

PALMYRENA

**PALMYRA AND THE SURROUNDING TERRITORY
JOINT SYRIAN-NORWEGIAN PROJECT**

**SURFACE SURVEY NORTH OF PALMYRA
JEBEL MERAH
APRIL AND MAY 2011.**

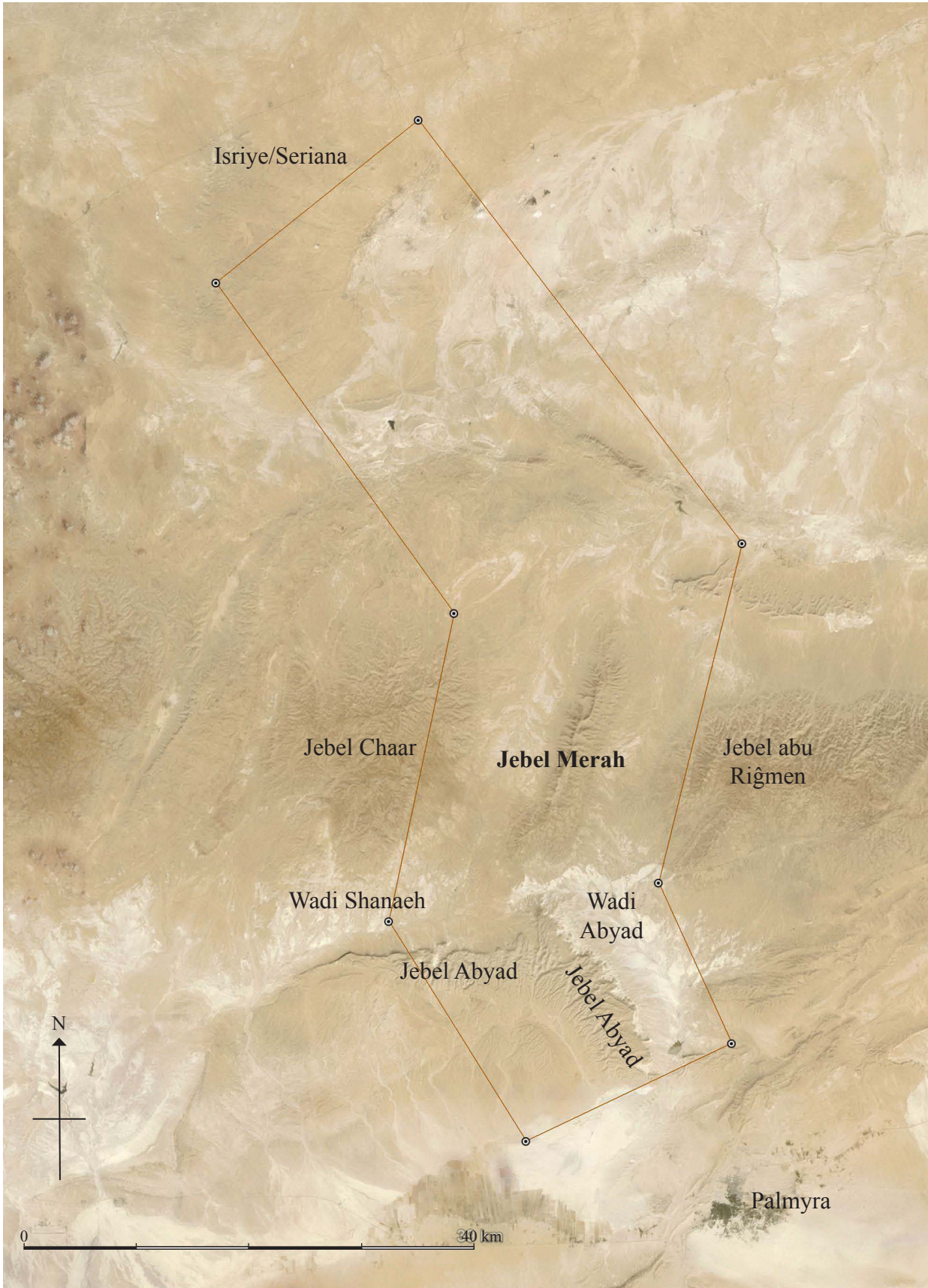
REPORT

HISTORICAL PERIOD

Jørgen Christian Meyer



2011



Concession area

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SITES SURVEYED HISTORICAL PERIOD.

Introduction:

The mission was a continuation of the fieldwork in April 2008 and April/May 2009, which extended as far as Fasida (35165N 38.022E. 71 km. NW of Palmyra).

The aim of the survey has been to elucidate the exploration of the landscape north of Palmyra, and by that the relationship between the large city of Palmyra and the hinterland. The main efforts of the 2011 survey was concentrated on the Jebel Merah area with special attention to buildings and larger settlements as a supplement to the French investigations in Jebel Chaar from the 1930ies, and the Syrian-Norwegian survey in 2009. Studies of high resolution satellite images and previous reconnaissance in the area indicated that settlements were not only confined to Jebel Chaar and Jebel Abyad but also to Jebel Merah.

The survey of the historical team was made in close contact with the pre-historic team, which visited other sites, and the two teams shared information.

Due to the political situation in Syria and heavy rains the survey was terminated in the beginning of May.

The mission was directed by Dr. Michel al-Maqdissi (Directorate General of Antiquities and Museums in Syria), Eng. Walid El-As'ad (Director of the Museums in Palmyra) and prof. Dr. phil. Jørgen Christian Meyer (University of Bergen, Norway).

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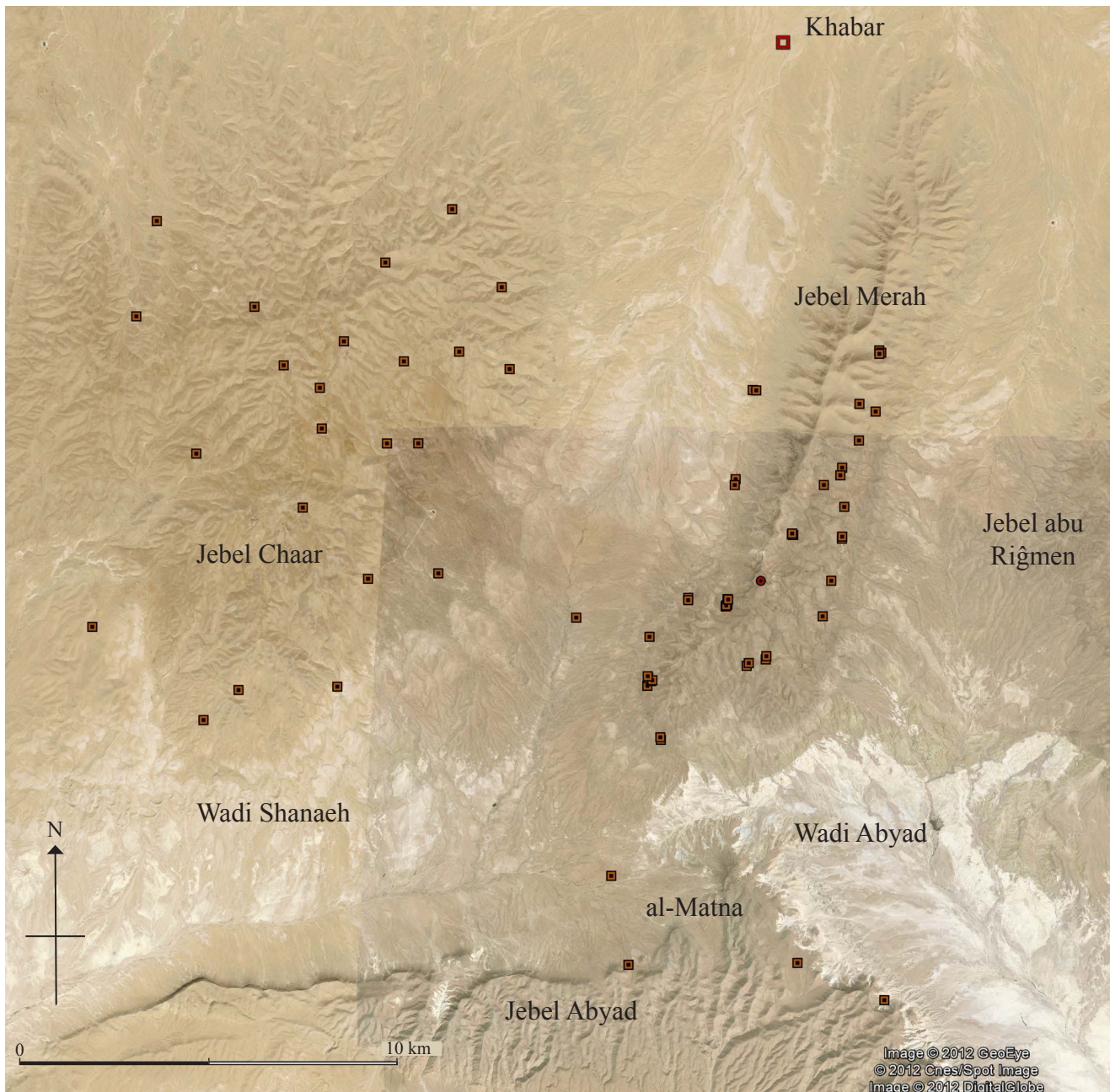
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JEBEL MERAH

Topography:

Jebel Merah is an about 19 km long, 3 km wide marked mountain ridge between the tableland of Jebel Chaar to the East and Jebel abu Riġmen mountains to west, 4 km north of the NE corner of Jebel Abyad. The top of the ridge reaches 1200 – 1330 m above sea level. The northern and central part of the mountain is surrounded on both sides by a broad shelf, at about 1000 – 1100 m above sea level, with a low series of hills at the edge towards the wadi systems between Jebel Merah and Jebel Chaar to the west and Jebel abu Riġmen to the east respectively.



The western shelf is about 1 km wide and the wadis from the western side of Jebel Merah broaden before they enter the plain to the west through openings between the hills at the edge of the shelf. The shelf forms a natural corridor of communication from the mountain pass at al-Matna in Jebel Abyad, along the watershed between Wadi Abyad to the east and Wadi Shanaeh to the west up to the plain between the northern parts of Jebel Chaar and Jebel Merah passing the fort or station at Khabar, before the route turns to the NW. The ridge of the mountain is relatively close to shelf, 1 km or less, but at two places deep bowl-shaped valleys cut into the mountain side.



The western shelf. To the left Jebel Merah, to the right the low series of hills.

To the east the shelf is more irregular and narrower and at several places it is cut through by the wadis coming from the mountain side, making communication NS more difficult in the rainy season. The eastern side of Jebel Merah is wider, at some places up to 2 km, and it is formed by a series of deep bowl-shaped valleys, separated by marked ridges.

To the south the mountain split up in two branches. The main ridge of Jebel Merah turns SW towards the watershed between Wadi Abyad and Wadi Shanaeh. To the S and SE the mountain fans into a series of valleys and smaller ranges. Close to Wadi Abyad the wadis enter deep narrow gorges. The border down to Wadi Abyad is formed by a steep slope cut through by bigger and numerous smaller wadis, and there are only a few natural accesses to Jebel Merah from Wadi Abyad, and they can be very difficult to negotiate during and after heavy showers. Satellite images show a distinct borderline between the white area of Wadi Abyad and the higher plateau testifying to very heavy erosion during the rainy season.



Deep bowl-shaped valley on the west side of Jebel Merah.



Jebel Merah seen from Wadi Abyad.



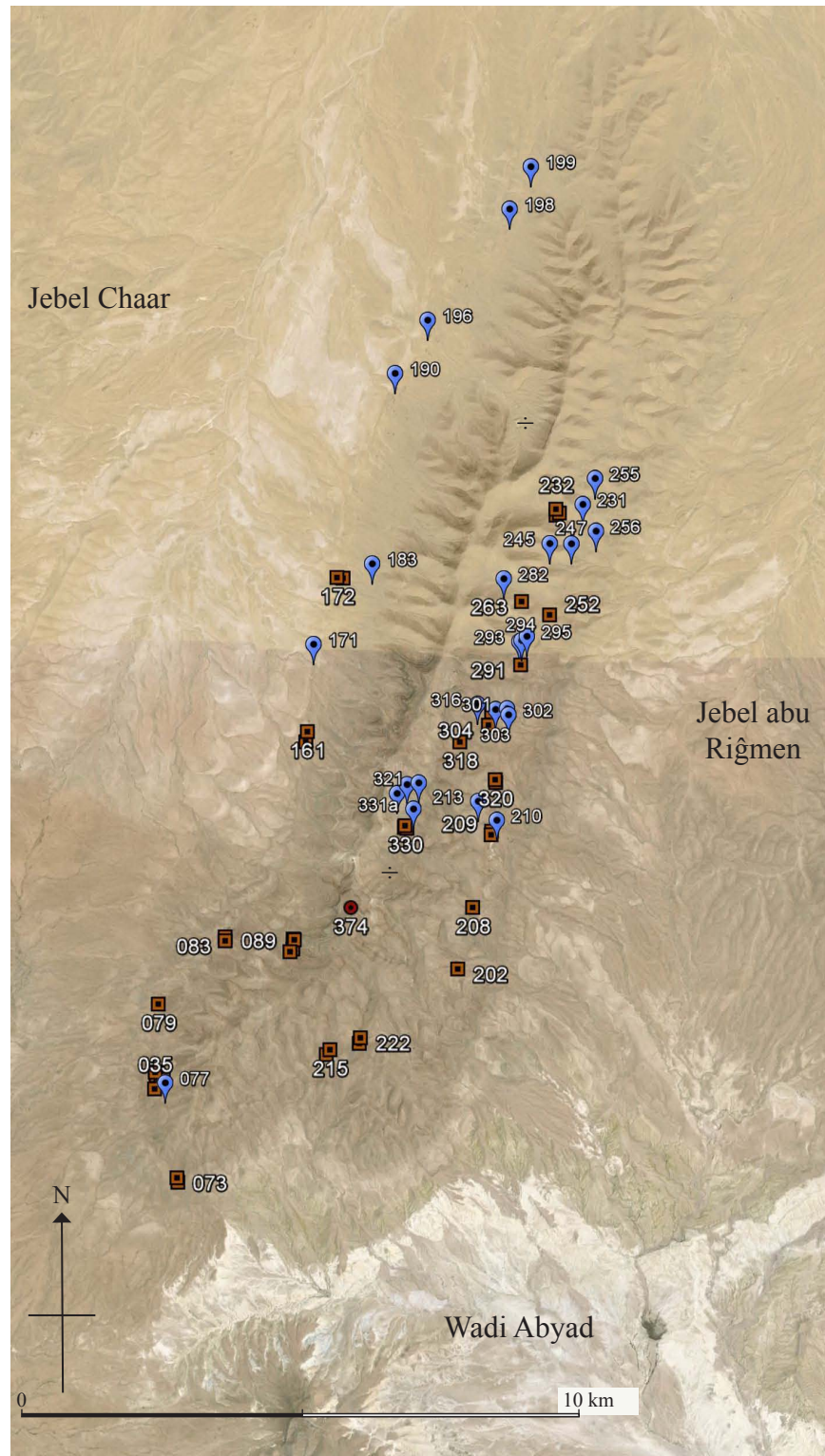
View from Jebel Merah towards Jebel Chaar. In the foreground opening between the hills at the edge of the shelf.



*The eastern shelf.
In the background
Jebel abu Riġmen
and Wadi Abyad.*

Area covered by the 2011 survey.

The survey covered all the western side of Jebel Merah intensively. A large bowl-shaped valley in the northern part of mountain NW of site 232, had been occupied by former oil drilling, and modern constructions have destroyed all possible remains of ancient buildings. The eastern side was covered intensively for the first 14 km to the north up to site 232, apart from a single large valley S of site 330 further to the south.

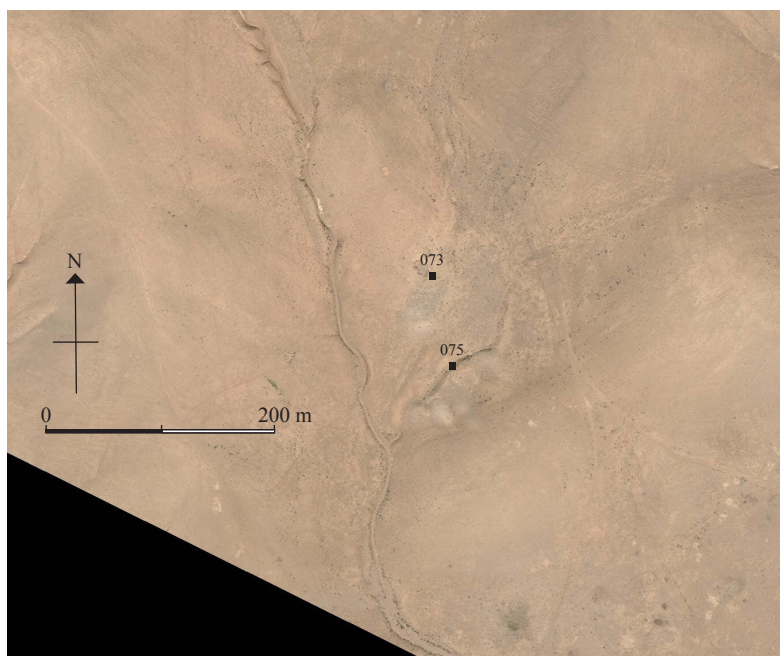
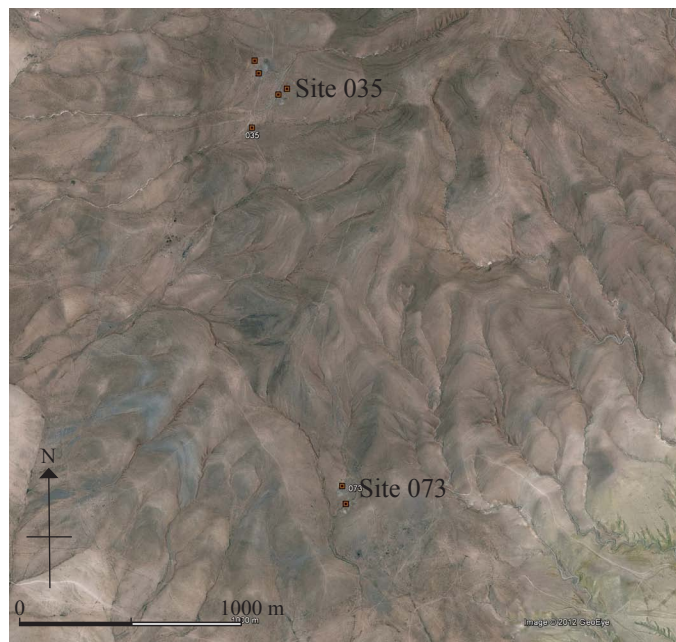


JEBEL MERAH WEST

Site 073.

Surveyed by AA, EMS, KB, JCM. April 19, 2011.
GPS: N34.810289 E38.073760

The site is just south of the SW ridge of Jebel Merah in a relatively flat undulating landscape forming the northern part of the watershed between Wadi Abyad and Wadi Shanaeh, about 1.6 km ESE of site 035. The site is close to a natural route from the NW corner of Wadi Abyad towards the western shelf of Jebel Merah. The drainage runs south towards Wadi Abyad. There are numerous traces of former Bedouin camps in the area.



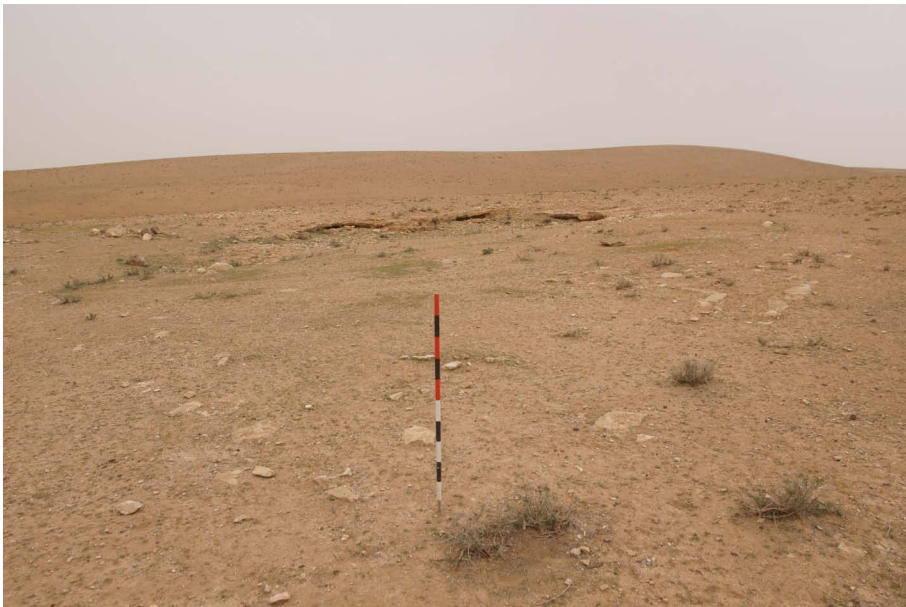
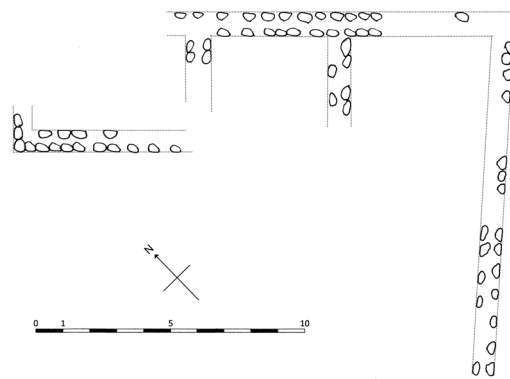
The site consists of the following:

1. Building 073.
2. Building 075.

1. Building 073.

GPS 073: N34.810289 E38.073760 (SE corner), altitude 1048.

The building lies on a small plain surrounded by low hills east of the main wadi coming from the north. Only the SE corner is visible to day. The building is slightly trapezoid and orientated NW-SE. The thickness of the walls varies from 80 to 90 cm. The S wall is preserved for about 14 m; the east wall for about 13 m, but inner walls continue 6 m further to the NW. Along the east wall a series of 3 smaller rooms is preserved, about 3.5 m in depth, varying in broadness from 4, 5 to 6 m. To the W the ground is raising slightly to a small hilltop, which has been cut off by diggings to the east, forming a shallow depression in the centre of the building. This has probably happened after the building has been abandoned. The delimitation of the building cannot be determined, but the visible structures indicate a fairly large building with an open courtyard in the middle and facing rooms along some of the outer walls.



Building 073 seen from SE.

2. Building 075.

GPS 075: N34.809502 E38.073806 (SW corner), altitude 1046.

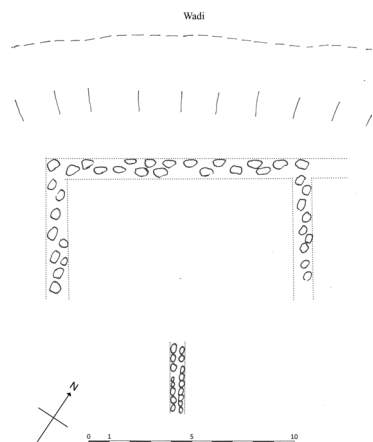
On the hill south of the small wadi coming from NE, 90 m S of building 073, several small tells are visible close to the wadi. In one of them recent diggings have revealed remains of walls of a building, 80 m S of building 073. The walls form part of a room, orientated SW-NE, length about 13 m. From the corners walls runs about 7 m to the SE, but the exact dimension of room, and the thickness of the walls cannot be determined. A few stones aligned with the wall towards the wadi, indicate that the building continued to the NE. About 2 m further to the SE a small stretch of a wall, 3.5 m long, width 80 cm, orientated NW-SE is visible, but it is not aligned with the walls of the building, and the relation to the room is uncertain. The remains indicate the existence of several room of a building, but the exact layout cannot be determined.

Finds and chronology:

Most of the finds have been found in relation to building 073. The finds comprise large amounts of undiagnostic brittle ware (86), 1 small green glass fragment, 2 fragments of grinding stones, and some handles, probably from the Byzantine period.

Conclusion:

The site must have comprised several buildings, one larger on the small plain, and probably also others south of the small wadi, indicated by the small tells and building 075, but the exact size and layout of the latter cannot be determined. There are no traces of cisterns, wells or water catching systems close to the site.



*Building 075 seen from NE.
In the background the NE
corner of Jebel Abyad.*

Site 035.

Surveyed by AA, EMS, KB, JCM. April 18, 2011.
GPS: N34.824447 E38.069139

The site, which covers a 325 m long oblong area, is located W of the SW ridge of Jebel Merah, at the southern limit of the western shelf of the mountain ridge, about 1.6 km WNW of site 035, and 1.7 km S of site 079. The W part of the site is dominated by an oblong low hill at the edge of shelf. The drainage comes from the NE and E and passes through openings in the hills at the edge of the shelf in the SW part of the site.



S part of site 035 seen from NE. In the background Jebel Abyad.

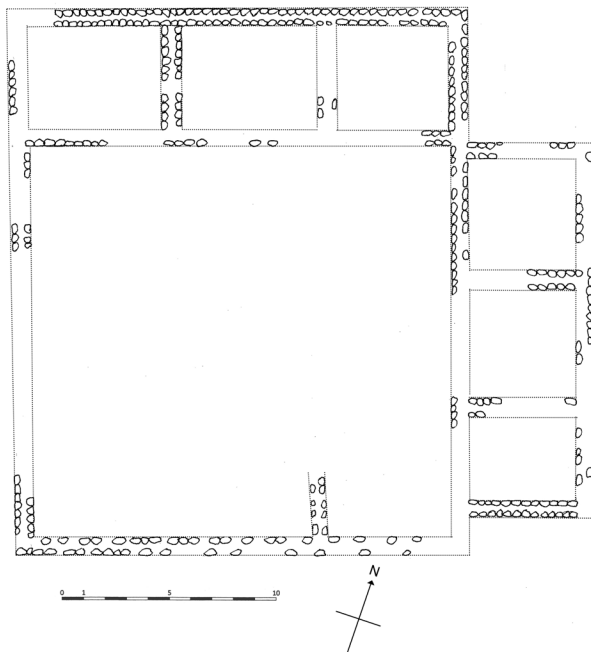
The site consists of the following:

1. Building 054.
2. Building 065.
3. Building 064.
4. Building 066.
5. Building or enclosure 068.
6. Building or enclosure 069.
7. Corral 078.
8. Cistern 063.
9. Cistern 062.
10. Cistern 077.

1. Building 054.

GPS 035: N34.824591 E38.069207 (NE corner), altitude 1081.

The building is located at the S part of the site just W of the track coming from the south, and the intersection of the wadis from the NE and the E, before they pass S of the building through an opening in the hills of the shelf towards the plain between Jebel Merah and Jebel Chaar to the W. The building forms an approximate square measuring 25 x 27 m, and is orientated NE-SW. The thickness of the walls varies from 80 to 90 cm. The centre of the building is formed by a large courtyard, ca 18 m NW-SE, and 20 m NE-SW. To the NW a series of three rooms face the courtyard, depth about 5 m, varying in width from 5, 6 (centre) to 5 m. The wall towards the courtyard measures about 70 cm. Remains of a small stretch of wall protruding from the SE outer wall is not rectangular to the outer wall, and it is probably secondary to the original building. To the NE a series of three rooms face the courtyard, depth 5 m, width varying from 5, 5 to 3 m (SE room). It is possible that the central room formed the entrance to the building. The rooms are not totally integrated in the layout of rest of the building. The NE corner of the building forms an open square and the interior wall of the courtyard are not aligned with the outer wall of NE room. The same arrangement can be observed in the SE corner, where the outer wall of the room has been displaced parallel to the outer wall of the courtyard with 1.5 m. The reason for this lay-out is unclear, but perhaps the series of rooms to the NE are a later addition to the central courtyard.



