

## THE HELLENISTIC LEVELS UNDER THE TEMENOS OF THE QAŞR AL-BINT AT PETRA

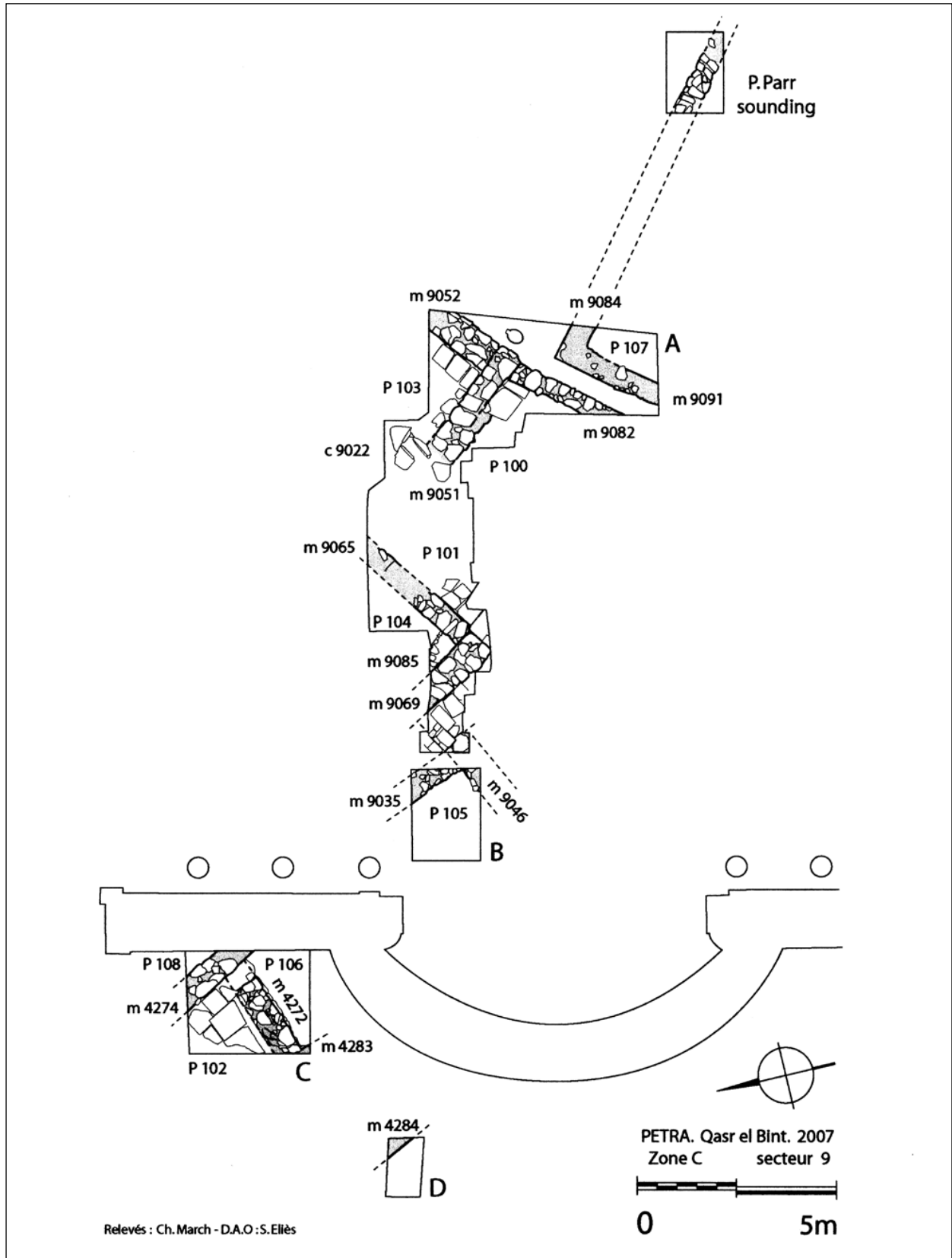
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Investigations into the most ancient levels of the city of Petra have for the past several years been the focus of research of some of the teams working on the site. Classical texts, that have often been presented and discussed, bear witness to Nabataean history going back at least to the 4th century BC (see recent work by Nehmé and Villeneuve 1999: 22-28; Dentzer and Augé 1999; Sartre 2001: 52-55; Hackl *et al.* 2003; Graf 1990; Wenning 2007). Also archaeology, has for a long time yielded up clusters of ceramics and coins which indicate human occupation dating back to the 4th and 3rd centuries BC; these are mainly Phoenician coins from the end of the 4th century and from the 3rd century BC, and Mediterranean stamped amphorae, the oldest of which dates to about 240BC (Parr 2007: 282, with a complete bibliography). In soundings carried out in the area of the Qaşr al-Bint, levels associated with buildings yielded material from this ancient Hellenistic period for the first time (Parr 1968). Consequently it is in this area, along the left bank of the Wādī Mūsā, along the colonnade and at the entrance to the temenos that the most recent search for Hellenistic levels has been carried out. However ancient levels have also been found elsewhere, in particular on the az-Zanţūr hill (Stucky 1995 and 1996) and on the terrace facing the Urn Tomb (Zeitler 1990). Two recent articles bring together all the archaeological documentation available on the subject and discuss the chronology (Graf *et al.* 2005; Parr 2007).

The excavations undertaken since 1999 by the French archaeological team in the Qaşr al-Bint area have brought new information to light. Their work is chiefly concerned with the monumental religious complex, built during the first two centuries AD, the apsidal monument dating

from the imperial era and the large dwellings along the south east and western sides of the temenos, from the Nabataean and Roman periods. However, during the excavation several of the soundings reached down to deposits predating this group of monuments. Soundings A and B, between the apsidal monument and the central altar, were first excavated by Andreas Kropp in two consecutive seasons. They were then taken over and extended by the authors during the 2007 season. To the west of the apsidal monument, levels predating the installation of the temenos were reached in several places, among others soundings C and D as shown on the map (**Fig. 1**). These trenches revealed a phase of installations lying directly on the aeolian sand and the pebble layer which are considered to be the substrate (river bed), and an architectural phase recognised along a 3m stretch of the bank of the Wādī Mūsā. These levels correspond to Phases 1 and 2 of the chronological-stratigraphic periods of the excavation area (Augé *et al.* Forthcoming), and are dated, by the material associated with them, to between the 3rd century and 1st century BC.

The layer of reddish aeolian sand presents a double slope towards the bank of the wadi, both from south to north by north east and from west to east, most probably because of greater deposits at the foot of the al-Ḥabis cliff. Large pebbles which correspond to a phase of violent flows, surface from this sandy layer and form the natural terrace which was subsequently progressively covered by the sand being deposited by the erosion of the sandstone cliff. These pebbles in turn, rest on bedrock which touches the sounding made by P. Parr in the south west corner of the central altar (Parr 1968: 13). The installations which we will describe were there-



1. General plan of the Hellenistic levels examined in the soundings.

fore in the corner of a gently sloping terrace, overlooked by a high cliff and only a few metres above the enclosed bed of the Wādī Mūsā just before it disappears into the cleft which runs around the rock of al-Ḥabīs (Fig. 2).

### Phase I

Lying on the surface of the aeolian sand deposits, ceramic fragments and imported sediments are indicators of occupation, as are traces of surfaces evidenced by thin layers of compacted earth mixed with ash from hearths. This is Phase I of the occupation of the area.

At the bottom of a sounding in the corner of walls 9065/9069 (Fig. 1), a terrace wall was found, built from a single row of medium sized stones crudely positioned in four courses supporting a higher level to the south of red sand substrate, parallel to the wadi. (Figs. 3-4).

