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#### INTRODUCTION

The collaboration between the Alma Mater Studiorum - University of Bologna and the State Board of Antiquities and Heritage (SBAH), existing since 2016, led to the creation of the QADIS survey project. The results presented here were analyzed in the frame of the EU funded project "EDUU - Educational and Cultural Heritage Enhancement for Social Cohesion in Iraq" (EuropeAid CSO-LA/2016/382-631).

In October 2017, we conducted the fourth fieldwork season and in this paper we report about 40 new sites identified. The survey area (Fig. 1) follows the administrative borders of the region of Qadisiyah to the South and East (including part of the Delmej basin), and it stops around the town of Afak to the North-West.<sup>1</sup>

This area was previously investigated in different periods: in 1902 in the Fara environs (Andrae 1903), in 1925-1926 and in 1968 in an area larger than our own (Dougherty 1926; Al-Shukri 1974), while between 1968 and 1975 Adams' survey developed on the ground (Adams 1981; the southern fringe of the QADIS area is covered by Adams and Nissen 1972).

As for the excavations, the site of Adab was extensively excavated between 1903 and 1905 (Wilson 2012), while close to the Delmei reservoir in 1977 a single season was carried out at Umm al-Hafriyat (Gibson 1977/78). The extremely difficult situation for the management and preservation of the archaeological heritage (see especially Emberling and Hanson 2008 on the looting peak which occurred between 2003 and 2007), after the 2<sup>nd</sup> and the 3<sup>rd</sup> Gulf War, the Iraqi archaeological teams, under the direction of the State Board of Antiquities and Heritage (SBAH), carried out regular or rescue excavations at different sitesq: Tell Dhuhaia, Bismaya/Adab (Al-Doori et al. 2001-2002), Tell Mirza, Tell Ruejeh and Tell Delmej 1-2 in the Delmej Basin, Tell al-Akhader, Tell Abu Edan, Tell el-'Arris (along the Afak-Al Budayr road) and Tell Drehem/Puzrish-Dagan (Al-Mutawalli and Shalkham 2014). The QADIS project aims at producing a new understanding of a multi-layered archaeological landscape through cuttingedge documentation techniques, to plot – with the greatest possible detail – urban plans from visible surface remains coupled with their fine chronological attribution through

systematic collections of surface materials (which also define the functional interpretation of the urban sectors), to check and update the bulk of Adams' seminal results through an integrated survey methodology, to map the landscape of silted channels also studying its historical development and to connect epigraphic sources with settlement patterns (Marchetti *et al.* 2017a; 2017b; in press).

# RESULTS OF THE FOURTH SURVEY SEASON (2017)

The fourth campaign (October 2017) focused on a large area extending from Tell Drehem and the Delmej reservoir to the N-NW until Bismaya/Adab and Tell Jidr/Karkar to the SE (Fig. 1) (Marchetti *et al.* in press a; in press b).<sup>2</sup>

QADIS NO.: QD066

MODERN NAME: none

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 540739.00 m

E 3531069.00 m N

DIMENSIONS: 422.24 m length, 293.52 m width, 9.58 ha

area

CHRONOLOGICAL PHASES: Unknown

DESCRIPTION: Site of irregular shape (low mound). The site is probably located South of Euphrates paleochannel.

QADIS NO.: QD067

MODERN NAME: Abu Ksheem

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 545548.00 m

E 3519670.00 m N

DIMENSIONS: 189.67 m length, 199.64 m width, 2.58 ha

area

CHRONOLOGICAL PHASES: Isin-Larsa, Old Babylonian,

Parthian, Islamic

DESCRIPTION: Site of rectangular shape (low mound).

Looting clustered on the south-eastern site.

QADIS NO.: QD068

MODERN NAME: Tell Al-Husan

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 543525.00 m

E 3519848.00 m N

DIMENSIONS: 78 m length, 83.5 m width, 0.5 ha area

CHRONOLOGICAL PHASES: Parthian

DESCRIPTION: Site of circular shape (low mound). The site is affected by intensive looting. A cluster of slags has been found to the south close to the ancient channel. To the North a cluster of bricks has been found.

