

GIRDA QALA NORTH TRENCH D: STRATIGRAPHY AND ARCHITECTURE

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The excavations of Trench D have been carried out during seventeen days, from the 8th to the 25th of October 2016. The team was composed of four members, Clélia Paladre, Rateb al Debs, Adel Hama Amin and Régis Vallet plus a team of four workers. The aim of these excavations was to obtain southern Uruk stratified contexts in order to achieve a better understanding of the Uruk presence in the Qara Dagħ area. We decided to open a trench of 10 x 5 m in the northern slope of the mound, oriented more or less north-west south-east. The emplacement of the trench was based on the results of the geomagnetic and archaeological surveys. Indeed, during the surface survey, we were able to observe a high concentration of southern Uruk material (ceramics -and animal bones) in the centre of the zone III (the richer zone of the prospection, cf. *supra*). This high concentration was associated on the geomagnetic plan with an imposing anomaly (Fig. 1). These excavations allowed us to recognize five successive levels of occupation, all of them dating back from the Middle Uruk period¹ (Fig. 2 and 3).



Fig. 1 - Plan of Girdi Qala North Mound with the location of the presumed Uruk site, Trench D and the results of the geomagnetic survey.

1. See the pottery study, Baldi, *infra*.

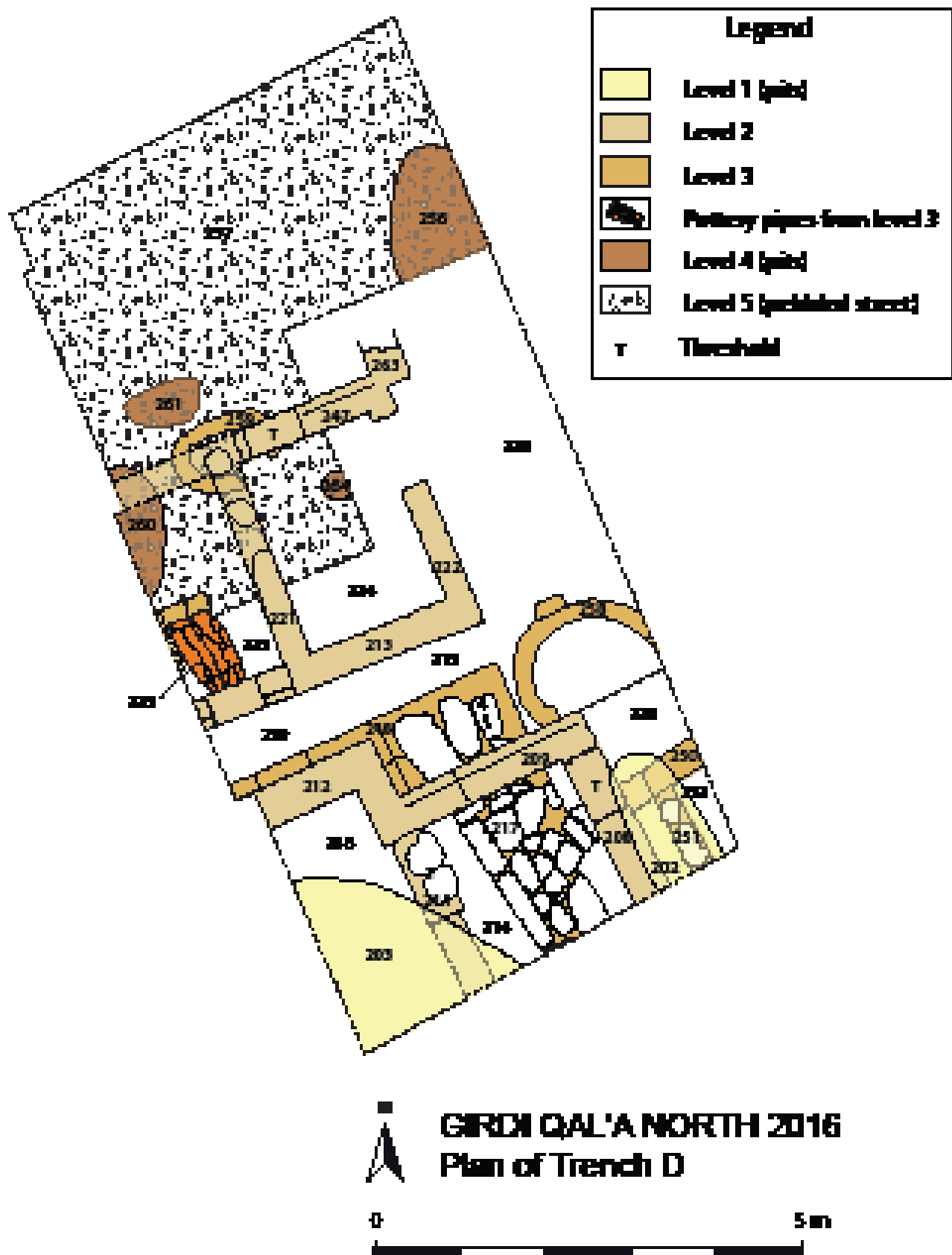


Fig. 2 - General plan of the Trench D.



Fig. 3 - Trench D, view from the North.

LEVEL 1

Two imposing pits (202 and 203) represent this earliest level. It was very close from the surface, thus heavily damaged by ploughing. It explains the amount of material observed there during the survey. Pit 202 is around 0.80 m width, its length is still unknown (it continues through the southern section of the trench). It is around 0.15 m deep, thus it is the bottom of a pit. 203 is a larger pit, sub-circular in shape, excavated on 2.20 m width and 2.80 m length. It was especially full of material (bones of animals and ceramics) and particularly of BRB's (153 fragments and 54 forms) (Fig. 4). At this day, the bottom of the pit is still unreached since the high quantity of material obliged us to postpone its excavation. It has to be noted that a thin white layer



Fig. 4 - Pit 203 with its complete ceramics.

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was visible in the southern section of the trench (Fig. 5), maybe the original floor of the pits. However, it was impossible to catch it in plan. Both of these pits have disturbed the deeper levels (level 2 and 3).



Fig. 5 - South section of Trench D, detail.

LEVEL 2

Level 2 is represented by two buildings, probably tripartite (at least for the southern one) in plan, and likely with residential functions. The first building is located at the top of the trench whereas the other one is located to the north, lower in the slope.

Building 1 is oriented north-south (according to the orientation of the main room). Only a part of a lateral vestibule (214) and a small part of a (probable) central hall (216) are present in the trench. The main mudbrick walls of this building (208, 209, 211 and 212) are 0.45m wide, with one brick and a half side by side (only the width of the bricks could be identified, 0.28 m, and the half bricks about 0.14 m wide). Wall 212 is oriented east west and shows a coat of around 0.14 m on its north face, a façade of the building. It is built on wall 248 from level 3 which is much wider (Fig. 6). Wall 211 is oriented north-south and is cut by pit 203 from level 1. Two stones of medi-



Fig. 6 - Superposition of walls 212 (level 2) and 248 (level 3).

um calibre, possibly reused from level 3, were forming a probable threshold (0.80 m wide, Fig. 7) which slipped into the vestibule 214. Wall 209 is oriented east-west and is partly built on wall 217 of level 3, which explains why it has stairs-like foundations. Thus, we can see three “stairs” of one brick each. Wall 208 is oriented north-south and shows a mudbricks threshold of 0.75 m width, with



Fig. 7 -General view of the southern building of level 2).

two side projections slightly rounded (Fig. 8). As wall 209, wall 208 displays stairs-like foundations of three “stairs” of one brick each, because it is built partly on wall 250 of level 3



Fig. 8 - Threshold of the wall 208.

and partly on the slope. Thus, the foundations are deeper to the north but also on its west face. A foundation trench was visible along the east face of the wall. This trench partly cut wall 250 of level 3. Two internal (228/229 and 235) and one external floors (262, in the external space 220, east of the building) were associated with this building. Floor 229/228 was located in the lateral vestibule 214 and yielded a terra cotta spindle whorl (Fig. 9), whereas floor 235 was located in the central hall 216. Both were easily identifiable by their grey colour and white inclusions. It rested on a layer of sterile brown sediment that probably corresponds to a backfill.

The second building, located lower in the slope, to the north, is probably oriented east west according to the remains of its main room, poorly preserved. The mudbrick walls (213, 221, 222, 247 and 263) are wide of one brick and a half, around 0.45 m (the bricks were about 0.35 x 0.28 m, and the half ones about 0.14 m wide). It composed three rooms. The eastern one is a

As wall 209, wall 208 displays stairs-like foundations of three “stairs” of one brick each, because it is built partly on wall 250 of level 3 and partly on the slope. Thus, the foundations are deeper to the north but also on its west face. A foundation trench was visible along the east face of the wall. This trench partly cut wall 250 of level 3. Two internal (228/229 and 235) and one external floors (262, in the external space 220, east of the building) were associated with this building. Floor 229/228 was located in the lateral vestibule 214 and yielded a terra cotta spindle whorl (Fig. 9), whereas floor 235 was located in the central hall 216. Both were easily identifiable by their grey colour and white inclusions. It rested on a layer of sterile brown sediment that probably corresponds to a backfill.



Fig. 9 - Spindle whorl from the floor 228 (GDQ Tc 1215.1)

vestibule (224) of about 2.5 x 1.8 m, provided with an access in its east wall 222 (without threshold), of 0.9 m width. The western room (223) is very fragmentary and only partly excavated. Finally, the northern room is larger and slightly projecting to the east, but almost nothing remains of it because of the erosion. Wall 213 is oriented east-west and shows a coat of 0.05 m. As walls 208 and 209, it is built with stairs-like foundations of three “stairs” of one brick each. In its west part, it recovered the terra cotta pipes of level 3 (225, Fig. 10), which were interlocked into the wall and cut in the alley between the two buildings of level 2. The building rested on a mortar layer (grey with white inclusions). Walls 221 and 222 are oriented north-south. Wall 221 is heavily damaged in its north part. Wall 247 is oriented east-west and presents a threshold of 0.65 m width, allowing access to the main room from the vestibule 224. In its west part, its traces were visible until the west section of the Trench D. In its east part, we were able to follow it until wall 263, a row of mudbrick slightly recessing beyond wall 222, and corresponding to the east facade of the building (Fig. 11). We identified a possible additional thin east-west wall, whose trace was visible in the west section of the trench, which could have partitioned room



Fig. 10 - Pipes 225 (level 3) at the base of wall 213 (level 2) .



Fig. 11 - Vestibule 224, view from the east

223 (a staircase?). Two floors were associated with this building, one (245/246) in room 224 (Fig. 12) and one external (236) in the space 226 to the east, which displayed a considerable amount of material *in situ* (Fig. 13).



Fig. 12 - Floor 245-246 in the vestibule 224.



Fig. 13 - Floor 236 in the external space 226

In the alley between these two buildings, several floors were identified, 234/237 to the west (219) and 232/233 to the east (215), that yielded a spindle whorl (Fig. 14). The alley 215/219 along with the spaces 220 and 226 composed the outdoor activities areas of the two residential buildings. This observation is corroborated by the presence of *in situ* material and by the reutilisation of a level 3 stone slab (of wall 217) as a millstone



Fig. 14 - Spindle whorl from floor 232 (GQD Tc 1210.1).



Fig. 15 - Floor 232-233 (in the external space 215) with circular knob associated with the millstone of 217

during the level 2 phase. Many circular depressions were visible on the flat surface of this stone and several cylindrical knobs were lying on the connected floor 232-233 (Fig. 15). This reuse proves continuity in the occupation mode of the area, despite the levelling of level 3 and the changes in the nature of the constructions.

LEVEL 3

A large building showing two distinct architectural phases, level 3A (late) and 3B (early), attested only in the south part of the trench, represents level 3. It is an imposing and high quality building. Its first phase is represented, at this day, by only one mudbrick wall (248), two ovens, two terra cotta pipes (the oldest known of this type) and its associated floors. The later phase is represented by additional walls in the south part of the Trench.

Phase 3B :

Wall 248 is oriented east-west. Its size is unknown since the level 2 installations (left in place) are partly sealing it, but it seems imposing with a width of at least 0.90 m. Its face presents to the east an opening (filled by the level 2 masonry) in order to pass the pipes 225 (Fig. 16). The stone foundations of wall 217 were laid upon its east part since it was present during phases



Fig. 16 - Pipes 225, aligned with the opening into wall 248.

3A and 3B. It was associated with kiln 258 (a mortar blockage between these two architectural elements was put in place during the 3B phase), a circular domestic kiln with a diameter of 2 m and walls of 0.20 m width. A small mudbricks platform was abutting the north face of the kiln. The filling of the chamber was full of shells that certainly served for the combustion. Three complete vessels were still on the kiln floor: a BRB and a jar with a small bowl upside down upon the jar opening (Fig. 17). The collapse of this kiln had created a steep slope recovered by level 3A (and then level 2) floors. Wall 248 and kiln 258 were associated, to the north, with the floor 253 in the external spaces 215 and 219.



