"A Critical Study of the Pilgrim Road between Kufa and Mecca (Darb Zubaydah) with the Aid of Fieldwork"

Being a thesis presented by

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Volume I: Text

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This dissertation has never been submitted to this or any other University
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Preface

The association of the present work with the subject of this thesis goes back to the late 1960s. I was at that time an undergraduate student at the Department of History, Faculty of Arts, in Riyadh University. In 1968, the Society of History and Archaeology was established at the same department under the direction of Dr. A.A. al-Ansary, who is now the Head of the History Department and Archaeology, and my fellow students selected me to be their permanent representative to this newly born society. Through my association with this society, I came to learn a good deal about the antiquities of Saudi Arabia, and I had an opportunity to join most of the archaeological expeditions sent to various parts of Saudi Arabia, including the areas which are traversed by the track of the Pilgrim Route (Darb Zubaydah). From that moment onwards, I felt that the monuments which I saw along the road deserved a thorough investigation both historically and archaeologically.

From 1971-1972 I was granted a scholarship from the University of Riyadh to do a research on the history and archaeology of the Kufa-Mecca road within the framework of a Ph.D. thesis at the University of Leeds. During the period when my research was progressing, I endeavoured to consult every available source that is connected, directly or indirectly, with the history and geography of Arabia including both classical and modern sources. The material I was able to collect has, I think, given us a clear picture of when
this road was officially established, and who initiated the work, in addition the people who participated in its construction and its development. A personal field investigation along selected sections of the road was likewise carried out by the present writer, with the aid of a supporting team provided by the University of Riyadh. This visit brought to light some important information about the monuments of this road which have been dealt with in the following chapters of this dissertation. In addition to the field work, short visits were made to the countries adjoining Saudi Arabia (Iraq, Syria, and Jordan) in order to gather comparative material on the similarities and differences in the archaeological features between the monuments along the Darb Zubaydah and the monuments in these countries. Other countries were also visited for the same reason (namely, Iran and Tunisia).

It is within this framework that I have aimed to work out in this thesis the history of the development of the Pilgrim Road between Kufa and Mecca and its decline. Discussing the various types of monuments under different aspects, involving especially comparative studies with other regions, forms a major part of this study.

The thesis is divided into nine chapters. Chapters I-IV, forming the first part of the thesis, cover introductory matter, e.g., to the early pilgrim roads in Arabia, including Darb Zubaydah before the ‘Abbasid period, and road works during the time of the Umayyad caliphs. Chapter II is the main section which is intended to offer a coherent historical background for the establishment of the Pilgrim Road by the ‘Abbasid caliphs, Zubaydah, and other donors. Chapter III is dedicated to the study of the decline of the road at the hands of tribes and the Qarmatians, etc. Chapter IV deals
with the Pilgrim Road after the fall of Baghdad and the Zubaydah road as reported on in the works of European travellers.

The second part of the work comprises chapters V-IX, all dealing with description of the field work and the identification of the sites, methods of the construction of the body of the road and the facilities provided along the road. Chapter VII is dedicated mainly to studying in detail the water tanks along Darb Zubaydah and an extensive comparative study with similar water installations in other areas outside Saudi Arabia. Chapter VIII is devoted to the study of two ‘Abbasid milestones and newly discovered kufic inscriptions near the Pilgrim Road. Finally, chapter IX, which deals with small finds (pottery and glass fragments, and coins).

For convenience, the majority of maps, site maps, and photographic plates, are all included in volume II.

As a final remark, I should like to observe that the study of Darb Zubaydah is far from complete; and I hope that this subject may be of interest to scholars from Saudi Arabia and elsewhere; additional research in this field should help to provide a clearer picture of the technique of road building along the Pilgrim Routes, not only in the special case of Darb Zubaydah, but also in general.
Abbreviations

A. Periodicals

AAS  Les Annales Archéologique de Syrie
AASOR The Annual of the American School of Oriental Research
ADAJ Annual of the Department of Antiquities of Jordan
BASOR Bulletin of the American School of Oriental Research
B.F.A. Bulletin of the Faculty of Arts Riyadh University
BIE Bulletin de l'Institut Égyptien
BSOAS Bulletin of the School of Oriental and African Studies
GJ Geographical Journal
GR Geographical Review
JAL Journal of Arabic Literature
JAOS Journal of American Oriental Society
JESHO Journal of the Economic and Social History of the Orient
JNES Journal of Near Eastern Studies
JRAS Journal of the Royal Asiatic Society
JRCAS Journal of the Royal Central Asian Society
JSOR Journal of the Society of Oriental Research
MIFAO Mémoires de Institut Français d'Archéologie Orientale du Caire
MMA Bull. The Metropolitan Museum of Art Bulletin
PAQS Proceedings of the American Philosophical Society
PF E Palestine Exploration Fund
PEQ Palestine Exploration Quarterly
QDAP Quarterly of the Department of Antiquities of Palestine

B. Others

B. Birkah
<table>
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<th>Arabic letter</th>
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NB: In quotations from works of other writers, the transliteration used is theirs. Concerning names of localities of Darb Zubaydah shown on the current maps of Saudi Arabia, the general pattern employed on these maps is followed here. We have kept the Anglicized names of well-known places, such as Mecca, Medina, and Kufa, unchanged.
Chapter I

INTRODUCTION

1. Early Islamic Pilgrim Routes

Mecca had been the focus of travellers, merchants and pilgrims long before Islam. From the time of the construction of the Ka'bah (according to Muslim tradition by Ibrāhīm) and especially after the rise of Islam, people from faraway lands visited Mecca and performed the rites of the pilgrimage, acknowledging the wish of God and his Prophet as the Qur'ān explains.¹ Mecca was not only a sacred city but also a commercial centre as it had been for the Arabs since pre-Muslim times because of its location on the ancient trade routes which linked the rich Arab states in South Arabia with Egypt, Palestine, and Mesopotamia.² But by the time of the Prophet Muḥammad, Mecca's trading function was perhaps somewhat less than it had been.

During the period of the second caliph, 'Umar Ibn al-Khaṭṭāb (13-23/634-644), the inhabitants of Arabia were all proclaimed Muslims.³ In addition, Islam spread outside

¹ Sūrah XXII, 27.
Arabia and the majority of the population in Iraq, Persia, Syria, Egypt, North Africa, and many other places, gradually accepted the new religion. Every adult Muslim from either sex was obliged to perform the hajj once in a life time, provided that he or she was able, physically and financially, to go on the journey.¹ The greatly increased flow of the pilgrims every year (resulting from the tremendous increase in the number of believers all over the Muslim state) necessitated official attention to the pilgrim routes. In Muslim tradition, the people were advised to be aware of their duty to keep the road (tariq) safe and in good order.² This also applied to the path (gari'ah), either in a city or a village, as well as to any road of considerable length. In the Qur'ān, the wayfarer (ibn as-sabīl) is mentioned several times among those who deserve charity.³

We shall describe below, how the early caliphs ('Umar in particular) and the Umayyads paid attention to the pilgrim routes by providing them with necessary facilities.

Our information about the pilgrim routes comes especially from the early Muslim geographers who record the major routes and listed the main stations and the various intervals in between. In most cases they give an indication of the distances between the stages. This may be stated in miles, barids (postal stages), farsakhs, or in the marhalah system (i.e., a day's journey). Before we describe these routes, it

¹ Sūrah III, 97.
³ Sūrahs II, 215; VIII, 41; IX, 60; XVII, 26; XXX, 38.
is necessary to list the earliest geographers on whom we have based our study. These geographers may be classified as either general geographers or official geographers, some of whom held governmental posts which gave them access to official records regarding the caravan routes. These records were concerned with military and trade interests in addition to their function for religious purposes.

(i) Ibn Khurdādhabah, Abū Ǧūṣm ʿUbaidullāh b. ʿAbdullāh. He was the Minister of Posts in Baghdad during the period of the caliph al-Muʿtamid (256-279/870-892). Ibn Khurdādhabah died after 272/885. He left us an interesting work with the title al-Masālik wal-Mamālik. The writing of this book started about 232/846.

(ii) Ibn Rustah, Abū ʿAlī Aḥmad b. ʿUmar. There is no record of his birth or death, but it is an established fact that he spent most of his life in Iṣfahān (Persia) and in 290/903 he went on the pilgrimage to Mecca. Ibn Rustah wrote a large book consisting of several volumes, of which only the seventh volume has survived, entitled al-Aʿlāq an-Nafisah.

(iii) Abūl Faraj Qudāma b. Jaʿfar. He accepted the Islamic faith at the invitation of the ʿAbbasid caliph, al-Muktāfī (289-295/902-908); then he was appointed Minister of State Posts in 297/908, which appointment he held until he died (between 310-337/908-948). Parts of his famous book Kitāb al-Kharāj have survived, and they contain valuable information.

(iv) Al-Yaʾqūbī, Aḥmad b. ʿIṣḥāq b. Wādiḥ al-Kātib, died in 284/897. He established personal contact with the ʿAbbasid caliph al-Muʿtaṣim and became the favourite of the Ṭūlūnīd

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1 Ed. M.J. de Goeje (Leiden, 1889).
2 Ed. M.J. de Goeje (Leiden, 1892).
3 Ed. M.J. de Goeje (Leiden, 1889).
rulers when he moved to Egypt and North Africa. Al-Ya‘qūbi completed his valuable Kitāb al-Buldān¹ about 277/890.

(v) Al-Maqdisi, Shams ad-Dīn Abū 'Abdullāh Muḥammad b. Aḥmad b. Abī Bakr, was born in Jerusalem 335/946. He died around 390/1000. Al-Maqdisi made numerous journeys throughout the Muslim lands, particularly Arabia. In 377/987 he was in Mecca. He wrote a remarkable geographical work named Aḥsan at-Taqāsim fi Ma‘rifat al-Aqālim.² It is believed that he started writing this book about 375/985, when he was forty years old.

(vi) Al-Hamdānī, Abū Muḥammad al-Ḥasan b. Ya‘qūb, the well-known Arab geographer from Yemen who was born in 280 A.H. and died around 360 A.H. He wrote several books concerning Arabia, especially its southern part. We are more concerned with his book on the geography of the Arabian Peninsula, Sifat Jazīrat al-‘Arab.³

(vii) Finally, we have a work giving copious information concerning the pilgrim routes in general and the Kufa-Mecca route in particular. This information, which is likely to have originated from official records, was written down in the third century A.H./ninth century A.D. The work is entitled Kitāb "al-Manāsik" wa Amākin Tūruq al-Ḥajj wa Ma‘ālim al-Jazīrah. Shaikh Ḥamad al-Jāsir, who edited this remarkable book,⁴ ascribes it to al-Imām Abū Isḥāq al-Ḥarbi who was born ca. 198/813 and died in 285/898.⁵ The following chapters show

¹ Ed. M.J. de Goeje (Leiden, 1892).
⁴ Beirut, 1389/1969.
⁵ Ibid., pp. 161, 255. We may draw attention to the fact that
how much information it has been possible to extract from his work with regard to the establishment of the Kufa-Mecca route, as well as other major routes.

We now examine the major pilgrim routes recorded by the early Muslim geographers.¹

There were at least seven major routes which led from different regions to Mecca and Medina (see map 1):

1. **The Kufa-Mecca Route:** This was one of the most important routes in the history of road making in Islam. Its history is central to this thesis and will be examined in detail.

2. **The Basrah-Mecca Route:** This was the second important route coming from Iraq. It traverses the north-eastern region of Arabia, along Wādi al-Bāṭin, through a mainly desert area. The most difficult part is across the extent of the ad-Dahna desert. The route then passes through the central province of al-Qaṣīm, an area which contains ample subterranean sweet water and wadis which made the land desirable for planting. From al-Qaṣīm, the road runs parallel to the Kufa-Mecca route. Both routes converge at the station Umm Khurmnān (named also Awṭās ʿn-ṭūb), a station situated about ten miles from Dhāt

the name of the author of this work is missing on the original manuscript. This has led several scholars to attribute the work to different authors. Al-Wohaibi, in his research, refers to this manuscript as Manāzil Ṭariq Makkah (The Halts on the Route to Mecca). Adducing evidence from biographical studies and contemporary geographers, al-Wohaibi believes that this work was by Muhammad b. Khalaf b. Ḥayyan (or Jiyyan), best known as al-Qādi Waki', who died in 306/918. See A. al-Wohaibi, The Northern Hijāz in the Writings of the Arab Geographers 800-1150 (Beirut, 1973), pp. 450-452. Whatever the truth about the authorship of this work, its presentation by Ḥamad al-Jāsir is valuable for his observations on certain localities in Arabia, particularly the pilgrim routes.

¹ We do not propose to add detailed biographical data on the above mentioned early Muslim geographers, which many scholars have provided, such as de Goeje, Minorsky, Müller, and Shaikh Ḥamad al-Jāsir. We may, however, refer to a useful book which summarizes the lives of famous Arab and Muslim geographers, with extracts from their works, 'Abd ar-Raḥman Ḥamīdah, Aʿlām al-Jughrāfiyyīn al-ʿArab wa Muqtaṣafāt min Ṭhārīrīm (Damascus, 1969).
The road also joins the main route from Kufa at the station of Ma‘din an-Naqirah. From this point the Medina route branches off. Ibn Rustah enumerates the main stations with the mileages between them. Al-Ḥarbi, however, provides more valuable information. He gives full details about every station and its watering facilities; in addition, he gives the distance in miles between the stages. He also gives details about the road that diverges from an-Naqirah.

3. The Syrian Route and 4. The Egyptian Route: Both of these routes converge at Ailah, a pilgrim station situated at the very end of the Red Sea at the Gulf of 'Aqabah. At this point the pilgrims from North Africa, Egypt, and Syria, gathered; then they continued the journey by either of the two routes: they might take the inland route from Ailah to Medina via Wādi al-Qura, or they might follow the coastal route which goes as far as al-Jār, an ancient seaport of Medina. From here the pilgrims could go to Medina or continue the trip to Mecca via al-Juḥfah. The Syrian caravans could follow another inland route which comes from Damascus and goes through Palestine, Arabia Petrea (Transjordan), and passes through Tabuk. At Wādi al-Qura the road joins the Egyptian caravan. Muslim

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2. Ibn Khurdādhabah, op. cit., p. 128.
5. Ibid., pp. 605-608.
historians and geographers such as at-Tabari and Yaqût, refer to the coastal route as "al-Mu'riqah route"\(^1\) (this runs along the coast to Aila\(h\)), while they refer to the inland route as the Tabûkîyya road (this passes through the settlement of Tabûk).\(^2\) Al-Bakri, for instance, relates that in the early Islamic period, the caravans of Ĕuraysh went by the Mu'riqah route to Syria.\(^3\) He adds that this route was used by the Arabs as a short cut between Syria and Mecca.\(^4\) For further details concerning the Syrian and the Egyptian routes, the reader may consult the recent studies of al-Wohaibi,\(^5\) who deals with them at great length. However, he does not examine these routes (and their stations) from a basis of personal investigation; instead, he studies their existence as they are recorded in the works of the early Muslim geographers. His critical studies and comments on these routes are in fact of great value to scholars.

5. The Şan'a-Mecca coastal route: Pilgrims from Yemen may start from Şan'a and follow the coastal line of the Red Sea through the Tihāmah. Al-Hamdāni gives a few details of this route, but gives no mileages.\(^6\) Al-Ya'qūbi\(^7\) provides a list of the stations along the route; Qudāma\(^8\) names a few of them. But none of the geographers give the total length of the route,

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\(^4\) Ibid., vol. 2, p. 656.
\(^5\) The Northern Hijāz ..., pp. 315-336.
\(^6\) Şīfat Jazīrat al-'Arab, p. 188.
nor do they give the distance between the stages. Al-Ḥarbi describes the same route but he adds more stations.¹

6. The Ṣan'ā'-Mecca inland route: This is the most important and desirable route for pilgrims coming from Yemen. It traverses the northern plateau of Yemen and then passes through the mountainous region of Ḩijāz province. From here the track goes through the Ḥijāz region, where it by-passes ʿaṭ-Ṭā'if, after which it descends to Mecca. Although the road passes through difficult terrain, it was preferred by travellers. This is due to the fact that the road traverses fertile lands where plentiful supplies of water, food, and vegetation were always available for the inhabitants and travellers. Al-Hamdāni gives more details than any other geographer about this route. He records the stations and gives the distances between them (in miles), as well as their latitude.² Qudāma³ and al-Maqdisi⁴ list a number of the stations along this route. Al-Ḥarbi⁵ on the other hand names more stations, but none of them give the distances between the stations along this route. With regard to this route, it is worth mentioning the information provided by Burckhardt. He lists the pilgrim stations from Ṣan'ā to Mecca which were in use during the early nineteenth century A.D.⁶

7. The 'Umān-Mecca route: On this route the caravans travelled along the coastal line of the Arabian Sea to Yemen; there they followed one of the main routes to Mecca.⁷

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caravans may also travel by way of al-Aḥsā (the eastern province of Arabia) and then join the Yamāmah-Mecca route. However, we may add that not all these routes were first established during the Islamic period. There were some which had been used a long time before Islam. The Meccan caravans traded with South Arabia and Syria in pre-Islamic times. Spices were transported by land through the Ḥijāz province via the coastal or the inland routes of which Mecca was a midway station.

With regard to the main routes from Iraq, the Basrah-Mecca route and the Kufa-Mecca route, we may conclude that they were officially in use from the start of the early Muslim campaigns against Iraq and Persia, and particularly after the foundation of Kufa and Basrah. These two routes flourished when Iraq was chosen as the capital of the ‘Abbasid caliphate. Very little is mentioned by Muslim historians or geographers concerning road works before the Umayyad period. Nothing archaeologically is known so far. Our information is mainly based on incidental remarks. According to Ibn Sa'd and at-Ṭabari, the Caliph ‘Umar Ibn al-Khaṭṭāb (13-23/634-644) went to Mecca from Medina in 17/638 in order to perform the ‘umrah (the lesser hajj). On this journey, the owners of the water (aṣḥāb al-miyāh) requested ‘Umar’s permission to establish stations (manāzil) along the route between Mecca and

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1 On the Yamāmah-Mecca route, see al-Ḥarbi, op. cit., pp.616-620.
3 See below, p. 18.
Medina. (At that time there were no permanent facilities along this route.) 'Umar allowed them to do so, but on the condition that the wayfarer must be able to obtain shelter and water:

"Ibn as-sabil aḥaqqu biṣ-ṣill wal-mā‘"

Ibn Sa'd reports that the Caliph 'Umar did in fact provide aid for travellers along the route between Medina and Mecca in order to help those who were unable to continue their journey and those who ran out of water. In Medina, 'Umar made a hostel available to house guests and passengers who had no place to stay. This hostel was equipped with a supply of food: flour, sawīq (a kind of dish composed of barley or wheat with sugar and dates), dates, and raisins.¹

We may conclude from these two texts that the Caliph 'Umar took special care of the route between the two cities of Mecca and Medina. Communications with them were to be easier, and he also wanted the route to be widely used. El-'Ali suggests in his article² that the Caliph 'Umar paid this degree of attention to wayfarers because most of them belonged to the army of the state or were traders bringing food to the holy cities, the latter thus gained special prestige with the state as well as respect in society.

2. Road Works during the Umayyad Caliphate

During the Umayyad caliphate, communications between the caliphs, who resided in Syria, and Arabia had to be regular, particularly with the holy cities in the Ḥijāz province. This was not only for the obvious religious reasons connected with the pilgrimage to the Holy City, but also because the caliphs owned estates in the Ḥijāz province and reclaimed lands

¹ Ibn Sa'd, op. cit., p. 203.
there which were provided with facilities for cultivation. Mu‘āwiya (41-60/661-680) had dams built and canals constructed in aṯ-Ṭā’if\(^1\) and in Medina.\(^2\) In addition to being interested in agriculture, the Umayyads were also addicted to building luxurious palaces and private lodges in various regions. Their experience in both fields, no doubt, enabled them to contrive ways of improving communications within the regions of the state.

The caliphs bestirred themselves to build new roads provided with facilities which enabled passengers to travel with some comfort, or to improve existing ones. Our information on this comes from two sources: references in classical writers and archaeological discoveries. Aṯ-Ṭabarī mentions that al-Walīd Ibn ‘Abd al-Malik (86-96/705-715) in the third year of his reign, wrote to the governor of Medina, later ‘Umar II, instructing him to level the mountain trails, and to sink wells. Similar letters were delivered to other provinces with the same instructions.\(^3\) In another report, aṯ-Ṭabarī relates that the Syrians considered al-Walīd as one of the best caliphs because it was he who build the Mosque of Damascus and the Mosque of Medina, and established fire signals (waḍ‘a al-manār) etc.\(^4\)

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1. G.C. Miles, "Early Islamic Inscriptions Near Ta‘if in the Hijaz", *JNES*, 7 (1948), pp. 236-242 and plates XVII-XVIII. Mu‘āwiya’s dam, "say-sod" as it is known locally, is still intact and in good condition, situated a few miles east of aṯ-Ṭā’if. The inscription that commemorates the construction of the dam is engraved on a rock wall near the dam. The dam is one of many which were built in that vicinity by the Umayyad caliphs and their subjects for irrigating lands. For a photograph of this dam, see Ya‘qūb Salām, "Aṯ-Ṭā’if, ‘Arūs al-Maṣāyif fi al-Mamlaka al-'Arabiyya as-Sa‘dīyya", *Qāfīlat az-Zayt*, part no. 10, vol. 23 (Oct.-Nov. 1975), pp. 25-35, plate p. 31.


These fire signals presumably included those placed along the routes. Further, Ibn al-Faqīh states, concerning the caliph al-Walīd, that along various halting places on the pilgrim route between Syria and Mecca, he had reservoirs built,¹ and al-Qalqashandi reports that al-Walīd was the first caliph to have mile-stones erected along the routes.²

"وأول من بنى الأميال في الطرقات.

The philanthropic undertakings begun by al-Walīd were improved upon and extended by the saintly 'Umar II (99-101/717-720). He had rest-houses built and wells dug in the newly conquered lands in the east. According to aṭ-Ṭabari, he ordered the Wāli of Khurasān, Sulaymān Ibn Abī as-Sarī, to have rest-houses built along the routes and to feed the wayfarers, to treat the sick among them, and if they were without means to pay their travelling expenses, etc., to ensure that they could reach their destination.³ 'Umar was also believed to be the first caliph to have initiated the building of khāns (rest-houses or inns) for travellers.⁴

Hishām Ibn 'Abd al-Malik (105-125/724-743) is one of the best known caliphs in the Umayyad period, for his interest in constructing palaces and gardens which were provided with water facilities, such as dams, cisterns, ganāts (underground aqueducts) and wells. His buildings were famous for their outstanding beauty. Some of them still stand as evidence, in

Transjordan, the Syrian desert, and elsewhere. He himself paid attention to the Syrian-Mecca route. Al-Mas'ūdi relates that Hishām constructed aqueducts and water tanks on the way to Mecca for the convenience of pilgrims.\(^1\) None of the early Muslim historians or classical geographers provide any detailed or technical information about the methods of road construction used during the Umayyad period. Similarly we still lack knowledge about the magnitude of the effort made by the Umayyad caliphs to establish and furnish the pilgrim roads between Syria and the holy cities. As for other routes in Arabia, some attention was paid to the Basrah-Mecca road, particularly by the Umayyad general, al-Ḥajjāj.\(^2\) It seems possible that some of the Umayyad road works were undertaken or supervised by non-Arabs, as happened in the case of other Umayyad engineering works in Arabia.

The Umayyad caliphs did their best to make use of the fertile lands in the Ḥijāz by agricultural developments, For this purpose, as some modern scholars claim, the Umayyad caliphs sent to the Ḥijāz Greek engineers who constructed wells and reservoirs;\(^3\) though, as far as we can ascertain, none of the early Muslim authors say so. However, it is certain that large numbers of non-Arabs temporarily migrated to the Ḥijāz during the Umayyad period. It is reported that three thousand foreigners were employed in the digging of Khalīj Banāt Nā’ilah in Medina\(^4\) during the caliphate of Mu‘āwiya. Al-Balādhuri reports on the floods which caused loss in lives and damage to

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2 See below, pp. 16 ff.
3 O'Leary, Arabia before Muhammad, p. 8.
property in Mecca during the reign of 'Abd al-Malik (65-86/685-705). To avoid further disasters, 'Abd al-Malik ordered the governor of Mecca to build walls and to erect dams at the openings of the roads, so that the houses should be secure.

To this effect, a Christian engineer was sent down from Syria, who constructed the walls and set up dams.\(^1\) Furthermore, al-Walid Ibn 'Abd al-Malik requested the Byzantine Emperor to send him technicians and craftsmen to help in the construction of the Umayyad Mosque in Damascus and of the Prophet's Mosque in Medina. The latter responded generously by sending large numbers of craftsmen and loads of decorative materials, including mosaics.\(^2\)

We must now turn to the archaeological evidence regarding the Umayyad works, beginning with works reported to have been undertaken by Hishām. The new archaeological discoveries in Syria prove that he did engage in such activities. In an excavation in the valley near the ancient village of Rimet Ḥazem, 7 km from the town of Souqida, a slab of stone has been unearthed which bears five readable lines of simple kufic inscription concerning the construction of a water tank (birkah). This birkah is situated along the road from Damascus towards Arabia. The inscription tells us that the construction of the birkah was carried out by the caliph Hishām under the supervision of a person called 'Ammár.\(^3\) This work may have been part of a big project designed to satisfy the needs of travellers for water, as reported by al-Mas'ūdi. In the late nineteenth century archaeological surveys in Palestine,

\(^1\) Ahmad b. Yahya al-Bal'ehuri, Futūh al-Buldān, ed. 'Abdullāh at-Tabbā and 'Umar at-Tabbā (Beirut, 1958), p. 72.


\(^3\) 'Abdal Kader Rihaoui, "Découverte de deux inscriptions arabes", AAS, tomes XI-XII (1961-2), pp. 207-211, figs. 1-2. See also, fig. 9, following p. 13 above.
four mile-stones bearing the name of 'Abd al-Malik were brought to light. These mile-stones, which were inscribed in simple kufic, were erected along the Damascus-Jerusalem road,¹ which was established or improved by 'Abd al-Malik. This testifies to the attention he paid to the roads of that province at least. The discovery of these mile-stones has proved that it was 'Abd al-Malik rather than al-Walīd who first planted mile-stones along the routes, which contradicts the statement of al-Qalqashandi. Also in connection with the Damascus-Jerusalem road, a new inscription was discovered in 1961 in the shallow water at the southern shore of the Sea of Galilee. The inscription is written in simple kufic on a slab of stone bearing the date and the name of 'Abd al-Malik. The text on this stone indicates that 'Abd al-Malik ordered the road to be levelled at one point where a hillock (‘agabah) once stood. This work was executed under the supervision of Yahyā Ibn al-Ḥakam in 73/692.²

We may conclude from the information at present available, that during the Umayyad period roads were established (or improved) and provided with facilities such as fire-signals, mile-stones, reservoirs, wells, etc. This information comes, however, from outside Arabia. We can deduce that in Palestine at least, much work was done under the direction of 'Abd al-Malik himself, who was followed by his active successors. This showed the system of establishing roads appropriately

¹ Two of these mile-stones were first mentioned by Charles Clermont-Ganneau, Archaeological Researches in Palestine during the years 1873-1874, vol. II (London, 1896), pp. 35-36. All the four mile-stones have been dealt with at great length at the beginning of this century. See MIFAO, vol. 43 (Paris, 1922), pp. 17-29.
provided with mile-stones showing the distance. We may presume that the same effort was made in the Ḥijāz province, judging by the scant reports mentioned above. Nevertheless, details of the work of the Umayyad caliphs in the Ḥijāz are at present not available. Perhaps through archaeological surveys and excavations in this province and elsewhere, a clearer picture may emerge.

3. The Kufa-Mecca Road before the 'Abbasid Period

It is not possible to date the origin of the present route of this road, nor indeed can we say just how early it became practicable. But we may assume that the road, or part of it, could have been used occasionally by tribesmen and individual travellers. Since there are a number of oases along, or near, the road, irrigated by several wadis and torrents, the ancient Arab tribes would have been able to rove over the lands which held rain pools and green pastures for their animals.

When the Muslims emigrated to Medina, under the leadership of the Prophet Muḥammad, the Meccan caravans, which were normally laden with valuable goods, felt under danger and were obliged to alter the route they took to Syria and follow the Iraqi route, 'فتركوا ذلك الطريق وسلكوا طريق العراق'. However, we do not know whether this was the main route used during the 'Abbāsid age.

It must be borne in mind that the existence of an Arab city like al-Ḥira (sixth to seventh centuries A.D.), which acted as a traffic centre between central Arabia and Iraq, encouraged the merchants from Ḥijāz to trade with that area, and the pilgrim road may have been partly used.

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1 Al-Ya‘qūbi, Tarīkh, vol. II, p. 73.
The early Muslim geographers report that the Persians established military garrisons at al-Qadisiyya and al-'Udhayb in the southern desert of Iraq. A wall six miles long once connected the two stations; and the lands on either side were irrigated and planted with palm gardens.¹

Soon after the death of the Prophet Muḥammad, some Arab tribes apostasized from Islam, while others refused to pay the alms tax (zakāt). These tribes, particularly Asad, Ghatafān, and Ṭayy, under the command of the false prophet, Ṭulayḥah al-Asadi, established their military bases at points along the road such as Samīrah and ar-Rābadhah.² (These later became prominent stopping stations for the pilgrims during the 'Abbasid period.)

The Muslim army, under the command of Khālid Ibn al-Walīd, was despatched to Iraq by Abū Bakr (11-13/632-634) in 12/633. It is reported that Khālid Ibn al-Walīd led his army by the Medina-Ḥira road,³ and that among the places which Khālid passed through were Fayd and ath-Tha'labīyyah.⁴ The latter became important for pilgrims during 'Abbasid times. At the end of the same year (12/633), Khālid performed the pilgrimage in absolute secrecy, even without the knowledge of Abū Bakr. His journey was described as so fast that he managed to reach Dḥāt 'Irq in less than two weeks, and began the ḥajj on time. But we still lack details about the road in question.

³ Ibid., p. 2016.
⁴ Ahmad Ibn Yahyā al-Balādhuri, Futūḥ al-Buldān, ed. A.A. at-Ṭabbā and 'Umar A. at-Ṭabbā (Beirut, 1958), p. 339. At-Ṭabari gives another version viz. that Khālid departed from al-Yamāmah to Abullāh on the Arabian Gulf. In this account, Khālid needed three guides, who knew the track to Iraq, to direct his army which was divided into three units. At-Ṭabari, op. cit., vol. I, part IV, pp.
which was considered to be the shortest but the most difficult.\(^1\) However, after two years, the caliph 'Umar (13-33/634-644) chose Sa'd b. Abī Waqqās and sent him as the head of new reinforcements to Iraq. 'Umar had sufficient knowledge about the conditions of the road to instruct Sa'd to rest his army at certain points along the way to Iraq. According to al-Balādhuri, Sa'd remained at the station of ath-Tha'labīyyah for three months.\(^2\) Aṭ-Ṭabari, on the other hand, reports that Sa'd stayed at the station of Zarūd during the winter time, and then advanced to Sharaf and al-'Udhāyb on his way to al-Qādisīyyah.\(^3\)

During the reign of 'Umar, the Muslims in Iraq increased greatly in number, and for this reason two new Muslim cities were founded for the first time outside Arabia, on instructions from 'Umar. These were Basrah\(^4\) and Kufa.\(^5\) After the establishment of these two cities, communication between them and the Ḥijāz must have become important, and they enabled Muslim soldiers who had been fighting in Iraq to perform the pilgrimage.

Abū Mūsā al-Ash'ari\(^6\) was appointed by 'Umar as governor of Basrah in 17/638. According to Yaqūt, he had wells

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\(^2\) Futūḥ al-Buldān, p. 356. 'Umar did in fact travel from Mecca to al-Ḥīra via Medina. Al-Hamdānī relates that 'Umar during his youth went with other Qurayshi youths to meet an-Nu'mān, King of al-Ḥīra. They were received well and presented with valuable gifts. See Abū Muḥammad al-Ḥasan b. Ya'qūb al-Hamdānī, *al-Iklīl*, vol. 8, ed. Nabīh Amin Faris (Princeton, 1940), pp. 27-28.


dug along the Basrah-Mecca road. It is also reported that during the reign of 'Uthmān (23-35/642-656), he had wells (عين) dug at the station of Fāyd. In 29/649, 'Uthmān appointed 'Abdullāh Ibn 'Āmir Ibn Kurayz as the new governor of Basrah in succession to Abū Mūsā al-Ash'ari. The ability and generosity of 'Abdullāh enabled him to undertake numerous public works. He dug canals at Basrah but his outstanding achievement was the establishment of several stations along the Basrah-Mecca road, provided with dug wells (عين). Some of these stations were also provided with palm-gardens. Among these places were an-Nibāj, al-Qaryatayn, and Bustān Bani 'Āmir near Mecca. It is also reported that he was successful in extracting underground water wherever he sought it:

"وَكَانَ لَكَ مَا يَغْلَبُ أَرْضًا إِلَّا أَنْبِطَ فِيهَا السَّاء". We are told also that he wished, if it were possible, to furnish the Basrah-Mecca road with water facilities and markets (أسواق), so that a woman on her mount would have been able to travel freely from one station to the other until she reached Mecca.

We have no data to show that 'Ali b. Abī Ṭālib (35-40/656-661) made any improvement along either road during the time of his rule. But we know that 'Ali marched from Medina to Kufa in 36/656. He followed what seems to have been the main pilgrim road, judging by the stations he stopped at

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4 Yaqūt, *op. cit.*, vol. 5, p. 256.
5 Ibid., vol. 4, p. 336.
6 Ibid., vol. 1, p. 414.
on his way to Kufa. These were ar-Rabadhah, Fayd, and ath-Tha’labīyyah.¹

His son, al-Ḥusayn, refused to acknowledge Mu‘āwiyyah’s son, Yazīd, as caliph. The supporters of al-Ḥusayn in Iraq declared him the only legitimate caliph. In response, he met their appeal and made his memorable expedition from Mecca to Kufa in 60/679. He was accompanied by members of his family, relatives, and followers. Al-Ḥusayn was unable to reach Kufa, finding himself outnumbered by the soldiers of Yazīd. He and his companions were eventually killed in cold blood at a place called Kerbalāʾ (about 25 km north west of Kufa) on 10 Muḥarram 61 (10 October 680).² However, when al-Ḥusayn left Mecca for Kufa, he also seems to have followed the pilgrim road which became familiar during the ‘Abbasid period. He stopped at a number of stations, such as al-Ḥājir,³ Zarūd,⁴ Zubālah,⁵ and al-‘Aqabah.⁶ The Umayyad caliphs, as mentioned earlier, made a great effort to secure communications between the various regions of the state and particularly between Damascus and the holy cities. Although there are no data available concerning the Kufa-Mecca road in general, we learn that ‘Abd al-Malik constructed the station of ath-Tha’labīyyah,⁷ which was one of the main pilgrim stations. His general, al-Ḥajjāj, the governor of Iraq, may have established watering places along the Kufa-Mecca road, although none of the early Muslim historians

¹ **Ṭabarî, op. cit.,** vol. I, part VI, pp. 3138, 3143, 3144.
³ **Ṭabarî, op. cit.,** vol. II, part I, p. 288.
⁴ **Ibid.,** p. 290. He also stopped at ath-Tha’labīyyah, **ibid.,** p. 292.
⁵ **Ibid.,** p. 293.
⁶ **Ibid.,** p. 294. **Ṭabarî** here gives the name as Baṭn al-‘Aqabah.
⁷ **Al-Ḥarbi, op. cit.,** p. 296.
or geographers say so. But al-Ḥajjāj seems to have provided the analogous Basrah-Mecca road with water facilities. Al-Ḥajjāj on his return journey from the pilgrimage travelled by way of Basrah. He ordered that the water between Basrah and Mecca be examined\(^1\) for its suitability as drinking water. The result proved that one of the stations called Māwiya (ماوية) had water of superior quality.

\(\text{وكان الحجاج لما سار نبي طريق البصرة شعرنا من الحج أمر بالمياه فوزت فيها}
\)

\(\text{بين البصرة ركنا فلم يجد أخف من ما ماوية} 2\)

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\(^1\) Apart from the obvious method of tasting or examining the appearance of the water, the following more precise methods for testing water were employed as early as the 4th century A.H./10th century A.D.:

(a) If water was available from two different sources, equal samples from both were taken and weighed, the sample being found to weigh less being purer.

(b) A second method was to fill two new earthenware jars, similar in size, capacity, and colour (i.e., the composition of the body); both were then placed on a tripod, for one hour or more, with a bowl underneath each of them. The jar which allowed more water to leak out contained a better quality of water.

(c) A third method was to employ a quantity of fine sieved mud, putting it into two separate bowls, equal in size and colour, and then filling each bowl with a similar quantity of water. The mud which filtered the water faster had a better quality drinking water.

(d) The final method was to rinse two lumps of fine mud with water from two different sources, leaving the mud to dry by exposing it to the sun, or keeping it in the shade; the lumps were then weighed separately. The mud that weighed less had a water of better quality.


\(^2\) Al-Ḥarbi, \textit{op. cit.}, p. 580.
Chapter II

THE ESTABLISHMENT OF THE ZUBAYDAH ROUTE DURING

THE 'ABBASID PERIOD

1. The Work of the 'Abbasid Caliphs

The earlier 'Abbasid caliphs, notably Abul 'Abbās as-Saffāḥ, Abū Ja'far al-Manṣūr, al-Mahdi, and ar-Rashīd, are credited with establishing the Kufa-Mecca road and providing it with all facilities needed for travellers (pilgrims, merchants, soldiers, and civil servants). The most important facilities were water tanks, dug wells and basins, rest houses, mile-stones, road signs (a'lam), fire signals or beacons (manār). Furthermore, they had the route cleared of dangerous obstacles and widened it for the people and their beasts.

The first 'Abbasid caliph, Abul 'Abbās as-Saffāḥ (132–136/749–754), ordered fire signals and mile-stones to be established from Kufa to Mecca in the year 134/751:

"وَنَبِها ضِرْبَ الطَّنَارِ مِنَ الكَوْنَةِ الْعِظَمَةِ والأَمْيَالِ"

Abul 'Abbās, during his short period of rule, was not able to perform the pilgrimage himself, but he managed to furnish the northern section of the road with forts as described below.

\[1\] At-Tabari, *op. cit.*, vol. III, part I, p. 81. Ibn al-Athīr, *op. cit.*, vol. 4 (Caire, 1375 A.H.), p. 344. An earlier Muslim historian states that as-Saffāḥ constructed al-manābir (المنابر), pulpits, unlike the account given by at-Tabari and Ibn al-Athīr, who mention al-manār, fire signals. Perhaps there is a scribal error in the latter, or maybe it is a distortion from the word al-manār (المنار). See *Kitāb al-'Uyun wal-Hadā'iq fi Akhbār al-Haqā'iq*, p. 211.
The caliphs, notably al-Manṣūr, al-Mahdi, and ar-Rashīd and their wives (particularly Zubaydah) were diligent in performing the pilgrimage and encouraging their subjects to do the same by improving communications and amenities along the route. The caliphs who visited Mecca had their own private houses at every station along the road, and these were fully furnished and provided with sleeping facilities (curtains and beds) and necessary utensils.  

Abū Ja'far al-Manṣūr ruled as caliph for twenty-two years (136-158/752-775); during his long reign he made the pilgrimage to Mecca six times but he had already been to the Holy City before ascending the caliphate in 136/754, as the head of the pilgrims and the representative of his brother as-Saffāh; during this latter visit, however, his brother died and homage was done to al-Manṣūr at Ṣufaynah, which is a station on the pilgrim route. Al-Manṣūr himself had forts and cisterns built at various points along the road.

The Caliph al-Mahdi seems to have been even more active, paying more attention to the comfort of ordinary pilgrims and other travellers, by making the road more accessible. The roadway was levelled and traffic then became faster, so that al-Mahdi could get ice brought to him (when he was in Mecca on his pilgrimage in 160/776), which none of the previous caliphs had done. A year later, al-Mahdi ordered further

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2 Ibid., p. 37.
4 Al-Ḥarbi, op. cit., pp. 300, 343.
improvements to the road and made it more convenient, as at-Tabari informs us:

وَبَنَى أَمْرُ الْمِهْدِيَ بِنْانَا الْقِصْرِ نِيَ طَرِيقٌ مَّعْصِرٌ مِّنَ الْقِصْرِ الَّذِي كَانَ ابْنُ العَبَاسِ بِنْانَا مِنَ الْقَادِسِيَةِ إِلَى زَيَالَةٍ وَأَمَرَ بِالزِّيادةِ فِي قِصْرِ أَبِي العَبَاسِ وَتَرَكَ مَنَازِلٍ أَبِي جُعْفَرِ الَّذِي كَانَ بِنْانَا عَلَى حَالَاتِهِ وَأَمَرَ بِاتِخَاذِ المصَّعَّنِ فِي كُلِّ شَهْلٍ وَتَجَمِيدِ الْإِمَيَالِ وَالْجَرَكِ وَحُفْرِ الْرِّكَايِاَ مِعَ المصَّعَّنِ وَوَلَى ذَلِكَ يَقَطَّينِ بِنِمِوِسِي نَمَّلُ يُبْلِي ذَلِكَ إِلَى سَنَةٍ ۱۷۱ كَانَ خَلِيفَةٌ يَقْطَينِ فِي ذَلِكَ
أَخُوُهُ أَبُو مُوسِيَّ

In the year 161/777, the Caliph al-Mahdi ordered the construction of forts along the Mecca road much bigger than those which had been built by Abul 'Abbâs (as-Saffâh) from al-Qâdisiyyah to Zubâlah and he also ordered the enlargement of the forts which had been built by Abul 'Abbas and left the forts built by Abû Ja'far unaltered. Al-Mahdi also ordered the building of cisterns and the renewal of mile-stones and reservoirs and the construction of dug wells with basins. For this he appointed Yaqtîn b. Mâsâ to supervise the work, with his brother Abû Musâ as substitute. ¹ Al-Mahdi himself witnessed the necessity of water for people using the road. In the year 164/780, he intended to go on the pilgrimage, but when he reached the station of al-'Aqabah, he found that the water was inadequate and so scarce that he could not risk going on to Mecca and abandoned the journey. He blamed Yaqtîn, the superintendent of the road, for the scarcity of water and for the fact that the people on their departure from Mecca had to

endure thirst, as did their beasts, until they were at the point of perishing.\(^1\) This incident seems to have touched al-Mahdi’s heart and encouraged him to make a much greater effort to provide the road with more facilities, particularly dug wells and cisterns.

Al-Ḥarbi reports a number of places associated with al-Mahdi, some of them bearing his name. At these places there were dug wells, reservoirs, and small basins located at the major pilgrim stations and at stopping places.\(^2\) It is clear that al-Mahdi, in his zeal for providing facilities for the public good, was to some extent animated by a spirit of competition in good works: his superintendent, Yaqṭīn, constructed a dug well at al-‘Umaq\(^3\) at his own expense, and the water of this well turned out to be sweeter than that of any other. Al-Mahdi thereupon offered to compensate Yaqṭīn for the expenses he had incurred, on condition that the well be named after him (i.e., al-Mahdi). Yaqṭīn, however, refused, and al-Mahdi satisfied himself by contributing one third of the expenses.\(^4\)

Similarly, one of al-Mahdi’s subjects, ʻĪsā b. ‘Ali, constructed a birkah at al-Mislah at his own expense; al-Mahdi tried to buy it from him, but ʻĪsā told him that he had presented the birkah to the pilgrims as a free gift. Al-Mahdi therefore, decided to build another in the vicinity, in order to guarantee sufficient water and to gain a greater reward from God.\(^5\)

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\(^2\) Al-Ḥarbi, op. cit., pp. 288, 312, 318, 328.
\(^3\) Al-‘Umaq is a pilgrim station between as-Sallīlah and Ma‘dīn Banū Sulaym. See Ibn Rustah, al-‘Alīg an-Naffisah, p. 179.
\(^4\) Al-Ḥarbi, op. cit., p. 333.
\(^5\) Ibid., p. 344.
In the year 166/782, al-Mahdi ordered the establishment of the postal service (barīd) for the first time between Medina-Mecca and Yemen. Both camels and mules were used for this service. Thus all Arabia and the central government (in Baghdad) were now linked together by reliable communications. Al-Mahdi also carried out many important improvements in the holy cities. For example he made a visit to Mecca in 166/776 and renewed the kiswa of the Ka'bah after the old coverings had accumulated on it from the time of the Caliph Hishām. During this visit, al-Mahdi paid out an enormous sum of money on improvements to the two cities. He had the necessary money brought from Iraq, Egypt, and Yemen. Al-Balādhuri tells us that al-Mahdi gave instructions for the canal of aṣ-Ṣilah (نهر الصلاء) in Iraq, to be dug, and he rehabilitated the land on either side of the canal. The revenues from this land were spent on the people of the holy cities.

As regards Medina, al-Mahdi extended the Prophet's Mosque and provided the city with a large number of cisterns connected with each other by means of conduits. The water which fed these cisterns came from the outskirts of Medina. Some of the water tanks were provided with two entrances, one for women and the other for men.

Hārūn ar-Rashīd (170-193/786-809) was the last 'Abbasid caliph to perform the pilgrimage to Mecca. He made seven visits to the holy cities, and on each of them he spent

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2 Al-Maqrīzī, op. cit., pp. 43-44.
3 Al-Balādhuri, op. cit., p. 409.
4 Al-Ḥarbi, op. cit., p. 409.
money generously for the welfare of the pilgrims and poor people. Ar-Rashid divided his time between fighting the enemies of the state one year and visiting the holy cities during the next, as al-Maqrizi puts it.⁴ Along the Kufa-Mecca road he built cisterns, dug wells, and forts. To the holy cities, particularly Mecca, he devoted special care in providing them with inns for travellers and poor people. His subjects and advisers were encouraged to do the same.⁵ On each visit which ar-Rashid made to the holy cities, one hundred jurisprudents (أئمة) accompanied him, together with their sons, at his own expense. In the years he did not visit Mecca, he performed the hajj vicariously, sending three hundred men at his own expense and providing them with splendid equipment for the journey.⁶

Ar-Rashid made some of his visits to Mecca on foot, and he was familiar with a short diversion between Medina and the station of ar-Rabadhah (on the main Kufa-Mecca road); the total mileage of this road is 102 miles.⁷ Some of the cisterns built by ar-Rashid along the road were named after him.⁸

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1 Al-Maqrizi, op. cit., p. 48.
4 Ibn ‘Abd Rabbīh relates that when ar-Rashid and Zubaydah performed their pilgrimage on foot, rugs were unrolled in front of them and folded up after they had walked over them, and so on. Ar-Rashīd eventually got fatigued and called on one of the servants, put his arms around him and said that he preferred riding a donkey to walking on rugs. See Abū ‘Umar Aḥmad b. Muḥammad, Kitāb al-‘Iqd al-Farīd, 7 vols. (reprint of the Cairo ed. 1940-53), vol. 6, p. 228.
5 Al-Ḥarbi, op. cit., p. 330.
6 Ibid., p. 346.
Al-Amīn succeeded his father, ar-Rashīd, in the caliphate (193-198/809-813), but we are not told that he made any improvement along the road. We also do not know who was the administrator of the road during his reign. In spite of this, it may be assumed that the pilgrims were led yearly as always by a representative of the caliph. Al-Amīn took little interest in the running of public affairs, owing to his lack of knowledge of administration. In due course, confrontation with his brother al-Ma'mūn led to a civil war at the end of which al-Ma'mūn emerged as the new caliph (198-218/813-833).

Al-Ma'mūn in general showed a remarkable intellectual interest, particularly in Greek science. It may have been in pursuit of such scientific as well as practical purposes that al-Ma'mūn gave orders for the measuring of the length of the whole road between Baghdad and Mecca; the result was 712 miles:  

\[\text{.. وتَهِبُ الموْصَمَ من ذَرَعٍ الْطَّرِيقَ فَنَجُدهُ بالْأَمَيْلِ ١٢.} \]

We have no information about any work of his on Darb Zubaydah.

As for the contribution of al-Mu'taṣīm (218-227/833-842) towards the road, the Muslim historians are likewise silent; and not until his son al-Wāthiq (227-232/842-847) do we learn of further effort to improve the road with important facilities. Al-Wāthiq engaged in fighting a number of tribes in the Ḥijāz province who had made the road unsafe by their depredations, particularly in the regions around the holy cities. Al-Wāthiq employed his Turkish general, Bugha al-Kabīr, for this task. The latter fought first the tribe of the Banī Sulaym and defeated them. He then carried out similar campaigns against other tribes, such as the Banī Numayr

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and the Banī Hilāl, who were also hostile to the pilgrims. 1

To secure the safety of the pilgrims, we find al-Wāthiq employing two men to be in charge of the two major routes. Ishāq b. Ibrāhīm b. Abī Khāmisah was appointed governor of al-Yamāmah, Bahrayn and chief superintendent of the Basrah-Mecca road. 2 As for the Kufa-Mecca road, 'Umar Ibn Faraj was in charge of restoring it and keeping it in good order. Apart from tribal raids against the pilgrim stations and caravans, the pilgrims suffered considerably from the scarcity of food and drinking water. We may quote at-Ṭabarī and Ibn al-Athīr on the condition of the pilgrims and the road in the season of the year 228/842. During this season the price of food and water was very high. A loaf of bread (one pound in weight) cost one dirham; and the price of the pilgrimage bottle (rawiyaḥ—زروية) went up to forty dirhams. 3

In the year 231/845, al-Wāthiq wished to go on the pilgrimage himself and sent the superintendent of the road, 'Umar b. Faraj, to inspect and improve the road (إصلاح الطريق); but al-Wāthiq had to postpone the idea when 'Umar reported to him the scarcity of water. 4 The following year, 232/846, the pilgrims on their return from Mecca suffered from thirst at four stations, and large numbers of them died. The pilgrimage bottle cost several gold pieces 5 (بلغت الشرة عدة دنانير). However, 'Umar b. Faraj carried out a number of improvements

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at certain points along the road. For example, he levelled part of the surface starting from Dhāt at-Tanāfnir, and provided it with mile-stones. He established a diversion route from Zubālah to Līnah (east of the road) which rejoins it at ath-Tha'ilabiyah. He provided this route with dug wells and reservoirs:

وقد ذات التنوير ميل يؤدى الى الميل الى طريق كان عمري فج استخني

هذا الطريق كانت الخيرات سلته وضيق السما بالشفاء وبدام

Along the major track, he repaired some cisterns and re-excavated about twenty old dug wells and provided them with troughs. Along this diversion road, which starts from Zubālah to Līnah and then meets the main road at ath-Tha'ilabiyah, ʿUmar established small way marks (alām) and fire signals, as well as two stations for the pilgrims, وصال لهذا الطريق أعلاماً ونُصِّ مواقيد.1 Al-Wāthiq was so generous to the inhabitants of the holy cities, that no single beggar (asking for food or money) was reported in them. When al-Wāthiq died, the people of Medina expressed their sorrow by publicly lamenting his death, and they bewailed him every night.2

Al-Mutawakkil ascended the throne of the caliphate after al-Wāthiq (232-247/847-861), and during his rule he employed a number of superintendents to supervise the road. In 234/848, Yaḥyā b. Harthamah was in charge of the road.3 In 240/854, Jaʿfar b. Dinār, who was the governor of Yemen in 224/838,4 was the second one to supervise the road.5

Jaʿfar held the post for a few years until al-Mutawakkil

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1 Al-Ḥarbi, op. cit., pp. 286-287.
replaced him by another man called Abu as-Sāj in 244/856.\(^1\)

Al-Mutawakkil paid attention to the Medina-Mecca road by pro-
viding it with useful facilities. At one station, for instance,
he dug fifty wells of varying depth, all of them holding fresh,
sweet water.\(^2\) Al-Mutawakkil also provided the Medina-Mecca
road with way marks (\(a\text{'lām}\)) and with mile-stones.\(^3\) As for the
main road, al-Mutawakkil had wells dug and castles built at
some points.\(^4\)

There is very little known about reconstruction or
improvements to the road and the upkeep of its facilities
after the period of al-Mutawakkil. The hostile tribes stepped
up their raids against the pilgrims' caravans, killing men,
taking women as hostages, and confiscating the property of the
pilgrims, including their mounts. Even Mecca and Medina did
not escape disturbances and insecurity. Furthermore, trouble
arose from the rise of new secessionist groups, namely the
movement of the Zanj, followed by the appearance of the
Qarmatians, who established their base in the eastern province
of the Arabian peninsula; Hajar (al-Aḥsā') was their capital.
The latter group were savage in their attacks on the helpless
pilgrims and showed no mercy to them. As will be shown later,
the Qarmatians went even further by destroying important fac-
tilities along the road (castles, cisterns, and dug wells) and
brought them into disuse. Faced with this intolerable danger,
the 'Abbasid caliphs were obliged to put heavy guards at
several points along the road in order to protect it;

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1 At-Ṭabari, \textit{op. cit.}, vol. III, part III, p. 1436 (he sug-
gests that the appointment of Abu as-Sāj as the road super-
intendent took place two years earlier, 242/856).

2 Nūr‘ad-Dīn 'Ali b. Ahmad as-Samhūdī, \textit{Wafā' al-Wāfa' bi}
Akhbār Dār al-Mustafa, ed. Muhammad Muḥiyi ad-Dīn 'Abd al-Ḥamīd,

3 \textit{Ibid.}, p. 1017.

4 Al-Ḥarbi, \textit{op. cit.}, pp. 319, 336, 344.
superintendents were appointed to inspect the road during nearly every pilgrim season, while every caravan had its own leader and military escorts.

We may now name some of those people who carried the risk and undertook these tasks. Their jobs were to control and protect the pilgrim caravans and the building of the roads. We will also indicate, briefly, the type of difficulty which the pilgrims had to face owing to the lack of facilities.

During the period of the Caliph al-Musta'In (248-252/862-866), Muḥammad b. Ḥātim was in charge of the maintenance of the reservoirs,1 وكان بَدْكِة رجل بُنَال لُهُمَّة بُنُحْمَد بُنُ حَامِمٍ عَلَى نَفَقَاتِ الْمَصَانِعُ. In 251/865, 'Abdullāh b. Sulayman was in charge of the control of the road,2 الموحَّالِ طُرْقِ مَكَّةَ لَضْبُطِ الْطَّرِيقُ and Abu as-Sāj was the road superintendent with another, called al-Ḥārith, acting as his deputy.3

In 252/867, Muḥammad b. 'Abdullāh took over from Abu as-Sāj to be responsible for the repair or improvement of the road.4 In 257/870, the Caliph al-Mu'tamid (256-279/870-892) appointed his brother, Ḍḥmad al-Muwaṭṭaq, superintendent of the road, in addition to his post as governor of Kufa, the holy cities, Yemen, and a number of other regions in Iraq and in Iran. Al-Mu'tamid did this after the strength of the Zanj had become considerable.5 The following year (258/871), the majority of the pilgrims gave up their pilgrimage

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1 Al-Ya'qūbi, Tarīkh al-Ya'qūbi, vol. II, p. 610
3 Ibid.
4 Ibid., p. 1685.
after they had reached the station of al-Qar'ā, which is the fourth stop from Kufa; this was due to the lack of water, although those who continued the journey arrived safe and sound in Mecca.¹

In 262/875, the Caliph al-Mu'tamid appointed Kaftamar 'Ali b. al-Ḥusayn b. Dawoud as road superintendent.² Three years later, 'Ali b. Masrur al-Balkhi replaced his brother Muḥammad as superintendent. 'Ali was the victim of an assault of the Banū Asad tribe in 265/878.³ The following year, Muḥammad b. Abī as-Sāj became the new superintendent of the road and the governor of the holy cities.⁴ In 271/884, Aḥmad b. Muḥammad aṭ-Ṭāi was appointed as the governor of Medina and the superintendent of the road.⁵ Not until 294/906, in the reign of the caliph Muktafī (289-295/902-908) do we learn of another superintendent; this was Ibrāhīm b. Abī al-Aṣḥāth, who was in charge also of the holy cities:

"والله كان قضاً مدينة وأمر طريق مكة والتفقة فيه لمصالحه".

During the period of the Caliph al-Mu'taḍid (279-289/892-902) we have no information concerning his making any improvement but we know that Abū Bakr 'Abdullāh b. Yūsuf was responsible for the road and its buildings:

"وكان مقدما على حوائل الخلائنة وصالح طريق الحج وعمارته".

The Road During the Reign of al-Muqtadir

When al-Muqtadir (295-320/908-932) succeeded to the caliphate, the road was unsafe because of the tribal raids, while at the same time the attacks by the Qarmatians reached their peak. The pilgrims were at their mercy and they had to suffer greatly from highway robbers and from the scarcity of water, to such an extent that a man might have to drink his own urine. However, during the period of al-Muqtadir, an attempt was made to guarantee the safety of the road and the pilgrims. It is reported that al-Muqtadir expended 315,000 dinars each year on the road and the holy cities. During his rule, the road was kept under constant protection. For example, in 303/915, Abū Ḥāmid Warqā' b. Muḥammad was in charge of guarding the road; he defeated a group of tribesmen and sent those who surrendered to Baghdad. In 311/923, Abul Hayja 'Abdullāh b. Ḥamdān was the road superintendent, on both the Kufa side and the Mecca side.

"وَكَانَ الَّذِي طَرِيقُ الكُوْنَةِ وِطَارِيقٌ مُّرَبِّقٌ بِذَرَقَةِ الحَجِّ"

This implies, however, that the road in this period was under the care of two people, one at each side. The following year, 312/924, Ja'far b. Warqa ash-Shybānī became the governor of Kufa and the road superintendent.

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1 At-Ṭabari, op. cit., vol. III, part IV, p. 2218. Ibn al-Athīr, op. cit., vol. 6, p. 120.
3 Ibn al-Athīr, op. cit., vol. 6, p. 152.
In order to restrict the tribal raids against the pilgrims, 'Ali b. ʾĪsā, the grand vizier, suggested to the caliph al-Muqtadir, in 315/927, that he employ 5000 horsemen from the Banū Asad tribe, and that he provide financial aid for them and their families; by this means the road would be kept in good order.\footnote{Ibid b. Saʿd al-Qurtubi, Silat Tarikh at-Tabari (Leiden, 1897), p. 130.} In spite of all these precautionary measures, the pilgrims still found it hard to travel. Although they arrived safely at Baghdad in 319/931 and had a tumultuous welcome, it is reported that the pilgrims had been starving and had nearly eaten each other from hunger. All this happened because the road was without buildings:

\textit{اذا كانت خالية من المعارة وآكل الناس يأكل بعضهم من الجوع.} \footnote{Ibid., p. 157.}

However, the Muslim historians provide no information about the state of repair of the road, either after the time of al-Mutawakkil or during the long period of the Caliph al-Muqtadir. Since officials were appointed to look after the road, restorations and improvements must presumably have been made. On the archaeological side, a dated inscription concerning road improvement during al-Muqtadir's period was found about thirty years ago in the old tailings of the gold mine known as Mahd adh-Dhahab. K.S. Twitchell, who discovered the inscribed stone, produced a photograph of it for G.C. Miles, who published it in 1953-4.\footnote{G.C. Miles, "Ali b. Isa's Pilgrim Road: an Inscription of the year 304 H. (916-917)", Bull. de l'Institut Egyptien (Cairo), vol. 36, 1953-4, pp. 477-487. A. al-Anṣārī has published a photograph of the inscription in his two books, Bayn at-Tarikh wal-Āthār (Beirut, 1969), see pp. 50, 59, 60, and Banū Sulaym (Beirut, 1971), pp. 61-62. See also fig. a, following P. 36.} The inscription is composed of twelve readable lines engraved on an irregularly shaped block
of stone. It reads as follows:

(1) بسم الله الرحمن الرحيم
(2) أمر عبد الله
(3) جعفر الإمام المتدر بالله أمير
(4) المؤمنين أطال الله بقاء الوزير أبا
(5) الحسن علي بن عيسى أدام الله عز
(6) ه بعبارة طريق الجادة لحج بيت الله
(7) لمراجا من جزيل ثواب الله و
(8) جرى على يد الفاضي محمد بن مو
(9) سي أشه الله وترلا ذلك
(10) أبو أحمد بن عبد العزيز ال...
(11) وصب بن جعفر الزبيري
(12) في سنة أربع وثلثة سنة

Translation:

(1) In the name of Allāh, the Compassionate, the Merciful:
(2) ordered 'Abdullāh,
(3) Ja'far the Imām al-Muqtadir billāh, Commander
(4) of the Faithful (may Allāh prolong his life),
(5) al-Ḥasan 'Ali b. 'Īsā (may Allāh perpetuate his glory),
(6) to build a broad highway for the pilgrims of the House of Allāh
(7) with the hope of meriting a rich reward in Allāh's sight); and
(8) (this work) was administered by the Judge Muḥammad b.
(9) Mūsā (may Allāh exalt him); and this was executed by
(10) Abū Aḥmad b. 'Abd al-'Azīz al-
(11) and Muṣ'ab b. Ja'far az-Zubayrī;
(12) in the year 304 (916/917 A.D.)

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1 Miles was not able to decipher the affinity (nisbah) but al-Anṣārī suggests al-'Aqībī. I see it as ath-Thaqafī (الثقفي).
2 Al-Anṣārī could not read the nisbah.
Fig. a: Kufic text dated A.H. 304 referring to the improvement of the Pilgrim Route at the time of the 'Abbasid caliph al-Muqtadir. (Original preserved in Dept. of Antiquities-Riyadh, Saudi Arabia. First published by G.C. Miles in 1953-4).
From studying the text, one can conclude the following:

1. A road was built (or rebuilt) during the reign of al-Muqtadir (295-320/908-932).

2. The work was administered by the famous vizier 'Ali b. 'Isā, who started his career at the 'Abbasid court in 278/892 (he died in 334/946).  

3. Three people were in charge of the construction of the road, among them being Muḥammad b. Mūsā, who had been the judge of Mecca.

4. The pilgrim road was not totally neglected during this period but whenever possible was well looked after.

According to classical Arab geographers such as Ibn Khurdādhabah, Ibn Rustah, al-Hamdānī, and al-Maqrīzī, there was only one main road leading to Maʿdin Banu Sulaym down to Mecca. The writer has observed along this road, a number of pilgrim stations provided with reservoirs, wells, and rest houses. There is an alternative route which diverges from Maʿdin Banū Sulaym to Ṣufaynah and goes across Ḥarrat Raḥat southwards to Ḥādhah.

The Ṣufaynah-Ḥādhah road was first mentioned by al-Ḥarbi. He reports that it was 'Isā b. Mūsā who established this road. Al-Ḥarbi also relates that this route had been used during the early 'Abbasid period by the pilgrims, but was then diverted to the line Ufā'iyyah-al-Mislaḥ. 'Arram as-Sulami refers to the Ṣufaynah-Ḥādhah road where he mentions

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4 Al-Ḥarbi, Kitāb al-Manāsik, pp. 335-336.
that Ṣufaynah is a village situated on the Zubaydah road, and that pilgrims turn to it from al-Ma‘dīn whenever they are thirsty.¹

During our investigation along the road, we found that it had been cleared of the boulders and big stones which are found heaped up on either side. However, the main road from Mahd adh-Dhahab is mainly over less difficult ground but the water of the dug wells at the road side might dry up if rainfall is sparse. Therefore, the road from Ṣufaynah, even though it is extremely rough, is more attractive because there is sufficient water all the year round.

Having referred to these two roads, we may now inquire which of these two the above text belongs.

Twitchell has observed from the air near Mahd adh-Dhahab the traces of a broad highway, about 30 km. east of the present Medina-Mecca road; it is about 50 metres wide.² This broad highway is apparently the same route which we have investigated at Ṣufaynah and Ḥādah. We may therefore conclude that the construction which took place in 304/916-917 was very probably on the Ṣufaynah-Ḥādah road. The work on this road may have been either an improvement or a reconstruction of the Zubaydah road. Miles also believes this to be the case.³

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¹ 'Arrām b. al-Asbagh as-Sulami, Kitāb ʿAsmā' Jibāl Tihāmah wa Sukkānūhā, ed. ʿAbd as-Salām Hārūn (Cairo, 1373 A.H.), pp. 73-74.
² Miles, op. cit., p. 483.
³ Ibid., pp. 482-483.

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The Pilgrim Road after the Period of al-Muqtadīr

From the period of al-Muqtadīr onward, the road became totally unsafe. The 'Abbasid caliphs were in no way able to rescue the pilgrims and to make the road more practicable. They were unable to act when the Buwayhidhs and the Saljuqs gained the upper hand and the caliphs were only tools...
in their hands. The deposing of the caliphs and wazirs made
the central government unstable, and the administration fell
into disorder.¹ After al-Muqtadir, even the intermittent
efforts shown by the government to maintain some order along
the road ceased; while the Qarmatians continued to ravage
Arabia in a ferocious fashion. As a result of successive
raids, particularly by the Qarmatians, the pilgrims from Iran
and Iraq were unable to travel to the holy cities. From the
tenth century onwards, the pilgrims accordingly began to avoid
the troubled areas and travelled not across Arabia but via
Syria or by sea.

After the time of al-Muqtadir, we lack information
about the road superintendents; and it is not until 570/1174
that we learn, from Ibn al-Athîr, of Yaḥyâ b. 'Abdullāh b.
Muḥammad b. al-Mu'allmar b. Ja'far Abul Faḍl. He was a famous
vizier and led the pilgrims for several years; he was also
in charge of the road, "واليه الحرم في الطريق." ² There was one
exception among the rulers of the Buwayhids, viz. 'Aḍud
ad-Dawlah (367-372/978-989) who in the ear 369/979 gave orders
to restore the city of Baghdad and its surroundings. Mosques
were restored and khâns were put in good order for strangers
and poorer people. Baghdad was provided with gardens,
were re-excavated, and brick and mortar factories were
restored. Concerning the Road, 'Aḍud ad-Dawlah did great
charitable deeds; he had the road restored from Baghdad to
Mecca. Water basins were made available along the road to-
together with wells and springs. Duty on the pilgrim caravans

¹ For details on the decline of the caliphate, see Carl
Brockelmann, History of the Islamic Peoples (London, 1964),
p. 131 f. B. Spuler, "The Disintegration of the Caliphate
in the East", The Cambridge History of Islam, vol. I (Cam-
was abolished. The danger of tribal or other banditry against the pilgrims seems to have died down during the period of 'Aqūd ad-Dawlah:

وُفِيتِ الجَبَّايةُ مِنْ قَوَائِلِ الْحَجِّ وَزَالَ مَا كَانَ يَجْرَى عَلَيْهِمْ مِنْ الْقَبَاحِ وَضَرْبِ الْمُسْفَفِ وَأَقُيِّمَ لَهُمُ السَّوَاعُ فِى مَائَالِ الْطَرِيقِ وَأَحْفَرَتْ الْأَبَاَرُ وَاسْتَغَيْضَ الْبِنَابِيَّ.

After the time of 'Aqūd ad-Dawlah, however, the pilgrims were often in grave danger, and they were always afraid of possible merciless attacks by the tribes. Ibn al-Athīr reports that in the year 406/1015, about fourteen thousand pilgrims died from thirst, and only six thousand survived; they had to drink the urine of camels; during this particular year, the pilgrims from Iraq did not make the journey because of the general devastation caused by the tribes. 

During the Saljuk rule in Iraq, the Sultan Malikshāh (447-485/1055-1092) was the only vigorous member of the whole dynasty. During his period of rule (465-485/1072-1092), he made many improvements all over lands under Saljuk control, and especially in the area of Baghdad. For example, roads in general were restored and bridges and khāns were also improved. Rivers or canals which had become filled up were cleared out. Along the Mecca road, he built water tanks

"حمل المصانع بِطريق مكة". He also built Manārat al-Qurūn "the minaret of horns". This minaret is described by Ibn Jubayr as he saw it when he travelled along the road around 478/1183. He says that the minaret was a tower rising in a stretch of

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2 Ibid., p. 281, fn. 2.
desert with no buildings around it. It had a conical shape and was built of baked bricks between which were inserted octagonal and quadrangular panels of terra-cotta ingeniously fashioned. This tower was decorated all over with gazelle horns which made it appear like the back of a hedgehog.¹

It seems, however, that the road was never safe during the sixth and seventh centuries A.H. (eleventh and twelfth centuries A.D.). The majority of its facilities were in a state of disrepair. Water tanks and dug wells, however, might survive because the tribes may have needed them; or they might be restored from time to time under heavy guard. Ibn Jubayr says that when travelling along the road, the emir of the pilgrims entered the station of Fayd in battle array and under arms, in order to instil fear into the bedouin who assembled in the place, and who might feel tempted to make an attack on the pilgrims.²

The last pilgrim caravan organised under the rule of an ‘Abbasid caliph was in 641/1243. In this year, the mother of the Caliph al-Musta‘ṣim (640-656/1241-1258) performed her pilgrimage, taking with her 120,000 camels.³

2. The Contribution of Zubaydah

Queen Zubaydah⁴ the wife of Hārūn ar-Rashīd, made


³ An-Nahrawālī, op. cit., p. 178.

⁴ Zubaydah was the daughter of Ja‘far, the son of the Caliph al-Mansūr. She was born in 145/762-763. In 165/781-782, she married her cousin Hārūn ar-Rashīd, the great ‘Abbasid caliph. She died in 216/831. On her political role and social life, see the following works: Abū Bakr Ahmad b.‘Ali al-Khaṭīb al-Baghdādī, Tarīkh Baghdād (Beirut, 1970), vol. 14, pp. 433-434;
an outstanding contribution towards the pilgrim road and the holy cities of Mecca and Medina. The somewhat sparse information available from historians and geographers proves that she devoted much of her time and a great deal of attention to the welfare of the pilgrims, and above all the inhabitants of Mecca.1 Though several sites along the road to Mecca are called Zubaydiyyah in her honour, there is no comprehensive independent report about the work she did apart from the stray references in historical literature and the Arab geographers. Thus the geographers, al-Ḥarbi in particular, refer to at least eleven places which were provided with water facilities (cisterns and dug wells) and rest houses or fortifications founded at her instigation. Al-Ḥarbi even refers to types of cisterns and palaces as being Zubaydiyyah, e.g. Birkah Zubaydiyyah2 بَرْكَةِ زِبْدِيْة, or Birkah li-Umm Ja'far3 بَرْكَةُ ۖاُمَّ جَعْفَر, and Qaṣr li-Umm Ja'far4 قَصْرُ اُمَّ جَعْفَر. As for the type or the shape of the reservoirs, al-Ḥarbi refers to these as Birkah Zubaydiyyah Mudawwarah5 بَرْكَةٍ زِبْدِيْة مَدْوَّرَة. Al-Ḥarbi also recorded in his important book, a piece of poem (urjūza) composed by Aḥmad b. 'Amr who accompanied Zubaydah on one of her pilgrimages to Mecca. In this, the poet enumerates the main


1 There is an interesting thesis covering the political life of Zubaydah and her activities. See, Nābīa Abbott, Two Queens of Baghdad, Mother and Wife of Harun al-Rashid (Chicago, 1946).


3 Ibid., p. 320.


5 Ibid., pp. 312, 316, 333, 352.
pilgrim stations along the entire length of the road indicating the places where Zubaydah had provided facilities for travellers.\footnote{Ibid., pp. 545-562. Al-Wohaibi states that these poems are "recorded to serve partly memo-technical purposes for the better retention of the names of the halts on the Iraqi pilgrim routes," al-Wohaibi, \textit{op. cit.}, p. 403.}

Yaqūt mentions nine places (some of them are also mentioned by al-Ḥarbi) which were associated with Zubaydah. These stations are as follows: al-Muhdath, a stopping place six miles beyond an-Naqirah;\footnote{Ibid., vol. 4, p. 160. Al-Ḥarbi, \textit{op. cit.}, p. 312.} al-‘Unābah, which is a \textit{birkah} between Tūz and Samīrah;\footnote{Ibid., vol. 4, p. 410.} Birkat Umm Ja‘far between al-Mughīthah and al-‘Udhayb;\footnote{Ibid., vol. 2, p. 260.} Qunay‘ah, a reservoir situated between ath-Tha‘labīyyah and al-Khuzaymīyyah;\footnote{Ibid., vol. 4, p. 334.} al-Ḥasani,\footnote{Ibid., vol. 3, p. 132.} a dug well near Ma‘din an-Naqirah; Qarūra,\footnote{Ibid., vol. 5, pp. 421-422.} a station situated between Ma‘din an-Naqirah and al-Ḥājir, provided with a \textit{birkah}, \textit{gašr} (castle), and a dug well. Az-Zubaydiyya\footnote{Ibid., vol. 2, p. 47.} is a station between al-Mughīthah and al-‘Udhayb. This station is provided with a \textit{birkah}, \textit{gašr}, and a mosque. Al-Haytham\footnote{Ibid., vol. 5, pp. 421-422.} is a station between al-Qā‘ and Zubālah, provided with a \textit{birkah} and a \textit{gašr}. Finally, Yaqūt reports a \textit{birkah} built by Zubaydah two miles from at-Tanāhi, which is a station between Baṭān and ath-Tha‘labīyyah.

The locations of these stations indicate, as Nabia Abbott remarks, that the main objective of Zubaydah "seems
to have been to minister especially to poorer or more pious pilgrims who, either from necessity or from choice, made the long pilgrimage on foot. For, as one follows the course of her 'stations' on the Mecca Road, it soon becomes apparent that these were located mostly at some 'halfway' spot between older established stations and towns."¹ These provisions seem to have been outstandingly successful. The traveller Ibn Jubayr was impressed by the Kufa-Mecca route because it was generously furnished with shelters, water tanks, and dug wells.