QADIS NO.: QD069

MODERN NAME: Ishan al-Muchadrah

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 531725.00 m

E 3540656.00 m N

DIMENSIONS: 72.36 m length, 84.81 m width, 0.43 ha

area

CHRONOLOGICAL PHASES: Unknown

DESCRIPTION: Site of circular shape. The northern part is completely destroyed by modern cultivation while no looting is attested.

**QADIS NO.: QD070** 

MODERN NAME: Al- Gofyayah

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 529537.00 m

E 3547944.00 m N

DIMENSIONS: 273.88 m length, 571.93 m width, 10.5 ha area

CHRONOLOGICAL PHASES: Islamic

DESCRIPTION: Site of irregular shape of medium height.

The surface is characterized by bushes as for Tell Drehem.

To the North there is a pottery scatter probably due to agricultural works.

QADIS NO.: QD071

MODERN NAME: none

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 531296.00 m

E 3538240.00 m N

DIMENSIONS: 155.69 m length, 150.17 m width, 1.67 ha

area

CHRONOLOGICAL PHASES: Ottoman

DESCRIPTION: Flat site of irregular shape surrounded by cultivation. No looting attested.

QADIS NO.: QD072

MODERN NAME: none

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 532621.00 m

E 3536704.00 m N

DIMENSIONS: 385.15m length, 86.65 m width, 2.87 ha area

CHRONOLOGICAL PHASES: Parthian, Sasanian, Islamic

DESCRIPTION: Medium height site of elongated shape. At the southern end of it there is a cluster of slags while throughout the site we found several glass fragments.

QADIS NO.: QD073

MODERN NAME: Tell Saleh

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 533320.00 m

E 3537249.00 m N

DIMENSIONS: 113.42 m length, 106.5 m width, 0.91 ha

area

CHRONOLOGICAL PHASES: Isin-Larsa, Old Babylonian,

Kassite, Parthian

DESCRIPTION: Site of irregular shape, medium height.

About 350 m to the South West there is a pottery scatter.

QADIS NO.: QD074

MODERN NAME: none

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 533381.00 m

E 3533719.00 m N

DIMENSIONS: 134.44 m length, 175.67 m width, 2 ha area

CHRONOLOGICAL PHASES: Parthian

DESCRIPTION: Low mound of irregular shape. In the western part of the site there is a cluster of slags together with glass frags. Modern cultivations are located all around.

QADIS NO.: QD075b

MODERN NAME: none

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 545844.00 m

E 3523237.00 m N

DIMENSIONS: 691.19 m length, 328.56 m width, 17.4 ha

area

CHRONOLOGICAL PHASES: Jemdet Nasr, Early

Dynastic I-III, Isin-Larsa, Old Babylonian

DESCRIPTION: Large site of irregular shape. Ancient

structures are visible in the Northern part of the site.

QADIS NO.: QD075c

MODERN NAME: none

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 545589.00 m

E 3523511.00 m N

DIMENSIONS: 141.07 m length, 120.71 m width, 1.42 ha

area

CHRONOLOGICAL PHASES: Parthian, Islamic

DESCRIPTION: High mound of circular shape.

QADIS NO.: QD075d

MODERN NAME: none

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 546360.00 m

E 3522171.00 m N

DIMENSIONS: 162.26 m length, 152.57 m width, 2.1 ha

area

CHRONOLOGICAL PHASES: Early Dynastic I-III, Ur III

DESCRIPTION: Low mound of round shape. A cluster of

slags was found in the center of the site.

QADIS NO.: QD076

MODERN NAME: none

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 533163.00 m

E 3535162.00 m N

DIMENSIONS: 163.55 m length, 207.16 m width, 2.6 ha

area

CHRONOLOGICAL PHASES: Parthian

DESCRIPTION: Low mound of irregular shape.