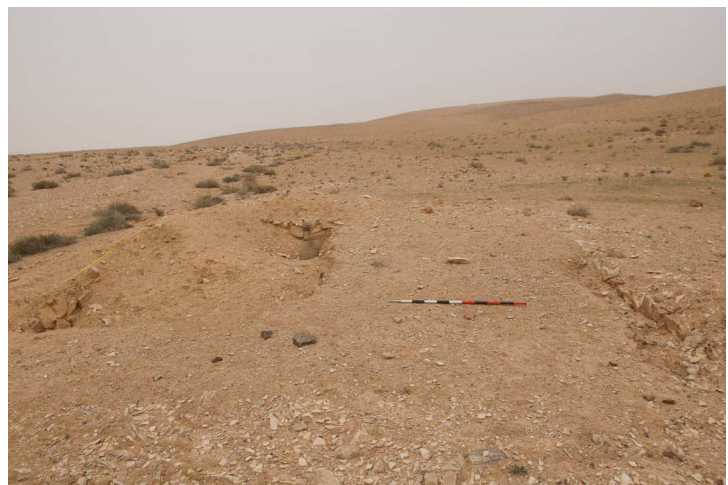
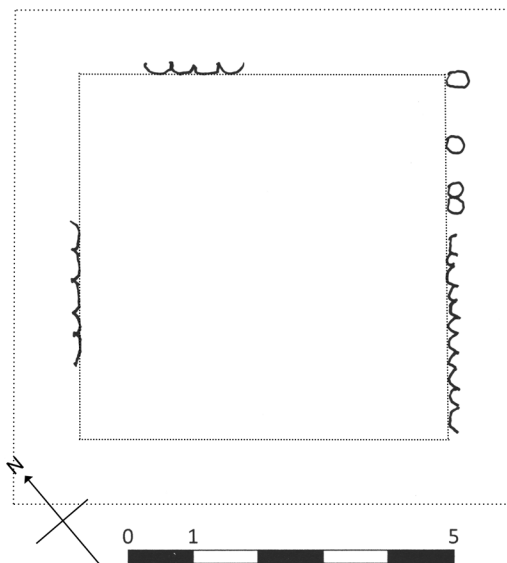


Northeast corner of building 054 seen from W. In the background cistern 062.

2. Building 065.

GPS N34.825922 E38.070493, altitude 1096.

The building is located just E of the NE wadi, close to the modern wadi-bed, 185 m NE of building 054. The building, which is orientated NE-SW, is visible as a small tell. Modern diggings have revealed the outline of a square building, measuring 5.5 x 7 m in the interior. The thickness of the walls cannot be determined. The building is probably a single room structure, and can be compared to other small buildings at other sites, also in Jebel Chaar, which can be classified as small shrines. About 40 m south of the building several smaller tells are visible, but there are no traces of walls in them.

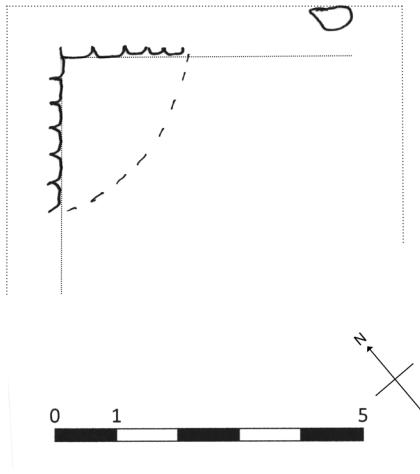


Building 065

3. Building 064.

GPS N34.826153 E38.070913, altitude 1096.

The building, which is orientated NE-SW, is located 40 m NE of building 065. It is visible as a small tell. Modern diggings in the tell have revealed the NW corner of a building. The walls are visible 2.5 m to the SW and 2 m to the SE. The layout of the building cannot be determined. It may be smaller building like building 065 or part of a larger structure.

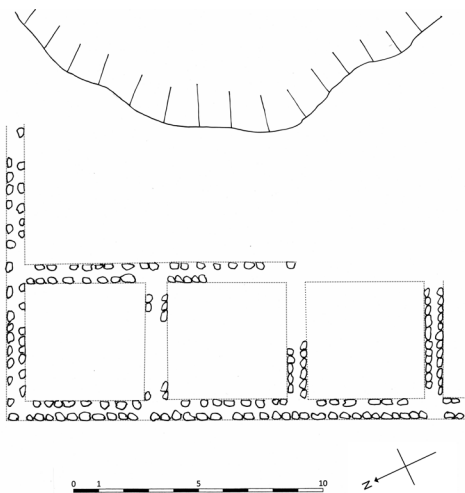


Building 064 seen from S.

4. Building 066.

GPS N34.827281 E38.069333 (NW corner), altitude 1105.

The building is located at the northern part of the oblong hill, about 290 m N of building 054. Part of the building, which is orientated N-S, is located on the top of the hill, but it stretches down the slope towards the east, which is dominated by a large digging in the hillside. The digging has cut into the underlying rock, but it is probably of more recent date, as it cuts off the northern wall towards the E. Even if the exact dimensions of the building cannot be established, the visible walls, width 80-90 cm, and the well-preserved NW corner give a general impression of the layout. The centre of the building has been a large central courtyard down the hillside. Along the W wall, which runs along the hilltop, a series of 3 rooms faced the courtyard, about 4.75 m in depth, 4.75 m in width. A small stretch of the N-S outer-wall continues to the south, showing that the building extended further in that direction.



Western part of building 066 seen from S. To the right the digging in the hill.

5. Building or enclosure 068.

GPS N34.826965 E38.069539 (W-limit), altitude 1092.

30 m SE of building 066 a 7.7 m long stretch of wall, orientated E-W, is visible at the foot of the hill, SE of another marked digging in the hillside. It may have been part of a larger building like building 066 or an enclosure. Other small stretches of walls are visible in the vicinity, but their interrelation is uncertain.

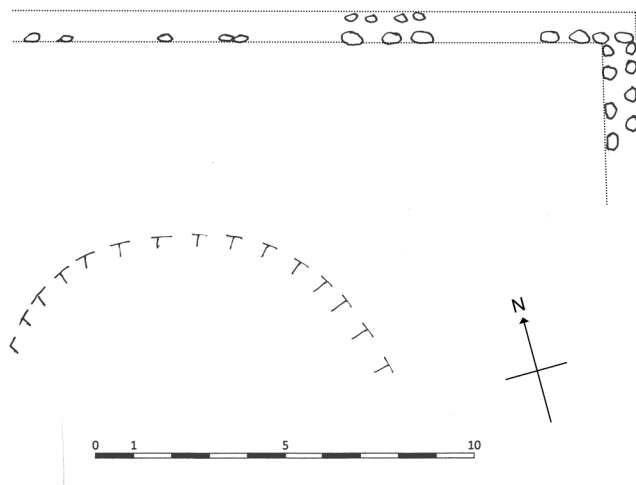


Diggings in the hillside.

6. Building or enclosure 069.

GPS N34.826776 E38.069531 (NE corner), altitude 1092.

20 m S of structure 068 a corner of a building or enclosure is visible at the foot of the hill, orientated N-S. The north wall is visible about 16 m to the W running slightly up the hill, the E wall 3 m to the south. At the centre of the presumed building or enclosure a large digging has been made in the hillside. Like structure 068 it may have been part of a larger building or an enclosure.



7. Corral 078.

GPS N34.827290 E38.069835, 1085 altitude.

45 m E of building 066 at the plain a large corral is situated just W of the track leading to the N. It measure 19 m E-W and 13 N-S. To the E it is divided into a smaller section about 6 m deep. To the N it has a small annex measuring 2 x 3 m. The purpose of the corral is uncertain, perhaps an animal pen or a threshing floor. It is probably later than the habitation at the site, as there are examples of corresponding corrals constructed on the top of earlier abolished buildings (see site 209, Jebel Merah East).

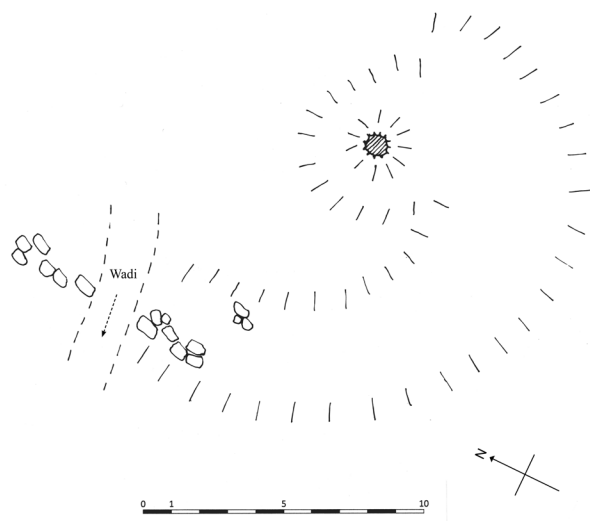


Corral 078, seen from W.

8. Cistern with small dam 063.

GPS N34.826396 E38.071257, altitude 1099.

The cistern is located 40 m NE of building 064 just S of a small wadi coming from the NE. The opening of the cistern is 75 cm in diameter, and built up by stones 1.60 m in depth. There are no traces of catch arms but to the S and W the cistern is surrounded by a semicircular rampart, which has stemmed the water from the wadi and lead it into the cistern. The rampart is not upcast from the cleaning of the cistern. To the W several larger stones are visible in the rampart, where the wadi has cut through. They are remains of the small dam that stemmed the current from the wadi.



Cistern 063, seen from N.

9. Cistern 062.

GPS N34.825011 E38.071775, altitude 1101.

The cistern is located 235 m E of building 054. N of the wadi coming from the E on the hillside. The opening is cut into the rock, diameter 1.42 m. 10 m from the opening a straight catch arm, constructed by large stones runs up the hillside towards the NE. It is preserved for 23 m.



Cistern 062 seen from the E. In the background building 054.

10. Cistern 077.

GPS N34.822095 E38.071108, altitude 1095.

The cistern is located 325 m SE of building 054, near the bottom of another wadi system coming from the E. The opening with a diameter of 1 m, built up by stones, is just N of the wadi, and it has partly been destroyed by the current. To the S a rampart with large stones has been cut through by the wadi. There are no traces of catch arms, and combined with the location of the cistern at the bottom of the wadi, it is highly probable that it was fed by water from the wadi by means of a small dam, not by the runoff from the hillside. Fragment of a large dolium was found in the rampart.

Finds and chronology:

Most of the finds have been found in relation to building 054 and at the foot of the oblong hill. The finds comprise large amounts of undiagnostic brittleware (121), coarse ware (13), 1 green glazed fragment, 1 red glazed fragment, 1 black glazed fragment (interior), 3 painted shards or red slip ware, 1 glass fragment, 1 bronze fragment, at cistern 077 a fragment of a large container in white coarse ware, diameter at least 36 cm, in building 054 a coin, which has been sent to cleaning in Damascus, and many fragments of grinding stones, one of them from a rubbing stone. Most of the pottery is undiagnostic, but some handles, some of the brittle ware and the glazed pottery range from the Roman to the early Islamic period.

Conclusion:

The site must have comprised several buildings with a concentration W of the track. The existence of at least one smaller shrine, and the great range of pottery and large amounts of fragments of grinding stones indicate a more complex settlement.



Coin from building 054.



Glazed pottery.



Handles.



Painted ware.

Site 079.

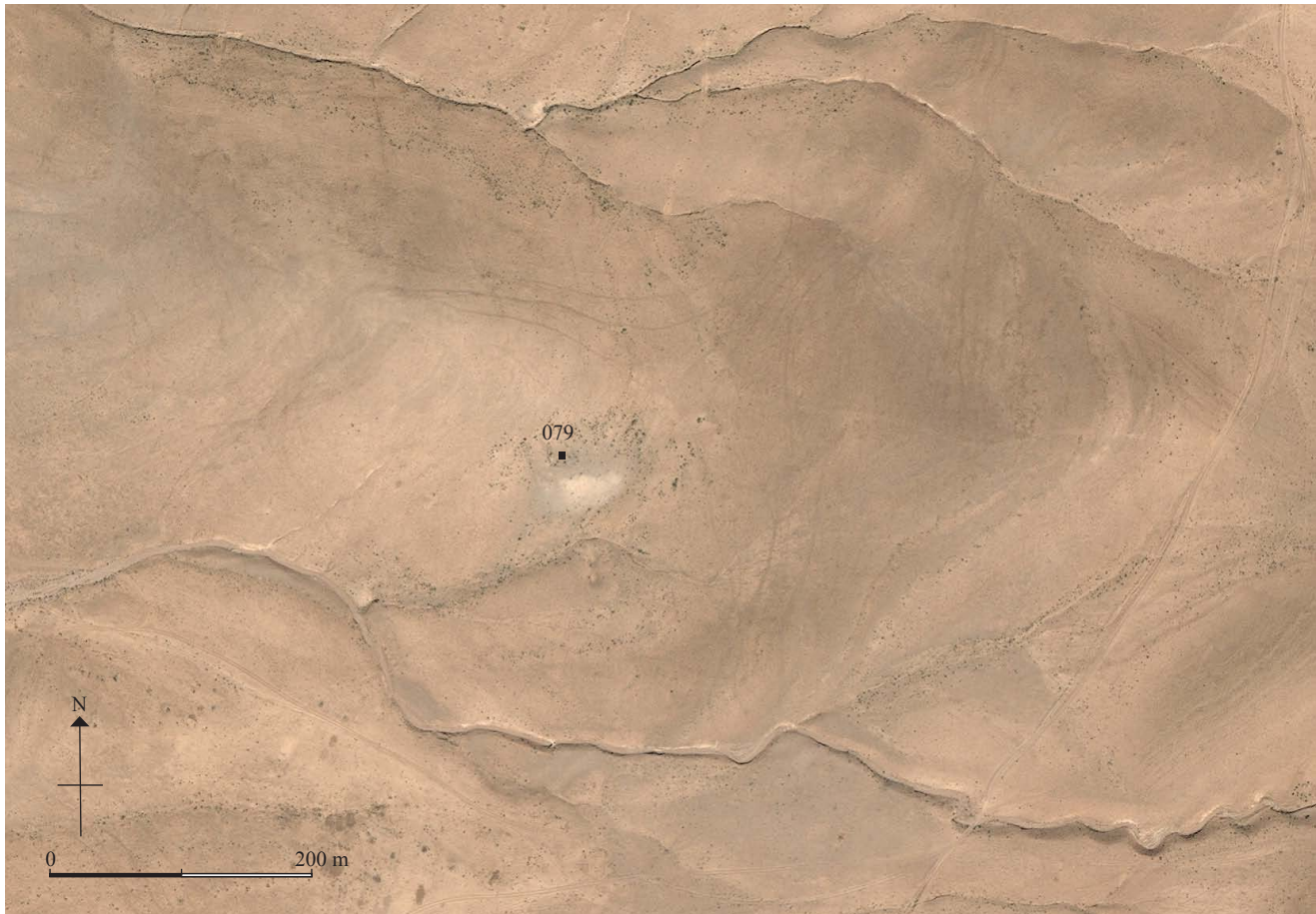
Surveyed by AA, EMS, KB, JCM. April 19, 2011.
GPS: N34.838241 E38.069739

The site is located W of the SW ridge of Jebel Merah, 1.2 km N of site 035 and 1.6 km SW of site 083, at the foot of a small isolated hill, 380 m W of the track leading to the N. There are no traces of cisterns or water catching systems in vicinity.



Site 079 seen from SE.





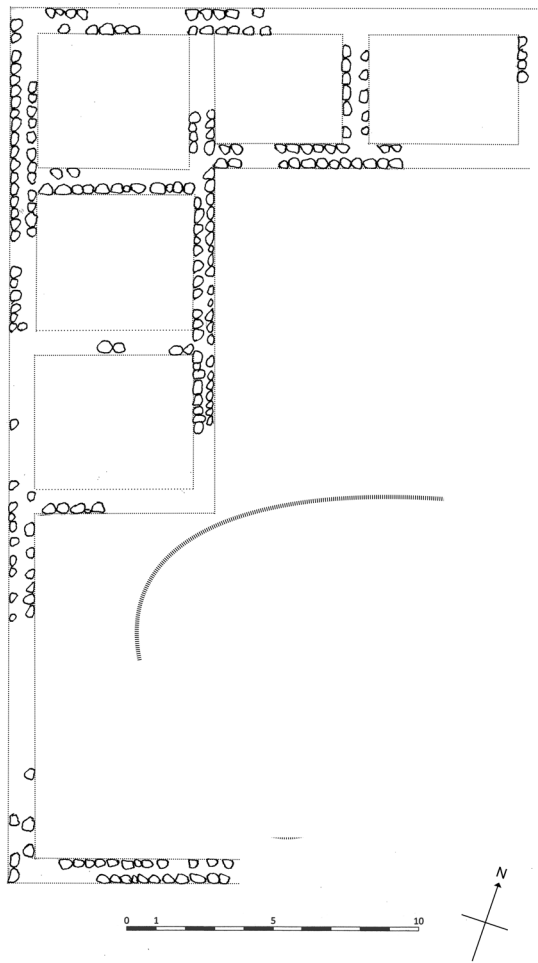
The site consists of the following.

1. Building 079.

GPS: N34.838241 E38.069739 (NW corner), altitude 1101.

The building is located on the S slope of the hill, with the N part of the building on the top of the hill. In the centre of the building there is a deep digging down through the rock. It is secondary to the original building as it cuts off some of the interior walls. The building is orientated NW-SE. Only the NW and SW corner is visible. The length of the W-wall is 30 m, the north wall is visible for 18 m, and the S-wall for 8 m. The thickness of the walls is about 90 cm. The length of the preserved W-wall indicates that the overall size of the building has been 30 x 30 m, which seems to be a common size of this type of building. Along the N wall and W-wall there are a series of rooms facing a central courtyard. Along the N wall two rooms measure 3.7 in depth, and 4.5 / 5 m in width. Along the W wall three rooms measure 5.5 m in depth, and 4.5 m in width, and the division in rooms have in all probability continued down to the SW corner. The interior wall facing the courtyard is about 60 cm. The NW corner-room is aligned with the rooms along the W-wall, but has been slightly displaced in relation to the rooms along the N-wall.

8 m W of the NW corner there is a 2.5 m long stretch of a wall orientated approximately N-S. The thickness cannot be determined. It may be part of another building or an enclosure.

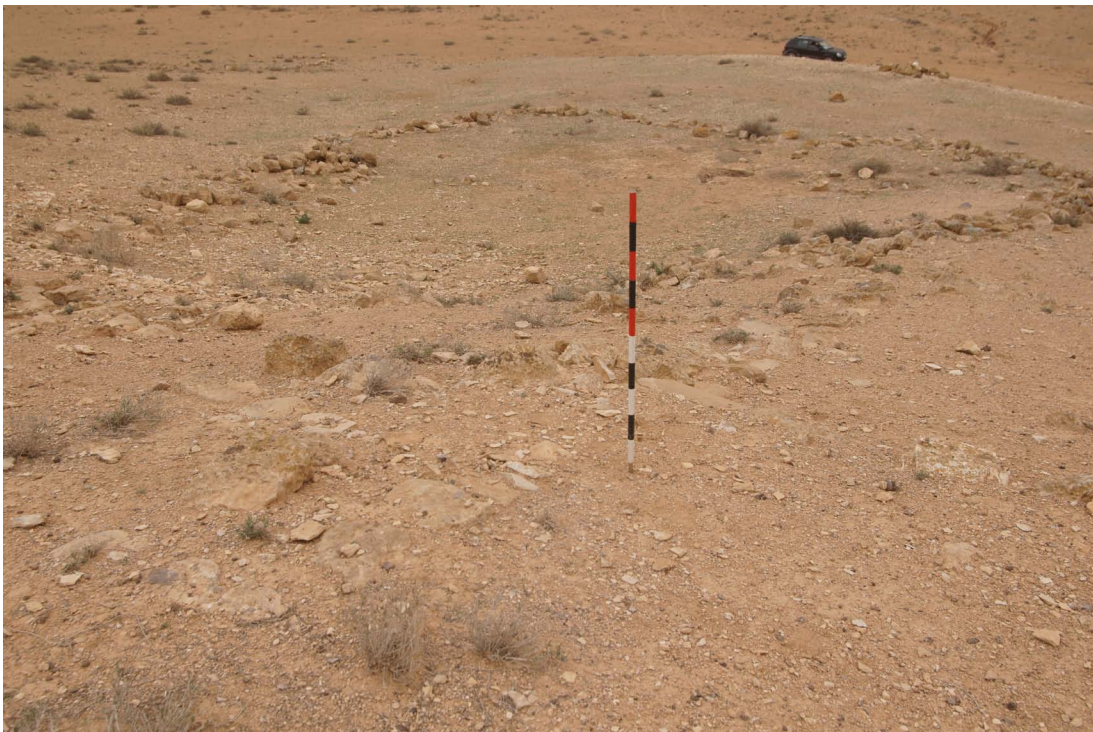


Finds and chronology:

The finds have been found at the foot of the hill, and they comprise brittle ware (60), coarse ware (5), grinding stone fragments (5) and 1 red glazed pottery. The few diagnostic finds range from the Roman period to the early Islamic period.

Conclusion:

The building is probably not part of a larger settlement.



Building 079 seen from NW. In the middle the digging.

Site 083.

Surveyed by AA, EMS, KB, JCM. April 19, 2011.
GPS: N34.848557 E38.083117

The site is located 1.6 km NE of site 079, and 1.2 km W of site 089, W of the beginning of the main ridge of Jebel Merah at the track leading to the north. The drainage is primarily coming from the S, following part of the shelf to the N, before it turns W through openings in the hills at the edge of the shelf. All the visible remains are situated at the plain E of the track W of the wadi. There are several traces of Bedouin camps in the area.



Site 083 seen from NW.

The site consists of the following:

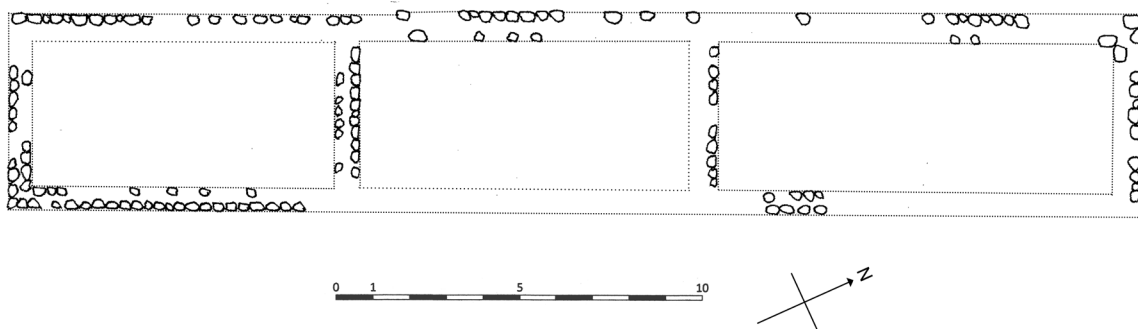
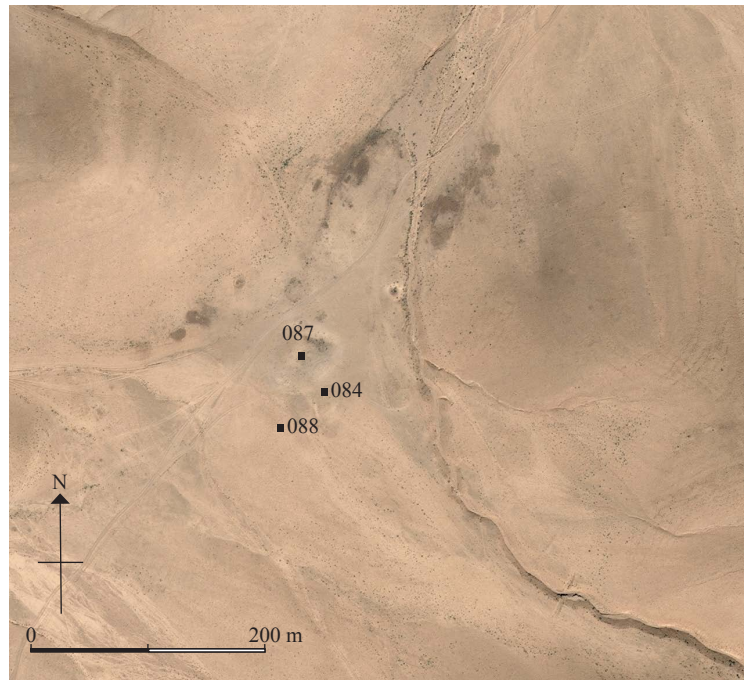
1. Building 087.
2. Building 084.
3. Building or enclosure 088.

1. Building 087.

GPS: N34.849194 E38.083099

(NW corner), altitude 1111.

The building, orientated SSW-NNE, is situated close to the track to the north, W of the wadi leading to the N. The W wall, 31 m long, the NE corner and the SW corner is well preserved, and a series of 3 rectangular rooms along the wall, depth about 4 m, width varying from 10.8 m, 9.2 m to 8.3 meters. The width of the W wall is 80 cm, the rest of the walls 60-70 cm. The 3 rooms are part of a large building with a central courtyard stretching towards the East. At satellite photos the contours of the structure are clearly visible, and the overall dimensions of the building must have been close to 31 x 30 m.

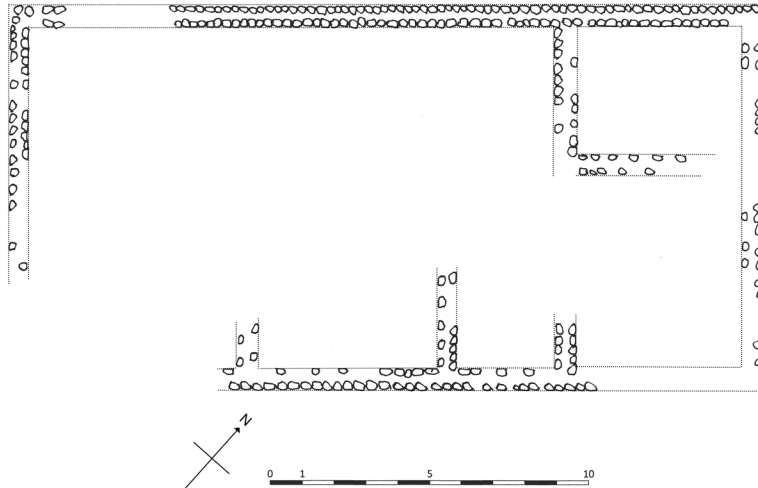


Building 087 seen from the S.

2. Building 084.

GPS : N34.848615 E38.083383 (NE corner), altitude 1114.

Building 084, orientated SW-NE, is located a few m S from the stipulated SW corner of building 087. The building is rectangular, measuring 23 (SW-NE) m x 12 m (NW-SE). Width of the wall about 70 cm. The N part and E part of the building has been divided into a series of rooms. The NW room has a depth of 5.1 m, width 4 m., and remains of a wall rectangular to the E outer wall, show a corresponding arrangement there. Along the E wall there are 3 rooms, depth not visible, and width varying from 3 m, 5.6 m to 6.6 m. Even if the depth of these rooms are not know, the general layout shows a building with an rectangular courtyard in the SW part of the building of relatively modest size, and most of the building has been occupied by rooms. There are no indications that the building extended further to the E.



Building 084 seen from SW.

3. Building or enclosure 088.

GPS: N34.848440 E38.082894 (SW corner), altitude 1116.

25 m SW of building 084 the SW corner of a structure is visible, 1.6 m to the N, and 1.8 m to the E, width of walls unknown. It may be part of a smaller building or an enclosure.

Finds and chronology:

Most of the finds have been found in relation to building 087 and 084. The finds comprise undiagnostic brittle ware (39), coarse ware (51), a glass bracelet, and some fragments of grinding stones. The glass bracelet cannot be dated exactly, as this was common both in the Roman and early Islamic period. The few diagnostic shards make a late impression, byzantine and Ummayyad.



