $0 \mathrm{~g}-9 \mathrm{~g} .6 .7 \times 5.5 \mathrm{~cm}$.
MS81-605/a-c 3 fragments of a tin glazed, probably lustre-painted vessel. A1/baulk $0 \mathrm{~g}-9 \mathrm{~g} .4 \times 2.7 \mathrm{~cm}$.
MS81-662/a-b 2 fragments of tin glazed, probably lustre-painted vessel. A1 $/ 8 \mathrm{e}-9 \mathrm{e} .5 \times 3$ and $3.8 \times 3.3 \mathrm{~cm}$.

## AB Unglazed wares

As in any excavation, the majority of excavated pottery was unglazed. They may be of local provenance, although so far neither kiln, nor any kiln waster of these types were discovered. The unglazed wares, according to their paste, may be divided into the following groups:

AB 1 wares with lighter paste,
AB2 red or pink wares and
AB3 kitchen wares with dark red, grey or black body.

## AB1 Wares with lighter paste

The body of these wares varies widely from light grey to buff; to this category we can also add those objects which have light green paste. This is a special clay in the locality and, as we have already mentioned above in Chapter II, it was frequently used for making compacted floors in the houses of Surt. This may also be evidence that this type of ware was manufactured locally.

Although most of the excavated pieces, prior to the 1981 season, were found in small fragments, we were able to distinguish several types of vessels by the end of our first season in 1977. This primary classification was later corroborated by the 1981 finds, when complete or near complete vessels of each of these types were discovered.

There is very little evidence for open vessels. We have only one type that we can confidently identify and reconstruct; a wide mouthed jar of comparatively modest size (average 15 cm in height and $10-12 \mathrm{~cm}$ in width), with a short spout and a small handle opposite. The body is globular, tapering towards the base, recessed shoulder and short vertical neck. Outside the vessels were covered with a white slip or just with a thin white wash. The body has series of compressed concentric grooves. The shoulder may be plain, but a few examples are decorated with incised wavy lines, as e.g. the fragmentary piece MS81-642. An almost complete jar of this type came to light during our fourth season from well no. 1 (MS81-642)(Plate 41a).

Of the closed forms, the most common type of vessel was a jug which has a globular body, resting on a shallow foot-ring, tall opening neck. At the base of the neck inside there is a filter. The filters, of which several examples were found, were exploited as possible areas for decoration. Accordingly the small and large openings of these filters were grouped in different ways to be decorative. These jugs have short handles, such as e.g. MS78-417(Plate 34a). Sometimes when only the filter and part of the neck was found, it was difficult to say whether they also had a handle as e.g. MS78-379(Plate 34b).

Another type of jug has a pear-shaped body on a low foot-ring, a tall cylindrical neck and a somewhat tall and straight handle, which is attached to the edge of the sloping shoulder and to the middle part of the neck. Several such fragments came to light at Surt and a complete piece in 1981 (MS81537)(Plate 41b). This latter piece has a light green paste.

Finally, the major group in this category: oil lamps. They have either light buff, grey or frequently a greenish paste. These lamps were comparatively small hand-lamps with a circular body on a flat base, long pointed spouts and curled handles (MS81-535)(Plate 41c). They were made in two parts; the upper part and the lower part moulded separately, then fixed together. The

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fragment of an upper part came to light during the fourth season in 1981 (MS81-513)(Plate 41d).

Another category of these light coloured unglazed wares had painted decoration. The designs are confined to vertical lines and these were painted either in brownish-red or occasionally in yellowish-brown or mustard colour. Several fragments of these came to light, but they were all small shards and therefore, it is impossible to say what kind of vessels were made in this type.

## Select Catalogue

MS63-22 Fragment of a small jar. Mosque surface. Ht. 7.7; diam. 4.7 cm .
MS63-02 Base and side fragment of small vessel. Mosque, cistern, lower level. $7.5 \times 8.7 \mathrm{~cm}$.
MS63-27 Fragment of a vessel. Mosque, cistern, lower level. $7.5 \times 7.4 \mathrm{~cm}$.
MS63-29 Handle. Mosque, cistern. $10.5 \times 4.7 \mathrm{~cm}$.
MS63-75 Filter fragment Site "A". Diam. 11.5; Ht. 4.7 cm .
MSpre-75-78 Rim and shoulder fragment, combed decor. Site "A". $10.5 \times 8 \mathrm{~cm}$.
MSpre-75-114 Upper part with the handle of a jug. Site "A". $11.5 \times 8.2 \mathrm{~cm}$.
MSpre-75-117 Three fragments of a filter. Site "A".
MSpre-75-119 Rim fragment with incised wavy lines and lobed lip. Site "A". $6 \times 9 \mathrm{~cm}$.
MSpre-75-123 Shoulder and rim fragment Site "A". $17.8 \times 14.7 \mathrm{~cm}$.
MSpre-75-131 Neck, shoulder and handle fragment of a jug. Site "A". Ht. 8.2; Diam. 6 cm .
MS77-220 Fragment of an unglazed vessel. B26j, layer 2.
MS78-277 Decorated shard. B26j, layer 2.
MS78-300 Fragment with part of a handle. A10i, layer $2.12 .5 \times 9 \mathrm{~cm}$. (Plate 41e)
MS78-305 Neck of a vessel. A10a, layer $2.3 .8 \times 2.7 \mathrm{~cm}$.
MS78-306 Fragment of a vessel with handle remain. A10a, layer $2.8 .5 \times 9.6 \mathrm{~cm}$.
MS78-307 Neck and shoulder fragment with handle remain. A10b, layer $1.10 \times 8.5 \mathrm{~cm}$.
MS78-311 Base fragment, found in two pieces. A10f, layer 1.
MS78-314 Filter fragment A10h, top layer. $10.5 \times 5.3 \mathrm{~cm}$. (Plate 41 g )
MS78-321 Handle of a vessel. A10a, surface. $12 \times 4.3 \mathrm{~cm}$.
MS78-324 Neck and shoulder fragment A10h, top layer. (Plate 41f)
MS78-336 Neck and shoulder fragment of a large jar. Restored. A10c, layer 1.
MS78-341 Shoulder fragment with combed decoration. B10j, layer 1.
MS78-342 Shoulder fragment with pressed lines. A10i, layer 2.
MS78-343 Spout and shoulder fragment of a pilgrim-flask. A10i, layer 2. (Plate 42a)
MS78-344 Fragment of a filter. 10i, layer 2.

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MS78-352
MS78-363
MS78-379
MS78-383
MS78-385
MS78-386 Cylindrical neck fragment, with two handle remains. A10g, top layer.
MS78-387 Lid fragment, with knob. A10g, top layer.
MS78-396 Handle with thumb-piece. C25a, extension.
MS78-399 Shoulder and spout fragment of a pilgrim-flask. A10h, top layer.
MS78-414 Lamp, broken into two. A10c, Pit 1, -150cm. (Plate 42b)
MS78-417 Jug fragment, neck, shoulder and filter. A10c, layer 2. (Plate 34a)
MS79-419 Lid. A10c, layer 1. Diam. 7; Ht. 5 cm .
MS79-445 Pilgrim-flask fragment with spout. A10c, layer 1.
MS79-452 Jug fragment with filter. A19d, layer 1. Diam. 6.2; Ht. 3.7 cm .
MS81-475 Fragment of a vessel, with inscription; ibqal, "prosperity". A19g. $6 \times 3.6 \mathrm{~cm}$.
MS81-478 Neck and shoulder fragment of a jug. Al/Oh-0g. Diam. 13; Ht. 10cm. (Plate 42c)
MS81-497 Rim of a vessel.A1/0i-0j. $7 \times 4 \mathrm{~cm}$.
MS81-498 Part of a handle. A1/0i-0j. $5.4 \times 5 \mathrm{~cm}$.
MS81-499 Base of a vessel. Al/0i-0j. $7.5 \times 3 \mathrm{~cm}$.
MS81-500 Shoulder fragment, with remains of a handle.A1/0i-0j.4.8 x 4.5 cm .
MS81-501 Neck fragment of a vessel. A1/0i-0j.4.5 x 5 cm .
MS81-508 Base of a vessel of green clay.A1/0g-0h. $8.2 \times 6.5 \mathrm{~cm}$.
MS81-513 Top part of a lamp, green clay.A19i, layer 4. (Plate 41d)
MS81-525 Lamp spout fragment. A19h. $3.7 \times 3 \mathrm{~cm}$.
MS81-535 Pottery lamp, complete.A19h, well $1.9 \times 7 \mathrm{~cm}$. (Plate 41c)
MS81-537 Small jug with handle, complete, green paste.A19h, c. $4 . \mathrm{Ht} .15$; Base diam. 5.5 cm . (Plate 4lb)
MS81-559 Neck and shoulder fragment with handle.A1/0e-9e.L. 5 cm .
MS81-563 Upper part of a jug, with two handles.A19h, cistern 5.Diam. 19.2; Ht. 15 cm . (Plate 42d)
MS81-595 Lid fragment of a cooking pot.A19f. Diam. 7.5; Ht. 3 cm .
MS81-642 Water jug with handle.A19h, well 1.Ht. 15.5; Diam. 15cm. (Plate 41a)
MS81-676 Fragment of a large jar.A19h, well 1.Diam. $33 ; \mathrm{Ht} .25 \mathrm{~cm}$.
MS81-677 Fragment of a large jar.A1/0b-9b. $26 \times 24.5 \mathrm{~cm}$.

## AB2 Red or Pink wares

They were more numerous than the light coloured wares. They fall into two basic types:
(a) very coarse and thick bodied wares and
(b) thin and finer bodied vessels.