QADIS NO.: QD077

MODERN NAME: Tell Bismar

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 544226.00 m

E 3522382.00 m N

DIMENSIONS: 178.06 m length, 187.23 m width, 2.51 ha

area

CHRONOLOGICAL PHASES: Uruk, Jemdet Nasr

DESCRIPTION: Low mound of irregular shape. Several sickle blades have been found in the central part of the site together with a white clay cone.

QADIS NO.: QD078

MODERN NAME: none

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 543649.00 m

E 3524236.00 m N

DIMENSIONS: 103.4 m length, 99.18 m width, 0.88 ha area

CHRONOLOGICAL PHASES: Early Dynastic I-II, Isin-Larsa, Old Babylonian, Parthian

DESCRIPTION: Medium height mound of circular shape.

The site is surrounded by cultivations.

QADIS NO.: QD079

MODERN NAME: Abu Ghara

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 543798.00 m

E 3525540.00 m N

DIMENSIONS: 173.46 m length, 143.46 m width, 2.21 ha area

CHRONOLOGICAL PHASES: Uruk, Jemdet Nasr, Isin-Larsa, Old Babylonian

DESCRIPTION: Low mound of irregular shape. The site is surrounded by vegetation.

QADIS NO.: QD080

MODERN NAME: Al Hamidat

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 543524.00 m

E 3527755.00 m N

DIMENSIONS: 171.58 m length, 181.3 m width, 2.83 ha

area

CHRONOLOGICAL PHASES: Unknown

DESCRIPTION: Low mound of circular shape.

QADIS NO.: QD081a

MODERN NAME: Al Hojam 1

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 555785.00 m

E 3520788.00 m N

DIMENSIONS: 140.07 m length, 144.4 m width, 1.47 ha

area

CHRONOLOGICAL PHASES: Ur III, Isin-Larsa, Old

Babylonian

DESCRIPTION: Low mound of triangular shape.

QADIS NO.: QD081b

MODERN NAME: Al Hojam 2

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 555580.00 m

E 3520836.00 m N

DIMENSIONS: 77.78 m length, 89.36 m width, 0.5 ha area

CHRONOLOGICAL PHASES: Unknown

DESCRIPTION: Site of irregular shape.

QADIS NO.: QD082 (Fig. 5)

MODERN NAME: Qal'at Al Nikhala

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 557313.00 m

E 3520064.00 m N

DIMENSIONS: 65.57 m length, 27.72 m width, 0.15 ha

area

CHRONOLOGICAL PHASES: Ottoman

DESCRIPTION: Qalat of square shape with four rounded towers on each corner. Mud brick masonry. The qalat has been probably built during ottoman period to control the land and then re used to fight against the British at the beginning of 20th century. To the east there is a cluster of slags.

QADIS NO.: QD083

MODERN NAME: Al Soba

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 556692.00 m

E 3520329.00 m N

DIMENSIONS: 33.13 m length, 47.19 m width, 0.12 ha

area

CHRONOLOGICAL PHASES: Unknown

DESCRIPTION: Qalat of square shape heavily ruined.

Mudbrick masonry.

QADIS NO.: QD084

MODERN NAME: Tell Halaf

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 556984.00 m

E 3520530.00 m N

DIMENSIONS: 117.29 m length, 80.06 m width, 0.78 ha

area

CHRONOLOGICAL PHASES: Jemdet Nasr, Early

Dynastic I-III, Isin-Larsa, Old Babylonian

DESCRIPTION: Site of medium height, irregular shape.

Sickle blades have been found through the site.

QADIS NO.: QD085

MODERN NAME: Umm Jaeb

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 557774.00 m

E 3520910.00 m N

DIMENSIONS: 101.03 m length, 91.66 m width, 0.7 ha

area

CHRONOLOGICAL PHASES: Ottoman

DESCRIPTION: Circular tower. Mud brick masonry. The

entrance is probably on the South part.

