

**ARCE/EAP Subproject
Conservation of the Sarcophagus of Ramesses VI**

**Tomb of Ramesses VI (KV 9)
Valley of the Kings, Luxor**

**Final Report
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I. Abstract

When the Twentieth Dynasty ruler Ramesses VI was buried in KV 9, the tomb that he took over and enlarged from his nephew Ramesses V, he was provided with at least two stone sarcophagi to protect his mummified remains. These sarcophagi were demolished at some undetermined time in antiquity after the tomb was robbed in the late 20th Dynasty. The goal of this project was to reassemble as many of the fragments of the decorated inner sarcophagus box and lid as possible. This work was carried out with the support from a sub-grant administered by the Egyptian Antiquities Project of the American Research Center in Egypt, funded by the United States Agency for International Development. Over a period of four months in the summers of 2001, 2002, 2003 the project succeeded in reassembling the remaining fragments of the second sarcophagus box and lid. A replica of the face of the lid, in the British Museum since the nineteenth century, was also incorporated into the re-assembly. On March 21, 2004, the reassembled sarcophagus was formally accepted by the Minister of Culture, H. E. Farouk Hosni and the Secretary General of the Supreme Council of Antiquities, Dr. Zahi Hawass in a ceremony held in the tomb.

II. Introduction

II.1 Acknowledgments

I wish to acknowledge the help of the Supreme Council of Antiquities, including the Secretary General, Dr. Zahi Hawass, former Secretary-General Gaballah Ali Gaballah, Magdy El-Ghandour, General Director of Foreign Missions and Permanent Committees, Sabry Abdel-Azziz, General Director of Pharaonic Antiquities. In Luxor, I was helped by Dr. Holeil Ghaly, former head of the Central Directorate of Upper Egypt and the Oases, Dr. Ali El-Asfar, General Director of Theban West Bank Antiquities, Mohammed El-Bialy, former General Director of Theban West Bank Antiquities, Sultan El-Eid, Director of West Theban Antiquities- Northern Sector, Mohammed Abd El-Azziz, Chief Inspector of the Valley of the Kings, and Ibrahim Suliman, former Chief Inspector of the Valley of the Kings. I wish also extend my gratitude to the local SCA representatives who assisted the project, Ahmed Ezz and Ezz El-Din Kamel El-Nubi of the Qurna Inspectorate, and Mohammed Bakri Hassan of the Karnak Inspectorate. The assistance of the American Research Center and the Egyptian Antiquities Project is also acknowledged with gratitude, including Director Dr. Gerry Scott III, former directors Dr. Jerre Bachrach and Robert Sprongborg, as well as Madame Amira Khattab. Finally, this project was only able to be accomplished with the support and guidance of the staff of the Egyptian Antiquities Project, including its director, Robert K. Vincent Jr., Michael Jones, Jarek Dobrowalski and Janie Abd el-Azziz.

II.2. Project Goals

The principal goal of the project was to reassemble the mummiform inner stone sarcophagus of Ramesses VI, which had been broken into several hundred pieces in antiquity. The majority of the fragments remained in the burial chamber of the tomb of Ramesses VI, KV 9, in the Valley of the Kings. The project would reassemble the fragments of the box and lid using epoxy adhesives and stainless steel pinning. The reconstruction work would be carried out in the burial chamber of the tomb with the reconstructed sarcophagus box and lid displayed in the burial chamber.

Work would be carried out in the months of June and July in 2001, 2002 and 2003. This work schedule was the result of the limited availability of two of the chief members of the staff, stone mason Dany Roy and conservator Lotfi Khalid Hassan.

Prior to the inception of this project, the storage arrangements were not adequate to the needs of preserving the decorated fragments of the mummiform sarcophagus. Having them subjected to repeated moving about and piling them on each other endangered the decoration and the fragments themselves. While those pieces placed in boxes had a better chance of survival and boxing the remainder might have been a feasible interim storage plan, their informative potential would not have been utilized. The alternative of removing the fragments to storage in a magazine off-site might offer the possibility of added

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protection but seemed a recourse of last resort, that would disassociate the fragments of the monument from their original context.

When the tomb was re-opened for tourists, there was an increased danger of theft or vandalism affecting the fragments. Naturally, the antiquities authorities were concerned about the integrity of this material and wished to place the fragments in a more secure location.

II.3. Project Staff

2001 Season

Edwin Brock, project director
Dany Roy, stone mason
Lotfi Khaled Hassan, conservator
Nahed Samir, conservation technician
Ahmed Salleh Abdulah, conservation technician
Mohammed Mahmoud Hassan, conservation technician
Francis Dzikowski, photographer
Lyla Pinch Brock, archaeological illustrator
Ahmed Ezz, SCA representative, Qurna Inspectorate

2002 Season

Edwin Brock, project director
Dany Roy, stone mason
Lotfi Khaled Hassan, conservator
Nahed Samir, conservation technician
Ahmed Salleh Abdulah, conservation technician
Mohammed Mahmoud Hassan, conservation technician
Francis Dzikowski, photographer
Lyla Pinch Brock, archaeological illustrator
Ezz el-Din Kamal el-Nouby, SCA representative, Qurna Inspectorate

2003 Season

Edwin Brock, project director
Dany Roy, stone mason
Lotfi Khaled Hassan, conservator
Nahed Samir, conservation technician
Ahmed Salleh Abdulah, conservation technician
Mohammed Mahmoud Hassan, conservation technician
Francis Dzikowski, photographer
Lyla Pinch Brock, archaeological illustrator
Mohammed Bakri Hassan, SCA representative, Qurna Inspectorate

II. 4. Historical Background

At least two stone sarcophagi were provided for the burial of Ramesses VI. The remains of an un-decorated, roughly cartouche-shaped red granite box are still in the tomb but no fragments of a corresponding lid of red granite survive. This outer sarcophagus once rested over a rectangular pit cut into the center of the burial chamber floor. It contained a second sarcophagus of green conglomerate quarried in the Wadi Hammamat, carved in the shape of a mummy. This inner mummiform sarcophagus was decorated on the exterior of the box and lid with lightly incised and painted figures and texts. Apparently at the time of burial, a resinous substance was poured over the inner sarcophagus and over time this had oxidized to form a black coating that partially obscured the decoration (Aldred, 1979). Apparently, the tomb was entered more than once by robbers after the king's burial, as testimony in one of the Tomb Robbery papyri, P. Mayer B, suggests (Reeves, 1990). Further testimony to disturbance of the burial may be attested by a hieratic graffito dated to regnal year nine (or earlier) of Ramesses IX, which records an inspection of the tomb (Reeves, 1990).

Unfortunately, this graffito, first recorded by Champollion and wrongly located by him in the burial chamber, but probably from the west wall of pillared hall F, no longer exists.

During the periods of Ptolemaic and Roman rule of Egypt, when the Theban Necropolis became an ancient tourist attraction or place of pilgrimage, the tomb was frequently visited as the burial place of the legendary Memnon. During the early centuries of the Christian era monks or anchorites frequented the Valley of the Kings and used many of the tombs, including that of Ramesses VI, as dwellings.

II. 5. Past Activities Related to the Sarcophagus

The tomb remained open following its plundering in the late 20th Dynasty, and a certain amount of debris was deposited in the corridors and chambers, although apparently not as a result of extensive flooding. The fact that it remained open since antiquity is demonstrated by the presence of graffiti in, Greek, Demotic, and Coptic throughout the tomb. It was also accessible to European explorers of the 18th and 19th centuries, also attested by graffiti, as well as written documentation both published and in archives (*Description de l'Egypte*, J. F. Champollion *Monuments de l' Egypt et de la Noubie*, and *Notices Descriptives*, C.R. Lepsius *Denkmaeler*, Robert Hay mss., British Library. For specific references: Porter and Moss, 1964). The Italian explorer, Giovanni Belzoni, at the behest of his patron, the British Consul Henry Salt, removed the face of the inner sarcophagus lid from the tomb. This was subsequently sold by Salt to the British Museum in 1823, where it still resides (Department of Egyptian and Nubian Antiquities EA 140). Final clearance of the tomb and its burial chamber, except for the floor pit, was carried out in 1888 by Georges Darresy (Daressy, 1918), and it may be at this time that sarcophagus fragments were stored on the platform, as later described by Elizabeth Thomas, who believed that the floor pit was covered by two stone lids (Thomas, 1964). Photographs from the first half of the 1950's published by Alexander Piankoff (Piankoff, 1954) show the floor pit partly cleared, but at some subsequent time all sarcophagus fragments were put back into the pit.

Until clearance was carried out by Brock in 1985 (Brock, 1993), the sarcophagus fragments lay mixed together with dirt and stone chips filling the central pit in the floor of the burial chamber. Several fragments were exposed on the surface, including parts of the lid, and were constantly subjected to wear and abrasion by people walking on them. After removal from the pit during the 1985 clearance operation, the fragments were stored temporarily on the two wide platforms at the north and south ends of the hall, but they were subsequently placed back in the pit out of the way of visitors, at the insistence of the Qurna Antiquities Inspectorate. During a second period of study and documentation while the tomb was closed for restoration, the fragments again were returned to the platforms. When these fragments were first studied following clearance of floor pit, the theme of decoration on box was identified as being similar to that on previous royal sarcophagi going back to the end of the 19th Dynasty (*eg.* Siptah, Setnakht, Rameses III, Rameses IV). At the insistence of the Qurna inspectorate at the time of this clearance, all the sarcophagus fragments were replaced in the floor pit, increasing the chance for damage to the painted decoration. Subsequently, while the tomb was closed for restoration activities, examination and preliminary documentation activities were carried out and it was possible to place the fragments on the two wide platforms to either side of the central floor. When conservation work began in the burial chamber the fragments were again moved, with some being placed in 3 wooded boxes and the remainder stacked on each other in spaces between the pillars.

II. 6. Documentation of fragments and joins

Previous activities by Brock, before the commencement of the project, included documentation of the decorated fragments, which number at least 280 pieces. All decorated pieces were numbered and listed. Lyla Pinch Brock made a detailed graphic record of each decorated fragment by means of tracings, subsequently scanned into a computer. Using the software program Adobe Photoshop, she was able to make hypothetical joins of fragments into groups, by comparison with known complete examples from other sarcophagi. Subsequently, these joins were tested in the tomb and the actual join outlines traced. Where joins can be found the outlines of the assembled fragments were drawn as they were fitted together, and the joined fragment groups placed on a sand table and photographed.

III. WORK PLAN

III. 1. Clarification of Work Plan Activities

The original proposal for the restoration of the inner sarcophagus of Ramesses VI (submitted February 1997) listed some possible options for carrying out the work, particularly with regard to where the work was to be done. To clarify a point that may have been misunderstood, it had always been the intention to carry out the reassembly of the sarcophagus in the burial chamber of the tomb. There are several reasons for preferring this location. The chief concern was to avoid excessive handling of the fragments, so as to reduce the chance of damage, particularly to the painted surfaces. Because the burial chamber was the find spot for these fragments it was best to keep these artifacts as close as possible to their original find spot (the floor pit). The majority of the decorated fragments

were at that time stored in wooden boxes on the south platform in the burial chamber, thus protected from dust and accidental breakage or from unauthorized handling.