Glass bracelet



Incised white course ware

Conclusion:

The site has probably consisted of more than the two visible buildings. Closer to the wadi E of the buildings there are many possible tells, but no remains of walls are visible. Of special interest is the layout of building 084, which has much more in common with the urban architecture than the building with large central courtyards which is the normal layout in the settlements.

Site 089.

Surveyed by AA, EMS, KB, JCM. April 20-21, 2011.

GPS: N34.847494 E38.096580, Altitude 1140.

The site is located 1.2 km E of site 083, in a deep bowl-shaped valley cut into the eastern and southern mountainside, where the main ridge of Jebel Merah turns SW (see map page 24). To the N the site is delimited by a series of two lower ridges. The opening to the valley is dominated by a low oblong isolated hill to the NW connected to the southern ridge. The main drainage from the site runs S of the hill. Another wadi runs north of the hill, from between the two lower ridges to the N. Access to the site is from the NW crossing the connection between the hill and the southern ridge.



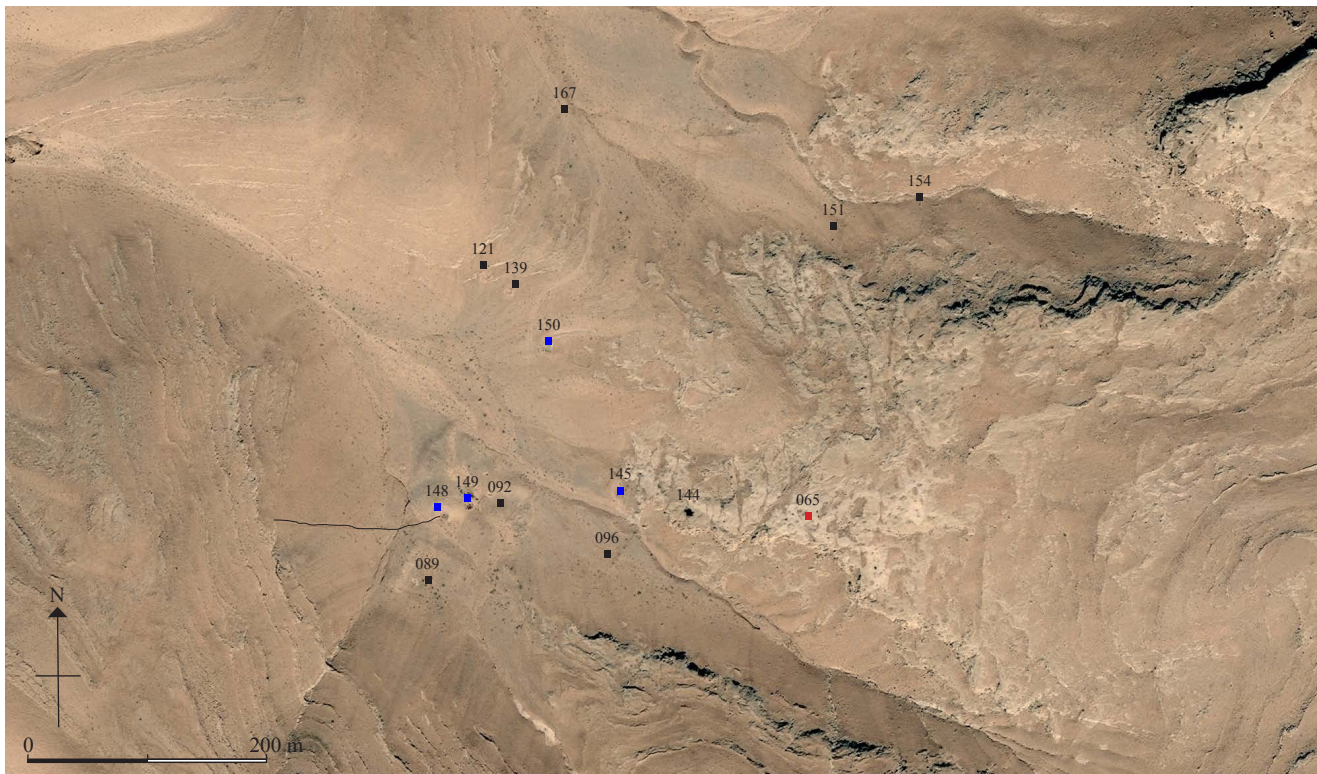
Site 089 seen from E. To the right the low oblong hill. In the background Jebel Chaar.



Site 089 seen from the W.

The site consists of the following:

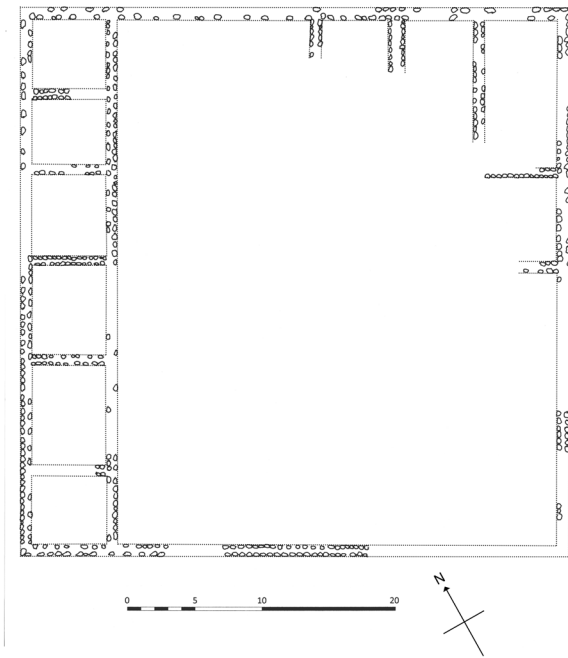
1. Building 089.
2. Building 092.
3. Building 121.
4. Building 139.
5. Cross wadi wall 096
6. Cross wadi walls 151 and 154.
7. Cross wadi wall 167.
8. Saphaitic inscription 143.
9. Cistern 144
10. Cistern 145
11. Cistern 150
12. Cistern 149
13. Cistern 148



1. Building 089.

GPS: N34.847097 E38.096005 (NW corner).

The building is located at the S part of the site at the foot of mountain surrounded by wadis coming down from the mountainside from the S. It is orientated NNE-SSW, and measures 41 m E-W and 41 m N-S. Width of the walls is between 90 and 100 cm. Along the W-wall there is a series of rooms facing a central courtyard, depth 5.5 m, width varying from 5.2 m, 5 m, 6 m, 6.6 m, 7.2 m to 5 m from N to south respectively. Also along the N-wall and E-wall internal walls in the NE part of the building indicate a series of rooms of approximately the same size, but the exact outline cannot be determined. Along the well preserved stretches of the S wall there are no internal walls, and the general layout of the building has with high probability been a square building with a large central courtyard, surrounded by rooms to the W, N and E.

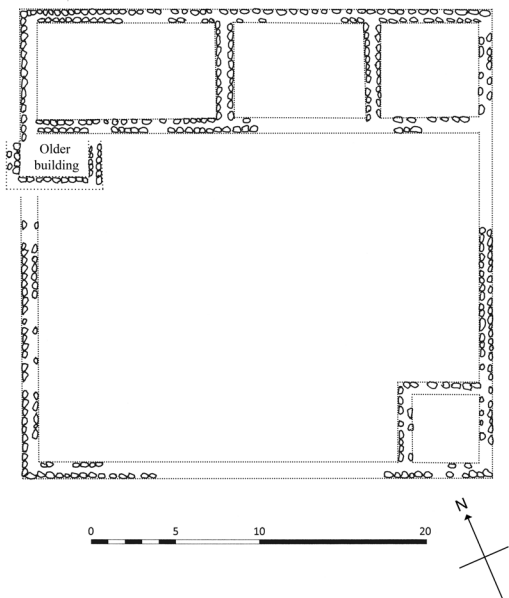


Building 089 seen from the S.

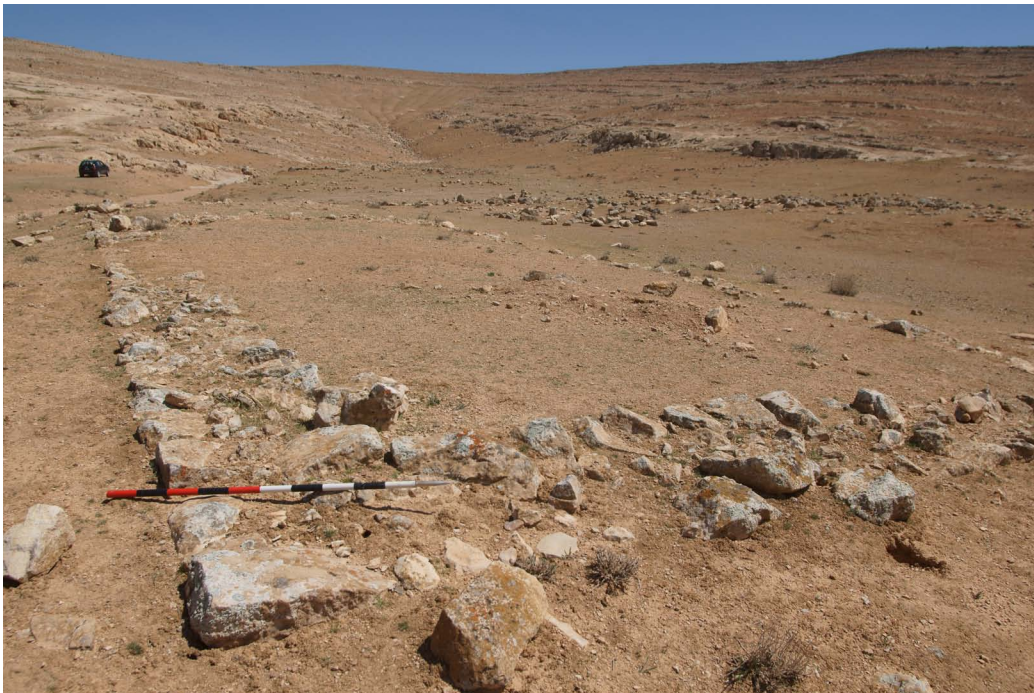
2. Building 092.

GPS: N34.847548 E38.096598 (NW corner).

The building is located about 30 m NNE of building 089, south of the big wadi coming from the E. It has a square design 28 x 28 m, width of the walls between 80 – 90 cm. Along the N wall a series of rooms face a central courtyard. The depth 5.6 m, width varying from 10.6 m, 7.8 m to 5.8 m from W to E respectively. It is possible that the NW room has been divided into two smaller rooms. In the SE corner there is another room, measuring 4 x 4 m. It is not possible to determine if the room has been part of a series of rooms along the S wall. It may also be a later addition. The general layout seems to be a central courtyard with facing room in the N part. In the NW corner of the courtyard modern diggings have revealed walls of an earlier building, a small room, measuring 4 m E-W. The later building has not been built exactly on the top of the earlier building, though the orientation is the same.



Building 092. Remains of older building.



Building 092 seen from the NW.

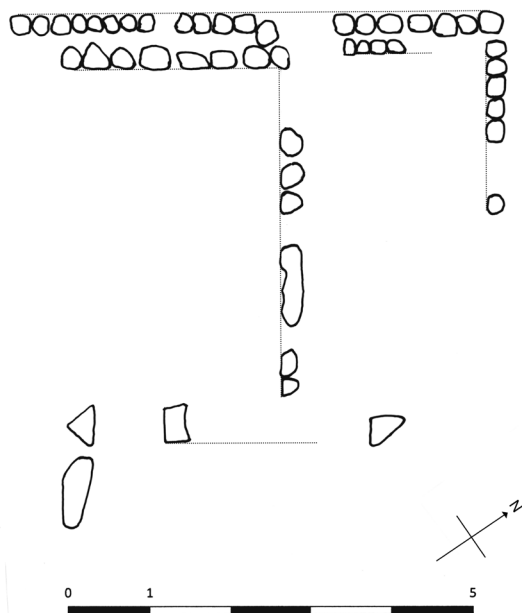


View towards building 121 and 139 from the SSE.

3. Building 121

GPS: N34.848867 E38.096517.

The building is located with its back to the hill at the opening of the valley, N of the wadi from the E, 145 m N of building 089. It is a small building orientated NE-SW, with two rooms facing SE towards the valley below. The NW corner of the building is well preserved. The W wall runs about 6 m to the S along the side of the hill. It has varying thickness. In the N room it is 50 cm, in the S room 70 cm. The N room measures approximately 4.2 m in depth, 2 m in width. The S room measures 4.2 m in depth and at about 3.75 m in width, as large upright stone indicate the entrance to the S room. Even if the exact dimension of the building to the S cannot be established, the layout seems relative clear. It is a small building with two rooms of varying size facing the valley below. The use of large stones at the entrance indicate some importance, and the layout of the building can be compared to corresponding buildings in Jebel Chaar, which can be classified as small shrines.

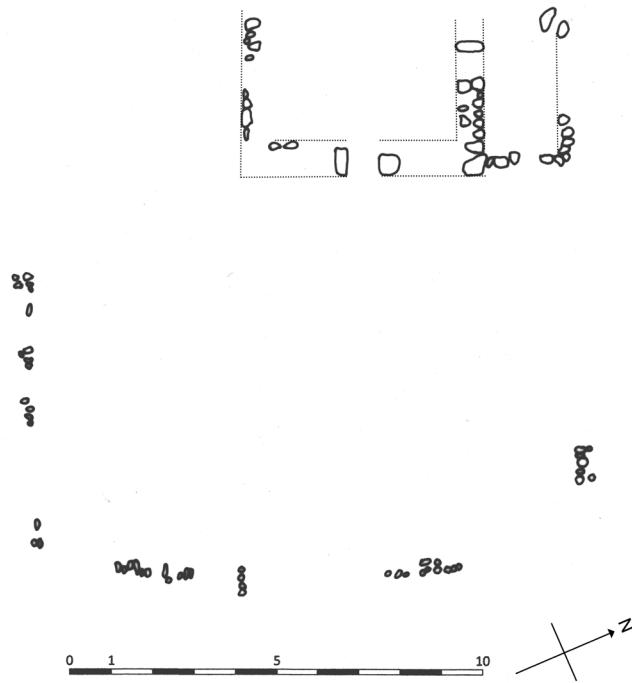


Building 121 seen from SE.

4. Building 139

GPS: N34.848754 E38.096699.

The building is located 25 m SE of building 121, and is also orientated NE-SW, with its back against the hill, measuring 8.5 N-S. It consists of two rooms, facing the valley below. The depth of the rooms cannot be determined. The N room has a width of 1.8 m, the S room 4.5 m. The entrance to the S room is marked by worked larger stones. In front of the building, aligned with the N wall there are faint traces of a courtyard, measuring 12.5 m N-S, 9.5 m E.W. The use of large stones at the entrance and the division into a larger and smaller room corresponds exactly to building 121, and it must also be classified as a small shrine.

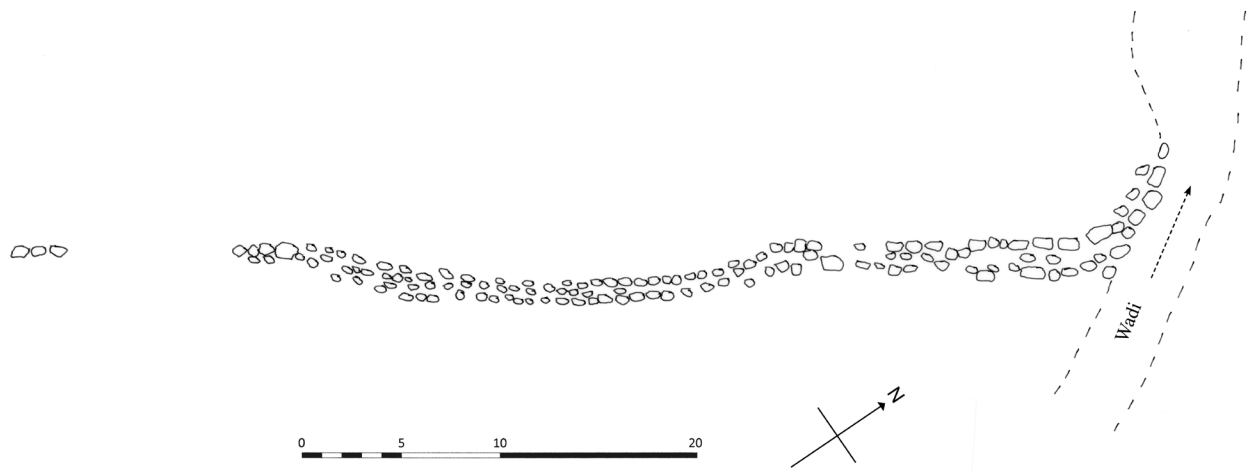


Building 139 seen from NE.

5. Cross wadi wall 096

GPS: N34.847109 E38.097772 (N end).

Immediately S of the SW limit of the S ridge a 60 m long wall runs to the S from the edge of the wadi coming from the E. The wadi runs close to the S ridge, but the landscape to the south forms a triangular plain, about 180 m long and 70 m broad to the W, sloping to the N towards the wadi. At the intersection between the wall and the wadi, which at this point reaches the underlying rock, the water has moved some of the stones from the wall down the wadi bed. The wall is solidly constructed close to the wadi, up to 2 m in width, with large pieces of rock, one of them measuring 2.5 m in length, and large stones. 12 m to the S the width changes to about 1 m, and the construction becomes lighter. The wall can be classified as a cross-wadi wall with the purpose of slowing down the current from the E in the rainy season and leaving moisture in the ground behind the wall.



Cross wadi wall 096



Cross wadi wall 096 seen from the N.

6. Cross wadi walls 151 and 154.

GPS: N34.849377 E38.099501 (N end W-wall).

GPS: N34.849418 E38.100086 (N end E-wall).

Between the S ridge and N ridge N of the site a wadi from the E forms an oblong 50 m broad valley. S of the wadi 2 stretches of walls, running to the S from the edge of the wadi are clearly visible. The W wall is 36 m long. The E wall, 55 m to the W is 20 m long. The walls can be classified as a cross-wadi walls with the same function as cross wadi wall 096.





Cross wadi wall 151 seen from the S.

Cross wadi wall 154 seen from the N.

7. Cross wadi wall 167.

GPS: N34.849950 E38.097202 (intersection wadi wall).

N of the connection between the hill at the opening of the valley and the southern ridge there are faint traces of a stone construction across the track and a small wadi coming from the E, about 5 m to the NE, and 20 m to the SE. Some of the stones have been washed to the W in the wadi bed. The function of the wall is uncertain, but it may be traces of a cross-wadi wall with the same function as the other cross wadi walls.



Cross wadi wall 167 seen from the N.

8. Saphaitic inscription 143.

GPS: N34.847304 E38.099207.

On the top of the southern ridge a longer inscription measuring about 2 x 1.5 m cut into the bare rock with large letters. The letters are Saphaitic and the inscription mentions a name. An analysis of the inscription is expected.

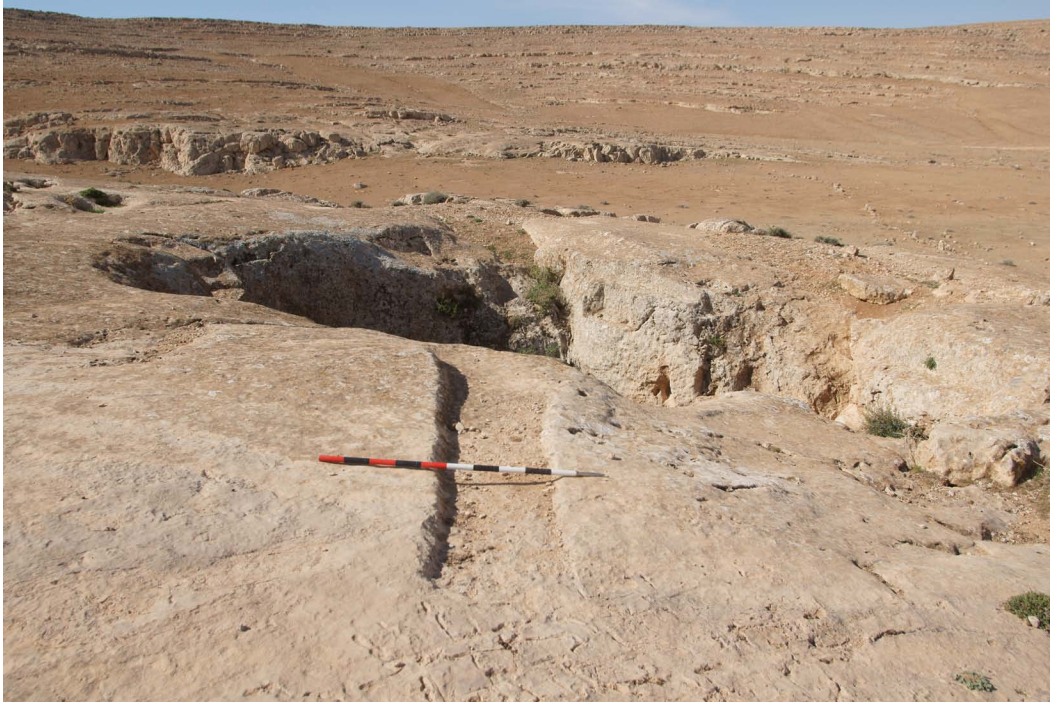


Saphaitic inscription.

9. Cistern 144

GPS: N34.847314 E38.098222.

The cistern is located on the SW slope of the southern ridge. It is an almost cylindrical natural hole in the rock, about 2 m deep, measuring 8 x 9 m. The bottom is now covered with smaller and bigger rocks, and the original depth of the cistern cannot be determined, but it has probably not been much deeper, as the surrounding landscape consists of rock with no stones or sedimentary layers. Along the W and E edge there are cuttings forming 10-15 cm broad ledges which have probably supported a wooden roof. Several stretches of small rock cut channels, about 40 cm broad and 20 cm deep, N and NE of the opening have been part of a water-catching system, leading the runoff from the rock into the cistern.



Cistern 144 seen from the N with rock cut channel.



Cistern 144. Rock cut ledges.

10. Cistern 145

GPS: N34.847317 E38.097669.

The cistern is located on a ledge at the SW limit of the southern ridge, close to the wadi coming from the E. It is bottle shaped, cut into the rock with a circular 65 cm opening. The neck is dressed with stones at the top, and cut into the rock at the bottom. The cistern is surrounded by a semicircular row of stones 1 meter from the opening to the SE and a longer semicircular row 2.5 m to the W. There are small catch arms close to the cistern SE and NE of the opening. The cistern is fed by water coming from the ledge to the NE and the higher rock to the E. Immediately W of the opening there is a broken fragment of a trough.



Cistern 145 seen from NE.

11. Cistern 150

GPS: N34.848363 E38.097089.

The cistern, which has been filled in and covered appears as a shallow crater, is located at the slope of the connection between the hill and the southern ridge.



Cistern 150 seen from SW.

12. Cistern 149

GPS: N34.847212 E38.096208.

The cistern is located 15 m N of building 089. It is bottle shaped with a circular 70-80 cm opening. The neck is dressed with stones 2 m in depth, before it enters the rock. N and NE of the cistern there is a large upcast, with traces of a semicircular row of larger stones close to the opening. The cistern is fed by water coming from the mountainside and the wadi W of building 089, by means of a 136 m long catch arm, running E up to the top of the mountain across the wadi. In the landscape there are only faint traces of the catch arm but on satellite images it is clearly visible.



Cistern 149.

13. Cistern 148

GPS: N34.847278 E38.096408.

The cistern is located 20 m ENE of cistern 149, close to the SW corner of building 092. It is surrounded by low upcast. Only the opening, cut into the rock measuring 110 cm in diameter is visible. It may have been part of the same water catching system as cistern 149, or it was fed by water from a small side wadi between building 089 and B.



Cistern 148.

Finds and chronology:

Most of the finds have been found in relation to building 089 and B. The finds comprise undiagnostic brittle ware (150), coarse ware (37). There are many small fragments of grindings stones, and 3 large ones with a diameter between 45 and 55 cm. The diagnostic shards range from the Roman period to the early Islamic period.



Glazed pottery

Handles



Handles



Incised brittle ware

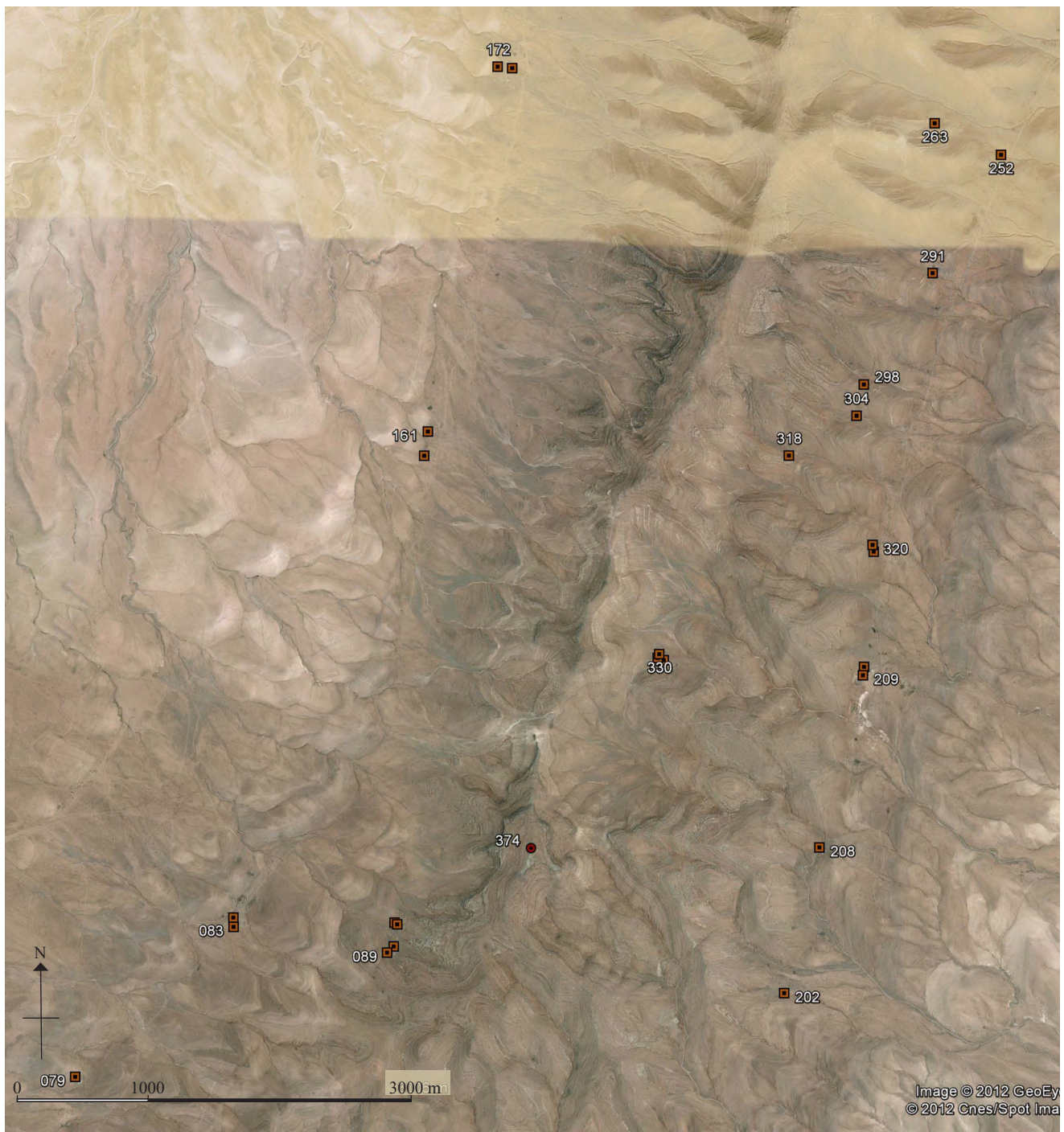
Conclusion:

The finds from the site give a very good impression of a larger settlement with buildings, smaller shrines, inscription, water harvesting systems and cross-wadi walls. It is interesting to note, that even the smallest water resources seem to have been utilized. It must have been an important settlement, and it is situated only 1.2 km SW of site 374 at the top of the mountain ridge, where a Palmyrene inscription has been found, strongly indicating the existence of a larger shrine at the top (see page 105).