Fig. 17 - Kiln 258

Farthest north, it is possible to identify another external domestic activities area. A small mudbrick kiln (259) which is more or less ovoid with a size of 1.30 m length and 0.80 m width represents it. Its walls are about 0.20 m width and only one bricklayer was preserved. Its opening is around 0.40 m wide. An long bone of animal was lying on the kiln floor (Fig. 18). It was associated with a series of burnt and ashy exter-



Fig. 18 - Kiln 259



Fig. 19 - Terra cotta bead from floor 242/243/244 (GQD Tc 1242.1).

nal floors (240, 242/ 243/ 244 and 249) which yielded a terra cotta bead (Fig. 19). All these installations prove the use of this zone as an external domestic activities area, as it still will be the case later. This series of external floors were also associated with the pipes 225 and thus with the original building. The pipes are made of terra cotta and oriented north-west south-east, following the slope. Each pipe is composed of two tubes. It was about 1.25 m length (2m from the wall 248). The south tubes have a size of about 0.20 m of diameter and 0.50 m length and were snap into the north one which have a size of about 0.30 m of diameter and 0.80 m length (Fig. 20). The north extremities of the tubes were broken



Fig. 20 - Pipes 225



Fig. 21 - Mudbricks platform at the north extremities of the pipes 225.

and lying on a small platform that reduced the slope. It was made of two mudbricks preserved on two layers (Fig. 21). This platform itself rested on the floor 249 associated with kiln 259. These pipes were used to discharge sewage water from the imposing building of level 3, as corroborated also by the presence at the pipes northern extremities of a thin layer of potsherds upon the floors, which helped the drainage system (Fig. 22). The south extremities of the pipes were disassembled (and not destroyed) near the south face of wall 213 from level 2. Thus, it was not present in the level 2 alley but the original opening devoted to pass the pipes



Fig. 22 - West section of Trench D showing the potsherds layer at the north extremities of the pipes .

was still visible into the masonry of wall 248 of level 3. We removed the pipes and noticed that they were lying on a thick mortar layer applied on the floor 240. A BRB fragment was found at its end (Fig. 23) and an animal bone was stuck into the north-west tube (Fig. 24).



Fig. 23 - Disassembly of the pipes 225.



Fig. 24 - Disassembly: animal bone in the north-east tube of the pipes 225.

Phase 3A

Four walls (217, 248, 250 and 251, Fig. 25-26) represent it. Wall 217, oriented north-west/south-east, is 1m wide in its north part and 0.80 m in its south part. It is made of imposing slabs (0.80 to 0.40 m in average) that constitutes the substructure of the wall. It was



Fig. 25 - Wall 217 (at the centre), beneath level 2, view from the west.



Fig. 26 - Walls 250 and 251 (at the forefront), view from the east.

partly lying on the wall 248 to the north. This last one was made of mudbricks and covered with a compact pinkish mortar layer full of gravels in order to install the slabs at its junction with wall 217. Further east, wall 250 is made of mudbricks lying on stone foundations. It is oriented east-west and has a size of about 0.50 m width. It is not bonded with the perpen-

dicular wall 251 to the south. Wall 251 oriented north-west south-east, is made of stones, mudbricks and mortar. It has a width of about 0.35 m. It is clearly not a supporting wall but maybe a (late?) low partitioning wall (Fig. 27). As wall 250, it was partly cut by the foundation trench of wall 208 from level 2.

In this entire sector, no internal floor associated with this building phase was discovered. It can be explain by the fact that the building was levelled by level 2 builders and thus we are here in a foundation level. However, 3A phase external floors were identified in the slope to the north, above the 3B phase floors previously described. First, in the external space 220 (north of 250), floors 230 and 231/238 were associated with walls 250 and with the corner of 217 and 248 (Fig. 28). It is clearly dating from level 3A since it sealed kiln 258 (floor 230 have been reused during the level 2 phase, as the stone slab of 217, cf *supra*). Second, further west, floors 227/239 were associated with wall 248 in the external spaces 215 and 219. Here again, these late floors have been reused during level 2.



Fig. 27 - Walls 250 and 251, detail



Fig. 28 - Floors 230 and 231/238 in the external space 220.

LEVEL 4

Level 4 yielded no architecture and was excavated only in the north part of the trench since the level 2 remains were left in place (except part of the north building). It is represented by a series of external floors preserved on 0.17 m of thickness (255) which were partly burned and ashy (that could imply the presence of nearby kilns) and that passed beneath level 3. In the centre of these floors, we can observe a high concentration of material including a grinding tools kit (Fig. 29) and a little sheep in terra cotta (Fig. 30). Three pits were identified (256,



Fig. 29 - Grinding tools kit from floors 255
(GQD P 1266.2)



Fig. 30 - Terra cotta sheep from floors 255
(GQD Tc 158.1) the east.

260 and 261) with little material and filled by the same thin brown sediment. Pit 256 is located in the south-east part of the trench partly in the east section. It has a size of 1.20 m length, 0.80 m width and 0.25 m deep. It cuts floor 257 of level 5 (Fig. 31). Pit 260 was located in the south-west part of the trench partly in the west section. It was around 0.80 m length, 0.40 m wide and 0.30 m deep. As pit 256, it



Fig. 31 - Pit 256 (level 4) which cut the street 257.

cuts 257. Finally, pit 261 was located in the middle south part of the trench and has a length of 1 m, 0.50 m width and 0.11 m deep. Thus, this level illustrates external domestic activities, a function that locally continues until level 2 at least

LEVEL 5

Level 5 was excavated in a limited area in the northernmost part of the trench. It yielded no architecture but was represented by a magnificent floor (257) covered of potsherds, stones (medium and small calibres) and bones (Fig. 32). This unexpected discovery can be interpreted as the surfacing of a street, conceived as such and showing the importance of the area. This



Fig. 32 - Street 257 (level 5).

floor was in an opposite dip compared to the natural slope of the mound, in the exact opposite way than all the other layers. Thus, the street was deeper near the south berm. Moreover, it has to be noted that just above 257, and thus under the soft floors from level 4, the sediment was compact, clayey and full of mudbricks, especially along the south berm (0.35 m of thickness). Therefore, we deal here with a destruction layer, which yielded three terra cotta cones (Fig. 33). All these facts suggest the presence of an imposing building hereafter the south berm, probably just beneath the building of level 3.



Fig. 33a - Terra cotta cones from level 5
GQD Tc 1203.1.



Fig. 33b - Terra cotta cones from level 5
GQD Tc 1203.2.



Fig. 33c - Terra cotta cones from level 5
GQD Tc 1241.1



CHALCOLITHIC CERAMICS FROM GIRDI QALA NORTHERN MOUND (SURVEY AND TRENCH D): TYPOLOGICAL FEATURES

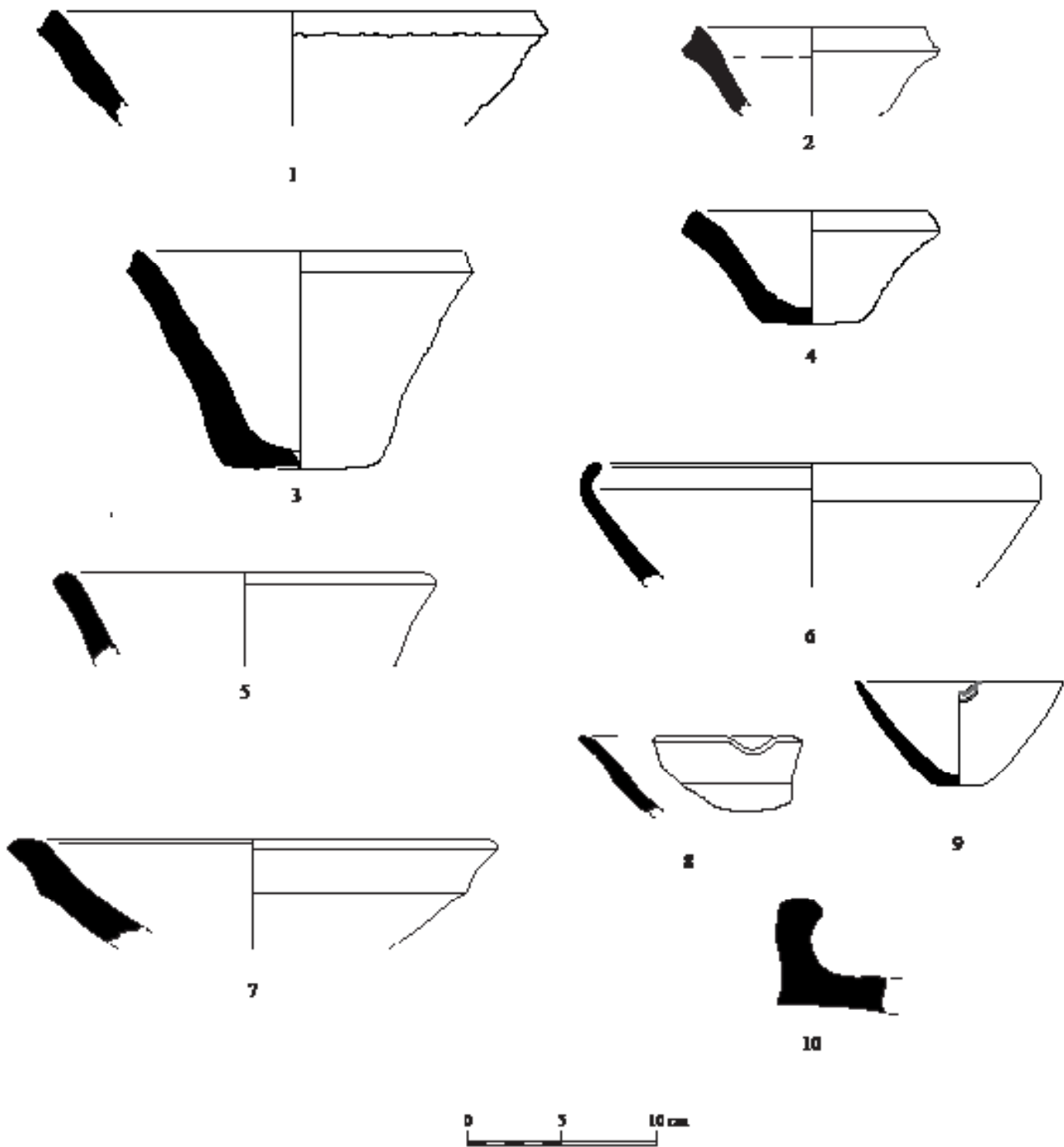
Johnny Samuele Baldi

The excavations, carried-out from October 4th until the end of the campaign, were preceded by a survey. This preliminary investigation, based on a careful subdivision of the site in different zones according to the micro-topography of the northern mound, was aimed at recognizing the areas showing important concentrations of southern Uruk ceramics. These ones represent the majority of the surface materials in almost all the surveyed areas,¹ but some sectors have yielded non-negligible quantities of pottery dating back to other periods (see the survey in this volume).

In particular, several Islamic sherds have been noticed in Area I, while Sasanian fragments are present both in Areas V and VI. According with the results of the Trench B at Girdi Qala main mound, the existence of quite important occupations during these phases is not surprising at all. Moreover, the surface assemblage of the Areas V and VI is quite mixed, with a lot of Early and Late Bronze Age specimens². Consequently, Areas III, IV, VII and VIII, whit their interesting features recorded by the geophysical survey, have appeared as the most promising zones as far as the Uruk phase. However, as already observed in the Trench C at Girdi Qala main mound, along with southern Mesopotamian materials, some local LC2 and LC3 chaff-faced ceramics are also attested. On the other hand, the presence of late Ubaid and LC1 sherds in the north-western sectors of the surveyed zone (Areas I, II, III and IV) represents a quite unexpected result. In addition to some generic black-on-buff samples with horizontal bands or wavy lines, some distinctive specimens with impressed crescent motifs and chevron incised decorations (Pl. II.8) show clear parallels with the Hamrin basin, the Erbil plain and the Mosul area.³ Despite the little quantity of these sherds, their presence both in the surface collection and in several stratified contexts of the Trench D is quite constant. Therefore, it seems clear that some kind of late Ubaid-LC1 installation has existed at least in the north-western sectors of Girdi Qala northern mound.

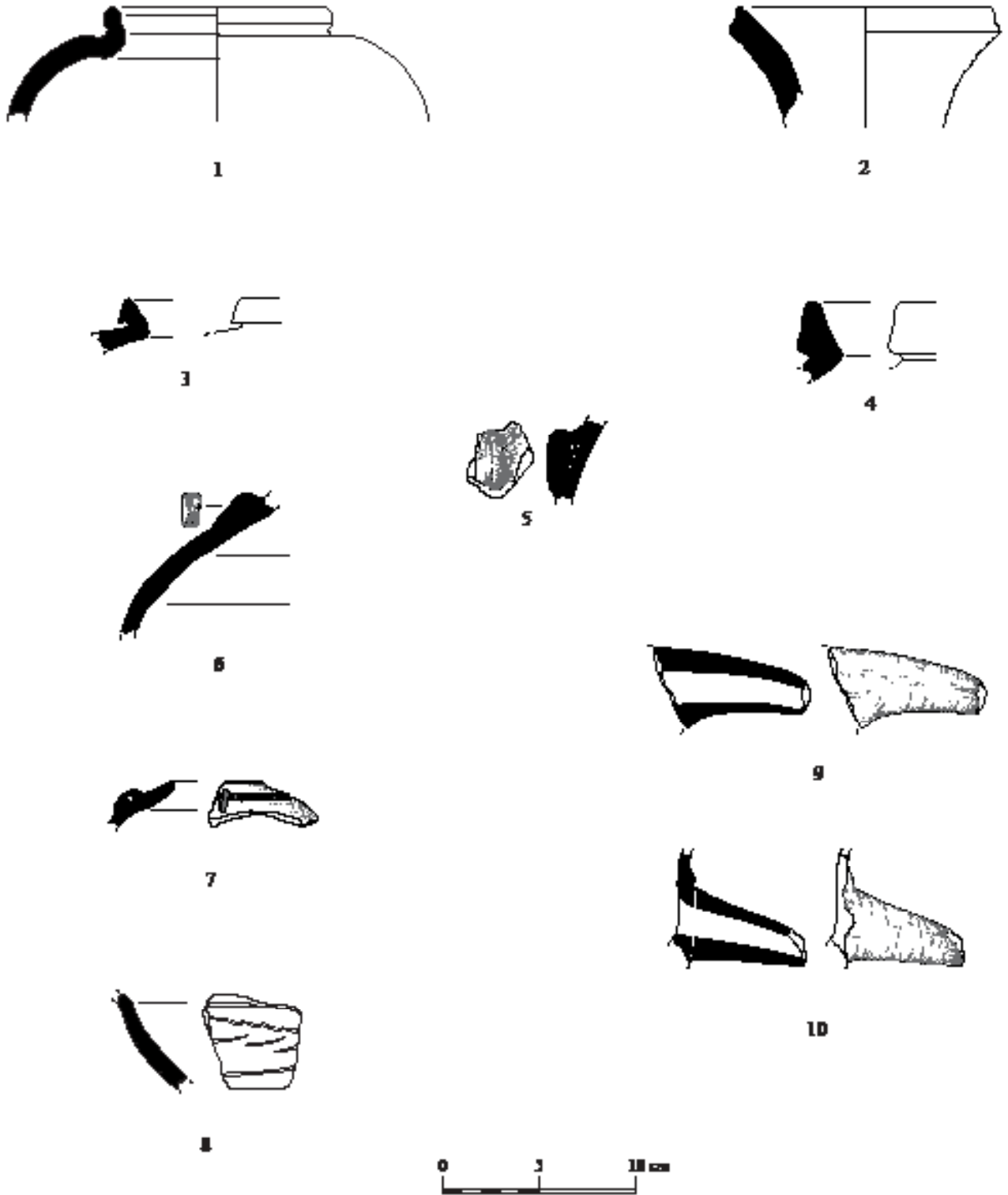
On the basis of these results, the choice of the location of the Trench D depends on the decision to look for southern Uruk stratified contexts, in order to achieve a better understanding of the Uruk presence in the Qara Dagh area. The 2015 campaign provided clear evidences for a very early Uruk presence at Girdi Qala main mound (with the large firing areas for pottery in the Trench C) and at Logardan (with the massive ramp to access the site).