The proposal for carrying out the restoration of the inner sarcophagus called for the assembled remains of the box to be placed on a rock-cut platform to the north of the central pit in the sarcophagus chamber. This site was selected as being the only location allowing sufficient flat space on which to place the assembly where it could be viewed by visitors without any obstructions. For the process of studying and cleaning the unassembled fragments the southern platform was utilized as a storage and staging area. Prior to the commencement of work and at the end of each season, unassembled fragments were stored in wooden boxes on the southern platform. All but the largest red granite fragments belonging to the outer sarcophagus box were placed out of the way in the northeast corner of the burial chamber. The two large blocks belonging to the head and foot end of the outer box were left in their positions as found, the foot end resting at an angle against the side of the pit and the head end balanced on its side on a ledge between the pit and the southern platform.

III. 2. Description of Work Site

All conservation activities would take place at the rear of the tomb, in the burial chamber with a high vaulted ceiling. The chamber was not accessible to visitors beyond the barrier railing at the bottom of the entrance ramp into this chamber. Beyond this barrier, two wide platforms are located to the left and right of center floor. The lower central floor surface is cut by a large pit, leaving a ledge on three sides, although little space remains on the south side due to the presence of two halves of the granite box. Half of the base of the granite outer sarcophagus still rests in the front of this pit, and the other half rests on its side on the ledge to the left at the rear. Two wide raised platforms are located to the left and right of central floor area, approximately a meter above the level of the central floor.

Work on assembly could be carried out on the two platforms and also in the west half of the lower central floor area if a temporary wood platform was constructed to cover the open pit. Temporary wood steps would connect each of the platforms with the central floor area. Upon completion of this project these steps and the wood platform would be removed.

III. 3. Preparation of base for sarcophagus box

The proposed site for displaying the assembled sarcophagus was the bedrock platform to the north of the central floor pit. This location was chosen as it would entail a lesser amount of preparation for placement of the assembled box and offered an unimpeded view for the visitor. The only other available space was the south bed rock platform, but the outer sarcophagus box half resting on the pit ledge and against the edge of the platform would obscure part of the assembled inner box. The floor of the chamber offered only the ledge to the north of the pit as unencumbered space, but it was not wide enough in itself and would need to be augmented by an artificial platform extending over the pit and substantially altering the original appearance of the chamber. While the north platform surface was level it was not completely flat, with noticeable irregularities remaining from the rough cutting of the surface. While it would be necessary to have a level and stable base on

which the re-assembled sarcophagus box could rest, at the same time it would not be desirable to alter the original surface of the platform by cutting it in any way to produce a level surface. One solution would be to construct a low retaining wall of limestone blocks to enclose a level bed of sand on which an insulating layer either of laminated wood or plastic could be placed to support the flat bottom of the sarcophagus box. The limestone blocks would be attached to the floor by a lime mortar layer. This idea was later modified by creating a low platform of limestone slabs laid on a leveled bed of sand and lime mortar applied to the surface of the platform. It was necessary to trim the bedrock surface slightly in three places to lower projections.

III. 4 Consolidation of painted decoration

It had been recommended by consultation with conservators that the painted surfaces of the fragments be protected during the assembly process to avoid damage during handling. This could be done by applying a temporary covering of Japanese paper. Chemical consolidants such as the application of diluted Paraloid B72 would mean that thorough cleaning of surface dirt should be done before application. Cleaning could also be done mechanically by using light brushes. Cleaning of dirt from break surfaces will also be carried out at this stage, using brushes and non-aqueous solvents such as acetone, alcohol or toluene.

III. 5. Assembly of Fragments

The fragments would be joined into groups using an epoxy adhesive as much as possible. In some instances it was desirable to augment and strengthen joins with drilling with tungsten-carbide drills and pinning using stainless steel rods held in place by epoxy adhesive. Assembly of the fragments forming the floor of the sarcophagus box would provide the foundation on which to build up the extant groups for the sides. Existing gaps would need to be dealt with in such a manner as to allow for possible insertion of fragments that might be found in the future. This need had to be balanced with ensuring structural stability for the assemblies. The fragments of the lid would be assembled over a supporting surface as well, at first suggested as limestone blocks cut to conform to the concave underside. This later was changed to a wooden platform with wooden supports under the lid surface. It was desirable both for display purposes and for stability to place the lid assembly on a solid surface and not over the box assembly which would need a separate frame as the sides of the box would not be strong enough to sustain the weight. In the original proposal, the most likely location for the display of the assembled lid would have been on the sloping floor of the deep recess in the center of the rear wall of the chamber. In this position, it would be visible to visitors standing at the entrance.

III. 6. Cleaning of Decorated Surfaces

The exterior of the box was decorated with painted figures and texts. A resinous substance was poured over the box and lid probably at the time of burial. This substance now formed a glossy dark brown coating that obscures the painted decoration. In addition, dirt had covered the fragments further obscuring the decoration. Since the resinous substance was actually an ancient artifact, it might not be desirable to remove it. The dirt covering the fragments would be removed, however, and the painted decoration consolidated.

III. 7. Documentation of Completed Assembly

A drawing to scale would be made of the assembly indicating the joins of fragments. This included each side and the foot end, as well as a plan and section. Complete photographic documentation would be made, in 35 mm format, both color slide and black and white print, supplemented by digital imagery.

III. 8. Information Sign

Some sort of informative sign or panel would be made that would give a succinct description of the background and results of the project. The location could be either in the burial chamber or outside the tomb entrance.

IV DESCRIPTION OF WORK

IV. 1 Commencement of Work

The principal goals of the first phase for June 2001 of the Rameses VI Sarcophagus Restoration were to install a temporary air circulation system, clean the sarcophagus fragments, test the joins, build a limestone base for the assembled sarcophagus box and install temporary wooden platform and steps over the center of the burial chamber where a pit is cut. Unfortunately, because of delays in the issuance of extension of permission to continue the project and for the granting of security clearance for two key members, Dany Roy and Lotfi Khaled, it was not possible to begin the work. During this time Lotfi Khaled had arrived in Cairo, After waiting over two weeks with no work, he decided to return to Rome until security permission was received. Dany Roy was able to use the time while waiting for security to assist the Sabil Mohammed Ali Pasha Project

After a month's delay while waiting for the security approval for the project's two conservators, Lotfi Khaled Hassan and Dany Roy, it was possible to travel to Luxor on July 7, 2001 and begin work on July 9, 2001. On July 8 the project director submitted to the Luxor Antiquities Inspectorate the documents from the SCA for a continuation of permission for the project to the end of the year, December 31, 2001 and security clearance for the project members to the end of July 2001. An agreement was reached with the Qurna Antiquities Inspectorate representative Mr. Ahmed Ezz to work for a weekly period of 6 days, Saturday through Thursday, from 7 AM to 2 PM.

On July 10, a truck carrying project equipment arrived in the Valley of the Kings and this material was unloaded. The following day, Tuesday, July 11, Dany Roy arrived on site and supervised the disposition of the delivered equipment and supplies. These included 50 slabs of limestone paving 40 cm square and 5 cm thick, 6 sheets of plywood, and 12 2 x 4 inch timbers. In addition, the project rented steel beams for winch scaffolding from Dany Roy as well as various tools.

IV. 2. Preparation of Work Site Activities

IV. 2 a. Installation of Air Circulation System

The air circulation system recommended by ARCE/EAP was installed on July 21, 2001. Delay in installation was a result of difficulties in scheduling a driver to bring the equipment from Cairo to Luxor. Some adjustment of the fan assembly as delivered from the shop was necessary to eliminate friction between the fan and its housing, but once this was accomplished, the machine worked smoothly and quietly.

IV. 2. b. Base and Housing for Fan and Motor

A solid base for the fan and motor assembly and the box to shelter it was constructed just to the south of the entrance to the approach ramp leading into the tomb. This location was chosen to allow for a straight run of tubing from the tomb to the fan and then up the hillside above the entry cut for the exhaust. In order to construct the base in this location it was necessary to remove the present information sign supports, consisting of two steel pipes set into lumps of cement poured into holes dug into the debris covering the valley floor. The base of the shelter was made up of large limestone blocks found in the vicinity of the tomb and the rest area. These were used to construct a platform against the base of the rubble wall running south from the tomb entrance. The blocks were cemented together with a mortar of sand and white cement and then faced with a further cement coating. A wooden base was assembled to support the actual mortar and fan assembly which was then placed on the stone and cement platform. A box shelter was constructed from sheets of plywood/particle board with wood framing. The interior of this box was lined with the same foil-backed fiberglass insulation sheets used to cover the flexible tubing. The south side of the box was hinged so that it could be opened for maintenance and repairs to the fan motor. A hole was also cut into the south side of the box for exhaust by the motor's cooling fan and a second hole was cut into the west side of this housing for air intake. Two other holes cut into the north side and the top of the box gave access for the attachment of the flexible tubing to the intake and exhaust ports of the fan. The box was painted with a light tan colored oil paint to protect its surface and so it would better blend into the surroundings.

A wooden shelter was constructed for the fan mechanism to protect it from the sun, and operational tests proved that the motor did not become over-heated during sustained periods of operation (a full workday of seven hours). The exhaust tubing was installed running from the fan parallel to the south edge of the entryway up the hillside. This could be covered by fragments of local limestone so that it will be both protected from damage by the sun and to hidden from view outside of the tomb entrance. Mr. Muhammed el-Bialy, the General Director of Antiquities for Thebes West Bank, Mr. Ibrahim Suliman, Chief Inspector of the Valley of the Kings and the assigned Antiquities Inspectorate representative, Mr Ahmed Ezz all expressed approval of the air circulation system and saw it as a favorable prototype for an overall system of air circulation for installation in other tombs in the Valley of the Kings.

IV.2. c. Completion of Installation of Air Circulation System

The air circulation system installed in July 2001 continued to function well while operated on a daily basis. Agreement was reached with the Qurna Inspectorate for the system to be left in the tomb through the completion of the project next year. The possibility was also considered in discussion with EAP Director Robert K. Vincent Jr. for making a long-term loan of the system to the SCA for use in the tomb in the future. The general consensus of SCA officials and staff who examined the system in operation on site was that it was a successful means of evacuating air from the tomb and could serve as a model for similar systems in other tombs as well. Given the possibility that the system would be left in place for some time, it was decided that a more permanent base and shelter for the fan and motor were needed outside the tomb entrance. In addition, it was felt that some protection of the flexible tubing from the effects of strong sun outside the tomb itself was needed. The simplest means of achieving this was to cover the tubing with sheets of aluminum foil-backed fiber-glass insulation.

Following the closing of operations in August 2001, the exhaust tube running from the fan and motor housing outside the tomb entrance up the hillside south of the entrance was removed by Qurna Inspectorate personnel and placed on the floor of the entry way. During the 2002 season, a more permanent, but a less visually obtrusive installation of the exhaust tubing was adopted. A trench 49 cm wide and 35 cm deep was dug in the debris covering the hillside along the south side of the entryway. The tube was set into this trench and then covered with the debris excavated from the trench. The upper end of the tube was left open at the top of the trench with a rock lining and a screen insert to allow air flow and prevent clogging by debris and garbage.