Site 161.

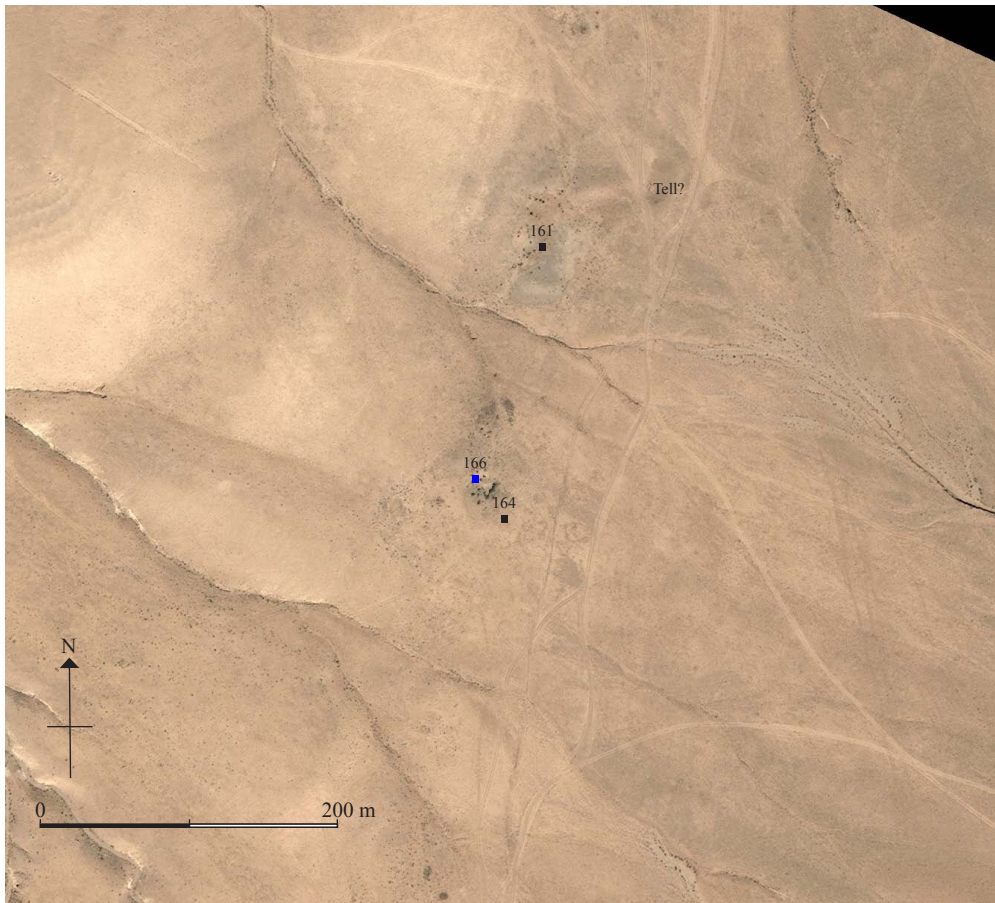
Surveyed by AA, EMS, KB, JCM. April 21, 2011.
GPS: N34.882389 E38.099298, altitude 1053.

The site is situated at the shelf, about 2.8 km S of site 172 and about 4 km N of site 083, W of the track leading to the N. The drainage is from the E with one bigger wadi separating the buildings at the site. The northern part is visible as a marked tell in the open plain. 100 m NE of the northern tell there is possible another smaller tell, but no remains of buildings are visible.





Northern tell area. Seen from the SE.



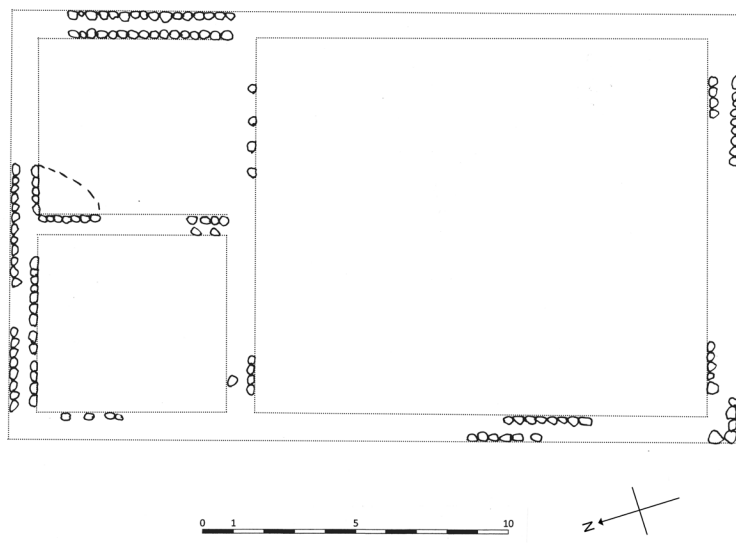
The site consists of the following:

1. North building 161.
2. South Building 164.
3. Cistern 166.

1. North Building 161.

GPS N34.882448 E38.099168 (NW corner).

The building is located in a marked rectangular tell, immediately N of the wadi, orientated N-S. It has a rectangular layout, 14 m E-W, 24 m S-N, width of the walls about 90 cm. The northern part of the building is occupied by two square rooms, depth about 6 m, width 5.8 m, facing a courtyard to the south, measuring 14.5 (NS) x 12 (EW) m. Modern diggings in one of the rooms show the construction of the walls: larger stones, filled up with smaller stones in the middle.

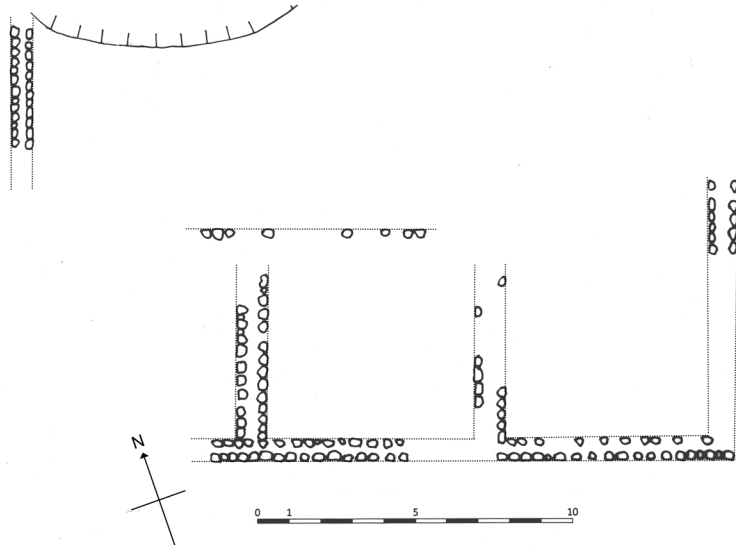


Diggings in the northern part of building 161.

2. S Building 164.

GPS N34.880629 E38.099217 (SE corner).

The building is located S of the wadi 140 m SSE of building 161, orientated NNE-SSW. Only the S part of the building is visible, width 23 m, with three square rooms, 5.5 m x 5.5 m, facing a courtyard to the N. Width of the walls 80-90 cm. The W and the E wall of the building are visible for about 14 m. In the middle of the building there is modern large circular digging, which has cut of the W wall.



Building 164 SW corner.

3. Cistern 166.

GPS N34.880961 E38.099024.

Immediately W of the building 164 there is a cistern, consisting of an underground cave, with two openings 3.3 m apart E-W. The largest (E) one is egg shaped, measuring 2.1 x 1.2 m, with a rock cut landing to the E, the other one (W) smaller 45 x 27 cm, with a small channel carved in the rock leading water from the S. The cistern has been fed by runoff water from the surroundings, but apart from the channel no catch arms are visible.



Cistern 166 seen from the W.

Finds and chronology:

Most of the finds have been found in relation to building 161. The finds comprise white coarse ware (18) and brittle ware (115), 4 fragments of large grinding stones. The few diagnostic finds range from Roman period to Byzantine/Umayyad period.

Conclusion:

Based on the surface survey and also satellite images the site seems have consisted of 2 separate fairly large buildings.

Site 172.

Surveyed by AA, EMS, KB, JCM. April 23, 2011.
GPS: N34.907204 E38.106317

The site is situated at the northern part of the shelf, where it broadens with low hills to the west, about 2.8 km N of site 161, W of the track leading to the N (see satellite photo page 42). The drainage is from the E with several smaller wadis. The site is visible as several tells in the open plain.

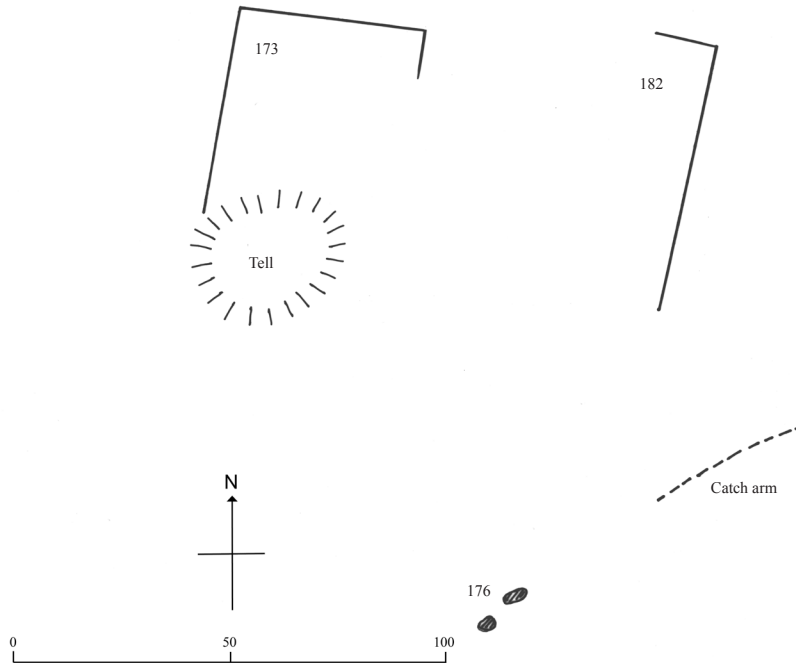


Site 172 seen from NW



The site consists of the following:

1. E-enclosure 182.
2. W-enclosure 173.
3. Isolated stretches of walls.
3. Cistern 176.



1. Enclosure 182.

GPS: N34.907204 E38.106317 (NE corner), altitude 1011.

Two stretches of walls, width 80 cm, form a distinct NE corner of a structure, orientated N-S. The length of the E wall is 65 m, the N wall 15 m. The exact dimension of the structure cannot be determined. There are no traces of interior walls. The structure is probably a large enclosure.

2. Enclosure 173.

GPS: N34.907306 E38.105105 (NE corner), altitude 1012.

Three stretches of walls, width 80 cm, form the northern part of a rectangular structure, orientated N-S, with distinct NW and NE corners, about 65 E of enclosure 182. The width of the structure E-W is 43 m. The E wall is visible for 12 m. The W wall runs for 49 m, before it disappears into a large tell, diameter about 30 m, with old Islamic graves. There are no traces of interior walls. The structure is probably a large enclosure, perhaps combined with some building to the south, covered by the tell.

3. Isolated stretches of walls

At the plain several isolated short stretches of walls are visible outside enclosure 173 and 182. They are not interconnected and they do not seem to be connected to enclosures. They are probably remains of smaller buildings or small enclosures.



Enclosure 173. NW corner.

Enclosure 182. E wall, seen from the S.

4. Cistern 176.

GPS: N34.906259 E38.106146, altitude 1008.

The cistern consists of two interconnected caves in the rock, 5 m apart, orientated N-S. The roof of the caves has now collapsed, and the interior partly filled up by debris. The dimensions at the surface of the caves are 10 x 5 m (N) and 4 x 6 m (S). The cisterns were fed by surface runoff water from E and NE. A catch arm, slightly curved to the NW is visible for 36 m, running to the NNE. Immediately W of the cistern there are 2 large tells made up by upcast from the cleaning of the cisterns.



Cistern 176 seen from the NE.

Finds and chronology:

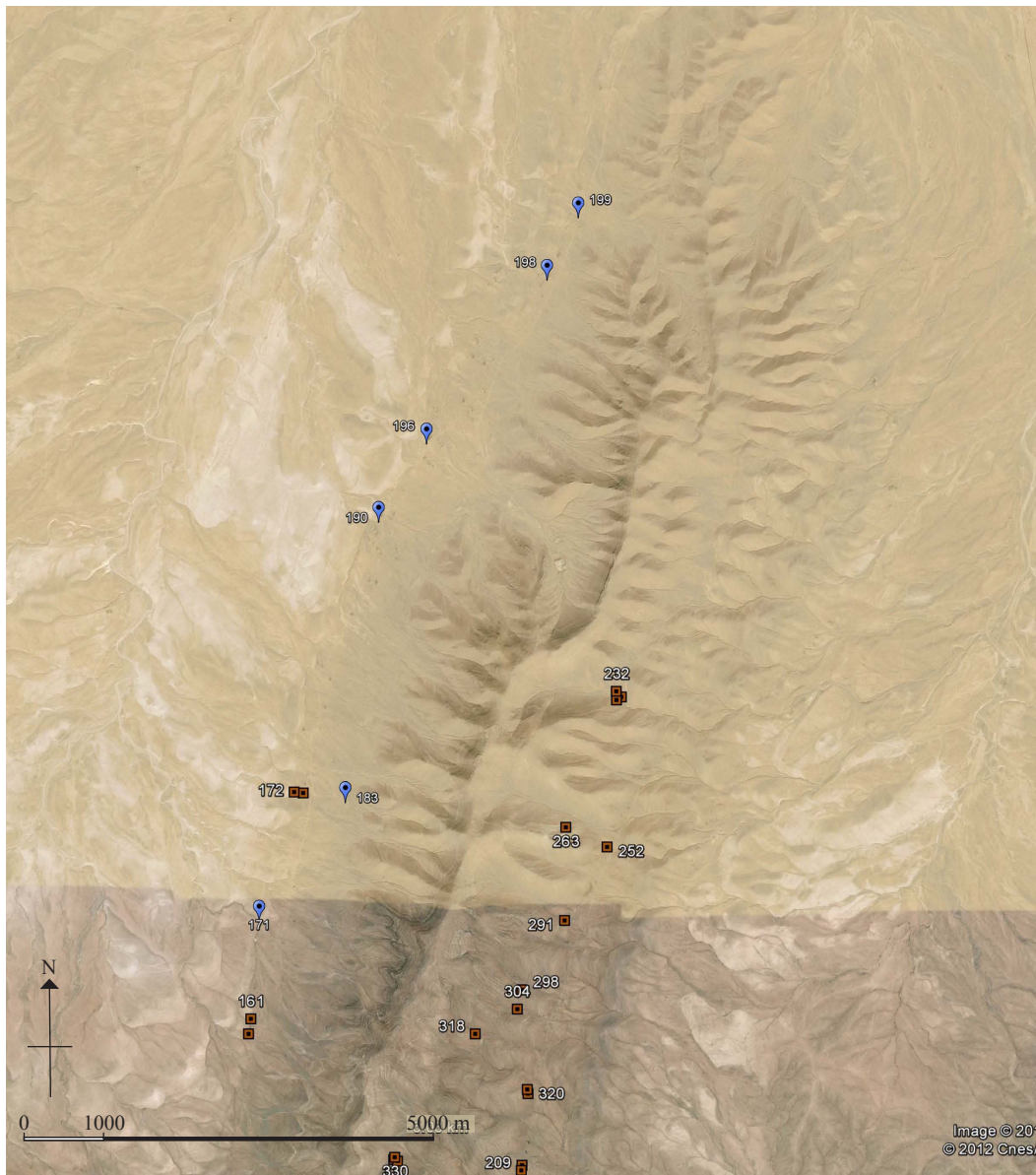
The site covers a large area, but the surface finds are few, coarse ware (1), brittle ware (29), mainly from the up cast near the cistern, and many small fragments of grindings stones. 1 diagnostic handle belong to the Byzantine/Umayyad period.

Conclusion:

The visible walls do not seem to be remains of buildings, rather large enclosures. The amount of pottery is surprisingly small, even if there are deep cultural layers at the site. The tells close to the cisterns are definitely upcast from the continuous cleaning of the reservoirs, but the tell connected to enclosure may cover actual remains of a building. The combination of Islamic tombs and remains of former buildings can be observed at many sites in the area. The many isolated stretches of walls may also indicate the existence of smaller buildings. However, the exact interpretation of the site is uncertain.

Cisterns, Jebel Merah West.

This list comprises cisterns which are not located close to the registered sites.



Cistern 171

Surveyed by AA, EMS, KB, JCM. April 23, 2011.

GPS: N34.893029 E38.100311, altitude 1006.

The cistern is located 1.2 km N of site 161 and 1.6 km south of site 172, at a wadi junction, coming from the S and E respectively, before they turn to the W through an opening in the hills. The circular opening measures 1.25 x 1.60 m, surrounded by upcast to the N and W. The cistern is bottle shaped, and the neck is dressed with stones at the top and cut into the rock at the bottom. It is fed by water from the NS wadi through an opening to the E. A small wall cross the wadi leads water to the cistern.

230 m to the S another possible cistern with large upcast at the edge of the wadi, but the opening is not visible.



Cistern 171 seen from NE.

Cistern 183

Surveyed by AA, EMS, KB, JCM. April 23, 2011.

GPS: N34.906052 E38.111867, altitude 1040.

The cistern is located 520 m E of site 172 with a large upcast to the north in a relatively open landscape with no larger wadis. The opening is covered with debris. W of the cistern there are several remains of aligned stones, probably from a catch-arm system. In the upcast there were several small fragments of undiagnostic pottery.

Cistern 190

Surveyed by AA, EMS, KB, JCM. April 23, 2011.

GPS: N34.936831 E38.116339, altitude 930.

The cistern is located 3.4 km N of site 172. It is bottle shaped and the opening measures 70 cm in diameter, with upcast to the N and W. The neck is dressed with a stone lining with marked traces of the rope for the bucket to the N. The cistern is fed by runoff water from the E, but no catch arms are visible.



Cistern 190.

Cistern 196

Surveyed by AA, EMS, KB, JCM. April 23, 2011.

GPS: N34.945436 E38.122766, altitude 935.

The cistern is located in the open landscape 4.4 km N of site 172. It is bottle shaped. The opening, dressed with stones has been reinforced by modern concrete. The cistern is fed by runoff water from the E.



Cistern 196 seen from SE.

Cistern 198

Surveyed by AA, EMS, KB, JCM. April 23, 2011.

GPS: N34.963406 E38.138919, altitude 921.

The cistern is located 6.8 km N of site 172. It is bottle shaped, with an opening measuring 80 cm in diameter with large upcast at the N and W. The neck is dressed with stones with an opening to the W. The cistern is fed by runoff water and small wadis coming from the SE. In the upcast there were several small fragments of undiagnostic pottery.

Cistern 199

Surveyed by AA, EMS, KB, JCM. April 23, 2011.

GPS: N34.945436 E38.122766, altitude 935.

The cistern is located in the open landscape 7.7 km N of site 172. It has recently been reinforced with stones and concrete in the height, with a roof with a circular opening. The cistern is fed by runoff water and small wadis coming from the E.

JEBEL MERAH EAST



Site 215.

Surveyed by AA, EMS, KB, JCM, MHM. April 25, 2011.
GPS: N34.830741 E38.103175, altitude 1079.

The site is located in the southern part of Jebel Merah, E of the SW branch of mountain, about 3 km E of site 035, and 1.8 km SSE of site 089 on the W side of the mountain, and 500 m WSW of site 222. No natural tracks lead to the other site of the mountain, and normal access is from the S. The area is dominated by deep wadis and smaller ranges running towards Wadi Abyad to the S. The site occupies, together with site 222, one of the few smaller plains in the landscape, W of a larger wadi coming from the N.

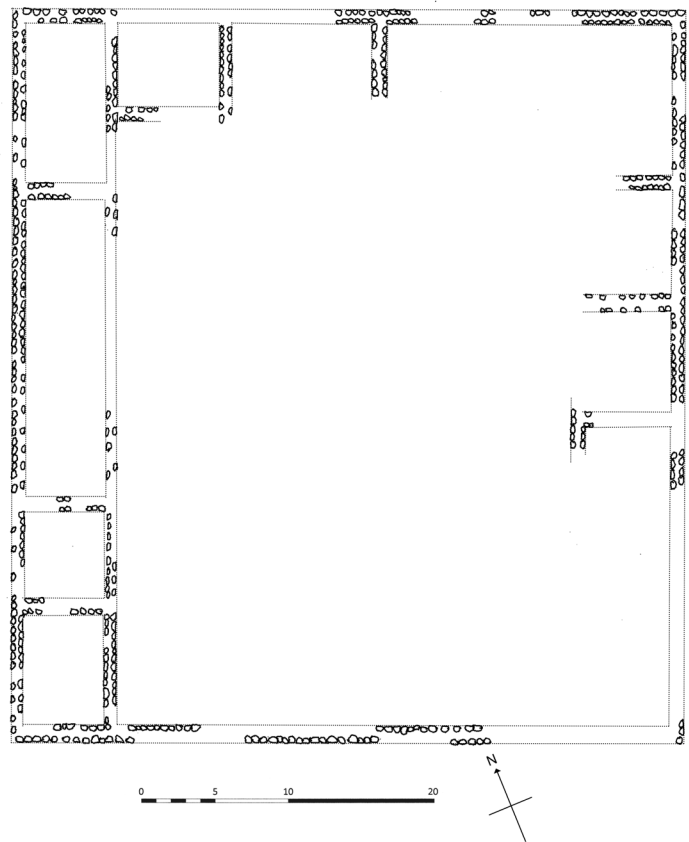
The site consists of the following:

1. Building 215.
2. Building 219.
3. Cistern 220.
4. Cistern 221.



1. Building 215.

GPS: N34.830741 E38.103175 (SW corner). The building is orientated SSW-NNE, and measures 46 m E-W and 42 m N-S. Part of the N wall, the SE corner and the NE part of the building are covered by later Islamic tombs. The width of the outer walls is between 90 and 100 cm. The layout of the building is clear. Along the W, N and E walls a series of rooms face a large central courtyard. The 5 rooms along the W wall have a depth of 5.4 m, width varying from 9 m, 8 m, 8 m, 5 m and 6.2 m from N to S respectively. The series of rooms along the N wall have a depth of 4.8 m. Only two rooms are visible in the NW part, width 6.8 and 9.4 m from W to E respectively. The series of rooms along the E wall has a depth of 5.8 m. Three rooms are visible in the NE part, width 8.6 m, 6 m, 5.6 m from N-S respectively. All the internal walls towards the courtyard have a width of 80 cm.



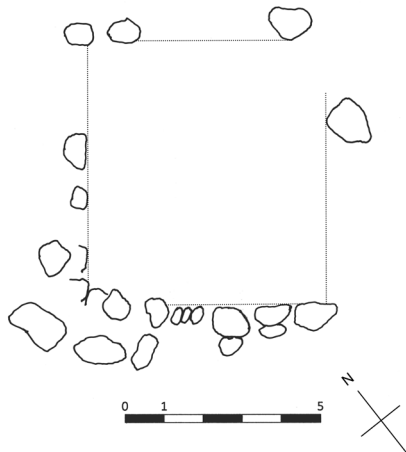


Building 215 seen from the S.

2. Building 219.

GPS: N34.830185 E38.103056.

The building is located 60 m south of building 215, separated by a small wadi, at the slope of a hill. It is orientated SW-NE, and is constructed with fairly large stones measuring about 6.7 m N-S and 6.4 m in the interior. The width of the walls cannot be determined, but the S wall has a width of at least 1.5 m and the opening of the building must have faced the valley below. There are no traces of other walls in the vicinity. The function of the building is unclear, but considering the solid construction it may be a small shrine.



Building 219 seen from the NE.

3. Cistern 220.

GPS: N34.832960 E38.104314, altitude 1112.

The cistern is located 220 m NNE of building 215 immediately E of the larger wadi coming from the N at a higher level. To the south there is a large upcast. The opening, which in recent times has been reinforced by concrete, is 80 cm in diameter. The neck is dressed with stones to a depth of 2.2 m, and then cut into the rock for about 70 cm. The depth of the cistern is 6.4 m. The cistern is fed by water coming from the N through an opening about 1 m down on the neck. The entrance to the neck is at a lower level and carefully lined with stone walls. The area N of the entrance, which forms an eclipse has been cleaned down to the rock and lined with rows of stones to the W for 70 m and to the E for 36 m. A series of 2 transverse walls up the hill slow down the water before it enters the cistern.



Cistern 220

4. Cistern 221.

GPS: N34.833376 E38.104740, altitude 1123.

The cistern is located 55 m NE of cistern 220 at a higher level. To the S there is a large upcast. The opening, which in recent times has been reinforced by concrete, is 90 cm in diameter. The neck is dressed with stones to a depth of 90 cm, and then cut into the rock. The cistern is fed by water coming from the N through an opening about 50 cm down on the neck. Two short catch arms lead the water to the entrance. The mountainside to north has sharp natural grooves, which lead the runoff towards the cistern.



Cistern 221

Finds and chronology:

All the finds are found in relation to building 215. Large fragments of white course ware (22), brittleware (50), 1 piece of green glazed ware, two large fragments of grinding stones. The diagnostic finds seem to belong to the late Roman or Byzantine period.



Pottery from site 215

Conclusion:

The plain around the building is only small and there are no other tells in the vicinity. There has probably not been any other larger buildings close by, apart from site 222.

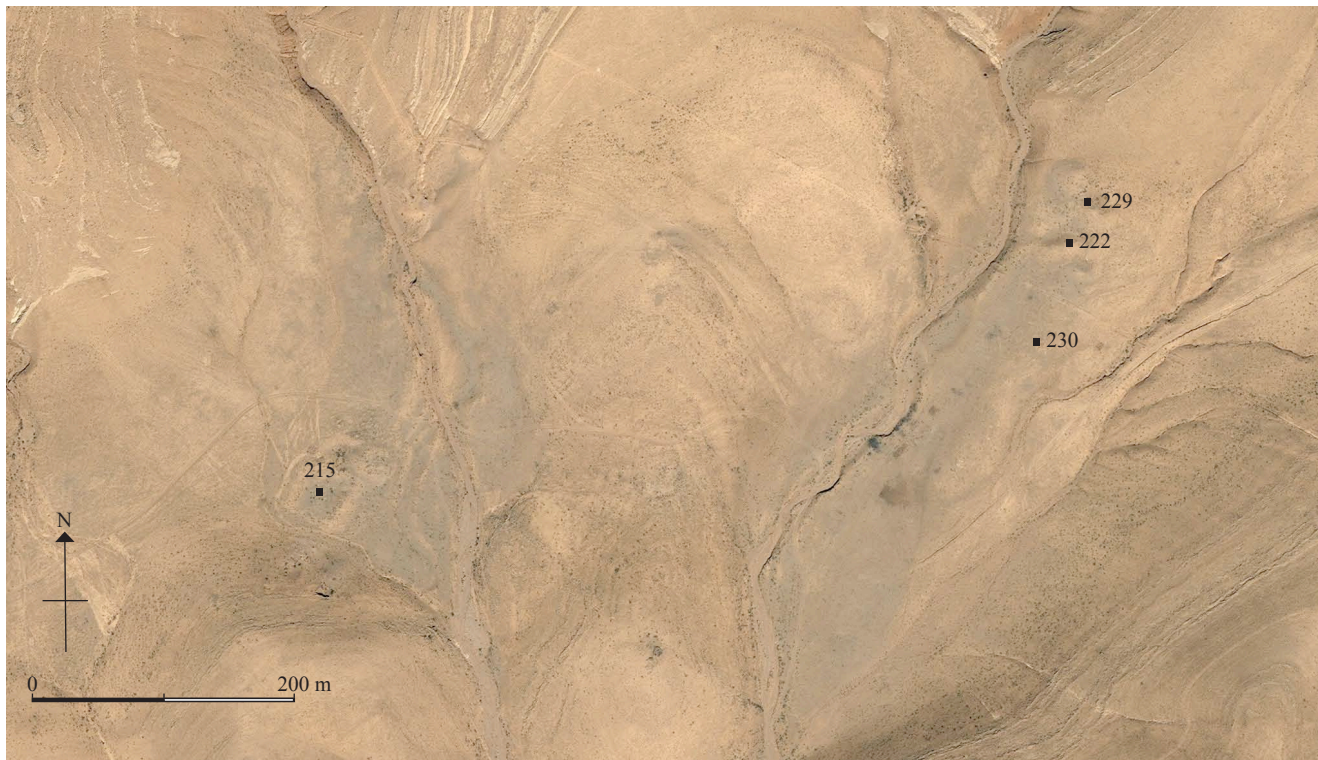


Site 215 seen from the N. In the NE corner of building 215 Islamic tombs.