In another sounding, along the eastern face of the apsidal monument, layered occupation levels established on the red aeolian sand of the substrate were covered over by a backfill of loose brown earth up to a depth of 40cm that

contained abundant animal remains (Fig. 5), which could be interpreted as the levelling of a terrace. Alternating layers of aeolian sand and of earth and ash subsequently accumulated over this backfill which were very disturbed due to the mobility of the sand's surface.

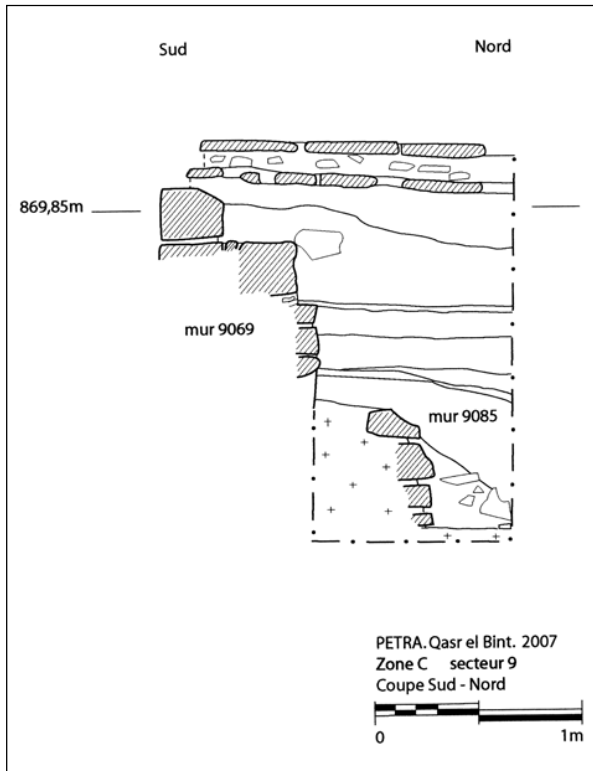
In a sounding on the western edge of the excavation area, below a Nabataean dwelling, an arrangement of pebbles was revealed in a ditch with a post hole in the sand on either side. These installations were in an area enclosed, 2.4m to the north, by a small wall built of stones bonded with clay which was found in a very narrow sounding preserved between the foundation trenches of later buildings (Fig. 6).

These remains represent the oldest phase of occupation in this area. They bear witness to the installation of terraces which we are not able to attribute with certainty to agricultural activity — these areas may just as well have been the site of simple domestic installations which require levelled ground.

The stratigraphic position of the installations in soundings F and G to the west (Fig. 2) has not



2. Schematic topographic map of the area.



3. Stratigraphic section showing terrace wall 9085, Phase I.

yet been clearly established, and for this reason they have not been included in the general plan. They are situated directly on the red aeolian sand but were not sealed by constructions from

Phase II. Later channels disturbed the stratigraphic relationships and the upper layers are related to the building from the beginning of the 1st century AD. Furthermore these installations (the small wall to the north, the arrangement of pebbles and the post holes) may just as easily belong to Phase I as to exterior installations associated with nearby Phase II buildings.

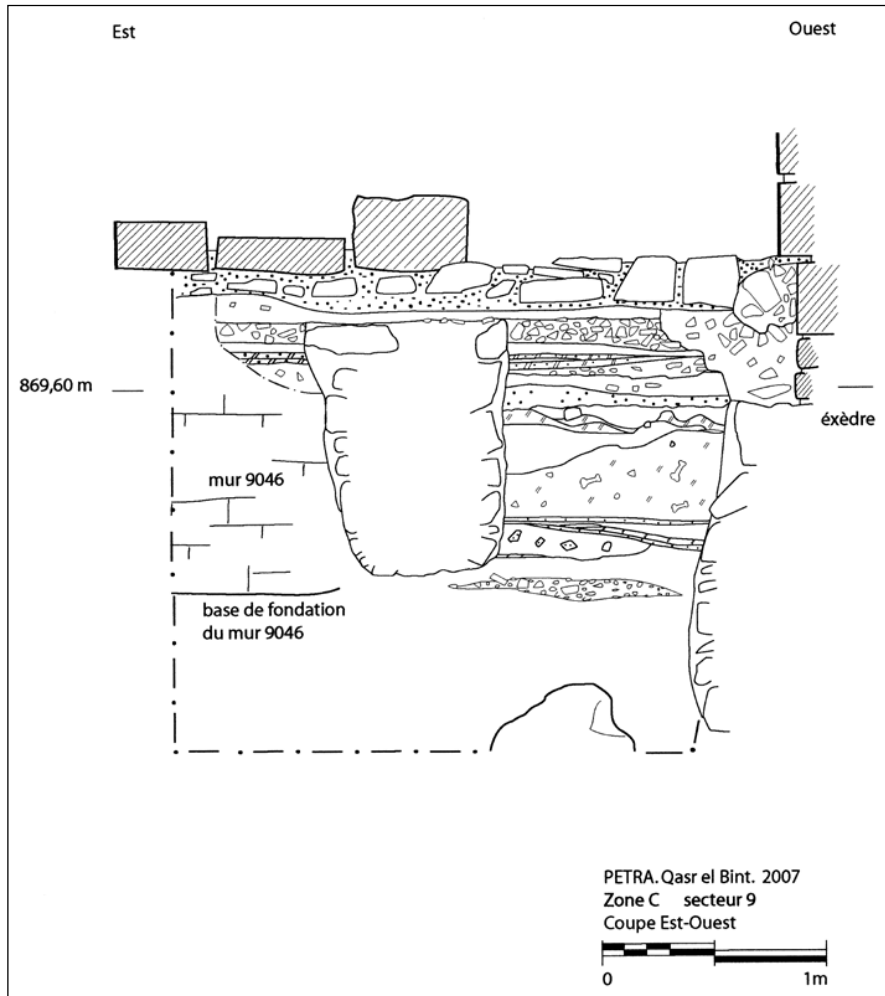
### Phase II

During the excavation, the architectural remains of Phase II, discernable along a stretch of more than 30m, stands out clearly from later buildings because of its oblique alignment relative to the buildings of the later monumental phase, associated with the sanctuary of the Qasr al-Bint and the temenos, which are strictly aligned on the wadi. The buildings of Phase II seem to run more or less northwest / southeast along the contour lines at the foot of al-Ḥabis. It is possible that the course of the wadi followed these lines at the time. If there were more buildings on the slopes of the hill it is probable that they were aligned along the same axes parallel to the slope.

The foundations were in deep trenches, and were made of blocks of undressed stone, with or without facing, and many large stones from the bed of the river. With few exceptions the stones



4. Terrace wall 9085, Phase I.



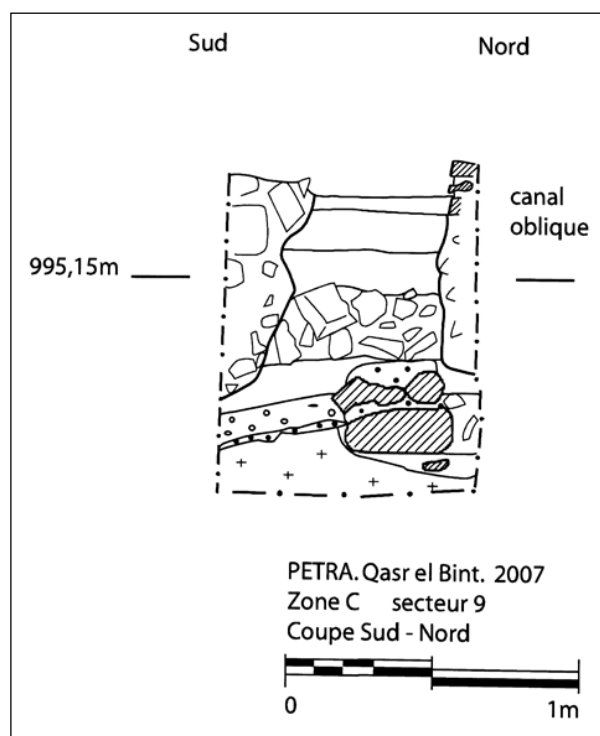
5. East-west stratigraphic section in room 105.

in the foundations were held together by a yellow clay mortar, residual traces of which are also found on the red aeolian sand near the trenches. Remains of the walls exist only up to one or two courses at most, and only in a few places. The development of the cult area, in the second half of the 1st century BC assumes the complete demolition of pre-existing constructions. Foundation trenches and various other pits also considerably disrupted this older architectural layer. The narrowness of the soundings and the small quantity of material recovered from them do not permit a functional interpretation of the areas. A general plan of all the Phase II installations cannot be drawn up of course, but the available data allow for some hypotheses and comments on the style of settlement and the relative chronology of the constructions.

