

CHAPTER 6

REPORT ON THE 1983 EXCAVATIONS
THE MAIN QUARRY

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6.1 Introduction

The Main Quarry was discovered in 1981, in the course of excavating the paved enclosure in squares K9, L9, K10, L10, M10 lying towards the valley floor south of the Walled Village (Figure 1.3; and see Kemp 1983). It was found that the eastern side of the enclosure ran along a rock face which dropped beneath strata of sand and organic rubbish. By the end of that season these strata had been partially removed in squares M9 and M10, but without the base being reached. In the following season more work was done, which resulted in the exposure of bedrock in square M10, and the removal of a considerable quantity of the fill in square N9. By the end of the season the nature and importance of this area was fairly clear. It was a large pit dug into the valley floor to provide marl for the manufacture of bricks. The material was in a fairly pure form, without the layers of stones and boulders which occur in smaller quarry pits closer to the village. The quarry had been dug at the beginning of the site's occupation, and the subsequent filling up preserved a very clear record of changing activity at the Workmen's Village site. It was possible from this to construct a stratigraphic history which might apply to the whole site, and clarify relationships in the more complex and disturbed areas closer to the village. Such an outline was included in the preliminary report for the 1982-83 seasons (Kemp 1983).

One problem remaining was to link the deep and largely undisturbed stratigraphy in the quarry physically with the stratigraphy encountered further to the north. To this end a start was made in 1982 on excavating square M12. This excavation exposed the quarry edge, and cut deeply into the quarry fill, although without reaching the bottom. It also, however, showed how much of the surface debris had been turned over in modern times in this area, and made it very doubtful if a direct linkage in the stratigraphy of the two main areas of excavation would be possible, at least in this part of the site.

The tasks remaining in 1983 were therefore limited and straightforward: to reach bedrock in square N9 and so complete the stratigraphic record in the deepest part, and to link squares M10 and M12, at least to the depth of the lower midden deposit. Both of these objectives were accomplished quite quickly. The stratigraphic record for the main quarry is now likely to be as complete as is possible, except for the crucial northward linkage in the upper levels. The remaining hope of accomplishing this lies in the areas of squares Q14 and R14, immediately to the south of the animal pens (Building 400). The

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other task, of defining the limits of the quarry, is too great and expensive to attempt by direct excavation. For this reason a resistivity survey was carried out, and this, with added topographic observations, has provided a reasonably satisfactory picture, which will be examined below and in Chapter 8.

6.2 Square N9



Figure 6.1. Stratigraphy in square N9, looking south-east.

Square N9, with no structures present, displays a clear and uninterrupted stratigraphic sequence (Figure 6.1), consisting essentially of five members (Kemp 1983: 7, Figure 2): an initial quarry fill of earth and debris of various kinds (Phase II), a lower midden layer of organically-rich soil (Phase III), a bed of clean, wind-blown sand suggestive of a period of abandonment (Phase VI), an upper midden layer characterised by steeply dipping beds of chaff (Phase VII), and finally layers of sand and silt which had accumulated since ancient times (Phase IX). The various members which originate from the village area grow thinner towards the south, to the extent that the lower midden layer (Phase III) more or less peters out across square N9.

The 1982 season ended with the removal of the top of the quarry fill (Phase II). On the very first day of the resumption of excavation in 1983, a pinnacle of bedrock [269] appeared in the centre of the square, 5-10 cms. down. Continued excavation uncovered bedrock over the whole floor of the square, revealing an uneven surface where the ancient quarriers had removed the

soft bedrock in rounded scoopings (Phase I). It was, in fact, difficult to define the junction between bedrock and fill because the upper surface of the bedrock had broken down into loose fragments which merged with the fill. To ensure that all ancient filling material was removed, digging continued until 10-15 cms. of unbroken marl bedrock was visible in all sections.

The maximum depth reached was 2.73 metres. This represents an approximate depth of cutting into the bedrock of 2.40 metres.