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1. An amount of 4395 sherds has been collected during the survey.
 2. The quite important Late Bronze Age assemblage suggests a scattered occupation on both Areas V and VI. The most distinctive shapes are large- and medium-sized storage jars with rectangular rims and finger-impressed or incised appliqué cordons, but also knob bases and carinated bowls with flattened rims. This repertoire perfectly matches with the Late Bronze typologies of neighbouring regions, as documented at Yorgan Tepe (Starr 1937–39, pls. 63–68, 77, 95–96) or Gurga Chiya (Wengrow *et al.* 2016: fig. 5).
 3. See for instance at Tell Abada (Jasim 1985: fig. 214), Tell Abu Husaini (Chiocchetti 2007: fig. 2.d), Surezha (Stein and Alizadeh 2014: fig. 12) or Khirbet Hatara (Fiorina 2001).



- 1 : GQ 16 N III-1
 2 : GQ 16 N III-6
 3 : GQ 16 N 1201-3
 4 : GQ 16 N 1200-2
 5 : GQ 16 N III-3 GQ 16 N V-2
 6 : GQ 16 N II-2
 7 : GQ 16 N III-4
 8 : GQ 16 N VII-2
 9 : GQ 16 N 1201-1 GQ 16 N 1201-4
 10 : GQ 16 N 1251-1

Plate I - Different shapes of Chalcolithic ceramics from Girdi Qala Trench D.



- 1: GQ 16 N 1258-1
- 2: GQ 16 N 1201-4
- 3: GQ 16 N III-7
- 4: GQ 16 N 1222-1
- 5: GQ 16 N V-2
- 6: GQ 16 N 1201-6
- 7: GQ 16 N VII-2
- 8: GQ 16 N II-2
- 9: GQ 16 N 1262-1
- 10: GQ 16 N 1201-9

Plate II - Different shapes of Chalcolithic ceramics from Girdi Qala Trench D.

Thus, the search for a residential area of the South-Mesopotamian settlers was amongst the main goals of the campaign 2016. Indeed, Uruk surface ceramics coming from Areas III, IV, VII, VIII – essentially medium-sized bowls, jars and cooking pots – belong to morpho-functional categories consistent with everyday activities carried-out on a domestic scale and have suggested the presence of living spaces.

No noticeable differences have been observed between the surface materials and the stratified ones. In the same way, the pottery collected in the Trench D at Girdi Qala northern mound is remarkably homogeneous and no typological, quantitative or qualitative differences have been observed between the levels identified during the excavations. Even in the pits of the more recent level – where the concentration of bevelled-rim bowls (BRBs) is slightly higher than in the other excavated contexts – the percentages of the diagnostic shapes does not diverge significantly from the average ratios. Therefore, the materials of the 2016 campaign must be considered as a unitary assemblage.

Amongst open shapes, the large majority of the specimens is represented by serially produced BRBs (Pl. I.1-5 – Fig. 1) whose diameter fluctuates between 12 and 24 cm. As main and ubiquitous hallmark of the Uruk assemblages, BRBs do not offer specific typological insights⁴. Their most compelling feature is rather linked to their dimensional variability, with three classes recognizable on the basis of the sizes: BRBs with diameters of 12-14 cm, 16-18 cm and 22-24 cm. On the one hand, no specimen seems to be aberrant with respect to this classification and, on the other, each of these dimensional groups is also homogeneous as regards the sizes of the bases (when they are conserved) and the thickness of the bodysherds. In other terms, three classes of BRBs show a remarkable standardization due to the modalities of the production (Roux 2003): a serial, repetitive (and probably recurrent) manufacture of batches of bowls having the same size and possibly intended to be used for the same function. Even if less abundant than BRBs, other open shapes are also well documented.



Fig. 1 - Middle Uruk BRB from Trench D at Girdi Qala .

4. The only noteworthy characteristic is that the rims of the BRBs from the northern mound of Girdi Qala (not only from Trench D, but also from the entire surface collection) are always sharply bevelled towards the exterior. In this sense, they match with the mature shape of these containers and are quite different than the Early Uruk proto-BRBs from Trench D at Logardan or from Levels 10-8 of Trench C at Girdi Qala (see Preliminary Report on the 2015 campaign).

Medium- and little-sized hemispherical bowls with plain rounded rims⁵, carinated bowls (Pl. I.7)⁶, in-turned rim bowls (Pl. I.6)⁷ and V-shaped bowls with thinned rims⁸ represent a consistent percentage (about 9%) of the assemblage from Trench D.

Amongst the V-shaped ones, several samples with pouring lips (Pl. I. 8-9 – Fig. 2)⁹ belong to a very distinctive Middle Uruk type.

The same observation can be made about ovoid or rectangular shallow basins with thick walls and bases (Pl. I.10)¹⁰: these containers, used for cooking and presenting food, are a widespread hallmark of the Middle Uruk phase.

The whole range of the closed shapes constitute 36% of the assemblage from Trench D. The large majority of these materials is represented by medium-sized jars used as storage vessels in the domestic contexts exposed during the excavations.



Fig. 2 - Middle Uruk pouring-lip bowl from Trench D at Girdi Qala.

5. See Ahmad al-Hattu (Sürenhagen 1979: Abb. 10), Godin “late” VI (Badler 2002: fig. 7: N3 34 #26, B20 #251), Abu Salabikh ‘Uruk Mound’ (Pollock 1987: fig. 5: c, d), Nippur ‘Inanna’ XXXV (Hansen 1965: fig. 5), Sheikh Hassan 10 (Boese 1995: 41, Abb. 9: b, d; 42: Abb. 10: d; 85: Abb. 22: b), or Sheikh Hassan 7/6 (Bachmann 1998a: Abb. 7: n; Boese 1995: 50, Abb. 18: d).
6. See Rubeidheh (McAdam and Mynors 1988: fig. 28: 18), Sheikh Hassan 10 (Boese 1995: 85, Abb. 22: f, g), Abu Salabikh (Pollock 1987: fig. 5: f; 6: b), or Uruk/Warka “Eanna-*Tiefschnitt* VI” (von Haller 1932: Taf. 19A: u’).
7. See Rubeidheh (McAdam and Mynors 1988: 45; fig. 28: 10), Ahmed al-Hattu (McAdam and Mynors 1988: 45), Farukhabad (Wright 1981: fig. 41: e, f; fig. 46: i, j), Nineveh (Gut 1995: Taf. LVII.840), or Godin “early” V (Badler 2002: fig. 10: B17#132). In southern Mesopotamia, this same type is characterized by a more angular profile, as at Abu Salabikh “*West Mound*” and “*Uruk Mound*” (Postgate 1983: fig. 37-38; Pollock 1987: fig. 5: g, h).
8. See Sheikh Hassan (Boese 1995: 40, Abb. 8: f-k, 80, Abb. 17: d; 85, Abb. 22: a; Bachmann 1998a: Abb. 7: d-k), Uruk/Warka “Eanna-*Tiefschnitt* VI” (Sürenhagen 1986: T/20, Nr. S/32; von Haller 1932: Taf. 18C: y; 19B: g, h, i, q, o Taf. 19C: y’), Rubeidheh (McAdam and Mynors 1988: 44-45, fig. 28: 6, 11), Abu Salabikh “Uruk Mound” (Pollock 1987: fig. 5: a, b; Pollock 1990: fig. 4: c), Nippur ‘Inanna’ XX-XVI (Hansen 1965: fig. 5), Susa “Acropole” I 18-17 (Le Brun 1978a: fig.: 19: 6; 1978b: 32: 7), Farukhabad (Wright 1981: fig. 40: e; 45: a, b, i, m), Hacinebi B2 (Stein and Misir 1994: fig. 15, J-L; Pearce 2000: fig. 13: g).
9. See Sheikh Hassan (Boese 1995: 84 fig. 21; Bachmann 1998a: pl. 7.d-g), Hacinebi B2 (Stein 2001: fig. 8.6, J-L), el Kowm 2 (Cauvin and Stordeur 1985: fig. 6.2), Tell Brak TW 13 (Oates and Oates 1993: fig. 51.33-35), Susa “Acropole I” 18 (Le Brun 1978: fig. 32.7), Choga Mish Protoliterate (Alizadeh 2008: fig. 26.E).
10. See Abu Salabikh “Uruk Mound” (Pollock 1990: fig. 5: I), Nippur “Inanna” XX-XVII (Hansen 1965: fig. 8), Uruk/Warka “Eanna-*Tiefschnitt* XI-VI (von Haller 1932: Taf. 18B: y; 19A: d’; Sürenhagen 1986: Nr. T/99), Sheikh Hassan 10 (Boese 1995: 84, Abb. 21: f), Hacinebi B2 (Stein 2002: fig. 11: k), Godin “middle” and “late” VI (Badler 2002: fig. 7: B20 #252, P4 20 #4), Ahmad al-Hattu (Sürenhagen 1979: Abb. 10), Rubeidheh (McAdam and Mynors 1988: fig. 37: 140).

Some small samples with a diameter varying between 4 and 8 cm are characterized by the absence of the neck and rounded, thinned-pinned, or quite square flaring rims (Pl. II.1-2)¹¹. But the most widespread jars belong to a medium-sized type with interior-angled rims. Actually, these neckless containers are typologically similar to the small jars, but their average dimensions are much bigger, with diameters varying between 18 and 26 cm. Their bevelled or rectangular section flaring rims display a sharp interior angle at the junction with the shoulder (Pl. II.3). These typically Uruk jars, often characterized by little pierced handles on the shoulder (Pl. II.5-7), are well documented over the whole Meso potamian alluvium, but also in south-western Iran and southern Anatolia¹². Some other typically Uruk samples of interior-angled jars have rims with a triangular section and a sinuous or vertical exterior profile (Pl. II.4)¹³. Short necked jars are less frequent, but as much as distinctive of the Middle Uruk phase as the other categories of closed shapes. They are easily recognizable both for their thinner walls and for the flattened or pinched rims¹⁴.

Spouts were often associated with all these categories of jars. Most of the spouts from Trench D (46 specimens) were fragmentary and separated from the vessels, but the absence of any kind of regularity in the association between spouts and specific types of jars is demonstrated by 16 elements recovered still connected to their vessels. Not only any kind of jar can have a spout, but these ones were also of different shapes: both upwards conical and drooping (Pl. II.9-10 – Fig. 3). These two forms probably matched with distinct functions, but from a typological point of view it is noteworthy that the drooping samples, typical of the Late Uruk phase, are extremely rare at Girdi Qala northern mound¹⁵.