It was noted that the plastic clips that had been used in the 2001 season to hold the aluminum covered insulating covering the lengths of tubing running from the open entrance of tomb to the fan housing, as well as the exhaust tube had become brittle from exposure to the sun. The next season, new plastic straps were attached as replacements and then covered with aluminum tape to protect them from the effects of ultraviolet rays.

IV 3. Installation of Temporary Wooden Platforms and Ramp

The presence of a large rough rectangular pit in the center of the floor of the burial chamber has always made movement difficult between the two platforms to the north and south. It was felt that a temporary wood platform at the west end of this pit, in communication with the permanent wood platform to the north would be necessary to make movement safe in this area as well as to provide a staging platform for fragments awaiting assembly. A wooden ramp was necessary to reach the north platform from the central floor. Originally, a second wooden ramp was proposed to connect the southern platform with the central floor to the west of the upright head end half of the outer granite sarcophagus box. However, on-site re-assessment of the situation made this space necessary for the storage of large fragments from the sides of the granite box. Instead a second temporary wooden platform

was constructed between the edge of the south platform and the foot half of the granite box now lying in the central pit. This proved helpful as an additional staging area for assembled fragment groups belonging to the sides of the inner sarcophagus box. In addition it also serves as a convenient platform from which to photograph the different stages of construction of the limestone base for the inner sarcophagus box and the assembly of the box itself.

IV. 4. Additional Work Space

Even with the construction of wooden platforms and the use of the north and south platforms, additional work space was needed for storing equipment and material and especially for carpentry work and fragment assembly test layouts. Fortunately, since the tomb was closed to visitors, we had access to the chamber and corridors between the burial chamber and the first pillared hall. Since these were already provided with wooden flooring, there was no danger to the original bed rock floor.

IV. 5. Installation of Scaffolding for Winch

The project had rented steel beam scaffolding and a winch from Dany Roy for maneuvering groups of assembled fragments into place on the platform. The scaffolding was rated for 8 tons and the winch for 3 tons which is greater than any of the fragment groups that need to be lifted. It was constructed so that movement was possible on tracks in 3 directions, side to side and front to back, as well as raising and lowering by the winch mechanism itself. The scaffolding formed a frame 2 meters high by 3 meters wide by 4 meters long. Foam cushioning was attached to the uprights closest to the north wall of the chamber, although there is no movement in the construction that brings the frame in proximity to the wall. It was hoped possible in a later phase dealing with the assembly of the lid fragments to install the scaffolding over the wooden platform here the lid was to be placed. The final selection of the deep recess centered in the rear wall of the burial chamber (see *infra*)made use of the winch impossible, due to lack of space.

IV 6. Lighting

The Egyptian Antiquities Project agreed to loan to our project electrical supplies, including electrical cables, extension cords with multiple outlets, and clip-on lamps. Several of the lamps were mounted on the east and west cross beams of the winch scaffolding to illuminate the work area on the north bed rock platform. Adjustable lamp stands were used with the remainder of the clip-on lamps at various work areas in the tomb. After the completion of the project all of the loaned electrical supplies were returned to the EAP.

IV. 7. Installation of Limestone Base for Sarcophagus Box

A flat surface was recommended in the proposal as a necessary installation to support the assembled fragments of the sarcophagus box. The existing surface of the north platform, selected as the display site for the box, was uneven. A bedding layer of lime and sand mortar was first laid down to obtain a flat surface on which to set the limestone slabs. Locally obtained flakes of limestone were added to fill in surface cavities. Additional

mortar of lime and sand mixture was used to bed the slabs and to fill the cracks between slabs. The resulting base consisted of 5 rows of 8 slabs, and was 2.0 m in width by 3.2 m in length (160 square m). It was located 1.5 m from the east row of pillars and 1.53 m from the west row of pilasters, 1.0 m from the north wall and its upper surface was 10 cm above the platform. The outer edge was carved with a "half bull-nose" to give a curved transition from the horizontal to vertical faces of the platform and the vertical face of the mortar bedding was inset by 1.5 cm.

After the application of a sand / lime mortar bedding layer and the mortaring in of the forty limestone slabs comprising the base, the surface was sanded smooth. A disk sander was used for this purpose. The hood fashioned of PVC attached to the end of the flexible tubing of the air circulation system was placed close to the sander during this operation. The suction created by the air circulation system was found to be strong enough to catch much of the dust created by the sanding. Temporary protective barriers were set up around the areas of sanding to confine the dust and keep it from being blown onto the decorated walls. After this step the upper edges of the base were sanded to a curved profile. Once the re-assembly of the box had been completed, it was necessary to sand the surface of the base again to remove marks left by the reconstruction work.

IV. 8. Additions to Base

At the end of the 2003 season, the original rectangular base of limestone slabs was augmented by the addition of more limestone left over from unused slabs. The intention was to give the base the same size and form as the outer granite box that originally held the mummiform second sarcophagus. This necessitated adding 5 cm of material at each side and 17 cm of material at each end to enlarge the limestone base to the dimensions of the outer box at the level of its interior floor, where the inner sarcophagus originally rested. At the corners of the head end of the base, each of the 2 outermost 17 cm. slabs had its outer corner cut to imitate the curve at the head end of the outer box. The two outermost 17 cm slabs at the foot end had their indentations cut into their short sides, parallel to the long axis of the base, to replicate the indentations at the foot of the outer box.

V. SARCOPHAGUS BOX ASSEMBLY

V. 1. Spatial Terminology

In previous preliminary reports on the project I had referred to the sides and ends of the box and lid in terms relative to the occupant. Since a descriptive term such as "left" or "right" by itself was not clear, adding such a term as "viewer's left" might have been considered, but this too could be ambiguous without knowledge of the viewer's location. Therefore, I had made use of the term "proper left" and "proper right" with "proper" referring to the referenced image as in a statue, or in this case, the effigy of the king associated with the mummiform nature of the inner sarcophagus. Since some readers might be unfamiliar with this usage, and since it will also be necessary to refer to various architectural elements in the tomb, I have decided to use cardinal references instead when referring to the sarcophagus box. However, given the more pronounced figural aspect of the lid, I have retained the terms "proper left" and "proper right", when referring to this object.

V. 2. Assembly of Sarcophagus Box Floor Fragments

It was judged essential that the assembly of the sarcophagus box begin with joining together the fragments making up the floor to have an accurate idea of the overall dimensions and to provide a foundation upon which to build up the sides.

The assembly of the floor of the sarcophagus box began with joining together large fragments that make up the head and foot ends (three pieces at each end). This was done by drilling a hole 12 mm. in diameter through the thickness of each of the three fragments for the insertion of stainless steel dowels 10 mm in diameter. The thickness of the fragments averaged 15 cm. Two large fragments forming the curved head end of the floor, together with another interior fragment, were drilled horizontally for 10 mm. dowels and joined together. The stainless steel dowels were held in place by being coated with an epoxy adhesive (Araldite). At the foot end, the central fragment and the one forming the left corner were then glued together using epoxy adhesive (Araldite) and a stainless steel dowel. Three lower edge fragments for the south side were then attached by epoxy to the southeast corner fragment. Other groups of edge fragments from both sides were assembled and joined together into groups by epoxy adhesive (Araldite). While it was possible to make continuous joins of the lower edge on the north side, two missing pieces interrupt the joins of the lower edge of the right side. Fortunately, fragments from the interior were found that served to "bridge" these gaps. As a result, it was possible to assemble connections along the lower edges of the box from the head end to the foot end on both sides of the box. Again, the sand table proved useful in supporting fragments being glued together in a stable position until the adhesive had set.

Once the edges of the floor of the box were laid out, joins for fragments of the interior of the floor were sought and added where possible. As there were fewer visual clues than had been the case with the edge fragments, location of joins was more time-consuming. Eventually it was possible to place nearly all the extant floor fragments, determined mainly by thickness, surface finish, and the appearance of resin stains to belong to the box floor. Two areas in the floor interior were not able to be filled, due to the absence of fragments.

Much of the floor of the sarcophagus box was assembled in the 2001 season and set in place on the limestone base prepared on the north platform of the burial chamber. Some additional fragments from the box floor were added in the 2002 season, as well as a few more joining the edges of the floor to the bottom of the sides. The west end third of the floor was lifted on end so that additional floor fragments could be glued in place.

Assembled groups for the sides of the box were set in place over the upper edges of the floor of the box in order to test for joins. On the south side it was possible to make joins in the central area from floor to 20 cm from the projected upper edge.

V. 3. Assembly of Sides of Sarcophagus Box

Prior to the actual assembly of the sides of the box, it was necessary to separate the fragments into groups of joins and determine exactly where connections with the floor assembly could be made. It had been estimated previously that approximately 75% of the box is preserved in fragments. While this still appeared to be true, it was now possible to determine where significant gaps occur. In some areas of the box's sides these absences were critical to the stable assembly process and some means of supporting fragment groups was necessary that can later be removed should missing pieces later be discovered.

V. 3. a. East End

Assembly and reconstruction of the foot end was particularly problematic, due to the lack of a significant number of fragments from the central area and the upper edge. There were some groups that formed the corners to nearly half the total height that could be attached, although some gaps existed between joins. The right foot corner fragments had more solid connections and some continuation along the right side. Another group of fragments extended from the central group on the proper right side to the right corner of the foot end. Unfortunately because of missing fragments, there was a large gap here between the edge of the floor of the box and this group. In order to better support this "bridge" of fragments, fiberglass rods were inserted vertically within the gap to add support.

During the 2003 season, it was possible to add two additional fragments to the foot end with the aid of lime and sand mortar filling. One of these was at the proper left corner and although it didn't directly join with the box, it was possible accurately estimate its position by comparison with assembled fragments along the proper right edge that had duplicate images. The other fragment that was attached at the foot end also needed support with lime mortar.

V. 3. b. South Side

Several groups of fragments belonging to the right side of the box were assembled into groups that could be built up from the box floor at this side.

V. 3. c. North Side

Several fragment groups could be assembled for the north side of the box, including sections from the base to the upper edge. It was possible to assemble the main part of the sides with most of the text columns and much of the scenes below nearly from head to foot end, although parts of the upper edge were missing. A similar situation was discovered on the proper left side, between the foot end and the central area, with a large gap above the floor level was bridged by a group of fragments. Fiberglass rods were used to add vertical support. As the fragment at the left foot corner that joined the side group did not have a very secure surface of juncture with the foot end beneath, it was secured by drilling a vertical hole, inserting a stainless steel dowel, and gluing it in place.

Three groups of fragments that had been fashioned during the 2002 season belonged to the proper left side of the sarcophagus box. At that time there were no secure surfaces on the box assembly on which to attach these groups. Further examination of several un-joined fragments during the 2003 season resulted in the discovery that some of them would act as intermediaries for a join between the fragment groups and the box assembly. This was particularly helpful because it allowed the assembly of the box, on one side at least, to be carried from the floor to the upper edge. As a result, it was also possible to discover that the upper edge of the box was not parallel to the floor but instead sloped down from head to foot. By projecting a line along the upper edge it was possible to estimate that the original height of the box at the head end would have been approximately 145 cm and at the foot end 125 cm.