QADIS NO.: QD086

MODERN NAME: Koshe

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 558059.00 m

E 3521109.00 m N

DIMENSIONS: 59.58 m length, 48.7 m width, 0.27 ha area

CHRONOLOGICAL PHASES: Parthian, Sasanian,

Ottoman

DESCRIPTION: Circular tower. Mud brick masonry. The

roof is collapsed.

QADIS NO.: QD087

MODERN NAME: Al Alewi

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 554481.00 m

E 3522783.00 m N

DIMENSIONS: 143.92 m length, 161.4 m width, 1.96 ha area

CHRONOLOGICAL PHASES: Uruk, Early Dynastic I-III,

Parthian, Sasanian

DESCRIPTION: Medium height mound of irregular shape.

A cluster of slags has been found in the norther part while sickle blades have been found all around.

QADIS NO.: QD088 (Fig. 6)

MODERN NAME: Qal'at Al Mehtarja

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 553854.00 m

E 3521826.00 m N

DIMENSIONS: 51.22 m length, 53.85 m width, 0.22 ha area

CHRONOLOGICAL PHASES: Ottoman

DESCRIPTION: Qalat of square shape with a single rounded tower to the East. Some rooms of the fortress are still visible.

QADIS NO.: QD089

MODERN NAME: none

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 557651.00 m

E 3520672.00 m N

DIMENSIONS: 31.55 m length, 27.69 m width, 0.1 ha area

CHRONOLOGICAL PHASES: Ottoman

DESCRIPTION: Qalat of rectangular shape. The building is quite narrow. Agricultural fields are located all around.

**QADIS NO.: QD090** 

MODERN NAME: none

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 556867.00 m

E 3518870.00 m N

DIMENSIONS: 99.7 m length, 98.1 m width, 0.76 ha area

CHRONOLOGICAL PHASES: Neo Babylonian, Parthian,

Sasanian

DESCRIPTION: Medium height mound of circular shape.

Agricultural fields are located all around. A cluster of stone and slags have been found in the west part of the site. One sickle blade coming from the surface collection.

QADIS NO.: QD091 (Fig. 3)

MODERN NAME: Tell Alskeri

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 559155.00 m

E 3519533.00 m N

DIMENSIONS: 97.15 m length, 102.23 m width, 0.8 ha

area

CHRONOLOGICAL PHASES: Uruk, Jemdet Nasr, Early

Dynastic I-III, Ur III, Neo Babylonian

DESCRIPTION: Low height mound surrounded by cultivations. A possible paleochannel is visible in the western part. The southern part of the site is cut away by cultivation works.

QADIS NO.: QD093

MODERN NAME: none

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 533654.00 m

E 3534744.00 m N

DIMENSIONS: 147.2 m length, 135.8 m width, 1.34 ha

area

CHRONOLOGICAL PHASES: Parthian

DESCRIPTION: Flat site of irregular shape. The site is surrounded by cultivations. The Euphrates paleochannel is on the West side of the site.

QADIS NO.: QD094

MODERN NAME: none

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 536528.00 m

E 3532695.00 m N

DIMENSIONS: 155.05 m length, 150.48 m width, 1.79 ha area

CHRONOLOGICAL PHASES: Uruk

DESCRIPTION: Low height mound of circular shape. The site is cut North South and East West in its central part by two different channels. The site is surrounded by cultivations.

**QADIS NO.: QD095** 

MODERN NAME: none

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 538118.00 m

E 3533531.00 m N

DIMENSIONS: 342.1 m length, 515.7 m width, 13 ha area

CHRONOLOGICAL PHASES: Early Dynastic I-II, Isin-Larsa, Old Babylonian, Kassite

DESCRIPTION: Medium height mound of triangular shape.

