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A Reconstruction of Senwosret I's Portico and of Some Structures of Amenhotep I at Karnak

François Larché, CNRS

DEFINITIONS: These architectural terms will be defined as follows:

“+”: altitude above sea level.

Header: a stone block occupying the entire thickness of a wall, that is to say with two visible faces.

Face: The visible surface of a wall.

Doorframe: The slight projection of the doorjambs and the lintel on a gateway which forms a frame around the doorway.

Reveal: The inner reveals are between the rebate and the inner face. The outer reveals are between the rebate and the outer face.

Rebate: A projection of the reveal in order to receive the edges of the doorleaf.

Socle: A raised platform supporting another structure.

Colonnade: A line of columns and their roofing.

Peristyle: A colonnade on the perimeter of a building or courtyard which completely or almost completely surrounds it.

Portico: An open gallery at ground level, but which is not necessarily bordered by a colonnade.

DESIGNATIONS: These designations for architectural structures will be defined as follows:

Senwosret I's portico: This formed the facade of Senwosret I's temple, “le Grand Château d'Amon,” of which there remains no certain vestiges.

So-called “Middle Kingdom” courtyard: The empty space bounded by Hatshepsut's suite to the west and the storerooms surrounding this courtyard to the east, north and south. No Middle Kingdom remains are visible, and it would have been better to name it the “New Kingdom” courtyard. Since, however, this space has long been known as the “Middle Kingdom,” it will be designated here as the so-called “Middle Kingdom” courtyard.

Limestone *radier*: A stone foundation platform covering the entire surface to be built upon. The limestone *radier* refers to the thick foundation (height: 3 cubits) made of thin courses of small limestone blocks, which is buried under the surface of the so-called “Middle Kingdom” courtyard. The blocks are all reused and were produced by cutting off the faces of larger blocks.

Platform: A foundation made of flat blocks of sandstone, limestone and granite, which occupies a small surface of less than 100 m², and built at the west side of the limestone *radier*. The blocks are all reused and at least two limestone blocks are decorated.

Storerooms surrounding the *radier*: A group of 10 storerooms was built around the east, north and south sides of the limestone *radier* from which they are separated by a U-shaped corridor. Set on a thick layer of sand, their foundations are made of two green sandstone courses surrounding the limestone *radier*.

Enclosure tied to the 5th Pylon: This enclosure is made up of four perpendicular walls delimiting a wide rectangular space, the west one being divided by the Pylon. Each half of this west wall is bonded to the Pylon and to the north or south enclosure walls, while the east wall is perpendicular to both the north and south ones. The *Akh-menu* abutts the east face of this east enclosure wall.

Service corridor: The north side of this corridor borders the outer wall of the storerooms

surrounding the limestone *radier*. Its south side is bordered by a range of rooms with or without columns. The corridor leads to the south door of the *Akh-menu*.

Enclosure tied to the 4th Pylon: This enclosure consists of three perpendicular walls delimiting the courtyard between the 5th and 4th Pylons, with the west one being bisected by the 4th Pylon. Each half of the wall is bonded to this Pylon and to the north or south enclosure walls.

Hatshepsut's podium: Similar to a high platform and accessed by several steps, Hatshepsut's podium is the massive structure built three cubits above the pavement of the temple in order to elevate the superstructures (of the *Chapelle Rouge* + her north and south *suites*). The east side of Hatshepsut's podium abutts both the limestone *radier* and the platform.

Hatshepsut suite: These rooms were built by the queen to either side of the *Chapelle Rouge*.

Enclosure tied to the 6th Pylon: This enclosure is made of three perpendicular walls delimiting the space bounded by the 6th Pylon and the limestone *radier*, the west one being divided by the Pylon. Each half of this west wall is bonded to the Pylon and to the north or south enclosure walls, these last two walls being simple veneers leaning against older walls.

Annals' courtyard or axial courtyard of the 6th Pylon: This courtyard is delimited on the west by the 6th Pylon, on the east by Tuthmosis III's vestibule with pillars, and by the cross walls closing the south and north courtyards of the 6th Pylon.

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4. Conclusion

From 2001 to 2007, the Franco-Egyptian center has undertaken new archaeological excavations in the central area of Karnak, between the *Akh-menu* to the east and the 3rd Pylon to the west. The numerous mud brick walls we discovered are giving new insights into the vast complex which spread across this area before the New Kingdom. These ancient structures allowed us to establish that in this area of the temple, the New Kingdom monuments could only have been built after earlier monuments were demolished. A shrewd expert on the temples of Karnak, William Murnane would have been fascinated by all these new discoveries which were made possible after the lowering of the water table successfully implemented by the SCA. During his many seasons in the Ramesside Hypostyle Hall, he constantly shared his knowledge of the temple with me. He taught me never to discard even the tiniest clues, and the example of his meticulous study of the monuments has inspired me to propose these new hypotheses on Senwosret I's and Amenhotep I's monuments.

1. Senwosret's Limestone Portico

The sounding¹ made in 2003 at the north-east corner of the podium on which Hatshepsut's *suite* is set has revealed the limestone corner block of the first course of the *radier* that is still buried under the so-called "Middle Kingdom" courtyard. This block is actually placed 7 cubits (1 cubit = 52.5 cm) east of the location proposed in a recent hypothesis² which identified the limestone *radier* with the foundation of Senwosret I's temple, the "Grand Château d'Amon." This temple, of which there remains very few dismantled remnants of the facade's portico, will henceforth be named more modestly as "Senwosret I's portico." In Gabolde's hypothetical reconstruction, the portico is placed 7 cubits west of the joint between Hatshepsut's podium and the limestone *radier*, but the north-west corner of this *radier* should have been located at the base of the left anta of the facade's portico and not 3.7 m further east.

In reality, the block discovered at the north-west corner of the limestone *radier* bonds the north side of the first course of the *radier*'s foundations to the west side of this first course of the same *radier* (fig. 24a-b). In Gabolde's hypothesis, whereby the limestone *radier* should be the foundation of Senwosret I's temple, shifting the *radier*'s west side to the east would then oblige the portico on its facade to line up with the north-west corner block of the *radier*. Therefore, this move challenges some of the arguments on which Gabolde's hypothetical reconstruction of the "Grand Château d'Amon" are based, and it was essential to reexamine the remnants previously discovered in the so-called "Middle Kingdom" courtyard in connection with the architectural vestiges of Senwosret I's portico.

1.1. The Limestone *Radier* is too Short Westward to Place Senwosret I's Portico

In Gabolde's hypothesis for the placement of Senwosret I's temple, the facade's portico is set at the location of the eastern part of Hatshepsut's *suite*³. He has also argued that Hatshepsut would have dismantled the Osirian pillars⁴ of the portico's facade in order to

¹ G. Charloux, "Karnak au Moyen Empire, l'enceinte et les fondations des magasins du Temple d'Amon-Rê," *Karnak 12* (Paris: ERC, 2007), pp. 191-204.

² L. Gabolde, *Le "Grand château d'Amon" de Sésostri I^{er} à Karnak* (Paris: Diffusion de Boccard, 1998).

³ *Ibid.*, pl. I.

⁴ The Osirian pillar n° 11 was discovered by G. Legrain buried below the south courtyard of the 5th Pylon, very close to the sandstone elements of Senwosret I's colonnade, the latter having been reused in the foundations of Tuthmosis I's colonnade. The clearing by O. de Peretti and Emmanuel Lanoë of the pit where this pillar was buried seems to show that it was reused at the same time as other elements of Senwosret I, but not during the construction of the 6th Pylon and its enclosure. This indicates that the latest possible date that Senwosret I's portico could have been dismantled was under Tuthmosis I.

attach the east face of her *suite* to the portico's back wall.⁵ According to this hypothesis, the construction of Hatshepsut's podium would have required the destruction, to a depth of seven cubits, of six courses forming the west side of the limestone *radier*. Therefore, while the observation of the vestiges of this west side does not confirm this destruction to such a depth (3.7 m), it nevertheless shows that ~ 50 cm of the edge of the west side was sliced off, with this excision stopping exactly at the base of the west face of the original structure that rested on the *radier*.

The north-west corner block of the *radier* (fig. 24a-b)

The actual position of the limestone block forming the north-west corner of the first course⁶ of the *radier* which occupies the so-called "Middle Kingdom" courtyard, is incompatible with Gabolde's proposed placement⁷ of the facade of Senwosret I's temple.⁸ Indeed, in order to set this corner block in place, (and probably the whole first course), the builder had to level a former mud brick structure. This destruction was made only under the surface of the block to be placed, since the vestiges of the brick structure are still visible against the west and north faces of the corner block. These *in situ* bricks indicate that, well before the construction of Hatshepsut's podium, the *radier*'s first course did not spread further west of the corner block or further to the north.

The slicing of the *radier*'s west edge

Observation of the cross joint that separates the east face of the north half of Hatshepsut's podium from the west side of the limestone *radier* (figs. 36-37) has shown that Hatshepsut had cut a slice (50 cm deep) away from the *radier*'s west face while keeping its first course intact. Although the podium is built against the *radier*, vestiges of the *radier*'s west side make it possible to see traces of this excision. A photograph of the east face of the north half of Hatshepsut's podium (fig. 25) shows that the east edge of the bed face of the sandstone blocks of the podium's first course rests on the west end of the top face (+73.09 m) of the limestone blocks of the *radier*'s first course. This overlap of about 50 cm has been confirmed on the north-west corner block of the first course of the *radier*, where this limestone block is partially covered by a sandstone block that forms the north-east corner of the podium's first course (fig. 24).

Hatshepsut's podium having thus been built slightly inside (~1 cubit and not 7 cubits as in Gabolde's reconstruction) the west side of the limestone *radier*, it is not possible to shift Senwosret I's portico westward and therefore outside the *radier* which was supposed to be its foundation. In another hypothesis,⁹ whereby the portico would be effectively placed plumb with the *radier*'s west side, it becomes difficult to imagine how Hatshepsut's *suite* could have leaned against a line of Osirian pillars of which no traces exist on the *suite*'s back face on either side of the the axis.

⁵ The east side of Hatshepsut's podium has, at the base of its setting course, a horizontal groove carved at different levels. On the north half, this groove is lined up with the granite threshold n°1, while on the south half, it is cut much lower (giving it the appearance of "stairs" at different levels) but not along the entire length of the course. Between the south half of Hatshepsut's podium and the red sandstone blocks, the limestone blocks of the 5th course of the *radier* are still in place. Their layout shows that the groove (with "stairs") was carved intentionally in order to join the podium to the courses of the limestone *radier*. This irregular groove could not have been used to attach Hatshepsut's podium to an hypothetically projected dado that would have adorned the base of the back wall of Senwosret I's portico. F. Larché, "Nouvelles observations sur les monuments du Moyen et du Nouvel empire dans la zone centrale du temple d'Amon à Karnak," *Karnak 12* (Paris: ERC, 2007), pp. 407- 499, pls. 24, 34.

⁶ G. Charloux, *Karnak 12* (Paris: ERC, 2007), pp. 191-204, pl. 16, fig. 22.

⁷ Gabolde, *Le "Grand château d'Amon,"* pl. I; *ibid.*, Charloux, pp. 191-204, pl. 19, fig. 27.

⁸ Larché, *Karnak 12* (Paris: ERC, 2007), pp. 407- 499, pl. 20.

⁹ Charloux, *Karnak 12* (Paris: ERC, 2007), pp. 191-204, pl. 20, fig. 28.

1.2. The Original Decoration on the South Outer Face of the Hatshepsut Suite

Several anomalies have appeared in the hypothetical reconstruction which joins to Senwosret I's portico a representation of this king, carved in sunk relief at the east end of the outer face of the south wall of the Hatshepsut suite, in continuity with Tuthmosis III's *Texte de la Jeunesse* (fig. 1).

Traces of Hatshepsut's original decoration are still visible on two of the three outer faces of the suite she built. This decoration was in sunk relief on the north side where it has been erased, except for its west end which was hidden by a doorjamb of Tuthmosis III.

On the west face, the original decoration has been replaced by a new one in sunk relief, and it is impossible to determine if the original was raised or sunken relief. South of the bark chapel, the present decoration is sunk relief in Tuthmosis III's name,¹⁰ while to the north it is also sunken but seems to date from Sety I.¹¹ This later decoration has clearly replaced an older one, also sunken, remnants of which are still visible along the north face of the north wall of the *Annals'* courtyard. No clue permits their attribution to either Hatshepsut or Tuthmosis III, who could have also erased an older decoration by Hatshepsut. To the north, the only clue for this erasure is the trace of its thickness which is delimited by the facade's building-line, well incised on the podium's edge. The 4 centimeters (5 near the north-west corner) which separates this building-line from the present face, indicates a thin excision of the facade made after its construction.

Unlike the north side, the decoration of the south was in raised relief.¹² At its west end, an Amun figure is still visible carved in raised relief, although partially covered with Tuthmosis III's throne in sunk relief. The representation of this seated king marks the beginning of the *Texte de la Jeunesse*.¹³ It seems impossible, then, to connect this original decoration with the sunk relief decoration of the outer face¹⁴ of the anta of the limestone portico (as L. Gabolde has reconstructed it) in order to form the facade of Senwosret I's temple because the original decoration is in raised relief and is laid out on several registers.

1.3. The Hypothetical Superimposition of Two Similar Scenes with Different Proportions

The figure of Senwosret I, carved on Hatshepsut's sandstone wall surface, is larger than the one decorating the limestone anta that it is supposed to have replaced. The hieroglyphs carved in the limestone version are more tightly spaced than those carved in the sandstone edition. The king's feet are not placed at the same level in relation to the text. The cut of the blocks on the right joint of the sandstone face does not fit exactly with the one on the left joint of the limestone anta.¹⁵ Together, these four discrepancies make the proposed

¹⁰ *Urk.* IV, 852; P. Barguet, *Le temple d'Amon-Rê à Karnak* (Cairo: Imprimerie de l'Institut Français d'Archéologie Orientale), p. 127.

¹¹ *Ibid.*, Barguet, pp. 121-122.

¹² The original decoration being in raised relief on the west end of the wall, it is tempting to reconstruct this style of decoration on the whole south face. However, one cannot definitively dismiss the hypothesis that Senwosret I's figure was carved in sunk relief by Hatshepsut on the east half of the south face or that both styles of relief appeared on the same wall.

¹³ The *Texte de la Jeunesse* having replaced Hatshepsut's earlier decoration, it is likely that this text was carved after the *Chapelle Rouge* was dismantled.

¹⁴ Gabolde, *Le "Grand château d'Amon,"* §51: "La paroi sud présentait une grande scène d'audience royale. Elle était bordée à droite par un grand texte qui se prolongeait sur le mur sud de la cour du Moyen Empire, selon une composition reproduite à trois reprises par Tuthmosis III" and §59: "Les blocs en calcaire de Sésostri I^{er} n'en conservent qu'une partie de la première colonne, tandis que la copie à l'Est du texte de la jeunesse n'a gardé en plus que quelques bribes peu exploitables de la seconde... Toute la suite a disparu avec le reste du temple du Moyen-Empire."

¹⁵ *Ibid.*, pp. 28, §38-39.

superimposition of the two scenes representing Senwosret I seated under a canopy impossible in reality (figs. 2-3).

Tuthmosis III carved this representation of Senwosret I followed by an important text of which only two columns remain. The rest of the text should not have covered the whole face of the missing limestone wall, whose east end probably showed Amun accompanied by other divinities. The Berlin leather roll (3056, verso, VIII, 4-5) evokes a similar scene where Amun and Thoth are shown on the wall named “*Kheperkare is pure in Amun’s temple.*”¹⁶

1.4. The Change in Direction of Senwosret I’s Portico

The new placement of the Osirian pillar n°11 (fig. 4)

The white crown of the Osirian pillar¹⁷ n°11 (Cairo Museum JE 48851) allows it to be placed on the south half of the portico as has already been proposed.¹⁸ However, the scenes on the three decorated faces of this pillar do not permit its placement at the east end of the portico, facing the south anta, as Gabolde suggests. Whereas the left face of the Osirian pillar and its back face are decorated with the king facing Amun, its right face shows a walking figure of a lone king wearing the *atef*-crown (fig. 7). Representations of this type are always found framing passages for processions, as can be seen all along the east-west axis of the temple, from the 2nd Pylon to the *Akh-menu*. The lone king always holds his walking staff obliquely on the right of the passage, while the staff is vertical on the left¹⁹ as it has been verified in the following passages (figs. 12-13):

- the reveals of the doorways of the 2nd (fig. 12.4) and 5th Pylons (fig. 12.3),²⁰
- the opposite faces of the two axial pillars of the bark chapel’s vestibule, (fig. 13.6),²¹
- the opposite faces of the four axial pillars of the *Akh-menu*,²²
- the outer doorframe of the north door of Tuthmosis IV’s calcite chapel,²³
- the west doorframe of the inner door of the *Chapelle Rouge*,²⁴
- the west doorframe of the east door of the southern *W3dyt*-hall, (fig. 12.1)
- the doorframe, turned towards the axis, of the two doors opened in the walls linking the so-called “granite arch” to the 6th Pylon.²⁵

One can also observe this layout on the third terrace of Deir al-Bahari, on the doorframe of the sanctuary’s door as well as on the door of the Hathor shrine.

With passages located on the north-south axis as well as on the east-west one, it is not possible to identify the position of the staff (vertical or oblique) with a geographical direction (north or south). In fact, this position (vertical on the left of the passage and oblique on the right) seems linked to the gesture that the king is making with his right hand while the left one holds the staff and a mace.

¹⁶ Barguet, *Karnak*, p. 156, n. 4.

¹⁷ *PM II*², p. 89; Cairo Museum (JE 48851) and Gabolde’s numbering: n°11 (*Le “Grand château d’Amon,”* p. 63, n. 92).

¹⁸ *Ibid.*, Gabolde, pl. I.

¹⁹ Cl. Traunecker, Fr. Le Saout, O. Masson, *La chapelle d’Achôris à Karnak II* (Paris: Éditions ADPF, 1981), p. 53: in his observations concerning the consecration of meat offerings, Cl. Traunecker remarks that the obliquity of the staff results from the ritual liturgy which requires the king to speak with one hand extended outwards.

²⁰ Barguet, *Karnak*, pp. 54 and 110.

²¹ *Ibid.*, p. 131.

²² J. –Fr. Pécoil, *L’Akh-menou de Thoutmosis III à Karnak* (Paris: ERC, 2000), pls. 45, 47, 49. Near the solar chamber, the fifth pillar is decorated with a lone walking king. B. Letellier showed me that this lone king was recharged above an earlier scene where Tuthmosis III faced a deity, as on the other faces of this pillar.

²³ N. Grimal, F. Larché, “Karnak 1994-1997,” *Karnak 11* (Paris: ERC, 2003), p. 59, pl. VIIb.

²⁴ P. Lacau, H. Chevrier, *Une chapelle d’Hatshepsout à Karnak* (Cairo: IFAO, 1977), p. 395, §708; F. Burgos, F. Larché, *La Chapelle Rouge d’Hatshepsout*, vol. 2 (Paris: ERC, 2008), pp. 272-273.

²⁵ E. Arnaudès-Montelimard, “L’arche en granit de Thoutmosis II et l’avant porte du VI^e pylône,” *Karnak 12* (Paris: ERC, 2008), pp. 148-149.

According to Gabolde's hypothesis, no door opened in the back wall of the portico, next to its angle with the right anta. Such a door would have justified the position of the Osirian pillar n°11 facing the south anta if the anta's inner face was also decorated with a lone walking king, facing a matching scene on the pillar. As this is clearly not the case, because the anta is decorated with a completely different scene, this pillar should therefore be moved to its true place alongside the only passageway of Senwosret I's portico, that is to say to the left of the axial passage. This new position of the Osirian pillar n°11 orients the colossus' white crown to the left side of the passage, and prevents the placement of the left half of the portico to the north of the axis. The white crown indicates clearly that the position of this Osirian pillar is to the south of the passage, and excludes a westward facing orientation for the portico. At El-Lisht, six Osirian pillars in limestone leaned against the walls of a large courtyard in front of Senwosret I's pyramid. Their position north and south of the courtyard was indicated by the red or white crown, and it is very likely that at Karnak red crowns, of which no vestige remains, topped the Osirian colossi abutted against the pillars placed north of the portico's axis.

The new placement of the Osirian pillar n°15 (fig. 7)

A fragment of the face of a pillar is decorated with the lower part of the oblique staff of a lone walking king. His direction allows its hypothetical attribution to the left side of the fragmentary Osirian pillar (*MBAIL* 17, n°15, pls. XXIV-XXXV) and its placement to the right of the axial passage,²⁶ facing the Osirian pillar n°11. The lone king holds his staff vertically on the Osirian pillar n°11, while the staff is oblique on fragment n° 15 facing it. The face-to-face orientation of these two pillars on both sides of the axis thus seems well confirmed by the position of the staff in the hand of the lone king.

Eastward orientation like the contra temple of Tuthmosis III

On the antas of the portico, the king always seems to wear the double-crown, to the north as well as to the south (Gabolde, *Le "Grand château d'Amon,"* pls. V, VI, XIII, XIV). This crown is still visible on the outer face of the right anta and on the facade of the left anta (figs. 2, 15).

At Karnak, the position of the crowns of kings not facing west allows Senwosret I's portico to face either eastwards or northwards but certainly not southwards. Osirian pillars facing east are not rare at Karnak, especially to the east of the temenos, where they can be observed in the temple of "Amun who hears prayers" as well as in Tuthmosis III's contra temple which abuts the east wall of the *Akh-menu*. The contra temple originally consisted of a portico of six free standing Osirian pillars without the low walls that linked them later (figs. 10-11).²⁷ The three decorated faces of each pillar display scenes similar to the ones carved on Senwosret I's Osirian pillars. Unfortunately, the Roman restorations made to the reveals of the axial passage, that is to say the face-to-face sides of the two Osirian pillars framing it, prevent us from seeing the original decoration which should have been a lone walking king. On the other hand, the king's direction on the back face of each of the pillars located south of the axis corresponds exactly with the king's direction on the back face of pillar n°11 that has been replaced to the left of the axis. The direction of the walking king proceeds towards the

²⁶ The existence of a double portico, (explained further below), allows a second placement for fragment n°15 in the median pillar under the portico to the right of the axis.

²⁷ A. Varille, "Description sommaire du sanctuaire oriental d'Amon-Rê à Karnak," *ASAE* 50 (1950), pp. 137-172, pl. XLI.

Barguet, p. 221: "Les six piliers osiriaques renouvelés par Séti I^{er}, ont été usurpés par Ramsès II. La porte d'entrée a été ornée d'un texte par Domitien, où l'on peut reconnaître une sorte d'hymne au soleil levant."

back of the portico, following the perimeter of the pillars until it returns to the axis of the portico (fig. 11).²⁸

The similarity of the decoration of Senwosret I's Osirian pillars to those of Tuthmosis III's contra temple incites that Senwosret's pillars also faced east.

Placement of the portico

It is still impossible to determine if the original building site of Senwosret I's portico was close to the findspot of Osirian pillar n°11, which was found below the 5th Pylon's south courtyard with sandstone drums and architraves of the same king (figs. 20-23). Their reuse by Tuthmosis I indicates that Senwosret I's temple no longer existed during his reign. It should be noted that all the other limestone fragments of Senwosret I's portico were discovered further west. At present, the evidence does not permit a connection between the limestone portico and the sandstone colonnade.

1.5. The Existence of a Double Portico

The two preserved headers of the upper part of the portico's right anta are joined and are perpendicular to the facade's corner architrave.²⁹ These three blocks supported the roof of the portico's corner. On both inner faces of the joined headers, the horizontal frame which supports the *Kheker*-frieze, turns at a right angle to go down along the two vertical edges (figs. 8-9).

To the right, the frame runs vertically along the inner face of the facade's architrave before turning at 90° to border horizontally the soffit of the same architrave.

To the left, the frame runs vertically along another face,³⁰ like the same type of border seen in the porticos of Hatshepsut's temple at Deir al-Bahari. In this temple, the double range of architraves of the portico which forms the vestibule of the Anubis chapel is directly embedded into the side wall without the support of abutted pilasters (fig. 9). The embedding of the middle architrave into the wall is framed, along its soffit and both vertical faces, by the frame which supports the *Kheker*-frieze. A similar layout probably existed in Senwosret I's portico where the vertical frame carved to the left of the two joined headers lets us suppose the existence of a second range of architraves supported by pillars rather than by a back wall as has been reconstructed at this location in Gabolde's hypothesis.

Moreover, the embedding of an intermediary architrave at this location is confirmed at the top face of the side wall by the layout of the left header.³¹ The left cross joint of this header is cut to the shape of a right angle and its top face is hollowed out with a mortice in order to receive a bonding clamp with a perpendicular block (fig. 9). If such a deep excision of the cross joint is unusual for the simple need to bond the course of a perpendicular wall, it can be perfectly justified to embed an architrave perpendicular to the anta (figs. 8-9).

Parallel to the facade, this second range of architraves could be supported by simple square pillars that Gabolde's hypothesis reconstructed inside a courtyard placed behind Senwosret I's portico (Gabolde, *Le "Grand château d'Amon,"* pls. XXXVIII-XXXIII). Each square pillar (height: 8 cubits) would then stand behind each Osirian pillar (height: 9 cubits) of the facade (figs. 5-6, 14-17).³² Each Osirian pillar is one cubit higher than the square one, but this difference is easily explained because the Osirian colossi abutting the pillars of the facade stand on socles (height: 1.5 cubits). On the other hand, the blank dado across the four

²⁸ In Sety I's temple at Abydos, the portico facade is different since it consists of only one row of pillars without attached Osirian colossi. On the inner face of each pillar, the king walks towards the axis of the temple.

²⁹ Gabolde, *Le "Grand château d'Amon,"* pl. IX.

³⁰ L. Gabolde sees this as proof of the portico's depth (3.03 m), and therefore, the position of its back wall.

³¹ *Ibid.*, block n°5, pls. X and XL; CFEETK neg. 43091-5.

³² M. Boccon-Gibod, "Le grand temple d'Amon-Rê à Karnak reconstruit par l'ordinateur," *Les dossiers de l'archéologie* 153 (October 1990), p. 12: two ranges of pillars are proposed here as a hypothesis.

faces of each square pillar, from its base to the start of the decoration, is about 90 cm high while it reaches 140 cm on the Osirian pillars. This 50 cm difference (1 cubit) corresponds to the height of the podium on which the portico (and the square pillars) was built. Since the socle (height: 1.5 cubits) supporting each Osirian colossus is higher than the podium (height: 1 cubit), the feet of the colossi were placed only half a cubit above the podium. A staircase of four steps equal to the podium's height was necessary to reach the double portico's floor. It is not impossible that the whole complex stood on another higher podium like Montouhotep II's funerary temple at Deir el-Bahari.

In adding the architrave (height: 2 cubits) and the cornice (height: 1 cubit) to the Osirian pillar (height: 9 cubits), the height of the facade reached 12 cubits (figs. 14-17).

1.6. The Date and the Reason for the Dismantling of Senwosret I's Portico

Although the Osirian pillar n°11 was most probably reused by Tuthmosis I to fill in the 5th Pylon's south courtyard, L. Gabolde attributes to Hatshepsut the dismantling of the portico's pillars, at the time of the construction of her podium which supported the *Chapelle Rouge*, between the Queen's north and south *suites*. Among his arguments, one³³ relies on the re-carving of a king's figure on one face of the square pillar n° 20 (fig. 6). He recognizes Tuthmosis II's profile, although the shape of the nose, which is straight and short, does not seem to be a convincing enough criteria to attribute the relief to this king, whose portrayals are rare.³⁴

It may well be the case that this modification of pillar n° 20 was made prior to or at the very beginning of the 18th Dynasty. Since the lack of a royal beard is very common in reliefs on Amenhotep I's limestone blocks,³⁵ it is tempting to attribute the profile to him, since he could have easily reused some of Senwosret I's pillars in his new sanctuary. In fact, at least ten blocks of Amenhotep I are in hard limestone, of which three show palimpsest traces of older relief decoration. Two limestone patches were, moreover, inserted into one face of pillar n°20, witness to the incautious handling of the monolith.

³³Gabolde, *Le "Grand château d'Amon,"* p. 78, §115: "Un des piliers de Sésostri I^{er} présente, par ailleurs, une double retouche particulièrement révélatrice: dans un premier temps, l'espace compris entre ce pilier et son voisin fut comblé par une maçonnerie, puis une scène, de module plus réduit que l'original et placée beaucoup plus haut, fut regravée tant sur le pilier que sur le mur de comblement qui avait été élevé tout contre. Comme cette maçonnerie, que l'on est bien obligé de restituer pour compléter la scène, était fatalement venue masquer la face adjacente, bien décorée, elle, dans le style de Sésostri I^{er}, on est amené à conclure que le comblement de l'entrecolonnement et la gravure de la nouvelle scène sont selon toute vraisemblance postérieurs à son règne. Quoi qu'il en soit ce décor de petit module fut à son tour arasé, de manière assez sommaire, à coups de ciseaux grossiers. Après un lissage au plâtre, une nouvelle représentation de roi, cette fois-ci de grand module— ce dernier est identique à celui adopté pour les figure humaines sur les autres faces— lui fut substituée. Comme cette nouvelle intervention remettait plus ou moins cette face en conformité avec les autres et reprenait une composition du pilier, il faut supposer que cette phase correspondit à la réouverture de l'entrecolonnement. Les caractéristiques du nouveau relief, très plat— très différent, en cela, des canons artistiques d'Amenhotep I^{er}— et des particularités des traits du visage, avec, notamment, un nez court et droit— permettent d'attribuer avec beaucoup de vraisemblance la retouche à Tuthmosis II: le monument était donc encore debout pendant son règne."

³⁴The recent discovery, at the base of Hatshepsut's north obelisk, of a niche with two statues of Neferhotep, a king of the XIIIth dynasty, has shown a certain flexibility to stylistic characteristics. Indeed, before Neferhotep's cartouche was exposed, the iconography of the kilt and (except for the ears) the style of the face, seemed to indicate that the niche dated from the beginning of the 18th dynasty. For Thutmosis II's reliefs, see K. Myśliwiec, *Le portrait royal dans le bas-relief du Nouvel Empire* (Warsaw, 1976), pp. 42-45 and figs. 39-41, 45-46.

³⁵Amenhotep I never wears a beard on his calcite bark shrine now restored in the Karnak open air museum.

The state³⁶ of preservation of the portico's blocks indicates a the rising water table was probably one of the reasons for dismantling the Middle Kingdom monuments,³⁷ of which the lower part of the walls were very damaged and weakened. This idea seems justified, although another cause could just as well explain the destruction of the lower part of the White chapel. Indeed, one would expect a socle, slightly larger than the base of the main structure, under the first preserved course of the chapel's limestone blocks, but this is missing. It is possible to reconstruct a foundation system similar to that of Hatshepsut's *Chapelle Rouge*, which was standing on her podium. Here too, one could have had two superimposed podiums, the upper one being the only one preserved. Two large blocks forming the sides of another small chapel of Senwosret I that were retrieved from the 9th Pylon give confirmation that the Middle Kingdom edifices had been flooded: a graffito from the beginning of the 18th Dynasty mentions that “*in year 5, 2nd month of Akhet, day 12, the level of the Nile inundation*” had been observed by “*the chancellor of the king of Lower Egypt, the general-in-chief Ah[mès],*” and that it had reached the base of the chapel's walls.³⁸

1.7. Blocks of Senwosret I's That Do Not Come from the Portico's Facade

A number of other blocks naming Senwosret I's that were found at Karnak have no direct connection with the portico's facade.³⁹

Two limestone chapels:

- *The White chapel* was almost entirely reused in the 3rd Pylon's foundations, except for the pillars which were discovered under the Hypostyle Hall.⁴⁰

³⁶ Gabolde, *Le “Grand château d’Amon,”* p. 137-138, §214: “La base des quatre faces du pilier à colosse osiriaque, tout comme la partie inférieure du pilier carré du Musée du Caire sont profondément rongées. Par ailleurs, dans la ‘Cour de la Cachette,’ le moignon de pilier dressé verticalement est encore largement attaqué à la base. Les deux premiers de ces monolithes retrouvés couchés horizontalement sous le sol du temple, n’ont pas pu subir les dommages qu’ils présentent pendant la période où ils sont demeurés enfouis, car toute la surface aurait alors été atteinte. Au contraire, le remblai qui les recouvrait constituait un milieu suffisamment sain pour que leurs couleurs aient résisté jusqu’à leur mise au jour par G. Legrain (*BIE* 4/3, 1902, p. 162). Il est donc clair que les dégradations sont antérieures à l’enterrement des blocs et donc antérieures au règne de Tuthmosis III. On relève encore qu’à peu près aucun des blocs de la base des parois n’a subsisté, comme si cette partie des murs avait particulièrement souffert. Seul le relief avec la ‘montée royale’ appartient à une première assise. Il présente justement, à sa partie inférieure, des zones de desquamation et des taches dues aux migrations salines, qui sont accompagnées d’un écaillage de la pierre (n. 120: Cette dégradation apparaît sur tous les clichés anciens ... On remarquera encore que les parties basses de la chapelle blanche de Sésostri I^{er} ont presque entièrement disparu. A l’inverse, les parties supérieures des parois et les architraves sont en relativement bon état et ne montrent en tout cas aucune des desquamations observées sur les parties basses de l’édifice... §216: Que l’eau soit responsable des dégâts est évident à l’examen des vestiges... Un texte de Sobekhotep VIII rapporte ainsi que le flot avait atteint sous son règne la cour même du temple d’Amon: ‘Sa Majesté se rendit dans la cour de ce temple pour regarder le grand Nil venu pour sa Majesté. La cour de ce temple étant remplie d’eau, sa Majesté se mit à patauger en compagnie de ses courtisans’ (L. Habachi, “A High Inundation in the Temple of Amenre at Karnak in the Thirteenth Dynasty,” *SAK* 1 [1974], p. 209 et W. Helck, *KÄT*, pp. 47-47, n° 63).”

³⁷ In an unpublished study, Cl. Traunecker remarks that a similar situation happened at Coptos, as the work of Sennucheri shows: see I. Guerneur, “Glanures,” “La statue d’Esnou(n),” *BIFAO* 103 (2003), p. 286, line x+18). The passage in question relates to problems with the water table. The evidence indicates that during the 17th Dynasty and at the beginning of the 18th, it was essential that action be taken to deal with the problem of damage to the temple caused by high annual inundations and the water table.

³⁸ Cl. Traunecker, “Rapport préliminaire sur la chapelle de Sésostri I^{er} découverte dans le IX^e pylône,” *Karnak 7* (Paris: ERC, 1982), pp. 121-123.

³⁹ Gabolde, *Le “Grand château d’Amon,”* pp. 119-120, § 189.