Type (a) the very coarse and thick bodied wares were mainly used for storage jars and jugs. The jugs vary in size from small to extremely large vessels, such as those that were discovered in situ in the porch of the mosque. While some of the large pieces may be plain, without any decoration, the smaller ones were decorated with pressed lines or heavily incised with wavy lines. In one instance we found both of these combined and also two bands of "rope" designs in relief. Furthermore, the small examples had a white slip on the exterior, occasionally inside of the vessels as well. The shoulder and neck fragment of one such jar still retains its handle and as we can observe on the photograph, was coated with a white slip (MS78-285)(Plate 35d). Most of these jars, as far as we can judge from the excavated samples, had recessed bases, like e.g. MS78-312 (Plate 42e).

An almost complete jug with filter was excavated in 1981 (MS81-512, Plate 42 f ). Its handle is attached to the upper part of the body and to the neck. It has a small conical thumb-piece on top of the handle. Several such fragmentary handles with similar thumb-pieces were found on the site, which could have been part of similar filtered jugs. The fragmentary neck and handle fragment (MS78-300) (Plate 41e) may have also been part of a similar vessel.

Several fragmentary hand-lamps, similar to those of the light-bodied ware, have also been excavated. Most of these had a white slip on the outside (MS63-26, 79-421, 79-427, 79-449 and 81-562 (Plate 43a)).

## AB3 Kitchen Wares with dark red, grey or black body

This type was mainly used for cooking vessels. The most popular of these was the flat-based cylindrical, upward tapering pot, which had two grip-handles just below the rim. Fragments of such a cooking pot came to light in almost every season, like e.g. MS77-258 (Plate 43b). Several other fragments were found to have been restored with holes and copper joining wires intact.

Another type of cooking pot were those with rounded shoulders and a concentrated opening with short vertical rims. The shoulder was usually decorated with a series of incised semicircular lines, such as the fragmentary piece which had two grip-handles (MS81-479).

A number of lids have also been excavated. Unfortunately none of them were complete but each of them had a tall conical knob on top, like MS78-387. 14.2 cm .

MS63-23 Base of a vessel. Mosque. $4.8 \times 3.8 \mathrm{~cm}$.
MS63-26 Fragment of a lamp, coated with white slip. Mosque. $6 \times 3.7 \times 3 \mathrm{~cm}$.

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MS63-28 Base of a jar, fragmentary. Mosque, cistern, lower level. $16 \times 8.3 \mathrm{~cm}$.
MS63-77 Frgs. of a vessel with handle. Site"A".
MSpre-75-116/a-c Three fragments, painted in brownish-red. These fragments are very similar to the unglazed Umayyad pottery excavated in Jordan and Syria. Site "A".

MSpre-75-118 Unglazed fragment with stamped decoration. Mosque. $6.5 \times 3.8 \mathrm{~cm}$.
MSpre-75-124 Fragment of a lid. Site "A". Diam. 8.3; Ht. 3.4 cm .
MS77-258 Cooking pot, fragmentary, verified from several pieces. Test trench, layer 2. (Plate 43b)
MS78-284 Shoulder and rim fragment, with grip-handle. A10a, layer $1.14 .5 \times 6 \mathrm{~cm}$.
MS78-285 Shoulder and neck fragment with handle. A0a, layer $1.12 .5 \times 10.5 \mathrm{~cm}$. (Plate 35 d )
MS78-294 Fragment of a vessel with red paint. A10i, layer $1.13 .2 \times 10.5 \mathrm{~cm}$.
MS78-298 Fragment of a large jar. A10a, layer 2. $23 \times 23 \mathrm{~cm}$.
MS78-299 Fragment with a handle. A10i, layer $2.10 \times 6.5 \mathrm{~cm}$.
MS78-312 Base fragment found in five pieces. Restored. A10f, layer 1. (Plate 42e)
MS78-313 Shoulder and rim fragment of a cooking pot with grip-handle. A10h layer $1.10 \times 6 \mathrm{~cm}$
MS78-319 Frgs. of a large jar. A10h, layer 1. (Plate 35b)
MS78-325 Shoulder fragment with handle, found in several pieces. Restored. A10f, layer 2.
MS78-330 Shoulder and rim fragment of a cooking pot. A10h, layer 2.
MS78-337 Black cooking pot, found in several pieces. A10h, layer 2.
MS78-350 Fragment of a pottery lamp. A10j, layer 2.
MS78-356 Cooking pot in several fragments, iron wire in place for original repair. A10f, layer 1.
MS78-357 Cooking pot, found in several fragments. A10f, layer 2.
MS78-364 Rim and shoulder fragment, white slip, pressed lines. A10i, layer 1. MS78-366. Pestle, white slip. A10i, layer 1. (Plate 34d)

MS78-376 Lid with conical knob. A10g, layer 1. (Plate 43c)
MS78-377 Lid, with knob. A10g, layer 1. (Plate 43d)
MS78-384 Neck and filter fragment with handle remains. A10g, top layer.
MS78-390 Base of cooking pot. C25a, surface.
MS78-393 Base of a vessel, found in three pieces. Restored. C25a.
MS78-398 Large jar fragment with graffiti: li-ltaghaffur (?). A10c, layer 1. (Plate 35a)
MS78-400 Rim fragment, lobed lip, wavy lines. A10h, layer 2.(Plate 43e)
MS78-403 Neck and shoulder fragment of cooking pot with grip-handle. A10f, top layer.

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MS78-410 Rim and shoulder fragment A10f, top layer.
MS78-411 Fragment with handle remain. A10f, top layer.
MS79-421 Lamp, with white slip. A10e, layer 1.
MS79-427 Lamp with flat handle. A12c, layer $1.1 \times 6.5 \times 5 \mathrm{~cm}$.
MS79-429 Fragment of a large jar, restored. A10e, layer $1.25 .5 \times 19 \mathrm{~cm}$.
MS79-443 Fragment with handle. A19d, layer $2.8 .5 \times 7.6 \mathrm{~cm}$.
MS79-444 Fragment with handle. A19d, layer $1.13 .6 \times 6.5 \mathrm{~cm}$.
MS79-449 Fragment with handle. A10d, layer $2.5 .2 \times 4 \times 3 \mathrm{~cm}$.
MS79-450 Base fragment A10d, layer $2.4 \times 2.7 \mathrm{~cm}$.
MS79-455 Lid fragment with knob. A10e, layer 1. Diam. 9.3; Ht. 5.5 cm .
MS79-457 Fragment of a jar, restored. A19d, layer 3. Ht. 13.8; Diam. 9cm.
MS79-469 Rim fragment with grip handle. A10d, layer $2.11 .6 \times 8.5 \mathrm{~cm}$.
MS81-479 Fragment of a cooking pot. A19g. Diam. 19cm. (Plate 35c)
MS81-512 Jug with filter, fragmentary. Restored. A19i. Ht. 19; Diam. 11.4cm. (Plate 42f)
MS81-562 Half of a lamp, white slip. A19h, cistern $5.8 .4 \times 2.6 \mathrm{~cm}$. (Plate 43a)
MS81-564 Shoulder and neck fragment of a cooking pot. A19h, cistern $5.10 .5 \times 9 \mathrm{~cm}$.
MS81-587 Lid of a cooking pot. A19h, cistern 4. Diam. 20; Ht. 6.5 cm .
MS81-684 Fragment of a vessel with inscription, found in two pieces. Restored. A18g. $12.5 \times 8 \mathrm{~cm}$.
AC Miscellaneous, non-Islamic pottery
There are a few small excavated fragments which were not of Islamic origin. These included two Roman terra sigillata fragments. One of them had a wheel motive in relief (MS78-327). It was excavated on the Central Mound. The other piece is a base fragment of a vessel and came to light outside the mosque (MS78-328).

There was also an imported Chinese celadon fragment (MS78-359). It was found on the Central Mound. Although it is a small piece, yet, we were able to see that it may have been part of a cylindrical box.

## Catalogue

MS78-327. Small fragment of a terra sigillata ware, on the surface with a wheel design in relief. A10j, layer 1 .

MS78-328. Base of a terra sigillata ware. 2C5a, outside wall.
MS78-359. Small fragment of a celadon cylindrical box. A10g, top layer.

## Petrological Analysis of Selected Glazed Wares: Preliminary Report

by Dr. John Riley

## The Samples

A total of seven samples from the excavations at Medinet Sultan (SUR 1, 2, 3, 5, 9, 10 and 11) were analysed in thin section using a petrological microscope to identify the rocks and minerals within the clay (from the method see Riley, 1979)(Plate 39). ${ }^{23}$

## Summary of Results

All the samples had a composition compatible with a local sedimentary origin, comprising varying proportions of quartz and carbonates. On the basis of these proportions, three fabrics could be distinguished, all of which paralleled with similar pottery from the excavations at Ajdabiya.

Examination of the glaze and its application to the body produced interesting results. There is no evidence of a slip applied before the glaze. However, the glaze is unusually rich in quartz.

## The Fabrics

Fabric 1 (Sur 1, 3, 5, 9)
In the hand, this fabric is a pinkish rose-red, often fired cream at the edges, sometimes reduced to grey (as SUR5). This corresponds by eye with the commonest polychrome glaze ware from Ajdabiya.

In thin section, petrological examination revealed regular, moderately sorted, sub-angular to sub-rounded quartz grains, of average frequency $c$. eight per millimetre square. The size ranges from $0.1-0.2-0.4 \mathrm{~mm}$ across with larger grains occasionally reaching $c .0 .8 \mathrm{~mm}$ across. The largest grains are often rounded. There are regular carbonate voids (traces of limestone etc. are visible around the inside edges); these average 0.3 to 0.4 mm across. In addition, there is occasionally cherty matter and some argillaceous material.

Within the group there is some minor variation: for example, SUR 5 has better sorted quartz than the rest (average size 0.1 mm with an average frequency of $c .10$ per millimetre square); also SUR 9 contains a higher proportion of carbonates (c. 12 per millimetre square). This does not seem very significant a difference, although a much larger sample could contradict this.