V. 3.d. West End

The curved west end was also a problematic part of this sarcophagus box for reconstruction. There was at least one large fragment (*ca.* 45 x 65 cm) at the curved southwest corner lacking any connection to the base. There was also a sizeable gap in the center of the west end at the base and no complete connection from base to upper edge of fragments belonging to this part of the sarcophagus. Toward the west end on the south side a large fragment group that had a curved section was assembled but found to have no strong connection with the floor edge or adjacent side groups.

V. 4. Gap Filling

Dany Roy and Lotfi Khaled suggested that some of the smaller gaps between fragments in the box assembly should be filled with lime mortar, appropriately tinted, in order to increase the stability of the assembly as well as for aesthetic reasons.

In order to insure better structural integrity for the box assembly several gaps were filled in with lime and sand mortar. On the proper right side, this was done in the central portion where some heavy fragments were placed over gaps with little support beneath. On the proper left side, a major gap was filled near the foot end and the floor of the box. After the large fragment groups were added to the proper left side of the box, mortar infilling was added to give additional support.

V. 5. Addition of Fragment Groups

One of the remaining assembly activities that needed to be carried out was the disposition of the groups of fragments that belong to the west end and the north side of the box but which formed no good joins with the present box assembly. Two possible solutions were proposed for consideration. The first was to set the groups in their proper positions over the box assembly with the intervening space filled with lime mortar. This had the disadvantage of not being very stable and would need some sort of internal bracing, such as metal bars that would be unattractive. The second possibility was to display them on some form of shelf or rack, perhaps using the wood left over from the dismantled temporary platforms.

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This display rack would be placed against the vertical face of the bedrock platform to the north of the central pit and the lid assembly. Although the displayed groups of fragments would not be in their original position, their decorated surfaces would be visible to visitors and they would be in correct relationship to each other.

Three fragment groups that belonged to the curved head end of the box could not actually be joined to the box assembly due to the lack of intervening fragments to make strong joins possible. Two of the groups were from the proper left side of the head end but did not form a secure join with each other, although they were close together. The other fragment group, from the proper right side of the head end, was large and did preserve some of the upper edge. Unfortunately, there was no secure surfaces for attachment to the box assembly, which would have partly filled in the large gap that now exists at this end of the box assembly. Two wooden display racks were constructed to serve as mounts for these two groups. The fragments are held on the racks by stainless steel rods set into the racks beneath the fragments. These were placed on the platform west of the head end.

Following this test assembly and further consultation with EAP it was decided to abandon this display approach as un-aesthetic. Instead, the un-mounted fragment groups were placed inside the sarcophagus box on its floor. Perhaps in the future a better means of dealing with these fragments will be possible, particularly if more missing pieces are discovered that any permit joins.

There were many fragments and groups belonging to the south side of the box, particularly at or near the upper edge, which could not be attached to the box assembly. In some cases, their approximate positions could be estimated by analogy to complete examples on earlier sarcophagi. However, as there was no actual juncture, we decided not to attach them. All of these fragment are now stored in locked wooden boxes placed with the smaller red granite fragments of the outer box in the northeast corner of the burial chamber. If more fragments should be discovered in the future outside the tomb, it may be possible to attempt further joins to the box assembly.

Cleaning of the decorated surface of the box and the un-mounted fragment groups was carried out to remove accumulated dust and dirt from the painted surfaces. No attempt was made to remove any of the black resinous coating. Cleaning was carried out manually, using small scalpels. The only chemical used was diluted alcohol.

V. 6. Fragments from Outside the Tomb

Several fragments of the sarcophagus were discovered during the activities of other missions working outside of KV 9. Some of these discoveries were made prior to the actual reconstruction project and it was possible to use some of them in the assembly of the sarcophagus box. These included a fragment discovered by the Amenmesses Project in the flood debris in one of the chambers of KV 10, the tomb of that 19th Dynasty king Amenmesses. Another usable fragment was found near the tomb of Ramesses III, KV 11,

by the Amarna Royal Tombs Project, which joined with others on the south side of the sarcophagus box. After the project was completed several fragments were found by the University of Basel mission in their work around the entrance to KV 18, the tomb of Ramesses X. One of these fragments joined to one of the un-mounted groups belonging to the north side of the box. The Swiss mission also provided a fragment belonging to the corner of the foot end of the sarcophagus box. This fragment was found built in to the old gate to the valley once standing between KV 5 and KV 6. When this was dismantled the fragment was stored in KV 18. Unfortunately my attention was only drawn to the piece after completion of the box assembly; it would have filled a gap in the southeast corner of the box. Again, following the completion of the project, the Amenmesses Project discovered a decorated fragment of the box while clearing a refilled pit excavated by Theodore Davis in the area of 19th Dynasty workers huts northeast of the entrance to KV 10. As with the other un-mounted fragments these pieces were also placed in the wooden boxes stored in the northeast corner of the burial chamber.

VI. LID ASSEMBLY AND FACE REPLICA INSTALLATION

VI. 1. Installation of Initial Wooden Platform

A wooden platform was constructed to the north of the central pit in the floor to act as a possible permanent support for the assembly and display of the assembled fragments of the sarcophagus lid, including the replica of the face to be fashioned by the conservation department of the British Museum.

6 parallel 2 x 10 inch beams ran from the north edge of the pit north to the base of the north stone platform and were supported by 6 vertical legs at their south ends and 6 slanting beams along the sloping face of the pit, all 2 x 10 inches, as well. 2 x 4 inch timbers were laid across these beams and overlaid with plywood sheets. The supports of the wooden platform to the north of the central pit were painted a dark brown to protect the wood, and the plywood sheets forming the work surface were painted a light yellow. Upon completion of the installation of the lid assembly the wooden platform was to be painted a beige color to blend in with the general appearance of the limestone surroundings and to protect the wood.

VI. 2. Assembly of Lid Fragments

The lid fragments that could be joined together were assembled on the new surface of the wooden platform on the north side of the central pit. These comprised the north and south sides of the upper torso, including the arms crossed over the chest and the *nemes*-headdress lappets and sides that frame the face. All of the south edge to the foot and the adjacent part of the right leg was also joined and the left edge, as far as the mid-leg. Other fragments comprising the central part of the lower legs as well as the left edge of the feet and a piece from the toes were placed in their approximate positions even though they form no joins with the rest of the assembly. Wooden blocks were shaped to fit under the central portions of the lid in the torso area to add support.

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As with the fragments belonging to the sarcophagus box, those pieces identified as coming from the lid of the sarcophagus were prepared for joining into groups, cleaned and tested for joins. It was possible to join some fragments together in groups, including the north (left) side of the *nemes* headdress and the left shoulder, parts of the right side of the headdress.

VI. 3. BM Lid Fragment Replication

During April 2002, Micheal Neilson of the conservation department of the British Museum began the production of a replica of the face from the sarcophagus lid now in the British Museum's Egyptian Antiquities collection (EA 140). The production of this replica in fiberglass resin was completed by the end of May, 2002. The replica was then carefully packed in a foam-lined wooden box and flown to Cairo on July 4. Arrangements were made in advance to have the lid donated to the SCA as a gift, so that the project would not have to pay customs duties on the replica. Apparently, the SCA encountered complications in getting the replica processed through customs and had to obtain a letter of agreement from the Ministry of Culture. On August 4, the replica was released to the SCA and at my request was immediately sent to Luxor, accompanied by an SCA representative. It was actually carried on top of a Peugeot station wagon but did arrive in Luxor in good condition and was received by the West Thebes inspectorate on August 5. It was taken to the tomb the same day and placed with the present lid assembly. Some adjustment of the lid assembly were necessary but could not be carried out until Dany Roy and Lotfi Khaled were back in Luxor. The lid replica was carefully fitted to the lid assembly and until receiving the permission of the SCA to have it permanently attached using epoxy adhesive.

VI. 4. Removal of Wood Platform

Following discussion with EAP in the spring of 2003, it was agreed that the wooden platform previously erected over the north side of the central floor pit should be removed as it obscured the view of the pit. A different means of displaying the lid assembly would be adopted that would support the lid on an inclined surface so that the face replica could be better seen by visitors standing at the east side of the chamber. This new support would be situated in the space between the edge of the pit and the northern bedrock platform. The actual location for the lid assembly was subsequently changed as is discussed below. Prior to removing the assembled but un-cemented lid fragments from the old platform, an outline of the lid was drawn on the surface of the platform, noting, as well, the location and outline of the their lower edges where these touched the platform. After their removal a tracing was made on paper of the outline of the assembled lid fragments. This tracing would serve as a template for the new support for the lid assembly. The wooden platform was dismantled and the lumber selected from its components for use in the construction of a new support for the lid.

VI. 5. Construction of Wooden Support for Lid

The selected lumber consisted of 13 pieces of 2 x 4 varying in length from 2 - 3 meters. These were taken to a carpentry workshop and the pieces were planed and glued together, augmented by mortice and tenon joints. Three cross pieces were attached to the underside at the widest part, the foot end and half way between. The tracing of the outline of the lid was then transferred onto this wooden construction and the final form was cut. Six other pieces of 2 x 4 were glued together in pairs along the widest surfaces to form three lengths of 4 x 4 to serve as 5 vertical supports for the sloping wood base. The longest of these 80 cm, would be placed below the head end two others would be set in from the edges at the widest part of the base and the remaining two supports would be placed half way to the foot end. Wooden receptacles were attached to the underside of the lid at the head end, and near the ends of two of the cross bars to surround the upper ends of the legs in order to strengthen the contact with the platform and prevent lateral slippage. A slanting brace was inserted against the longest leg at the head end running to the center of the cross bar at the widest part of the platform to further increase strength and stability. Another pair of slanting braces was placed between the legs at the widest part of the lid and a third pair at the second pair of legs. The wooden platform and legs were all painted a light beige to blend in with the surrounding bed rock.

VI. 6. Selection of Display Site for Lid

After the new wooden base for the lid assembly was constructed, an attempt was made to find the best location to place it from the viewpoint of appearance and security of support. Using the replica of the face as a reference point, since it was light in weight, the wooden base was set up to the north of the central pit with as much of the base as possible positioned on the flat bed rock surface. The head end of the base was raised to approximately 80 cm, a height calculated to afford the optimal angle for viewing and held up temporarily by screw jacks. There still remained a part of the proper right side and foot end of the base that would rest over the uneven sloping surface of the edge of the pit. The original intention had been to lay the platform flat on the bedrock floor, place the fragments of the lid as well as the replica on the platform, glue them together, and then jack up the platform at the head end to the height of 80 cm and insert the support legs. If the lid fragments were placed on the base in this position, a considerable amount of weight would have been directly over the least stable part of the emplacement.

Aside from the difficulty of installing support for the wooden base and lid assembly of sufficient strength and stability to carry the load over this uneven sloping surface, maneuvering the fragment groups into place from their temporary storage position at the west end of the pit and in the rear recess across the open pit and onto the platform would be difficult and dangerous. This would have to be done without the use of the winch as there was not enough available level space on which to erect it over the intended work area. Instead, only the strength of the available manpower working in the restricted space between the pit and the platform would be the only means of getting the pieces in position on the platform.

In addition to these stability and installation concerns, the overall appearance of the assembly and platform in that location was not appealing. In order to utilize as much of the flat floor area as possible to serve as a support surface, it would be necessary to locate the assembly and platform at the northwest corner of the floor area, rather than in a more aesthetically pleasing central location which would have put the right half of the assembly over the edge of the pit.