Lacking any evidence to the contrary, we consider that these constructions were domestic

spaces; in other words dwellings. In spite of the lack of stratigraphic continuity (separate soundings and later disturbances) and the obvious on-going processes of installation, three architectural phases have been distinguished which both identify the evolution of the buildings and facilitate their description.

In the rubble in the foundation trench of wall 9065 many fragments were found of a thick white coating material, of good quality and bearing the imprint of the facing stones which it covered. It testifies the destruction of a building previous to the construction of room 104/101 (**Fig. 1**). This construction could have been room 107, which is the corner of an older building to the southeast. Walls 9084 and 9091 which form the northwest corner of 107 were flattened before the building of wall 9082. A small ditch was built in the rubble whose oldest bedded layers seal the foundation trench of 9082. The deposits from it



6. Stratigraphic section showing a Phase I wall built on virgin sand in an isolated sounding to the west.

are both on the top of the flattened wall 9091 and up against the face of wall 9082. Wall 9082 closes off the east side of area 100, probably an exterior space which was originally opened to the east. Two pavements were laid one after the other in this area, to the west along wall 9065, indicating rebuilding work. Only the upper pavement is preserved along wall 9082, which must therefore have been built during or after the remodelling work. We have therefore two phases of construction in area 100, which have also been noted in area 101, which are bounded on the west by two successive thresholds and the secondary construction of wall 9069. This succession of the two phases is also found in area 105 where two occupation levels can be discerned, the earlier one marked by a thick floor of yellow clay, covered by a light backfill which separates it from two successive surfaces made of clay mixed with ash (Fig. 5). To the northeast, in room 102, the succession of the two construction phases is marked by the partition wall 4274 which was built over an older pavement.

To sum up:

*Phase IIa*: first solid buildings hypothetically including room 107 to the southeast;

*Phase IIb*: destruction of these buildings (including room 107?) and installation of areas 100/101, 105 and 102 to the west;

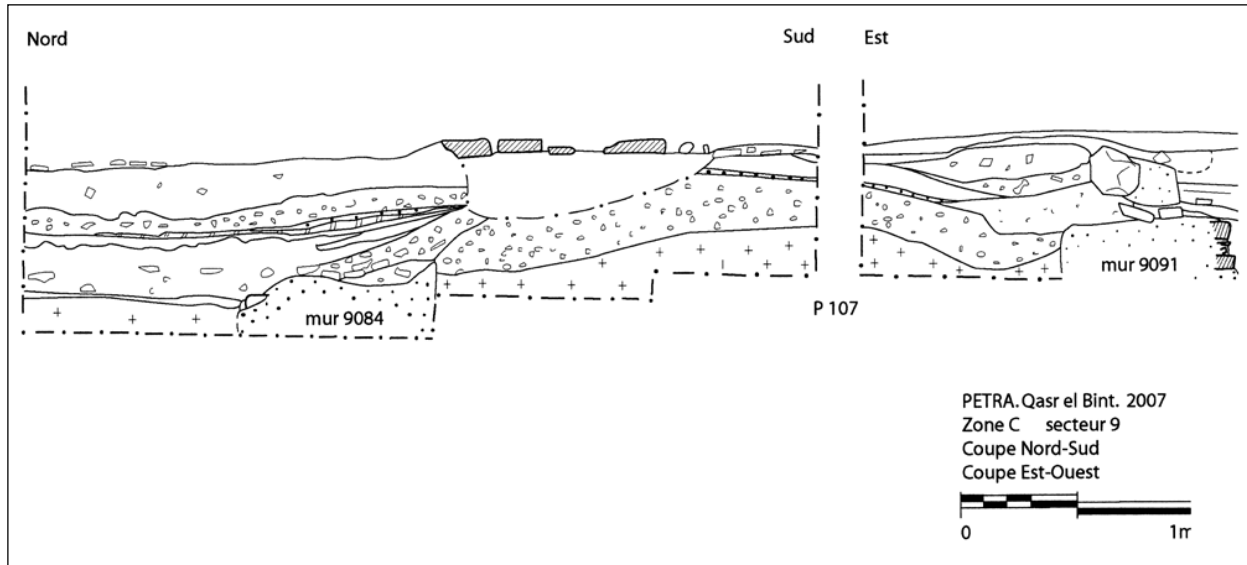
*Phase IIc*: construction of walls 9082, 9069, 4272 (we are grouping together works which might have been executed over a period of time), installation of the upper level.

In the excavation area, Phase IIa can only be represented by room 107 to the east, bounded by the two perpendicular walls 9084 and 9091. These walls are only preserved as foundations in the trenches dug into the red aeolian sand of the substrate. They consist of undressed stone blocks laid in courses and of pebbles sunk into a yellow clay mortar. No occupation levels have been found. The main part of this dwelling was to the south, towards the higher part of the river terrace and it is likely that it was made level by backfilling in the corner which we have explored: the very gravelly deposits spread over the sand substrate between walls 9084 and 9091 could be the remains of such a backfill (Fig. 7). The tops of the walls were directly covered by the surfaces contemporary with the adjacent building.

The alignment and orientation of wall 9091 are the same as those of the wall excavated by P. Parr in a sounding opened in the southwest corner of the high altar in 1965 (Parr 1968: 19). If we believe that this is the same construction it must have been at least 8m long, which allows us to put back at least one partition giving us two aligned rooms.

Phase IIb corresponds with the installation and initial occupation of areas 100/101, 103, 104, 105 and 102/106. There is no stratigraphic relationship between this group of rooms and construction 107 before its demolition, the sand substrate in the area which separates them having been eroded by the flow of water in the ditch built between walls 9091 and 9082. It is therefore impossible to establish whether occupation of room 107 was partly contemporaneous with that of rooms 100/103 before the building of wall 9082. However, since the walls of room 107 had been levelled during the occupation of the set of rooms 100/103 we believe that the occupation of 100/103 in part postdates that of room 107.

The oldest walls are 9051, 9052, 9035, 9046 and 9065, and further to the east 4272 and 4283 (4284?). The contact between walls 9051 and



7. Stratigraphic section in room 107 in the east.

9065 was destroyed by a later large pit which contained fine ceramics that date it to the last quarter of the 1st century AD. The constructions to the west (102/106) could not be associated with certainty with the traces excavated in the trench that was dug below the temenos because the foundations of the wall of the temenos itself and of the later apsidal monument have severed any stratigraphic link between these two areas. Nevertheless it is probable that they belong to the same grouping: walls 4274 and 9035 face much the same way and are built on the same axis, whilst walls 4272 and 9046, at each end, bound an area only 7.5m long which can only be occupied by two rows of stones without leaving much room for an external separating space.

To the east, room 103 is associated with the exterior open space 100. This area sloped towards the entrance to room 103, the interior floor level of which is only slightly lower than the natural sand outside. Stones crudely placed along the southern face of wall 9051 made it possible to descend to the pavement which marked the threshold of the opening to room 103 (Fig. 1). The flow of rainwater threatened this room with flooding and a collector was situated just opposite the threshold which collected the run-off water (9022) and channelled it away along a small underground conduit covered with stone slabs, probably to the riverbed to the northeast (Fig. 8). Room 103 never had a built floor, only a row of paving slabs along wall 9052 at ground

level (Figs. 8-9). This ground offers no signs of a particular type of occupation, nor of domestic activities: it may have been a store-room, but the lack of material does not tend to support this interpretation.