Site 222.

Surveyed by AA, EMS, KB, JCM, MHM. April 25, 2011.
GPS: N34.832655 E38.109531, altitude 1107.

The site is located about 500 m ENE of site 215 on the W slope of a mountain range (see map page 54), E of a large wadi coming from the N. A track leads diagonally up the mountain side towards the N and NE. The structures stand at the northern part of a narrow plain stretching down to the intersection with the wadi coming from site 215 400 m to the S.



The site consists of the following:

1. Building 222.
2. Building 229.
3. Structure 230.

1. Building 222.

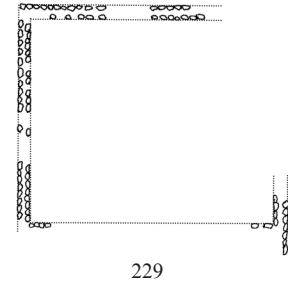
GPS: N34.832731 E38.109711 (NE corner).

The building, which is orientated N-S lies in a tell and only the N part is visible. It measures 33 m E-W. The width of the walls is between 90 and 100 cm. Along the N wall a series of rooms face a central courtyard. The rooms have a depth of 5.8 m, width varying from 6 m, 11 m, and 7 m from W to E respectively. The NE room is very small only 4.2 m deep and 3 m width, and the division wall to the W makes an angle in the front. It cannot be determined whether this is part of a contemporary layout or perhaps remains of an earlier building. The outer W is visible for 18 m, and part of an internal wall shows the existence of a series of rooms also in this part of the building, with a depth 6 m. The building has probably been a square building with a large internal courtyard with facing rooms along the N and W walls.

2. Building 229.

GPS: N34.833003 E38.109739 (NW corner).

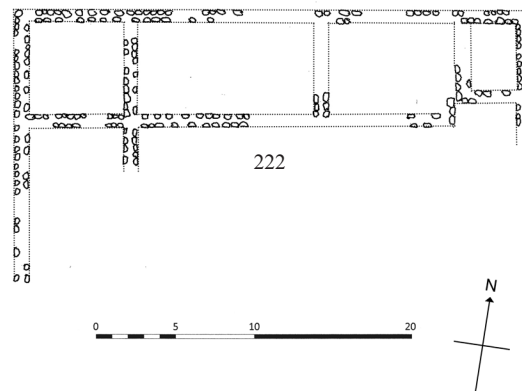
24 m N of building 222 there is a marked tell with remains of a square structure measuring 14.6 m N-S, 16.4 m E-W, width of the walls 90 cm. In the SE corner a small stretch of a wall continues to the S. The existence of a tell strongly indicates another building, not an enclosure, but the layout cannot be determined.



3. Structure 230.

GPS: N34.831999 E38.109551.

64 m to the S of building 222 on the plain there is a 2.5 m long stretch of a wall orientated E-W, width 90 cm. There are no tells in the area, and it cannot be determined if the wall is from an enclosure or a building.



NE corner of building 222 seen from NE. In the horizon Jebel Abyad.

Finds and chronology:

All the finds are found in relation to building 222 and B. The comprise coarse ware (7), red coarse ware (10), brittle ware (35), 5 fragments of grinding stones, one of the large with a diameter of about 40 cm. There are only few diagnostic finds and they range from the Roman period to the Byzantine period or later.

Conclusion:

The settlement can be compared to site 215, and it is with all probability related to the plain S of the buildings.



Site 202.

Surveyed by AA, EMS, KB, JCM, MHM. April 24, 2011.
GPS: N34.844231 E38.128329, altitude 1074.

The site is located about 2.2 km NE of site 222, 1.1 km SSW of site 208, and 2.5 km S of site 209 (see map page 61), in a valley about 1 km E of where the track from Wadi Abyad turns N along the E-shelf of Jebel Merah. The landscape opens up towards the E to a broad plain. The drainage is from the W with a large wadi N of the site, coming from the NW, and a smaller one W of the site, coming from the SW. The site is dominated by numerous small tells.



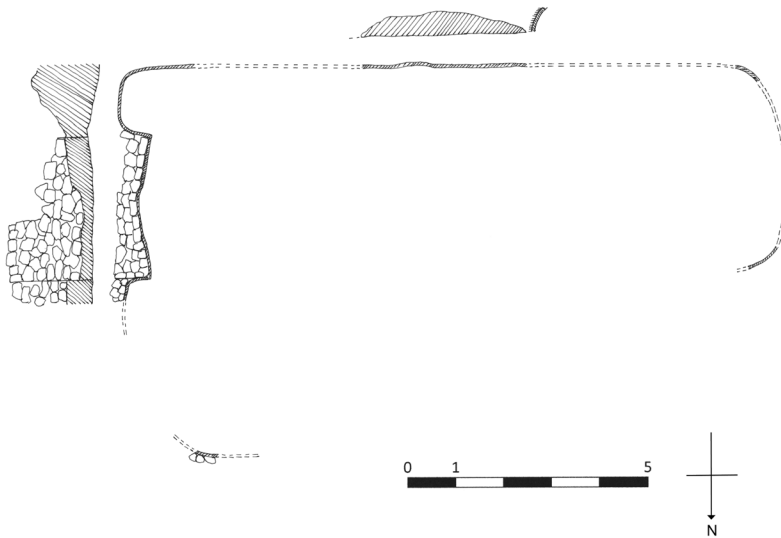
The site consists of the following:

1. Cistern 202.
2. Building 205.
3. Building 206.
4. Enclosure 207.
5. Cistern 204.

1. Cistern 202.

GPS: N 34.844281 E 38.128488.

The cistern, which is approximately rectangular in shape, orientated E-W, has been dug into the ground, and the interior covered with watertight plaster. The depth of the original cistern cannot be determined. The plaster on the S side shows that the roof has been a barrel vault, which has now collapsed, but the interior of the cistern has been partly cleaned in modern times. The length of the cistern is 13 m. The W end of the cistern is slightly curved in the corners with a width of 4 m. The S wall is straight E-W,



Cistern 202.

but a few stretches of the N-wall, covered with plaster, show that the cistern widens towards the E end, which measures about 8 m in width. The E part of the cistern has in the middle been built up with large stones, forming an upright wall covered with plaster. 3 m of the wall, slightly curved towards the E horizontally, protrudes about 50 cm into the interior. The wall is 1.75 m high to the N, but is partly broken off to the S. It cannot be determined if this is due to erosion or part of the original construction. S of the wall the cistern forms a curved niche covered with plaster. The N limit of the wall cannot be determined. The purpose of the construction is not clear, but it has probably been part of some stairs leading into the interior or a special arrangement at the opening to the cistern. On the surface at northern edge of the cistern there are traces of a stone structure 1.5 m long, slightly curved; with three shifts composed by large stones slabs orientated slightly diagonally NW-SE to the cistern. It indicates that the cistern has been covered by some structure, but the function is unclear. The cistern was fed by water from the E. There are faint traces of a channel, also visible on satellite images, from the wadi, coming from the SW. The wadi must have been blocked by a wall, but this has been washed away.



Cistern 202 seen from WNW. In the background tells related to building 206.



Cistern 202 seen from ENE.



Cistern 202. Remains of barrel vault in the south wall.

2. Building 205.

GPS: N34.843903 E38.128453.

The building is located 40 m south of Cistern 202 on the slope of the hill. The walls have been much eroded or covered by windblown material and only faint traces are left. It is orientated E-W, length about 35 m, width about 12 m, with a division wall 12 m from the E. It cannot be determined whether the structures are part of a larger complex.

3. Building 206.

GPS: N34.844037 E38.128954.

50 m SE of Cistern 202 there are several marked tells with piles of stones. In one of the there are traces of a NW corner of a structure orientated N-S. Width of the walls cannot be determined.

4. Enclosure 207.

GPS: N34.843940 E38.129862.

On the plain 130 m ESE of Cistern 202 a stretch of a slightly S- curved wall, 37 m long, orientated N-S, width 80-90 is visible. It has probably been part of an enclosure or a retaining wall.



Enclosure 207 seen from the S.

5. Cistern 204.

GPS: N34.844977 E38.127995.

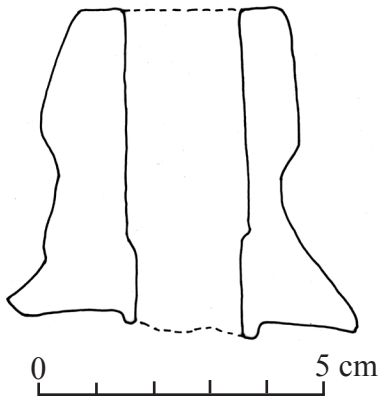
The cistern is located 85 m NW of Cistern 202 N of the wadi coming from the SW and S of the wadi coming from the NW. The opening, which has been reinforced by concrete measures 55 cm. Two short catch arms lead the water from the hill to the NW down into the cistern.



Cistern 204.

Finds and chronology:

All the finds are found in relation to Cistern 202 and close to the tells E of the cistern. They comprise coarse ware (15), brittle ware (75), 1 green glazed ware, 4 fragments of grinding stones, and the upper part of a so-called pilgrim flask or water gourd. Pilgrim flasks are common from the Hellenistic Age up into the Islamic period, and can be difficult to date. The closest parallel is from Palmyra, which can be dated to the 4th century AD (Daszkiewicz, Malgorzata & Maria Krogulska & Jerzy Raabe: Technology and typology of Common-ware pottery from Palmyra, in Meyza, Henryk & Jolanta Mlynarczyk: Hellenistic and Roman Pottery in the Western Mediterranean – “Advances in Scientific Studies”. (Acts of the II Nieborów Pottery Workshop, Nieborów, 18-20 December 1993), pp 41-59, p. 45. Warsaw 1995). Other diagnostic pottery ranges from the Roman period to the Byzantine/Umayyad period.



Pilgrim flask.



Green glazed pottery.



Handles from different periods.



Conclusion:

Even if there are only faint traces of buildings at the site, the large elaborate cistern and the many tells in the area, combined with the finds, indicate a larger settlement in the area

Site 208.

Surveyed by AA, EMS, KB, JCM, MHM. April 24, 2011.
GPS: N34.853985 E38.131892, altitude 1081.

The site is located 1.1 km NNE of site 202, 1.3 km SSW of site 209, about 430 W of the track leading to the N. It lies at the main wadi coming from N and NW from a big bowl shaped valley to the W. The only visible structure at the site is cistern 208, but E of the cistern and the wadi there is a 170 m long and 150 m broad plain with deep layers of dark humus, with two semicircular corrals and high concentration of surface finds. The plain is a very popular Bedouin camping ground.



1. Cistern 208.

GPS: N34.853985 E38.131892.

The cistern is located immediately W of the wadi coming from the bowl shaped valley to the E. The opening has been covered with a modern concrete superstructure. A catch arm runs 150 m up the hill towards the WNW.

Finds and chronology:

The finds are found on the plain E of the wadi. They comprise coarse ware (1), brittle ware (34). Diagnostic finds range from the Roman period to Byzantine/Umayyade period.

Conclusion:

The high concentration of brittle ware on the plain strongly indicates the existence of some building at the site.



Handles from site 208



Site 209.

Surveyed by AA, EMS, KB, JCM, MHM. April 24, 2011.
GPS: N34.865736 E38.135639, altitude 1090.

The site is located about 2.5 km NNE of site 202, 1.6 km E of site 330, and 940 m S of site 320, where the shelf opens up into a broad plain with an oblong hill. The track from the S divides into two branches S of the hill, meeting again at the N end. At the N part of the hill several tells are visible with Islamic graves. E of the sites there are traces of old fields.



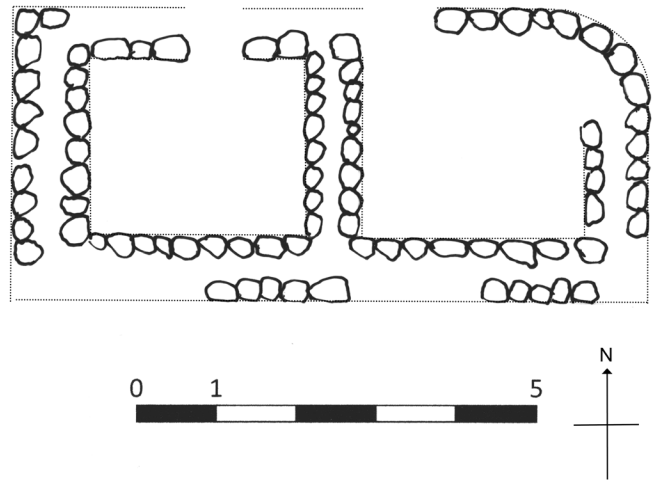
The site consists of the following:

1. Building 209.
2. Building 211.
3. Building 214 beneath coral.
4. Cistern 212.
5. Cistern 213.
6. Cistern 210.

1. Building 209.

GPS: N34.865746 E38.135612.

The building is located at the W part of the tell close to the track. It is rectangular, orientated E-W, measuring 8 m x 3.8. The NE corner forms a curve. The width of the outer wall walls is about 80 cm, except the W wall which measures 100 cm in width. It is divided into two rooms. The width of the division wall is 60 cm. The W rooms measure 2.7 x 2.2 m, with a door opening facing N in the middle of the room. The E room with the curved NE corner has a depth of 2.2 m, and a width of 2.8 m along the S wall. The door to the room is just E of the division wall. There are no external walls from the building and the corners are well defined. The building is well-constructed and it has with all probability been a small shrine.



*Building 209
seen from the
N.*

2. Building 211.

GPS: N34.865665 E38.136026.

34 m E of building 209 there is an about 3 m long stretch of a wall, orientated approximately E-W, width 80 cm. The location in a tell with Islamic graves strongly indicates the it is part of a building.

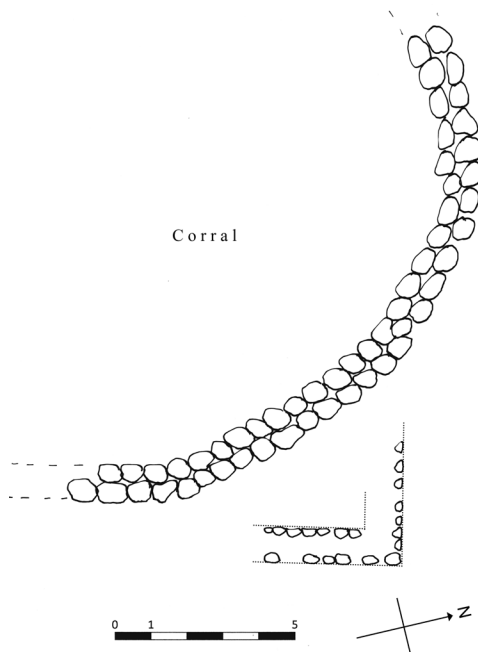


Tell seen from the NW

3. Building 214 beneath coral.

GPS: N34.866211 E38.135653.

W of the track, 50 m N of building 209, a semicircular corral, measuring 22 x 30 m, has been constructed on the top of earlier structure. The NE corner is visible, 4 m N-S and 3.5 m E-W, width 100 cm. The width of the wall indicates an underlying well-constructed building.



NE corner of building 214

4. Cistern 212.

GPS: N34.867234 E38.134422.

The cistern is located 195 m NW of building 209, with a huge upcast N of the opening, about 2 m high with large stones, which may have functioned as a small dam. The cistern in itself consists of a large natural cave in the underground. The irregular opening measures about 4 m in diameter. The cistern received water from the mountainside to the SW.



Cistern 212

5. Cistern 213.

GPS: N34.867673 E38.132789.

The cistern is located 156 m WNW of cistern A up the mountainside on a natural bench. The cistern in itself consists of a deep natural cave in the rock. There are 3 openings to the cistern. One of them has recently been covered with a cement cube. The 2 others have been cut through the roof of the cave, both of them with a diameter of about 1 m. The neck of one of them has partly been dressed with stones to a depth of 2 m. The cistern receives water from a large mountain area to the W. A solid catch arm is constructed up the mountainside for about 100 m to the N, and a smaller one about 30 m towards the S.



Cistern 213

6. Cistern 210.

GPS: N34.864608 E38.136453.

The cistern is located 120 m SSE of building 209 on the E side of the oblong hill with an upcast E of it. It consists of a large natural cave. It has three opening 7-9 m apart forming a triangle. One them has recently been covered with a cement tube. The other openings are cut into the rock. The cistern receives water from the oblong hill and the hill SW of the cistern. A 100 m long catch arm runs to the north.



Cistern 210 seen from the NW



Overview of site 209 from NW. In the background Wadi Abyad.

Finds and chronology:

All the finds are found in relation to the tells. They comprise coarse ware (77), some large shards of white coarse ware (5), brittle ware (53) and 2 fragments of grinding stones. All the pottery is undiagnostic.

Conclusion:

Even if no larger buildings are visible at the site, the tells with Islamic graves and the small shrine indicate the existence of a settlement. The corral is definitely much later than the settlement.

Site 330.

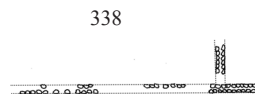
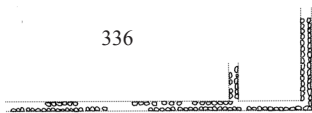
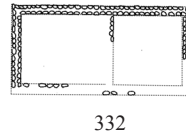
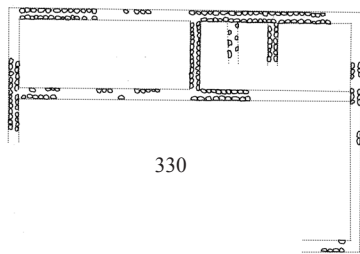
Surveyed by AA, EMS, KB, JCM. April 28, 2011.
GPS: N34.866693 E38.118376, Altitude 1163.

The site is located 1.6 km W of site 209, in a deep bowl-shaped valley. The opening to the valley is dominated by a marked high oblong hill, 900 m long E-W and 280 m broad, surrounded by wadis coming from the W. N of the hill the wadi forms a narrow corridor from the shelf. S of the hill the wadi runs E through a broad plain, before it meets the N wadi after a defile at the E end of the hill. The site is visible as a cluster of tells in the SW part of the valley at the W end of the plain, S of the wadi. A track leads to S immediately W of the tells. Due to several days with heavy rain showers and floods, and the termination of the fieldwork, the registration of the site, including all the cisterns, was not finished, but studies of high resolution satellite images make a compensation for that.



The site consists of the following:

1. Building 330.
2. Building 332.
3. Building 336
4. Building 338
5. Cistern 321
6. Cistern 326
7. Cistern 327
8. Cistern 331A
9. Cistern 331B
10. Cistern 331C



1. Building 330.

GPS: N34.866894 E38.118494 (NW corner).

The building is located at the SW end of the tells. It is orientated SSW-NNE, width of the walls is varying from 80 to 100 cm. The length of the building N-S is 28.4 m. A series of rooms along the W wall face a central courtyard to the E. Depth of the rooms is 5.6 m. Two visible rooms at the NE end have a width of 6 m and 5.4 m, from N to S respectively. Deep modern diggings in the S room show the construction of the walls to a height of about 1 m. A small stretch of a wall divides the room into smaller rooms, but it is clearly secondary to the original construction. The diggings in the room shows how much windblown material has filled up the building, after it was abandoned. A SE corner is visible 19.4 m from the NE corner. It cannot be determined if this mark the NE corner of the building, or a corner to an internal wall, with a series of rooms facing the courtyard along the E wall.

2. Building 332.

GPS: N34.867200 E38.118538 (NW corner).

The building is located about 23 m NNW of building 330 on a small tell, orientated SSW-NNE, width of the walls about 80 cm. It measures 14.6 m N-S and 7.2 m E-W. The building is divided into two rooms, depth 6.4 m, width 5.6 and 6.6 m from N to S respectively. It cannot be determined whether it was small rectangular building or a larger building with some structures to the E.

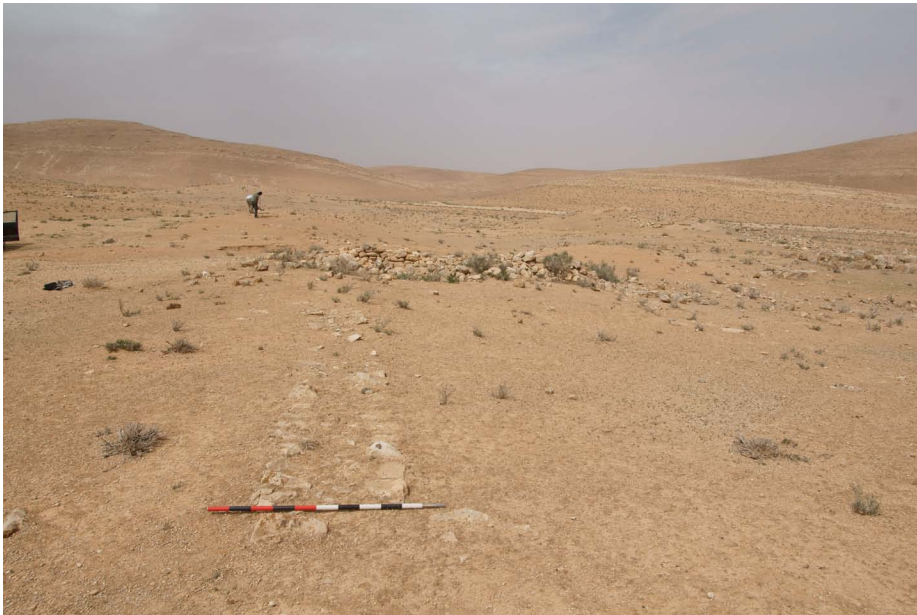
3. Building 336

GPS: N34.866775 E38.118937 (NE corner).

The building is located about 40 m E of the NE corner of building 330, orientated SSW-NNE. The tell area is delimited immediately E of the building. The NE corner is clearly visible. The E wall continues to the S for 24.2 m, the N wall to the W for 7.6 m. Width of the walls is 80 cm. A small stretch of an internal division wall, width 75 cm is visible 5 m S of the NE corner, indicating a series of rooms along the E wall, facing a central courtyard to the W. The exact size of the building cannot be determined, but it probably had the same layout and size as building 330.

4. Building 338

15.8 m N of the NE corner of a 19.2 m long wall, orientated SSW-NNE runs towards the N, width 80 cm. A 3.2 m long stretch of an internal wall, 2.6 m from the N end, indicate a series of rooms facing a central courtyard to W. It must have been a fairly large building, but the layout cannot be determined. NE of the wall there is a larger tell with some Islamic graves indicating the existence of some building there, too.



*W wall of building 330
seen from S.*



*Excavated room of building
330 seen from NW.*



Building 336 seen from SW. In the background cistern 331A and the access to the valley from W, S of the oblong hill.

5. Cistern 321

GPS: N34.870640 E38.121059.

The cistern is located 445 m NNE of the tells, just S of the wadi coming from the W. The opening has recently been reinforced by concrete. There are no traces of catch arms, and the cistern is fed by water from a small side wadi coming from the SW.

6. Cistern 326

GPS: N34.870364 E38.118758.

The cistern is located 370 m N of the tells, at a small wadi coming from the NE. The cistern has now been filled in. There are traces of a catcharm running up the hill to the N.

7. Cistern 327

GPS: N34.868923 E38.116790.

The cistern is located 260 m NW of building 330. The opening is square, and the neck dressed with stones. The cistern is fed by water coming from a larger wadi to the W. No traces of catch arms. Some lines of stones immediately S of the cistern may indicate some walls.



Cistern 327 seen from W.

8. Cistern 331A

GPS: N34.866417 E38.120021.

The cistern is located about 100 m ESE of building 336, S of the wadi. Registration is based on satellite images. The cistern has a large upcast E of the opening. A catch arm SW of the cistern is clearly visible, running 40 m towards the SW, before it turns S for 77 m up the hill.

9. Cistern 331B

GPS: N34.867231 E38.120916

The cistern is located 180 m E of building 332, N of the wadi. Registration is based on satellite images. The cistern is at the edge of the wadi, but receives its water from the hill to the N. Two catch arms are clearly visible, one running about 120 m to the NNE, and one running 100 m to the NE.

10. Cistern 331C

GPS: N34.865894 E38.123125

The cistern is located 290 m ESE of cistern 331A. Registration is based on satellite images.

Finds and chronology:

All the finds have been found in relation to tells. The finds comprise coarse ware (7), brittle ware (62) and many small fragments of grinding stones. The diagnostic shards range from the Roman period to the Byzantine/Early Islamic period.



Pottery from site 330

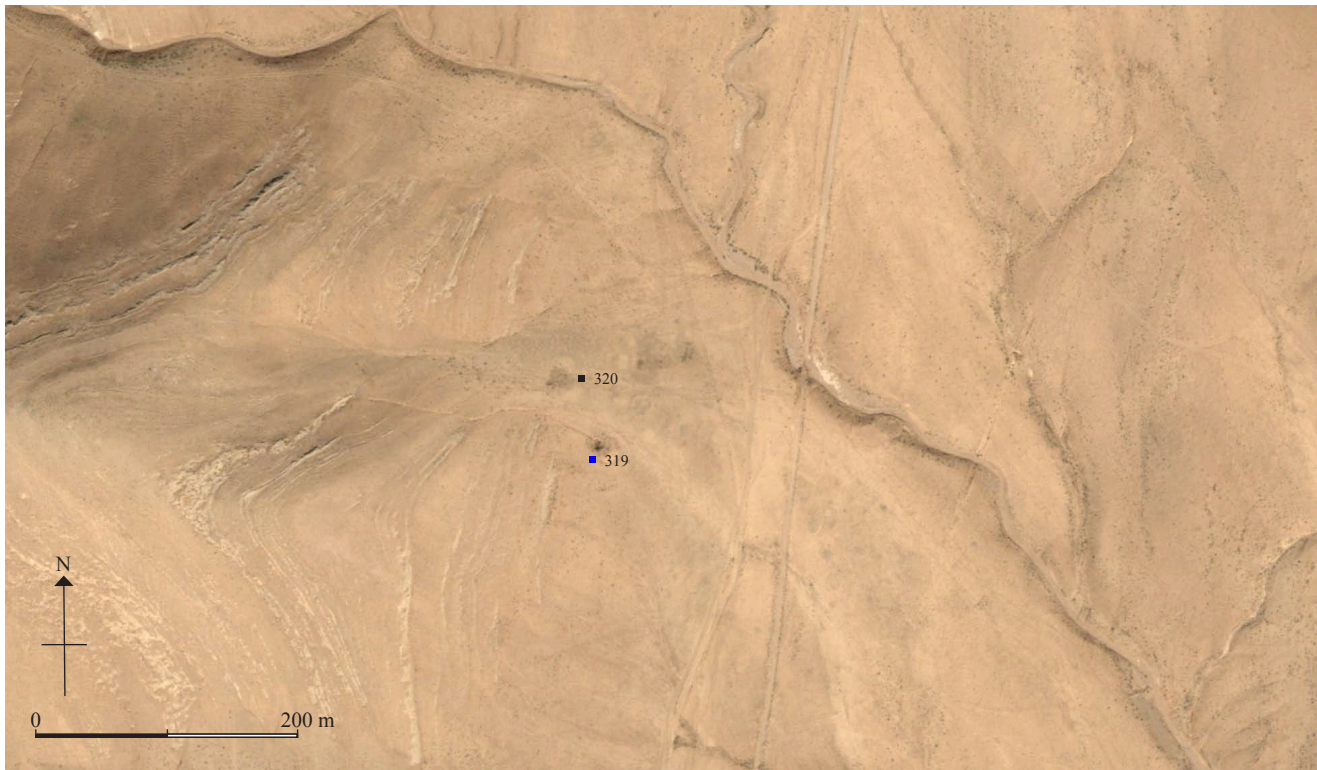
Conclusion:

W, N and NE of the registered building there are several smaller tells, which with all probability cover remains of other buildings, and site 330 must have been a larger settlement, which based its existence on the water resources coming from the surrounding mountains into the valley.