Another consideration of a more practical nature was that when the SCA conservation technicians were doing any future cleaning and restoration work on the wall and ceiling in this part of the chamber, the lid assembly would be in the way of any scaffolding they would need to erect. As a result there was the possibility that damage to the lid assembly might occur during conservation work or work would be impeded by its presence in this location.

A decision was then made to see what the effect would be if the lid platform was placed on the sloping floor of the rear niche as had originally been suggested in the initial proposal. The results from an aesthetic point of view were striking. The lid assembly would be visible to visitors from as far back as the entrance to the first pillared hall, and would draw their attention down into the burial chamber. The symbolism of the scene on the wall at the rear of the niche, showing the solar boat lifted out of the waters of creation at dawn was also evocative, with the lid placed directly in front of this theme of resurrection. The sloping surface of the floor of the niche provides a suitable angle for viewing the face of the lid. Although the lid is not in its original position, it is on the same original alignment in the burial chamber with relation to the tomb's main axis, just as the sarcophagus box is on the same axis of alignment it had in relation to the burial chamber while not in its original position. Regarding the argument that the spatial separation of box and lid might make their interrelationship less apparent, it would seem that similarity of material and present reassembled condition would reduce this confusion. In addition, the planned information sign would serve to further point out their interrelationship.

VI. 7. Assembly of Lid Fragments

Prior to the installation of the modified wooden base to support the lid assembly, the fragment groups from the proper left and right sides were placed in the appropriate sides of the niche so that they could be more easily placed on the wooden base. The wooden base was placed on the sloping floor after the legs had been cut down considerably to accommodate the angle of slope as well as irregularities in the floor surface. The bottoms of the legs were mortared to the floor surface using lime mortar. Three stainless steel rods, 1 cm in diameter, were inserted through the foot end of the platform and into holes drilled into the floor beneath to prevent the platform from sliding down towards the pit.

The placement of the lid fragments on the sloping surface was difficult but eventually it was possible to place all of the groups together with the face replica in the necessary correct

alignment. Wooden supports were installed beneath the assembled groups and stainless steel dowels 8 mm in diameter were inserted into the base at the lower (foot end) of the proper left and right sides to keep the fragments from sliding down. It was soon realized that these were not sufficient in strength so they were augmented by a 2 cm stainless steel rod inserted in the base at the lower end of the proper left and right sides of the lid assembly. Metal strips 20 cm in width and 3 mm in thickness were attached to the sides of the base with screws. These projected above the upper surface of the base and engaged the sides of the lid where the lower edges touched the base surface, in order to restrict lateral movement of the fragments. Epoxy adhesive (Vantico) was used to cement the fragment groups together, with wooden blocks placed beneath the central part of the lid for support. The surface of the lid was cleaned of accumulated dust and dirt, particularly around the painted areas of the hands, scepters and striped headdress.

VII. Test Cleaning

In 2001, Lotfi Khaled began a test cleaning on part of the foot end of the sarcophagus box. He was able to complete that cleaning in 2002, showing the resin to have stained the surface of the stone. A second test cleaning was carried out on the best preserved section of the right side of the box. This features a *ba*-bird, with human arms raised in adoration, standing on an oval containing a mummiform figure.

A third test cleaning was carried out by Nahed Samir on a decorated portion of the sarcophagus lid. Here the traces of the painted decoration were very faint, but showed a standing goddess facing the center of the lid. The skin of her face and arms were rendered in yellow and her wig in blue. Because this fragment had once lain on top of the debris filling the central floor pit its surface had been exposed to such erosive forces as people walking on it or objects rubbing against it, thus damaging the painted decoration. As a result of these test cleanings, it can be seen that different results can be obtained, depending on the present condition of the surface of the fragment as well as its past history. In extreme cases, as visible on the right side of the box, one fragment may be coated with the resinous material while an adjacent fragment, found outside the tomb has lost this coating, as well as some of the painted decoration. It is recommended that if any future cleaning activities are undertaken, they should be confined to only the painted figures and not the background. Additional cleaning of the sarcophagus box and lid to remove dirt is desirable. Any more removal of the resinous coating should be undertaken only in areas where it may be possible to make the decoration clearer and should be carried out there on the painted decoration using mechanical means of removal, mainly the use of fine picks. Painted decoration was consolidated after cleaning, using a diluted paraloid solution.

VIII. DOCUMENTATION OF BOX AND LID ASSEMBLIES

VIII. 1. Graphic Documentation

In late July and early August, 2002, Lyla Pinch-Brock was able to make drawings of the assembled portions of the sarcophagus box and lid. This involved a combination of using digital photographs ((Nikon Cool-pix 995) and computer imagery software (Adobe

Photoshop 5.0) to produce drawings of the sides and ends of the box assembly and a view of the lid assembly as seen from above.

Lyla Pinch Brock spent several days working on the production of drawings of the box and lid assemblies during the later stages of the work. She accomplished this by a combination of on-site tracings of some of the fragments and digital photography of the assembled groups, particularly the recent additions to the proper left side of the box. She then scanned the digital imagery into a computer and after printing these images out used the prints as the basis on which to create reduced scale drawings. These were then scanned back into the computer for adjustment and final printing.

VIII. 2. Photographic Documentation

Francis Dzikowski, staff photographer for the Theban Mapping Project, was available during each of the project's seasons to photograph on-going work in the tomb. He recorded the state of the sarcophagus assembly at the beginning of each season and at its' completion. He was able to place his cameras in various difficult view points, including a view from directly above while supported on the winch scaffolding. He made a final shooting session of the completed assemblies of the box and lid on June 21, 2003. The remainder of the photographic documentation was made by the project director, using his own equipment for both 35 mm color slide and black and white film as well as digital photography. The images for the illustration of the progress reports as well as the final report derive from the digital photography.

IX. Final Site Preparation

IX. 1. Dismantling of Winch Scaffolding

Once all the fragment groups that could be placed on the sarcophagus box were installed, there was no longer a need to use the winch. By the end of the first week of July, 2002, the work crew had dismantled the winch and its scaffolding and placed the pieces of equipment at the tomb entrance for later removal from the tomb. This material, which had been rented from Dany Roy, was taken away by the middle of July 2002, together with his tools and equipment.

IX. 2. Removal of Temporary Wood Platforms

After the winch and scaffolding were dismantled, all of the temporary wood platforms were removed from the burial chamber. This included the wooden steps leading up to the west end of the north bedrock platform. The large sand box used for supporting glued groups of fragments as taken apart and the temporary platform at the west end of the floor pit, including its supports, were removed. The other wood platform that had been placed between the granite sarcophagus box fragment lying partially in the central floor pit and the southern raised area also was dismantled. All the remaining wood was stored in KV 8 the tomb of Merenptah, in the side chamber Fa, off the first pillared hall, which had a locked metal gate.

IX. 3. Removal of Air Circulation System

After the completion of all work in the burial chamber, a decision for the final disposition of the air circulation system had to be reached. At the time that it was originally installed, the EAP had considered turning the system over to the SCA. Eventually, the SCA decided that it was not desirable to keep the system in the tomb and other possibilities were briefly explored, such as loaning it to other projects. The Japanese mission of Waseda University carrying out conservation in KV 22, the tomb of Amenhotep III, in the West Valley of the Valley of the Kings was approached, but after some consideration they declined the offer. Ultimately, the EAP decided to loan the system to the conservation project working on the painted decoration in the Red Sea monasteries of St. Anthony and St. Paul. In July 2003, the flexible tubing was removed from the tomb and off the hillside south of the entrance, the fan and motor assembly was dismantled from its stand after removal of the wooden housing. A truck was hired to remove the material from the Valley and transport it to the Red Sea monasteries. While it had been decided that the existing air circulation system would not have been powerful enough to efficiently deal with the internal environmental problems generated by a high influx of visitors, the necessity of addressing this problem is acknowledged. Future site management activities in the Valley will need to address seriously these issues for all tombs. One other problem, perhaps related to the lack of any air circulation system, has been the rapid build up of fine limestone dust that has been accumulating, not only on the walls, but also on the sarcophagus box and lid assemblies, seriously obscuring the decoration.

IX. 4. Installation of Information Panel

In the initial project proposal, provision was made for installing an information panel that would describe the sarcophagus restoration activities. While a possible location of this panel within the burial chamber near the box and lid assemblies was considered, the EAP preferred a site outside the tomb, where there would be less congestion and more opportunity to view the panel. The most acceptable site for installation was beside the existing information panel installed by the Theban Mapping Project (TMP) to the left of the tomb entrance. The same companies that manufactured the TMP signs and frames were contracted to produce the sarcophagus information panel in order to ensure a comparable appearance. The Swiss firm Atelier Uznaberg GmbH, Uznabach, Switzerland, produced the same type of A1 size aluminum panel as for the TMP, with the text laser-etched into the surface. The hollow aluminum frames to hold the panels were manufactured in Cairo by Graphilex Signs and Industries, SAE, 10 Nehru Street, Heliopolis, to the same specifications as those made for the TMP. One modification to the frames was the addition of a pair of stronger right-angle brackets to support the bottom edge of the panel. **[image]**

The text and imagery of the panel was designed by Lyla Pinch Brock, with the English text composed by Edwin Brock and translated into Arabic by Alaa El-Habashi of the EAP, all in conjunction with editorial modifications by the EAP. The final result was a bilingual text

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flanking a central image of the royal head on the sarcophagus lid and surmounting a drawing of the figures on the sarcophagus box. The English text is as follows:

“The Sarcophagus of Ramesses VI

The sarcophagus of Ramesses VI, shattered in antiquity, was reconstructed in 2003 from fragments found in the king’s tomb and elsewhere in the Valley of the Kings. The stone is a hard green conglomerate, quarried in the Wadi Hammamat, 100 km from Luxor in the Eastern Desert.

The sarcophagus, originally painted blue, red, yellow and black, is stained by ointments used in the burial ritual.

Carved decoration tells of the afterlife of the king through symbolism connecting him with the sun god Re and with Osiris. The face of the lid is a replica of the original, which has been in the British Museum since 1823.

The sarcophagus was placed inside a granite box, of which two huge fragments remain in the burial chamber.

The mummified body of Ramesses VI was found in the nearby tomb of Amenhotep II in 1898 and now rests in the Egyptian Museum, Cairo.”

IX. 5. Official Reception of the Sarcophagus Reconstruction

On March 21, 2004, the tomb of Ramesses VI was officially re-opened by the Minister of Culture, H. E. Farouk Hosni and the Secretary-General of the Supreme Council of Antiquities, Dr. Zahi Hawass. Representatives from the American Embassy, the United States Agency for International Development, the American Research Center in Egypt, the Egyptian and foreign media and various officials of the Ministry of Culture and the Supreme Council of Antiquities were present. Copies of an illustrated brochure produced by the Egyptian Antiquities Project of the American Research Center in Egypt with text in English and Arabic were provided for all attending the ceremony. The achievements of the project were favorably received by the Egyptian authorities.