Ibn Jubayr says:

"These tanks, pools, wells and stations on the road from Baghdad to Mecca are monuments to Zubaydah, daughter of Ja'far al-Manṣūr and wife and cousin of [the caliph] Harūn ar-Rashīd, who applied herself to this throughout her life, leaving on this road facilities and useful works which from her death until today have been of service to all who every year go on an embassy [pilgrimage] to God most High. But for her generous acts in this direction this road could not have been traversed. God in His satisfaction will ensure her reward."²

Ibn Baṭṭūṭa repeats almost verbatim what Ibn Jubayr says by attributing the construction of the water tanks, water basins, and wells, to Zubaydah the daughter of Ja'far.³

Al-Masūdī preserves an interesting story told by Muḥammad b. 'Ali aṣ-Sabri al-Miṣri al-Khurāsānī to the 'Abbasid caliph, al-Qāhir (320-322/932-934). The narrator praised the magnificent philanthropic work of Zubaydah in providing the road with cisterns, as well as establishing some hostels (road houses) as charities at Tarsūs and on the Syrian borders. The narrator, al-Miṣri, also states that Zubaydah secured to the inhabitants of Mecca sufficient water by means of constructing

¹ Nabia Abbott, op. cit., p. 245.
cisterns and digging wells, and the most important project of them all was her building of the aqueduct called 'Ain al-Mushāsh, which conducts the underground water from a distance of about twelve miles from Mecca.¹

Al-Ya'qūbi tells us how Zubaydah wanted to eclipse her husband, in both serious and trivial matters. As for her major works (to which there are few parallel before her time), she dug the aqueduct of 'Ain al-Mushāsh which is twelve miles long; this project cost her one million and seven hundred dinars; she also constructed in the precincts of the Ḥarām Mosque in Mecca several cisterns, drinking places, and basins for ablution. At Mina and 'Arafāt, Zubaydah built shelters, cisterns, and dug wells; she furnished the road from there to Mecca with dug wells. For the upkeep of these facilities, she provided endowments which amounted to thirty thousand dinars each year.²

With regard to the special care she took towards Mecca, Ibn Khallikān has left us the following information:

"Her charity was ample, her conduct virtuous, and the history of her pilgrimage to Mecca and of what she undertook to execute on the way is so well known, that it is useless to repeat it. ... She furnished the city of Mecca with water the scarcity of which had been so great, some time before that, the contents of a water skin cost a gold piece [dinar]. She had it brought thither from a distance of ten miles; this was effected bylevelling and hewing, through rocks, by which means a stream, situated without the sacred territory, was led into the precincts of it. She constructed also the 'Aqabat al-Bustān, and when her intendants observed to her that the expense would be very great, she replied that she was decided to have it executed, were every stroke of a hatchet [given during the work] to cost a dinar."³

Al-Azraqi and al-Fakhi give brief accounts of the water installations, inside and outside Mecca, executed and subsidised by Zubaydah. The network of water courses consisted of water tanks, basins which were connected with each other by canals, and channels to conduct the water inside the Holy City.¹ One of the big reservoirs built by Zubaydah was provided with a room to accommodate the watchman, whose responsibility it was to look after the reservoir. On the arch of the gate, the following inscription was written:

"In the name of Allah the Merciful the Compassionate: there is no God but Allah alone without any partner. The blessing of Allah be on Muhammad his servant and messenger. The grace of Allah be with us all. Umm Ja'far and daughter of Abū al-Faḍl Ja'far the son of the Commander of the Believers, ordered the construction of these fountains in order to provide water for the House of Allah and to the people of his sanctuary, praying thereby for Allah's reward and seeking to draw nigh unto him. By the hand of Yasir, her servant and client in the year one hundred and ninety-four [809-810]."²

Below this inscription and on the same stone, appears the name of Abū Ishāq Ismā'īl b. Ishāq al-Qādī who supervised the work.³ Rather more is known about pious works carried out by Zubaydah other than her work on the pilgrim road. She provided Mecca and its sacred places with water⁴ and built khāns

⁴ The most remarkable achievement by Zubaydah was her aqueduct called 'Ain Zubaydah. There are two treatises dealing with her project and other water installations in the Holy City and its sacred places. These treatises cover the work of Zubaydah, the 'Abbasid caliphs, the rulers of Mecca, and the governors of Egypt, Syria, Yemen, and the sultans of the Ottoman Empire. The first treatise was written in 1144/1730 by al-Qādī Ḥanīf ad-Dīn Ibn al-Qādī Mūhammad. This treatise, which is still unpublished is called, "Rišālah fi 'Imārat al-'Ainān, 'Ain Yunayn wa 'Ain Mu'mān" (al-Maktabah al-Aḥmadīyyah, Tunis, no. 16229). The
and some other utilities outside Arabia.¹

We do not know the expenses she incurred for the construction of the places mentioned along the road, but judging by the estimated sum of money on one single ganāt, her expenditure on the road itself must have been very large.

second treatise was written and published earlier this century by 'Abdullāh Muhammad Sālīḥ az-Zawāwī. This treatise is called, Bughyat ar-Rāḥibīn wa qurrat 'Ain Aḥl al-Balad al-Amīn fi ma Yata'allaq bi 'Ain al-Jawharah as-Sayyidah Zubaydah Umm al-Amīn (Mecca, 1330/1911). When Zubaydah found out that Meccans and the visitors to the Holy city were suffering because of the lack of water, she decided to construct an aqueduct from a considerable distance. She ordered her engineers to study the topographical area below the high mountains of the Hijāz east of Mecca. The engineers found a source of fresh water almost eighteen miles distant. This place was called Wādī Ḥunayn. Zubaydah purchased the farms in this wadi and constructed the ganāts through them, of which there were several. The principal ganāt was dug first, and this was called 'Ain Ḥunayn. This ganāt was supported by others which brought spring water from various directions. Each of these ganāts had special names (see al-Cādir Muḥammad b. 'Ad-Dīn, op. cit., pp. 6–7), e.g., 'Ain Mushāsh, 'Ain Maymūn (in az-Zawāwī's treatise 'Ain Maymūnāh, op. cit., p. 6), 'Ain az-Za'farān, 'Ain al-Barūd, 'Ain al-Safrā, and lastly 'Ain al-Ṭāfīrī and al-Ḥarbiyyāt (in az-Zawāwī's treatise, 'Ain Thqabah wal-Khuraybat, ibid., p. 6). Zubaydah also constructed a special ganāt to the plain of 'Arafāṭ. This was named 'Ain Wādī Nu'mān, and brought water from Wādī Nu'mān, which is situated about thirty miles further east near the mountain of Kara on the way to Tā'īf (see 'Abd al-Cādir Mulla Ḥalandari, al-Khulāsah al-Mufida li Ahwal 'Ain Zubaydah (Mecca, 1345/1927), p. 6). The water of this single ganāt was diverted from Jabal 'Arāfāt to Muzdalifah, and thence to Mīnā, where it debouched into a huge dug well called Bi'r Zubaydah (the well of Zubaydah). All these ganāts were built with skill to a high standard, and provided with inspection shafts for ventilation and for cleaning when they had become blocked with sand and mud (Shakīb Arsalān, al-Irtisāmat al-Litāfī Khāṭir al-Hajj ila Aqdsi Matāf, p. 17). The water of these ganāts was controlled during the pilgrimage season and was directed from one place to the other according to the movement and traffic of the pilgrims (az-Zawāwī, op. cit., p. 8).

¹ Queen Zubaydah also built in various parts of the Muslim state khāns and hospitals, palaces and forts in order to accommodate passengers travelling on foot in remote areas, particularly along the northern frontiers, called ath-Thughur (the fortified line) in Syria, cf the palace which was built inside the town of Baghras. In Badhakhshān in Khurāsān region, she had palaces built for poor people. In order to maintain the use of these buildings she left endowments with a yield of one hundred thousand dinars a year (see al-Ya'qūbī, Mushakalat al-Nās li Zamānīhim, p. 26; Nasūdī, Muruḍ adh-Dhahab, vol. 8, p. 297; V. Minorsky, Hudūd al-'Alam (The Regions of the World) (London, 1937), pp. 150, 349).
For the upkeep of the water installations in Mecca (and possibly along the road), Zubaydah left many endowments with a yield of thirty thousand dinars a year. She also spent during one of her many visits to the Holy City, approximately fifty million dinars in sixty days.¹

3. The Contribution of Other Donors

It was pointed out in a previous chapter that the caliphs and Queen Zubaydah were not the only persons who deserve credit for the work towards the establishing of the road, for certain among their subjects participated as well. These were people of high status who were related to the caliphal family as well as personalities such as respected generals and officials such as viziers, secretaries, and men and women of great wealth.

Details of these donors are given by al-Ḥarbi who refers to them by their full names or by their titles. A list of some of the donors and their work is provided below, together with brief items of information concerning each of them.

'Īsā b. Mūsā b. Muḥammad 'Alī b. 'Abdallāh b. 'Abbās²

He constructed a well at the station of

² 'Īsā b. Mūsā was the nephew of as-Saffāh and al-Manṣūr, and a leading member of the 'Abbasid family. He was expected to ascend the throne after al-Manṣūr but the latter nominated his own son, al-Mahdi, as his successor and compensated 'Īsā with a huge sum of money. When al-Mahdi became caliph, he forced 'Īsā in 160/776 to give his allegiance and to drop his claim to the throne. In return, al-Mahdi paid 'Īsā a large amount of money, and in addition awarded him extensive estates in various regions. After this, 'Īsā left Baghdad and lived in isolation until he died in 167/783. Before that, 'Īsā had been governor of Kufa for almost 13 years. He led the pilgrims twice to Mecca on behalf of the caliph, in 134/751 and in 143/760. For full details, see al-Ṭabarī, op. cit., vol. III, part I, pp. 331-352, 467-469; Ibn al-Athīr, op. cit., vol. 5, pp. 54-55; Khalīfa b. Khayyāṭ al-'Uṣfuri, Tarīkh Khalīfa b. Khayyāṭ, 2 vols., ed. Souhil Zakkar (Damascus, 1968), vol. 2, pp. 627, 645. On his connection with the construction of Qaṣr al-Ūkhaydīr, see K.A.C. Creswell, A Short Account of Early Muslim Architecture (Beirut, 1968), pp. 200-203.
ar-Rabdadhah, and established the Şufaynah-Ḥādhah road which passes through the eastern edge of Ḥarrāt Rahaṭ.  

Mūsā b. 'Īsā b. Mūsā

He ordered the construction of a birkah which was located three miles from al-Biṯān. He also had a basin (hawd) built, six miles from Fayd. Beside it, a shelter was also provided.

'Īsā b. 'Ali

According to al-Ḥarbi, 'Īsā was the first to have constructed a water tank and a palace at the station of al-Mislah. 'Īsā also built a square birkah at the station of al-Ghamrah.

'Ali b. 'Īsā

According to al-Ḥarbi, 'Ali built a reservoir and a palace on the secondary road, called at-Ṭariq al-Ba’th, which passes by al-Mislah.

'Abd aṣ-Ṣamad

He constructed a well at Fayd and built a mosque.

1 Al-Ḥarbi, op. cit., p. 328.
2 Ibid., p. 335.
3 The son of 'Īsā b. Mūsā mentioned above. He was a very active figure particularly during the time of Hārūn ar-Rashīd. He was once governor of Egypt and Syria in 176/792. In addition he was at various times governor of Mecca, Medina, Kufa, and Basrah. Occasionally, he led the pilgrims to Mecca. See at-Ṭabarī, op. cit., vol. III, part I, pp. 624-627, III, II, 646-647, 739-740.
4 Al-Ḥarbi, op. cit., p. 293.
5 Ibid., p. 304.
6 'Īsā b. 'Ali was the uncle of as-Saffāh and al-Manṣūr, a devoted general who spent most of his life time as a companion and adviser to al-Manṣūr, at-Ṭabarī, op. cit., vol. III, part I, pp. 71-72, 121-122, 332-333.
8 He is likely to have been identical with 'Ali b. 'Īsā b. Ja'far al-Manṣūr, a governor of Mecca who twice represented the caliph in the pilgrimage seasons 238/852 and 239/853, at-Ṭabarī, op. cit., vol. III, part III, pp. 1414, 1419.
9 Al-Ḥarbi, op. cit., p. 343.
10 He may be the same as 'Abd as-Samad b. 'Ali b. 'Abbās, the
at the station of Awţās.\(^1\)

'Abdullāh b. 'Ubaydullāh al-Ḫāshimi\(^2\)

He built a well at the station of Ma'din al-Qurashi.\(^3\)

Abū Muslim al-Khurāsānī\(^4\)

The well known general in the early period of the 'Abbasid state. In 136/753, Abū Muslim obtained permission from the 'Abbasid caliph as-Saffāh to go on the pilgrimage the same year Abū Ja'far al-Manṣūr led the pilgrims on behalf of the caliph. On this journey, Abū Muslim was accompanied by a large contingent of his troops. He smoothed the road and had wells constructed. In addition, he distributed generous gifts such as garments and other material among the bedouins he met along the road:

\[\text{كان أبو سلم يحلع المقابل وكسو الأgrab البنوث واللاحف وحفر الآبار وسهل الطرق.}\] \(^5\)

Uncle of al-Manṣūr, he was born in 104/722 and died in 185/801. Ibn Kathīr, al-Bidāyah wal-Nihāyah, vol. 10, p. 186. During the period of al-Manṣūr, 'Abd as-Samad was awarded at various times the governorship of Mecca, Medina, and al-Jazīrah province. At the time of ar-Rashīd, he was appointed governor of Basrah. He twice led the pilgrims to Mecca, Khalīfa b. Khayyā taraf, op. cit., vol. 2, pp. 658, 672-673, 697, 711, 743.

\(^1\) Al-Ḫarbi, op. cit., pp. 309, 347.


\(^3\) Al-Ḫarbi, op. cit., p. 324.

\(^4\) Abū Muslim al-Khurāsānī was the leader of the 'Abbasid revolution in Khurāsān. When the 'Abbasid dynasty replaced the Umayyad, Abū Muslim was put in charge of the Khurāsān province during the period of the caliph as-Saffāh. But for various reasons his relations with the new dynasty were increasingly strained. The accession of Abū Ja'far al-Manṣūr (in 136/753-754) brought about the downfall of Abū Muslim. Abū Ja'far immediately brought him to his court and presented a number of accusations against him and then killed him. For full details, see at-Ṭabarī, op. cit., vol. III, part I, pp. 99-116. Ibn al-Athīr, op. cit., vol. 4, pp. 350-355. Farouq 'Omar, The 'Abbasid Caliphate, 132/750-170/786 (Baghdad, 1969), pp. 137-181.

Apart from this information, we do not know, at the present time, to what extent the road was improved by Abū Muslim, also there is no information available about the stations which were provided with watering facilities.

Yaqtîn b. Mūsâ

He was the famous road superintendent; he dug a well at the station of 'Umaq.

The Barmakids

The Barmakids were credited with providing the pilgrim road with a number of watering facilities. They constructed reservoirs and wells at several stations, which were named after them (i.e., al-Barmaki, al-Barmakiyya). These watering facilities were built at Zubālah, al-Khaḍrâ', al-Ajfar, near the

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1 Yaqtîn Ibn Mūsâ was a close associate of al-Manṣūr. During the reign of al-Mahdi he was in charge of the construction of the pilgrim road; his supervision lasted for ten years. In addition, al-Mahdi put him in charge of the reconstruction of the Prophet's Mosque in Medina in 167/783. After the death of al-Mahdi, Yaqtîn continued to work for al-Hādî and ar-Rashîd. He died in Baghdad in 185/801, at-Tabari, op. cit., vol. III, part I, pp. 103, 486, 520, III, II, 650; Ibn Kathîr, op. cit., vol. 10, pp. 133, 149. 188.

2 Al-Ḫarbi, op. cit., p. 333.

3 A distinguished family of Persian origin headed by Khālid b. Barmak who enjoyed good relations with as-Saffāḥ, the first Abbāsid caliph. Khālid later became the head of the department of finance. His son Yaḥyâ was appointed by al-Mahdi as a tutor to Hārûn ar-Rashîd. When the latter ascended to the caliphate, he designated Yaḥyâ wazîr. Yaḥyâ together with his sons al-Faḍl and Ja'far were put in charge of administrative and government affairs. During the reign of ar-Rashîd, the Barmakids saw their rule unchallenged, but their powerful position eventually led to their downfall. On returning from the pilgrimage, which he accomplished with his suite in 196/802, ar-Rashîd suddenly decided to get rid of the Barmakids. During the night of 1 Ṣafar, 187/29-29 January 803, he had Ja'far executed and condemned his brothers to life imprisonment; Yaḥyâ was placed under observation. The properties of all the Barmakids, with the exception of Muḥammad b. Khālid, were confiscated. On the origin of the Barmakids, their rise and fall, see Encyclopaedia of Islam, vol. I, pp. 1033-1036.


5 Ibid., p. 298.

6 Ibid., p. 303.
station of Fayd, and at the station of al-'Umaq.

Khuzaymah b. Khāzim

The station of al-Khuzaymīyyah was named after him. According to Ibn Rustah, he provided this station with reservoirs and wells provided with draw-wells from which water was obtained by means of camels. Al-Ḥarbi relates that Khuzaymah built a mosque and a minaret at this station.

Al-Faḍl b. ar-Rabi'ī

He had a well dug at the station of Fayd.

'Abdullāh Ibn Mālik

He provided the road with a number of wells and water

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1 Ibid., p. 304.
2 Ibid., p. 332.
5 Ibn Rustah, op. cit., p. 176.
6 Al-Ḥarbi, op. cit., p. 300.
8 Al-Ḥarbi, op. cit., p. 309.
9 'Abdullāh b. Mālik al-Khuza'ī, called al-Qā'id, a famous general and a close associate of al-Mahdi. During the time of al-Manṣūr, he was the governor of Khurāsān. He held the office of police chief during the time of al-Mahdi and al-Ḥādi. In 189/604 ar-Rashīd awarded him the governorship of Ṭabaristān, Rayy, Ḥamdān, and other provinces. It is said that he once performed the pilgrimage on foot, as expiation for an oath of allegiance which he failed to keep. For full details, see
tanks which were built at different stages. At Bāṭn al-Agharr, an interval station between al-Khuzaymīyyah and al-Ajfar, he built a square tank provided with a settling tank (miṣfāt). 1 At al-Qarā'īn, located between Fayd and Tūz, 'Abdullāh built a well, a birkah, and a hawd. 2 Near the station of Tūz, he built a number of wells. 3 He also constructed a well a few miles from Samīrāh. 4

Abū Dulaf al-Qāsim b. 'Īsh 5

According to Ibn Rustah, he established the pilgrim station of al-Ḥājrīr. 6 According to Qudāma, he built a citadel at Fayd. 7

Khāliṣah 8

The maid of al-Khayzurān, the mother of Hārūn ar-Rashīd. She may be considered the most celebrated female, after Zubaydah, for her devotion and generosity in providing for the needs of the pilgrims. According to the information recorded


1 Al-Ḥarbi, op. cit., pp. 300-301.
2 Ibid., p. 310.
3 Ibid., p. 311.
4 Ibid., p. 313.

6 Ibn Rustah, op. cit., p. 176.
7 Al-Kharajī, p. 186.
8 She was the maid of al-Khayzurān and the mistress of the caliph al-Mahdi. She was a woman of considerable personality, which made her very popular in the 'Abbasid court. According to Qudāma, Khāliṣah had a connection with the village of Turabah, east of at-Ṭā'īf, which was a prosperous village with wells and farms. Qudāma, op. cit., p. 188. For further details, see at-Ṭabari, op. cit., vol. III, part I, pp. 405, 569-570, 578-579.
by al-Ḥarbi, Khāliṣah built reservoirs, wells, and shelters, at different intervals along the pilgrim road, as well as paving sections of the track.

Near the station of al-Qā', she had shelters (قاب) and watering facilities built.\(^1\) At aṭ-Ṭulayḥah, 12 miles from al-Bīṭān, she owned shelters and a reservoir for storing water (خزانة للسا).\(^2\) At al-Bīṭān, there was a birkah called al-Khāliṣiyah, presumably built by Khāliṣah.\(^3\) Three miles from al-Bīṭān, on the way to Mecca, Khāliṣah had two reservoirs built, and in addition she provided shelters and a water store built in the same vicinity.\(^4\) At ath-Tha'labiyah, there was a dug well and a reservoir built at her instigation.\(^5\)

Khāliṣah personally ordered the road to be paved at one point near the station of al-Ajfar.\(^6\) She also owned a number of buildings inside Mecca, and built wells and restored others in the vicinity of Mecca for the convenience of the pilgrims.\(^7\)

Husayn al-Khaṣṣy\(^8\)

He constructed two reservoirs at two places between al-Bīṭān and ath-Tha'labiyah. Two miles from the station of Tūz, he had three wells dug, each of them being provided with a settling tank.\(^9\)

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8. His nickname was Husayn al-Khādim; he was the butler of Hārūn ar-Rashīd. For further details, see aṭ-Ṭabari, \textit{op. cit.}, vol. III, part II, pp. 680, 705, 766-767, 1045, 1355.
Masrûr al-Khâdim

He may have been responsible for the building of the well at the station of al-Ajfar which was named al-Masrûrî. He also constructed a water tank at the station of al-Mislah.

'Umar Ibn Faraj

He repaired a section of the road during the time of the caliph al-Wâthiq. He also repaired cisterns and provided the track with way marks (cairns) and beacons.

Al-Musayyab Ibn Sulayman al-Makhzûmi

Al-Musayyab established the station of Ma'din al-Qurashi with permission from 'Umar Ibn Faraj, who was the superintendent of the road. He also dug a number of wells at Ma'din al-Qurashi.

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1 Masrûr al-Khâdim al-Kabîr, called Abû Ḥâshim, a trusted butler of Ḥârûn ar-Rashîd. He often joined the big military expeditions, when he took charge of the expenditure, at-Ṭabarî, op. cit., vol. III, part II, p. 712. After the death of ar-Rashîd, his position in the 'Abbasid court was respected. He performed the pilgrimage once; on this journey he was accompanied by two hundred horsemen, ibid., p. 982. Masrûr was in control of the prison in Samarra during the time of al-Mu'tašîm, ibid., p. 1166. For further details, see Mas'ūdî, Murūj adh-Dhahab, vol. 6, pp. 33, 335, 408-409.

2 Al-Ḥarbi, op. cit., p. 303.

3 Ibid., p. 344.

4 'Umar Ibn Faraj ar-Rukhaji was a prominent civil servant (kâtîb) during the time of al-Ma'mûn and al-Mutawakkil. Al-Wâthiq made him the superintendent of the pilgrim road which task he filled successfully, particularly at the time of raids carried out by hostile tribes against the road and the pilgrims. 'Umar died in 233/847. For full details, see at-Ṭabarî, op. cit., vol. III, part II, pp. 1350, 1363, III, III, 1368, 1370, 1377, 1516; Yaqût, op. cit., vol. 3, p. 38; al-Baghdâdi, op. cit., vol. 1, p. 94.


6 Al-Musayyab was in fact a resident at Ma'din an-Naqirah, where he owned some property, but he felt in danger from a wealthy man named Muḥammad b. Yūsuf al-Ja'fari, and decided to leave the place completely and built himself a fortress (hiṣn) at Ma'din al-Qurashi (during the reign of al-Wâthiq). He remained at this private residence until he was killed by Ḥasan b. Ja'far al-'Alawi in 273/886. His fortress was destroyed. See al-Ḥarbi, op. cit., pp. 323-324. Muḥammad b. Yūsuf al-Ja'fari accompanied the general Bugha al-Kabîr as his guide when the latter came to the Hijâz province on a military
Al-Ḥarbi also mentions the names of other donors who provided the road with useful facilities. At present we are unable to trace their backgrounds, and cannot tell who they were or what positions they held. Nevertheless, for the sake of completeness, we here list their names in alphabetical order.

Abū Ṭāhir az-Zubayrī dug a well at Fayd.
Bakr Ibn Yabyā dug a well at Ma'din al-Qurashi.
Baṣīr al-Waṣīf built a well at Dhīt 'Irq.
Hādīm Ibn Ḥassān built a well at Ma'din al-Qurashi.
Ḥammād al-Yaṣīd constructed a birkah at a place located six miles from al-Mawān.

Ibn Hījr built a birkah at three miles from as-Salilah.
‘Imrān b. ‘Umar dug a well at the station of Fayd.
Ibn Muhāyr dug a well near the station of ar-Rabadhah.

mission to silence tribes who at times made the pilgrim road unsafe. For details, see at-Ṭabari, op. cit., vol. III, part II, pp. 1358-63.

1 Unknown.
2 Al-Ḥarbi, op. cit., p. 332.
3 Unknown.
4 Al-Ḥarbi, op. cit., p. 332.
5 Unknown.
6 Al-Ḥarbi, op. cit., p. 352.
7 Unknown.
8 Al-Ḥarbi, op. cit., p. 324.
9 He may be the same as Ḥammād b. Ishāq b. Ḥammād b. Yaṣīd, Ibn al-Ṭabīr, op. cit., vol. 6, p. 327. Ḥammād b. Yaṣīd, the grandfather, was born in 100 A.H., Khalīfā b. Khayyāt, op. cit., vol. 1, p. 434.
10 Al-Ḥarbi, op. cit., p. 325.
11 Unknown.
12 Al-Ḥarbi, op. cit., p. 329.
13 Unknown.
14 Al-Ḥarbi, op. cit., p. 309.
15 Unknown.
16 Al-Ḥarbi, op. cit., p. 328.
Muḥammad b. al-Fadl at-Tājir 1 dug a well at the station of al-‘Umaq. 2

Muḥammad Ibn ar-Rabī‘ 3 dug a well at ath-Tha‘labīyyah. 4

Wahīb 5 dug a well at Fayd. 6

Yūsuf Ibn Ismā‘īl 7 constructed five wells at Dḥāt ‘Irq. 8

Badr b. Hasanwayh 9

He contributed generously towards the Kufa-Mecca

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1 He is likely to have been identified with Muḥammad b. Faḍl al-Jarjarā‘ī, who died in 250/864. He was a secretary and then became wazīr to al-Mutawakkil and al-Musta‘īn. See Ibn al-Athīr, op. cit., vol. 6, pp. 314, 318; Ibn al-Abbār, op. cit., pp. 152-154.

2 Al-Ḥarbi, op. cit., p. 332.

3 Likely to have been the brother of al-Faḍl Ibn ar-Rabī‘.

4 Al-Ḥarbi, op. cit., p. 279.

5 He could have been one of the following: Wahīb b. Khālid (gāḥīb al-kaḍādīs) an owner of a cotton factory who died in 169/785, Khalīfā b. Khayyāt, op. cit., vol. 2, p. 704; Wuhayb b. ‘Abdullāh an-Nisā‘ī, an army general in one of the districts of Khurasān, aṭ-Ṭabarī, op. cit., vol. III, part II, p. 650.

6 Al-Ḥarbi, op. cit., p. 309.

7 He may have been the same as Yūsuf b. Ismā‘īl al-‘Alawi, the nephew of Mūsā b. ‘Abdullāh al-Ḥusaynī, who revolted against the ‘Abbasids in 251 A.H., aṭ-Ṭabarī, op. cit., vol. III, part III, p. 1586.

8 Al-Ḥarbi, op. cit., p. 352.

9 He was a well-known prince of Kurdish descent, who in the 4th/10th century and the beginning of the 5th/11th century, succeeded in ruling the lands west of Iran and upper Mesopotamia (this included the Jabal district, Hamdān, Dinawar, Nihawand, Asadabad, Berijird, and several districts of Ahwāz as well as Qarmisān, Ḥulwān, and Shirāz from time to time). His support of Aḍud ad-Dawlaḥ brought him this status in 370/980, after the death of his father, Ḥasanwayh, and after his brothers had been executed by Aḍud ad-Dawlaḥ for their support of his rival brother, Fakhr ad-Dawlaḥ. Badr established a good understanding with the Buwayhids of Baghdad, who induced the caliph al-Ṣādir to confer upon him the honorific "Nāṣir ad-dīn wa ad-Dawlaḥ". Badr managed to conduct and administer the regions under his control. He imposed law and order on the lawless tribes, among them being one of his own, the Barzikan, who were regarded as the worst tribe on earth for their brigandage. His wise conduct brought safety to the lands under his rule, which enabled him to develop the economy and to improve the mountain roads which ran through his territories. Through his guidance, markets were developed, among them being the one at Hamdān. The revenue of these markets helped to foster many religious functions and to secure, by generous gifts, the safety and welfare of pilgrims who crossed his territory. For full details, see ar-Rudhrawārī, Dhayl Kitāb Tajārib al-Uman, vol. 3, pp. 288-291.
road, particularly at a time when the central government in Baghdad hardly paid any attention to it. He sent five thousand dinars with the leaders of the pilgrim caravans from Khurāsān to be expended on the guarding of the road; in lieu of what the pilgrims contributed each year, the sum was afterwards increased until it reached nine thousand dinars.

In addition, he donated a large sum of money every year (estimated at one hundred thousand dinars) towards the repairing of the road, restoration of water tanks, and cleaning the wells or digging new ones. He also assured the regular supply of fodder for animals along the entire length of the road by paying at the going rate to the inhabitants of the stations on the road. Badr distributed a large sum of money among the descendents of the Prophet and the Ānṣār, Qur’ān readers, and ascetics.¹

When Badr died, this regular contribution stopped, directly affecting the beneficiaries and bringing the pilgrimage to a standstill.²

Jamāl ad-Dīn Abū Maṇṣūr al-Īṣfahānī

He was the vizier of Ǧūṭb ad-Dīn, the governor of Mosul. According to Ibn al-Athīr, Jamāl ad-Dīn was of an outstanding munificence, compassion, and loving charity. His fame extended from Khurāsān to the Yemen. He distributed a great


² Badr was killed in 105/1014 during the siege of a fort belonging to one of the rival factions in his territories.
sum of money among the poor people, prayer leaders, and those in need. As part of his good deeds, he spent large sums on the renewal of the mosque at Minā, near Mecca, and on the decoration of the holy Ka'bah, and on improving the steps ascending to the summit of Jabal 'Arafāt. In the vicinity of 'Arafāt he spent generously on the improvement of the water tanks and in conducting water into them by means of underground canals. He made sure that water was available at 'Arafāt every pilgrim season. At Medina, he renewed the city wall. What, however, is of direct interest to us, is that Jamāl ad-Dīn also directed his attention towards the station of Fayd, on Darb Zubaydah, and repaired its wall.

وَبِنَى سُورَةً عَلَى مَدِينَةِ الرِّسَالَةِ، صَلِّي اللَّهُ عَلَيْهِ وَسَلَّمُ وَلَى فَيْدٍ وَبِنَى لَهَا أَيْضًا فَصِيلاً

One of his impressive buildings, outside Arabia, was the construction of a bridge on the Tigris river which was built from cut stone, supported by iron, lead, and gypsum. However, Jamāl ad-Dīn died in 559/1163, before this bridge was completed.¹

¹ Ibn al-Athīr, al-Kāmil, vol. 9, pp. 87-89.
Chapter III

THE DECLINE OF THE ROAD

1. Tribal Raids

The problem of tribal raids on the pilgrim road became a major preoccupation comparatively late, and this may partly be connected with the fact that up to the 'Abbasid period Arabs as a whole had more influence in the empire than non-Arabs. On the contrary, the 'Abbasid dynasty drew its strength mostly from the Persians, and the conflict between al-Amin and al-Ma'mun brought into the open the conflict between the Arabs who backed al-Amin and the Persians who were behind al-Ma'mun. The caliph al-Mu'tasim, owing to his distrust of the Persians, recruited a large army of men originating from the Turkish-speaking provinces of eastern Persia and Transoxiana. For the latter group, al-Mu'tasim established Samarra to be the new capital of the state.

Certain tribes in Arabia had their grazing lands on either side of the pilgrim road, and also between Mecca and Medina. From the period of as-Saffah until the end of the reign of al-Mu'tasim, the road was at peace; the pilgrims enjoyed freedom from molestation and merchants and state officials were in no danger whatsoever.

During the earlier period of the 'Abbasid state, the caliphs al-Manṣūr, al-Mahdi, and ar-Rashid, all performed the
pilgrimage several times. Their wives and important officials did the same, and all of them paid generously towards the welfare of the pilgrims and the improving of communications. Furthermore, the tribes who wandered on either side of the road, and those who lived in or near the main pilgrim stations, very likely benefited from the heavy traffic along the road. But it seems that these tribes felt isolated or were simply ignored by the later caliphs, and they proceeded to react in a more nationalistic way against the non-Arab elements who became the dominant power behind the caliphs.\textsuperscript{1} To a certain extent, also, the deteriorating economic situation encouraged the increase in tribal raids.

The first danger came from the tribe of Banū Sulaym.\textsuperscript{2} In 230/844, they were led by their leader 'Uzayzah b. Ǧaćṭāb; they raided the areas around Medina and many parts of the Hijāz province. They imposed what prices they pleased on the local markets and their depredations were intolerable. The governor of Medina was alerted and appointed Ḥammād b. Jarīr aṭ-Ṭabarī to deal with the raids. Ḥammād met the Banū Sulaym near the station of ar-Ruwaythah, three leagues from Medina, but his force was outnumbered; he was killed, his soldiers were defeated, and their mounts, arms, and clothes were taken. After this one-sided battle, the Banū Sulaym increased their raids against the stations between Medina and Mecca, while other tribes did the same and the pilgrim road became totally impassable.\textsuperscript{3} The caliph al-Wāthiq proceeded to employ his Turkish officer, Bugha al-Kabīr, who led a successful campaign against the Banū Sulaym.

\textsuperscript{1} Al-Wohaibi, The Northern Hijāz in the Writing of the Arab Geographers, 800-1150, p. 390.
\textsuperscript{2} On the history of this tribe, see 'Abd al-Ḳuddūs al-Anṣārī, Banū Sulaym (Beirut, 1971).
He followed them into Ḥarrat Rahaṭ and defeated them near as-Suwārqīyyah, their main point of strength which included many fortresses. Bugha inflicted heavy losses on them and a large number of them were captured and put in the prison of Medina. Among these was their leader 'Uzayzah b. Qāṭṭāb, who in the following year, 231/845, tried with other prisoners to escape, but his attempt failed and he was killed together with his tribesmen by the people of Medina. Bugha combed the whole area for the Banū Sulaym and other tribes such as Ghaṭafān, Fazārah, and others.¹

In 232/846, Bugha met the tribe of Banū Numayr, who had caused many disturbances in the Yamāmah province. Damage done by them was as great as that of the Banū Sulaym. Bugha, after fierce fighting, succeeded in defeating them and capturing a large number of them, who were later taken to Baghdad.²

However, various tribes maintained their attacks against the pilgrims. In 265/878, bedouin from the Banū Asad tribe killed the road superintendent, 'Ali b. Masrūr al-Balkhi, before he reached the station of al-Mughīthah.³ In 292/882, the Arabs attacked a pilgrim caravan between Tūz and Samīrah. They robbed the pilgrims, and 5000 camels with their loads were taken, as well as many prisoners.⁴ In 285/898, members of the Ṭayy tribe, led by their chief, Ṣāliḥ b. Mudrik aṭ-Ṭā'ī, attacked the pilgrim caravan at the station of al-Ajfar, and

took property from them worth two million dinars; in addition, a large number of women were taken prisoner.

The tribes found the pilgrim road a lucrative source of plunder, and seem to have missed no opportunity of attacking the pilgrims. However, in many cases their attempts failed because the caravans had strong military escorts. Thus in 287/900 they failed to win a battle over the pilgrim caravans on their return journey from Mecca. The Ṭayy tribe fought the pilgrims and their military escort at a point several miles from Ma'din Banī Sulaym, on the way to Baghdad. After severe fighting, which lasted for several days, the tribesmen had lost a considerable number of their men killed or wounded and captured; among those who were killed was Ṣāliḥ b. Mudrik aṭ-Ṭāʾī, whose head was taken to Baghdad.

On a number of other occasions, the Ṭayy tribe were unsuccessful in their raids against the pilgrims, particularly in the two successive years 294/906 and 295/907. In the former year they besieged the pilgrims at Fayd, in the latter year, Ḥusayn b. Mūsā, an army officer, made a remarkable attack against the Ṭayy tribe and caused them heavy casualties.

During the reign of al-Muqtadir (295-320/908-932), the tribal raids increased in volume. For example, in 302/914 the bedouin carried out an assault on the pilgrims near the station of al-Ḥājir, robbing them of their mounts and all their property, and taking large numbers of women and slave-girls

prisoner. The next year, 303/915, members of the Ṭayy tribe intercepted a train of pilgrims under the leadership of Ḥātim al-Khursāni: the tribesmen stripped them of their belongings and those who survived the attack died from thirst. However, during the same year, bedouins unsuccessfully attacked Abū Ḥāmid Warqā' b. Muḥammad, who was in charge of protecting the road; he succeeded in killing a number of them, and many were captured and sent to Baghdad, where the people of the city avenged themselves on the captured tribesmen by throwing them into the Tigris.

Another tribe which caused trouble for the pilgrims was the Ḥarb tribe, who controlled the road between Medina and Mecca. Pilgrims were never safe without a military escort. According to al-Hamdāni, the caliph al-Muqtadir bought safety for the pilgrims from Banī Ḥarb, and it is most likely that other tribes who infiltrated other parts of the road were similarly bribed.

In 335/945, the Banū Sulaym appeared on the stage again, but this time they attacked the pilgrims coming from North Africa and Syria. It was estimated that the caravan consisted of 20,000 camels, all these being loaded with valuable goods belonging to business men and pilgrims, many of whom with their families wanted to reach Baghdad via Mecca to escape from the dangerous areas on the frontiers with the Byzantines. A wealthy man, known as al-Khayyatī, who was the Qādi of

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2 'Arīb b. Sa'īd al-Qurṭubī, Siṣlat Tarīkh at-Tabari (Leiden, 1897), p. 54; Ibn al-Athīr, op. cit., vol. 6, p. 752.
3 Ibid.
5 Al-Wahhaibī, op. cit., p. 390.
Tarsus, accompanied this caravan, and he alone had 120,000 dinars. The whole of the caravan was taken by the Banū Sulaym, and the majority of the people lost their lives.¹

In 363/973, the Banū Hilāl and other bedouin attacked the pilgrims who were travelling along the road, and slaughtered most of them.²

By this time it seems to have become impossible to put an end to tribal raids. Ibn Miskawih describes the technique of the tribe of Banī Shaybān, who were expert in raiding the pilgrim road and other communication routes. They had very fast horses which they used whenever the army of the state made an attempt to root them out. A raiding party from this tribe could travel a distance of 30 farsakhs (90 miles) per night, and it was very difficult to identify their positions, or to know where they were usually hiding. This particular tribe established contact with certain Turkish tribes, but the Buwayhid sultan, 'Aqūd ad-Dawlah, eventually managed to isolate them from their allies and punished them severely in 369/979.³

During the rule of 'Aqūd ad-Dawlah, various tough measures were taken in order to put down the tribal raids, and the road for some time was considered safe.

Among these successes, 'Aqūd ad-Dawlah was able to kill the chief of the Banī 'Aqīl tribe, Dawūd b. Muṣ'ab al-'Aqīli.⁴

Sometimes the pilgrims had to pay protection money for their safety. In 379/989, Ibn al-Jarrāḥ aṭ-Ṭā'ī met the

⁴ Abū Shuja' Rudhrawī, Dhayl Kitāb Tajārib al-Ummām (Cairo, 1334/1916), p. 54.
pilgrims between Samīrah and Fayd; they paid him 300,000 dinars as a ransom for their lives.¹

In 384/994 the pilgrims from both Iraq and Syria were unable to go on their pilgrimage because the chief of the bedouin, called al-Uṣayfīr al-Muntafiqī (الأمير المنتفئي) refused to let them pass, alleging that the money he had obtained from Baghdad in the previous year was counterfeit, and he demanded repayment; the correspondence between him and the authorities in Baghdad took so long to settle that the pilgrims ran out of time and decided to abandon the pilgrimage.²

The well-known wealthy prince named Badr b. Ḥasanawayh, paid in 385/995³ and the year after, 386/996, 5,000 dinars to the bedouin chief, al-Uṣayfīr, as a bribe to protect the pilgrims from attempts on their lives. The same amount of money was paid by him every year during his lifetime; sometimes the sum to be expended on bribes and road repairs went up to 9,000 dinars.⁴ In the following years, al-Uṣayfīr and other tribesmen made the road unsafe again, and the pilgrims, particularly the Khurāsānīs, were obliged to abandon the pilgrimage.⁵ Al-Uṣayfīr died in 409/1018.⁶

The beginning of the fifth century A.H. (early eleventh century A.D.), brought more tribal raids which devastated the road and harassed the pilgrims.

In 402/1011, members of the Khafājah tribe, led by their chief, Fulaytah al-Khafāji, marched to the station of Wāqiṣah, where they drained the water from the wells and reservoirs and filled them with colocynths (الحنظل). On the arrival of the pilgrims at the station of al-'Aqabah, the Khafājah

³ Ibn al-Athīr, op. cit., vol. 7, p. 175, fn. 1.
⁴ Ar-Rudhwārī, op. cit., p. 282. Ibn al-Jawzī states that Badr Ibn Ḥasanawayh paid 9,000 dinars directly to al-Uṣayfīr in order to secure the safety of the pilgrims, and also to relieve them from the necessity of paying for their lives out of their expenses. Ibn al-Jawzī confirms that this amount of money was regularly paid every season until 403/1012; Ibn al-Jawzī, op. cit., vol. 7, pp. 178-179, 187-188.
⁶ Ibid., vol. 7, p. 303.
tribe prevented them from getting to the water, killed a large number of them and confiscated their property. Although the government sent troops immediately to deal with this attack and to bring back the property which had been taken, the damage caused by the tribe was enormous.¹

Adh-Dhahabi, who puts the incident a year later (403/1012), estimates that 15,000 pilgrims were killed at the hands of the tribe.²

Khafājah renewed their raids in the following years. In 426/1034 they even attacked the city of Kufa, plundered the town and damaged the palm trees; as a consequence, the pilgrims were not able to travel to the holy cities.³

In 485/1092, Khafājah again attacked the pilgrims, killing many of the soldiers who were escorting the caravan and then robbing the pilgrims of their belongings. Next the tribesmen turned towards Kufa, killing a number of the inhabitants and robbing others; this time, however, a strong army contingent was despatched from Baghdad, who traced the tribesmen and inflicted on them heavy casualties. After this incident, the Khafājah tribe was considerably weakened.⁴

Another tribe which was very active along the road was the Banū Nabhān. In 412/1021, they besieged the pilgrims at Fayd; many of these pilgrims were Khurāsānis. The caravan had with it the sum of 30,000 dinars to be paid to the bedouin as bribes. They offered the chief of the Banū Nabhān, Ḥumār b. 'Uday (حمار بن عدي) up to 5,000 dinars, but he refused and decided to take all the goods of the pilgrims. At this

¹ Ibd., vol. 7, p. 264.
² Muhammad b. Ahmad adh-Dhahabi, Kitāb al-'Ibar fi Khabar man Ghabār, vol. 3 (Kuwait, 1961), pp. 82-83. Ibn al-Jawzi reports that those pilgrims who were taken as prisoners became forced labour to be used as shepherds for the Banū Khafājah. Ibn al-Jawzi, op. cit., vol. 7, pp. 260-261.
⁴ Ibd., pp. 165-166.
critical moment, a hot-headed youth from Samarqand struck the chief with an arrow, which killed him instantly. His followers thereupon dispersed, and the pilgrims were able to continue their journey.¹

By the second half of the sixth and early seventh centuries A.H. (second half of the twelfth and early thirteenth centuries A.D.), the pilgrim road was chronically insecure. It was impossible to protect either the road or the pilgrims from tribal raids. To avoid meeting the tribesmen, who usually were stationed at various points among the road, the pilgrims sometimes travelled not by the main route but by the road of Khaybar north of Medina. This occurred in 556/1160. Although they enjoyed security, they suffered considerably from the journey because the road was very rough.² In 559/1163, a large number of the pilgrims were cut off at Fayd, ath-Tha'labīyyah, and Wāqiṣah and other stations: prices were high everywhere, especially at Mecca; and infectious diseases caused many losses among people and their animals in the desert.³

In 622/1225, the emir of the pilgrims, Ḥusām ad-Dīn Abū Firās al-Kurdi, left the pilgrims between Medina and Mecca and fled to Egypt. It was said that he absconded because the road was not safe, owing to the failure of financial aid from the caliphs of Baghdad for the keeping of good order along the highway.⁴

¹ Ibid., vol. 7, p. 310. Ibn al-Jawzi gives the name of this youth as Ibn 'Affān, a skilful bowman, see op. cit., vol. 8, p. 2.
³ Ibid., p. 92.
⁴ Ibid., p. 364.
2. The Effect of the Carmatian Raids

The Carmatians\(^1\) established their base in Bahrayn (the name then given to the coastal region of eastern Arabia to the south of Iraq). From there they carried out their raids against the pilgrim caravans, and attacked the big pilgrim stations. The result of their raids was serious: they sacked and plundered big cities such as Kufa and Basrah, which were important for the pilgrims, merchants, and state officials travelling to the holy cities, and went even further by sacking Mecca itself. The pilgrims never felt safe and for many years were unable to travel across Arabia to perform the pilgrimage. The following account seeks to present the details of the activities of the Carmatians, in so far as they endangered the road.

In 294/906, Zikrawayh, the Carmatian leader, carried out a terrible attack against the pilgrims on their way from Mecca. Their forces spread along the entire northern section of the pilgrim road, from the station of Fayd up to the city of Kufa. At the end of that pilgrimage season, the first caravan returning from Mecca escaped unharmed because they had been warned earlier by the inhabitants of Wāqiṣah. Zikrawayh retaliated by killing the fodder merchants and burning their stores, and for several days the Carmatians besieged the inhabitants in their fortress, but finally he withdrew towards Zubālah. On their way, the Carmatians plundered several camps

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belonging to the Asad tribe; then they met the second caravan of pilgrims at al-'Aqabah (this caravan was heading for Khurāsān). The soldiers of the Qarmatians followed the caravan, and in order to bring it into disorder, they kept pricking and goading the camels with their swords and spears; then they killed the majority of men and women (many women were also taken into captivity). The goods of this caravan were plundered. Only a few people managed to escape, and they brought the news of the massacre to the government forces encamped at Wāqiqah. The latter took to their heels. The Sultan of Baghdad received the news through a message brought by carrier pigeons. Even before this, however, the Sultan had dispatched messages by express couriers with orders to advance towards Wāṣif or Basrah, or to retreat to Fayd or Medina until the government forces were ready to rescue them. However, the pilgrim leaders did not heed the warning, nor did they respect the written order issued by the Sultan; they continued their march home, only to find themselves in the hands of the Qarmatians who butchered them. After this massacre, the Qarmatians filled all the dug wells and cisterns in the vicinity of Wāqiqah with the dead and wounded camels and other beasts; then they proceeded to the station of al-'Aqabah awaiting further pilgrim caravans. After fierce fighting, the pilgrims were slaughtered and their goods taken, only the women receiving quarter and being carried off. The bodies of the dead men were piled up so as to form an enormous mound. The Qarmatian women and children completed the massacre by carrying water round to see if life was left in any yet; and if any one gasped for a draught of water, they finished him off. It was reported that twenty thousand were left dead on the fatal camping ground; the property seized from the pilgrims was estimated to be worth two
million dinars. After filling the wells and reservoirs of al-ʿAṣabah with corpses of men and animals, the Qarmatians proceeded to Zubālah. Zikrawayh sent numerous patrols both north and south, as he expected an attack from the government troops encamped at al-Qādisīyyah. However, as he was expecting another caravan of pilgrims, which had been joined by many merchants carrying valuable goods, Zikrawayh moved from Zubālah to ath-Thaʿlabīyyah. The pilgrims learned at Fayd what had happened to the other caravans and stopped there waiting for help. Zikrawayh then advanced towards Fayd and persuaded the inhabitants of the oasis to surrender the administrator of the roads and the government troops who had gathered inside the mosque and the two forts to the Qarmatians. In return, the chief of the Qarmatians promised to spare the inhabitants and their property, but they did not respond to his demand. When the Qarmatians found it impossible to seize the town, they retreated by way of an-Nibāj and Ἡφαιρ Ἀβί Mūsā on the pilgrim road from Basrah. The caliph al-Muktāfī (289-295/902-908) sent his Turkish general, Waṣīf b. Suwārtikīn, with a large force to deal with the Qarmatians. After fierce fighting, the Qarmatians were defeated and Zikrawayh was taken prisoner; he died of his wounds before reaching Baghdad.¹

After these terrible events, the pilgrim caravans became the object of regular savage attacks. The vizier, 'Ali b. 'Īsā tried in 303/915 to make political concessions to the Qarmatians by offering them free trade in the Sirāf region in

order to reduce their campaigns against the pilgrims, but his policy was strongly rejected by his opponents who did not understand the true position until later, when the army of the state had failed to defeat the Qarmatians.¹

During the reign of the caliph al-Muqtadir, the Qarmatians kept up their raids against the pilgrims. In 312/924 the Qarmatian leader, Abū Ṭāhir al-Janābi, attacked the pilgrim road; at the end of this pilgrimage season (312/924), the Qarmatians slew a large number of persons in the Baghdadī caravan; then they advanced to a spot called al-Habīr, awaiting more caravans. Hearing this news, the majority of the pilgrims gathered in the defensive station of Fayd. But they soon ran out of food and decided to continue the journey along the main route to Baghdad. The road administrator, Abul Hayjā' b. Ḥamdān, advised them to travel by way of Wādi al-Qura on the Syrian road, but most of them did not obey him. Abū Ṭāhir made a vicious attack on the pilgrims, killed a great number of them, and took captive the road superintendent as well as many men, women, and children. The valuable goods of this caravan, and its camels, were taken as booty. The Qarmatians then retreated to their base in Hajar. It was estimated that 1,000,000 dinars in cash were taken including the Sultan's treasure, and an even greater amount of valuable goods including personal belongings and perfumes. Those pilgrims who escaped from the massacre, fell into the hands of local bedouin tribes who robbed them of what remained in their hands and then left them to die of hunger and thirst.²

Abū Ṭāhir made an attempt to bargain with the

¹ ‘Arīb, Silat Tarīkh at-Tabari, p. 59.
prisoners in return for gaining control over the two cities of Basrah and al-Ahwāz. Concerning this matter Abūl Hayjā', who was a prisoner himself, negotiated with the Qarmatian leader the release of the prisoners, and wrote to the authorities of Baghdad informing them. Ibn Miskawaih puts the number of the prisoners at 2,220 men and 500 women. The Qarmatian leader despatched his own messenger to Baghdad; he was given a hospitable welcome but his demand was turned down.¹ As a result, Abū Ṭāhir advanced his troops towards the station of Zubālāh during the month of Dhul Qa'dah 312/924. He met a caravan of pilgrims, mostly Khurāsānians, and killed a great number of them. The rest, among them the road administrator (Ja'far b. Warqā'), made their escape towards Kufa, leaving behind them all their camels loaded with valuable goods. The Qarmatians followed them at once to Kufa and after fierce fighting a large number of the government troops were slaughtered; then the Qarmatians ransacked the city of Kufa and for six days they plundered the town, entering it each day in the morning and leaving by nightfall. Before going to their base in Hajar, the Qarmatians took great quantities of the valuable goods which were available in the markets of the town. They also wrenched off the iron gates of the city.²

When this news reached Baghdad, it put fear into the hearts of the inhabitants who soon were in a state of disarray; those people in the western part of Baghdad crossed over to the eastern side.³ The sacking of Kufa showed the formidable strength of the Qarmatians, and the government troops were in

no way capable of defeating them. The Qarmatians spread all over central Arabia; not only cities like Kufa and Basrah were under their constant attack, but Baghdad itself was also threatened.

In 315/927, many of the inhabitants of Baghdad hired a large number of boats and loaded them with essential goods, preparing to sail either for the city of Wāsiṭ or to Khurāsān.¹

The most outrageous military action (to orthodox Muslim contemporaries) launched by the Qarmatians was in 317/930, when they seized the holy city of Mecca. On the 8th of Dhul Hijja (12 January 930) of that year, the Qarmatian forces entered the city where they slaughtered the pilgrims inside the Ḥarām Mosque, many of whose bodies were thrown into the well Zamzam. They remained for several days in the vicinity of Mecca, entering the city each morning for fresh exhibitions of violence and then camping outside it each night. The door to the Ka'bah was wrenched off, its valuable treasures were seized and the kiswa (the ceremonial covering) was taken and divided among the attackers. An attempt was made to remove the golden water spout of the Ka'bah but it failed; however, the black stone was pulled out of the corner of the Ka'bah and carried off.

The Qarmatians indiscriminately butchered the natives of Mecca, entering their houses and taking their property. Eventually, they departed with their camels laden with booty.²

The news of the sack of Mecca was condemned and received with anger and sorrow in the various parts of the

¹ Ibn Miskawaih, op. cit., vol. I, pp. 179-180; Ibn al-Athīr, op. cit., vol. 6, p. 188.
Muslim world. Even the Fāṭimid 'Ubayd Allāh condemned this savage attack, and ordered the leader of the Qarmatians to give back the property he had taken from Mecca, including the black stone.\footnote{Ibn al-Athīr, \textit{op. cit.}, vol. 6, pp. 204-205. See also, C.E. Bosworth, "Ṣanawbarī's Elegy on the Pilgrims Slain in the Carmatian Attack on Mecca (317/930). A Literary Historical Study", \textit{Arabica}, vol. 19, 1972, pp. 222-239.} Nevertheless, the black stone remained with the Qarmatians for twenty two years. It was finally returned in 339/950 and fixed in its proper place.\footnote{Ibn al-Athīr, \textit{op. cit.}, vol. 6, p. 335.} By the sacking of Mecca, the Qarmatians had proved they were the dominant power in central Arabia who could control the entire length of the road; the pilgrims had, accordingly, no option but to alter their journeys by travelling by way of Syria.\footnote{Ibid., p. 207.} During the Qarmatian disturbances in Arabia, the pilgrim road was in disuse almost continuously for fifteen to twenty years; the pilgrims could not travel without Qarmatian permission. Otherwise, those pilgrims who made an attempt to travel along the road put their lives at risk. In 323/934 a pilgrim caravan, escorted by the emir Ghulām al-Mutahashim, went as far as al-Qādisiyyah, where they met Abū Ṭāhir, the Qarmatian leader. Many pilgrims were killed, their goods and mounts were confiscated, and the leader of the caravan escaped, having been wounded. After this massacre, Abū Ṭāhir made his way towards Kufa, and in that year the pilgrim caravans coming from Iraq were unable to travel along the road.\footnote{Ibn Miskawaih, \textit{op. cit.}, vol. I, p. 330. \textit{Kitāb al-'Uyun wal-Hadā'iq}, vol. 4, part I, p. 286; Mas'ūdī, \textit{op. cit.}, pp. 389-390.} Four year later, pilgrims were permitted to go on the pilgrimage but had to pay protection money. In 327/938, Abul Ḥusayn b. al-Mu'ammar, an
adherent of al-Janābi, met the pilgrims at the station of Zubālāh. He imposed the following charge: three dinars for each camel sedan (or howdah), two dinars for each camel, and one for each mule.

We undoubtedly lack complete information about the period during which the Qarmatians were in full control of the road. During the period of the Qarmatian raids, the facilities of the road (wells, cisterns, fortresses, etc.) must have suffered a great deal of damage and many of them probably fell into ruin. The deliberate acts of destruction by the Qarmatians, such as draining water out of the wells and cisterns, or blocking them with human and animal bodies must have made it difficult for the engineers to put them back into good order. It is also possible that a number of halting places were abandoned by the inhabitants. A telling example is given by as-Samhūdi, who describes the station of ar-Rabadhah (considered to be the best pilgrim station along the road). He states that the inhabitants of ar-Rabadhah had a series of armed encounters with the neighbouring village of Ḥarīyyah in 319/931. The latter, with the help of the Qarmatians, reduced the station of ar-Rabadhah to ruins, and the inhabitants had to leave.

3. Other Factors

There are a number of factors which may cause the decline of any essential and important road. Among these is the political and economic situation in the area through which

1 Kitāb al-'Uyūn wal-Hadā'iq, vol. 4, part I, p. 333. Ibn al-Jawzi says that an agreement was made between the Qarmatians and the 'Alawīd Abī 'Ali'Umar b. Yahyā al-'Alawī to allow the pilgrims to travel along the road, the road tax was arranged to be as follows: five dinars per camel and seven dinars per mālmal, see al-Muntāzam, vol. 6, p. 296.

a road runs; and the lack of proper conduct of traffic of pilgrims between Baghdad and Mecca in fact affected the road and thus caused re-routing at times. Internal conflicts or foreign invasions may also force the deflection of traffic from one region to another. With regard to this point, we have already witnessed the devastation caused by the tribes in central Arabia on the road; although the road was never attacked by external foreign powers, it was raided for several years by the Qarmatians but as we mention below, Mongol destruction of Baghdad forced the deflection of the flow of pilgrims from Iraq, Iran, and the rest of the eastern lands, to travel by the Syrian road via Damascus. Beside the main important points which led to the decline of the road, we may refer to one factor which may at times have had some importance. This is the effect of natural factors, and especially the climate, on maintenance of the road.

The road crosses very vast deserts, mountainous regions, and wide rugged plains. The survival of the road (as the most important route for Muslims from Iraq, Iran, and lands to the east of the Muslim state) was dependent upon the availability of water in sufficient but not excessive quantities along the road.

Although the road was incredibly well furnished with a variety of watering facilities fed by seasonal rain and by subterranean water, it was always difficult to forecast the weather conditions on which the provision of such water depended. Heavy rain and strong floods may damage and destroy the reservoirs and wells. Unless a society is prosperous and well ordered, repairs may prove beyond its power and capabilities.

Darb Zubaydah was definitely affected by the weather.
For example, moving sand dunes have always been a big obstacle to be overcome. It must have been a hard task for engineers to repair and maintain the facilities along the road. Occasional catastrophic changes in localities on areas which the road crossed had to be faced. Thus we learn that in 654/1256 the region east of Medina was disturbed by the interruption of the flow of lava which evidently blocked the flow of traffic along the Darb Zubaydah.\(^1\) However, we do not know just how much of the facilities were damaged along the road in this region.

Chapter IV

THE ROAD DURING LATER PERIODS

1. The Road after the Fall of Baghdad

Baghdad fell to the hands of the Mongols after a short siege which started in the middle of Muharram 656/January 1258. The city was savagely sacked and the majority of its inhabitants were indiscriminately butchered in cold blood. The last caliph of Baghdad, al-Musta'ṣim (640-656/1242-1258) was executed with many of his kinsmen; and the elite of the city were also killed.¹ A few of the caliph's relatives managed to escape and through them a new 'Abbasid caliphate was re-established by the Mamluks in Cairo (Rajab 659/June 1261).²

The city of Baghdad was reduced to the position of the capital of the province called al-'Irāq al-'Arabi under the rule of the Il-Khanids who derived their title from Hulagu.³

After less than a century, the Jalayirids succeeded

³ G. Le Strange, Baghdad during the 'Abbasid Caliphate (London, 1924), p. 345.
the Il-Khanids as rulers of Baghdad in 740/1339; then the
city was taken twice by Timūr, first in 795/1392-3 and again
in 803/1401. After this period the Turkmans Qāra Qoyunlu
took over as the new rulers, who were in turn shortly dispos-
sessed by another rival clan, the Aq-Qoyunlu, in 872/1467.
The Ṣafawīs and the Ottomans had a long series of conflicts
over the city until it was finally taken by the Ottoman Sultan
Murād IV (1032-49/1623-40), in 1048/1638.¹

The fall of Baghdad in 1258 had a direct effect on
the pilgrim road: and traffic between Arabia and Baghdad
decayed and Damascus emerged as an important centre for the
pilgrims instead.

Although the pilgrim caravans from Khurāsān, Persia,
and Iraq, made their journey along the Kufa-Mecca road, they
were often compelled to travel via Damascus in order to be
under the protection of the Syrian caravans.²

After the sack of Baghdad, there is a lack of
information regarding the maintenance or improvement of
the facilities of the road, but we learn that caravans still
reached Mecca from Baghdad, for example in 666/1267,³ al-
though during the remaining period of the seventh century
A.H. (later thirteenth century A.D.), there was only a small
number of pilgrims travelling along the road. From the
beginning of the eighth century A.H. (fourteenth century
A.D.), the pilgrims from Khurāsān, Persia, and Iraq, resumed
using Baghdad as their main pilgrimage centre, but the regular

² 'Abdulla 'Aqawī, "The Pilgrimage to Mecca in Mamluk Times",
1974, pp. 146-166, see pp. 148-149.
³ Muḥammad b. ʿAbdallāh al-Fāsī, Shifāʾ al-Gharām fi Akhābār
despatch of the pilgrim caravans depended on the existence of stability at Baghdad at the times concerned.

In 720/1320, Abū Saʿīd (Khada Banda), the Il-Khanid Sultan of Baghdad, made peace with Baybars, the Sultan of Egypt. The peace agreement ended the conflict between the two kingdoms and the natives from both regions, particularly merchants, were able to travel freely to and fro. The Sultan of Egypt negotiated with the powerful tribes in Arabia for the safety of the pilgrims coming via Baghdad. The caravans, together with their mahmil and a representative from the Sultan, were escorted by certain tribes from Kufa to Mecca and vice versa. The pilgrims enjoyed travel in safety, but this soon ended with the death of the Sultan Abū Saʿīd.¹

It is reported that the Il-Khanid Sultan took a personal interest in the organising of the pilgrim caravans from Baghdad, and he even compensated them when they were attacked and robbed by the wild bedouin.²

The pilgrim caravans coming from Iraq at that time were described as huge, and the pilgrims appeared sometimes as innumerable.³ But the most valuable information regarding


2 Naqīzī, op. cit., vol. 2, part I, pp. 190, 214-215. Al-Anṣārī, op. cit., p. 299. It appears that after the peace agreement between Baghdad and Egypt, part of the road was repaired and the watering facilities were looked after. Abū Saʿīd, for example, employed his deputy to the pilgrimage to repair and improve the aqueduct outside Mecca ('Ain Ḥunāyn) for the convenience of the pilgrims, ʿUṯb ad-Dīn an-Nahrawalī, Kitāb al-Iʿlām bi Aʿlām Bayt Allāh al-Ḥaram, in Akhbār Makkah, vol. 3, p. 337.

3 Al-Fasī, op. cit., p. 283.
the condition of the road during this period comes from Ibn Baṭṭūṭa. On the 20th of Dhul Ḥijja 726 (17 November 1326), Ibn Baṭṭūṭa departed from Mecca for Medina and then to Baghdad. He joined the Iraqi caravan which, as he states, consisted of a great number of Iraqis, Khurāsānians, Persians, and other easterners. Ibn Baṭṭūṭa describes the pilgrims on this caravan as "so many that the earth surged with them like the sea, and their march resembled the movement of a high piled cloud." On the condition of the road and its features, he gives information similar to that given by his predecessor, Ibn Jubayr. Ibn Baṭṭūṭa, for instance, enumerates the halting places and gives the length of marches between them, and he also describes some of the cisterns and dug wells which were full of water. Somewhat surprisingly, he refers to the construction of the road as the work of nobody but Zubaydah. He states that "every tank, water basin and well on the road between Mecca and Baghdad is a noble monument to the memory of Zubaydah." He also adds that if Zubaydah had not lavished her care and attention on the road, nobody would have been able to use it.

Ibn Baṭṭūṭa does not record for his time any charitable work or any government effort to repair or improve the facilities of the road. As for the safety along the road, he gives the impression that the pilgrims and the inhabitants along the road were at peace because they bartered with each other, but at the same time he refers to the precautions the pilgrims had to take. For instance, they were accustomed to enter the station of Fayd in warlike array in order to drive

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2 Ibn Baṭṭūṭa, op. cit., p. 108.
fear into the bedouin who assembled in the vicinity of this place.\textsuperscript{1} This kind of precaution was probably taken at other stations where the Arabs might rob the pilgrims.

However, the proportion of pilgrims travelling along the road varied from one year to the next, and this was due to the political situation in Baghdad. For example, when Abū Sa'īd, the Sultan of Baghdad, died in 736/1335, the pilgrims from Iraq were not able to perform their pilgrimage for eleven years.\textsuperscript{2}

During the second half of the eighth and ninth centuries A.H. (late fourteenth and early fifteenth centuries A.D.), the pilgrims travelling from Baghdad were still using the road, but not in successive years, and their number fluctuated from one year to another.\textsuperscript{3}

Since the pilgrims were able to use the road, we may suppose that some of its facilities, at least, must have been maintained, otherwise it would have been hard for the pilgrims to travel such a distance without water or shade. But we lack at present more concrete evidence about the financing and arrangements for the maintaining of the facilities of the road, particularly from the time of the fall of Baghdad onwards.

\textsuperscript{1} \textit{Ibid.}, p. 108.

\textsuperscript{2} \textit{Al-Fāsī}, \textit{op. cit.}, pp. 280-282; \textit{al-Anṣārī}, \textit{op. cit.}, p. 305.

\textsuperscript{3} \textit{Al-Fāsī}, \textit{op. cit.}, pp. 283-299. The Jalayirids succeeded the Il-Khanids in Iraq and Adharbayjan (736-835/1336-1432). So far, there is no evidence from literary sources for them making any improvement along the Zubaydah road. When the present writer was in Iraq (December, 1975), he received verbal information from Dr. 'Īsā Salmān (general director of the Department of Antiquities in Baghdad) and from Mr. Fou'ād Şafar (the sub-director), that an Arabic inscription had been discovered on one of the cisterns of Darb Zubaydah (the Iraqi section). This refers to the Jalayirid Prince Aḥmad b. Uways (784-813/1382-1410). If this information is valid then it indicates that at least part of the road was not neglected during this period.
However, we may gather some information about the condition of the road during the late twelfth and early thirteenth centuries A.H. (second half of the eighteenth century A.D.). This information comes from two Persian manuscripts. The first of these was written in 1198/1784 by the Persian traveller 'Abd al-Karîm Ibn 'Aqibat.¹ The author, who travelled to Iraq, Syria, and Arabia, gives some notes concerning the road. He estimates the distance between Najaf and Medina as 180 farsakhs; and from Najaf to Mecca, he puts the distance at 230 farsakhs.²

'Abd al-Karîm also gives the credit for establishing the road and providing it with water facilities to Zubaydah. But the author himself found it impossible to travel by this road and was advised to travel via Aleppo and Damascus. 'Abd al-Karîm explains the obstacles along the road as follows.

The internal conflict between Aḥmad Pasha³ the governor of Baghdad, and the bedouin made the pilgrims unsafe. Moving sand dunes were apt to cover the track of the road itself; furthermore, the water was not sufficient for the pilgrims. The author also indicates that Aḥmad Pasha made an attempt to protect the road from the bedouin in order to improve its stations, but he did not succeed.⁴

The second Persian manuscript was written by Band 'Ali Mirza Khairat 'Ali in 1214/1799.⁵ The author wrote this

¹ 'Abd al-Karîm Ibn 'Aqibat Muḥammad Khawajah Muḥammad Riza, Bayān Waqī', MS. British Museum, Add. 8909. There is also a brief English translation by F. Gladwin, followed in turn by a French translation by L. Langles under the title, Voyage de l'Inde à la Mekke (Paris, 1797).
² Bayān Waqī', fols. 78-79.
³ For details of Aḥmad Pasha, the governor of Baghdad, see Encyclopaedia of Islam, vol. I, p. 261.
⁴ Bayān Waqī', fols. 78-79.
⁵ Manāzil al-Haḥī (Itinerary from Iraq to Mecca), MS. British Museum, Add. 16, 741.
work following the wishes of the Şafawid Prince Abūl Fath Şūltān Muḥammad Mirza. The author wrote an account of the route from Baghdad to Najaf, Ḫillah, and through the territory of the Shammar tribe to Medina and Mecca, and gives an account of the latter place and the rites of the pilgrimage. He also gives brief notes on the route from Syria and other routes by land and sea. Khairat 'Ali received oral information from Ḥajji 'Abd al-Wahhāb of Baghdad, who at the age of sixty years had performed thirty-three pilgrimages to Mecca, and had been admitted to the Prince's presence in India.\(^1\)

In his account, the author gives details about the pilgrim roads which led from various directions to Mecca. What concerns us here is his description of the Iraq-Mecca road, and from his description we deduce that the road was only partially used.\(^2\) The route which the author took was as follows: he departed from Baghdad to Najaf following the original pilgrim road, and after stopping at some stations, at which there were a number of reservoirs, the author turned off to the east where he rested at the village of Līnah, presumably to avoid crossing the great desert of an-Nafūd.\(^3\) From Līnah the road went across the desert of an-Nafūd to Ḥā'il (to the west of the Zubaydah road). From Ḥā'il the author describes the route to Medina, which traversed it in a southerly direction and took a route parallel to the original pilgrim road.

We may conclude from this that at that time Ḥā'il, which acted as the capital of the Shammar tribe, became a

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major centre of pilgrimage in Arabia. However, Khairat 'Ali gives some valuable information concerning the northern section of the road. For example, he gives the distance between the stages in farsakhs, and he gives the normal distance from one station to another as twelve farsakhs (36 miles).

Along this portion of the road, he mentions a number of water tanks, some of which were full of rainwater, but the author does not give specific names to the places where these water tanks are located. On the other hand, Khairat 'Ali states that it was Zubaydah who established and furnished the road;\(^1\) he also adds that she built fire signals (manārs) every two farsakhs, some of which still survived.\(^2\)

With regard to the condition of the road from the late eighteenth and early nineteenth centuries A.D. onwards, our information comes from European scholars and travellers. The pilgrims from Persia and Iraq continued their seasonal journey across Arabia, but the road was only partially used. The pilgrims had to suffer a heavy capitation tax imposed on them from the dominant powers such as the Saudi state\(^3\) and the governors of Mecca.

The road itself was sometimes deflected from Ḥā'il to Dir'iyyah or other parts of the Saudi territories. Because of the Saudi military activities against southern Iraq at the end of the eighteenth century A.D., the Persian pilgrims felt unsafe. Thus, dealing first with the period of the first Wahhabi states, it was reported that the Saudi forces attacked and plundered a caravan of Persian pilgrims between Ḥillah and

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2 Ibid., fol. 25.
Mashhād 'Alī in 1798 A.D.\(^1\)

According to Burckhardt, the Persian hājj which used to set out from Baghdad and come through Najd to Mecca was discontinued when the Wahhabis stopped the Syrian hājj.\(^2\) Burckhardt also reports that the pilgrim caravans from Iraq and Persia had perforce to travel through the territory of the Wahhabis, as in 1815 when the pilgrims took the risk of travelling across the desert and passed by Dir'īyyah; but within four days' journey of Mecca it was attacked by the Bānū Shammar. The caravan then returned to Dir'īyyah through the intercession of Ibn Sa'ūd (Prince 'Abdullāh b. Sa'ūd, 1229-33/1814-18), the goods which had been plundered were restored, and he sent a party of his own people to escort it to the Holy City.\(^3\)

From this piece of information, we may conclude that the Saudi state might have encouraged the pilgrims to travel via Dir'īyyah as an alternative to Ḥā'il, but the Shammar tribe, under the rule of the ar-Rashīd family of Ḥā'il\(^4\) reacted against the Saudi attitude because their region had for long been a major pilgrimage centre, their commercial contact with the pilgrims was profitable, and they also provided escorts for the pilgrims.\(^5\) But as we describe below, Ḥā'il despite this interruption remained favoured as a pilgrimage centre.

Burckhardt relates that the Persians were not always permitted to come to the Holy City because they were Shi'ites.

The Ottoman Sultan Murad IV (1032-49/1623-40) commanded that

\(^1\) El-Shaafy, op. cit., p. 254.
\(^2\) J.L. Burckhardt, Travels In Arabia, p. 251.
\(^3\) Ibid.
\(^4\) For full details of the history of this family, see A. Musil, Northern Nejd, pp. 236-255; Philby, op. cit., pp. 128-159.
\(^5\) Ibid., p. 28.
no Persian belonging to the Shi'ā sect should be allowed to perform the pilgrimage or to enter the Holy City. This prohibition was implemented for several years, but the money expended by the Persians soon re-opened the way for them to visit Mecca. We also learn from Burckhardt that members of the 'Aqeil Arabs of Baghdad used to escort the Persian pilgrims. He also states that because the Persian pilgrims were known to be sectarian, they were exposed to great extortion on the road. Sa'ūd exacted a heavy capitation tax from them and Sharīf Ghaleb of Mecca did the same.1 Although Musil reports that the Saudi state controlled the pilgrim routes (except that from Jiddah to Mecca)2 we do not know if they carried out any sort of maintenance or improvement work along these routes. Christina Phelps Grant, dealing with the condition of Darb Zubaydah in the first half of the twentieth century, says that by then, "scarcely any of its birkets and rest houses could be used; in the north east they have been mutilated by a variety of invading powers, and in Najd a great number of them have been destroyed by the Wahhabis."3 In respect of this statement concerning the damage done by Wahhabis, we can neither dispute it nor agree until contemporary sources appear. If destruction of the road (or part of it) by the Wahhabis can be proved, then this may give support to the idea that the Saudi state wanted to divert the traffic from Iraq to Dir'īyyah or to another part of their territories, and not via Ḥā'il.

2. The Zubaydah Road in the Works of European Travellers

There are only a few European explorers who have paid attention to the Zubaydah road during their travels in

1 Burckhardt, op. cit., p. 251.
2 Musil, op. cit., p. 262.
Arabia. Some of these pioneers referred to this important highway and attribute its construction to the piety of Zubaydah, the wife of Ḥārūn ar-Rashīd. Their writings date from the first half of the nineteenth century A.D. to the early twentieth century A.D.\(^1\)

Among the first European travellers to visit northern and central Arabia was the Finno-Swedish explorer George Augustus Wallin. He made two visits, the first being in 1845,\(^2\) and the second in 1848.\(^3\) In spite of his having stayed at Ḥā'īl, and his wandering in the Nafūd desert, he produced only a small amount of information about the road. His comments on communications of central Arabia are nevertheless of great value. For example, he mentions that the Zubaydah road was very well supplied with water at almost every station, but that the bedouin made the road unsafe, so that only the large caravans and strong parties which proceeded like warlike expeditions could travel. Because of this danger, Wallin himself avoided travelling to Mashhad 'Ali by the Zubaydah road, preferring to take a more secure though more difficult route.\(^4\)

He estimated the journey from Mashhad 'Ali to Mecca lasted about eleven days by camel caravan.\(^5\) Wallin also observed that the pilgrims coming to Ḥā'īl usually rested there for two days; they in fact used the city as the main pilgrimage

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\(^1\) For details of earlier European travellers in Arabia, see R.H. Kiernan, *The Unveiling of Arabia* (London, 1937).
\(^2\) "Narrative of a Journey from Cairo to Medina and Mecca by Suez, Arabá, Tawilá, al-Jauf, Jubbé, Ḥá'īl and Negd in 1845", *JGDS*, vol. 24, 1854, pp. 115-207.
\(^3\) "Notes Taken during a Journey through part of Northern Arabia in 1848", *JGDS*, vol. 20, 1851, pp. 293-344. These two articles have been translated into Arabic by Samir Sálim Shibli, *Sūwar min Shāmāli Jazīrat al-'Arab* (Beirut, 1971).
\(^4\) *JGDS*, vol. 20, p. 336.
centre in a similar fashion as pilgrims in the past had used the town of Fayd. The author himself joined the Mesopotamian and Persian pilgrims from Ḥā'il to Medina and Mecca; however, the whole journey was so fast that it lasted only eighty five hours; unfortunately Wallin was therefore not able to make notes on the road.

In 1862-3, W.G. Palgrave visited central and eastern Arabia. His narrative does not assist us, as he made no attempt to investigate any part of the Zubaydah road. Nevertheless, Palgrave refers to Ḥā'il as the terminal for pilgrims from Iraq and Persia. He states that Prince Ṭalāl of Ḥā'il succeeded in his negotiations with the Shah of Persia, which implied the annual caravan from Persia coming through Ḥā'il in preference to other routes via Syria and the Arabian Gulf. Apparently the rulers of Ḥā'il were taking on the responsibility for protecting the caravans and assisting them with supplies. Palgrave personally observed how the Persian pilgrims expressed their gratitude for the good treatment they had met with from Ṭalāl, the governor of Ḥā'il, and his brother Māʾīb. Palgrave left Ḥā'il for al-Ḡaṣīm, and on the way he stopped at the ancient pilgrim station of Fayd, but he did not give any useful details.

In the year 1864 (between January and May), the Italian explorer Carlo Guarmani visited northern Najd. Although he toured the area between the regions of Ḥā'il and al-Ḡaṣīm, he has nothing to say regarding the pilgrim road. The only

1 JRGS, vol. 24, p. 197.
2 Ibid., p. 206.
5 Ibid., p. 228.
station he mentions is the village of Fayd, where he rested for only four hours; he considered this place as being the oldest settlement in Najd and its borders.¹ As regards pilgrim traffic and security, Guarmani reports that the emir, Ṣalāḥ Ibn Rashīd of Ḥā'il provided an escort of 600 men, under the command of his brother Met'ib, for the yearly caravan of Persian pilgrims from Baghdad to Mecca.²

Lady Anne Blunt was the first European who can be said to have observed the northern part of Darb Zubaydah more closely. She visited Arabia in 1878-9.³ In February 1879 she left Ḥā'il and accompanied the caravan pilgrims to Iraq. Lady Blunt, with her husband Wilfred, was planning to cross the great desert of an-Nafūd eastward in order to reach Basrah on the Arabian Gulf. This plan had to be suspended after they were advised not to take risks. At that time of the year, there was sufficient rain, and she was informed that all the reservoirs on the pilgrim road were full, unlike conditions along the road she had apparently originally intended to take and which led through a waterless region without anything to compensate for the difficulty.⁴ The Blunts claimed that this pilgrim road from the Euphrates had never before been travelled by a European.⁵ Lady Anne gives a brief description of some of the reservoirs at which the caravan rested, but she omits the names and the exact locations of a number of them.⁶

¹ Carlo Guarmani, Northern Najd (A Journey from Jerusalem to Anaiza in Qasim), translated from Italian by Lady Capel-Cure (London, 1938), p. 43.
² Ibid., p. 92.
⁴ Ibid., vol. II, p. 32.
⁵ Ibid., p. 71.
⁶ Ibid., p. 67.
Fig. b: Lithographic sketch of a water-tank near Darb Zubaydah, (probably of ash-Shihiyyat) as seen by Lady Anne Blunt.
might be due to the lack of information available from the local people. At any rate, her journey produced several important facts which appear in her account for the first time. In particular, descriptions are given of the stations of al-Khaḍrā', the pond of al-'Ashshar, the reservoir of ash-Shīḥīyyāt, and the cistern of al-Jumaymah. In her account, Lady Anne included a sketch showing a square tank with the caravan resting nearby and people watering their animals and filling their water skins. A map of her journey is also provided showing the number of the stations along the road.

