

# SOME REMARKS ON THE EARLY OLD KINGDOM STRUCTURES ADJOINING ON THE WEST ENCLOSURE WALL OF THE NETJERYKHET FUNERARY COMPLEX

Fabian Welc

Further exploration of the area around a rock-cut hypogeum with entrance ramp from the north, excavated in 2004-2005,

were aimed at uncovering accompanying structures in an effort to precise the date of this structure (on the hypogeum,

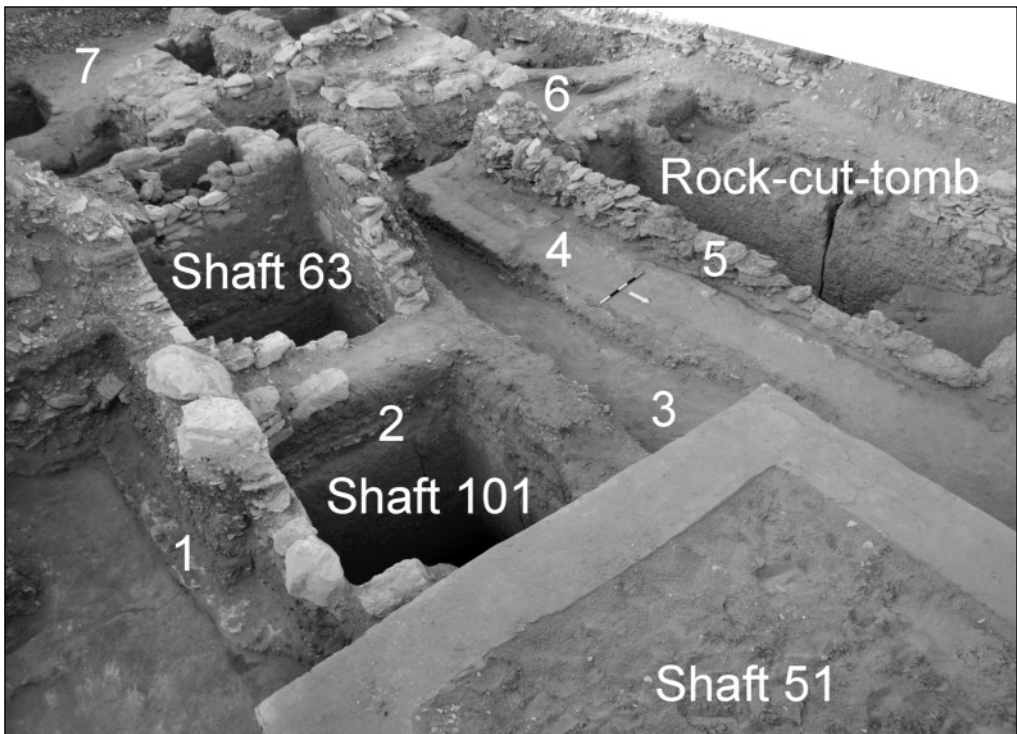


Fig. 1. General view of the area excavated in squares 2002 and 2102, view from the northeast. 1 – eastern edge of Floors 1 and 2; 2 – Floors 1 and 2 visible in the southern wall of shaft 101; 3 – Floor 1 extending directly east of the rock-cut hypogeum; 4 – Floor 2 on its brick bedding; 5 – stone casing of rock-cut hypogeum; 6 – depression hewn in the rock south of the hypogeum; 7 – Floor 3 (Photo F. Welc)

cf. Myśliwiec 2005a: 6-7, 2007a: 160-168; 2005b: 152; Welc 2007: 176-181; Rzeuska 2007: 186-189).

The ground on the eastern side of the corridor containing the entrance ramp to the hypogeum was cleared all the way to the face of the stone foundations of the step pyramid's enclosure wall (eastern part of square 2002, cf. above, Figs 7-8 on 162-163). Also explored was the area immediately to the south of the hypogeum (square 2102).

A full stratigraphic record of layers, both natural and resulting from man's activity, is now available for this part of

the site.<sup>1</sup> The following structures and layers have been distinguished:<sup>2</sup>

- depression hewn in bedrock just south of the rock-cut hypogeum (Square 2102) [Figs 1, 2];
- mud floor (no. 1), east of the rock-cut hypogeum (Square 2002) [Figs 1, 3];
- whitewashed mud floor (no. 2) on brick bedding, east of the rock-cut hypogeum (Square 2002) [Figs 1, 3];
- whitewashed mud floor (no. 3) to the south and southeast of Shafts 95 and 97 (Square 2102) [cf. Fig. 1];
- stone and brick casing of rock-cut hypogeum (Square 2002) [cf. Fig. 1].