Site 320.

Surveyed by AA, EMS, KB, JCM, MHM. April 27, 2011.
GPS: N34.874177 E38.136421, altitude 1101.

The site is located 850 m N of site 209 and 1 km S of site 304, on the shelf immediately W of the track. It is visible as a tell.



The site consists of the following:

1. Building 320.
2. Cistern 319.

1. Building 320.

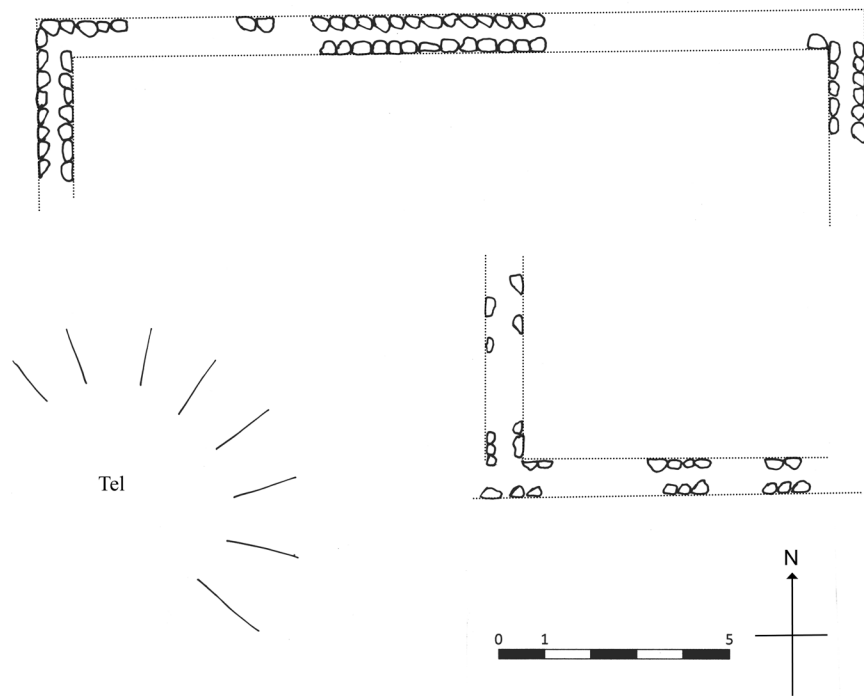
GPS: N34.874640 E38.136327.

The building is located W of the track leading to the N. It is rectangular, orientated E-W, measuring about 18 x 10.5 m, width of the walls about 80 cm. The SW part of the building disappears into the tell. 6.7 m W of the SE corner there are remains of an internal division wall, which has divided the building into 2 rooms. No external walls from the building are visible, and the rooms have probably not been part of a larger building.

2. Cistern 319.

GPS: N34.874177 E38.136421.

The cistern is located 60 m S of building 320 with a large upcast E of the cistern. The cistern has now been filled in. It received water from the hill to the SW. Remains of a 100 m long catch arm is visible towards the W.



NW corner of building 320. In the background cistern 319.

Finds and chronology:

All the finds are found in relation to the building. They comprise white coarse ware (1), brittle ware (13). A handle belongs to the Roman period.

Conclusion:

There are no other tells in the area, and the building has probably been a small isolated building.

Site 318.

Surveyed by AA, EMS, KB, JCM, MHM. April 27, 2011.

GPS: N34.880633 E38.129784, altitude 1150.

The site is located about 450 m W of the track leading to the N in a small valley on the S side of the wadi, about 900 m NW of site 320 and 600 WSW of site 304.



The site consists of the following:

1. Wall 318.
2. Cistern 317.

1. Wall 318.

GPS: N34.880633 E38.129784.

The stretch of a wall, S of the wadi, orientated SW NE measures 4.10 m, width 70 cm. Some larger stones E of wall may indicate a corner. Probably part of a building.

Wall 318 seen from the S.



2. Cistern 317.

GPS N34.880093 E38.129898.

The cistern is cut into the rock in connection with a natural cave. It has largely been filled in with smaller rocks. No traces of catch arms. It was fed by water coming from the S.

Finds and chronology:

A few undiagnostic shards of brittle ware were found in relation the wall, and also fragments of grinding stones.

Conclusion:

Combined with the finds of fragments of grinding stones the wall has probably belonged to an isolated building.

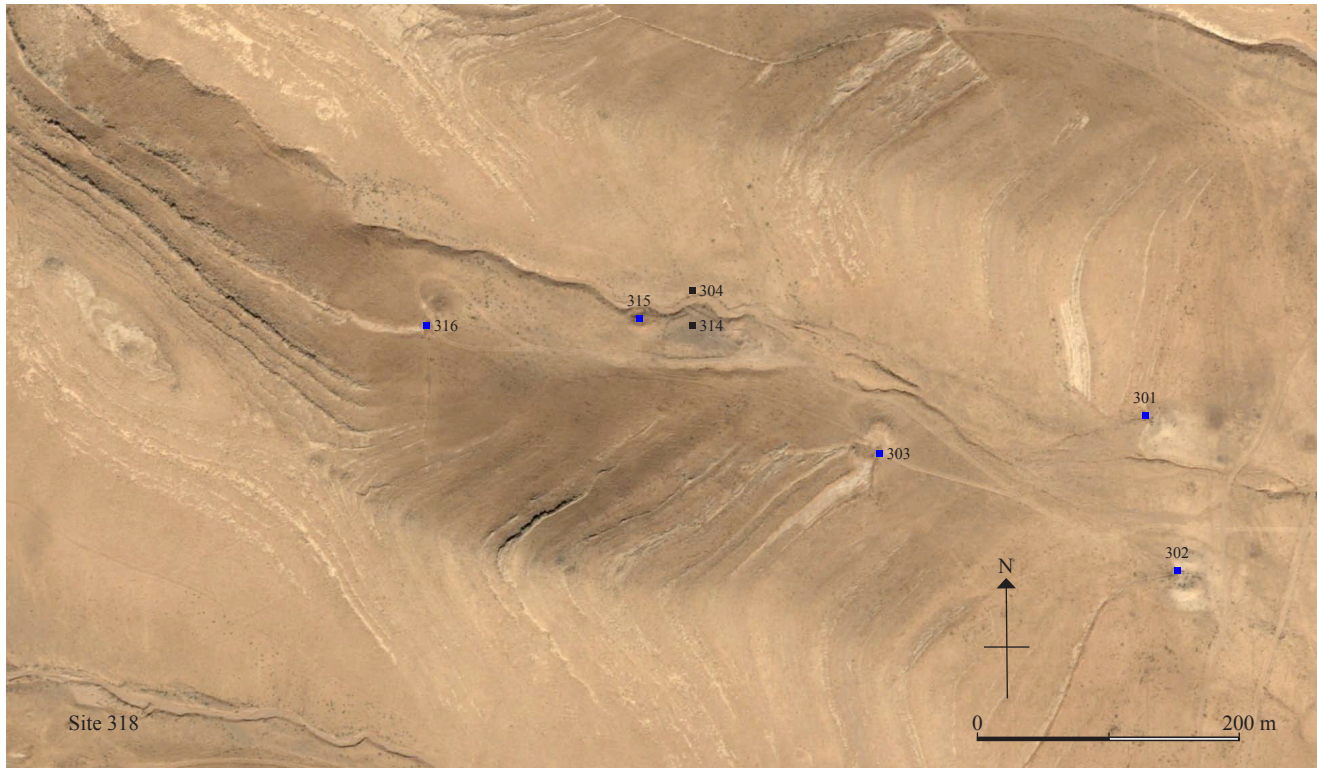


Site 304.

Surveyed by AA, EMS, KB, JCM. April 27, 2011.

GPS: N34.883461 E38.134997, Altitude 1134.

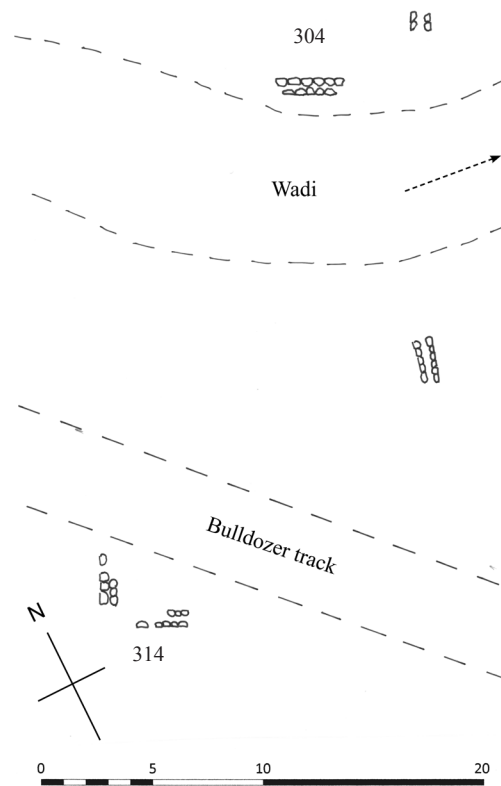
The site is located on both sides of the wadi coming from the W, about 470 m W of the track leading to the N, about 900 m NNW of site 320, and 340 m S of site 298. The site has recently been heavily destroyed by bulldozers, the building of a corral on the top of the walls after the abandonment of the site and also strongly eroded by the water in the wadi, and only a few stretches of walls are visible. Cisterns are located along the wadi from the track to the site and W of the site.



The site consists of the following:

1. Walls 304 N of the wadi.
2. Walls 314 S of the wadi.
3. Cistern 303.
4. Cistern 315.
5. Cistern 316.
6. Cistern 301
7. Cistern 302.

1. Walls 304 N of the wadi.
 GPS: N34.883461 E38.134997.
 Two small stretches of walls seem to form the SE corner of a building, orientated NNE-SSW. The S wall is preserved for 6 m, the E wall for only 1 m, with between 90 and 100 cm.



2. Walls 314 S of the wadi.
 GPS: N34.883251 E38.134834.
 Immediately S of the bulldozer track a SW corner of a building is visible, orientated NNE-SSW. The S wall is preserved for 4 m, the W wall for 3.2 m, width of the wall 80 cm. 18 m NE of the corner another 2.4 m stretch is visible, width 100 cm, orientated NNE-SSW, but it cannot be determined if there is any connection between the walls.



Wall 304 seen from the W.



Site 304 seen from the W.

3. Cistern 303.

GPS: N34.882505 E38.136199.

The cistern is located 150 m SE of the main site, S of the wadi. A catch arm runs 80 m up the hill to the S. The opening has recently been reinforced by concrete. NW of the opening an old trough repaired recently with concrete. A large fragment of a dolia in white course ware was found in the small upcast N of the opening.



Cistern 303 seen from E.

4. Cistern 315.

GPS: N34.883362 E38.134322.

The cistern is located 45 m W of the main site, S of the wadi. The cistern has been eroded away by the wadi, and only the upcast S of the opening is visible. In the upcast there are large concentration of ceramic.

5. Cistern 316.

GPS: N34.883375 E38.132642.

The cistern is located about 200 m W of the site, S of the wadi on the slope of the hill, with an upcast N of the opening. The opening has recently been reinforced by concrete. Two catcharms runs up the hill, one to the SW, 185 m long, and one to the S, 123 m long.

6. Cistern 301

GPS: N34.882633 E38.138459

The cistern is located N of the wadi about 95 m W of the track leading to the N, 330 m ESE of the main site. The opening to the cistern has been covered by a modern small “wellhouse”, but an old trough is still in use. A catch arm runs about 140 m to the N.

7. Cistern 302

GPS: N34.881647 E38.138750.

The cistern is located S of the wadi, about 80 m W of the track leading to the N, 400 m SE of the main site. The opening has been covered with modern concrete reinforcement. A catch arm runs 250 m to the SW.

Finds and chronology:

The finds have been found in relation to walls in the disturbed area and the upcasts at the cistern 315 and 303. The finds comprise large amounts of white course ware (60), brittle ware (31) and several fragments of grinding stones. A few diagnostic shards range from the Roman? to the Byzantine/Umayyad period.

Conclusion:

Due to the heavy disturbances at the site not much can be deducted from the surviving walls, but the sites must have included at least 2 building.

Site 298.

Surveyed by AA, EMS, KB, JCM, MHM. April 27, 2011.
GPS: N34.885600 E38.135862, altitude 1130.

The site is located in a narrow valley 450 m W of the track leading to the north, 240 m N of site 304, and 990 m SW of site 291. It is visible as a small tell with Islamic graves immediately S of the wadi. A smaller branch of the wadi runs through the site S of the tell.



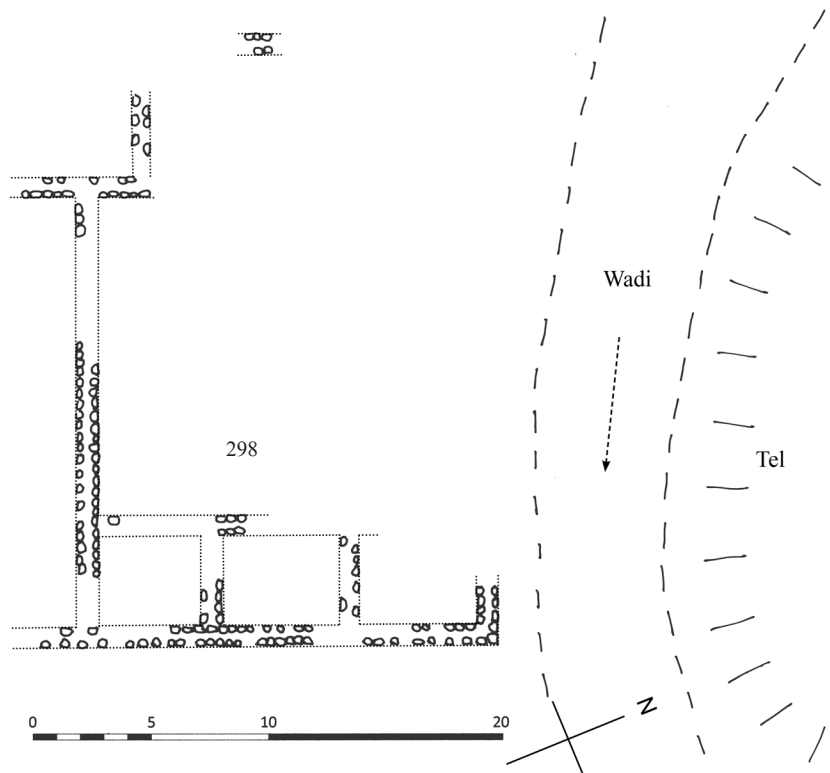
The site consists of the following:

1. Building 298.
2. Cistern 297.

1. Building 298.

GPS: N34.885600 E38.135862.

The building is located 8 m S of the tell and it is orientated SSW-NNE, width of the walls 90-100 cm. The E wall is visible for 20 m, with a distinct corner at the N end. 17 m from the N end a wall runs 19 m to W, where it meets a small stretch of an N-S wall, which again forms part of a NE corner. Along the E wall a series of 3 small rooms face a central courtyard, depth 3.8 m, width 5 m, 5 m and 4,4 m from N-S respectively. The building continues towards the S on the other side of the E-W wall, but the relation between the two parts of the building cannot be determined. The layout resembles the building at site 263. It is also possible that the E-W wall is an internal wall related to a series of rooms facing the courtyard along an external S-wall, but no division walls are visible. A small stretch of a W-wall has probably been related to the two walls forming the NE-corner mentioned above, but the lay-out of the W part of the building cannot be determined.



Building 298 seen from S. Close to the wadi the tell

2. Cistern 297.

GPS: N34.885361 E38.136743.

The cistern is located S of the wadi 90 m ESE of building A, with a large upcast N of the opening. The opening has been covered with a modern concrete superstructure. 2 catch arms runs up the hill towards the SE and SW.



Site 298 seen from E.

Finds and chronology:

The finds are found in relation to the building. They comprise white coarse ware (10), brittle ware (20). A few diagnostic shards belong to the Byzantine/Umayyad period.

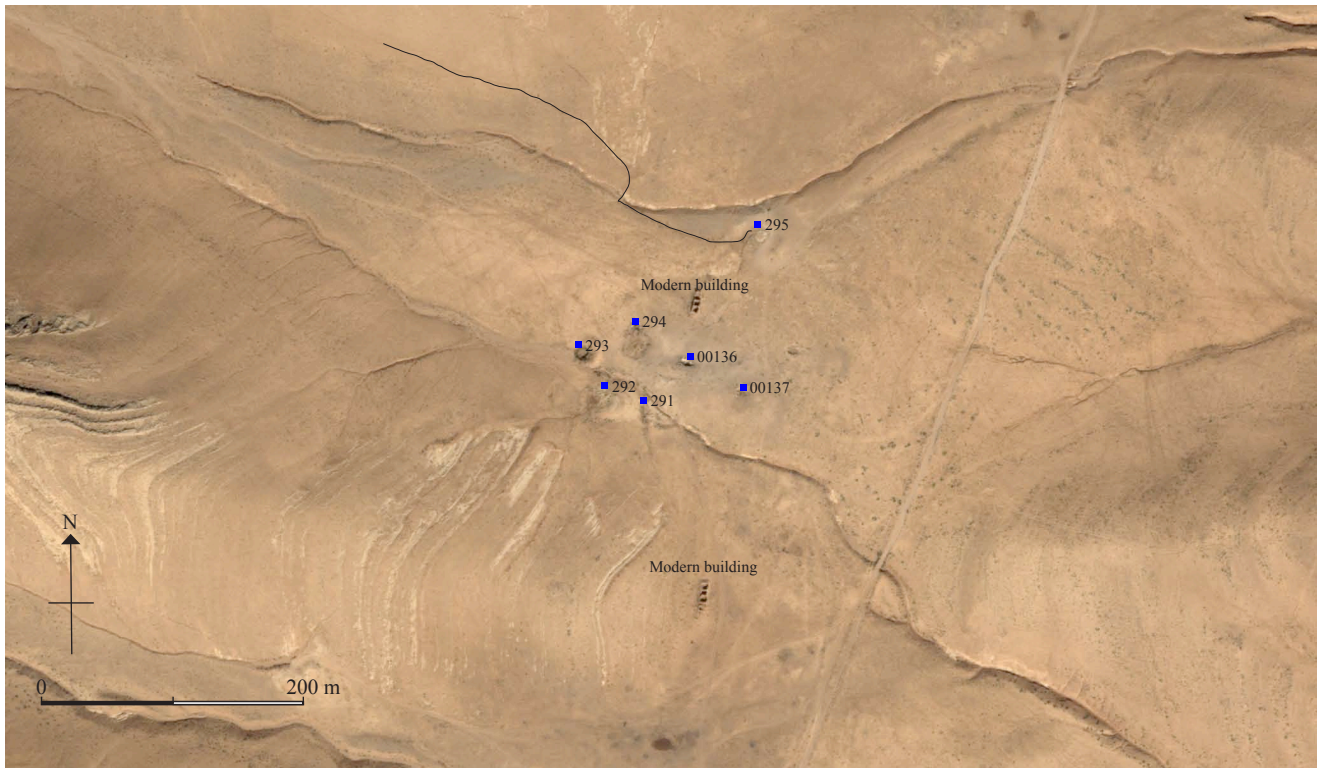
Conclusion:

The visible walls form part of a larger building with a central courtyard. It is possible that the tell covers other structures related to the building.

Site 291.

Surveyed by AA, EMS, KB, JCM, MHM. April 27, 2011.
GPS: N34.893199 E38.141336, altitude 1123.

The site is located on a broad triangular plain between two wadies coming from a bowl-shaped valley to the W, 990 m NE of site 291 and 1.1 km S of site 263. The site is visible as a large concentration of upcasts from cisterns, some of them filled in, only appearing as craters in the ground. On a small hill a now abandoned modern house has several fragments of grinding stones in the construction. 150 m S of the site there are the ruins of another modern house.



Site 291 seen from SSE.

Only the largest cisterns have been registered:

1. Cisterns 291.

GPS: N34.893071 E38.141433.

The cisterns are located close to each other just S of the S wadi. They have a modern concrete superstructure. A 75 m long catch arm runs up the low hill towards the SSE.



Cistern 291 seen from NW.

2. Cistern 292.

GPS: N34.893177 E38.141030.

The cistern is located S of the S wadi, 37 m W of cisterns 291. The cistern has a modern concrete superstructure and concrete troughs. An ancient trough has been built into the system. A 100 m long catch arm runs up the low hill towards the SE.



Cistern 2912 seen from NE.

3. Cistern 293.

GPS: N34.893480 E38.140898.

The cistern is located immediately N of the S wadi 35 m NNW of cistern 292. The interior has partly been filled in. The walls of the cistern, width about 90 cm have been built up with large stones. The diameter of the cistern is about 15 m. No traces of catch arms.



Cistern 293 seen from W.

4. Cistern 294.

GPS: N34.893675 E38.141326.

The cistern is located 45 m NE of cistern 293. The interior is partly a natural cave in the underground, but the S part of the cistern has been built up with a solid wall of large stones with an opening towards the S. The opening is either a channel or steps to the interior. No traces of catch arms.



Cistern 294 seen from NW.

5. Cistern 295.

GPS: N34.894332 E38.142366.

The cistern is located immediately S of the N wadi. The opening has been covered with a modern concrete structure. The cistern receives water partly from the wadi, but the main supply comes from the hillside N of the wadi by means an aqueduct running about 100 m parallel to the wadi, before it crosses the wadi on a small bridge. From the bridge a 250 m long catch arm runs towards the NW up the hillside.



Cistern 295. Catch arm crossing the wadi.



Cistern 295 seen from W.



Ruin of northern modern house with fragment of grinding stone.



Bowl-shaped valley W of site 291.

Finds and chronology:

The finds are found mainly at the E end of the cistern area. They comprise white coarse ware (32), brittle ware (130), terra sigiliata (1), numerous smaller and larger fragments of grinding stones. The finds range from the Roman to the Byzantine/Umayyad period.



Terra sigiliata.



Handles.

Conclusion:

Even if no walls are visible at the site, the large amount of pottery, including a shard of late terra sigiliata, strongly indicates the existence of buildings at the site, not only cisterns.



Site 252.

Surveyed by AA, EMS, KB, JCM, MHM. April 26, 2011.

GPS: N34.901272 E38.147036, altitude 1103.

The site is located immediately W of the track leading towards the N 200 m south of the wadi coming from 263, 1 km NE of site 291, 550 m ESE of site 263 and 1.8 km S of site 232. The site is visible as a tell with a few Islamic graves to the E, and upcast from a cistern to the W.



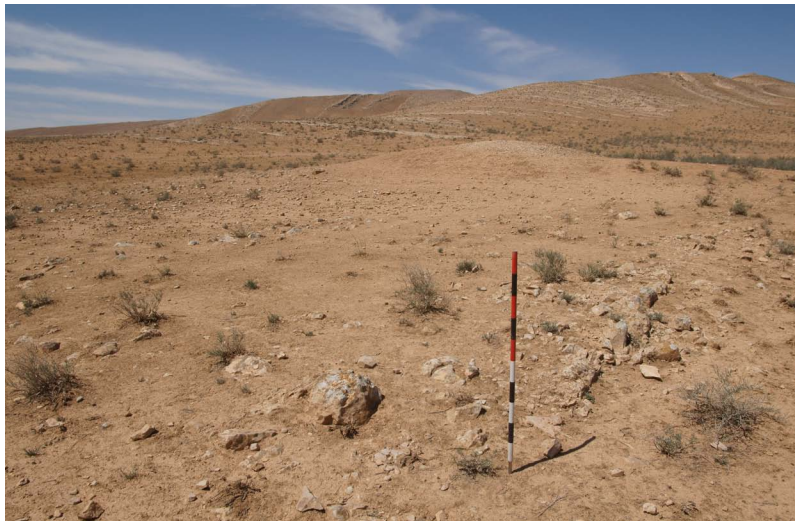
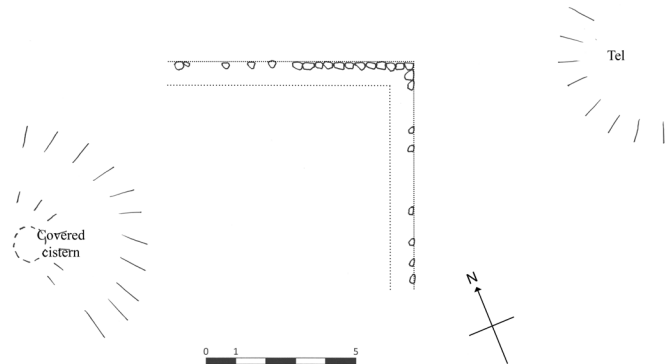
The site consists of the following:

1. Building 252.
2. Cistern 257.

1. Building 252.

GPS: N34.901272 E38.147036.

The building is located between the tell and the upcast from cistern 257, which covers the SW part of the building. The building is orientated NNE-SSW. Two stretches of walls, width cannot be determined form a NE corner. The N wall is visible for 8 m, the E wall for 7.4 m. Cistern 257 delimits the building to the W, and it has probably been a small building. There are no traces of internal walls.



Building 252 seen from NE.

2. Cistern 257.

GPS: N 34.901363 E38.146682.

The cistern is located immediately SW of building 252. It is filled in and the upcast has covered the SW part of the building. The cistern must have been in use after the abandonment of the building.

Finds and chronology:

All the finds are found in relation to the building. They comprise white coarse ware (4), coarse ware (2), brittle ware (20) and a fragment of a grinding stone. The diagnostic shards belong to the later Roman period or later.

Conclusion:

The building has either been a small isolated building or related to site 263 550 m to the W.

Site 263.

Surveyed by AA, EMS, KB, JCM, MHM. April 27, 2011.
GPS: N34.903431 E38.141508, altitude 1141.

The site is located in the E end of a bowl shaped valley to the W, valley 650 m W of the track leading to the north, 550 m WNW of site 252, 1.2 km N of site 291 and 1.6 km SSW of site 232, S of the wadi coming from a bowl shaped valley to the W.



The site consists of the following:

1. Building 263.
2. Cistern 249.
3. Cistern 262.
4. Cistern 261.
5. Cistern 258.

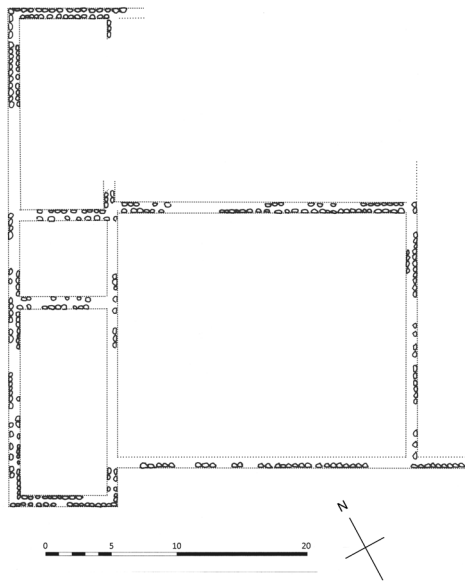


Overview of site 263 seen from W.