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11. Concerning the samples with rounded rim, see Rubeidheh (McAdam and Mynors 1988: fig. 32: 67) Abu Salabikh “Uruk Mound” (Pollock 1987: fig. 7: e, i; 1990: fig. 3: d), Nippur “Inanna” XIX (Hansen 1965: fig. 13), Uruk/Warka ‘Eanna-*Tiefschnitt*’ VI (Von Haller 1932: Taf. 19B: s’), Sheikh Hassan 8 (Boese 1995: 77, Abb. 14: b, j, k) and Hacinebi B2 (Pearce 2000: fig. 15: b). About the variant with rectangular-section or square rims, see Godin “middle” and “late” VI (Badler 2002: fig. 8: B23 #366, B20 #239), Abu Salabikh “Uruk Mound” (Pollock 1990: fig. 4: b) or Sheikh Hassan (Boese 1995: 78, Abb. 15: b).
 12. See Hacinebi B2 (Stein 2002: fig. 10: e, fig. 11: g), Rubeidheh (McAdam and Mynors 1988: fig. 31: 66, fig. 34: 98-99), Abu Salabikh “Uruk Mound” (Pollock 1987: fig. 7: m; Pollock 1990: fig. 3: e), Nippur ‘Inanna’ XVIII (Hansen 1965: fig. 14), Uruk/Warka ‘Eanna-*Tiefschnitt*’ VI (Sürenhagen 1986: Nr. T/48, 77, 93), Sheikh Hassan 7/6 (Bachmann 1998a: Abb. 12: a; Boese 1995: 172, Abb. 10: d, e), Susa “Acropole I” 18 (Le Brun 1978: fig. 32.13).
 13. See Ahmad al-Hattu (Sürenhagen 1979: Abb. 10), Rubeidheh (McAdam and Mynors 1988: fig. 31: 57, 59; 32: 73; fig. 32: 78), Abu Salabikh “Uruk Mound” (Pollock 1987: fig. 7: t, u, v), Uruk/Warka ‘Eanna-*Tiefschnitt*’ and ‘*Sagegraben*’ VI (von Haller 1932: Taf. 19B: q’, t’; Sürenhagen 1986: Nr. S/9), Sheikh Hassan 8/9-12/13 (Boese 1995: 77, Abb. 14: i; 82, Abb. 19; 201: Abb. 13: l), Hacinebi B2 (Pearce 2000: fig. 15: e), Susa “Acropole I” (Le Brun 1978: fig. 32.2, 3), Choga Mish Protoliterate (Alizadeh 2008: fig. 28.C-D, F).
 14. See Sheikh Hassan 13/12, 10 and 8 (Boese 1995: 45, Abb. 13: a; 75, Abb. 12: e; 79, Abb. 16: a, b; 201: Abb. 13: h), Abu Salabikh “Uruk Mound” (Pollock 1987: fig. 7: o; 1990: fig. 5: f), Rubeidheh (McAdam and Mynors 1988: fig. 32: 76-77), Uruk/Warka ‘Eanna-*Tiefschnitt*’ VI (von Haller 1932: Taf. 19C: u), Hacinebi B2 (Pearce 2000: fig. 15: c; Stein 2002: fig. 11: c, f).
 15. Just 3 samples come from Trench D, while 1 specimen has been collected during the survey of the Area VI, where it is difficult to establish whether this late drooping spout, identified along with some sherds of Early Bronze goblets, dates back to the very end of the Late Uruk phase or rather to the Early Bronze Age. Moreover, all the samples from Trench D have a slightly curved shape, quite different from the strongly arched profile of the Late Uruk drooping spouts (see for instance at Susa “Acropole I” 17 – Le Brun 1978: fig. 34.8; Choga Mish Protoliterate – Alizadeh 2008: fig. 31.E, I-K).

Decorations are exclusively documented on closed shapes and they are also typical of the Middle Uruk period. In particular, besides finger-impressed or incised cordons (Pl. II.7)¹⁶, decorative knobs¹⁷, as well as herringbone and triangular incised motifs on the shoulder of the jars are quite regular, according to a general Uruk tendency towards the middle of the 4th millennium BC¹⁸. Moreover, two groups of respectively 17 and 35 bodysherds display a thick reddish-brownish or grey slip on the exterior surface. It seems very likely that these fragments have to be identified with the so-called Red and Grey Uruk Wares, typical hallmarks of the Uruk period in southern Mesopotamia as well as in the Hamrin Basin¹⁹.



Fig. 3 - Middle Uruk slightly drooping spout from Trench D at Girdi Qala .

Although the ceramic typology of the different Uruk phases is controversial²⁰, the assemblage from the survey of Girdi Qala northern mound and from Trench D clearly belong to a “normative” Middle-Uruk repertoire. On the one hand all the forms and decorations are well documented during the central centuries of the 4th millennium, while, on the other hand, it is remarkable the complete absence of some typical Late Uruk indicators, as banded-rims bottles and bowls, twisted handles, long and bandy-shaped drooping spouts, or reserved-slipped vessels. Morpho-stylistic parallels emphasize the matching with Middle Uruk stages of both south- (Uruk/Warka ‘Eanna-*Tiefschnitt*’ VIII-VI and Nippur ‘Inanna’ XX-XVII) and north-Mesopotamian sites (Rubeidheh²¹, Abu Salabikh “Uruk Mound”, Nineveh ‘Uruk B’, Sheikh Hassan 6-13²², Hacinebi B2 and). Likewise, given the proximity of the Zagros range, it is not

16. See Susa “Acropole I” 18 (Le Brun 1978: fig. 32.2-3), or Rubeidheh (McAdam and Mynors 1988: fig. 30.46; 34.100; 36.122).

17. See Abu Salabikh (Pollock 1987: 133), Rubeidheh (McAdam and Mynors 1988: 44-48, 51), Sheikh Hassan (Boese 1995: 249-271), Tell Leilan (Schwartz 2001: 241, fig. 7.5; Wright 2001: 125-126; Brustolon and Rova 2007: 23).

18. See Sheikh Hassan 7-5 (Bachmann 1998: figs. 8, 10, 12-13), Nineveh “Norduruk B” -37-31 (Gut 1995: pls. 60-62, pl. 68: 952; Gut 2002), Hacinebi B2 (Pearce 2000: fig. 15: d-e), Choga Mish Protoliterate B (Delougaz and Kantor 1996), Habuba Kabira Süd (Sürenhagen 1974-1975: pl. 27.95, pl. 28.130).

19. Despite the impossibility to distinguish red or grey (sometimes slipped and sometimes plain) Uruk traditions on the basis of very sketchy descriptions (von Haller 1932: 39), it seems sure that during the Early and Middle Uruk periods (Eanna XIV-VI at Uruk – von Haller 1932: pl.17.D. c’-d’, pl.18.B.r-s and d’-h’, pl.18.C.p, q, s, t, u; Inanna XX-XVII at Nippur – Hansen 1965: 202-204) this kind of productions have been a quite rare but constant presence within the Uruk repertoires (see at Ahmad al-Hattu and Rubeidheh, where red and grey wares represent about 4% of the assemblage – Sürenhagen 1979 :47-50; McAdam and Mynors 1988: 49).

20. See the differences in the chrono-typologies of Hansen (1965: 202-204), Johnson (1973: 56-58) and Wright (1981: 165-172).

21. Despite the evident parallels with Girdi Qala northern mound, the occupation at Tell Rubeidheh dates back to a late stage of the Middle Uruk and to an early phase of the Late Uruk period, as indicated by the presence of reserved slip bottles, strongly arched drooping spouts and other later types.

22. These same levels are indicated by Bachmann (1998b) as 15/13-6/5.

surprising to observe the very close similarities between the assemblages from Girdi Qala northern mound and Godin VI. The most significant feature is that the whole assemblage from Girdi Qala northern mound belongs to the south-Mesopotamian Uruk tradition, while any kind of local shapes or wares are virtually absent. Even if a consistent south-Mesopotamian presence is well recorded in the western Qara Dagh since the Early Uruk (as demonstrated by Trench D at Logardan and by the lowest levels of Trench C at Girdi Qala), the domestic areas exposed in Trench D of Girdi Qala northern mound constitute the first evidence of a south-Mesopotamian Middle-Uruk settlement east to the Tigris River and north to the Hamrin basin.

The dating of the materials and structures from Trench D seems particularly relevant when considering the evolution of the south-Mesopotamian presence both in the Hamrin and at Godin Tepe at that time. The increase in number of the small Middle-Uruk agricultural settlements in the Hamrin region (Invernizzi 1986) matches with the growing contacts between Godin and the Uruk cultural sphere²³. It is very likely that the valleys of the Zagros Piedmont in the Qara Dagh area were part of crucial exchange zone centred on a main road network: the so-called Great Road of Khorasan. In its southern sector, this system of connections between Mesopotamia and Iranian plateau followed the Diyala River and then cross the central part of the Zagros Mountains through a series of high fertile districts as the Mahidashat and the Kangavar Valleys (Henrickson 1994: 86). Similarly, in the northern sector, the main paths seem to have been the Shahizor Valley with its scattered Middle-Uruk installations (Wengrow *et al.* 2016) and the Sangao-Qara Dagh road, with south-Mesopotamian settlements as Girdi Qala northern mound.

23. Before the construction of the Late Uruk oval enclosure (phases Godin “middle” and “late” V), the so-called Godin “middle” and “late” VI (Badler 2002: 87; the same phases are named Godin VI:2 and VI:1b/a after the reassessment of the stratigraphy by Rothman and Badler 2011: 82-84) show a more and more important Uruk presence.

GIRDI QALA, STRATIGRAPHICAL TRENCH B

Laurent Colonna d'Istria, Alisée Devillers and Mustafa Ahmad

In 2016, we enlarged the trench B to the east by completing the excavation of square 1. The trench covered 50 sqm in all and 10 stratigraphic levels were identified on approximately 2m of deposit, belonging to three cultural periods, Hellenistic, Sassanian and Islamic.

LEVEL 1 (MIDDLE ISLAMIC PERIOD)

The first level noticed is characterized by fire installations : loc. 46, 47 and 48 on the northern corner of the square 1 (alt. min. 652, 94 m – alt. max. 652, 89 m), and loc. 49 with vertical stones laying on edge (alt. 653,00 m) on the eastern part of this square (fig. 1). The fire installation loc. 49 (fig. 2) covered up partially a fifth fire installation, loc. 50 surrounded by ashy earth. This square was an open space, due to the proximity with the slope of the tell. Some stones without obvious connexion were found near the southern-east berm. The archaeological artefacts discovered (potsherds and fragment of iron ring) allow us to date this level to the Middle Islamic Period, but contained also Late Sasanian material (fig. 3).



Fig. 1 - Square 1 - fire installations loc. 46, 47, 48 and loc. 49 – view to the south-east.

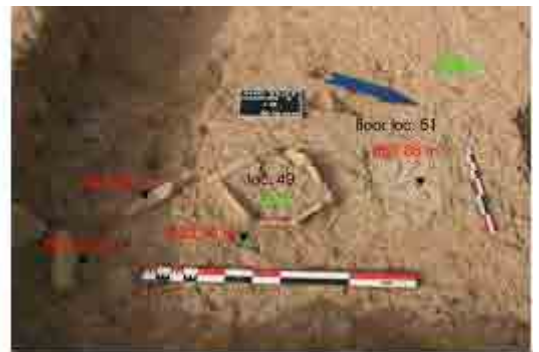


Fig. 2 - Fire installation loc. 49 view to the south-west.



Fig. 3 - GQ B -1043- intrusive Late Sasanian potsherds from the Level 1.

LEVEL 2 (EARLY MIDDLE ISLAMIC PERIOD, C10-11TH/12TH CENTURIES AD)

Level 2 is the digging level of five pits. Two of those are located on the northern-east berm: loc. 57 (alt. 652, 62 m) and loc. 58 (NV 1049 and 1060, alt. max. 652, 66 m – alt. min 652, 34 m). The pit 63 (NV 1053 and 1057, alt. max 652, 64 – alt. min. 652, 44 m) is alongside the northern-west berm. The pit 61 was dug south of loc. 60 (NV 1059, alt. max. 652, 6 m – alt. min 651, 94 m). The last pit, loc. 28 (NV 1072, alt. max. 652, 74 m – alt. min. 651, 98 m) is located at the centre of the square 1 and was partly excavated during the 2015 season. Once again, it seems that this digging level can be attributed to the early Middle Islamic period: glazed pottery from loc. 63, unglazed comb ware pottery from loc. 29 (fig. 4), metal plaque with two holes and the glass bangle from loc. 58, a needle and a metal scoria from loc. 61.



Fig. 4a - Potsherd from pit loc. 28 – GQ B 1072-3
(unglazed pottery)



Fig. 4b - Potsherds from pit loc. 63 = GQ B 1053
(glazed pottery)

Fig. 4 - Potsherds from loc. 28 et 63 (« early Middle Islamic period »).

LEVEL 3A (EARLY MIP)

Although Level 3 has been partially disrupted by the pits from the Level 2 (loc. 61 and loc. 57), two small stone-built walls have been identified in the south-east of the square 1: loc. 54 (alt. max. 652, 85 m – alt. min 652, 73 m) and loc. 55 (alt. max. 652, 98 m – alt. min. 652, 66 m). A red brick could be a door-socket (showing a door between loc. 54 and loc. 55). The fire installation loc. 50 discovered partially under loc. 49 and alongside the wall 54 could be linked to wall 54 (fig. 5). These two small walls (loc. 54 and 55), composed of rubble stone, belong to the same building, to which must be linked to the wall loc. 27 discovered during the previous campaign (fig. 6 ; see report 2015). At the north of these walls, it seems that we are here in an outdoor space. According to the sherds from this Level, Level 3A may be dated to the early Middle Islamic Period (fig. 7).



Fig. 5 - Views of the Level 3a during excavation.

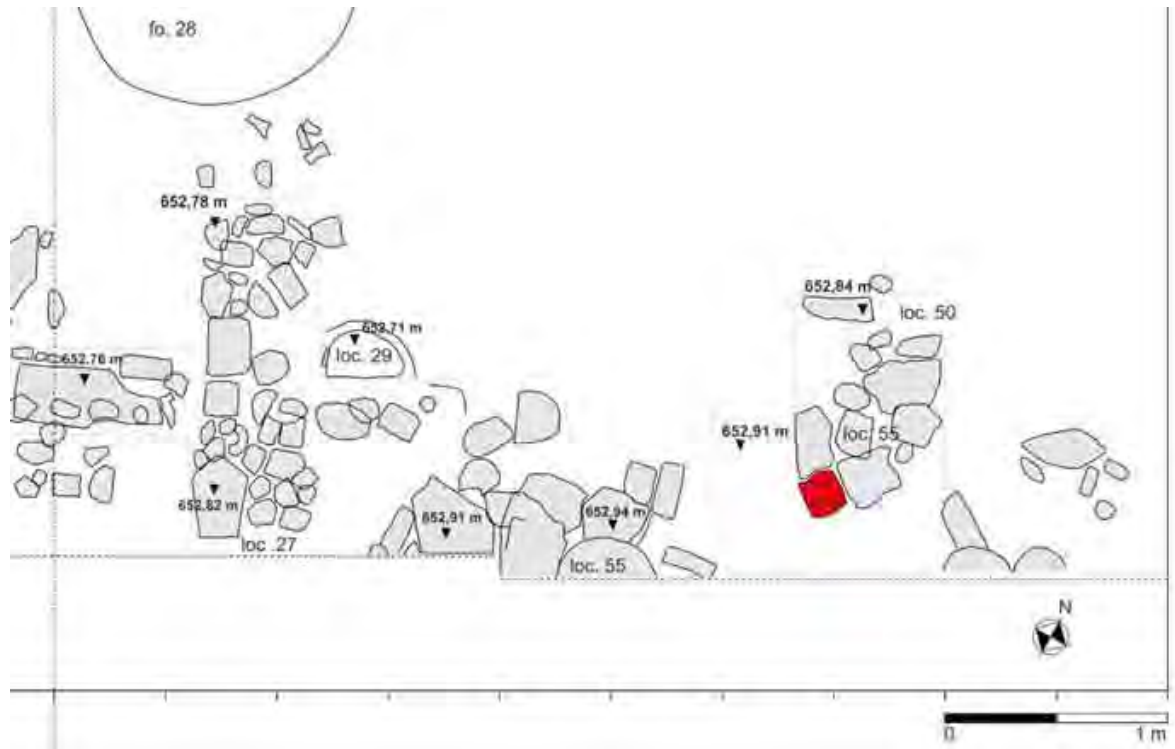


Fig. 6 - Level 3a -seasons 2015 and 2016.