This fabric is very similar to that of the most common fabric for the polychrome glazed wares at Ajdabiya (as Riley, 1979: P108), and it is highly likely that each group has a common origin.

## Fabric 2 (SUR 2, 11)

In the hand, the fabric appears similar to that of fabric 1, although SUR 2 has a more compact cream fabric.

A petrological examination reveals a better sorting of quartz grains than in fabric 1 , with consistently larger grains (averaging $0.2-0.3 \mathrm{~mm}$ across). These are mainly sub-rounded, although there are occasional larger pieces (to 0.8 mm

[^24]across) which are usually rounded. There are few carbonates or carbonate voids. This fabric is paralleled at Ajdabiya (Riley, forthcoming, No. 28; P145 = Glazed Ware Type 6).

## Fabric 3 (SUR 10)

In the hand, the fabric is a fairly compact biscuit cream ware.
In thin section this is very distinctive and easily distinguished from the other fabrics as it has a dense proportion of well sorted ( $0.1-0.2 \mathrm{~mm}$ across) quartz grains (frequency of about 25 per millimetre square). The grains are sub-angular to sub-rounded. There are virtually no carbonates.

The fabric is matched at Ajdabiya by a unique sherd (Riley, forthcoming, no. 30; P154 = Glazed Ware Type 8).

## Discussion of Fabrics

The seven Medinet Sultan samples fall clearly into three fabric groupings, representing three different clay preparation methods, or three different clays. All are from a sedimentary source and the rounding of the larger grains (caused by wind) confirms a North African source for Fabrics 1 and 2. A precise origin remains elusive. Quartz and carbonates are constituents of North African pottery from the west of the Nile to western Tunisia. A large number of Roman amphoras made in Tripolitania and Tunisia have been analysed in thin section, and although these contain varying proportions of quartz and carbonates, no firm matches could be found for the recipes presented in Medinet Sultan Fabrics 1-3. These areas cannot be excluded as a possible origin, but this cannot be proved.

## The Glazes

The glaze of all except for SUR 10 was examined. In all cases, there is no indication of prior smoothing of the surface before application of the glaze, or of a previously applied slip. In all cases the underlying surface is rough. The glaze of those samples of Fabric 1 was thick, varying from $0.1-0.2 \mathrm{~mm}$ thick. These also contained a varying quantity of sub-angular quartz grains of thickness $0.05-0.1 \mathrm{~mm}$ across. This is unusual. The two samples of Fabric 2 had a much thinner glaze ( 0.05 mm thick), and, again there was no evidence in thin section of a previously applied slip, or paint.

## Report by Mr. Muhammad Hamid and Ted Hughes <br> (West Surrey College of Art and Design, Farnham)

## SUR 2

Earthenware body, as the particles are not fused together nor do they have a glassy appearance. From the lightness of the body colour, it seems likely that the clay contains lime as this would account for the bleaching of the body colour. Relatively low density points to a low temperature firing, probably between $950-1050^{\circ} \mathrm{C}$.

The clay was thrown into some kind of bowl shape, and then dipped or brushed with a slip. The inner surface has been decorated with two colours on the white ground. The green pigment is consistent with the colour produced by a reaction between a lead-based glaze and a copper compound, while the brown is consistent with the colour produced by a manganese compound in
conjunction with a lead glaze. It is impossible to tell, from the visual evidence alone whether the copper was painted on or under the glaze, but the directional running of the colour with the glaze indicates that the vessel was fired standing on its rim. Concerning the manganese, this is not such a strong flux. Again it is difficult to tell whether it has been put on a slip, applied when the pot was still damp or painted on or under the glaze. The former seems likely.

## SUR 1 MS

The vessel probably possessed tall slightly flaring walls. The light-coloured earthenware body shows finer characteristics than that of SUR 2. Again white clay slip. With this shard, the copper green has been applied over the manganese pigment painted on the white ground. The glaze is therefore lead based. The greenish yellow tinge is either due to a small amount of copper or a slight reduction which took place in the firing; it would be necessary to check for the presence of carbon particles in the body, if found then the latter theory is correct.

Bearing in mind that, for reasons of economy, this type of ware was probably rawglazed (i.e. only fired once), we suggest the manganese was painted onto the white slip, then glazed with the copper being sprinkled or splashed on to the unfired glaze; this technique would have prevented the copper from smudging the manganese as a layer of raw glaze would separate the two pigments.
SUR 3
Again an earthenware, tan-colour body containing white flecks, a sign of the presence of lime. Again white slipped. A greenish-tinged glaze is apparent on both sides, but the tone is more yellow. This would indicate the presence of alkali in a mainly lead glaze, which is further suggested by the purplish hue of the manganese.

## SUR 9

A very red earthenware body which points to the presence of iron, or the lack of lime, or both, in the body. A thin wash of white slip on both sides. The shade of the black lines and the green show a typical reaction of manganese and copper under a lead glaze. Applied in the same manner as SUR 2.
SUR 10
A very light body, both in colour and in weight, again suggesting a lime content in the earthenware body. The slip-glaze appears "sick", that is it has an opalescent quality brought about by the attack of the acids and alkalis in the soil in which it was found. The manganese black lines have a well developed colour, and this with the traces of copper green point to the use of a lead glaze.
SUR 11
The body and slip, as for SUR 10. From the green-blue response of the copper we suggest the glaze contained both lead and alkali.

## Conclusion

We suggest SUR 11 is later in date than the other shards examined here, as it represents a more sophisticated technique; likewise SUR 9 and 10 with their "black" pigment indicate a comparative later date.

## B) Metalwork

Although large numbers of metal objects came to light during our excavations at Surt, the majority of these were iron fragments. Most of them were small and very rusty, like e.g. MS79-438; a larger piece was possibly part of a sword (MS81-476). There was also an iron buckle (MS81-611). Every iron fragment, except the very tiny ones, were carefully recorded and photographed.

On the Central Mound large amounts of iron slag came to light during our third and fourth season's work. This slag (MS79-434, 81-552, 81-580, 81-599, 81-600, 81-634, 81-638, 81-663 and 81-672) was concentrated in squares $9 \mathbf{c - 9 h}$ and $\mathbf{8 e} \mathbf{- 8 h}$, suggesting that there may have been, in this area an iron furnace and workshop. As we have already shown, this part of the site must have been the madina of the city of Surt, with shops and workshops.

Of the bronze objects, which were also numerous, the most interesting pieces were the hair pins: MS78-310, 78-326, 78-331, 81-483, 81-630 and 81-640. These are very similar to those which came to light in several Islamic sites in North Africa, Egypt and also Iran. One of the hair pins (MS78-326) had a decorated central part with incised lines.

In 1978 we found a bronze finial with archaic Kufic inscription, reading Allah. It was found outside the mosque (MS78-422). Judging from the style of the script, it must date either from Umayyad or from early ${ }^{\text {c }}$ Abbasid times, i.e. second century AH/eighth centuryAD.

Another unusual find was a copper plaque with punched decoration (MS79-456, Plate 44a), showing four arcades with dots below and in the outermost right arcade the figure of a serpent. There was a copper pin next to it, so it may have been used a jewellery, probably as a brooch.

From the outside of the mosque comes a circular disc with a ring attached to it (MS79-430) and the fragment of a copper plate (MS79-435). Finally, in 1981 a fragment of a bronze chain was found on the Central Mound (MS81-633).

## Select catalogue

MS63-03 Small leaf-shaped fragment, bronze. Mosque. $3 \times 0.8 \mathrm{~cm}$.
MSpre-75-19 Sword-hilt, bronze, with engraved decoration. Surface find. L. 11.5; W. 3.2 cm .
MS78-310/a-b Two bronze bracelets, one of them rolled. A10h, layer 1.
MS78-316 Large iron nail. A10f, layer 2.
MS78-326 Hair pin, bronze, with decorated central part, head missing. A10f, layer 2. L. 9.5 cm .
MS78-331 Hair pin, bronze, decorated central part, head missing. A10f, layer 1. L. 8.5 cm .
MS78-422 Bronze finial, conical with Kufic inscription reading: Allah. A10d, layer $2.2 .2 \times 2 \mathrm{~cm}$.
MS79-426 Iron blade fragment A19c, layer 1. L. 6.6 cm .
MS79-430 Small bronze disc with ring attached. A10e, layer 1. Diam. 1.5 cm .
MS79-433 Bronze hair pin fragment A19a, layer 2. L. 4 cm .
MS79-434 Lump of iron. A19c, layer 3.

MS79-435 Copper plaque. A10e, layer $1.2 .5 \times 2.5 \mathrm{~cm}$.
MS79-438 Iron blade fragment, probably of a knife. A19a, layer $2.3 \times 1.5 \mathrm{~cm}$.
MS79-456 Small decorated bronze plaque, punched decoration of four arcades and a serpent; copper pin was attached. A19c, layer 1. Plaque: $2.9 \times 1.5$; pin L. 4.5 cm . (Plate 44a)

MS79-460 Small bronze bead. A19a, layer 2. Diam. 0.5 cm .
MS79-464 Iron nail. A19d, layer 2.
MS79-466 Iron nail. A19a, under the fire pit. L. 6.7 cm .
MS81-476 Fragment of a dagger or a sword, iron. A19j. L. 12 cm .
MS81-483 Head of a make-up or hair pin, bronze with incised decoration. A19g. L. 3.3 cm .
MS81-533 Piece of flat iron, probably part of a blade. A19h, cistern $4.5 .6 \times 2.5 \mathrm{~cm}$
MS81-554 Iron slag. A19h, well 1.
MS81-579 Wire fragment, bronze, twisted. A19h.
MS81-580 Iron slag. A19h.
MS81-599 Iron slag. A1/baulk 0d-0e.
MS81-600 Iron slag. A1/baulk $0 \mathrm{~h}-9 \mathrm{~h}$.
MS81-611 Buckle, iron. A1/baulk 0i-9i. $5 \times 3.2 \mathrm{~cm}$.
MS81-630 Fragment of a hair or make-up pin, bronze. A1/baulk 0e-9e.
MS81-633 Chain fragment, bronze. A18f.
MS81-634 Iron slag. A18e.
MS81-638 Iron slag. A18h.
MS81-640 Fragment of a hair or make-up pin. A18f. L. 4.6 cm .
MS81-658 Nail head fragment, iron. A19h, cistern 4. Diam. 2.3cm.
MS81-663 Iron slag. A1/baulk $0 \mathrm{~b}-9 \mathrm{~b}$.
MS81-666 Blade fragment of a dagger or a knife. A1/baulk 8f-9f. L. 13.7 cm . (Plate 44b)
MS81-672 Iron slag. A18f.
MS81-682/a-c Three iron frgs. of various sizes. A18e.