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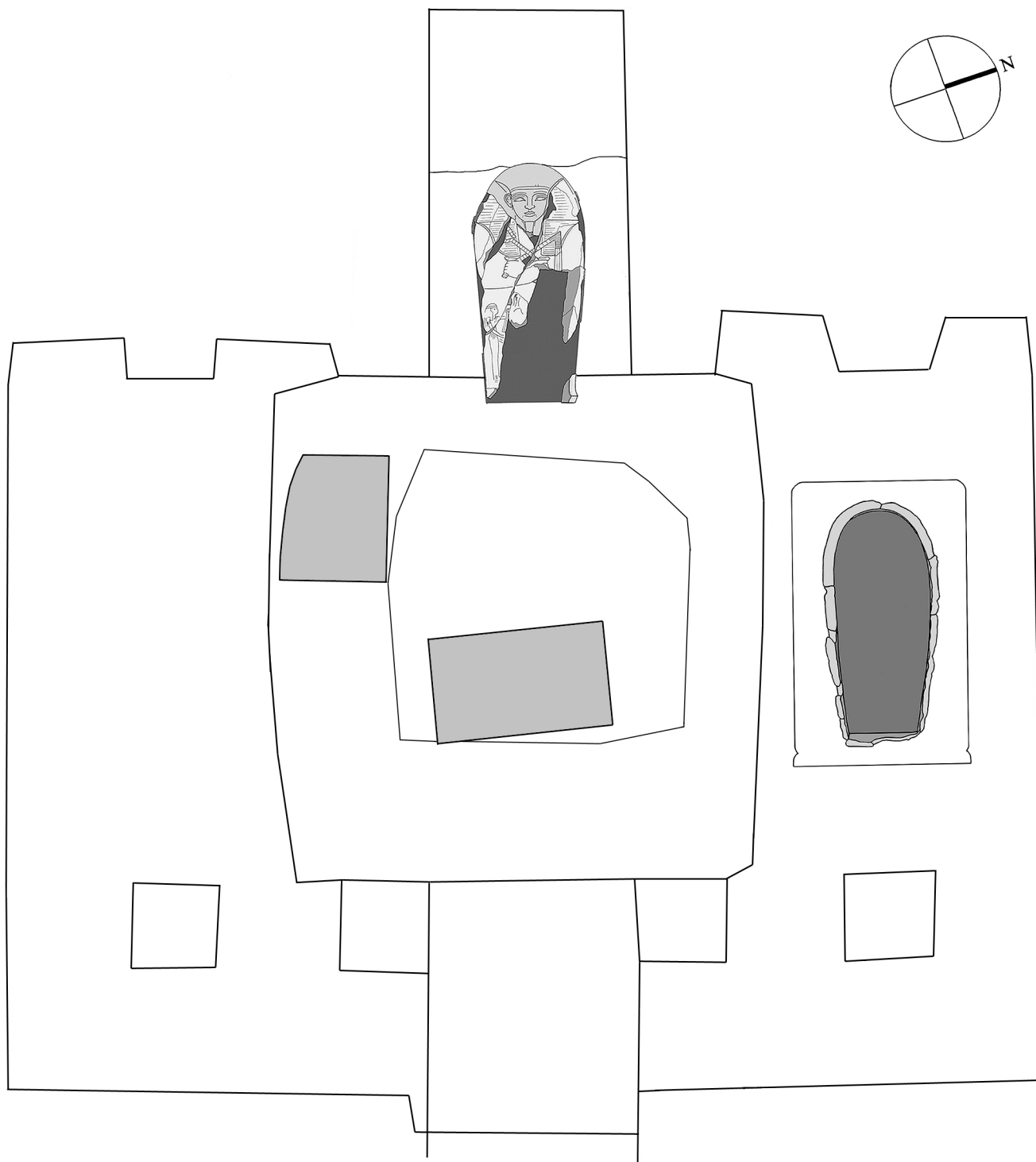


Plate 1: Plan of tomb of Ramesses VI showing location of re-assembled base and lid.
Drawn by Lyla Pinch-Brock in August, 2002.

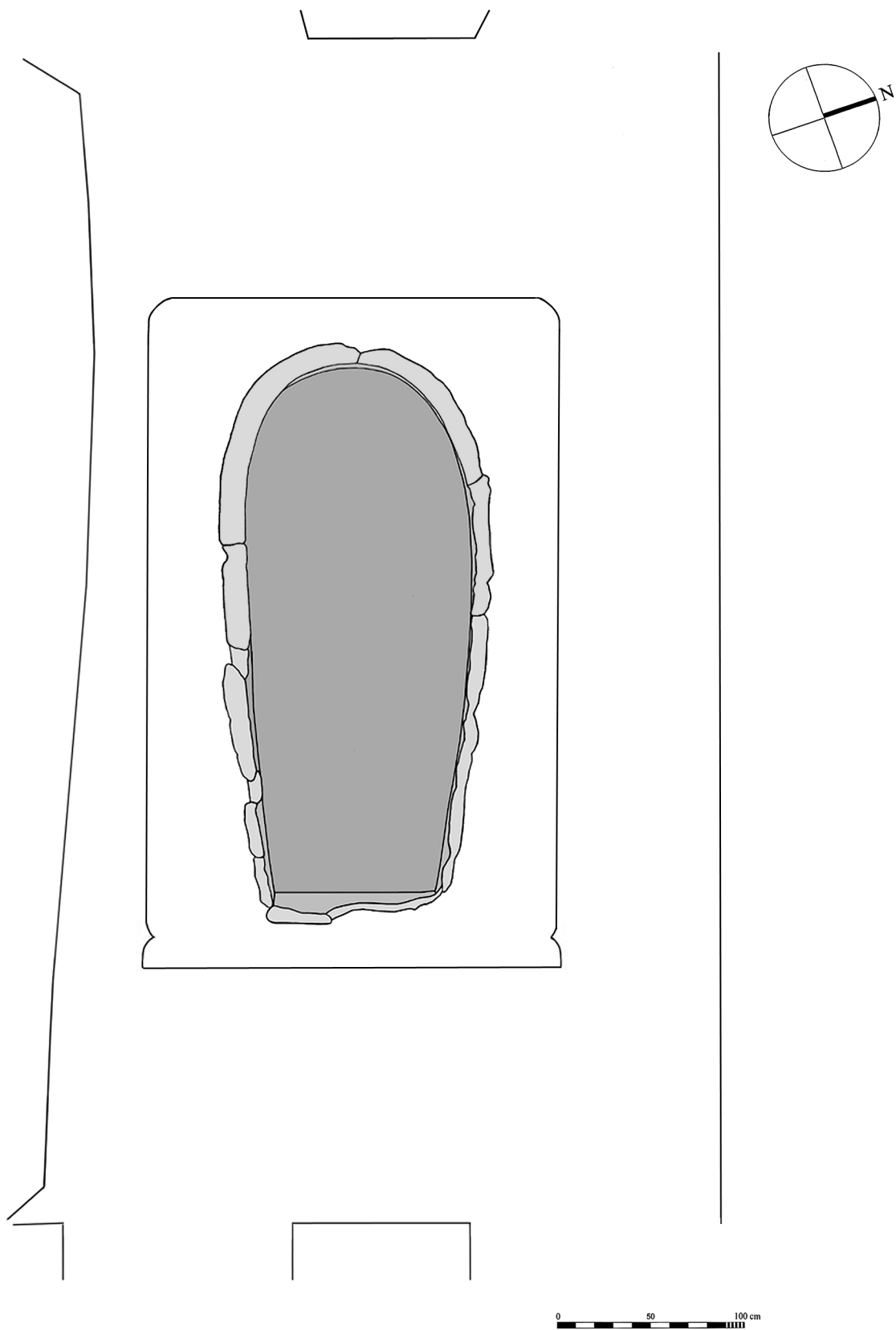
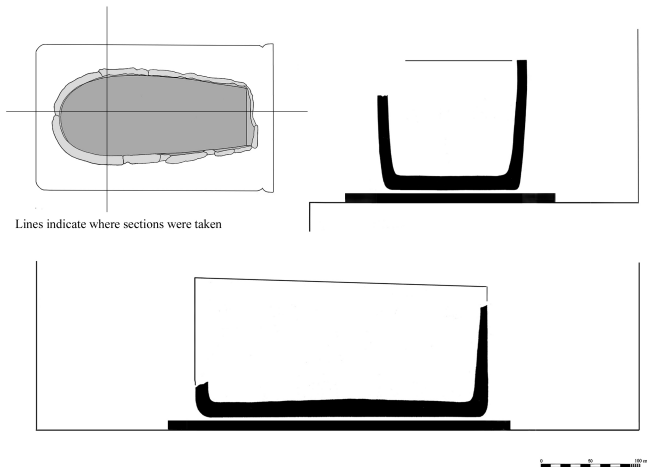
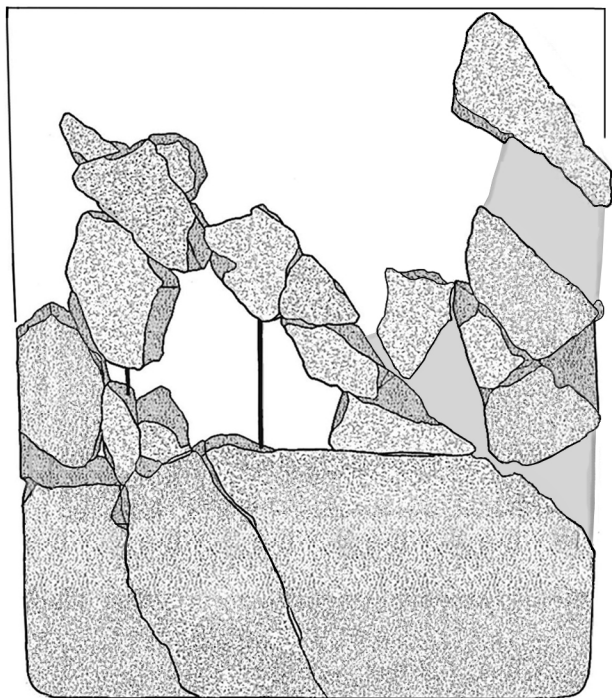


Plate 2: Plan of north platform, showing sarcophagus box placed on limestone plinth. Drawn in the tomb of Ramesses VI by Lyla Pinch-Brock in August, 2002.