A high concentration of pottery is visible on the mound. A cluster of slags in the West part. Ottoman pottery on top of the mound. The Euphrates paleochannel is visible in the South part.

QADIS NO.: QD096

MODERN NAME: none

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 543865.00 m

E 3527263.00 m N

DIMENSIONS: 177.2 m length, 83.95 m width, 1 ha area

CHRONOLOGICAL PHASES: Unknown

DESCRIPTION: Low height site of circular shape. The Euphrates paleo channels is visible in the North part.

**QADIS NO.: QD097** 

MODERN NAME: none

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 529805.00 m

E 3545952.00 m N

DIMENSIONS: 347.13 m length, 196.5 m width, 5.74 ha area

CHRONOLOGICAL PHASES: Early Dynastic I-III, Ur III, Isin-Larsa, Old Babylonian

DESCRIPTION: Low height mound surrounded by cultivation. Pottery was not visible on the surface but only in coincidence with looting pits.

QADIS NO.: QD098

MODERN NAME: El Thawra

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 536078.00 m

E 3530758.00 m N

DIMENSIONS: 77.87 m length, 84.08 m width, 0.62 ha area

CHRONOLOGICAL PHASES: Parthian

DESCRIPTION: Flat site of irregular shape. Pottery was not visible on the surface but only in coincidence with the channels works.

QADIS NO.: QD099

MODERN NAME: Qalat al Muradiya

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 542012.00 m

E 3522899.00 m N

DIMENSIONS: 21.1 m length, 14.24 m width, 0.01 ha area

CHRONOLOGICAL PHASES: Ottoman

DESCRIPTION: Qalat built in 1885 and restored in 2015.

The building was used during the conflict against Ottomans

but not against British. Mud brick masonry

QADIS NO.: QD100

MODERN NAME: none

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 543640.00 m

E 3520010.00 m N

DIMENSIONS: 61.23 m length, 69.61 m width, 0.32 ha

area

CHRONOLOGICAL PHASES: Unknown

DESCRIPTION: Qalat on top of a preexisting tell.

**QADIS NO.: QD101** 

MODERN NAME: none

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 551435.00 m

777

E 3522745.00 m N

DIMENSIONS: 196.67 m length, 181.43 m width, 2.82 ha area

CHRONOLOGICAL PHASES: Early Dynastic, Isin-Larsa, Old Babylonian, Kassite, Parthian

DESCRIPTION: Flat site of circular shape. Looting is attested on the East part of the site. Slags were found on the South East part of the site.

QADIS NO.: QD102 (Fig. 4)

MODERN NAME: none

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 550247.00 m

E 3522787.00 m N

DIMENSIONS: 155.52 m length, 137.51 m width, 1.49 ha area

CHRONOLOGICAL PHASES: Unknown

DESCRIPTION: Low mound of circular shape, probably covered by a thick (around 30cm) deposit. Few pottery is coming from the fields around the site. Sand is attested on the southern part of the site.

QADIS NO.: QD103

MODERN NAME: Ishan el Gahauci

REGION AND DISTRIC: Qadisiyah, Afak

COORDINATES (UTM WGS84 Zone 38S): 549735.00 m

E 3523293.00 m N

DIMENSIONS: 160.72 m length, 138.67 m width, 1.86 ha

CHRONOLOGICAL PHASES:

area

HASES: Early Dynastic I-II,

Parthian, Islamic

DESCRIPTION: Medium height mound of round shape.

The soil is characterized by a thin crust of silt. Looting is attested on top of the site.

#### DISCUSSIONS AND CONCLUSIONS

The new data collected during the fourth campaign (October 2017) of the QADIS survey project indicate a higher settlement density especially as far as the Early Dynastic I-III, the Isin-Larsa/Old Babylonian and the Parthian-Sasanian periods are concerned (Fig. 2). Most of the sites exposed are very small, flat and often very difficult to identify without the support of satellite imagery. Moreover, many of them are severely damaged by modern crop or looting. Along with the new sites exposed, remote sensing analysis using aerial photographs and satellite imagery,

allowed to identify a more complex hydraulic landscape system and probably a substantial waterway hierarchy.