## C) Glass and Glass weights

The amount of glass that was recovered in our excavation was considerable. Most of it, however, was very small. A few pieces nevertheless revealed that they may have been the products of an important Fatimid glass centre. One such outstanding piece was the fragment with mould-blown decoration, excavated outside the mosque (MS78-283). Another piece from the second season was a base fragment with cut design (MS78-295, Plate 44c), excavated on the Central Mound. The base of a
heptagonal glass bottle came to light in the same area (MS78-301). Two other cut glass fragments were also excavated in the same year and area (MS78-397/a-b) and the shoulder fragment of a ribbed green glass (MS78-404). Another item in the same area, the wall fragment of a ribbed green bottle (MS78-405) (Plate 44d), was probably part of the same vessel as the previous base. Two further bases of perfume flasks were found also on the Central Mound (MS79-437, MS81-556) and an attractive lobed base was likewise recovered (MS81-615).

All the above items are of medieval date. It was therefore interesting to discover, during the excavations of the Third or Qibli Gate, the fragments of a modern Italian perfume bottle (MS81-654), to which we have already referred to above.

Our excavations produced three complete and one fragmentary glass weights. Unlike most of the Fatimid glass weights, none of these have any inscriptions. Yet, their shapes, sizes and weights are identical to those that are known from Fatimid times. The first such glass weight (MS77-236, Plate 44e) came to light outside the mosque, in the trench on the eastern side of the major north-south wall. The second example (MS79-425) was found in our thirds season's work on the Central Mound; the third specimen (MS81-594) was under the baulk of 0d-0e, while the fourth (MS81-609), which is only half of a weight, was lying under the baulk of $\mathbf{0 h} \mathbf{- 9 h}$. (For the location of these glass weights cf. fig. 12, where they are marked with a black dot.)

The discovery of several large pieces of glass slag, one inside the mosque (MS6325) and all the others on the Central Mound within a small area, was very significant. On the Central Mound the slags were located in the following squares: MS81514 under baulk 9c-9d, MS81-598 in square 8g, MS81-584 in 8h and MS81-860 under baulk $0 \mathrm{i}-9 \mathrm{i}$. Thus most of these were excavated close to square 8 d where a circular structure was unearthed and what we identified as a glass furnace. ${ }^{23}$ It was here where large amounts of calcite were found. It is not suggested here that the finely decorated glass fragments were manufactured locally, although it is quite possible. We simply propose that certain kinds of glass vessels and objects, probably the more simple ones, may have been manufactured in Surt.

## Select catalogue

MS63-25 Lump of glass, kiln waster (?). Mosque.
MS77-236 Glass weight. C26a, layer 4. Diam. 2.4 cm . (Plate 44e)
MS78-283 Small glass fragment with mould-blown decoration. C25a Ext.
MS78-295 Base fragment of a glass vessel with cut decoration. A10b, layer $2.5 .5 \times 3.5 \mathrm{~cm}$. (Plate 44c)

MS78-301 Base of a heptagonal glass bottle. A10h, layer 1. Diam. 2.7; Ht. 2.7cm.
MS78-348 Base of a glass vessel with cut decoration. A10g, top layer.
MS78-353 Fragment of a glass vessel with mould-blown decoration which could be a bird. A10f, layer $3.5 \times 3.5 \mathrm{~cm}$.

MS78-397/a-b Two glass fragments, with cut decoration. A10c, layer 1.

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MS78-404 Shoulder fragment of a ribbed glass vessel. A10g, layer 1.
MS78-405 Base and side fragment of a ribbed greenish-blue glass vessel. A10g, layer 1. (Plate 44d)
MS79-425 Glass weight. A12c, layer 1. Diam. 2.5 cm .
MS79-437 Perfume-flask fragment, base part. A19d, layer $2.2 .2 \times 1.8 \mathrm{~cm}$.
MS79-439 Glass base fragment A19d, layer $3.3 \times 1.5 \mathrm{~cm}$.
MS81-493 Base fragment of a glass bottle. A19e. $2.1 \times 1.5 \mathrm{~cm}$.
MS81-514 Glass slag. A1/baulk 9c-9d.
MS81-556 Base fragment of a perfume-flask. A1/baulk $0 \mathrm{e}-0 \mathrm{f} .20 \times 16 \mathrm{~cm}$.
MS81-572 Half of a glass bead, brownish-green glass. A18g, layer 2. Diam. 1.9 cm .
MS81-573 Glass slag. A18h.
MS81-575 Base fragment of a green glass vessel. A1/baulk 9e-9f. $4.5 \times 4 \mathrm{~cm}$.
MS81-584 Glass slag. A18h.
MS81-594 Glass weight. A1/baulk 0d-0e. Diam. 2.8 cm .
MS81-597 Base fragment of a glass vessel. A18h. $3 \times 2.8 \mathrm{~cm}$.
MS81-598 Glass-slag. A18g.
MS81-602 Fragment of a glass vessel with mould-blown decoration. A1/baulk $0 \mathrm{~h}-9 \mathrm{~h} .3 .4 \times 4.3 \mathrm{~cm}$.
MS81-608 Base fragment of a glass. A1/baulk 0i-9i. $2.8 \times 1.9 \mathrm{~cm}$.
MS81-609 Fragment of a glass weight. Al/baulk $0 \mathrm{~h}-9 \mathrm{~h} .2 .4 \times 1.9 \mathrm{~cm}$.
MS81-610 Glass slag. A1/baulk 0i-9i.
MS81-615 Base fragment of a lobed glass vessel. A18f. $4 \times 3.6 \mathrm{~cm}$.
MS81-622 Base fragment of a glass cup and several small frgs. A18f. Diam. 4.8; Ht. 1.9cm.
MS81-654 Three fragments of a modern, probably Italian perfume bottle. B/E4/9g.

## D Coins (Plate 45)

Reference has already been made above to the coin which was found in Dr. Mohammad Mostafa's excavation in 1965/66 south of the mosque. The coin, as he stated, bears the name of the Fatimid Caliph al-Mu'izz. Unfortunately the fate and the whereabouts of this coin is not known. According to our colleagues, after the excavations in 1966 it was taken to Tripoli. Therefore it may be in the stores of the Museum of Islamic Art.

Prior to Dr. Mohammad Mostafa's excavation in 1965/66 and during the long interval of 1966 and 1977 , i.e. before our excavations began, several coins were collected from various parts of the site. They include two Roman bronze coins, Fatimid gold dinars and silver dirhams, Hafsid gold and silver coins, Ottoman bronze coins and even a coin from Paraguay, dated 1870!

During our four seasons work at Surt only four coins came to light and a fifth one was brought in from Sultan village. The first two coins were excavated in 1978 on the Central Mound:
$\begin{array}{ll}\text { MS78-268 } & \text { a Fatimid bronze coin, in square } \mathbf{0} \mathbf{j} \text { and } \\ \text { MS78-315 } & \text { a Fatimid silver dirhem, bearing the name of Caliph al Hakim, found in square } \mathbf{0 h} .\end{array}$
One coin was excavated in 1979:
MS79-462 a Fatimid silver-plaited bronze coin in square $\mathbf{0} \mathbf{j}$. It was then that a bronze coin was found and handed in from Sultan village: an illegible bronze coin. Finally, from the fourth season comes our last coin:
MS81-538 another illegible bronze coin.

## E Miscellaneous objects

There are a few finds that do not fall into any of the categories discussed above. Some of them are important or interesting and should therefore be discussed. Few of these objects came to light prior to our own excavations in 1977. Amongst these was a window-glass fragment embedded in plaster (MS63-1). It was excavated by Abdussaid in the sanctuary of the mosque. A second, almost identical fragment was found on the surface of the mosque just before we began our archaeological work in summer, 1977 (MS77-178). These two small fragments may have been used in the windows of the mosque and reveal to us that the glass panels were embedded in plaster frames.

From the outside of the mosque comes an inscribed stone with plaster stuck to it (MS78-270). It was in the trench to the northeast of the mosque. The inscription unfortunately is illegible. There was another stone there in the same trench, with some carved decoration (MS78-392).

On the Central Mound a textile fragment came to light (MS78-374). Unfortunately it was too fragile and too dusty to see its decoration properly or to indicate what it may have been.

A carnelian bead, with remains of a copper wire attached to it, came to light again outside in the trench northeast of the mosque (MS78-401). Another carnelian bead was excavated on the Central Mound (MS79-432). Our only example of a seal, made of amber, with the name Muhammad incised in Kufic, was also there during the last season (MS81-522). There was also a polished stone (MS81-527), most likely used for games.

An extremely interesting piece is another polished stone, but this time a larger one in the shape of a ball (MS78-415). It could have been used as either a weight, or as a missile with a catapult.