The presence of two successive pavements on the western side of area 101 could indicate that this installation already existed in Phase IIb when it was a courtyard opening to the west. The stratigraphic relationship with the levels associated with wall 9082 has unfortunately been broken by the digging of various later foundations. If this were the case then it would only have existed along wall 9065, preceding the change of level leading down to the entrance to room 103.

To the west, room 102/108 was most probably a single space and connected to 106 by a threshold. A layer of large (80cm), very even paving stones, covered the ground and supported the base of the white coating of the walls (Fig. 10). The levels of room 106, which have disappeared in the foundations of the walls of the apsidal monument and of the temenos, have been poorly preserved in the angle between walls 4272 and 4283: here regular floors of well compacted yellow clay are visible in the section. From this it seems to us that this dwelling on the western side was built with much more care than the spaces on the eastern side described above.

Phase IIc corresponds to the modifications made to the constructions of Phase IIb. Rather than a planned phase of general architectural



8. Room 103 to the east and the opening of the small channel 9022.

restructuring, it is a series of alterations which took place over a period of time. Nevertheless a second phase of occupation is identifiable across all of the levels which were explored.

To the east, the exterior space 100 was closed off by wall 9082 (**Figs. 1 and 9**). We have seen that the run-off flowing through this space led to the installation, in Phase IIb, of an underground conduit at the entrance to room 103 to evacuate the water. By closing off this exterior space with walls, the inhabitants of this dwelling diverted the run-off into a kind of open channel which they made along the outside of wall 9082. Supported by levelled wall 9091 and parallel to

9082, this channel eventually became silted up with layered deposits filled with ceramic fragments. Beyond the channel the flow was directed towards a small re-used stone basin with a spout, and from there it went directly into the red sand substrate (**Fig. 11**). The channel silted up over time but must have remained in use until the end of the Phase II occupation.

A new pavement was installed in room 101, about twenty centimetres above the previous occupation floor along wall 9065 (**Fig. 12**). Some paving slabs have been preserved on the same level also along the new wall 9082 in room 100 but it is not possible to determine whether this





9. View towards the south, over walls 9052 and 9082 bounding spaces 103 and 100 (on the right). Top left is room 107.



11. Basin with spout installed in line with the runoff channel built between walls 9082 and 9091.



10. The pavement of room 102.



12. The two levels of paving to the west of area 101.

flooring covered the whole of room 100/101. An access corridor was created to the west by building wall 9069 perpendicular to 9065 against which it abuts (**Fig. 1**). Access to the west was over a threshold attested by the door socket carved through two blocks of stone (**Fig. 13**). The narrowness of the excavation trench makes it difficult to understand this area, in particular the reason for the remodelling and the relationship between room 105 to the west and the group of rooms centred around the exterior

space 100/101. The construction of this corridor may have provided a link to hitherto separate spaces.

Room 105, on the western side, is bounded by walls 9035 and 9045. It already existed in Phase IIb as is shown by the two phases of floor construction clearly visible in the section. Both of these floors were carefully made with clay brought in to form smooth surfaces. However there is no sign of paving. Wall 9035, which runs southeast to northwest, appears to turn in very slightly to the east.

Further west, room 102 was divided, thus



13. Threshold of a door in between walls 9035 and 9069.

creating room 108, by the building of wall 4272 the foundations for which were dug through a beautiful pre-existing pavement. This wall is built into the angle of the threshold opening into room 106. Access to it was walled up, which implies another way into room 106.

The extent of the excavation does not allow a detailed study of the domestic space and the domestic architecture. Yet the nomadic history of the Nabataeans, as told in ancient texts, requires that these installations be viewed in a particular light. The evolution of the oldest domestic spaces on this site could give us information about this supposed lifestyle. Ethno-archaeology has been able to define the characteristics of the dwellings of groups in the process of settling. These characteristics have, in some cases been recognised in archaeology (see for example Aurenche 1984; Mouton 1999). In the current case one should note that in the small number of constructions which have been examined, only one angle between walls is bonded, allowing one to suppose that they were built at the same time. Elsewhere:

- wall 9082 was built abutting the angle of walls 9051 and 9052, thus closing off room 100.
- wall 9069 was built abutting wall 9065 to form the corridor 101.
- wall 4272 was built to divide room 102.
- the angles between 9035 and 9046 and between 9065 and 9051 were sealed by later disturbances so that it was not possible to examine them.

In the majority of cases the tendency is towards increasingly complex structures, with

more partitions and more enclosures. This does not indicate a settlement planned out according to architectural rules and establish social practice. The impression is more of a building which was extended and remodelled according to developing needs rather than according to a plan. The practice of frequent and multiple remodelling of dwellings is more common where buildings are made of lighter materials or of unbaked earth. The tendency to enclose spaces progressively is one of the characteristics of the settlements of groups which are in the process of sedentisation and who are dividing specialised areas from traditionally all-purpose spaces.

The question which arises, even though the area explored was small, is that of the dimensions and the structure of the dwellings. Given the multiplicity of rebuilding work and the irregular orientation of the walls one can put aside the notion of a large dwelling designed by an architect along ordered and regular lines, leaving two hypotheses: either there were small scattered dwelling units within an urban area, or there was a single large house which grew progressively by extension and division.

The first hypothesis points to an urban pattern made of small family units whose domestic space was a group of one to four rooms associated with an exterior space either open or enclosed. Supporting this view are the very different orientations of the walls which could be explained by their belonging to different units. This would consist of a first group formed of rooms 102 and 106 to the west, to which must be added at least an extra space between walls 4283 and 4284. A second group in the centre would be made up of at least two rooms, 103 and 104, bounding the exterior space 100/101, to which room 105 can be related, unless it belongs to the western group. To the east room 107, associated with the wall excavated by P. Parr in the sounding made at the foot of the larger altar, would be part of a third group, which has been the least explored. This scheme could represent an older phase of isolated units built around an open space in which domestic activities were carried out, and which was later enclosed in order to integrate it into the house (by the construction of wall 9082 which encloses room 100). But in the known examples of this kind of development of dwellings the houses are generally very dispersed,

like in the camps of nomads, both for privacy and because of the need for space to stockpile provisions and to keep livestock. This is not the case here, especially if room 105 is considered as part of the western grouping, making two practically contiguous houses; it is also the case for the eastern grouping between rooms 103 and 107. Consequently if we are interpreting these remains as being those of the evolving dwellings of a group of nomads in the process of settling, the urban density indicates an advanced stage of the process. Urbanisation is characterised by the progressive occupation of the free spaces between older dwellings. This would fit with the chronology indicated by the stratigraphy: the central group seems to have been built later than the eastern group which was then rapidly abandoned and flattened.

The second hypothesis, of the progressive growth of a single large house, assumes that all the remains of the architectural phase which was excavated belong to a single dwelling, with the exception of room 107 and the wall which extends it to the east, which would be the edge of a second dwelling which lies beneath the eastern part of the later temenos. Supporting this idea is the fact that the orientation of the constructions is roughly the same overall. But in particular, there is a discernable difference in the treatment of spaces which distinguishes the group 105/106/102 to the west, where good clay floors and careful paving were laid, from the group 100/104/103 to the east where the floors are beaten earth and only have a few paving slabs along the walls of the exterior space. This differentiation between the spaces is highlighted in the centre by the threshold which marks the end of corridor 101, separating two complementary parts, a domestic area to the west, for daily life and reception, and a rustic area to the east with storerooms and various specialised spaces grouped around an open courtyard.

The area of the excavation is too small to provide sufficient elements of the architectural organisation to allow an informed choice of one or other of these hypotheses.