#### NOTES

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<sup>&</sup>lt;sup>2</sup> The dates proposed in this paper for each site must be considered as preliminary. Length and width are defined according to site shape.

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Fig. 1 Map of the QADIS survey area. In red the newly identified sites during the fourth campaign (October 2017) by the Iraqi-Italian QADIS expedition.

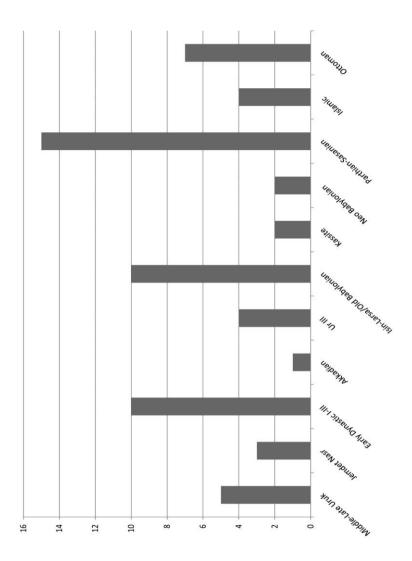


Fig. 2 Chronological frequency of the newly identified sites during the fourth campaign (October 2017) by the Iraqi-Italian QADIS expedition.

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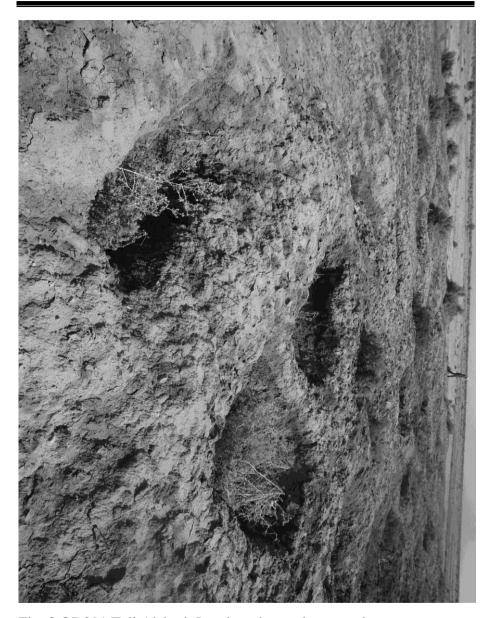


Fig. 3 QD091 Tell Alskeri. Looting pits on the mound.

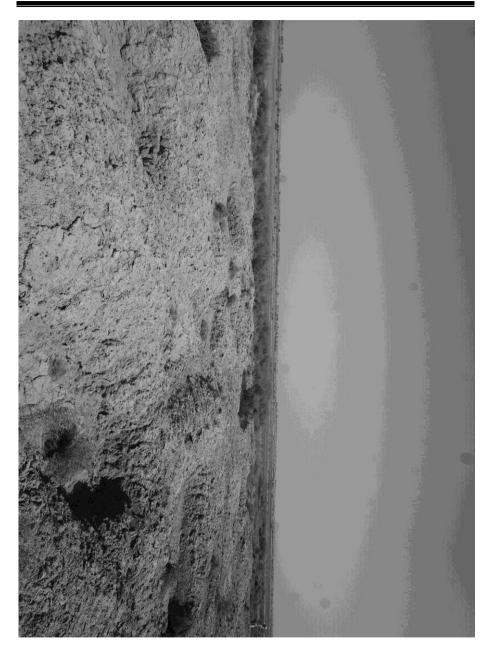


Fig. 4 QD102. Looting pits on the mound.



Fig. 5 QD082 Qal'at Al Nikhala, Ottoman period.



Fig. 6 QD088 Qal'at Al Mehtarja, Ottoman period.