The most remarkable find, however, was a comparatively large, egg-shaped green nephrite jade (MS81-618). It was found under the baulk of $\mathbf{0 i - 9 i}$, resting on the top of a wall. The presence of a jade on a Fatimid site is somewhat surprising. Although a similar piece came to light in Ajdabiya during the excavations in 1981. It is difficult to explain its purpose. Particularly as it has no traces of any carving or decoration on it. It has a smooth, highly polished surface, but is broken at one end. We can offer only one plausible explanation for its function: it is well-known that Islamic paper-makers and scribes used to polish and burnish their paper with semiprecious stones, including jade. Since this jade was found in the centre of the city, in the madina, where workshops and shops are concentrated, it is possible that it was used, not necessarily by a paper-maker, but by a scribe polishing his material.

## FEHÉRVÁRI ET AL

## Select catalogue

MS63-01 Window-glass fragment, embedded in plaster. Mosque, sanctuary. $6.5 \times 3 \times 2.5 \mathrm{~cm}$.
MS77-178 Window-glass fragment, embedded in plaster. Mosque surface. $7.5 \times 5 \mathrm{~cm}$.
MS77-228 Clay bead. C26a, level $4.3 \times 3 \mathrm{~cm}$.
MS77-248 Piece of plaster decoration. Test trench inside the sanctuary, layer $2.9 .5 \times 9.5 \mathrm{~cm}$.
MS78-270 Stone with inscription and plaster pieces. C23a. $18 \times 19 \times 7 \mathrm{~cm}$.
MS78-374 Textile fragment. A10g, layer 1.
MS78-392 Decorated stone. 2c5a.
MS78-401 Carnelian bead, with remains of a bronze wire. 2c3a, layer 1.
MS78-415 Stone ball, used either as a weight or as a missile for a catapult. A10c.
MS78-420 Quartz fragment A10e, layer $1.3 \times 2.5 \times 1.5 \mathrm{~cm}$.
MS79-432 Carnelian bead, conical with small hole. A10e, layer $3.0 .9 \times 0.6 \mathrm{~cm}$.
MS79-446/a-bTwo flints. A19d, layer 1.
MS79-465 Plaster fragments., painted in red. A19d, layer 2.
MS81-520 Large shell, found in several frgs. A19h.
MS81-522 Seal fragment, amber, with inscription: Muhammad. A19h. $0.9 \times 0.8 \mathrm{~cm}$.
MS81-526 Flint. A19h. Diam. 5.5 cm .
MS81-527 Polished stone, used in games.A19h. Diam. 3.2 cm .
MS81-534 Animal skull, probably of a rabbit. A19h, cistern 4.
MS81-567 Large shell. A19h, cistern 5.10 cm .
MS81-583 Ostrich-egg-shell fragment. A18h. $2.6 \times 1.7 \mathrm{~cm}$.
MS81-592 Large piece of flint. A18h, top layer. $5 \times 3.7 \mathrm{~cm}$.
MS81-596 Half of an egg-shaped marble. A1/baulk $0 \mathrm{~h}-9 \mathrm{~h} .6 .5 \times 5.5 \times 2 \mathrm{~cm}$.
MS81-606 Large piece of black fossil. A19f. $8 \times 3.6 \times 3 \mathrm{~cm}$.
MS81-618 Egg-shaped nephrite jade, green, one end broken. A1/baulk 0i-9i. $6.7 \times 4.2 \mathrm{~cm}$.
MS81-619 Bead, amber. A18f. Diam. 0.6cm.
MS81-620/a-c Three ostrich-egg-shell fragments. A18f.
MS81-623 Grey stone with Kufic inscription, reading: Bismillah. A18h. $9.5 \times 8.5 \mathrm{~cm}$.
MS81-632/a-e Five pieces of flint of different sizes. A18f.
MS81-646 Pink flint-stone. Al/baulk $0 \mathrm{~g}-9 \mathrm{~g} .7 \times 6.5 \mathrm{~cm}$.
MS81-685 Large piece of calcite. A18e. $6 \times 5.7 \mathrm{~cm}$.

Plate 34


Plate 34a. (MS78-417)


Plate 34c. (MS78-352)


Plate 34b. (MS78-379)


Plate 34d. (MS78-364)


Plate 34e. (MS78-378)

Plate 35


Plate 35a. (MS78-398)


Plate 35c. (MS81-479)


Plate 35e. (MS65)


Plate 35b. (MS78-319)


Plate 35d. (MS78-285)


Plate 35f. (MS early 70s)


Plate 36a. (MS78-289)


Plate 36c. (MS78-346)


Plate $36 e$. Glass fragment


Plate 36d. (MS63-68)


Plate 36f. Bronze weight

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Plate 37


Plate 37a (MS81-653)


Plate37c (MS81-649)


Plate 37e (MS78-416)


Plate 37b (MS78-290)


Plate 37d (MS78-382)


Plate $37 f$ (MS78-318)


Plate 38a. (MS78-340)


Plate 38c. (MS75-94)


Plate 38e. (MS78-308)


Plate 38b. (MS63-84)


Plate 38d. (MS78-292)


Plate 38f. (MS78-354)

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Plate 39


Plate 39

Plate 40


Plate 40a. (MS78-369)


Plate 40b. (MS78-371)


Plate 40c. (MS81-570)


Plate 40d. (MS81-628)


Plate 40e. (MS77-179)


Plate 4Of. (MS63-40)


Plate 40g. (MS63-41)

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Plate 41


Plate 41a. (MS81-642)


Plate 41b. (MS81-537)



Plate 41f. (MS78-324)


Plate 41g (MS78-314)

Plate 42


Plate 42a. (MS78-343)


Plate 42c. (MS81-478)


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Plate 43


Plate 43a. (MS81-562)


Plate 43c. (MS78-376)


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Plate 43b. (MS77-258)


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Plate 43f. (MS81-587)


Plate 44a. (MS79-456)


Plate 44c. (MS78-295)
 "----"


Plate 44d. (MS78-405)


Plate 44e. (MS77-236)

## Plate 45



Plate $45 a$.


Plate $45 c$.


Plate $45 b$.


Plate 45d.

## Conclusion

By Géza Fehérvári

The Archeological work at Surt (Medinet Sultan), which was carried out under the direction of Dr. Mohammad Mostafa and Mr. Abdulhamid Abdussaid in the midsixties, revealed the North and West gateways of the city and part of the city walls. It has also uncovered the Great Mosque, which was attributed to the early Fatimid period, that is to the fourth century $\mathrm{AH} /$ tenth century AD.

The excavations, which were carried out on the site under the joint auspices of the Department of Antiquities of Libya and the Society for Libyan Studies between 1977 and 1981, were intended to continue and to extend the earlier works. The joint excavations concentrated first of all on the mosque area, where trenches were opened both inside and outside the building. These were intended to provide answers to some of the outstanding questions connected with the mosque. First of all to present evidence for the history of the building. It was also intended to excavate the large Central Mound, where Abdussaid's trial excavation revealed a number of walls and brought to light numerous glazed and unglazed pottery shards.

As regards to the mosque, our excavations clarified most of the problems. Furthermore, it became evident that there were three phases in the history of the building:

Phase I, a considerably smaller building, the only part of which survived is the central part of the present day porch. It must have served as a qibla wall. This small mosque could have been erected almost at any time after the foundation of the city of Surt. In Chapter I, Professor Hamdani tries to show that this actually happened during the early ${ }^{\text {c }}$ Abbasid period, i.e. during the second half of the eighth century AD.
Phase II was the enlargement of the early mosque. This work attributed, on historical grounds, to the Fatimid Caliph al-Mu ${ }^{\text {cizz }}$, sometime between his accession in $341 \mathrm{AH} / 952 \mathrm{AD}$ and prior to the invasion of Egypt $355 \mathrm{AH} / 965$ $A D$. It was at that time that the mosque was built in the form as we know it today. It was also at that time that the area behind the earlier qibla wall was filled up and on which the present sanctuary was built. The plan of the mosque is typical of Fatimid mosques in Ifriqiya and the closest parallels are those of Mahdiya, Zwila and Ajdabiya.

Phase III presents the period of decline and therefore only minor alterations. These works may have been carried out after the Beni Hilal and Beni Suleym invasion in $443 \mathrm{AH} / 1051 \mathrm{AD}$, when the population of the city was drastically reduced. By then, Surt had lost its original role and importance. The work on the mosque included the closing of one of the double entrances on the west side, the blocking of the central and the two extreme entrances to the sanctuary. It was also at that time that the eastern part of the qibla wall, the east and west walls had to be straightened, due either to destruction during the invasion, or to severe earthquake. At a later date, after the
final abandonment of the city, nomads settled in the area and for habitation broke up the unity of the riwaqs by dividing walls into smaller cells or rooms. These nomads also used the area as a burial ground.

The excavations outside at the northeast corner of the mosque revealed a major wall running in an east-west direction and then meeting another one, which had a northeast-southwest alignment. This wall had to be strengthened by a buttress as it was leaning outwards. The alignment of the second major wall, the northeast-southwest wall, suggested that it actually runs under the mosque. That was found, however, not to be the case, since it suddenly turned at a right angle towards the east and continued as a pise wall. Then it came to an abrupt end. These two major walls most likely pre-date the Fatimid mosque of al-Mucizz, but their original purpose is now impossible to determine. However, they still must have been in good state of preservation when the mosque was built, since the service buildings of the mosque, namely the ablution area, a latrine and a store-room (Rooms 1, 2 and 3) were attached, but not bonded, to these walls.

The work on the Central Mound was most rewarding. This mound did not cover, as Goodchild and Abdussaid suspected a large building or buildings, but was the heart of the town, the madina. Large numbers of cisterns, one well, cess-pits and numerous bread ovens were located and excavated. Thousands of glazed and unglazed shards and several complete unglazed vessels came to light, together with iron, bronze and glass fragments. Several of these were decorated. A large number of iron and glass slag were found which indicated local manufacture of glass and iron. The remains of a furnace, most likely for glass, was located with a large quantity of calcite in the same area. The numismatic evidence suggests an early Fatimid date for this area. There was, however, evidence for an earlier occupation here, i.e. in the time of the early ${ }^{\text {c }}$ Abbasids and Aghlabids.