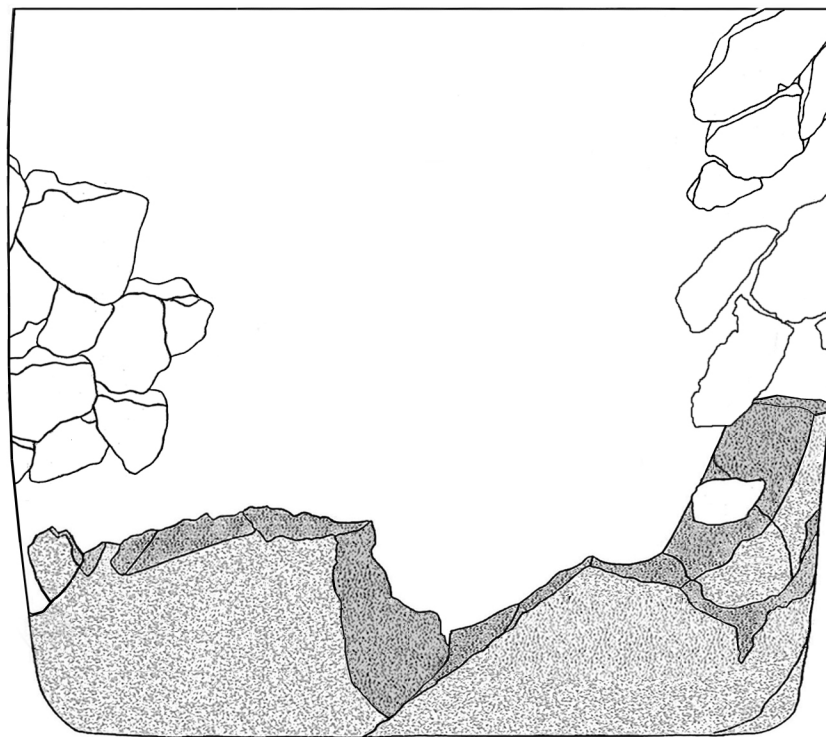


Lines indicate where sections were taken

Plate 3: Longitudinal and lateral sections of the sarcophagus box and plinth. Drawn by Lyla Pinch-Brock in the tomb of Ramesses VI in August, 2002.



foot end



head end

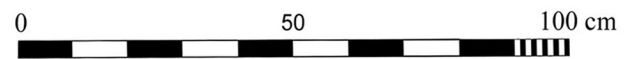


Plate 4: Elevations of head and foot ends of the sarcophagus box, with unjoined fragments at head end shown unshaded. Heavy black vertical lines at foot end designate location of fibreglass support rods. Drawn in the tomb of Ramesses VI by Lyla Pinch-Brock on August 15th, 2003.

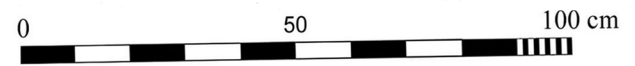
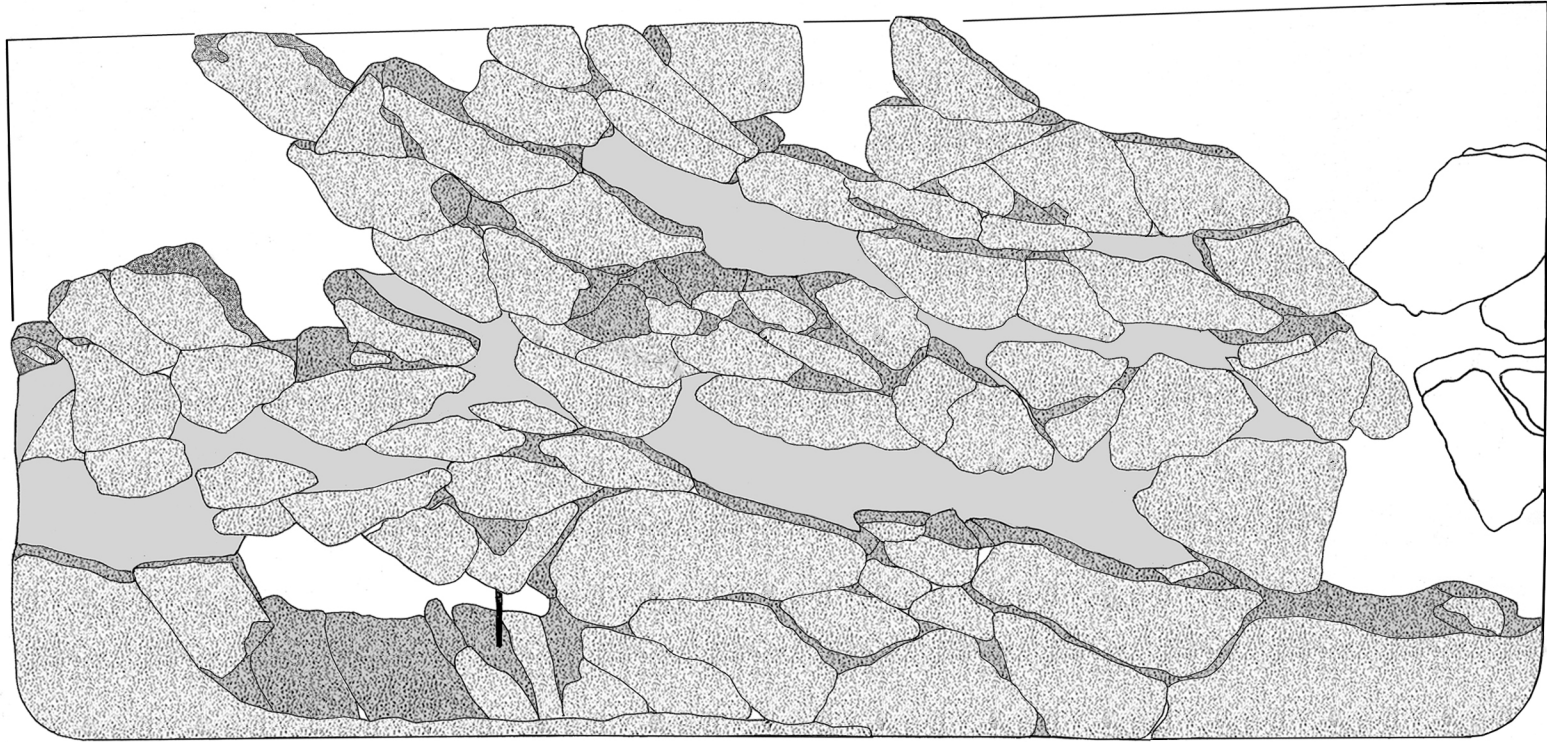


Plate 5: Elevation of proper left side of sarcophagus box, with unmounted fragments shown unshaded. Heavy black vertical lines designate locations of fibreglass support rods. Drawn in the tomb of Ramesses VI by Lyla Pinch-Brock, on August 15th, 2002.

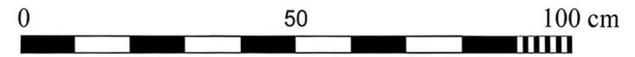
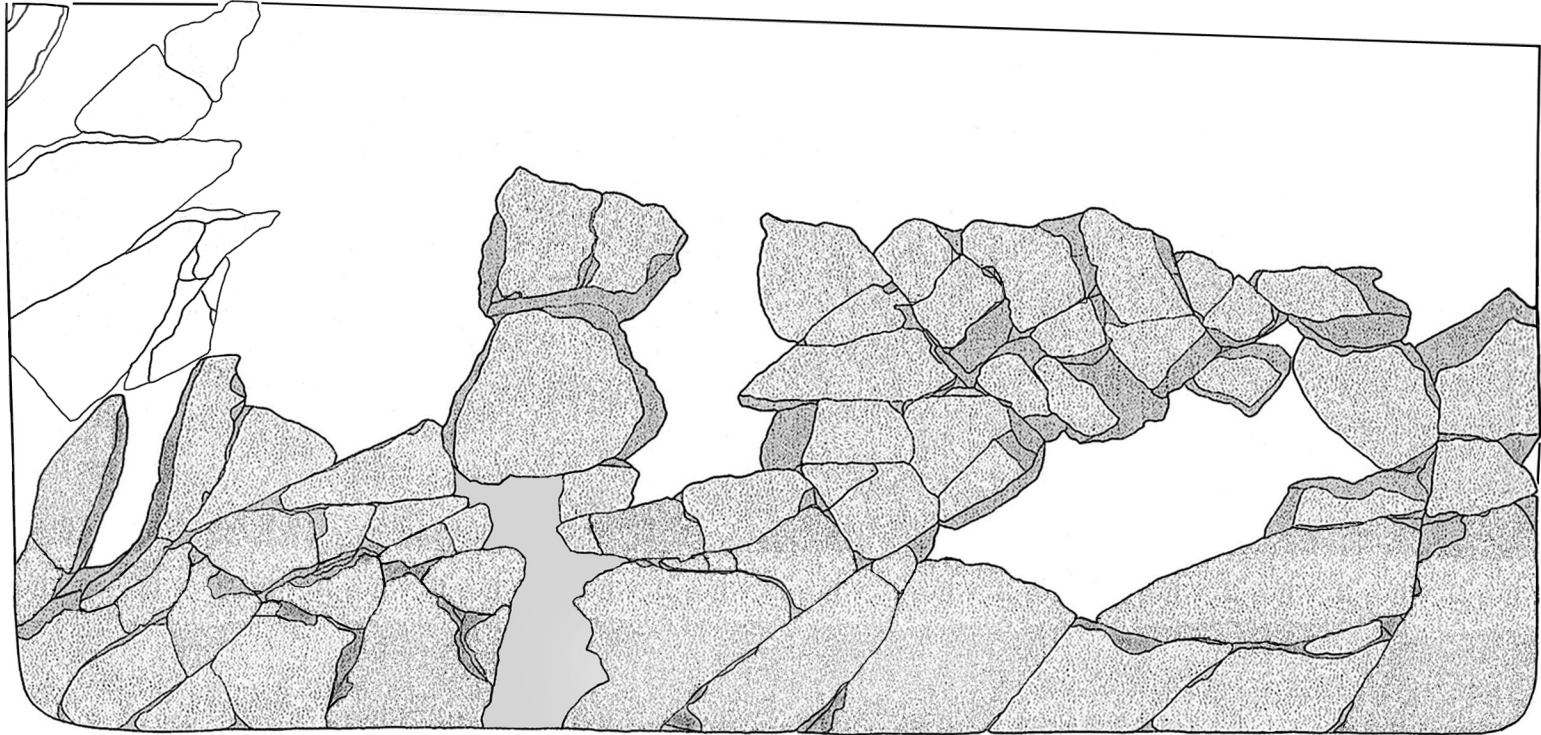


Plate 6: Elevation of proper right side of the sarcophagus box, with unmounted fragments shown unshaded.
Drawn in the tomb of Ramesses VI by Lyla Pinch-Brock on August 15th, 2002.



Plate 7: Top view of reconstructed lid showing fiberglass replica of face from the British Museum (in dark grey) and painted decoration at lower proper right. Drawn in the tomb of Ramesses VI by Lyla Pinch-Brock in December, 2003.