Setting aside room 107 to the east, which was destroyed during the occupation of the adjacent dwelling, it appears that all the architectural elements of Phase II were demolished simultaneously and voluntarily. Higher levels of occu-

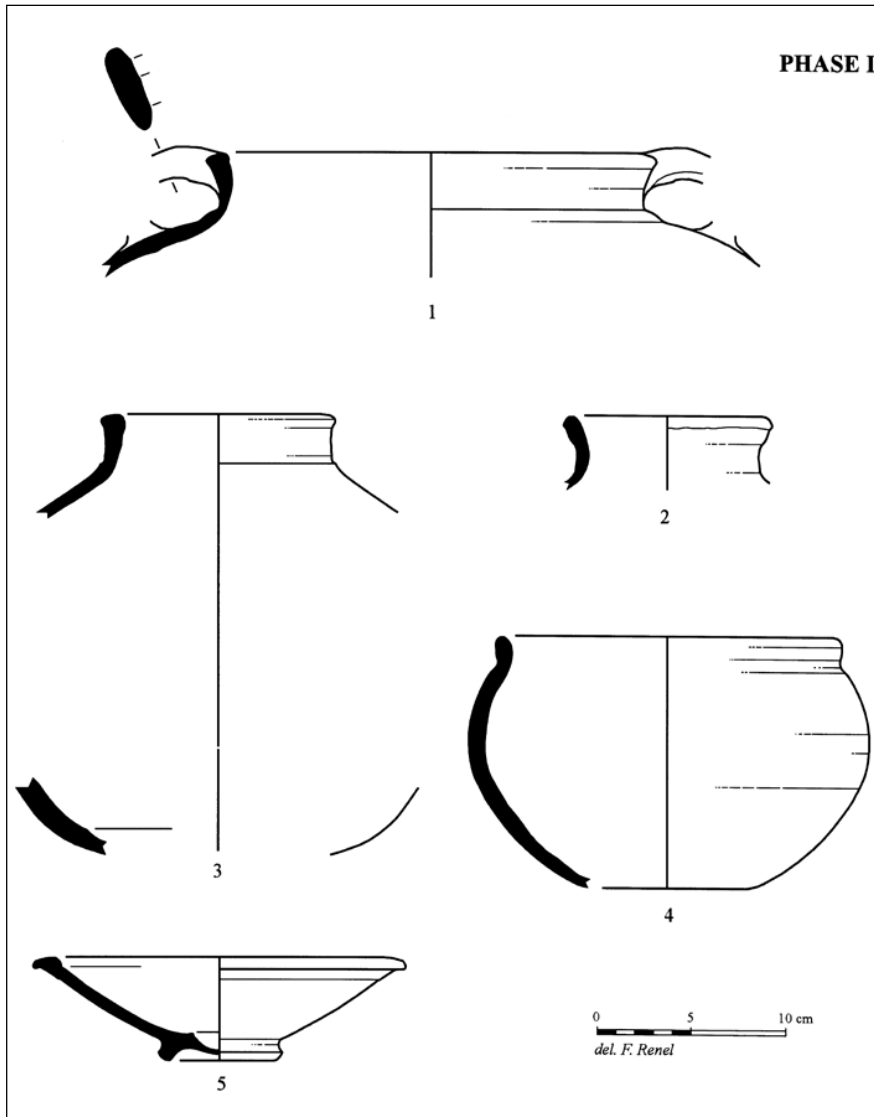
pation of the various spaces are not buried beneath irregular layers with successive exposed surfaces which would indicate a progressive destruction of the walls. The rooms are filled by dense layers of earth mixed with stones and chippings from the dressing of sandstone blocks which point to the re-use of the building materials of the walls. In some places regular blocking made of medium sized stones and earth indicate a deliberate levelling of the ground in preparation for new building work. The bedding fill for the laying of paving stones associated with the installation of the religious complex of Phase III rests directly on these deposits.

### The Pottery

The totality of the registered ceramics is not sufficient to allow a typological study related to the detailed sequence of occupation. Two phases can be identified however, and the division between them corresponds to the transition between Phase I and Phase IIa, when the construction of the built dwellings took place. This transition is marked principally by the change from a group of vary varied ceramic wares to one formed by a more homogenous and standardised material. It corresponds also to the introduction of fine red-glazed wares which takes over from the *Greek Black-glazed* wares that disappear at the beginning of Phase II.

The ceramics recovered from the Phase I levels come from the surface of the red aeolian sand substrate, and from the fill spread over two areas where it was mixed in with a fair amount of animal remains (terrace wall 9085 and beneath room 105). The collection recovered contains everything that was preserved directly on the substrate and thus does not exclude the presence of ceramics that predate the Hellenistic period. Furthermore it should be noted that this material is mixed with material from Phase II which accumulated in the sediments cut by the flow of water between rooms 100 and 107 to the east of sounding A.

In spite of that this assemblage of ceramics (**Fig. 14**) which is so far not well represented, is clearly distinguished from later collections in Petra by the low number of red sandy Nabataean wares and the strong presence of ceramics made from chalky ware and with slip. The collections are fairly varied in composition particularly in



14. Pottery from phase I.



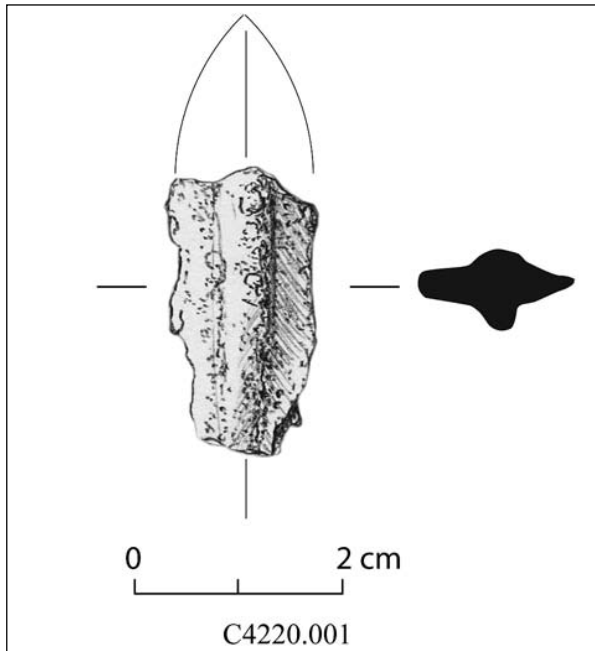
15. Cooking pot from phase I (locus C4030).

the wares and the frequency of external productions.

The sandy wares are coarse or only somewhat levigated (using abundant unsorted mineral temper) and of a mainly beige to brown colour with a grey interior. Generally the local pottery from Phases I and II is made from beige paste whereas in later phases the paste is a bright orangey red. The oldest pottery is the greyest, especially inside, and the surface is the roughest. This means that one may have a pottery sherd which is grey in the interior and brown on the outer surface (and sometimes also the inner surface) and a grey or whitish wash on the outside. The presence of white grit is frequent and may be considerable on the surface. This is probably limestone grit and is characteristic



16. Grey ware from phase I (locus C4246).



17. Iron arrowhead from phase I (locus C4220).

of the ceramics of this older phase. A surface wash in shades of white, red or grey and of poor quality is already quite widespread in Phase I. The wash is very thin and allows large areas of the clay to show through giving the pottery a rather washed-out appearance. Three subcategories have been distinguished within the local production, having in common the use of sand as a tempering agent and a grey coloured ware with a brownish surface. The most common is a grey ware with a buff to brown surface. This same ware is sometimes found with a white to greenish wash, and least common is a grey ware with a pinkish beige surface abundantly speck-



18. Black glazed ware lamp.

led with white grit.

Fragments of medium sized jars and pots represent the majority of the locally produced pottery, but due to the small size of the fragments it is not possible to determine their shape with any precision. A single atypical fragment resembles the *Cream Ware* pottery with thick walls, no visible temper and a yellow to greenish tinge. This fragment could be the precursor of the *Cream Ware* produced throughout the Nabataean period.