The Blunts mentioned that along the main path, the road had been cleared of the big and dangerous rocks in order to allow people and animals to pass unharmed.

Charles Huber, whose life ended with his murder in 1884 was the second explorer to have travelled by the road of Zubaydah. His journeys covered the northern and central part of Arabia. His material was published as Journal d'un Voyage en Arabie (1883-1884) (publie par la Société Asiatique et la Société de Géographie, Paris, 1891). In this work we find some stray information about a number of stations and sources of water along the road, such as al-Khaḍrā', Zarūd, and the reservoir of al-'Arā'ish. But the most important contribution is his description of the road, which appeared

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1 Ibid., p. 63.
2 Ibid., p. 64.
3 Ibid., p. 71.
4 Ibid., p. 84.
5 Ibid., p. 80. See also fig. b, following p. 91 above.
6 See the map attached to the first volume.
7 Ibid., p. 68.
8 Kiernan, op. cit., p. 226.
in a separate article. Here he gives more elaborate details about the road than those given by Anne Blunt. He describes the road from Ḥā'il to Baghdad, making notes on the various pilgrim stations, reservoirs, and dug wells, and giving the distance in miles between them. Huber also offers some notes on the width of the main track of the road, where the method of clearing and smoothing the road from dangerous obstacles is alluded to. He also explains how the builders of the road, at an earlier period, realized the difficulties confronting travellers and did their best to make the road more convenient by creating water facilities along the entire length of the road. Huber also makes an interesting description about the whole complex of the town of Fayd, referring to its famous fort and the rest of the various constructions, including the wells which were connected by an underground duct.

With regard to the southern section of the road, we have only sparse information, which is provided by Burton and Doughty.

Burton travelled in the Ḥijāz province in 1853. He joined a caravan from Medina and travelled along the road which he called Darb ash-Sharqi or the Eastern Road. During this journey, Burton saw some of the old stations and reservoirs. Beside a description of as-Sawārqiyyah, he gives a sketch

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2 Ibid., vol. 5, pp. 104-125.
3 Ibid., pp. 124-125.
6 Ibid., vol. II, p. 58.
of the village. Burton had the opportunity to inspect the village of Ṣufaynah, where he found the Baghdad caravan which consisted of Persians and Kurds, and collected the pilgrims of north-eastern Arabia, Wahhabis and others. These pilgrims according to Burton were escorted by the "Agayle tribe and by the fierce mountaineers of Jabal Shammar." He also observed two old reservoirs, the first being al-Ghadir⁴ and the second al-Birkah⁴.

Between the years 1876-8, Charles Doughty travelled in Arabia. During his wanderings he travelled from Ḥā'il to al-Qaṣīm, resting at Samīrah, but the details he gives do not concern ancient monuments, merely the value of the village as a source of water at that time.⁶

Doughty left Najd with a caravan bound for at-Tāʾif. On his journey he collected some information about the Darb ash-Sharqi, or Eastern Road, which Burton had already mentioned.⁷

At the beginning of the twentieth century, G.E. Leachman visited parts of north-eastern and central Arabia. His first visit was in 1909-10, his second in 1912. On neither visit did he travel by Darb Zubaydah, except for a short stretch. He mentions two stations, al-Jumaymah¹⁰ and

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¹ **Ibid.**, p. 124.
² **Ibid.**, pp. 128-130.
³ **Ibid.**, p. 134.
⁴ **Ibid.**, p. 136.
⁷ Doughty mentions the stations of al-Mislah, al-Birka, Ḥādhah, Ṣufaynah, and as-Suwārqīyya, **ibid.**, p. 531.
⁹ "A Journey through Central Arabia", **GJ**, XLIII, 1914, pp. 600-520.
¹⁰ **GJ**, XXXVII, p. 267.
Zubālah. ¹ Of quite outstanding importance, however, for the study of the Zubaydah road is the contribution made by the Czech explorer, cartographer, and orientalist, Alois Musil, whose work in Arabia started as early as 1908. The expeditions he made covered the northern districts of Arabia. In his reports describing his travels, he recorded for scholars abundant material that deals with different subjects connected with Arabia. Of this we are chiefly concerned with his book Northern Nejd. Musil also included with his work valuable maps.

While he was travelling from Ḥā'il to Iraq, he observed most of the ancient stations, and their reservoirs and other watering facilities. His notes on the route seem to be accurate and still valid. Musil also gathered from the local people some information on the places which he did not visit. He wrote useful studies concerning the portion of the road which he in fact observed, making use of the classical Arabic texts which he used with skill and effect. ² Musil makes reference to the fact that along the main track of the Zubaydah road, stones have been collected in places and piled up into two walls on either side; he says that at some points these walls are constructed quite artistically. ³

From our brief review, we may derive the following conclusion: European travellers, and the earlier Persian scholars, mentioned only the northern section of the road,

¹ Ibid., p. 269.
² Northern Nejd, appendix I-III, pp. 205-236.
³ Ibid., p. 189, fig. 61, p. 190. For details on the various routes in Arabia, including Darb Zubaydah, see A Handbook of Arabia, vol. II, Routes (Admiralty War Staff Intelligence Division, May 1917). For information about parts of Darb Zubaydah, which is mainly a summary of the European travellers, see pp. 73-80, 173-179.
which starts from Kerbalā or Mashhad 'Ali and before reaching Fayd diverges towards Ḥā'il.

Musil explains the decline of Fayd, stating that it started when the pilgrims began to travel by way of Ḥā'il and the trading caravans adopted the route through the oasis of al-ʿAdwah.¹ This oasis is located about 50 km north-west of Fayd.

European travellers only mentioned a few stations between Medina and Mecca which are part of the Zubaydah road. The remaining sections of the road, particularly that from Fayd to Mahd adh-Dhabab, and along the inland route which traverses the country east of the Ḥarrat Rahaṭ, were completely ignored. This may be due to the long neglect of the road, probably from the time when the road was diverted to Ḥā'il.

It may be presumed that this part of the road was abandoned because of the lack of security against lawless tribesmen who attacked the pilgrims whenever possible.

¹ Musil, op. cit., p. 66.
Chapter V

FIELD STUDY OF THE ZUBAYDAH ROAD

1. General Description of the Sites Visited by the Author

The purpose of this field study was to collect information about the material remains of Darb Zubaydah and of its monuments. The investigation was restricted to the area of Saudi Arabia within which the longest part of the road is located, beginning at the station of al- 'Aqabah and ending at the station of Birkat al-Kharabah. On this journey over forty sites were visited. Some of these have already been reported by early European travellers, but the writer was able to inspect in addition many sites which have never been reported before.

During this field study, it was found impossible to follow the whole of the main track of Darb Zubaydah. This was due to the occurrence of topographically difficult areas which are inaccessible to modern vehicles. Therefore, in many cases, alternative routes or short cuts had to be followed from one site to another. Furthermore, certain sites are too far removed from inhabited villages where one may seek food, water, and petrol. It would in fact be an excessively difficult task for one single investigator, or even a small party, to cover the entire length of the road.\(^1\) The task was made

\(^1\) Such a task could only be undertaken by a larger party working during the rainy season, when climatic conditions are not too exhausting.
more difficult by the fact that aerial photographs were unobtainable at the time of the field study. Had these been available, then this would have enabled us to locate the archaeological monuments along the road with greater ease and accuracy.  

The features found at these stations were as follows: remains of water tanks, dug wells, forts and rest houses (all in varying states of preservation). Sections of the original track of the route were inspected and these showed where the road had been evened out, cleared, or paved. Places which had been provided with way-marks (a‘lām) were also examined. Small finds such as pottery and glass fragments were, in addition to the study of monuments, collected for examination. A number of early kufic inscriptions found near the Pilgrim Road are here reported for the first time. As for mile-stones, only two belonging to the 'Abbasid period have been included. These mile-stones were discovered early this century. A few coins of 'Abbasid date found at stations on the road have also been reported.

The following list contains the sites visited by the writer. The names of localities which are given here are based mainly on the geographical and geological maps of Saudi Arabia prepared by the Department of the Interior, United States Geological Survey. In regard to the newly discovered sites, the same system of transliteration as used in these maps has been used in order to ensure uniformity.  

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1 After completing the field study, I received a photograph comprising three areas where the road is visible. This aerial photograph was sent by Mr. Ralph J. Roberts, United States Department of the Interior, Geological Survey.

2 These are the maps that show the pilgrim road from Kufa to Mecca: Geographic Map of the Darb Zubaydah Quadrangle I-202 B 1960; Geographic Map of the Wādi Ar-Rimah Quadrangle I-206 B 1961; Geographic Map of the Northeastern Hijāz Quadrangle
Sites Visited by the Author along the Pilgrim Road

(Darb Zubaydah)

Al-‘Aqabah
Al-‘Aqabah Dam (or as-Saddah)
Birkat aṣ-Ṣaffīrī
Birkat al-‘Amyā
Al-Haytham
Birkat ath-Thulaymah
Birkat al-Jumaymah
Zubālah
Birkat al-‘Aṣāfīr
Ash-Shiḥiyyāt
Birkat al-Ḥamrā
Birkat Ḥamad
Ath-Tha’labīyyah
Al-Bid‘
Al-Khaḍrā‘
Al-Wusayr (al-Khuzaymīyyah)
Zarūd
Al-Ajfar
Birkat as-Sāqiyyah
Birkat al-Ḥuwayd
Birkat ash-Shaghwah
Fayd
Birkat al-Ghuraybayn
Birkat al-Makhruqah
Birkat Uraynibah

I-205B 1959; Geographic Map of the Southern Ḥijāz Quadrangle
I-210B. 1958; see also the geological maps of the same regions:
I-202A, I-205A, I-205A, I-210A. These were all published in
1963. Also the larger geological and geographical map of the
Arabian Peninsula, scale: 1:2,000,000, published in 1963.
At-Tūzi (al-Jaffālīyyah)

Samīrah

Birkat Ḫurayd

Birkat al-Ḥumaymah

An-Nuqrāḥ (ash-Shamālīyyah, al-Janūbīyyah)

Mahd adh-Dhahab

Birkat as-Sāqiyyah

Ḍlāy'i ash-Shaqq (al-Krā')

Birkat Ufay'iyah

Birkat Khabrā' al-Ḥāj

As-Suwārqīyyah

Ṣufaynāh

Ḥādhah

Al-Mislaḥ

Al-Ghazlānīyyah

Al-Birkah

Birkat al-Kharābah

Al-'Agabah

Plan: Site no. 1

Pls: i, nos 1-2
    ii, nos. 1-2

Al-'Agabah is a pilgrim station, situated about six kilometres to the north of Birkat ẓ-Ẓaffirī and c. fifty kilometres north-east of the city of Rafḥa. It occupies an area of one square kilometre, on an extensive piece of flat ground having loose soil, and the rain water gathers here, descending along small valleys from the high hills. To the north of the station is a small rectangular rain-pond, badly ruined, about 5 x 2.5 m. extending from west to east. It has steps in both corners of the west wall which descend to the

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For further details see below, p. 150.
bottom (pl. i, no. 1).

Five metres to the east of the pond there is a water-basin c. 15 x 5 m., almost entirely sanded up. A rounded dug well, fifty metres deep, is located thirteen metres to the east of the basin (pl. i, no. 2).

Some three hundred metres to the south-east of the ruined pond, there is a group of reservoirs, contained within a basin divided into two by a central partition wall. This is about 105 x 55 m., extending from north to south. In the north-western corner of the surrounding wall is the water channel which is cut through hard soil. Steps were constructed in both the northern and southern walls (pls. ii, nos. 1-2).

About fifty metres to the west of these reservoirs is a square dug well, and further north is another square dug well. A third dug well, rectangular in plan, is sited to the south-east of the reservoirs. All these wells were soundly constructed and are still in a state of good repair; they were dug so as to reach into the solid rock, and their mouths are all protected by walling which in some cases rises above ground level.

Among the first Europeans to visit the station of al-‘Aqabah was Charles Huber, who travelled along parts of the ancient pilgrim route from Hā'il to Iraq. He gives an interesting description of the site. With regard to the small tank, he found it in a ruinous state with no water; the bigger reservoir was partly ruined and partly sanded up, with some water. Huber was surprised at the design of the four wells; He considered them as most remarkable because they had been constructed with great care.¹

Musil rested at this station on 2 April 1915. He mentions the existence of two rain ponds and the four dug wells, as well as the ruins of the fortified settlement.1

Al-'Aqabah Dam (as-Saddah) Pl.: iii, nos. 1-2

About six kilometres to the south of the pilgrim station of al-'Aqabah, is a small dam constructed in the ravine of Sha'ib al-Baṣn on the very edge of the plateau. The wall of the dam is still in good condition, apart from some limited local damage. The dam measures 30 metres at the base and 40 metres at the top. The wall is c. 3.5 metres high and around 2 metres in thickness. The space behind the dam is 80 metres long and 40 metres wide.

The construction of the dam was of roughly cut limestone, fixed with white mortar and small gravel.

Musil, before reaching the station of al-'Aqabah, passed by this dam which still retained some water,2 but he provides no further information.

Birkat az-Zafiri

About eleven kilometres to the north of Birkat al-'Amyâ and c. six kilometres to the south of al-'Aqabah, is Birkat az-Zafiri. It is located in the az-Zafiri area, which is a plain surrounded by hills from which the rain-water gathers and descends into the depression of the pond. A dirt road passes to the west of the pond and traverses the plain to the north of the birkah. The reservoir is of a round shape completely choked up with sand and vegetation. It measures some thirty-two metres in diameter. The wall of the birkah is 0.50 metre above ground level. The sluice gate of the pond

1 Northern Neqid, p. 192.
2 Ibid.
is located on its eastern side. It allows the water to flow into the pond with a left turn. No steps can be seen here, but presumably they have been covered with sand. Approximately ten metres to the south of the birkah, a rectangular water basin is to be found. It measures 3 x 5 metres. The enclosure wall rises above ground level for 0.40 metres.

Another rectangular basin can be seen four metres to the west of the pond. Its dimensions are 10 x 5 metres with its wall rising for 0.30 metre above the level of the ground. Both of these basins are sanded up.

No signs of any construction or remains were to be seen near the pond.

Huber, who visited this reservoir, says that it was a beautiful birkah and in good condition.¹ Musil also saw it, but in his time it was half choked up.²

**Birkat al-‘Amyā**

Plan: Site no. 4

Pl.: IV, nos. 1-2

Birkat al-‘Amyā is situated five to six kilometres to the north of the station of al-Haytham. The birkah is constructed in predominantly rough ground with low hillocks surrounding it. The birkah is sited behind a small hill. It is square in plan measuring on the average 30 x 30 metres. Internal steps are placed in the middle of the eastern wall reaching down to the bottom, and in the south-western corner is the water channel which is cut in the solid rock and ends with a steep flight of narrow steps leading down to the bottom of the pond. The actual depth of the tank is not clear because of the partial filling of sand, but it can be estimated at

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¹ Huber, *op. cit.*, p. 115.
² *Northern Négd*, p. 191. For identification, see below p. 151.
about 2.5 metres. No traces of rest-houses or dug wells can be found, but there are a few piles of stones to the north of the birkah.

Musil rested at this reservoir on 1 April 1915. He describes it as a large pond which was restored and cleaned by Muḥammad Ibn Rashīd. The pond was full of water which was reached by three steps.¹

Al-Haytham (al-Qā')²

Plan: Site no. 5
Pis.: v, nos. 1-2
vi, no. 1.

Al-Haytham (al-Qā') is a very big pilgrim station situated about seventeen kilometres to the north of Birkat ath-Thulayman, and about six kilometres to the south of Birkat al-ʿAmyā. The station occupies an area of one square kilometre. The area is called Naqdhat al-Ḥamrah and is a grazing place. Al-Haytham is composed of two large cisterns, an old fortress and some foundations.

The cisterns were built beside each other, the size of each being 50 metres square. The southern one is choked up with sand but the enclosure wall and the water channel in the south-east corner are still visible. The other cistern is also filled with sand but one can discern the characteristic construction of the birkah. It has steps on three sides, in the middle of the walls, except the western wall. The steps, unfortunately, are badly ruined. The northern pond is supported with internal semi-circular buttresses and provided with a carefully covered inlet which is located in its north-east corner.

About 150 metres to the south-west of the cisterns is

¹ Ibid., P. 190. For identification, see below, pp. 150-151.
² For further details and identification, see below, pp. 151-152.
a ruined fortress which is surrounded by an enclosure wall 60 metres square. Inside the wall, one can identify the foundations of rooms and the base of the walls. Near this old fort, to the west and east, there are other foundations of rest houses. Roughly two hundred metres to the north of the fortress, a stronghold was constructed on a small hillock four metres high and 15 metres square.

All over this site, numerous fragments of pottery of various types can be found. They normally appear on the surface whenever the rain comes or when a strong wind blows the sand away.

Musil gives a brief description of the site of al-Haytham. He states that the two reservoirs were choked up, and also confirms that the stronghold north of the fortress was built by Prince Muḥammad Ibn Rashīd. Musil claims that there was another big cistern situated to the south-west of the ruined fort. He gives the measurement as being some two hundred metres long by one hundred and fifty metres wide, extending from north to south. I was unable to observe this pond mentioned by Musil. He does not give the exact location, nor any further details about the area surrounding it. Perhaps this cistern, if Musil is correct, has completely disappeared under the sand and mud.

**Ath-Thulaymah**

Plan: Site no. 6

Ath-Thulaymah is an old pilgrim station situated c. two kilometres to the north of al-Jumaymah. It is situated in a depression surrounded by imposing hills. In the centre

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1 Muḥammad Ibn Rashīd was the governor of Ḥa'il between 1869 and 1897. For details, see Musil, *op. cit.*, pp. 242-244.
3 For identification, see below, pp. 152-153.
of the depression is a large round cistern which has been con-
structed and provided with a settling tank rectangular in
shape. The pond has a diameter of c. 32 metres, its enclosure
wall is roughly 2.5 metres in thickness, and rising 0.70 m.
above ground level, this wall being partly ruined. The
western side of the enclosure wall shows an external rectang-
ular annex, probably intended to house the steps. The pond
is almost filled with sand with a visible depth of only 1.5
metres. The settling tank which is constructed on the eastern
side of the pond is 9.30 x 6 metres extending north to south.
Its enclosure wall rises c. 1.00 metre above ground level.
Sections of the original wall which deflected the water into
the pond can still be seen to the east. When inspecting the
area behind the small hillock north of the pond, we found a
long wall extending for 150 metres in length and a thickness
of one metre. To the west of this wall we discovered similar
constructions but we were unable to decide its length because
it was covered with earth. These two walls either formed an
important dam or a deflection wall which directed the rain-
water to the pond. On top of the hills to the west and south
west of the birkah are the foundations of ruined buildings
which were probably those of an old castle belonging to the
station; though they may have been the rest houses of the
pilgrims.

Musil did not visit this site, although he was only
two kilometres away. He was satisfied with the description
of his guide, Nazel, that this was the old station of al-Qāʾū.

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1 Musil, op. cit., p. 190.
Al-Jumaymah

Plan: Site no. 7 and section 7a.

Pls.: vi, no. 2, vii, no. 1.

Al-Jumaymah is a pilgrim station situated in a flat area about 14 kilometres to the east of Rafa'ah. A Saudi customs post is about three kilometres to the south. The features of al-Jumaymah include a square rain pond, a dry dug well and the remains of old foundations. The pond is perfectly preserved and in good condition. It measures 30 x 30 metres. The sand has covered most of the surface of the pond but it still shows a depth of 3.45 metres. Eleven flights of steps located in the middle of the eastern wall descend to the bottom of the birkah. The inlet of the pond is to be found in its south-western corner. It is carefully designed and very well constructed, ending with a flight of steps reaching down to the ground of the tank. A recent report suggests that the birkah once had a round settling tank at the entrance, but there was nothing visible when I visited the site; it may have become covered with sand and mud. About two hundred metres east of the pond is a dry dug well. The state of this well indicated that it was very deeply dug in the solid ground. The mouth of the well is 1.5-2 metres in diameter. The sand has covered most of the side around the well, the well itself still showing a considerable depth.

One kilometre to the south of the water tank is the remains of an old rectangular building which could be a fortress or a khān.

Among the first European travellers to visit al-Jumaymah was Lady Anne Blunt. She halted here on the

1 "Zubaydah Pools" Result of a Reconnaissance and Suggestions for Restoring the Pools (published by the Ministry of Agriculture and Water, March 1967), pp. 1-5 (see pp.1-2, photo. 1).
evening of 19 February 1879. She thought that the *birkah* of
of al-Jumaymah was the last of the reservoirs of Zubaydah.
She also says that there were considerable ruins and a very
large well.¹

Huber stopped at al-Jumaymah on his way to Baghdad.
He gives an interesting description of the *birkah* which he
says was beautiful and in good condition, adding that its
construction was very ingenious.² Leachman was the third
European traveller to describe the station of al-Jumaymah.
When he visited the site in January 1910, he found that the
water tank was full of rain-water. There were also troughs
around the tank for the watering of animals. The water in the
*birkah* seems to have been sufficient for a large group of
people. Leachman counted 3,500 tents which were erected in
the depression of al-Jumaymah for the ‘Anayzah tribe.³ It was
said that in February 1910, the water was enough for 12,000
men for several days.⁴

The last European to have visited al-Jumaymah was
Musil. He halted at this place on 1 April 1915. He found the
*birkah* in perfect condition and full of rain-water. Musil and
his companions drew water for their animals and refilled their
water-skins.⁵

¹ Anne Blunt, *A Pilgrimage to Nejd*, II, p. 84.
   267-268.
⁴ *Handbook of Arabia*, II, Routes, p. 76.
⁵ Musil, *op. cit.*, p. 189. For further details and identifi-
   cation, see below, p. 152.
Zubālah\textsuperscript{1}  


Zubālah is one of the largest stations on the pilgrim road. It is about 38 kilometres to the south of Rafḩā and is situated in an area two kilometres by c. one kilometre, at an altitude of five metres above the level of the surrounding plain. Cisterns and wells were constructed in the bottom of the valley, which is called Wadi Zubālah. The ruins of a fortress and some other settlements were located to the south on top of high ground.

In the northern part of the station, in the basin of the wadi, there are three water tanks, the first from the north covering c. 40 x 45 metres. It is the only one which is in perfect condition, having been restored by the Ministry of Agriculture. The restoration was done in concrete and cement; consequently the original design and character of this pond has vanished. Next to the restored tank is another square pond which is filled with earth. The more southerly tank measures 25 x 25 metres. This pond is badly ruined but the walls and the circular buttresses on each corner still rise above the ground level for c. 2 to 3 metres. There are steps in the western wall leading from two sides down to the bottom of the birkah.

In the basin of the valley, hundreds of wells were dug very deep in the solid ground, the intervals sometimes being as little as two metres. A large number of these wells can be re-used, and most of them remain in good condition and full of rain-water. Five big wells were inspected near the reservoirs. Herdsmen and bedouins often draw water for their sheep and camels when they pass by.

\textsuperscript{1} For further details, see below pp. 153-154.
The wells and the cisterns are fed with water from Sha'īb al-Munāshbiyat and Umm Shahūf. To the west of the basin on the higher ground one notices that rocks and stones have been piled in long lines; this was probably done by the local people who wanted to direct the flood of rain-water into the mouth of the wadi in the east.

South of the basin, in a commanding position, stands the ruin of a square fortress measuring approximately 35 x 35 metres, having a round tower in each corner and one in the middle of each wall. The fort is surrounded by a spacious court which is also enclosed by a wall. On the northern side of the fort are the ruins of houses and other foundations. In these ruins, a variety of pottery fragments can be found. A few pieces were collected for examination.

There are two cairns (a‘lām) which defined the location of the station; the first is to be seen four kilometres to the south of the fortress, while the other is sited about one kilometre to the east of the reservoirs.

A number of European travellers visited the station of Zubālah, but they give little information about its monuments. In his brief account of Zubālah, Huber says that it was an important place provided with four big reservoirs which were filled with water. He also describes five dug wells constructed deep in the solid rock. Huber says that the buildings south of the basin were in a ruinous state, having been ruined by the effect of wind and rain.¹ Leachman refers only to one reservoir which he says was partially destroyed.²

On 31 March 1915, Musil rested at Zubālah. He gives

¹ Huber, *op. cit.*, pp. 113-114.
² Leachman, *op. cit.*, p. 269.
information about the ruins and the reservoirs. He refers to the ruins of the fort and the adjoining settlements on the northern side. With regard to the water-tanks, he states: "In a fairly large basin north of the settlement there are two ample cisterns and northwest of them two extensive rain ponds. The southern pond is half filled with debris, but the northern one is much larger and is still comparatively deep."¹

**Birkat al-'Aṣāfir**

Birkat al-'Aṣāfir is a square rain pond 40 x 40 metres, situated c. 27 kilometres to the south of Zubālah. It was built on the east side of the Pilgrim Road, right in the Sha'ib Umm al-'Aṣāfir which joins Wādi Zubālah of Fayḍat Sa'ūd and Sha'ib Abū ar-Rūth. In this depression there is a garden of tālb trees, green vegetation, and desert flora and it therefore serves as grazing land for camels and other animals. The ground of this sha'ib would seem to be suitable for agriculture.

The water tank of Umm al-'Aṣāfir is completely filled up with sand and herbage. About 300 metres to the west of the pond is a rectangular building measuring 4.5 x 2.5 metres on the inside. The walls of this construction rise above ground level to a maximum height of one metre. This probably was a rest house, or it could have been part of a settlement in ancient times.

Nine kilometres to the south-west of the rain pond, a cairn (‘alam), two and a half metres high, was established on top of a hill.

Musil stopped at the station of Umm al-'Aṣāfir and

¹ Musil, op. cit., p. 188. When I visited Zubālah, I was unable to identify the fourth reservoir, as recorded by Huber and Musil. I presume that it has been completely choked up.
reported that the pond was completely choked up with sand.\(^1\) He gives no further details about the site.

**Ash-Shihîyyât**\(^2\)

Plan: Site no. 10.

Pls.: xi, nos. 1-2, xii, nos. 1-2, xiii, nos. 1-2.

The pilgrim station of ash-Shihîyyât is situated c. 34 kilometres to the south of Zubâlah and 16 kilometres south-west of Birkat Umm-al-’Aṣâfîr. The modern name of ash-Shihîyyât seems to have derived from the extensive shallow depression which is called Sha‘îb ash-Shihîyyât; here grow ample shîh trees and other vegetation.

The station extends from east to south. The cisterns and wells have been constructed in the lower ground of the depression, while the fort and rest houses were built on higher ground.

On the eastern side is a rectangular pond measuring 35 x 60 metres showing a depth of only two metres. The inlet of the pond is located in its north-western corner; in the opposite corner is an outlet, in the south-western corner. Adjoining the tank on the northern side is a settling tank, also rectangular in shape, partially ruined and filled with sand. A circular cistern is situated on the western side about 310 metres from the first tank. Its design and construction are outstanding. It has a diameter of 55 metres and the surviving depth is 1.5 metres, the rest being filled with sand. Double steps are provided in the western side of the birkah, but they are also covered with sand. The cistern is supported internally with six buttresses, semi-circular and half square ones placed alternately. A rectangular settling tank is

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\(^1\) *Op. cit.*, p. 188. For identification, see below, pp. 154-155.

\(^2\) For further details and identification, see below, pp. 155-156.
constructed to the south of the cistern; a canal feeder directs the rain-water from the valley into this basin and then through a water passage which enters under the wall of the pond. The opening of this water passage has a good coating and plastering of cement. Further to the south of the tank is a long wall which deflects the water into the pond. The spoil dug out of the birkah is heaped on three sides in small hillocks. On the higher ground between the two reservoirs lie the construction of the ancient settlement of the station. The walls rise for one metre above ground level. On elevated ground south of the rectangular tank are the remains of a fort which measures about 30 x 35 metres. A portion of its southern wall is two metres high. All the foundations in this station are built of sandstone and limestone, cut from the hills nearby.

A few fragments of pottery and glass were collected for examination. Anne Blunt arrived at ash-Shīḥīyyāt on 15 February 1879. From her brief but interesting description of the site, we may quote what she says with regard to the water tanks:

"There are two tanks near us, one round, and the other square, and both of the same fashion as the first we saw. We have been examining the construction and find that the walls were originally built hollow of stone, and filled up with concrete. This is now as hard as granite, and has a fine polish on the surface. The water is beautifully clear and good."

Other features mentioned by Lady Blunt were a ruined khān and an immense deep well. Her husband believed that no other European had visited ash-Shīḥīyyāt before them.²

The station was also visited by Huber who gives the

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1 Blunt, op. cit., p. 71.
2 Ibid.
name as Ašeḥebat. He describes the whole site; the two reservoirs were in perfect condition and contained some water. He refers only to one well, which had a depth of 40 metres and a diameter of 3 metres. Huber examined the ruins of the station, among which lay those at the palace. He was able to identify its walls, which rose several metres above the ground.¹

Musil was the third European traveller to visit ash-Shiḥiyyāt. He rested here on 30 March 1915, but does not give much detail about the monuments of the station. He merely states that there were the ruins of a modest settlement and a few reservoirs half choked with rubbish.²

**Birkat al-Ḥamrā³**

Birkat al-Ḥamrā is located on the western side of the Pilgrim Road about 16 kilometres south of ash-Shiḥiyyāt. It is sited in a valley which issues from the surrounding hills. The area is mainly rough and there is no plantation or vegetation which might attract animals to graze. The birkah is circular, with a diameter of c. 23.50 metres. It is now filled up with sand, leaving a depth of only two metres. The pond is provided with an inlet in its western side which ends inside the enclosure with a left turn. There appear to be steps in the eastern wall of the birkah. The pond is constructed mainly of black stones fitted with mortar.

There are a few foundations of rest houses (khāns) near the pond on its southern side.

Musil refers to this pond but provides no details.⁴

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¹ Huber, *op. cit.*, pp. 112-113.
³ For identification, see below, p. 156.
Birkat Hamad

Birkat Ḫamad is sited at a distance of 13 kilometres to the south of Birkat al-Ḥamrā. It is situated in an area on the northern border of ad-Dahna desert and the eastern border of an-Nafūd. It is rectangular in plan, measuring 31 x 19 metres with a depth of 6 metres. It has been recently restored by the Ministry of Agriculture. Although no change has been made to the actual shape of the birkah, its general appearance is now less attractive as a result of the poor workmanship in the surfacing of its walls with cement.

A modern sluice-way has been provided in its north-western corner; it ends where a flight of eleven steps descends to the bottom of the birkah. The main pedestrian steps are, however, situated in the middle of its southern wall. The pond has also been provided with internal semi-circular buttresses.

The remains of old foundations of rest houses are located to the south of the birkah.

Musil refers to this pond but he gives no description of it. No other European traveller seems to have noted this pond.

Ath-Tha'labiyah

Plan: Site no. 13.

Ath-Tha'labiyah is a pilgrim station situated on the eastern part of the Sha'īb al-Bid' which runs through the sand hills of at-Taysiyah, north to east, parallel to the Pilgrim Road. The nearest station is that of al-Bid', a few

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1 For identification, see below, p. 156.
3 For further details, see below, pp. 158-159.
kilometres to the south. Both of these stations are sited on the edge of 'Irq al-Maţhūr, a part of the great desert of an-Nafūd. Sha'īb al-Bid' itself is a shallow valley which forms a grazing area. The bedouins consequently drive their sheep and camels here so that they can get fresh pasture, especially during the rainy seasons.

The remains of the station of ath-Tha'labīyyah consist of a square tank, a settling tank, and a few foundations. The rain pond measures 26 x 26 metres, the enclosure wall rising 0.70 metre above ground level.

The surface of the birkah is covered by sand and mud which leave a depth of only 1.5 metres, but the original depth must have been greater. The birkah is provided with steps in its eastern wall and with a water passage in the south eastern corner. There is also a flood diversion wall extending further south in the sha'īb.

A water basin (or a settling tank) is to be found beside the birkah, measuring 24 x 7 metres and showing a depth of only 1.20 metres. The rest of it is covered with sand and mud.

In regard to the foundations of houses (or khāns) near the birkah on its east side, no definite plans could be established as the buildings were much ruined.

Musil refers to this station together with al-Bid', which is described next.

Al-Bid'\(^1\)

Plan: Site no. 14

Pls.: xvi, nos. 1-2, xvii, nos. 1-2

Al-Bid' is an important station along the Pilgrim

\(^1\) For identification, see below, pp. 158-159.
Road, situated about three kilometres to the south of ath-Tha'labīyyah in a wide depression. In the rainy season, the water can easily reach the place through many valleys, particularly that of Sha'Ib al-Bid'. There are a small number of ancient wells, some of which still contain water. South of the station there is a large water tank which has been constructed in the lowest part of the depression and which is aligned on an east-west axis. The reservoir measures approximately 73 x 40 metres. At the eastern end there is a settling tank separated by a partition wall from the main pond. The cistern has been provided with a water inlet as well as with a long diversion wall at the south-eastern corner. A gap situated in the north of the partition wall allows the water to enter the main pond. Three flights of steps have been provided in the middle of three sides of the enclosure wall (all except the eastern side). Although the birkah is filled with sand, it still shows a depth of two metres. The pond has semi-circular buttresses on the insides of the walls, and the partition wall has them on both sides.

The remains of the foundations of buildings and of the fort of the ancient station are still visible near the pond. Fragments of pottery are to be noticed in the ruins. The spoil of the birkah can easily be identified to the north of the pond.

Some hundred metres to the west of the pond is a square dug well which has dried up. Further north there are a number of wells of which we were able to examine three. The most interesting one was that in the middle. It is c. 25 metres deep with a diameter of 10 metres, and contain sweet fresh water. This well has remained in perfect condition,
and a large number of the local bedouins come here to draw water for themselves and their animals. The mouth of the well has had to be restored in order to facilitate the drawing of the water. The construction of the well is of cut masonry. There is a small opening near the bottom of the well which is about one metre wide: this gap could have been an aqueduct to divert the water into the well from a distance, or perhaps an inspection shaft.

Musil describes briefly the stations of al-Bid' and ath-Tha'labíyyah. He refers to the defile which extends for three kilometres and which was full of wells, some having water while others were choked up. He also refers to the remains of the fort, of houses, and of three artificial reservoirs which were all that was left of the ancient pilgrim station of ath-Tha'labíyyah.¹

Al-Khaḍrā'  

Pl. : xviii, no. 1.

Five kilometres to the west of al-Bid' is the plain called al-Khaḍrā'. In this open plain there are a number of old wells. They are dug very deep in the solid ground, some of them still containing fresh water, while others have dried up. The wells are lined with uncut stones, their mouths being without parapets to mark their sites. Al-Khaḍrā' is always an attractive watering station for the bedouins, who pitch their camps either near the area, or if they are wandering in the grazing lands deep in the desert. The majority of them belong to the Shammar tribes.

Anne Blunt visited al-Khaḍrā', and from her account we gather that it was an important watering station. She

¹ *Op. cit.*, p. 27. We were unable to locate a third reservoir between the two stations or near them. Musil does not give the exact location of these three reservoirs.
counted fourteen wells which were in use.\(^1\)

Huber also visited the place, and refers to the same number of wells, giving their depth as 15-16 metres with a diameter of 2 metres.\(^2\)

Musil, who rested at al-Khaḍrā' on 25 January 1915, gives the number of wells as eighty.\(^3\)

Al-Ḥāshimah

Al-Ḥāshimah is a dried-up well situated to the south-east of the village of Turabah and west of al-Wusayḍ. This well is not far away from the main track of the Darb Zubaydah. The well is excavated in the solid ground. Its walls are not regular and its mouth has an elliptical shape. Huber mentions two wells at al-Ḥāshimah while Musil refers to only one.\(^4\)

**Al-Wusayḍ**

Pl. : xix, no. 1.

Al-Wusayḍ (also called al-Khuzaymīyyah) is a pilgrim station about 13 kilometres south-east of Bi'ɾ al-Ḥāshimah. It is situated on the track which runs through al-Bid' and ath-Tha'labīyyah. At al-Wusayḍ there is an old restored well which still contains fresh water, and the bedouins find no difficulty in watering their animals. Some of them pitch their tents beside the well. To the south of this well there are two basins or troughs of which the first measures 11.50 x 11.50 metres, and is fully sanded up. The remains of an old settlement (or remains of rest houses) can be seen to the west. Further south of the first trough is the second basin.

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It is rectangular in plan, measuring 25 x 7 metres and is completely sanded up. The enclosure wall rises 0.80 metre above ground level. Some 20 metres to the south-west of the basin is an old dug well containing no water. A conduit originally linking the well with the basin is still visible on the ground.

Musil refers to this station as the ruined reservoir of Braykat al-Wusayf; but he gives no further details about it.

**Zarūd**

Pl. : xix, no 2.

Zarūd is a pilgrim station c. 3 kilometres south-east of the remains of the old station of al-Khuzaymīyyah (al-Wusayf). In low ground, surrounded by huge thick sandhills there is only one dug well which is still in use. It has recently been restored and provided with three troughs for the watering of animals. The ground indicates that several wells had been dug here, but have disappeared under the sand. Huber reports that there were two wells at Zarūd, but the water was not as good as at other stations.

**Al-Ajfar**

Al-Ajfar is a small village consisting of mud houses and palm trees. It is situated in a low flat depression about 74 kilometres to the north-east of Fayd. It is an important watering station because of an artesian well which has been recently dug. The herdsman with their sheep and camels come here regularly in order to get their water supplies. I was unable to examine the area around this village, which still preserves its original name, and which was one of the important

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1 Musil, *op. cit.*, p. 26; for identification, see below, p. 160,
pilgrim stations along the pilgrim road. We may therefore refer to the valuable information given by Musil.¹

**Birkat as-Sāqiyah²**

About 22 kilometres to the south-west of al-Ajfar is a circular pond situated in a valley called Sha‘īb as-Sāqiyah. This pond measures c. 25 metres in diameter and is built of black volcanic stones which were brought from the nearby barras.

The birkah is now fully sanded up, but its water inlet, on the southern side, is still visible. The spoil of the birkah is heaped on the north and the southern sides. To the west of the birkah is a small heap of red bricks which may have been a potter's kiln, but it is more likely that it was a lime kiln, as no fragments of pottery appear nearby. Remains of foundations can be seen to the east of the pond, appearing in the shape of small hillocks.

The valley in which the tank is constructed is full of talh trees and other kinds of herbage.

**Birkat al-Huwayd**


About 46 kilometres to the north-east of Fayd is the water tank of al-Huwayd. It is sited in a depression five kilometres to the north of the modern highway which links the region of al-Qażim with Ḥā'il. Al-Huwayd is a square pond measuring 27 x 27 metres, built with roughly-cut granite stone. The birkah is filled with sand, leaving only a depth of 2 metres. Its characteristic features can be identified. The enclosure wall has semi-circular buttresses on the inside,

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¹ Musil, *op. cit.*, pp. 68-69; for further details see below, p. 163.
² For identification, see below, p. 164.
steps are located in its north-western corner, and the water conduit is placed in its south-western corner leading into the *birkah* with an abrupt end. The remainder of the deflection wall can be traced in the south-west direction, through the *shaʿib*.

As far as we know, this reservoir has never been reported by any European traveller or scholar.¹

**Birkat ash-Shaghawah**

Ash-Shaghawah is a rectangular *birkah* situated some 20 kilometres north-east of the village of Fayd. This *birkah* is situated in a valley called Ṣāḥ Abū Rimth. The local people call it Shaʿib ash-Shaghawah. It is an inviting place for the bedouins who camp here in the rainy season and in the spring. Their sheep and camels pasture in the valley, and the herdboys have no difficulty in getting their water from Fayd or from the other hamlets surrounding the village.

The dimensions of the *birkah* are c. 26 x 20 metres extending from north to south. Its construction is mainly of volcanic stone. The pond is almost choked up with sand, but the inlet of the water can be seen in its north-western corner. Adjoining it is a deflection wall extending to the west, at present showing a length of 40 metres.

No remains of foundation can be seen apart from the earth of the *birkah*.

**Fayd**

Plan: Site no. 18

Pls.: xxi, nos. 1-2, xxii, nos. 1-2, xxiii, no. 1.

Fayd nowadays is a village situated about 130 kilometres south-east of the city of Ḥāʾil. It is sited in a low ¹

¹ For identification, see below, p. 164.
plain about 20 kilometres east of the harra of Jabal Salmā. In the early period of the 'Abbasid caliphate, Fayd was one of the most important and strategically located stations on the Darb Zubaydah. The pilgrims would take advantage of its position midway on the road from Kufa to Mecca by using it as a storage point for food and other supplies intended for use on the return journey.  

Fayd was also chosen as the main seat for the administrators of the road (‘Amil at-‘arīq) during the pilgrimage season.  

The remains of the ancient city give evidence of the golden age it has seen. In its heyday, Fayd could match the Muslim cities founded in the first century A.H., such as Basra and Kufa, while there is evidence that Fayd was important prior to the 'Abbasid period and even before the Islamic era. Not only did Fayd become famous, but its fortress or castle was also well known. Early Muslim geographers refer to it as Ḥiṣn Fayd.  

On the site of what was once a city now stands a large village, together with nine other hamlets under the jurisdiction of the village of Fayd.  

Fayd is an oasis with palm trees and plantations of citrus fruit. The plain in which Fayd is situated, provides lush pasture land for the herds of the local bedouins. Fresh water is also available at Fayd, and some of the old wells are

4 For further details, see below pp. 164-167.
still usable.

The monuments of the ancient station lie about one and a half kilometres north of Fayd. Among them is the ancient citadel which is now locally called Qaṣr Khřash. This fort has been badly disturbed through the inhabitants re-using its stones and materials for the walling of their gardens. In four sections of the old city and the fort, the locals have occupied the ground and converted it to arable land. It is thought that the fort consisted of several storeys and there seems to have been a tower in each corner. Parts of the surrounding wall are still visible and it appears to have had a number of gates. Small holes can be seen in the remaining walls of the fortress, through which one can discern that there were rooms underneath.

To the west of the fort is the old settlement of Fayd. One can observe the remnants of rooms, and traces of a rectangular building which the local people call a mosque, perhaps rightly. There is a number of ancient wells which are scattered in the old settlements and around the fort and in the small valley east of the village. These wells were dug deep into the solid rock and lined with stone. Most of them still hold water; the rest have been choked up with sand and abandoned. Inside the village of Fayd are the remains of a number of ancient spring-wells which were provided with an aqueduct (ganāt) so as to allow the water to reach the old wells and the reservoirs in the old city. These wells and the aqueduct are no longer in use.

With regard to the reservoirs, there is one sited to the south-east of the fort which is of quadrangular shape, c. 35 x 35 metres. To the north of the village is another
water tank of similar shape, but both tanks are completely filled with sand, although their walls are still discernible.

Between the ruins and the modern village is a small valley, p.50 metre below ground level. When it is in full flood, it erodes the land on either side and exposes some of the old foundations of the settlements, together with fragments of pottery and glass of different types. Large numbers of these fragments are also to be found among the foundations of the settlements. In the garden plots there are also many jars which have been broken during cultivation.

In the ruins of the fort we examined three mill stones, one of which was very large and in good condition, the second being smaller, while of the third only half remained (pl. xxii, no. 2).

The abundance of pottery at Fayd, together with what looks like a kiln, indicates that it probably had its own vitreous pottery and earthenware manufactory, but this cannot be stated categorically until proper examination of the whole site is made.

The original track of the ancient Pilgrim Route can be traced two kilometres south-east of Fayd. Here the road has been cleared and the rocks piled on both sides as low walls. This portion of the road is 18 metres wide (pl. xxiii, no. 1).

A number of European travellers were able to visit Fayd in the second half of the nineteenth century, among them being Palgrave, who travelled in central and eastern Arabia in 1862-3. He visited Fayd on his way from Ḥā'il to al-Qaṣīm, and although he describes the modern village of Fayd,¹ he makes no mention of the ancient monuments.

Huber, who travelled in central Arabia between 1878 and 1882, was the second explorer to visit Fayd. He gives valuable information concerning the ancient city. He refers to the fortress of Qaṣr "Kherās", stating that it is surrounded by a wall and has a rounded tower which is eight metres high. He also mentions the square ruined building of what he thinks was an earlier mosque, which might show how important Fayd was. He describes too the construction of the wells at Fayd, stating that the water is deep and hard to extract for watering the palm trees. These wells, Huber reports, communicate with each other by underground galleries.

Musil gives some brief but interesting information about the village of Fayd and its decline in the past. He states that the village comprises about thirty five huts, most inhabited by the member of Bani Tamīm. Fayd experienced a considerable decline when pilgrim began to travel by way of Ḥa'il and the trading caravans adopted the route through the oasis of 'Edwa'.

Among modern archaeologists to visit Fayd in recent times were Winnett and Reed. Although they did not examine the area thoroughly, it is worthwhile referring to their notes. They examined the remains of the fort, which they thought were the remains of a caravansarais and rest houses built by Zubaydah in the ninth century A.D. They also assume that Fayd had more importance before this date and that it might have been a town in ancient times.

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The Road between Fayd and Samīrah

The distance from Fayd to Samīrah is approximately eighty kilometres. The road here runs due south, then south-west, and passes through low plains, valleys and shallow depressions. There are spacious areas along the path to Samīrah with plenty of desert flora and vegetation. The local bedouins often move from one place to another in order to allow their animals to pasture. Along this road there is a small number of old reservoirs, wells, and other installations, some of these being still visible above the surface while others are covered with sand.

Bi‘r Umm Harrūj

About thirteen kilometres south of Fayd is a dug well called Bi‘r Umm Harrūj. It is sited in a shallow depression which bears the name of Sha‘īb Umm Krush. The well is lined with stones, and beside it is a shelter made of mud. There was no water in this well when we inspected it.

Birkat al-Ghuraybayn

About 28 kilometres south-west of Fayd and c. 15 kilometres south of Bi‘r Umm Harrūj is a round cistern situated in the depression of Sha‘īb al-Ghuraybayn. The pond is completely choked up but its wall is still visible. The diversion wall of the water can be seen extending inside the sha‘īb. The spoil of the pond is heaped up on the eastern and western sides of the birkah. There is an old well which can be seen to the west of the reservoir. This has a considerable depth, and is still provided with a water-scoop. There was no water in this well.

1 For details and identification, see below, pp. 167-168.
Al-Makhrūqah

At an approximate distance of twenty-eight kilometres further south of al-Ghuraybayn is the depression of Sha'īb al-Makhrūqah. At the entrance to the sha'īb there are two hills, the Jabal al-Makhrūqah to the east and the Jabal Shamrah to the west. In the pass between these hills, the water is very near to the surface and the herdsmen do not need to dig more than one metre to reach it in order to water their livestock. This operation takes place always in the rainy season.

Not far from the entrance of the sha'īb on the east side, facing south, is the foundation of an old basin or a pond, of which only one wall appears on the surface. Down to the south of the mountain pass is the foundation of an ancient fort measuring approximately 70 x 55 metres. The walls are still discernible, but nothing remains above ground level. Within the enclosure wall, one can identify the foundations of rooms. It appears that this fort had a tower in each corner and was once provided with one gate on each of three sides, excluding the north. The construction is mainly of unshaped, reddish stones. About two kilometres from the ruined fort there is what appears to be an old dam wall, which deflects the water to one of the reservoirs in the area. A small portion of this dam is still visible. It measures about six metres in length and half a metre in width.

Approximately five kilometres from the entrance of the sha'īb of al-Mukhrūqah there are two rain ponds, built c. four kilometres on the same alignment. The first pond, which is in the north, is a circular birkah. It has an outlet and a water channel but it is filled up with sand. The second pond is a square one, completely choked up. There is an inlet
in its western side which is still visible. The spoil of the pond is heaped on the eastern side.

**Birkat Uraynubah**

Plan: Site no. 25
Pls.: xxiii, no. 2, xxiv, nos. 1-2.

Birkat Uraynubah (also called al-Mudhayribât) is circular and situated on the eastern side of the road in Sha'ib Uraynubah or Wādi 'Uqilah. The distance from here to the pond of al-Makrūqah is about nine kilometres. The valley is rich with herbage.

The pond is still in perfect condition, having suffered only slight damage. It has a diameter of c. 25 metres but is, however, almost completely choked up, leaving a depth of 1.5 metres. The coating plaster is still visible on the walls.

The pond has internal half-round buttresses, while on the northern side is the water channel which ends inside the **birkah** with a left turn. Double staircases are placed in the north-western side of the pond, some of them being still visible. The spoil of the **birkah** is to be found on its south and east sides.

**Birkat at-Tūzi**

At-Tūzi is an old pilgrim station situated in a low depression, about thirteen kilometres north-east of the village of Samīrah. The area of this old station has been claimed by a bedouin chief, and the natives therefore call it al-'Amīyr or al-Jaffāliyyah. There are a few mud houses and a small garden of palm trees. There is also a well dug by the owner of the place. The land nearby is a grazing area, particularly in the rainy seasons and spring.
At at-Tūzi there is only one old cistern circular in shape, measuring c. 25 metres in diameter. It is filled with sand and shows a remaining depth of one metre. It is provided with semi-circular buttresses on the inside, while on the northern side appears the water channel which ends inside the birkah with a left turn. Double steps are provided on the south-western side of the birkah. A portion of the wall which deflects the water into the birkah can be seen on the northern side extending inside the valley.

Musil, who did not travel along the way between Fayd and Samīrah, gives some geographical notes on the area: he refers to at-Tūzi but does not produce any details of the constructions.¹

Recently the reservoir of at-Tūzi and the previous one mentioned were described in the report of Winnet and Reed.²

Samīrah³

Plan: Site no. 27
Pl.: xxv, nos. 1-2.

Samīrah was a pilgrim station on the Zubaydah Road. It is situated about 180 kilometres south-east of Ḫā'il. Samīrah nowadays is a large village and its people live by growing palms, vegetables, and fruit. It is also a marketing centre for the bedouins who roam the nearby areas where pasture is available.

Charles Doughty visited Samīrah on his way from Ḫā'il to al-Qaṣīm. Although he does not give details about its antiquity, his information is still worth mentioning. He informs us that at that time there were thirty houses and one

¹ Musil, op. cit., p. 81.
³ For identification, see below, pp. 166-167.
hundred inhabitants. There was no indication of palm trees, but he saw the corn fields of well-grown wheat and barley almost ripe for the harvest. He adds that owing to the location of Samirah between Jabal Shammar and the Hijaz, "it has surely been always a principal water station."  

Nothing was known about the ancient Samirah until quite recently. In the rainy season of 1973, the flood of the wadi uncovered new features and structures of archaeological interest. These features are to be found five kilometres to the south-west of the village of Samirah. The basin of the dry wadi is one metre below the surrounding area. Inside the wadi, the flood unearthed what looks like an arch, about one metre high and 1.50 metres wide. The arch stands on two pillars. This arch is constructed of unshaped stones in different sizes and is fitted with white mortar mixed with gravel (pl. xxv, nos. 1-2). The characteristic feature of the arch recalls similar arrangements we saw at the garden barrage and the aqueduct (ganāt) at Qaṣr al-Ḥayr ash-Sharqi. The one at Samirah may therefore have been an aqueduct leading to an underground cistern but it is too early to reach a definite conclusion. At the edge of the wadi, east of the arch, appears a structure which seems to be either a well or an opening of a ganāt lined with cut stone. In the middle of the wadi, west of the arch, we examined a concrete structure measuring c. 18 x 5 metres. There is an indication of square buttresses on either side. An opening (or perhaps a well) appears beside it on the eastern side. We could not determine the identity of this structure, but it is likely to be part of the water.

installations of this site (probably an underground tank). There is an indication of an aqueduct (qanāt) extending from the south-west of the arch for a distance of one kilometre, where it ends at a lower level in which a sanded-up square pond can be seen. Sherds of green earthenware were collected and these will be examined in detail.

In addition to the above-mentioned monuments, there are about fifteen mounds (tells) to be seen south of Samīrah and east of the foundations. When Winnet and Reed visited Samīrah in May 1967, they were guided to a number of these mounds, three kilometres south of Samīrah. They found on the surface a number of worked flints, borers, blades, points and scrapers, and also some green glazed sherds. They also observed a patch of ground about 10 x 5 metres long, paved with small stones set in cement. They thought that it might have been the remains of a reservoir, but the villagers believe it to have been a prayer station on the Darb Zubaydah.\(^1\)

After the flood uncovered the new remains, the curiosity of the local people was responsible for some damage to the arch. According to the authorities at Samīrah, a young boy found a bundle which contained forty silver coins. As he placed no value on the coins, he distributed them among the people. I was able to examine one of the pieces which survives.\(^2\) It bears the date A.H. 143/760 A.D. and the mint is given as Kufa.

However, the fact may be established from our own and others' observation that the ancient pilgrim station existed south of the modern village and extended over an area of

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\(^2\) For more details, see below, pp. 357 ff.
considerable size. The actual locality and the remains of the site can be established only by careful excavation. The preliminary observation of the few remains above the surface, the sherds collected, and the survival of the 'Abbasid coins, indicate that Sam'arah was an important pilgrim station on the road between Kufa and Mecca.

Birkat Hurayd

About thirty kilometres south-east of Sam'arah are the remains of a rounded cistern situated in the wadi called Sha'ib Hurayd. The birkah has been constructed on the northern side of the wadi, the breakwater wall which was set up to deflect the rain-water into the birkah being still visible traversing the wadi. The birkah is badly ruined owing to erosion by the valley flood, and only half of the pond is still visible. On its southern side is the water channel which ends inside the birkah with a left turn.

There is no indication of any old structure to be seen near the birkah. As far as our information goes, this birkah has never been visited or mentioned by any European traveller.

Ma'din an-Nuqrah

Ma'din an-Nuqrah nowadays is a small village located on the motorway which links Medina with the province of al-Qaṣīm. In the past, an-Nuqrah had an important copper mine and acted as a connecting point where the pilgrim routes from Basrah and Kufa join; from there they branch off to Medina and Mecca.

However, an-Nuqrah is divided into two; an-Nuqrah

1 For identification, see below, p. 169.
ash-Shamālīyyah and an-Nuqrah al-Janūbiyyah, being about five kilometres apart. The ancient mine workings in both can still be identified.

When we inspected the site, we saw nothing of the remains of dwellings and rest-houses, but ruined and sanded-up ancient wells can still be seen to the east.¹

**Birkat al-Humaymah**²

Birkat al-Humaymah is situated c. 24 kilometres to the east of an-Nuqrah about five kilometres north of the motorway.

It is circular in plan, measuring roughly 27 metres in diameter. Its enclosure wall rises 0.50 metre above ground level. The *birkah* is filled with sand but one can still discern its stairs which are located on the eastern side, one flight of steps being visible. Three external buttresses are still visible (two semi-circular) while the third is half-square. The inlet is to be seen on its western side supported by a breakwater wall. The spoil of the *birkah* is heaped around it in small hillocks. There is no indication of any remains of ancient settlement near the *birkah*.

**Mahd adh-Dahhab**

Pl. : xxvii, no. 1.

Mahd adh-Dahhab (the cradle of gold) is situated roughly 250 kilometres south-east of Medina, being located on the main Pilgrim Road from Kufa to Mecca. The inland route from Medina also passes through it. Mahd adh-Dahhab, according to early Muslim historians, belonged to the tribe of Banū Sulaym,³ its original name being Ma'din Banū Sulaym. According

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¹ For further details and identification, see below, pp.171-172.
² For identification, see below, p. 171.
to al-Balādhuri, the Prophet Muḥammad gave the Maʿdin district as a reward to his companion Bilāl b. al-Ḥārith. Both Ibn Saʿd and Ibn al-Athīr report that the mine was in use during the period of the Caliph Abū Bakr.

However, this gold mine was developed and worked during the time of the early ʿAbbasid caliphate—the eighth and ninth centuries A.D.—and it may have been worked in ancient times prior to the Muslim period.

The present state of the mine shows that it has been extensively worked in the past, and that the depth was as great as 85 metres. The numerous ruins of stone dwellings indicate that a large labour force formerly worked the mine.

Some of the ancient materials, such as grinding stones, were found in the debris of Mahd adh-Dhahab. The old dwelling houses and settlements have been badly disturbed during the re-working of the mine between 1939 and 1954. It is reported that the spoil of the ancient mine has proved valuable, and a new vein has been discovered below.

Until quite recently, ancient foundations and fragments of mill stones were observable. In addition, sherds of green earthenware are still to be found from time to time.

At Mahd adh-Dhahab, Kufic inscriptions have been found in the debris relating to the construction of the Pilgrim Route during the reign of the Caliph al-Muqtadir.

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1 Futūh al-Buldān, pp. 21-22.
4 Western Arabia and the Red Sea, Naval Intelligence Division, 1946, p. 517.
5 See above, pp. 35-37.
About one kilometre to the south of the mine is an ancient water tank completely sanded up and surrounded by the spoil which is heaped up in low mounds.

The track of the ancient pilgrim route from Mahd adh-Dakahab to Mecca can be traced. A number of old stations have survived, these being equipped with wells, cisterns, and rest houses which we describe below.\(^1\)

\textit{Dlay' ash-Shaqq}^2

Plan: Site no. 31

Pls.: xxvii, no. 2, xxviii, nos. 1-2, xix, no. 1.

At a distance of c. 37 kilometres to the south-east of Mahd adh-Dakahab is a low depression, surrounded by volcanic hills, called \textit{Dlay' ash-Shaqq}.\(^3\) In this area, an old pilgrim station was founded on the pilgrim road from Kuafa. The ruins of this station consist of two cisterns and the remains of a fortress or a palace (\textit{gâsûr}). Since there is water available and there is desert flora, a few bedouins camp in this vicinity with their sheep and camels. The two reservoirs have been constructed to the west of the station on the lowest part of the ground. The first one is a circular \textit{birkah} beautifully built and still in perfect condition, most of it, however, being full of debris up to 2 metres from the ground level. Staircases are provided on the eastern and western sides. The pool is also provided with a steeply descending channel close to the steps in the western wall. Semi-circular buttresses have been added to support the pond from inside. The spoil of the pool is heaped up as small hillocks on the north, west, and south sides.

\(^1\) For further details and identification, see below, pp.177-179.
\(^2\) For identification, see below, pp. 179-180.
\(^3\) The local people sometimes refer to it as al-Kurâ'.

A rectangular rain pond is to be found next to the pool on the south. It is almost choked up with debris and shows a depth of only half a metre. Half-round buttresses are provided on the inside. The western and the eastern walls each have three buttresses, while on the northern and southern walls there is only one buttress in the middle of each. Steps are fitted in the north western and the south-eastern corners. An inlet is located in the south-western corner. 150 to 200 metres east of the reservoirs are the remains of the fortress, measuring some 50 x 55 metres, built from volcanic stones. From the construction of this building, one can deduce the importance of the place. The fort is surrounded by a wall which probably had three gates (in the north, east, and west).

One can assume that the fort was provided with a mosque situated in the northern part of the structure. In each corner of the wall there seems to have been a tower. Inside the fort, there are rooms divided into sections, a part of the wall is still 2 metres high. Unfortunately, there are no fragments of pottery to be found here. None of the European travellers who visited Arabia in the past mentioned this old station.

Ufā'iyah

Ufā'iyah is a pilgrim station situated in a depression between Jabal Ufā'iyah and Jabal Umm al-Ghīrān. The distance from the ruins of Qlay' ash-Shaqq is about 31 kilometres in a south-west direction. In this depression a square pond c. 41 x 41 metres has been constructed; it intersects the valley called Sha'īb Wahdān. The point is completely sanded up but the walls can be noticed with semi-circular

\[^{1}\text{For further details, see below, pp. 180-181.}\]
buttresses about seventeen in number placed on the outside. There is an indication of steps in the middle of the eastern wall of the birkah, while the water passage is located on the north-eastern corner. The cistern was built of mainly volcanic stones and gypsum. The spoil of the birkah is heaped as small hillocks on three sides, excluding the north. There is no sign of foundations or any settlement in the vicinity.

This birkah never appears to have been mentioned by any traveller or explorer before.

Khabrā' al-Ḥāj

Khabrā' al-Ḥāj is a round water tank situated about thirty kilometres to the south of Birkat Ufā'iyah. It is constructed in low ground. It measures c. 27 metres in diameter and is built of volcanic stones brought from the nearby harras. The birkah is now filled with sand up to 1 metre from the ground level.

It appears that the pond was provided with two inlets located on its southern sides. Four flights of steps are still visible on the western side of the birkah.

Forty metres north-west of the tank is a dug well which is filled with sand. There are no other foundations to be seen near the birkah.

There is no evidence that it has ever been visited by any European traveller.

Al-Mislah

Plan: Site no. 35
Pls.: xxix, nos. 2, xxx, nos. 1-2.

Al-Mislaḥ is a pilgrim station about 25 kilometres south-east of the village of Ḥadhah. It is situated in a narrow

1 For identification, see below, pp. 181-182.
2 For further details, see below, pp. 182-183.
valley bearing the name Wādi al-Mislah, which is a continuation of Wādi al-‘Aqīq. Less than ten kilometres to the north is a large depression called Fayḍat al-Mislah.

Al-Mislah marks the junction between the main Darb Zubaydah (which runs through Mahd adh-Dhahab), and an alternative but roundabout road which passes through Ḥādhah and Ṣufaynah, and rejoins the main road at al-Mislah. Al-Mislah itself lies about five kilometres off the track of the road to the west. There are some low hillocks surrounding the station at an altitude c. 6 metres above the level of the plain. Al-Mislah contains a large reservoir, wells, and some foundations.

A rectangular pond has been constructed in the middle of the valley extending from north to south. It is surrounded by a wall which is 0.70 metre higher than ground level. The pond is almost completely sanded up to a depth of one metre only, and measures c.73 x 65 metres. A part of the southern side of the pond acts as a clearing basin (mīsfāt), and is separated from the birkah by a wall, leaving two gaps in the eastern and western walls. The rain-water gathers in the clearing basin through two passages in the southern wall, but the main waterway or feeder canal is located near to the south-western corner. It is very well designed and the surface is paved. The water flowed from this canal into the catchment tank (or the mīsfāt) and thence into the main pond through the two sluices on either side.

In general, the birkah is beautifully built, the prominent features being the buttresses at each corner in addition to semi-circular buttresses placed externally to support the eastern and the northern walls. The western wall has
buttresses which are rectangular in section. These are all constructed of dressed stone brought from the nearby hills. It seems that the birkah was provided with steps in its western wall, but as it is now completely sanded up, they are no longer visible.

Near the birkah on the south, there are five dug wells, all still containing water. They are lined with stone around their mouths, and measure one metre in diameter. Another well is to be found very close to the pond which is lined with stones from the mouth to a visible depth of three metres. It measures four metres in diameter but unfortunately is filled up with sand.

Because of the availability of water in the wells and occasionally in the birkah, the bedouins nearby have built stone shelters with wooden roofs where they can rest whenever they pass by, or when it is a rainy season. This area is useful for grazing purposes. About fifty metres to the north of the pond is the foundations of an old building with beside it a large well completely choked up, measuring c. 10 metres in diameter. The sand has covered more wells nearby, but one can still observe their sites as holes in the ground. Some 120 metres to the north of the reservoir is a small hill on top of which is the foundations of an old building which might be a rest house or a fort. It measures 25 x 14 metres.

Some of the European travellers mention al-Mislah, among them being Richard Burton, who visited the holy cities in 1853. He did not list the station as one of the places he visited on his way from Medina to Mecca, but he did mark "Moslah" on the map showing his route --though he sited it

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wrongly.

Doughty mentions al-Mislaḥ where he found a cistern and ruins, but he gives no further details.¹

**Al-Ghazlānīyyah**²

Al-Ghazlānīyyah is a round pond situated about 25 kilometres to the south of the old station of al-Mislaḥ. The birkah is constructed in a low plain where rain-water gathers, so that it is rich with desert flora and other vegetation. The birkah measures about 28 metres in diameter, and is built of black stones and mortar. The birkah is now completely filled with sand. No other features are visible, except for the water inlet which can be seen on the western side of the birkah. There are no indications of foundations or traces of old settlement here.

This pond has apparently never been reported before.

**Al-Birkah**³

Plan: Site no. 37.

Pls.: xxxv, no. 2, xxxvi, no. 1.

On the western border of Sahl Rakbah, about 30 kilometres south of al-Mislaḥ is an old pilgrim station called now al-Birkah. It lies on the eastern edge of Wādi al-‘Aqīq which runs from south to north. The station's main feature is the water tank and the ruins of what was once an ancient settlement. The birkah has recently been dug out by the Ministry of Agriculture, and it appears in a fine state of preservation, having suffered only very slight damage. It was built with all its four sides stepped having a dimension of 35 x 35 metres at the

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² For identification, see below, p. 183.
³ For further details and identification, see below, pp. 183-164.
bottom and c. 49 x 49 metres at the top. The depth of the birkah is estimated to be 5.5 metres. The marginal wall surrounding the birkah is 1.5 metres rising above ground level. A water conduit which connects the wadi with the tank is located on the south-western corner of the birkah.

The remains of the old settlement of this station can be seen near the birkah. It consists of a square fort c. 60 x 60 metres, with a round tower in each corner. The shape and the bases of walls can be identified within the enclosure wall. Adjoining the fort on the western and eastern sides are more ruins of rooms and houses. The walls of this complex still rise several metres above the ground level (see fig. k). Both the birkah and the fort are built of volcanic stones.

Among the European travellers to mention this station was Burton. He rested with the pilgrim caravan from Medina at this place on 8 September 1853. He says: "It is called Al-Birkat (the Tank) from a large and now ruinous cistern built of hewn stone by the Caliph Harun."¹ He gives no further details concerning this station. Doughty refers to it as "el-Birket Fi Rukkaba where were ruins."²

Almost fifty years after Burton's visit, we learn that this station was in good use. The Egyptian writer Ibrāhīm Rif'at Pasha and the Amir of the pilgrims coming from Egypt states that on 24 April 1910, he rested at this station on the way to Medina. He says that at this interval was a basin called Birkat Zubaydah, perfectly built, measuring 50 x 50 metres with a depth of c. three metres. Around the pond were other reservoirs which contained water and were connected as though joined

with a river. All these cisterns, he says, were surrounded with different types of trees.\(^1\)

Al-Kharābah\(^2\)

Plan: Site no. 38
Pls.: xxxvi, no. 2, xxxvii, nos. 1-2.

Al-Kharābah is an old pilgrim station situated in a depression in the western part of Sahl Rakbah. The station is sited about fifteen kilometres to the east of al-Birkah (or Birkat al-‘Aquīq).

At al-Kharābah there are two large reservoirs which were choked up with sand and debris. The Ministry of Agriculture made a successful attempt to clean them out, in order to enable the bedouins, who are scattered near Wādi al-‘Aquīq, to make use of them for the watering of their animals. When these tanks were inspected after the debris had been removed, they appeared to be in perfect condition. They only needed minor restoration to the damaged parts and the application of a new coat of plaster or cement and the smoothing of their surfaces. An aqueduct was built to transfer the water from Wādi al-‘Aquīq (the area where al-Birkah is constructed) to al-Kharābah. This old aqueduct is to be replaced by a modern pipe-line.

The first pond to the west acts as a catchment tank. It is rectangular in shape and built with all its four sides stepped. It measures about 36 x 28 metres at the top, and is 22.3 x 12.5 metres at the bottom. The depth of this reservoir is roughly 5.79 metres. It is provided on two corners with a small flight of steps at the bottom, the north-western corner


\(^2\) For identification, see below, p. 184.
having six semi-circular steps, and the north-eastern corner
six flights of rectangular steps. The other two corners are
provided with half-round buttresses, one in each.

The second tank is circular in shape and stepped
from top to bottom. The dimensions of this cistern are as
follows: it measures at the base about 40 metres in diameter
and at the top 54 metres in diameter, with a depth of 4.84
metres.

Between the two reservoirs is a single domed room.
It was probably built to accommodate the people who took care
of the station and watched the users when the ponds were full
of water, and also to defend the tanks against any attempt of
sabotage, or to protect animals from falling into them. This
building has doors: three sides have two doors each while
the southern facade has one door only. The doors are decorated
with rusticated stones and around the top part is crenellation.
There are two sluices under the room, the water flowing over
the catchment tank and then rising to the level of the sluices;
it then flows into the bigger tank. The building measures
9 x 5 metres with an elevation of 12 metres. The construction
of the whole complex is of hewn stones, roughly cut, brought
from harras nearby. The design of these tanks does not resemble
any other station that we could recall either in Arabia or in
any other region.

As far as we know, Philby is the only European
scholar to have visited and described this station. His informa-
tion about the site is of value. He refers to these two tanks
as "al-Birkah", but his description applies to al-Kharabah and
not to al-Birkah which we mentioned above. He describes the

\[ \text{azi} (\text{azi}) \]: for further details, see below, p. 292.

\[ \text{azi} (\text{azi}) \]: for further details, see below, p. 292.
two reservoirs and the method of how they were fed with water by the numerous runnels of the westwards drainage system meeting from various directions to pour their water into the rectangular catchment tank, which was designed to filter the water before it passed through the sluices placed at a high level into the enormous circular tank. Philby says that the structure of the tanks appeared to be in good condition, though there was no water in either tank. He comments that this was probably because of the long neglect of the feeder channels since the diversion of the pilgrim traffic to a line farther north and more suitable for motor cars. Philby did not notice the room between the reservoirs. He gives inaccurate measurements of the tanks.

The Sufaynah-Hadhah Road

There are three important pilgrim stations on the road which leads from Mahd adh-Dhahab and from Medina down via the eastern edge of Ḥarrat Rahaṭ. These stations are as-Suwārqīyyah, Sufaynah, and Ḥādhah. According to R. Burton, this road is known as the Darb ash-Sharqi or Eastern Road, which owes its existence to Zubaydah the wife of Hārūn ar-Rashīd.  

As-Suwārqīyyah

Pls.: xxxi, nos. 1-2, xxxii, nos. 1-2.

As-Suwārqīyyah is about sixty kilometres south-west of Mahd adh-Dhahab. It is situated in a low plain which is surrounded by the high hills of the Ḥarrat Rahaṭ. The remains of the ancient settlement of this village are to be found on

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top of the hills which encircle the modern village of as-Suwārqīyyah. Vestiges of an old dam are still visible to the west of the village. There are also a few kūfīc writings inscribed on the rocks near the village. In an old mosque, two memorial stones were found which bear texts in kūfīc letters probably going back to the third century A.H.¹

The modern village of as-Suwārqīyyah is situated in the basin of the mountains of the Ḥarrā. It consists of mud houses which are built in groups near the gardens. The water here is near to the surface, and the soil is extremely rich. People grow dates, corn, etc. The population is estimated to be more than one thousand.²

Burton arrived at as-Suwārqīyyah on 4 September 1853. He gives a description of the village and provides a sketch showing the pilgrims' camp in front of the settlements of as-Suwārqīyyah.³

Şufaynah


Şufaynah is situated on the edge of Ḥarrat Rahat, south-east of as-Suwārqīyyah. It is an old and important pilgrim station linked with both Medina and Ma'din Banī Sulaym (now Mahd adh-Dhahab). This village is distinguished by its sweet water, palms, and other useful plantations.

Burton visited Şufaynah and inspected its features. At Şufaynah Burton found the Baghdad caravan which joined the Darb ash-Sharqi.⁴ It is worth quoting Burton's description of the village:

¹ On these inscriptions, see below, ch. VIII, part 2.
² This is according to Ḥamad al-Jāsir, see al-Ḥarbi, op. cit., p. 339, fn. 2.
³ Burton, op. cit., pp. 124-125. For further details, see below, p. 165.
⁴ Burton, op. cit., p. 125.
"It is a village of fifty or sixty mudwalled, flat-roofed houses, defended by the usual rampart. Around it lie ample date-grounds, and fields of wheat, barley, and maize. Its bazar at this season of the year is well supplied: even fowls can be procured."

On 27 and 28 April 1901, Ibrāhīm Rifʿat Pāsha rested at Ṣufaynah on his way to Medina. He describes the station as a small village inhabited by four hundred people, and says that barley, wheat, vegetables, and palm trees grew there. He counted thirty-six wells lined with stones, with a depth of three and a half fathoms. All the wells contained a permanent supply of clean, sweet water.

The ancient track of the route from Ṣufaynah to Ḥadhah is to be seen near the village of Ṣufaynah on the south. This track traverses the eastern edge of the Ḥarrat Rahaṭ for a distance of approximately sixty kilometres. According to al-Ḥarbi, this route was established by Ḥusayn b. Ṣaḥḥāna, one of the chief men in the 'Abbasid state.

We inspected a small portion of the road where we found that the track has been cleared of dangerous large rocks which were piled up on both sides. Sometimes the track is divided into two by rocks which were too large to be removed. Generally, the road hereabouts measures between four and eighteen metres in width.

Ḥadhah

Pls.: xxxiv, nos. 1-2, xxxv, no. 1.

Ḥadhah is a village with a population of approximately five hundred. It is situated sixty to seventy kilometres south

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4 This is al-Jāsir's estimation, see *Ibid.*., p. 336, fn. 3.
of Șufaynah. In the basin of its wadi, people grow dates, maize, etc., the available water being very near to the surface. The soil is extremely rich and useful for cultivation.

At Ḥādhah there are the remains of old ruins of castles and other buildings. They are to be found on the western bank of the wadi. There are also some old wells containing fresh water. A few kufic inscriptions are inscribed in different places on rocks but these have been badly disturbed by the local people.

At Ḥādhah we inspected the track of the ancient route which reaches the station from the north. This is still clearly visible with a width of about twenty-five metres.

Doughty refers to Ḥādhah as a station where there are corn fields and some ruins.1

2. Identification of Sites Visited by the Author along Darb Zubaydah

The field study undertaken by the present writer began from the station of al-‘Aqabah. From this point we shall commence our discussion, hoping that the section of the road from al-‘Aqabah up to Kufa will be investigated in the near future. However, we must point out that Musil was the first scholar who made an effort to identify a number of pilgrim stations located on the line between Kufa and Fayd. His notes on the Pilgrim Road are in general very useful. We propose to follow a similar method in dealing with Darb Zubaydah. Our attention was generally limited to the monuments along the track of the road. Musil made use of material from early Muslim historians and geographers, and we were

fortunate to be equipped with newly-published material regarding the early period and to be able to handle objects related to the road; in addition, we discovered and observed a large number of sites along the road. Thus we hope that this gazetteer will supplement and enhance the accounts by Musil.

Three tables are provided here, showing the main pilgrim stations and the intervening halts. All the six early Muslim geographers shown on Table I give only the main stations and the mileage between them, with the exception of al-Hamdani who also adds the degree of latitude of main stations. Ibn Khurdadhbeh and Ibn Rustah differ from the rest and record the intervening stations (places for taking the evening meal, غَزِيَّات).

Table II explains the work of al-Ḥarbi (Kitāb al-Manāsik) who not only supplies rich information about bigger stations but also offers abundant facts on smaller ones, and on places between stations. He not only provides details on watering facilities and accommodation, but he also gives the mileage, particularly at points where the road diverges. A small section of the work written by al-Ḥarbi appears to be missing from the original text; his account therefore begins with the station of al-Qāʿ. Almost a total of eleven stations and intervening halts are missing.

Table III shows the road from Medina to Kufa as recorded by Ibn Jubayr in the second half of the sixth century A.H./second half of 12th century A.D., followed by Ibn Baṭṭaṭa in the early eighth century A.H./14th A.D. Their information differs from that given by their early predecessors. For example, they enumerate the stations without giving the mileage, and there is no mention of stopping places or minor halts.