⁴⁰ H. Chevrier, “Rapport sur les travaux de Karnak,” *ASAE* 28 (1928), p. 123: “Ce fut ensuite un pilier de Sésostri I^{er}, en calcaire, découvert [dans la salle hypostyle] à côté du grand linteau de l’an passé... Sous le mur Est, au droit d’une niche de mâit, on a découvert un autre pilier qui se trouve être le voisin de celui découvert dans le III^e pylône sous l’autre mur de parement.” It is possible that the blocks of the White chapel discovered in the foundation of the 3rd Pylon were buried here before the construction of the Pylon. It is also possible that these

- A bark shrine was found reused inside the 9th Pylon's fill.⁴¹

Two large limestone gates probably embedded in a stone wall:

- *Lintel*: 7 fragments of a limestone lintel⁴² have been reassembled in the Open Air Museum near Amenhotep I's calcite shrine. They form the upper half of a doorway lintel, decorated with a scene depicting Senwosret I enthroned above the *Sema-tawy* between Horus and Seth. When the lintel was dismantled, it was cut up into blocks which were then turned 180° and then reused inside a lintel of Amenhotep I built into a battered stone wall, as the well planed side joints seem to indicate. At the level of the lintel, the doorframe's length was 3.10 m (6 cubits) under Senwosret I, but was 3.46 m under Amenhotep I. This allows us to reconstruct the width of the vertical doorframe as 1.5 cubits, and of the doorway as 3 cubits under Senwosret I and Amenhotep I, while the height of the doorway can be estimated as being 7 to 9 cubits. The decoration of both lintels (Senwosret I and Amenhotep I) represents the king wearing the red crown on the left. In the hypothesis where both doorframes would be exterior ones and not interior ones, this king would be to the north, implying that the door itself faced south or west. Although one does not know if this lintel was really found inside the 3rd Pylon, two reconstructions can be proposed: either this lintel belonged to the doorway of the structure that the 6th Pylon replaced, or it belonged to a doorway on the southern axis. The blocks from Amenhotep I's doorjambs and counter-lintel have now been identified (fig. 40: the 2 lines N+S of 16 niches).⁴³

- *Counter-lintel* (length: 364 cm; height: 136 cm; passage: 187.6 cm): carved in sunk relief, this counter-lintel was found in the foundations⁴⁴ of the south courtyard between the 4th and the 5th Pylon, and not in the *Cachette* courtyard. Rebuilt in the Open Air Museum, behind the White Chapel, this counter-lintel was built into a battered stone wall, as its perfectly planed side joints indicate. At the level of the counter-lintel, the doorframe's length (7 cubits) implies a doorway width from 3 to 4 cubits. The stars decorating the soffit of the counter-lintel indicate that this block belongs to the inner face of the door, since this type of starry decoration is only found above the inner doorway but never above the outer one. To the right, the king, wearing the red crown,⁴⁵ stands before Amun who gives him life, which permits us to orientate its decorated face either eastward or northward. This doorway could be placed on the east-west axis, with the counter-lintel facing east, or on the north-south axis, with the counter-lintel facing south. Could it have been the inner face of the main gate to Amun's temple, the ancestor of the 5th Pylon?

Small limestone doorways probably built into mud brick walls:

- *Small lintel*:⁴⁶ This fragment of a limestone lintel was discovered in the *Cachette* courtyard and is exhibited in the Open Air Museum.

elements were already reused inside the fill of Tuthmosis II's vanished Pylon and that they were reused a second time in the 3rd Pylon. In both hypotheses, the White Chapel would have been dismantled at the beginning of the New Kingdom as Senwosret I's other monuments were.

⁴¹ Traunecker, *Karnak 7* (Paris: ERC, 1982), pp. 121-126.

⁴² Gabolde, *Le "Grand château d'Amon"*, p. 120, n. 41; *PM II*², p. 135; H. Chevrier, *ASAE* 53 (1956), p. 41; G. Björkman, *Kings at Karnak* (Uppsala: BOREAS, 1971), p. 128, 3.

⁴³ F. Burgos, F. Larché, *La Chapelle Rouge*, vol. 2, pgs. 326-7.

⁴⁴ *PM II*², p. 135; A. Fakhry, "A report on the Inspectorate of Upper Egypt," *ASAE* 46 (1947), p. 30: the lintel of Senwosret I found broken into three fragments by Abou el-Naga Abdallah in 1946 beneath the southern courtyard between the 4th and 5th Pylons seems to correspond perfectly to this lintel of Senwosret I. See Fr. Le Saout, A. el-H. Ma'arouf, Th. Zimmer, "Le Moyen-Empire à Karnak: Varia 1," *Karnak* 8 (Paris: ERC, 1987), pp. 302-305, pl. VI.

⁴⁵ On the north-south axis, the red crown is usually placed to the left of the door, that is to say to the west, when moving northwards and to the east when moving southwards.

⁴⁶ Ma'arouf, Zimmer, *Karnak* 9 (Paris, ERC, 1993), pp. 223-225, 234, fig. 1: archives Lacau n° A IX-a4 and a4d.

- *Small lintel*:⁴⁷ This fragment of a limestone lintel of unknown provenance is lost today. Th. Zimmer remarks that H. Chevrier⁴⁸ had mentioned a fragment of a Senwosret I lintel which could be one of those he found not far from the structure with six columns standing north of the courtyard between the 3rd and 4th Pylons.

- *Small lintel*:⁴⁹ A limestone fragment carved with a nomen cartouche of Senwosret is epigraphically identical to Senwosret I's other doorways. Because no monument of any other Senwosret is known at Karnak, it is likely that this lintel belongs to Senwosret I. This fragment is perhaps also one of those found by H. Chevrier not far from the structure with six columns standing north of the courtyard between the 3rd and 4th Pylons.

- *Doorjamb*s:⁵⁰ Some fragments (87CL 340, 95CL 331) belong to two doorways built into a mud brick wall. This could be the wall discovered below the northern part of the sandstone foundations surrounding the limestone *radier*.

- *Doorjamb*: A fragment of doorjamb naming Senwosret, in hard limestone, was reused in the "horned altar," east of Karnak (CFEETK neg. 42793/9).

Elements of a wall:

- *Doorjamb in hard limestone*: Two opposite faces are decorated, one with three superimposed scenes representing Senwosret I making offerings to Amun and the other with a cartouche which is part of a larger text. These faces were cut up during the transformation of the block into a stela by Kamose. The depth of the block (1.12 m) is too great and its decoration is inappropriate for a pillar.⁵¹ Instead, it must be from a doorjamb which could come from an edifice modified or dismantled by Kamose or one of his predecessors. This doorjamb could have come from the axial doorway of Senwosret I's portico. Reused in the foundation of the north colossus attributed to Ramesses II, in front of the 2nd Pylon's gate, the stela is today exhibited in the Luxor Museum⁵² (J 43, CFEETK negs. 53139-53143).

- *Large block*⁵³ with a niche in hard limestone: This block carved in raised relief was discovered in the *Cachette* courtyard and is exhibited in the Open Air Museum. It has been reconstructed on the south axis, either in a wall, by Th. Zimmer, or in a doorway, by Ch. Van Siclen, while L. Gabolde places it on the east-west axis inside the "Grand Château d'Amon." It seems to me that this block could come from the back wall of Senwosret I's portico or from the rear facade (the one facing west) of the monument of which the portico served as entrance. The carving in raised relief indicates a roofed space, perhaps one behind this rear facade that

⁴⁷ *Ibid.*, pp. 225-226, 234, fig. 2a.

⁴⁸ H. Chevrier, "Rapport sur les travaux de Karnak (1937-1938)," *ASAE* 38 (1938), p. 598.

⁴⁹ Ma'arouf, Zimmer, *Karnak* 9 (Paris, ERC, 1993), p. 226, fig. 2b.

⁵⁰ Le Saout, Ma'arouf, Zimmer, *Karnak* 8 (Paris: ERC, 1987), pp. 297-302; for their dimensions see E. N. Hirsch, "Bemerkungen zu Toren in den Tempeln des Alten und Mittleren Reiches," in *Wege öffnen. Festschrift für Rolf Gundlach zum 65. Geburtstag Festschrift*, *ÄAT* 35, ed. Mechthild Schade-Busch (Wiesbaden: Harrassowitz, 1996), pp. 88-97.

⁵¹ Gabolde, *Le "Grand château d'Amon,"* § 13.

⁵² *PM II*², p. 37; M. Hammad, "Découverte d'une stèle du roi Kamosé," *CdÉ* 30 (1955), pp. 198-208; L. Habachi, "Preliminary report on Kamose Stela and other Inscribed Blocks found reused in the Foundations of two Statues at Karnak," *ASAE* 53 (1956), pp. 195-202, pl. I; *idem*, *The Second Stela of Kamose and the struggle against the Hyksos Ruler and His Capital*, *ADAIK* 8 (Glückstadt: Verlag J. J. Augustin, 1972), pp. 28-29 and 51; Björkman, *Kings at Karnak*, p. 56 and 128; B. V. Bothmer, *Catalogue du Musée d'art égyptien ancien de Louxor* (Cairo: IFAO, 1985), p. 21, fig. 32 and 33; Chr. Wallet-Lebrun, "Contribution à l'étude de l'histoire de la construction à Karnak," in *L'égyptologie et les Champollion*, eds. in M. Dewachter & A. Fouchard (Grenoble: Presses Universitaires de Grenoble, 1994), p. 230, n. 20.

⁵³ *PM II*², p. 135; P. Lacau, H. Chevrier, *Une chapelle de Sésostri I^{er} à Karnak* (Cairo: Imprimerie de l'Institut français d'Archéologie orientale, 1956), p. 209, § 584: this blocks mentions a chapel which is known from the list on the White chapel; Ma'arouf, Zimmer, *Karnak* 9 (Paris, ERC, 1993), pp. 227-232, fig. 3 and 4; Gabolde, *Le "Grand château d'Amon,"* § 125-128.

one could reconstruct as the sandstone colonnade whose elements were reused on either side of the 5th Pylon.

- *Block in soft limestone:*⁵⁴ Decorated in raised relief, this block (87CL 315) shows the remains of two large superimposed registers (fig. 7). On the lower one, there remains only the king's red crown without uraeus and topped with the vestiges of spreading wings of the Behdetite falcon, and with Senwosret I's cartouche being perfectly legible. Decorated with a row of stars, the skyline of this scene is placed under the groundline of the upper register, of which only one foot of a running king is preserved. Contrary to all Senwosret I's other blocks, this one is in soft limestone which could be an argument against its belonging to the "Grand Château d'Amon." Moreover, although the quality of the details is very close to Senwosret I's style, the carving is flatter and the raptor's feathers are less detailed than on Senwosret I's monuments. The lack of a uraeus on the crown is very rare in reliefs of Senwosret I's, while the three figures of Amenhotep I preserved on the lintel of the monumental south gate have none on their crowns. One potential hypothesis would be to link this block with those of Amenhotep I, this one having posthumously represented Senwosret I whose temple Amenhotep had just destroyed, even while copying his decorative style. However, architectural elements⁵⁵ in soft limestone have already been attributed to the Middle Kingdom, therefore one cannot exclude block 87CL 315 from Senwosret I's temple so easily. The direction of the red crown prevents its placement under the facade's portico, so a second hypothesis would reconstruct this block either in the chapels behind the portico, or in the rear facade (facing west) of the monument to which the portico served as entrance. In this last hypothetical position, this block should be located in the north half of this rear facade like the previous large block with a niche.

- *Fragment in soft limestone:* This fragment (87 CL 490) shows part of Senwosret I's cartouche carved in sunk relief. As with the previous block, the nature of the limestone throws some doubt on a Middle Kingdom attribution, although architectural elements in soft limestone have been already dated to the Middle Kingdom (cf. note 55).

- *Fragments of decoration,* in the name of one Senwosret, were discovered in the courtyard between the 7th and 8th Pylons.

Elements of a sandstone portico:⁵⁶

- *At least two sandstone polygonal columns with 16 faces:* Column drums and their fragments were unearthed in the so-called "Middle Kingdom" courtyard. One face is inscribed with a column of text in Senwosret I's name, on which Amun's name was defaced. According to Th. Zimmer, the carving is characteristic of the 18th dynasty but this hypothesis can be challenged by a similar style of carving on Senwosret I's sandstone architraves found reused on both side of the 5th Pylon.

- *Sandstone architraves:* Two fragments carved on both faces in sunk relief were found by A. Mariette around 1870 in the so-called "Middle Kingdom" courtyard. The first fragment mentions a "20th regnal year" and reports a "renewal," the text of one of the faces having being recarved over an older inscription. The second fragment shows a cartouche of

⁵⁴ This block was identified by L. Coulon, on April 4, 1994, in *fiche* 87CL 315 of the "Cheikh Labib" database (CFEETK neg. 25 883, 29 026). The red crown has no uraeus. The block is not mentioned in Gabolde, *Le "Grand château d'Amon."*

⁵⁵ Fr. Le Saout, "Un magasin à onguents de Karnak et le problème du nom de Tyr: mise au point," *Karnak 8* (Paris: ERC, 1987), p. 328.

⁵⁶ *PM II*², p. 108; A. Mariette, *Karnak: étude topographique et archéologique* (Leipzig: Hinrichs, 1875), pp. 32-33 and 41, pl 8 (a-b-c); *LDT*, pp. 28-29; H. Chevrier, "Rapport sur les travaux de Karnak (1947-1948)," *ASAE* 46 (1947), p. 176; Barguet, *Karnak*, 1962, p. 154, n. 3; J.-M. Kruchten, *Les annales des prêtres de Karnak (XXI-XXIII^e dynasties) et autres textes contemporains relatifs à l'initiation des prêtres d'Amon*, *OLA* 32 (Leuven: Peeters, 1989), p. 8: Th. Zimmer dates these columns and architraves to the reign of Tuthmosis III.

Senwosret I, while Amun's name has been hacked out and then recarved. These architraves seem to belong to the aforementioned polygonal columns, discovered in the same location. According to Th. Zimmer, the dedication of a "renewal" (that could have happened during the reign's 20th year) would be later than Senwosret I and could date between the beginning of the 18th Dynasty and Akhenaten. However, this hypothesis can be challenged after the discovery of another sandstone colonnade, in Senwosret I's name, on both sides of the 5th Pylon.⁵⁷

1.8. The furniture in Senwosret I's name

Naos in diorite (fig. 18: height 175 cm; width 77 cm; depth 93 cm)

This naos⁵⁸ was discovered in the later fill which covered the courtyard between the 7th and 8th Pylons, just like the block from the left anta of Senwosret I's portico. It is crowned with a cornice and its facade is framed by a torus moulding resting on a dado (height: 5 cm). The back face of the naos was neither decorated nor even polished, so it must have stood against a wall. Each side face is decorated with two superimposed registers made up of two scenes representing Senwosret I making offerings to Amun. The king wears the white crown on the left side and the red one on the right. The location of the royal crowns shows that the naos faced to the east or the north. The god's figures and names were defaced under Akhenaten and then later recarved. It is still unknown if the statue that sheltered inside the naos represented Senwosret I or Amun. The naos' inner volume (height: 129 cm; width: 54 cm; depth: 68 cm) limits the scale of the statue to 2/3 of human size, similar to the *Ka*-statue of king Hor standing inside a wooden naos in the Egyptian Museum in Cairo.⁵⁹

Socle with steps in calcite (fig. 19)

Early photographs shows that fragments of a calcite socle were found, very deeply buried, east of the granite threshold n°4 in the so-called "Middle Kingdom" courtyard. This socle has often been identified as the base of a wooden naos. However this function does not fit with the design features of its upper surface, since the rectangular grooves carved around its perimeter have a slope (around 5 cm/m) indicating that they are channels for the flow of liquids rather than slots to secure the wooden panels of a naos to the socle. The liquid would have then been directed toward steeply sloping, narrow channels cut on both sides of the steps at the front of the socle. The right channel can be reconstructed through the much damaged side elevation of the stairway. On the other hand, no doorhinge sockets are found on the socle, making it impossible to have functional doorleaves on any wooden naos placed on the socle. Nevertheless, such sockets are clearly visible on the large quartzite socle which supported the naos from the *Akh-menu*, and likewise on the small diorite socle discovered north of the granite threshold n°3. These sockets permitted installation of a wooden naos (fig. 19e).

This impressive calcite socle looks more like a stepped altar⁶⁰ similar to the one that once stood in the *Akh-menu*'s axial sanctuary.⁶¹ The socle's facade is carved with a text in Senwosret I's name, which was defaced under Akhenaten and then restored later. Its back face is vertically levelled but roughly polished, in order to lean it against a wall. The stairway

⁵⁷ Larché, *Karnak* 12 (2007), pp. 421-422, pls. XVI-XIX.

⁵⁸ M. Pillet, *ASAE* 23 (1923), pp. 143-158: "Cette pièce capitale a été trouvée à Karnak, à quelques pas au sud de l'obélisque occidental du VII^e pylône, le 29 janvier 1922. Elle était enterrée au milieu d'une petite pièce faisant partie des habitations élevées dans cette cour à une basse époque et devait servir de bassin, le rebord de sa face faisant une saillie de quelques centimètres seulement au-dessus du sol de cette époque."

⁵⁹ Cairo CG 259, JE 30948. The statue is 170 cm high, 27 cm wide, 77 cm deep; its naos is 207 cm high, 70 cm wide, 105 cm deep.

⁶⁰ Ch. Van Siclen suggests that a naos with its own floor could have been placed on this socle. This arrangement would not require door hinge sockets to be carved into the socle. This, I propose, is also the case with Senwosret I's naos.

⁶¹ N. Beaux, *Le cabinet de curiosités de Tuthmosis III. Plantas et animaux du "Jardin Botanique" de Karnak*, *OLA* 36 (Louvain: Peeters, 1990), p. 10.

is not centered on the socle since three columns of text are carved on its left front and only one on its right. This asymmetry is also noteworthy on its top face, where the two parallel grooves are not equidistant from the outer sides. It probably lacks a very thin calcite block that must have abutted the south side in order to restore its symmetry.

Altar with a cornice in hard limestone⁶²

Three large fragments and several smaller ones have been pieced together, in front of the “Cheikh Labib” storeroom, to form 3/4 of this altar’s top course (3 x 4 cubits). The support for a ramp or a stairway (width: 2 cubits) is visible in the middle of one face, while on the opposite one, a recess has been carved to fit a patchstone. A shallow rectangular depression (width: 152 cm; depth: 95 cm; height: 7 cm) is cut into the altar’s upper surface. It has probably been used to support a heavy offering table as seems to be indicated by lever cavities dug on one edge of the depression. It is framed with a badly damaged vertical projection (width: 15 cm), placed 13 cm behind the level of the fillet topping the cavetto cornice. This projection could be the start of cross-steps, like those seen on the “horned altar,” on the representations of Tuthmosis III’s “Great Offering,”⁶³ or on two blocks of Amenhotep I.⁶⁴ In the inscription carved in sunk relief on the cornice’s fillet, the name of Amun remains intact and pristine, indicating that the altar was not visible under Akhenaten. One should be certain that these fragments really came from the so-called “Middle Kingdom” courtyard before advancing the hypothesis that, since Amun’s name was not defaced, the altar was perhaps reused inside the limestone *radier*.

1.9. Conclusions (figs. 14-17)

From the “Grand Château d’Amon,” there remains only the sparse vestiges of a double portico with pillars lining up in front of a wall.⁶⁵ Like Tuthmosis III’s contra temple, this portico could have faced east, allowing us to think that Tuthmosis III may have copied Senwosret I’s portico but on a smaller scale.⁶⁶ The reconstruction of the text carved on Senwosret I’s missing architraves allows a range of at least eight Osirian pillars *in antis*, standing in front of an equal number of square pillars built under the portico. Behind this facade, it is still impossible to determine if Senwosret I’s naos, facing eastward, was simply leaning against the portico’s back wall or if it was displayed in a room *en suite* whose door opened through the axis of the back wall. M. Pillet thought that the calcite socle with steps could have been used to support the diorite naos,⁶⁷ a hypothesis that is compatible with the observations made on its top face. If the naos sheltered Senwosret I’s statue, the portico

⁶² 2001 report of the franco-egyptien committee, p. 20: the study of L. Gabolde concerns blocks 87CL 338+344+398+429, 92CL 344+645, 94CL 1108. He reckons that the inscription is in Senwosret I’s name. According to M. Azim, some blocks would have come from beneath the courtyard of the 8th Pylon and others from the so-called “Middle Kingdom” courtyard.

⁶³ Burgos, Larché, *La Chapelle Rouge*, vol. 2 (Paris: ERC, 2008), p. 202b.

⁶⁴ Larché, *Karnak* 12 (2007), pl. XC.

⁶⁵ The known temples of the Middle Kingdom have small dimensions. See E. Bresciani, “Le temple double de Sobek sur la colline de Medinet Madi,” *Dossier de l’archéologie* 265 (2001), pp.132-140; R. Naumann, “Der Tempel des Mittleren Reiches in Medinet Madi,” *MDAIK* 8 (1939), pp. 185-189; D. Arnold, *The Encyclopedia of Ancient Egyptian Architecture* (Cairo: American University in Cairo Press, 2003), figure p. 156 (short note on the temple p. 145); M. Bietak, “Kleine ägyptische Tempel und Wohnhäuser des späten Mittleren Reiches. Zur Genese eines beliebten Raumkonzeptes von Tempeln des Neuen Reiches,” *Hommages à Jean Leclant* vol.1, *Bibliothèque d’Étude* 106/1 (Cairo, IFAO, 1994), pp. 413-435.8.3.

⁶⁶ Gabolde, *Le “Grand château d’Amon,”* §21: “À Karnak même, le temple adossé de Tuthmosis III, avec ses six piliers à colosse osiriaque adossé en façade, s’est à l’évidence inspiré du modèle de Sésostri I^{er}...”

⁶⁷ M. Pillet, *ASAE* 23 (1923), p. 155: “le point où fut découvert le naos ne fournit aucun renseignement sur son emplacement primitif, mais à l’endroit que je viens d’indiquer se trouve un bloc d’albâtre gravé au nom de Sésostri I^{er} et qui, croyons-nous, put servir de socle au naos.”

would be the facade of a contra temple, but if it was an Amun statue, the temple's main entrance did not face west, but must have faced east.

2. Senwosret I's Sandstone Colonnade

Two architraves, one fragment of a polygonal column drum and one column base were reused under the pavement alongside the west face of the 5th Pylon's north wing⁶⁸ when the latter was built (figs. 20-21). They come from a sandstone colonnade of Senwosret I. More column bases of this colonnade were reused in the foundations of most of the Osirian colossi leaning against the east face of the 4th Pylon.⁶⁹ Five other fragments of similar architraves as well as 14 fragments of polygonal sandstone column drums with 16 faces⁷⁰ (Ø: 1.5 cubit) were reused in pairs, below the 5th Pylon's courtyard, as the foundation of Tuthmosis I's colonnade which is still partially standing (figs. 20-23).⁷¹

All of these sandstone elements belonged to a colonnade that existed before the 5th Pylon's construction. Its partial reconstruction is possible thanks to the symmetry of the text carved on the two corner architraves, symmetry which allows the placement of the colonnade on an axis of the temple.⁷² The sandstone was covered with a plaster coating and the sunk relief decoration was painted yellow. Traces of scratching on Senwosret I's drums indicate that Amun's temple had endured a period of negligence before the 18th Dynasty's reconstruction.

To date, there is no indication that Senwosret I's colonnade can be restored as standing near the place of its discovery, where it could, very hypothetically, have been built at a lower level (+73.45 m) close to the floor linked with the two calcite column bases buried between the 5th and the 4th Pylon.⁷³

The limestone Osirian pillar n°11 (fig. 4), representing Senwosret I wearing the white crown, was found below the 5th Pylon's south courtyard by G. Legrain.⁷⁴ The large pit cleaned⁷⁵ (fig. 23) in 2004 outside the west enclosure wall of the 6th Pylon, corresponds to the negative space where the pillar once lay. This pit is clearly independent from the foundation trench of the west enclosure wall built by Hatshepsut and Tuthmosis III. This disconnection of the trench from the pit invalidates the hypothesis that the Osirian pillar n°11 was put here by Tuthmosis III. On the contrary, it seems very likely that it was buried as a votive deposit by Tuthmosis I when he reused the fragments of Senwosret I's sandstone colonnade in the foundations of his own colonnade in the 5th Pylon's courtyards. Because all of these

⁶⁸ In november 2005, R. Le Bohec discovered, between the foundations of the north wing of the 5th Pylon and the foundations of the north obelisk, three sandstone elements reused as pavement that were placed on a sand layer filling the space between the two foundations. Two elements belonged to architraves (length: 75 cm) each decorated on one face only. The third one is an upside down column base. Their dimensions, decoration and the fact that they are sandstone, link them to elements of Senwosret I's colonnade reused in the foundations of Tuthmosis I's portico in the courtyards of the 5th Pylon.

⁶⁹ They were discovered in april 2007 by R. Le Bohec.

⁷⁰ Barguet, *Karnak*, p. 109, n. 3. Fragments of this colonnade were partially seen in 1985 by M. Azim during the clearing of the south courtyard, before being discovered in their entirety during the 2003-2004 excavations by J.-Fr. Jet, E. Lanoë and O. de Peretti.

⁷¹ H. Chevrier, *ASAE* 49 (1949), p. 261: "À l'Ouest (plutôt à l'Est) [of the side room of the 6th Pylon], nous avons nettoyé jusqu'à un niveau mettant au jour les fondations des colonnes centrales. Sous deux de celles-ci nous avons vu des tambours de colonnes de seize pans remployés pour leurs fondations."

⁷² O. De Peretti, E. Lanoë in *La Chapelle Rouge*, vol. 2, pp. 144-150: 7.3, "Les fouilles des cours du 5^e pylône." These architraves and some fragments of the column drums were removed to be displayed on a *mastaba* built between the 3rd Pylon and the Ptah temple.

⁷³ See n. 68.

⁷⁴ G. Maspero, *Guide du visiteur au Musée du Caire* (Cairo: Imprimerie de l'Institut Français d'Archéologie Orientale, 1915), pp. 8-9, n°11; *PM II*², p. 89.

⁷⁵ O. De Peretti, E. Lanoë in *La Chapelle Rouge*, vol. 2, pp. 144-150: 7.3. Les fouilles des cours du 5^e pylône.

architectural elements of Senwosret I were reused so close to each other, it is tempting to think that they come from the dismantling of the same architectural complex.

The addition of these archaeological facts clearly demonstrates that Senwosret I's temple was dismantled at the latest by Tuthmosis I. Furthermore, other evidence will permit us to identify his predecessor, Amenhotep I, as the individual most likely responsible for dismantling the Middle Kingdom monuments.

3. The New Kingdom Foundations in the So-Called “Middle Kingdom” Courtyard

In the light of archaeological excavations inside⁷⁶ and archival photographs of the so-called “Middle Kingdom” courtyard, new observations have been established concerning this empty space bounded by Hatshepsut's podium to the west and the sandstone foundations of the rows of storerooms to the east, north and south. A vast *radier* made of limestone courses built of small and thin blocks is buried under the surface of the courtyard. A smaller platform composed of sandstone, limestone and granite blocks, is embedded in the *radier*'s west side.

3.1. The Limestone *Radier* (figs. 26, 33)

The *radier*'s dimensions

A vast *radier* (height: ~ 3 cubits) was made up of at least six superimposed courses (fig. 28), built by means of an irregular assembly of flat limestone blocks which do not seem to come from either the Gebelein quarries, or from Tura or Ma'asara in northern Egypt.⁷⁷ This *radier* is founded at a lower level (+72.82 m to the west, +72.69 m at its center and +72.76 m to the south of the platform)⁷⁸ than the green sandstone foundation of the storerooms around its perimeter (bed face +73.46 m and bottom of the trench +73.04 m). The vestiges of these small and flat limestone blocks, well organized in courses, still occupy a square space (72 x 72 cubits) where they have often been discovered in place among other disturbed ones (fig. 31).

This *radier* is the only limestone subfloor known at Karnak, the foundations of this site being nearly always made of sandstone apart from a few scattered limestone blocks used to fill joints. If it was logical to quarry hard limestone blocks from northern Egypt in order to build temple superstructures, it seems strange to transport them all the way to Karnak only to hide them inside a *radier*. On the contrary, the many smoothen faces⁷⁹ of these small limestone blocks (figs. 28-29) prove that, in fact, they were produced by slicing up much larger blocks which belonged to dismantled monuments. It will be explained below why the *radier* was built on the site of earlier structures that had been torn down, without digging any foundation pit for the *radier*.

The *radier*'s top face

⁷⁶ Excavations by H. Chevrier in 1946 (*ASAE* 47 [1947], pp. 176-177); J. Lauffray in 1976-79; M. Azim in 1982-83; L. Gabolde and J-Fr. Carlotti in 1998; G. Charloux and R. Mensan from 2004 to 2007.

⁷⁷ This cream white limestone shows irregular cracks but it seems to the naked eye quite different from the limestone from the Tura or Ma'asara quarries. Unfortunately, its origin could not be established since the blocks of the *radier* were not examined in the study of Th. De Putter and Chr. Karlshausen, “Provenance et caractères distinctifs des calcaires utilisés dans l'architecture du Moyen et du Nouvel Empire à Karnak,” *Karnak* 11 (Paris: ERC, 2003) pp. 373-383.

⁷⁸ This platform, which will be described further below, is contiguous with the axis to the east side of Hatshepsut's podium.

⁷⁹ M. Azim, CFEETK Report n° 1599 on the project made to develop the central part of the temple of Amun in 1983-1984: “Ce mur d'enceinte peut avoir entouré un temple de pierre fondé sur un radier général de calcaire, dont les blocs sont des remplois.” These reused blocks were observed during the dismantling of the east side of the *radier*.

The sounding⁸⁰ made along the east face of the southern half of Hatshepsut's podium (fig. 28) revealed four superimposed courses built of small limestone blocks, on which rests—parallel to the podium—a line of three long red sandstone blocks. Two limestone courses are missing to reach the level of the top surface (+74.44 m) of these sandstone blocks. This top surface is leveled with the granite threshold n°1, which is now used as a step to the eastern axial door of Hatshepsut *suite*, the one named “*Door of the food offerings*” (figs. 24-28).⁸¹ Like the three red sandstone blocks, this threshold n°1 rests on the *radier*'s third course, which extends the platform's lower course (see below, 3.3).

The building-guidelines incised on the top face of the west threshold n°1 (figs. 24, 26) and also on the red sandstone block contiguous to its south edge, indicate that the south doorjamb of the previous axial gate rested astride both blocks. This clue is confirmation that these three red sandstone blocks belong to the setting course of a vanished monument. While distinctly marking the *radier*'s west edge, it is possible that this line of long red sandstone blocks continued around the *radier*'s four sides. In framing the *radier*'s setting course, this line of blocks could have thus formed a kind of chain giving greater stability to the walls built on its superstructure. Dovetail mortices carved on the eastern top edge of the red sandstone blocks show that they were firmly clamped to the *radier*'s upper course.

The four granite thresholds (figs. 26, 31, 34)

The *radier*'s top surface can be determined by the four granite thresholds (n°1 to 4 from west to east) which are aligned on the east-west axis, the westernmost one (n°1) being one step lower (15 cm) than the other three⁸² (n°2, n°3, n°4). These are the only vestiges of the floor of a vanished monument. Resting on the *radier*'s third course, the four granite thresholds were embedded in the three uppermost courses (fig. 33).

Each of these four thresholds has a sliding channel carved perpendicular to the door reveals for the placement of the door leaves. This transversal layout is characteristic of Middle Kingdom thresholds, while in New Kingdom, this channel is usually parallel to the door reveals. Nevertheless, there are several exceptions to this practice, which limit the importance of the channels' direction as a dating criteria for thresholds:

- At Medamud,⁸³ there are vestiges of a granite doorway of Senwosret III's with its threshold resting on a limestone course. The sliding channel is parallel to the door reveals as in the New Kingdom.
- At north Karnak,⁸⁴ channels perpendicular to the door reveals, as in the Middle Kingdom, are still visible in Tuthmosis I's Treasury.

Threshold n°1, which marks the *radier*'s top face (figs. 24-27):

- is placed 11 cm above the setting course of the green sandstone foundations around the *radier*;
- is level with the setting course of the east wall of the enclosure linked to the 5th Pylon;
- is six cm lower than the granite threshold of *Akh-menu*'s southern entrance.

⁸⁰ J. Lauffray's sounding was cleared in the spring of 2004.

⁸¹ Barguet, *Karnak*, p. 153.

⁸² Thresholds n°1: +74.44; n°2: +74.57; n°3: +74.61; n°4: +74.59: threshold n°1 is at the level of the present pavement of the 6th Pylon courtyard. This threshold was cut in two, across its length, along the transversal sliding groove, at the time of the construction of Hatshepsut's podium. See H. Chevrier, *ASAE* 53, p. 16, figs. 3-5.

⁸³ M.F. Bisson de la Roque, *Rapport sur les fouilles de Médamoud: (1925)* (Cairo: Imprimerie de l'Institut Français d'Archéologie Orientale, 1925), p. 24. It remains to be confirmed whether or not this doorway was rebuilt after the Middle Kingdom.

⁸⁴ J. Jacquet, *Karnak-Nord V. Le trésor de Thoutmosis I^{er}. Étude architecturale*, FIFAO 30 (Cairo: IFAO 1983), p. 37, fig. 5: the occasional use of sliding grooves perpendicular to the reveals seems, however, to have continued after the Middle Kingdom since two perfect examples were identified in the thresholds of rooms 1 and 2 of Tuthmosis I's treasury.

In the event that these four thresholds of a Middle Kingdom type are still in their original locations, one must admit that the Middle Kingdom floor was 11 cm higher than the one at the beginning of the New Kingdom⁸⁵ (+74.33 m for the top face of the foundation around the *radier*). In fact, the floor of structures previous to New Kingdom seems to have risen slightly from west to east:

- to the west of the temple, this floor was at +73.37 m as the remains of the pavement attached to both calcite bases embedded below the 4th Pylon's courtyard indicates;⁸⁶
- to the east of the temple, this floor could be at +73.50 m as the top of brick structures still in place⁸⁷ under the storerooms surrounding the *radier* seems to show. The top of the pebble fill on which the platform rests reaches +73.41 m in some places (figs. 34-35).

Since the four granite thresholds are built into a *radier* made of reused blocks (older than the New Kingdom), it is likely that these thresholds were also reused and that they also came from an earlier, dismantled, construction.⁸⁸ Given the position of the sliding channels for the door leaves, it is very likely that these thresholds date to the Middle Kingdom although the example from Medamud casts some doubt on this dating criterion. It was probably during their removal from the original monument to which they belonged, or during their placement in the *radier*, that fissures developed in thresholds n°2 and n°3. The widening of each crack was averted by fitting one or two wooden clamps (fig. 33). The bed face of threshold n°2 was strengthened with two horizontal clamps, while on threshold n°3, one clamp was fitted vertically to its western cross joint and a second one horizontally on its top face, exactly under the north doorjamb.⁸⁹ Since they were probably removed from their original locations in the Middle Kingdom sanctuary at the beginning of the New Kingdom, these thresholds could have only been reused within a new structure dating to the beginning of New Kingdom, namely, the six limestone courses of the *radier*.

The slicing of the *radier*'s west side (figs. 24, 28, 36, 37)

At the base of the cross joint marking the support of the east face of the south half of Hatshepsut's podium against the west side of the limestone *radier*, the first course of the two contiguous structures seems to rest on a thick layer of yellow sand shared by both (fig. 28). However, since it is nearly impossible to distinguish separate layers of sand, this shared criteria does not prove that the podium is contemporary with the *radier*. On the contrary, the joint separating Hatshepsut's podium from the limestone *radier* (figs. 35-37) shows that Hatshepsut had cut a slice (width: 50 cm) away from the *radier*'s west face while keeping its first course intact (fig. 24; see *supra*. 1.1).

- *The technical reason for this slicing*

⁸⁵ J. Lauffray, "Les travaux du Centre Franco-Egyptien d'étude des temples de Karnak de 1972 à 1977," *Karnak* 6 (Paris: ERC, 1980), p. 24: "il est un fait constant dans tous les lieux de culte et sous toutes les latitudes, les abords des temples s'élèvent avec le temps plus rapidement, surtout pendant les périodes troublées, que les sanctuaires mieux entretenus."

⁸⁶ *Ibid.*, Lauffray, p. 25.

⁸⁷ Charloux, *Karnak* 12 (Paris: ERC 2007), pp. 191-204.