Attention should be drawn to the very small number of open shapes. Storage jars (Fig. 14: 1-2) and cooking pots of coarse wares make up the majority of the closed-shape pottery. These are all thick-walled vessels (Fig. 14: 3-4) and are similar to a form that is very common in Palestine and Phoenicia during the Persian period. There are parallels with finds at Qadoum in Samaria amongst material from the 5th and 4th centuries BC (Stern *et al.* 1984: figs. 7, 1 and 3) and Tell Kazel in Syria (Badre *et al.* 1990: fig. 23e). Another type (Fig. 14: 1) has a short neck with a simple everted rim to which is attached a large handle, oval in section. The diameter of the opening appears to indicate the shape of a mid-sized, fairly squat jar.

A storage jar (Fig. 14: 4) of pale beige clay, reasonably well levigated and with a sand and plant temper, presenting a slightly soapy-looking surface, is one of the only open shapes identified: two fish dishes were also found, made of sandy orange ware with a rough surface and no slip (Fig. 14: 5).

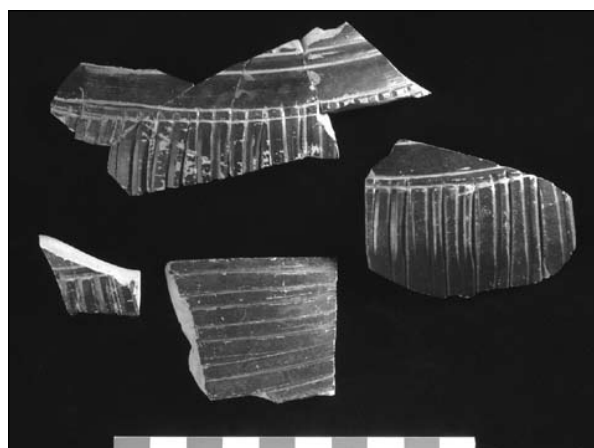
The only evidence for large capacity storage jars is a few pottery sherds containing a large amount of mineral temper and showing traces of a red slip. The absence, in this context, of vessels for transportation, such as the *Phoenician Basket Jars* or *Torpedo Jars*, very common in the Levant at that period, is remarkable.

The absence of local fine wares is significant insofar as this is a diagnostic element of the later Nabataean phases. In general, and in the deeper levels in particular, groups of ceramics contain a larger quantity of fine slip wares, sometimes polished, than do the later levels of the early Christian period. This feature can be explained by the Iron Age traditions which group together numerous collections of this type, though less clearly here than in other sites of north eastern and north western Arabia.

The imported pottery seems to indicate inter-regional exchanges rather than long distance trading links. With regard to this it should be noted that imported Greek pottery has very little influence on local production at this time, contrary to what is seen right from the start of the next phase. Pottery made of alluvial limestone ware is well represented, often with a mica temper and a reddish brown slip with a nice polished surface which brings to mind the contemporaneous ceramics from the Egyptian Delta (Ballet 2002: 90). It should be remembered that the Zenon papyri attest to Nabataean participation in trade between Egypt and Palestine in the 3rd century BC.

Imported luxury pottery, of which there is very little compared to locally produced items, is of the Hellenistic type originating in Greece or the western Mediterranean (Rhodes). These pieces (drinking vessels, lamps, fish-plates, *kantharoi*) are *Black-glazed* are. There are several bowls with everted rims and fragments from a closed vessel with gadrooned decoration which could be a *cantharos* or an amphora of *West Slope* type (**Fig. 19**).

Level C4244, to the west, yielded a *Black-glazed* ware lamp of the Broneer IX type (**Fig. 18**) which may have come from mainland Greece or from a workshop on Rhodes which produced imitations of Attic ware. Three comparable items were found in old soundings made by P. Parr in Petra (Amr 1987: Pl 20-21, p. 273) and G. and A. Horsfield (Horsfield and Horsfield



19. *Kantharos* or *West slope amphora* in *Black glazed ware*.

1941: 108, p. 134, Pl. XV). This type is often dated from the second half of the 4th century BC and more commonly from the 3rd century BC (Kassab *et al.* 1995: p. 89, n° 163, 177-78, 182-184).

A few fragments of amphorae were recovered, mostly of the Rhodian type (8 sherds altogether, against 42 from the following phase). These are all body sherds and no rims or handles were found. The presence of numerous amphorae from Kos and from Rhodes on some of the Hellenistic sites in Arabia can be linked with the unusual deposits of Samian and Koan wine amphorae found in Sinai in the coastal strip north of Romana between the western edge of Lake Bardawil and Pelusium. These deposits bring to mind the comments of Herodotus (III, 6-7) on the Egyptian custom of systematically saving the imported amphorae, once emptied of their wine, for use as water storage in the desert (Oren 1997: 80-81).

Finally six sherds of grey pottery were found, very similar to a type that was widespread in the Oman region during the Late Pre-Islamic period: three sherds were on the red aeolian sand substrate in two separate soundings, and three in the fine deposits over the red aeolian sand substrate in soundings to the west (and some also in fill contexts from the beginning of Phase II).

These sherds are of clinky grey ware, of medium thickness, containing exploded white grits and a medium mineral temper; deep finger impressions made whilst throwing mark the inside wall (**Fig. 16**). They are fragments of jars or pots of medium to small size. If the identification of

these is confirmed as being from the region of Oman, either by a well represented morphological type or by petrographic analysis, then this would support the belief that there was contact between the two communities, which also exhibit strong similarities in their funerary practices (Mouton 2006). It would also pinpoint a chronological break for the oldest levels of Phase I since this type of pottery does not appear in the Oman peninsula before the 2nd century BC, and more probably towards the middle of the century.

The possible relationship with the Oman peninsula is not limited to these sherds of grey pottery. Various elements lead to more extended comparisons: a fragment of fine pottery, soapy textured and painted a dark wine colour, which is also found in the oldest levels of Mleiha, and an iron arrowhead (Fig. 17) with a morphology closely related to that of the late Pre-Islamic finds in that region (Mouton 1990). But in Petra the lack of elements that are truly characteristic of the finds in the Oman area must be underlined. However the parallels support prior observations made by S. Schmid on the relationship between some of the open forms with painted decoration found in Petra and the industries of eastern Arabia and the Iron Age traditions of the Oman area (Schmid 2004). But they must be confirmed by archaeometric analysis.

The pottery finds from the Phase II levels (Figs. 20-21) are more numerous and are clearly distinguished from those of previous phases by their homogeneity and the strong influence of the Mediterranean Hellenistic pottery. A *koine* of ceramic types dominates the pottery of the eastern Mediterranean from the Hellenistic period onwards. The Petra region is an integral part of this phenomenon from this phase onwards.