6.3 Square M11

This square had been left unexcavated as an intervening area between M10 (completed in 1982) and M12 (partially dug in 1982, see above). The various beds filling the quarry in M12 had been disturbed by modern illicit digging to a much greater depth than found elsewhere at the site. The reason for this seems to have been that, on hitting the quarry edge, the robbers had been led to believe that they had discovered a burial shaft, and had therefore burrowed downwards. This had been done twice on almost the same spot, and had left it difficult to decide how much of the midden fill was intact ancient material. There was no trace of the intervening bed of clean sand (Phase VI), and it was thus important to discover what happened to it once it left the northern face of square M10.

The excavation of M11 therefore began with the removal of the thick layer of soft turned-over soil from the robbers' digging [264]. It eventually exposed the remains of the upper midden layer, composed of steeply-dipping beds of chaff and dusty sand [332, 337, 338]. Below this layer the deposit of clean sand [339] appeared in the southern part, and below this again the top of the lower midden layer [341]. By this time it was clear that the sand layer and everything above it had been completely dug over across the northern part of the square, so that no further northward connections could be made. It had become much clearer how much of the fill of M12 was intact ancient deposit and how much was recently disturbed. With no further stratigraphic information likely to be forthcoming from further excavation, the work here was ended, except for the examination of a small patch in the south-west corner.

One of the most interesting discoveries of 1981 had been the brick-paved courtyard built along the edge of the main quarry. It was completely excavated that year except for a narrow strip on the north side where it ran into another set of five-metre squares. In 1982 most of this remnant was exposed in the course of clearing square L11, leaving only the north-east and north-west corners still buried. The north-east corner, lying in square M11, has a particular importance from the way it is interleaved with the strata filling the quarry. It thus serves to place the building and decay of the courtyard within the general stratigraphic sequence for the site (see Kemp 1983). The excavation of this part of M11 thus served as a check on the conclusions put forward in the 1981-82 preliminary report (Kemp 1983: 10-12, Plate I.1).

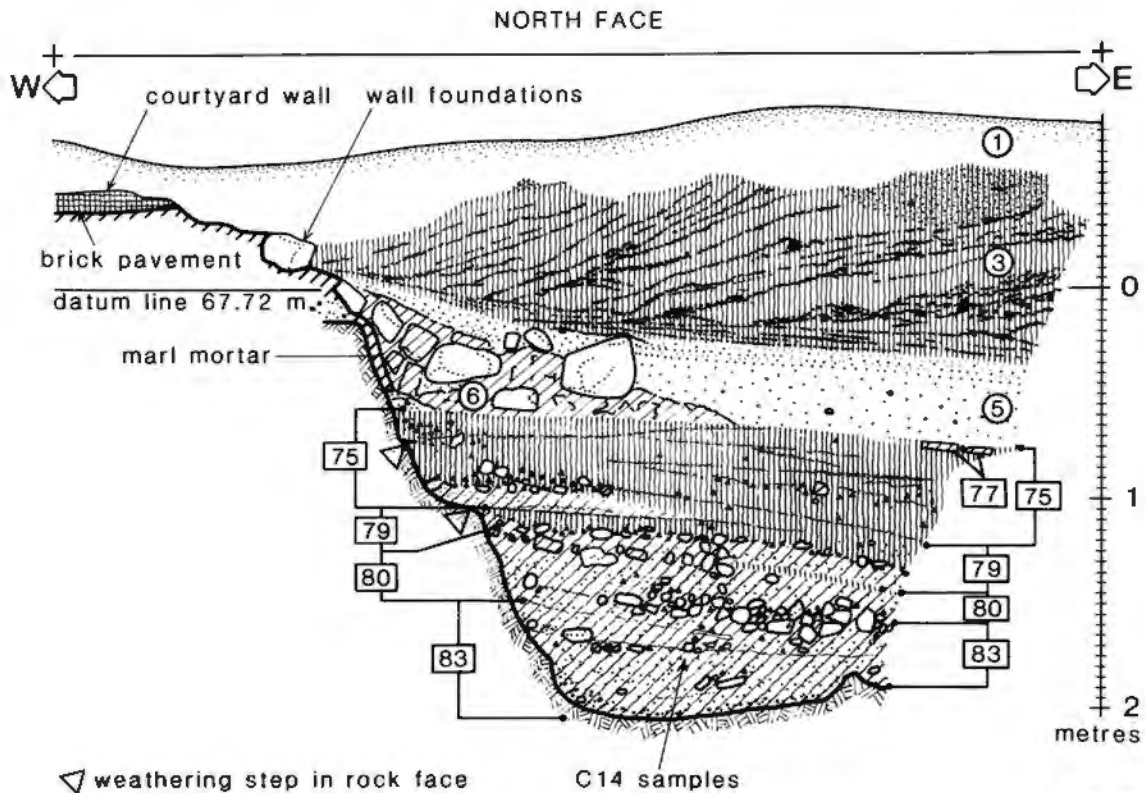
In that report it was stated that the paved courtyard belonged to Phase IV, and thus post-dated the deposition of the lower midden layer within the quarry (Phase III). The reasons were twofold: a mortar line running along the foot of the enclosure wall on the quarry face equivalent to the top of the lower midden layer (labelled "marl mortar" in Figure 6.3, and cf. Kemp 1983: Plate 1.1); a thin deposit of organic material on the north side of the courtyard which appeared to run beneath the foundations of the courtyard and was assumed to be equivalent to the lower midden layer within the quarry (this is just visible in section 84 of Kemp 1983: 7, Fig. 2). In completing the excavation of the north-east corner in M11 this interpretation was amply confirmed (Figure 6.2).