⁸⁸ This reuse was already proposed by Th. Zimmer in J.-M. Kruchten, *Les Annales des prêtres de Karnak*, p. 9: "Les récents travaux dans cet espace, menés par Azim et l'auteur de ces lignes, ont conduit à contester le fait que ces seuils soient en leur place originelle et à penser qu'ils ont été déplacés après le Moyen Empire, s'il s'agit bien de leur date de construction. See M. Azim et Th. Zimmer, "La cour du Moyen Empire: quatrième campagne de travaux dans la zone centrale," forthcoming; J. Lauffray, *Karnak* 6 (Paris: ERC, 1980), p. 24; Leclant, *Orientalia* 47, p. 288; *idem.*, Leclant, *Orientalia* 54, pp. 371-372.

⁸⁹ H. Chevrier, *ASAE* 49, p.13; *ASAE* 53, p. 16, fig. 3-5 and J. Lauffray, *Karnak* 6 (Paris: ERC, 1980), p. 24, n. 1: "Chevrier croyait que la fondation des seuils avait été enlevée partiellement en sape par des chercheurs de dépôts. Nous avons constaté que le seuil le plus à l'Ouest repose au Nord sur deux assises de pierre et que sa partie médiane est placée sur du sable jaune très homogène. Ce ne peut être le résultat d'un comblement hâtif."

Hatshepsut built the east face of her sandstone *suite* against the west face of a now vanished earlier structure. The sandstone east face, which is still in place, seems to be counter-battered which would indicate that it leaned against an earlier structure. This tight joint is confirmed by the narrow channels for pouring plaster cut vertically into the abutted sandstone face. In order to allow two contiguous constructions to react independently to possibly differential rates of subsidence, it was essential that the east wall of the Hatshepsut *suite* rested only on the podium without overlapping the limestone *radier* which, like every other foundation, protruded slightly beyond its original superstructure. The only possible way to maintain the tight joint between the two structures was to slice off the edge of the limestone *radier* where it projected beyond its now vanished superstructure.

- *The unusual arrangement in the middle of the radier's west side*

The excision of this projection reveals an unusual arrangement under the granite threshold of the east door of Hatshepsut's *suite* (figs. 36-37). This large granite slab was inserted by Hatshepsut astride the *radier* and her podium. To place this slab, it was necessary to modify the *radier* by cutting the earlier threshold n°1 and by dismantling the upper three courses of the *radier* along the entire length of Hatshepsut's new granite threshold. The central section of the *radier*'s original projection remains intact where the west half of threshold n°1 was removed. Here the podium clearly bypassed the projection:

- Just to the north of the remaining east half of threshold n°1, a long limestone block equipped with a channel running east-west, was cut at a right angle in order to slide Hatshepsut's new threshold into place (fig. 37). This long block continues westwards for approximately 50 cm beyond the western limit of the present limestone *radier*, that is to say 50 cm west of the visible joint between the podium and the *radier*. The channel's western joint could belong to the *radier*'s original face which is thus lined up with the north-west corner block of its first course (fig. 24a).

- Just to the south of the remaining east half of threshold n°1, the *radier* also extends westwards for approximately 50 cm before touching Hatshepsut's podium. The excision of the projection is obvious at this location (fig. 36).

The removal of the *radier*'s projection was not necessary on the axis (fig. 26) where the earlier narrow doorway (+74.44 m) was almost entirely dismantled by Hatshepsut,⁹⁰ to be replaced by a wider one (+74.10 m). The new granite threshold was inserted astride the limestone *radier* and the podium, and supported new doorjambs in sandstone and granite which were embedded in the earlier structure while probably leaning against the original inner doorjambs.

The channel embedded beneath the *radier*'s top face (figs. 27, 36, 37)

Next to the north side of the threshold n°1, is a long limestone block (length: 245 cm; depth: 66 cm; height: 45.5 cm) belonging to the *radier*'s fifth course into which a channel running east-west has been carved (top face +74.05 m; channel's bottom +73.89 m; width: 12 cm; depth: 14 cm), which was covered by the sixth and upper course of the *radier*. The cutting of its east joint indicates that the channel (fig. 27) continued inside the *radier* while its westward extension was destroyed when Hatshepsut built her podium. The west joint of the block seems to have been in line with the *radier*'s west face, before this one was chopped off at a point about 50 cm to the north and south of the axial door along the entire length of the west face except beneath the granite threshold.

⁹⁰ The west half of the original threshold n°1 and the original outer doorjambs were dismantled by necessity. However, the east half of the threshold stayed in place, as did, probably, the inner doorjambs. However the reveals of these inner doorjambs should have been cut back in order to widen the passage to the same width as Hatshepsut's new doorway.

A similar channel, but in sandstone and oriented north-south, was cut to the north of Hatshepsut's podium⁹¹ by the foundation pit of this last one. This channel continued northwards beyond Tutmosis III's enclosure wall which surrounds the *Akh-menu* and the north storerooms. It is likely that these two channels were once connected through a manhole that would have been destroyed when Hatshepsut built her podium.

Another channel still exists along with its basin, both in red sandstone, buried below the pavement at the east end of the corridor which borders the south side of Hatshepsut's podium.⁹² Since the recent excavations have not yet shown this channel entering the south side of Hatshepsut's podium, it would be unwise to put forward the hypothesis that the channel could be the extremity of the one dug in the pavement of the *Chapelle Rouge*'s sanctuary.⁹³

The hypothetical plan of the walls built on the *radier* (see *infra* 4. Proposed plan of Amenhotep I's monuments)

The two lower courses of the limestone *radier* are made of a very loose assembly of blocks separated by thick horizontal and vertical joints, filled with sand (figs. 28, 34, 35).⁹⁴ The blocks are set discontinuously in order to form a very irregular casing filled with sand. The preserved courses above the two lower ones are much better bonded, having tight joints filled with a mortar made of plaster and limestone chips.

The lower course is irregularly placed, but is often replaced by a very thick sand layer. This course seems, however, to form lines at the *radier*'s perimeter and around the platform. If this lower course also existed underneath and in the extension of the granite thresholds n°2, 3 and 4, it would be tempting to reconstruct the plan of the missing walls plumb with the lines followed by the blocks of the lower course. The sand casings framed by the lines of this lower course would then correspond to the spaces delimited by the walls. We hope to confirm this hypothesis by future excavations, but it is still too early to assert that the walls rested where the *radier* is built of six courses or that the spaces between the walls correspond to the places where sand replaces the lower course of the *radier*.

The reused blocks inside the *radier*

- *Limestone blocks*: the flat limestone blocks of the *radier* are reused.⁹⁵ Their perfectly smooth faces, (figs. 34-35) but often incised with lines, are still visible on the west side of the *radier* as well as other faces with tool marks characteristic of cross joints. These blocks were made by cutting up much larger blocks.

⁹¹ Charloux, *Karnak 12* (Paris: ERC, 2007), pp. 261-284, pl. 4-7.

⁹² H. Chevrier: "Les fouilles furent poursuivies vers l'Ouest, jusque dans le couloir (of the "Texte de la jeunesse") entre le mur de la construction de la Reine. On trouvait là une rigole aboutissant à un petit bassin creusé dans une pierre et on apercevait des pierres remployées qui ont été laissées en place" (see *ASAE* 49, p. 259); Charloux, *Karnak 12* (Paris: ERC, 2007), pl. 7, fig. 14.

⁹³ Cl. Traunecker identifies these channels with the drainage systems used in the courtyards of the upper/mortuary temples of Old Kingdom pyramid complexes. Oral communication.

⁹⁴ R. Mensan, CFEETK preliminary Report, 2005: the sounding to the south of the platform.

⁹⁵ From M. Azim's work to develop the central part of Amun temple in 1983-1984, CFEETK Report n° 1599: "Ce mur d'enceinte peut avoir entouré un temple de pierre fondé sur un raft général de calcaire, dont les blocs sont des remplois." M. Azim observed these reuses during the dismantling of the south side of the *radier*.

- *Boundary stela*:⁹⁶ a photography of H. Chevrier illustrates the discovery, on March 13th 1949, of a limestone boundary stela in the name of Senwosret I, which was reused as a block in the north-west part of the *radier*, most probably in its second course (fig. 32). Although it has often been cited, this obvious reuse of a block inscribed for Senwosret I's in the heart of the *radier*⁹⁷ has not led to the logical conclusion— which should have been imperative— that the construction of the *radier* was accomplished by some later king through the systematic reuse of limestone blocks from dismantled pre-New Kingdom monuments (including those of Senwosret I, among others).

- *Four granite thresholds*: on the other hand, the perpendicular position of the sliding channels for the door leaves relative to the door reveals on the four granite thresholds has previously misled observers, resulting in the prevailing, but still unconvincing hypothesis that Senwosret I dismantled his own monuments in order to reuse them in the *radier* of his new temple. However, it is a fallacy simply to date all thresholds with doorleaf sliding channels perpendicular to their reveals to the Middle Kingdom, because two thresholds of this type were used by Thutmosis I in his Treasury at North Karnak,⁹⁸ while at Medamud, the granite threshold of Senoswret III's door has a sliding channel *parallel* to the reveals, a format usually found in New Kingdom thresholds (assuming this doorway was not rebuilt after the Middle Kingdom).

The blocks found scattered on the *radier*

Many stone temple furnishings of Middle Kingdom date were discovered during the successive excavations of the courtyard.⁹⁹

Offering tables:¹⁰⁰

- A limestone offering table¹⁰¹ was found by H. Chevrier on March 14th 1949.

Pedestals: (currently displayed on the top face of the south foundations of the storerooms surrounding the *radier*)

- The granite pedestal¹⁰² n°1, discovered in 1950, is perhaps one of the two on display;

- the granite pedestal n°2;

- the diorite socle for a naos was found to the north of the granite threshold n°3 (fig. 15).

Statues:¹⁰³

⁹⁶ *PM II*², p. 108; H. Chevrier, "Rapport sur les travaux de Karnak (1948-1949)," *ASAE* 49 (1949), pp. 257-258, fig. 3: "Le lendemain, on trouvait les premières pierres en place, parmi d'autres très bousculées: le 14, une autre table d'offrande, en calcaire celle-ci, de Sésostri I^{er} avec très peu de texte très effacé et du même type que la précédente... Le 13.[04.49], vers l'Ouest, on découvrait en place dans les fondations une pierre qui avait la silhouette d'une stèle retournée: on se trouvait en présence d'une stèle frontière de Sésostri I^{er}, la seule que nous connaissions de cette époque." Cairo Museum JE 88802 (56 x 27 x 147 cm); J. Leclant, "Compte rendu des fouilles et travaux menés en Égypte durant les campagnes de 1948-1950," *Orientalia* 19 (1950), p. 364; P. Montet, *Géographie de l'Égypte ancienne*, vol. 2 (Paris: Librairie C. Klincksieck, 1961), pp. 38-39, fig. 3; L. Habachi, "Building activities of Sesostri I in the Area to the South of Thebes," *MDAIK* 31 (1975), pp. 33-37, fig. 5 (he refers to figure 4 while the stela is represented in figure 5); Barguet, *Karnak*, p. 155, n. 5; Gabolde, *Le "Grand château d'Amon"*, p. 115, §185 et 188: "Une stèle-frontière de Sésostri a été exhumée de la "cour du Moyen Empire" où elle était réemployée en assise de fondation."

⁹⁷ A second stela of the same kind stored in the Cairo Museum (Temp. Reg. 10/4/22/7) may come from Karnak.

⁹⁸ J. Jacquet, *Karnak-Nord* 5, p. 37, fig. 5: thresholds of rooms 1 and 2.

⁹⁹ For Cl. Traunecker, the findspot of the pieces from Karnak brought to the Louvre by Mariette should be viewed with suspicion, since these antiquities were mixed in the Opet storeroom (See J.-J. Fiechter, *La moisson des dieux* (Paris: Éditions Julliard, 1994).

¹⁰⁰ H. Chevrier, *ASAE* 49: "le 14, une autre table d'offrande, en calcaire celle-ci, de Sésostri I^{er} avec très peu de texte très effacé et du même type que la précédente."

¹⁰¹ *PM II*², p. 108; *ibid.*, Chevrier, p. 258; Leclant, *Orientalia* 19 (1950), p. 36.

¹⁰² *PM II*², p. 110; Barguet, *Karnak*, p. 155, n. 5.

¹⁰³ Barguet, *Karnak*, p. 154, n. 3: "Voir aussi des fragments de montant de porte et d'architrave (encore visibles sur place), au nom de Sésostri I^{er}, dans *L. D.*, Text, III, 28 a et 29, et mentionnant l'année 20. Une statue-groupe de Sésostri I^{er} et Hathor fut aussi retrouvée à cet endroit (G. Legrain, *Statues et Statuettes de rois et de*

- A granite dyad¹⁰⁴ representing Amenemhat I sitting next to another figure (now destroyed), that P. Barguet identifies as Amun. If this destruction was the work of Akhenaten, it would cast doubt on the reuse of this group inside the limestone *radier*. This dyad is stored in one of the rooms attached to the south enclosure wall bound to the 5th Pylon.
- Two quartzite statues¹⁰⁵ dating to the time of Senoswret III. The eastern one represents an official seated as a scribe, while the western one appears to be a kneeling vizier. Both figures are enveloped in long cloaks. These statues are now displayed on the top face of the north foundations of the storerooms surrounding the *radier*.
- A diorite dyad¹⁰⁶ representing Hathor seated next to a standing figure of Senwosret I was found in 1897 and is stored in the Cairo Museum (CG 42008, JE 32751).
- A fragment of a throne¹⁰⁷ with the name of king Wegaf, discovered by G. Legrain in 1897, is now stored in the Cairo Museum (JE 33740).
- A granite statue¹⁰⁸ was found by A. Mariette. Its current location is unknown.
- A headless diorite statue¹⁰⁹ of king Sobekhotep (I or IV) shows him seated with his arms crossed over his chest and his feet crushing the Nine Bows. It is stored in the Louvre Museum (AF 8969).
- A granite statuette¹¹⁰ of a seated king, discovered by A. Mariette, is stored in the Louvre Museum (A. 121 [E 7824]).

Scattered architectural elements:

- A sandstone block¹¹¹ inscribed with the names of Sobekhotep IV and Neferhotep I was discovered by A. Mariette. Its current location is unknown.
- Six decorated limestone fragments, one carved with a cartouche of Senwosret, were probably stored inside the Caracol in 1975, and then likely moved to the “Cheikh Labib” in 2007.

particuliers, I, CGC 42001-42138 [Cairo: Imprimerie de l’Institut Français d’Archéologie Orientale, 1906], pl. IV, pp. 6-7; JE Caire 42008). “Deux statues en quartzite rouge (actuellement au Nord de la cour) représentant deux personnages assis en scribe, enveloppés d’une longue robe, ont été laissées à l’endroit où elles furent trouvées; elles sont de l’époque de Sésostri III (Mariette, *Karnak*, pl. 8s).”

¹⁰⁴ PM II², p. 107; Mariette, *Karnak*, p. 41, pl 8(d); G. Legrain, “Notes prises à Karnak,” *RecTrav* 23 (1901), p. 63; Barguet, *Karnak*, p. 115, n. 2.

¹⁰⁵ Mariette, *Karnak*, pl. 8s; Barguet, *Karnak*, p. 154, n. 3; Fr. Le Saout, “Deux statues en quartzite du Moyen Empire,” *Karnak* 8 (Paris: ERC, 1987), pp. 308-312.

¹⁰⁶ PM II², p. 108; G. Legrain, *Statues et statuettes*, I, pp. 6-7, pl. III; G. Maspero, *Guide du visiteur du Musée du Caire*, pp. 113-114; H. G. Evers, *Staat aus dem Stein* vol. 2 (München: Bruckmann, 1929), p. 92, fig. 24; A. Scharff, “Gott und König in Aegyptischen Graffenplastiken,” *Studi in memoria di Ippolito Rosellini nel primo centenario della morte (4 giugno 1843— 4 giugno 1943)* (Pisa: Industrie grafiche, 1949), p. 310.

¹⁰⁷ PM II², p. 110; G. Legrain, “Notes d’inspection: Le roi Ouga-f,” *ASAE* 6 (1905), p. 130; W. V. Davies, *A Royal Statue Reattributed*, *British Museum Occasional Paper* 28 (London: British Museum, 1981), n° 1.

¹⁰⁸ PM II², p. 109; Mariette, *Karnak*, p. 45, pl. 8 (m); H. Gauthier, *Le Livre des Rois d’Égypte*, vol. 2, MIFAO 18 (Cairo: Imprimerie de l’Institut Français d’Archéologie Orientale, 1912), p. 19 [III].

¹⁰⁹ PM II², p. 109; Mariette, *Karnak*, p. 44-45, pl 8 (k); *Ibid.*, Gauthier, *Livre des Rois*, vol. 2, pp. 32-33, n. 3; Davies, *A Royal Statue*, p. 28, n° 6; J. von Beckerath, *Untersuchungen zur politischen Geschichte der zweiten Zwischenzeit in Ägypten* (Glückstadt: J. J. Augustin, 1964), p. 248; É. Delange, *Musée du Louvre—Catalogue des statues égyptiennes du Moyen Empire* (Paris: Éditions de la Réunion des musées nationaux, 1987), pp. 48-50; H. Sourouzian, “Inventaire iconographique des statues en manteau jubilaire,” *Hommages à Jean Leclant*, vol.1, *Bibliothèque d’Étude* 106/1 (Cairo: IFAO, 1994), p. 513.

¹¹⁰ PM II², p. 109; *ibid.*, Mariette, p. 45, pl. 8(l); *ibid.*, Gauthier, *Le livre des rois d’Égypte*, vol. 2, p. 49 [45,I]; *ibid.*, von Beckerath, p. 255; *ibid.*, Davies, n° 37; *ibid.*, Delange, pp. 22-23.

¹¹¹ PM II², pp. 109, 180, 293; *ibid.*, Mariette, p. 45, pl. 8 (n-o): he incorrectly attributes the block to Neferhotep I and Sobekhotep III; *ibid.*, Gauthier, vol. 2, p. 25 [XIII] and 32 [V]; W. Helck, *Historisch-biographische Texte der 2. Zwischenzeit und neue Texte der 18. Dynastie* (Wiesbaden: Harrassowitz, 1975), p. 30, n° 35; *ibid.*, von Beckerath, p. 244.

- A fragment of a granite doorjamb and several sandstone fragments,¹¹² inscribed with a text in crude relief mentioning Senwosret I and Tiberius. The fragment with Tiberius' restoration text was photographed in the "Cheikh Labib" (CFEETK neg. 44343, doc. 43402). These fragments that were once seen to the south of the granite threshold n°4, cannot be found today.

*

The findspots of some stone furnishings of Senwosret I, like his limestone stela and his calcite socle with steps, are clearly identifiable in archival photographs as well as the anonymous granite socle for a naos. It is possible that, as with the limestone stela, several of these objects were reused within the *radier* during its construction. This *radier* may have served as reliquary for these consecrated, but now obsolete, temple furnishings. This pattern of votive reuse is common at Karnak during every era. One can cite the substratum of the south courtyard between the 4th and 5th Pylon, where Osirian statues and a lintel of Senwosret I were buried within the sand layer supporting the foundations of the pavement. In the north courtyard, a niche containing two statues of Neferhotep was also buried within the sand layer to the north of the foundation of Hatshepsut's obelisk. Neither should one forget the so-called Monthu temple at North Karnak, whose base is composed of reused decorated blocks.¹¹³

The particular case of the calcite socle with steps in Senwosret I's name¹¹⁴ (fig. 19)

This pattern of reuse inside the *radier* does not account for the presence of the calcite socle with steps¹¹⁵ (*supra.* 1.8). Although archival photographs show fragments of the socle buried very deeply to the east of the *radier*'s threshold n°4, the defacement of Amun's name proves that this socle was still visible under Akhenaten.¹¹⁶

If the calcite socle was really *in situ* on the limestone *radier*—to the east of threshold n°4—its large dimensions would have obliged the builders to place it on the *radier*'s top face before the construction of the superstructure. Indeed, the width of the four doorways (two cubits, according to measurements on the four granite thresholds from the *radier*) is too narrow to bring the calcite socle through any of them. This socle could only have been installed, therefore, after the *radier*'s completion but before the construction of the walls through which these doors were opened. The back face of the socle, flat but roughly polished, indicates that it should have abutted a wall.

¹¹² *PM II*², p. 110; G. Legrain, "Notes prises à Karnak - Une restauration de Tibère au sanctuaire d'Ousertesén I^{er} à Karnak," *RecTrav* 22 (1900), pp. 63-64; G. Legrain, "Rapport sur les nouveaux travaux exécutés à Louqsor à l'Ouest du temple d'Amon, octobre 1916 - mars 1917," *ASAE* 17 (1917), p. 51; Barguet, *Karnak*, p. 155, n. 3.

¹¹³ A. Varille, *Karnak-Nord* vol. 1 (Cairo: Imprimerie de l'Institut Français d'Archéologie Orientale, 1943).

¹¹⁴ See 1.9 and L. Gabolde, "Le problème de l'emplacement primitif du socle de calcite de Sésostris I^{er}," *Karnak* 10 (Paris: ERC, 1995), pp. 253-256.

¹¹⁵ H. Chevrier, *ASAE* 49, pp. 12-13: "Continuant les fouilles de l'année passée, nous avons exploré la partie orientale de ce qui est maintenant une cour, avec d'autant plus d'intérêt que P. Lacau avait remarqué qu'un bloc affleurait le sol..., nous avons tout de même mis au jour trois fragments intéressants. Le bloc d'albâtre affleurant le sol comporte ce qui reste d'un escalier à degré de faible hauteur, comparable à celui du monument de Sésostris I^{er}, à sa gauche se trouvent deux colonnes de texte de ce roi; un autre bloc, cassé presque au ras de l'escalier, porte une seule colonne. Enfin un troisième bloc, d'angle celui-là, fut mis au jour à proximité. Ces trois blocs se raccordent d'une part entre eux, d'autre part avec les deux blocs qui se trouvaient sur le sol, à cet emplacement même et que j'avais dû faire repousser sur l'arasement du mur de l'est pour effectuer les fouilles... L'emplacement des fragments prouve qu'il était là, derrière le dernier seuil en granit..."

¹¹⁶ Nevertheless, it will be explained below why the monuments which occupied the location of the so-called "Middle Kingdom" courtyard could have been, in part, demolished by Amenhotep III. This king could have also begun the dismantling of the limestone *radier* that supported them, in order to remove the reused blocks on which Amun's names and images were later hacked out by his successor. This would explain the defacement of the god's name on Amenhemat I's statue and on the calcite socle, but this hazardous hypothesis is still impossible to confirm.

3.2. The Brick Structures Predating the Limestone *Radier*

All of the different architectural phases presently visible between the so-called “Middle Kingdom” courtyard and the 3rd Pylon date to the New Kingdom. They rest on the remains of more ancient mud brick structures which had been levelled beforehand.¹¹⁷ The preservation of these mud brick structures is quite uneven, which makes it very difficult to reconstruct a general plan of the temple prior to the New Kingdom. However, the systematic drawing of these remains reveals a certain architectural coherence. Recent soundings have disclosed the massive scale of their design and have allowed us to propose a date for their construction. These vestiges extend out from both sides of Hatshepsut’s podium: westward in front of the 4th, 5th and 6th Pylons; eastward into the so-called “Middle Kingdom” courtyard and; to the north and the south, as far as Tuthmosis I’s enclosure walls.

Around the *radier*

- *a large enclosure wall in mud brick surrounding the temple*

Below the wide corridor separating the north enclosure wall attributed to Tuthmosis I from the storerooms surrounding the limestone *radier*, a large mud brick wall, oriented east-west, was cleared to a length of 12.65 m and a width of 3.76 m. Its south face is preserved to a height of 90 cm while its north one was cut by the sandstone foundation of the enclosure wall. Both its location and exceptional width make it very likely that this is an enclosure wall. To the south, another sounding¹¹⁸ dug below the service corridor has revealed the continuation of the remains visible on photographs of the clearance made in 1984. Here, a mud brick wall is placed symmetrically to the one observed to the north.

- *between the green sandstone foundations surrounding the so-called “Middle Kingdom” courtyard*

Outside of the north-east corner of Hatshepsut’s podium and below Tuthmosis III’s eastern chapel, (the one that is leaning against the right angle made by two of the green sandstone foundations), G. Charloux discovered the well preserved remains of two perpendicular mud brick walls in 2004.¹¹⁹ Their bases rest upon another brick structure described as a “pavement.”¹²⁰ These walls can now be connected with those discovered to the west of the Hatshepsut podium.

More soundings were dug by R. Mensan in 2007¹²¹ between the green sandstone foundations surrounding the so-called “Middle Kingdom” courtyard in order to reexamine mud brick vestiges discovered by M. Azim in 1984¹²² during a drainage operation. Photographs show the presence of brick everywhere inside the grid pattern formed by these parallel and perpendicular foundations.

- *the sand layers*

The very thick layer of sand (~ 80 cm), on which the green sandstone foundations of the storerooms surrounding the *radier* rest (fig. 29), would appear to extend, at the same level, to the *radier*’s first course, also laid on a sand layer, if these two layers were not vertically separated by a thick stack of limestone chips as an archival photograph of the *radier*’s north

¹¹⁷ Charloux, *Karnak 12* (Paris: ERC, 2007), p. 191-204, pls. II, IV; Mensan, *La Chapelle Rouge* vol. 2, 7.1.4. Les aménagements en brique crue, pp.126-127.

¹¹⁸ G. Charloux, CFEETK report on operation 128, 2005: “Deux sondages dans le second déambulatoire sud de la Zone Centrale du Grand Temple d’Amon-Rê,” to be published by Soleb in a collective work on the mud brick structures previous to the New Kingdom at Karnak.

¹¹⁹ G. Charloux, *Karnak 12* (Paris: ERC, 2007), p. 198, pl. II.

¹²⁰ *Ibid.*, Charloux, pp. 191-204, pl. X.

¹²¹ R. Mensan, CFEETK preliminary report, 2007: to be published by Soleb in a collective work on mud brick structures at Karnak predating the New Kingdom.

¹²² M. Azim, to be published by Soleb in a collective work on mud brick structures at Karnak predating the New Kingdom.

half shows (figs. 31- 32). This common level (+72.75 m), on which both subjacent layers of sand were poured, gives the impression that the whole surface of the so-called “Middle Kingdom” courtyard was uniformly leveled (*infra* 4.1). It is therefore important to establish whether this levelling was made everywhere at the same time.

Below the *radier* (figs. 28-29)

The *radier*'s first course rests on a thick yellow sand layer¹²³ (~10 cm to the south of the platform) under which is a horizontal crust made of sand hardened by contact with the subjacent layer of mixed silt and clay¹²⁴ (+72.75 m). On the *radier*'s edges, this crust seems to rise on levelled remains of mud bricks.

An archival photograph (fig. 30) of the south-east corner of the so-called “Middle Kingdom” courtyard shows a few aligned limestone blocks forming the first course of the *radier*'s south side.¹²⁵ This limestone course seems to have cut through mud bricks at a level close to the upper face of the large mud brick wall observed to the north of the courtyard,¹²⁶ below the parallel foundations of the storerooms surrounding the *radier*. The tiny mud brick platforms that H. Chevrier called “landmarks,” probably belong to these levelled structures.¹²⁷ Everywhere else below the *radier*, the elevations of mud bricks seem to have been planed down to their lowest level, although we must await the result of the micro-morphological analysis of the mixed silt and clay substratum to know whether or not this results from the compression of mud bricks compacted by successive floods.

Further west, these brick structures extend below the corridor bordering the north and south sides of the Hatshepsut *suite*. This *suite* rests on a podium built of three courses, the lowest of which cut through a mud brick wall that appears to be contemporary with another one, described earlier, under the foundation of the storerooms surrounding the *radier* (fig. 24).

Below the 6th Pylon's courtyards

An earlier building with mud brick foundations was identified below the 6th Pylon's courtyards, occupying a space 39 m in length. Its walls are perfectly symmetrical on both sides of the east-west axis of the temple, under which were found, between the 6th Pylon's

¹²³ J. Lauffray, “Les travaux du Centre Franco-égyptien de 1972 à 1977,” *Karnak 6* (Paris: ERC, 1980), p. 21: “Comme l’a justement noté H. Chevrier, avec aussi, par place, du sable gris de rivière bien distinct de celui dont le fouilleur a recouvert le fond de son sondage en fin de chantier.”

R. Mensan, CFEETK preliminary report, 2005: “La base de ce radier repose sur un substrat limono-argileux recouvert d’une fine croûte de sable cristallisé. La surface est parfaitement horizontale. Il s’est avéré impossible de déterminer si ce sédiment est un limon apporté par la crue ou s’il est d’origine anthropique. La texture macroscopique évoque plutôt de la brique crue mais aucune structure de ce type ne permet de corroborer cette hypothèse.”

This is also the opinion of archaeological specialists in mud brick, like M. Millet and J. Domer. A team of British geologists who examined a core drilled below the south-west corner of the *radier* identified this substratum as a geological formation consisting of layers of silt. South of the platform, R. Mensan excavated a small area (1.5 x 1.5 m) to a depth of 70 cm through this silt and clay layer, reaching a level +72.05. Since this layer is perfectly homogenous and contains no intrusions, only a micro-morphological analysis will permit us to determine whether or not it consists of compacted mud bricks.

¹²⁴ *Ibid.*, J. Lauffray: “Presque partout, jusqu’à la couche cristalline, on trouve des intrusions de tessons romains et des fragments de la chapelle de granit de Philippe Arrhidée, même dans des zones laissées intactes par H. Chevrier. Les carriers et les chercheurs de trésor ont tellement bouleversé les stratifications que le matériel mobilier ne peut servir à établir une chronologie absolue des structures *in situ* dont nous constatons la succession.”

¹²⁵ G. Charloux’s observation on photographs (n° 100695 to 100697) of H. Chevrier’s sounding.

¹²⁶ Charloux, *Karnak 12* (Paris: ERC, 2007), pp. 191-226; R. Mensan, to be published by Soleb in a collective work on mud brick structures at Karnak predating the New Kingdom.

¹²⁷ H. Chevrier, *ASAE* 49 (1949), p. 259, pl. XIII: “À l’angle nord-est, on mettait au jour deux petits massifs carrés de briques crues (pl. XIII), dont la face extérieure correspond à l’alignement interne du mur de la XVIII^e dynastie... Mais le travail fut repris au nord le long du mur de la XVIII^e dynastie, pour voir si de semblables jalons existaient également là. On en a trouvé en effet, mais pas disposés de la même façon.”

threshold and the granite ramp to Philip Arrhideus' chapel, the foundations of a large platform in mud brick (length: 4.30 m). This platform forms the axis of symmetry of these foundations prior to the New Kingdom.¹²⁸ On each side of this platform, a series of parallel and perpendicular walls (thickness: 2 cubits) are regularly spaced out. Finally, the grid pattern formed by these thin walls is framed by two thicker ones (thickness: 4 cubits), oriented east-west.

Conclusions

Because most of these mud brick vestiges are badly preserved, it is quite difficult to differentiate the several phases of construction. On the other hand, a recurrent feature of all these walls is the fact that they all cut through or rest on a layer of fill containing ceramics dating from the end of the 11th Dynasty to the beginning of the 12th Dynasty. This fact permits us to determine that the mud brick walls are possibly contemporary with or at least subsequent to the Middle Kingdom.

The excavations made between the so-called "Middle Kingdom" courtyard and the 3rd Pylon, have shown that this area was very likely occupied since the beginning of the Middle Kingdom. The first inhabitants settled here in order to establish a sanctuary whose vestiges are preserved as mud brick walls that are cut through and levelled by the foundations of the stone monuments of the 18th Dynasty. The stratigraphy shows that the architectural phase directly subsequent to these earlier occupants is still *in situ*.

One can therefore point out that the limestone *radier* is surrounded by two parallel deep trenches which very likely once contained an ancient foundation that was a continuation of the five sandstone courses observed below the south wall of Tuthmosis III's south chapels. After the removal of these five courses, both trenches were half filled with a very thick layer of sand on which the green sandstone foundations that supported the now vanished limestone construction of Tuthmosis I still rest. The discovery of a sandstone channel, contemporary with these last foundations, reveals the existence of a building that required the draining of liquids. The fact that this channel was cut through by the construction of Hatshepsut's podium suggests that this earlier building, now destroyed, should have stood in the same location as the *Chapelle Rouge*. It also reveals the continuity of the architectural plan of the temple from the beginning of the 18th Dynasty onward.

3.3. The Platform Built Into the Limestone *Radier*¹²⁹ (figs. 25-27)

A kind of platform is embedded in the center of the west side of the limestone *radier*. It is located just behind the east door of the Hatshepsut *suite*. Twenty cubits long from north to south and nineteen cubits wide from east to west, the platform is placed slightly northwards of the true central axis of the temple.

¹²⁸ G. Charlox, "The Middle Kingdom temple of Amun at Karnak," *Egyptian Archaeology* 27 (2005), 20-24, offered the hypothesis that this mud brick platform could have supported a ramp leading up to the *House of Amun*.

¹²⁹ L. Gabolde, J.-Fr. Carlotti, E. Czerny, "Aux origines de Karnak: les recherches récentes du Centre Franco-Égyptien d'Étude des Temples de Karnak dans la 'cour du Moyen Empire'" *BSEG* 23 (1999), pp. 35-36: "Cette plate-forme en grès a été signalée en 1904 par L. Borchardt, qui semblait l'assigner au Moyen Empire. Elle fut ensuite fouillée une première fois par H. Chevrier qui, lui, ne la datait pas puis, en 1976-1979, par J. Lauffray qui en réalisa un nouveau dégagement et en fit alors effectuer un relevé minutieux. Il la considérait comme postérieure au Moyen Empire, mais antérieure au Nouvel Empire. L'examen de Lauffray semblait révéler plusieurs strates visibles de remblais. Enfin, des structures très anciennes de briques crues – déjà mentionnées, du reste par H. Chevrier – paraissaient avoir été aperçues au plus profond des sondages. Plus récemment, Th. Zimmer supposait que la plate-forme était l'élément le plus récent de la cour mais ne lui donnait pas de date précise."

R. Mensan, CFEETK preliminary report, 2005, pp. 3-6: "les sondages autour de la plate-forme," to be published by Soleb in a collective work on the mud brick structures previous to the New Kingdom at Karnak.

Its elevation (figs. 34-35)

On its edges, the platform is built of two thin courses (height: ~30 cm) made from blocks of varied size while inside one can observe three thin courses in place. The visible face of its lower course shows that it is made of sandstone blocks¹³⁰ except for a long granite block which is reused (top face +73.78 m). Its upper course has its perimeter built of long red sandstone blocks framing slabs either in limestone or red sandstone¹³¹ (top face +74.05 m).

The existing top face of the platform could not have been used as the setting course for any superstructure since it has many projections and wide open joints, along with construction details that are usually hidden, like a mortice for a clamp. This platform was, in fact, entirely covered by the fifth and sixth limestone courses, the last one serving as the pavement and the setting course for the superstructures.¹³²

Thus, the platform seems to have served only to recycle elements reused from dismantled older monuments, including some with peculiar characteristics.¹³³

- *A soft limestone tablet*¹³⁴ is decorated in relief with a figure looking back and whose head is carved just below the horizontal frame that supports usually a *Kheker*-frieze. The nature of the soft limestone as well as the style of the carving— which is much flatter than reliefs of Senwosret I— suggests that this tablet stems from an early New Kingdom monument (figs. 37-38);

- *A soft limestone tablet* is decorated in sunk relief with the kilt of a god.¹³⁵ The soft limestone differs from the hard limestone used in Senwosret I's monuments;

- *Two column bases in red sandstone* (Ø105 cm) once supported octagonal columns (Ø 57cm);

- *A limestone offering table for double libation*¹³⁶ (fig. 25).