Fig. 7 - Potsherds from the Level 3A - GQ B-1045 («early Middle Islamic periods »).

LEVEL 3B (EARLY MIP)

Level 3b is characterized by a level of pits: loc. 73 (NV 1062, alt. 652, 33 m) at the north of the square, loc. 75 (NV 1063, alt. 652, 18 m) at the south-east of the square, and loc. 33 (alt. 652,45 m) at the east of the square. In the pit 73, we discovered a grinding stone (39 × 43 cm, alt. 652, 34 m), glass fragments, and a jar fragment with handle (fig. 8).



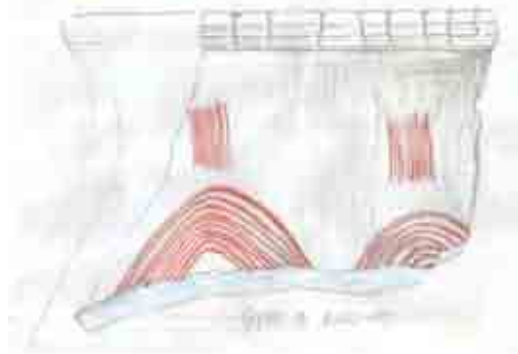
Fig. 8a - GQ B – 1062 = pit loc. 73
(early Middle Islamic periods)

Fig. 8b - GQ B – 1063 – pit loc. 75 (early Middle Islamic periods)

Fig. 8 - Potsherds from pits - Level 3b.

LEVEL 4A (EARLY ISLAMIC PERIOD)

This level is characterized by a mud-bricks-built wall (loc. 59) and its associated floor (loc. 62), on the northern-east part of square 1. Unfortunately, loc. 59 was largely destroyed because of the level 2 pits (loc. 61 and loc. 21). Nevertheless, we discovered at least three headers bricks and its joints. Their dimensions are 43 × 13 cm and more or less 10 cm width. It is possible that the wall loc. 30, discovered in 2015, was contemporaneous with wall 59 (same elevation). Potsherds discovered during the excavation of this level suggest that it is dating from the Late-Sassanian or Early Islamic Period (fig. 9).



Preliminary drawing
Potsherd GQ B 1050-10

Fig. 9 - Square 1, view to the south-east and Potsherd GQ B 1050 from Level 4.

LEVEL 4B (LATE SASSANIAN PERIOD)

Close to loc. 59, we found loc. 65, a wall with a different orientation, which allows us to assume that a connection between those two constructions does not exist. We noticed at least two bricks in foundation and one stone slab that is part of the wall-foundation. A stone door-socket was found near loc. 65 and seems to be in connection with it (fig. 10). Thus, it is possible that this wall was the limit of an outdoor/inner area. After removing loc. 59, it appears that loc. 65 runs under this wall. Loc. 65 was associated to a destruction layer with remains of eroded bricks.



Fig. 10 - Square 1,
view to the south-east - Levels 4a and 4b.

LEVEL 5A (SASSANIAN PERIOD)

Underneath the levels 4A and 4B on the northern part of square 1, the walls 79 and 81, in connection with the floor 71, seem to be part of a large building. Wall 79 (alt. max. 652,32 m – alt. min. 652,27 m) is located under loc. 65, in the same orientation (NE-SW) (fig. 11). We found alongside this mud-bricks wall the fire installation loc. 74 (NV 1066) (fig. 12)

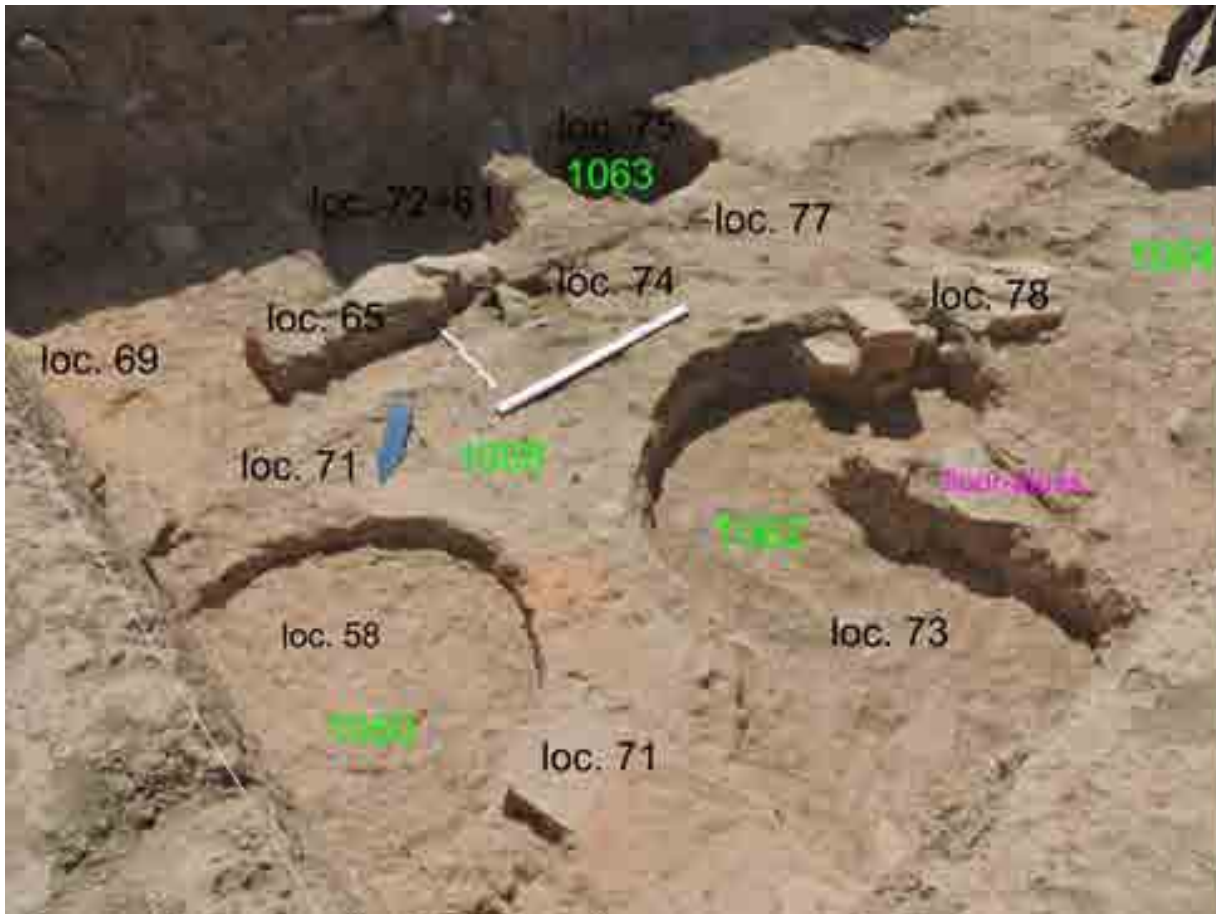


Fig. 11 - Square 1-view to the South - Levels 4 and 5.



Fig. 12 - Sasanian potsherds from the fire installation loc. 74.

composed of, on its eastern part, one jar fragment and at least two bricks on its western part. It was filled with ashy and silty earth. Bricks were lying on the floor. It could be a platform structure. Between the pits 61 and 75, the wall 81 (alt. max. 652, 28 – alt. min. 651, 97) is perpendicular to loc. 79. It was partly destroyed by those pits and was connected with a pot containing parts of a dog skeleton (loc. 62).

More interesting is this cooking pot (in loc. 72, alt. max. 652, 29 m – alt. min. 651, 94 m) discovered at the south boundary of the pit 61 (fig. 13). The whole pot was found in different fragments, and have been restored (fig. 14). The bottom of it was burned and the pottery was surrounded by a skeleton of a dog (spine at the SSE of the pot and the legs at the NNW). The

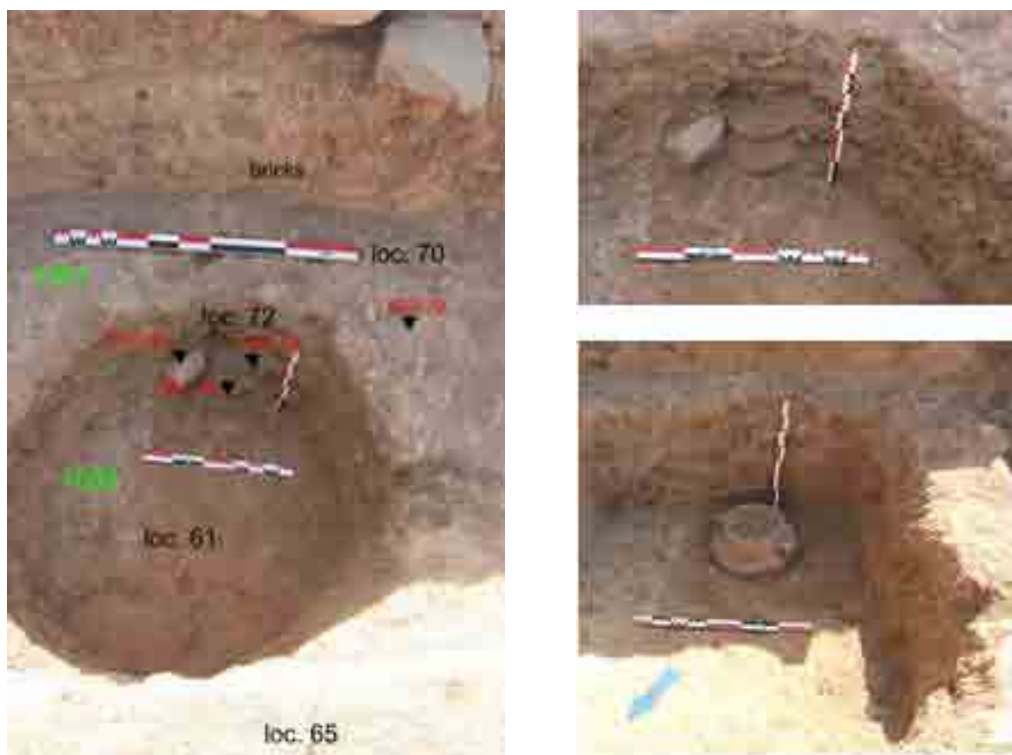


Fig. 13 - Location of the dog grave loc. 72.



Fig. 14 - Cooking pot of the dog grave, loc. 72, QQB.Tc.1061-1 - and potsherd discovered over of the cooking pot QQB-1061 - early Middle Islamic Period.

skull and one vertebra were located inside. According to its linear motive and its shape, the pot is a typical Islamic cooking pot (early MIP, 11-12th centuries AD), well spread in Sulaymaniah (Ahmad, *infra*), and the related tomb is clearly intrusive into a Sasanian level.

LEVEL 5B (SASSANIAN PERIOD)

This level is characterized by two stone walls. The first (loc. 83, alt. 652, 22 m) oriented east-west and located under loc. 79, and the second (loc. 78, alt. 653, 33 m) parallel to the first in the west part of square 1. Those stone building walls are partly destroyed by the pit 73 (level 3B). We noticed also two groups of square-shaped bricks ($35 \times 35 \times 10$ cm), loc. 85 (alt. 652,28 m) and loc. 86 (alt. 652,27 m) (fig. 15 and fig. 16). We did not finish the excavation of loc. 78 (NV 1074), so we are not able to give an interpretation of this structure. It is possible that it was associated to the *djuss* floor found in 2015.



Fig. 15 - Squares 1 and 2 - views to the south-east - Level 5B.



Fig. 16 - Squares 1 and 2 - view to west and the tannur loc. 36.

LEVEL 6 (HELLENISTIC PERIOD)

This is the deepest level reached this season, on the West part of the square 2. We noticed one floor and a tannur (loc. 36, alt. 651, 96 m), partly damaged by the stony pit loc. 35 (alt. 651, 96 m) (fig. 16). On the NO berm, a fire installation loc. 88 (alt. 651, 86 m) has been discovered, surrounded by ashy earth and located underneath structure 78, which was partly removed. We thus assume that loc. 36 and loc. 88 were part of a same floor, characterized by clay earth and eroded bricks. It delivered a new kind of pottery decoration, with “half-moon” motifs. This potsherd (GQ 16 1075) allows us to date this level to the Hellenistic period (fig. 17).



Fig. 17 - Potsherd with « half-moon » motifs
GQ 16 1075 (loc. 87) - Hellenistic Period.