There are a number of other geographers who did not
list the stations of the whole road, though they provide information about many of these stations. Among these geographers are Yaqūt and Lughdah al-İṣfahānī. The works of al-İṣṭakhri and al-İdrīsī also contain brief notes about a number of stations along the road.

We must point out that many of the pilgrim stations along the entire length of the Zubaydah road now appear to have fairly modern names. An attempt is made to establish on a map the position of various stations, together with their classical and modern names.

(al-ʿAqabah)

This station still retains its original name. Ibn Khurdādhabah locates the station at 29 miles from Wāqiṣah. He refers to it as a station with wells. Ibn Rustah furnishes the same mileage figure and he adds that it is a station with wells and cisterns; the place used to be an obstacle because of its hilly nature until it was finally levelled. Al-Maqdīsī refers to the facilities at al-ʿAqabah saying that it has wells of a great depth, while its houses are in ruins. Yaqūt does not mention the monuments at al-ʿAqabah but he states that it is a water source owned by Banī ʿIkrimah of Bakr Bin Wāʾil.

Birkat al-ʿAmyā : (al-Jalḥāʾ)

Both Ibn Khurdādhabah and Ibn Rustah give the name of al-Jalḥāʾ as the place for the evening meal (i.e., the intervening station) between al-ʿAqabah and al-Qāʾ. Al-Jalḥāʾ is located 13 miles from al-ʿAqabah. Musil locates al-Jalḥāʾ

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1 See vol. II, map 4, classical and modern names.
2 Ibn Khurdādhabah, op. cit., p. 126.
3 Ibn Rustah, op. cit., p. 175.
in the modern place called al-Qeteb (or al-Zetab). This place, as Musil states, is located 20 kilometres from al-'Aqabah with no artificial reservoir.\(^1\) In fact, there are two reservoirs sited between al-'Aqabah and al-Haytham; these are Birkat aṣ-Ṣafīrī, six kilometres from al-'Aqabah and Birkat al-'Amyā sited at a distance of over twenty kilometres from al-'Aqabah. These two reservoirs have been mentioned by Musil as well. We would consider Birkat al-'Amyā to be the same station as al-Jalḥā' and not al-Qeteb as Musil suggested. \(Al-Haytham: (al-Qā')\)

Ibn Khurdādhabah followed by Ibn Rustah, Qudāma, and al-Maqdisi, give the distance between al-'Aqabah and al-Qā' as 24 miles (equal to 40 kilometres). Al-Ya'qūbi does not give the distance, while al-Hamdāni reduces it to 20 miles but gives the degree of latitude as 29° 20'. Ibn Khurdādhabah refers to one well at al-Qā'. Ibn Rustah says of the same station that it was a cramped place with wells containing a small amount of water.\(^2\) At the time of al-Maqdisi, the station was ruined and had only one well. He adds that it used to be a prosperous and well-inhabited place.\(^3\)

At present this station is called by the local people al-Haytham and sometimes they combine the two names into al-Qā' wal-Haytham. We agree with Musil that al-Haytham corresponds with the station of al-Qā'.\(^4\) Musil, however, contradicts himself when he rightly ascribes al-Haytham to one place and then refers to it differently as located in the other.

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\(^1\) Musil, op. cit., p. 207.
\(^2\) Ibn Rustah, op. cit., p. 175.
\(^3\) Al-Maqdisi, op. cit., p. 107.
\(^4\) Musil, op. cit., pp. 190. 207.
We found the account of al-Ḥarbi about al-Qāʾ seems to agree well with the conditions at the present site of al-Haytham. Al-Ḥarbi states that there are two mosques at al-Qāʾ and a castle, which he considers the best fortified building along the road. He enumerates a number of reservoirs at this place, one called al-Qaṣrā, another called as-Shābīyyah near which there was a cistern known as al-Miṣfāt and another known as al-ʿAtīqah. Al-Ḥarbi refers only to one well being four cubits in diameter and a depth of 88 fathoms; this well, he states, was regarded as the deepest well along the whole road.\(^2\)

al-Jumaymah : (al-Juraysi)

The intervening station between al-Qāʾ and Zubālah given by Ibn Khurdādbehah and Ibn Rustah is al-Juraysi, which is located 14 miles from al-Qāʾ. Musil suggests al-Jumaymah (21 kilometres from al-Qāʾ/al-Haytham) as the reasonable place for al-Juraysi.\(^3\) Al-Ḥarbi provides useful information on the line between al-Qāʾ and Zubālah. He refers to al-Juraysi as a place which is supplied with a water tank, a castle (qaṣr), and a mosque; in addition, he mentioned a choked well and other structures.\(^4\) The information of al-Ḥarbi tallies with what now appears at the site of al-Jumaymah, despite the fact that only the water-tank and the well have remained visible while the other foundations have disappeared.

Ath-Thulaymah : (al-Haytham)

Al-Ḥarbi mentions al-Haytham as a station established by Zubāydah; at this place he records a reservoir with a

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1 See above, pp. 104-105.
2 Al-Ḥarbi, op. cit., pp. 281-282.
3 Musil, op. cit., p. 207.
4 Al-Ḥarbi, op. cit., pp. 281-282.
miṣfāt (settling tank), a mosque, and other structures.¹ Yaqūt repeats the same information almost verbatim; he locates this station between al-Qā' and Zubālah. At this place, he records a water tank and a palace built by Umm Ja'far "Zubaydah".² This station which al-Ḥarbi and Yaqūt locate six miles from al-Qā' (and very close to al-Juraysi—c. one mile according to al-Ḥarbi), is identical with the modern place ath-Thulaymah. Musil, who mentioned ath-Thulaymah but did not visit the site, refers to it wrongly as al-Qā'.³ (Zubālah)

The pilgrim station of Zubālah is still in existence and its archaeological remains are clear evidence of its importance in the past. Al-Ḥarbi puts the distance from al-Qā' (now al-Haytham) as 18.5 miles, while Ibn Khurdādhabah and the other geographers make it 24 miles. Ibn Khurdādhabah records that at Zubālah, water is available in great quantity.⁴ Ibn Rustah says, "It is an outstandingly beautiful village, very well peopled and has marketing places. It holds abundant water; in its wadi water is available during winter and summer."⁵

Al-Maqdisi describes Zubālah as an inhabited fortress and a prosperous place with ample water.⁶ He adds:

"There are impressive wells dug into rock, and many other small ones. The pilgrims would keep some of their stores at Zubālah for the return journey. A large number of Arabs usually assembled at Zubālah bringing with them camels, hay, and other goods. The pilgrims would feel joyful when they reached Zubālah."⁷

¹ Ibid., p. 282.
² Yaqūt, op. cit., vol. 5, pp. 421-422.
³ Musil, op. cit., p. 190.
⁴ Ibn Khurdādhabah, op. cit., p. 126.
⁵ Al-Ḥalāq, p. 175.
⁷ Ibid., pp. 253-254.
Yaqūt records that Zubālah is a populous village with marketing places, a fort (ḥisn), and a congregational mosque. The village is inhabited by Banū Ghādirah of Banū Asad tribe.¹

Lughdah al-Işfahāni records Zubālah as a notable marketing place and one of many markets along the Kufa-Mecca road. He says that it is a watering place for the Banū Asad tribe. There is a castle and other structures built by the Sultan.²

Al-Ḥarbi furnishes much useful information about Zubālah in its heyday. He mentions in his account a castle (qasr) and a mosque. He enumerates a variety of water tanks and different types of wells. He puts the number of wells constructed in the bottom of its valley as 350.³

Of all the information given above, that by al-Ḥarbi offers the best picture of Zubālah in ancient times.

**Birkat al-‘Aṣāfīr : (at-Tanānīr)**

The intervening halt between Zubālah and ash-Shuqūq, according to Ibn Khurdāḏhabah and Ibn Rustah, is at-Tanānīr, located 14 miles from Zubālah. Al-Ḥarbi differs from them and names a place called ar-Raḥm, 7 miles from Zubālah. But he locates at-Tanānīr 12 miles from Zubālah. He states that the buildings at this place were in ruins. He describes the area as a wide plain with plenty of spīna christi trees َوَلَوْنَتَاعَكْبِرْ السدر⁴. Yaqūt reckons at-Tanānīr as an evening halt sited between Zubālah and ash-Shuqūq. He describes its position as a grazing place for the tribes of Banū Sallāmah and Banū

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¹ Yaqūt, *op. cit.*, vol. 3, pp. 129-130.
² *Bilād al-‘Arab*, pp. 333-334.
Ghādirah; at this place the Sultan built a water tank.\(^1\) The location of at-Tanānīr is probably identical with Birkat al-'Aṣāfīr which lies south of Zubālah at an estimated distance of 27 kilometres. Musil also suggests the same.

**Ash-Shihāyyāt (ash-Shuqūq)**

The description of ash-Shuqūq as recorded by Ibn Khurdādhabah, Ibn Rustah, al-Ḥarbi, and Ibn Jubayr, is identical with the present site of ash-Shihāyyāt. Musil suggests the same.\(^2\) Ibn Khurdādhabah says: "at ash-Shuqūq there are reservoirs and wells."\(^3\) Ibn Rustah reports that ash-Shuqūq is inhabited by Arabs and the water is drawn out from cisterns.\(^4\) Al-Ḥarbi's account on ash-Shuqūq supplies more material. There are two water tanks, each is provided with a filtering tank (miṣfāt); one of the tanks is square in shape while the other is circular; the latter is named Zubaydiyyah. He also mentions four wells and other watering facilities: these are canals, water scoops, and a water storage tank.\(^5\)

The two tanks mentioned by al-Ḥarbi correspond with the remaining two reservoirs at ash-Shihāyyāt, of the four wells only three have been discovered so far.

When Ibn Jubayr arrived at ash-Shuqūq, he saw two cisterns which were filled with fresh and clear water. The caravans were delighted to find water in great abundance and of good quality. The pilgrims usually poured out the water they had before, and supplied themselves with fresh water. They had a joyful resting day spent in swimming, bathing, and

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1 Yaqūt, *op. cit.*, vol. 2, p. 47.
4 *Al-'Alāq*, p. 175.
5 *Al-Manāsik*, p. 288.
washing their garments. Ibn Jubayr describes one of the tanks as huge and circular in shape; the water was more than two fathoms deep so that a swimmer could not cross, except with great effort and exertion.¹

**Birkat Ḥamad : (Rudān)**

**Birkat al-Ḥamra : (ar-Rustumīyyah)**

Ibn Khurdādhabah puts the place for the evening meal between ash-Shuqūq and al-Biṭān (Qabr al-ʿAbādi) as Rudān (or Radīn) located 14 miles from ash-Shuqūq. The exact location of this halt is probably identical with Birkat Ḥamad, a reservoir situated c. 24 kilometres from ash-Shiḥīyyāt (ash-Shuqūq).

Musil also agrees with this. Al-Ḥarbi differs from Ibn Khurdādhabah; he gives the name of Birkat ash-Shaykhah as the place for the evening meal: provided with a water tank, a palace, and other structures. However, al-Ḥarbi does not give the exact location, and it appears that he puts the distance at over six miles from ash-Shuqūq. It is probable that al-Ḥarbi and Ibn Khurdādhabah agree on the same location of the evening halt but each of them gives a different name. Al-Ḥarbi also supplies more information about the line between ash-Shuqūq and al-Biṭān. For example, he locates ar-Rustumīyyah, with a reservoir "called Zubaydiyyah", houses, and a mosque, at six miles from ash-Shuqūq.²

Yaqūt also records this station. He says that there is a cistern built by Umm Jaʿfar and a palace and a mosque.³

Ar-Rustumīyyah probably corresponds with the modern Birkat al-Ḥamra sited c. 16 kilometres south of ash-Shiḥīyyāt.

¹ Ibn Jubayr, Rihlah, p. 208.
³ Muʿjam, vol. 3, p. 43.
Birkat al-'Ashšār: (al-Bīṭān or Qabr al-'Abādī)

Musil locates the pilgrim station of al-Bīṭān (Qabr al-'Abādī) in the ruins of Birkat al-'Ashšār. The distance between ash-Shuqūq and al-Bīṭān is 29 miles, according to Ibn Khurdādhabah and Ibn Rustah; this figure is identical with the distance between ash-Shīṭīyyāt and Birkat al-'Ashšār. Ibn Rustah reports that water at al-Bīṭān is drawn out from cisterns.¹

At the time of al-Maqdisi, the station's buildings were in ruin and its wells were choked up.²

Al-Ḥarbi does not consider al-Bīṭān and Qabr al-'Abādī as one station, but states they are one mile apart, unlike Ibn Khurdādhabah and Ibn Rustah who consider them as one station. Al-Ḥarbi records that at al-Bīṭān there are a castle and a mosque. In the same vicinity he refers to a number of watering facilities built by the Caliph al-Mahdi, by Khāliṣah (the maid of Hārūn ar-Rashīd's mother), by the mother of the Caliph al-Mutawakkil, and by the well-known road superintendent, 'Umar Ibn Faraj. Al-Ḥarbi counts around 20 drinking troughs built in the section of the trader's lodgings.³

'وَنَّى بِبَيْتِ الْتَجَارِ نَحْوَ مِنْ عَشَرِينَ حُرْخَا' ⁴

As for Qabr al-'Abādī, al-Ḥarbi relates that it is connected with Ruzbeh Ibn Bazugamīr Ibn Sāsān, a native of Hamadān who became a Christian and then fled to the Muslim territories in Iraq where he became acquainted with Sa'd b. Abī Waqqāṣ. He built Sa'd a mosque and a palace. Sa'd was impressed by the character of this man, so he introduced him to the Caliph 'Umar Ibn al-Khaṭṭāb. When Ruzbeh met 'Umar he accepted Islam. 'Umar

² Al-Maqdisi, op. cit., p. 254.
³ Al-Manāṣik, p. 291.
awarded him a regular income, and sent him back to Sa'd also described as
escorted by people called al-'Ibad/(‘أيِبِّيِد’) who were occasion-
ionally hired to guide wayfarers. On the way to Iraq, Ruzbeh
died; because of their fear of ‘Umar, the people who were
escorting him waited for some nomads to witness his death,
then he was buried in the spot which was named Qabr al-‘Abādi
after al-‘Ibbād or al-‘Abbād.¹ Musil also quotes the same
story narrated by at-Ṭabarī.²

Birkat al-‘Ārā’ish : (al-Muhallabīyyah)

The next station after al-Biṭān is ath-Tha’labīyyah
between which is the intervening station called
al-Muhallabīyyah. The distance from al-Biṭān to
al-Muhallabīyyah, according to Ibn Khurdādhabah and Ibn Rustah,
is 14 miles (23.6 kilometres).

Al-Ḥarbi does not give the name of al-Muhallabīyyah,
nor does he give the name of the intervening halt. On the
other hand, he records a number of water tanks and other facil-
ities between al-Biṭān and ath-Tha’labīyyah.³

Al-Bid‘ : (ath-Tha’labīyyah)

Ath-Tha’labīyyah is located by Ibn Khurdādhabah,
Ibn Rustah, Qudāma, and al-Maqdisi, at 29 miles from al-Biṭān
(Qabr al-‘Abādi). Al-Ḥarbi furnishes a figure of 22.5 miles.
Ibn Rustah records that ath-Tha’labīyyah is a town that marks
a third of the road from Kufa to Mecca, surrounded by a wall,
provided with baths and a marketing place. There is also a
congregational mosque with a pulpit (minbar); water is
obtained from cisterns.⁴ Al-Maqdisi also considers the same

¹ Ibid., pp. 291-292.
part V, pp. 2491-5.
⁴ Ibn Rustah, op. cit., p. 175.
station as marking one third of the road to Mecca; he relates that it is a prosperous place, with many reservoirs, the water being drawn out by means of a draw well. Its fort is inhabited and provided with a well of fresh water.¹

Al-Ḥarbi provides more information about ath-Thaʿlab-Iyyah than any other geographer. He refers to its very many wells, which were of different types, built by several well-known people including the Caliph al-Manṣūr and Khāliṣah. There is a fortress and a cathedral mosque at ath-Thaʿlab İyyah. There are also two water tanks of square shape, one of them provided with a settling tank. He also lists more than thirty wells of varying sizes.²

Ibn Jubayr saw ath-Thaʿlab İyyah on his way to Iraq. He found a construction looking like a fort (hisn) lying in ruins with only its walls surviving; near the fort he saw a water tank, the biggest of its kind, filled with water, and provided with accesses on three sides.³

The description of ath-Thaʿlab İyyah by early geographers indicates that the station was of a considerable size, its monuments seem to have covered a wide area.

At the present time we have two places: ath-Thaʿlab İyyah and al-Bid', separated by c. three kilometres.

Musil refers to both places and mentions some of their remains. It is very likely that ath-Thaʿlab İyyah is identical with Birkat ath-Thaʿlab İyyah of today and the area of al-Bid'. Ibn Jubayr's description of one of the reservoirs at ath-Thaʿlab İyyah corresponds correctly with the present big reservoir at al-Bid'.

¹ Al-Maqdisi, op. cit., p. 254.
² Al-Ḥarbi, op. cit., pp. 296-297.
Birkat al-Wusayf : (al-Ghumays)

Ibn Khurdādhabah names al-Ghumays as the evening halt between ath-Tha'labīyyah and al-Khuzaymīyyah. Ibn Rustah calls the halt al-'Ayn: this seems to be incorrect and is perhaps a scribal error. They both, however, agree in locating the stopping place at 14 miles from ath-Tha'labīyyah (23.8 kilometres). Al-Ḥarbi refers to al-Ghumays as a cistern (birkah) at 9 miles from ath-Tha'labīyyah. Yaqūt records the same figure but he refers to a place which lies in ruins.

Musil suggests that al-Ghumays is probably the present Braykat al-Wusayf which he locates at an estimated distance of 26 kilometres from al-Bid'. But Musil does not give the whereabouts of this tank (birkah). As we shall see below, al-Wusayf is a large area and contained several facilities which are ruined at the present time.

Al-Wusayf : al-Khuzaymīyyah (Zarūd)?

Ibn Khurdādhabah, Qudāma, Maqdisi, and al-Hamdānī record al-Khuzaymīyyah as a major station after ath-Tha'labīyyah. Ibn Rustah and Qudāma put Zarūd the same as al-Khuzaymīyyah. Al-Ya'qūbī refers to Zarūd only. Ibn Rustah's information is as follows: al-Khuzaymīyyah is the old station of Zurūd, it became known as al-Khuzaymīyyah because Khuzaymah b. Khāzim provided the place with watering facilities. Yaqūt regards al-Khuzaymīyyah and Zarūd as two separate stations, one mile apart.

1 Al-Manāsik, p. 299.
2 Mu'jam, vol. 4, p. 213.
3 Northern Neqūd, p. 208.
4 See above, p. 52.
Al-Ḥarbi's account shows also that the two stations were separated by a mile and a half. He records that at Zarūd there are some twenty wells; some are choked up, others contain brackish water. He refers to a fortress, shops, and a water tank built in the same vicinity.\(^1\) About al-Khuzaymīyyah he relates that there are six wells with saltish water.\(^2\)

We found it a difficult task, at the present time, to make a suitable distinction between both stations. The name Zarūd seems to cover a large area between ath-Ṭha'labīyyah and al-Ajfar. Musil discussed this point at great length.\(^3\) He locates al-Khuzaymīyyah in the ruins of Zarūd. The records of early geographers normally name Zurūd, then al-Khuzaymīyyah.

Zarūd is still known by the local people as the well of Zarūd, an important source of water located at approximately 27°50'N, 43°13'E. North-west of Zarūd, at a distance of c. three kilometres, is the site of al-Wusayf. At this place the remains of an ancient settlement can still be found; there are a number of ancient wells, one of them containing good water, and sanded-up water troughs.

The present writer understood from the local people that they refer to the southern part of al-Wusayf as al-Khuzaymīyyah. Musil brought about some confusion when suggesting al-Ghumays as being the same as Braykat al-Wusayf. We presume that he perhaps spotted another cistern in the same vicinity. If this is the case, then we would consider al-Wusayf, which is not far from Zarūd, as the ancient station of al-Khuzaymīyyah.

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\(^1\) Al-Ḥarbi, \textit{op. cit.}, p. 299.
\(^2\) \textit{Ibid.}, p. 300.
Braykat al-Agharr: (Baṭn al-Agharr)

Ibn Khurdādhabah gives the intervening station between al-Khuza'yīyah and al-Ajfar as Baṭn al-Agharr, while Ibn Rustah refers to it as al-Agharr; both locate this station 15 miles from al-Khuza'yīyah. Al-Ḥarbi records a number of places between al-Khuza'yīyah and al-Ajfar which were supplied with wells, cisterns, and palaces. He locates Baṭn al-Agharr at 8 miles from al-Khuza'yīyah, where 'Abdullah Ibn Mālik built a square water tank provided with a settling tank; three wells contained fresh water and each was provided with a trough for drinking water. He also records a fort (biṣn) and stalls for selling goods.  

This station seems to have survived. Musil proposes that al-Agharr is probably the deserted Braykat al-Agharr which he locates 38 kilometres from Zarūd.  

(Al-Khaḍrā')

Al-Khaḍrā' is mentioned by al-Ḥarbi at an estimated distance of 2 miles (c. 3.4 kilometres) west of ath-Tha'labīyyah. He says that the place is provided with large wells where the inhabitants of ath-Tha'labīyyah enjoy the taste of the water because of its sweetness. Among these wells were al-Barmaki and al-Bustān. Al-Khaḍrā', without doubt, is the same watering station as the one carrying this name at the present time, which we described previously, and where many ancient wells are still in use.

Al-Ḥashimah: (al-Ḥashimīyyah)

Al-Ḥarbi reports that four miles before reaching

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1 See above, pp. 52-53.
2 Al-Ḥarbi, op. cit., p. 301.
4 Al-Ḥarbi, op. cit., p. 298.
al-Khuzaymiyyah the road divides into three: the route on the right (the western one) goes to al-Hāshimiyyah. Yaqūt refers to al-Hāshimiyyah as a watering place on the Mecca road, sited at a distance of four miles east of al-Khuzaymiyyah. The source there belonged to Banū al-Ḥārith b. Tha'labah of Banū Asad. Al-Hāshimiyyah is likely to be the present deserted well of al-Hāshimah to the west of al-Wusayf.

(Al-Ajfar)

The ancient pilgrim station al-Ajfar is preserved in the present village of al-Ajfar, which we described previously. We may summarise what we know about al-Ajfar as a station for the pilgrims from early geographers. Lughdah al-Iṣfahāni tells us that al-Ajfar belonged to Banū Yarbū' tribe, then it was taken from them by Banū Judhaymah in the beginning of Islam.

Ibn Rustah reports that at al-Ajfar the bedouins camp in tents, the water is brought from cisterns and wells, and a certain type of white clay is taken from here to Baghdad to be used for washing clothes. Al-Ḥarbi says that it was called al-Ajfar because of the hollows in its extended plain, in each of which a number of wells were excavated. He refers to one circular pond and a large number of wells, each of which was named after the person who, presumably, built it.

Recently, two ancient water tanks were discovered near the village of al-Ajfar; they were fully sanded up.

1 Ibid., p. 298.
3 Bilād al-’Arab, p. 58.
4 Al-‘Alāq, p. 176.
5 Al-Manāsik, pp. 301-303.
Birkat al-Huwayd : (al-Hawd--Barīd Fahdān)
(al-Qarā'īn) : Birkat as-Sāqiyyah

Ibn Khurdādhabah and Ibn Rustah locate al-Qarā'īn which is the evening halt at 20 miles from al-Ajfar. Al-Ḥarbi mentions the intervening station at 12.5 miles. He says that it contains a fort and a building near which was a square cistern. In addition, he gives information on other places on the way to Fayd which were provided with watering facilities. Among them was al-Ḥawd (the tank) called Barīd Fahdān which is the postal stage number 30. This may correspond to the present Birkat al-Ḥuwayd, 46 kilometres north-east of Fayd. Regarding the evening station, al-Qarā'īn, Musil failed to give the exact location, he simply says that al-Qarā'īn refers to hills north of Fayd. During the writer's visit to the area between al-Ajfar and Fayd, he discovered two sites: Birkat as-Sāqiyyah c. 22 kilometres south of west of al-Ajfar, and Birkat ash-Shaghwah c. 20 kilometres north-east of Fayd. It is most probable that as-Sāqiyyah is a suitable place for the evening station, al-Qarā'īn.

(Fayd)

Early Muslim geographers and travellers never fail to mention Fayd in their records, indicating its position as a major station and a mid-way town between Kufa and Mecca. The plain on which Fayd was established, used to be in the pre-Muslim period open country shared between the Asad and Tayy tribes. Pre-Islamic poetry indicates that Fayd was a watering station in pagan times.

When the chief of the Tayy tribe, Zaid al-Khayl,

1 Musil, op. cit., p. 208.
later named Zaid al-Khayr by the Prophet Muḥammad, accepted Islam, the Prophet awarded him Fayd as state-owned grazing land.¹

From the start of the Islamic period onwards, Fayd began to grow into a big town. Wells were dug, ganāts were constructed and lands were cultivated. Al-Hajari² and al-Bakri³ claim that Abū ad-Daylam, an associate of Yazīd b. ʿUmar b. Hubayrah was the first to irrigate the land at Fayd by means of ganāts, but al-Ḥarbi and as-Samḥūdī confirm that the Caliph ʻUthmān constructed a ganāt and cultivated the land around it before anybody else.⁴

During the ʻAbbasid period, Fayd developed into a town and became the seat of the amīr al-bāj, the pilgrim administrator. It was provided with the most essential facilities; private residences for the caliphs and their relatives, and forts and palaces were built to house pilgrims and the state's troops. Shops and mosques were constructed, and above all, water was secured by digging wells, ganāts, and constructing reservoirs. Since the soil was rich and water was abundant, farms were developed.

Musil compiled some valuable information from early Muslim geographers and historians on the history of Fayd.⁵

The following are some particulars about the facilities built at Fayd as recorded by early Muslim sources. Ibn Khurdādhabah records that Fayd is half way along the road between Kufa and Mecca; there were a minbar, marketing places,

water tanks, and aqueducts. Ibn Rustah adds that fields were irrigated by water from its aqueduct; there was also a cathedral mosque. He says that Fayd was inhabited by a large number of people of the Ṭayy tribe and the road administrator ('Amil at-Ṭarīq) resided there.

Al-Ḥarbi who wrote during the third century A.H./ninth A.D., provides a list of the important facilities at Fayd. There was a palace built for the sultan, there were also gardens and fortresses (busūn) some of which were in ruins, in addition there was a cathedral mosque, a minbar, a water tank square in shape and three qanāts, two of which were built by the Caliph 'Uthmān and the 'Abbasid caliph, al-Mahdi. Al-Ḥarbi records a number of wells of fresh water, built by well-known persons in the 'Abbasid period. According to aṭ-Ṭabarī, in 145/762 the Caliph al-Maḥsūr despatched a force led by Kuthayr b. Ḫusayn al-‘Abdi who established a strong encampment at Fayd and defended it by a moat. The force was intended to cut off the communication between the inhabitants of Kufa and the rebel insurgent followers of the family of 'Ali in Medina. Although this force left for Medina, the moat was filled in and levelled only after many years.

Al-Maqdisī (4th century A.H./10th century A.D.) refers to Fayd as a town with two fortresses with plenty of water and well-inhabited. There was a bath, a cistern, and other facilities, provided by the Buwayhid ruler of Iraq, 'Aqūd ad-Dawlah. He also refers to its aqueduct and to its wells which contained fresh water. The town was well-inhabited.

2 Al-'Aqāq, p. 176.
5 Aḥsan at-Ṭaqāsīm, pp. 108, 258.
Al-Iṣṭakhri (d. after 340/951) considers Fayd as the best established station between Iraq and Medina; there were palm plantations and fields with limited water. Fayd was inhabited by members of the Ṭayy tribe who left sometimes in the year to look for grazing lands.¹

When Ibn Jubayr visited Fayd (580/1184) he found a large fortress with towers and merlons standing on flat plain surrounded by an old looking wall. It had a large number of wells which were connected with underground aqueducts.²

Ibn Baṭṭūṭa saw Fayd early in the 8th century A.H./14th A.D. He refers to its fortress but does not mention its watering facilities.³

Birkat al-Ghuraybayn : (al-Qarnātayn)

Al-Ḥarbi provides copious information on the area between Fayd and Tūz. He gives details of many places which were provided with facilities, i.e., water tanks, wells, and shelters. He gives the evening halt as al-Qarāʾin. This station is mentioned by Ibn Khurdādhabah and Ibn Rustah as a halt between al-Ajfar and Fayd.⁴ They, however, put the halt between Fayd and Tūz as al-Qurnātayn, 17 miles (28.9 kilometres) from Fayd. Musil makes al-Qurnātayn correspond with the rocky hills called al-Qarnān or al-Qrānen, 36 kilometres from Fayd.⁵ We may consider al-Qurnātayn to be in the present place of Birkat al-Ghuraybayn, about 28 kilometres south-west of Fayd.

(Al-Makhrūqah)

Al-Makhrūqah is likely to be the same place as

¹ Al-Iṣṭakhri, op. cit., p. 24.
³ Ibn Baṭṭūṭa, op. cit., p. 108.
⁴ Al-Manāsik, pp. 310-311.
Jabal al-Makhrūq mentioned by Ibn Jubayr where he stopped with the pilgrim caravan on their way to Iraq. Al-Makhrūqah is preserved as the name of a mountain over 40 kilometres south-west of Fayd. In that vicinity we discovered some ruins of reservoirs and buildings, which we have described in the previous section.

Birkat at-Tūzi: (Tūz)

The name of the ancient pilgrim station of Tūz is preserved in the present reservoir of at-Tūzi north-east of the modern village of Samūrah. Ibn Rustah regards Tūz as a station located in a fertile region and inhabited by Arabs from the Banū Asad tribe; the water is drawn from wells and cisterns. Al-Ḥarbi states that Tūz is inhabited by a tribe called Banū Murrī of Banū Asad. He refers to reservoirs having been constructed at Tūz, one circular and called Zubaydiyyah, the other square and provided with a settling tank (mīsfāt). He also mentions a large number of wells which had been dug in the same vicinity.

(Samūrah)

The ancient pilgrim station of Samūrah is identical with the newly discovered archaeological remains, 5 kilometres south of the modern village. Ibn Rustah says that Samūrah is inhabited by Bedouin Arabs and water is drawn from wells and reservoirs.

Al-Ḥarbi supplies some interesting additional information on Samūrah and says that there is a palace, mosque, and a market place. He mentions eight large wells and a hundred small ones which were lined at the top; in addition, there

1 Ibn Jubayr, op. cit., p. 205.
2 Al-ʿAlāq, p. 176.
3 Al-Ḥarbi, op. cit., p. 312.
were two water tanks, one of which was round, the other square; one of these tanks was built by Zubaydah.\(^1\) Al-Maqdisi relates that Samirah had two water tanks and fields; the water was fresh and plentiful.\(^2\) When Ibn Jubayr arrived at Samirah, he found it inhabited, and he saw a fortified building (نبض الحصن) built in a wide plain, surrounded by a large wall. He refers to many wells, cisterns, and swamps, but says that the water was of brackish taste.\(^3\)

**Birkat Hurayd : (al-'Abbasiyyah)**

Ibn Khuradhabah and Ibn Rustah put al-'Abbasiyyah as the evening halt between Samirah and al-Hajir, and they give the distance from Samirah to this halt as 15 miles (25.5 kilometres). Yaqūt mentions two places between Samirah and al-Hajir; these are al-Ḥusaynīyyah (no mileage) and at three miles from there, al-'Abbasiyyah with two forts and a cistern.\(^4\) Al-Ḥarbi, as usual, provides more details: in addition to other information, he mentions a halt called al-Ḥisnah with many wells and camps belonging to the Banū Na'ämah tribe. Al-Ḥisnah is most likely the al-Ḥusaynīyyah of Yaqūt. Al-Ḥarbi names al-'Abbasiyyah as the evening station, three miles from al-Ḥisnah and 10 miles from Samirah, provided with round reservoir measuring 50 cubits in diameter and 10 cubits in depth, two forts, and wells with plentiful water.\(^5\) However, al-Ḥarbi's figure on the distance between Samirah and al-'Abbasiyyah differs by 5 miles from those given by Ibn Khuradhabah and Ibn Rustah.

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1. Ibid., pp. 415-416.
5. Al-Ḥarbi, op. cit., p. 316.
Despite this discrepancy, we may conclude that the figure given by Ibn Khurdadhabah and Ibn Rustah together with the description of al-Ḥarbi, al-'Abbāsīyyah is likely to refer to the deserted rounded reservoir called Birkat Ḫurayd, c. 30 kilometres south-east of Samīrah. Near this ruined cistern is the well of an-Nimrīyyah (42°20' E, 26°26' N approximately), an important source of water for the local bedouin.

Al-Baʿayith : (al-Ḥājir)

Ibn Khurdadhabah and al-Maqdisi put al-Ḥājir at 33 miles from Samīrah, while Ibn Rustah offers the figure of 34 miles. Al-Hamdānī and Qudāma give a figure of 23 miles. Al-Ḥarbi puts it at 23 miles and a half.

Shaikh Ḥamad al-Jāsir suggests that al-Ḥājir is the present village of al-Baʿayith¹ south-west of Samīrah at a distance of c. 55 kilometres. The figures given by Ibn Khurdadhabah and Ibn Rustah—33 and 34 miles—correspond to 56.1 and 57.8 kilometres respectively.

Although the present writer did not visit this area, it is for the benefit of the reader that we quote the early Muslim geographers on their information about the station of al-Ḥājir.

Ibn Rustah records that al-Ḥājir was established by Abū Dulaf al-Qāsim b. ʿĪsā. It is a large and fertile place, and water is available in cisterns and wells.² Al-Ḥarbi reports that a square water tank and a large number of wells were constructed at al-Ḥājir; some of them were built by the Caliphs al-Mahdi and al-Mutawakkil.³ When Ibn Jubayr visited

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¹ I wish to thank Shaikh Ḥamad al-Jāsir for his kindness in giving me the above information in a letter he sent to Professor William Brice (Ref. 630 dated 8 Feb 73) of the Dept. of Geography at Manchester University.
² Al-'Alāq, p. 176.
³ Al-Manāsik, pp. 318-319.
al-Ḥājir he found reservoirs at this station which were filled with water. Ibn Baṭṭūṭa refers to the reservoirs at the same station; he says that when water dries out, people dig temporary wells in hollows in the ground.²

**Birkat al-Ḥumaymah**: (Qarūra)

Ibn Khurdādhabah and Ibn Rustah refer to Qarūra as the evening station between al-Ḥājir and Ma'din an-Naqirah, 17 miles from al-Ḥājir. Al-Ḥarbi locates Qarūra at 13 miles from al-Ḥājir, which is an evening halt inhabited by tribes of Banū 'Umayr. The place was marked by a waymark (a'lam) and provided with two water-tanks, one square and the other circular; this latter was built by Zubaydiyyah. He also refers to two places which were provided with watering facilities, one of them being al-Ḥasani which is a rounded cistern built 6 miles from Qarūra.³ However, Qarūra is likely to be in the place of the rounded reservoir called Birkat al-Ḥumaymah, about 24 kilometres east of the present Ma'din an-Nuqrah.

Ibn Jubayr records that Qarūra has many water tanks filled with rain-water.⁴

**Ma'din an-Nuqrāh**: (Ma'din an-Naqirah and al-Qurashi)

This station has acted in the past as a connecting point for the routes coming from Kufa and Basrah. From there, the routes bifurcate with one going to Medina while the other goes to Mecca. These two routes have been recorded by early Muslim geographers. Ibn Rustah records that an-Naqirah is inhabited with many bedouins; there were a few wells with a small amount of water.⁵ Al-Maqdisi records that an-Naqirah is inhabited with many Bedouins.

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¹ *Riblah*, p. 204.
³ *Al-Manāṣik*, pp. 319-320.
⁵ *Al-'Alāq*, p. 176.
a desolate place with a fortress and a small quantity of water.\footnote{Abasan, p. 108.} Al-Ḥarbi supplies more details about an-Naqirah. For example, he refers to the efforts made in the pre-Islamic period to extract water from this place. He mentions the facilities existing in his own time as follows. There were a fortress, a mosque, two water tanks, and wells. In addition, he records that the entrances leading to this station were marked with road-signs (aʿlām).\footnote{Al-Manāsik, pp. 321-322.} When Ibn Jubayr stopped at this station, he found wells and water tanks like vast cisterns, one of which was filled with rain-water which was sufficient for the whole caravan; it never showed any decrease of its water despite the large amount of water drawn.\footnote{Ibn Jubayr, \textit{op. cit.}, p. 204.}

However, the main pilgrimage station at the time of al-Ḥarbi was Maʿdīn al-Qurashi a mile distant from Maʿdīn an-Naqirah. It was built at the time of al-Wāthiq (227-232/842-847) by a wealthy citizen called al-Musayyab Ibn Sulaymān. He built himself a fortified palace protected by a moat and provided with two gates. At this station were many wells, some inside the fortress, others outside; these were built by al-Musayyab and other important people in the 'Abbasid state. Although the fortress was destroyed in 273/886, the station remained an attractive place for the travellers.\footnote{Al-Manāsik, pp. 323-324.}

As we mentioned in the previous chapter, the present an-Nuqrah is divided into two: an-Nuqrah ash-Shamālīyyah and an-Nuqrah al-Janūbiyyah. It seems likely that an-Nuqrah ash-Shamālīyyah corresponds to al-Maʿdīn an-Naqirah while al-Janūbiyyah was Maʿdīn al-Qurashi.
An-Naqirah to Ma'din Banī Sulaym

The road between Ma'din an-Naqirah and Ma'din Banī Sulaym has not been included in the field work which was carried out by the present writer. The track of the route between these stations together with its monuments have never been studied by any scholar so far. In literature, al-Wohaibi, in his recent research, discusses briefly the pilgrim route between Ma'din an-Naqirah and Mecca.¹ He brings to our attention the inaccuracy of some of the early geographers, namely Ibn Khurdādhabah, Qudāma, and al-Maqdisi on their account of this part of the pilgrim route. They misplaced a number of the stations: for example, Ma'din Banī Sulaym is listed south of ar-Rabadhah followed by as-Salīlah and al-'Umaq, while they should be placed as follows: ar-Rabadhah, as-Salīlah, al-'Umaq, and Ma'din Banī Sulaym respectively.² Shaikh al-Jāsir refers to this discrepancy on several occasions. He makes use of the early Muslim sources in connection with names of places along the pilgrim route when dealing with the work of al-Ḥarbi, Lughdah al-Īṣfahānī, and al-Hajari.

For the completion of this topic, we propose to list the stations from Ma'din an-Naqirah to Ma'din Banī Sulaym, giving short details on their facilities as recorded by the early geographers.

(Mughīthath al-Māwān)

Early Muslim geographers differ from each other when listing the name of this station as they do about the mileage concerned. With the exception of al-Yaʿqūbi and al-Hamdāni, they refer to it as Mughīthath al-Māwān; al-Yaʿqūbi mentions it as al-Mughīthah, while al-Hamdāni puts it as al-Māwān.

¹ Al-Wohaibi, op. cit., pp. 381-384.
² Ibid., p. 382.
Shaikh al-Jāsir comments that it was called Mughīthath al-Māwān in order not to be mistaken for the station of al-Mugīthah which is located between al-'Udhayb and al-Qar'ā.\footnote{Al-Manāsik, p.322, note 1.} Ibn Khurdādhabah and al-Maqdisi put the distance as 33 miles from Ma'din an-Naqrāh, Ibn Rustah 34 miles, Qudāma 27 miles, al-Hamdānī 26 miles, while al-Ḥarbi proffers 27 miles from Ma'din an-Naqrāh and 26 miles from Ma'din al-Qurashi.

However, the name of al-Māwān is reserved in Jabal al-Māwān, c. 50 kilometres south-east of an-Nuqrāh. According the Shaikh al-Jāsir, there is a source near the mountain, located at $25^\circ20'N$, $41^\circ15'E$.\footnote{Ibid., pp, 323-324, note 1.}

Ibn Rustah says that Mughīthath al-Māwān is inhabited by bedouins, and that it possesses reservoirs and wells containing only a tiny amount of water. Al-Ḥarbi records that this station is inhabited by the Banū Muḥārib tribe; he also reports that it was provided with a fortress (gaṣr) and a mosque. As for the water facilities, there were two cisterns and six wells, some of them provided with watering troughs but the water in these tanks and wells had a brackish taste.\footnote{Al-'Alāq, p. 178.}

(Arīmah)

The evening halt between al-Mughīthah and ar-Rabadhah is given as Arīmah according to Ibn Khurdādhabah and Awra'ah in the account of Ibn Rustah. They both give the distance as 14 miles from al-Mughīthah. Al-Ḥarbi supplies more information on the facilities between al-Māwān and ar-Rabadhah. He locates Arīmah as the halt for the evening meal 10 miles from al-Mughīthah, and credits it with a water tank called al-Krā'.\footnote{Al-Manāsik, pp. 325-326.}
Arīmah is likely to be the ruined reservoir to the south-west of Jabal al-Māwān, located at the point where Wādi Sāḥūq and Wādi al-Quṣayrah meet, approximately at 41°20' E, 25°02' N.¹

(Ar-Rabadhah)

Ibn Khurdādhbihah, Ibn Rustah, Qudāma, and al-Maqdisī agree on the distance between al-Maghīthah and ar-Rabadhah as 24 miles, al-Hamdānī differs by offering one mile less, while al-Ḥarbi reduces the figure to 20 miles. Shaikh al-Jāsir paid special attention to ar-Rabadhah and its surroundings. He writes at great length about this station, relying on the early literary sources.²

The Caliph 'Umar Ibn al-Khaṭṭāb held ar-Rabadhah as a state grazing reserve for the state's animals which came into the treasury by way of tax.³ During the period of the Caliph 'Uthman Ibn 'Affān, ar-Rabadhah became the refuge of the Prophet's companion Abū Dharr al-Chifārī who died there in 62/652.⁴

In 'Abbasid times, ar-Rabadhah was a prosperous pilgrim station inhabited by bedouins, and was supplied with accommodation and watering facilities. Al-Ḥarbi reports that there was a fortress and two mosques; one of them was built by Abū Dharr al-Chifārī. In addition, there were two reservoirs, one circular and the other square. He also states that there were many wells and he names thirteen of them which were the best wells for their fresh water. Some of these wells were

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¹ See Map of North Eastern Hijāz quadrangle, I-205A.
constructed by famous people in the 'Abbasid state.\(^1\) Al-Ḥarbi also indicates that ar-Rabadhah was linked with Medina by 202 miles of the route which was used by the Caliph Ḥarūn ar-Rashīd.\(^2\) The period of use of ar-Rabadhah seems to have been terminated by the invasion of the Càrnatiens who attacked the place in 319/931 and forced its inhabitants to leave; its facilities were left to fall into disuse.\(^3\) However, we may locate the station of ar-Rabadhah at the present site of Birkat Abū Salīm at 41°18'E, 24°40'N approximately.\(^4\)

\((\text{As-Salīlah})\)

The pilgrim station of as-Salīlah is likely to correspond with a ruined site (shown on map of North Eastern Hijāz I-205A) south of Birkat Abū Salīm at a distance of 40 kilometres and at about 40°18'E, 24°23'N.

Ibn Rustah puts the distance between ar-Rabadhah and as-Salīlah at 26 miles; he says that the station is inhabited by bedouins. Passers-by might discover that water is deficient in the wells and cisterns of as-Salīlah.\(^5\) Al-Ḥarbi records the distance from ar-Rabadhah to as-Salīlah as twenty three and a half miles.\(^6\) He relates that the station was named after as-Salīl Ibn Zayd Ibn al-Ḥarīth who was first to claim the area. Az-Zubayr Ibn al-'Awām owned a palace and a mosque there. With regard to the water facilities, al-Ḥarbi reports a cistern of square shape provided with a settling tank and a water conduit. There were six wells constructed with cut stones, but they contained water of brackish taste.\(^7\)

\(^1\) Al-Ḥarbi, op. cit., p. 328.  
\(^2\) Ibid., pp. 329-330.  
\(^3\) As-Samhūdī, op. cit., vol. 3, p. 1091.  
\(^4\) See map of North Eastern Hijāz, I-205A. In a recent article by Shaikh al-Jāsir, he agrees with me in this respect. See, "Ar-Rabadhah: Taḥdīd Mawqī'ihā", \(\text{Al}-\text{Arab}\), parts 1-2 (Aug.-Sep.), 1975, pp. 1-4.  
\(^5\) Al-'Alāq, p. 179.  
\(^7\) Ibid., p. 331.
Al-‘Umaq

The name of this station is preserved in Bi‘r al-‘Umaq about 50 kilometres north of Mahd adh-Dhahab. Ibn Rustah locates al-‘Umaq at 21 miles from as-Salīlah and 19 miles from Ma‘din Banī Sulaym. He records that the station is inhabited by bedouins and the water is available in wells and reservoirs.¹ Al-Ḥarbi locates al-‘Umaq 18 miles from as-Salīlah and 22 miles from Ma‘din Banī Sulaym. He gives valuable information about the station, concerning which he claims that the sweetness of its water cannot be compared with that of any other station. He counts the facilities provided at al-‘Umaq as follows: a fortress (qaṣr) and a mosque, and a total number of nine wells --some of them built by men of high status including the Caliph al-Manṣūr and the famous road administrator Yaqtīn b. Mūsā.²

Mahd adh-Dhahab: (Ma‘din Banī Sulaym)

Ma‘din (mine) of Banī Sulaym is preserved in the present Mahd adh-Dhahab. We pointed out in the previous chapter that, according to Ibn Sa‘d³ and Ibn al-Athīr⁴ the gold mine of Banī Sulaym was exploited during the time of the Caliph Abū Bakr as-Ṣiddīq (11-13/632-634). Shaikh al-Jāsir,⁵ who writes on the ancient mines in Arabia, expresses some doubts concerning this information. But the extraction of gold from this mine seems to have been carried out by the tribes before the Islamic period. Thus al-Ḥarbi reports that this mine contained a large quantity of gold which used to be dug in ancient

² Al-Manāsik, pp. 332-333.
³ Tabaqāt, III, I, p. 151.
times: 1. He adds that even the soil of the mine was mixed with gold, but the work in this mine came to a halt because of the enormous cost involved.Muslim historians and geographers do not furnish much detail on the gold mine. Judging by the present condition of the mine, it seems that it had been dug to a great extent during the Umayyads and the 'Abbasids. During the Umayyad period we learn, from at-Tabari and Ibn al-Athir that in 128/745 Ma'din Banî Sulaym had its own local governor called Kuthayr b. 'Abdullah.

On the archaeological side, there is evidence that gold coins were struck, in the Umayyad period, at this place, though the minting place which appears on a gold piece refers, literally, to Ma'din Amîr al-Mu'minîn in Hijaz and not to Ma'din Banî Sulaym.

Al-Wohaibi explains the dereliction of Ma'din Banî Sulaym in early Islam as due to either decreasing security or to the sheer ignorance of the local people who succeeded Banû Sulaym, its previous owners. Banû Sulaym migrated from Arabia as a result of the expansion of Islam.

However, in the 'Abbasid period, Ma'din Banî Sulaym became a major pilgrim station on the Kufa-Mecca road.

Most of the early geographers list this station as Ma'din Banî Sulaym with the exception of al-Hamdani who refers

1 Al-Manâsik, p. 335.
4 M. Casanova, Une Mine d'or au Hidjaz (extrait du Bulletin de la section de Géographie, vol. 35 (Paris, 1920). This article is intended to point out the exact location of Ma'din Banî Sulaym based on early Muslim geographers and European travellers.
5 Al-Wohaibi, op. cit., pp. 132-134.
to it as Ḥarrat Banī Sulaym. Needless to point out that Ibn Khurdādhabah, Qudama, and al-Maqdisi again differ on the exact position of this station in their records.

Ibn Rustah reports on Ma'din Banī Sulaym, stating that it comprises ancient villages populated with Arabs from Banū Sulaym. Water is obtained from cisterns.\(^1\) Al-Ḥarbi gives more details on the facilities provided at al-Ma'din. He records a palace and a mosque. There is a circular cistern built by Zubaydah and a large number of wells, old and new, which have different names. He also refers to a place called Rayyan two and a half miles from al-Ma'din. At this place, which lies in ruins, the caliph Hārūn ar-Rashīd was accustomed to rest. He built palaces for himself and for his soldiers and companions, while stores and wells were also provided.\(^2\)

\(\text{Dlay' ash-Shagg: (al-Kurā')}\)

Ibn Rustah refers to the evening halt between al-Ma'din and Ufa'iyah as al-Kayrānah. He locates this station at 14 miles from al-Ma'din.\(^3\) Ibn Khurdādhabah proffers al-Kurā' as an evening station 15 miles from the previous station which he wrongly indicates as al-'Umaq.\(^4\) Al-Ḥarbi's account concerning the route from al-Ma'din to Ufa'iyah is richer than that given by any other geographer. He mentions a place called 'Aqabat Kurā', an evening halt 11 miles from Ufa'iyah. At this station he records two reservoirs which were constructed near each other; in addition, there are two palaces one big while the other is small. There is also a well, tents (أُبَات) and stores.\(^5\)

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\(^1\) Op. cit., p. 179.
\(^2\) Al-Manāṣik, p. 333.
\(^5\) Al-Manāṣik, p. 334.
The description by al-Ḥarbi coincides exactly with the monuments we found at the place which is now known as Qlay' ash-Shaqq, situated about 37 kilometres south-east of Mahd adh-Dhabah. The local people sometimes refer to it as al-Krā' which is no doubt the remainder of the original name al-Kurā'.

(Ufa'iyah)

Ibn Rustah puts Ufa'iyah 32 miles from Ma'din Banī Sulaym, a station he describes as well-inhabited and containing plentiful water in cisterns and wells.¹

Ibn Khurdādhhabah, who differs in naming the previous station, offers the same distance but he does not specify the watering facilities at this station. He simply refers to one single water tank and wells.²

Al-Ḥarbi locates Ufa'iyah 26.5 miles from Ma'din Banī Sulaym.³ He quotes 'Abdullāh Ibn 'Amr to the effect that the station was called Ufa'iyah because it had so many snakes and vipers. He also reports that Ufa'iyah originally belonged to relatives of Abū Bakr aṣ-Ṣiddīq, az-Zubayr's family, and to members of the Banū Sulaym tribe. As to the watering facilities at Ufa'iyah, he records a square water tank called Birkat al-Wādi and another tank, circular in plan, provided with a settling tank, which had been constructed one mile from the main station. In addition, he records an indefinite number of wells containing brackish water.⁴

However, the location of Ufa'iyah is preserved in the present Birkat Ufa'iyah which we described previously.

¹ Al-'Alāq, p. 179.
² Al-Masālik, p. 132.
⁴ Ibid., pp. 341-342.
The distance between al-Ma‘dīn and Birkat Ufa‘iyah may be estimated to be over sixty kilometres. This figure differs only slightly from that given by Ibn Rustah and al-Ḥarbi.

**Khabrā‘ al-Ḥaj : (al-Kabwānah)**

Ibn Khurdādhabah gives al-Kabrānah as an evening halt 14 miles from Ufa‘iyah\(^1\) while Ibn Rustah does not name the rest station but he locates the evening halt, which was provided with a water tank, at half-way between Ufa‘iyah and al-Mislaḥ. In other words, he agrees the distance given by Ibn Khurdādhabah, since he puts the total distance between Ufa‘iyah and al-Mislaḥ at 28 miles.\(^2\)

Al-Ḥarbi names Birkat al-Kabwānah as the evening halt at 12.5 miles from Ufa‘iyah. He records the facilities provided at this station as follows: a palace, tents (or shelters), stores, which were lying in ruins, and a number of wells with plentiful water. He also refers to a reservoir which was constructed 16 miles from Ufa‘iyah towards al-Mislaḥ.\(^3\) Al-Ḥarbi’s information is more valid than that of the other geographers for he gives the correct name of this station.

Ibn Khurdādhabah shows a scribal error in writing الكبارة instead of الكباره, the error being due to converting the letter و (waw) into ر (ra). Lughdah al-Iṣfahānī mentions al-Kabwānah as an evening station on the road to Mecca.\(^4\)

Shaikh al-Jāsir confirms that the name al-Kabwānah is still preserved in the mountain called Kabwān which is to the north of al-Mislaḥ.\(^5\)

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The present map of southern Ḥijāz (quadrangle I-210B) indicates a mountain called Ukbūwān, over 30 kilometres from al-Mislaḥ. However, we observed to the south of this mountain the place called Khabrāʾ al-Ḥāj which is likely to be the same station called al-Kabwānāh. When we inspected the place, we found a rounded cistern and a well, though both stations are now filled with sand.

(Al-Mislaḥ)

The name of al-Mislaḥ is preserved in the present name for certain remains located south-east of Ḥādhah at about 40°45′E, 22°23′N. Ibn Khurdādhabah, Qudāma, and al-Maqdisi give the distance from Ufaʾiyah to al-Mislaḥ as 34 miles. Ibn Rustah provides a figure of 28 miles, while al-Hamdānī differs by giving one mile less than Ibn Rustah. Al-Ḥarbi locates al-Mislaḥ at 26.5 miles from Ufaʾiyah.

Ibn Khurdādhabah considers al-Mislaḥ as migāṭ, the point where the Iraqi caravans start their rites.¹

Al-Ḥarbi relates that the original route did not go through al-Mislaḥ but it is diverted by the road called Ṭarīq al-Baʿth, where the ʿAbbasid prince, ʿAlī b. ʿĪsā, constructed a water tank and a palace.² The establishing of al-Mislaḥ seems to have started at the time of Abū Jaʿfar al-Manṣūr. He built a water tank at al-Mislaḥ in order for it to be used by the pilgrims. The Caliphs al-Mahdi and al-Mutawakkil also participated in developing the station by building some other useful facilities. Al-Ḥarbi enumerates the facilities which were provided at al-Mislaḥ as a palace and a mosque. There was also a square reservoir with settling tank beside which Masrūr al-Khāḍim built another water tank.

² Al-Ḥarbi, op. cit., p. 343.
There were twenty-two constructed wells at al-Mislah.\(^1\)

**Al-Ghazlāniyyah : (al-Qaṣr)**

The evening station between al-Mislah and al-Ghamrah is given by Ibn Khurdādhbih and Ibn Rustah as al-Qaṣr, eight miles from al-Mislah.

Al-Ḥarbi does not record the name of the evening station but he locates a reservoir called al-Mu'taq (المعتن) or Birkat 'Awāzil (عزال) nine miles from al-Mislah.\(^2\)

Al-Qaṣr (or Birkat 'Awāzil) is likely to be the present Birkat al-Ghazlāniyyah which we visited at c. 25 kilometres from al-Mislah.

**Al-Birkah : (al-Ghamrah)**

The distance given from al-Mislah to al-Ghamrah according to Ibn Khurdādhbih, Ibn Rustah, Qudāma and al-Maqdisi is 18 miles (c. 30.6 kilometres).

Al-Hamdāni furnishes a mileage figure of 20 miles and al-Ḥarbi reduces it to 17 miles (c. 26.8 kilometres).

Al-Ghamrah is most likely to be identical with the present al-Birkah (or Birkat al-'Aqīq). The distance from al-Mislah to al-Birkah is around 30 kilometres.

Ibn Rustah describes al-Ghamrah as a fertile station with plentiful water available in cisterns and wells. He reports that the pilgrims start their rites at al-Ghamrah but the camel drivers have to wait until they reach Dhāt 'Irq.\(^3\)

Al-Ḥarbi reports that there were a palace and a mosque at al-Ghamrah; in addition there were two square reservoirs which were built by the Caliph Ḥārūn ar-Rashīd and by the 'Abbasid prince, 'Īsā b. 'Ali. With regard to wells, al-Ḥarbi counts

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\(^3\) Ibn Rustah, *op. cit.*, p. 179.
three which contained sweet water. The station of al-Ghamrah was fed with water from the big Wādi al-‘Aqīq which passes through it.\(^1\) The present state of Birkat al-‘Aqīq, and the nearby ruins, confirm the information of al-Ḥarbi.

**Birkat al-Kharābah : (Busiyān)**

Birkat al-Kharābah, which is situated to the east of al-Birkah (or Birkat al-‘Aqīq) seems to have been constructed on the Basrah-Mecca road in order to act as an evening station. Shaikh al-Jāsir identifies al-Kharābah as the ancient intervening station called Busiyān.\(^2\) Lughdah refers to it as a halt for the evening meal, located before the main station of Wajrah; he says that rain-water is collected at Busiyān.\(^3\) Yaqūt relates that Busiyān is located 21 miles from ash-Shubaykah, a station on the Basrah road, with reservoirs and rivers.\(^4\) Shaikh al-Jāsir correctly suggests that the word anhār (rivers) is a distortion of ābār (wells). Al-Ḥarbi reports one reservoir and an unspecified number of wells at Busiyān.\(^5\)

**(As-Suwārqīyyah : Sufaynah : Hādhah)**

These three settlements not only acted as pilgrim stations but were inhabited by tribes who became permanent settlers. The position of these three localities on the main pilgrim roads from Iraq, and linked with Mecca and Medina, helped greatly to increase and promote their products. At these three places, the water was available and the soil was fertile.

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\(^1\) Al-Ḥarbi, *op. cit.*, p. 346.


\(^3\) *Bilād al-‘Arab*, p. 373.

\(^4\) *Mu’jam*, vol. 1, p. 423.

\(^5\) *al-Manāsik*, pp. 601-602.
As-Suwārqīyyah

This is located on the road which links Medina with the south-east regions, particularly with the Kufa-Mecca road at Maʿdin Bani Sulaym.¹ According to ‘Arrām, as-Suwārqīyyah was a pleasant village with many inhabitants from Banū Sulaym. It was provided with a minbar and a cathedral mosque. Because of its market place, it became a centre point for merchants who came from other regions to purchase their goods. Since the water inside the village contained salt, the inhabitants sought water from the nearby wadis. They cultivated the fields by planting palm trees and a variety of fruits and citrus trees.

The un-settled people of as-Suwārqīyyah (bādiyah, or the nomads) were tending horses, camels, and sheep. The people of as-Suwārqīyyah would trade with the districts of Hijāz and Najd, particularly along the pilgrim routes from Basrah and Kufa which traverse these two regions.²

As-Suwārqīyyah was one of the strongholds of Banū Sulaym. Because of the potential power of Banū Sulaym, they went as far as challenging the central government in Baghdad by controlling the road in the area between Medina and Mecca.³

At the present time, as-Suwārqīyyah still shows traces of its past. We could still witness the ancient ruins of a huge dam which was constructed across the wadi to the west of the village and the old settlements which are scattered on top of the various high hills.

¹ Al-Ḥarbi, op. cit., p. 339.
³ See above, pp. 61 f.
Şufaynah

Şufaynah appears to have been inhabited by various tribes before the Islamic period. But it was very well populated in the 'Abbasid period and became a large village with palm gardens and cultivated fields.¹ At the beginning of the 'Abbasid period, both Şufaynah and Ḥādhah were linked by a cleared road which was established by the 'Abbasid prince Ḥasā b. Mūsā.² Although the pilgrims would travel via Ufā'iyah and al-Mislaḥ, they often turned aside to Şufaynah when they ran out of water.³

After the pilgrim season of 136/753, Abū Ja'far al-Manṣūr was at Şufaynah, where he received the news of the death of his brother as-Saffāḥ. At Şufaynah, al-Manṣūr accepted homages from his companions as the new caliph.⁴

Ḥādhah

Al-Ḥarbi puts the distance between Şufaynah and Ḥādhah at 20 miles, the distance between Ḥādhah and al-Mislaḥ being 18.5 miles. This station, as al-Ḥarbi relates, belonged to the Banū Sulaym tribe. The Caliph al-Mutawakkil built a palace there. As regards the watering facilites, there were thirty-six wells containing sweet water.⁵

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¹ For full details, see al-Wohaibī, op. cit., pp. 257-261.
² Al-Ḥarbi, op. cit., p. 335.
⁵ Al-Ḥarbi, al-Manāsik, p. 336.
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<td>Ma'din al-Qurashi (Ma'din an-Naqirah) 34</td>
<td>Ma'din an-Naqirah 34</td>
<td>Ma'din an-Naqirah 27</td>
<td>*</td>
<td>*</td>
<td>34</td>
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<tr>
<td>interval</td>
<td>As-Samţ</td>
<td>16</td>
<td>*</td>
<td>16</td>
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<td>Mughîthath al-Mâwân</td>
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<td>*</td>
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<td>Awrah? 14</td>
<td>*</td>
<td>24</td>
<td>*</td>
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<td>Ar-Rabadhah</td>
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<td>24</td>
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<td>Al-Kanabayn</td>
<td>13</td>
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<td>Ma'din Banî Sulaym</td>
<td>24</td>
<td>As-Salîlah 26</td>
<td>*</td>
<td>29</td>
<td>As-Salîlah *</td>
<td>As-Salîlah 23</td>
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<td>Sharûra</td>
<td>12</td>
<td>As-Sanjah 12</td>
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<td>As-Salîlah</td>
<td>26</td>
<td>Al-'Umaq 21</td>
<td>*</td>
<td>26</td>
<td>Al-'Umaq *</td>
<td>Al-'Umaq 24</td>
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<td>Al-'Umaq</td>
<td>21</td>
<td>Ma'din Banî Sulaym 19</td>
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<td>Ma'din Banî Sulaym</td>
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<td>Al-Kurâ'</td>
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<td>Kayranah 14</td>
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<td>Ufa'iyyah</td>
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<td>32</td>
<td>*</td>
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<tr>
<td>interval</td>
<td>Al-Kabrânah</td>
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<td>*</td>
<td>32</td>
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<td>Al-Mislaḥ</td>
<td>34</td>
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<td>Al-Qaṣr</td>
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<td>8</td>
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<td>Al-Ghamrah</td>
<td>18</td>
<td>*</td>
<td>18</td>
<td>*</td>
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189
<table>
<thead>
<tr>
<th>Type of Station</th>
<th>Ibn Khurdādhabah</th>
<th>Ibn Rustah</th>
<th>Qudāma</th>
<th>Ya'qūbi</th>
<th>Maqdisi</th>
<th>Hamdāni</th>
<th>Latitude (N) deg. min.</th>
</tr>
</thead>
<tbody>
<tr>
<td>interval</td>
<td>Awṭās</td>
<td>12</td>
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<td>12</td>
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<tr>
<td>main</td>
<td>Dhāt 'Irq</td>
<td>26</td>
<td>*</td>
<td>26</td>
<td>*</td>
<td>*</td>
<td>24 21 40</td>
</tr>
<tr>
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<td>Ghamr Dhi</td>
<td>*</td>
<td>11</td>
<td></td>
<td></td>
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<td></td>
<td>Kindah</td>
<td>11</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>main</td>
<td>Busṭān Banī 'Āmir</td>
<td>*</td>
<td>22</td>
<td></td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>interval</td>
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<td></td>
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<tr>
<td>main</td>
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<td>24</td>
<td>*</td>
<td>24</td>
<td>*</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>From</td>
<td>Intervals (or evening meals)</td>
<td>To (distance in miles)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Al-Qā'</td>
<td>Numerous places provided with water facilities. al-Haytham and al-Juraysi (6-7 miles)</td>
<td>Zubālah 18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zubālah</td>
<td>Not mentioned. But he gives at-Tanānīr 12 miles</td>
<td>ash-Shuqūq 17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ash-Shuqūq</td>
<td>Birkat ash-Shaikah 6 miles. There are other places provided with water facilities and rest houses. 12 miles</td>
<td>Biṭān (Qabr al-‘Abādi) 22.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biṭān</td>
<td>Not mentioned, but there are numerous tanks between both stations.</td>
<td>ath-Tha’labīyyah 22.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ath-Tha’labīyyah</td>
<td>Not mentioned but there are a number of places provided with water facilities, among them Zarūd.</td>
<td>al-Khuzaymīyyah 23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Al-Khuzaymīyyah</td>
<td>Baṭn al-Agharr (8 miles). There are other places with water facilities.</td>
<td>al-Ajfar 20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Al-Ajfar</td>
<td>(complex of buildings) 12 miles. Several tanks and wells between both stations</td>
<td>Fayd 27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fayd</td>
<td>al-Qarā’in 17 miles. Some other spots provided with cisterns and wells.</td>
<td>Tūz 24.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Tūz</td>
<td>al-Ḥummah 8 miles. There are series of tanks and wells between both stations.</td>
<td>Samīrah 25.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Samīrah</td>
<td>al-‘Abbāsīyyah 10 miles. Other numerous tanks and wells between both stations.</td>
<td>al-Ḥājir 23.5</td>
<td></td>
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<tr>
<td>Al-Ḥājir</td>
<td>Qarūrah 13 miles. Number of other places provided with water facilities and shelters between both stations.</td>
<td>an-Naqīrah 27.5</td>
<td></td>
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</tr>
<tr>
<td>An-Naqīrah</td>
<td>Birkat al-Aqīwānah 13 miles. Many other tanks and wells.</td>
<td>Mughīthath al-Mawān 27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mughīthath al-Mawān</td>
<td>Arīmah 10 miles. Between both stations there is a series of cisterns and wells.</td>
<td>ar-Rabadhah 20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Place</td>
<td>Description</td>
<td>Distance</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>-----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Ar-Rabadhah</td>
<td>ar-Rawthah 13 miles. Numerous cisterns, wells and shelters between both stations</td>
<td>as-Salilah 23.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>As-Salilah</td>
<td>Birkat Ḍabbah 11 miles (In this place there is a well with plentiful water and a ruined fortress,)</td>
<td>al-'Umaq 18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Al-'Umaq</td>
<td>aṣ-Ṣafḥah 10 miles</td>
<td>Ma'din Banî Sulaym 22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ma'din Banî Sulaym</td>
<td>'Aqabat Kurā' (two cisterns, two fortresses, a dug well, houses and shops) 15.5 miles.</td>
<td>Ufa'iyah 26.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ufa'iyah</td>
<td>al-Kabwānah (a cistern fortress, ruined shops, and several dug wells) 12.5 miles.</td>
<td>al-Mislaḥ 26.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Al-Mislaḥ</td>
<td>Not mentioned. But there is a water tank called al-Mu'taqa or al-'Awāzil 9 miles.</td>
<td>al-Ghamrah 17</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Al-Ghamrah</td>
<td>Not mentioned. But at 8 miles from al-Ghamrah is the station of Awṣās provided with fortresses, houses, ruined shops, and a reservoir</td>
<td>Dhāt 'Irq 20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dhāt 'Irq</td>
<td>Not mentioned. But the station of al-Ghumayr is located at 7 miles, provided with a spring well and a water tank. There are also numerous shops in a ruined state.</td>
<td>al-Bustān 21</td>
<td></td>
<td></td>
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</table>
### Table III

**The pilgrim road in the accounts of Ibn Jubayr and Ibn Battuta**

<table>
<thead>
<tr>
<th>Ibn Jubayr: Departure from Medina, Saturday 8 Muḥarram 579/21 April 1184</th>
<th>Ibn Battuta: Departure from Medina c. 2 Muḥarram 726/29 November 1326</th>
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<tbody>
<tr>
<td>Medina</td>
<td>Medina</td>
</tr>
<tr>
<td>Wādī al-ʿArūs</td>
<td>Wādī al-ʿArūs 3 nights' journey</td>
</tr>
<tr>
<td>Māʾ al-ʿUsaylah</td>
<td>al-ʿUsaylah 4 leagues</td>
</tr>
<tr>
<td>An-Nuqrah</td>
<td>an-Nuqrah</td>
</tr>
<tr>
<td>Al-Qarūrah</td>
<td>al-Qarūrah</td>
</tr>
<tr>
<td>Al-Ḥājir (the same day)</td>
<td>al-Ḥājir</td>
</tr>
<tr>
<td>Samīrah</td>
<td>Samīrah</td>
</tr>
<tr>
<td>Al-Jabal al-Makhrūq (passed the same day)</td>
<td>al-Jabal al-Makhrūq</td>
</tr>
<tr>
<td>Wādī al-Kurūsh</td>
<td>Wādī al-Kurūsh</td>
</tr>
<tr>
<td>Fayd</td>
<td>Fayd</td>
</tr>
<tr>
<td>Al-Ajfar</td>
<td>al-Ajfar</td>
</tr>
<tr>
<td>Zarūd</td>
<td>Zarūd</td>
</tr>
<tr>
<td>At-Thaʿlabīyyah</td>
<td>ath-Thaʿlabīyyah</td>
</tr>
<tr>
<td>Birkat al-Marjūm</td>
<td>Birkat al-Marjūm</td>
</tr>
<tr>
<td>Ash-Shuqūq</td>
<td>al-Mashqūq</td>
</tr>
<tr>
<td>At-Tanānīr (spent the night)</td>
<td>at-Tanānīr</td>
</tr>
<tr>
<td>Zubālāh passed by on 23 Muḥarram</td>
<td>Zubālāh</td>
</tr>
<tr>
<td>Al-Haythāmain</td>
<td>al-Haythāmain</td>
</tr>
<tr>
<td>'Aqabat ash-Shayṭān (passed by)</td>
<td>'Aqabat ash-Shayṭān</td>
</tr>
<tr>
<td>Wāqiṣah (from here to al-Kūfah, three days)</td>
<td>Wāqiṣah</td>
</tr>
</tbody>
</table>
Balwarah (spent the night on 28 Muḥarram) Balwarah
Al-Qar'ā (passed by) al-Qar'ā
Manārat al-Qurūn (passed by) Manarat al-Qurūn
Al-'Udhayb (passed by) al-'Udhayb
Al-Qādisīyyah (passed by) al-Qādisīyyah
An-Najaf an-Najaf
Al-Kūfa
Chapter VI

THE ENGINEERING AND FURNISHINGS OF THE ROAD

1. Methods Involved in the Construction of the Route of the Darb Zubaydah

This section will be concerned with the construction of the road in general, and with such special features as paving, cuttings or clearings of the ground to accommodate the road surface.

We shall try to find out if the road was provided with bridges or similar facilities. Our treatment of this subject will be arranged according to the three types of evidence:

1. The construction of the road according to early Arab authors;
2. The construction of the road according to European travellers; and
3. Our own observation.

Early Arab Authors

Early Arab authors (geographers and travellers) give an outstanding amount of general information on the Kufa-Mecca road. They write in detail about the main pilgrim stations and their facilities such as water tanks, wells, rest houses, etc. However, none of them with the exception of al-Ḥarbi offer any observations concerning the condition of the track, the existence or the absence of paving, and similar matters.
Al-Ḥarbi reports that the road between the station of Ḥādah and Ṣufaynah was established by the ʿAbbasid prince, ʿĪsā b. Mūsā, during the early period of the ʿAbbasid caliphate.\(^1\) He also reports that Khāliṣah, the personal maid of al-Khayzurān, the mother of Hārūn ar-Rashīd, arranged to have the road paved near Baṭn al-Agharr. In this place it had to be paved with stones because of the moist clay ground.\(^2\)

"وَعَلَى مِيلٍ مِن بَابِ الأَغْرِبْ يُرْنَ زَرَّةً بَالْبِيْسِيْهِ، فَيَتَحَدَّرُ عَلَى الرَّصِيفِ وَحَيَّةٌ حَجَارَةٌ نَرْشَ بِهَا الطَّرِيقَ كَثَرَةً لَكَرَةً رَوَاحُ مِن عَمَلِ عَالِمِهِ"

Khāliṣah also bought a hundred slaves and ordered them to carry the stones there and to build the road from al-Ajfar in two pavements; she guaranteed their freedom upon the completion of their task. Al-Ḥarbi adds that travellers had been suffering from the rain as the ground at this place became very muddy:\(^3\)

"وَلْفِنْيَةٌ فِي خَالَصِهِ اسْتَرْتَ مَا ثَقَلَ وَقَالَتْ انْقُلُوا الْحَجَارَةَ حَتَّى تَجْعِلُوا أَنْفُسَكُمْ فِي الْمَفَازِرِ فَإِنَّمَا قَرَنْتُ أَحْرَارَهُ فَقَعُوا ذَلِكَ وَأَنَّ النَّاسَ يَنْأَوْنَ مِن المَرْصَدِ لَنْ أَكَانَ بَيْنَا أَخْذُوا".

We do not know if these two pavements mentioned by al-Ḥarbi were parallel pathways, or if one was built above the other, as top surface layer and under-lying bedding layer.

Further, Ibn Rustah refers to the station of al-ʿAqabah saying that it contained wells and reservoirs. Since in its original state the ground there presented an obstacle to the travellers because of its steep slope, it was eventually levelled:\(^4\) "وَأَنتُ عَفَيْةٌ فَسُهِّلَتَ. Similar methods are reported to have been used on the Basrah-Mecca road.\(^5\)

\(^1\) Al-Ḥarbi, \textit{op. cit.}, p. 335.
\(^2\) \textit{Ibid.}, p. 301.
\(^3\) \textit{Ibid.}, p. 305.
\(^4\) Al-ʿAlāq, p. 175.
\(^5\) Al-Īṣfahānī, \textit{op. cit.}, p. 371.
According to Lughdah al-Iṣfahānī, the governor of Basrah, Muḥammad b. Sulaymān, ordered the Basrah-Mecca road to be paved at ad-Dathīnāh where there was a plain which became very muddy whenever the rain fell. The area was all paved except for eight miles which remained in their natural state.¹

The European Travellers

The European explorers did not pay much attention to the construction of the road, with the exception of Blunt, Huber, and Musil who make a few remarks on the construction and clearing of the road.

Before reaching the station of ash-Shīḥīyyāt, Lady Blunt describes the track of Darb Zubaydah as follows:

"The road is regular, marked out with a double wall which we are told, was built by Zobeydah to hang an awning from, so that the pilgrims might travel in the shade. But this must be nonsense. It is more likely that it is merely the effect of the road having been cleared of the big stones which here cover the plain."²

Huber witnessed two points where the track was cleared and paved between the area of Zarūd and ash-Shīḥīyyāt. He observed a section of the road which was marked by two marginal walls and had a width of 20 to 30 metres. He also saw part of the road, 5 miles long, with walls constructed on either side. He records the thickness of the walls as 0.60 metre and that they rose one metre above ground level.³

Musil provides us with the following information:

"The pilgrim road of az-Zobedijje (Darb as-Sitt Zobejde) is 24 metres wide. Stones have been collected and piled up into two walls which enclose the road to the east and west. At places these

¹ Ibid.
³ Bull. de la Soc. de Géographie (Paris), vol. 6, part VII, ser. p. 110, p. 112.
walls are built quite artistically."¹

This description by Musil refers to the section between Birkat al-Ḥamrā’ and Zubālah.

However, neither Blunt nor Musil, nor any other European traveller, refer to paving or other road works such as cuttings, etc.

Our Observations

The track traverses various types of country involving various kinds of terrain. These can be classified as follows:

1: plain ground, easy to traverse except when there are swamps or clay pans;

2: moderately rough areas of a hilly nature, dissected by many valleys, streams, and depressions, which can be passed but need improvement;

3: rugged ground which it would be difficult to cross without a path cleared of obstacles;

4: regions of thick desert and sand hills which can be traversed but are very exhausting to travellers without the

¹ Musil, op. cit., p. 189. J.B. Glubb describes briefly, in his most recent work (Haroon al-Rasheed and the Great ‘Abbāsidhs (London, 1976), pp. 247-249), the pilgrim road of Darb Zubaydah, which he came to know from first hand experience many years ago when he was an army officer stationed in Iraq. His description shows acute observation, though he had not gone in for systematic study. He observed that the track of the road and innumerable other animal tracks sometimes cover a breadth of perhaps two hundred yards. He notes that in places where the natural desert is thickly strewn with rocks and boulders, the rocks have been picked up, carried off the pilgrim road, and stacked along the sides. Glubb also mentions, though unsystematically, the monuments related to the pilgrim road, i.e., wells cut through the rock of the natural ground, cisterns and dams which were constructed, at regular intervals, in patches of low ground. Glubb also reports that in the 1920s he spent a great part of six years in the desert south of Kufa and that on many occasions he travelled along the track of Darb Zubaydah and camped beside the masonry-built water cisterns. He also flew in the old biplane across the endless expanses of desert where he located his ground position only by looking down to see the thin track (of Darb Zubaydah) stretching from one horizon to the other.
provision of a road;
5: areas of rocky nature and lava mountainous regions traversed
by deep long valleys likewise difficult in parts.