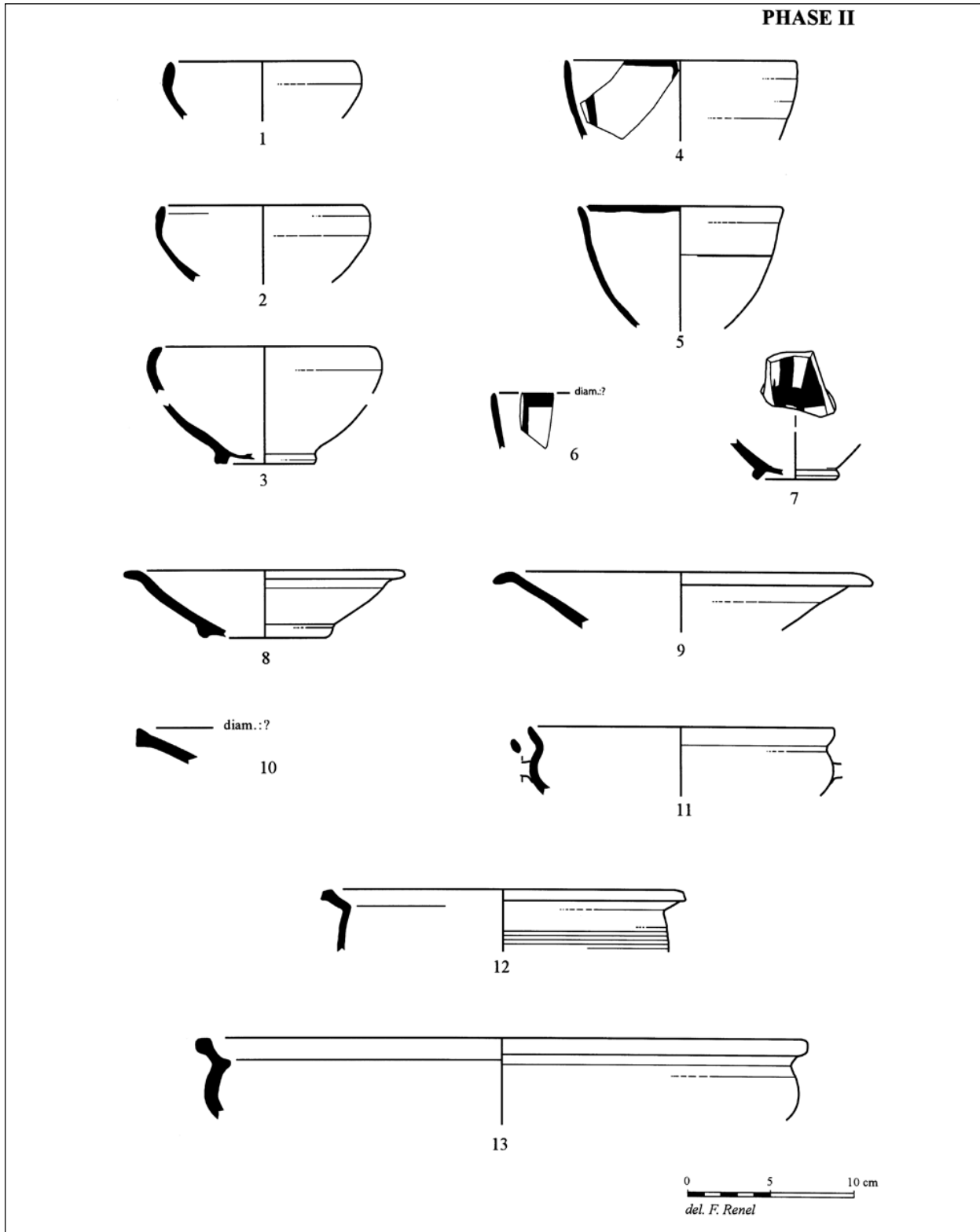
The local potters learned new techniques and tricks of the trade which would last throughout the Nabataean period and become defining characteristics of the production. The pastes became finer, both in thickness and in quality, even though the source material appears to remain the same as in the previous phase. We have already remarked on the even texture, the orange colouring, the slight roughness to the touch and the almost ubiquitous lighter surface wash.

The diversity of shapes also distinguishes this assemblage from that of the previous phase.

For the most part they derive their inspiration from the Hellenistic world, as much for table ware as for the kitchen ware, indicating the rapid take-up of the new models. Among the open shapes the most common local version is a cup with an incurving rim (Fig. 20: 1-3); one should also note the production of dishes with a central depression of the fish-plate type (Fig. 20: 8) and of *skyphos* with pinched handles and a partial dull brown slip (Fig. 20: 11). The latter form, of which there are many examples at Caesarea, Ashod (Lapp, 1961: type 151-4) and Tell Kazel in Syria (Badre *et al.* 1990: fig. 9k) is generally dated to the middle of the 2nd century BC. The unrefined shapes of the coarse ware cooking vessels of Phase I were followed, in Phase II, by vessels of better defined shapes (Fig. 20: 12-13) clearly inspired by Hellenistic productions (lopades and caccabes, Ballet 2002: fig. 6). The introduction of cooking vessels could reflect profound cultural changes and new culinary practices related to the use of olive oil. The examples of closed forms which have been catalogued are from mid-sized storage jars of orange ware with a white, grey or red wash. Their highly fragmented condition does not allow for a detailed typology.

Along side the ordinary pottery, a semi-fine local pottery becomes common, an orange buff ware without any visible temper, in both closed and open forms. Two decorated groups are discernible. The first consists of bowls without a foot (Fig. 20: 4-6) and cups with a low ring base (Fig. 20: 7) which have a linear or radial decoration of the kind defined as type 1 of the painted ceramics by S. Schmid, and which appears in the 2nd century BC (Schmid 2000). The second group contains locally made imitations of the early forms of *Eastern Terra Sigillata*, and particularly of the Samaria 1 form, and has a good quality polished red slip (Fig. 21: 1). The high quality of this production indicates permanent workshops and highly skilled craftsmen (Schmid 2001: 430).

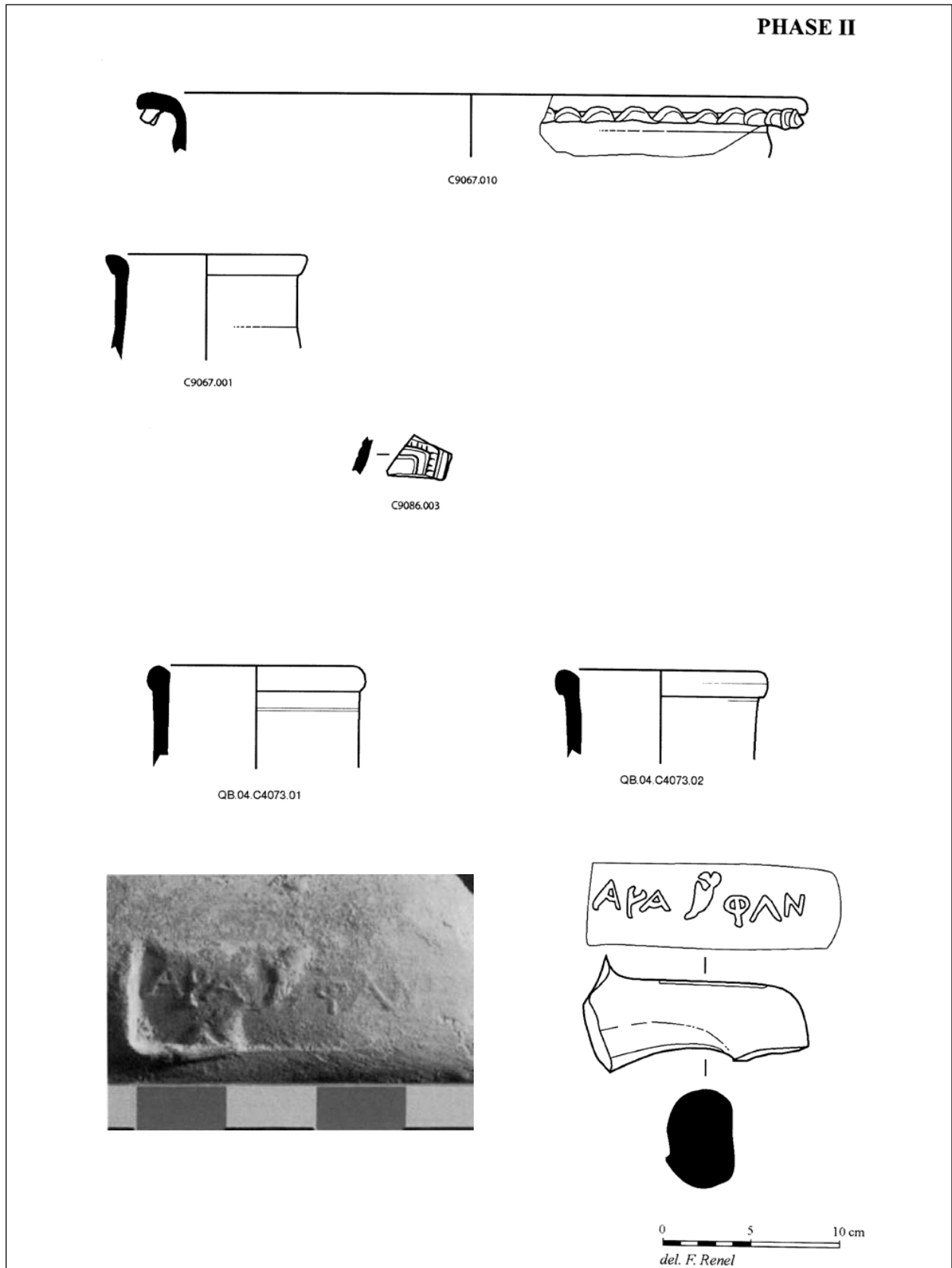
In a more general way it is possible to distinguish common ceramics of good quality by defining a category of 'refined common' pottery which consists of shapes too thick to be fine pottery, with a surface that is not at all sandy, in which some irregularities are found, particularly striations from grits during turning, but which