Finally, the hard winter of 1980/81 revealed a corner of the city in the southeast part. The limited excavation there brought to light the remains of the Third or Qibli gate, which was mentioned by Arab historians. At a later date this gateway was walled up. This third gate is very close to the Southwest Fort. Thus by the end of our fourth season in 1981 all the three gateways to the city were uncovered.

The Islamic city of Surt was, even at its peak during the middle and second half of the tenth century AD, a modest settlement. It was, however, a prosperous city, a commercial centre with several workshops. All these were possible because the town had its own harbour in the nearby lagoon. Life was possible here since the town had water, partly collected in cisterns, partly because it had a few wells. There were fruit and vegetable gardens around. Traces of these were visible, as Goodchild has pointed out. Surt was an important place and played an eminent role in the Fatimid invasion of Egypt. It was a military and possibly also a naval base, a staging and supply post between Tunisia and Egypt. After the Fatimids occupied Egypt and transferred their centre to Cairo, they lost interest in Ifriqiya. The Beni Hilal and Beni Suleym invasion was more a revenge than a serious attempt to recover the lost territories in the west. Cities and sites like Surt, had fulfilled their role before and at the time of the occupation of Egypt. They were no longer important. As professor Hamdani points out in Chapter I, Surt declined not because of the Hilalian invasion, but because it lost its role, given to the city by the Fatimids. The Hilalian invasion was only the final blow.

The archeological work at Surt is far from complete. Any future work should concentrate on the Central Mound, where the already uncovered areas should be extended towards the north and the south. Work there will most likely reveal more shops and workshops, streets and private houses. The area around the Qibli gate likewise deserves more attention. The connection between this gateway and the Southeastern Fort should be investigated. Another important area that deserves attention is the North Fort, where several walls and the outline of a round tower are visible.

The excavations at Surt have greatly enhanced our knowledge of the life, material culture and history of Ifriqiya, particularly during the early Fatimid period.

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## مدينة سنطان

وفي الأخير نود أن تشير إلى أن فصل الشتاء المطير 1981/1980 قد كشّ النقاب عـــن الركــن
 البوابة الثالثة - بوابة القبلة - الثّي سبق وأن أشار إليها المؤرخون العرب قبل أن بتّ إغلا
 اللوسم الختّامي لهذه الحفريات (1981) تّ النّرن على البو ابات الثلاث الخاصة بالمدينة.

وخلاصة القول إن مدينة سرت الإسلامية كانت عبارة عن مدينة صغيرة حتــى خـــال أوج فـــترات
 تجاريا تمارس فيه إلى جانب ذلك بعض الأنشطة الصناعية، وكل هذا كان ممكنا بسبب تمتعها بميناء خــاصـا


 سرت بموقع هام ولعبت دورا بارزا في سيطرة الفاطميين على مصر، فتدا كانت قاعدة عسكرية وربما بحريــة






 ثلتك الهجرة إلا آخر سهم قضي على المدينة.

ويبقى أن نقول أن أعمال الحفر والنتقيب عن آثار سرت لم تكتمل بعد، وأن ایى عمل يتّم مستقبلا فـي
 فالحفر هناك سيؤدي في اغلب الظن إلى اكثيّان المزيد من المتاجر والورش والشوار ع ومنــــازل الأهـالـي، كما أن المنطقة المحيطة بيوابة القبلة هي الأخرى في حاجة إلى المزيد من الاهتمام. ويجب إضافة إلى ذلـــكـ دراسة العلاةة بين هذه البوابة والحصن الجنوبي الشُرقي كذلك هناك موقع آخر جدير بالدراســـــــة والاهتّــام وهو موقع الحصن الشُمالي حيث يتضح للعيان عدة جدران وآثّار لبرج دانئري الشُكل هناك.
 والتاريخية لشمال أفريقبا خصوصا إيان العهـ الفاطمي المبكر.

 شيبوب اللذان كانا مسئولين عن المصلحة إثناء تفيذ مشروع هذه الحفريات وإلى رئيسها الحالي الأستاذ/علـ

 بالشكر إلى جمعية الار اسات الليبية على المساعدات المالبة التي تُتدت بها خلال العمل الميداني وإثناء أعـداد هذا النتّرير




















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## مدينة سلطان



 المرحة الاؤلمى:
IT:






 |lo प̈tor

 وقد قام البروفيسور/غيزا فيهرفاري بناءا على دعوة من رئيس مصلحة الآثار يومئذ الدكتور (صـــلاح






 وفي عام 1975 وجهت مصلحة الآثّار دعوة لللبروفيسور لوسيان غولفين (Lucien Golvin) مـن



## سينة سلطنـن

## مدينة سلطان

 طرفي الجدار الأمامي لبيت الصـلاة واللذين تّم اعتبار هما كعلامةُ على تُوسعة المسجد.


 الاستفسارات من المهام الأساسية للحفريات المشتركة بين مصلحة الآنّار وجمعية اللراســـــات الليبيــة واللــــي سنتطرق إليها في الفصل الثاني من هذا التُقرير .
 في المرتفع الذي رمز إليه قود تشايلد في خريطتّه بحرن (C) وكان الأخير يعتّد بأن هذا الموقع كان مكانـــــا
 عدد كبير من قطع الفخار المصقول والخشن، ولكن نظرا لضيق وقت موسم الحفريات ثلك ومحدودية برنـــلمج العمل بات السيد/عبدالحميد عبدالسيد غير قادر ساعثئذ على تحديد هويةَ ما عثر عليه، إلا أنه أشـــار عمومــا

 عام 1978.


 وبالتالي إلى وحداتها السكنية وحماماتها ومو اقع أسو اقها ...ألخ".

 مصطفى في عمله بسرت في شهر ناصر ( يوليو) عام 1965 بناء على خطة ارتكزت على كتا ولابات البكـــري


 إلى وجود بعض البقايا الاثرية للباب القبلي على بعد ستين مترا شمال الحصن الجنوبي الشُرقي

وباتباع نفس البرنامج السابق فان العمل على طول السور الشماللي قد أسفرعن العثّور علـــى البـــاب
 على بعد 296 مترا من الباب الشماللي و265 مترا من الحصن الجنوبي الغربي.

وقد تبين من خلال عمليات اللتظظيف وإزالة الأتربة من على أسوار المدينةَ بأن تلك الأسوارقد شـــيدت

 مسافات غير متساويةَ و هذه الدعامات هي الأخرى مختلفة الأحجام بين 250 سم مربع × 250 ســـــ مربــعّع و380×250 سم مربع.

ومما تُقدم يمكننا أن نخلص إلى أن حفريات الدكتور/محمد مصبطفى قد أماطت اللـدام عن البوابتيـــن الشــــالية والغربية أما بقية الأسوار فقد قام بتوضيح خط سيرها بألواح من الإسمنت المسلح.






 كبּَ

 Finir !










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{ }^{1} 5^{2} \rightarrow 2 \text { ताइ }
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 of:


## مدينة سلطان

وقام باججراء حفريات في منطقة سرت في 1950/1948. وفي سنة 1952 قــــام الســـلاح الجـوي



 الشرقية، والثانية خريطة مفصلة عن المدينة الإسلامية موضا فيا فيها بقايا التحصينات التي كانت بالمدينة فـ






 يقع في الناحية الغربية من المدينة.

وفي عام 1963 أخذت مصلحة الآثّار على عاتقها أعمال الحفر والتتقيب بالمدينة وأســــندت مهمـــة
 سشايلد الآنف الذكر، وهو المكان الذي يرجح أن يكون موقع المسجد الأعظم، إلا أنه خلال المسوحات المبدئية
 مواصلة أعمال الحفر، علما بأن الانهيار الموجود بوسط المكان قد يسهل عمليات التنقيب لاحقا.
 في الحفر فيها عثر على حجر مسوى ولوحات عليها كتابات بالخط الكوفي البارز، كما عثر على قاعدة عمـا عـود وغرفة دفن تحت الأرض ذات حجم كبير . ولقد أسفرت الحفريات المتّابعة عن وجود مبنى قائم بذاته والـــــي تيين أنه المسجد الأعظم بالمدينة.



 الغربي. علما بأن المدخل الكائن بالجانب الغربي مزدوج تّوسطه دعامة.

ومقارنة بباقي جدران المبنى فإن الجدار الشمالي يعتبر سميكا إلى حد كبير إذ يبلغ سمكه نحــو مــــر

 عند الناحية الشمالية الغربية للحصن داخل الرواق كتلة مسنطيلة الشكل بنيت من الحجارة مـي

 حرن (L) في الزوايا تاركة فيما بينها خمس فسحات. وفي الرواق ون عند واجهة بيت الصـلاة هنــــــاك حنيتـــان

 رغم ششابهها مع تصميم المحراب، إلا أنه كان لها غرض آخر وهو وضع جرار المياه الكبيرة التي اكتشـــفت

## مدينة سلطان

## حفريات سرت (مدينة سلطان) 1981/1977

 خليج سرت تثريبا وذلك على بعد 55 كم إلى الشرق من مدينة سزت الحالية، و على مسافة 5 كبلومتر ات مـن


 الغرب و450 أربعمائة وخمسين مترا من الشمال إلى الجنوب، وهي تغطي مساحة قـر ها ها





 اتصالاته مع مصر والجزيرة العربية، وربما كان موقع الحامية خارج المدينة المذكورة، فإذا انطلقنا من هـــــا
 اللاحقة.

 الحفريات ألأثرية الني أجريت في المدينة قبل عام 1977.
 الانطباعات التّي سجلت في العصر الحديث عن المنطقة، حيث قاما بزيارة المدينة في عام 1821 وذكرا فـــي

 (Barth وأنشّينا الرومانية وسرت الإسلامية.وفي عام 1881 هام رحالة الماني آخر يدعي فروند (Freund) بزيارة المنطقة وكتب تُريرا مفصـلا عما وفق عليه من بقايا أثرية.