Its pebble foundations (figs. 34-35)¹³⁷

The platform exactly covers an area of fill poured into a kind of casing. On three sides of the platform, (east, north and south), a regular stratigraphy consisting of two superimposed layers has been observed to a height of about 70 cm, that is to say from the bottom upwards.¹³⁸

¹³⁰ *Ibid.*, Gabolde, Carlotti, Czerny, p. 38: “Qu’il s’agisse de remplois ou de blocs apparemment neufs, tous sont taillés dans un même grès de couleur gris-rose à rouge sombre. C’est le grès de la colonnette au nom d’Antef II, celui utilisé au temple de Mentouhotep à Deir el-Bahari ou encore celui employé au temple primitif de Médinet Habou. Il est totalement distinct du grès jaune ou brun employé au Nouvel Empire.”

¹³¹ J. Lauffray, *Karnak 6* (Paris: ERC, 1980), p. 21: “Ces dalles incluent des remplois: au centre une double table à libations, vue par H. Chevrier; au Nord, une partie d’une figure royale et un fragment de texte.”

¹³² Gabolde, Carlotti, Czerny, *BSEG 23* (1999), p. 39, n. 17: “C’était déjà plus ou moins l’avis de H. Chevrier (*ASAE 47*, p. 176) qui y voyait seulement des fondations et dans une certaine mesure, celui de Lauffray (*Karnak 6*, pp.18-26) qui reconnaissait dans l’assise du haut une superstructure du fait que ses faces latérales avaient été soigneusement dressées.”

¹³³ *Ibid.*, pp. 39-45.

¹³⁴ This tablet was embedded in plaster in the upper course of the platform, along the north half of Hatshepsut’s podium. Numerous fragments of the tablet were reassembled by the conservator Sa’adi. The upper frame is oversimplified since it shows only two lower lines, whereas there are usually four. The two reeds are also very schematic with no detail. N. Grimal and M.-D. Martellière attribute the style of carving to the beginning of the New Kingdom, and it would be useful to re-examine the other tablet (stored inside the “Cheikh Labib”) which is carved in sunk relief with the belt of a god.

¹³⁵ Gabolde, Carlotti, Czerny, *BSEG 23* (1999), pp. 40 – 44: the god is identified as Atum.

¹³⁶ J. Lauffray, *Karnak 6* (Paris: ERC, 1980), p. 22, fig. 7.

¹³⁷ *Ibid.*, Lauffray, pp. 21, 22, fig. 7; *Ibid.*, Gabolde, Carlotti, Czerny, *BSEG 23* (1999), pp. 35-36.

¹³⁸ *Ibid.*, Lauffray, p. 21; *Ibid.*, Gabolde, Carlotti, Czerny, pp. 45-46; R. Mensan, CFEETK preliminary report, 2005.

- A fill (height: ~ 60 cm) containing few shards¹³⁹ is composed of a mix of grey muddy sand and irregular small pebbles (Ø 0.5 to 4 cm) which appear to come from the bed of a *wadi*.¹⁴⁰ This fill rests on a flat, but not quite horizontal, substratum (+72.71 m below the north-west corner of the platform, +72.91 m below its south-east corner) of a mixed silt and clay. This substratum is at the same level and has an identical composition to the one onto which the sand layer supporting the first course of the limestone *radier* was poured.
- A layer (depth: 5 to 20 cm) of grey and fine alluvial sand, containing very few tiny shards, rests on the former fill whose top does not appear to have been levelled. This sand layer was used to wedge the blocks of the lower course of the platform, since those blocks had their bed faces at different levels.

The low mud brick wall encasing the pebble fill (figs. 34-35)

A fill of small pebbles was poured inside the perimeter delimited by a low wall in mud brick, which predates the *radier*, and whose north, east and south sides were examined. It had already been described by H. Chevrier as a low wall.¹⁴¹ Its likely function was to prevent the effluence of the pebbles, since this material can only be contained inside a pit or casing.

There appears to be a kind of casing here, delimited by three low walls of mud brick, (the fourth wall ought to exist under Hatshepsut's podium), which so closely resembles a rough "roll" of soil that it is difficult to compare them with the mud brick walls which appeared at the same level (+73.84 m) below the sand layer on which the green sandstone foundations of the storerooms surrounding the *radier* rest.¹⁴² This resemblance to an irregular "roll" results from man-made damage to the faces of the low wall, as tool marks on the bricks show. The inner face was cut before the pebbles were poured while the outer one was cut before the first course of the *radier* was built (figs. 34, 39).¹⁴³

3.4. The Connection Between the *Radier* and the Platform (fig. 39)

The first course of the *radier* carefully surrounds the "roll" that appears to contain only the lower part of the pebble fill on which the platform rests. It is difficult to determine if the roll was already this low before the construction of the *radier* or if it had been planed down in order to place the second course of the *radier* upon it. The limestone blocks of this second course actually appear to be embedded into the perimeter of the upper part of the fill,¹⁴⁴ although a thin sand layer separates them. It is probably when this second course of the *radier* was embedded into the fill that some of the pebbles spilled over the low wall, into which a few pebbles were compressed under the weight of the upper courses of the *radier*.

¹³⁹ R. Mensan, CFEETK preliminary report, 2005. North of the channel, four limestone blocks carefully joined with plaster were removed. Visible at a level of +73.41, the pebble fill was sifted on a small grid (30 x 60 cm) and to a depth of 70 cm until silt and clay substratum was reached at a level of +72.71. A. Masson and M. Millet examined the very few pottery shards that were found, which they tentatively date, subject to further examination, to the end of Middle Kingdom and the Second Intermediate Period.

¹⁴⁰ The thin plaster layer, observed by L. Gabolde and J-Fr. Carlotti, in which the pebble fill was embedded, does not exist to the south of the platform. The biggest pebbles were deposited naturally by gravity on the bottom of the casing. The pebble fill could have served both to drain water flowing from the surface and to limit the capillary action of the water table.

¹⁴¹ H. Chevrier, *ASAE* 47, p.177: "Sous l'assise inférieure de la plate-forme, soit que toute l'infrastructure soit en briques crues, soit qu'un muret ait été établi pour éviter que le sable ne coule."

¹⁴² Charloux, *Karnak* 12 (Paris: ERC, 2007), pp. 191-204. Mud brick remains were observed around the courtyard, below the sandstone foundations of the storerooms surrounding the *radier*.

¹⁴³ J. Lauffray, *Karnak* 6 (Paris: ERC, 1980), p. 21.

¹⁴⁴ The fill could have been cut to place the second course of the *radier*. The pebbles may have been poured in two stages: the first one flush with the top of the "roll," and the second one after the the second course was laid. There also seems to be a thin layer of yellow sand inside the vertical joint separating the course from the fill.

Although the first two courses of the *radier* surround the three visible sides of the pebble fill, they never pass under it.¹⁴⁵

To the north of the platform, the roll appeared, although very levelled, beneath the two limestone blocks of the *radier*'s first course, that were lifted during the excavations. The roll also appears to continue westwards below the first sandstone course of Hatshepsut's podium where poor vestiges in mud brick appeared. However, the possible turning of the roll southwards at a right angle, in order to form the west side of the casing containing the pebble fill, was not accessible to the excavators. The tight joint between Hatshepsut's podium and the platform was cleaned to examine the cut that was made by Hatshepsut inside the pebble fill in order to set in the first sandstone course of the podium. This pebble fill appears to continue further west below the podium. Three small quartzite foundation deposit stones inscribed with Hatshepsut's prenomen *Maatkare* were discovered in this excision, and were nearly plumb with Hatshepsut's large granite threshold.

As one can see to the south and east of the platform, the limestone blocks preserved around it were superimposed in a corbelled fashion so that the third and fourth courses of the *radier* are contiguous with the first and second courses of the platform. This layout indicates that the platform could not have been built after the limestone *radier*, which covers the platform. Instead, they are contemporary. In fact, the space occupied by the pebble fill under the platform corresponds to the combined height of the first two courses of the *radier* and of the layer of sand inserted between them.

Thus the platform sealed a casing filled with pebbles and surrounded by a mud brick "roll" which appears to be the only visible remains of an earlier settlement (figs. 34-35). Everywhere else below the *radier*, the elevations of the older mud brick structures seem to have been planed down to their lowest level.¹⁴⁶

Although they are too few to be conclusive, pottery shards were found by sifting the pebble fill on which two of the limestone blocks, carefully joined with plaster, that were lifted from platform rested. These ceramics range in date from the end of the Middle Kingdom to the Second Intermediate Period, which seems to rule out a Middle Kingdom date for the platform. We shall see, moreover, that the whole *radier*, including the platform, probably served as a reliquary for the dismantled elements of an older sanctuary. This same type of reuse of pre-New Kingdom architectural elements is found beneath the courtyards of the 5th Pylon, where Tuthmosis I's columns are founded on the architraves and column drum sections of a colonnade of Senwosret I (*supra* 2: Senwosret I's sandstone colonnade). Likewise, the Osirian pillar n°11 of Senwosret I was discovered alongside the south colonnade of Thutmosis I at the level of its foundations. Finally, in the courtyard between the 4th and 5th Pylons, pre-New Kingdom¹⁴⁷ elements were carefully buried under the 18th Dynasty foundations.

3.5. An Hypothetical Drainage System

¹⁴⁵ Gabolde, Carlotti, Czerny, *BSEG* 23 (1999), p. 38.

¹⁴⁶ The micro-morphological analysis of the silt and clay substratum will let us know whether or not it is made of mud bricks compacted by the successive floods.

¹⁴⁷ Larché, *Karnak* 12 (Paris: ERC, 2007), p. 493: Osirian statues of sandstone and a limestone lintel of Senwosret I were buried in the sand layer supporting the foundations *radier* under the pavement of the south courtyard. A niche with two statues of Neferhotep was also buried in the sand layer north of the foundation of the obelisk in the north courtyard.

Although the water table is very close to the ground today, it is hard to know if such was the case during the Antiquity. If it was high in antiquity, the pebble layer should have served as a drainage system to prevent the water from rising too high.¹⁴⁸

At Karnak, this implementation of a pebble fill is unique, since sand is used everywhere else in foundations. The use of pebbles under the platform was a deliberate choice, since it would have been easier to substitute the continuation of the two first courses of the limestone *radier* in place of the pebble fill. These pebbles seem, then, to give an exceptional importance to this tiny surface, where they could have only served to prevent the rise of the water table. This underground drainage system suggests there was a specific need to protect the ancient ground which once existed beneath the platform. This drainage system could be linked to the use, on the surface, of wooden furniture, a material sensitive to humidity. As the portable bark inside its wooden naos¹⁴⁹ would usually have been protected from humidity by a hard stone socle, a sounding near the socle located inside the bark sanctuary of Philip Arrhideus would allow us to discover if the pebble fill extends that far westwards. According to this hypothesis, the pebbles would have served to drain the water used during cult rituals, which could also explain why there is a wide open joint between the bark socle and the pavement of Hatshepsut's *Chapelle Rouge*.¹⁵⁰

4. Proposed Plan of Amenhotep I's Monuments

Dating the *radier* to the beginning of the New Kingdom opens up new prospects for the location of Amenhotep I's dismantled monuments. Since Amun's names and images were not attacked on the king's limestone blocks, his monuments (fig. 40) were torn down before Akhenaten's reign. The display of the recovered blocks from these monuments on new *mastabas* built to the south of the "Cheikh Labib" storeroom, where they have been restored, permit their classification into eleven sets of walls characterized by the letters A, B, C, D, E, G, M, N, P, R, and S¹⁵¹ (fig. 40). Ten of these eleven sets were already described by C. Graindorge¹⁵² while J. Fr. Carlotti has proposed a sequence of three reconstructed plans.¹⁵³ However, my examination of all the faces of these blocks during their transport suggests to me that they should be reconstructed according to a completely different plan, even though it uses the same architectural elements. Two stages of construction can be proposed, from east to west.

4.1. First Stage: the Monuments Built On and Around the Limestone *Radier* (in gold on the plan, fig. 40)

The sanctuary

Since no architectural elements in Amenhotep I's name have been identified, the sanctuary was, perhaps, built by one of his predecessors. Its schematic reconstruction relies solely on the location of the four granite thresholds and of the calcite socle.

The enclosure wall C+C' (three cubits thick at its base)

¹⁴⁸ In Amenhotep III's temple at Kom al-Hetan, H. Sourouzian has cleared a thick layer of pebbles inserted between the lower and the intermediate foundation courses of the walls and of the colonnades.

¹⁴⁹ C. Graindorge, "Les monuments d'Amenhotep I^{er} à Karnak," *Égypte, Afrique et Orient* 16 (2000): the decoration carved on the inner faces of the walls R and R' shows a wooden naos sheltering the portable bark.

¹⁵⁰ F. Burgos, F. Larché, *La Chapelle Rouge*, vol. 2, 1.2.5. Le dallage du sanctuaire.

¹⁵¹ The walls A, B, C, D, E, N, R are placed north of the axis while the walls A', B', C', D', E', R', S' are placed south of the same axis.

¹⁵² C. Graindorge, *Égypte, Afrique et Orient* 16 (2000), pp. 25-36.

¹⁵³ *Ibid.*, pp. 27, 29 and 34.

The thickest of Amenhotep I's walls (fig. 40)¹⁵⁴ fits the traces incised astride threshold n°1 and on the red sandstone block bordering the west edge of the top face of the *radier*.¹⁵⁵ The east side of Hatshepsut's *suite* abutted this enclosure wall C (fig. 41; *Égypte, Afrique et Orient* 16 [2000], p. 29, plan 2, N° 6). Around 50 blocks belonging to the south half C' of the enclosure are preserved, along with seven more that are attributed to its north half C.

A horizontal line of text in relief, topped with a torus moulding and a cornice, runs along the upper part of its outer battered face, while its lower face is smooth and lacks decoration. The battered face of four superimposed blocks of the north half C (1C + 2C + 3C + 4C)¹⁵⁶ shows superimposed registers with small scenes identical to the *antas* of Senwosret I's portico. Since the south joints of these blocks are vertically aligned, they could have abutted the north doorjamb, probably in granite, of the axial door (the ancestor of the present "Door of the food offerings"). This doorjamb was edged with a vertical torus moulding as the vertical groove (1/4 cylinder shaped) incised to the right of the west face of the four superimposed blocks shows. This support is also confirmed on the vertical inner face of the same four blocks whose decoration stops along the usual vertical frame. This inner face shows bulls walking towards an abattoir and facing the axial door on either sides C and C' (block 1C).¹⁵⁷

The inner face of the south half C' is vertical and, above a blank dado, is decorated in raised relief with two registers on which the ritual liturgies of Amun at Karnak unfold. On the lower register, Amenhotep I pays homage to Amun and consecrates new monuments, while on the upper one he presents offerings to the Ennead and consecrates altars.

The wall D+D' (two cubits thick at its base)

The outer face of wall D is battered and topped with a line of text. Above a blank dado, the lower register shows Amenhotep I running the ritual race around boundary stones in the presence of Amun-Kamutef, while the upper one depicts his coronation by Amun. The wall's inner face is vertical and is also decorated with two registers above a blank dado: the lower one represents an episode of the *Heb-Sed*, and the upper one the *montée royale* in front of Amun.

Wall D is clearly delimited (length: 4.78 m) on both faces by two vertical frames bordering the blank reveals of two door openings. Along the left edge of the battered face, the reveal is cut with a vertical groove which was very likely used to embed a wooden doorpost.

This wall D cannot be placed as in *Égypte, Afrique et Orient* 16 (2000), fig. 34, plan 4, N° 3. A new location is now proposed between the axial sanctuary and the north wall of enclosure C. Only a few blocks from a symmetrical wall D', to the south, are identified (1D' to 4D'-240A1).

The wall A+A' (81 cm thick at its base)

C. Graindorge considers wall A to be the facade of an abattoir, pierced by at least three doorways, of which some elements of doorjambs and lintels were identified. One cannot say if these doors gave access to the temple interior either for live cattle coming from outside or for prepared cuts of meat after the animals were butchered. The outer battered face of the wall is decorated with a single register carved in raised relief above a dado, while its inner vertical face is blank except for a horizontal line of text carved at mid-height in sunk relief. Wall A is reconstructed to the east of the limestone *radier*, plumbd with the ancient foundation trenches reused for Tuthmosis I's storerooms (fig. 40; *Égypte, Afrique et Orient* 16 [2000], p. 29, plan 2, N° 11). Block 4A (271A1) should abutt the north doorjamb, probably in granite, of

¹⁵⁴ F. Burgos, F. Larché, *La Chapelle Rouge*, vol. 2, p. 329.

¹⁵⁵ The blocks of the structure 3 (*Égypte, Afrique et Orient* 16 [2000], p. 29, plan 2) in fact come from wall C (N° 6), from which they cannot be separated (see pl. 40; *ibid.*, Burgos, Larché, p. 329).

¹⁵⁶ *Ibid.*, p. 329.

¹⁵⁷ *Ibid.*, p. 329, fig. c.

an axial door. This doorjamb was framed with a vertical torus moulding as the vertical groove (1/4 cylinder shaped) that cut through the left edge of the battered face of block 4A indicates. Six other blocks also come from this north half A, while 19 blocks from the south half A' have been identified.

4.2. Second Stage: the Constructions Built to the West of the Limestone *Radier* (in yellow on the plan, fig. 40)

The constructions built to the west of the limestone *radier* were replaced, first by a monument that has since vanished, the *Netchery-menu* and its bark chapel in hard limestone, and later by Hatshepsut's podium and its superstructures. The blocks from these dismantled constructions were buried below the *Cachette* courtyard or they may have been reused in the foundations of Ptah temple, but this must be confirmed by future excavations.

The bark chapel R+R'

This bark chapel consists of two parallel walls (R and R') with battered outer faces¹⁵⁸ and vertical inner ones.¹⁵⁹ Both faces are entirely decorated with two registers above a dado. Described by C. Graindorge as "two screen walls surrounding a wooden bark shrine," R and R' do, in fact, form the two side walls of a chapel opened at each end. The doorframe of the eastern facade is decorated with two large columns of text. The battered western facade has two doorjambs with vertical reveals (width: 90 cm). Each side of the doorframe is decorated with at least four small registers (1R-5R),¹⁶⁰ each one showing Amenhotep I facing the two alternate forms of Amun.

Three limestone blocks (175A1+249A1+87CL56) are now joined on a *mastaba*¹⁶¹ next to three other blocks from the facade's doorframe (87CL42, 87CL183, 183A1). Perpendicular to the north doorframe, the outer face of R starts with a blank surface (two cubits long) which was used to fold back the doorleaf of a side door. This blank surface ends near the west facade with a chiselled rough protuberance which looks more like a destroyed rebate than the result of the removal of a vertical torus moulding. On the other side of the opening, the doorleaf could be fixed to the doorpost embedded inside the groove cut in the south reveal of wall B, which is same width as the blank surface (two cubits, fig. 40).

The decoration of the inner faces of both walls R and R' starts alongside the two rebates of both axial openings. Though there are no expected blank surfaces to fold back the doorleaf, this is not sufficient proof that these openings had none.

Six blocks from the upper course which supported the roof slabs were found: the four southern ones are decorated with a *Kheker*-frieze carved inside and painted outside, while the two northern ones show a different pattern; outside, the painted frieze is replaced by a horizontal line of text which was topped by a course of cornice blocks having a horizontal torus moulding.

The disposition of the west facade of Amenhotep I's bark chapel between two openings was later copied in the *Chapelle Rouge* and then later in Tuthmosis III's granite bark sanctuary. The proposed location of Amenhotep I's bark chapel is on the site of the Philip Arrhedeus chapel (fig. 40; *Égypte, Afrique et Orient* 16 [2000], p. 27, plan 1, N° 4 and p. 29, plan 2, N° 4).¹⁶²

The enclosure wall around the bark shrine B+ E and B'+E'

¹⁵⁸ *Ibid.*, p. 328, fig. a.

¹⁵⁹ *Ibid.*, p. 328, fig. b.

¹⁶⁰ *Ibid.*, p. 328, fig. c.

¹⁶¹ *Ibid.*, p. 328.

¹⁶² *Ibid.*, p. 328.

- The two symmetrical right corners of two perpendicular walls (B+E and B'+E') are decorated in raised relief with small scenes similar to the reliefs on Senwosret I's portico. Three blocks¹⁶³ form the corner (north-west) of the walls B and E while four other blocks and two fragments¹⁶⁴ belong to the symmetrical corner (south-west). Three details prevent the reconstruction of a portico with free standing supports linked by architraves between these corners (fig. 40; *Égypte, Afrique et Orient* 16 [2000], p. 29, plan 2, N° 8):¹⁶⁵

* The small size of the blocks, as well as their irregular bonds, do not permit the seating of architraves whose soffits should be lined up between both corners of the portico;

* The horizontal frame, carved under the upper line of text, seems incompatible with the decoration of an architrave on which this frame might possibly have been painted but never carved;

* The decoration on the face bordering the superimposed small scenes differs from Senwosret I's portico, which shows only the king facing Amun. The remains of tiny, superimposed female figures suggests that this was a much longer scene whose right end is carved on a block from wall B, on which there appears the foot of a figure on an equally small scale (13B).

- Wall B (two cubits thick at its base): both faces are decorated in raised relief. Battered, its outer one has a single register showing, on its right half, a large figure of Amenhotep I smitting his Asiatic enemies, and topped with a horizontal line of text.¹⁶⁶ Like the large figure of Tuthmosis III carved on the 6th Pylon's west face, Amenhotep I faces away from the temple's axis. Block 19B (87CL384) being placed on the wall's left half, the raptor's direction indicates a king moving rightwards, in the opposite direction of the smitting king. Vertical, its inner face is decorated with two registers showing the king, the god's wife Ahmes-Nefertari, and the priests entering the temple. They are purified in basins before moving towards the courtyard where they sing in front of the Ennead, accompanied by Thoth. Both perpendicular ends of wall B are preserved:

* the south end of wall B (to the right of the outer face) is dressed as a smooth reveal (87CL 477+355+123+497). A vertical groove is cut into the angle of the reveal with the outer face, probably to fix a wooden doorpost. A doorleaf allowed the passage that opened on both sides of the west facade of the bark chapel to be closed off (fig. 40).

* the north end of wall B (left of the outer face) is framed on both sides of the corner with superimposed registers of small scenes¹⁶⁷ which are duplicates of those on Senwosret I's portico. Wall B is reconstructed north of the bark shrine R, aligned with its west facade, and separated from it by an opening whose doorleaf must have been fixed to a wooden doorpost (fig. 40; *Égypte, Afrique et Orient* 16 [2000], pl. 34, plan 4, N° 2).

- Wall B' (2 cubits thick at its base): eight blocks from this wall, reconstructed south of the bark shrine's wall R', were identified (two blocks are still not placed).¹⁶⁸ In particular, an assembly of three blocks shows:

* On its battered face,¹⁶⁹ a fragmentary horizontal text is carved under the horizontal torus moulding;

¹⁶³ *Ibid.*, p. 324, fig. b.

¹⁶⁴ *Ibid.*, p. 325, fig. b.

¹⁶⁵ *Ibid.*, pp. 324-325.

¹⁶⁶ It seems impossible to assign to wall B the two small limestone blocks which were reused inside the north wing of the 5th Pylon, and which belonged to the frame of a flagpole niche. Other niches had probably decorated the eastern face of the 5th Pylon's ancestor.

¹⁶⁷ F. Burgos, F. Larché, *La Chapelle Rouge*, vol. 2, pg. 324.

¹⁶⁸ *Ibid.*, p. 325, fig. c.

¹⁶⁹ *Ibid.*, p. 324, fig. b and p. 325, fig. b.

* On its vertical face,¹⁷⁰ the remains of two successive scenes separated by a vertical frame. In the left scene, the king moves leftwards in the direction of the south-west corner, while in the very fragmentary scene on the right, only a brief segment of a horizontal frame where it meets the vertical frame remains. This horizontal frame is topped with a *Kheker*-frieze. Below it, a skyline surmounts a *Nekhet*-glyph, indicating the raptor's position and that the scene was very narrow.¹⁷¹

The north cross joints of both superimposed blocks line up vertically and are perfectly smooth. These two anomalies prove that these cross joints once abutted a monolithic element that was already standing here. This may have been an Osiran pillar of Senwosret I, whose two parallel faces have the same depth as wall B'. Indeed, the face of one such pillar stored in the "Cheikh Labib" storeroom has been recarved twice (fig. 6): on the first occasion, the new king was placed much higher, in front of a *w3s*-sceptre held by a figure of Amun that was partly carved on an adjoining wall; in the second edition, a lone king is shown with a highly arched eyebrow characteristic of Amenhotep I's relief portraits, although the nose is shorter. Because the orientation of this second king is incompatible with the inner face of wall B', this pillar (fig. 6) was probably incorporated into the symmetrical wall B. Given the difficulty in reusing these pillars, it seems likely that they were still in place when walls B and B' were constructed.

- *Wall E* (two cubits thick at its base and 95 cm under the torus): both its faces are decorated in raised relief. The inner one is vertical, and carved with two registers depicting the daily ritual of Amun. Battered, the outer one is smooth except for the line of text carved under the horizontal torus moulding supporting the cornice (block 87CL 483).¹⁷² Block 87CL 84 (CFEETK neg. 109364) forms a reflex right angle, whose one face has no vertical frame. This wall E (N° 9) cannot be placed symmetrically to wall C (N°6) as was proposed (see *Égypte, Afrique et Orient* 16 [2000], pl. 29, plan 2, N° 9), since wall E (N° 9) is thinner at its base (2 cubits) than the wall C (N°6) (3 cubits). Wall E is, in fact, perpendicular to wall B at the level of the corner previously described, viz. the one with decoration which duplicates that of Senwosret I's portico.¹⁷³ This wall E constitutes, then, the north wall of the courtyard located north of the bark chapel R+R' (fig. 40).

- *Wall E'*: only one top block of this wall E', which formed the south continuation of the enclosure C', was identified.¹⁷⁴

The two lines N+S of 16 niches, the predecessor of the 6th Pylon

These two series of eight niches were lined up on both sides of an axial door (fig. 40; *Égypte, Afrique et Orient* 16 [2000], p. 29, plan 2, N° 13),¹⁷⁵ each one (height: 4 cubit) likely sheltered a royal statue.¹⁷⁶ On both side faces of each niche, Amenhotep I sits enthroned in front of an offering list and a table laden with offerings, while a priest carries out the cult ritual. Both lines N and S seem to come from the east face of a Pylon which is reconstructed as the ancestor of the 6th Pylon and its western enclosure (fig. 40; *Égypte, Afrique et Orient* 16 [2000], p. 29, plan 2, N° 5).

At its base, the width of the Pylon reached six cubits, a figure computed through the addition of the niche depth (2.5 cubit) to the depth of the headers (125.5 cm) which form, at

¹⁷⁰ *Ibid.*, p. 325, fig. a.

¹⁷¹ Observation made by Ch. Van Siclen.

¹⁷² F. Burgos, F. Larché, *La Chapelle Rouge*, vol. 2, pg. 324, fig. b.

¹⁷³ *Ibid.*, p. 324, fig. b.

¹⁷⁴ *Ibid.*, p. 325, fig. b.

¹⁷⁵ *Ibid.*, pp. 326-78.

¹⁷⁶ These niches are not high enough (4 cubits) to have sheltered the sandstone Osirian statues (6 are preserved, height: 3.15 m, CFEETK neg.1720) which were reused in the foundations of the south courtyard between the 5th and the 4th Pylon.

their top, the back face of the niches. The visible faces of both headers (87CL 404 and 405) show that the battered outer one is blank, while the vertical inner one is decorated. Two blocks belonging to the facade of the niches have vertical torus mouldings marking the end of the decoration. This particular feature allows them to be placed at the extreme ends of each wing:

- *In the north wing*, it is possible to place block 357A1 (CFEETK neg. 115996) between the axial door and the first niche. Unlike the other vertical ones, the torus moulding of block 357A1 is not carved alongside the doorframe of the niche, but is set 15.5 cm apart. To the left of the torus, the face of the block is smooth, probably as far as the doorframe of the axial door. Two superimposed blocks, 63A1 (CFEETK neg.115705) and 288A1, are placed to the right of the last niche. To the left of the vertical torus, the face is decorated with the right doorframe of the niche while to its right, the face is smooth, probably until the north-east corner of the Pylon.

- *In the south wing*, block 87CL 465 (CFEETK neg. 104987) is placed to the left of the niche, at the farthest point from the axial door. To the right of the vertical torus, the face is decorated with the left doorframe of the niche, while to its left the face is smooth probably until the south-east corner of the Pylon.

- *Flagpole niche*: the existence of at least one flagpole niche in each wing is proved by the thin depth (60 cm) of header 1S5-6 (345A1) which belongs to the back of the fourth niche of the southern range. Smooth and vertical, the outer face of this block is set ~ 65 cm back from the west face of the Pylon. This layout is characteristic of a flagpole niche facing west.

- *Decoration*: a few limestone fragments in sunk relief were found in the foundation trench reused for the 6th Pylon and its west enclosure wall.¹⁷⁷ They belonged to a line of text similar to the one topping the walls of the open air passages delimiting the small chapels P. It is possible that the original trench was dug under Amenhotep I to receive the foundations of a thin Pylon with battered faces (fig. 40). The west face was blank but maybe have been topped by a line of text while its east face had 16 niches.

- *An axial door*: this door separated the two rows of eight niches. It is possible that a limestone lintel of Amenhotep I,¹⁷⁸ with texts that mentioned construction work in Karnak temple¹⁷⁹ and which consists of blocks reused from a hard limestone lintel of Senwosret I, was placed here. Seven reused fragments come from the upper half of the original doorframe and from the face above it which shows Senwosret I sitting enthroned between Horus and Seth.¹⁸⁰ These blocks were cut up and rotated before Amenhotep I reused them as a lintel

¹⁷⁷ R. Mensan in *La Chapelle Rouge*, vol. 2, pp. 137-141: 7.2.3. La chapelle occidentale de Thoutmosis III: opération 161 with fig. pg. 294.

¹⁷⁸F. Burgos, F. Larché, *La Chapelle Rouge*, vol. 2, pg. 326. It is also possible that this door comes from Amenhotep I's Pylon that was replaced by the 5th Pylon. According to this last hypothesis, Amenhotep I probably reused Senwosret I's lintel in its original location.

¹⁷⁹ Chr. Wallet-Lebrun, 18/2C (in press by Soleb): “[Ame]n[ho]tep I^{er} doué de [vie] qui [compte parmi son oeuvre en faveur de son père] Amon, seigneur-des-trônes-des-deux-terres, la construction de son domaine, l’agencement de son temple et l’érection de la porte Sud *Seqa-hotep* de vingt coudées en [belle pierre blanche de calcaire].…”

¹⁸⁰ The direction of this lintel from an axial door is very likely defined by the position of the heraldic plants crushed by the feet of the divinities. Seth, here referred to as the god of Ombos, is the Lord of Upper Egypt. He is placed to the left, on the lily of the South, while Horus is placed to the right, on the papyrus of the North. This allows the lintel to face east, and not west as one might think even though the king's red crown faces Amun, behind Seth. Unfortunately, behind Horus, the crown of the symmetrical king facing Amun has disappeared. The missing crown may have also been red, as one can see in the representation of Karnak's 3rd Pylon, shown in a relief from the walls of the Colonnade Hall at Luxor temple (see Epigraphic Survey, *Reliefs and Inscriptions from Luxor Temple, Volume 1: The Festival Procession of Opet in the Colonnade Hall* [Chicago: The Oriental Institute of the University of Chicago, 1994], pl. 100). Indeed, on the lintel of the axial door, (which is supposed to face west here), the opposing kings running towards Amun both wear the red crown. This strange symmetry

embedded in a battered stone wall, as their perfectly flat cross joints indicate. On the lintel, the doorframe was wider under Amenhotep I (width: 3.46 m, projection: 7 cm) than under Senwosret I (width: 3.10 m). The few blocks belonging to the inner and outer doorjambs (passage: 3 cubits) show different widths of the vertical doorframes:¹⁸¹

* The narrowest doorframes (77.5 cm)¹⁸² have a slightly battered face that belonged to the inner doorframe.¹⁸³ They are decorated with a column of text consisting of large hieroglyphs which permits the height of the passage to be reconstructed as nine cubits. One reveal is smooth, in order to fold the single doorleaf, while the other one is decorated with two columns of text which probably preceded a figure of the king striding into the temple (now missing).¹⁸⁴

* The widest doorframes (96 cm)¹⁸⁵ are more battered than the former ones and come from the outer doorframe.¹⁸⁶ They are decorated with several superimposed scenes showing the king facing Amun. The door rebate seems to be preserved on block 156A1.

* The counter-lintel: two blocks¹⁸⁷ in hard limestone, very likely belonged to the counter-lintel of the earlier doorway of Senwosret I,¹⁸⁸ since one block (87CL 122) is clearly reused. Its top face shows an excision made at a right angle with reliefs depicting stars which is typical of the decoration on the soffit of a lintel.¹⁸⁹ From the dimensions of the lintel and of the doorjambs, it is possible to reconstruct the doorway as being ~9 cubits high with a passage three cubits wide. Amenhotep I wears the red crown on the left side of the lintel, and the white one on the right, indicating that his door faced either south or west.

The chapels G and P for the royal cult

Foundations perpendicular to the western enclosure of the 6th Pylon also supported the north and south side chapels of Amenhotep I that Tuthmosis III and Hatshepsut later replaced. - *The long chapels G and G'* (~ 67 cm thick, two vertical faces): at least six long chapels have scenes depicting the offering ritual made to the royal statue and its *ka*, by priests who are displayed on two registers. A few blocks from the side walls still retain partial projections of the back walls of these chapels. This bonding confirms that the main back wall (north for G, south for G') was dismantled at the same time as the chapels. Their proposed reconstruction is in the same location as the later chapels of Tuthmosis III, which border the north and south sides of the Hatshepsut *suite* (figs. 40-41; *Égypte* n°16, p. 27, plan 1, n° 3).

- *The short chapels P and P'* (~ 59 cm thick, two vertical faces): at least five short chapels have decoration on their side walls nearly identical to that of the long ones, but without the *ka* behind the royal statue. A few blocks of the side walls have kept the projection of the facade, but never of the back wall, as though the back walls had stayed in place when the rest was dismantled. Their proposed reconstruction is in the same location as Tuthmosis III's chapels

of identical crowns does not seem to be a sculptor's mistake since another relief, to the south of this one on the same wall, the exit gateway of Luxor temple is shown with the scene on its lintel showing the two kings run towards Amun but wearing different crowns this time: red to the left (North) and white to the right (South).

Epigraphic Survey, *RILT* 1, pl. 56.

¹⁸¹ F. Burgos, F. Larché, *La Chapelle Rouge*, vol. 2, pp. 326-327.

¹⁸² *Ibid.*, p. 327. South doorjamb: 97CL 125 (CFEETK neg. 109227), 190A1 (CFEETK neg. 115851) - b. North doorjamb: 182A1 (CFEETK neg. 115851), 298A1+67A1.

¹⁸³ *Ibid.*, p. 327.

¹⁸⁴ *Ibid.*, p. 327d. Reveal of the doorway: 298A1 (CFEETK neg. 116016).

¹⁸⁵ North doorjamb: 126A1 (CFEETK neg. 115836), 87CL 439 (CFEETK neg. 105214), 87CL 3+354A1 (CFEETK neg. 109065), *Ibid.*, p. 326a. South doorjamb: 274A1, 87CL 190 (CFEETK neg. 105166), 94A1 (CFEETK neg. 115813), *Ibid.*, p. 326b.

¹⁸⁶ F. Burgos, F. Larché, *La Chapelle Rouge*, vol. 2, p. 326.

¹⁸⁷ See pl. 50d. A lintel in hard limestone, reused from an earlier lintel: 87CL 122 (CFEETK neg. 109230), 237A1 (CFEETK neg. 11583).

¹⁸⁸ F. Burgos, F. Larché, *La Chapelle Rouge*, vol. 2, p. 327.