Figure 6.2. North-east corner of the brick-paved courtyard in square M11, looking west. The corner masonry rests on top of midden debris (Phase III = M10[75]) filling the quarry.

The removal of loose surface material at first exposed the rubble from the outward collapse of the wall [533]. Beneath this lay the sloping top of the lower midden layer ([341] in square M11), and the assumed identity between it and the organic debris running beneath the north wall of the courtyard wall could now be visibly confirmed. They are, indeed, the same deposit. Further confirmation of the stratigraphic position of the courtyard came from the stone and marl mortar buttressing around the foot of the north-east corner, which had been built wholly on top of the lower midden layer (Figure 6.2). The local chronology proposed in the 1982-83 report thus receives further support.

6.4 Chronological summary of the quarry sequence



M10

Figure 6.3. Quarry section in square M10.

Key to levels and units: (1): loose, disturbed soil from modern digging = Phase X; (2)-(3): upper midden layer - discoloured dusty sand interbedded with compacted layers of chaff = Phase VII; (3A): loose, clean, yellow wind-blown sand; (5): loose, clean, yellow wind-blown sand, almost devoid of artefacts = Phase VI; (6): marl-brick rubble and stones with sandy patches = Phase V; [75]: lower midden layer - discoloured sand with dense admixture of organic material, charcoal, sherds, stones, occasional pieces of marl brick. Especially towards the east side, a dense layer of sherds, stones and pieces of charcoal form the surface. Contains compacted bedding planes = Phase III; [77]: marl-brick fragments embedded in the surface of [75]; [79]: lower midden layer - sandy matrix, discoloured reddish-brown at the top from weathering of the marl quarry face. Contains pebbles, sherds, marl nodules, bones, twigs and other organic material. The lower part is also reddish in colour. The top coincides with a major weathering step in the rock face; [80]: quarry fill - grey dusty sand containing pebbles and sherds = Phase II; [83]: quarry fill - greyish-orange sand containing much organic material and weathered pieces of marl. Upper surface packed with cobbles and marl-brick fragments. The C14 samples came from this deposit = Phase II; [88]: quarry fill in the deepest cutting in the quarry floor - reddish-brown marly sand with fine fibre, stones and some sherds = Phase II.