Aerial photographs, where available, show that the
track of the road usually runs in a fairly straight line in
flat ground but curves in areas of a hilly nature and of
extremely rough ground, so as to avoid difficulties. Road
works specially undertaken to allow for a straight track,
overcoming difficulties rather than avoiding them, seem to
be exceptional.

Road Paving: Pl. xiv, no. 2.

From Birkat Ḫamad the road enters the eastern side
of the desert of an-Nafūd passing through sandy hills and
traversing low ground which is covered with bushes.

On the road between Buraykat al-'Ashshār and Birkat
al-'Arā'ish, we found the only example of road paving known
to me so far, and it is at this place that the road is paved
with slabs of stones laid over the undulating sand hills. The
road edge is sometimes marked out with stones on both sides,
and because the sand now covers most of the paving, it is not
possible to know in detail what material of stone was used
during the construction, or whether lower layers below the top
paving were provided. The measurement of this paved road is
about two to four metres in width and sometimes the road
appeared to be wider. Unfortunately, we were unable to ascer-
tain more about this paved road as night was falling and our
vehicles were trapped in the sand.

This is probably the same road mentioned by Huber\(^2\)
which was more visible at that period than now.

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1 See pl. xxxix, nos. 1-2.
We may also conclude that this section of the road was included within the paving operation carried out by Khāliṣah at al-Ajfar and Baṭṭn al-Ahhrarr. Further examination about the original state of the track, in the future, will no doubt establish a true picture of road pavings in early Islam.

The Clearing of the Road

There are two types of ground where the road has been cleared of stones (which have been piled sometimes regularly and at others unsystematically, on both sides of the road), namely moderately rough, and extremely rough ground; and methods and provisions of clearing vary somewhat between these two types of terrain.

The moderately rough ground

(a) The road between ash-Shiḥiyyāt, Birkat al-Ḥamrā, and Birkat Ḥamad passes through rough areas and rugged ground. The results of the old road works can be observed here: the bigger stones and dangerous rocks have been removed and piled on both sides of the road so as to form small walls. The road surface itself has become smooth and even through the effect of the footsteps of men and beasts over the centuries. It measures, on average, eighteen metres in width (pl. xiii, no. 2).

(b) About two kilometres south-west of Fayd, more evidence of the cleared road is to be found. At this place a small hillock stands as a barrier or obstacle in front of the caravans, and in order to create a way for them to pass, the volcanic stones and rocks were removed and piled as low walls on either side. The measurement across the road here is eighteen metres approximately (pl. xxiii, no. 1).
The clearing of the road over rough ground: pls. xxxiii, nos. 1-2, xxxv, no. 1.

The most remarkable features which attract our attention are to be noticed on the road between Šufaynah and Ḥādhab. This is the loop line of the road which bifurcates from the main road at Mahd adh-Dhaḥab.

The road from Šufaynah passes through Ḥarrat Rahaṭ at the eastern edge. The plain of the ḥarrah is rough and it is dangerous for the animals. There is no shelter or vegetation. We examined this road at both Šufaynah and Ḥādhab. Along this way, the volcanic rocks and big stones were taken and heaped on both sides of the road. In many cases the road has been diverted round the boulders because they are difficult to move. The width of this road varies accordingly from two to twenty metres, and it becomes wide in flat areas, but in the rocky places there are many diversions and it may divide into alternative narrow tracks, much more than in any other type of ground.

This section of the road is likely to be the same as that mentioned by al-Ḥarbi which was established by the 'Abbasid Prince ʿĪsā b. Mūsā and presumably the same track which was improved during the time of the Caliph al-Muqtadir in 304 A.H./916-917 A.D., according to the inscription which was discovered at the gold mine of Mahd adh-Dhaḥab.¹

There is little evidence which can be used to compare the track of Darb Zubaydah with that of other roads outside Arabia during the same period. But we know that at a later time, various methods of clearing and paving roads, for the convenience of the pilgrims, were followed. Thus, during the Fāṭimid dynasty, a section of the Darb al-Ḥaj from Egypt and

¹ See above, pp. 35-38 and fig. a.
Sinai to north-west Arabia was levelled through hills at a place called 'Aqabat al-‘Urqūb in Sinai. The road was continuously repaired by later Mamluk sultans. Inscriptions at this place prove that Sultan Qānṣūh al-Ghūrī carried out some improvements along the Darb al-Ḥāj route.\(^1\)

It seems that the people who engineered the track of Darb Zubaydah used similar techniques to the ones employed in pre-Islamic period in south Arabia. In rocky regions and rough ground in Yemen, Aden, and Ḥaḍramawt, a number of mountain passes are known where the roads were opened for trading caravans. They were either cut through the rock, or cleared and levelled with slabs of unshaped stones; sometimes they were provided with flights of steps to cross high ground. In many cases the passes were lined on both sides with low walls. Among the more outstanding examples is the road across the Najd Marqad pass, in the Be‘iḥan area in Ḥaḍramawt mentioned by F. Albright. He suggests that the walls lining the roadway would serve as a device to keep a caravan in one line once it started. He describes the walls of Najd Marqad pass as about a metre thick; the distance between them varies from 9.8 to 10.6 metres increasing to 18 to 22 metres at the ends of the pass. He also reports that "as soon as the ground becomes rocky the route narrows to about two tracks, and when it gets very rocky, it narrows to one."\(^2\)

This technique looks similar to the roadworks on the route between Ṣufaynāh and Ḥādhah.


As for bridges, there is no mention in early sources that they were provided along the road. But bridges were built regularly, in Iraq, particularly during the 'Abbasid period when they were built over canals and rivers. Al-Ḥarbi's account relates that some pilgrim roads in Arabia were provided with bridges for crossing. In particular, that a bridge was constructed on a valley which enabled travellers to cross on the road from Nibāj Banī 'Āmir to an-Naqirah.¹ From al-Ḥarbi's report, this bridge seems to have been built in the area of the present village of al-'Uyūn in al-Qaṣām district in Saudi Arabia, but this region of the Basrah road has not yet been reported upon.

2. A'lam: علام
Cairns Used as Way Marks

The meaning of the word 'alam has been described as a cairn or a landmark, though it can also mean a banner or a mountain. Yaqūt refers to the purpose of the 'alam as a road sign which acts as a way mark and help to locate the roads for travellers:² 

"العلم: لما بني على جوان الطرى، من المنار وما يدل على الطرق أعلام. واحد بعلم." It is also said that the 'alam is an object which has been erected in the open places to guide the wanderings.

The 'alam also serves as a boundary mark between two areas.³

Ibn Duraid refers to the meaning of 'alam as a banner, an army flag, and also as a cairn of stones or any other material, set up as a guide for travellers:

¹ Al-Manāsik, p. 606.
² Yaqūt, op. cit., vol. 4, p. 146.
³ Ibn Manẓūr, Lisān al-'Arab, vol. 12, p. 419.
The word 'alam is mentioned in literature by pre-Islamic poets, such as Labīd and 'Antarah in their Mu'allaqāt, but the meaning is not specified as a cairn or a way mark.¹

The poetess al-Khansā' regarded her brother as an 'alam after his heroic death:

وَفَانَ صُحْرَا لِثَأَمِ الْجَدَّةِ فِي كَانَ عَلَمُ نَعَمٍ نَارَ (as though he were an 'alam surmounted by a beacon fire).³

al-Ḥarbi, inconclusively, refers to some places on the Zubaydah Road which were provided with al'ām cairns. He locates 'alam Khāliṣah being erected four miles from Zubālah to the south.⁴ At Qarūra, which acts as an evening halt between al-Ḥājir and Ma'dīn an-Naqirah, there is a mountain on which a cairn was built at the top.⁵

Al-Ḥarbi records eight cairns were erected at an-Naqirah: two for the entrance to the station, two for the way out, two cairns to mark the road to Basrah, and two to mark the road to Medina.⁶

Al-Ḥarbi records also that an unspecified amount of short

² Muhammad Badr ad-Dīn al-Ḥalabi, Kitāb Nihāyat al-Arāb min Sharb Mu'allaqāt al-'Arab (Cairo, 1906), pp. 122, 125, 158, 165.
⁵ Ibid., p. 320.
⁶ Ibid., p. 322.
aʿlām cairns have been erected to mark the road that leads
to Ḥāḍḥah:¹ "وبتاغ حاذو على مقدان ميل منها مائتين بُئر غازو، وفي ذلك الطريق أعلام قصار يستدل بها."

At al-Mislah, al-Ḥarbi refers to two cairns which were erected to indicate a diversion route nearby.²

On the mountain of Umm Khurmān, a pilgrim station, al-Ḥarbi records a cairn (ʿalam) and a watch tower "علم ومنظور"; the travellers to Basrah march from there.³

After giving the meaning of the ʿalam and examples from the early work of al-Ḥarbi, we may explain how they were used as way marks along Darb Zubaydah.

Since over much of its course, the road had no specially built body which was unmistakable but consisted rather of tracks followed by caravans, the pilgrim road had to be marked regularly and fixed by means of cairns. These were erected usually on high hills or mountains on both sides of the road.

The idea of having them was to lead trade and pilgrim caravans in the right direction. Also they were used to mark the pilgrim stations and watering places along the road.

Most of the ancient way marks are still observable in situ. The way marks which we have examined are firmly constructed to resist severe winds and heavy rain. They are established on the highest points and as near as possible to the main road. The construction of these way marks, cairns, or road signs, is mostly from unshaped stones of similar size and no binding material (clay or lime) was used.

All these cairns are similarly designed in a tower

¹ Ibid., p. 336.
² Ibid., p. 343.
³ Ibid., p. 346.
shape without any inscription or other distinguishing mark.

We describe in detail three typical way marks as
illustration.

(a) About one kilometre and a half east of Zubālah on the
northern side, a cairn is sited on the top of a small hill.
Most of its stones have fallen down but it was clearly origi-
originally of a considerable height. It now measures approximately
two metres in height and tapers gradually upwards.

(b) About four kilometres to the south of the ancient fort
of Zubālah, stands another way mark. It has been constructed
at the west side of the road on the top of a small hill.
This cairn is now about three metres in height, but the stones
which are scattered round it show that it was originally much
higher (pl. x, no. 2).

(c) About nine kilometres north-west of Birkat Umm 'Aṣāfīr
is a way mark built on top of a slight eminence. Here the
height is about two metres and a half. Most of the stones
have been scattered down the slope of the eminence.

It is worth mentioning that these aʿlām cairns or
way marks appear mostly in the mountainous areas at places
where there are several intersecting roads that might confuse
the caravans. This can be seen between Zubālah and Birkat Umm
'Aṣāfīr.

In some places, however, one can still make out the
collapsed remains of the original way marks. These remains
of cairns can be seen on the small hillocks on the northern
section of the road between the station of al-'Aqabah and
Birkat al-Jumaymah.

Cairns or way marks are best preserved in the area
of Mahd adh-Dhahab where the road diverts to Šufaynah and
rejoins it at al-Mislah. In moderately rough ground, where the road has been cleared of the worst boulders, we could not see any sign of way marks. One can assume that there was no need for them because travellers had no alternative route but could only follow the most direct path.

In addition to the use of the 'alam as a road sign, we can also refer to the use of the manār which is a lighthouse or a fire signal. The interpretation, however, given by the lexicographer Ibn Manṣūr indicates that al-manār has the same function as the 'alam, it can be used as a border mark, the construction of the manār can be of daub or earth.¹

So far, we have no example of the manār or its construction along Darb Zubaydah. The only description of the manār is that given by Ibn Jubayr about Manārat al-Ḳurūn.²

We also learn that fires were lit at some places along the Kufa-Mecca road.³ Al-Ḥarbi clarifies this in mentioning the use of a'lam and mawqif, fire signals or beacons.⁴

Al-Jazari, a traveller in the 10th century A.H./16th A.D., gathered some information about the Kufa-Mecca road from a Yemeni historian. He quotes the distance between the station of al-‘Udhayb (in Iraq) and Mecca as: 57 barid (postal stage) and 57 mashraf, the distance between each postal stage and mashraf is 6 miles which equal 2 farsakhs (parasangs):⁵

البرد المنصوب بين العذيب: وکت سبعة وخمسون بریدا وسبعة وخمسون شرفنا،
بين كل بريد وشرف ستة أمثال وبِن فرسان من فراسخ العرب.

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³ Lughdah al-Iṣfahāni, op. cit., p. 376.
⁴ Al-Manāṣik, p. 287.
⁵ Durar al-Fawāʾid, p. 468.
The literal meaning of the *mashraf* is an elevated or commanding site (plural, *mashārīf*: elevations, heights or hills). As far as we could gather, this term has not been mentioned in early Muslim sources in connection with roads.

We may derive from al-Jazari's statement that the *mashraf* is likely to be a kind of road sign or a watch tower to indicate the direction of the pilgrim road for travellers.

Finally, we may draw attention to the use of cairns in the pre-Islamic period. It seems that the Muslims followed the same system of marking their roads as did the Greeks and the Romans. The Greeks planted trees on the summits of the mountains instead of cairns but in most cases they used cairns which acted as way marks or road signs.¹

The story of cairns appears to originate from a Greek legend: that Mercury (or Hermes) after killing Argus had to throw "absolution stones" on the road side.² This accident became a remarkable feature of great importance. During the Roman period, cairns were set up on top of the small hillocks, the stones used in them were mainly rubble without any binding material. They have the tower shape as in those found along the Zubaydah road. The Roman cairns in the Jordanian desert have the tower shape, rectangular in plan, erected on a plinth. At the base of the cairn, they include a shelter of Roman dressed stones. This shelter allows the watchman to sit upright. Such features would be of more value

in the case of cairns used for fire signals.\textsuperscript{1} We have no parallel example to these on Darb Zubaydah so far.

\textsuperscript{1} W.B. Rees, "The Transjordan Desert", \textit{Antiquity}, III, 1929, pp. 389-407. See pages 392, 401, 402, and plate A. There are also other cairns which have been arranged unsystematically and haphazardly erected by bedouins. These can be seen in Sinai desert and in the south Negeb where various cairns were discovered such as a dead man's pile or maqtal, memorial heaps shahadat, ritual heaps, road side heaps, and finally the boundary heaps or guide heaps. See C. Woolley and T. Lawrence, "The Wilderness of Zin (Archaeological Report)", Palestine Exploration Fund, vol. III (London, 1914-5), pp. 22-23.
Chapter VII

FACILITIES ALONG THE ROAD: WATER-SUPPLY

SHELTER (PROTECTION)

1. The Construction and Design of Water Tanks
   along the Zubaydah Road

During the time of the 'Abbasid caliphs, the Kufa-Mecca road was well furnished with a great number of different types of water tanks. According to early Muslim geographers, the water tanks were built at the main stations, at the intervening halts, and also provided at places between the big stations and the halts. In the surviving account of al-Ḥarbi, we counted no less than 90 reservoirs, but the total number was probably greater, since part of al-Ḥarbi's work is missing. Al-Ḥarbi deserves credit for the detailed descriptions of the watering facilities at every station along the road which he offers. For example, he usually refers to the type and shape of the water tanks, whether they are square or round and whether they are constructed on their own or connected with others. In many cases he also indicates if the cistern is provided with a settling tank or left without one. Although he does not normally describe the constructional material of the water tanks, he at one point refers to a reservoir which was left without plastering (لم تتمسَرَح)\(^1\). But a very important

\(^1\) For the Arabic meaning, see sahrīj (صهریج) in az-Zabīdi, Ṭāj al-ʿArūs, vol. 2, p. 67.
fact that can be derived from al-Ḥarbi's account is the size of certain water tanks given in his text. For a cistern of quadrangular shape, he gives 90 x 45 dhirā'; for two circular ones, he gives a diameter of 50 dhirā' and a depth of 8 and 10 dhirā' respectively.¹

The use of dhirā' (cubit) in the Islamic world differs considerably from one region to another. It varies between 54.04 and 145.63 cm.² The general equivalent to the dhirā', 54.04 cm., is used on the measuring column of the Nilometer in Rawḍa Island in Egypt.³

The measurements given by al-Ḥarbi seem to be sensible, and in fact correspond quite well with the size of the reservoirs under discussion. If we take the size of the cubit attested in the Nilometer (54.04 cm.), the figure of 90 x 45 dhirā' equals c. 48.63 x 24.31 metres. This corresponds in fact reasonably well to the actual size of the fairly large reservoirs. As for the circular ponds, al-Ḥarbi's figure of 50 dhirā' would, on the same assumption, equal 27.02 metres; the depth of 10 dhirā' would equal 5.40 metres. This is almost identical with what we found in the case of the majority of rounded cisterns along the Zubaydah road.

There are several types of reservoir to be found along the Darb Zubaydah. Essentially, they can be divided into

¹ Al-Ḥarbi, op. cit., pp. 300, 303, 316.
² For complete information, see Walther Hinz, Islamische Masse Und Gewichte (Umgezeichnet Ins Metrische System) (Leiden, 1955), pp. 55-62.
³ The Nilometer is said to have been built at the time of the 'Abbasid caliph, al-Na'mūn, and rebuilt by the Caliph al-Mutawakkil as shown on the inscription written on the column giving a date of 247 A.H. (821-2 A.D.). It was restored repeatedly over the ages. The function of the Nilometer was to mark the rise and fall of the water of the river Nile. For full details, see Creswell, A Short Account of the Early Muslim Architecture, pp. 292-296, fig. 60; Seyyed Hossein Nasr, Islamic Science (World of Islamic Festival, 1976), p. 210, plate 116.
rectangular (including square) and circular reservoirs. Some of the pilgrim stations were provided with both kinds of tanks. Some of the stations on the other hand have only water basins, or troughs, instead of reservoirs, as is clearly the case at al-Wusayrī to the north of the old station of Zarūd. We have classified the reservoirs as follows:

**Circular**

1. B. aṣ-Ṣafīrī
2. B. ath-Thulaymah
3. B. al-Ḥamra
4. B. ash-Shīḥīyyāt
5. B. as-Sāqiyah
6. B. al-Ghuraybayn
7. B. al-Makhrūqah
8. B. Uraynibah
9. B. at-Tūzi
10. B. Ḥurayd
11. B. al-Ḥumaymah
12. B. Ḍlayr ash-Shaqq
13. B. Khabrā' al-Ḥājj
14. B. al-Ghazlānīyyah
15. B. al-Kharābah

**Rectangular and Square**

1. B. al-'Aqabah (R)
2. B. al-ʿAmya' (S)
3. B. al-Qā' wal-Haytham (S)
4. B. al-Jumaymah (S)
5. B. Zubālah (S)
6. B. al-'Aṣāffr (S)
7. B. ash-Shīḥīyyāt (R)
8. B. Ḥamad (R)
9. B. ath-Tha'labīyyah (S)
10. B. al-Bid' (R)
11. Al-Wusayf (troughs and wells)
12. B. al-Ḥuwayd (S)
13. B. ash-Shughwah (R)
14. B. al-Makhrūqah (R)
15. B. Ḍlay' ash-Shaqq (R)
16. B. Ufa'iyah (R)
17. B. al-Mislah (R)
18. B. al-'Aqīq (R)
19. B. al-Kharābah (R)

We shall now describe their characteristic designs and main features. This description will be based on those reservoirs which have not been choked up with alluvium, carried into them by rain-water over the centuries, and on those which have recently been cleaned out and are thus open to inspection. Reservoirs which have been completely sanded up, we shall attempt to classify mainly according to their shape and general characteristics.

**Round Ponds**

The round birkahs possess varying features and are also variable in size. The biggest is c. 50 metres in diameter; most of the remainder measure approximately 30 metres in diameter. There are no two birkahs of exactly the same size. They were always constructed from local stone when this was available, but were constructed of stone brought from a distance when they were situated in clayey, flat ground. Most of our circular tanks are now filled up with sand, and desert flora grows inside them. A few of them, however, are still open to
a considerable depth (c. two to three metres). Thus the important features of the reservoirs (i.e., buttresses, channels, steps, and flood diversion walls) are still visible in these cases. One of these ponds, Birkah al-Kharābah, has recently been cleaned out; this permitted a detailed examination of its design and construction. On the other hand, very little can be said of certain ponds which are completely choked with sand and debris, viz. B. aẓ-Ẓafīrī, B. as-Sāqiyah, B. ash-Shaghwhah, B. al-Makhrūqah, B. al-Ghuraybayn, B. Ḥurayd, B. al-Ḥumaymah, B. Khabrāʾ al-Ḥājj, and lastly, B. al-Ghazlānīyyah.

All these choked ponds are large in diameter (their average size is about 30 metres across) but it is more difficult to be sure about their average depth since they are sanded up.

The small mounds caused by deposition of the spoil from the digging out of these large reservoirs give a general idea that the latter are fairly deeply dug below the surface. The only depths observable now are one or two metres.

On the other hand, a number of well-built ponds have been well preserved and are still to a great extent unchoked, so that constructional methods can be studied. These are: B. ath-Thulaymah, B. ash-Shīḥīyyāt, B. Uraynibah, B. Qlayʾ ash-Shaqq, and in addition there is the recently cleaned out pond at al-Kharābah. We will base our study on these, describing the characteristic design and the main features of these ponds while keeping in mind more generally the fully sanded-up ponds so as to arrive at a comprehensive picture.

The circular ponds are normally situated in a depression within a flattish plain; occasionally they are in a deep valley or a gully. Where inspection is possible, it appears that in some cases the material used is limestone, roughly
dressed, and lime mixed with small gravel, as in the case of B. aẓ-Ẓaffri.

Other cisterns such as B. al-Ḥamra, those reservoirs between Fayd and Samīrah, and also B. Ḫurayd, so far as can be judged from their outlines, are all built of volcanic stones roughly dressed, or of undressed boulders. Some cisterns were built entirely of rubble and untrimmed stones; this can be seen at B. Ḫurayd and Khabrā′ al-Ḥājj.

Those ponds which are still open to a considerable depth, help us to be more precise in indicating their constructional material. The material used in their walls, as far as now distinguishable, was normally cut stone (limestone, volcanic rock, or granite) found in the regions. We have B. ath-Thulaymah and B. ash-Shīḥīyyāt built of limestone. B. Uraynibah, the round pond at Qlay′ ash-Shaqq, and al-Kharābah are constructed of volcanic and granite stones. The courses are laid alternately of headers and stretchers and are evenly laid with a thin layer or skin of pure lime between them. The walls on the inside are coated with a thick plaster of lime, sometimes mixed with small gravel.

The reservoirs penetrate well below ground level (up to c. 5 m.), their bottom being surfaced with a smooth layer of lime to prevent water from soaking into the earth. This is observable at al-Kharābah. The average thickness of the walls of these ponds is 2.50 metres, including the raised marginal walls which are always placed on the outer side of the ponds.

We will now discuss individual constructional features of these round reservoirs, including buttresses, steps, and water channels.
**Buttresses**

All the circular ponds examined were provided with internal buttresses (semi-circular and half square). We were unable to find any round reservoirs with external buttresses. As regards the reservoirs which are covered with sand, it is of course difficult to know what sort of buttresses (if any) they were provided with.

B. al-Ḥamra’ appears to have a half square buttress (c. 2 x 1.3 m.) situated opposite its water channel; this buttress has a second smaller semi-circular buttress in front of its centre part. B. ash-Shībīyyāt has internal semi-circular and half square buttresses placed alternately. These buttresses are six in number; the mouth of the water channel was also designed as a half square buttress. (See pl. xii, 1-2)

B. Uraynibah and the round pond of Qlay‘ ash-Shaqq have internal buttresses which are semi-circular in plan. The pond of Qlay‘ ash-Shaqq has six buttresses finely designed and constructed within an equal distance from each other. There are also four smaller half round buttresses flanking the steps and water channel respectively. (see pls. xxiv, 2, xxvii, 2)

The last round pond which can be studied is al-Kharābah. It is completely different from the others. It is constructed with its sides stepped from top to bottom. There was thus no need for it to be provided with buttresses.

**Water Channels**

The reservoirs of Darb Zubaydah road were provided with water channels. These are designed and built to some extent so as to be different from each other. Some of these channels are joined with a catchment basin, or alternatively fed directly by flood water from the nearest sha‘īb. In some cases the pond is provided with two water channels (one at each
side), probably because the sha'\textsuperscript{\textdagger}b surrounds the pond on both sides. There is some indication that B. as-Sāqiyah of al-Ajfar had been provided with three channels.\textsuperscript{1} It is, however, impossible to identify their designs with certainty at the moment as these ponds are covered with sand and mud. The observable water channels are found at a few rounded ponds. The water channel at B. aẓ-Ẓaffiri leads into the birkah with an L-shaped angle-turn; the width of the channel is about one metre. The design of B. aẓ-Ẓaffiri is nearly identical with that at B. al-Ḥamra', but here the water channel enters the birkah with a right L-shaped angle-turn. The average thickness of the walls of the channels here is about 0.50 to 0.70 m. The style of the water channel, which turns either left or right when entering the birkah, is also used in some other reservoirs such as B. at-Tūzi and B. Ḥurayd. The construction of the water channels, particularly at al-Ghuraybayn, B. at-Tūzi, and B. Ḥurayd is of rubble masonry; the inside of the channels appears to have been given a surfacing of cement made from lime and small gravel. Both B. ath-Thulaymah and B. ash-Shīhīyyāt have their water channels joined to clearing basins. Unfortunately the water channel at ath-Thulaymah has suffered some damage and the rest is covered with thick sand. The discernible part of the sluice-way at ash-Shīhīyyāt shows careful design. The water enters the pond through a clearing tank and is then piped into the birkah by a water passage. The channel enters the basin through a gap in the wall which is covered at the top. The inner surface of the sluice-way is well coated with smooth plaster of pure lime. The facade of the channel mouth is shaped as a half square buttress in the face of which

\textsuperscript{1} This cannot be confirmed at the present time until the pond is completely cleaned out.
the opening of the channel is placed.

Two other examples of water channels may be adduced. At Birkah Uraynibah, the water enters the pond through a steeply inclined passage which ends in a left turn.

The water channel at the round pond of Qlay' ash-Shaqq reaches the inside of the birkah without a turn, ending abruptly. The surfaces of both channels, here and at Birkah Uraynibah, are covered with concrete which consists of line and gravel.

Regarding the large cistern of al-Kharābah, arrangements there are rather different. The water is delivered into it through two sluices which are joined to another square pond. These sluices are situated on a higher level. Both these tanks are provided with an aqueduct which brings water from a considerable distance. The water at al-Kharābah flows into the tank over the steps instead of through a water channel.

Steps

These are normally of two types: steps set at right angles to the wall of the tank, and steps set along the wall. In the latter case, two sets of steps in opposite directions may start from the same point. There may be one flight of steps to a birkah, or more.

An unusual arrangement is found at B. ath-Thulaymah, which is provided with a rectangular annexe on its northern side. The additional construction appears to be intended to house the stairs and the entrance of the birkah. Unfortunately the sand which covers the pond made it hard to identify them properly. (See site no. 6, and fig. c, following p. 213 above.)

At B. ash-Shīhiyyāt, the steps are situated along the western side; two flights descend from the same point
left and right, against the wall, down to the bottom of the *birkah*. The length of each tread measures about one metre. The same design is followed at B. Uraynibah where the entrance is situated on the eastern side with two flights of steps again descending in opposite directions from the same point to the bottom of the *birkah*. (See site nos. 10, 25, pl. xxiv, 2.)

The round pond of Qlay' ash-Shaqq represents another type. Here the *birkah* is provided with stairs on the east and west sides, which descend at right angles to the wall of the *birkah*. The flight of steps from the west is joined to the water channel on its southern side. Both steps and channel are supported by buttresses in the corners. On the opposite side are the other stairs which are likewise supported by two buttresses on both sides. (See site no. 31 and pl. xxvii, 2.)

The flights of steps measure about 4.15 m. in length. They are built of rectangular and squared volcanic stones, roughly dressed and laid with lime and small gravel; on the surfaces they are coated with plaster of pure lime.

As we saw, the round pond of al-Kharābah is unique in its construction. It was built, not with steps set against vertical sides, but with the sides themselves stepped. After the pond had been cleaned out, it was revealed that there are eleven such (circular) steps. The stones here are of well dressed volcanic rock and granite. (See site no. 38, pl. xxxvii, 1)

**Rectangular and Square Reservoirs**

These can be classified into three categories: subdivided basins, quadrangular basins linked with clearing basins, and square single tanks. A fair number of these are still in perfect condition showing an average depth of between two to three metres; many others, however, are choked up with sand
and mud, although the outlines of their walls can be discerned. In addition they are marked by small mounds of spoil near them.

There are three tanks which have been recently cleaned out and restored. The first is at Zubālah (c. 5 m. deep), the second is B. Ḥamad (6 m. deep), and the third is B. al-'Aqīq or al-Birkah (5.05 m. deep). We can also include the catchment tank of al-Kharābah which shows a depth of 5.79 m.

The three types of reservoir are different in design and of various sizes. Although many of them have suffered badly, their main features are still observable and can be studied. They are constructed of different materials; some are built with blocks of limestone (rectangular and square), roughly dressed, and cemented with pure lime or lime mixed with small gravel. This can be seen at al-Qa' wal-Haytham, B. al-'Amya', and B. al-Jumaymah. When inspecting the ruined pond of Zubālah, it was found that it had been constructed of undressed limestone blocks, mainly of small size. The rectangular tank of ash-Shīḥīyyāt shows that its constructional material is also limestone, roughly dressed, and rubble, mud, and lime mixed with gravel. The tanks of ath-Tha'labīyyah and al-Bid' are built mostly of limestone cemented with lime.

B. al-Ḥuwayd and B. al-Makhrūqah are built of volcanic stones as well as with lime. The rectangular tanks of Ḍlay' ash-Shaqq and B. Ufa'iyah are both constructed of volcanic stones, very well trimmed and cemented with lime. The large reservoir of al-Mislah and the recently cleaned tank of al-Birkah, and also that of al-Kharābah are all constructed of trimmed volcanic and granite stones.

In regard to the restored tanks at Zubālah and B. Ḥamad, it was not possible to identify their constructional material because they are coated with a layer of cement, but
judging by the topographical areas round them, the one at Zubālah may have been constructed of the same material as the ruined birkah nearby. B. Ḥamad is most likely built of volcanic and sand stone. We are not completely certain regarding the constructional material of B. al-ʿAṣāffr which is situated c. 27 kilometres south of Zubālah, as it is completely sanded up. It may well be built of limestone.

We now proceed to the details of the construction and the design of the rectangular reservoirs, and will then examine their main features: buttresses, steps and channels.

**Subdivided Ponds**

There are three examples of large reservoirs divided by partition walls. These are the big reservoirs of al-ʿAqabah, B. al-Bidʿ, and B. al-Mislah. The one at al-ʿAqabah measures c. 105 x 55 m. and is divided into two by a central transverse partition wall which divides it into two square ponds. The thickness of this wall is about three metres. In each basin there is a further basin enclosed by walls which reach the same level as the main enclosure wall. In the eastern part of the reservoir, two other walls are still observable. One wall joins the enclosure wall from the north; the others join the partition wall at the eastern side. These walls presumably were linked together, but this cannot be verified since most of this reservoir is filled with mud and sand, and parts of the stone walls have fallen down owing to neglect over the centuries. (See site no. 1, pl. ii, 1-2.)

The rectangular pond of al-Bidʿ measures about 73 x 40 metres. Its southern part is separated from the main birkah by a wall leaving only a small gap at the northern end which allows the water to flow into the main pond. The partition wall reaches the same level as the enclosure wall of the birkah. The
thickness of this wall is c. 1.50 m. (Site no. 14, pl. xvi, 1-2.)

The birkah of al-Mislah measures c. 73 x 56 m. It is choked up and is now only one metre deep. In its southern part, there is a partition wall which divides the pond into two; there is a small gap at each end of the wall which allows the water to flow to the main tank. (Site no. 35, pl. xxix, 2.)

Ponds Linked with Clearing Basins

Some of the rectangular tanks are linked with clearing basins or filter tanks which adjoin the birkah, mostly from the direction of the flood water. The tank of ash-Shiḥīyyāt (site no. 10) offers a typical example. The main tank measures about 60 x 34 metres with a depth of two metres; the catchment basin measures c. 36 x 16 metres, but is now sanded up. The birkah and the basin extend from south to north; both appear to receive water through three channels.

The second pond is at ath-Tha'labiyyah (site no. 13). It is a square tank measuring c. 26 x 26 m., with a depth of 1.50 m. The catchment, or the overflow tank adjoins the birkah from the south; it measures c. 24 x 6.5 m., with a depth of 1.20 m. only.

Undivided Rectangular and Square Ponds

There are a few rectangular and square basins. Most of them have survived well in spite of long neglect and the effects of inclement weather. A few are now ruined, such as the small pond at al-'Aqabah and the ruined tank at Zubālah. These two could only be restored with difficulty. However, parts of their walls are still standing to considerable height, and their buttresses, as well as the tops of the steps leading down into the basin, rise above ground level; we are therefore able to understand the method of design and more than is usual of the construction. Though a few are filled with sand
and mud, one can gain some general idea of their constructional method. An example which may be adduced is the pond of al-Qā'wal-Haytham; here, two square tanks have been constructed adjoining each other, the first at the north (50 x 45 m.), the second at the south (50 x 50 m.). Although thick sand has filled them and vegetation grows inside them, their walls and buttresses which are partly damaged still help the observer. Many of the reservoirs have remained in perfect condition, having only suffered slight damage. These are B. al-'Amya, B. al-Jumaymah, B. ash-Shīḥīyyāt, B. ath-Tha'labīyyah, B. al-Ḥuwayḍ. Some are choked up with sand and mud but appear to be perfectly preserved on the evidence of the condition of their walls.

B. al-'Amya (site no. 4) and B. al-Jumaymah (site no. 7), have the same design and a very similar style. They are sunk below the surface, built of trimmed masonry, mainly of limestone laid on the natural rock. At al-Jumaymah, the enclosure wall is attached to the natural rock at a depth of 4.50 m. At al-'Amya, on the other hand, the masonry is laid on the natural rock at a greater depth. (See section in site 7a.)

When examining the construction of the quadrangular pond at ash-Shīḥīyyāt, we found the walls were built of three concentric skins, the first (outer one) of limestone (dressed and ordinary unshaped) cemented together, mortar made of lime mixed with small gravel; then a second skin of concrete, consisting of lime, mud, and small gravel, had been applied and this had then been lined with an inner skin of roughly trimmed masonry. The thickness of this wall is c. two metres.

**Buttresses**

The essential function of the buttresses is to resist any oblique thrust delivered by the pressure of soil; but it
serves a second purpose in binding and unifying the wall into which it is built. Buttresses support the walls of the ponds either externally or internally. There are two types, viz. the half round and the half square. In many cases we find both types have been combined in one birkah. We will deal first with those buttresses in the sub-divided ponds.

At al-'Aqabah, the enclosure wall from the south appears to be buttressed on the internal side; one half round buttress is to be found in the eastern wall, while three buttresses are in its western part. The central partition wall has only two half square buttresses on its western side. Concerning the rectangular basin which is enclosed by two walls in the western part of the reservoir, we notice that these walls were provided with semi-circular buttresses placed alternately on either side. On the inner side of the basin, there are five of them, one each in the south-east and south-west corners, two in the southern wall, and one buttress is in the western wall. There are also seven buttresses which are situated on the outer walls of the basin, five of them facing south and two to the west. (Site no. 1, pl. ii, 2.)

In the second part of this reservoir, which is to the east, one cannot see any single buttress in the small basin, but the internal walls making the other partitions have buttresses on both sides. The wall which joins the enclosure on the north has seven buttresses placed alternately on either side, three facing east and four facing west. The other wall which joins the partition wall from the south appears to have been provided with three semi-circular buttresses, two in its southern side and one on its northern side. Probably there are more buttresses which were added to the walls but in the present condition of the whole reservoir, one cannot observe
any more. The semi-circular buttresses at al-'Aqabah measure about one metre across, the half square about 1.50 m.

At al-Bid', the **birkah** was provided with semi-circular buttresses internally and at the corners. The buttresses were placed in symmetrical design on opposite walls, facing one another; the western and eastern walls each have two buttresses. Five buttresses are placed internally against the northern wall and the same number against the southern wall. The corners of the tank are also buttressed from the inside. The partition wall of the pond has five buttresses on the eastern side and three on the western side. The north-east and north-west corners have buttresses on the outer sides, one each in each case. (See site no. 14.)

The reservoir of al-Mislap has external buttresses of two types. The eastern part of the enclosure wall has five semi-circular buttresses, against the western wall there are only three half square buttresses visible on the surface. These measure roughly 2.50 m. across; one of them at the southwestern corner near to the water channel is noteworthy. In its centre, there is a round boss built of finely dressed granite surrounded by alternately black volcanic material and limestone. It shows the skill of a well-trained craftsman in its design. The northern part of the enclosure wall has six semi-circular buttresses, but on the southern wall, there are only two. The four corners of the pond are provided with big semi-circular buttresses placed externally; these measure c. 3 m. across. The partition wall which divides the pond into two, does not give any indication that it had buttresses (pl. xxx, 1).

The buttresses of the two ruined tanks of the small **birkah** of al-'Aqabah and Zubālah, rise together with the adjoining parts of the walls about 2-3 metres above ground level. The
tank at al-‘Aqabah has been provided with four half round buttresses which are placed externally; there is one in the middle of each wall.

Birkat Zubalah, however, has enormous round buttresses which were built on the external sides. There seems to be one in every corner and the eastern wall also has one buttress in the middle (pl. viii, 1).

Concerning the rectangular and square ponds which are provided with external buttresses: these exist at B. al-‘Amya and B. al-Jumaymah. They have semi-circular buttresses on each side externally. At B. al-‘Amya, the eastern wall of the enclosure has four buttresses, two of them being situated in each corner, and two supporting the corners of the entrance near the middle. As for the other three walls, two buttresses are to be noticed near the centre of each. The measurements of these buttresses are on average 1.30 m. across, and they are level with the ground. (See sites nos. 1, 4.)

B. al-Jumaymah has the same system. The eastern wall has four buttresses, two at each corner, and two flanking the entrance. The southern and western walls both have one buttress still discernible, but in the northern wall no buttress is visible at present. Their measurements are c. 1.50 m. across.

The rectangular pond of ash-Shihiyat appears to have no buttresses, except on its western wall where there seems to be a half rounded buttress with a smaller half square buttress placed in front of its centre part. This measures c. 8 x 4 m. In the centre of the southern wall, there is a projecting oblong slab which appears to be the top of a very shallow buttress. B. ath-Tha’labiyah (no. 13) is provided with a half rounded buttress externally and also on its internal side. There are fourteen external buttresses round the birkah,
including the two which are placed in the centre of the southern wall of the overflow tank; the stairs of the birkah are flanked by buttresses on either corner. In the northern and eastern walls of the birkah, there are five buttresses, two in the corners and two are placed in the northern wall—placed so as to coincide with the external buttresses at the same level; the fifth buttress appears on the northern part of the eastern wall with a corresponding buttress on the inside.

B. Ufa'iyah which is completely choked up, is provided with half round buttresses placed externally; seventeen of them are still visible.

Finally we turn to a consideration of the tanks which have only internal buttresses. Starting with the two square tanks of al-Qā' wal-Haytham, we find that the northern birkah, in which most of the prominent features are still observable, is provided with semi-circular buttresses. Three are built against the western wall. Only one freestanding buttress is to be seen on the southern wall and there are two on the eastern side with another two flanking the central stairs, just as the other two entrances of the birkah are buttressed at the corners of the stairs. The second tank to the south, which has suffered badly, has two half square buttresses remaining on the eastern side of the enclosure, and one other near the water channel on the southern side. (See pl. v, 1.)

The rectangular birkah of Qlay' ash-Shaqq, as we indicated before, is fully sanded up, but its enclosure wall and the buttresses are still visible. They appear to be in a very good condition. Their symmetrical design proves the skill and dexterity of the ancient craftsmen. The east and west walls each have three buttresses placed at equal distances from each other. The other two walls have one buttress each.
The reservoir of al-Birkah and the catchment tank at al-Kharābah are completely stepped on all sides and there was, accordingly, no need to have them buttressed; except at the lowest part of al-Kharābah, we find two semi-circular buttresses placed on opposite sides, the first in the north-western corner, the other on the south-eastern corner.

**Water Channels**

The water channels serving the rectangular and square ponds are of different design. (Some of the ponds are also provided with more than one water channel.) They can be classified into the following categories:

1. Channels in steps
2. Channels ending in a steep slope.
3. Others.

The precise form of the channels in the case of the sanded-up ponds subh as B. 'Aṣāfîr, B. al-Makhrūqah, and B. Ufa'iyah, cannot be ascertained. The channels of the ruined reservoirs of the small birkah of al-'Aqabah and B. Zubālah were impossible to locate as their walls have been destroyed.

We will start by describing those ponds where the channels are stepped at the end. B. al-'Amya and B. al-Jumaymah have their channels similarly designed. At al-'Amya, the channel is very deeply cut into the solid rock at the south-western corner of the basin, and is flanked by two thick walls, each measuring c. 1 m. across. The width of the channel itself is c. 0.80 m. It ends in a flight of nine small steps descending along the southern wall, each step measuring about 1 m. in width. There are indications that the channel must have been covered where it joins the birkah.

B. al-Jumaymah also has its channel in its south-western corner. Here also the channel is cut into the solid
rock and flanked by two rock-cut walls coated with plaster of lime; the surface of the channel is also covered with lime mixed with small gravel. The channel is covered where it reaches the birkah; after having pierced the wall of the basin, it enters the basin by flights of steps. Four steps are still visible, each step measuring c. 0.50 m. across, and the steps are supported by a wall.

The third example of this kind is at B. Ḥamad, which has recently been restored. The channel here is placed in its north-western corner. After piercing the wall of the birkah, it again ends in a flight of eleven steps descending down to the bottom of the birkah along the side of the western wall, each step measuring c. 0.90 m. in width. The channel is strengthened by a semi-circular buttress placed on the north-west corner inside the birkah.

The two tanks of al-Birkah and al-Kharābah, which have been recently cleaned out, have different types of water channel. Al-Birkah, which was constructed very close to the valley, has its channel deeply cut into the solid rock with a width of c. 0.80 m., the thickness of its rock cut walls being c. 0.50 m. This channel, which is supported by a flood diversion wall, enters the tank at the top of its south-western side, the water thereafter flowing over the steps down into the tank. The same system is used at the catchment tank of al-Kharābah; this tank gets its water from a considerable distance away through an underground duct. When the water reaches the catchment tank it flows over the steps.

We come now to those channels which have steeply sloping endings. First there is the rectangular tank of ash-Shīḥīyyāt; at this pond there are three water passages, the main channel being situated in its north-western corner.
This channel apparently also supplied at the same time a
catchment tank which adjoins the birkah on the north. The
channel enters the pond proper with a steeply inclined spill-
way and is supported by a wall on the east. The inner surface
of the walls of the channel is cemented with lime. There is
also another water channel placed on the northern side of the
pond which enters from the west; it has been provided with
two walls and was smoothed inside with pure white mortar. When
examining this channel, we found that it had apparently been
constructed in the wrong place and had been abandoned by the
builders. This, however, can only be a tentative conclusion
as the pond, as it stands now, is mostly choked up. The third
channel is constructed on the south-western corner. This also
may have been used as a spillway channel when the tank was full.

We can also include B. ath-Tha'labīyyah which has
nearly the same system as B. ash-Shībiyyāt. This birkah has
a rectangular overflow tank, only one water channel being
provided to feed them both. Probably the overflow tank was
filled from a pipe which is not visible now, from the main
tank when it was full. The channel has been constructed in
the south-eastern corner of the birkah. There are two walls
built of the same material of the pond, the thickness of these
walls being c. 1 m. The flood seems to have been led straight
into the birkah, by-passing the overflow basin. The channel
is covered at the end with slabs of stone and plastered inter-
nally and externally with lime. There are indications that it
was once covered at the top for a length of four metres or
more and the rest was apparently left open. The width of this
gradually narrowing channel at the beginning is c. 1.50 m.
across, and at the end is c. 1.10 m. We do not know whether
the channel was stepped at the end or had a steeply inclined
finish, as this area in the **birkah** is covered by sand and mud.

The rectangular pond of al-Bid' has one water channel which was constructed so as to enter in its south-eastern corner. The mouth of the channel measures c. 3 m. in width. It appears to have had a steeply sloping end covered by a thick layer of pure lime, but now its surface is badly damaged. On its south-western corner, there is also another water channel which perhaps acted as a spillway so as to allow the surplus water to run from the pond when it was full. This passage measures c. 1 m. in width and is choked up with sand at the mouth.

The pond of al-Ḥuwayd also has a water channel entering at its north-western corner and which has an abrupt end, possibly vertical. Its surface shows that it had been cemented with a hard coating of lime mixed with small gravel. B. Ḍlay' ash-Shaqq has its channel in the north-western corner. It has a steep end with a width of c. 1 m. The large reservoir of al-‘Aqabah has its water channel in the south-western corner. It has been cut deep into the rock, making a width of c. 0.50 m. The mouth of the channel appears under the enclosure wall of the main tank which it pierces. Owing to the sand and mud covering the whole **birkah** we do not know if the channel had steps or a steeply inclined or vertical end when entering the **birkah**.

The northern square pond of al-Qā' wal-Haytham offers a fine example of channel construction in the water channel which was constructed in its north-eastern corner. The material used consists of rectangular and square slabs of stone laid with white mortar and small gravel. The inner surface of the channel is smoothed by a layer of pure lime. The sectional measurement of the mouth is c. 1 m. square. There is another water channel in the south-eastern corner of the same pond.
However, it is also possible that this acted as a spillway sluice, or that it carried the surplus water from its pond to the next tank towards the south; the latter has a water channel in its south-eastern corner walled on both sides. This is c. 2 m. wide, but it is choked up with sand.

Finally we have B. al-Mislaḥ, which was provided with a very long water channel situated near the south-western corner. It is about 19 metres in length, the material used in its construction being rubble and dressed volcanic material and limestone. The walls are covered with a thick layer of lime mixed with small gravel. The surface shows that it has been smoothed with pure lime. The mouth of the channel measures c. 1 m. in width, but how it ends is not clear because it is sanded up. There is a gap in the south-western side of the enclosure which perhaps acts as another water channel or a spillway. The enclosure is also broken on its south-eastern side. This also indicates that it is either an additional water channel or a spillway.

Steps

Steps (or stairs) are a prominent feature in the rectangular and square ponds. They are constructed in different ways, some of the reservoirs being provided with flights of steps on two sides, and in a few cases on three of four sides. A special case is the tank with its four sides stepped from top to bottom.

We describe first the steps found at the sub-divided ponds. The reservoir of al-ʿAqabah has four entrances, two on each side. On the eastern wall there are two flights of steps, which are placed within a distance of c. 14 m. from each other; each of these has five steps still visible inside the pond. The width of the northern staircase is c. 7 m. and that
of the southern stairs is c. 6 m. The western wall, likewise, has two entrances; from each, a flight of steps descends consisting of four individual steps appearing inside the pond; the width of the steps is again c. 6 m. All these steps have been constructed at right angles to the walls of the basin.

The reservoir of al-Bid' has steps in the middle of each wall except for its eastern side. There are three shallow steps still visible at every entrance, descending towards the bottom of the birkah; the rest are now under the soil which covers the pond. The treads measure, on average, 5 m. in width. Facing the steps of the north and western sides, there is an external rectangular platform which acts as a landing to the steps.

At the birkah of al-Mislah no steps can be seen but there is a rectangular slab c. 10 m. in length, placed on the external side of the western wall. This may be an indication that the front entrance of the birkah was at this point.

In regard to the undivided rectangular and square ponds, we begin with the small birkah of al-`Aqabah. Here the steps descend from the north and south-western corners, both being placed along the western wall, facing each other. Four steps are visible on the northern side, and five in the southern side. The treads on each side measure c. 1 m. in width.

In the case of the two square ponds of al-Qā' wal-Haytham, we find that only the northern tank shows steps descending at right angles to the sides, in the middle of each wall except for the western side. The steps are very strongly weathered but their general design could be discerned. They are all supported by internal half round buttresses flanking their corners. On the northern and eastern sides, four steps are visible and each tread measures c. 7 m. in width. The
southern entrance, on the other hand, has five steps still appearing inside the birkah, and each tread measures c. 5 m. in length.

B. al-'Amya and B. al-Jumaymah have an identical style of construction and design. The flights of steps which appear at B. al-'Amya are in the middle of the eastern wall, descending at right angles. They are built of blocks of very well-shaped limestone, each tread measuring c. 5.8 m. in width; the steps are provided with a rectangular external platform which acts as the entrance. The number of the steps is nine, and they are in a very good condition.

B. al-Jumaymah has been provided with steps in the middle of its eastern wall. The steps are still observable and in perfect condition, each tread measuring 6 m. in width across. Five steps at the bottom are carved in the natural rock, the other four being built with shaped blocks of limestone. The steps have an external rectangular platform which acts as the threshold. (See sites nos. 7-7a, pl. vii, 1.)

The ruined tank at Zubālah has a different type of step. The steps are placed along its western wall, starting from one point (a central platform) and descending to the bottom of the birkah in opposite directions. There are six steps visible on each side, and each tread measures c. 1 m. in width.

The rectangular pond of ash-Shā'īyyāt is stepped along its northern and southern walls, three steps being observable on each side. Each of them measures c. 30 metres in length.

B. ath-Tha'labīyyah has its steps in the middle of the western side of the enclosure, five steps appearing inside the pond and built at right angles to the walling. The treads measure c. 3.30 m. in width.
B. al-Ḥuwayḍ is provided with steps descending along the northern wall from its eastern corner, but they are badly damaged.

The rectangular pond at Qlay' ash-Shaqq, which is completely sanded up shows indications that it was provided with steps on two sides, descending from the north-eastern and the south-western corners along the walls. On each side there is now only one step visible on the surface; these measure c. 4 m. in width.

Concerning the restored tanks of Zubālah and B. Ḥamad, we are faced with some confusion, particularly at Zubālah, because the restoration has modified the original characteristics of these birkahs. At Zubālah the main entrance is situated in the middle of the southern wall with five steps reaching down to the bottom of the birkah at right angles to the sides. In addition, the walls of the eastern and western sides are partly stepped (three steps in the eastern wall and four at the west) but these do not reach the bottom. Possibly they helped users to climb nearer to the water when the pond was full.

B. Ḥamad, on the other hand, has a flight of steps in the middle of its southern wall, nine steps being built at right angles to the wall. Each tread measures c. 4.50 m. in width. The steps are supported by semi-circular buttresses flanking the two corners.

Lastly, we have the recently cleaned out tanks of al-Birkah and al-Kharābah. Al-Birkat or Birkat al-‘Aqīq; this has been constructed with its four sides stepped, from top to bottom, in twelve shallow steps, and its enclosure wall rises 1.5 m. above ground level.

The catchment tank at al-Kharābah is also constructed
with all its four sides stepped, from down to c. 1 m. above the bottom of the birkah. There are ten shallow steps; near the bottom of the birkah there are two flights of steps placed in the south-west and north-western corners. As for the north-east side, there are six straight steps constructed along the northern side--these steps measure roughly 0.50 m. in width. In the opposite direction at the south-western corner there are six semi-circular concentric steps.

**Flood Diversion Walls**

Most of the reservoirs of Darb Zubaydah were provided with flood diversion walls. Their purpose was to direct the running rain-water into the ponds. These walls would normally intercept the floods which gather during and after the rains. They are built across the nearby sha'ib, wadi, or gully.

The Arabic technical term for the walls that deflect the water into a birkah can be found in the work of al-Ḥarbi. He reports that at Baṣn al-Agharr (an evening halt between al-Khuzaymīyyah and al-Ajfar), 'Abdullah Ibn Malik¹ built a square cistern provided with a settling tank (miṣfāt). Al-Ḥarbi refers to the wall which deflects the water into this birkah as a madfa'u māʾ (مَدَفَع مَاءً). He does not, however, give the exact length of this wall nor does he describe the method of its construction. He says that the madfa' resembles a pool (سبح الغدير).

Ibn Manṣūr explains that the madfa' (plural madāfi') is a wall, or sequence of walls, usually built in uneven ground to direct the water from one place to another.² When trying to trace these walls at every birkah reservoir, we found that they

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¹ See above, pp. 52-53.
² Al-Manāsik, p. 301.
³ Lisān al-ʿArab, vol. 9, pp. 442-443.
Fig. e: The great Aghlabid cistern and its settling tank in al-Qairawan. It was built in 247-8/861-2. (photo. by kind permission of Mr. Ibrahim Shabbuh, National Institute of Arts and Archaeology in Tunisia).
are not often built in absolutely straight lines but were, rather, designed according to the lie of the ground and the direction of the flowing water. The remains of these walls indicate that they sometimes reached a remarkable length, on occasion more than 150 m.

B. ath-Thulaymah (site no. 6 and Fig. C.) shows that it has been provided with a series of flood diversion walls, the first being on its eastern side. Two sections of this wall are still visible above the ground. The first section near the clearing tank of the birkah measures c. 45 m. in length, the other is c. 50 m. and the thickness of the wall is 1 m. The second diversion wall lies in a depression behind a small hill-ock to the north of the birkah. This system indicates that abundant rain-water gathers here during the rainy seasons and it has accordingly been blocked by a wall which is 150 m. long and 0.80 m. thick. The construction of this wall was mainly of rectangular and square blocks of limestone and granite. This diversion wall helps in directing the flood towards the birkah. There is a third wall which is now almost completely covered with mud and sand, to be found farther west.

It looks as though these diversion walls were attached to the main water channel leading to the pond; this is visible in the case of the round pond of ash-Shīhīyyāt, but the best example can be seen at B. al-Bid’, where the flood diversion wall is joined to the birkah at its south-eastern corner. It is 28 m. long and 1 m. thick and it has been constructed with the same material as the birkah.

If the pond happened to be built in a very flat depression, as is B. ash-Shughwah near Fayd, we find that it has been provided with a much longer curving or irregular diversion wall. The idea, probably, was to gather a great quantity
of running rain-water; the length of this particular wall is over a hundred metres.

At B. Ḫurayḍ we found that the wadi had destroyed half of the birkah; but two sections of the remaining diversion wall can still be seen, lying in a scattered condition on either side of the wadi.

Generally, the material used in the construction of these walls was the same as the reservoirs. They are mainly of masonry (fairly large untrimmed blocks of limestone or volcanic and granite material being used) brought from the nearby areas and laid with white mortar mixed with small gravel.

2. **Comparative Study of Water Tanks in Other Regions**

In this section we propose to make a brief study of water tanks constructed in other provinces of the Islamic world including also some dating from the pre-Islamic era. In Arabia there are sufficient examples of water tanks in Yemen; these are mainly of pre-Islamic date. Along the road which joins Syria and Egypt with the holy cities of Mecca and Medina there are a number of reservoirs and cisterns which have been reported on by European travellers. These appear to have been constructed before and during the Muslim era, although no exact date can be assigned to them.

The Jordanian desert has many water tanks; these are mainly Nabataean, Roman, and Byzantine. From the Sinai desert there are a few examples of ancient water tanks, and some from the Muslim period. Of water tanks in Syria we have only sparse information, although the Syrian desert may have had as many as Transjordan.

In Africa, the majority of surviving water tanks are probably in Tunisia and we shall therefore devote special
attention to these.

(a) Tunisia

In this region, large numbers of cisterns and water tanks, of different sizes, survive. The construction of these reservoirs and cisterns took place during the period of the Aghlabids (800-909 A.D.). But cisterns from the Roman period remained in use in Tunisia up to the Islamic period.

An account given by al-Bakri states that the city of Qairawān had fifteen cisterns, constructed on the outskirts of the city (north of Qairawān) in order to secure enough water for its inhabitants. Some of these tanks were the work of the Caliph Hishān ibn ʿAbd al-Malik and of others. Among the most important was the grand cistern of Abū Ibrāhīm Aḥmad Ibn Muḥammad al-Aghlab which was dug near the city of Qairawān at the place called Bāb Tunis. ¹ Ibn ʿIdhārī provides us with the exact date of this reservoir. He states that in 245/859 Abū Ibrāhīm Ibn al-Aghlab paid out a large amount of money to construct cisterns (مَوَاجَل), mosques, and bridges. ² According to Ibn ʿIdhārī, the building of the grand cistern started in 247/861 and was completed in 248/862. ³

Creswell made a short study of the cisterns of Qairawān, particularly the big Aghlabid cistern. ⁴ But the most interesting and detailed work was done by M. Solignac. ⁵

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³ Ibid., p. 113.
⁴ K.A.C. Creswell, Early Muslim Architecture, part two (Oxford, 1940), II, pp. 289-290. See also, idem, A Short Account of Early Muslim Architecture, pp. 291-292.
discussed in detail the early Islamic water storage arrangements in Tunisia, especially the water tanks and their main features. He provides us with illustrations and plans of these water tanks, on which we shall base our treatment of the comparison between the water tanks on Darb Zubaydah and those of Tunisia.

The majority of the water tanks in Tunisia are circular but there are a few rectangular and square ones. We will discuss first the circular cisterns indicating their prominent features and the similarities and differences between them and the others of Darb Zubaydah.

**Circular Tanks**

Generally, it appears that the choosing of the position of the ponds was according to the same criteria as along Darb Zubaydah. Normally the cistern is built in the lowest part of a depression or near to a wadi edge. The basin in these cases is often constructed with its walls below ground level, although some few cisterns were built with their walls standing above the level of the ground. Among the circular cisterns are those which were constructed at the Bāb Tūnis of Qairawān. Among these is the huge circular cistern (c. 128 m. diameter) connected with another small one (34 m. diameter) which acts as a filtering tank. According to Ibn 'Idhāri, this enormous cistern is to be dated to the ninth century A.D. The construction of this cistern was of rubble masonry covered with a very hard plaster.¹

However, this Aghlabid tank although apparently circular is in fact polygonal. Creswell describes it as follows:

³ Creswell, *Early Muslim Architecture*, II, p. 289 and *A Short Account of Early Muslim Architecture*, p. 291. A picture of this cistern can be seen in fig. e (following p. 236 above).
averaging 6.25 m. in length. Each corner is strengthened, externally and internally, by a round buttress." . . . "The larger cistern has 48 sides, with a rounded buttress in each corner internally and externally, and in addition an intermediate buttress externally in the centre of each side." 1

This design does not appear in any rounded cistern examined along Darb Zubaydah. These are normally of fully rounded shape. Most of the Darb Zubaydah tanks are constructed independently as the case is at B. az-Zaffiri, B. al-Ḥamra', B. as-Sāqiyah, and others. Some of the rounded cisterns in Tunisia were built without the catchment tanks, as in the case of the basin of Bir Chaouch Ali 2 or the cistern of Bir El-Adine 3 also Fesqiyyet Eddaiyya. 4

There are some very close similarities between the reservoirs of Darb Zubaydah and those of Tunisia. This applies to the use of a rectangular filter tank connected with a circular pond. From Darb Zubaydah we have two examples: B. ath-Thulaymah, provided with a rectangular clearing tank (fig. C) and also B. ash-Shihîyyât which has a similar one (site no. 10). In Tunisia this design is discernible in the cistern of Majen el-Fedj 5 and the cistern of Henchir Bou Alem 6 or in the reservoir of Majen es-Smaoui. 7

Some of the rounded cisterns in Tunisia were provided with clearing tanks of rounded shape. We have seen an example

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1 Creswell, Early Muslim Architecture, II, p. 289.
2 Solignac, op. cit., XI, fig. 73, p. 74. Local names from Tunisia are written here according to the same transliteration as that given by Solignac.
3 Ibid., X, fig. 72, p. 81.
4 Ibid., XI, fig. 94, p. 105.
5 Ibid., XI, fig. 78, p. 79.
6 Ibid., XI, fig. 80, p. 81.
7 Ibid., XI, fig. 90, p. 100.
in the big Aghlabid tank. A similar arrangement is to be seen in the basin of Sidi ad-Dahmani,\(^1\) situated a few hundred metres from the grand cistern. This design also appears in other cisterns, as in Ain al-Rhorab,\(^2\) the basin of Guenaou,\(^3\) and in Fesqiyet ez-Zoraq.\(^4\) This design does not, however, appear in the rounded cisterns which we examined on Darb Zubaydah.

**Buttresses**

Among the remarkable features of the Tunisian tanks are the buttresses. Generally, the buttresses employed in the Tunisian tanks are placed internally and externally on the same cistern. This system is visible in particular in the polygonal shape of the grand Aghlabid cistern at Bāb Tūnis.\(^5\)

The thick walls of the Aghlabid cisterns are in fact buttressed internally and externally with round topped hemicylinders.\(^6\) None of the circular cisterns on Darb Zubaydah are provided with external buttresses; normally they have semi-circular buttresses placed on the inner side. This is especially evident in B. Uraynibah (pl. xxiv, 2), B. at-Tūzi (site no. 26), and B. Ḍlayʿ ash-Shaqq (site no. 31, pl. xxvii, 2). Similar examples to these cisterns can be seen in Fesqiyat es-Souq of Djebel Ousselat,\(^7\) Fesqiyet el-Arad,\(^8\) Majen es-Smaoui,\(^9\) and the cistern of Majen Bou Garraa.\(^10\)

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\(^1\) Ibid., X, fig. 4, p. 26.
\(^2\) Ibid., XI, fig. 76, p. 76.
\(^3\) Ibid., XI, fig. 77, p. 77.
\(^4\) Ibid., XI, figs. 99-100, pp. 115-117.
\(^5\) Ibid., X, fig. 4, p. 26; fig. 36, p. 185; fig. 37, p. 185; fig. 39, p. 187, fig. 40, pp. 190-191.
\(^7\) Solignac, *op. cit.*, XI, fig. 85, p. 94.
\(^8\) Ibid., XI, fig. 88, p. 96.
\(^9\) Ibid., XI, fig. 90. p. 100.
\(^10\) Ibid., XI, fig. 91, p. 101.
Some of the Tunisian cisterns possess squarish buttresses continued higher up in column shape. This shape is employed in the reservoir of Bir El-Adine.\(^1\) This particular design recalls a similar one which appears on one of the buttresses in the rectangular reservoir of al-Mislaḥ (site no. 35, pl. xxx, 1).

The rounded cistern of ash-Shīḥiyāt, on Darb Zubaydah, is unique for its two types of buttress (semi-circular and half square) placed alternately on the inner side. This has no parallel in the Tunisian cisterns.

Some of the rounded cisterns in Tunisia have no buttresses. These are Ain el-Rhorab,\(^2\) the basin of Ben Guenaoū,\(^3\) Majen el-Fedj,\(^4\) the cistern of Henchir Bou Alem,\(^5\) and Majen Henchir Fortunat.\(^6\)

We may presume that some of the sanded-up cisterns on Darb Zubaydah are of this type. For example, B. ath-Thulaymah (site no. 6), B. as-Sāqiyyah, B. al-Churaybayn, B. al-Ḥumaymah, and B. al-Ghazlāniyyah. These cisterns may have no buttresses or may have been constructed with all their walls stepped, as is the case in B. al-Kharābah (site no. 38, pl. xxxvii, 1). However, this problem has to remain unsolved until these tanks are cleared out in the near future either for inspection or for restoring them to general use.

Steps

The available plans of the circular cisterns in Tunisia show no sign of steps. The only example is to be seen

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1. Ibid., X, fig. 12, p. 81.
2. Ibid., XI, fig. 76, p. 76.
3. Ibid., XI, fig. 77, p. 77.
4. Ibid., XI, fig. 79.
5. Ibid., XI, fig. 80, p. 81.
6. Ibid., XI, fig. 81, p. 82.
in the small basin of Raqqada$^1$ which is similar in plan to B. ath-Thulaymah of Darb Zubaydah. The cistern of Majen es-Smaoui possesses a number of half rounded flights of steps descending from the channel entrance down to the bottom.

The lack of steps in these cisterns poses an as yet unsolved problem.

Water Channels

The rounded cisterns are fed by water from canals and aqueducts which admit the water from the nearby wadi. The canals and aqueducts are normally covered, as in the basin of Bir Chaouch Ali.$^2$ The general design of the cistern of Majen el-Fedj$^3$ is identical with that of the rounded cistern of B. ash-Shīḥīyyāt (site no. 10, pl. xii, 2). B. ath-Thulaymah (site no. 6) has similar arrangements where the water is carried by canal into the catchment basin, the water then flowing into the main cistern.

It is unfortunate that we have not been able to identify precisely the canals and aqueducts on Darb Zubaydah; this is due to the fact that most of them are destroyed or buried under the sand.

The Tunisian cisterns have channels (rounded or semi-circular in section) pierced through the cistern walls near the bottom. These intake channels also appear to be circular. An example of this can be seen in Fesqiyet ez-Zoraq.$^4$ There is a very similar design in which the aqueduct links up with the basin through an opening with an arched top, both in the case of the big Aghlabid tank at Bāb Tūnis and that of B. ash-Shīḥīyyāt.

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$^1$ Ibid., X, fig. 55, no. 3, p. 242.
$^2$ Ibid., XI, fig. 74, facing p. 74.
$^3$ Ibid., XI, fig. 78, p. 79.
$^4$ Ibid., XI, fig. 100, p. 116.
Flood Diversion Walls

Concerning the flood diversion walls going with the Tunisian tanks, we find similar arrangements to those found along Darb Zubaydah. An example of this is clearly visible in the cistern of Majen el-Fedj.\(^1\) This shows a wall which has been built across the wadi in order to divert the water into the canal which in turn leads it into the cistern.

Some of the rounded cisterns in Tunisia are joined to covered water chambers, used to store surplus water from the main cistern after it has been decanted for the second time. An example of this is found with the big Aghlabid tank at Bâb Tûnis,\(^2\) and another is Fesqiyyet ez-Zoraq.\(^3\) This arrangement, however, is not represented in the rounded reservoirs of Darb Zubaydah.

When we review the facts brought out by the above comparative analysis, we find that there are very close similarities between the circular cisterns in Tunisia and those of Darb Zubaydah.

(a) Similar arrangements in the construction of tanks was adopted: the use of rubble masonry and plaster; the thickness of walls being nearly the same with only marginal differences. The dimensions of the cisterns are similar in some cases.

(b) Similar arrangements were adopted in using the diversion wall and the open channel.

(c) The most usual common feature in the cisterns is the use of semi-circular buttresses. As for the origin of the circular cisterns in Tunisia, Creswell states that they "are generally accepted today as of Muslim origin, although it is true that no

\(^1\) Ibid., XI, fig. 79, p. 79.
\(^2\) Ibid., X, fig. 42, facing p. 194.
\(^3\) Ibid., XI, fig. 99, facing p. 115.
such cisterns are to be found elsewhere in Islam. Unfortunately the only ones that can be definitely dated are those of Qairawan."\(^1\)

Solignac agrees with Creswell that these cisterns are no doubt of Muslim construction, but he suggests that the ideas and the techniques in these tanks go back to an earlier time, having probably been brought from Egypt or elsewhere.\(^2\)

In fact, the picture is now quite different from that presented by Creswell, since numerous types of circular cisterns have been found along Darb Zubaydah. The origin of these rounded cisterns still remains to be identified however. Since examples of pre-Islamic rounded cisterns have been found in the region of the Yemen, one cannot rule out the possibility that the technique of these cisterns has a southern Arabian origin.

**Square Water Tanks**

These are probably the majority in the larger quadrangular group. They are variable in size, the biggest being c. 77.50 m. square; others have an approximate dimension of 30 x 30 m. Some of these tanks are built with their walls level with the ground, while others have their walls rising above the ground to a considerable height. The features of these water tanks are in many ways similar to those along Darb Zubaydah. Most of these Tunisian tanks were constructed as single tanks without the use of a decantation basin; instead, a covered cistern is built next to the main reservoir,\(^3\) or sometimes it is constructed internally in one of the corners of the cistern.\(^4\)

None of these methods, however, are in evidence near Darb

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Zubaydah where the water tanks are usually provided with an external filter tank, or lack filter tank altogether.

**Cisterns with Walls Rising above Ground Level**

At Raqqada in Tunisia, a number of small basins were constructed with their walls standing above ground and open to the air. An example of this can be seen in Fesqiya no. 5. This style of construction is fairly rare along Darb Zubaydah; only the ruined birkah of al-‘Aqabah (pl. i, 1) and the one at Zubālah (pl. vii, 1-2) which have their walls rising above the ground level to a considerable height are similar.

**Buttresses**

The single water tanks (i.e., those which have no filter tanks) are the basin of Djerissa and basin no. 8 in Raqqada. The main distinguishing features of these water tanks are the buttresses which are placed either internally or externally. None of the tanks are provided with buttresses both externally and internally. In Darb Zubaydah, so far, only B. ath-Tha‘labīyyah which has buttresses both externally and internally may be adduced for their other type (site no. 13, pl. xv, 1-2).

The basin of Djerissa, in Tunisia, is provided with internal half square buttresses. Similar examples to this can be seen on Darb Zubaydah in the southern birkah of al-Qā‘ wal-Haytham. Some of the square water tanks along Darb Zubaydah possess internal semi-circular buttresses. This is visible especially in the northern birkah of al-Qā‘ wal-Haytham.

A similar arrangement to this can be seen in Tunisia in the Aghlabid basin of Bachou.  

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A number of water tanks in Tunisia are without buttresses, except for semi-circular ones placed internally in the corners of the tanks, as in the case of Fesqiyat es-Sid. Such semi-circular buttresses exist in B. ath-Tha'labīyyah on Darb Zubaydah. Some of the square water tanks in Tunisia have external round buttresses placed in the corners, and semi-circular ones constructed in the middle of each wall. This type is visible in the basins of Raqqada. The same arrangement is present in some water tanks along Darb Zubaydah, such as B. al-Jumaymah (site no. 7) and B. ath-Tha'labīyyah (site no. 13).

Rectangular Water Tanks

Rectangular water tanks are few in number in Tunisia while they are frequent along Darb Zubaydah; among these reservoirs are those of Bir el-Adine, Bir Chaouch Ali, and the basin of Somra.

There are some similar constructional features between these reservoirs and those of Darb Zubaydah.

Rectangular reservoirs may be divided into two sections by a partition wall so as to provide a spare filter tank (which is normally smaller than the main tank). This design is discernible in Tunisia in the reservoir of Bir el-Adine. The same design is present in a number of cases along Darb Zubaydah; for example at B. al-Bid' (site no. 14) and B. al-Mislah (site no. 35, pl. xxix, 2).

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2 Ibid., X, fig. 7.
3 Ibid., XI, fig. 102, p. 123.
4 Ibid., XI, fig. 104, p. 130.
5 Ibid., X, figs 7 and 18. This tank is built next to an earlier rectangular basin possibly from the Roman period. However, this small basin has no buttresses.
A second type is the undivided rectangular tank with external filter basin attached. For example, the one in Somra\(^1\) in Tunisia is similar in plan to the one in Qlay\(^1\) ash-Shaqq on Darb Zubaydah (site no. 31, pl. xxviii, 1). Both are provided with semi-circular buttresses, though the Tunisian example lacks the corner stairs found in its Arabian parallel.

A third variety consists of undivided rectangular basin without filter tank attached. In Tunisia, there are a number of such single basins, like those at Bir Chaouch Ali.\(^2\)

**Canalization**

The methods by which water is conducted into these tanks may now be examined. In some cases the water runs in from the wadis by means of a network of aqueducts. The locality of Bir el-Adine\(^3\) used in pre-Arab times to be a Roman settlement provided with a network of aqueducts. In this place both the Aghlabid and the Fatimids built water tanks. The water tanks are connected with a large distributing system of aqueducts (presumably Roman in origin), which are discussed by Solignac.\(^4\)

The possibility of somewhat analogous arrangements cannot be ruled out along Darb Zubaydah. We have already mentioned that at Fayd the anciently dug wells were connected with each other by an underground aqueduct, and this aqueduct must have carried water to the water tanks which are still visible in situ. We also traced, in the newly discovered features at Samirah, what appeared to be an underground aqueduct. It was possible to show that B. al-'Aqīq (site no. 37) and B. al-Kharābah (site no. 38) were once linked by an aqueduct.

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\(^1\) *Ibid.*, XI, fig. 104, p. 130.
\(^2\) *Ibid.*, XI, fig. 102, p. 123.
\(^3\) *Ibid.*, X, fig. 7.
Unfortunately, when the Zubaydah road fell into disuse, most of its installations became ruined, or have disappeared, and this applies particularly to the aqueducts.

The square tank of Djerissa,\(^1\) in Tunisia, shows another system for distributing the water. Here the water enters the tanks through a channel, from the mouth of which another branch diverts along the wall of the tank. Whether this acted as an outlet, or whether there was a separate outlet is not clear. This design of water conduit does not apparently exist on Darb Zubaydah. We come now to the reservoir of Somra.\(^2\) Here the water enters the tank by means of a canal (of the sagiyah system) into the filter basin, and then the water is piped into the main reservoir by two underground channels.

We may add that none of the quadrangular reservoirs on Darb Zubaydah had a separate filtering tank. Fesqiyyat es-Side\(^3\) has walls rising above the ground level for 3.50 m. The water flows into it directly from the nearest wadi; the intake channel widens outwards. The Aghlabid reservoir of Bachou\(^4\) has two openings which receive the water from a nearby dug well. There is no visible outlet channel or aqueduct leading away from this reservoir.

**Steps**

In Tunisia, only a few (square and rectangular) water tanks are provided with steps. The first example which may be mentioned is in Fesqiyyat es-Side.\(^5\) This has flights of steps at two points. The first descends from the cistern wall

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1. Ibid., XI, fig. 103, p. 128.
2. Ibid., XI, fig. 104, p. 130.
4. Ibid., XI, fig. 83, p. 86.
opposite the water channel at right angles reaching down to the bottom of the reservoir. Another flight of steps is built against an internal wall, and these descend along the walling from the top part of the covered cistern down to the bottom of the reservoir. Indications of steps appear in the basins no. 2 and no. 5 in Raqqa.\(^1\) Basin no. 5 has one flight of steps in its north-western corner along the eastern wall. As for basin no 8 of Raqqa, one flight of steps is visible in its south-western corner along the south wall.\(^2\)

On Darb Zubaydah, most of the water tanks (square and rectangular) have steps on two opposing sides and sometimes on three; normally the steps are built in the middle of the walls, as in the case of B. al-Qā'ī wal-Haytham (site no. 5, pl. v, 1), B. al-'Amya (site no. 4, pl. iv, 2), B. al-Jumaymah (site no. 7a), and B. ath-Tha'labīyyah (site no. 13, pl. xv, 2).

Only a few reservoirs possess steps in their corners; among these are the small birkah at al-'Aqabah, B. al-Ḥuwayq, and the rectangular reservoir in Ḍlay' ash-Shaqq (site no. 31, pl. xxviii, 1). Both steps at right angles to the cistern walls, and steps along the walls occur there as we have seen, and the latter type includes the variety where two flights of steps descend alongside a cistern wall in the opposite direction from one common podium. This type is not attested in Tunisia.

Finally, there is no single example known to us in Tunisia which has cistern walls stepped on all sides, from top to bottom, as in B. al-'Aqīq and the catchment basin in B. al-Kharābah (site no. 38, pls. xxxv, 2, xxxvi, 2).

The following table shows the details of the water tanks along Darb Zubaydah and the ones in Tunisia.