¹⁸⁹ Larché, *Karnak* 12 (Paris: ERC, 2007), p. 417 and pl. XCII: block 87CL122.

which border the north and south courtyard of the 6th Pylon (figs. 40-41; *Égypte* n°16, p. 29, plan 2, n° 1).

- *The chapels at the extremities surrounding small passageways*: altogether, there are six passageways, three on the north and three on the south. On the north side, from west to east:

- the first passageway separates the wall with the range of niches S and N from the westernmost chapel of P
- the second passageway separates the range of chapels G from the range of chapels P
- the third passageway separates the easternmost chapel of G from the two parallel walls surrounding the limestone *radier*. Blocks from three walls (P1, P5, G0) have a different decorative scheme on one face, which is blank except for a horizontal line of text carved at its top in sunk relief. These particular faces were adjacent to small passageways which gave access to the outside (fig. 40).

The chapel of Ahmes-Nefertari

At least 13 blocks of the M-series have the same thickness. The salts covering them indicates that they lay buried under the groundwater table, probably below the *Cachette* courtyard. The *Kheker*-friezes which are found on both sides of one block are not at the same level, indicating that the roofs on each side of the wall were at different levels. A corner block with a vertical torus moulding is decorated with two cartouches of Ahmes-Nefertari. There is no clue as to the original location of this structure anywhere within the sanctuary.

The copy of Senoswret I's White Chapel

More than 30 blocks (architraves, pillars, low walls, dados, roof slabs) come from a chapel whose dimensions and decoration are identical to Senoswret I's White Chapel. The low walls placed in between the pillars are slightly thinner (35 cm) than those of the White chapel (44 cm).

On all these monuments, the facial features of Amenhotep I appear remarkably consistent, with a long curved nose, a falling chin and, most of the time, a highly arched eyebrow joining the tip of the eye. These portraits differ from the profiles of Amun, which have a much shorter nose above a flatter mouth and smaller chin, and are astonishingly similar to the profile of Senoswret I.

4.3. The Stages of Deconstruction

All these blocks of Amenhotep I were found in several locations at Karnak: in the so-called Montu Temple at north-Karnak,¹⁹⁰ below the *Cachette* courtyard,¹⁹¹ in the 3rd Pylon,¹⁹² in the foundations of the storerooms surrounding the limestone *radier* and, very likely, in the foundations of the Ptah temple. Because of these many findspots, three successive stages of the dismantling of Amenhotep I's monuments can be envisaged.¹⁹³

The first stage of deconstruction under Thutmosis I

This first destruction concerned the two parallel enclosure walls (inner enclosure wall: 2 cubits thick, outer enclosure wall: 3 cubits thick) that were successively built by Amenhotep I around the limestone *radier* on which the main sanctuary rested (fig. 40). Continued probably by Thutmosis II and certainly by his successor, the dismantling process included the north and south ranges of short and long chapels P/P' and G/G' (fig. 40) which were eventually replaced by similar chapels of Thutmosis III, of which vestiges still stand. The

¹⁹⁰ *FIFAO* 19, p. 16, pl. 41-44; *FIFAO* 25, pp. 23-65, 62.

¹⁹¹ *ASAE* 4, pp. 1-40, 193-226; *ASAE* 5, pp. 1-43, 265-280.

¹⁹² *ASAE* 22, pp. 235-260; *ASAE* 23 pp. 99-138; *ASAE* 24, pp. 53-88; *ASAE* 26, pp. 119-130; *ASAE* 28, pp. 114-128; *ASAE* 29, pp. 133-149; *ASAE* 31, pp. 81-97; *ASAE* 32, pp. 97-114; *ASAE* 37, pp. 173-200; *ASAE* 38, pp. 567-608; *ASAE* 39, pp. 553-570; *ASAE* 46, pp. 147-161; *ASAE* 47, pp. 161-183; *ASAE* 49, pp. 1-15, 241-267; *ASAE* 50, pp. 429-442; *ASAE* 51, pp. 549-572; *ASAE* 52, pp. 229-242; *ASAE* 53, pp. 7-19, 21-42.

¹⁹³ Larché, *Karnak* 12 (Paris: ERC, 2007), pp. 487-488: 8.4.

only preserved foundations of Amenhotep I were discovered below the westward extension of the outer enclosure wall against which Tuthmosis III and Hatshepsut abutted the south chapels of the 6th Pylon. These foundations consist of five courses, in green sandstone, built in the same manner as the courses of the limestone *radier*. Elsewhere around the *radier*, and below the north extension of the outer enclosure, this foundation of five courses was removed by Tuthmosis I. He replaced them by one made of two or three thin courses, in green sandstone, set on a very thick sand layer poured into Amenhotep I's original trench. The sand thus replaced the two first courses of the original foundation. A few of Amenhotep I's limestone blocks¹⁹⁴ were also reused in this new foundation, at its connection joint with the old one.

The second stage of deconstruction, during the coregency of Hatshepsut and Tuthmosis III

The second stage of the destruction of Amenhotep I's monuments was the removal of his narrow Pylon with 16 niches (S+N). Its western foundations (fig. 41) were reused in the construction of the 6th Pylon and its western enclosure.

The third stage of deconstruction under Amenhotep III

The third phase of destruction removed nearly everything that Amenhotep I had built on the eastern foundations, that is to say at the location of the so-called "Middle Kingdom" courtyard. Amenhotep III preserved the storerooms of Thutmosis I which surround the limestone *radier*. Later restorations to these magazines prove that they remained in use until the cult stopped. Since the east face of Hatshepsut's *suite* has remained very rough, it would seem natural that Amenhotep III kept in place the enclosure wall built along the perimeter of the limestone *radier*, against which this rough face abutted. However, the reconstruction of wall C+C' as the west side of this enclosure and the reuse of its blocks in the 3rd Pylon invalidates this hypothesis. It is difficult to imagine what Amenhotep III had planned to do in the so-called "Middle Kingdom" courtyard, since it seems to have remained nearly empty until today.¹⁹⁵ Like Amenhotep I, Amenhotep III would thus have been the instigator of vast disruptions inside the temple of Amun by simultaneously dismantling all the monuments built west of the 4th Pylon as well as part of the sanctuary of Amun that occupied the so-called "Middle Kingdom" courtyard.

Addendum:

La destruction comparée des temples du Moyen Empire à Tôd, Médamoud et Karnak

Au temple de Tôd, de nombreux détails rendent bien improbable la chronologie des étapes de construction du temple telle que l'a proposée Bisson de la Roque¹⁹⁶. S'il a bien remarqué le mur en calcaire de Sésostri I^{er} (h : 3,87 m), qui a été partiellement conservé dans le vestibule ajouté par Ptolémée Évergète II, il n'a pas vu que la fondation en calcaire de ce mur était indépendante du radier, celui dont le démontage a révélé un trésor d'Amenhemat II, le fils¹⁹⁷ de Sésostri I^{er}, ainsi que de nombreux emplois du Moyen Empire. Pour faciliter la description des éléments d'architecture, l'orientation du temple sera simplifiée par rapport au Nord géographique : l'entrée ptolémaïque sera dite à l'ouest, le naos supposé à l'est, le trésor au nord et l'accès moderne au sud.

¹⁹⁴ F. Burgos, F. Larché, *La Chapelle Rouge*, vol. 2, pp. 235, 238, 247-251.

¹⁹⁵ H. Chevrier, *ASAE* 47 (1947), p. 177: "La thèse généralement admise de l'exploitation du calcaire pour la fabrication de la chaux semble ici être en défaut, car de nombreux blocs de ces matériaux sont restés sur le terrain."

¹⁹⁶ F. Bisson de la Roque, *Tôd (1934 à 1936)*, FIFAO 17 (Le Caire: IFAO, 1937).

¹⁹⁷ Que le trésor soit au nom d'Amenhemat II rend aberrant l'attribution, par Bisson de la Roque, du radier à son père Sésostri I^{er}.

1. Les quatre déconnexions visibles entre le radier et le mur de Sésostris I^{er}

La porte détruite au sud du mur en calcaire de Sésostris I^{er}

Une ancienne porte a été partiellement détruite à l'extrémité sud du mur en calcaire¹⁹⁸ de Sésostris I^{er} afin d'y appuyer l'angle sud-ouest de l'ajout ptolémaïque. Le jambage sud de cette porte a disparu alors que son jambage nord est resté intact à l'exception de la feuillure de butée du vantail, qui a été soigneusement arasée (1 : 36 cm) de façon à pouvoir y appuyer les assises ptolémaïques. La destruction partielle de ces assises en grès a fait apparaître l'embrasure lisse du jambage nord ainsi que l'orifice du loquet¹⁹⁹ aménagée le long de la feuillure arasée.

En restituant une largeur minimale au passage disparu de cette porte, le jambage sud aurait dû se trouver au moins 2 coudées plus au sud, ce qui le place bien au-delà de l'alignement du radier démonté par Bisson de la Roque. L'angle sud-ouest du temple de Sésostris I^{er} devant être alors restitué encore plus au sud, tout semble indiquer que la fondation du mur en calcaire est complètement indépendante du radier comme le montre d'ailleurs son appareil beaucoup plus soigné.

Les photographies publiées montrent que cette fondation est placée uniquement à l'aplomb du mur en calcaire sans aucun lien apparent avec le radier²⁰⁰. La marque de l'appui d'un dallage est nettement ravalée sur le parement visible des parpaings en calcaire de cette fondation. On peut y restituer de minces dalles en calcaire d'épaisseur constante et parfaitement ajustés sur un remblai, identiques à celles du temple de Sésostris I^{er} à Éléphantine où une dizaine ont été réutilisées, sous Hatshepsout et Thoutmosis III, dans la fondation du temple de Satet.

Le dallage en grès du radier

Le schéma²⁰¹ de Bisson de la Roque indique qu'un dallage en grès recouvrait le radier. Le sol du temple le plus récent est ainsi placé 37 cm au-dessus de celui qui était associé au mur conservé de Sésostris I^{er}, ce que montre la trace de l'appui du dallage contre l'assise de réglage en calcaire. Comme le constate très justement Bisson de la Roque, le dallage en grès est ainsi postérieur au mur de Sésostris I^{er}. Cependant, il fait l'hypothèse que le dallage associé au mur de Sésostris I^{er} aurait été l'assise en calcaire qui supporte le dallage en grès alors que les photographies montrent que cette assise est construite de blocs remployés (même s'ils ne sont pas décorés), plus ou moins bien appareillés, et dont le lit d'attente n'est pas assez bien ravalé pour avoir été un sol²⁰². Ces blocs n'ont rien en commun avec les belles dalles en calcaire du temple de Sésostris I^{er} à Éléphantine. Rien n'assure donc que cette 3^e assise du radier ait fait office de dallage au Moyen-Empire.

L'alignement du côté ouest du radier

Le plan et une photographie²⁰³ montrent clairement que le côté ouest du radier, en particulier son angle nord-ouest, n'est absolument pas aligné avec la fondation du mur de Sésostris I^{er}, cette dernière étant installée beaucoup plus à l'ouest. Cet indice montre que, encore une fois, le mur et le radier sont structurellement déconnectés.

Le sectionnement de la fondation du mur en calcaire de Sésostris I^{er}

Toujours visible, l'assise de réglage de cette fondation est construite d'épais parpaings traversants, en calcaire, parfaitement joints et débordant de part et d'autre du mur épais de 2 coudées. Un sondage permettrait de mieux étudier cette fondation et d'en compter les assises.

¹⁹⁸ F. Bisson de la Roque, *Tôd (1934 à 1936)*, p. 13, fig. 9 et Pl. I.

¹⁹⁹ Observation d'Antoine Garric. Un orifice semblable est visible sur un jambage de la porte de Médamoud reconstruite au musée en plein air de Karnak. *Ibid.*, F. Bisson de la Roque, pl. III.

²⁰⁰ *Ibid.*, p. 6, fig. 4 et Pl. XIV.

²⁰¹ *Ibid.*, p. 11, fig. 7.

²⁰² *Ibid.*, p. 12, fig. 8 et Pl. XIV-1.

²⁰³ *Ibid.*, pl. I et XIV-1.

L'extrémité sud conservée du mur de Sésostri I^{er} tourne à angle droit vers l'est ce qui est confirmé également sur l'assise de réglage de la fondation. Ce mur perpendiculaire ne conserve qu'une très petite surface de son parement nord où l'on voit la bordure segmentée du décor et la queue d'un personnage, probablement le dieu si l'on reste cohérent avec la décoration du parement perpendiculaire. Comme l'indique les traces de coins éclateurs, la fondation du refend a été sectionnée à moins d'un mètre de l'angle avec le mur conservé. La logique constructive imposant que cette fondation ait été démantelée après les assises en élévation qu'elle supportait, il est certain que ce refend a été volontairement détruit à un moment de l'histoire du temple. Aucun sondage stratigraphique n'ayant été réalisé entre le radier et cette fondation, il n'est alors possible d'estimer la date de cette destruction que par un raisonnement sur les vestiges architecturaux.

2. L'élévation conservée du mur en calcaire de Sésostri I^{er}

Le mur conservé de Sésostri I^{er} a été largement découpé dans sa partie médiane sous Ptolémée Évergète II qui y fit installer une nouvelle porte axiale. La décoration primitive de Sésostri I^{er} a alors disparu de la partie centrale des deux parements mais les vestiges conservés des parties latérales, au nord et au sud de cette nouvelle porte, permettent de la reconstituer partiellement.

Le parement ouest

Une grande inscription gravée en creux, en colonnes, couvrait la partie du parement actuellement au sud de la porte axiale. Le sommet du mur conservé correspond au haut du texte qui aurait dû logiquement être couronné d'un tore surmonté d'une corniche. Cependant, la frise de *Khekerou*, gravée à ce niveau sur le parement opposé, couronne une décoration en creux qui n'incite guère à y poser une couverture. Peut-on alors imaginer une assise supplémentaire sculptée d'un tore surmonté d'une corniche sur ses deux parements opposés ?

L'extrémité sud de l'inscription en colonnes est bordée par le motif vertical du cobra s'enroulant autour de la tige centrale d'une plante héraldique²⁰⁴, ce motif décorant ainsi le chambranle gauche de porte démantelée qui a été décrite plus haut. Au nord de la porte axiale, le parement en calcaire est beaucoup moins lisible mais on observe²⁰⁵, au niveau du dallage ptolémaïque, un alignement de *ankh* et de *was*, surmonté d'un lion couché qui pourrait fort bien avoir supporté le trône du roi assis sous son dais, comme on le voit à Karnak deux fois sur le mur du texte de la Jeunesse et également sur l'angle du portique de Sésostri I^{er}. On aurait alors ici l'habituelle scène du roi assis devant un grand texte en colonnes.

Le parement oriental

Il y avait au moins six scènes sur lesquelles le roi Sésostri I^{er} se dirige vers le nord. Ces scènes sont couronnées d'une frise de *Khekerou* indiquant le sommet du mur mais la décoration en creux n'incite pas à y faire reposer une couverture. Seules quatre scènes sont partiellement conservées dont deux de fondation :

- sur la scène 1, à gauche, coupée par une petite porte ouverte à l'époque ptolémaïque, seules les jambes du roi apparaissent ;
- sur les scènes 2, le roi face au dieu creuse la fosse de fondation du temple ;
- sur la scène 3, le roi face au dieu jette des grains dans la fosse ;
- les scènes 4 et 5 ont été détruites par la nouvelle porte axiale, à l'exception de la queue du dieu de la scène 5 ;
- sur la scène 6, le roi consacre des offrandes au dieu ;

²⁰⁴ Observation de Ch. Van Siclen.

²⁰⁵ Observation de Ch. Van Siclen.

- on ne sait si d'autres scènes suivaient, le mur étant détruit. Il faudrait faire un sondage vers le nord, dans l'alignement du mur, pour observer les vestiges d'une éventuelle fondation ou de sa tranchée.

La direction du roi

Au sud de la nouvelle porte axiale, le sens de la marche de Sésostri I^{er} est à l'inverse de celle de Ptolémée Évergète II sur les assises en grès ajoutées au-dessus du mur en calcaire : Sésostri I^{er} se dirige vers la porte comme pour sortir alors qu'il devrait aller dans le sens contraire, vers le sud. Curieusement, il se dirige vers le nord de part et d'autre de l'axe est-ouest, ce qui proscrit l'existence d'une porte axiale sous son règne. Cette disposition indique que, au Moyen Empire, Sésostri I^{er} arrivait du sud pour se diriger vers le nord où devait se trouver le naos. Cependant, ce dernier aurait pu aussi être à l'est car aucun indice d'architecture ne permet encore d'affirmer que le naos se trouvait à l'aplomb du trésor d'Amenhemat II découvert dans le radier.

Le refend perpendiculaire aux assises en grès

Les assises en grès, ajoutées sur la partie sud du mur en calcaire, possèdent l'accroche d'un refend perpendiculaire dont aucune trace n'existe sur le mur de Sésostri I^{er} puisque la décoration des scènes de fondation 2 et 3 est continue à l'aplomb du refend disparu. Invisible sur le mur en calcaire, ce refend contre lequel le mur ptolémaïque en grès s'est appuyé, s'il est obligatoirement postérieur à Sésostri I^{er}, ne peut être qu'antérieur à Ptolémée Évergète II. De nombreux blocs épars de la 18^e dynastie ayant été découverts, souvent réemployés dans les fondations ptolémaïques, il est probable qu'au Nouvel Empire un temple avait déjà remplacé celui du Moyen Empire. Ce remplacement n'a pu intervenir qu'au moment de la construction du radier.

3. Nouvelle datation du radier

Bisson de la Roque a publié un inventaire précis des remplois qu'il a découvert au moment du démontage du radier. Ainsi, il a décompté 28 blocs aux noms de Montouhotep III et Montouhotep V. Du premier, il a des éléments en grès (fragments de colonnes octogonales Ø 45 cm, trois portes avec deux linteaux), en calcaire (parements en relief dans le creux et un élément de porte) et un socle de statue en granite. Du second, il décrit les éléments de deux monuments en calcaire décoré en relief, dont une dalle de plafond permettant de restituer une chapelle large de 3 coudées. Il a également extrait une architrave en calcaire d'Amenhemat I^{er}, ce qui lui fait conclure que le radier est l'œuvre de son fils Sésostri I^{er}. Ce dernier aurait ainsi réemployé les éléments démantelés des monuments de ses prédécesseurs, dont son père, dans un radier de fondation sur lequel il aurait construit son nouveau sanctuaire.

Cependant de nombreuses incohérences apparaissant dans cette hypothèse, il est indispensable d'évaluer à nouveau la date de construction du radier qui, s'il n'est certainement pas l'œuvre de Sésostri I^{er} pour les évidentes raisons d'architecture qui viennent d'être expliquées, peut difficilement lui être antérieur pour plusieurs raisons :

- d'abord, le trésor découvert sous le côté nord du radier est au nom d'Amenhemat II, le fils de Sésostri I^{er}, et il semble bien en place, soigneusement enfoui sous une dalle en calcaire ;
- ensuite, comme le radier ne peut être l'œuvre de Sésostri I^{er}, comment expliquer le emploi dans le radier de deux blocs au nom de son père Amenhemat I^{er} sans ajouter un remaniement intermédiaire entre les deux règnes. En effet, il faut bien qu'un roi ait réemployé, dans l'assise inférieure du radier²⁰⁶, l'architrave en calcaire d'Amenhemat I^{er} (h : 40cm, L : 174cm) et posée sur l'assise inférieure la base d'une statue en granite de ce roi ;
- enfin, rien n'empêche les éléments des 12^e et 13^e dynasties découverts sous l'église ou dans son dallage de provenir du radier. Ainsi, les jambages et le linteau en granite d'une porte de

²⁰⁶ F. Bisson de la Roque, *Tôd (1934 à 1936)*, p. 64 et 104, inv. 2138.

Sésostris I^{er} (h : 4,10m L : 2,80m, l passage: 1,35 m) ont été réemployés dans le dallage de l'église avec de nombreux fragments en calcaire et granite au nom de ce roi. Deux fragments seraient peut-être même au nom d'Amenhemat II (calcaire inv. 1337 et granite inv. 1647).

- un fragment en calcaire est réemployé en fondation d'un mur ptolémaïque²⁰⁷.

Il semble désormais beaucoup plus logique de dater ce radier du Nouvel Empire et, dans cette perspective, il serait intéressant d'examiner à nouveau l'outil en fer trouvé dans le sable de fondation (inv. 2108) avec un petit taureau en calcaire probablement doré. D'autre part, le tracé du temple observé par Bisson de la Roque, dessiné dans le limon et répété sur les assises du radier, semble bien trop ténu pour ne pas être subjectif.

Une hypothèse plus raisonnable serait de proposer une clôture (en raison de la décoration en creux sur ses deux parements) en calcaire construite par Sésostris I^{er} pour entourer un ensemble de petites chapelles construites par ses prédécesseurs. La porte en granite serait alors restituée dans l'axe du mur perpendiculaire à celui encore en place. L'accès principal au temple pourrait être la porte dont le jambage nord est encore en place dans le mur conservé de Sésostris I^{er}. Le temple de Satet construit par ce roi à Éléphantine possède une disposition identique, sa porte d'accès n'étant pas axiale mais placée à droite de la façade, après un grand texte en colonnes. À Tôd, la clôture et ses chapelles auraient alors été détruites à la 18^e dynastie, à l'exception du mur toujours en place, et un nouveau temple avec une nouvelle orientation vers le Nil aurait été construit comme le laisse supposer les nombreux blocs épars de cette période. Le radier aurait ainsi été construit au Nouvel Empire avec le trésor d'Amenhemat II pieusement conservé à l'aplomb probable de l'ancien naos.

4. Conclusion

Une situation similaire existe à Médamoud où deux radiers de fondations ont été identifiés par Bisson de la Roque²⁰⁸. Celui du Moyen Empire a conservé sa première assise posée sur un lit de sable et l'angle sud-est de la seconde et dernière assise ainsi qu'une porte en granite au nom de Sésostris III, dont le seuil est encore en place. Ce radier est constitué de blocs en calcaire dont aucun ne semble être en remploi, contrairement au radier du Nouvel Empire dont les blocs constitutifs sont tous des blocs du Moyen Empire réemployés. Comme à Tôd, le temple du Nouvel Empire à Médamoud s'ouvre à l'ouest vers le Nil alors que celui de Sésostris III s'ouvre au nord, c'est-à-dire à l'inverse de celui de Sésostris I^{er} à Tôd, comme si les naos des deux temples tournaient le dos à Karnak. Cette inversion est peut-être liée à la position de Karnak entre Tôd et Médamoud, sur la rive orientale du Nil, Tôd étant au sud et Médamoud au nord.

Grâce aux exemples des radiers des trois temples de Karnak, Tôd et Médamoud, on peut conclure que les radiers et les fondations supportant les temples du Moyen Empire étaient faits de blocs en calcaire sans aucun remploi, alors que ceux du Nouvel Empire n'étaient faits que de blocs provenant du démontage de sanctuaires plus anciens.

²⁰⁷ *Ibid.*, fig. 65.

²⁰⁸ F. Bisson de la Roque, *Medamoud*, FIFAO 8, (Le Caire: IFAO, 1931), pl. IV

Figures

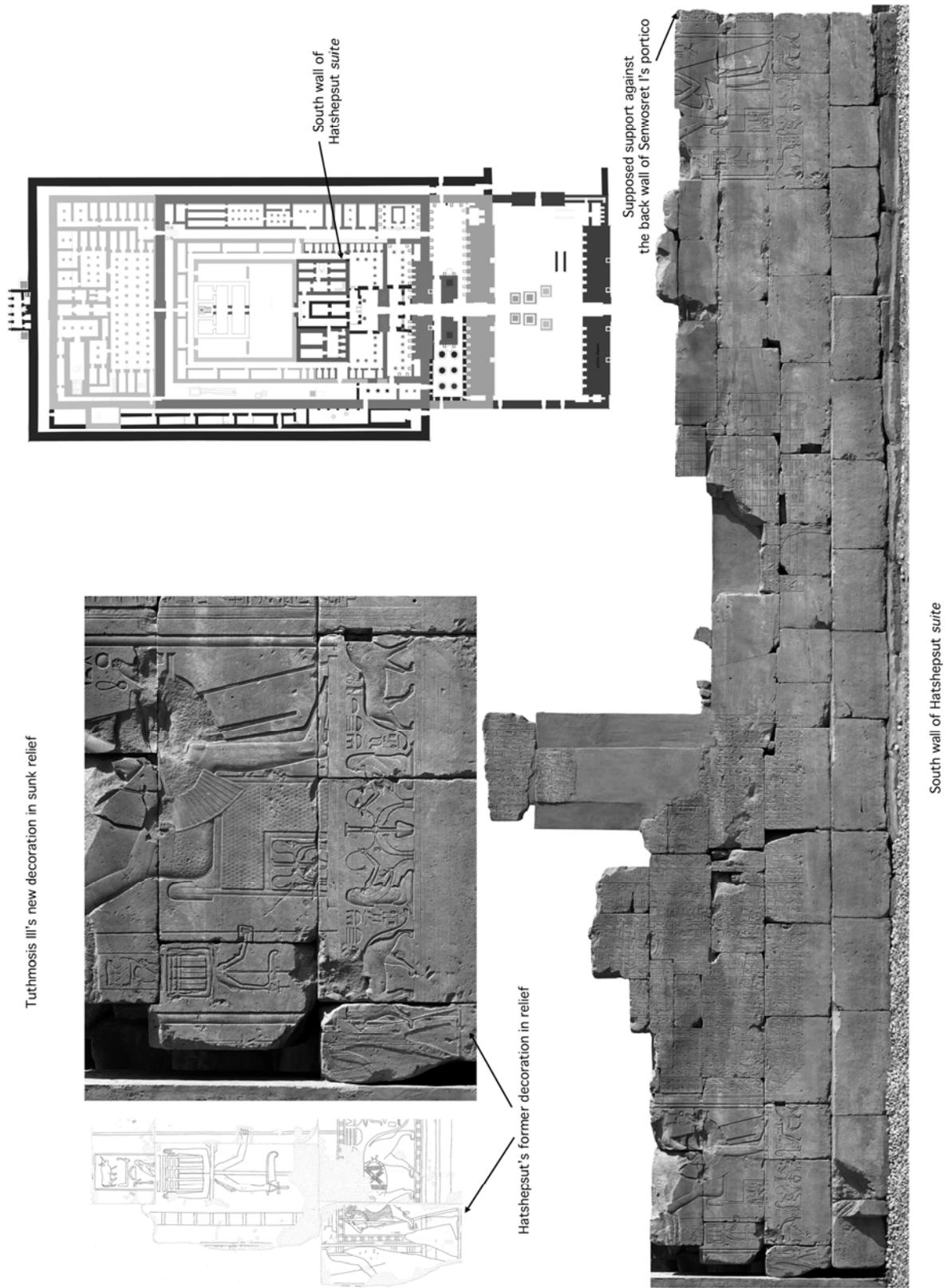
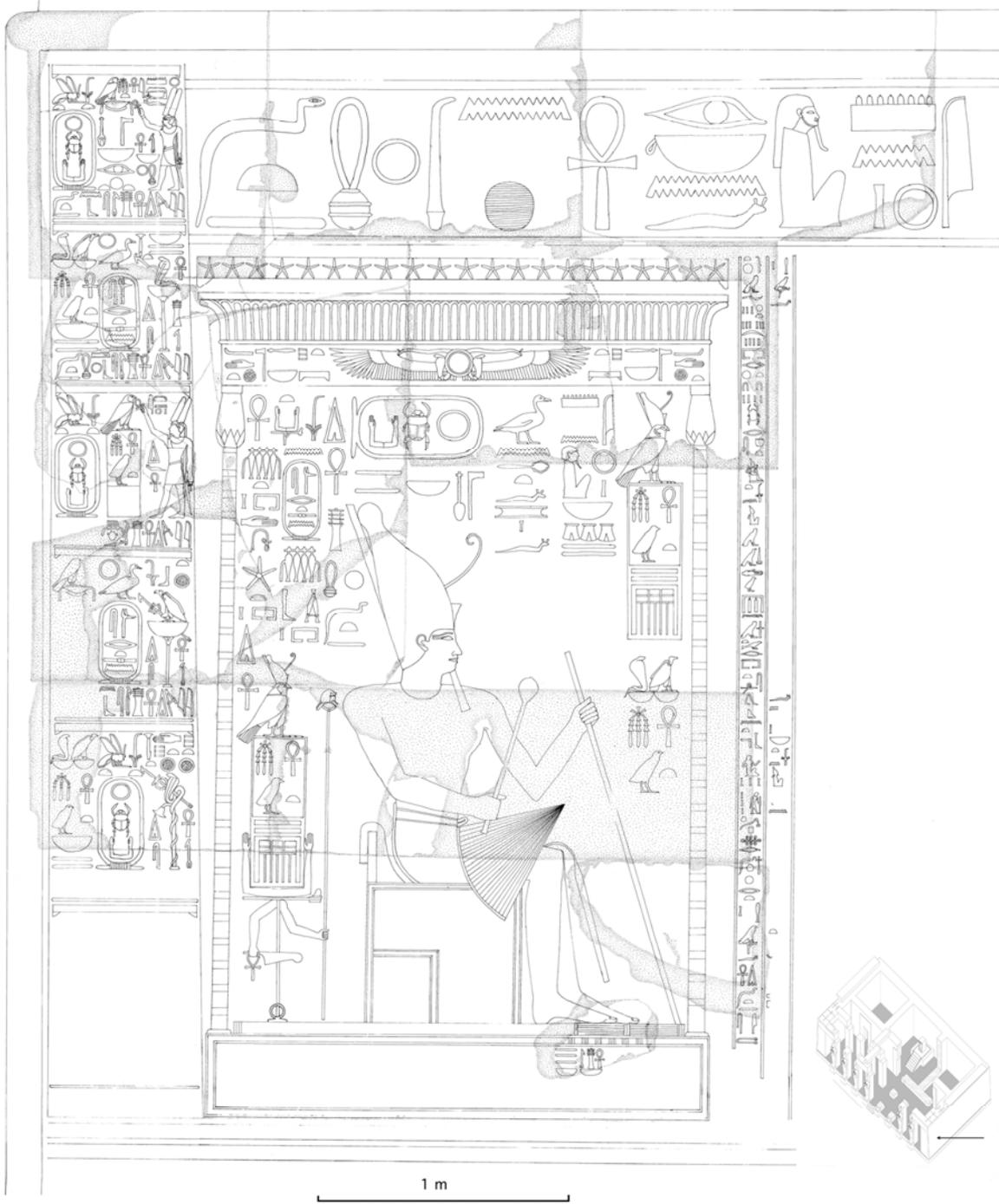
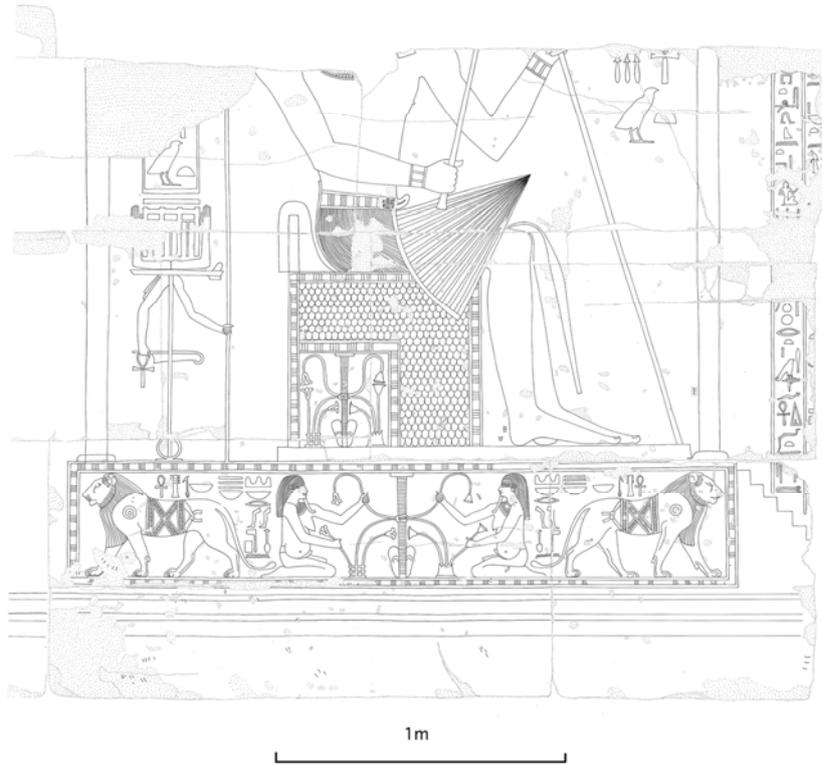


Fig. 1



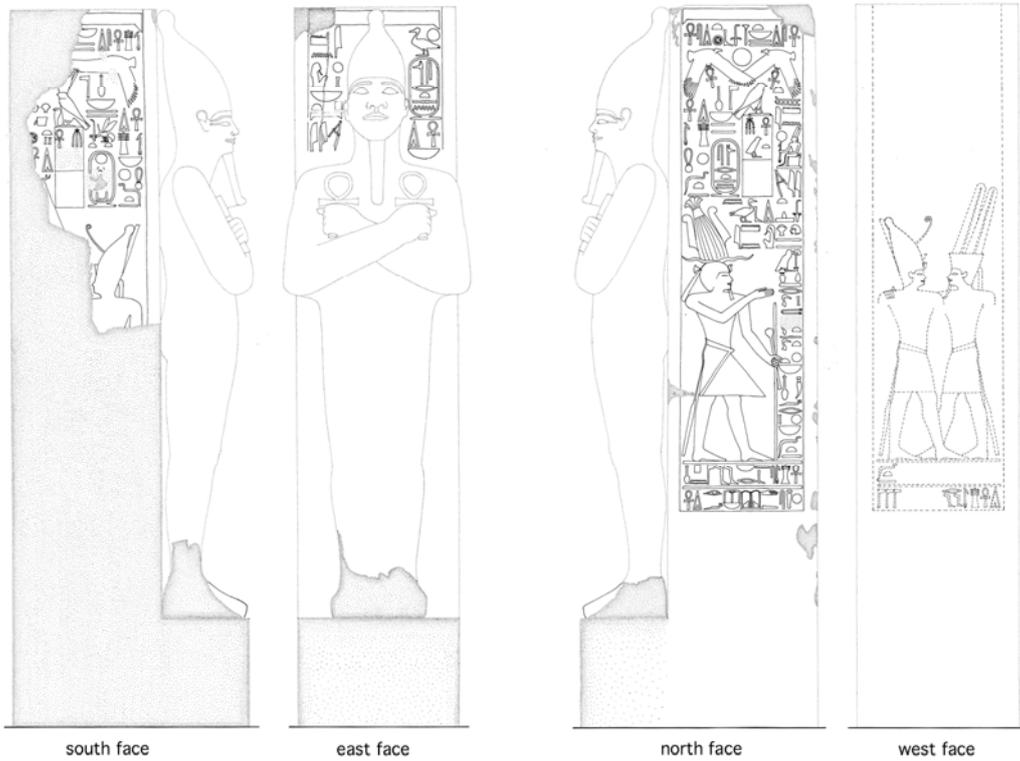
North face of the north anta of Senwosret I's portico