## ARCHITECTURAL FEATURES UNDER THE NETJERYKHET ENCLOSURE WALL

The first strata above bedrock is the so-called lower "red layer" composed of pebbles of varied size and singular chips of local limestone. The filler is fine sand of reddish color bonded with lime carbonate (no. 2 in Fig 4). Next stratigraphic unit (no. 5 in

Fig. 4) include a lower layer, composed of crushed local limestone mixed with insignificant amounts of grayish sand, and the one above it, consisting of conglomerated crushed mud brick, sand, grits of limestone and small stones with a character-



Fig. 2. Depression hewn in bedrock just south of the rock-cut hypogeum, view from the west (Photo F. Welc)



Fig. 3. Floors 1 (no.1) and 2 (no. 2) revealed east of the Shaft 101, view from the east (Photo F. Welc)

1 Reaching bedrock, identified here as a local Eocene limestone designated as the Saqqara Member of the Maadi Formation (cf. Said 1962: 99, 322; Handbook 2003: 192).

2 Cf. above, report by K. Myśliwiec, in this volume

ristic grayish-green coloring. Testing under the Netjerykhet enclosure wall proved that these two layers continued eastward for at least 0.50 m (extent of test pit); their northward continuation is suggested by their presence in the north cross section of the excavation area.

On the south, these strata were cut off by a mud-brick wall, uncovered about a meter away from the southern (E-W) cross-section which is the border of the mud-brick platform (Fig. 4). The brick wall stands on these two layers, separated from them by a few-centimeter thick layer of compacted tafl. The test pit dug eastward along this structure indicated that it extended at least 0.40 m in that direction, running directly below the

lowermost blocks of the foundation of the step pyramid enclosure wall. The dimensions of the uncovered section of the wall are: 0.72 m long, 0.35 m wide, 0.20 m surviving height (made up of three courses of bricks, some broken mud bricks on the south side of the wall indicating that it was higher once). The bricks were all: 23 cm long, 11 cm wide, 7-8 cm thick. They were made of Nile silt mixed with plant temper, the latter observed on the sides of the bricks as actual remains and voids. The bond in these three surviving courses consisted of one course of stretchers alternately with a course of two headers and two stretchers [Figs 5, 6]. Bonding the bricks was a tafl-mud mortar. The c. 2-3 cm thick layer of this mortar preserved

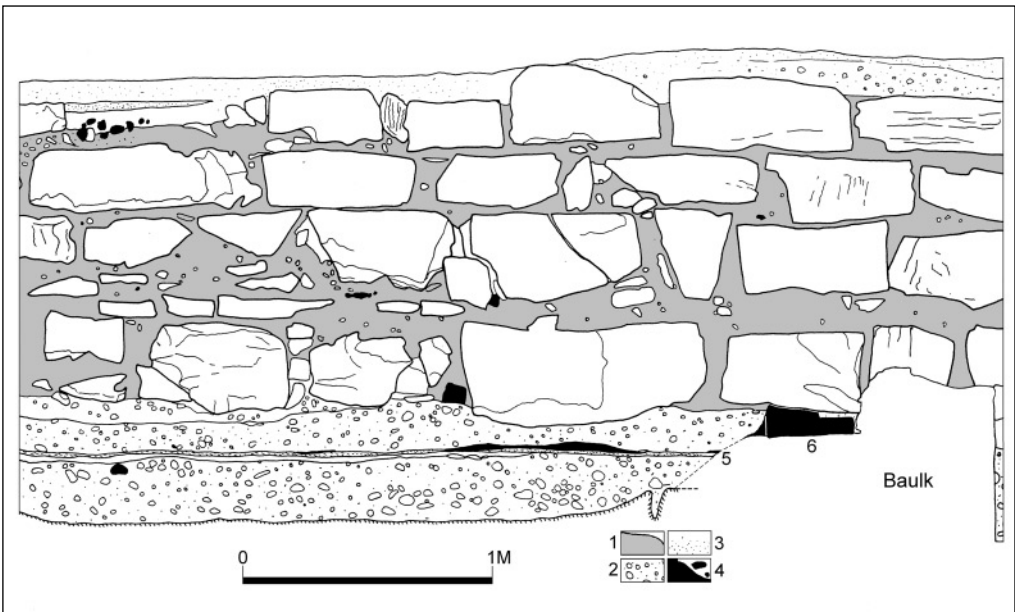


Fig. 4. Stone foundation of the Netjerykhet enclosure wall and remains of the brick wall below it (east cross section). 1 – mortar between blocks of foundation; 2 – so-called “red layers” (upper and lower divided by a layer here marked as no. 5); 3 – sand mixed with fine limestone debris; 4 – crushed mud brick; 5 – crushed local limestone mixed with insignificant amounts of grayish sand and the layer above it, conglomerate of crushed mud brick, sand, limestone grits and small stones (Drawing and interpretation F. Welc)