وأثنّاء الاحتّلال الإيطالي قام ضابط ايطالي يدعى لويدجي شـــير اتا (Luigi cerrata) باســتطالع
 دراسة أجريت عن مدينة سرت قبل الحرب العالمية الثانثية دراسة أينوري روسي (Ettore Rossi) التّ نشرت في الطبعة الأولى من دائرة المعارن الإسلامية، حيث أشار بشيء مـــــن الاقتضَـــاب إلــى المراجــع التاريخية التي تُعرضت اللمنطقة مع ذكر ملاحظاته الخاصة عن بقاياها الالثرية.

وبعد الحرب العالمية الثانية اصبح شمال ليبيا تحت إدارة عسكرية بريطانية، وتم إنشاء مصلحة تُنـــي





## حفريــــــــات سرت <br> (مدينة سلطان) <br> 1977-1981

اعداد
غيزا فيهرفاري
عباس حمداني
مسعود شقلوف
هال بيشوب

جون رايلي / محمد حامد / تي يغس
تحرير : اليز ابيث سافاج
ترجمة: مصطفى عبدالله الترجمـان

نش
مصلحة الأثار، الجماهيرية التربية الليبية الشعبية الالشتُراكية العظمى جمعية الاراسات الليبية بلثند، بريطانيا

#  (مدينة سلطان) 

1977-1981




[^0]:    ${ }^{1}$ In modern times the name Medinat al-Sultan was used for this site and earlier archaeological references also mention it under the name. The original name was, however, Surt and that is how Arab historians and geographers refer to this place. The modern city of Sirt has no connection to this site. It is of Ottoman origin which borrowed its name from the bay.
    ${ }^{2}$ For these references cf. R. G. Goodchild, "Medina Sultan (Charax - Iscina - Surt). A Preliminary Note," Libya, vol. I, 1964, 100-01, nts. 7-10.
    ${ }^{3}$ Goodchild, Ibid., 101, nt. 11-15.
    ${ }^{4}$ F. W. and H. W. Beechey, Proceedings of the Expedition to Explore the Northern Coast of Africa, London, 1828, 169-71.
    ${ }^{5}$ H. Barth, Wanderungen durch die Kustenlander des Mittelmeeres, Berlin, 1847, vol. I, 334-35, also note on pp. 346 and 377.

[^1]:    G. A. Freund, "Viaggio lungo la Gran Sirte," Pianieri Italiani in Libia, Milano, 1912, 171.
    L. Cerrata, Sirtis, Avellion, 1933, 209-12.

    Ettore Rossi, "Surt", Encyclopedia of Islam, First ed.
    Cf. notes 2 and 3 .
    ${ }^{10}$ Abdulhamid Abdussaid, "An Early Mosque at Medinat al-Sultan", Libya Antiqua, vols. III-IV, 1966-67, pp. 15560, pls. XLI-L.

[^2]:    ${ }^{11}$ Abdussaid, ibid., p. 156, pl. XLIVa..
    ${ }_{12}$ This theory was tested, as it will be shown, during the 1977 and 1978 campaigns.
    ${ }^{13}$ Abdussaid, ibid. pl. XLVIa.

[^3]:    ${ }^{14}$ Mohammad Mostafa, "Excavations at Medinat al-Sultan. A Preliminary Report", Libya Antiqua, vols. III-IV, 1966-67, p. 150.
    ${ }^{15}$ Abdussaid, ibid.
    ${ }^{16}$ Abdussaid's personal communication to the authors.
    ${ }_{17}$ The results of these excavations are presented in Chapter II, section 4.
    ${ }^{18}$ Mostafa, ibid. p. 145.

[^4]:    ${ }^{19}$ Mostafa, ibid. p. 149.
    ${ }^{20}$ Mostafa, ibid. p. 150, fig. 2.
    ${ }^{21}$ Mostafa, ibid. p. 150, fig .3.
    ${ }^{22}$ Mostafa, ibid. p. 150, fig. 4.

[^5]:    ${ }^{1}$ Richard Goodchild, "Medina Sultan (Charax Iscina, Surt), A preliminary note", Libya Antiqua. I. 1964, 133-42.
    ${ }^{2}$ Goodchild, 134, 141 accepting Barth's identification of earlier sites made in 1846.
     in the Bibliotecha Geographorum Arabicorum, (henceforth BGA), ed. M. J. Geoje. VIII, Leiden 1892 (reprint 1967), 344-46. Cf. H. H. Abd al-Wahhab, "Ajdabiya", Encyclopedia of Islam (new edition).
    ${ }^{4} \mathrm{Al}-\mathrm{Ya}{ }^{\mathrm{c}}$ qubi, in the passage quoted, states clearly that the Mazata were Ibadi Kharijites. Since the Fantas are derived from them, they would also have belonged to the same sect. It is quite likely that Ibadi Kharijism would have been the common link between the three tribal groups of Surt, at least in the pre-Fatimid days. It must also be noted that the Mindasa came to the Surt region from the environs of Tahirt where they had previously helped in the establishment of the Ibadi Kharijite dynasty of the Rustamids.

[^6]:    ${ }^{5}$ Ibn Khurdadhbih, Al-Masalik wa'l-Mamalik, VI, 85, 86, 224 and al-Muqqadasi, Ahsas al-Taqasim fi Ma'rifat alAqalim, III, 245, both of the BGA, Leiden, 1967 (reprint) edition.
    ${ }^{6}$ Ibn Hawqal, Kitab Surat al-Ard, BGA, Leiden, 1967 (reprint) II, 67-68, French translation by J. H. Kramers and G. Wiet entitled: Configuration de la Terre, Paris, 1964, 63-64. Dr. King informs me that he noted the hard sandy ground mentioned by Ibn Hawqal in the description that follows.
    ${ }^{7}$ Kramer and Wiet, introduction, XI.
    ${ }^{8}$ Ibn Hawqal, 67.
    ${ }^{9}$ Al-Bakri (d. $476 \mathrm{AH} / 1083 \mathrm{AD}$ ), who wrote al-Masalik wa'l-Mamalik, a part of which is entitled al-Mughrib fi Dhikr Bilad Ifriqiyah, which was edited by De Slane, Algiers, 1857. Al-Bakri's chief source of information was an inhabitant of Qayrawan, Muhammad ibn Yusuf ibn al-Warraq al-Ta'rikhi (d. $363 \mathrm{AH} / 973 \mathrm{AD}$ ). For al-Bakri's account of Ajdabiya and Surt see p. 5 and 6.

[^7]:    ${ }^{10}$ Mohammad Mostafa, "Excavations in Medinet Sultan, a preliminary report", Libya Antiqua, III-IV, 1966-67, 14554 , particularly p. 150 . Mrs King informed me that during the excavation at the site where she was working, an earlier layer of building was noticed. Besides some building over an older construction, there was certainly considerable extension which has been demonstrated by recent excavations. (Cf. below, Chapter II.)
    ${ }^{11}$ Ibn Hawqal, p. 67.
    ${ }_{12}$ Lisan al-Din ibn al-Khatib (d.776AH/1374AD), A $A^{c}$ mal al-I lam fi man buyi ${ }^{c}$ a qabl al-Ihtilam, Part III, (about the Maghrib), ed. A.M. al-Iyadi and M.I. al-Katbani, Casablanca, Dar al-Kitab, 1964, p. 59.
     Buldan, Paris, 1840, p. 149.
    ${ }^{14}$ Al-Maqrizi (d. $\left.845 \mathrm{AH} / 1441 \mathrm{AD}\right)$, Itti ${ }^{c}$ az al-Hunafa, new Cairo ed. (based on al-Maqrizi's own complete manuscript), by Jamal al-Din Shayyal, vol. I, 1967, p. 96.

[^8]:    ${ }^{15}$ Al-Maqrizi, I, pp. 95-6.
    ${ }^{16}$ Sirat Ustadh Jawdhar, Cairo, 1953, pp. 118-19. Ustadh Jawdhar was the trusted treasurer and administrator for the first four Fatimid caliphs. His diaries were edited under the above title by his secretary Abu ${ }^{\mathrm{c}}$ Ali Mansur al- ${ }^{\mathrm{c}}$ Azizi in the time of the Fatimid Caliph al $^{-}$Aziz (365-86/975-996).
    ${ }_{17}$ Ibid., p. 95.
    ${ }^{18}$ Ibid., p. 114.
    ${ }^{19}$ Ibn Khaldun, (Section on Fatimids), in De Slane's Histoire des Berberes, vol. II, p. 550.
    ${ }^{20}$ Ibn al-Athir, al-Kamil, vol. VIII, p. 246; also quoted in al-Maqrizi, op. cit., vol. I, pp. 237-38, 247; also Ibn ${ }^{\text {c }}$ Idhari al-Marrakushi, al-Bayan al-Mughrib fi Akhbar al-Andalus wa 'l-Maghrib, (composed in 706AH/1306 AD), ed. Dozy, Colin and Levi-Provencal, Leiden, 1948-51, vol. I, p. 230.

[^9]:    ${ }^{21}$ Al-Maqrizi, vol. I, p. 333, on the authority of ${ }^{\mathrm{c}}$ Ali ibn $\mathrm{Sa}^{\mathrm{c}}{ }^{\mathrm{id}}$ al-Maghribi.
    ${ }^{22}$ Al-Maqrizi, vol. I, p. 263; Ibn ${ }^{\text {c }}$ Idhari, op. cit., vol. I, pp. 243-45.
    ${ }^{23} \mathrm{Ibn}{ }^{\text {c Idhari, vol. I, pp. 251-52. }}$
    ${ }^{24}$ Al-Maqrizi, vol. I, p. 285; vol. II, pp. 51-52.
    ${ }^{25}$ Ibid., vol. II, pp. 51-52.
    ${ }^{26}$ Al-Maqrizi, vol. II, pp. 60-67, based on a contemporary source, al-Musabbihi (d. 450/1029). See also Ibn ${ }^{\text {c Idhari, }}$ vol. I, pp. 257-58 and Ibn Khaldun, (Arabic text), vol. IV, p. 58. (De Slane's translation does not reach this portion.)
    ${ }^{27}$ The history of this period has been presented in my article "Some aspects of the History of Libya during the Fatimid period", Libya in History, Beirut, 1970 (pp. 321-348), more particularly pp. 336-9.