Fig. 2



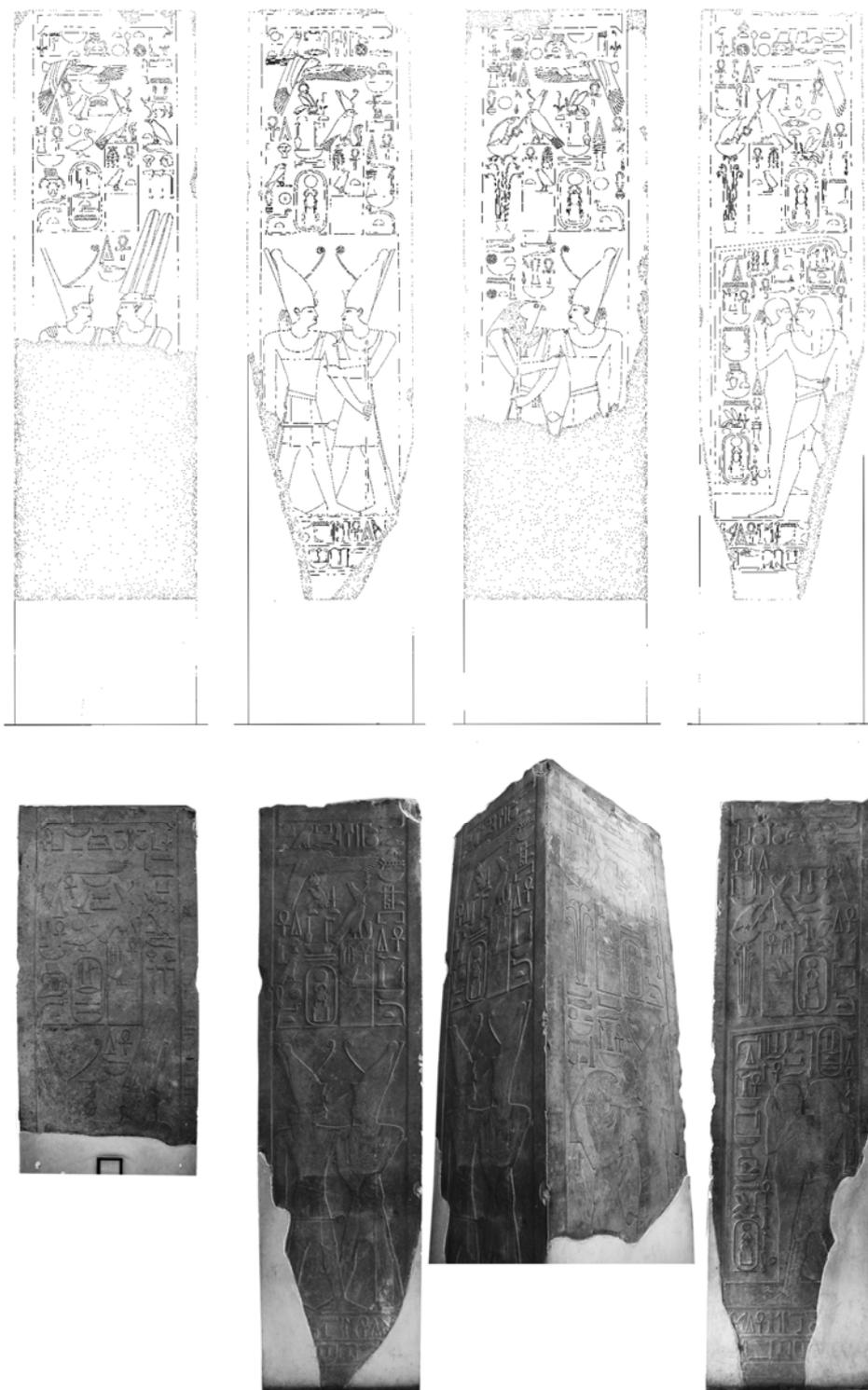
South face of Hatshepsut suite : Senwosret I seating under a canopy

Fig. 3



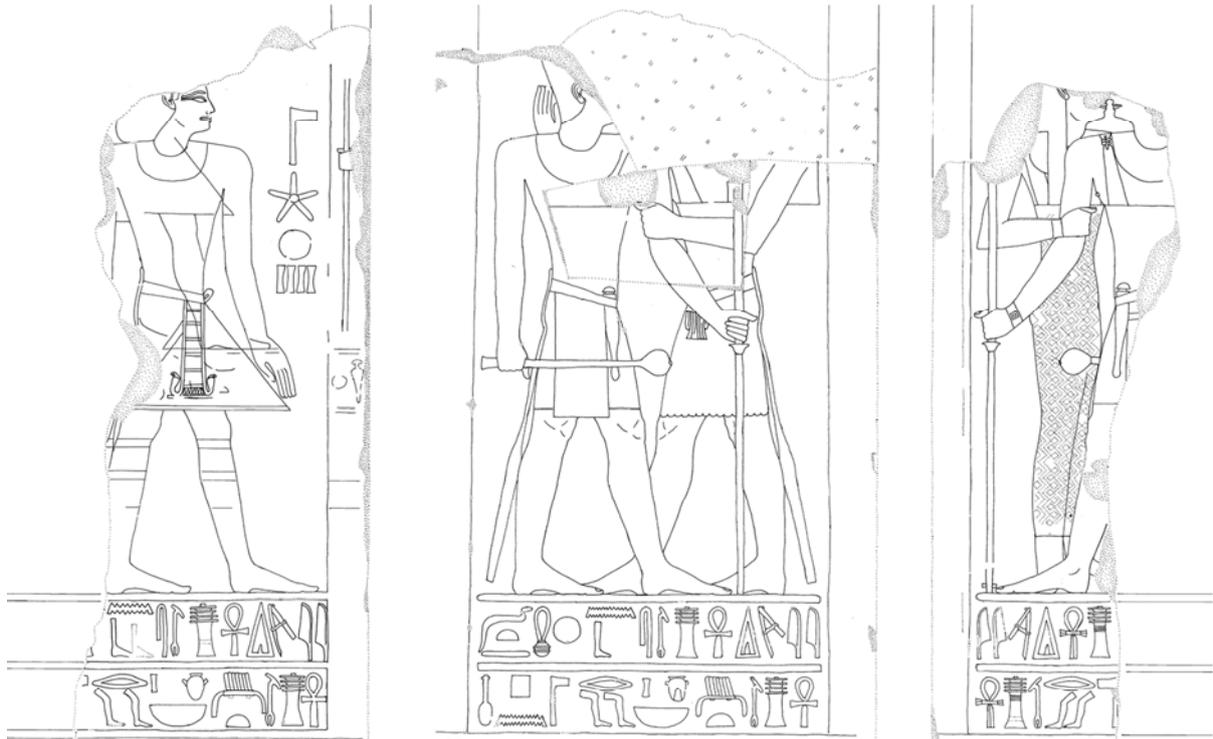
Senwosret I's osirian pillar n°11 (Cairo Museum JE 48851) found below the south courtyard of the 5th pylon and placed to the left of the axial passage

Fig. 4



Senwosret I's pillar (Cairo Museum JE 36809) found the *cachette* courtyard and supporting the middle range of architraves

Fig. 5

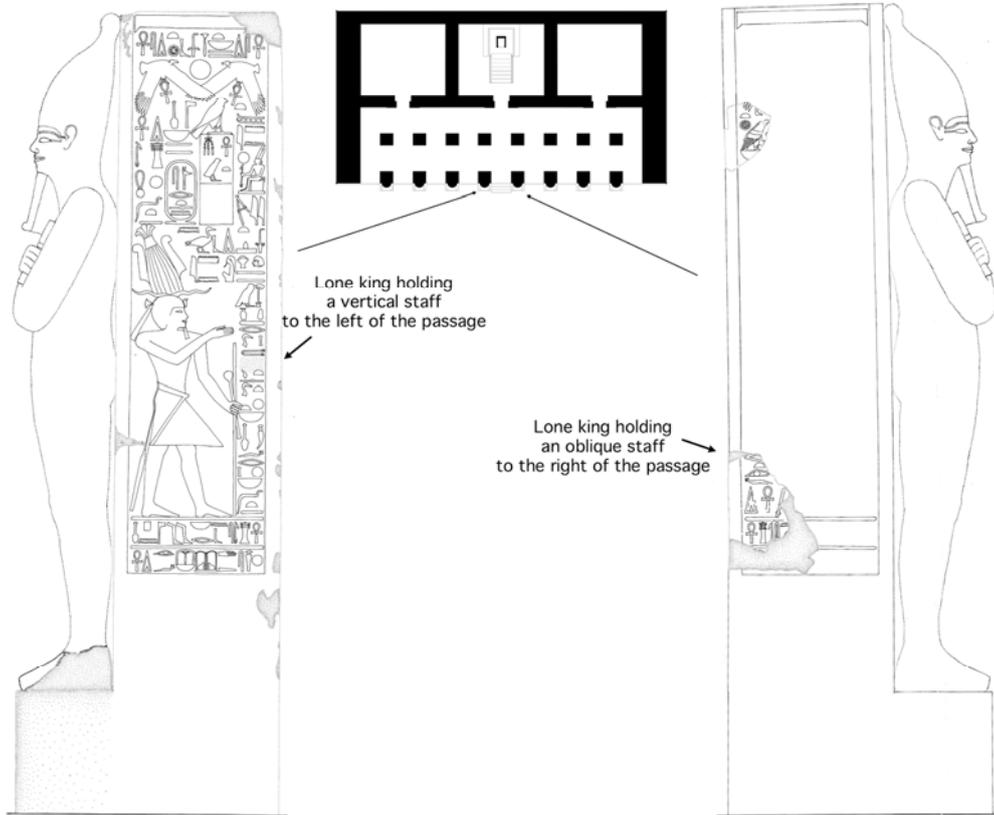


Royal figure recarved
before the New Kingdom



Senwosret I's pillar found in the cachette courtyard and supporting the middle range of architraves

Fig. 6

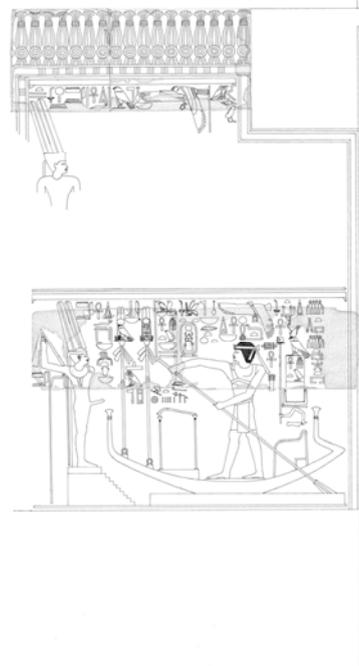


The faces of the pillars framing the axial passage



0 1m
Block 87CL315

In the upper scene, the king runs and, in the lower one, he wears the red crown



Decoration of the inner face of the right anta of the facade

Fig. 7

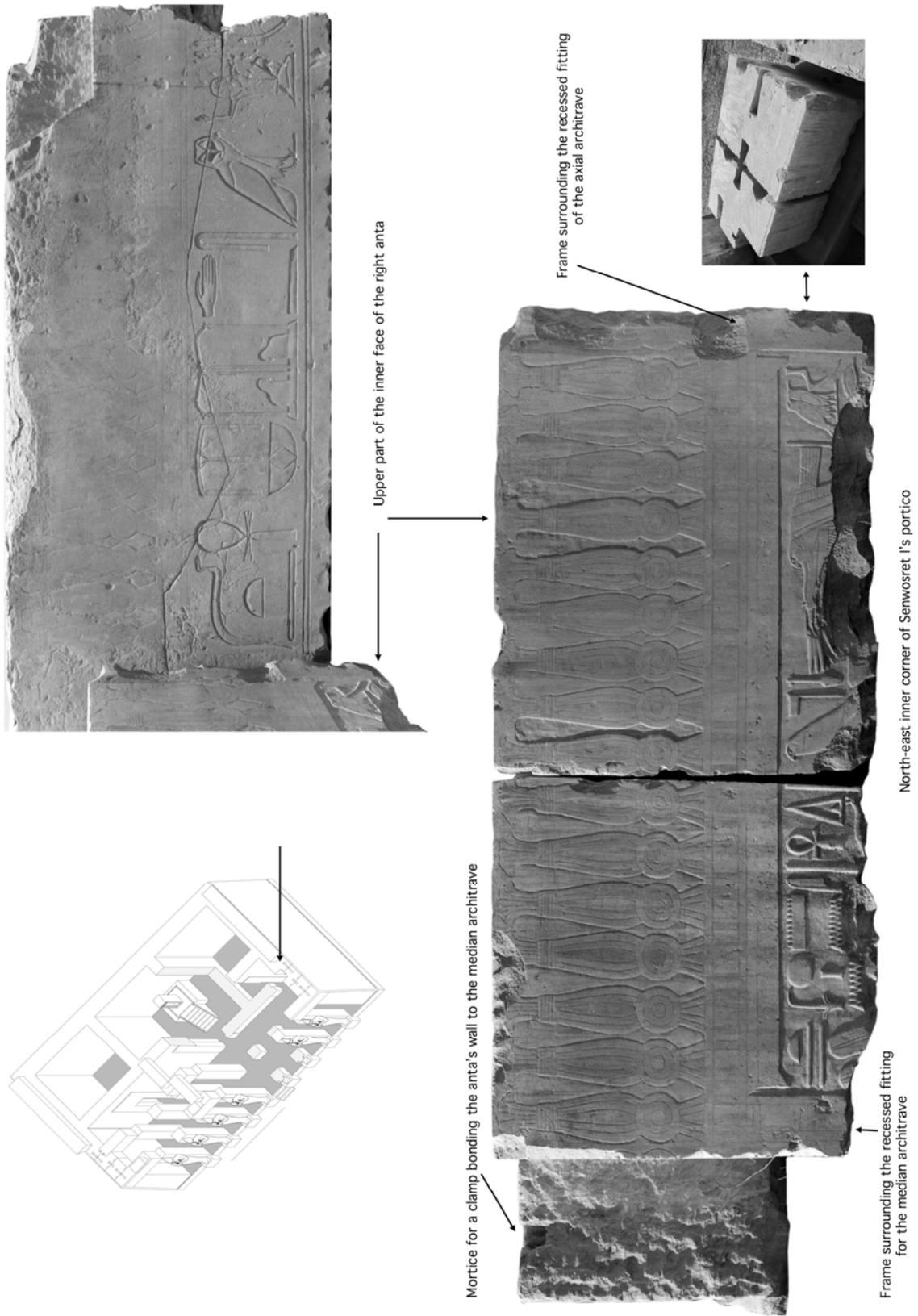


Fig. 8



Portico in front of Anubis' chapel at Deir al-Bahari



Mortise for the clamp bonding the anta's wall to the perpendicular architrave



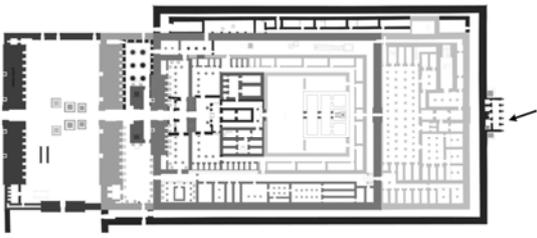
Frame surrounding the recessed fitting of the median architrave



Mortise for the clamp bonding the anta's wall to the perpendicular architrave

Embedding of the median architrave of Senwosret I's portico

Fig. 9



North face nord of pillar 1, south-east corner : King →

South face of pillar 6, north-east corner : King ←



West face of pillar 4 : King ←



West face of pillar 3 : King →



South face of pillar 3 : King ←

← axial passage →

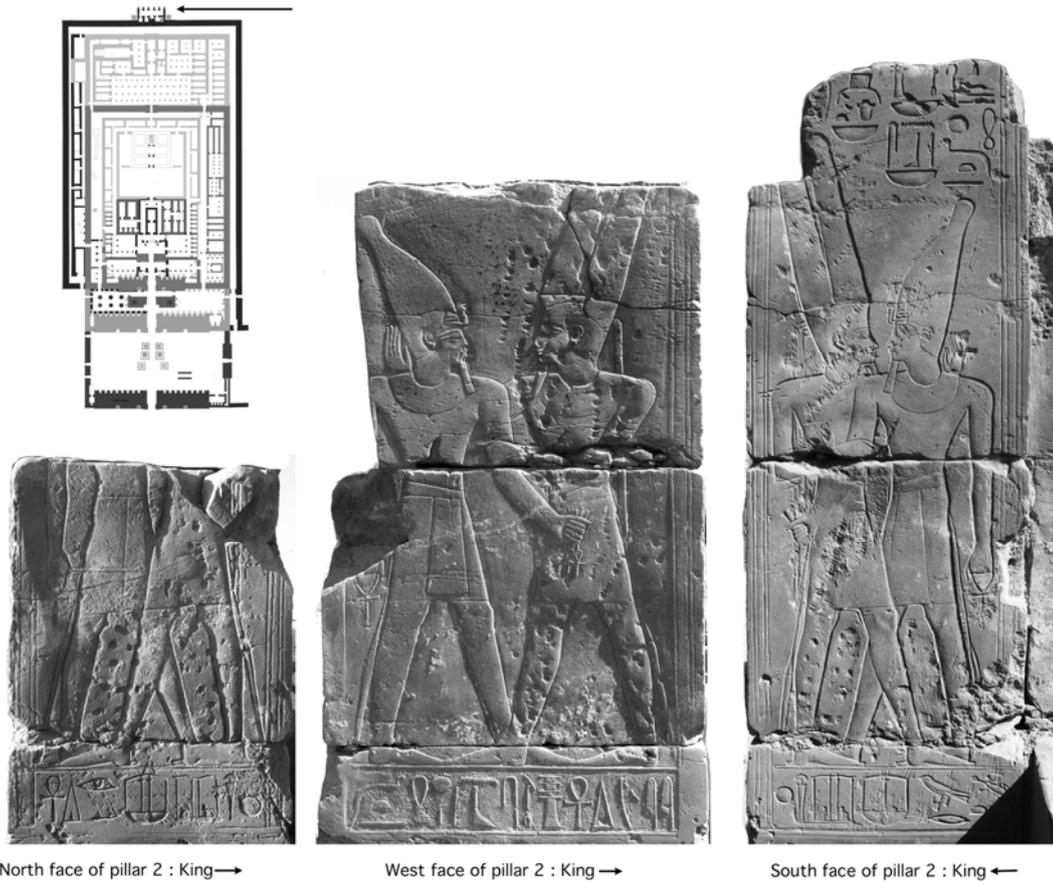


Tuthmosis III's contra temple



West face of pillar 5 : King ←

Fig. 10

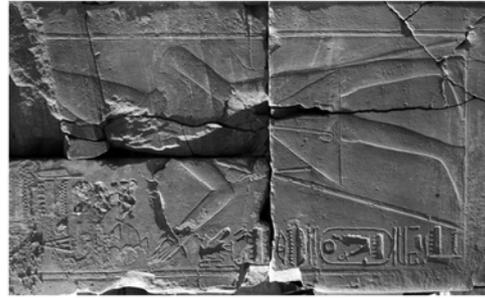


Tutankhamun III's contra temple : the south half seen from inside

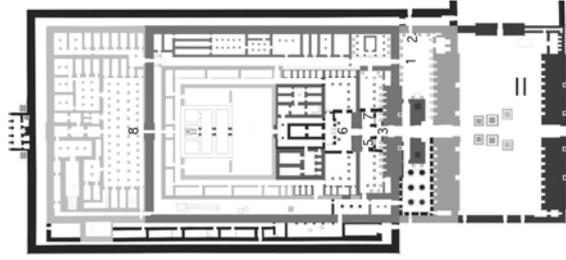
Fig. 11



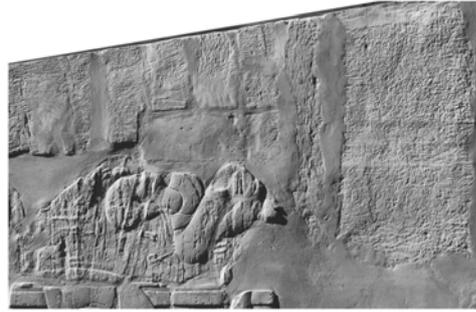
1. East door of the south Wadlyt courtyard



2. South door of the south Wadlyt courtyard



3. Reveals of the passage of the 5th pylon



4. Reveals of the passage of the 2nd pylon



Fig. 12



6. Opposite faces of the axial pillars of Tutmosis III's vestibule



8. Opposite faces of the axial pillars of Akh-menu



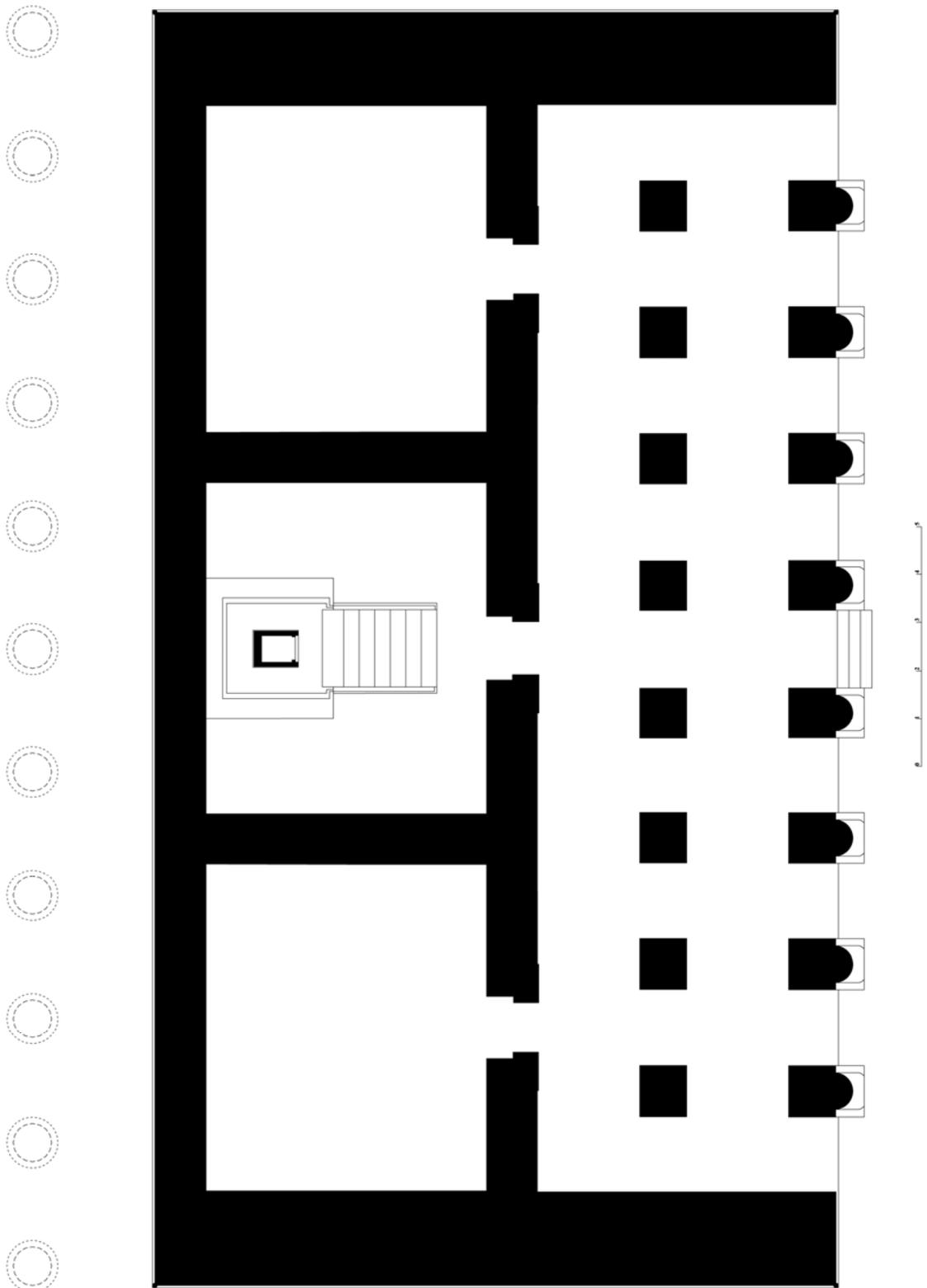
5. Door of the north courtyard of the 5th pylon



7. Door of the south courtyard of the 5th pylon

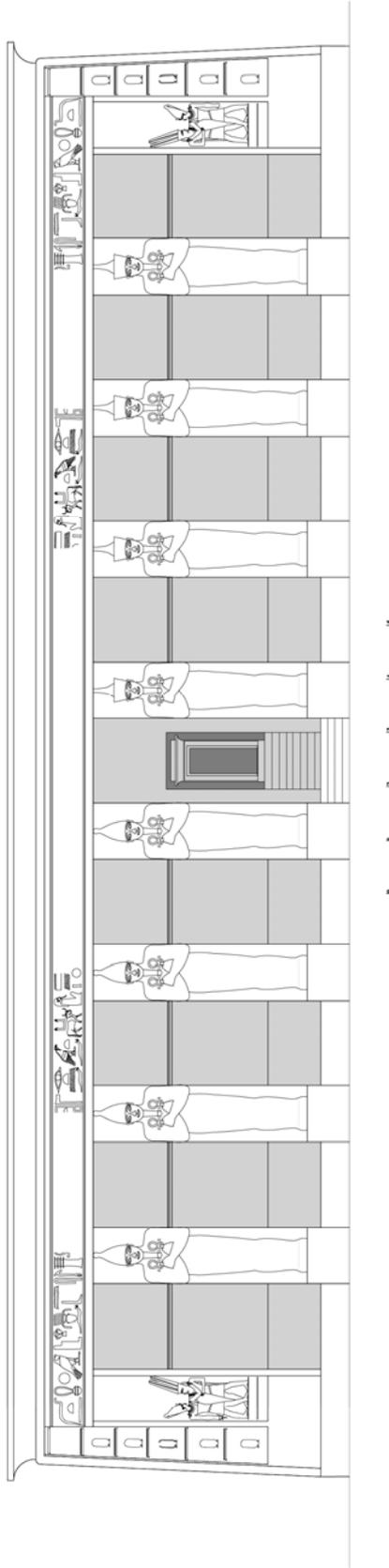


Fig. 13



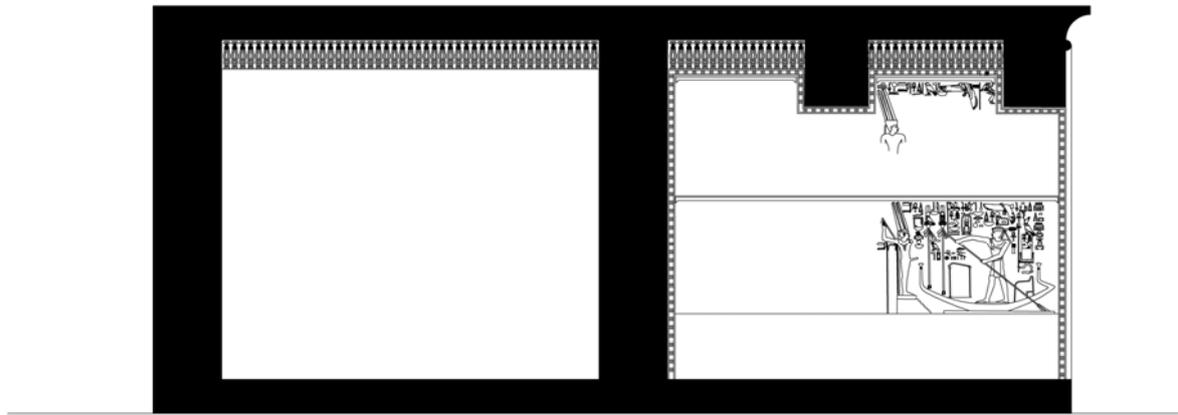
Plan of Senwosret I's portico

Fig. 14

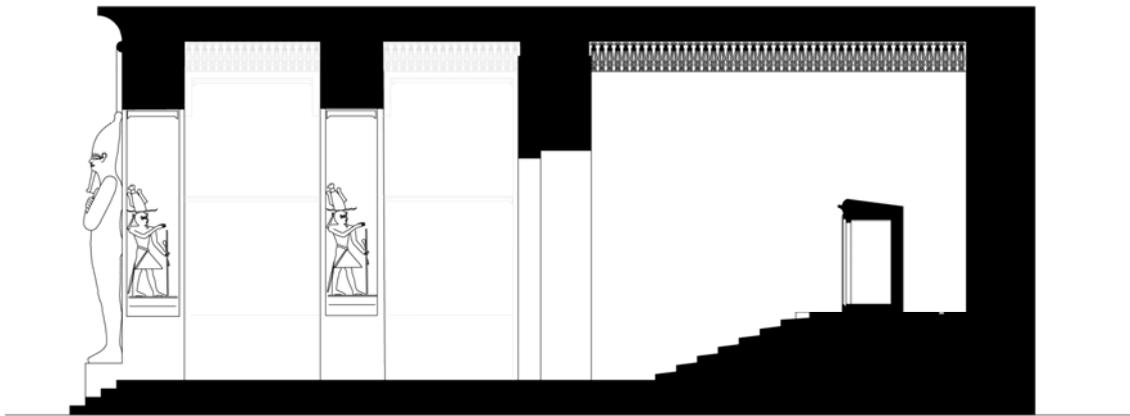


The east facing facade of Senwosret I's portico

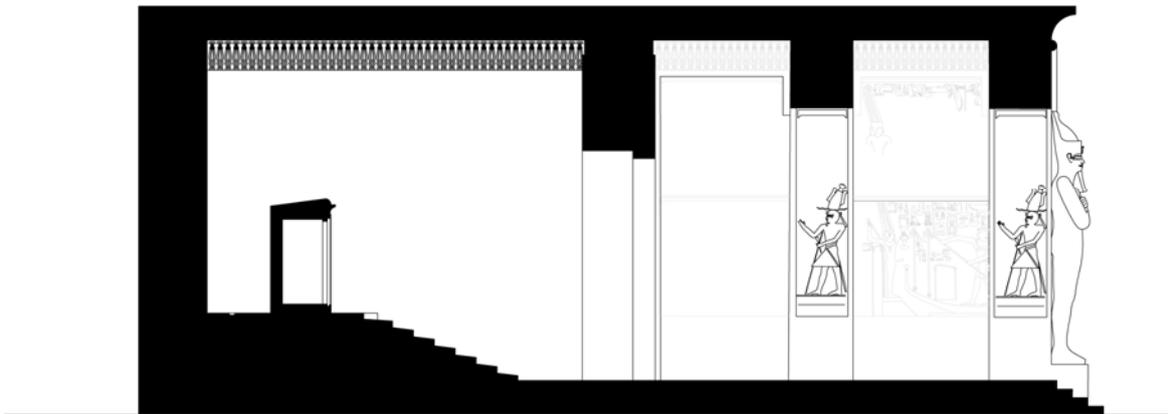
Fig. 15



a. Section looking at the north anta



b. Axial section looking south

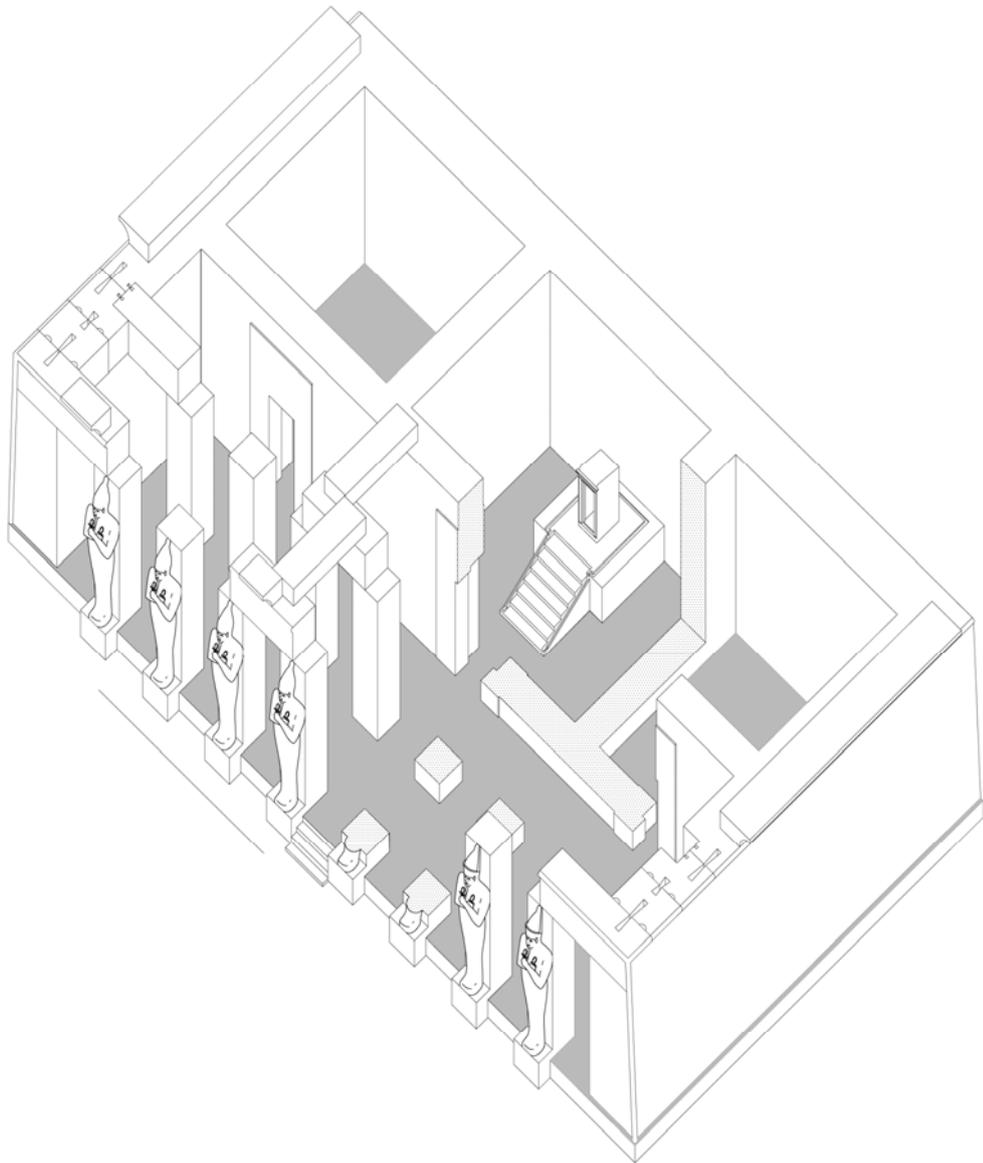


c. Axial section looking north

0 1 2 3 4 5

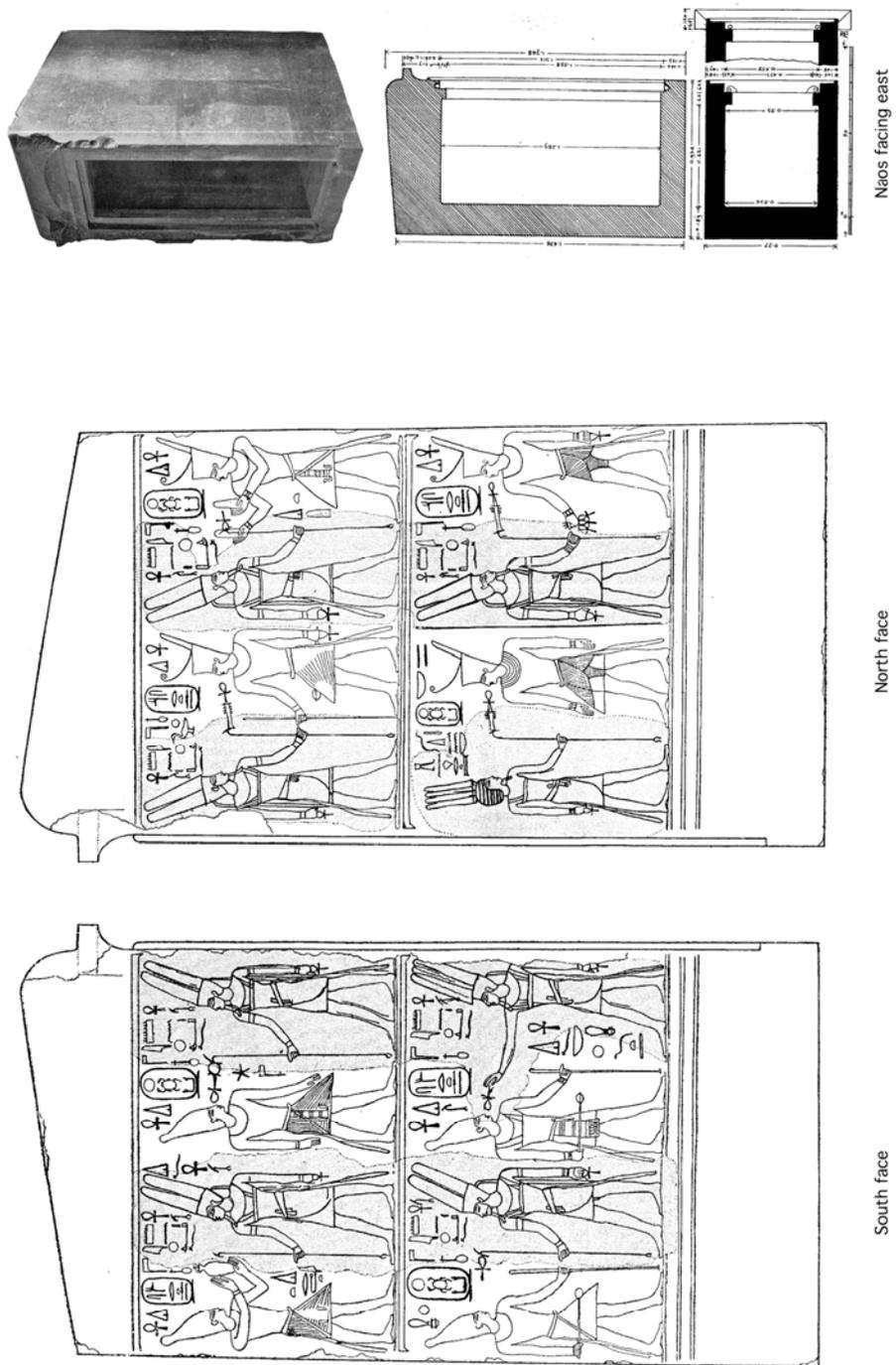
Hypothetical reconstruction of Senwosret I's portico