1. Building 263.

GPS: N34.903431 E38.141508 (NW corner).

The building is orientated NE-SW. It has an approximately square layout, measuring 38 m NE-SW and 31 m NW-SE. The building seems to have been divided into two sections each with a central courtyard to the E. The S section has a series of rooms along the W-wall, depth 6.5 m, width of one of the visible rooms 5.8 m, facing a courtyard measuring 18.4 m (NS) x 22 m (EW). The S wall of the courtyard is not aligned with the SW corner of the building, but is displaced parallel with 3 m to the N. The internal division wall between the S and the N section is not precisely aligned with the N wall of the NW room either, but is slightly displaced. In the N section traces of an internal wall indicate a series of 2 rooms along the W-wall, depth 6.6, width cannot be determined. The N courtyard measures 14 m (NS) x 22 m (EW). A small stretch of a wall runs 3 m towards SE from the SE corner. It cannot be determined if this is part of another section of the building or an attached enclosure.



Building 263. SW corner. In the background cistern 262.

2. Cistern 249.

GPS: N34.903589 E38.140765.

The cistern is located 65 m W of building 263. It has been covered with a modern concrete superstructure. The cistern has an impressive water catching system to the SW, with two long catch arms, one leading 270 m to the W up the hill side, and one leading 225 m to the S up the hillside.



Cistern 249 seen from NE.



Cistern 249 W catch arm seen from SW.

3. Cistern 262.

GPS: N34.903394 E38.142172.

The cistern is located 30 m E of building 263. The cistern itself is a natural cave in the rock, but it has now partly been destroyed. E of the cave there is a large upcast with some pottery. No traces of catch arms.



Cistern 262 from WSW.

4. Cistern 261.

GPS: N34.903300 E38.143458.

The cistern is located 115 m E of cistern 262. It has been filled in. No traces of catch arms.

5. Cistern 258.

GPS: N34.902864 E38.143651.

The cistern is 50 m SSE of cistern 261. It has been filled in. No traces of catch arms.

Finds and chronology:

The finds are found in relation to the building and some in the upcast of cistern 262. They comprise coarse ware (6), brittle ware (85), green glazed ware (1), many fragments of grinding stones including 2 large pieces originally with a diameter of about 40 cm. The diagnostic shards range from the Roman to the Byzantine period perhaps later.



Handles and green glazed ware.

Conclusion:

The existence of the site is related to the bowl shaped valley to the W. It resembles site 298, also in architectural layout.

Site 232.

Surveyed by AA, EMS, KB, JCM, MHM. April 25 and 26, 2011.
GPS: N34.918364 E38.148277, altitude 1100.

The site is located about 800 m W of the track leading to the N, about 1.7 m NNE of site 263, on both sides of a wadi. To the W the landscape opens up into a deep bowl shaped valley. There are no traces of buildings in the valley. On the plain, N of the wadi and W of the buildings there are several remains of probably later corrals. At the surface of the plain there is a large worked block, measuring 60 x 40 x 30 cm, probably from a more monumental building at the site, but the original position cannot be determined.



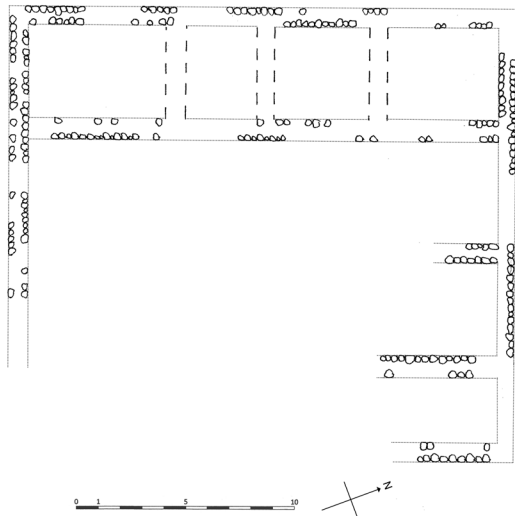
The site consists of the following:

1. Building 233.
2. Building 234.
3. Building 232.
4. Wall 235.
5. Cistern 245.
6. Cistern and dam 231.

1. Building 233.

GPS: N34.917410 E38.148305 (SW corner).

The building is located S of the wadi in a marked tell, orientated NNE-SSW. The building measures 21 m E-W and 23 m N-S, width of the walls varying from 90 to 100 cm. A long the W wall a series of rooms faced a central courtyard to the E. The depth of the rooms is 4.2 m. The division walls between the rooms is only visible as low upheavals, but the width of the rooms seem to vary from 6 m, 3 m, 5 m and 4.5 m from S to N respectively. Along the N wall there is a series of rooms facing the courtyard. Depth about 4.5 m, width 3 m, 4.4 m and 4.7 m from E to W, respectively. Modern digging around the SW corner shows that the building in depth has been well constructed with large stones.



Building 233. SW corner

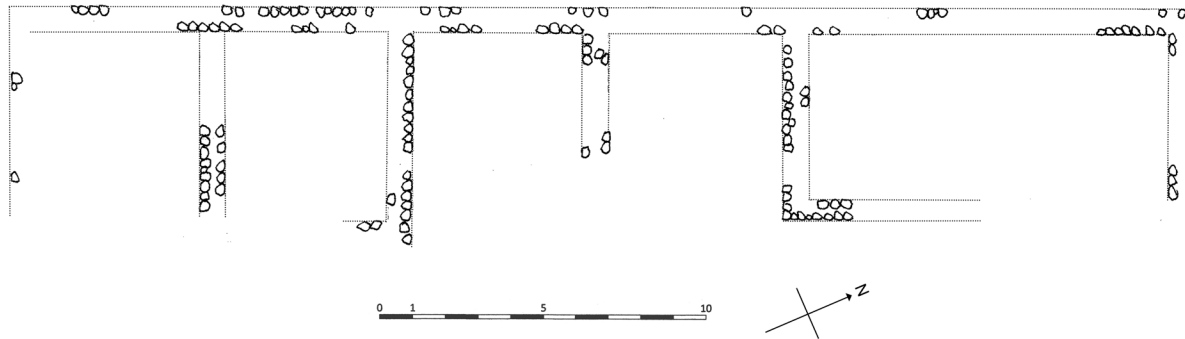


Building 233. W part of building seen from SSW.

2. Building 234.

GPS: N34.917743 E38.148964 (SW corner).

The building is located N of the wadi in a marked tell, about 45 m N of building 233, orientated SSW-NNE. The area has been heavily disturbed by modern diggings. Only the W part of the building is visible. The building measures about 36 m N-S. Along the W wall there is a series of rooms facing a central courtyard to the E. The depth of the rooms seems to differ. In the NW part of the building the depth is 5 m, whereas in the SW of the building it is about 6 m. The width of the 4 visible rooms in the SW is about 5, 5, 5 and 5.3 m from S to N respectively. The NW part of the building has probably also been divided into two rooms, with a width of about 5.5 m. Considering the extend of the tell the building has probably been a square building with a central courtyard.



Building 234 seen from SE. W of building southern part of catch arm to cistern 245.

3. Building 232.

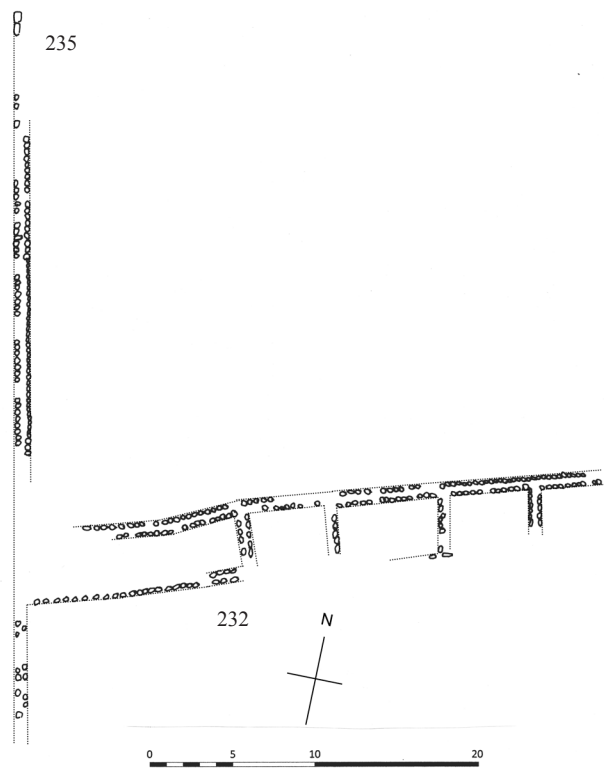
GPS: N34.918364 E38.148277 (NW corner).

From the S end of wall 235 a wing of rooms extends to the E for at least 32 m, 80 m NW of building 234. The back wall, width about 90 cm is not straight, but makes a bend at the W end. The depth of the rooms is about 2 m, the width of three central rooms varies from 4.8 m, 6 m and 4.4 m from E to W respectively, but the rooms are not exactly right-angled. The rooms do not seem to part of a larger building. Rather they represent a series of rooms along an E-W wall probably facing the plain to the S.

4. Wall 235.

GPS: N34.918364 E38.148277 (S end).

The wall starts at the NW corner of building 232, and it runs about 100 m to the NNE, before it turns N for about another 100 m towards the summit. The width of the wall close to building 232 is about 100 cm, later it varies between 80 and 90 cm. The wall closes off the valley N of the wadi, and has probably been related to husbandry.



Wall 235 seen from N.



Building 232 seen from W.

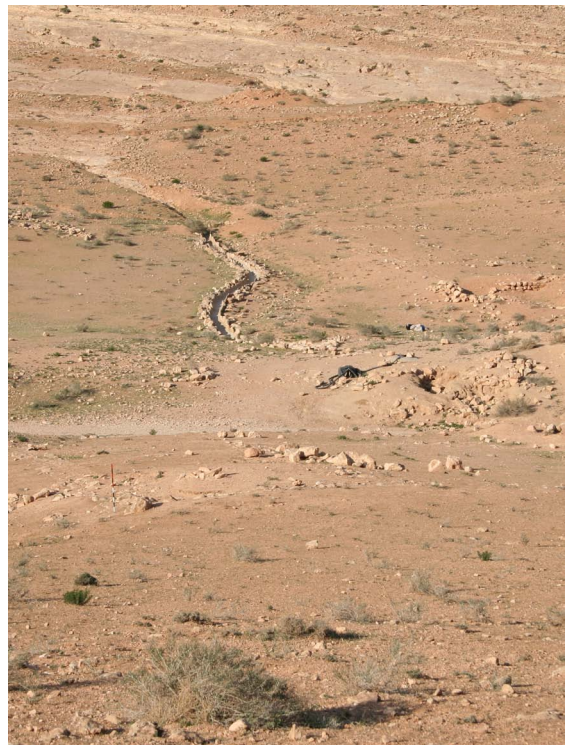


Worked block on the plain S of building 232.

5. Cistern 245.

GPS: N34.917713 E38.148900.

The cistern is located immediately SW of the SW corner of building 234. The opening has been reinforced with concrete. An elaborate catch arm, like a channel with upright slabs and reinforced with plaster, runs NNE W of building 234 for about 50 m before it turns towards the E.



Cistern 245. Catch arm W of building 234 seen from S.



Bowl-shaped valley W of site 232.

6. Cistern and dam 231.

GPS: N34.915657 E 38.153380, altitude 1069.

The cistern and dam is located 470 m SE of site 232, about 350 m W of the track leading to the N. It is visible as huge upcasts on both sides of the wadi coming from site 232, where the hills form a narrow pass, and where the wadi bed is formed by the rock.



*Cistern and dam
231 seen from
ENE.*

Immediately W of the upcast N of the wadi there is a huge cistern formed by a natural cave almost at the same level as the wadi bed. The cave continues in under the upcast to the E. The opening is approximately circular, measuring 2.5 m in diameter. The E part of the opening is cut into the rock, whereas the W part is dressed with stones about 1 m in depth down to rock. The cistern is partly filled with sediments about 2 m down, and the original depth of the cistern cannot be determined. The cistern received water from two sources. Firstly there is an elaborated opening in the W wall of the cistern with traces of a channel with upright slaps leading the water from the wadi into the cistern. This must have been the main source. Secondly a long catch arm runs 75 m to the S up the hill side.



Cistern 231 seen from E.



*Cistern with upcast
seen from SW.*

The upcast E of the cistern, which has been cut off by the wadi, has huge dimensions, about 3.5 m high from the wadi bed and 15 m at the foot. The sharp profile towards the wadi shows distinct layers from the continuous cleaning of the cistern, but no larger stones. Immediately N and NE of the upcast there are large concentrations of stones, which are obviously not natural in the landscape, but their relation to the cistern and the upcast is unclear.

Before the wadi cut through the upcast it was connected to the upcast S of the wadi 14 m on the other side. In contrast to the N upcast the S upcast contains a lot of stones. Some of them form the S part of a circular structure, preserved 1 m in depth and 2 m in length, with a narrow opening about 50 cm wide and 1 m deep leading to the S. Though there are no traces of catch arms towards the S, the structure most of all looks like remains of a cistern which has been dug into the upcast at a much higher level than cistern 321, which is about 3 m below.



*Upcast S of wadi
seen N.*



*Stone structure in upcast
S of wadi seen from N.*

The site is very difficult to interpret, especially the relation between cistern 321 and the stone structures in the upcast S of the wadi. The huge upcast N of the wadi is undoubtedly due to the cleaning of the cistern, but it must also have functioned as a dam, retaining all the water coming from the bowl shaped valley W of site 232 during heavy floods.

Finds and chronology:

The finds comprise coarse ware (44), white coarse ware (10), brittle ware (47) and 2 green glass fragments and several smaller fragments of grinding stones. Some pottery, coarse ware (1) brittle ware (3) and a fragment of a grinding stone have been found in the upcast S of the wadi at cistern 231, but they have probably been washed to the site by the water. The finds are difficult to date.

Conclusion:

The settlement is one of the larger settlements at the eastern side of Jebel Merah, and must be related to the large bowl-shaped valley to the W. The long wall up the hillside to the N, which has closed of the valley indicate some kind of husbandry as part of the economic basis of the settlement.

Site 374.

Surveyed by NA, KJH, DN. April 25, 2011.
GPS: N34.853944 E38.107886, altitude 1312.

The site was surveyed by the pre-historic team in connection with the registration of cairns at the summit. Due to the unexpected stop in the survey the historical team was not able to visit the site. The description of the site is based on photographs and information from the pre-historic team.



The site is located on one of the highest summits of Jebel Merah, altitude 1312 m, about 1.2 km NNE of site 089 at the W-side of the mountain, and about 2 km W of site 202 at the E-side of the mountain. It commands a tremendous view over the surrounding landscape. The summit is easily accessible from the S. The site appears as a large heap of disturbed stones, partly from the cairns at the site, partly from a destroyed building. The building must have been a monumental building. There are several carefully worked blocks, up to 110 cm long, 80 cm broad, 40 cm deep scattered in the area. The outline of the building cannot be determined at the site, but satellite images show the possible contours of a 20 m long (E-W) and 9 m broad (N-S) building, orientated approximately E-W, but the site needs to be reinvestigated.

A fragmented Palmyrene inscription was found at the site. The slab measures 60 cm x 35 cm, and it is broken off at the bottom and to the right. The surface is heavy weathered. An analysis of the inscription is awaited.



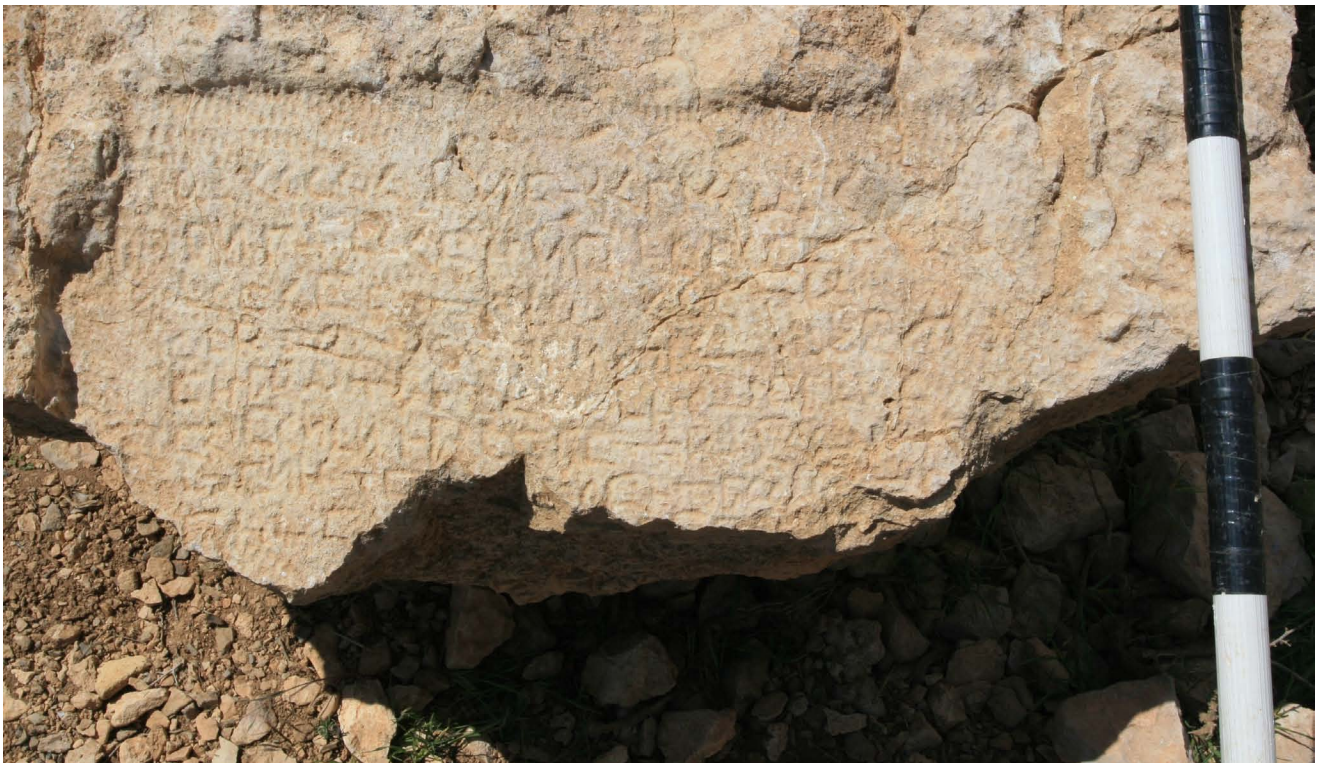
Site 374 seen from N. In foreground a cairn. In the background Jebel Abyad.



Site 374. Worked block.



Site 374. Worked block.



Site 374. Palmyrene inscription.

Finds and chronology:

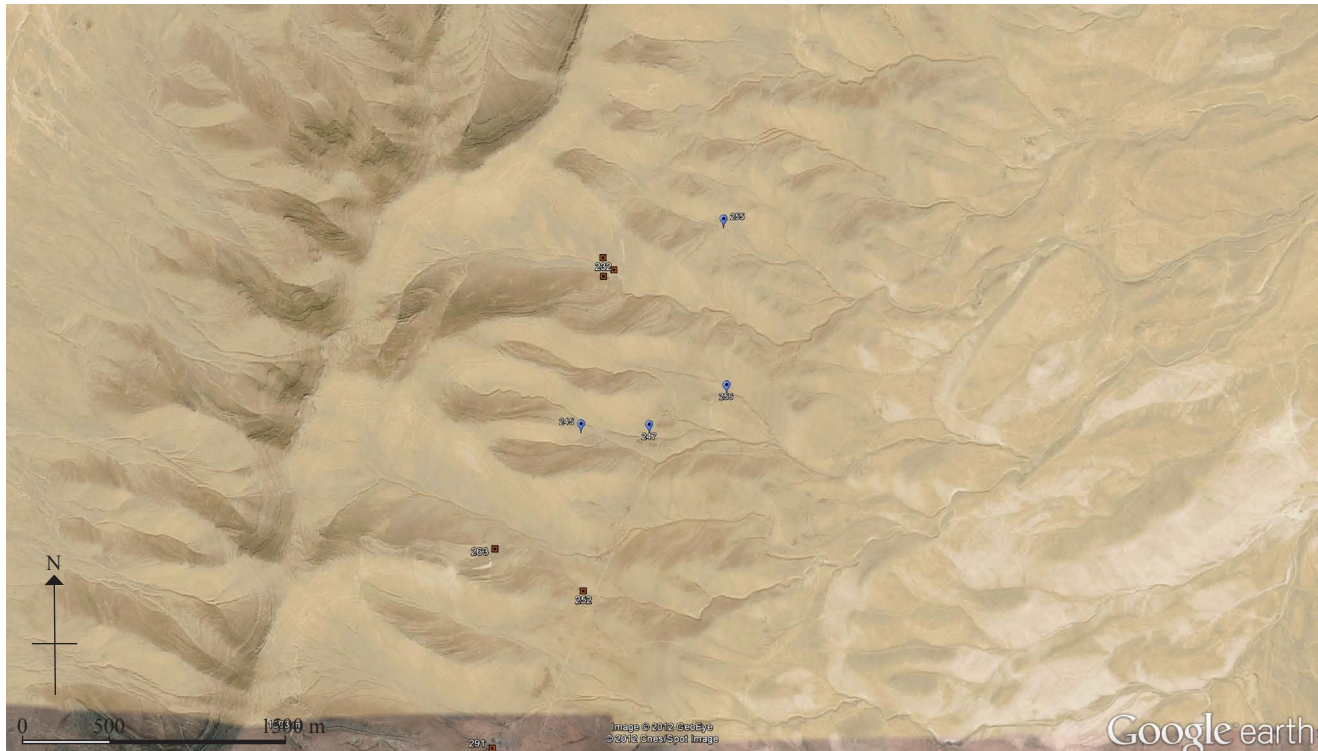
The finds from the comprise undiagnostic coarse ware (8), brittle ware (80) and 5 glass fragments. An analysis of the inscription is still awaited, but it probably belongs to the first 3 centuries AD.

Conclusion:

The architectural remains and the inscription strongly indicate the existence of a monumental shrine on the top.

Cisterns, Jebel Merah East.

This list comprises cisterns which are not located close to the registered sites.



Cistern 245

Surveyed by AA, EMS, KB, JCM, MHM. April 26, 2011.

GPS: N34.909336 E38.146870, altitude 1119.

The cistern is located 250 m N of site 252, and 1 km S of site 232, 480 m W of the track leading to the N, S of the wadi coming from the W. The cistern is visible as a low upcast. It has been filled in.

Cistern 247

Surveyed by AA, EMS, KB, JCM, MHM.

April 26, 2011.

GPS: N34.909295 E38.151143,
altitude 1093.

The cistern is located 400 m E of cistern 245, N a wadi and close to the track leading to the N. The opening has been covered with a modern concrete superstructure. A deep elaborated catch arm, like a channel, reinforced with upright slabs and plaster runs 150 m up the hill towards the N.



Cistern 247 seen from S.

Cistern 256

Surveyed by AA, EMS, KB, JCM, MHM.

April 27, 2011.

GPS: N34.911337 E38.155987,
altitude 1078.

The cistern is located 500 m NW of cistern 247, on the other side of a hill, S of a wadi coming from the W, about 230 m E of the track leading to the N. The opening of the cistern has been covered with a modern concrete superstructure. A deep elaborated catch arm, like a channel, reinforced with upright slabs and plaster, runs 75 m up the hill to the S.



Cistern 247 seen from S.

Cistern 255

Surveyed by AA, EMS, KB, JCM, MHM.

April 27, 2011.

GPS: N34.919847 E38.155800,
altitude 1090.

The cistern is located 520 m NW of site 231, and 700 m ENE of site 232, W of the track leading to the N, immediately S of a wadi coming from the W. It is visible as a large upcast E of the opening. It has been filled in. There are no traces of catch arms.



Cistern 255 seen from ENE.

Site 256A.

GPS: N34.912664 E38.153778, altitude 1090.

Surveyed by JCM, NA. May 2010, April 27, 2011.

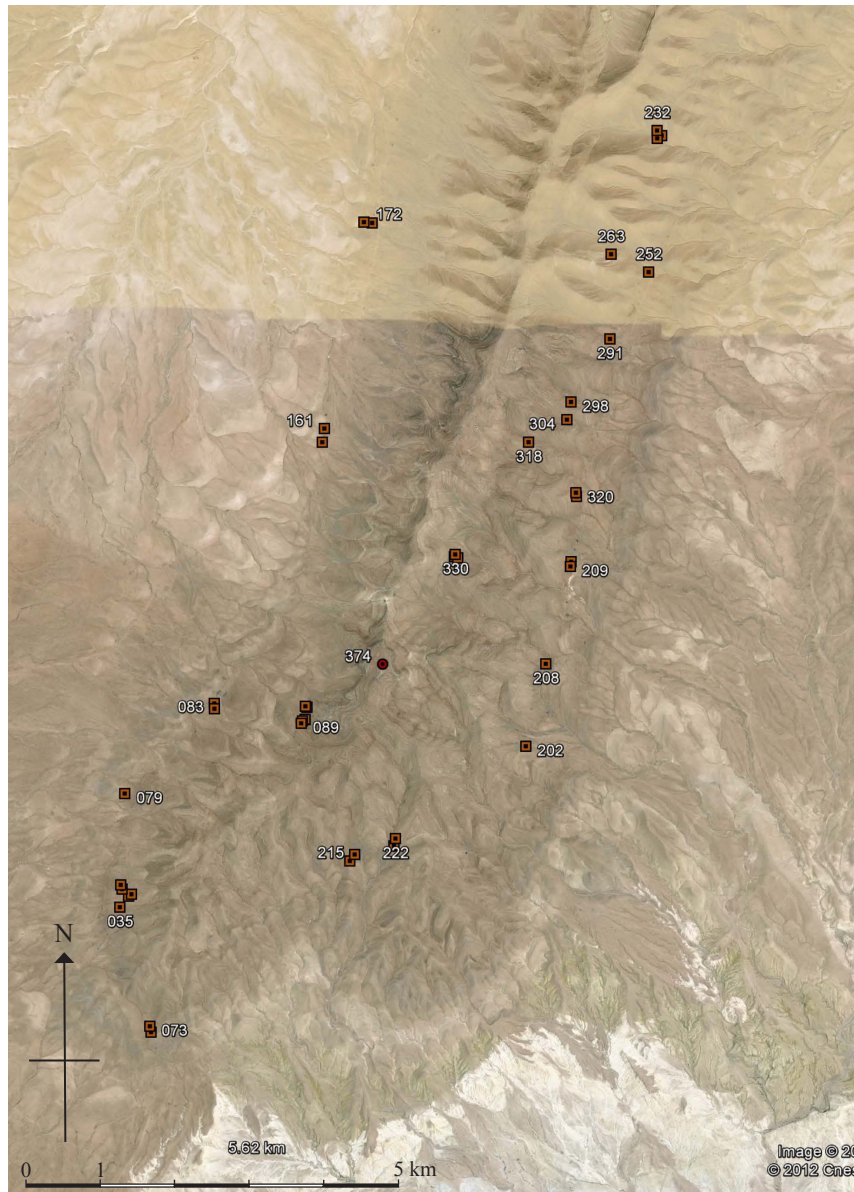
On a triangular plain, 800 m SE of site 232, E of the track leading to the N, there are several circular stone structures measuring about 2 m in diameter deeply imbedded into the surface. No surface finds can be related to them. They look like small graves, not from the Islamic period, but perhaps from the Iron Age?



Site 256A seen from W.