\(^1\) Ibid., X, fig. 54, p. 241; fig. 57, p. 245.
\(^2\) Ibid., X, fig. 64, p. 257.
Table showing the details of the water tanks along Darb Zubaydah and in Tunisia

<table>
<thead>
<tr>
<th>Type of feature</th>
<th>D. Zubaydah</th>
<th>Tunisia</th>
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</thead>
<tbody>
<tr>
<td>(1) Rounded cisterns</td>
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<tr>
<td>Rounded cistern with rounded external filter tank attached</td>
<td>Rare</td>
<td>&quot;</td>
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<tr>
<td>Rounded cistern with quadrangular filter tank</td>
<td>Common</td>
<td>&quot;</td>
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<tr>
<td>Rounded cisterns with covered storage water</td>
<td>Uncommon</td>
<td>&quot;</td>
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<tr>
<td>Rounded cisterns with no buttresses</td>
<td>Rare</td>
<td>&quot;</td>
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<tr>
<td>Rounded cisterns with external buttresses</td>
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<tr>
<td>Rounded cisterns with internal buttresses</td>
<td>Common</td>
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<tr>
<td>Rounded cisterns with internal square and semi-circular buttresses</td>
<td>Fairly common</td>
<td>Uncommon</td>
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<tr>
<td>Rounded cisterns with internal and external buttresses</td>
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<tr>
<td>Rounded cisterns with internal steps</td>
<td>Common</td>
<td>Fairly common</td>
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<tr>
<td>Rounded cisterns with internal steps on two sides</td>
<td>&quot;</td>
<td>Uncommon</td>
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<tr>
<td>Rounded cisterns with internal steps on one side</td>
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<td>Fairly common</td>
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<td>Rounded cisterns with all sides stepped</td>
<td>Fairly common</td>
<td>Uncommon</td>
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<tr>
<td>Water channel with abrupt end</td>
<td>Common</td>
<td>Rare</td>
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<td>Water channel with sloping end</td>
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<td>Water channel with left or right turn</td>
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<tr>
<td>Open canal (or aqueduct)</td>
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<tr>
<td>Flood diversion wall</td>
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<tr>
<td>(2) Sub-divided basins</td>
<td>Fairly common</td>
<td>Rare</td>
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<tr>
<td>(3) Square reservoirs</td>
<td>Common</td>
<td>Common</td>
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<tr>
<td>Feature</td>
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<td>Occurrence</td>
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<tr>
<td>(4) Rectangular reservoirs</td>
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<tr>
<td>Reservoirs with separate filter basin</td>
<td>Rare</td>
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<td>Reservoirs joined by catchment basin</td>
<td>Common</td>
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<td>Reservoirs with internal buttresses</td>
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<td>Reservoirs with covered water storage</td>
<td>Uncommon</td>
<td>Common</td>
</tr>
<tr>
<td>attached</td>
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<tr>
<td>Reservoirs with external buttresses</td>
<td>Common</td>
<td>Fairly common</td>
</tr>
<tr>
<td>Reservoirs with buttresses on either side</td>
<td>Common</td>
<td>Common</td>
</tr>
<tr>
<td>Reservoirs without buttresses</td>
<td>Rare</td>
<td>Fairly common</td>
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<tr>
<td>Reservoirs without steps</td>
<td>&quot;</td>
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<tr>
<td>Reservoirs stepped in the corner</td>
<td>Common</td>
<td>&quot;</td>
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<tr>
<td>Reservoirs with all sides stepped</td>
<td>Fairly common</td>
<td>Rare</td>
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<tr>
<td>Reservoirs stepped on two sides</td>
<td>Common</td>
<td>&quot;</td>
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<tr>
<td>Reservoirs stepped on three sides</td>
<td>Fairly common</td>
<td>&quot;</td>
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<tr>
<td>Reservoirs stepped alongside one wall</td>
<td>&quot;</td>
<td>&quot;</td>
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<tr>
<td>Water channel with steps</td>
<td>Common</td>
<td>&quot;</td>
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<tr>
<td>Water channel with sloping end</td>
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<tr>
<td>Water channel with abrupt end</td>
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<td>&quot;</td>
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<tr>
<td>Water channel provided with aqueduct</td>
<td>Fairly common</td>
<td>Common</td>
</tr>
</tbody>
</table>
| Canal or open {
| saqiayah                                    | Common     | "          |
| Flood diversion walls                      | "          | Fairly common |
(b) **Transjordan**

This area has seen great activity from energetic people long before Islam. We think especially of Nabataeans, Romans, and the Byzantines. All three produced good examples of water engineering. They made every effort to make use of rain and flood water by storing it behind dams and in huge reservoirs and cisterns. The dams were sometimes built across the wadi necks.\(^1\) "Large reservoirs were hewn out of solid rock and were made water tight with facings of small stones tightly cemented together with lime cement, or simply faced with several coatings of lime covering."\(^2\) The reservoirs were provided with stone channels which led water into settling basins and then into the cisterns.\(^3\) Many of these tanks have been in use throughout the centuries since they were built, others have recently been repaired and become serviceable again for the nomads, villagers and their livestock.

We were able to inspect a number of these reservoirs and also we have a certain amount of information about other water tanks in the region particularly from Petra and south Negeb which we will describe below. With regard to the water tanks in the Jordanian region, we found them comparable in certain aspects to those of Darb Zubaydah.

It is difficult, on technical grounds, to distinguish between the Nabataean, Roman, or the Byzantine reservoirs. But we can be fairly sure that the earlier tanks in Jordan date from the Roman period, while the latest are the Arab cisterns, in particular, perhaps, the one of al-Muwaqqar.\(^4\)

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2. Ibid., p. 53.
characteristic features in these tanks are, to a certain extent, parallel to those of Darb Zubaydah.

The use of masonry (rubble or roughly trimmed stone) coated with thick plaster or cement is apparent in both regions. They are also similar in their basic construction. Smooth sided tanks in both areas possess similar adduction canals (aqueducts), water channels, entry points and corner stairs. On the other hand, buttresses, internal or external, appear to be absent in Jordan except in the kite shaped cisterns found in Wādī Sirḥān.¹ These buttresses are of course a prominent feature on Darb Zubaydah.

It has also to be added that round cisterns with stepped sides, again prominent on Darb Zubaydah, are likewise apparently absent in Jordan. The reservoirs in the Jordanian region can be classified into the following categories: rectangular and square (the majority), polygonal or semi-circular, and the kite shaped cisterns.

Rectangular Basins

The rectangular cisterns may be provided with catchment basins. The first type can be seen at Gerasa. Here, a rectangular reservoir (now called al-Berkatein)² was constructed during the Roman period, in the early third century A.D. (209-211)³ in order to secure water for the inhabitants of the ancient city of Gerasa. The reservoir itself is divided into two sections by a partition wall in the northern part, with a sluice gate to regulate the depth of the water in the upper, or

¹ See below, pp. 258-259.
² Carl H. Kraeling, Gerasa City of The Decapolis (New Haven, Connecticut, 1938), pp. 159-167.
main pool.¹ The thickness of the enclosure wall is 2.5 m. and
it is built of fine local limestone laid in courses. "Some of
the stones have rough bevelled margins while others have the
regular marginal dressing and the projecting bosses cut off
smooth. At irregular intervals stones project from the walls
to afford a standing place for those lifting water from the
pool when it was full."²

We can safely say that such protuberances of big
stones and the stones jutting out are not found in the reser-
voirs of Darb Zubaydah. Another example of a pre-Islamic water
tank comes from el-Meṣeṣeʾīḥbah in Jordan. It is a rectangular
birkah measuring 27 x 12 metres and 9 metres deep. This birkah
probably belongs to the Byzantine period. The constructional
material consists mainly of roughly cut rectangular blocks of
black stones covered with cement.³

Birkat Umm el-Jemal is a reservoir built in Nabataean-
Roman times. It is still sufficiently water-tight to hold the
seasonal rain-water.⁴ The method of construction in this
reservoir is somewhat similar to that of Gerasa. The stones
are marginally drafted with projecting central bosses.⁵

Birkat Ziza (now Zizya), south of Amman, is believed
to have been built originally during the Roman period. It was

¹ Kraeling, op. cit., fig. 2, p. 161, pls. XXXIII b, and
XXXIV a.
² Ibid., p. 162. The reservoir now shows staircases in its
corners in the northern side, but we do not know whether these
were original or were added when the pond was repaired by the
Jordanian authorities in 1961. However, neither Harding nor
Kraeling mentioned the staircases.
³ Nelson Glueck, "Exploration in Eastern Palestine", AASOR,
Vol. XIV (1933-4), fig. 17, p. 42.
⁴ Nelson Glueck, "Transjordan", The Biblical Archaeologist,
vol. IX, fig. 9, p. 25. See also, "Exploration in Eastern
Palestine", AASOR, IV, part I, fig. 4, p. 6.
⁵ Nelson Glueck, The Story of the Nabataeans, Deities and
constructed of solid masonry.\textsuperscript{1} It has now been repaired and is credited with a capacity of c. 23 million gallons. The last example of a rectangular basin is the water tank of al-Muwaqqar. This reservoir is similar in construction to other pre-Islamic examples discussed above. The Jordanian Department of Antiquities cleared out his tank; during the clearing, they recovered a capital bearing a kufic inscription, originally set on the bottom of the reservoir to serve as a water gauge in order to determine the depth of the water.\textsuperscript{2} The inscription claims that the \textit{birkah} was constructed by the Caliph 'Abdullah Yaz\textit{id} b. 'Abd al-Malik (720-724 A.D.).\textsuperscript{3} We do not know whether Yaz\textit{id} did in fact construct this tank entirely, or whether he repaired an earlier one. This cistern has now been restored and proves very useful for the daily lives of the villagers and their livestock.

Square Cisterns

There are many of this type in Transjordan, of pre-Islamic date. Some of them are small in size, others are large. The first example is Birkat Ba'\textit{ij} in the ancient settlement of Umm el-Jemal. This \textit{birkah} is 17 m. square, cemented on the inner side of the walls, with steps leading down to its bottom.\textsuperscript{4} Another tank from this settlement is the ancient reservoir of al-Sabkha,\textsuperscript{5} recently repaired and now filled with water. This reservoir and the one mentioned

\textsuperscript{1} R.E. Brünnow, and A. v. Domaszewski, \textit{Die Provincia Arabia}, vol. 2 (Strassburg, 1905), pp 93-94, figs. 674-675.

\textsuperscript{2} "Exploration in Eastern Palestine", IV, pt. I, p. 56, fig. 43, p. 55; Lankester Harding, \textit{op. cit.}, p. 160.


\textsuperscript{5} \textit{Ibid.}, fig. 12, p. 20.
Fig. f: (1-2) : Ancient water-tank near Qaṣr al-Ḥallābāt in Jordan; probably Roman, 1st to 2nd century A.D. (photos by the present writer).
above are believed to date from the Nabataean-Roman and Byzantine periods. A few kilometres north of al-Sabkhah is a huge reservoir called Umm el-Qe'tein constructed of the solid masonry characteristic of the Roman and Byzantine style. The final example of the square tanks from Jordan is the ancient reservoir of al-Qaṭranah. This is provided with a rectangular settling tank. There is no specific date to this big cistern, but it is similar to the pre-Islamic water tanks in Transjordan. It has now been restored and holds the seasonal rain-water for a long period.

Other Types

Not all the water tanks in Transjordan are of the usual type (square and rectangular). There are a few of different shapes. A few hundred metres from Qaṣr al-Ḥallabat is a cistern constructed of the same material as the fort. The constructional material consists of large blocks of masonry of hard stone, roughly trimmed, mostly of limestone ashlar, square or rectangular. The construction of this cistern probably goes back to the time of the Emperor Caracalla whose name was found in the nearby fort (198-217 A.D.). The water supply for the fort was kept in a number of cisterns, large and small, in the wadi to the north and west. This cistern which is nearly sanded up is probably one of them. It has an unusual shape. It is nearly semi-circular in shape but its walls are almost polygonal. However, this type was not found along the Zubaydah road.

Two ancient reservoirs from the Byzantine period were found near Qaṣr el-Azraq in Wādī Sirḥān. These were

1 Ibid., p. 19.
2 Ibid., p. 25, fig. 17, p. 26.
3 Lankester Harding, op. cit., p. 152. (See also fig. f, 1-2 following p. 257 above.)
reported on by Group Captain L.W.B. Rees. One of them, 'Ain el-Asad seems also to have been described, but not dated, by Musil under the name of Al-ţjāţi. This reservoir is built in a kite shape and has six unequal walls supported with semi-circular buttresses. The second reservoir is composed of eight unequal sides and is almost of the kite shape. These two reservoirs, although they are not comparable to the reservoirs of Darb Zubaydah bear certain similar features, namely the semi-circular and square buttresses.

Petra

At Petra the Nabataeans constructed a large number of cisterns and reservoirs. Some of these were dug into the wadi beds while others were excavated into the solid rock. They were provided with canals in order to direct the rain water into them. Some of the Nabataean water tanks were partly of "cyclopean" masonry and partly the natural rock which abuts on one side. The enclosure walls in some of these tanks rise above ground level. We saw some reservoirs along Darb Zubaydah which were partly dug in the natural rocky ground and partly constructed of hard masonry, as in B. al-'Amya (pl. iv, 1) and B. al-Jumaymah (pl. vii, 1). The Nabataeans also excavated a series of tanks on the summits of the mountains and these were also dug into the natural rock.

Steps

Nearly every reservoir in Transjordan was provided

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2 Ibid., fig. 1, p. 90.
3 A. Musil, Arabia Deserta (New York, 1927), fig. 77, p. 341.
4 Rees, op. cit., fig. 2, p. 92.
6 Ibid., p. 68, fig. 168.
with flights of steps. For example, staircases with broad flights of steps were constructed in the corners descending vertically along one cistern wall, down to the bottom of the tank. This is clearly visible in Birkat Umm el-Jemal.\footnote{Nelson Glueck, "Transjordan", The Biblical Archaeologist, fig. 9, p. 55, "Exploration in Eastern Palestine", IV, fig. 4, p. 6.}

Birkat al-Qaṭranah is provided with staircases in its southwestern corner and the settling tank is also provided with a staircase in its north-western corner. All these steps were built issuing from one corner and descending along a wall of the tank. However, the Jordanian steps in some cases extend along a wall nearly from one corner of the tank to the other,\footnote{AASCR, XIV, fig. 17, p. 42.} which is not the case at Darb Zubaydah which are much shorter. Furthermore, in Jordan there is usually one flight of steps per tank, while in Darb Zubaydah there are usually two; either along the same wall or at opposite corners. Darb Zubaydah also has steps located centrally, issuing from the middle of a side, sometimes descending from a corner postium in opposite cirections along a side or at a right angle to the side—which again is not the practice in Jordan.

**Buttresses**

In general, all the reservoirs in Transjordan are built without buttresses except those of Wādī Sirḥān. These two, as we indicated above, are of hexagonal and kite shape. Although they do not resemble any of the water tanks along Darb Zubaydah with regard to their general appearance, the buttresses are of interest to us. They are of two types: rounded and semi-circular as in the reservoir of 'Ain el-Asad,\footnote{Rees, Antiquity, III, fig. 1, p. 90.} or square as in the reservoir of Amari and Kaf.\footnote{Ibid., fig. 2, p. 92.}
dimensions of these buttresses are almost the same as those of Darb Zubaydah.

**Water Channels**

In Transjordan, every reservoir was connected with a water channel and canal which brought water from the nearby wadi or from the hillsides. The best example comes, however, from the Negeb next to Jordan, from where Glueck illustrates a Nabataean-Byzantine cistern and channel leading rain-water into it.¹ This is a true parallel to what we have seen in nearly every cistern on Darb Zubaydah. The same can be said about the Roman cistern near Qaṣr al-Ḥallabat.

In Petra and elsewhere, the channels are for the most part cut out of the rock-walls of the valley but when necessary they were carried across the openings of the side ravines on masonry arches.² Such masonry arches have not been sighted along Darb Zubaydah, probably because the whole area where the cisterns are built is fairly flat, unlike the topography of Petra. We have, however, seen the same type of water channels along Darb Zubaydah, dug into the solid ground, as in Birkah al-'Amya and Birkah al-Jumaymah. As for the water tanks in Jordan which were provided with filter tanks, the water either flows from the filter basin into the main reservoir as in Birkah al-Qaṭranah, or in cases such as al-Muwaqqar³ the water flows over a stepped channel. This latter system is similar to the system of Birkah al-'Amya and Birkah al-Jumaymah or Birkah al-Bid' on Darb Zubaydah.

So far, channels provided with a sloping end where they enter the tank, or entering the tank with a lateral turn,

² Kennedy, *op. cit.*, p. 14, fig. 188.
³ "Exploration in Eastern Palestine", IV, fig. 4, p. 55.
have not been found in Jordan. They are on present evidence characteristic of the 'Abbasid technique. Flood diversion walls were, however, provided for the water tanks along long walls erected across the valleys. We observed this method in Birkah al-Qaṭranah\(^1\) and Birkah Zizya\(^2\) in Jordan.

(c) **Sinai and South Negeb**

Sinai and south Negeb, like Transjordan, had an important pre-Islamic past. It was the bridge between Egypt, Palestine, and Arabia. The Romans, Nabataeans, and Byzantines were very active in this area. For instance, the Romans maintained their military posts along the Sinai coasts.\(^3\) The Nabataeans organized and constructed roads between Petra and Gaza across the desert of Sinai.\(^4\) The Byzantines built cities and posts in different places in Sinai.\(^5\) All these three nations made water available along the desert routes and at their military stations. The water was brought from the wadis by means of canals and stored in large reservoirs and cisterns or behind dams. The few examples we have of water tanks in Sinai and Negeb are believed to be mostly of Byzantine date. Some of them were rock cut, rectangular or square cisterns,\(^6\) others are rectangular or double reservoirs of irregular shape constructed of masonry. The constructional materials used in

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2. Ibid., figs. 674-675 and p. 94.
5. C. Woolley and T. Lawrence, "The Wilderness of Zin", *PEQ*, vol. III, pp. 72-132. There are two types of water tanks known during the Byzantine period: open tanks and roofed ones. The latter, however, are not related with this discussion since roofed cisterns have not yet been found along Darb Zubaydah.
6. Ibid., pls. VIII no. 1, XXIII, no. 1.
these cisterns are rubble or cut masonry covered with thick plaster. In order to feed these reservoirs, channels were cut far up on the rocky hillsides and low walls were built to catch the flood.\textsuperscript{1} Also trenches or low catchment walls were constructed to lead the rain-water to the tanks.\textsuperscript{2} The surplus water from the tanks was made available through channels for irrigation. The technique and the constructional methods which appear in these tanks are paralleled, to some extent, by water tanks from Darb Zubaydah. The features which correspond in both regions are the use of similar material, long catchment walls, canals, and the use of steps. However, not all the shapes of the cisterns found in Sinai can be paralleled by the ones used along Darb Zubaydah. For example, the double reservoirs of irregular shape and the entirely rock cut cisterns are absent in Darb Zubaydah.

The first example of Byzantine reservoirs is one in Esbeita (or Sbeita) which is constructed in the centre of the southern part of the town. It consists of two parts, the larger composed of five irregular walls; attached to it is the second basin which probably acted as a settling tank. Both basins have steps from the corners, leading down into them. The construction of these basins is mainly of masonry and rubble concrete.\textsuperscript{3}

The second Byzantine cistern is the Raheiba reservoir.\textsuperscript{4} It likewise has an irregular shape, measuring 22.5 m. by 18.5 m. The cistern is cut in the rock and lined in part with rubble masonry set in good cement.\textsuperscript{5} This one has also a

\textsuperscript{1} Ibid., p. 32.
\textsuperscript{2} Ibid., p. 34.
\textsuperscript{3} PEF, vol. III, pl. XVIII, nos.1, 2. See also pp. 73-75, fig. 9, p. 74.
\textsuperscript{4} Ibid., pl. XXVIII, no. 2.
\textsuperscript{5} Ibid., p. 115.
stone staircase in one corner leading down into it. From the Wady 'Ain El-Guderat (Quderat) we have an example of a square water tank which is of Byzantine date. It is about twenty yards each side, built of Greek type masonry laid in regular courses. The water was brought to this reservoir by an aqueduct. In one corner of this reservoir is the opening of the sluice which lets out its water to irrigate the land nearby.\footnote{Ibid., pp. 60-61.} However, this reservoir remained abandoned until it was finally repaired by the Turks and became capable again of holding water.\footnote{Jarvis, \textit{op. cit.}, see plate opposite p. 112.}

From the Muslim period, two examples are known in Sinai.\footnote{Shamuel Tamari, "The Itinerary of the Pilgrims in Sinai: Al-Qurrais", \textit{Atti della Accademia Nazionale dei Lincei,} vol. XXVIII, fasc. 7-12 (1974), pp. 793-816.} These are two rectangular reservoirs, probably of the Mamluke period, corresponding to the 'Abbasid tanks. On the technical side, nothing has changed since the 'Abbasid period, the same technique and constructional method still exist in them. However, buttresses are not found in the Mamluke cisterns. There are two tanks, one which was repaired in modern times, the other being now completely destroyed and filled with debris. The reservoirs are located in one of the former pilgrim stations, namely al-Qurrais in the middle of the Sinai desert along the Darb al-\Hajj. The construction of the reservoirs is of regular courses of limestone, covered with coloured plaster.\footnote{Ibid., p. 803.} There is no specific date for these water tanks but it is suggested that the buildings of the station as a whole are of types characteristic of the seventeenth century A.D.\footnote{Ibid., p. 814.} The restoration of the reservoir took
place in the second half of the nineteenth century A.D.\textsuperscript{1} This restored reservoir has in its south-western and north-eastern corners, two rows of stairs leading from top to bottom.\textsuperscript{2} However, the stairs do not emerge exactly from the corners (as in Darb Zubaydah) but they descend against the wall in the direction of the corner.

We may now conclude by saying that the above-mentioned water tanks were constructed with their walls mostly below ground level. We also noticed the absence of buttresses in both water tanks in Sinai, a feature which is prominent on Darb Zubaydah.

(d) Syria

Roman reservoirs were comparatively numerous in this region. Every ancient settlement was provided with cisterns and reservoirs. These tanks were of different sizes but they were of the usual form, i.e., normally square or rectangular. The majority of the reservoirs in Syria are from the pre-Arab period. Each cistern is connected with a canal and a water channel. The design of these tanks is identical to those of Transjordan. They were built with almost vertical sides but with no sign of steps around the sides. Water tanks of circular shape appear to be absent in Syria.

The constructional materials of the reservoirs are mostly rubble masonry and cut stone covered with a thick layer of white mortar or cement. These tanks were built in the lowest depressions and near the wadi edges. As to the canals and channels provided to convey water into them, some of these were dug in the ground and lined with masonry while other

\begin{itemize}
\item[\textsuperscript{1}] Ibid., p. 797.
\item[\textsuperscript{2}] Ibid., pl. II, p. 804, pl. III, p. 806, figs. 5-9, pp. 807-809.
\end{itemize}
canals were covered over or built below the ground. Quite a lot of these pre-Arab cisterns in Syria remained intact and in use during the Umayyad period, and some have remained so until modern times. The Umayyad caliphs, particularly Hishām, seem to have maintained some of these water tanks or restored them. Hishām also constructed new cisterns along the Damascus-Mecca road. An Arabic inscription was found in Syria bearing his name with reference to the construction of a birkah in the ancient valley of the ancient village of Rimet Ḫazem, seven kilometres from the town of Soueida.

Undivided Basins

The first example of this group is the rectangular birkah at the ancient site of Ḫelela, north-east of Palmyra. This is carefully constructed of small stones laid with a layer of lime mortar. The birkah is fed with water from the nearby wadi. There is a water channel in its northern wall exactly near the north-western corner. Many other reservoirs (rectangular and square) are found at several ancient sites, such as Khān ash-Shāmāt, Khān at-Trāb (both north-east of Damascus), and Khān al-Qaṭṭār (south-west of Palmyra). The birkah at Khān al-Qaṭṭār is built of rubble stones laid in good mortar.

There are a number of water tanks at Khān al-Manqūra (this locality is almost half way between Damascus and Palmyra). Among these tanks is the rectangular birkah located a few

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1 Masʿūdi, Murūj adh-Dhahab, vol. 5, p. 466.
2 Rihaoui, op. cit., pp. 207-211, figs. 1-2.
4 Ibid., Atlas, pl. XVI.
5 Ibid., p. 44, Atlas, pl. XIX.
6 Ibid., p. 48, Atlas, pl. XXXIX.
Fig. h: The birkah near the village of Rimet Hazem 7 km. from Soueida, which was built during the period of the caliph Hisham. (photo by the present writer)
hundred metres north of the khān itself. It measures c. 63 x 6 m. Near the south-east corner of the khān is a large water tank divided into two: a settling tank measuring 42 x 29.2 m. and the main tank which measures 42 x 42 m. Both this tank and the one to the north were fed with water from a wadi running along the eastern region. There is a wall constructed across the wadi in order to deflect water towards the reservoirs. The birkah near the khān is provided with an open canal extending north where it received water which is adduced by the flood diversion wall.  

1 Musil reports on the undivided reservoir at Khān al-ʿAneib which has no parallel either along Darb Zubaydah or at any other place. It is a square reservoir with an oblong extension issuing from the centre of one side.

There are two good examples of square water tanks illustrated by Mouterde and Poidebard; Birkat el-ʿAndarine and Birkat al-Qdeym. Birkat al-ʿAndarine (north of Qaṣr Ibn Wardān) measures 61 x 61 m. 3 It is built below ground level, constructed of rubble and cut masonry covered with cement. There is no sign of buttresses or steps in this reservoir which is now filled with debris. The date of this birkah is probably pre-Arab and may be the second century A.D. 4

Birkat al-Qdeym (north of Palmyra) is worth examining since some of its features are parallel to the ones on Darb Zubaydah and those of Tunisia. The reservoir measures on the inner side 62 x 62 m. 5 The enclosure wall is built with

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rubble masonry and faced with cut stone linked by mortar including lime and ashes. The wall has been given an ornamental coping. The **birkah** has rounded buttresses, one on the exterior of each corner; the northern and southern walls each have a semi-circular buttress in their centres, placed externally, while the northern wall also shows one semi-circular buttress placed on the inner side in the middle of the wall. These buttresses are analogous to most of those on the reservoirs of Darb Zubaydah and those in Tunisia. However, Birkat al-Qdeym is filled with water by a special arrangement identical to the one found with reservoirs of Tunisia, particularly the rectangular reservoir of Bir El-Adine, and the basin of Djerissa. Birkat al-Qdeym is provided with a covered canal which conveys water from a distance and is provided with inspection man-holes. The canal ends in a chamber attached to the cistern on its southern side. From this chamber the water spills straight into a channel which is 0.25 m. below the level of the canal. The water flows from it into the cistern with no signs of steps or slope of the outlet. Simultaneously, any overspill water flows round the whole enclosure wall of the **birkah** where it joins an outlet channel issuing from the northern wall of the basin. This method of distributing water is parallel to the system adopted in the reservoirs of Tunisia; on the other hand it is not comparable to the cisterns of Darb Zubaydah. Perhaps further investigation of those reservoirs along Darb Zubaydah which are still buried under the sand along the road may give a satisfactory answer.

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1. Ibid., figs. 12-13, p. 123.
3. Ibid., vol. XI, fig. 103, p. 128.
as to whether similar arrangements exist there also. However, the technique of Birkat al-Qdeym is neither Roman nor Byzantine. It is similar to the technique of the early Arab period, particularly the design of the Umayyad buildings\(^1\) such as Qaṣr al-Ḥeir al-Gharbi and its water installations, or the hydraulic works of Qaṣr al-Ḥeir al-Sharqi. For example, the garden barrage of Qaṣr al-Ḥeir al-Gharbi is supported by buttresses placed on either side.\(^2\) These buttresses are analogous to those of Darb Zubaydah.

Finally, the hydraulic works at Qaṣr al-Ḥeir al-Sharqi show similar buttresses to the ones of Darb Zubaydah, particularly the enclosure wall which may have acted as a vast garden build by Caliph Hishām.\(^3\) However, the buttresses which support this wall are built on either side, are semi-circular, and placed about 12 m. from axis to axis.\(^4\)

The last example of an undivided cistern comes from Boṣra. This reservoir is very large and rectangular in shape (c. 130 x 100 yards), constructed in the south-western part of the city. It was built of draughted masonry similar to the reservoir of Umm el-Jemal in Transjordan. "The inside of the reservoir is composed of alternating [rectangular] buttresses and spaces of about equal widths, the buttresses measuring about 2.90 m. the spaces 2.85 m. wide."\(^5\) The reservoir has remained in perfect condition and still contains water when the floodwater flows. There are different opinions

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\(^1\) Ibid., p. 125.
\(^2\) Daniel Schlumberger, "Les fouilles de Qasr el-Ḥeir El-Gharbi (1936-38)", *Syria*, vol. 20, 1939, pp. 195-238, see pl. XXX, p. 206 and fig. 4, p. 208.
\(^4\) Ibid., figs. 579-580, pp. 533-534.
on the origin of this birkah—whether it is of early Islamic or pre-Islamic date. Butler believes strongly, judging on technical grounds, that it dates from the Roman period.

**Divided Basins**

There are a number of divided water tanks. For example, the reservoir at Khān al-Manqūra is divided into two unequal sections, forming the main reservoir and its settling tank. Another divided cistern can be found at Khān al-‘Aneib.

**Steps**

Some of the reservoirs in Syria are provided with steps located mostly in the corners. For instance, the reservoir at Boṣra has flights of steps in its north-western corner, descending against the western wall down to the bottom of the birkah. The rectangular cistern at Khān al-‘Aneib is also provided with steps near its south-western corner. The staircases lead along the southern wall down to the bottom of the reservoir.

The majority of the cisterns in Syria were provided with addition canals similar to the ones of Darb Zubaydah. The water seems to flow over into the tanks without the usual entry arrangement as in Darb Zubaydah: e.g., the sloping end channels or the stepped ones are absent.

(e) **Iran**

In regard to the cisterns and reservoirs in Persia (Iran) there is little information available from published

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3. Poidebard, op. cit., Atlas, pl. XXIV, see also Musil, op. cit., figs. 3-4, pp. 32-33.
4. Ibid., fig. 27, p. 107.
5. Brünnow, op. cit., fig. 925, p. 42, fig. 926, p. 43.
literature, and in particular there is no archaeological report known to me which may throw some light on this matter. But from what is known, there tend to be fundamentally distinguishing Iranian water facilities from those in Arabia, namely ganats and the widespread practice of covering over reservoirs with vaulting. The available information indicates indeed that the people of Iran were most familiar with the use of ganats long before the Islamic period. The construction of the ancient ganats shows remarkable and ingenious skill in hydraulic engineering, and these ancient wells and tunnels still exist and function until the present time.¹

However, this matter is not of direct comparative interest for our special problem. As for the water tanks, we are told that they are known in Persia especially from the Islamic period. Only very recently we learnt of one circular cistern dated to pre-Muslim times. But this was not built on the Iranian plateau but was discovered on the Island of Kharg in the Arabian Gulf.² This round tank measures 20 m. in diameter with its wall c. 2 m. high.³ The wall appears to rise above ground level and there is no sign of buttresses.


³ Ibid., pp. 51-52 and fig. 3.
The tank was not built in order to catch the rain-water but was fed directly by a qanat which had been built on the same island. Bowman concludes in his discussion that the cistern is related to the monastery and thus has a religious purpose. The date of this monastery, according to Bowman, could be between the fourth and fifth centuries A.D.¹

Cisterns from the Muslim period onwards were made available along the important routes which linked various provinces with each other. Al-Iṣṭakhri (d. c. 350/961) reports that khāns, cisterns, and dug wells were provided for travellers along these routes. These facilities were constructed every 2 to 3 farsakhs or alternatively 3 to 4 farsakhs (12-18 or 18-24 kms respectively) particularly along the routes between Khurāsān province and the cities of Nayin and Yazd.²

In western Iran, Hertfeld and Sir Aurel Stein, observed a succession of ruined cisterns. These were described as being all of rectangular shape, constructed with rough stone work bound together by cement, and they show for the most part uniform dimensions of 15 x 13 yards;³ some of them are vaulted. The date of these cisterns was tentatively given as being of the early Islamic period.⁴

Technically, the cisterns found in Iran seem to have been built in the same manner as seen on Darb Zubaydyan and in other regions which we mentioned above. However, a little more

¹ Ibid., pp. 60-62.
³ Sir Aurel Stein, Old Routes in Western Iran (New York, 1909), pp. 54-55.
⁴ Ernst Hertfeld, "Eine Reise durch Luristan, Arabistan und Fars", Dr. Pettermann's Mitteilungen, vol. 53, 1907, pp. 73-90, see pages 81-83.
is known about Persian water tanks which are from part of a series round Siraf, dating from the 9th to the 11th centuries A.D. The first type is rectangular with rounded corners. The sides have buttresses, 4 to 5 on each side, supporting a long vault (in this last respect it differs of course fundamentally from those on the Darb Zubaydah).

The second type has similar construction but is circular. This type has buttresses on the outside, but is probably Seljuq to 13th century (parallel examples to this type found in Oman are suggested to be of a later date, presumably the 17th century A.D.).

A third type in the same region of Iran is a square or rectangular kind of tank with settling tanks adjoining; this is believed to be much more recent, approximately 17th century A.D. or slightly earlier.¹ T. Wilkinson,² a geomorphologist, informed me recently that two types of cisterns were discovered in the vicinity of the ancient city of Siraf. The first type is circular, measuring on the average from 5 to 10 metres in diameter. The second is elongated and has the bath-tub shape measuring c. 6 x 2.3 m. Mr. Wilkinson thinks that the latter type of tanks are dated from 9th to 10th centuries A.D. Most of these ponds were made to hold water which is distributed for irrigation purposes by means of canals.

During the Safavid period (907-1145/1501-1732) the

¹ I am greatly indebted to Mr. Donald Whitcome, of the Oriental Institute of Chicago, for his kind help by providing me with this useful information of the three types of cistern. He himself has carried out an archaeological survey in western Iran and in Oman.
² Tony Wilkinson was a member of the Siraf excavation under the direction of Dr. David Whitehouse during the season 1972/3. He recently published an article under the title of "Agricultural decline in the Siraf Region, Iran", *Paleorient*, vol. 2, pt. 1 (1974), pp 123-132.
major routes in Iran were provided with a large number of caravansarais and water was made available by building *ganats*, wells, and water tanks. The water tanks are normally constructed inside the caravansarai, sometimes in the middle. In some cases, a cistern or a basin is constructed outside the *khan* or the caravansarai. But it appears that these water tanks were filled with water brought in from *ganats* and wells. The tanks also are not provided with buttresses, and the only feature that is parallel to those in Arabia, and elsewhere, is the steps. If the tank is constructed below ground level, steps are provided internally, but in cases where cistern walls rise above ground level, the steps are provided externally.

The present writer observed in the regions on Natanz and Yazd, in Iran, that cisterns are built under the ground and these are normally roofed and domed.

(f) **Western Arabia**

Western Arabia (particularly the Hijaz province) acted in ancient times and during the Islamic period as a link between South Arabia and Egypt, Palestine, Syria, etc.

The province of Hijaz witnessed the activities of the Dedanites, Lihyanites, and Nabataeans, but no water works can be ascribed to them at the present time. The Romans probably left some evidence of their activities in this direction in

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3 Arthur Pope, *op. cit.*, fig. 448, p. 1251.

Arabia.  

Along the coastal and inland routes, water had to be made available by constructing wells, *ganats*, and reservoirs. But it is only after the beginning of Islam (especially during the Umayyad period) that this region saw some activities in this direction, of which traces are still in evidence. Due to the increased flow of pilgrims from various parts outside Arabia, old routes had to be improved together with constructing new watering facilities. The Fatimids of Egypt, the Mamluks and the Ottomans in turn paid a great deal of attention to the pilgrim roads in this region and particularly by building new cisterns and improving older ones.  

Musil and Philby reported a number of water tanks in different areas of the northern part of the Hijaz province, but in each case no exact date is given. J. Dayton in a recent report refers to a huge square reservoir at al-Mu'azzam called Mabrak an-Naqah (north of Mad'in Saleh and south of Tabuk). Dayton says that this reservoir is of the Roman type, similar to others known in Jordan and Syria. This reservoir is still in perfect

2 See above, ch. I, pt. 2.  
4 *Northern Hejaz*.  
5 *The Land of Midian*.  
condition and in general use. ¹

Musil refers to an Islamic type cistern, rectangular in shape, built at the site of al-Malḥa south of al-Bed' (north-west of Tabūk). He says that the pilgrim station in which the tank is built was established after the sixteenth century A.D. ² This tank (which was also visited by the present writer) is now ruined, showing a visible depth of about 2 metres. It is constructed from rectangular dressed limestone. The walls of the cistern are built entirely below ground level with no buttresses. There are flights of steps issuing from one corner, descending down to the bottom. The general design of the tank is similar to the ones along Darb Zubaydah.

As regards the circular reservoirs, we have only one example in Ḥijāz so far. This is found at 'Ain as-Sukkari at Tabūk. At this place, a circular water tank was reported by Musil ³ and Philby. ⁴ This reservoir is one of three which were built to hold water for drinking and for irrigating the farms. The construction of the cistern appears to be of a later date than those of Darb Zubaydah. The cistern is built not below ground level but entirely above the ground. It is made of cut stone with stairs issuing against one side of the

¹ The exact date of this cistern is rather doubtful; it may have been built or at least repaired in 600 A.H./1203-4 A.D. by al-Malik al-Mu'āẓẓam of the Banū Ayyūb. At the end of the 17th century A.D. it was broken up. See Musil, Op. cit., p. 224. Kabīrīt al-Madani (1012-1070 A.H.) stopped at Birkat al-Mu'āẓẓam. He says that it has 25 flights of steps but at the time he visited it, he found only 15 flights of steps visible, for the rest were under the water. See Riblat ash-Shitā' wa as-Ṣayf, p. 236. Al-Khīyārī saw this tank in 1060/1669. He gives estimated measurements as 100 x 100 cubits (dhirā' al-'amal, this corresponds to 66.5 x 66.5 m.), Tuhfat al-Uqābā', p. 48.


wall and descending down to the level of the water. Philby describes the wall of this tank as one yard in thickness and about 100 feet in circumference.\footnote{Ibid., p. 115.}

(g) **Southern Arabian Water Tanks**

The southern Arabian states, i.e., Minaeans, Qatabaneans, Sabaeans, and the Himyarites, in pre-Islamic times, possessed a flourishing system of agriculture. In their communities, they relied to some extent on irrigation schemes for crops and the watering facilities for animals, and these give evidence both of a high standard of technical ability and the use of lengthy experience. Constructions, including huge dams, cisterns and reservoirs, and dug wells were used to secure perennial water. Certain ancient inscriptions contain references to the building and restoring of water tanks together with construction of dug wells and aqueducts.\footnote{See Mahmud al-Chul, "New Qatabani Inscriptions II", BSOAS, vol. XXII, pt. 3 (1959), pp. 425-429, pl. III; D.B. Doe, "The Wadi Shirjan", Bulletin No. 4, Department of Antiquities, Aden, 1964, pp. 1-3, inscription no. 1; G. Ryckmans, "Inscriptions Sub-Arabes, 9th series", Le Museon, vol. 64, 1951, pp. 111-112 and fig. on p. 110, pl. IV, Ky 456-458 (Philby 222); A. Janne, Sabean Inscriptions from Mahram Bilqis (marib) (Baltimore, 1962), 550/1, 735/14; Arthur K. Irvine, "A Survey of Old South Arabian Lexical Materials Connected with Irrigation Techniques", Ph.D. Thesis, University of Oxford, 1962, see particularly pp. 88-95, 129-136.}

A large number of ancient water tanks have survived throughout the centuries and some remain in perfect condition. Certain of these have been cleared and restored in modern times. A number of pre-Islamic cisterns have been found in the Aden region and in Ḫaḍramaut, but the majority are in the high plateau of the Yemen. These tanks can be classified in the following categories: square, rectangular, and circular.
In addition, a fourth type can be included, which is the bathtub shaped cisterns. Some of these tanks were built with smoothed sides, some have stepped walls, while others are partially stepped. All of these tanks were provided with channels and conduits either above ground or under ground. Staircases or steps were also provided but sometimes these were not constructed as a solid mass but consisted of stones jutting out from the sides of the tanks. The majority of these tanks have been constructed below ground level. The constructional materials used in these tanks are of the locally available stone—volcanic or limestone. The stones are used either as natural rubble or roughly trimmed, joined with mortar, and covered with cement which is as hard as iron. This coating is still visible in many of these tanks.

Some of these ancient cisterns are partially rock cut and partially constructed with stones laid in courses. However, even now, new cisterns are built in substantially the same manner as the ancient ones. Rathjens and Wissmann state that cisterns built or improved and extended in recent times cannot always be easily distinguished from the ancient ones; the most distinguishing feature is the dark, almost black-brown, colour of the iron-hard mortar covering on the inside of the old cisterns which has, sometimes, an irregular humped surface.¹ Some of the characteristic features in these cisterns correspond to those on Darb Zubaydah. These are canals, water channels, and steps. The only different factor is that the south Arabian tanks lack the use of buttresses which are numerous on Darb Zubaydah. We may now mention a few examples of cisterns and reservoirs from south Arabia.

Square Basins

The first example that can be cited is a square cistern situated about three kilometres east of El-Messadjid directly on the road to Şan'ā in a south-western direction. This cistern measures c. 15 m. in diameter and is provided with internal and external steps. The largest of all square and stepped cisterns is the one which lies on the outskirts of the village of Beit el-Ḥauri in the Hamdan province, north of Şan'ā. This is 40 x 40 m. square; the sides are stepped, and internal and external staircases are provided. The depth of this cistern is between 6-9 m.2

A third square cistern is the birkah which is situated in Wādī Djubib at Ghaiman, south-east of Şan'ā. It is about 31 x 31 m. square, with its walls entirely vertical.3

Rectangular Tanks

These are probably the majority and are scattered everywhere in the south Arabaian provinces. Some of them are small in size such as the cistern between Şan'ā and Ghaiman which is still in good use.4 Another cistern, according to E. Glaser, is called es-Sabra; this is in the middle of Ḥaz,5 and is probably of Ḫimyarite origin. It is oblong, measuring 36 x 41 m. with a depth of 5-6 m. Two of the cistern walls are vertical while the other two are stepped. The construction of this tank consists of huge, flat stones, partially mortared;

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1 Rathjens and Wissmann, op. cit., photo 94, p. 147, fig. 93, p. 148.
2 Ibid., fig. 95, p. 149, photo 97, p. 150. See also, A. Grohmann, Arabien Kulturgeschichte des Alten Orients (München, 1963), fig. 38, p. 149.
3 Carl Rathjens, Sabaeica, vol. I, fig. 87, p. 83, photos nos. 36-37, pp. 142-143. See also, Grohmann, op. cit., p. 148.
4 Ibid., photo 42, p. 144.
5 Rathjens and Wissmann, op. cit., p. 103.
The joints between the stones are all filled with mortar which had been poured in whilst in a liquid state.\(^1\)

There is a rectangular reservoir situated on the pass above 'Asr, west of Ṣan'ā. It seems to have been built or renovated in more recent times. Its dimensions are 20 x 14 m, with a depth of 6 metres.\(^2\) Also among the rectangular basins is the one at El-Azragain, north of Ṣan'ā. This basin seems to be divided into two by a raised wall which has a sluice gate at one end, probably to help filtering the water.\(^3\) One of the best examples of a pre-Islamic rectangular cistern is a group to be found at Kaukaban in Yemen.\(^4\) These are built with their sides almost smooth, except at one side where there is a broad flight of steps; the remainder of this wall is partly stepped.

The great cistern of Migyal al-As'ad, near Ṣan'ā, is described by Hugh Scott. It is a rectangular reservoir with sides of shaped and dressed stone. This cistern has been cleared out and restored during the time of the late Imam of Yemen under the supervision of his eldest son.\(^5\) This is provided with flights of projecting stones leading down to the water.

At Nu'air in 'Amid in the Ḥaḍramaut region, Freya Stark observed a number of rectangular cisterns, the largest measuring 30 x 16 m.\(^6\) Some of the rectangular tanks are

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\(^1\) Ibid., pp. 102-103.
\(^2\) Ibid., photo 95, fig. 94, p. 148.
\(^3\) Ibid., photo 96, p. 149.
\(^4\) Rathjens, *Sabaeica*, photos 55, 56, 57, p. 149.
\(^5\) Hugh Scott, "A Journey to the Yemen", *GJ*, vol. XCIII, no. 2, 1939, pp. 97-125, see p. 119.
\(^6\) Freya Stark, "An Exploration in the Hadhramaut and Journey to the Coast", *GJ*, vol. XCIII, no. 1, 1939, pp. 1-17, see p. 3 and top plate opposite p. 6.
partly rock cut and partly built of cut masonry. This case is to be found at Karish in the western Protectorate of Aden.1

Water Tanks of Oblong Shape

These tanks are different from the rectangular ones. They are of a considerable size, oblong in shape but having no sharp corners. A series of these tanks are to be found at Ḥuṣn al-Ghurab in the Ḥaḍramaut region. Their walls are vertical and built below ground level. The constructional material consists of ashlar masonry faced with thick plaster. This type of design, however, has not been found along Darb Zubaydah yet.2

Bath-Tub Cisterns

This type of cistern is not found on Darb Zubaydah. They can be distinguished by their oval plan and vertical side walls. These are probably characteristic of the hill side tanks which are oblong or semi-circular. They are small when compared with the basins and stepped cisterns, but on the other hand they are arranged in groups. Some of this type were found in Ḥugga in Yemen.3 Bowen, Albright, and others, report on similar cisterns found in the Yemen, particularly on spurs of el-Harajeh, Jebel Khudreh, Jebel Khalbas, and Nugub. They say that these cisterns are normally located outside the domestic house area. They report that these cisterns were not situated where they would catch rain-water but were filled with water carried up from below.4

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3 Rathjens and Wissmann, *op. cit.*, p. 153, fig. 98.
4 Archaeological Discoveries in South Arabia, pp. 7-8, pl. 15.
Staircases and Steps in the Rectangular and Square Basins

Staircases are the most outstanding feature in these water tanks. Four types of steps were used in order to provide entrances for people using these tanks.

(i) **Steps arranged along cistern walls**

Some of the cisterns are provided with broad steps against one, two, or all walls. A typical example of this kind can be seen in the cistern situated in the middle of Ḥaz. Its western and eastern sides are stepped down to the bottom, while the other two walls remain vertical. The cistern which is situated on the pass above 'Asr, has two steps along the circumference, the upper one about three-quarters of a metre below the edge; the second about 3 metres below the first. The breadth of the steps which go round the whole cistern is about three quarters of a metre. The edge, which is raised a little above the surrounding ground, is interrupted in two diagonally opposite corners of the cistern, and from here flights of steps lead down to the bottom. The large cistern at the village of Beit el-Ḥauri has two concentrically arranged steps running round the whole cistern. The floor of the cisterns is smaller than the upper area at ground level; and this helps to prevent excessive evaporation as the water level goes down. Flights of steps for access lead from the upper edge of the cistern directly, or more often interrupted by the stepped or banked structure, down to the bottom. This sort of cistern according to Rathjens and Wissmann can be seen in many places in Yemen, on the route from El-Messādjid in the west to beyond El-Gheras in the east.

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1 Rathjens and Wissmann, *op. cit.*, p. 102.
2 Ibid., p. 148, photo 95 and fig. 94.
3 Ibid., p. 149, fig. 95. See also, Grohmann, *op. cit.*, fig. 38, p. 149.
As for the cisterns of Kaukaban, their walls are almost vertical except at the sides where broad flights of steps are placed. One of them is provided with broad steps which occupy only one half of one side of a wall.\(^1\) Another cistern has the total length of a whole wall stepped.\(^2\)

However, these broad steps are not prominent in the cisterns of Darb Zubaydah. The only cistern which has these broad steps is the rectangular reservoir of ash-Shībīyyāt (site 10). There, the steps appear in its northern and southern sides.

(ii) **Cisterns with corner stairs**

Some of the southern Arabian cisterns are stepped in the corners similarly to those of Darb Zubaydah and Trans-Jordan.\(^3\) Of these is the cistern on the pass above 'Asr, west of Ḟan'ā.\(^3\) A second square basin near El-Messādjid\(^4\) is provided with internal steps on its western side. The steps on the northern side issuing from the corner descend alongside the northern wall down to the bottom of the birkah; as for the southern side, the steps emerge not from the corner but from a podium or bank attached to one side, and go down to the ground floor of the birkah.

A typical example of corner steps can be seen in the large cistern at Karish\(^5\) in the Aden region. This has steps beginning in the south-western corner and leading alongside a wall exactly in the same manner as in many cases along Darb Zubaydah.

(iii) **Projecting flights of stones**

A third type of staircase is presented in the southern

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Arabian cisterns. For instance, the water in the cistern of Migyal al-As‘ad is reached by a flight of stones projecting from the eastern side.¹ But the most interesting example of this kind is to be seen in the cistern of Ghaiman.² In the centre of each wall, there is a row of big stones, nicely dressed, projecting from the wall and descending down to the level of the water. These stones acted as equivalent to the usual flights of steps. This method is not found in Darb Zubaydah or in any other cisterns known to us.

(iv) **External staircases**

External steps are also provided in some cases. This type is visible in the reservoir of El-Messadiaj, which is provided with external flights of steps; the southern wall has steps in its centre while on the northern side, the steps begin at the north-western corner.³ The same method was applied to the cistern of the village of Beit el-Mauri.⁴ External steps are placed in the middle of the western wall, while the other steps are at the north-eastern corner. The final example of external steps is to be seen in the cistern of Ghaiman, south of ªSan‘a.⁵ The staircases are built along its western side.

**Circular Cisterns**

These are also numerous in south Arabia. They can again be of two types: those with smooth sides or vertical walls, and the stepped cisterns. The rounded cisterns are normally single but a few of them are provided with small

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¹ Hugh Scott, _op. cit._, p. 119.
² Rathjens, _Sabaeica_, fig. 87, p. 83, photos, 36-37, pp. 142-143.
³ Rathjens and Wissmann, _op. cit._, p. 148, fig. 93.
⁴ _Ibid._, p. 149, fig. 95.
⁵ Rathjens, _Sabaeica_, fig. 87, p. 83.
Ancient cemented cistern south of Dhamar

Fig. i: Circular cistern in the Yemen; pre-Islamic. (Reproduced from Hugh Scott, GJ, vol. XCIII, No.1, 1939, facing p.107).

Ancient cisterns on Husn al Ghurab

Fig. j: Oblong-shaped cistern at Husn al-Ghurab in the Hadramaut region; pre-Islamic. (Reproduced from Freya Stark, GJ, vol. XCIII, No.1, 1939, facing p.6).
circular basins attached, and these are filled with water for beasts to drink from. A first example of the circular cisterns is found at Dhamar, south of Šan'ā; this is built with vertical walls covered with thick cement.\(^1\) Similar in type to this is the cistern called Birkat Qa' Raqqā, west of Ḥaz. This cistern is described by Scott as pre-Islamic and with sides not stepped.\(^2\) On the way from Šan'ā to El-Gherās, north-east of Rauda, lies a circular cistern of similar form;\(^3\) It is provided with a small attached round drinking basin. Two cisterns of the same type are found in the Yemen plateau; the first is on the way from El-Gherās to El-Harre,\(^4\) and the second was found in the fortified crater of Djabal Haid el-Lèssi to the east of Dhamar.\(^5\) The latter is provided with two small attached drinking basins, and the main cistern has a number of steps around its circumference. As for the Aden region, we have only one example of the round cistern type, and this is the ancient cistern near Khalla, in Dhala District.\(^6\) This cistern in particular exactly recalls in appearance some of the simple type cisterns on Darb Zubaydah.

Concerning the cisterns with completely stepped sides, there are two to which we may now refer. The first one is the large cistern at Metne (in Djabal Ḥadhur Nebi Sch'āib) west of Šan'ā.\(^7\) According to Rathjens and Wissmann, it was built (or

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\(^1\) Walter E. Harris, *Journey Through the Yemen* (London, 1893), pp. 283-284, photo opposite p. 36. Hugh Scott, *op. cit.*, p. 107, photo opposite same page. (See also fig. 1 following p. 284.)


\(^3\) Rathjens and Wissmann, *op. cit.*, pp. 151-152, photos 98099, fig. 96. See also, Rathjens, *Sabaecā*, photo 60, p. 150.

\(^4\) Rathjens and Wissmann, *op. cit.*, photo 100, p. 152.


\(^6\) Lankester Harding, *op. cit.*, pl. XI, no. 3.

\(^7\) Rathjens and Wissmann, *op. cit.*, photo 92, p. 146.
extended) in the Turkish period; it is extremely large and stepped from top to bottom. But the steps are not close to each other and are narrower, as in Birkah al-Kharābah on Darb Zubaydah; they are mainly large flights of broad circumference, steps or banks. The second stepped cistern is situated in Messa'ud on the road which leads to Wal'ân and Ma'bar (between Dhamar and Ṣan‘ā'). This cistern,¹ which has been restored, is stepped from top to bottom in the same manner as the cistern at Meţne.

**Staircases**

Each circular cistern is provided with entry points which are provided with stairs, even in cisterns which are stepped on all sides. Normally, the staircases are placed on one side of a cistern but in some cases they are placed on two sides. For example, the circular cistern north-east of Raudha has two approaches with flights of steps lying opposite each other.² In this case, the steps emerge from the outside of the tank and descend gradually into the cistern until they reach the bottom. The majority of the remaining circular cisterns are provided with steps at one side. A clear example of this can be seen in the reservoir on the way from El-Gheras to El-Harre.³

The stepped circular cisterns are also provided with staircases, and these are situated at a convenient point; this is visible in particular in the reservoir in Meţne,⁴ and the cistern of Messa'ud.⁵ As for the reservoir of Djabal Haid

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1 Rathjens, *Sabaeica*, photo 59, p. 150.
2 Rathjens and Wissmann, op. cit., photo 98, p.151.
el-Lessi, the stairs are built so as to descent vertically across one step or bank to the next until they reach the bottom of the basin.¹

There is one point worth mentioning concerning the steps in most of the circular tanks, namely that the steps do not emerge from a cistern wall, as is the case in Darb Zubaydah but they are built within an external annex or podium. This feature is, however, not apparent in the cisterns of Darb Zubaydah but only in the cistern of ath-Thulayman (site no. 6). The only example from Yemen where steps issue from the centre of a wall is that at Ra'udha, north of Ḥanā'a.² Cisterns with steps having right or left turns are apparently absent in the southern Arabian tanks.

**Water Channels**

Water channels were needed to conduct the rain and flood water into these tanks. Some of the channels are cemented,³ others are rock cut, leading water from natural rock reservoirs as in the case of Shu'bair in Aden region.⁴ In some cases, the channel widens outwards and this is visible in the ancient cistern near Khalla, Dhala District.⁵ Such features were noted in many cisterns on Darb Zubaydah. In some cases, no over-ground channels or canals are visible as is the situation with the cistern of Ḥaz. Rathjens and Wissmann assume that this cistern is fed by an underground channel, or may be fed by water streaming into it overground during the rainy seasons.⁶ This is highly probable in a large number of cases.

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¹ Rathjens and Wissmann, *op. cit.*, fig. 97, p. 153.
² Rathjens, *Sabaecia*, photo 60, p. 150.
⁵ *Ibid.*, pl. XI, no. 3.
However, some reservoirs appear to be fed with water through underground channels; inlets are visible in the rock cut cistern at ḫuṣn Ghaiman;\(^1\) and in a rectangular cistern at Kaukaban.\(^2\)

**Conclusion**

After studying the different types of water tanks along Darb Zubaydah and comparing them with others from the regions mentioned above, we can draw the following conclusions:

1. The three basic types of reservoir (round, square, and rectangular) found along Darb Zubaydah are known in Transjordan, Syria and Palestine, south Arabia, and elsewhere. The square and rectangular reservoirs are very common in these regions. However, in detail, the tanks of Darb Zubaydah have their own character. Although, where constructional methods are concerned, they are built in a similar fashion to those in other regions (with vertical walls and the use of steps), the Darb Zubaydah tanks are strengthened with two types of buttress, viz. internal (normal) and external (used occasionally). The buttresses are either semi-circular or half square. They are prominent features in the Darb Zubaydah tanks. Such buttresses are, however, employed only in quite a small number of square and rectangular tanks in Tunisia;\(^3\) a few examples can also be quoted from Syria, where, for example, the square birkah of al-Qdeym is provided with external buttresses, while the rectangular tank at Bosra has buttresses placed on the inside.\(^4\)

Both of these examples from Syria are likely to be from an early Islamic period.

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3 See above, pp. 239 ff.
4 See above, pp. 265 ff.
<table>
<thead>
<tr>
<th>Type of water tank and its features</th>
<th>Darb Zubaydah</th>
<th>Tunisia</th>
<th>Transjordan</th>
<th>Syria</th>
<th>Sinai</th>
<th>Western Arabia</th>
<th>South Arabia</th>
<th>Iran</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rounded cisterns</td>
<td>++ (Isl)</td>
<td>+++ (Isl)</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(+)(pre)</td>
<td>+++(pre)</td>
<td>+ (pre) +++ (Isl)</td>
</tr>
<tr>
<td>Quadrangular filter tank attached</td>
<td>++</td>
<td>++</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(?)</td>
<td>(-)</td>
<td>(?)</td>
</tr>
<tr>
<td>Rounded filter tank attached</td>
<td>(-)</td>
<td>++</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(?)</td>
<td>(-)</td>
<td>(?)</td>
</tr>
<tr>
<td>Covered storage water tank attached</td>
<td>(?)</td>
<td>++</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(?)</td>
<td>(-)</td>
<td>(?)</td>
</tr>
<tr>
<td>Buttresses</td>
<td>+++</td>
<td>++</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(?)</td>
<td>(-)</td>
<td>(+)</td>
</tr>
<tr>
<td>External Buttresses</td>
<td>(+)</td>
<td>++</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(?)</td>
<td>(-)</td>
<td>(?)</td>
</tr>
<tr>
<td>Internal Buttresses</td>
<td>+++</td>
<td>+++</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(?)</td>
<td>(-)</td>
<td>(?)</td>
</tr>
<tr>
<td>Internal square and semi-circular buttresses</td>
<td>+</td>
<td>(+)</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(?)</td>
<td>(?)</td>
<td></td>
</tr>
<tr>
<td>Steps</td>
<td>+++</td>
<td>(+)</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(?)</td>
<td>(+)</td>
<td>+++ (?)</td>
</tr>
<tr>
<td>Internal steps</td>
<td>+++</td>
<td>(+)</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(?)</td>
<td>(+)</td>
<td>++ (?)</td>
</tr>
<tr>
<td>Internal steps on two sides</td>
<td>++</td>
<td>(+)</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(?)</td>
<td>(+)</td>
<td>(?)</td>
</tr>
<tr>
<td>Internal steps on one side</td>
<td>++</td>
<td>(+)</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(?)</td>
<td>(+)</td>
<td>++ (?)</td>
</tr>
<tr>
<td>Cisterns with all sides stepped</td>
<td>+</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(?)</td>
<td>(+)</td>
<td>(?)</td>
</tr>
<tr>
<td>Water channels with abrupt end</td>
<td>+++</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(?)</td>
<td>(+)</td>
<td>(?)</td>
</tr>
<tr>
<td>Type of water tank and its features</td>
<td>Darb Zubaydah</td>
<td>Tunisia</td>
<td>Transjordan</td>
<td>Syria</td>
<td>Sinai</td>
<td>Western Arabia</td>
<td>South Arabia</td>
<td>Iran</td>
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<td>-----------------------------------</td>
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</tr>
<tr>
<td>Water channel with sloping end</td>
<td>++</td>
<td>(+)</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(?)</td>
<td>(+)</td>
<td>(?)</td>
</tr>
<tr>
<td>Water channel with left or right turn</td>
<td>++</td>
<td>(+)</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(?)</td>
<td>(+)</td>
<td>(?)</td>
</tr>
<tr>
<td>Stepped water channel</td>
<td>+++</td>
<td>+</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(?)</td>
<td>(+)</td>
<td>(?)</td>
</tr>
<tr>
<td>Open canal or aqueduct</td>
<td>+</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(+)</td>
<td>++</td>
<td>(?)</td>
</tr>
<tr>
<td>Flood diversion wall</td>
<td>+++</td>
<td>++</td>
<td>++</td>
<td>++</td>
<td>++</td>
<td>(+)</td>
<td>(+)</td>
<td>(?)</td>
</tr>
<tr>
<td>Rectangular tanks</td>
<td>+++ (Isl)</td>
<td>+++ (Isl)</td>
<td>+++ (pre)</td>
<td>++(pre)</td>
<td>++(pre)</td>
<td>(+)(Isl)</td>
<td>++(pre)</td>
<td>+ (Isl)</td>
</tr>
<tr>
<td>Square tanks</td>
<td>+++ (Isl)</td>
<td>+++ (Isl)</td>
<td>+++ (pre)</td>
<td>++(pre)</td>
<td>++(pre)</td>
<td>(+)</td>
<td>++(pre)</td>
<td>+ (Isl)</td>
</tr>
<tr>
<td>Subdivided tanks</td>
<td>+ (Isl)</td>
<td>+ (Isl)</td>
<td>+(pre)</td>
<td>+(pre)</td>
<td>-</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
</tr>
<tr>
<td>Quadrangular tanks with filter tank attached</td>
<td>+++ (Isl)</td>
<td>++ (Isl)</td>
<td>++ (pre)</td>
<td>++(pre)</td>
<td>(+)</td>
<td>(-)</td>
<td>(-)</td>
<td>(+)</td>
</tr>
<tr>
<td>Tanks provided with a covered storage water tank</td>
<td>(-)</td>
<td>+++ (Isl)</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
<td>(-)</td>
</tr>
</tbody>
</table>

**Legend:**

+++ : very common  
++ : fairly common  
+ : infrequent  
(+) : rare  
(-) : not found  
(Isl) : Islamic  
(pre) : pre-Islamic  
(?) : not known to us
Buttresses are apparently absent in the South Arabian tanks. In Palestine, half square internal buttresses appear in the so-called Pools of Solomon near Jerusalem, but these have been repaired several times throughout the centuries and their date cannot be decided. 1

2. The individual square and rectangular tanks of Darb Zubaydah have more steps than those in other regions. Each cistern on Darb Zubaydah has steps and stairs on more than one side. This arrangement, however, has apparently never been found in any other cistern in Arabia or outside Arabia. Furthermore, we have water tanks on Darb Zubaydah which are entirely stepped. Such examples have not been seen so far in any part of the above-mentioned regions.

3. The arrangement of providing more than one access to one birkah (along Darb Zubaydah) was perhaps intended to speed up the process of drawing water by pilgrims and other travellers, and to prevent a traffic hold up. It is perhaps also possible that it was chosen since it would have allowed the male travellers to use one side of a birkah and females to use the other. This may be understood from information given by al-Ḥarbi. He says that the 'Abbasid caliph al-Mahdi had several water tanks built at Medina; some of these tanks were provided with two ways of access, one for men the other for women. 2

4. The circular water tanks are very common along Darb Zubaydah and they are known in South Arabia and in Tunisia. The constructional method of the circular tanks can be derived originally from South Arabia. The one single example of a

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2 Al-Manāsik, p. 409.
round tank found in Kharg Island in Iran is apparently of a later date compared with those of South Arabia. The same technique employed in Darb Zubaydah probably transferred to Tunisia. The round tanks of Darb Zubaydah and those of Tunisia are alike in certain ways, and both regions show the common 'Abbasid technology.

5. The methods of directing water towards the water tanks in various regions are similar, such as the use of open canals and flood diversion walls. The construction of water channels at the point of entry into the tanks of Darb Zubaydah is, however, different in design from the ones in other regions.

6. We may refer to one single type of monument which survived on Darb Zubaydah. This is the use of the azj for wells and reservoirs. The azj al-ma'qūd is an arched or vaulted structure, mentioned several times by al-Ḥarbi¹ in places where wells and reservoirs were constructed. We believe that the best example is evident in the domed room at Birkat al-Kharābah.² As far as we know, the example from al-Kharābah has no parallel in any other region.

Cisterns not represented on Darb Zubaydah

It must be stated that in the Islamic period (particularly at the times of the Umayyads and the 'Abbasids), cisterns placed inside buildings and vaulted over reservoirs were used mainly for luxury by the caliphs and their associates. Among these pools which are known to us, is that from Khirbat al-Mafjar³ which is of Umayyad date. The second is the Ramlah cistern (in Palestine) which was built at the time of the caliph

¹ Al-Manāsik, pp. 282, 303, 304.
² Site no. 38, pl. xxxviii, 2.
Harūn ar-Rashīd (172/789). But the most outstanding and luxurious pools (or birkahs) seem to have been built for the 'Abbasid caliphs in their second capital, Samarra; unfortunately none of the features of these pools has survived. On the evidence of the 'Abbasid poets, one of these pools was of a most unusual kind, designed and ornamented with representations of fish and animals. The water ran regularly into the pool from a nearby river. Ostriches were used to pull water out of the pool by means of water-wheels. The surplus water from the pool was used to irrigate a spacious garden around the pool.

As regards the workmen and engineers who built the water tanks of Darb Zubaydah, we have no knowledge so far where they came from (whether from Syria, Iraq, Arabia, or elsewhere) or what training or what careers they had, but we know, from available material, that the Kūfah-Mecca road is a purely Islamic construction project, established and developed during the 'Abbasid period.

During the times of the Umayyads and the 'Abbasids, engineers, architects, and workers of excellent skill were recruited from one region to another in order to execute big projects.

The administrators of Darb Zubaydah must have

adopted similar ways by selecting the best engineers of hydraulics and workers to construct the water tanks and other watering facilities. We may note two good examples connected with two major events in Iraq. These are the building of Baghdad and Samarra. On both occasions, joint committees were instituted to recruit skilled engineers and workers. According to al-Ya'qūbi, one hundred thousand highly skilled engineers and craftsmen were brought, from various regions, to build the city of Baghdad. Some of their work was connected with digging wells and canals.\(^1\) Similar arrangements were made for the building of Samarra,\(^2\) and here again specialists in water engineering were involved. Among the engineers (muhandisīn) who were involved in the construction of Baghdad, were in fact local people in the Islamic state and of Arab descent.\(^3\) The skill shown in the engineering of the tanks of Darb Zubaydah give a good example of the 'Abbasid technique. The architects and technicians must have been inspired by what were, by the 'Abbasid period, traditional methods derived ultimately from engineers who built tanks in South Arabia, Syria, and elsewhere. But as we saw, the engineers of the Darb Zubaydah tanks also had ideas of their own. They applied more than one feature in one single birkah. On the other hand, while the same features may be repeated in several tanks, yet no two reservoirs are identical in design, or mostly in dimensions and standard plan: this project did thus not proceed by the repetition of a limited number of standard designs by the engineers of Darb Zubaydah.

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\(^1\) Al-Ya'qūbi, Kitāb al-Buldān, p. 238.
\(^2\) Ibid., pp. 250, 264.
\(^3\) Ibid., pp. 241-242. For details on Muslim engineers, see Ahmad Timor Pasha, A'lām al-muhandisīn fi al-Islām (Cairo, 1957).
3. The Construction and Design of Wells along the Zubaydah Road

The survival of the pilgrim road depended mainly on the availability of water in great quantity and in good quality. When the road was established, wells, water tanks, and aqueducts were provided along its entire length. Among these operations, the most remarkable achievement was the digging of a large number of wells at every suitable point on the road in order to make use of subterranean water. Early Muslim geographers—particularly Ibn Khurdādhabah and Ibn Rustah—give in their accounts brief details about the watering facilities on the pilgrim road, but their information was restricted to the big stations only. Al-Ḥarbi on the other hand was able to draw on a most prolific knowledge on the various types of watering facilities, not only at the major stations but also at the evening halts and the area between the bigger stations and the smaller ones. When we traced al-Ḥarbi's account of the pilgrim road, we made a calculation of the different types of well which he records, and we arrived at a total of no fewer than 1,230 wells: 551 biʾr, 307 hisu, and 372 galīb. This does not include other types of facility such as the small well called rakīyya, spring wells, ṣuyūn, or qanāts and aqueducts.¹

¹ The well has several names. The information derived from ancient Arab linguists and lexicographers is as follows: The biʾr and the galīb are similar and they contain permanent water and require a considerable depth; they can be lined with stones or left without. The hisu (plural ṣubāʾ) signifies a well which is dug to collect water which has been trapped between two solid layers below ground, or a well which is dug to allow water to seep through its sides into its bottom. Al-Ḥarbi records that the hisu can be completely or partially lined with stones. As for the meaning of the rakīyya: it is a well with a small amount of water. Both the hisu and the rakīyya are considered to be temporary wells dug in the wadi basins or in the depressions where water from rain and flood
This figure, however, is deduced from the present published work bearing in mind that part of al-Ḥarbi's book is missing. Al-Ḥarbi in many cases describes the constructional design of the well, its shape—whether it is circular or square, the lining of the well—whether it is partly or completely lined, and whether the well is lined with uncut or well-cut stones. He also gives the size of the well, the diameter of the shaft and the depth. Other important points mentioned by al-Ḥarbi include the quality of the water—whether it is good drinking water or not. Thus he would indicate wells which contained fresh water and those which contained brackish or salty water.

The constructional design and perfect execution of the wells which still survive gives clear evidence about the ability and skill of the engineers who built them.

The majority of these wells are circular but wells square or rectangular in plan are met with. The shape and width of the shafts of different wells vary very considerably. The diameter of the opening at the top of the well fluctuates between one meter and two metres, to sometimes, four metres or even more. The depth of these wells is from 20 to 50 m.

When inspecting these wells at various places, we found a small gathers. From the account of al-Ḥarbi, we found out that in one particular spot a number of a hundred of these temporary wells was dug. For further details, see Ibn Ṭanẓūr, Lisān al-‘Arab, vol. 2, pp. 182-183, vol. 5, p. 98, vol. 18, p. 192, vol. 19, p. 50; Az-Zabīdī, Ṭāj al-‘Arūs, vol. 10, pp. 88, 155, 437-438. See also, E.W. Lane, An Arabic-English Lexicon, Bock I (parts 1-8) (London 1863-93), part 2, pp. 572 and part 7, pp. 2554-5; Encyclopaedia of Islam, vol. I, pp. 1230-2. See also the valuable work which was written by E. Bräunlich on the construction of various forms of the well together with their accessories and the way they were used in Arabia, "The Well in Ancient Arabia", Islamica, nos. 1-2, 1924-26, pp. 41-76, 288-343, 454-528. This study is based on the available lexicographica! and literary references and on European travellers. However, none of this work is connected with wells along Darb Zubaydah.
number still containing fresh water and these are in general use by the local people. A considerable number of wells have remained in perfect condition but have now no water, the rest have suffered badly and are filled with sand and debris. The wells were constructed in different topographical areas and so they had to be built with regard to the strength or softness of the surrounding sub-soil or natural ground. Some of these wells have been dug very deep and lined with stone, in many cases from top to bottom, or at least round the mouth of the shaft. The lining of a well can be ough stone or ashlar masonry. If, on the other hand, a well is cut in solid rock, no such strengthening is needed and such wells or parts of the wells are not lined.

We shall now refer to some of the wells which we inspected along the Zubaydah road and study their construction. Starting with the station of al-'Aqabah (pl. I, 2) we found four ancient wells which have been dug very deep into the solid rock; one of these is circular, measuring 3 metres in diameter. The other large wells have shafts which measure about 7 metre square, and the fourth well is rectangular and measures about 3 x 2 metres. The approximate depth of these wells is 50 metres and they are all lined from the mouths downwards with ashlar, down to a considerable depth while the remaining portions are cut in solid rock. It looks as though the walling had reached above the ground level, with the loosened earth piled up around their mouths to form a parapet so as to prevent animals from coming too close and falling in, or fouling the wells, and at the same time to shield them from being choked up by wind-blown sand. All these wells contained water when we visited them.
The pilgrim station of Zubālah is provided with a remarkable number of ancient wells which were dug in the basin of its wadi, and on the wadi edges. A few have remained in spectacular perfection, but there are hundreds of small dug wells scattered in the wadi; their shafts are vertical and lined with rough limestone, while the opening of these wells measures on the average, one metre across. Their approximate depth is 30 metres. Many of these wells are now blocked by loose rock fallen from the walls, or choked by vegetation, but nevertheless the holes can still be observed. The purpose of having very many wells near each other in a small plain was most probably to provide a permanent reserve of stored water which would be available for use over a longer period. One can imagine that during the rainy season and when the wadi was in full flood, the water would fill these wells.

Beside the small wells there are quite a few much deeper wells with bigger shafts at Zubālah. These have been dug very deep on the edges of the wadi, but not in its bottom, in solid ground near the reservoirs of the station. We inspected four of them. Three had their shafts four metres square and one was circular with a diameter between 2 and 3 metres. All these four wells still contained fresh water. They are lined around the mouths with fine dressed limestone copings (rectangular and square), while the remaining portions are cut into the solid rock.

There are some other places on the pilgrim road which have many wells similar to these at Zubālah: these are al-Bid‘ and al-Khaḍrā’, but the most prodigious profusion of such wells is to be found at Līnah to the east of Zubālah, c. 40 kilometres from Birkat Ḥamad. Līnah has acted in the
past as a pilgrim station and as an important watering station;\(^1\) it has a great number of ancient wells dug into hard flinty rock. We inspected some of these wells which are situated at the outskirts of the village on its northern side. The approximate diameter of the shafts is 2 metres. Musil counted some four hundred wells at Līnah; he records their depth to be from 8 to 11 bāl (c. 16-22 metres).\(^2\)

At ash-Shīḥīyyāt we observed three dry dug wells, one rectangular measuring 8 x 6 metres, and two rounded measuring about 4 metres across. The rectangular well had been dug into solid ground and lined with shaped stone round the mouth. This well is now half filled with sand. When inspecting the other two, which are situated to the west of the rectangular reservoir, we discovered that the one to the south is filled with sand, remaining open only to a depth of two metres. Its mouth shows the lining, which consists of roughly dressed limestone.

The other well, to the north, is open to a considerable depth (c. 25 metres), lined at the mouth with masonry made from rubble of irregular shape, while the lower portion of the shaft is cut into the solid rock. There is a small rectangular trough linked with the well, possibly built at a later date (pl. xiii, 1).

\textit{Al-Bid'} and \textit{al-Khaḍrā'}

At the watering stations of \textit{al-Bid'}, and \textit{al-Khaḍrā'}, there are a large number of ancient wells, deeply dug below the soft top soil. Some of these wells, particularly at \textit{al-Khaḍrā'}, are without parapets to mark their positions. At \textit{al-Bid'} we managed to examine only four wells; three circular

\(^{1}\) Yaqūt, \textit{op. cit.}, vol. 5, p. 29, al-Ḥarbi, \textit{op. cit.}, p. 282.
\(^{2}\) Northern \textit{Neğd}, p. 164.
wells are to be found a few hundred metres to the north of the reservoir, while the fourth is a square well sited to the west of the cistern. Two of the round wells are partly choked, but they still show a considerable depth. The lining used in them was of rubble mostly, reaching down to their bottoms; the opening of the shafts of these two is c. 4 metres across. The third, round, well which is the most prominent one, shows a fine construction; it is 10 metres across with a cylindrical shaft, and it has a very neat casing consisting of roughly rectangular stones laid in well coursed masonry from the mouth to the bottom. The masonry appears to have been laid with lime mortar. The mouth of the shaft has recently been restored, mainly with the same material, and the depth of the well is about 25 metres. There is a niche or an opening near the bottom of the well which measures 1 to 2 metres by 0.50 metres. There is also an indication of steps having been provided on the inside of the niche.\(^1\) The purpose of this opening may have been to admit an aqueduct which provided the well with water during the rainy seasons, or it may be an inspection shaft used also for drawing water; or perhaps it was used as an access duct to clean the bottom of the well from debris. The fourth well is 7 metres square, apparently very deep and cut into the solid ground. The shaft of the well is not absolutely vertical to the bottom; it would appear that the person who dug the well was often forced to remove softer rock and thus in places the diameter of the well is wider than in others.

At al-Khaḍrā', quite a number of the wells are still in use by the local bedouins.\(^2\) Many are choked up, but in

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\(^1\) Pl. xvii, 1-2.