Fig. 16



Axonometric drawing of the hypothetical reconstruction of Senwosret I's portico

Fig. 17



Naos facing east

North face

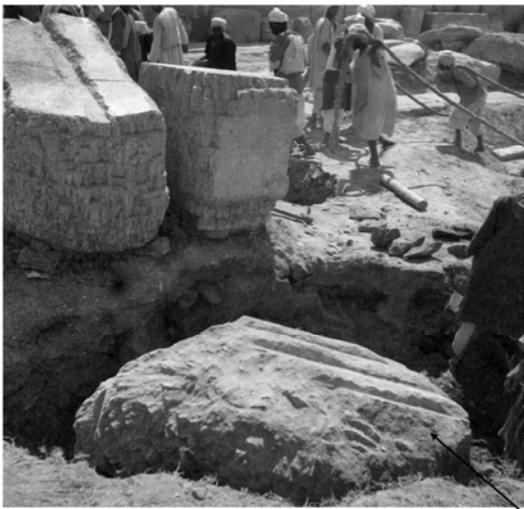
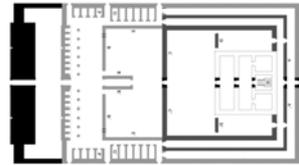
South face

Senwosret I's diorite naos discovered in the east part of the courtyard between the 7th and 8th pylons

Fig. 18



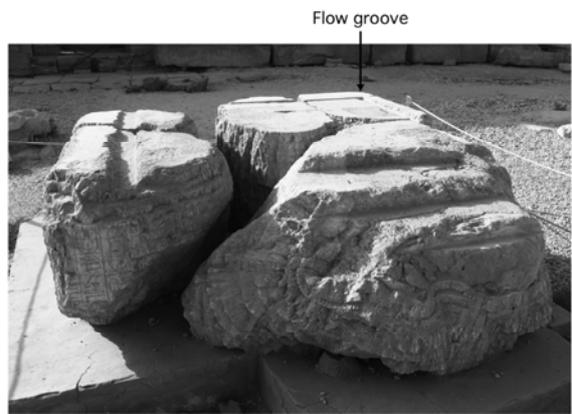
Calcite socle with steps



Calcite socle with steps



Socle of naos discovered north of threshold 3

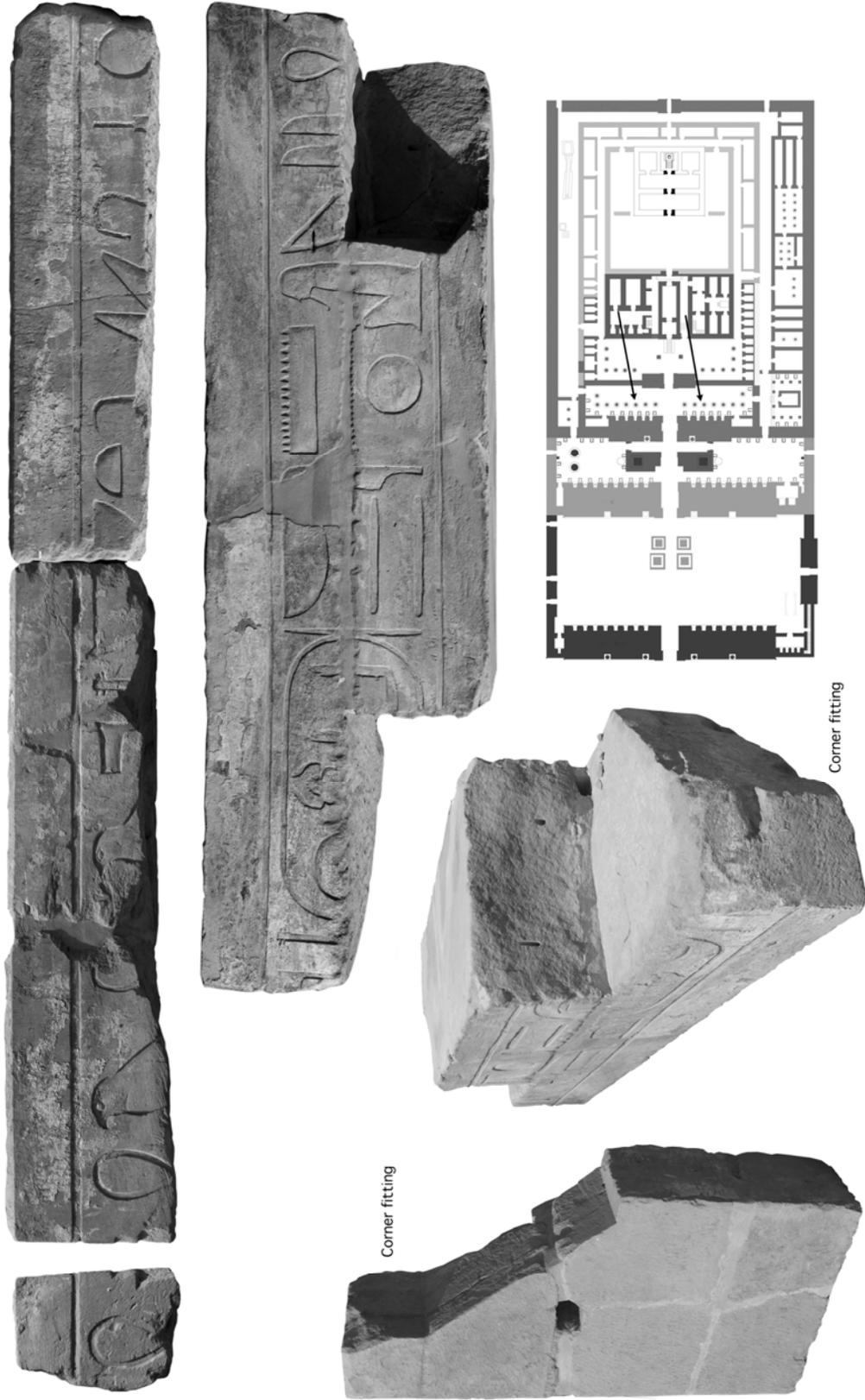


Flow groove

Calcite socle with steps

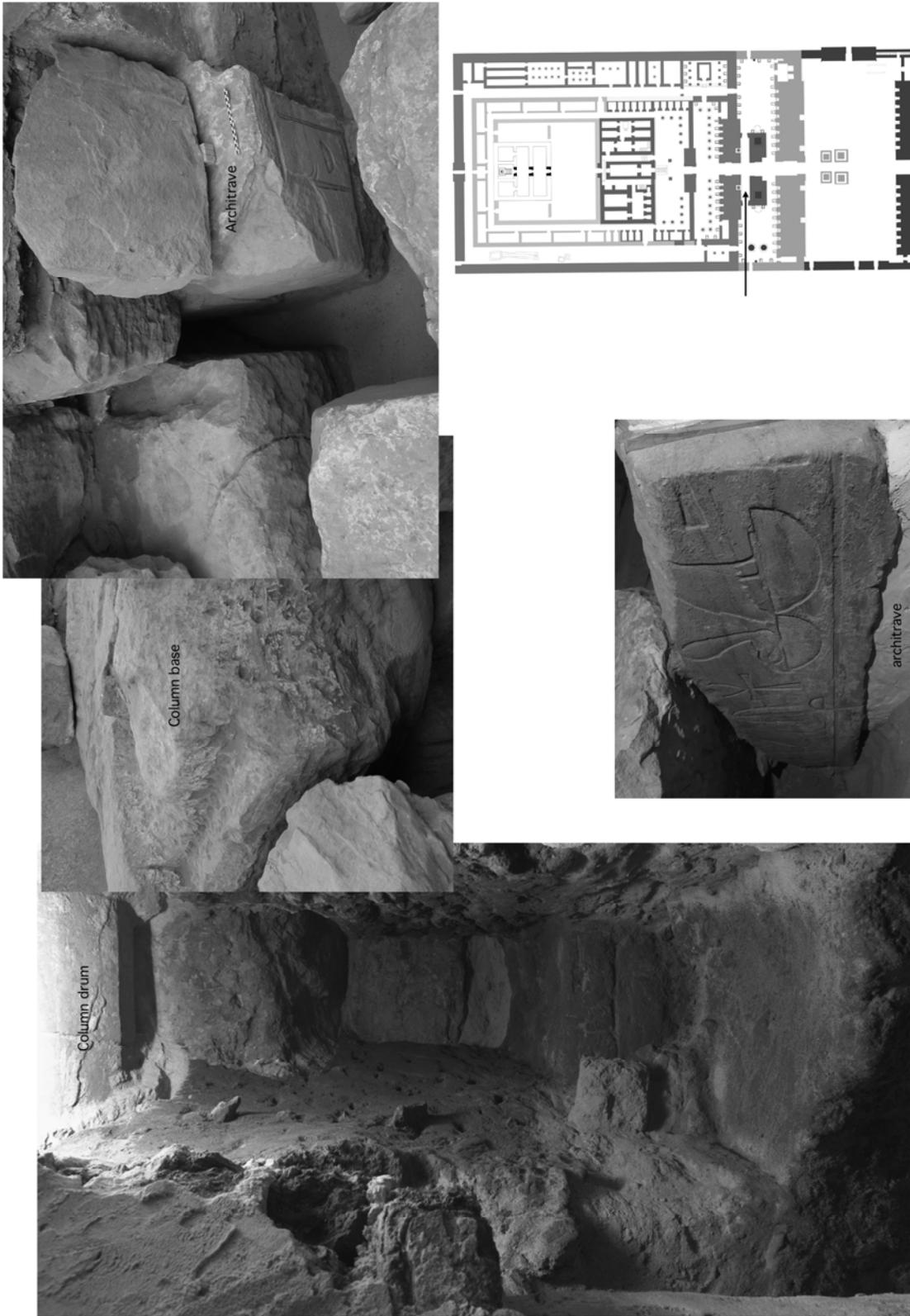
The calcite socle with steps and a socle of a naos

Fig. 19



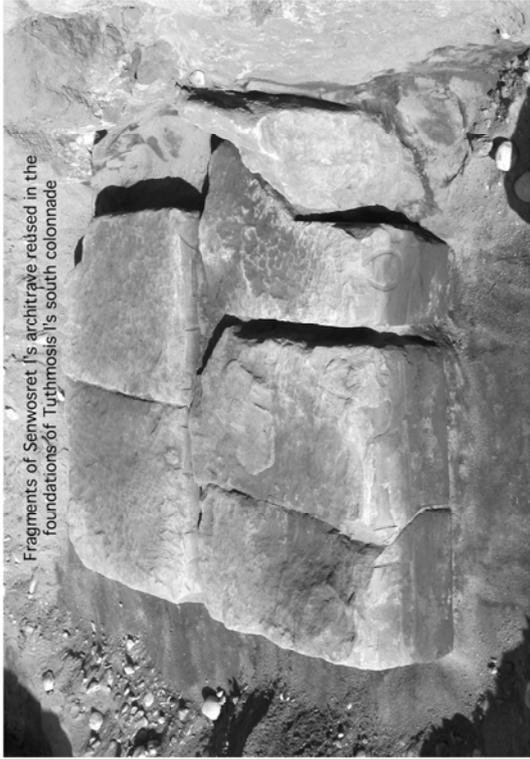
Vestiges of two corner architraves of Senwosret I's sandstone colonnade reused in the foundations below the courtyard of the 5th Pylon

Fig. 20



Vestiges of two architraves, one column base and one column drum from Senwosret I's sandstone colonnade reused in the foundations in front of the 5th pylon

Fig. 21



Vestiges of Senwosret I's sandstone colonnade reused in the foundations of the courtyard of the 5th pylon

Fig. 22



Column fragments of Senwosret I reused in the foundations of Tuthmosis I's colonnade



Foundation deposit from the north courtyard of the 5th pylon



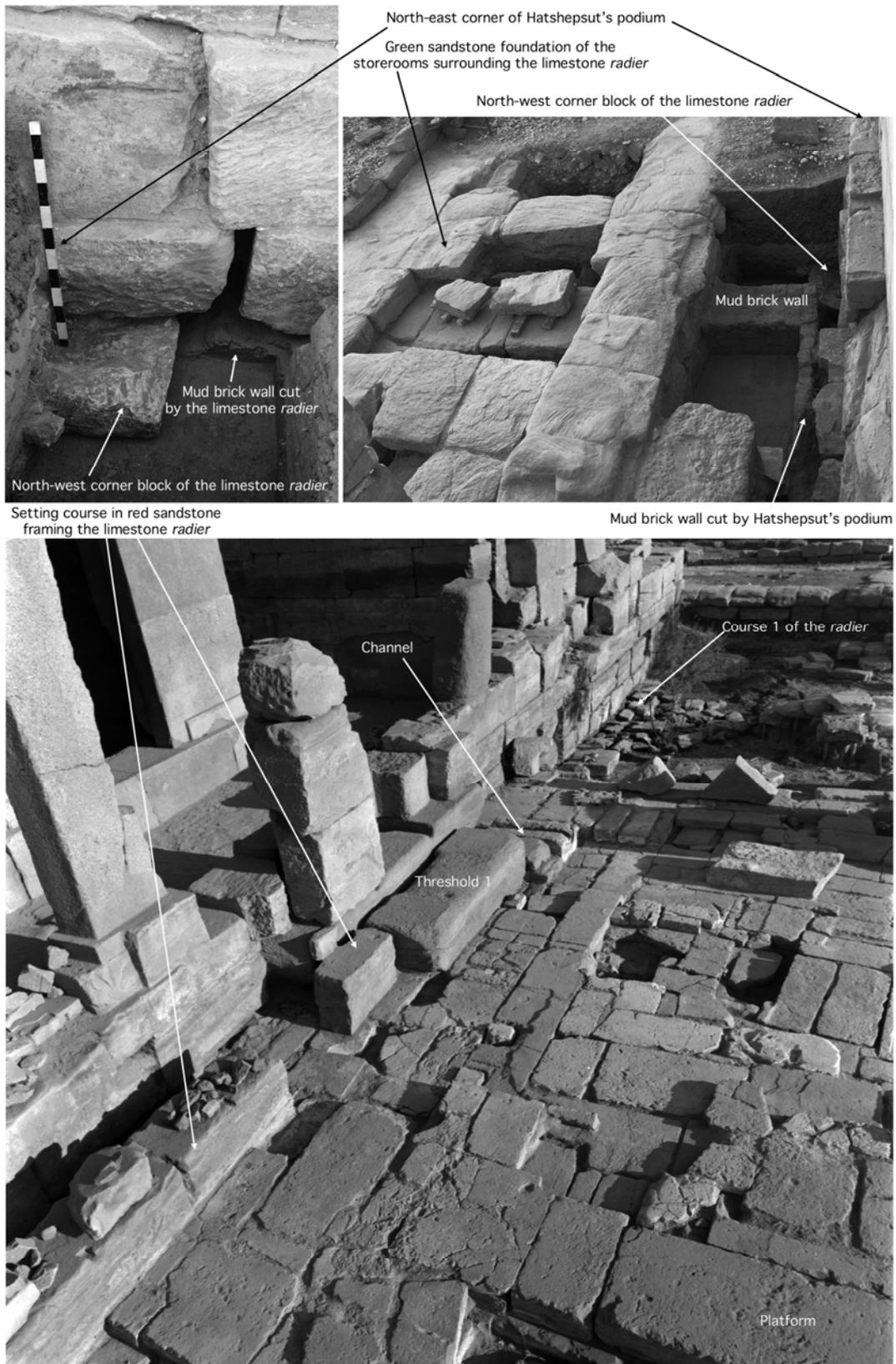
Foundation deposit from the south courtyard of the 5th pylon



Foundation deposit from the north courtyard of the 5th pylon

Foundation deposits from the courtyards of the 5th pylon

Fig. 23



Courses 3 and 4 of the limestone *radier*, clamped with the courses of the platform

Fig. 24

Limestone tablet decorated in sunk relief, reused in the platform



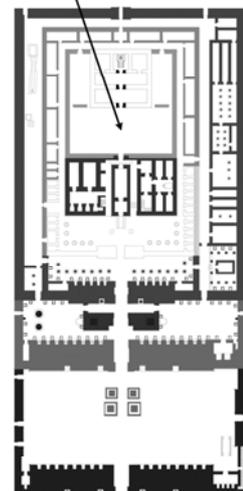
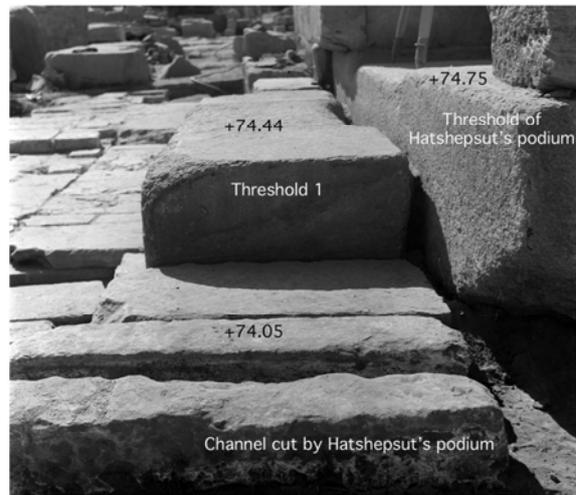
East face of Hatshepsut's podium

Limestone table for double libation reused in the platform



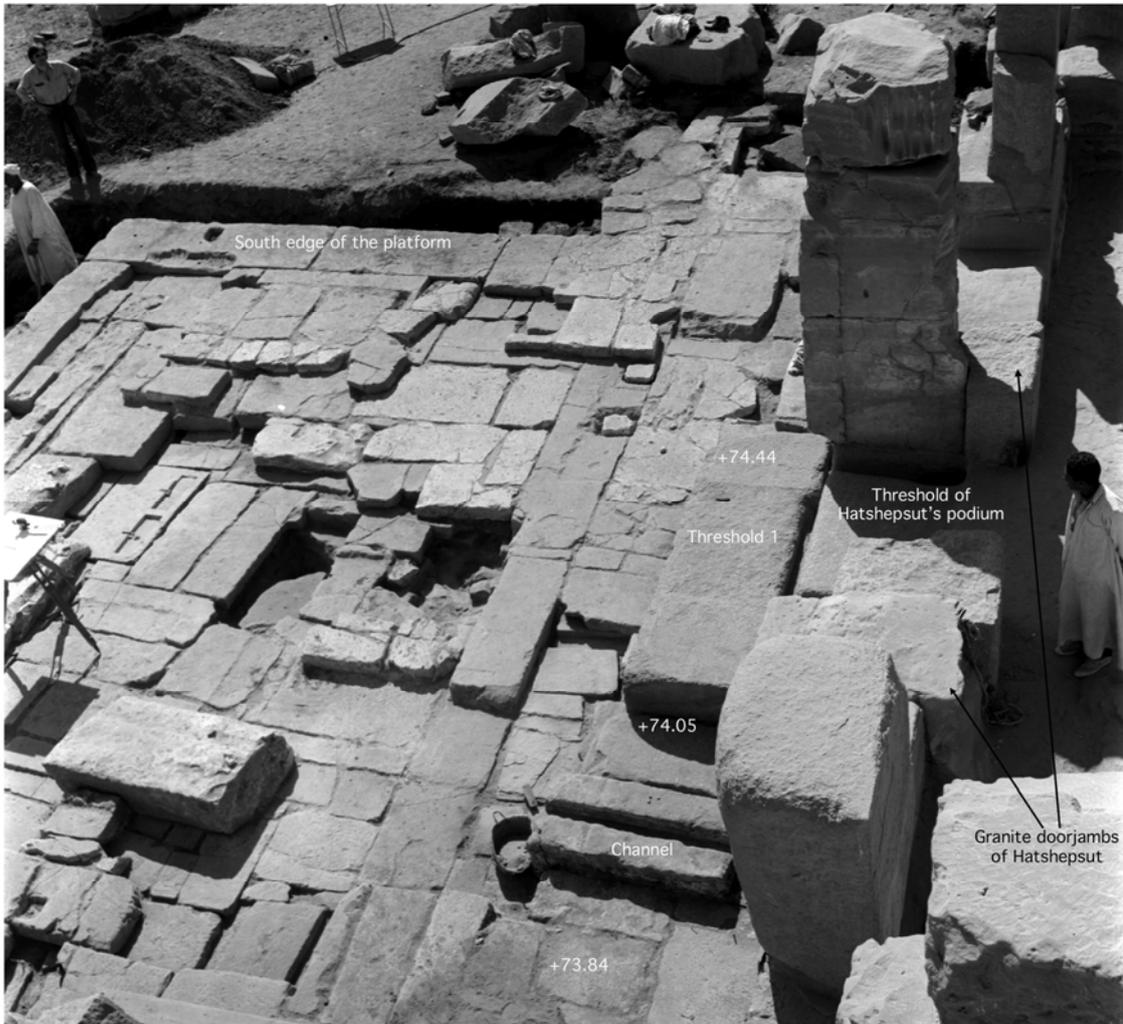
Platform built into the limestone *radier*

Fig. 25



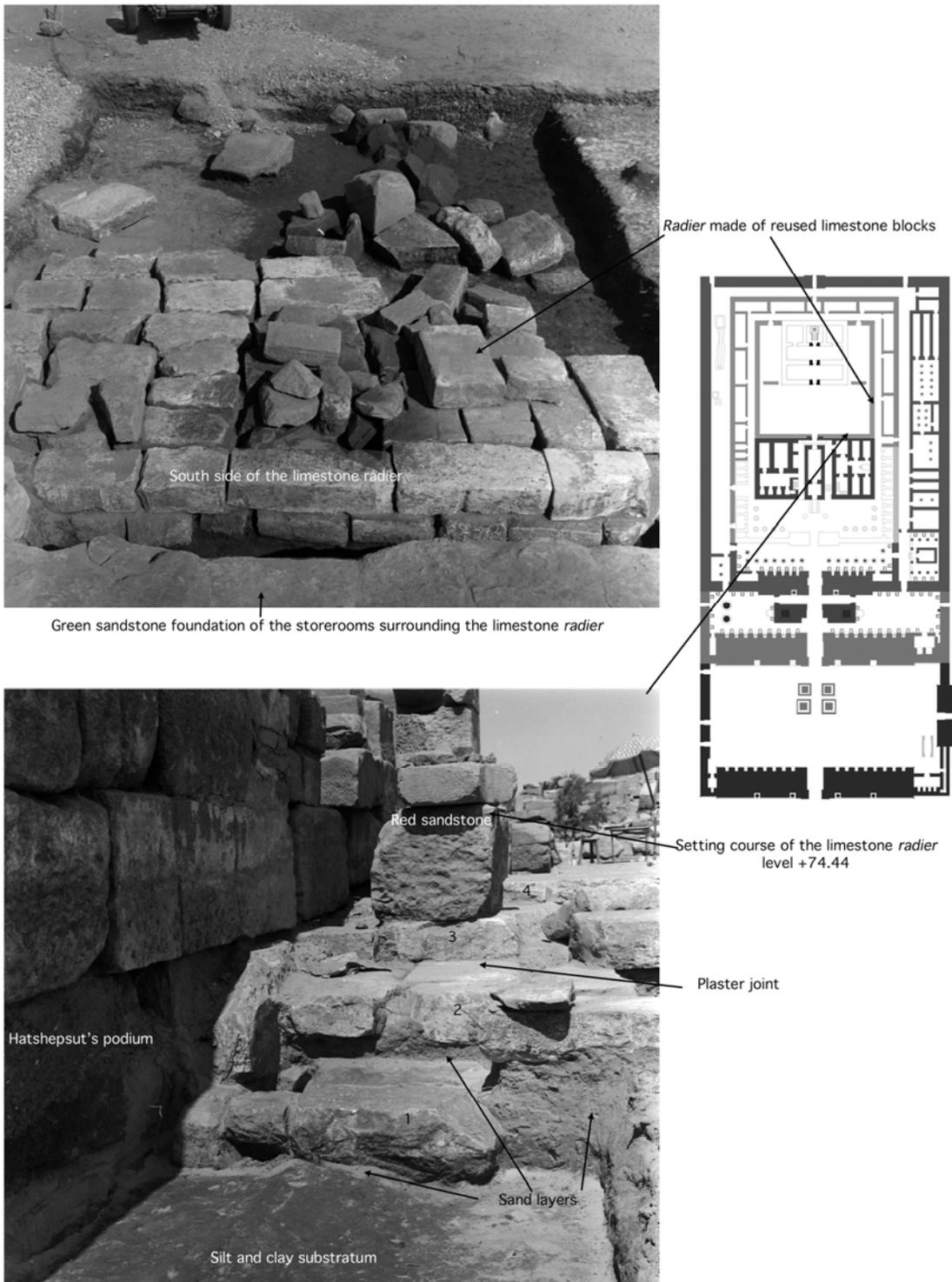
The platform built into the limestone radièr

Fig. 26



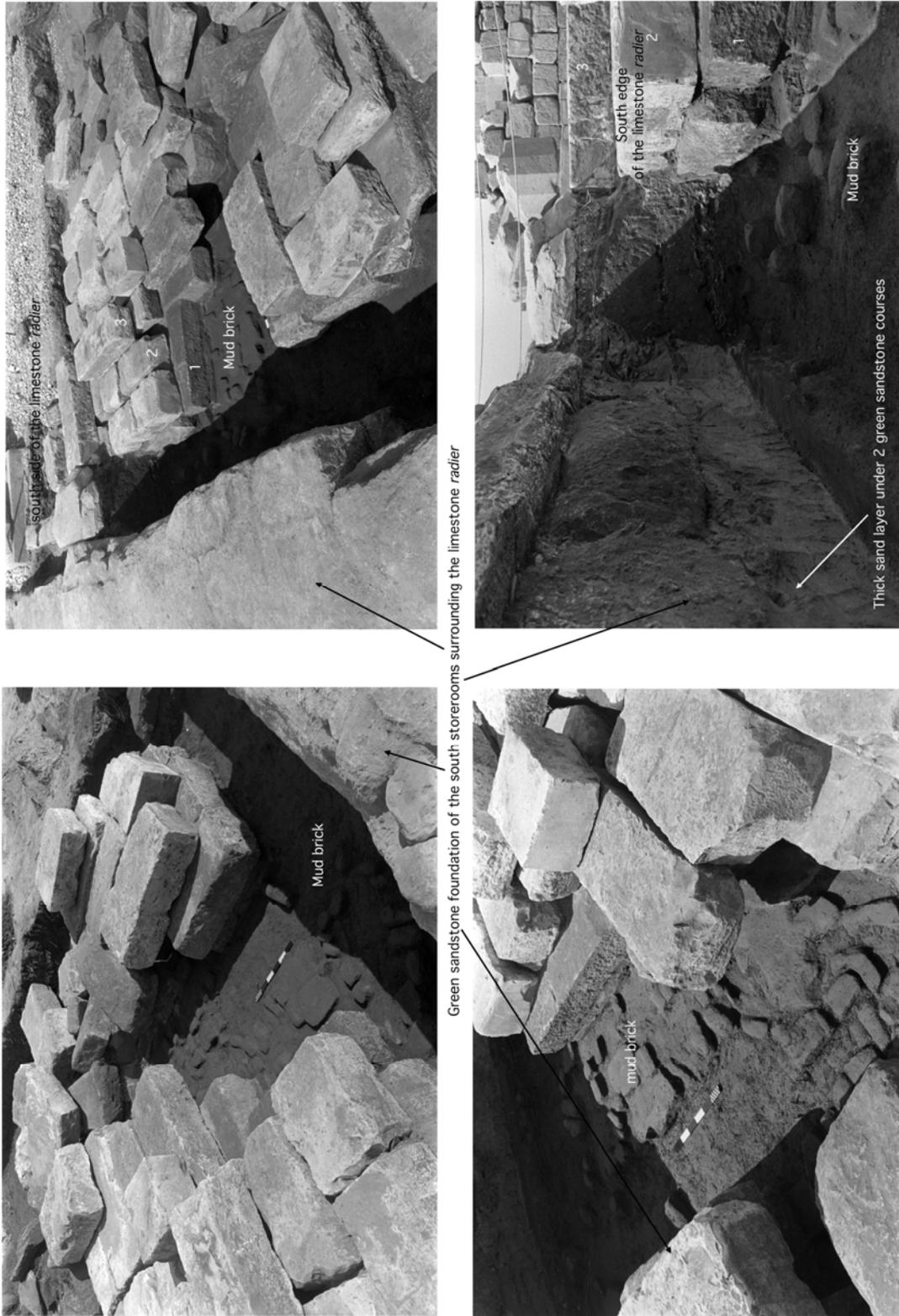
The platform built into the limestone *radier*

Fig. 27



The south-west corner of the limestone radier

Fig. 28

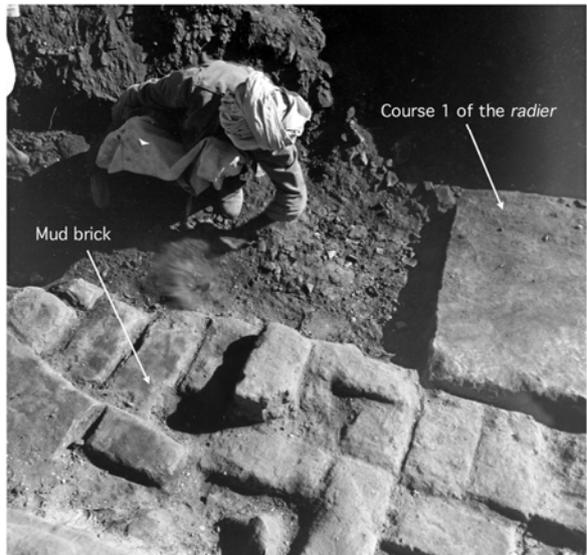
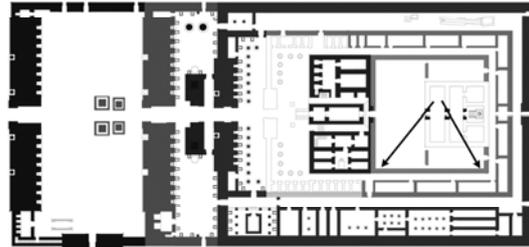


South side of the radier made of reused limestone blocks

Fig. 29



Two green sandstone courses of the foundation of the south storerooms surrounding the limestone radier



South side of the radier made of reused limestone blocks

Fig. 30

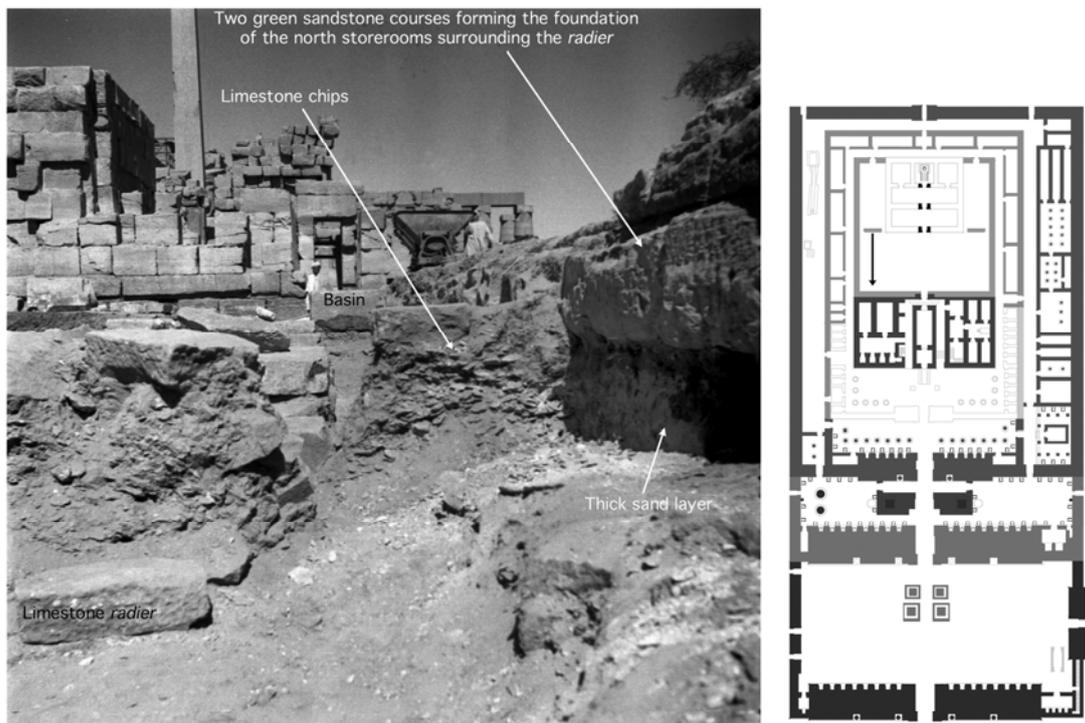


Two green sandstone courses, built on a thick sand layer, forming the foundation of the north and east storerooms surrounding the *radier*