LEVEL 6' (HELLENISTIC PERIOD)

Loc. 69 is attested by a reddish wall found in the eastern corner of the square 1. It is composed of red/orange bricks of 35 × 35 × 10 cm (fig. 17 and fig. 18). It counts at least five layers of well-preserved mudbricks. Its excavation is ongoing and we did not notice a floor connected to it (except a shallow white line). It seems that this is the most well preserved structure yet found in the trench (fig. 18) and should be more investigated next season.



Fig. 18 - Squares 1 and 2 - View to the west at the end of the excavation - October 2016.

GIRDI QALA, A BRIEF OVERVIEW OF THE LATE PERIODS' CERAMIC

Mustafa AHMAD

The excavation in Girdi Qala yield a collection of pottery that dated to the last occupations' periods in the site; i.e. Hellenistic, Sasanian and Islamic periods. The pottery that are related to the last periods has been obtained from the excavation of two trenches on the top of the main mound (Trenches A and B) in addition to the intra-site survey that has been conducted for Girdi Qala. The amount of pottery collected from the site is still not sufficient to build a complete picture about the pottery production and traditions in Girdi Qala and its region in general. However, it gives us some indicators related to the ranges of dating and the nature of fabrics of each period that can ascribe to this area of the region.

HELLENISTIC PERIOD

The Hellenistic pottery forms the principal collection of ceramic among the whole corpus. The amount of pottery obtained from the excavation is sufficient to know the pottery traditions, typology and techniques used for this period.

The types and fabrics of the pottery dated to this period indicate that the site of Girdi Qala was one of the major cities in the network of Hellenistic sites in the region. The reason is that all the types of the sherds are, in general, the typical Hellenistic pottery types that are found mainly in all the Hellenistic sites in Iraq and Syria.

Some forms such as the **fish plate** form have parallels with sites located in the south and middle of Iraq such as Larsa¹ and Uruk² (No. 1030-1; fig. 1:A) and in Tell Beydar³ (No. 1062-20; fig. 1:B), and sites located in the west; in Syria. It indicates the expansion of Hellenistic pottery traditions in the region, and the role of the network of Hellenistic cities or the strong influence of the Hellenistic culture in this spot of Land.

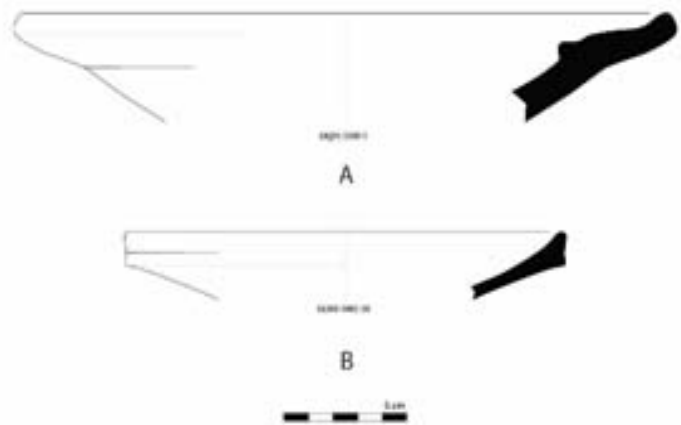


Fig. 1 - Fish Plates.

1. Lecomte 1993, fig 5:16:19.
2. Petrie 2002, fig. 6:1.
3. Katzy 2015, Pl. 55:6.

Many common unglazed pottery sherds collected from trench B dated to this period. Through checking and tracing the techniques used in forming the rims of the pots, it is remarkable that the potter intended to impose his expertise in forming the rims. This is clear in the modeling of the lips on the exterior face of the rim of the **grooved over-rolled rim** type, where we can see many sub-types of the main type (fig. 2). This feature was observed in Tell Arbid,⁴ in Jebel Khalid in Syria that was one of the Greek colonies in Syria⁵ and in Hatra in Iraq⁶.



Fig. 2 - Hellenistic Pots.

4. Momot 2011, Pl. IX.

5. Jackson and Tidmarsh 2011, fig. 59-60.

6. Venco-Ricciardi 1997, fig. 4, 6-7.

One of the most important decorations found on the sherds is the **dog-tooth** décor (No. GQ15 1007-15 and GQ15 1007-45; fig. 3). This decoration is found usually on the Hellenistic pottery dated to 4th-3rd century BC. The presence of this decoration on the pottery sherds confirm the date that was proposed for this phase of occupation during the Hellenistic period in Girdi Qala. Many parallels for this type of decoration was found, whether in sites located to the west, in Syria for example, such as Tell Beydar,⁷ Tell Arbid,⁸ Jebel Khalid⁹ and Sheich Hamad¹⁰ and in Nimrud in Iraq¹¹, or to the south in Iraq such as in the Hellenistic city of Uruk¹² or to the north in Duhok Region¹³.

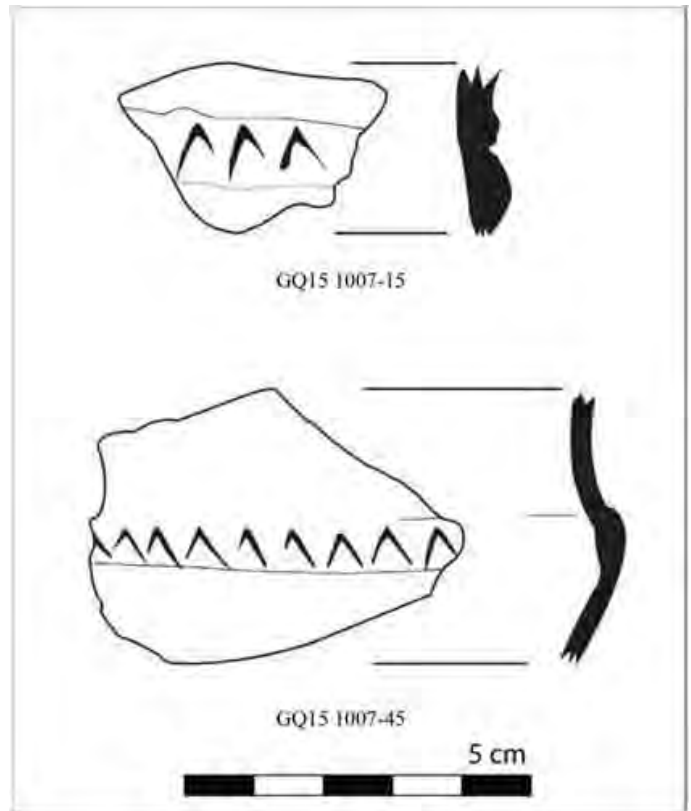


Fig. 3 - Dog-Tooth Decoration.

Another decoration found on the sherds, is the **stamped crescent** décor. This decoration again was well spread in the region during this period (fig. 4). Parallels are to be found in Jebel Khalid¹⁴, in Sheich Hamad¹⁵, in Nimrud¹⁶.



Fig. 4 - Stamped Crescent Decoration.

7. Martín Galán 2003, fig. 4:28-29. ; Martín Galán 2007, fig. 1:14-15; 6:25.

8. Momot 2011, Pl. XIV-XVI.

9. Jackson and Tidmarsh 2011, fig. 71:8.

10. Kreppner 2006, fig. 61:45.

11. Oates and Oates 1958, pl. XXI:17.

12. Petrie 2002, fig. 9:V2a.

13. Gavagnin, Iamoni and Palermo 2016, fig. 22:9-11

14. Jackson and Tidmarsh 2011, fig. 71:5; 169:3.

15. Kreppner 2006, fig. 61:15, 35-36.

16. Oates and Oates 1958, pl. XXVII:4.

Few pottery shards of cooking ware have been found during the excavation. The fabric is mainly hard compact fires in high temperature degree and full of fine to medium size white and gray minerals. A **triangular folded rim type** (QD16 1007-1; fig. 5) comes from trench B. This type of cooking ware's rim is well known in the Sulaymaniah region. Many parallels can be found in Rania¹⁷, Peshdar and the Sharazur plains.¹⁸

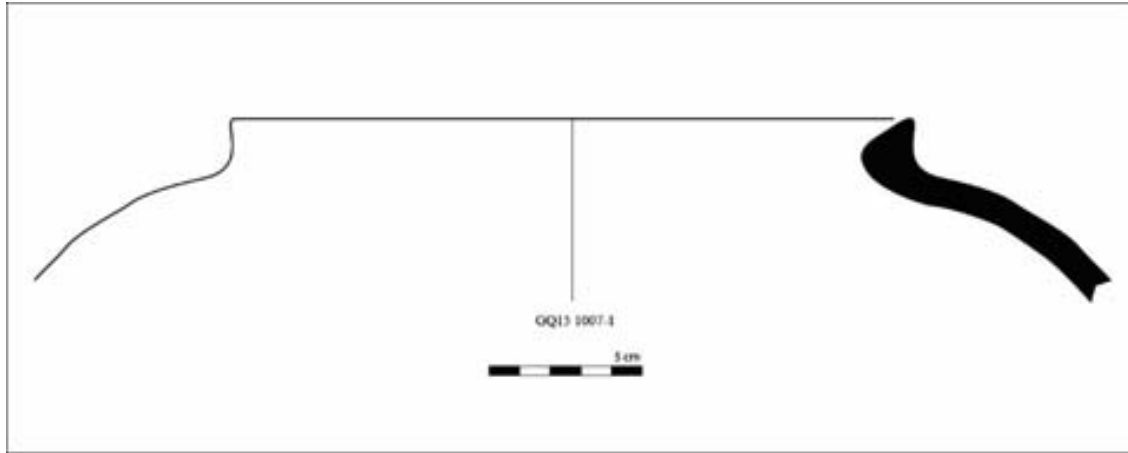


Fig. 5 - Hellenistic Cooking Pot.

Further excavation is needed in order to have more information related to the Slipped wares, and glazed ware pottery. Few sherds of cooking ware have been found during the excavation, but the amount of the sherds do not reveal the pottery traditions related to this ware of ceramic.

SASANIAN PERIOD

The pottery sherds that are dated to this period are very recognizable in Girdi Qala. That is due to the fabric of the pottery in addition to the typical Sasanian rim forms. The fabric of the Sasanian pottery is usually sandy to gritty, with different colors ranged from Reddish Buff and reddish brown to greenish buff color. The Sasanian pottery of Girdi Qala is divided into two main phases; first is the typical Sasanian pottery period (SAS) dated to 4/5th-6th centuries AD and the second is the last phase of the Sasanian period that is called Late Sasanian period (LSAS) dated to 7th-8th centuries AD.

In Girdi Qala, the Late Sasanian pottery is very recognizable due to its gritty fabric and the typical forms of this period, while the Sasanian period's pottery needs more investigation. The future excavation will enrich our knowledge about this period (i.e. SAS). The Late Sasanian period refers to the last phase of the Sasanian rule in the region beside of the beginning of Islamic period (Rashedi and partially Umayyad periods). In This period, some modifications could be traced in the production of the pottery. After the advent of Muslims to the region, the pottery production's traditions did not changed directly to be Islamic (until Early Abbasid period). The remarkable feature was the continuation of the Sasanian pottery tradi-

17. Many parallels found in Qalatga Darband, a Hellenistic site located in Rania. (Personal observation).

18. Personal observation.

tions in the production of pottery during this period with some modifications and alterations in forms and fabrics.

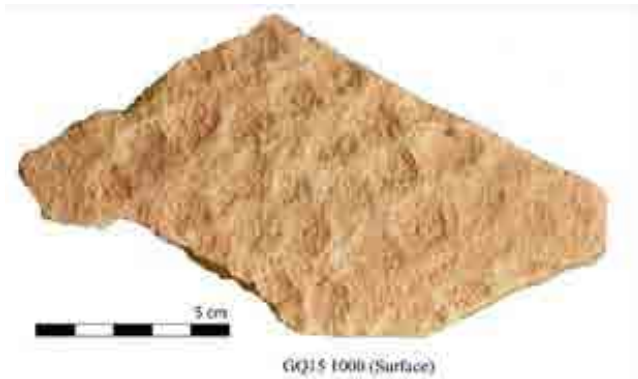


Fig. 6 - Honey-comb Decoration.

Another decoration has been found during the excavation (Nv. 1007-47, fig. 7). The decoration consists of **connected bows** covering the entire outer surface. This type of decoration in addition to the honey-comb decoration are very important for this period, where we they can be used as good tools for dating related to this period.



Fig. 7 - Connected bows decoration.



Fig. 8 - Sasanian stamped decoration.

A piece of pottery found in trench B has a **stamped decoration** on a gritty greenish buff fabric (Nv. 1019-1, fig. 8). The depiction represents a standing ram with a scorpion on its right side. A good parallel for this stamp was found in Saddam Dam Salvage project²³.

19. Finster and Schmidt 1976, pl. 60:b; 61:a.

20. Finster and Schmidt 1976, pl. 55:a.

21. Finster and Schmidt 1976, pl. 52:e-f, 53:h-i.

22. Personal observation.

23. Simpson 1996, fig. 1; Simpson 2013, fig. 1-2.

A typical rim of **double rim** type found in this trench is dated to this phase of LSAS (GQ15 1024-5; fig. 9). Many parallels for this type have been found in Bestansur in Shahrizor plain²⁴, in Saddam Dam Salvage project²⁵ and in Qal'eh-i Yazdigird in Iran²⁶.