on the north face of the wall suggests that the wall was originally plastered with it. Interestingly, the ground under the wall had not been leveled, the structure being erected on a layer of tafl rubble (crushed and slaked marl and marly limestone of olive-gray color), in effect of which it rises insignificantly toward the west. The lowest course of blocks in the foundation of the step pyramid enclosure wall rested directly on the remains of this wall. There is no intervening layer, suggesting that these two structures are fairly contemporaneous, thus justifying the dating of this mud-brick wall to the early Third Dynasty.<sup>3</sup> Nothing can be said at present of the structure this wall belonged to.

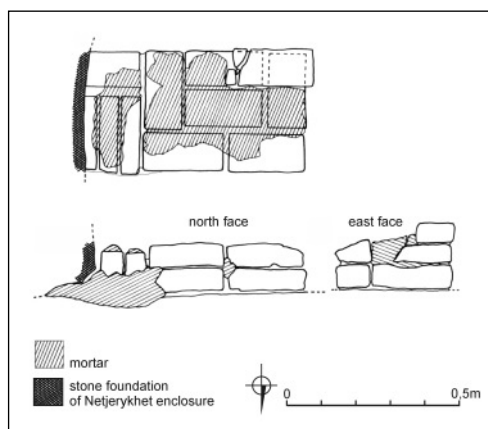


Fig. 5. Mud-brick wall discovered under the stone foundation of the Netjerykhet enclosure wall (Drawing F. Welc)

Immediately on top of the mud-brick structure extends another upper "red layer"<sup>4</sup> of a constant thickness not exceeding 0.30 m and evidently falling toward the east.<sup>5</sup> The stone foundation of the Netjerykhet enclosure wall was raised directly on top of this layer.

These features are clearly the oldest excavated in the context of the rock-cut hypogeum in squares 2002 and 2102.

Floors 1 and 2 extending directly east of the rock-cut hypogeum, are the oldest cultural layers in this area. Their fragments uncovered near the foundation of the enclosure wall are covered with the lower "red layer". Therefore, both Floors can be dated at the latest to the early Third



Fig. 6. Mud-brick wall discovered under the stone foundation of the Netjerykhet enclosure wall, view from the southwest (Photo F. Welc)

- 3 Such dating is confirmed also by size of the bricks of this wall which is very similar to the dimension of the bricks used in Archaic and early Old Kingdom structures erected on the Saqqara necropolis, cf. Emery 1961, 181
- 4 The key lithological constituent in this layer are pebbles of a diameter 1-10 cm (averaging 2-3 cm) and singular fragments of limestone rock measuring 2-3 cm across. The filler is reddish medium and coarse sand, the color coming from the high iron ( $Fe_2$ ) content, bonded with lime carbonate. The elongated pebbles have been observed macroscopically to have an orientation, the direction of which requires further study.
- 5 The lower and upper "red layer" appear to be the result of intensive rainfall causing streams of mud and rubble to flow down the slope, taking with them all the loose material. Similar layers containing an abundance of pebbles have been noted in a number of places on the site: layer 10 (Szafranski 1999: 91, Fig. 2:10); layer 1 (Mycielska-Dowgiałto, Woronko 1998: 107, Fig. 1:1); layer 2 (Mycielska-Dowgiałto *et alii* 1999: 169-170, Fig. 3:2, Phot. 2; so-called gravel layer; Mycielska-Dowgiałto, Woronko 1999: 108, 110, Fig. 4).

Dynasty.<sup>6</sup> This brings us to a reconsideration of the previously proposed dating of the rock-cut hypogeum.<sup>7</sup> The two floors (nos 1 and 2) appear to be in strict connection with the rock-cut hypogeum, especially Floor 2 which rests on a brick

bedding. As for the rock hypogeum, nothing lets suggest that its execution had cut through these floors. Taking this fact into consideration, one can put forward a provisional date for the hypogeum at the beginning of the Third Dynasty.<sup>8</sup>

## STONE AND BRICK CASING WALL OF THE ROCK-CUT HYPOGEUM

A low stone wall with remains of a brick superstructure has been preserved along the eastern, southern and western edges of the corridor to the rock-cut hypogeum (no. 5 in Fig. 1). The stone part was constructed of small irregular blocks of local limestone set without mortar. The wall was raised in at least three independent stages, the first one being a section encasing the southeastern edge of the ramp. The construction technique, as well as the small and irregular limestone blocks used here effectively distinguish this part. The next section of this wall, running along the northern and the middle of the eastern border of the corridor, was made of much bigger and more regular blocks cut from local limestone of a clearly brownish color. Corresponding with the latter stage is a section of the stone wall uncovered on the western side of the corridor, at its northern end. It is very similar in terms of construction technique and material used. Its chronologically latest fragment, a short structure barely a meter long was found between the two walls lining the eastern

edge of the corridor. It looks like a hasty reparation, erected to fill a gap in the wall, probably after intensive rainfall causing streams. The blocks used here are highly irregular and of varied size, laid without mortar, the numerous voids between them filled with small rock rubble and potsherds.