North half of the limestone *radier*

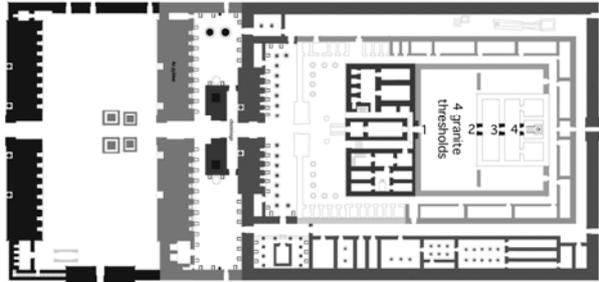
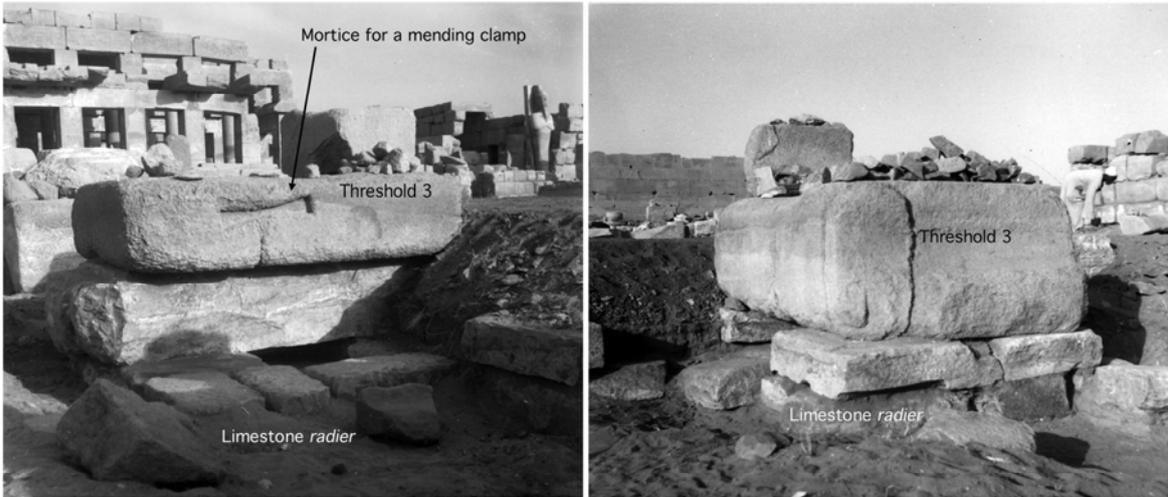
Fig. 31



Senwosret I's border stela reused in the course 2 of the limestone radier

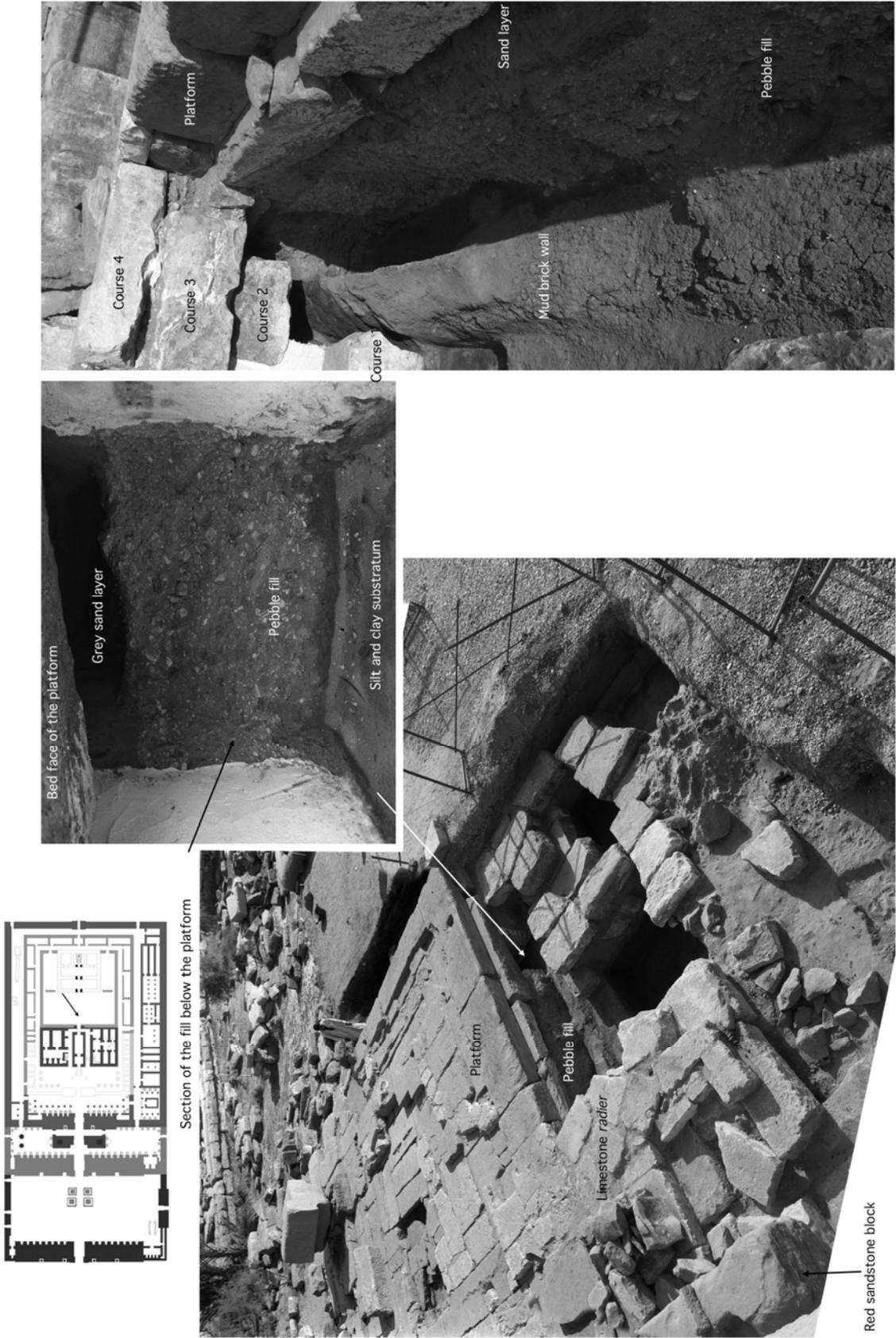
North half of the limestone radier

Fig. 32



Granite thresholds built-in the limestone *radier*

Fig. 33



The platform built into the limestone radler

Fig. 34

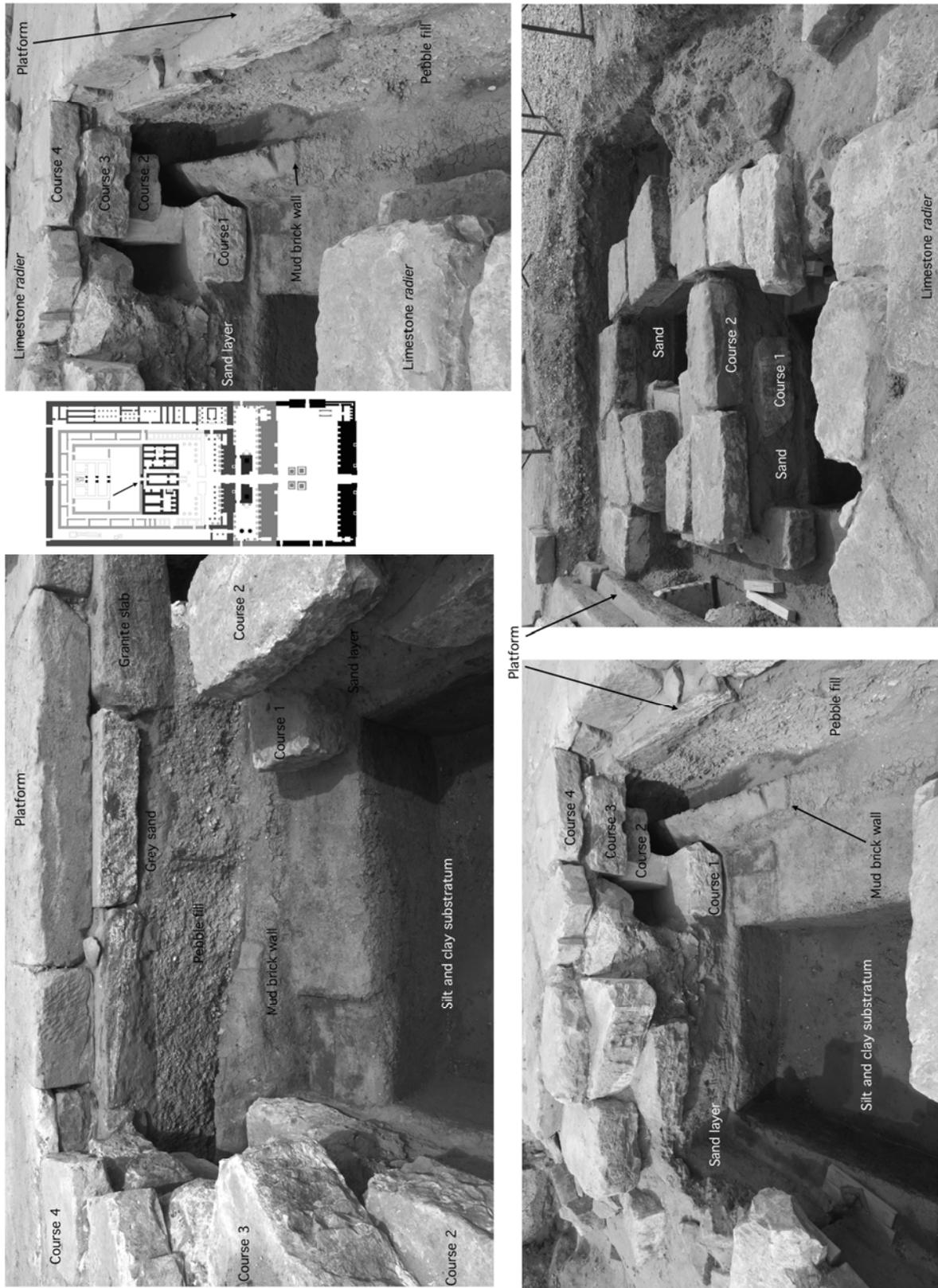


Fig. 35

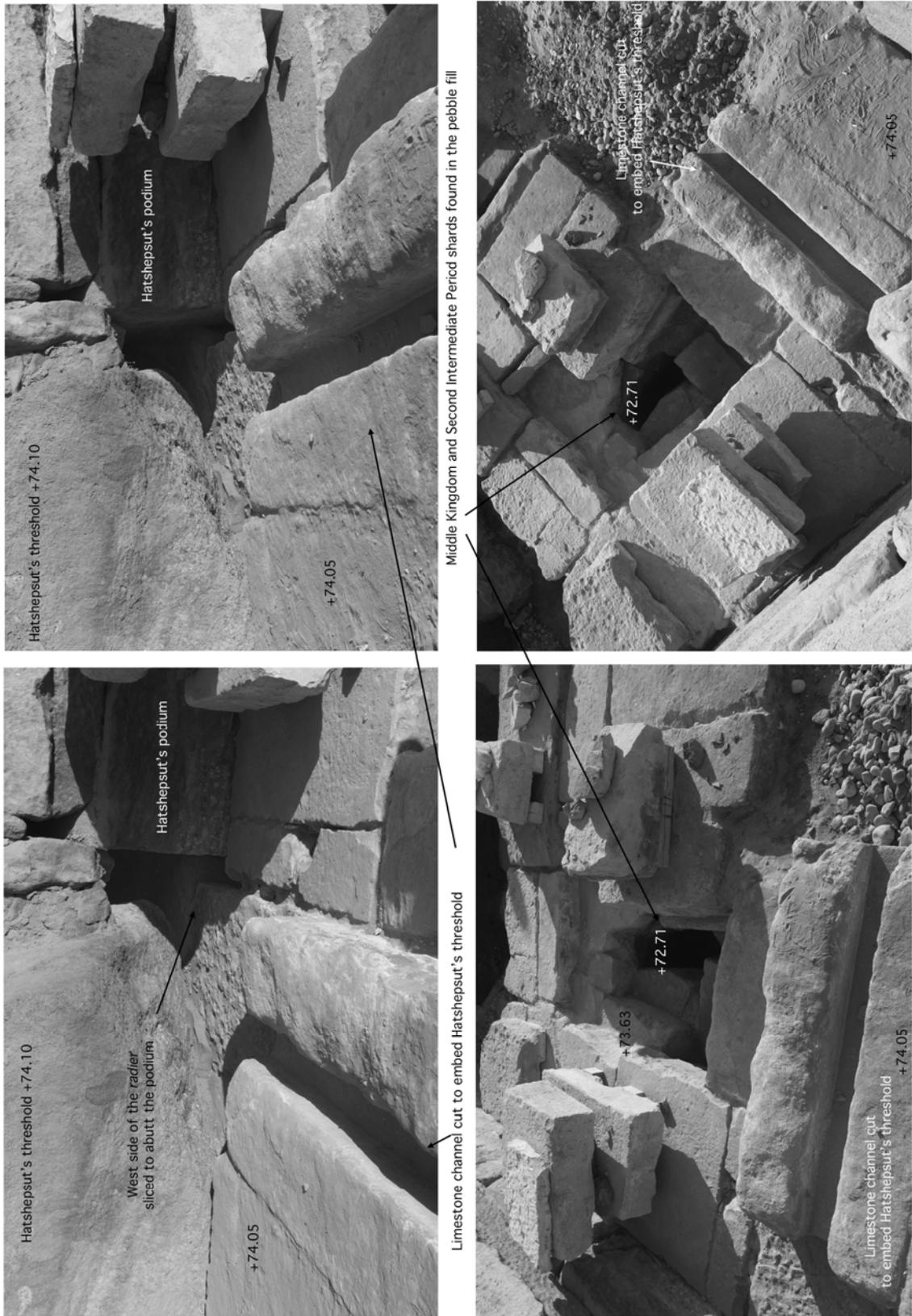
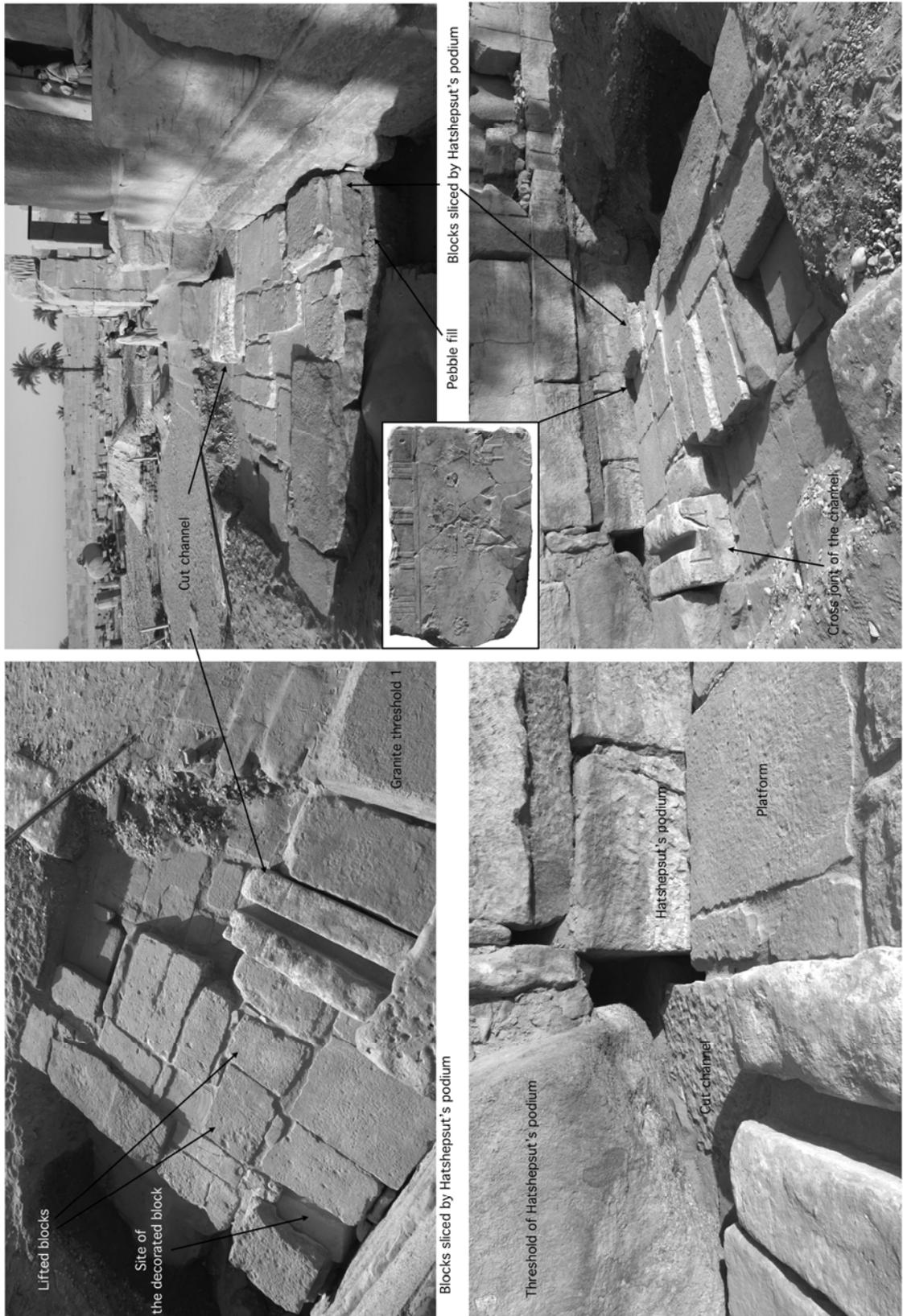


Fig. 36



North-west corner of the platform

Fig. 37

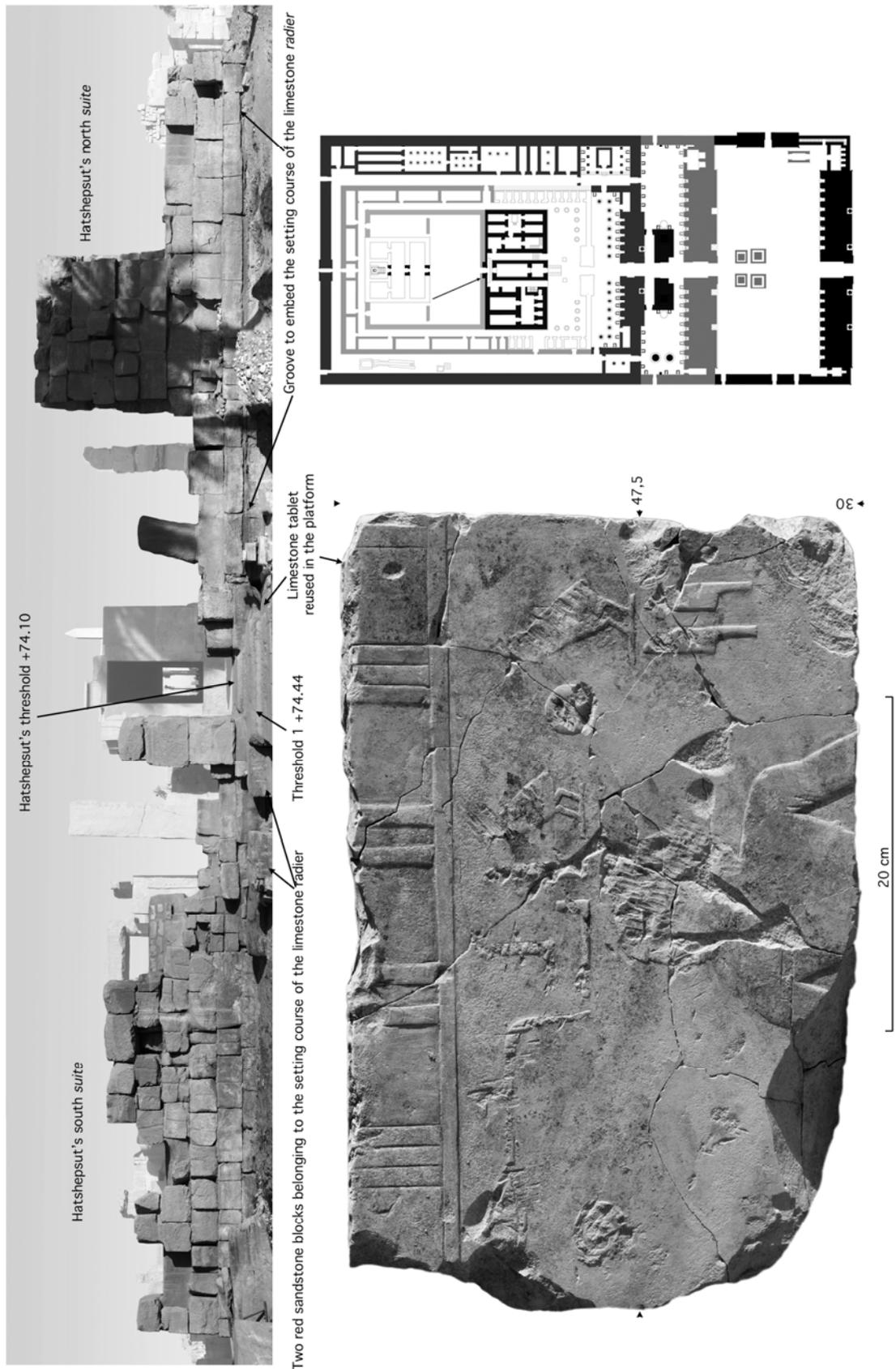


Fig. 38

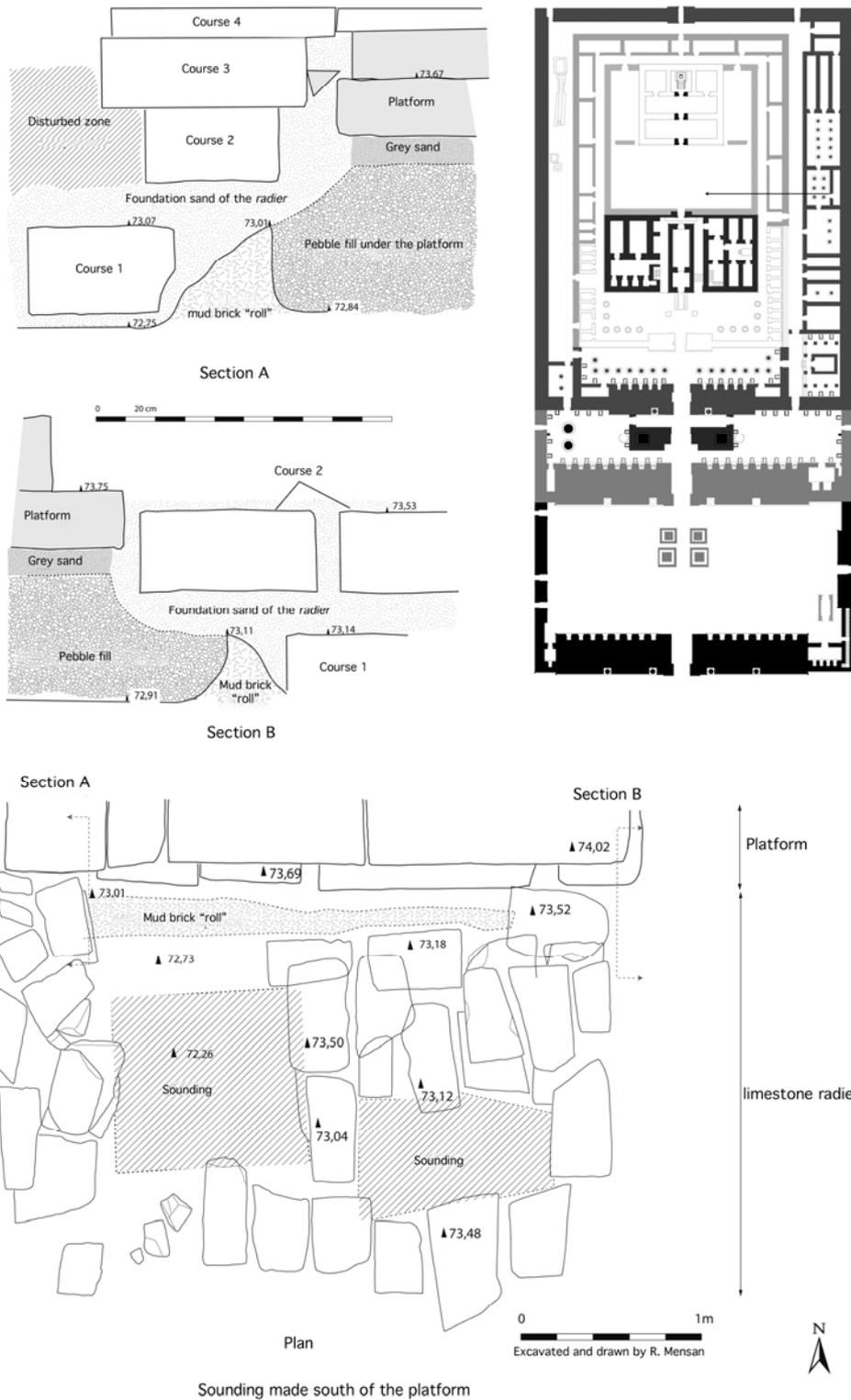
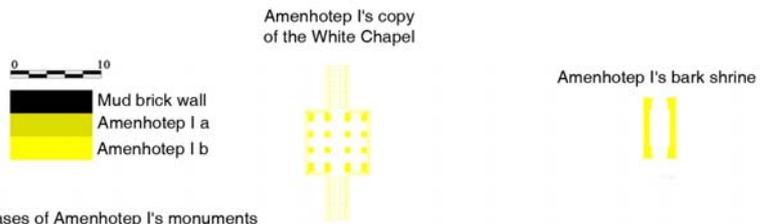
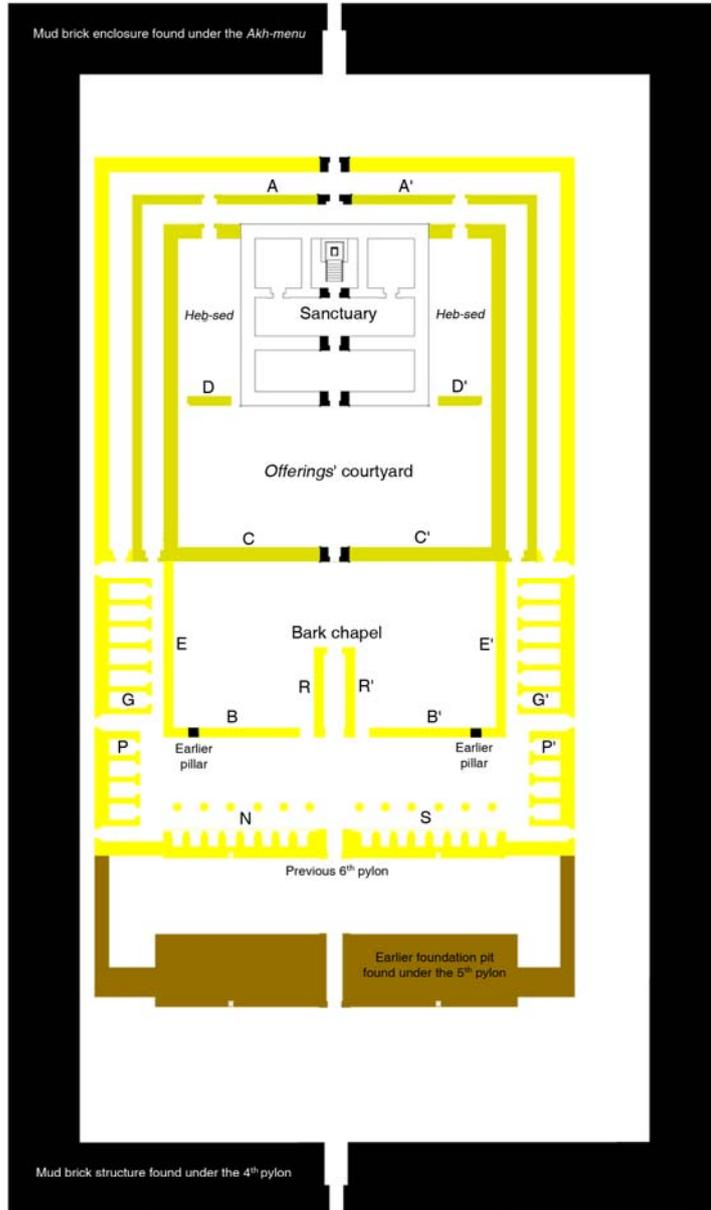
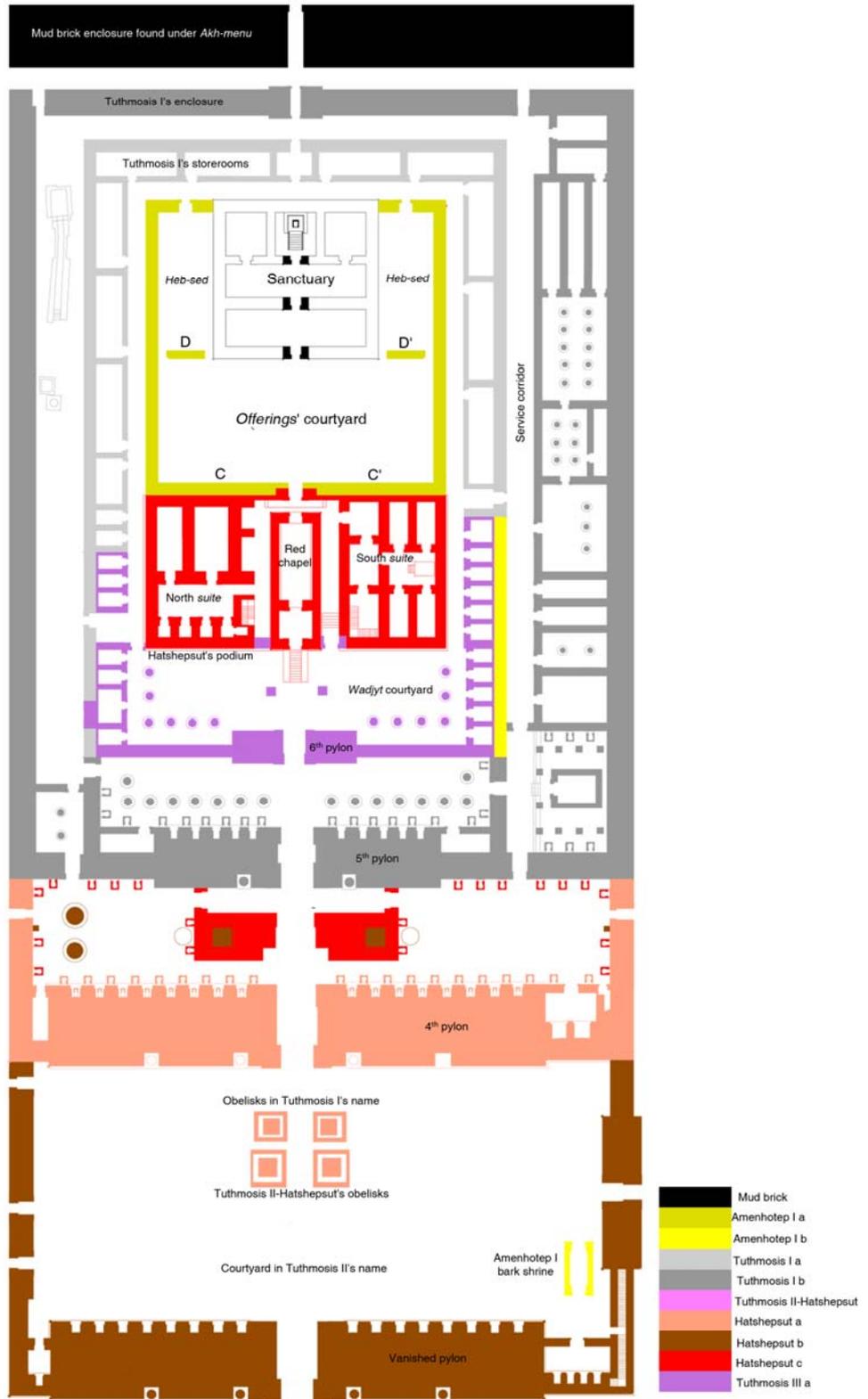


Fig. 39



Two hypothetical construction phases of Amenhotep I's monuments

Fig. 40



Hypothesis of reconstruction under Tuthmosis III, phase a

Fig. 41

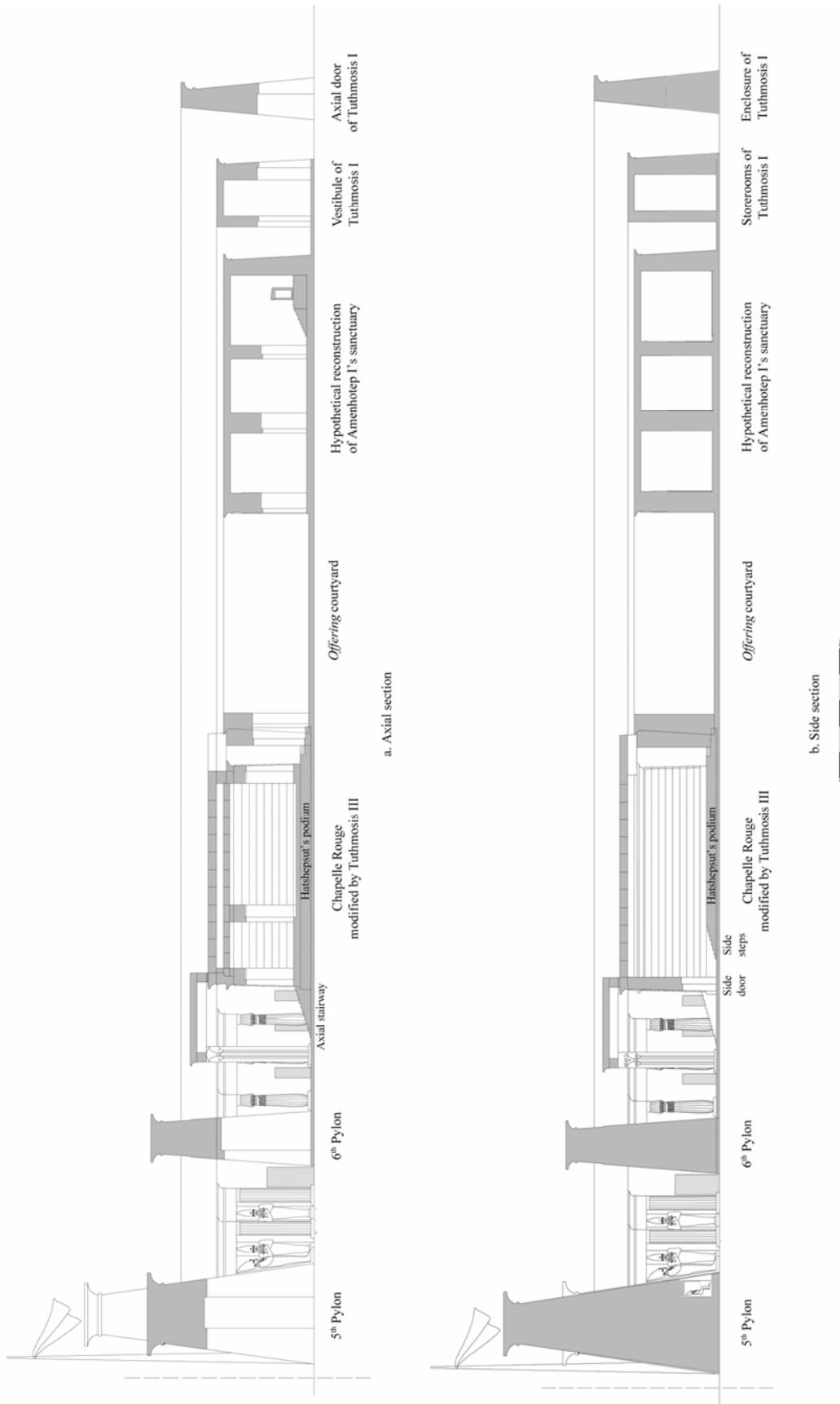


Fig. 42