CONCLUSION

The settlements in the Jebel Merah area are located on the shelves, in or in connection with the bowl-shaped valleys and in valleys to the S and SE. The survey covered all the western side intensively, and the main concentration of settlements on this side of the mountain is in the southern half of the range. The eastern side was covered intensively for the first 14 km to the north, and it shows a higher concentration of settlements than on the western side. Studies of high resolution satellite images show that there has probably also been relatively few settlements further to the north. Of course it cannot be excluded that a detailed survey in the northern area will reveal remains of buildings, but many of the larger sites in the southern part can be roughly identified on the satellite images as tells or ramparts, though only a survey on the ground can confirm it, and there are no similar traces to the north, which at least indicates that the density of settlements there was markedly lower than in the southern part also at this side of the mountain.



The registered buildings only give a very incomplete picture of the actual number of former settlements around Jebel Merah. It has probably been much higher. This has something to do with architecture.

Until recently we concluded that the visible walls were foundation walls for a mud – and – straw brick structure, which is a very common technique up through the ages in the Middle East. At many sites, including Palmyra itself doorposts and columns are the only visible remains of former houses. Mud – and – straw brick technique, combined with marble door-frames, was also used at Khaled al-Ali, a site surveyed in 2008 70 km NW of Palmyra (Meyer 2008, pp. 113-120), from where it was possible to take samples for pollen analysis. From this line of thought the tells indicate the existence of deep cultural layers. It is true that the main building at Akarem at the W side of Wadi Abyad 18 km NNW of Palmyra surveyed in 2009 (Meyer 2009, pp. 7-16) was built of mud-built stone walls, with outer bigger stones and a filling of smaller ones and clay in the middle, but this technique was considered more or less exceptional. Site 330 (p. 73) proves that such is not the case. The visible stretches of walls are not foundation walls but the upper part of the preserved walls. The existence of tells do not necessarily indicate deep cultural layers but the accumulation of windblown material after the abandonment of the building.



Tell with mud - and - straw bricks. Khaled al-Ali.



Site 330. Stretch of wall at the surface and digging showing the height of the wall.

This conclusion does not only concern architecture. It is crucial for our understanding of the forces forming the landscape, and by that also what is visible of ancient structures and the chronological composition and the importance of the surface finds at the sites.

No doubt water and erosion is a strong force. Torrents may wash away several metres of earth and stones down to the rock, removing not only tracks, but also modern roads. Water has created the wadis and has changed their courses. On satellite images the white colour shows the areas where water erosion is heavy. In the E part of Jebel Abyad the water has continuously washed away all sediments and surface material away from the mountain side down into Wadi al-Takara and chances of finding any former settlements are slight just as is the case in the bigger wadis. If buildings are visible in areas with heavy erosion it is characteristic that the surface finds show a relatively early chronology. The accumulation of windblown material, however, is an equally strong force forming the landscape. It may cover former buildings with several meters of sand, earth and dust and by that also protecting the walls from the slow erosion of the rain. In some cases the former settlement is visible as tells or ramparts of accumulated material around the walls. A good example is Khabar station 52 km NNW of Palmyra (Meyer 2008, pp. 87-88), where only the ramparts are visible, not the walls.

It is obvious that the chronological composition of the finds related to such sites is much later, and even in some cases the finds may be relatively few and insignificant not reflecting the actual importance and complexity of the site, because the upper layers are not cultural layers.



Modern abandoned building built of mud-built stonewalls. Joufar SE of Palmyra.



Khabar station. Satellite photo of the ramparts.

The 2011 survey has proved that the existence and a high concentration of villages or estates north of Palmyra were not confined to the Jebel Chaar area. The buildings in Jebel Merah are also of the same type as those at Jebel Chaar. A common layout is a square or rectangular building with a large central courtyard and several internal rooms facing the courtyard. As in Jebel Chaar small shrines, often with double rooms, are also common. However, none of the villages can be compared in size to the villages of Jebel Chaar and there are several isolated buildings around Jebel Merah. This has probably something to do with the topography. Jebel Chaar is an undulating tableland, whereas Jebel Merah is a long mountain ridge with deep separated valleys. However, the exploration of Jebel Merah area has been just as intensive as the Jebel Chaar area. Almost every valley is occupied with buildings and water-catching systems, and the distance between the sites is between 500 – 2000 m, compared with 2000-4000 m in Jebel Chaar. The existence of cross-wadi walls at one of the sites (site 089) indicates either agriculture or horticulture as part of the economic basis of the settlements or estates, undoubtedly combined with pastoralism as well (site 232). Large grindings stones and fragments of large containers have been found at almost all sites.

All the pottery from the sites, gathered from the surface, show the same tendency as the sites registered in the surveys of 2008 and 2009. It ranges from Roman period to early Islamic period. As noted before, only excavations can reveal the exact chronology of the individual sites as to different phases.

References:

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PHOTO LIST

Site	No.	GPS	Description	From	
073			Village	Jebel Merah W	
	00034	N34.810289 E38.073760	Building 073	SW	
	00033	N34.809502 E38.073806	Building 075	E	
	00035		Overview	N	
	00036		Stone floor?	S	
	00452		Finds	E	
	00453		Finds	(100 m E of site)	
	00454		Finds	Handle A	
	00455		Finds	Handle B	
	00456		Finds	Brittle ware rims A	
			Brittle ware rims B		
			Brittle ware		
035			Village	Jebel Merah W	
	00010	N34.824643 E38.069031	Building 054	E part	
	00011		Building 054	S wall	
	00012		Building 054	N part	
	00013		Building 054	N part	
	00013		Building 054	N rooms	
	00027	N34.825922 E38.070493	Building 065	Shrine?	
	00028	N34.826153 E38.070913	Building 064	Shrine?	
	00029	N34.827281 E38.069333	Building 066	Overview	
	00030		Building 066	N rooms	
	00031		Building 066	N rooms and center	
	00032	N34.827290 E38.069835	Corral 078		
	00022	N34.826396 E38.071257	Cistern/dam 063	Cistern upcast	
	00023		Cistern/dam 063	Cistern opening	
	00024		Cistern/dam 063	Dam	
	00025		Cistern/dam 063	Dam / cistern	
	00016	N34.825177 E38.071794	Cistern 062	Upcast	
	00017		Cistern 062	Opening	
	00038	N34.822095 E38.071108	Cistern 077	Opening	
	00037	N34.820564 E34.820564	Cistern 076		
	00021		Overview	Building 054 from 077	
	00039		Overview	Hill with 066	
	00367		Finds	Handles	
	00369		Finds	White coarse ware	
	00371		Finds	Brittle ware	
	00372		Finds	Painted ware	
	00373		Finds	Glazed pottery	
	00513		Finds	Grinding stone	
	00514		Finds	Grinding stone	
	00517		Finds	Grinding stone pusher	
	00518		Finds	Grinding stone pusher	
	00379		Finds	Bronze coin	
	079			Building	Jebel Merah W
		00041	N34.838069 E38.069731	Building 079	S wall
00042			Building 079	W part	
00043			Building 079	Internal wall /digging	
00044			Building 079	NW corner /digging	
00045			Building 079	W part	
00046			Building 079	N part /digging	
0498			Overview	N	
00040			Overview	NE	
00492			Finds	Handles A	
00493			Finds	Handles B	
00494			Finds	White coarse ware	
00495			Finds	White coarse ware	
00496			Finds	White coarse ware	
00497			Finds	Brittle ware rims A	
00498			Finds	Brittle ware rims B	
00500			Finds	Handles.	
00501			Finds	Brittle ware	
00502			Finds	Red glazed ware	

Site	No.	GPS	Description	From
083			Village	Jebel Merah W
	00049	N34.848615 E38.083383	Building 084	N corner room
	00050		Building 084	N part
	00051		Building 084	
	00052		Building 084	N part
	00053		Building 084	N part
	00054	N34.849194 E38.083099	Building 087	S part
	00055		Building 087	S part
	00056		Building 087	N part
	00048	N34.848440 E38.082894	Building 088	Corner
	00057		Overview	NW
	00058		Overview	Plain towards N
	00059		Overview	
	00060		Overview	
	00061		Overview	Plain towards N
	00471		Finds	White coarse ware
	00472		Finds	White coarse ware
	00473		Finds	White coarse ware
	00474		Finds	White coarse ware A
	00475		Finds	White coarse ware B
	00476		Finds	Brittle ware
	00477		Finds	Brittle ware A
	00478		Finds	Brittle ware B
	00479		Finds	Glass bracelet
089			Village	Jebel Merah W.
	00076	N34.846806 E38.095899	Building 089	Overview
	00084		Building 089	W part
	00085		Building 089	S wall
	00087		Building 089	NW part
	00089		Building 089	NE corner
	00091	N34.847494 E38.096580	Building 092	Overview
	00092		Building 092	NW corner. Older building
	00093		Building 092	NW corner
	00094		Building 092	W wall
	00107	N34.848896 E38.096440	Building 121	Shrine. Door posts
	00108		Building 121	Shrine W wall
	00109		Building 121	Shrine NW room
	00110		Building 121	Shrine Overview
	00148	N34.848775 E38.096628	Building 139	Shrine
	00149		Building 139	Shrine doorpost
	00150		Building 139	Shrine
	00145	N34.847233 E38.096162	Cistern 149	Opening
	00146		Cistern 149	Opening
	00144	N34.847356 E38.096515	Cistern 148	Opening
	00141	N34.847431 E38.097558	Cistern 145	
	00141		Cistern 145	Opening
	00143		Cistern 145	Overview
	00147	N34.848373 E38.097233	Cistern 150	
	00130	N34.847358 E38.098174	Cistern 144	Overview. Rock-cutting
	00131		Cistern 144	Cutting at W edge
	00132		Cistern 144	Cutting at E edge
	00133		Cistern 144	Cutting NE
	00134		Cistern 144	Cutting E edge
	00135		Cistern 144	Cutting E edge
	00140		Cistern 144	Cutting NW of cistern
	0882 - 0893	N34.847304 E38.099207	Inscription 143	Saphaitic
	00116-00129		Inscription 143	Saphaitic
	00095	N34.847173 E38.097709	Dam 096	
	00096		Dam 096	
	00097		Dam 096	
	00098		Dam 096	
	00099		Dam 096	
	00100		Dam 096	Overview
	00101		Dam 096	Overview
	00106		Dam 096	
	00151	N34.849445 E38.099456	Dam 151	
	00152		Dam 151	

Site	No.	GPS	Description		From
089	00154		Dam 151	Overview	E
	00153	N34.849503 E38.099994	Dam 154		N
	00163	N34.850284 E38.097004	Dam 167		NE
	00164		Dam 167		S
	0875		Overview	Towards Jebel Chaar	E
	0889		Overview	Towards Jebel Chaar	E
	00075		Overview	Towards N. 089	S
	00077		Overview	NE valley	SW
	00078		Overview	NE valley. Dam 096	SW
	00079		Overview	Towards N. 089	S
	00081		Overview	Towards N. 089, 092	S
	00082		Overview		SW
	00083		Overview	Towards NE. Dam 096	SW
	00102		Overview	096, 092, 089	NE
	00103		Overview	089, 092	NE
	00104		Overview	Valley towards Jebel Chaar	E
	00105		Overview	121, 139	SE
	00165		Overview	Entrance to valley	W
	00400		Finds	Green and red glazed	
	00401		Finds	Fine red ware	
	00402		Finds	Handles	
	00403		Finds	Handles	
	00404		Finds	Handles A	
	00405		Finds	Handles B	
	00406		Finds	Handles A	
	00407		Finds	Handles B	
	00408		Finds	Hard burned ware A	
	00409		Finds	Hard burned ware B	
	00410		Finds	Brittle ware	
	00411		Finds	Red brittle ware. Rims	
	00412		Finds	White coarse ware, handle	
	00413		Finds	White coarse ware, handle A	
	00414		Finds	White coarse ware, handle B	
	00415		Finds	White coarse ware	
	00416		Finds	White coarse ware	
	00417		Finds	White coarse ware	
00515		Finds	Grinding stone A		
00516		Finds	Grinding stone B		
00519		Finds	Grinding stone		
161			Village	Jebel Merah W	
	00155	N34.882448 E38.099168	Building 161	N part. Digging	SE
	00157	N34.880629 E38.099217	Building 164		SW
	00158	N34.880961 E38.099024	Cistern 166	W opening	W
	00159		Cistern 166	E opening	N
	00160		Cistern 166		E
	00156		Overview	Tel E of road	SW
	00162		Overview		SE
	00166		Overview		SE
	00169		Overview		SE
	00460		Finds	White coarse ware, handle A	
	00461		Finds	White coarse ware, handle B	
	00462		Finds	Brittle ware handle A	
	00463		Finds	Brittle ware handle B	
	00466		Finds		
	00467		Finds		
	00468		Finds	Brittle ware	
	00469		Finds	Brittle ware	
	00470		Finds	Brittle ware	
172			Village?	Jebel Merah W	
	00184	N34.907000 E38.105016	Structure 173	NE corner	NE
	00183	N34.907204 E34.907204	Structure 182	E wall	S
	00179	N34.906069 E38.105763	Cistern 176	Covered	NE
	00180		Cistern 176		ENE
	00178	N34.906393 E38.106518	Catch-arm 179		SW
	00181		Overview		WNW
	00182		Overview		WNW
	00512		Finds	Handle	

Site	No.	GPS	Description		From
171			Cistern	Jebel Merah W	
	00170	N34.893029 E38.100311	Cistern 171		E
	00171		Cistern 171	Opening	E
	00172		Cistern 171		N
183			Cistern	Jebel Merah W	
	00185 00186	N34.906052 E38.111867	Cistern 183 Cistern 183	Covered Covered	S W
190			Cistern	Jebel Merah W	
	00187 00190	N34.936831 E34.936831	Cistern 190 Cistern 190		SE S
196			Cistern	Jebel Merah W	
	00191 00193	N34.945436 E38.122766	Cistern 196 Cistern 196		SE S
198			Cistern	Jebel Merah W	
	00194	N34.963406 E38.138919	Cistern 198		SE
199			Cistern	Jebel Merah W	
	00195	N34.970263 E38.143103	Cistern 199		SW
215			Village	Jebel Merah E	
	00253	N34.830741 E38.103175	Building 215	W wall	S
	00254		Building 215	W part	N
	00255		Building 215	N wall	E
	00256		Building 215	E part	NE
	00258		Building 215	Overview	SSW
	00259		Building 215	Overview	SSW
	00260		Building 215	Overview	SSW
	00261	N34.830185 E34.830185	Building 219		S
	00262		Building 219		E
	00263		Overview		NE
	00264		Overview	Cistern area	SW
	00265		Overview		NE
	00270		Overview		NE
	00266	N34.832960 E38.104314	Cistern 220		SE
	00267		Cistern 220		NE
	00268	N34.833376 E38.104740	Cistern 221		S
	00269		Cistern 221		NW
	00418		Finds	Handles	
	00419		Finds	Green glazed ware	
	00421		Finds	Handle A	
	00422		Finds	Handle B	
	00423		Finds	Brittle ware	
	00504		Finds	White coarse ware, handle A	
	00505		Finds	White coarse ware, handle B	
	00506		Finds	White coarse ware, A	
	00507		Finds	White coarse ware, B	
00508		Finds	White coarse ware, C		
00509		Finds	White coarse ware, D		
00510		Finds	White coarse ware		
00520		Finds	Grinding stone A. Pusher		
00521		Finds	Grinding stone B. Pusher		
222			Village	Jebel Merah E	
	00271	N34.832731 E34.832731	Building 222		NE
	00272		Building 222	NW corner	E
	00273		Overview		S
	00274		Overview		S
	00275		Overview		N
	00363		Finds	Handles	
	00364		Finds	Brittle ware	
	00365		Finds	Whire coarse ware	

Site	No.	GPS	Description	From
208			Cistern/Site	Jebel Merah E
	00225	N34.853985 E38.131892	Cistern 208	NE
	00457		Finds	Handles
	00458		Finds	Handles A
	00459		Finds	Handles B
202			Village/reservoir	Jebel Merah E
	00208	N34.844281 E38.128488	Cistern/reservoir	Overview
	00209		Cistern/reservoir	Overview
	00210		Cistern/reservoir	Overview
	00211		Cistern/reservoir	Overview
	00212		Cistern/reservoir	Stone structure E part
	00213		Cistern/reservoir	Plaster SE corner
	00214		Cistern/reservoir	Plaster S side
	00215		Cistern/reservoir	Plaster SW corner
	00216		Cistern/reservoir	Plaster NW corner
	00218		Cistern/reservoir	Stone structure E part
	00220	N34.843940 E38.129862	Wall 207	
	00219	N34.844977 E38.127995	Cistern 204	
	00221		Overview	
	00222		Overview	
	00223		Overview	
	00224		Overview	
	00424		Finds	Pilgrim flask
	00426		Finds	Pilgrim flask
	00427		Finds	Pilgrim flask
	00428		Finds	Pilgrim flask
	00429		Finds	White coarse ware, handles A
	00430		Finds	White coarse ware, handles B
	00431		Finds	White coarse ware, handles A
	00432		Finds	White coarse ware, handles B
	00433		Finds	Handles A
	00434		Finds	Handles B
	00435		Finds	White coarse ware A
	00436		Finds	White coarse ware B
	00437		Finds	Handle A
	00438		Finds	Handle B
	00439		Finds	Red brittle ware
	00440		Finds	Brittle ware
	00441		Finds	Brittle ware A
	00442		Finds	Brittle ware B
	00443		Finds	Brittle ware C
209			Village	Jebel Merah E
	00226	N34.865740 E38.135520	Building 209.	NW
	00227		Building 209.	SE
	00228		Building 209.	NE
	00229		Building 209.	N
	00245	N34.866313 E38.135612	Structure 214,	corral
	00246		Structure 214,	corral
	00230	N34.866313 E38.135612	Corral	Overview, cistern 212
	00231	N34.864665 E38.136420	Cistern 210	Overview
	00237	N34.867371 E38.134352	Cistern 212	
	00238	N34.867673 E38.132789	Cistern 213	
	00240		Cistern 213	NE opening
	00242		Cistern 213	SW opening
	2058		Overview	Plain and cistern 213
	00232		Overview	Old fields E of site
	00233		Overview	Road to the north
	00234		Overview	Building 209, J. Abu Righmen
	00235		Overview	Building 209, J. Abu Righmen
	00236		Overview	Building 209, J. Abu Righmen
	00243		Overview	View towards Wadi Abyad
	00244		Overview	Towards SE
00511		Finds	Brittle ware	

Site	No.	GPS	Description		From
330			Village	Jebel Merah E	
	00357	N34.866693 E38.118376	Building 330	W wall	SSE
	00358		Building 330	Internal wall and room	N
	00359		Building 330	Room	NNW
	00360		Building 330	Room	N
	00356		Overview Tels		W
	00355	N34.86892 E38.116790	Cistern 327		SW
	00480		Finds	White coarse ware, handle A	
	00481		Finds	White coarse ware, handle B	
	00482		Finds	Handles A	
	00483		Finds	Handles B	
	00484		Finds	Handles A	
	00485		Finds	Handles B	
	00486		Finds	Coarse ware, rim and handle A	
	00490		Finds	Coarse ware, rim and handle A	
	00491		Finds	Coarse ware, rim and handle A	
	00487		Finds	Brittle ware	
	00488		Finds	Brittle ware	
	00489		Finds	Brittle ware	
320			Building	Jebel Merah E	
	00354	N34.874640 E38.136327	Building 320	NW-corner	NW
	00384		Finds	Coarse ware, handle.	
318			Cistern and wall	Jebel Merah E	
	00353	N34.880743 E38.129358	Wall	Building?	S
304			Village	Jebel Merah E	
	00350	N34.883461 E38.134997	Building 304	Wall N of wadi	WNW
	00351		Overview		SW
	00352		Overview	Cistern 314 and 315	SW
	00348	N34.882633 E38.138459	Cistern 301		S
	00349	N34.882505 E38.136199	Cistern 303		E
	00380		Finds	Handles	
	00381		Finds	White coarse ware	
	00382		Finds	White coarse ware	
	00383		Finds	Brittle ware	
298			Village	Jebel Merah E	
	00342	N34.885600 E38.135862	Building 298	E wall	N
	00343		Building 298	SE corner and center	SE
	00344		Building 298	Overview	SW
	00345		Building 298	S wall	E
	00347		Building 298	View into valley.	E
	00398		Finds	Brittle ware	
	00399		Finds	White coarse ware, handle	
291			Cistern area.	Jebel Merah E	
	00329	N34.893199 E38.141336	Cistern 291		SE
	00330	N34.893266 E38.140930	Cistern 292		E
	00331	N34.893587 E38.140796	Cistern 293		SW
	00332	N34.893793 E38.141228	Cistern 294		W
	00333		Cistern 294		S
	00335	N34.894395 E38.142324	Cistern 295	Catch-arm	E
	00336		Cistern 295	Catch-arm	W
	00334		Overview	Modern building, cist. 295	SW
	00337		Overview	Modern building, cist. 293, 294	NW
	00338		Overview	View up into valley	E
	00339		Overview	Modern buildn. Grinding stone	
	00340		Overview	Modern building, 291, 293	SE
	00341		Finds	Grinding stones	
	00387		Finds	Terra sigiliata A	
	00388		Finds	Terra sigiliata B	
	00389		Finds	Handles	
	00390		Finds	Handles A	
	00391		Finds	Handles B	
	00392		Finds	Handle A	

Site	No.	GPS	Description	From	
291	00393		Finds	Handle B	
	00394		Finds	Brittle ware	
	00395		Finds	Whire coarse ware	
252			Building	Jebel Merah E	
	00312	N34.901272 E38.147036	Building 252	Corner. Cistern 257	ENE
	00313		Building 252	N wall. Tel	
	00317	N34.901363 E38.146682	Cistern 257		W
	00396		Finds	Handle and rims	
	00397		Finds	Rims.	
263			Building, Village	Jebel Merah E	
	00318	N34.903431 E38.141508	Building 263	Internal wall	ESE
	00319		Building 263	SW corner	SW
	00321		Building 263	Overview	SW
	00324		Building 263	Overview	WSW
	00314	N34.902864 E38.143651	Cistern 258		NE
	00315	N34.903394 E38.142172	Cistern 262		W
	00316	N34.903589 E38.140765	Cistern 249		NE
	00320		Cistern 249	S catch-arm	S
	00323		Cistern 249	S catch-arm	S
	00325		Cistern 249	W catch-arm	W
	00326		Cistern 249	Intake	WSW
	00327		Cistern 249	Intake	N
	00444		Finds	Handles A	
	00445		Finds	Handles B	
	00446		Finds	Handles A	
	00447		Finds	Handles B	
	00448		Finds	Handles A	
	00449		Finds	Handles B	
	00450		Finds	Green glazed ware	
	00451		Finds	Brittle ware	
	232			Village	Jebel Merah E
		00294	N34.918364 E38.148277	Building 232	N-S wall
00295			Building 232	Rooms, curving wall	W
00296			Building 232	N-S wall towards S	N
8155			Building 232	Rooms	SW
8156			Building 232	N-S wall	S
8157			Building 232	N-S wall	N
00300		N34.917410 E38.148305	Building 233	SW corner	SW
00301			Building 233	Overview from 234	N
8161			Building 233	Overview, building 234	S
8162			Building 233	W wall	S
8163			Building 233	S wall	W
8164			Building 233	Overview	S
8165			Building 233	NE corner	NE
00297		N34.917743 E38.148964	Building 234	Overview	N
00298			Building 234	Overview	N
8158			Building 234		SE
8159			Building 234		SE
8160			Building 234		S
00299			Misc	Building block S of 232	
00302			Overview	Into the valley	E
00303			Overview	Into the valley	E
00304			Overview	To the east and 231	W
00374			Finds	Handles A	
00375			Finds	Handles B	
00376			Finds	White coarse ware A	
00377			Finds	White coarse ware B	
00378			Finds	Brittle ware	
00276		N34.915657 E38.153380	Cistern 231	N rampart	S
00291			Cistern 231	N rampart	S
00277			Cistern 231	N rampart	S
00278			Cistern 231	N rampart	S
00279			Cistern 231	S rampart, stonestructure.	N
00280		Cistern 231	S rampart stonestructure	NW	
00281		Cistern 231	S rampart stonestructure.	S	
00292		Cistern 231	S rampart stonestructure.	E	
00293		Cistern 231	S rampart stonestructure.	W	

Site	No.	GPS	Description	From	
232	00282		Cistern 231	S rampart	N
	00283		Cistern 231	S rampart	N
	00284		Cistern 231		E
	00287		Cistern 231	Intake	W
	00288		Cistern 231	Interior	W
	00305		Cistern 231	Overview	ENE
	00289		Cistern 231	Overview	E
	00385		Cistern 231	Finds/Handle A. N rampart	
	00386		Cistern 231	Finds/Handle B. N rampart	
	374			Shrine / inscription	Jebel Merah E
9688		N34.853944 E38.107886	Shrine	Building blocks	
9689			Shrine	Building blocks	
9690			Shrine	Building blocks	
9691			Shrine	Building blocks	
9692			Shrine	Building blocks	
9693			Shrine	Building blocks	
9700			Overview		
9702			Overview		
9694-			Inscription	Palmyrene	
9696			Inscription	Palmyrene	
9706-			Inscription	Palmyrene	
9715			Inscription	Palmyrene	
256A				Circular tombs	Jebel Merah E
	00309	N34.911337 E38.155987	Tombs		W
	00310		Tombs		S
247			Cistern	Jebel Merah E	
	00311	N34.909295 E38.151143	Cistern 247		N
256			Cistern	Jebel Merah E	
	00308	N34.911337 E38.155987	Cistern 256		S
255			Cistern	Jebel Merah E	
	00306	N34.919847 E38.155800	Cistern 255		NE

FIND LIST

Jebel Merah West:

035

Many fragments of grinding stones, 1 pushing.
2 large white coarse ware fragments.
1 large dolie fragment, 38 cm i diameter of the pre-
served shard. Thickness 1.4 – 1.5 cm
121 brittle ware
12 coarse ware
1 glass fragment
1 green glazed, 1 red glazed, 1 dark (black?) glazed
3 painted ware
1 coin

073

2 fragments or grinding stones
1 green glass fragment rim
86 brittle ware. Non-characteristic.

079

5 fragments of grinding stones
5 white coarse ware
60 brittle ware. Non diagnostic
2 red glazed.
1 water spout?

083

1 big fragment and 1 small fragment of grinding
stones
1 glass bracelet
51 white coarse ware
39 brittle ware

089

3 large fragment of grinding stones. One 40 cm diam-
eter
37 white coarse ware
150 brittle ware

161

3 small fragments and 1 big fragment of grinding
stones
18 white coarse ware
105 brittle ware

172

Small fragment of grinding stone
29 brittle ware

Jebel Merah East:

202

4 fragments of grinding stones
15 white coarse ware
75 brittle ware
1 green glazed ware

208

1 white coarse ware
34 brittle ware

209

2 fragments of grinding stones
1 large piece of white coarse ware
57 white coarse ware
53 brittle ware.

215

2 large fragments of grinding stones
22 large fragments of white coarse ware
50 brittle ware
1 green glazed ware.

222

1 large fragment of grinding stone. Diameter 32
cm
10 red coarse ware
7 white coarse ware
35 brittle ware

232

54 white coarse ware
47 brittle ware
2 glass fragments

231

1 small fragment of grinding stone
1 brittle ware
1 white coarse ware

252

Fragments of grinding stones
4 white coarse ware
2 red coarse ware
20 brittle ware

263

8 white coarse ware
85 brittle ware
1 green glazed ware.

291

Many fragments of grinding stones
1 terra sigiliata
32 white coarse ware
130 brittle ware

298

10 white coarse ware
20 brittle ware

304

Many fragments of grinding stones
60 white coarse ware
31 brittle ware

317 / 318

1 fragment of grinding stone
5 brittle ware

320

1 white coarse ware
13 brittle ware

330

Fragments of grinding stones
7 white coarse ware
62 brittle ware

374

8 white coarse ware
80 brittle ware
5 glass fragments