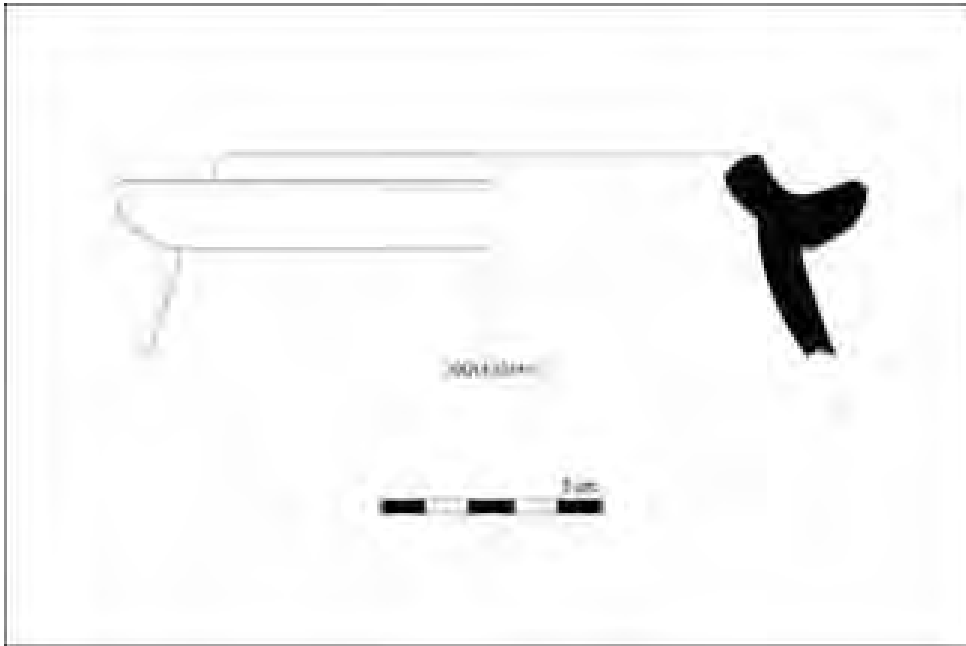


Fig. 9 - Double rim pot.

ISLAMIC PERIOD

The excavation in Girdi Qala Trench B did not yield a good amount of pottery dated to Islamic period. The last levels of occupation were not well preserved; therefore, the results are not sufficient yet to establish a good typological and fabric study. Nevertheless, despite the paucity of the pottery collected, some features can be pointed out.

Through checking the whole collection of Islamic pottery, a remarkable feature is noticeable, the nature of the pottery of Girdi Qala ascribes to the well-spread and well-known ceramic in Iraq and Syria during the period that is dated to the 10/11th-12th centuries AD. Except some local pottery of Handmade ware, beside of the cooking ware that is widely known in Northern Iraq namely Sulaymaniah region.

Few **Glazed ware** sherds were found during the excavation. A **polychrome sgraffito base** was found in Locus 63 (No. 1053-8, fig. 10) dated to 10-11th century AD. The glaze of light yellow and green colors have been implemented directly on the surface of the base without a usual white slip in-between. The fabric is well lavigated buff color paste with



Fig. 10 - Polychrome Glazed base.

24. Cooper, Rajab and Ahmad 2012, fig. 3:13.

25. Simpson 1996, fig. 3:6.

26. Keall and Keall 1981, fig. 10:3, 10.

tiny black minerals. Another Square grooved on top rim of sgraffito ware has been found during the survey and can be dated to 10-12th Century AD.

A collection of **cooking ware** handles (No. 1040-18, 1045-2 and 1048-16; fig. 11) beside of a complete pot (1061-1, fig. 12) dated to 11-12 Century AD were found in the upper levels. This type of pottery is well spread in Sulaymaniah particularly in Shara-zur, Bazian and Tanjaro regions.²⁷



Fig. 11 - Cooking ware handle.



Fig. 12 - Complete cooking ware pot.

The existence of this type of ware in Girdi Qala confirm the expansion of it to Chamchamal region. This type of pottery ware shares many common features; the fabric is mainly formed of hard compact clay containing fine to medium size grits essentially white and gray color grits, the surface finishing on exterior usually polished or well smoothed and the decoration is almost the same on all the pots of this ware that has mainly a wavy wide incised line.

²⁷. Personal observation.

The **common ware** ceramic is mainly predominant on the pottery collected during the excavation. The fabric has fine to medium size minerals of black, white and occasionally reddish color grits. The color vary from buff to light greenish buff colors. Few sherds have **wavy or horizontal incised comb decoration** (fig. 13).



Fig. 13 - Common ware sherd with incised combed decoration.



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APPENDIX A

TOPOGRAPHICAL REPORT

Micheline Kurdy

During the campaign of 2015, Paul Courbon realized the topographical survey of the two sites of Girdi Qala and Logardan and their environments. The implemented system was attached to the UTM38 projection to be integrated into a national Kurdish SIG.

For 2016, work focused on the architectural survey of the excavation sectors in both sites. A three dimensions survey method was applied during this campaign, using photogrammetric technique and linked to the topographic system implemented last year. The target of this work was to realize a three-dimensional geo-referenced documentation of each excavation sectors along the campaign: first, to survey and document in 2D/3D the progress of the excavations of each sector, and second, to provide a high-resolution work support for archaeologists as a base for the site analysis and post-excavation work.

This methodology consisted of series of consecutive photographic shots with a Nikon D80 camera belonging to the mission, accompanied with topographic surveys with a total station LEICA TCR1205 (of the 1200 series), belonging to the archaeological department of Sulaymaniah. The used technique allowed realizing for each excavation sector a set of 3D models geo-referenced in the topographical system with possibilities to produce ortho-images, plans, sections and elevations (Fig. 1).



Fig. 1 - Example of the 3D models realized for sector D, Logardan.

GIRDI QALA:

The topographic points were measured based on the two remaining stations from the previous year and three electric pylons. An additional station was added to reinforce the system and served for surveys of the area north of tell. Along the excavation campaign, the two excavation areas (B and D) were surveyed with photogrammetric method and geo-referenced in the topographical system, 8 documentations for sector B and 4 documentations for sector D. 3D models were created and ortho-image plans were generated (Fig. 2 and 3). The objective of these multiple surveys was to provide the archaeologists with a faithful technical support for analysis and a base for the realization of the architectural plans (Fig. 4).



Girdi Qala, 2016, Trench B
 Micheline Kurdy
 ©Mission archéologique du Qara Dagh



Girdi Qala, 2016, Trench D
 Micheline Kurdy
 ©Mission archéologique du Qara Dagh

Fig. 2 - Girdi Qala, ortho-image of sector B at the end of the excavations, in plan.

Fig. 3 - Girdi Qala, ortho image of sector D at the end of the excavations, in plan.

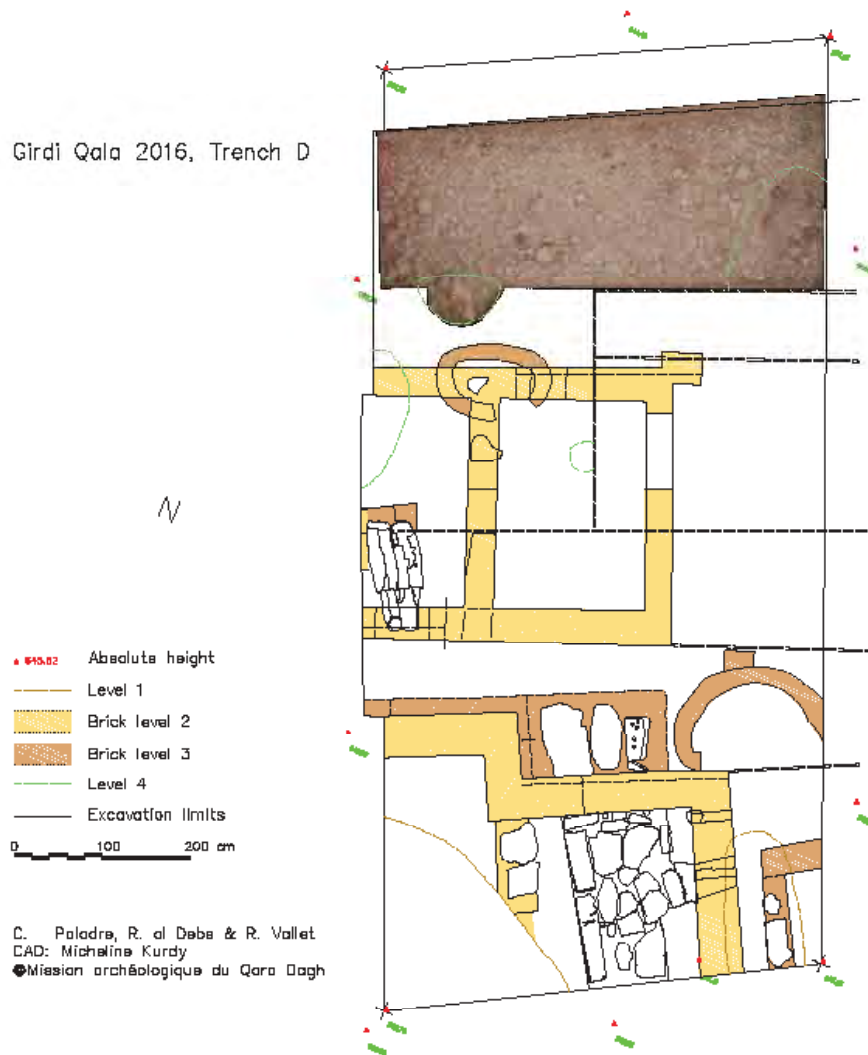


Fig. 4 - Girdi Qala, plan of sector D.

At the same time, a grid has been set up, allowing the geo-location of the geomagnetic survey of the zone at the west of the site. Later, this grid was integrated into the field survey to obtain a correlation between the geomagnetic images and the general study of the region.

LOGARDAN:

The topographic points were measured based on the stations set up the previous year. The two sectors (D and E) were surveyed with photogrammetric method and geo-referenced in the topographical system. Along the excavation campaign, 10 documentations for sector D and 8 documentations for sector E were created, 3D models and ortho-image plans were generated (Fig. 5 and 6). Here again, the objective of these multiple surveys was to provide the archaeologists with a technical support faithful to reality for analysis and a base for the realization of the architectural plans (Fig. 7 and 8).

At the same time, a grid has been set up, allowing the geo-location of the geomagnetic survey west and south of the site. Later, this grid was integrated into the field survey to obtain a correlation between the geomagnetic images and the general study of the region.

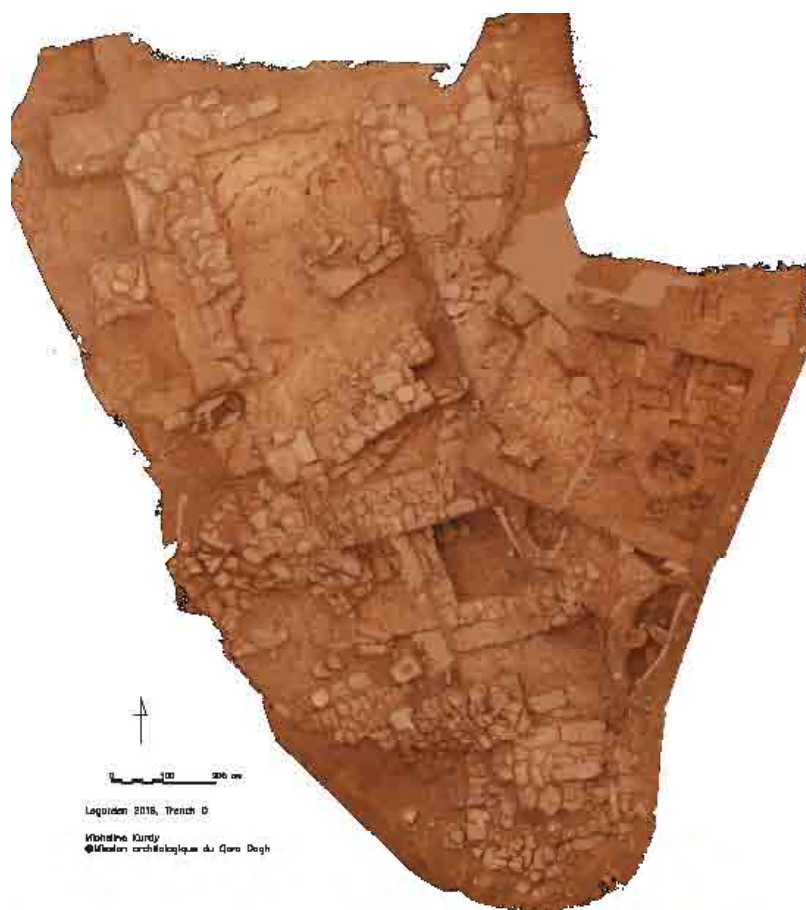


Fig. 5 - Logardan, ortho-image of sector D at the end of the campaign.

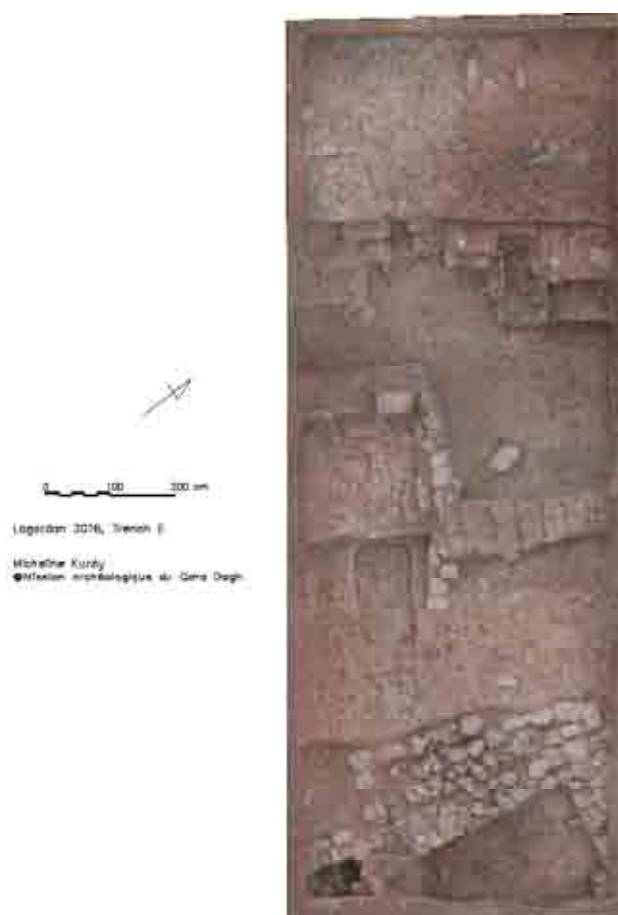


Fig. 6 - Logardan, ortho-image of sector E at the end of the campaign .