[^10]:    ${ }^{28}$ Ibn Khaldun, vol. III, p. 267 and my article cited in note 27 above. Subsequently Michael Brett elaborated this point in his article "The Zughba at Tripoli, 429 H. (1037-8 A.D.)", in the Sixth Annual Report of the Society for Libyan Studies, London, 1974-75, pp. 41-47.
    ${ }^{29}$ Goodchild, p. 136, has translated the word jawf as "north"; and Mohammad Mostafa, p. 147, has misread it as bahri, "facing the sea", which would also indicate north. The gate referred to is actually in the west, hence jawfi, i.e. "towards the land." In both Goodchild's and Mohammad Mostafa's rendering, we get two gates in the north and facing the sea but none in the west. The correct word jawfi in al-Bakri is confirmed by the excavations, as there is a gate in the west, towards the land, i.e. jawf. The excavations also confirm that there is only one gate to the north not two. Mohammad Mostafa describes the great trouble he encountered searching for the second "gate facing the sea" which turned out to be facing west! Mohammad Mostafa mentions the third gate of al-Bakri correctly as qibli (i.e. facing Mecca) which is mentioned by Goodchild only as the "south gate". The former stated that he had seen traces of this qibli gate on the eastern wing of the city wall. However, in the last season of excavation in 1981, Dr. Fehérvári discovered this gate in the south-east outside the third fort in the same direction. (Cf. Chapter II, Part 5.) A section of the road passing through the gate was visible. Otherwise there is no evidence of the city roads.
    ${ }^{30}$ Al-Bakri, pp. 5-6.
    ${ }^{31}$ H. Blake, A. Hutt and D. Whitehouse, "Ajdabiyah and the earliest Fatimid Architecture", Libya Antiqua, vol. VIII, 1971, pp. 105-20, particularly p. 113.
    ${ }^{32}$ Ibid., pp. 108-09; Abdulhamid Abdussaid, "An Early Mosque at Medina Sultan," Libya Antiqua, vols. III-IV, 196667, pp. 155-60, particularly p. 158.
    ${ }^{33}$ Al-Bakri, p. 5 .

[^11]:    ${ }^{34}$ Abdulhamid Abdussaid, p. 158. He says: "The supposition of an octagonal minaret rising from its square base rests mainly in the oblique cutting of two fragments of Kurfic inscriptions found nearby, and one medium-sized stone similarly cut obliquely."
    ${ }_{35}^{35}$ Blake, Hutt and Whitehouse, p. 118.
    ${ }^{36}$ Al-Maqrizi, vol. I, p. 96.

[^12]:    ${ }^{37}$ Mohammah Mostafa, p. 152.
    ${ }^{38}$ As in note 13 above.
    ${ }^{39}$ Al-Bakri, p. 6.
    ${ }^{40}$ Ibid., p. 5.
    ${ }_{42}^{41}$ Al-Maqrizi, vol. II, pp. 51-52.
    ${ }^{42}$ Ibid., vol. II, p. 215.
    ${ }^{43}$ Al-Bakri, p. 6.

[^13]:    ${ }^{44}$ Idem.
    ${ }^{45}$ Idem
    ${ }^{46}$ Idem.
    ${ }^{47}$ See my article, "Some considerations on the Fatimid Caliphate as a Mediterranean Power," Atti del III Congresso di studi Arabi e Islamici, Naples, 1967, pp. 385-96 and "Fatimid - 'Abbasid Conflict in India," Islamic Culture, vol. XLI, 1967, no. 3, pp. 185-91.

[^14]:    ${ }^{48}$ Al-Maqrizi, vol. II, pp. 212-8; Ibn ${ }^{\text {c }}$ Idhari, vol. I, pp. 267-69, 275-80, 289-98; Ibn Muyassar (d. 697AH/1278AD), Ta'rikh Misr, vol. II, (Arabic text), Cairo, 1919, p. 5.
    ${ }^{49}$ This invasion is described in detail by the authors cited in note 48 above; also by Ibn Khaldun in De Slane, Histoire des Berberes, vol. I, pp. 24-29, 34.
    ${ }^{50}$ Al-Maqrizi, vol. II, p. 217.
    ${ }^{51}$ Idem.
    ${ }^{52}$ Ibn Khaldun, vol. III, p. 268.

[^15]:    ${ }^{53}$ Al-Idrisi (d. $561 \mathrm{AH} / 1166 \mathrm{AD}$ ), Nuzhat al-Mushtaq in Opus Geographicum, Naples - Rome, 3rd fasc., 1972, pp. 31415.
    ${ }^{54}$ As in note 13 above.
    ${ }^{55}$ Abu 'l-Fida (d. 732AH/1331AD), Taqwim al-Buldan, Paris, 1840, p. 149.

[^16]:    ${ }^{56}$ Ahmad al-Na ${ }^{\mathrm{c}}{ }^{\mathrm{ib}}$ al-Ansari al-Tarabulsi, al-Manhal al- ${ }^{c}$ Adhb fi Ta'rikh Tarabulus al-Gharb, Tripoli, Maktabat alFarjani (no date), pp. 119-20.

[^17]:    Mohammad Mostafa, p. 149.
    Goodchild, figs. 1-2.
    Mostafa, fig. 4.

[^18]:    ${ }^{4}$ G. Marçais, Manuel d'art Musulman, Paris, 1922, vol. 1, 107-09, 117-18, 130-35; "al-Mahdiya", Encyclopaedia of Islam, vol. III, 121-22; K.A.C. Creswell, Muslim Architecture of Egypt, Oxford, 1952, vol. I, 5-10; Derek Hill and Lucien Golvin, Islamic Architecture in North Africa, London, 1976, 104-05.
    ${ }^{5}$ Creswell, Early Muslim Architecture, 1st ed., Oxford, 1955, vol. II, 248-53; Hill and Golvin, 100-01.
    ${ }^{6}$ Hill and Golvin, 105-6.
    7 H. Blake, A. Hutt and D. Whitehouse, "Ajdabiyah and the Earliest Fatimid Architecture", Libya Antiqua, vol. VIII, 1971, pp. 108-09; also D. Whitehouse, interim reports of the excavations at Ajdabiyah in The Society for Libyan Studies, Third Annual Report, 1971-72, 5-19; Fourth Annual Report, 1972-73, 22-27.
    ${ }^{8}$ H. Ziegert and A. Abdussalam, "The White Mosque of Old Zuila", Libya Antiqua, vols. IX-X, 1972-72, 221-22, 1 fig, and pls. CX-CXI.

[^19]:    ${ }^{12}$ Creswell, Muslim Architecture of Egypt, vol. I, pp. 65-106.

[^20]:    ${ }^{13}$ Blake, Hutt and Whitehouse, 108-09; also Whitehouse, note 7.
    ${ }^{14}$ Ziegert and Abdussalam.
    ${ }^{15}$ Mostafa, 150.
    ${ }^{16}$ Maqrizi, Khitat, vol. II, p. 247; repeated by Yusuf ibn Taghribirdi, Nujum al-Zahira, vol. I, p. 67.
    ${ }^{17}$ Mostafa, 149.

[^21]:    ${ }^{1}$ Mohammad Mostafa, "Islamic Objects of Art", Libya Antiqua, vol. II, 1965, p. 123, no. 2, fig. 2, plate LI/b.
    2 Abdulhamid Abdussaid et alia, "Second season of excavations at El-Medeinah, Ancient Surt," The Society for Libyan Studies, Eighth Annual Report, 1976-77, p. 17, pl. II, also "The Third season of excavations at El-Medeinah, Ancient Surt," Libyan Studies, Tenth Annual Report, 1978-79, p. 8, fig. 4.
    ${ }^{3}$ Cf. below III/9-III/13.

[^22]:    ${ }^{4}$ Helen Philon, Early Islamic Ceramics, Benaki Museum Athens, London, 1980, pp. 35-61.
    5 Arthur Lane, Early Islamic Pottery, p. 12; Geza Fehérvári, Islamic Pottery; a comprehensive study based on the Barlow collection, London, 1973, pp. 35-40.
    ${ }^{6}$ Geza Fehérvári, "Near Eastern wares under Chinese influence," in Pottery and Metalwork in Tang China, Percival David Foundation Colloquy on the Art and Archaeology of Asia, no. 1, edited by W. Watson, London, 1971, pp. 26 -27.
    7 Helen Philion, 41-45.
    ${ }^{8}$ Arthur Lane, "Medieval finds at al-Mina in North Syria," Archaeologia, vol. 87, 1937, pp.19-78.

[^23]:    ${ }^{15}$ Golvin, pls. LXXVI - LXXVII.
    ${ }^{16}$ Mustafa, nt. 1.
    ${ }^{17}$ Golvin, pl. LXXVIII/4.
    18 Jenkins, pp. 94 \& f.
    ${ }^{19}$ Philion, p. 59, no. 127, pp. 91-107.
    ${ }^{20}$ Golvin, op. cit., pl. LXXVII, nos. 5-11.

[^24]:    ${ }^{22}$ J. A. Riley, "The Petrological Investigation of Roman and Islamic Ceramics from Cyrenaica," Libyan Studies, Tenth Annual Report, 1978-79, pp. 35-46.

[^25]:    ${ }^{23}$ One of the glass slags was examined at the Conservation Department of the Institute of Archaeology, University of London, and was found to be that of a waster.