The results of the 1983 work justify, at least for the present, the retention of the provisional scheme of phases proposed in the last preliminary report

(Kemp 1983; and see Figures 6.3 and 6.4). The actual cutting of the quarry is Phase I; Phase II covers the initial fill of stony earth [79, 80, 83], and above this occurs the first of the erosion steps on the quarry face. The lower of the two organically rich layers lies immediately above [75], becoming Phase III, and again its top is associated with an erosion step on the quarry face. The building of the brick-paved courtyard (Phase IV) followed above this. At this point we have the first dated objects from intact contexts. As noted in the last preliminary report (Kemp 1983: 14) a fragmentary ring bezel from towards the top of the lower midden layer [75], object no. 2898, bears part of the prenomen of Tutankhamun. The validity of this piece has now been strengthened by the discovery of a second Tutankhamun bezel in the sand layer immediately above in the adjacent square, M11. This is object no. 4595 in unit [339]. The stratigraphic linkage created by the excavation within square M11 also makes it likely that two more bezels with the cartouches of, in one case, Smenkhkare, and in the other, Tutankhamun, found during the 1981 excavations, also belong to the lower midden layer, although a certain degree of uncertainty remains (see Chapter 9 for a fuller discussion of the bezels). It thus seems incontrovertible that the reign of Tutankhamun had begun before the bed of clean sand of Phase VI [M10(5)] accumulated. The thick deposit of chaffy layers (the upper midden layer = Phase VII [M10(2-3)]) must thus represent human activity later than this. One hypothesis is that it belongs to the guard community whose existence was discussed in the chapter on the Main Chapel (Chapter 2). The chaffy layers themselves may represent floor material periodically cleaned out from the later animal pens, Building 400 (see Chapter 4.7). The periodic nature of the activity is marked by the sharp divisions between the alternating beds of dusty sand and chaffy material.

The great uncertainty which attaches to this record is how many years should be allocated to the deposition of the clean sand and the subsequent dumping of the upper midden material which itself had followed a periodic pattern. Since the reign of Tutankhamun had already begun before the sand accumulated, a maximum of eight years only is available before one moves into the reign of Ay.

6.5 The extent of the main quarry

So completely has the main quarry been filled with sand and silt that its limits are quite undetectable from visual inspection of the ground. Yet now that a reasonably complete record of quarry stratigraphy has been obtained no further deep excavation into the quarry is planned. The volume of material that it is necessary to remove in order to reach a significant depth without fear of the trench walls collapsing is very great, and thus costly in terms of resources. When the opportunity arose of having a resistivity survey carried out at the site, the outline of the main quarry was chosen as the first priority. A report on this survey is given in Chapter 8. The result is an outline map of the general trend of the quarry edge in the southern part of the site. The edge of the quarry may not everywhere be steep and clear. This became evident in the 1981 excavation of square L8 which exposed a cutting into the bedrock beside the quarry which is very shallow. If the quarry edge