Fig. 7 - Logardan, plan of sector D.

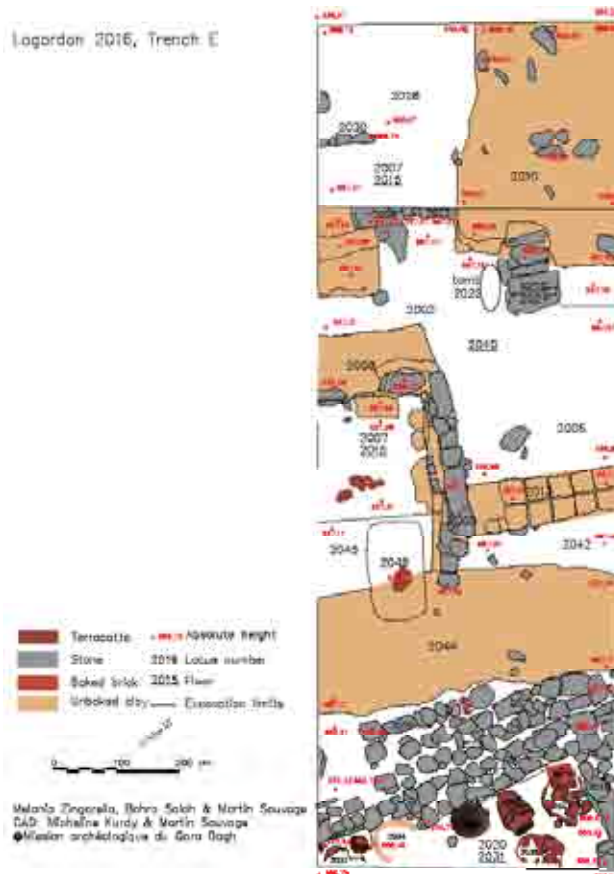


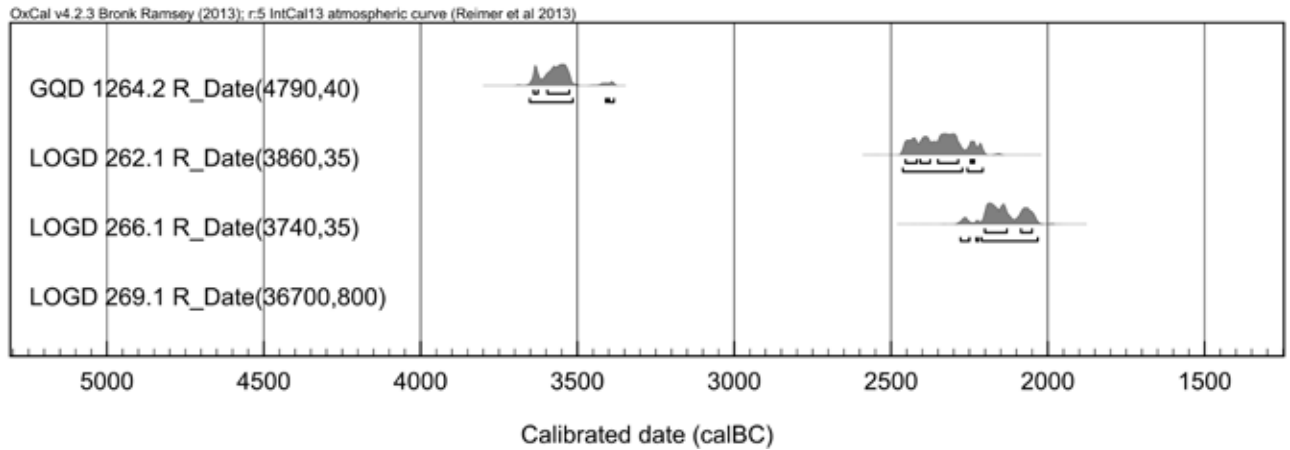
Fig. 8 - Logardan, plan of sector E.



APPENDIX B

RADIOCARBON DATING

Results of calibration of 14C dates



<i>Sample name</i>	<i>Lab. no.</i>	<i>Age 14C</i>	<i>Remark</i>
GQD 1264.2	Poz-91136	4790 ± 40 BP	
LOGD 237.1	Poz-0	>0 BP	dissolved
LOGD 262.1	Poz-91138	3860 ± 35 BP	
LOGD 266.1	Poz-91139	3740 ± 35 BP	
LOGD 269.1	Poz-91140	36700 ± 800 BP	

Five charcoal samples were analysed in 2016, four from Logardan Trench D and one from Girdi Qala Trench D, north mound. One of them dissolved during preparation (LogD 237.1), while LogD 269.1 produced an aberrant result. A second analysis of the same showed that it was a mixed sample, blending charcoals of different origins, thus polluted. Not nowadays but in the ancient times (which doesn't really explain why the result would be fine, if divided by 10 !). We hope that next season provides convenient radiocarbon samples from level 4 of Logardan D. The three other samples (GQD 1264.2, LOGD 262.1 and LOGD 266.1) produced datings that are totally consistent with their cultural assemblage (respectively Middle Uruk, Akkad and Late Akkad) and stratigraphical location.

Given are intervals of calendar age, where the true ages of the samples encompass with the probability of ca. 68% and ca. 95%. The calibration was made with the OxCal software.

OxCal v4.2.3 Bronk Ramsey (2013); r:5

IntCal13 atmospheric curve (Reimer et al 2013)

GQD 1264.2 R_Date(4790,40) (*GQ D Lvl 3*)

68.2% probability

3640BC (10.4%) 3627BC

3596BC (57.8%) 3527BC

95.4% probability

3653BC (92.7%) 3515BC

3410BC (0.5%) 3405BC

3399BC (2.2%) 3384BC

LOGD 262.1 R_Date(3860,35) (*Log D Lvl 3b*)

68.2% probability

2454BC (15.4%) 2418BC

2407BC (14.6%) 2376BC

2351BC (35.9%) 2286BC

2247BC (1.1%) 2244BC

2239BC (1.1%) 2236BC

95.4% probability

2463BC (81.7%) 2273BC

2257BC (13.7%) 2208BC

LOGD 266.1 R_Date(3740,35) (*Log D Lvl 3a*)

68.2% probability

2201BC (48.1%) 2131BC

2086BC (20.1%) 2051BC

95.4% probability

2279BC (5.5%) 2251BC

2229BC (1.1%) 2221BC

2211BC (88.8%) 2033BC

LOGD 269.1 R_Date(36700,800) (*Log D Lvl 4*)

68.2% probability

40004BC (68.2%) 38610BC

95.4% probability

40602BC (95.4%) 37839BC






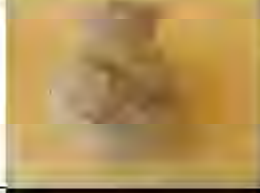
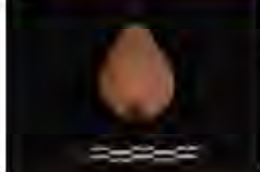

APPENDIX C

FINDINGS LIST

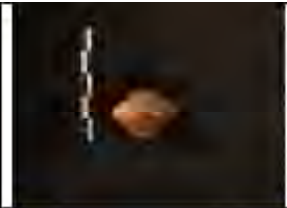




Excavations at Girdi Qalaa (GQ) and Logardan (LOG) تَابِي قِنْت

2016

الصورة أو الرسم Photo or drawing	الوصف description	رقم الموقع locus no	القياسات dimensions	مادة المادة material	نوع القطع kind of object	الرقم Code
	<p>Composition of 2 identical and symmetrical groups. A bearded hero wearing a skirt and a belt is mastering with both hands a maned bull whose head is raised. The bull is standing on its hind legs. There is an eight-pointed star between the two groups, and a deletion under the star. Akkadian period, from the reign of Naram-Sin</p>	G01	3 x 1,7 cm Diam 1,7 cm Perforation 0,6 cm	Stone (serpentine)	Cylinder seal	LOGD P236.1

	Cylindrical, 6 flattened facets, decorated with incised herringbone motif	611	L 1.7 cm Diam. 1.2-1.7	Clay	pendant	LOGD Tc204.2
	Round, slightly concave base. Painted black band.	619	Diam. 5.5-6 cm H. 3.5 cm	Ceramic	Stopper	LOGD Tc228.1
	Edge broken in places	619	8x5.8 x3.7 cm	Clay	Wheel (from chariot model)	LOGD Tc228.2
	Truncated. Concave base	638	2.4x3.2 cm cm	Clay	Loom weight	LOGD Tc232.2
	Sieve Ancient Uruk (local LC2-3)	634	Diam. 10 cm (irregular) Th. 1 cm (irregular)	Ceramic	Vessel	LOGD Tc237.1
	Small jar with everted rim Early Dynastic II-III	649	Diam. 5.5 cm (mouth) 7.5 cm (body) H. 8 cm Th. 0.3 cm	Ceramic	Vessel	LOGD Tc243.1
	Pear-shaped. Rounded base	652	L. 4.8 cm W. 3.2-1.5 cm	Clay	Token	LOGD Tc279.2
	Bell-shaped	2006	H. 3.8 cm Diam. 4-4.2 cm	Clay	Loom weight	LOGE Tc1037.1

	Wide-mouthed small globular jar, flaring rim, round base. Mid-third millennium BC	2020	H. 5.8-6.3 cm Diam. 6.5-6.7 cm	Ceramic	Vessel	LDGE Tc:1106.1
	Medium-size elongated globular jar. Round base. Decoration on shoulder: one crescent with diagonal incisions, one protruding ring. Mid-third millennium BC	2023	H. 34.6 cm Diam. 16 cm	Ceramic	Vessel	LDGE Tc:1068.1
	Truncated. Concave base	2999	H. 1.8 cm Diam. 2.9 cm	Clay	Loom weight	LDGE (LTS) Tc:1999.1

	Conical. Dark red paint.	2999	H. 2.2 cm Diam. 3 cm	Clay	Spindle whorl	LDGE (LTS) Tc:1999.3
	Round	75	18.11x17.4 cm	Clay	Bead	GOB Tc:1068.1
	Barrel-shaped		1.9x1.8 cm	Clay	Bead	GOB Tc:1055.1
	Iron pin in 2 parts. Square section	61	14.4 x 0.5 cm	Iron	Pin	GOB Mer:1059.3
	Spindle whorl. Unbaked clay	71	H. 2.39 cm Diam. 4 cm	Clay	Spindle whorl	GOB Tc:1058.1

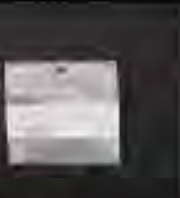
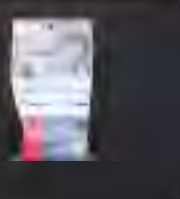

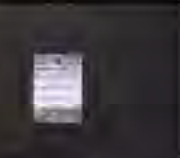
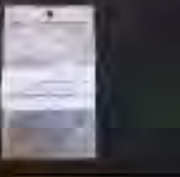

	Ribbed, alternate black and white	73	5.7 x 0.6 cm	Glass (black)	Bangle (fragment)	GQB V1062.2
	round	78	5x3.1 x2.4 cm	Glass (blue)	Base of small vessel	GQB V1072.1
	Overlapping ends	61	Diam 2.9 x 0.5 cm	Bronze	Ring	GQB Mer1059.1
	Cooking pot with 2 handles.	72	Ht 15.5 cm Diam 17-14.8 cm Th. 1.2-0.6 cm	Ceramic	Vessel	GQB Tr1061.1
	Bowl, with pouring lip Middle Uruk	258	Diam 10.5 cm base diam 3 cm H. 6 cm Th : 0.3 cm	Ceramic	Vessel	GQB Tr1251.1
	Cone fragment	200	L 5.5 cm Diam. 2-1.3 cm	Clay	Cone (fragment)	GQB Tr120B.2
	Cone. Tip broken	200	L 8 cm Diam 3-1.2 cm	Clay	Cone (fragment)	GQB Tr120B.1
	Perforated roundel, flat.	214	Diam. 6 cm Th. 1 cm	Clay	Perforated roundel	GQB Tr1215.1
	Sheep? Ears, nose and lower part of legs broken	254	L 5 cm W. 1.8-2.3 cm Th. 1-1.5 cm	Clay	Animal figurine (incomplete)	GQB Tr1258.1



APPENDIX D

EXPORTED SAMPLES

QARA DAGH ARCHAEOLOGICAL MISSION AUTHORISATION FOR EXPORT OF ARCHAEOLOGICAL SAMPLES SEASON 2016

Qty	description	sample no.	Photo
1	Charcoal	LOGD Ech266.1	
1	Charcoal	LOGD Ech225.1	
1	Charcoal	LOGD Ech237.1	
1	Charcoal	LOGD Ech262.1	
1	Charcoal	LOGD Ech269.1	
1	Charcoal	LOGE Ech1098.1	

1	Charcoal	LOGE Ech1106.1		
1	Charcoal	GQB Ech1048.1		
1	Charcoal	GQB Ech1056.1		
1	Charcoal	GQB Ech1251.1		
1	Charcoal	GQB Ech1264.2		
1	Charcoal	GQB Ech1264.1		
1	BBB Pastes (TRUE- PROTO)	GQB LOGD		
1	Painted sherds (pastes)	LOG 2016	