\(^2\) Pl. xviii, 1.
general these wells are very deep and lined with rubble stone from the rim of the well down to the bottom.

Al-Hāshimah, al-Wusayṭ, Zarūḍ

About 13 kilometres to the west of al-Wusayṭ is the ancient well of al-Hāshimah. It has been dug into solid ground, with the lowest part being much wider than the mouth, and it has a casing of rubble masonry round the mouth. The well is now blocked with sand and debris, and part of the walling has fallen in; the remaining depth is now c. 20 metres.

At al-Wusayṭ there are two ancient wells, one which has recently been restored and cleaned out, and which still contains water; the second well is dried up and shows that it had been attached to a rectangular basin (measuring 25 x 7 m.) through an open channel. The diameter of the shaft is about 7.30 metres. This well is lined with rubble masonry from top to bottom; the parapet which was built round the mouth of the well is now ruined (pl. xviii, 2).

At Zarūḍ there is only one well which has been very well preserved. It has recently been restored and protected from damage by a modern parapet (5 x 5 m.), and three small basins are linked with the well by open channels in order to help the users to water their animals (pl. xix, 2). Fayd, which was the biggest station on the pilgrim road, has been provided with a large number of wells and underground canals, and these have been dug in different places inside and around the ancient complex of the station.

Some of these wells have survived and still contain water, but the majority are choked up. In general, the wells have been cut deep into the solid rock and are lined with unshaped masonry of volcanic stone. Many of them were protected by square parapets which rise above the ground level.
The largest well is about 7 metres in diameter. They are of various depths between 25 and 30 metres (pl. xxii, 1). In the centre of the village there remain a few ancient spring wells which communicated with each other through an aqueduct so that the water could be transferred from one well to another. The largest well, tapping a spring which has been choked up, has a huge shaft: the old lining of boulders is still visible round its mouth (pl. xxi, 2). The ruined condition of this well prevented us from taking measurements.

Between Fayd and Samīrah we could not notice many wells except for two: the first is Bi‘r Umm Harrūj, 13 kilometres to the south of Fayd, which is possibly modern; the second well is sited near the reservoir of al-Ghuraybayn. It has been constructed from undressed stone: the shaft is about 3 metres across.

Among the stations between Madh adh-Dhahab and al-Mislah, the only well that can be found so far is that at Khabrā‘ al-Ḥājj. The well is now sand up to the mouth.

At al-Mislah we inspected a number of circular wells. There are five small wells with cylindrical shafts and still containing some water, the opening of their mouths measure c. one metre across while the approximate depth is 30 metres.

These small wells seem to have been strengthened with stone from top to bottom. Two other big wells are still visible in situ but they are choked up with sand and mud. One of these, which is near the birkah from the south, is about 4 m. in diameter, lined from the mouth with roughly dressed volcanic stone. The walling around the mouth near the top is of much larger stone, while on the other hand, the lining applied to the remaining portion is of smaller masonry of irregular shape (pl. xxx, 2). The other well is to the north of the pond but
it is completely sanded up.

4. Rest-houses, Khāns, etc.

In previous chapters, we have discussed how the Kufa-Mecca route was provided with castles, fortresses, and rest-houses (or possibly palaces), which were built at the major stations and the minor halts. Early Muslim historians and geographers mentioned the following names of buildings along the road: qusūr (تسامور), hujūn (حصن), gībāb (قبد), and buyūt (بيوت). In addition, masājid (مساجد) were also built.

Archaeological remains along the road completed the information recorded in the works of Muslim historians and geographers.

When we inspected a number of sites along the road, we found the remains of the foundations of ancient buildings. These foundations related to buildings which varied in size; some are small, measuring on the average 25 x 25 metres, while others are much larger. Huber reports that near the road (which traverses the ad-Dahnā' desert), he found individual small houses, each measuring 8 x 8 m. and provided with an access towards the road.¹

However, it is too early to draw a comparison between the ruins of these buildings and other standing monuments, of an early Islamic period, outside Arabia. This matter can be solved only after thorough archaeological examination and when more detailed plans are available. Furthermore, at the present time, one cannot decide, as regards Darb Zubaydah, on the differences between a qaṣr (castle) and a hiṣn (fortress) or between gībāb (domes or shelters) and buyūt (houses). So far

¹ Charles Huber, Bul. de la Soc. Géographie (Paris), vol. 6, part VIIe ser., p. 112.
as the limited evidence now available allows, our general impression is that the plan of the larger buildings resembles in many cases the planning of early Arab buildings in Syria, Jordan, and Iraq. The buildings in these regions are generally square in shape, and the enclosure wall is normally strengthened at the corners and in the middle of the walls by round and half round towers.¹

The available information from early Muslim historians indicates that the larger buildings on Darb Zubaydah were intended to house important people such as caliphs, princes, generals, and their entourages. Some of these buildings were strongly fortified, and in time of major threats (from wild tribes and insurgents) they were strong enough to protect the state's army and a large number of pilgrims and travellers.

Among the best examples was the town of Fayd and its bishn, where neither the Qarmatians nor the ruthless tribes were capable of taking the town or harming the people who sought protection inside. We will describe, below, a few examples of some of these buildings which now lie in ruins.

Al-Qa‘w wal-Haytham (site no. 5)

The ruins of the old settlement of this station are to be found to the south-west of the birkahs. Among the ruins is what seems to be a fortress which consists of a square area enclosed by a wall measuring about 60 x 60 m. The sand has covered nearly all the foundations, but the bases of the walls and the details of some of the rooms can still be observed. The constructional material was unshaped rubble (limestone and sandstone); in the vicinity of the ruins we examined four uncut stone slabs, which may have been used in the construction,

the largest being 95 x 30 cm., and the smallest 65 x 32 cm. No binding material (such as white mortar or cement) was noticed in the ruins. Since the fortress today is in a very ruinous state, we managed to identify only a few of the details of rooms inside it (pl. vi, 1).

In the central part of the ruins appear the foundations of rooms which measure on the average 3 x 3 m. and 6 x 3 m. are discernible. At the western side of the fortress, there are two rectangular rooms attached to the enclosure wall, one at each side. They measure c. 19 x 6 metres and c. 15 x 4 metres. There were perhaps two entrances to this fortress: one on the northern side and the other on the southern. On the north-western side of the enclosure wall at its north-eastern side is another large rectangular building, but parts of its western wall are now buried under the ground. This room measures about 27 x 11 metres. It is impossible to decide whether the ruined building had corner towers. To the west of the fortress are rectangular buildings—probably the remains of rest-houses; the first one is c. 17 x 11 metres, the second is c. 17 x 9 metres. To the north-east of the ruins of the fort are the remains of foundations of some structures.

On a small hillock, four metres higher than ground level, is a stronghold 15 metres square; this has been constructed with similar material as the old ruins, perhaps materials from the ancient remains were used. This building, according to Musil, was constructed by Prince Muḥammad b. Rashīd.¹

Zubālah

At Zubālah there is an ancient fort or a palace situated on the southern part of the station which overlooks all the surrounding area. It is almost square in plan,

¹ Northern Neqd, p. 190.
measuring about 35 x 35 metres. It would appear that it must have consisted of more than one storey. At the moment the remaining walls rise from 2 to 3 metres above ground level. There is a tower in each corner and one in the middle of each side. The material used in the construction was mostly of rubble stone and terre-pise (rammed earth). Due to the effect of weathering over the centuries the rubble has mostly fallen inside or accumulated on the outside of the fort. The rest of the old settlement is to be seen to the north of the fort (see pl. ix, 1-2).

Ash-Shīḥiyyāt (site no. 10)

At ash-Shīḥiyyāt there are the remains of a fort, rest-houses, and kāns. They were built in two groups, the first being to the south and among these is the fort which was constructed on higher ground. This measures about 35 x 30 m.; part of its southern side is still two metres high. The construction material consists of irregularly shaped untrimmed stone (limestone and mudbricks or mud). To the south of the fort are the remains of some foundations; they consist of six individual rectangular buildings; their walls are now one metre higher than the ground level; the largest of these buildings is c. 35 x 15 metres and the smallest is c. 15 x 10 metres. The other group of rest-houses are to be found to the north, and there are five individual houses. The largest is c. 35 x 20 metres, their walls are all about one metre above the level of the ground. The material used in them was of mainly rubble masonry. As the sand covers the whole area, it is difficult to know if any other material was used (see pl. xi, 2).

Fayd (Qaṣr Khrāsh)

The ancient fort of Fayd, which locally is called
Qaṣr Khrāsh, is the largest construction we have seen along the road so far. It is situated on the eastern side of the old settlements and it indicates that it has been enclosed by a wall which is about three metres in width. The main feature of the gāsr is in the centre where a square building 40 x 40 metres stands. It looks as though the whole building had collapsed and accumulated to form an enormous mound which reaches about four metres above ground level; the highest part is in the eastern side. There seems to be a tower in each corner and one can notice small holes in walls which show rooms underneath. There are walls which adjoin the fort at the eastern side; it forms a rectangular enclosure in the south-western side of the gāsr and on its north-western side is a rectangular structure. The gāsr or the fort was constructed from big boulders of granite and volcanic stones; no binding material was noticed.

The ancient settlements and houses are situated to the west of the fort; a large number of wall foundations are to be seen around; rooms and some passages can be easily distinguished. They were constructed with big slabs and boulders of volcanic and granite masonry, which are still visible above the ground (see pl. xxi, 1).

Qlay‘ ash-Shagg (site no. 31)

The fortress or the palace of Qlay‘ ash-Shagg is nearly square in plan and measures c. 55 x 50 metres; it is constructed of boulders of volcanic masonry. The walls are still visible, rising above ground level from 0.50 to two metres. The ruins indicate that the palace had towers (square or round) in each corner, but none of these is standing high above the ground level. It seems that the palace was provided
Fig. k
AL AQIQ FORMAL COMPLEX
with three gates, one on each side except the south. There is a rectangular building which adjoins the palace to the north and which appears to be a mosque. We inspected a small standing wall which looks as if it contained a mihrab and a minbar. Generally, the foundations of the palace indicate that it was divided into two parts. The southern section has three divisions; these measure on the average 28 x 17 metres; in this part are the rooms which were constructed in a symmetrical design. On the eastern and western side, there are four rooms each; they adjoin the nine rooms on the southern side which extend from east to west. The average size of these rooms is c. 6 x 4 metres. There are large rooms or courtyards separated by walls in the central and northern part of the building. In the southern part there are two L-shaped corridors or courtyards with a rectangular section between them (see pls. xxviii, 2, xxix, 1).

The Complex of Birkat al--'Agīq

At al-Birkah, the remains of a palace or a fort can still be seen near the water tank (see fig. k following p. 307). The main building has an enclosure wall measuring about fifty metres on each side. There is a round tower in each of its four corners, as in the case of the 'Abbasid palace al-Ukhaidir in Iraq.\(^1\) The foundation walls (which were examined recently by the Department of Antiquities) are still standing to a considerable height. There are other additional small buildings to be found around the main complex, among them a small building measuring about 30 x 30 metres.

Finally, we may conclude that the above notes refer mainly to foundations that are still visible above ground.

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\(^1\) See Creswell, *A Short Account of Early Muslim Architecture*, fig. 40, pp. 208-209.
These do not, however, present a coherent picture of buildings along Darb Zubaydah. We can hope that in the very near future, joint scholarly work based on archaeological investigation might bring to light further information about the actual planning and design of palaces, fortresses, and buildings of Darb Zubaydah. We shall then be able to understand the basic facts about the buildings which were provided for the pilgrims in the early Islamic period.
Chapter VIII

INSCRIPTIONS

1. Milestones

Two milestones relating to the pilgrim road, Darb Zubaydah, are now preserved in the Department of Antiquities in Riyadh. Neither of them, as far as we know, has been reported on as yet.

Milestone no. 1 (plate xxxviii, 1)

This milestone contains an inscription of five readable lines incised on a slab of granite. It is possible that it was found by H. St. J. Philby during his numerous travels in Arabia, but there is no written report to support this. The area in which this milestone was located is likewise unknown. The text reads as follows:

Translation
1. Eight ١
2. miles, which is ٢
3. two thirds ٣
4. of the way from ٤
5. al-Kūfah ٥

Milestone no. 2 (plate xxxviii, 2)

This milestone used to be stored in a display room in the Technical Department of the Institute of Mineral Resources in Jiddah. It has recently been brought to Riyadh together with other kūfīc inscriptions.
Credit is due to Mr. A. Anṣari for having noticed this stone when he was visiting the Institute in Jiddah in 1961. He was not, however, able to read the whole text, and he did not realize that it was a milestone. Apparently, a photograph of this milestone was published for the first time in a report concerning the activities of the Department of Antiquities in Riyadh. The stone is granite and measures 50 x 42 cm. It bears six engraved lines of kūfic inscription. These read as follows:

Translation

1. One mile from 

2. the postal stage 

3. which is the 

4. sixty second 

5. postal stage from 

6. al-Kūfah

We believe these two milestones (apart from textual reference) are the only direct proof, so far, to show that the roads were provided with milestones in Arabia during the period of the 'Abbāsid caliphs. Four milestone fragments of the Umayyad period from Palestine have, however, survived. These belonged to the Damascus-Jerusalem road which was established, or improved, by the great Umayyad caliph, 'Abd al-Malik (65/685-86/705), and they show the distance in miles (بالأثقال). The 'Abbāsid milestones under discussion use two kinds

2 He surmised, incorrectly, that the stone was broken, ibid., p. 178.
of measurements. Milestone no. 1 indicates the distance in miles, while the second stone gives the distance in postal stages (المسار). We have already noticed that at-Tabari, ibn al-Athîr, and others record that in the year 134/751, both fire signals (الشمار) and milestones (الأميال) were erected along the Kufa-Mecca road. We have also seen that the Caliph al-Mahdi in the year 161/777 ordered the milestones to be renewed along the Kufa-Mecca road.

Al- nhựabi also makes a reference to the milestones which were erected along the Kufa-Mecca road:

(Relating to the distance from the station of Ufa‘iyah to al-Ghamrah as a road used as a short cut by those who do not wish to pass through al-Mislah). This road is situated eleven miles from al-Ghamrah "at the milestone on which was written four from the postal station (al-barid)". Al- nhựabi adds that this short cut rejoined the main road five miles before al-Mislah, at the milestone on which was written "five from the postal station (al-barid)"

The available milestones correspond to the reference of al- nhựabi. To locate the original site of milestone no. 1 is a task of some complexity. According to ibn Rustah, ibn Khurdâdhabah, and al-Maqdisi, the pilgrim station

1 At-Tabari, op. cit., vol. III, part I, p. 81, Ibn al-Athîr, op. cit., vol. 4, p. 344: "وَفِي ذَٰلِكَ لَيْدَعَ الْمَسَارَ أَنَّ النَّارَ مِنَ الْكَوْهَةِ إِلَى شَمَهْرِ الأَمِيَالِ".
2 Ibid., vol. 5, p. 60, at-Tabari, op. cit., p. 486.
3 Al- nhựabi, op. cit., p. 345.
4 Al- nhựabi, p. 345.
5 Ibn Rustah, op. cit., p. 175.
6 Ibn Khurdâdhabah, op. cit., p. 127.
ath-Tha'labīyyah was situated one-third of the way along the Kufs-Mecca road. Yaqt puts the same station as two-thirds of the way along the road (presumably on the return journey from Mecca). A calculation of the full distance between Kufs and ath-Tha'labīyyah shows it to be 257 miles. This result agrees with the calculations of ibn Rustah and ibn Khurdādhabah. Most of the Arab geographers refer to Fayd as a station mid-way between Kufs and Mecca. According to the mileages which are given by ibn Rustah and ibn Khurdādhabah, the total distance between Kufs and Fayd is 349 miles.

Al-Ḫarbi alone gives the mid-way point as al-Munaṣṣif (المنصيف) between Kufs and Mecca; it is four miles before reaching Samīrah and is situated, according to his calculations, 39 miles from Fayd.

If, according to the classical Arab geographers, ibn Khurdādhabah and ibn Rustah (but not al-Ḫarbi), ath-Tha'labīyyah is a station one-third of the way along the road, and Fayd the half-way station between Kufs and Mecca, we are led to the following conclusion: milestone no. 1 was probably placed somewhere between Mughātht al-Māwān and ar-Rabadḥah. This would have marked two-thirds of the total length of the road. But al-Ḫarbi, who puts the half-way mark between Kufs and Mecca, 39 miles after Fayd, gives the following information: six miles from Mughātht al-Māwān is a circular pond which was built by Ḥamād al-Yazīdī, beside which was a dug well of brackish water, rest-houses, and a store house (or a water storage) belonging to Khāliṣah. According to al-Ḫarbi, the site of this pond marked two-thirds of

1 Yaqt, Mu'jam al-Buldān, vol. 2, pp. 78-79.
2 Ibn Rustah, op. cit., p. 176.
3 Al-Ḫarbi, op. cit., p. 313.
the Kufa-Mecca road:

"والشَّرٌّ على جبل يقال له فرعين وتبيلة بركة زبيدية مدوره، يسرة
علي ستة أمثال من الملايين بركة نسي الحبران، وهي لحأم الزيدي
مدوره، وهي بين الميل التاسع والعشرون، ومنها بئر ردية، وتبيلة وخازانة
لخالصة، ووضع هذه البركة ثلثا طريق الكوفة وله." ¹

Al-Māwān is about fifty kilometres south of the village of
an-Nuqrāh, where there is a mountain called Māwān. It is
situated approximately, latitude 25°15′, longitude 41°15′.
At al-Māwān there was a pilgrim station provided with facili-
ties for the pilgrims. ²

Al-Ḥarbi is thus the only one to have mentioned the
position of the place which acted as the two-thirds point
of the road between Kufa and Mecca.

Milestone no. 2 gives the distance according to the
system of measurement by postal stages (پرید) barīd. The
word barīd is "derived from Latin veredus/Greek beredos." ³
Linguistically the word barīd is of Persian origin. It means
a mule which has its tail cut to be distinguished when carrying
the post. ⁴ In addition, the distance between two stations is
referred to as a barīd, postal stage.

The Arab geographers and travellers used various
types of measurements. These were:

1. marhalah (one league of a day's journey) ¹ (مرحله)
2. farsakh (parasang) ⁵ (فرسخ)

¹ Ibid., p. 325.
² Ibid.
⁵ The word farsakh (فرسخ) is a "Persian measure of distance
on a time basis from the Parthian word frasakh, which came into
Armenian as hrasakh, into Syrian as parsehā, to continue in
both Arabic and modern Persian as farsakh", Encyclopaedia of
3. **barid** (بِرِيد)
4. **mile** (ميل)

To know the equivalent of the measurement to the **barid**, we have to elucidate the measurements which were used by the geographers. Al-Ya'qūbi states the distance between Baghdad and Kufa is thirty **farsakhs**, which is equal to three leagues (وي ثلاثة مراحل).\(^1\) Clearly one league was equivalent to ten **farsakhs** (parasangs).

Ibn Rustah assesses the distance between Basrah and Mecca as 25 leagues, equal to 700 miles.\(^2\) He estimates the distance between Baghdad and Mecca (via Medina) as 960 miles, while it is only 848 miles directly to Mecca without passing through Medina. The distance between Samarra and Mecca is assessed at 99 postal stages.\(^3\)

Ibn Khurḍādhabah puts the total mileage between Baghdad and Mecca as 275 2/3 **farsakhs** which corresponds to 827 miles.\(^4\)

For travellers, certain rules were proposed concerning their prayers during long journeys. According to Islamic Tradition, the passenger must not shorten his prayers unless he is travelling a minimum distance of four postal stages.\(^5\)

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4. Ibn Khurḍādhabah, *op. cit.*, p. 132. The Arab geographers, such as ibn Khurḍādhabah and ibn Rustah always give the distance between Baghdad and Kufa by the league system (مَرَاحِل) or in farsakhs (فَرَسَخ). From Kufa to Mecca they normally indicate the distance between the stages according to the mileage system. They refer to the total mileage as it is from Baghdad to Mecca, when in fact they mean from Kufa to Mecca. We must concur with al-Wuhaibi, who realized that when calculating the figures between the various stations, one arrived at different totals which contradict the full calculation given by the Arab geographers. This discrepancy may be due to scribal errors. See A. al-Wuhaibi, *Hijāz in the Writings of Arab Geographers*, p. 388.
and is away from his permanent home.

Learned Muslims make the barīḍ equal to four farsakhs.¹ They also indicated that in the Umayyad period, the farsakh equalled two miles and a half, while in the 'Abbasid it became three miles.²

The above information given by the Arab geographers and Muslim legislators help us to establish the following table which indicates the different measurements:

1 marḥala equals 10 farsakhs
1 barīḍ equals 4 farsakhs
1 farsakh equals 3 miles

Before discussing the location of milestone no. 2, it is helpful to quote al-Ḥarbi, who states that some places were marked with milestones bearing similar formulas. He noticed the milestone no. 42³ at one mile from ar-Rabadhah. Milestone no. 46 is ten miles before reaching Ma‘dīn Bani Sulaym, on the way to Mecca.⁴ Al-Ḥarbi puts milestone no. 51 at twelve miles before ar-Ruwaythah on the Medina-Mecca road.⁵ Lastly, al-Ḥarbi calculated the full distance between Baghdad (in fact Kufa) and Mecca as 758 miles (minus six miles) and by postal stages he puts it at 62 and two-thirds barīḍ (via Medina).⁶

From these pieces of information, we come to the following conclusion: our milestone must have been placed

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1 Ahmad Bake al-Ḥusayni, Dalīl al-Muṣāfir (Cairo, 1319 A.H.), pp. 7 f.
2 Al-Ḥijjawi, op. cit., p. 182.
3 Al-Ḥarbi, op. cit., p. 328.
4 Ibid., p. 332.
5 Ibid., p. 448.
6 Ibid., p. 468.
some 8 miles from the outskirts of Mecca. The 62 barīds mentioned on the milestone equal 744 miles. This figure is different by 8 miles from the calculation of al-Ḥarbi (752 miles).¹

One may ask how these milestones were placed. Were they attached to a standing object like a pillar or were they perhaps fixed into a wall so that travellers could recognize them easily? They are too small to be visible if they stood on their own. This is also true for the Umayyad milestones.²

Roman milestones were placed on their own; they were free standing. They usually looked like pillars of a cylindrical shape. The length of each was more than one metre, with a diameter of c. 50 cm. at the bottom and c. 40 cm. at the top. The writing occupies most of the top part of the stone. If the stone is rough, the top part has normally been smoothed in order to make it less difficult to write on. We may quote some examples of these milestones from Syria, where for example, two milestones were found in Khān al-Manqura on the Damascus-Palmyra road.³ Another Roman milestone, from the time of Trajan, was found near Palmyra. This also has the same shape.⁴ Similar Roman milestones have been discovered in Libya, dated 290-292 A.D.⁵

Al-Azraqi gives the total mileage between the Ḥaram

¹ Ibid., p. 468.
² The largest is 57 x 39 cm. See MIFAO, vol. 43, p. 18, no. 2.
³ Poidebard, La trace de Rome dans le desert de Syrie, pp. 49-51, Atlas, pl. xxvi, no. 1 and no. 4.
Mosque (in Mecca) and Jabal 'Arafāt as 12 miles. He says that the milestone number six was attached to the wall in Wādī Muḥassir.

As-Samhūdī reports that in one of the mosques on the Medina-Mecca road, an inscribed stone was fixed inside the mosque (or conceivably in the wall of the mosque): this stone indicated the distance along the road. The idea of locating a milestone in a mosque seems to be reasonable and perhaps was the case along Darb Zubaydah. Travellers might stop and assemble for praying and resting, and at the same time everybody would be able to learn the distance to his destination.

The Department of Antiquities in Riyadh discovered recently some kūfic inscriptions near the ancient watering station called al-Barūd north of Mecca. Among these inscriptions, which have not been published yet, is one of a few lines (rather illegible) inscribed on the face of a big rock, indicating at least one distance along the road which passes by this inscribed rock.

From this information we may conclude that our two milestones were perhaps placed in a visible position, i.e., on a wall or a mosque as suggested above.

It is possible that further discoveries in Arabia

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2 Ibid., p. 414. Al-Azraqi does not describe these milestones. His explanation is rather ambiguous. He describes them as Umayyad milestones, each of them being three cubits long.

والمilestone حجر طويل ثلاث اذرع وهو من الاسباب الرومانية

He does not clarify whether these milestones had inscriptions on them to show the distance, or whether they were stones acting as ālām to mark the road between the Holy Mosque and Jabal 'Arafāt. See Ibid., p. 414. Ibn Rustah, op. cit., pp. 56-57 reports on these milestones; he says that they were erected by the Umayyad Caliph Marwān b. al-Ḥakam (64/684-65/685).
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along the caravan routes or other areas may bring to light other milestones which are still undisturbed in their original places.

Let us now examine the characteristic forms of the letters and compare them with those on the Umayyad milestones. The accompanying illustration shows the similarities and differences between the letter forms. The letter group alif on both milestones is characteristic of the usual form which appeared in the first century of Hijrah in which the base of the alif is bent to the right. But there are slight differences; in the Umayyad stones the alif bends to the right with a slight curve as in no. 1, or it is twisted to the right at a right angle as in stones nos. 2 and 4. On the other hand, in the alif in the 'Abbasid stones, the point bent to the right ends with a sharp point, as in milestone no. 2, and in the fourth line in milestone no. 1. The apex of the alif in these stones has a slanting edge, as appears in stone no. 2, while in no. 2 the top of the alif is hollowed with two raised sharp points on either side. This hollowed form is also repeated in the shape of the letter group lām and nūn. The only bā' which appears in the Umayyad milestones is the medial bā'. This has no resemblance to the 'Abbasid initial bā' which appears only in milestone no. 2 with an angular top. The letter dāl appears in different shapes in the Umayyad milestones which show the usual characteristics of the period of the first and early second century of Hijrah. The upper part which is usually horizontal is not fully horizontal in these specimens, but it rises gradually to the left and at the end it has a right

1 See A. Grohmann, Arabische Paläographie, vol. II (Wien, 1971), Table no. II. Also see Nabiya Abbott, The Rise of the North Arabic Scripts, etc. (Chicago, 1939), pl. V.

2 Grohmann, op. cit., Table II, and fig. 60, p. 87.
turn rather than rising vertically. This letter appears twice in the 'Abbasid milestone no. 2. Here the two strokes are fully horizontal and they join vertical upright angles. The final end of the upper strokes has a hook which turns to the right with a sharp point. The letter dāl on the 'Abbasid stones is quite similar to the letter of group kāf which appears in the word الكوفة (al-Kūfah); this has no parallel in the Umayyad stones which are typical of the early eighth century A.D., late first century A.H.\(^1\)

The letter group sīn on the 'Abbasid stone no. 2 has a regular sawtooth shape, in contrast to the uneven shape to the sīn which appears on Umayyad stone no. 4. The letter of group mīm appears fully rounded on both of the 'Abbasid stones. On the Umayyad stones, the mīm appears in different forms, oval or triangular, which is in the characteristic fashion of the same period. However, the rounded mīm did appear before the 'Abbasid era: it can be seen in the text inscribed on the Dome of the Rock.\(^2\)

The letter groups lām on both the Umayyad and 'Abbasid milestones are fairly similar, the main difference being that one of the lāms which appear on the 'Abbasid stone no. 2 has an angular apex, and another has a hollowed apex.

The letter groups fā' and gāf appear to be identical with the Umayyad and 'Abbasid periods. For the letter group hā', we find that the initial hā' in the 'Abbasid no. 2, begins with a right angle, has an angular apex and terminates with two curves while the initial hā' in the Umayyad stones,

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particularly stone no. 1 and no 2, have an overall rounded shape which is typical of that period.  

The shape of the final ḥāʾ on the Umayyad stones and the 'Abbasid stone no. 2 is curved, while that of the 'Abbasid milestone no. 1 has a semi-square shape.

Finally, the letter group wāw of all the stones is virtually identical, the only difference being that the letter wāw in the 'Abbasid stones terminates with a sharp edge.

We understand, now, the differences and the similarities between the forms of the letters on the Umayyad milestones and those of the 'Abbasid period. It is worth while comparing the style and the shape of the letters on the 'Abbasid stones with other material from the same period. In this respect we rely mainly on the very useful handbook by Grohmann which contains samples of dated inscriptions from both the Umayyad and the 'Abbasid period. Our immediate impression, concerning the style and forms of the letters, is a mixed one. Some of the letters are fully 'Abbasid but other still recall the Umayyad characters.

Hastae tend to remain of the same (narrow) width, and not to widen towards the top into a broad club shape, as many 'Abbasid letters do, though some, like the 'Asqalan inscription, do not show this widening. The top of the letters tend to be slanting and concave as in 'Abbasid scripts, where dating is concerned. A lower limit may be indicated by the Muwaqqar inscription (101/720-105/724) and an upper one by early 'Abbasid inscriptions. There is no special shape

1 See Grohmann, op. cit., Table no. 11.
2 Adolf Grohmann, Arabisch Paläographie.
3 Grohmann, op. cit., pl. IV, no. 3. This is dated in 155 (771) at the time of Caliph al-Mahdi.
4 Ibid., pl. XV, no. 2.
5 Ibid., fig. 78, p. 105 and pl. IV, no. 3.
comparable to the letter of group alif. The nearest example can be traced in the inscription from al-Muwaqqar. Inscriptions from the early 'Abbasid period have different forms; one of these is the club shape with a slanting edge at the top, and the base widening to the right. The 'Abbasid letters of group bā', tā', thā', nūn, and the initial and medial yā', nearly all possess the same shape as on both milestones, except that the heads of the letters in stone no. 1 are sometimes hollowed, while on stone no. 2 they are slanting with a sharp edge at the top. Identical forms to these letters can be traced on the dated stone from Hijāz,1 and the same shape is developed in a later dated inscription from Egypt (263/876-265/879) at the time of Aḥmad ibn Ṭūlūn.2 In this inscription we find that the tops of the letters are widening with slanting or hollowed edges.

The letters of group dāl have the same forms as the letter group kāf. The characteristic features of these letters can be traced in the inscription from al-Muwaqqar.3 The inscription from the time of al-Mahdi contains both letters; here the hooks of the top strokes widen out towards the ends. The nearest example to the letters dāl and kāf can be traced in an inscription from the Berlin Museum which is dated 260/874.4 The letter group rā' appears the same on both stones. The shape of this letter does not appear so often in the early 'Abbasid inscriptions. The nearest parallel shape is clearly visible in the inscription of al-Muwaqqar.5

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1 Ibid., fig. 78, p. 105.
2 Ibid., pl. XXI, no. 2.
3 Ibid., pl. XV, no. 2.
4 Ibid., pl. VI.
5 Ibid., pl. XV, no. 2.
inscription from 'Asqalan dated during the time of al-Mahdi (155/771).

As for the letter group sin, which appears only in milestone no. 2, in a sawtooth shape, this style is traceable in the stones from the 'Abbasid period: 155/771, 160/776, and 172/789. It also appears on most of the later dated inscriptions.

The letter group ḫā' is written only in milestone no. 1, and its form can be traced in the inscription from the Umayyad period. There is no difference between this letter and the group ẓā which appears in the 'Asqalan inscription; the shape of this letter is identical to the letter ḫā'.

The letter group 'ayn, is inscribed only in stone no. 2. It possesses the typical form of the early 'Abbasid period, as it is clearly visible in the 'Asqalan inscription.

The letter groups fā' and gāf are written on both milestones having almost the same shape. These, as we stated above, appear to be identical with those on the Umayyad milestones. This form was also used in the late ninth century A.D. (260/874).

The letter groups hā' and wāw are traceable in many inscriptions during the Umayyad and 'Abbasid period. The

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1 Ibid., pl. IV, no. 3.
2 Ibid., pl. IV, no. 3.
3 Ibid., fig. 78, p. 105.
4 Ibid., pl. IV, no. 2.
5 Ibid., pls. VI, VII, nos. 3 and 4.
6 Ibid., pl. XII, no. 1.
7 Ibid., pl. IV, no. 3.
8 Ibid., pl. IV, no. 3.
9 Ibid., figs. a, b, c, p. 83. See also MIFAQ, vol. 45, 1949, pl. II, nos 1, 3.
10 Grohmann, op. cit., pl. VI.
initial letter ḥā' can be seen in the inscription of the Dome of the Rock.\textsuperscript{1} It is also traceable in the 'Asqalan inscription\textsuperscript{2} and that from the Berlin Museum.\textsuperscript{3} In this (pl. VI) the letter ḥā' has a bigger beak, while the earlier ones show one less than ours. The final letter ḥā' appears to be identical with the form found in the inscription of al-Muwaqqar\textsuperscript{4} as is the case also with the letter group wāw. These two letters are also used at a later date, 260/874.\textsuperscript{5}

The letter group wā' has two forms, the cursive shape which is written on both milestones and the reversed shape which is shown on stone no. 1. The cursive form is traceable in the inscription from the time of al-Mahdi (155/771);\textsuperscript{6} it also appears at a later date.\textsuperscript{7} As for the reversed form, it is traceable in a dated inscription in 191/807\textsuperscript{8} in Cairo Museum, but we have already seen this characteristic shape in the Umayyad milestones, particularly no. 4.\textsuperscript{9}

**Conclusion**

We have no reason to doubt that these two milestones are 'Abbāsid. Firstly, the style of the writing is the type of the early 'Abbāsid period and, secondly, the distance formulas on the stones are truly 'Abbāsid and agree with quotations given by al-Ḥarbi. Thirdly, we have text from at-Ṭabarī, ibn al-Athīr, and other historians, that the 'Abbāsid caliphs (Abū 'Abbās as-Saffāḥ, Abū Ja'far al-Manṣūr, and

\textsuperscript{1} Ibid., pl. XII.
\textsuperscript{2} Ibid., pl. IV, no. 3.
\textsuperscript{3} Ibid., pl. VI.
\textsuperscript{4} Ibid., pl. XV, no. 2.
\textsuperscript{5} Ibid., pl. VI.
\textsuperscript{6} Ibid., pl. IV, no. 3.
\textsuperscript{7} Ibid., pl. VI.
\textsuperscript{8} Ibid., pl. VII, no.3.
\textsuperscript{9} MIFAQ, vol. 45, pl. II.
al-Mahdi) erected milestones along the road from Kufa to Mecca. Both at-Tabari\(^1\) and ibn al-Athîr\(^2\) agree that in 134/750 the milestones were placed along the road. This year corresponds to the reign of Abû 'Abbâs as-Saffâh (132/750-136/754). The Caliph al-Mahdi, as we have already mentioned, renewed the milestones in the year 161/777. This is also reported by at-Tabari,\(^3\) ibn al-Athîr,\(^4\) and al-Qalqashandi.\(^5\) However, there is no mention of the system of mileage indicated by these milestones in the reports of the Muslim historians.

It is most probable that the mile measurement (ميل) was used during the early period of the 'Abbasids. Milestone no. 1 could most likely have been erected either during the time of as-Saffâh, Abû Ja'far, or perhaps during the rule of the Caliph al-Mahdi. The reign of Abû 'Abbâs as-Saffâh lasted only four years and the establishing of milestones did not take place until 134/752, two years after he had ascended the throne. It is likely that the work was initiated by Abû 'Abbâs as-Saffâh and completed by Abû Ja'far.

From the information mentioned by at-Tabari and ibn al-Athîr, it appears that as-Saffâh built castles (قصور) only along a small section of the road and this is between Wâqîsah and Zubâlah.\(^6\) The Arabic text which concerns as-Saffâh does not really explain whether the whole road was completely furnished with milestones or only part of the road. It simply says:

\[\text{وفيها ضرب المنار من الكرنك الي كه واناميل}\]

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that in this year (134/752) both lighted places and milestones were erected\(^1\) between Kufa and Mecca.

The second milestone, which is related to the postal stage (بَرِيد) system, is more likely to be of the late eighth century A.D. It could be related to the establishment of the barîd during the caliphate of al-Mahdi (158/775-169/785); as we saw, he renewed the milestones in 161/778.\(^2\) He also ordered the barîd to be established between Medina-Mecca and the Yemen for the first time. We may conclude that the distance measurement on the mile system (كُم) was used mainly for the main pilgrim route from Kufa to Mecca, while the postal stage system, barîd, was probably linked with stopping places which were specially built for the state postal system.

2. Kûfic Inscriptions Found Near Darb Zubaydah

A number of kûfic inscriptions, on rocks and stones, have been sited at as-Suwârqiyyah, Ḥâdhah, and on a small mountain near Samîrah. Some of these inscriptions are in good condition. Nevertheless, many others have been badly disturbed, possibly by inhabitants, particularly those at Ḥâdhah. None of these kûfic writings have, as far as we know, been reported so far.

We start by describing the Arabic inscriptions found at as-Suwârqiyyah. Here we only managed to spend about twenty four hours. Our investigations brought to light two complete and undated inscriptions on stones, which were kept in an old mosque. Other kûfic inscriptions are to be found on the rocks of a mountain near the market of the village to the north. On the southern side of Jabal al-'Uwaynah, north of as-Suwârqiyyah,

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\(^1\) Aṭ-Ṭabari, op. cit., vol. III, part I, p. 81.

there are also some early kūfic writings inscribed on the granite rocks.

As-Suwārqīyyah

(1) Prayer (for pardon)

Two readable lines of simple kūfic inscribed on a rough granite stone. The inscription has been damaged by a crack across both lines. It reads as follows:

Translation

1. O God pardon Ḥaban

2. The son of 'Ubayd his terrible sin.

(2) Prayer (for mercy and pardon) (pl. xxxi, 2)

At the same place of Jabal al-'Uwaynah, two clear well written lines of early kūfic, engraved on a block of granite stone.

Translation

1. O God bless Muḥammad

2. forgive ʿAbdullāh the son of Muḥammad the son of 'Ādam

(3) Prayer (for pardon)

Two lines of kūfic writing inscribed on granite stone. Some letters are difficult to identify because the letters are very tiny and not deeply cut. Other letters are mutilated by a crack in the stone.

Translation

1. O God forgive Sahl b. .. . Yazīd

2. the son of Ḥakīm the son of Nāʿil ...

The letter alif of the word is missing—probably the scribe has forgotten to add it. The fifth word in the first line is
obscure, but it could be related to Sahl; the last word in the second line is not clear either, but it may be read as زنهم (their sins).

(4) **Prayer (for forgiveness)** (pl. xxxii, 1)

Five clear lines of simple kūfic engraved on a black granite stone (74 x 45 cm). The text is undated and reads as follows:

1. اللهم اغفر لعبد الله بن
2. محمد بن آدم بن عبد الله بن
3. عثمان بن سعيد بن جعفر
4. بن الزبير رضي الله عنهم اجمعين
5. ورحم من قال آمين

Translation:

1. O God forgive 'Abdullāh b.
2. Muḥammad b. Ādam b. 'Abdullāh b.
3. 'Umrān b. Sa'īd b. Ja'far
4. b. az-Zubayr may God be well pleased with them all
5. God have mercy upon those who say Amen.

Without any doubt this text and inscription no. 2 were executed by the same hand. The name mentioned in inscription no. 2 is related to the same one in this text. It is more likely that the scribe could not find much freedom to write on the small rough stone, so he had to choose another one with more space.

(5) **Unclassified text** (pl. xxxii, 2)

This text is composed of nine lines of simple kūfic inscribed on a granite boulder (90 x 60 cm.). It is situated on the mountain of al-Quṭay'ī to the east of the market of as-Suwarqiyyah. The stone is somewhat broken on the left side (and maybe on the right), where some letters or words have gone.
Translation

1. The son of Muḥammad his slave (?)
2. not a Lord that can be removed by death
3. is a King even the Kingship and
4. the King who does not die
5. there is no God but Allāh exalt him (?)
6. ... God there is no God but Allāh
7. Muḥammad the Messenger of God and
8. Muḥammad wrote...
9. ... (6).

This inscribed text is rather peculiar. The text has to remain meaningless since some words appear to be missing. The repetition of words such as الملك, ملك, and the repeated formula of the Shahadah, لا الله الا الله, indicate that the text is incomplete, probably the portion of this stone which contains the missing words has fallen away.

(6) Tombstone (fig. 1)

This stone was discovered on the wall of the mosque in the old suburb of as-Suwārqiyyah. It measures 46 x 30 cm. It bears ten lines of elaborated kūfīc inscriptions. It reads

1 Stands for ما.
2 The word ينزل should be written as نزله.
Fig. 1: Undated tombstone from as-Suwarqiyah bearing the name of Sulayman b. Muhammad b. Harmalah. (preserved in Riyadh University Museum).
as follows:

1. بسم الله الرحمن الرحيم
2. شهد الله إنه لا إله إلا
3. هو والملائكة والو
4. السلام قائمًا بالقسط لا
5. اله إلا هو العزيز الحكيم
6. أنا سليمان بن محمد بن حر
7. مله اشهد أن لا إله إلا الله
8. وان محمد رسول الله و
9. ن الموت حق والبعث
10. حق

Translation
1. In the name of God the Compassionate the Merciful
2. God has testified that there is no god but
3. He and the angels and
4. endued with knowledge standing firm, there is no
5. god but He, exalted in power, the Wise
6. I (am) Sulayman b. Muḥammad b. Ḥar
7. malah, testify that there is no god but Allāh
8. and Muḥammad the Messenger of God that
9. death is reality and the day of resurrection
10. is (also) reality.

Lines (2-5) are literal quotations from the Qur'ān (sūrah III, verse 18).

(7) Tombstone (fig. m)

This stone is found in the courtyard of the mosque at as-Suwārqiyyah. It has been used as a sundial to help in determining prayer times. It is a green coloured granite stone. It bears a remarkably elaborated eleven lines of kūfic inscriptions. The letters are not deeply inscribed and
Fig. m: Undated tombstone from as-Suwarqiyyah bearing the name of Muhammad b. 'Abdallah b. Yusuf. (preserved in Riyadh University Museum).
therefore a few have been obliterated. The stone measures 52 x 27 cm. It reads as follows:

Translation
1. In the name of God the Compassionate the (Merciful)
2. now hath come unto you an Apost(le)
3. from yourselves: it grieves
4. him that ye should perish
5. Ardently anxious is He over you to the believers is He
6. most kind and merciful. O God
7. make Muḥammad b. 'Abd
9. . . . one of those who will succeed
10. who do not fear
11. nor shall they grieve.

The end of the eighth line and the beginning of the ninth line show indications of evasion; perhaps the stone cutter or the engraver did not find enough space to add more details with whom the text is concerned.
Qlay' an-Nis near Samīrah

(8) Prayer (for forgiveness) (pl. xxvi, 1-2)

Qlay' an-Nis is a small mountain situated about 48 km. south of Samīrah. The nearest pilgrim station is the remains of Birkat Ḫurayd and Bi'r al-'Usaylah which lie about 22 km. to the north, on the ancient pilgrim road. Engraved on the rock on top of this mountain is a text of early kūfic writing which is still preserved. It is composed of nine lines. The area which the inscriptions cover measures 1.50 x 1.50 m. The inscription is chiselled into the granite which is interrupted by streaks of white quartz. Because of these marks we could not decipher the whole text. Also the writing is not deeply inscribed. The text reads as follows:

الله اغفر لابراهيم بن زياد
2. ذئب ناكم انت الغفور
3. الرحم ونجتم من الجور بالخير
4. نانكم علي ذلك من القادرين
5. اماما من هذا ؟ ننسك وهو
6. عليه ننس من القادرين لقد كتب ؟
7. كريم الا حاسد عند الله
8. نسكتكم الله وهو
9. السبع العلم

Translation

1. O God forgive Ibrāhīm b. Ziyād
2. his sin Thou the oft-forgiving
3. Most Merciful, and Thou deliverest him from others' injustice
4. indeed Thou art of those who are most strong
5. of leaders in this? By yourself and He
6. Himself alone is of the Capable and then wrote?
7. noble minded but is jealous of God
8. but God will suffice thee as against them and He
9. is the All Hearing, the All Knowing.

Lines 8 and 9 are literally quoted from the Qur'an (surah II, verse 136). We are unable to identify the words in the fifth and sixth lines as the letters are badly disturbed with white marks (quartz) on the granite.

**Inscriptions from Ḥādhah**

Only two inscriptions were copied from rocks in the Ḥādhah wadi. Here there are many inscribed stones but they are badly disturbed by the nomads.

(9) **Confession** (pl. xxxiv, 1)

1. (A)ḥmad ibn Ḥusayn testifies
2. that there is no god but Allāh.

The letter alif of Ḥmad is missing. The third word in the first line is possibly Ḥushaysh (حشيش) since there are two teeth after the letter sīn (س), or maybe the writer added the extra tooth by mistake.

(10) **Prayer** (pl. xxxiv, 2)

1. Repentance from God upon
2. Muḥammad b. Ya'qūb
3. b. Ishāq.

Little has been written concerning the Islamic inscriptions from Saudi Arabia which have not so far been made a special object of study by an institute of scientific expeditions. Only a few kūfic inscriptions have been discovered and
only some of these have been published. The earliest dated kufic inscriptions were found on top of the Mountain of Sal', north of Medina and these were published by Muḥammad Ḥamidullāh.¹ Others were discovered by Karl S. Twitchel east of aṣ-Ṣā'if and these were also published.² A number of inscriptions from the early Islamic period were found in Jordan.³ Miles also published a dated inscription of the early fourth century of Hijrah (304 A.H./916-917 A.D.). This was found in the old gold mine of Ma'din Banī Sulaym (Mahd adh-Dhahab).⁴

Three European scholars, St. J.B. Philby, G. Ryckmans, and Ph. Lippens, carried out an historical and archeological expedition in Arabia in 1951-1952. On this expedition they photographed and copied a large number of kufic inscriptions from rocks and stones. The majority of these inscriptions were collected from the Ḥijāz province. At a later date some of these were studied and published by A. Grohmann.⁵

Mr. 'Abd al-Quddūs al-Anṣāri is the first Saudi pioneer to have travelled and visited numerous archaeological sites and to recognise a large number of kufic inscriptions. Among these places is aṣ-Ṣuwaydah⁶ east of Medina. Here he found a few dated and undated kufic inscriptions, some from the early Islamic period.⁷ From the available contemporary

² George C. Miles, "Early Islamic Inscriptions near Ṭa’if in Hijaz", JNES, vol. 7, 1948, pp. 236-242, pl. XVIII, a, b.
³ D. Baramki, "Kufic Texts", ADAJ, vol. 1, 1951, pp. 20-22, pls. VI-VII.
⁶ A. Anṣāri, Bayn at-Tārikh wal-‘Athār, pp. 133-143.
⁷ Unfortunately, some of his photos are poor as well as his copying of the inscriptions: see ibid., pp. 133-142.
published material on Arabic inscriptions from Arabia and other places, we may find some comparable texts to our new inscriptions.

As is clear, these inscriptions are all undated and it would be a difficult task to arrive at a specific date. The genealogies of the persons with whom the inscriptions are concerned are still unknown to us. Some of them may probably have been connected with, or worked on, the road; alternatively, perhaps they were the people who travelled along this road (merchants, pilgrims, etc.).

The prayer texts nos. 1 to 4 are parallel to other dated texts discovered in the vicinity of at-Ṭā'if.¹ Identical inscriptions were discovered in Jabal Ṭubeiq and Wādī Rum² in Jordan.

These inscriptions are written in kūfic style characteristic of the ninth century A.D.

The texts nos. 2 and 4, from as-Suwārqīyyah, are more likely of the late 8th or early 9th century A.D. They are clearly written and may be executed by the same hand. Letters are straight and extended with great skill. The characters of some of the letters such as nūm (م), nun (ن), and wāw (و) are similar to the milestones from the 'Abbasid period which could be dated in the late second or early third centuries of Hijrah.³ There is only one point worth mentioning concerning text no. 4. The fifth name in the third line is written as ٢٥٣ which we interpreted as Sa'īd. But the scribe seems to have changed the usual form of the letter dāl (اذ) to ٢٥٣ which could be read as ṭāʾ (ت) or nun (ن). Could it possible be that the

¹ A. Grohmann, op. cit., pp. 64-95, z. 78, 80, pl. X, 7, z 141, pl. XIII.
² Baramki, op. cit., pp. 20-22, pls. VI-VII.
³ See plate xxxii.
writer meant to put شعبان (Sha'bān) instead of سعيد (Sa'īd). This is, however, highly unlikely. We may assume that the scribe forgot to extend the upper stroke of the letter dāl.

It is likely that the person who is mentioned in text no. 4 is descended from the family of az-Zubayr ibn al-'Awām. Az-Zubayr had eleven sons and nine daughters; among his sons was Ja'far. We understand from historians that Ja'far ibn az-Zubayr was appointed by his brother 'Abdullah b. az-Zubayr as the governor of Medina after the death of the Umayyad Caliph Yazīd b. Mu'awiyah (64/683). They state that Ja'far had only one son named Muḥammad who became a muḥaddith (a relater of traditions). It is possible, however, that Ja'far had more than one son, and if this is the case, then this text is of importance, historical and chronological, since the genealogical books do not provide such information.

Text no. 6 is a tombstone inscribed, probably, in the late ninth century kufic style. Dated tombstones of this period are found in Egypt containing typical Qur'ānic quotations, particularly for the introduction and termination. The tombstones from Egypt are slightly different because their letters are partly ornamented, but in general, the style of inscriptions is similar. This is also found on a fragment of a stele from Almeria from Spain. The scribe of our stone has

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1 Ibn Sa'd, Tabaqāt, vol. 3, p. 70.
3 Ibid., p. 125.
5 Werner Caskel, Arabic Inscriptions in the Collection of Hispanic Society of America, trans. from the German by Beatrice Gilman Proske (New York, 1936), text p. 18, pl. XXII.
made a spelling mistake by writing بالنصط instead of
"righteousness".

The formula of stone no. 7 is also used on tombstones
from Qairawân in 256/870.¹ The incisions of the letters and
the balance of the words and the lines are also similar.²

There is no comparable text to inscription no. 5.
By the type of the letters, we presume that it is of the ninth
century A.D. As we explained above, this text is rather
peculiar because of the repetition of some words. However,
we did meet a text from Qairawân quoting a formula which re-
sembles this slightly.³ In this text,⁴ there are two lines
(1-2) that read as follows:

"ليس ملكاً يزيله الموت ملكاً انا الملك ملك من لا يزول"
The formula is parallel, to some extent, to the words mentioned
in lines 2-3 and 4 of our text, though the text of the
Qairawân is thought to be of the late tenth century A.D.⁵

Inscription no. 8 bears the name of Ibrâhîm b. Ziyâd
(ابراهيم بن زياد). This person seems to have been of great impor-
tance in the beginning of the second century of Hijrah. His
name is mentioned only once by at-Ṭabarî, who says that Ibrâhîm
bin Ziyâd was the messenger of Naṣr b. Sayyâr.⁶ This was in
the year 123/740. Naṣr b. Sayyâr, however, was the governor
of Khursân province as early as the reign of the Caliph Hishâm
ibn ‘Abd al-Malik.⁷ He continued to rule over the whole

¹ Bernard Roy and Paule Poinssot, Inscriptions arabes de
² Ibid., fig. 12, p. 119.
³ Ibid., text 13, pp. 48-50.
⁴ Unfortunately this text is provided with no photograph or
drawing.
⁶ حتي قدم اليه ابراهيم بن زياد رسول مصر.
⁸ Ibid.
region until the rise of the 'Abbasid revolution. He apparently died in 131/748 near Hamadan while he was trying to escape from Abū Muslim al-Khusaibī.

If the text does concern Ibrāhīm, then we can certainly attribute it to the first half of the second century A.H. Kūfic inscriptions discovered in Jabal Usays, in Syria, dated in 120/737 are of the same style.

As for the two inscriptions from Ḫādhah, they could be of the late second century of Hijrah which corresponds to the late 8th or early 9th century A.D.

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1 Ibid., p. 1718.
Chapter IX

SMALL FINDS

1. Early Islamic Pottery from the Pilgrim Road (Darb Zubaydah)

During the writer's investigation of the pilgrim road, numerous types of pottery sherds were found in many places. The abundance of pottery sherds indicates that the road was widely used by a large number of people in early Islamic times, particularly during the 'Abbasid period. It has already been mentioned that the road was provided with necessary facilities. Water was secured by digging wells and constructing reservoirs. At big stations and stopping places, buildings were erected to house the pilgrims, travellers, and state administrators during their journey to and from the holy cities.

People who used the road must have carried with them food, water, and other essentials which were stored in jars of different sizes. We can assume also that pottery dealers made use of this highway by displaying their wares. Early Muslim geographers made reference to places along the road which were provided with market places and stalls. Ibn Rustah refers to market places at Zubālah and ath-Tha'labīyyah. Ibn Khurdādhabah mentions the existence of market places at Fayd. Al-Iṣfahānī mentions Zubālah as a big market centre; along the whole road

1 Al-'Alāq an-Nafisah, p. 175.
2 Kitāb al-Masālik wal-Mamālik, p. 127.
from Kufa, similar markets were provided.\footnote{1}

During the pilgrim season, the inhabitants of places near, or on the road, dealt with pilgrims by selling them food and other goods. Ibn Jubayr illustrates the relation between the pilgrims and people who met them at major stations; they bartered with the pilgrim for various kinds of goods and items. For example, bedouins, both men and women, used to organise well-attended markets for camels, rams, butter, milk, meat, and camel fodder at Samīrah, Fayd, and ath-Tha‘labīyyah. The pilgrims would barter clothing and other items for the goods they needed on the journey.\footnote{2}

One may conclude that in the market places along the road were different pottery, glass, and other wares and utensils for sale. We can assume that the pottery dealers and perhaps the potters themselves participated a great deal with their products in the areas of these markets, although this is not specifically mentioned by the early Arab geographers.

We have collected a large quantity of attractive fragments from different places, both of glazed and unglazed types from different vessels. Our pottery comes from six ancient stations, viz al-Qā‘ wal Haytham, Zubālah, ash-Shīḥīyyāt, al-Bid', Fayd, and lastly Samīrah. In addition, a few fragments in the possession of Riyadh University Museum have been examined. These were collected from Zubālah and Fayd. We have referred to these fragments as ZR and FR.

The sherds can be classified into the following categories:

1. Lustre painted fragments of the early Islamic period.

\footnote{1} Bilād al-'Arab, pp. 333-335.
2. Tin-glaze ware.
3. Splashed ware.
4. Monochrome green glazed ware.
5. Unglazed ware both with and without decordanation.

Generally, the sherds are from the rims, handles, shoulders, and bases of big jars, bowls, cups, and small lamps. It must be noted here that, as far as we know, there is no single published report which deals with Islamic pottery from Saudi Arabia. Recently, however, P.J. Parr and others described briefly some glazed potsherds found at the ancient Islamic site of al-Mabiyat, c. 18 km. south of al-'Ula, on the pilgrim route coming from Syria and Egypt. The date of these sherds is probably of the eleventh and twelfth centuries A.D.; other sherds are of the eighth century A.D.¹

Lustre Painted Ware

Among the material collected, there are three small fragments of early Islamic lustre ware. They represent the two earliest types of lustre ware: painted polychrome and monochrome. It is well known that lustre ware became desirable only after the invention of tin-glaze: "Metallic pigments were painted over the opaque white tin-glaze and fixed on the

¹ P.J. Parr et al., Preliminary Survey in N.W. Arabia, 1968, reprinted from Bulletins nos. 8 and 9 of the Institute of Archaeology (London, 1970), pp. 199-203. After completing the writing of the chapter on pottery, in its final shape, Dr. Géza Fehérvári called my attention to the newly published work dedicated to the pottery finds from Susa: Myriam Rosen-Ayalon, La Poterie Islamique, Memoirs de la Délégation Archéologique en Iran, Tome L, Mission de Susiane (Paris, 1974). This work contains valuable information on the different types of Islamic pottery from Susa including unglazed and glazed types. This work will be of great value as a guide for future archaeological investigations along Darb Zubaydah or elsewhere in Arabia. We feel, however, that despite the importance of the information contained in this work, it does not in any way conflict with the classification or the dating of the pottery finds from Darb Zubaydah as here presented.
glaze by a second firing. After firing the lustre painted surfaces give an iridescent and glittering reflection."\(^1\)

The provenance of lustre has not yet been established, but it is believed that the technique was invented by Egyptian glass-makers some time before the Islamic period.\(^1\) "There is no doubt that lustre was first employed on a large scale for ceramics decoration in Baghdad and Samarra."\(^3\) Lustre painting eventually spread all over the Islamic world; to Iran, Egypt, Syria, Algeria, and Spain.\(^4\)

An interesting fragment of polychrome lustre was picked up at al-Bid' (B. 1, fig. 12). This is part of a rim of a bowl of yellowish earthenware. The decorations consists of leaves and a stripe round the edge. The colours of the fragment are brownish red, mustard, and olive green. The earliest comparable example to these decorative motifs appears on a deep lustre bowl which was found in Mesopotamia.\(^5\) Polychrome lustre is believed to be the earliest type of lustre-painted pottery. Its colours were used on wall tiles in al-Jausaq al-Khāqānī and the al-'Āshiq palace in Samarra. Polychrome lustre tiles were also used to decorate the mihrab of the Great Mosque of al-Qairawān in Tunisia. These tiles were imported from Baghdad in 862 A.D.\(^6\) The approximate date of this type of lustre therefore goes back to the middle or

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5 Friedrich Sarre, *Die Keramik von Samarra* (Berlin, 1925), p. 41, pl. XII, no.2-156.
late ninth century A.D.\(^1\)

Of the second type, there are two small fragments painted in monochrome lustre. The first piece was found at Zubālah (Z. 1, fig. 7, pl. LXII). It has a yellowish body, coated on either side with tin-glaze; the lustre painting can be seen on the inner side; the decoration of this piece is composed of intertwined scrolls within lines.

The second fragment of monochrome lustre comes from Fayd. It also has a yellowish body, coated with tin-glaze on either side and monochrome lustre pigment still visible on the inside (FR 1, fig. 19). According to the late Ernst Kühnel, who was the first to publish a study of 'Abbasid lustre ware, monochrome painted lustre can be dated to the very end of the ninth and to the first half of the tenth century in Mesopotamia.\(^2\)

It really gained importance under the Fatimid dynasty (969-1171 A.D.) in Egypt, where it went through a considerable development.\(^3\) Further investigations along the pilgrim route (from Kufa to Mecca) may result in producing more sherds of this type, and this can perhaps throw further light on the origin and early development of this pottery.

**Tin-Glazed**

Among the glazed sherds found along the road were tin-glazed wares. At Fayd, five large fragments (F.5 a-b, 6 a-b, 7 a-b) were collected, being rims, bases, and shoulders from bowls or dishes. These are of fine white body or sometimes buff coloured earthenware. The body is coated on either side with a shiny opaque white glaze. The glaze appears to be decayed on some pieces, particularly on F. 5-a, as a result of

\(^1\) *Ibid.*, p. 43.


\(^3\) G. Fehérvári, *op. cit.*, pp. 43-44.
its long contact with the soil.

It has been suggested that tin-glazed ware was invented for the first time by Muslim potters in Mesopotamia. The date would be either in the late eighth or early ninth century. Tin-glazed ware was never used in China.\(^1\) The inspiration for the invention of tin-glazed ware must have come from Chinese T'ang white porcelain, which Muslim potters greatly admired. These Chinese wares were of yellowish white stone and porcelain. The latter is white and is slightly translucent.\(^2\) Muslim potters invented this type of pottery and presented it to the 'Abbasid court.\(^3\)

The origin of tin-glaze is not known, but it is assumed by several scholars that it was invented in Mesopotamia during the eighth or ninth century A.D. The excavations of Sarre and Herzfeld at Samarra before the First World War produced the first excavated specimens of this type. It appears that the technique spread quickly in the Islamic world, since small pieces have also been discovered at Raqqa\(^4\) and al-Mina in Syria, at Fustat in Egypt, and in several places (Susa, Siraf,\(^5\) Nishapur,\(^6\) Jurjan\(^7\)) in Iran.

Muslim potters were not satisfied with one type, but produced new decorative techniques by painting over the glaze with cobalt blue,\(^8\) green antimony yellow, manganese purple,

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\(^1\) Ibid., p. 40.
\(^3\) Ibid., p. 23.
\(^4\) Ibid., p. 24.
\(^5\) G. Fehérvári, op. cit., p. 40.
\(^7\) M.Y. Kiani, "Recent Excavations in Jurjan", *Percival David Colloquy*, no. 4, 1973, pp. 126-133.
\(^8\) Sarre, *Die Keramik von Samarra*, pp. 44-45, pl. XVIII.
or in lustre.1

The few pieces found at Fayd are akin to the type discovered at Samarra.2 These are very similar in shape to our fragments from Fayd, being mostly rims widening outwards with rounded edges, and foot rings shaped with a flat base. There is only one piece from Fayd (F. 7-b, fig. 14) which indicates that it once was painted with cobalt blue, showing pear-like motifs, identical to those published by Sarre.3 The new recently published work on Nishapur shows a number of tin-glaze pieces excavated. These were all imported from Iraq.4 The majority are bowls and dishes. Some of them resemble the kind we have from Fayd. This type can be dated from 836 to 892 A.D.

Splashed Ware

A few sherds of splashed ware were collected from two sites: al-Qā' wal-Haytham and Zubālah (Q1. 1, 2, 3, 4 a-b, fig. 1, pl. xl, Z. 3-ab, 4, 5 a-b, fig. 7, pl. xlii). These sherds are parts of rims, bases, and shoulders from bowls.

Splashed ware is stated to be "the earliest type of pottery in the Near East to show the influence of imported Chinese T'ang wares."5

Splashed ware has been found at nearly every important Islamic site. Among the most well-known places are Samarra, Siraf, and al-Mina.6 Nishapur excavations revealed large quantities of this type, which were of Mesopotamian

1 G. Fehérvári, Islamic Pottery, p. 40.
2 Illustrated in Sarre, Die Keramik von Samarra, pl. XIX, nos. 1-5.
3 Ibid, pl. XVIII, nos. 2-168 and 4-167.
5 G. Fehérvári, Islamic Pottery, p. 35.
6 Ibid, p. 35.
technique. Some splashed ware was also found in the Umayyad palace of Khirbat al-Mafjar which are identical to those of Samarra and al-Mina.

The character of the splashed ware fragment which we are examining is akin to that of Mesopotamia. The composition of the body is of fine-grained greyish white or buff earthenware. The glaze consists of three colours: yellow, manganese purple (or purple brownish) and green stripes. These colour stripes can be noticed on QH. 4 a-b and Z. 4, on other fragments only two colour stripes appear, manganese purple and green, as in QH. 3 or green stripes over white engobe as in Z. 5 a-b.

Splashed ware from Samarra and Nishapur has three variations in applying colour lead glaze: splashed, mottled, or application by brush. Before the colour is added, the body is painted with white slip and then covered with a transparent lead glaze. The splashed fragments from QH. and Z. are identical to those found in Samarra and Nishapur. Splashed ware from Samarra which show colour stripes are illustrated in Sarre's book. Charles Wilkinson describes some attractive bowls from Nishapur painted in coloured stripes.

We can assume, judging from the position of the pilgrim road, that these few splashed fragments are related to wares from Mesopotamia, or perhaps Iran. "The ninth century date is certain, for fragments ... were found at Samarra." Archaeological discoveries in many other places,

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4 Sarre, *Die Keramik von Samarra*, pls. XXIX, 1, 2, XXXII, 1-245, 3-243, 4-244.
5 *Nishapur Pottery*, p. 73, nos. 10-11.
such as Susa, indicate that splashed ware was highly developed in the second half of the tenth century.\(^1\)

The Muslim potters used at a later date the so-called sgraffito technique under the paint. This type was used in Mesopotamia, Iran, and Egypt. This type is dated late tenth and first half of the eleventh century.\(^2\)

**Monochrome Green Glaze**

This is the commonest type among our fragmentary specimens. It is abundant and can be seen at almost every site along the caravan route. The monochrome glazed ware is always of a very thick body, the glazes being turquoise-blue, green, and yellow.\(^3\) Only two monochrome colours are represented in our collection: turquoise-green and green. The composition of the body is either yellowish or buff earthenware, mixed with small grains, coated on either side with a fairly thick green or turquoise-green glaze. In many cases one observes raised lumps or large spots appearing internally or round the rims. On many pieces we found that the glaze has greatly decayed and eroded owing to its long contact with the soil. The sherds can be classified into two categories: sherds with decorations and others without.

The undecorated pieces are from bases, handles, and shoulders. The bases are of different shape: slightly concave with shallow foot ring (CH. 25-27, figs. 4-5) (S. 11, fig. 22). Flat base with ring shaped foot can be noticed in Z.25, fig. 9 and F. 29, fig. 17. From the site of Samirah we have examples of shallow concave base with irregular foot ring. Flat bases are normally with rounded edges (S. 8, fig. 22)

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\(^1\) Raymond Koechlin, "Les Céramiques Musulmanes de Suse au Musée du Louvre", *Syria*, vol. IX, 1928, pp. 40-58, pl. XXIV, no. 1.

\(^2\) Fehérvári, *Islamic Pottery*, p. 36.

\(^3\) *Ibid.*, p. 34.
or with low foot ring (S. 9, fig. 22, pl. xliiv). The handles are also of different characteristic shapes: they vary in thickness, and are vertical (QH. 12, fig. 2, pl. xli); others are curved in the middle (QH. 13, 14 a-b, fig. 2 and F. 33-b, fig. 18) or curved at one end (F. 34-b, fig. 18). Sometimes the handles are flat (F. 32 a-b, fig. 18). These handles are of typical Mesopotamian origin. Pitchers appear with two handles, vertical and curved at the top end\(^1\) or curved in the middle.\(^2\)

Small fragments from open lamps (QH. 10 a-b, fig. 1-2, pl. xli, 3) are identical with those from Samarra.\(^3\) The only complete object is a small vase with a yellowish body, coated inside and outside with a turquoise-green glaze (B. 21, fig. 13, pl. xliii, 3). Identical vases have been found in Samarra having the same characteristics.\(^4\)

**Fragments with relief and incised decorations**

The decorated pieces are remarkably attractive. The ornamental designs which appear on them are in relief and incised decoration under the glaze. The relief motifs consist of cable patterns, ribbons, large dots, and rosettes.

Examples of relief cable ribbons are to be seen on many sherds (QH. 19-20, fig. 3-4, pl. xli; Z. 15-16, fig. 8, pl. xlii, 1; F. 25 a-b-c, fig. 17, pl. xlii, 1; and S. 5, fig. 21).

Applied dots and vertical cable patterns are represented on a few sherds (S. 6, a-b-c-e-f, fig. 21, pl. xliiv, 1; Z. 18 a-d, fig. 8; and F. 24a, 24g, fig. 21, pl. xlii, 3).

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\(^1\) Sarre, *Die Keramik von Samarra*, p. 26, nos. 94-95.

\(^2\) Ibid., p. 26, no. 93.

\(^3\) Ibid., p. 26, nos. 100-101.

\(^4\) Ibid., p. 26, nos. 97, 98, 99. See also, *Excavations at Samarra 1936-39*, vol. II, Baghdad, Iraq Government Department of Antiquities (Baghdad, 1940), plate LVII.
Incised decorations usually appear below the rims or on the shoulders. Deep incised zigzag lines below rim fragments are represented in our illustrations QH. 6 a-b, fig. 2; Z. 10, fig. 7, pl. xlii, 1-2; and F. 4 a-b, F. 15 a-b, fig. 14-15. Incised zigzag lines decorating the shoulders are visible on many fragments (QH. 16-17, fig. 3; Z. 11, fig. 7; and F. 19, fig. 16). There is only one piece with a unique decoration (FR. 4, fig. 19). This is a shoulder fragment from a vessel with a moulded relief decoration consisting of simple palmettes.

A comparison of the style and technique found in our decorated fragments and monochrome green glaze and those of pottery found in Mesopotamia and other places may indicate some significant facts. Glazed ware with relief decoration has been found at al-Hirah.\(^1\) We have examined some fragments from al-Hirah stored at the Ashmolean Museum. These are of similar decorative motifs: viz, rosettes and relief ribbons (21-86, 1932; 24-86, 1932). Similar relief and incised decorative motifs appear on the large storage jars which were found in Samarra,\(^2\) Susa,\(^3\) and Siraf.\(^4\) The relief decorations on these jars consist of semicircles, rosettes, and dots between two cable patterns forming half circles. The incised lines appear below the rims and round the top shoulders. It has been established that this type of relief glazed ware derived from the Parthian period and was used throughout Sasanian times until the early Islamic period.\(^5\) This type is subsumed under the term Sasanian-Islamic. Lane dates the storage jar from Susa

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\(^1\) D.T. Rice, "The Oxford Excavation at Hirah", *Ars Islamica*, vol. 1, 1934, pp. 51-73.

\(^2\) Sarre, *op. cit.*, pp. 28-29, pl. VI, 1-110, 2-111.

\(^3\) Raymond Koechlin, *op. cit.*, vol. IX, pl. XIII, no. 1.


to the 7th-8th century A.D.\textsuperscript{1} Another storage jar, probably from the same place, is thought to be of the same date.\textsuperscript{2}

Charles Wilkinson states that "glazed pottery of this type was very common in Mesopotamia and never seems to have been made on the high plateaus of Iran."\textsuperscript{3}

Ettinghausen puts the date of the storage jars of Susa and those from Mesopotamia between the eighth and ninth centuries A.D.\textsuperscript{4} He bases his conclusion on the modifications of the forms of the jars, which have no necks, and the handles which consist of small loops to which the lid can be tied.\textsuperscript{5}

The rim fragments and shoulders which we have already mentioned are parallel to the above-mentioned jars. An example of the small loop handle is illustrated in FR. 7, fig. 19; it is identical to these handles on the big storage jars.

Storage jars excavated in Siraf are dated between 825-850 to 977-1055 A.D.\textsuperscript{6} It is too early to determine whether our fragments were of local production or were imported by travellers from Iraq and Iran. We may suggest that they are of an eighth to ninth century date.

\textbf{Unglazed Pottery}

"Unglazed earthenware was used, as to a lesser extent were metal and stone, for cooking vessels, but an even greater function for this ware was the storing of water, as opposed to

\textsuperscript{1} Ibid., pl. 3.
\textsuperscript{2} Charles Wilkinson, \textit{Iranian Ceramics} (New York, 1963), pl. 17.
\textsuperscript{3} Op. cit., p. 121.
\textsuperscript{4} \textit{A Survey of Persian Art}, vol. II (London, 1938), pp. 646-680, see p. 674.
\textsuperscript{5} Ibid., p. 674. See also, vol. VII, pl. 190, A-B; Sarre, \textit{op. cit.}, pp. 28-29, pl. VI, 1-110, 2-111.
\textsuperscript{6} David Whitehouse, "Excavations at Sirat", \textit{Iran}, vol. VI, pl. VI, p. 14; vol. X, p. 72, pl. Xb.
other liquids."¹

Most of the sites we have visited were littered with sherds of unglazed ware. A few potsherds were collected with and without decoration. Generally they are of a porous soft, yellowish or greyish body, while others are of a dense and hard red paste which was fired at a high temperature. The decorated pieces have a considerable similarity to those discovered in Mesopotamia and Syria. The decorations have been either carved out, incised, moulded or stamped. The decorative motifs are mainly geometric.

An example of the stamped decoration appears on a small shoulder fragment (QH. 29, fig. 5), showing half a circle divided into compartments with a small dot in each of them. This type of decoration can be seen on fragments found at al-Ḥirah² and also on pottery discovered in the 'Abbasid palace al-Ukhaidir.³

The unglazed pottery excavated at al-Ḥirah and al-Ukhaidir dates from the eighth and ninth centuries. Numerous stamped potsherds have been excavated in Samarra with similar designs.⁴

Some sherds are decorated in relief and the motifs look like floral designs (QH. 30, fig. 5) or zigzag ribbon pattern; these appear on a handle fragment (QH. 36, fig. 5). The latter is parallel to similar fragments discovered at al-Ukhaidir.⁵ Identical relief decorations also appear on

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² Excavations at al-Ḥirah, Ars Islamica, vol. I, fig. 22.
⁴ Excavations at Samarra, pls. XXXI, XXXII.
⁵ Sumer, XXII, pl. 15.
several fragments excavated at Kufa.¹

There are a few interesting pieces with incised decorations. These pieces are of the so-called eggshell ware. The decorative motifs are small bands of thin incised lines, both horizontal and vertical, forming compartments allowing some space to be occupied by deep dotted lines (QH. 28, fig. 5, pl. XLI, 2; Fr.11 a-b, fig. 19). Sometimes they appear as small wavy incised lines to form leaflike motifs (Fr. 10, fig.19). Quite similar decorative motifs can be identified on jugs and jars discovered at al-Ḥirah.² This design also appears on potsherds found at al-Ūkhaidir.³

An interesting piece comes from ash-Shīḥīyyāt. This shows an attractive design. It is a fragment of a spout from a bottle or ewer. It has a mould decoration consisting of zigzag lines, forming lozenges, each of them filled with a small dot (Sh. 8, fig. 11). Several fragments belong to one vessel, probably a pilgrim bottle (QH. 43, fig. 6, pl. XLI, 3). These pieces are decorated in relief. The decoration consists of floral designs and zigzag lines which are contained within a border. The decorative motifs of these pieces are identical to similar ones excavated at Samarra⁴ and others discovered at al-Ḥirah. We have examined some sherds from al-Ḥirah stored at the Ashmolean Museum bearing similar motifs. This type of decoration has developed in Iraq and the technique was also widely known in Syria from the early Islamic period.⁵

¹ Muḥammad 'Ali Muṣṭafa, "Preliminary Report on the Excavations in Kufah during the Third Season", Sumer, XIX (English Section), 1963, pp. 36-68, fig. 15; see also, "Excavations at Samarra", pls. XL, XLII.
² "Excavations at al-Ḥirah", Ars Islamica, I, figs. 20-21.
³ Sumer, XXII, pl. 18.
⁴ Excavations at Samarra, pls. XXXVI, XXXVII.
Steatite Ware

A few fragments of steatite ware were collected during our investigation along the pilgrim route. They consist of parts of cooking pots, plates, and lamps. The sherds are mainly of greyish and black colours. Some are decorated with grooves and engraved lines as illustrated in Z. 31-32, fig. 9-10, others being decorated in relief (F. 38 a-b, fig. 19). An interesting piece, illustrated in FR. 22, fig. 21, is decorated with intertwined incised lines forming lozenges. Some fragments show small holes which indicate that the vessels have been repaired when they were still in use (Z. 30-32, fig. 10; F. 37a, fig. 18; FR. 22-23, fig. 21).

Steatite ware has been discovered at many Islamic sites including al-Ḥirah, Samarra,¹ and Siraf. We examined a few steatite sherds from al-Ḥirah² stored at the Ashmolean Museum bearing similar decoration (Ḥirah 75-1932, 76a-1932, 76b and 76d-1932).

Steatite ware has been found in Siraf dated to the ninth and tenth centuries A.D. and it seems that steatite was widely used in the Islamic world.³

We may assume that our fragments are contemporary with the other pottery fragments or at least correspond to the same date mentioned above.

Conclusion

Examination and analysis of the pottery and glass fragments show that they may be attributed to an early Islamic date, viz. from the late eighth to the early tenth centuries A.D. This date indicates that the route was widely used

¹ Excavations at Samarra, pl. CXXIX.
² This type is not mentioned by D.T. Rice in his report on the al-Ḥirah excavation.
³ "Excavation at Siraf", Iran, vol. VI, p. 20.
during this period. But on the other hand, one must bear in mind that the pottery and glass fragments are only surface collections, and do not belong to any specific strata; they only appear on the ground during and after the rain or when a strong wind blows the sand away.

One might assume that some of the pottery was produced locally to satisfy the needs of travellers, but this has to be proved through scientific excavations. As examples, one piece from Samīrah should be mentioned, which we suspect is a waster (S. 5, fig. 21), and a slag fragment from a pottery kiln (QH. 42, fig. 6) fired at a high temperature which has caused bubbles on the inside. Some yellowish coloured clay appears slightly on the edges which may indicate that it was intended for glazing pottery.¹

The above-mentioned date of the pottery also corresponds to the few silver coins which have been included in this pilot research.