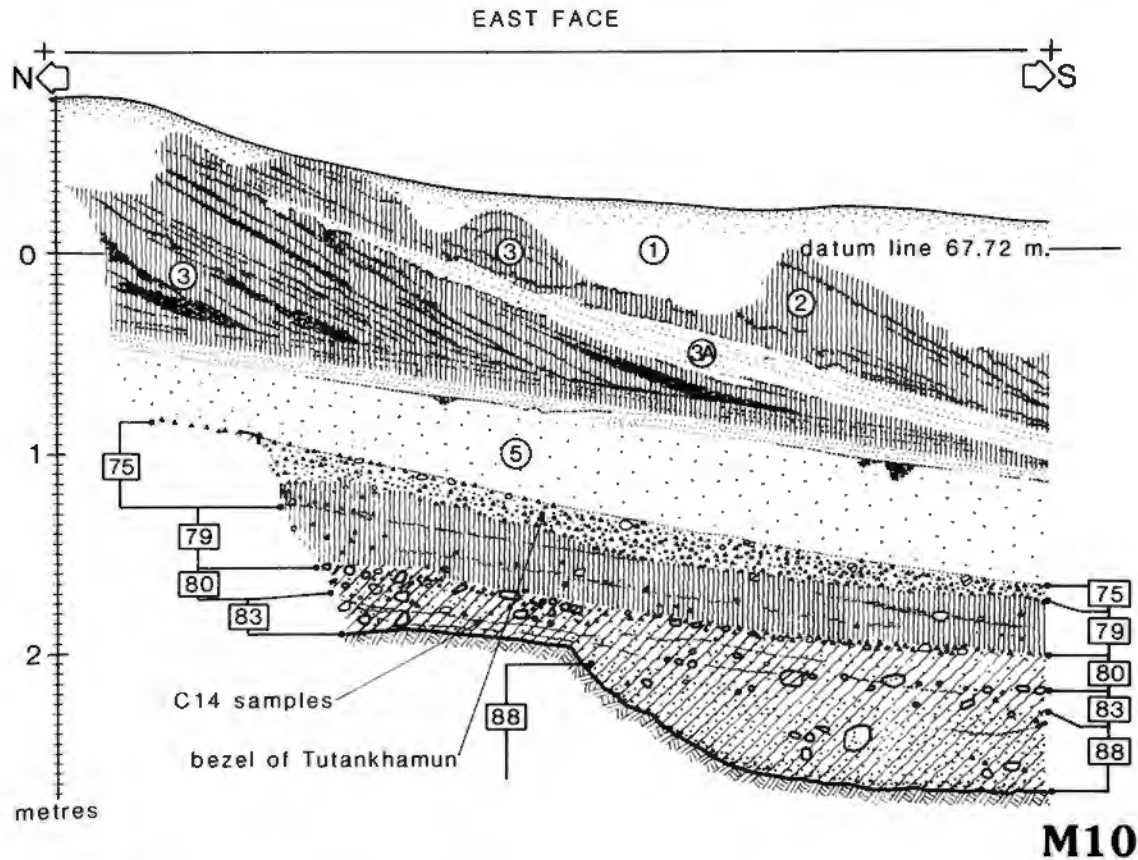


Figure 6.4. Quarry section in square M10.

were to be followed completely by excavation a very irregular and locally complex plan would probably emerge. The resistivity survey has probably greatly generalised the outline, while still providing a general indication of its limits. In view of the enormous saving in expenditure it seems reasonable to accept this outline and not to pursue the quarry edge further by excavation.

For technical reasons, however, (which are explained in Chapter 8), the resistivity survey was unable to operate in the northern part of the quarry where its edge is buried beneath accumulations of loose organic material. It is thus necessary to deduce where it lies from direct topographic observations (Figure 8.12). The remainder of this section is devoted to outlining these. It should be read in conjunction with Chapter 8 and its accompanying illustrations.

The starting point is the group of excavated squares: L8, M9-12, and N9. These reveal the principal quarry edge running more or less north-south across the "M" group. Only in M10 and N9, however, has the deep quarry floor been actually exposed. In square L8 the 1982 excavations revealed the upper part of a stepped edge to the quarry, and this was taken into consideration in plotting the resistivity results.

Northwards, unquarried bedrock close to the surface has been exposed by the excavation of an L-shaped area in square L14, and along the line of squares L15 to N15 (cf. Kemp 1983: 11, Figure 5). This sets limits to the extent

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of the quarry towards the north-west. In squares O15 and P15 the excavations of 1981 uncovered walls belonging to Building 350. In part these were built over the fill of a deep cutting into the bedrock, the floor of which could not be reached. It is likely that this is the northern edge of the quarry, and if so, Building 350, like the brick-paved courtyard, belongs to Phase IV of the general stratigraphic history. Further to the east lie the animal pens of Building 400. Most of these are built on bedrock. The preliminary clearance of superficial deposits in square Q14 at the end of the 1983 season (Figure 4.1) revealed bedrock also along the southern edge of the square [482], although showing signs of dipping to the south. As the map shows (Figure 8.12), the quarry edge must make a sharp turn here.

The principal uncertainty lies in the north-east corner, where no excavation has yet been done. A shallow sand-filled valley runs up towards the chapels, and it has been assumed that this marks an extension of the quarry in this direction, although its width is limited by the stony hill on which Building 540/541 stands (cf. Figure 1.3).