1 (C9073.001), 2 (C9081.001), 3 (C9086.001/002), 4 (C9067.003), 5 (El Habis.005), 6 (C9086.008), 7 (QB.04.C4069), 8 (C9067.002), 9 (El Habis.015), 10 (QB.04.C4069), 11 (C9087.001), 12 (El Habis.019), 13 (El Habis.024)

20. Pottery from phase II levels at the Qaṣr al-Bint and from al-Ḥabīs survey.





21. Pottery from phase II levels at the Qaşr al-Bint, including imported amphora.

overall are smooth and regular. These ceramics are often covered in irregular patches of red and black slip which reflect both an attempt to copy the Hellenistic wares and perhaps the continuation of the traditional techniques inherited from the Iron Age. This non-sandy but common texture is not found in the assemblages from the beginning of the 1st century AD.

The proportion of imports remains high but is centred around two types of product: amphorae for their contents (**Fig. 21: 5-7**) and the high quality products for their prestige value. This is the case for the *Black-glazed* ceramics which, during Phase II, are progressively replaced by the first of the red-glazed ceramics of the *Eastern Terra Sigillata* type. One should note a single sherd found in one of the levels of abandonment of this phase: a fragment from the rim of a green-glazed dish with a central depression (**Fig. 20: 10**) characteristic of the Mesopotamian productions from the Parthian period of the 1st century BC (Hannestad 1984: fig. 8).

Only two lamp fragments were catalogued from the Phase II levels. They are very small and come from the type of Delphiniform lamp that had an S shaped knob which was very fashionable in the 2nd and 1st centuries BC in the eastern part of the Mediterranean basin (Frangé 2004).

### Dating, Coins and Conclusions

From the point of view of chronology the diagnostic elements in the ceramics are weak. The collection of finds from the Phase I levels is poor. None of the forms refer to the Syrio-Palestinian collections from the end of the Iron Age (*Torpedo jar*, *Basket handled jar*, *Mortarium*, *Cooking pot*); the imported material covers a period from the 4th to the 3rd century BC, the fine pottery tends to be more from the end of the 3rd century BC. The collections from Phase II show a definite break with the previous phase. Once again it is the products imported from the Hellenistic world which are significant, indicating a date between the 3rd and 2nd centuries BC.

The coin finds provide some complementary chronological information. Almost all the coins found come from the trench opened through the temenos, between the wall of the apsidal monument and the high altar. All these coins were identified by C. Augé. Two groups become clear, one from the 3rd century BC and the other

from the end of the 2nd to the beginning of the 1st century BC.

The four coins from the 3rd century BC are:

- 1 coin most probably from Ptolemy I, from the beginning of the 3rd century BC, found in the small channel built under room 103 to carry away the runoff from exterior space 100. This channel was in use either throughout Phase II or only during Phases IIb and IIc.
- 1 coin from Ptolemy II or III, from the middle of the 3rd century BC, in a late pit dated to the last quarter of the 1st century AD by the ceramics it contained; the coin probably came from the sediments through which the pit was cut since it passes through all the architectural levels down to the substrate.
- 1 coin from Arados from the middle of the 3rd century BC on the level of fine earth resting on the red aeolian sand of the substrate by the spouted basin, on the outside of room 103 to the east. Given the erosion by the runoff in channel 9088 at this point the coin may come from Phase I as easily as from Phase IIa or IIb.
- 1 silver coin, a prototype of the Nabataean coinage, dated from the 3rd century BC found against the face of wall 4284 which, by its construction and orientation, is identified as belonging to the architecture of Phase II.

The six coins from the end of the 2nd and the beginning of the 1st century BC are:

- 1 coin from Aretas II, in the upper floor of room 105, therefore from Phase IIc.
- 2 Nabataean coins from the anonymous series, which were found in the pavement of room 101 and the surrounding walls, so probably from Phase IIc or from later fill linked to the destruction of the buildings.
- 1 coin not clearly identified but which can only be from Seleucid mints or from the anonymous Nabataean series (both being of the same date) found in the sediments against the foundation walls of the first remodelling of the temenos, so either from the levels of Phase IIb or IIc, or in the fill of the foundation trench of this construction.
- 1 coin from the anonymous Nabataean series found in the small channel built under room 103, which was in use either throughout Phase II or only during Phases IIb and IIc.
- 1 coin of the same type, found in the large pit from the end of the 1st century AD (see

above), but which most likely comes from one of the levels cut by the pit.

A cautious interpretation of these coins indicates that the architectural phase which we are studying probably began in the 3rd century BC or maybe, in the second half of that century if one is being very conservative. The most recent series appears to belong to the later phases, except the coins found in dubious contexts, which indicates that these levels were occupied right up until the first half of the 1st century BC. These conclusions are not disproved by the distribution of the pottery.

The following chronology is therefore posited.

Phase I corresponds to the installations preceding the architectural phase. There are deposits from occupation and isolated terraces which cannot be chronologically sequenced. The ceramics are clearly of Nabataean tradition but one should not ignore the possible mixing with material from earlier phases in the sandy sediments (prehistoric lithics and Edomite pottery?).

Phase II and the construction of the first built houses on the terrace of the Wādī Mūsā must begin during the 3rd century, and extend through the 2nd century and the first half of the 1st century BC.

Finally the buildings which form the 'oblique architectural level' seem to have been deliberately levelled around the middle of the 1st century BC to permit the installation of the religious complex.

The traditional nomadic history of the first Nabataeans can be connected to the vestiges of Phase I. It is true that the variety of coarse wares, in marked contrast to the collections from the later phases, could indicate a degree of mobility of the population. However without the written evidence there would be nothing in the small amount of archaeological material available to indicate a nomadic lifestyle. On the other hand there is no doubt that from Phase II onwards, that is to say from the second half of the 3rd century BC, the Nabataeans, or at least part of their community, had settled and were gradually adopting a lifestyle in which Hellenistic influence is seen in the material culture.

Bound by the cliff to the west, the areas which we explored stretch eastwards along the banks of the Wādī Mūsā, as revealed by the soundings

taken along the colonnade. The most significant recent discoveries were made by D. Graf's team since 2004, about 300m east of the soundings discussed here. The five lower strata identified, primarily in sounding III, have been dated to the last centuries BC by the excavators (Graf *et al.* 2005: 422-426). The oldest, stratum I, rests directly on the natural gravel and is characterised by an irregular low wall to which no built flooring corresponds. This quite clearly corresponds with the Phase I which we have described. The next two levels have revealed similar sections of wall, and are separated by a level with no trace of buildings from the last 'pre-monumental level', stratum V. Stratum V is crossed by a wall made of larger and better arranged stones, and which can most probably be associated with our Phase II.

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