2. Early Islamic Glass from the Pilgrim Route (Darb Zubaydah)

A number of glass fragments have been collected from four sites along the Pilgrim Route, viz. al-Qāʿ wal-Haytham, Zubālah, Fayd, and Samīrah. The majority of these pieces come from al-Qāʿ wal-Haytham and Fayd. They are mainly parts of necks, rims, bases, and shoulders from vessels, bottles, or flasks. There are also a few glass pieces from bracelets. The fragments include both transparent and opaque colours: dark blue, light green, bluish, white and yellowish. Some of the pieces are badly weathered and the colour has considerably

¹ Experts at the Ashmolean Museum have examined this piece and suggest that it is from a pottery kiln.
It is very difficult to study such small fragments of small plain glass since they have no decoration or any distinctive features. Carl Lamm states that "vessels of plain glass are more difficult to date than such as have been decorated, and where no archaeological evidence is available, only a comparison with ornamented specimens as regards shape and metal, can afford a sound basis for dating and classification."\(^1\)

Parallel fragments to ours were discovered at the 'Abbasid palace of al-Ukhaidir and dated to the eighth/ninth century. Small glass fragments discovered in Samarra are also closely similar.

Neck fragments (QH 1, 2, 3, 4, fig. 23, pl. XLIV, 2; F. 2, 3, fig. 23; FR. 8, fig. 24, pl. XLV) are parallel to the glass bottle necks excavated at Samarra.\(^2\) The two pieces in QH 10, fig. 23 and FR. 1, fig. 24 are similar to those shown in Lamm.\(^3\)

Archaeological discoveries in Seleucia (Iraq) revealed large quantities of Islamic glassware. The glassware from this area was in common use in Mesopotamia in the eighth and ninth centuries A.D.\(^4\) Rim fragments and slightly concave bases in QH. 1-4, fig. 23 and QH. 8, 9, fig. 23, are identical with those from Seleucia.\(^5\) The neck fragments in FR. 6, 7, 8, fig. 24 also have close parallels to the pieces found in Seleucia.\(^6\)

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2 *Excavations at Samarra*, pls. CXII, CXIII, CXIV.
3 C.J. Lamm, *Das Glas von Samarra* (Berlin, 1928), pl. III, 161, 158.
5 Ibid., nos. 69, 46, fig. 50 and nos. 60, 61, 63, fig. 51.
6 Ibid., nos. 39, 42, 44, fig. 50.
A number of the glass bottles in the Iraq Museum dated to the ninth and tenth centuries A.D.\textsuperscript{1} have a similar characteristic shape to some of our fragments, particularly as regards the shape of the mouth and the design of the neck.

An example of the disc-shaped mouth appears in the Samarra finds\textsuperscript{2} which is similar to a piece from F. 1 (fig. 23). Two small flasks at the Metropolitan Museum (dated from the ninth or tenth century) are also of disc-shaped mouths and identical to the piece from Fayd.\textsuperscript{3}

It is very difficult to attribute these small fragments to either Mesopotamia or Iran. Pinder Wilson claims that it is not possible to distinguish with absolute certainty between the glass of Persia and that of Mesopotamia; this is largely because of the intimate connexion between these two lands.\textsuperscript{4}

Among the fragments from the Pilgrim Route, there are two pieces which are probably wasters (F. 10, FR. 10, fig. 24), but it is too early to judge whether they were of local production.

The excavations at Siraf have brought to light large quantities of Islamic glassware, which can be classified into three categories:

(a) local production (9th-10th century A.D.);
(b) East Persian type (9th-11th century A.D.);

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\textsuperscript{1} Hana 'Abdul Khaliq, "Glass Object Newly Obtained by Iraq Museum", \textit{Sumer}, XXVIII, 1972, pp. 47-52, pl. IV, nos. 25-26, 30.
\textsuperscript{2} C.J. Lamm, \textit{Das Glas von Samarra}, Tafel, IV, no. 184.
(c) Egyptian glass of the 9th and 10th century A.D.

It is suggested that the imported glass ware arrived via the Red Sea port of Jiddah.\(^1\)

We may deduce from this information that the Pilgrim Route must have been used to transfer this glassware to Siraf from either Mecca or Medina, via Kufa or Basrah. In fact, Egyptian glassware was available in the Red Sea region, particularly at 'Aidhāb and the northern Sudan.

Archaeological discoveries in Soba, south-east of Khartoum\(^2\) revealed numerous types of glass fragments, some of them dating from the 6th-9th and the 9th-12th centuries A.D.\(^3\)

It is still not possible to arrive at a definite date for our glass fragments, but judging by similar glass fragments found in Mesopotamia and Perisa, we may assume that they are of a ninth or tenth century date. Further investigations or perhaps scientific excavations on some of the sites along the Pilgrim Route may solve this problem.

3. Three 'Abbasid Coins

From time to time, people wandering along the road find early Islamic items at a number of the pilgrim stations. Unfortunately, many of these are not reported to the authorities or to numismatists; but in most cases they find their way to important public figures who will often keep them as souvenirs without otherwise taking an interest in them. As far as we could gather, some of the coins which have been found on the road dated mainly from the early 'Abbasid period. We were able

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\(^1\) "Excavations at Siraf", *Iran*, VI, pp. 18-19.


to examine only three pieces ourselves, one of which is a gold dinar while the other two are silver coins (dirhams).

The gold coin (dinar)

This was found at Fayd; it is in good condition and the text legible. The inscription reads as follows:

Obverse: centre
لا الله إلا
الله وحده
لا شريك له

Reverse: centre
محمد رسول الله أرسله بالهدى ودين الحق ليطهره على الدين كله

The name of the minting place and the name of the caliph are both absent from this coin. It is a known fact that up to the present, the place of minting has not been found on 'Abbasid dinars earlier than the year 193/808, during the period of Ma'mūn. 2

G. Miles pointed out the challenging problem of the correct mint attribution in the case of most of the dinars issued by the Umayyad and early 'Abbasid caliphs which were struck without the mint names. 3 However, the date that appeared on this coin (189/804) corresponds to the reign of Hārūn

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1 It was purchased from one of the villagers by Dr. A. al-An'ārī of Riyadh University during an archaeological expedition organised by the Society of History and Archaeology of Riyadh University in February 1970. The coin is preserved in the Riyadh University Museum, Faculty of Arts (no registration number).


Fig. 0: An 'Abbasid silver dirham found at Samirah, and dated A.H. 143. (Examined by the writer at the governor's house in 'Uqlat as-Suqr, Saudi Arabia).
ar-Rashid (170-193/786-809). On the obverse of the coin, the word "للخليفة" is written in the bottom part of the centre, and this symbolised the name of the caliph for whom the coin was struck. So far, only two parallel examples to the formulas (on the obverse and reverse) are known: the first, mentioned by G. Miles, was issued at the same date as our coin. The second example is listed in the Cairo Museum catalogue on the Umayyad and 'Abbasid coins, and this coin, again, has the same formula.

Two Silver Coins (dirhams)

As we mentioned earlier, at Samīrah a bundle full of silver coins was found, but unfortunately all its contents were distributed among a number of people; only a few are now in known hands, two of which we were able to examine.

Minted at Kufa: 143/760

Obverse: centre
لا الله إلا
الله وحده
لا شريك له

margin
بسم الله ضرب هذا الدرهم بالكونه سنة ثلاث واربعين وسته

Reverse: centre
محمد
رسول
الله

margin
محمد رسول الله ارسله بالهدى ودين الحق ليظهره علي الدين كله

The date on this coin corresponds to the time of Abū Ja'far al-Manṣūr (136-158/754-775). At present, we have no parallel example in the catalogues available here, although we know of

1 G. Miles, ibid., catalogue no. 108, p. 110. The same formula appears on a gold dinar bearing the date 188. See ibid., pl. XX, no. 107.
2 'Abd ar-Rahmān Fahmi, Fajr as-Sikka al-'Arabiyyah (Cairo, 1965), see p. 521, pl. 37, no. 1779.
3 This coin was examined by the author at the house of 'Ali al-Jal'ūd, the governor of 'Uqlat aṣ-Ṣuqūr, in May 1973.
a number of dirhams minted during the period of al-Manṣūr and particularly in the year 143 A.H. in places other than Kufa.  

**Minted at Madīnat as-Salām (Baghdad): 158/778**

Obverse: centre

لا الا
الله وحد
لا شريك له

margin

بسم الله المضرب هذا الدرهم بمدينة السلام سنة ثمان وثمانين وفلك

Reverse: centre

محمد
رسول
الله

margin

محمد رسول الله ارسله بالهدى ودين الحق ليخطره (على الدين كله ولو كره المشرك) كتب

The date of this coin corresponds to the period of the Caliph ar-Rashīd. Similar pieces minted in Madīnat as-Salām (Baghdad) and bearing the same date are published from the Collection of Cairo Museum.  

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1 Fahmi, *op. cit.*, p. 470, pl. 55, no. 1562.

2 This coin was also found in the Samīrah hoard and it is one of the few pieces which survived. It is now housed in the Riyadh Museum, Faculty of Arts (no registration number).

3 Fahmi, *op. cit.*, p. 553, pl. 67, no. 1876.
CATALOGUE 1

Pottery

Al-Qā'ī wal-Haytham

Splashed Ware

QH. 1 Rim fragment from a bowl; convex side; rounded edge; buff earthenware; olive-green colour covers the inside; outside has remains of green dots. 7 x 4.5 cm.

QH. 2 Base fragment from a bowl; flat base, low foot ring, buff earthenware; covered on both sides with white slip and splashed with a dark and light green. 5 x 3 cm.

QH. 3 Rim fragment from a bowl, convex side, rounded edge, red body; covered on the inside with stripes of manganese purple and green glaze; outside has remains of green and manganese purple. 5 x 4 cm.

QH. 4a Base fragment from a bowl; flat base, grey body; covered on the inside with three colours: green, yellow and stripes of manganese purple; outside has remains of dots of green glaze. 6.5 x 5.2 cm.

QH. 4b Base fragment from a bowl; white and reddish earthenware; covered on the inside with streaks of green and

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1 The names of localities from which pottery and glass fragments were collected have been abbreviated as follows:

QH: al-Qā'ī wal-Haytham
Z: Zubālāh
ZR: Zubālāh--Riyadh University museum
Sh: ash-Shihiyyāt
B: al-Bid'ī
F: Fayd
FR: Fayd--Riyadh University museum
S: Samīrah
manganese purple; outside unglazed. 8.5 x 6 cm.

Monochrome Ware

QU. 5a Rim fragment from a bowl; everted rim; yellowish earthenware; coated on both sides with turquoise green glaze; impressed lines appear outside round the neck.

QU. 5b Rim fragment from a bowl; flat and everted rim; yellowish earthenware, incised lines are visible at the rim and round the neck under turquoise green glaze, which is badly weathered. 5 x 5 cm.

QU. 6a Rim fragment from a bowl; everted rim; flat top with rounded edges; buff earthenware; incised wavy line decoration can be seen on the outside below the rim; coated on sides with green glaze. 7. x 2.3 cm.

QU. 6b Rim fragment from a bowl; rounded everted rim; yellowish earthenware, covered on both sides with green glaze. 6.5 x 2.6 cm. Broken into two.

QU. 7a Rim fragment from a bowl, inverted and slightly everted rim with flat top; yellowish earthenware, remains of incised lines on the outside; glazed on either side with green lead glaze. 6.5 x 3.5 cm.

QU. 7b Rim fragment from a bowl, inverted, slightly everted rim with flat top; yellowish earthenware; remains of incised lines on the outside, glazed on both sides with green. 6 x 3.5 cm.

QU. 8a, b, c Three rim and neck fragments from bowls; each is curved on the inside and everted outside with sloping top1 yellowish earthenware; relief and incised lines are visible on the outside, green glaze covers both sides.

(a) 6 x 5 cm. (b) 4.5 x 3 cm. (c) 3 x 2.5 cm.
QH. 9a Rim fragment from a bowl, flat slightly everted rim, yellowish earthenware, coated on both sides with green glaze. 4.5 x 2.2 cm.

QH. 9b Rim fragment from a bowl; flat everted rim, yellowish earthenware covered on both sides with green glaze. 3 x 2.5 cm.

QH. 10a, b Two small rim fragments from lamps; rounded edges; yellowish earthenware (QH. 10a), coated on both sides with green, while QH. 10b is covered on both sides with olive-green. (a) 3.5 x 2 cm. (b) 2.5 x 1.8 cm.

Handle Fragments

QH. 11 Fragment from a rim, and the joint of a vertical rounded handle from a lamp; yellowish earthenware; covered on both sides with green glaze. 3.5 x 3 cm.

QH. 12 Fragment of an oval handle from a jar; yellowish earthenware; coated on both sides with turquoise green glaze. 6.7 x 3.5 cm.

QH. 13 Fragment of a handle; yellowish earthenware; upper curved end of a handle with part of the body to which it was attached; green glaze all over which is now badly decayed. 6 x 4.5 cm.

QH. 14a, b Two wide, curved handles from jars; yellowish earthenware; (a) coated on both sides with green glaze; (b) with light green glaze.
(a) 4 x 3.4 cm. (b) 3.2 x 3.2 cm.

QH. 15a, b, c, d Four fragments from jars with joints of handles; yellowish earthenware; glazed on the outside with green and (a) inside white slip; (d) coated with dark and light green glaze; (b and c) showing impressions under light green and manganese purple.
(a) 5.5 x 4 cm. (b) 5.5 x 5 cm. (c) 7 x 4.5 cm. (d) 4.5 x 3.5 cm.
Pottery with Incised and Relief Decoration

QH. 16 Shoulder fragment of a vessel; yellowish earthenware; outside coated with dark green and inside with greyish green glaze, outside with incised zigzag line below a concentric incised line, inside the impression of the potter's hands is clearly visible. 8 x 6 cm.

QH. 17 Shoulder fragment from a large jar; yellowish earthenware glaze; incised decoration appears on the outside, consisting of two horizontal lines on the top part; between them are small impressed dots; zigzag line can be seen in the middle, while at the bottom is a horizontal line and the remains of three vertical lines; dark green glaze on either side, but that on the inside has been blackened. 10 x 8.5 cm.

QH. 18 Shoulder fragment from the body of a jar; yellowish earthenware; remains of horizontal incised lines appear on the outside under green glaze; inside coated with light green glaze with bluish tinge; at one place there is a lump of green glaze. 10.5 x 8.5 cm.

QH. 19 Shoulder fragment from a jar; white body; on the outside decorated in relief with zigzag cable pattern under dark green glaze; inside green colour and a lump of greenish glaze. 4.5 x 4.5 cm.

QH. 20 Small fragment from the body of a jar; white body, on the outside decorated in relief with a zigzag cable pattern; coated on either side with green glaze. 3.5 x 2.2 cm.

QH. 21a Shoulder fragment from the body of a jar; yellowish earthenware relief. Stamped decoration appears on the outside consisting of small dots, and the remains of a ribbon pattern; coated on the outside with green
gla ze, inside with dark glaze that has now decayed. 4.2 x 3 cm.

QH. 21b Small fragment from the shoulder of a jar, yellowish earthenware, decorated in relief on the outside with two small circles composed of small dots under green glaze; inside green glaze, which is badly weathered. 3 x 3 cm.

Base Fragments

QH. 22 Base fragment from a jar, slightly concave with short foot, yellowish body; coated on the outside with green glaze; inside remains of creamy white slip and greenish glaze which has now considerably darkened. 5 x 3.7 cm.

QH. 23 Base fragment from a small vessel, flat base, yellowish body; covered on both sides with green glaze. 4.5 x 3 cm.

QH. 24 Base fragment from a bowl, flat in the centre, short foot; yellowish body, glazed on the exterior with light green glaze and splashes of manganese purple. 6.5 x 4.2 cm.

QH. 25 Base fragment from a plate; slightly concave foot ring with rounded edges, yellowish body, coated on both sides with green glaze; the glaze on the inside is darkened.

QH. 26 Base fragment from a vessel, short foot, yellowish body, slightly concave base, impressions on the inside, coated on the outside with green glaze; inside with cream slip and black tinge. 5.5 x 4.3 cm.

QH. 27 Large base of a jar; slightly concave with recess in the middle; ring shaped foot, yellowish body; coated on the outside with dark green glaze; inside remains
of green glaze which has now considerably darkened. 9 x 5.7 cm.

QH. 28 Shoulder fragment from the body of an unglazed vessel; yellowish body, creamy brownish slip on the outside; on the outside decorated with incised concentric lines forming two bands, the upper part containing horizontal lines followed by a line of dots; further below the lower part appear horizontal and vertical lines making geometrical designs, with small deeply impressed dots in the middle. 5 x 3.7 cm.

QH. 29 Shoulder fragment from the body of an unglazed vessel; yellowish earthenware; remains of stamped decoration on the outside consisting of half of a circle divided into compartments, with a small dot in each of them. 3.8 x 2.5 cm.

QH. 30 Shoulder fragment from the body of an unglazed small jar; yellowish earthenware, relief decorations appear on the outside consisting of what seems to be a floral design. 3.5 x 2.2 cm.

QH. 31a Rim fragment from an unglazed water bottle, straight vertical rim with profile ledge; yellowish earthenware; greyish white slip appears on the outside. 3.2 x 2 cm.

QH. 31b Rim fragment and side of the neck of an unglazed water bottle; slightly sloping rim; the neck is concave on the inside with projecting edge outside; white earthenware, covered on both sides with white slip. 4.3 x 2.5 cm. Broken into two.

QH. 32 Base fragment with the lower part of an unglazed vessel, white earthenware, slightly concave with a short foot; sandy colour slip appears on both sides. 4 x 4 cm.
QH. 33 Base fragment from an unglazed vessel; flat and short foot; sandy greyish slip appears on both sides. 4.8 x 3.5 cm.

QH. 34 Base fragment from a bowl, flat base with short foot; white body, remains of yellowish slip on the outside. 3.8 x 2.8 cm.

QH. 35 Base fragment from a bowl, flat base short foot; white body, whitish slip appears on the outside. 4.8 x 3 cm.

QH. 36 Fragment of a round handle from a jar; white body; relief decoration appears on the outside, consisting of a zigzag ribbon. 5.2 x 1.5 cm.

QH. 37 Small fragment of a handle from a vessel, white body. 3 x 2.8 cm.

QH. 38 Large rim fragment from a storage jar; rounded edge, slightly sloping; buff earthenware. 15.5 x 7 cm.

QH. 39 Rim fragment from a jar; slightly everted rim; yellowish earthenware; remains of white slip appear on both sides. 8.5 x 6.5 cm.

QH. 40 Base fragment from an unglazed bowl; rounded base, short foot; yellowish earthenware. 9 x 4.6 cm.

QH. 41 Fragment of a door jamb; yellowish earthenware; inside showing a circular deep impression for accepting the pole of the door.

QH. 42 Fragment of stained lump probably from a pottery kiln. 11.5 x 10 cm.

QH. 43 Fragments of an unglazed vessel; probably of a pilgrim's bottle; greyish earthenware covered with yellow slip on both sides; outside decorated in relief with zigzag lines and floral patterns framed by concentric lines.
Zubālah

Lustre Painted

Z. 1 Fragment from the body of a vessel painted in monochrome lustre; yellowish earthenware, coated on both sides with tin glaze; the yellowish brown lustre decoration appears inside showing simple intertwined scrolls within lines. A further thick line is on what seems to be the inner side. 2.8 x 2.8 cm. Probably Mesopotamia, early 10th century.

Z. 2 Shoulder fragment from a vessel, Chinese stoneware; with lead glaze; similar to one excavated in Siraf. 9th-10th century.

Splashed Fragments

Z. 3a Rim fragment from a bowl with rounded edges, buff earthenware, covered on the inside with stripes of yellow, purple, brownish and green colour; outside remains of green glaze. 5 x 3.8 cm.

Z. 3b Base fragment of a bowl, outside encircled by a deep cut line; buff earthenware; inside coated with stripes of green, yellow, and manganese-purple colours; outside remains of green glaze which is greatly decayed. 5 x 4.8 cm.

Z. 4 Shoulder fragment from a small bowl, buff earthenware, coated inside with green, manganese purple, yellow stripes; outside remains of white engobe and a stripe of green. 4.8 x 2.3 cm.

Z. 5a Shoulder fragment from a small bowl; yellowish earthenware; coated on either side with tin glaze, inside two stripes of green; outside the glaze survives only in small patches. 2.7 x 2.3 cm.
Z. 5b  Small fragment from the body of a bowl; buff earthenware; glazed on either side with tin glaze; inside green stripes. 3 x 2 cm.

Z. 6a  Shoulder fragment from the body of a bowl; buff earthenware; coated on the outside with green glaze; inside with bluish glaze and remains of black glassy stripes in the glaze. 2.5 x 2.5 cm.

Z. 6b  Thick fragment from the shoulder of a jar; yellowish earthenware; coated on the outside with greenish glaze and black glassy stripes inside the glaze; on the inside remains of dark green glaze. 3.5 x 2.5 cm.

Z. 7  Base fragment from a small vessel; flat base with short foot; red earthenware; coated on both sides with green lead glaze and dark green patches. 3.6 x 2 cm.

Z. 8  Shoulder fragment from the body of a small bowl or a vessel; concave shape; buff earthenware, on either side remains of olive green glaze. 2 x 0.9 cm.

Z. 9  Shoulder fragment from a small vase or a vessel; yellowish earthenware, coated on the outside with tin glaze; impressions on the inside which were covered once with tin glaze; remains of green splashes. 3 x 2.5 cm.

Fragments with Incised Decoration

Z. 10  Rim fragment from a bowl; everted rim with flat top, buff earthenware, on the outside decorated round the neck with an incised zigzag line and two horizontal parallel lines; glazed on both sides with green. 4 x 2.8 cm.

Z. 11  Shoulder fragment from the body of a jar; yellowish earthenware; decorated on the outside with deep
zigzag line and another two horizontal parallel incised lines under green glaze; coated on the inside with brownish green glaze. 6.5 x 5 cm.

Z. 12 Shoulder fragment from the body of a jar; yellowish earthenware; decorated on the outside with horizontal parallel lines incised under the green glaze; inside coated with brownish green glaze. 8.5 x 7.5 cm.

Z. 13 Fragment from the bottom part of a vessel; buff earthenware; decorated on the outside with incised parallel lines under the green glaze; coated on the inside with green glaze. 4.5 x 3 cm.

Wares with Stamped Decoration

Z. 14 Shoulder fragment from the body of a jar; buff earthenware; relief decoration appears on the outside consisting of the remains of a horizontal ribbon, and rosette composed of two circles of small dots and half a circle of a ribbon under green glaze; inside coated with what appears to be manganese purple glaze that is now badly decayed. 6 x 5 cm.

Applied Decoration

Z. 15 Shoulder fragment from the body of a jar; buff earthenware; outside remains of impressed decoration probably of a kind of cable pattern, coated with green glaze; on the inside probably manganese purple glaze that is now badly decayed. 4.5 x 3 cm.

Z. 15 a, b Two fragments from the body of a jar; yellowish earthenware; relief decoration appears on the outside consisting of vertical parallel lines (on one); on the other (15a) a cable pattern appears in relief; coated outside with green glaze, while inside (15b) retains a dark manganese purple glaze, while the glaze
on 15a has completely decayed. (a) 3.5 x 3 cm.  
(b) 5.5 x 3.2 cm.

Z. 16
Shoulder fragment from the body of a jar; yellowish earthenware; inside coated with blue and green glaze with layer of raised lumps rising above the original glazing; applied decoration on the outside consisting of vertical ribbons on each side, and a vertical zigzag cable pattern appears in the middle; horizontal parallel incised lines can be seen under the green glaze. 11.5 x 7.5 cm. Broken into four.

Z. 17
Two shoulder fragments from the body of a jar; yellowish earthenware, one (17a) is decorated in relief on the outside with a cable pattern under green glaze; the same glaze covers the inside. The second fragment (17b) shows the remains of two horizontal parallel ribbons under turquoise green glaze; the same glaze appears on the inside. 
(a) 5.2 x 3 cm. (b) 3.5 x 3 cm.

Z. 18
Five fragments from the body of a jar; yellowish earthenware; applied decoration can be seen on the outside consisting of horizontal and vertical ribbons and the remains of half circles with large dots under green glaze. (a) 4.5 x 2 cm. (b) 2.5 x 2 cm.  
(c) 3.5 x 3 cm. (d) 3.5 x 2.2 cm. (e) 2 x 1.5 cm.

Z. 19
Fragment from the lower part of the neck of a pot; yellowish earthenware; round the neck two parallel incised lines appear under crackled green glaze. 8 x 5 cm.

Z. 20
Fragment from a rim and handle of a pot; inverted flat rim; horizontal handle which is now broken; yellowish earthenware; coated on both sides with
light green glaze. 5.5 x 4.5 cm.

Z. 21 Shoulder fragment and the joint of a handle from a pot; yellowish earthenware; glazed on both sides with green, and on the outside appear the remains of a horizontal relief ribbon under the glaze. 5.6 x 3 cm.

Z. 22 Small fragment from a neck of a jar; yellowish earthenware; glazed on either side with green, on the outside remains of five parallel horizontal lines incised under the glaze. 5 x 2.8 cm.

Z. 23 Two small fragments from a cylindrical neck of a bottle; buff earthenware, relief ribbons appear on the outside and impressions on the inside, glazed on either side with green. (a) 2 x 1.8 cm. (b) 3 x 2 cm.

**Base Fragments**

Z. 24a Base fragment from a pot, rounded flat base and thin in the centre; buff earthenware; remains of turquoise blue glaze on the outside; similar glaze covers the inside. 6.5 x 3.5 cm.

Z. 24b Base fragment from a pot; buff earthenware, coated on the inside and round the base with green glaze. 6.5 x 3.5 cm.

Z. 25 Base fragment from a bowl; ring shaped flat base; buff earthenware; coated on either side with green glaze. 5 x 3.8 cm.

Z. 26 Base and side fragment of a jar; yellowish earthenware; outside coated with green glaze; shallow foot ring, conical side. Ht. 9 cm; width 8.5 cm. diam. 6 cm.

Z. 27 Fragment from a small pot, probably the base; yellowish earthenware, blazed on either side, with turquoise
green. Diam. 4 cm., ht. 2.5 cm.

Z. 28 Side fragment from the body of a jar; yellowish earthenware; dark green glaze appears on the outside; inside bluish colour which is badly decayed.
Diam. 4 cm.

**Steatite**

Z. 29 Fragment of a base and a rim from a plate; black stoneware; vertical rim, flat base, relief decoration appears on the outside consisting of horizontal parallel lines. 7 x 3.8 cm.

Z. 30 Small fragment from the body of a jar; steatite stoneware, two small holes in the middle, on one side decorated with horizontal parallel lines.
Diam. 3.5 x 3 cm.

Z. 31 Shoulder fragment from the body of a vessel; steatite stoneware; outside carved decoration showing two intertwined zigzag lines forming leaves; below a heavy line followed by fine obliquely carved parallel lines. 3.5 x 3 cm.

Z. 32 Rim fragment from a small plate; steatite stoneware, vertical engraved lines appear on the outside.
3.5 x 2.5 cm.

ZR. 1 Fragment from a rim of a large pot; loose clay body which is black in the centre and red on the inside; everted flat rim; calcine spots can be seen inside the red paste. 7.5 x 4 cm.

ZR. 2 Rim fragment from a pot; slightly everted and inverted sloping rim; red earthenware, with black spots, the remains of fire on the outside. 6.5 x 3.5 cm.

ZR. 3 Rim fragment from a bowl; rounded lightly sloping rim towards the centre; yellowish earthenware;
inside remains of turquoise green glaze with a
darkened and thickened stripe; outside remains of
green glaze. 6.5 x 4.5 cm.

ZR. 4 Rim fragment of a bowl; flat everted rim; yellowish
earthenware; outside remains of green glaze; inside
unglazed. 4.3 x 3.3 cm.

ZR. 5 Fragment from the shoulder of a jar; yellowish
earthenware; decorated on the outside with horizontal
parallel lines. 4 x 3 cm.

ZR. 6 Small wall fragment of a vessel; yellowish earthen-
ware with parallel fine incised lines on the outside,
unglazed. 4 x 3 cm.

ZR. 7 Base fragment from a bowl, yellowish earthenware;
flat rounded base; remains of incised lines and white
stripes appear on the outside. 6.5 x 4 cm. Ht. 3 cm.

ZR. 8 Fragment of a wide handle of a jar; red earthenware,
green glaze appears on either side which has now
partly flaked off. 3.5 x 2.5 cm.

ZR. 9 Fragment of a wide handle of a jar, buff earthenware,
unglazed. 6.2 x 3 cm.

ZR. 10 Fragment of a rounded handle of a jar; yellowish
earthenware; unglazed; the handle is curved on
its upper part. 7.2 x 1.5 cm.

Ash-Shibiyat

Sh. 1 Fragment from the body of a bowl or a jar, yellowish
earthenware; glazed on the outside with turquoise
green; in one place indications of a ribbon in
relief under the glaze; on the inside a bluish dark
colour. 7.2 x 3.5 cm.

Sh. 2 Fragment from the body of a jar or bowl; yellowish
earthenware glazed on the outside, with dark green
impressed lines appearing under the glaze; on the inside impressions can be seen under the bluish-green glaze. 5.5 x 5 cm.

Sh. 3 Fragment from the body of a jar; yellowish earthenware; dark green glaze on the outside and light green on the inside with finger impressions underneath. 4.4 x 2.3 cm.

Sh. 4 Rim fragment from a bowl; everted rim flat top with profile ledge; yellowish earthenware, black glaze inside and on the rim; on the outside remains of green glaze. 4 x 3.7 cm.

Sh. 5 Rim fragment from a jug; vertical rim with rounded edge; buff earthenware; coated on both sides with olive-green glaze. 2.8 x 2.8 cm.

Sh. 6 Two small fragments from the rim of a small cup; yellowish earthenware, vertical rim with rounded edge; incised decoration on the outside consisting of parallel horizontal lines under turquoise green glaze; on one of them (6a) remains of green glaze can be seen on the inside.
(a) 2.4 x 2.3 cm. (b) 2.1 x 1.1 cm.

Sh. 7 Fragment from the shoulder of a jar; yellowish earthenware; turquoise green glaze on the outside; green glaze with bluish tinge on the inside. 5.7 x 4.5 cm.

Sh. 8 Fragment of a spout from a ewer or small bottle; sandy-coloured earthenware, unglazed, cylindrical at one end hexagonal at the other; the cylindrical part has a moulded decoration consisting of intertwined zigzag lines forming lozenges; each of these lozenges has a small dot in the centre and they are framed by two concentric circles at either side. 3.3 x 1.6 cm.
Al-Bid‘

B. 1 Fragment of a rim from a bowl; polychrome lustre, yellowish earthenware; slightly everted rim, decorated on the inside with what appears to be leaf motifs painted brownish-red with mustard lustre, and an olive coloured stripe along the edge; outside remains of brownish lustre pigment on a creamy white background. Broken in two. 6.2 x 2.6 cm. Probably Mesopotamia, 9th or early 10th century.

B. 2 Fragment of a glazed vessel; buff earthenware, covered with a cobalt blue glaze on the outside and creamy-white glaze which is now considerably decayed. 2.5 x 2.4 cm. Iranian or Syrian, 12th-13th century.

B. 3 Fragment of a rim from a bowl; yellow earthenware; laboratory analysis shows that the body contains magnesium and aluminium, while the glaze on either side (which appears to be zinc) is a calcium potassium silicate glass with traces of iron. 3.5 x 2.7 cm. Mesopotamia, 9th-10th century.

B. 4 Fragment of a base of yellowish-whitish earthenware, flat base, decorated inside with green stripes over opaque tin glaze; the glaze once covered the base as well, but has now considerably decayed. 4.5 x 3.5 cm., ht. 1.8 cm. Probably Egypt or Iran, 9th-10th century.

B. 5 Wall fragment of a bowl, buff earthenware, splashed inside with green and yellow stripes once covered with colourless lead glaze, which has now completely decayed; outside remains of tin glaze. 3.8 x 3.4 cm. Mesopotamia, 9th-10th century.

B. 6 Fragment of a rim from a bowl or mug, yellow
earthenware, inverted and slightly everted flat rim; coated on the outside with green glaze. 4.3 x 2.3 cm. Mesopotamia or Iran, 9th-10th century.

B. 7 Fragment of a rim from a bowl; yellow earthenware; everted flat rim, glazed on both sides with green colour. 4 x 2.3 cm.

B. 8 Fragment of a rim from a bowl, yellow earthenware; everted round rim, dark green glaze on both sides. 4.2 x 1.5 cm.

B. 9 Fragment of a rim from a jar; yellow earthenware; thick and everted rim, glazed on either side with dark green glaze. 4 x 3.8 cm.

B. 10 Fragment of a neck or shoulder of large bowl or jar; yellow earthenware; remains of a handle joint; turquoise greenish-blue glaze on the outside and dark brown on the inside. 6.5 x 4.7 cm.

B. 11 Side fragment of a bowl; yellow earthenware; decorated outside by incised stripes under turquoise green glaze, inside with green glaze. 3 x 1.8 cm.

B. 12 Fragment of a body of a jar or plate; yellow earthenware, decorated on the outside with parallel lines incised under dark green glaze; light green glaze covers the inside. 3 x 1.8 cm.

B. 13 Fragment of a rim of an unglazed egg-shell ware, probably part of a cup; yellowish paste, two incised lines appear on the outside. 3.8 x 3.6 cm.

B. 13a Fragment of the body of a bowl; yellow earthenware decorated on the outside with parallel vertical incised lines and horizontal pressed impressions under green glaze, dark creamy glaze on the inside. Broken into two. 6.6 x 4.8 cm.
B. 14  Fragment from a body of a jar; yellow earthenware, decorated on the outside with parallel lines incised under green glaze; mauve glaze covers the inside. 5.5 x 5.5 cm.

B. 15  Fragment from the body of a jar; yellow earthenware, decorated in relief with thick rib on the outside and coated with green glaze; light turquoise green glaze on the inside. Broken into two. 5.5 x 3.2 cm.

B. 16  Two fragments of handles from ewers or bowls; whitish earthenware, one of them (16b) is thicker than the other. (a) 4 x 1.5 cm. (b) 3 x 2 cm.

B. 17  Fragment of a jar, yellow earthenware; decorated on the outside with a round rosette in relief containing small dots, forming two circles under green glaze; the inside is coated with turquoise green glaze. 3.8 x 2.5 cm.

B. 18  Small fragment of a jar, yellow colour; decorated on the outside with a series of dots in relief under green glaze; traces of green glaze on the inside which is iridescent. 3.7 x 2 cm.

B. 19  Fragment of a large, heavy, rounded rim from a big jar; yellow earthenware; glazed on both sides with turquoise green; on the top there is a large lump of glaze at one place. 8 x 6 cm., thickness 3.5 cm.

B. 20  Fragment of a body from a large storage jar, yellow earthenware, turquoise green glaze on the outside, faded green glaze on the inside. 9.8 x 7.2 cm., thickness 2.5 cm.

B. 21  Small vase; flat base, widening body, short neck, everted, now broken rim; yellow earthenware; turquoise green on either side; the remains of a handle
are visible on the shoulder. Rim, 5.2 cm.; base, 3.8 cm.; height, 7.5 cm.

**Fayd**

**F. 1** Small shoulder fragment from a vessel; early mono-
chronic lustre yellowish body; painted on the inside
with yellowish brown lustre over tin glaze; outside
remains of tin glaze and brownish lustre pigment are
visible. 4.3 x 2.8 cm. 8th-9th century.

**F. 2a** Fragment from the neck of a small vase, red body;
rounded rim; covered on both sides with green lead
glaze; horizontal incised lines appear on the out-
side round the neck. Ht. 1.8 cm.; width 2.2 cm.

**F. 2b** Rim fragment from a vessel; yellowish body; rounded
rim; remains of light green colour appears on either
side. 5 x 2.5 cm.

**F. 3** Rim fragment from a vessel; red body; everted rim;
decorated round the neck with single incised line;
covered on both sides with light green colour.
3.2 x 2.2 cm.

**F. 4** Small shoulder fragment from the body of a vessel;
frit body; covered inside with creamy coloured glaze,
and with cobalt blue on the outside. 3.5 x 2.2 cm.

**Tin glaze Ware**

**F. 5a** Fragment of base and lower part of a bowl; white
earthenware; rounded base; low foot-ring, flat in
the middle; covered on both sides with white tin
glaze; the glaze is decayed. Diam. 9.5 cm.; length
13 cm.

**F. 5b** Rim and shoulder fragment; from a bowl; probably
belongs to F. 5a; white body, rounded rim slightly
sloping; covered on both sides with tin glaze.
10.5 x 6.5 cm. Broken into three.
F. 6 Rim and shoulder fragment from a bowl; buff earthenware; everted rim, concave on the inside; covered on both sides with tin glaze; some green and brown colours can be seen round the edge of the rim. 11 x 5 cm.

F. 7a Rim and the lower part of the neck of a vessel; white body; rounded and slightly sloping rim, neck is concave on the inside with projecting edge outside; covered on either side with tin glaze. 5 x 3.5 cm.

F. 7b Rim and the lower part of the neck from a bowl; white body; rim widening outwards with rounded edges; covered on either side with tin glaze; inside remains of cobalt blue painting are visible. 5 x 4 cm.

**Unglazed Ware**

F. 8a Rim and the lower part of the neck from an unglazed bowl; red earthenware; rim flat at the top; widening slightly outwards; covered on either side with white slip; remains of incised decoration can be seen on the outside of the neck. 5.2 x 5.8 cm.

F. 8b Rim fragment from an unglazed bowl; red body; inverted flat rim; widening slightly outwards; covered on both sides with white slip. 5.5 x 3 cm.

F. 9a Base fragment from a vessel; white body, flat base, remains of sandy coloured slip on either side; impressions of potter's fingers inside. Diam. 7 cm.; width 5 cm.; ht. 3.5 cm.

F. 9b Fragment from a small vessel, white body, flat base with projecting edge; sandy coloured slip on both sides. 3.8 x 3 cm.; ht. 2.5 cm.

**Green Glaze Ware**

F. 10 Shoulder fragment and part of flat wide handle from
large plate; yellowish body; green glaze on the outside; inside white cream coloured and the remains of green glaze which is badly decayed. 9 x 5.2 cm.

**F. 11** Rim fragment from a bowl; yellowish body; sloping rim with rounded edges; dark green glaze on the outside; white and green colour on the inside which are considerably decayed; a series of oblique impressions decorate the neck on the outside; small raised lumps remain of the glaze and appear on the rim. 6 x 6 cm.

**F. 12** Rim fragment from a bowl; white body; sloping everted rim; glazed on both sides with green; decorated on the outside with parallel horizontal lines; there is a small hole in the middle. 7.5 x 4.5 cm.

**F. 13** Rim fragment from a bowl; white body; sloping everted rim; glazed on either side with green, decorated on the outside with parallel running incised horizontal lines. 6 x 6 cm.

**F. 14 a, b, c, d** Four rim fragments from bowls; yellowish earthenware; sloping rims (14d with projecting edge), green glaze covers both sides of each; (14b and 14c much darker on the outside; incised decoration appears on the outside below the rims consisting of zigzag lines and shallow horizontal lines further below. (a) 6 x 4.2 cm. (b) 6.5 x 4.5 cm. (c) 5 x 3.3 cm. (d) 4 x 3.5 cm.

**F. 15 a, b** Two rim fragments from bowls, yellowish body, inverted slightly everted rims, flat with projecting edge; coated on either side with green glaze; each has an incised decoration on the outside below the rim consisting of zigzag line, and below a straight horizontal one. (a) 7.5 x 3.3 cm. (b) 4.8 x 3.3 cm.
F. 16a Rim fragment from a bowl; yellowish body, everted rim with profile edge; coated on either side with green glaze; below the rim appear two incised lines under the glaze. 4 x 3 cm.

F. 16b Small neck from a bowl; yellowish body; coated on either side with green glaze; round the neck there are horizontal incised lines under the glaze. 4 x 4 cm.

F. 17 Shoulder fragment from the body of a jar; yellowish body; remains of turquoise green glaze appears on the outside on white ground slip; inside white colour and the remains of goldish glittering tinge owing to iridescence; incised lines can be seen on the outside. 6 x 5.5 cm. Broken into two.

F. 18 Shoulder fragment from the body of a jar; yellowish body; glazed on the outside with green; inside white blue glaze which is badly decayed; zigzag incised lines appear on the outside and the remains of straight horizontal incised lines at each side. 9 x 5 cm.

F. 19 Shoulder fragment from the body of a jar, yellowish body; coated on the outside with dark green glaze; inside bluish glaze which is badly decayed; incised decoration appears on the outside consisting of horizontal zigzag lines and four parallel lines. 6 x 5.5 cm.

F. 20 Shoulder fragment from the body of a jar; yellowish body; glazed on the outside with green; inside bluish and black glaze effected by weathering; incised decoration appears on the outside consisting of horizontal and vertical lines under the glaze. 7 x 5.5 cm.

F. 21 Shoulder fragment from the body of a jar; yellowish
body; coated on the outside with green glaze; inside with light green, the latter ones badly decayed; incised decoration on the outside consisting of parallel horizontal lines and zigzag lines with large loops. 7.5 x 6.5 cm.

F. 22a Shoulder fragment from the body of a jar; yellowish earthenware; coated on outside with green glaze; inside bluish and brownish purple; decorated on the outside with horizontal incised lines; inside some impressions appear under the glaze. 8.5 x 7 cm.

F. 22b Shoulder fragment from the body of a jar; yellowish earthenware; coated on the outside with green glaze; inside with light green glaze which is now considerably decayed; slight impressions appear on the outside under the glaze. 11.5 x 8 cm. Broken into two.

Sherds with Applied Decoration

F. 23 Shoulder fragment from the body of a jar, yellowish body; coated on the outside with green glaze, inside bluish colour, relief decoration appears on the outside consisting of a horizontal ribbon and a large dot under the glaze. 8 x 7 cm.

F. 24a Shoulder fragment from the body of a jar, yellowish body; coated on both sides with green glaze, which is now badly decayed; relief decoration appears on the outside consisting of two horizontal parallel running ribbons between them four dots; the remains of half a circle at one place. 8 x 7 cm.

F. 24 b, c Two small fragments of shoulders from jars, covered on both sides with green glaze; each is decorated in relief on the outside with two horizontal parallel lines; dots in the middle. (b) 3.2 x 2.8 cm. (c) 3 x 3 cm.
F. 25

a, b

Two shoulder fragments from jars; yellowish body; coated on the outside with green glaze; inside the glaze is badly decayed; decorated in relief with zigzag cable pattern under the glaze; F. 25b shows another horizontal ribbon at one place.
(a) 5.5 x 4.5 cm. (b) 6 x 5 cm.

F. 26

a, b, c

Three shoulder fragments from jars; yellowish body; glazed on the outside with green; inside light green glaze which is badly affected by weathering; applied decoration on the outside consisting of a zigzag cable pattern. (a) 5 x 4 cm. (b) 3 x 2.3 cm. (c) 5 x 5 cm.

F. 27

Base fragment from a vessel, greyish colour; rounded concave base; short foot; coated on the inside with bluish and cream colour glaze. Diam. 5.8 cm.; ht. 1.7 cm.

F. 28a

Base fragment of a vessel; yellowish body; concave, with shallow foot ring; coated on either side with green glaze; the glaze inside is badly weathered. 7 x 3.5 cm.

F. 28b

Fragment and side of the body of a vessel; yellowish earthenware; rounded base, shallow ring foot; glazed on the outside with turquoise green which is badly weathered. 7 x 6 cm.

F. 29

Base fragment from a vessel; yellowish body, shallow foot ring with flat base in the middle; coated on the outside with green glaze and with cream colour inside. 5.5 x 5 cm.; diam. 5 cm.

F. 30

Shoulder fragment of a vessel; yellowish body; coated on the outside with green glaze; light green inside, relief decoration on the outside consisting of two large dots. 3.7 x 3.5 cm.
F. 31  Small shoulder fragment from the body of a vessel; yellowish body, coated on both sides with green glaze; remains of relief decoration on the outside consisting of several small dots which once formed a ring. 3.5 x 2 cm.

F. 32  Two flat handles from jars; yellowish body; coated on either side with light green glaze.  
   (a) 5.5 x 5.2 cm.  
   (b) 5.3 x 4 cm.

F. 33a  Fragment from the shoulder and the handle of a vessel; yellowish body, coated on either side with green glaze, which inside is almost completely missing. 3.8 x 2.8 cm.

F. 33b  Small fragment from the handle of a vessel; yellowish body; coated on either side with green glaze. 2.2 x 1.2 cm.

F. 34a  Handle fragment from an unglazed vessel; red body, curved at one end; on outside there are four parallel lines in relief. 5 x 2.5 cm.

F. 34b  Handle fragment from an unglazed vessel, black body; oval shaped; curved in the middle. 3.3 x 2.5 cm.

F. 35a  Shoulder fragment from the body of a jar; yellowish earthenware; coated on the outside with green glaze; inside cream colour which is badly decayed; there is a small hole in the centre. Diam. 3.5 cm.

F. 35b  Small rounded shoulder fragment from a vessel; yellowish body; inside the remains of green glaze. Diam. 2.2 cm.
Steatite Ware

F. 36a Shouldering fragment from the body of a cooking pot; greyish coloured stoneware; without any decoration. 6.5 x 6 cm.

F. 36b Shoulder fragment from a cooking pot, greyish stoneware; decorated on the outside with vertical incised lines. 10 x 3.5 cm.

F. 37a Rim fragment from a plate, stoneware, black greyish colour; there are three holes on it, probably owing to a repair; vertical incised decoration appears on the outside. 4.2 x 4.2 cm.

F. 37b Shoulder fragment from a plate; greyish stoneware; remains on profile edge appear on the outside and vertical incised lines appear above it. 3.7 x 3.5 cm.

F. 38a Shoulder fragment from a stoneware plate, greyish coloured; on the outside a relief ribbon and indication of engraved decoration. 5 x 3.5 cm.

F. 38b Shoulder fragment from a stoneware plate; greyish black colour; relief decoration appears on the outside consisting of a horizontal line and another vertical one on the outside. 5.5 x 2 cm.

F. 39 a, b Two small rounded fragments from plates: (a) is black stoneware without decoration; (b) greyish colour with a hole in its centre. (a) 3.2 x 3 cm. (b) 2.5 x 1.5 cm.

Glazed Ware

FR. 1 Small rim fragment of a vessel; painted in monochrome lustre; yellowish earthenware; covered on both sides with tin glaze; inside remains of brownish lustre pigment. 3 x 2 cm.

FR. 2 Base fragment from a small vessel; oval shaped,
shallow foot; buff earthenware; coated on both sides with tin glaze, inside stripes of manganese purple appear. 2.3 x 2.2 cm. Ht. 1.2 cm.

FR. 3
Five shoulder fragments from jars; yellowish body; coated on both sides with green glaze; inside the glaze decayed. (a) 5.5 x 5 cm. (b) 4 x 3.5 cm. (c) 4 x 3 cm. (d) 0.5 x 4.5 cm. (e) 4 x 3.2 cm.

FR. 4
Shoulder fragment from a vessel; white body; green glaze on the outside, while inside it is considerably decayed; moulded relief decoration appears on the outside consisting of simple palmettes. 4.5 x 3.5 cm.

FR. 5
Rim fragment from a large jar, yellowish body; everted, slightly sloping rim; coated on both sides with green glaze which is now badly decayed.

FR. 6
Rim and shoulder fragment of a bowl; white body; everted rim; glazed on both sides with green glaze which is badly weathered; decorated in relief on the outside; round the neck incised oblique lines, followed below by a horizontal ribbon and another zigzag cable pattern below that. 9 x 9 cm.

FR. 7
Shoulder fragment with an attached half circle handle, part of a jar; white body; glazed on both sides with green which is badly decayed. 4 x 3 cm.

FR. 8
Small fragment from a vessel; body contains potassium aluminium silicate and traces of iron and titanium. The glaze which covers both sides contains calcium, potassium silicate with aluminium and traces of zinc, iron, titanium, and barium. T'ang period 9th-10th century.

Unglazed Wares

FR. 9
Rim fragment from a small vase; white body; rounded
rim, widening outwards; sandy coloured slip appears on both sides and stripes of black decoration on the outside. 5 x 2 cm.

FR. 10 Neck and shoulder fragment of an egg-shell vase; white body; tall rounded neck, incised decoration on the outside consisting of leaf-like compartments producing a continuous decoration; covered on both sides with white slip. 4.2 x 3.5 cm.

FR. 11a Neck and shoulder fragment of an egg-shell vase; thin white body; outside incised decoration; on the neck thin incised lines form a network of lozenges; below a zone of four incised concentric lines followed by a zone of deeply pressed dots; five incised lines form the lower frame of this register; further below the surface is divided into compartments of unequal widths and four vertical lines; in the wider compartments there are again pressed dots. 4.9 x 3.8 cm.

FR. 11b Small fragment from the body of an egg-shell ware; white body; incised decoration appears on the outside consisting of vertical lines and pressed dots, below them horizontally placed incised lines. 4 x 2.5 cm.

FR. 12 Neck fragment of a jar; rounded rim, white body; white slip on both sides; horizontal impressions on the outside. 7.5 x 4.8 cm.

FR. 13 Neck and rim from a pitcher; white body; rounded everted rim, cylindrical neck, part of the joint appears at one place; greyish slip on both sides. Ht. 5.6 cm.; diam. 6 cm.

FR. 14 Fragment of rounded handle from a vessel; white body, curved at one end. 5.9 x 0.8 cm.

FR. 15 Base fragment from a vessel; white body, rounded edge,
flat base. 7.8 x 5.5 cm.

FR. 16 Handle of a dish of a plate, red body; snadstone; there is a hole in the centre. 5 x 3 cm.

FR. 17 Shoulder fragment from a vessel; greyish body; greyish slip on the outside; incised decoration appears on the outside, composed of a rhombus and an oval. 5 x 2.3 cm.

FR. 18 Rim fragment from a big jar; red body, sloping everted rim, covered on the outside and at the rim with white slip; incised decoration at the rim composed of two concentric lines and two zigzag lines. 9.5 x 8.5 cm.

Steatite Ware

FR. 19 Spout of a stoneware jar; oval shape; cylindrical neck; irregular mouth; small vertical incised lines appear at one side. 4.3 x 3.3 cm.

FR. 20 Fragment of a stoneware lamp, probably part of a spout; greyish black body, egg-shaped. 5.8 x 4.9 cm.

FR. 21 Probably rim fragment of a plate; stoneware greyish-black body; rounded edge, part of the joint attached to the rim at one place. 4 x 3.5 cm.

FR. 22 Rim fragment from a stoneware vessel, rounded edge; greyish black body; incised decoration appears on the outside consisting of intertwined lines at the top forming lozenges, and two parallel horizontal lines with another vertical line below, there are three holes, one of which is filled with iron, probably owing to a repair. 3.5 x 3 cm.

FR. 23 Small rounded shoulder from a stoneware vessel; two small holes in the middle; incised lines appear on the outside. 2.6 x 2.2 cm.
Sanirah

Rim Fragments

S. 1 Rim fragment of a bowl; yellowish earthenware; everted flat rim; decorated on the outside of the neck with an incised line; covered on either side with a turquoise green glaze. 3 x 3 cm.

S. 2 Rim fragment of a large bowl; sloping everted rim; yellow earthenware; coated on both sides with blue-green glaze which shows some iridescence; large lump of glaze appears on the inside of the rim, probably caused during glazing. 5.4 x 3 cm.

S. 3 Fragment of a rim of a bowl; everted slightly raised rim; buff earthenware; remains of light green glaze appears on either side which is now badly decayed. 4.2 x 3 cm.

S. 4 Fragment of a rim with the joint of a flat handle, probably from a plate or a dish; yellowish earthenware; glazed on both sides with green. 4.7 x 3 cm.

Sherds with Applied Decoration

S. 5 Side fragment from the body of a jar, kiln-waster; yellowish earthenware; decorated on the outside with cable pattern in relief under green glaze, which has burnt during firing; inside covered with creamy white glaze which has a bluish tinge. 8.2 x 5 cm. (Probably Iranian 7th or early 8th century.)

S. 6a Side fragment from the body of a jar; yellowish earthenware; decorated on the outside with applied cable pattern under turquoise green glaze; on the inside remains of dark and green glaze which is badly decayed. 4.6 x 4.3 cm. Probably Iranian, 8th-9th century.
S. 6b  Side fragment from the body of a jar; yellowish earthenware; decorated on the outside with applied cable pattern under dark turquoise green glaze; inside remains of blue glaze which is badly decayed. 7 x 5.7 cm.

S. 6c  Side fragment from a body of a jar; yellowish earthenware; outside decorated in relief with two parallel lines, between which appears a large disc-shaped dot under turquoise green glaze; inside covered with creamy white colour with bluish tinge. 6 x 2.7 cm.

S. 6d  Side fragment from the body of a jar; yellowish earthenware; bearing on the outside two parallel stripes applied in relief, and a large dot between them under dark turquoise green glaze; inside remains of black glaze which is now considerably decayed. 4 x 2.5 cm.

S. 6e  Side fragment from the body of a jar; yellowish-white earthenware; applied decoration appears on the back consisting of a ribbon and two small dots under green and blue glaze; inside remains of green glaze. 2.4 x 2.2 cm.

S. 6f  Small fragment from the body of a jar; yellowish-white earthenware; outside remains of two dots under green glaze. 2.4 x 2.2 cm.

S. 6g  Side fragment from the body of a jar; yellowish-white earthenware; decorated on the outside with relief patterns, composed of what appears to be half circles and two dots under green glaze; inside creamy green white glaze with bluish tinge. 4.7 x 3 cm.

S. 6h  Small fragment from the body of a jar; yellowish-white
earthenware; decorated on the outside with the remains of two ribbons and a seal consisting of small dots, all in relief under turquoise green glaze, inside remains of black glaze. 3.5 x 1.7 cm.

**Base Fragments**

S. 7  Base fragment from bowl; shallow foot-ring with flat base; buff earthenware; remains of green glaze appears on the inside. 4.7 x 4.5 cm.

S. 8  Fragment of a base from a bowl; yellowish earthenware; flat base with rounded edge; glazed on the outside with turquoise green which is badly weathered; on the inside appears light green glazed stripe on white slip background. 6.5 x 4.7 cm.

S. 9  Base from a vase or a small jar; yellowish earthenware; circular flat base with low foot-ring; glazed on the outside with turquoise blue; light green glaze appears on the inside; lump of burnt clay stuck to the middle of the base. 6.2 x 5 cm. Ht. 4 cm.

S. 10 Fragment from the base of a jar; yellow earthenware; glazed on the outside with turquoise green; inside black glaze which has now badly decayed. 8.4 x 7 cm. Ht. 6.5 cm.

S. 11 Base fragment of a large storage jar; buff earthenware; shallow concave base with short, irregular foot-ring; coated on the outside with dark green glaze, on the inside white glaze with bluish tinge which has badly decayed. 12.5 x 9 cm. Ht. 4.8 cm.

**Unglazed Sherds**

S. 12  Sice fragment from the body of a jar; reddish earthenware; decorated on the outside with small incised lines. 2.8 x 2.5 cm.
S. 14  Fragment from the base of a jar; white earthenware; flat base; the centre of the base appears to be considerably thinner than the edge. 5 x 3.5 cm.

S. 15  Fragment of a base from a jar or a large plate; reddish earthenware; flat base with short foot; white slip covers the outside. 7.2 x 4.2 cm.

S. 17  Rim fragment from a bowl; buff earthenware; profile ledge appears on the inside, remains of black ash are to be seen on both sides. 11.2 x 6 cm.

S. 18  Rim fragment from a bowl; buff earthenware; concave and smooth wall on the outside, finger marks inside. Broken into three. 7.3 x 2.5 cm.

S. 19  Rim fragment from a bowl, red earthenware; flat and everted rim; decorated on the outside with incised parallel running lines. 3.3 x 2.5 cm.

S. 20  Side fragment from the body of a jar; red earthenware; incised decoration appears on the outside, consisting mainly of stripes at the bottom and deep dots at the top. 7.1 x 5.7 cm.

S. 21  Side fragment of a large jar; yellow earthenware; badly weathered; no decoration. 13 x 11.5 cm.

Steatite

S. 22  Rim fragment from a dish or a cooking pot; black stoneware; decorated on the outside with incised vertical lines; with a small hole at one end. Broken into two. 8 x 3.5 cm.
CATALOGUE 2

Glass

QH. 1 Mouth and neck fragment of a flask; everted from flat rim, cylindrical neck; straight sides; irregular finish; greenish glass. Diam. 2.2 cm.; ht. 2.5 cm.

QH. 2 Fragment of rim and neck of a flask; everted sloping rim; cylindrical neck, greenish slender glass. Ht. 1.5 cm.; diam. 2.4 cm.

QH. 3 Fragment of a rim; everted, slightly sloping uneven rim, which is connected with the top part of the cylindrical neck; greenish glass. 2.6 x 2.4 cm.

QH. 4 Small fragment of a rim and neck of a bottle; flaring neck is short and everted rim; blue glass. 2.2 x 3 cm.

QH. 5 Shoulder fragment of a flask; transparent greenish glass; the fragment is twisted downwards on one side; in the middle of the fragment is the joint of the neck which is now missing. 5.5 x 4.2 cm.

QH. 6 a, b, c Three fragments, rims of cups; transparent greenish glass; the rims slope steeply and are thickened below the edge. (a) 2.5 x 1.4 cm. (b) 3.7 x 1.4 cm. (c) 3.7 x 2.6 cm.

QH. 7 Small fragment of a rounded rim of a vessel, opaque blue glass. 1.4 x 1.4 cm.

QH. 8 Base of a flask, slightly concave; transparent yellowish glass. 3 x 1.1 cm.

QH. 9 Base of a flask of greenish transparent glass;
impressed base with shallow foot ring in the middle
relief square mark. Diam. 3 cm.; ht. 1.1 cm.

QH. 10
Fragment of a concave base of bottle; transparent
green glass; moulded body with impressions; vertical
ribbing. Diam. 6.5 cm.

Z. 1
Fragment of rim of a bowl, transparent green glass,
thickened sloping rim. 2.5 x 1 cm.

Z. 2
Fragment of a rim of a thin bowl or cup; transparent
light violet coloured glass, slightly everted rounded
rim and thinner downwards. 2.3 x 1.3 cm.

Z. 3
Fragment of base of small bottle; concave upwards,
light green coloured glass. 3 x 2.2 cm.

Z. 4
Fragment of convex base and side of a small bottle;
greenish glass. 1.5 x 1.3 cm.

F. 1
Fragment of mouth and neck of a flask; cloudy white
colour showing traces of weathering; slight
iridescence; the disc-shaped mouth is regularly
formed; the neck widens toward the bottom.
Diam. at the mouth, 4 cm.; diam. at the bottom,
2.2 cm.; ht. 2.5 cm.

F. 2
Fragment of a rim and neck of a small bottle, greenish
glass, remains of a cylindrical neck, widening at
the mouth. 2 x 1.7 cm.

F. 3
Fragment of rim and neck of a flask; greenish glass;
everted sloping rim. Diam. 2.2 cm.

F. 4
Two fragments of rounded, dark blue glass bracelets;
one of them is much thicker than the other; both
are flat inside and curved on the outside.
(a) 3.3 x 1.6 cm. (b) 0.7 x 1.6 cm.
Three fragments of glass of bracelets, greenish purple glass, covered on the outside with yellow colour; irregular profile surface with yellow and red paints.

(a) 7 x 2 cm.  (b) 6 x 3 cm.  (c) 6 x 2.5 cm.

Two fragments of glass bracelets, thin twisted shapes; the first is green coloured, the second is dark blue.

(a) 0.4 x 1.7 cm.  (b) 0.4 x 1.7 cm.

Base fragment of a rounded vessel; transparent greenish glass; inside the folded base a vein of violet coloured stripes. 4 x 1.4 cm.

Base fragment of a large vessel; transparent greenish glass, affected by weathering; flat at the bottom, concave in the middle. 6.5 x 4 cm.

Rim fragment of a bottle; light blue glass; rounded rim slightly folded. 6 x 2.5 cm.

Side fragment of a vessel; transparent greenish glass, the fragment is irregular and twisted to one side; perhaps a waster. 3.2 x 1.6 cm.

Two fragments of rims, dark blue glass, one (a), is a rim of a thin cup with regular rounded rim twisted downwards; the second (b) is a rim of a large vessel, thick rounded rim, flat on the inside surface and everted. (a) 1.8 x 1.5 cm. (b) 2.8 x 1.5 cm.

Small glass bead; globule shape, honey coloured with a hole in its centre. Diam. 1.1 cm.

Fragment of base and side of a bottle, thick transparent white glass; globular shape thinning upwards. Indications of floral decoration appear on the outside of the body. 5.5 x 4 cm.

Base fragment of perfume bottle; conical shape; dark green glass; decorated on the outside with
incised wavy lines.  2.8 x 2 cm.

FR. 3  
Base fragment of a small vessel; transparent white glass, flat round base which is concave in the middle. 3.4 x 1.9 cm.

FR. 4  
Fragment of base of bottle or cup of thin transparent light green glass; base with rounded disc shape. 2.8 x 2.7 cm.

FR. 5  
Fragment of round base of a bottle, blue colour, short foot. Diam. 2.2 cm.

FR. 6  
Fragment of mouth and neck of a bottle; transparent white glass, at the top rim is everted. Diam. at the top, 1.9 cm.; diam. at the bottom, 1.1 cm.; ht. 2 cm.

FR. 7  
Fragment of neck and mouth of small bottle; opaque pinkish glass; cylindrical neck encircled by rings. 2.3 x 1.3 cm.

FR. 8  
Neck and mouth fragment of a bottle, transparent greenish glass; cylindrical neck, rounded everted rim, ridge in. 2.4 x 2 cm.

FR. 9  
Fragment of a rim of a cup; transparent greenish colour; rounded everted rim. 3 x 2.2 cm.

FR. 10  
Waster fragment of the neck of a bottle, transparent bluish glass pressed and twisted. 3.5 x 2.2 cm.
CONCLUSIONS

It can be said that the Pilgrim Road from Kufa to Mecca was officially established at the time of the 'Abbasid Caliphs. We agree with A. Al-Wohaibi that the Basrah-Mecca road was a purely Muslim innovation.\(^1\) Perhaps some settlements along the Kufa-Mecca road were inhabited or at least used for various purposes in the pre-Muslim period; but this still has to be proved, preferably by scientifically conducted excavations.

From the historical sources now available, we can conclude that a major part of the Pilgrim Road was used by the Muslim armies when they marched to Iraq in the first half of the seventh century A.D. The Caliph 'Uthmān provided facilities at certain stations, especially at Fayd, by digging wells and qanāts. The road from that period onwards became open to traffic, but was used mainly by soldiers. During the Umayyad period, the road remained in continuous use but the volume of traffic appears not to have been as heavy as on the Syrian-Mecca road. We have hardly obtained any information to the effect that the Umayyad caliphs did anything to the Kufa-Mecca road. The only hint in this connection is made by al-Ḥarbi who mentions that the station of ath-Tha'labīyya was established by 'Abd al-Malik b. Marwān.\(^2\) On historical grounds, it is not they but the 'Abbasid caliphs who are credited with the establishment and development of the

\(^1\) Al-Wohaibi, *The Hijaz in the Writing of the Arab Geographers*, p. 385.
\(^2\) *Al-Manāsik*, p. 296
Kufa-Mecca road during their reigns. Officials and well-known people (both men and women) paid generously for the improving of the road by building water tanks, wells and some other useful facilities. Among the best known personalities who contributed a great deal in the construction of the road is Queen Zubaydah from whose name the road took its name. Her great achievement was, in addition to the work she sponsored along the road, having organised a network of water supplies for Mecca and its holy places. These water works are best known as 'Ayn Zubaydah.

The Pilgrim Road in fact reached its golden age at the time of Hārūn ar-Rashīd and Zubaydah, who paid impressive sums for the welfare and comfort of the pilgrims. The road had regular superintendents whose task it was to inspect the road and its facilities. The road was made available for a wide variety of traffic, not only pilgrims but also merchants and soldiers. Thus on many occasions, the central government in Baghdad (and in Samarra) sent reinforcements to the threatened points in the Hijāz region or central Arabia along the road. The best example was when the road came under attack from tribes and from the Qarmatians. The volume of traffic during the early period of the 'Abbasid caliphs was extremely high so that a single caravan might exceed twenty thousand and might carry with it an impressive amount of goods.

The decline of the road was caused by the irruptions of certain tribes as early as the third century A.H./ninth century A.D. This was accentuated later by the Qarmatian raids on many stations along the Pilgrim Road which began in the late third century A.H. (early ninth century A.D.). But despite the destruction of the road by the above-mentioned
groups and the weak position of the central government in Baghdad, the road was maintained and improved, from time to time, by the caliphs themselves and by other donors.

The fall of Baghdad in 656/1258 can be considered a major factor in the decline of the Kufa-Mecca road. The road from that period onwards became entirely unsafe to travel on; there were no more repairs or improvements of its facilities and no special arrangements to organise the traffic. But the road was sporadically used when there was a strong ruler in Baghdad who could negotiate the safety of the pilgrims and supervise their movements. We have pointed out that the road, from the 14th century A.D., was occasionally used by pilgrims from Iraq, Iran, and the rest of the eastern lands. The road was still known in the 19th and 20th centuries as Darb Zubaydah or Darb as-Sitt Zubaydah, and some of its facilities are still in use by local tribes and pilgrims.

On archaeological grounds, the Kufa-Mecca road can be considered the finest and most remarkable and extensive road system in the earlier period of Islamic history. The people who administered and built the road appear to have had highly sophisticated knowledge of road building. They paved the road at some points, cleared it of dangerous obstacles, and cut it through hills and mountains. They provided water installations in great number. These were built over a vast distance despite the fact that the climatic conditions varied dramatically: from bitter winds and rain floods to the torrid heat of the desert sand. The engineers must have obtained a good knowledge of the topography of the different regions through which the road was made, in order to construct water cisterns and dams. They must have learnt scientifically how to extract underground water by digging
wells (and ganāts) along the entire length of the road. Perhaps technologists in such methods were present during the construction of the water-supply network. Not only did they build shelters for the pilgrims, khāns, and fortresses, but they marked the road out with road-signs and provided it with milestones as well.

From what remains of the buildings on the road, it is clear that they were of a considerable size, and solidly constructed to the extent that some of them could resist the attacks of tribes and the power of the Qarmatians.

So far, we have no data available about the people who actually participated in the construction of the road, such as engineers or workers. In a previous chapter we mentioned that it was a common practice during the Umayyad and ‘Abbasid periods to recruit skilled workmen, craftsmen, and engineers from different parts of the Islamic state to carry out big projects. This might also have been the case when the Pilgrim Road was constructed. Since local labour was not available, we assume that the road must have demanded the importation of a great number of technicians and workers (as was normally the case with Roman roads). But perhaps forced labour was occasionally used, as when Khāliṣah, the maid of al-Khayzurān, employed a hundred slaves to pave a section of the road—although after the completion of their work she set them free.¹ It appears also that people might participate voluntarily by digging wells at some main stations; an example of this is given by al-Ḥarbi.²

The best preserved monuments along the road, at the present time, are the water tanks and the wells. Their

¹ See ch. VI, part 1. See also, al-Ḥarbi, op. cit., p. 305.
² Ibid., p. 291.
restoration will no doubt help in many ways, as it does the local settlers and the nomads together with their livestock. Putting these monuments in good condition will also commemorate those who over a thousand years ago established the Pilgrim Road and provided it with facilities in such a manner that the monuments still bear witness to this outstanding enterprise.
Appendix A

The Administrators of the Kufa-Mecca Road

During the 'Abbasid Period

<table>
<thead>
<tr>
<th>Name of person in charge</th>
<th>Year of appointment</th>
<th>The Caliph</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muḥammad b. Ibrāhīm b. 'Ali</td>
<td>-</td>
<td>Al-Manṣūr</td>
</tr>
<tr>
<td>Yaqtīn b. Mūsa</td>
<td>161/777</td>
<td>Al-Mahdi</td>
</tr>
<tr>
<td>(His tenure of his post lasted until 171/787. His brother Mūsa acted as his substitute)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'Umar b. Faraj¹</td>
<td>231/845</td>
<td>Al-Wāthiq</td>
</tr>
<tr>
<td>Yaḥya b. Harthamah</td>
<td>234/848</td>
<td>Al-Mutawakkil</td>
</tr>
<tr>
<td>Jaʿfar b. Dīnār</td>
<td>240/854</td>
<td>&quot;</td>
</tr>
<tr>
<td>Abu as-Sāj</td>
<td>244/858</td>
<td>&quot;</td>
</tr>
<tr>
<td>Muḥammad b. Ḥātim</td>
<td>-</td>
<td>Al-Mustaʿīn</td>
</tr>
<tr>
<td>'Abdullāh b. Sulaymān</td>
<td>251/865</td>
<td>&quot;</td>
</tr>
<tr>
<td>(He was the assistant of Abu as-Sāj)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Al-Ḥārith (the successor of 'Abdullāh)</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>Muḥammad b. 'Abdullāh</td>
<td>252/866</td>
<td>&quot;</td>
</tr>
<tr>
<td>Aḥmad al-Muwaffaq</td>
<td>257/870</td>
<td>Al-Muʿtamid</td>
</tr>
<tr>
<td>Kaftamar 'Ali b. al-Ḥusayn b. Dawoud</td>
<td>262/875</td>
<td>&quot;</td>
</tr>
<tr>
<td>'Ali b. Masrūr al-Balkhi (He replaced his brother Muḥammad b. Masrūr al-Balkhi, 'Ali was later killed by Bani Asad tribe in 265/788)</td>
<td>265/878</td>
<td>&quot;</td>
</tr>
<tr>
<td>Muḥammad b. Abi as-Sāj</td>
<td>266/879</td>
<td>&quot;</td>
</tr>
<tr>
<td>Muḥammad b. Aḥmad aṭ-Ṭāʾī</td>
<td>271/884</td>
<td>&quot;</td>
</tr>
<tr>
<td>Abū Bakr 'Abdullāh b. Yūsuf</td>
<td>-</td>
<td>Al-Muʿtaṣīd</td>
</tr>
<tr>
<td>(279-289/892-902)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ibrāhīm b. Abīl Ḥāsh'ath</td>
<td>294/906</td>
<td>Al-Muktafi</td>
</tr>
</tbody>
</table>

¹ Simultaneously İshāq b. Ibrāhīm b. Abī Khamīṣah was appointed as the Superintendent of the Basrah-Mecca road.
<table>
<thead>
<tr>
<th>Name</th>
<th>Year</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abū Ḥāmid Warqā' b. Muḥammad ash-Shaybānī</td>
<td>303/915</td>
<td>Al-Muqtadir</td>
</tr>
<tr>
<td>Abūl Hayjā' 'Abdullāh b. Ḥamdān</td>
<td>311/923</td>
<td>&quot;</td>
</tr>
<tr>
<td>Ja'far b. Warqā' ash-Shaybānī</td>
<td>312/924</td>
<td>&quot;</td>
</tr>
<tr>
<td>Yaḥya b. 'Abdullāh b. Muḥammad b. Mu'ammār b. Ja'far Abul Faḍl</td>
<td>570/1171</td>
<td>His tenure of his post seems to have lasted over 20 years. So he worked under three caliphs: Al-Muqtafi, Al-Mustanjid, Al-Mustaḍī.&quot;</td>
</tr>
</tbody>
</table>
Appendix B

Glossary of Arabic Technical Terms Related to Darb Zubaydah

abyāt  literally "houses", but is also applied to shelters or tents

'alam  a cairn used as way-mark or road-sign

'amīr al-ḥājij  the person in charge of accompanying the pilgrims to and from Mecca during the pilgrim season. Normally appointed by the caliph

'agabah  natural obstacle, such as hillock or high ground which is difficult for caravans; also steep incline

'azj  a small structure next to a birkah or a well; perhaps guard house

badhragat al-ḥājij  escorting of pilgrims to and from Mecca during the pilgrim season

barīd  postal service, or postal stage (normally 12 miles apart)

birkah  a cistern constructed for travellers on major routes, which may be of any shape

bi'r  a well of a considerable depth with permanent water

dhirā'  cubit (used as a measure for distance or length)

farsakh  a measure of distance equalling 3 miles

ghādir  natural pool

ḥafir al-ʾābār  the digging of wells

ḥawd  a water basin or trough, of varying shape, sometimes smaller than a birkah

ḥarra(t)  lava field or lava flow

ḥīsān  fortress

ḥisū (pl. absā')  a kind of well with temporary water

inbāt al-mā'  extracting water from below ground, i.e., digging wells or qanāts

khān  a hostel built for travellers along major routes or in remote places
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>khizānah</td>
<td>term applied to a store house, or a cistern used for storing water</td>
</tr>
<tr>
<td>madfa‘u mâ’</td>
<td>a wall constructed for deflecting water into a birkah, ẖawḍ, etc.</td>
</tr>
<tr>
<td>manār</td>
<td>a fire signal (or beacon)</td>
</tr>
<tr>
<td>manzil (pl. manāzil)</td>
<td>a halt or station on the pilgrim road; it also applies to areas where tribes gather for the water pastures</td>
</tr>
<tr>
<td>manzarah</td>
<td>a light house or a watch tower</td>
</tr>
<tr>
<td>marbalah</td>
<td>a day's journey, equalling one league, or c. 30 miles</td>
</tr>
<tr>
<td>maṣna’ (pl. maṣnī’)</td>
<td>(literally &quot;construction&quot;) term applied to a birkah, ẖawḍ, etc.</td>
</tr>
<tr>
<td>mawāqīd</td>
<td>fire signals or beacons</td>
</tr>
<tr>
<td>miḥrāb</td>
<td>a niche in the wall of the mosque indicating the direction of Mecca</td>
</tr>
<tr>
<td>mīl (pl. amyāl)</td>
<td>an Arab mile, equal to 1.7 km.</td>
</tr>
<tr>
<td>minbar</td>
<td>strictly a pulpit in a mosque where the imām officiates; term used by early Muslim geographers for any place provided with a congregational mosque, or a place for the local governor (wāli)</td>
</tr>
<tr>
<td>miṣfāt</td>
<td>a settling tank attached to a birkah</td>
</tr>
<tr>
<td>galīb</td>
<td>similar to bi‘r; a well of permanent water</td>
</tr>
<tr>
<td>ganāt</td>
<td>underground canal with shafts or wells at intervals</td>
</tr>
<tr>
<td>gāri‘ah</td>
<td>a path, or the road track</td>
</tr>
<tr>
<td>gaṣr</td>
<td>palace, or castle</td>
</tr>
<tr>
<td>gibab</td>
<td>shelters</td>
</tr>
<tr>
<td>rakīyya</td>
<td>a kind of well, with temporary water; the same as bisu</td>
</tr>
<tr>
<td>sahhal at-turq</td>
<td>to make roads smooth</td>
</tr>
<tr>
<td>gāhib at-tariq</td>
<td>road superintendent</td>
</tr>
<tr>
<td>sāniyah (pl. sawānī)</td>
<td>apparatus used for drawing water out of a well, etc.</td>
</tr>
<tr>
<td>rāwiyah</td>
<td>a pilgrim bottle (or a waterskin)</td>
</tr>
<tr>
<td>sahriji</td>
<td>large cistern for storing rain-water (normally covered over)</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>sha'īb</td>
<td>depression</td>
</tr>
<tr>
<td>sharbah</td>
<td>water bottle or pilgrim bottle</td>
</tr>
<tr>
<td>sūq (pl. aswāq)</td>
<td>market for shopping at stations along the pilgrim route</td>
</tr>
<tr>
<td>tārīq</td>
<td>road, route or the track of the road</td>
</tr>
<tr>
<td>wahl</td>
<td>mud; or clayey ground</td>
</tr>
<tr>
<td>wāli at-Tarīq</td>
<td>as ṣāhib at-ṭarīq, or the road administrator</td>
</tr>
</tbody>
</table>
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