These stages in the construction of the casing wall of the rock-cut hypogeum are confirmed by the relation between this wall and the underlying mud Floor no. 2. All three stages of the wall cut through the Floor 2, the lowest courses of blocks being set in a long and narrow trench with relatively regular edges, much wider next to the northern end of the corridor where flat and thin limestone slabs had been used. The pottery found in the structure of the casing wall consisted mostly of beer-jar fragments from the terminal Old Kingdom period. It is in this period then that the building of the stone and brick casing wall of the entrance ramp should be placed.

The construction of the casing wall indicates that the earlier structure (rock-cut hypogeum) was still in use somehow at

6 The period preceding architectural extension of the pyramid complex to the west and north. Cf. Lauer 1936: 206; 1988: 5 - 11, fig. 1

7 Myśliwiec 2005a: 6-7, 2007a: 160 -161, Myśliwiec 2007b: 83

8 Such a dating is also confirmed by the pottery finds from the neighborhood of the rock-cut hypogeum, cf. below, Pottery report by T.I. Rzeuska in this volume. On the other hand, mastabas with similarly arranged underground parts uncovered in Meidum and Dahshur have been dated to the end of the Third and early Fourth Dynasty. Concerning such a dating of the rock-cut hypogeum see above, contribution by K.O. Kuraskiewicz in this volume, esp. 170.

the end of the Old Kingdom. The wall was evidently meant to stop streams of water flowing down the slope during heavy rains (see also Welc 2007:181).

## REFERENCES

- Emery, W.B.  
1961 *Archaic Egypt*, Edinburgh Handbook
- 2003 G. Papa, Site Environmental Analysis (geology of North Saqqara) [in:] *Handbook for the Environmental Risk Analysis*, F. Ago, E. Bresciani, A. Giammarusti (eds), Edizioni Plus – Università di Pisa, 180-203
- Lauer, J.-P.  
1936 *La pyramide a degrés, I et II, l'architecture, Fouilles à Saqqara*, Service des antiquités de l'Égypte, Le Caire
- 1988 Sur certaines modifications et extensions apportées au complexe funéraire de Djoser au cours de son règne [in:] J. Baines, T.G.H. James, A. Leahy and A.F. Shore (eds), *Pyramid Studies and Other Essays Presented to I.E.S. Edwards [=Occasional Publications 7]*, London: Egypt Exploration Society, 5-11
- Mycielska-Dowgiałło, E., Szafranski, Z.E., Woronko, B.  
1999 Reconstruction of morpho-dynamic processes during the last 4700 years period in archeological site (area I) at Saqqara (Egypt) [in:] *Geoarqueologia i Quaternari litoral. Memorial M. P. Fumanal*, Valencia, 169-170
- Mycielska-Dowgiałło, E., Woronko, B.  
1998 Analysis of mineral deposits in the northern wall of Pit I, *PAM IX [=Reports 1997]*, 107-115
- 1999 Genetic-climatic interpretation of mineral deposits uncovered in section N and sections perpendicular to it, *PAM X [=Reports 1998]*, 107-112
- Myśliwiec, K.  
2005a Eine geheimnisvolle Rampe und Plattform an der Westseite der Pyramide des Djoser, *Sokar 11*, 6-7
- 2005b West Saqqara, 2004, *PAM XVI [=Reports 2004]*, 147-160
- 2007a Saqqara. Archaeological activities, 2005, *PAM XVII [=Reports 2005]*, 155-168
- 2007b Saqqara [in:] *Seventy Years of Polish Archaeology in Egypt [The Book]*, Warsaw, 79-81
- Rzeuska, T.I.  
2007 The pottery, 2005, *PAM XVII [=Reports 2005]*, 182-189
- Said, R.  
1962 *The Geology of Egypt*, Amsterdam–New York
- Szafranski, Z.E.  
1999 Observations on stratigraphy. Northwestern part of Area I/E-F (former Pit I/E-F), *PAM X [=Reports 1998]*, 91-96
- Welc, F.  
2007 Exploration of an Archaic (?) Funerary Structure in Sector 2002, *PAM XVII [=Reports 2005]*, 176-181