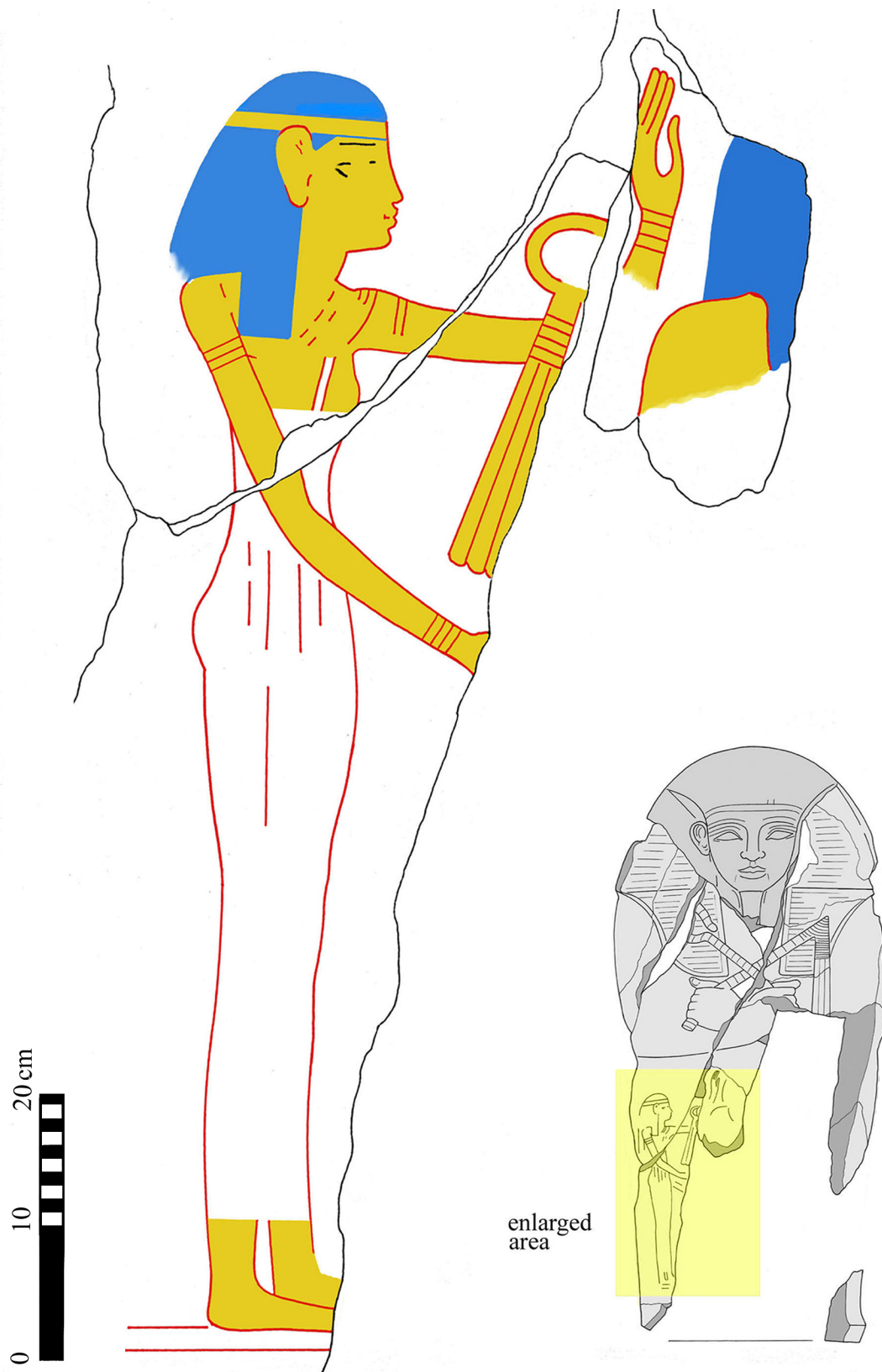


Plate 8: Detail of painted decoration on lower proper right side of lid of sarcophagus of Ramesses VI. Drawn in the tomb of Ramesses VI by Lyla Pinch-Brock in December, 2003.

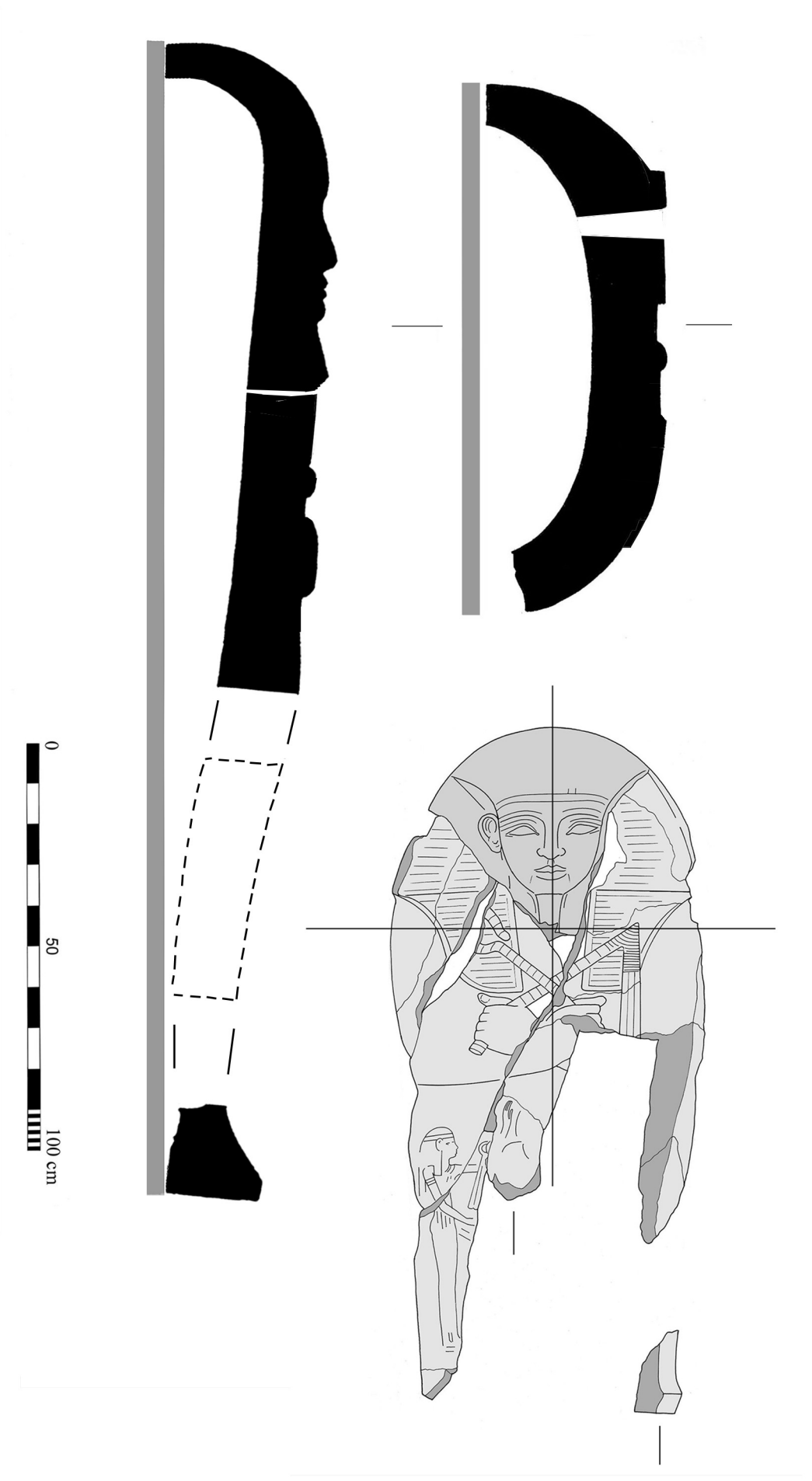
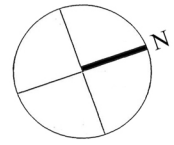


Plate 9: Conservation of the Sarcophagus of Ramesses VI: longitudinal and cross sections of lid, as displayed in rear of tomb of Ramesses VI, showing wooden supports. Dotted line represents reconstruction of missing section, based on unmounted fragments. Drawn by Lyla Pinch-Brock in the tomb of Ramesses VI in August, 2002.



edge of pit



Plate 10: Plan of rear recess K showing placement of lid. Drawn by Lyla Pinch-Brock in the tomb of Ramesses IV in August, 2002.

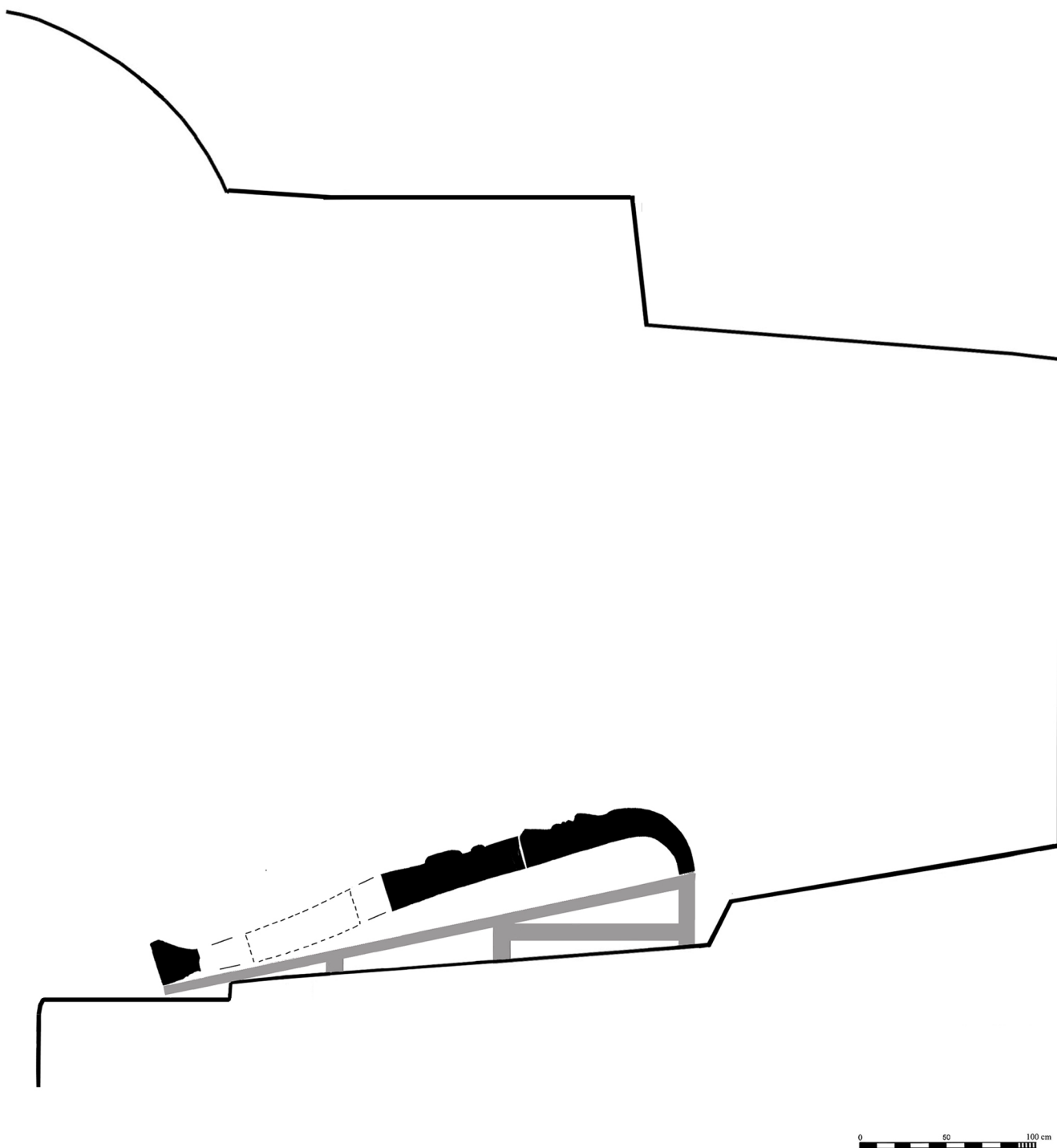
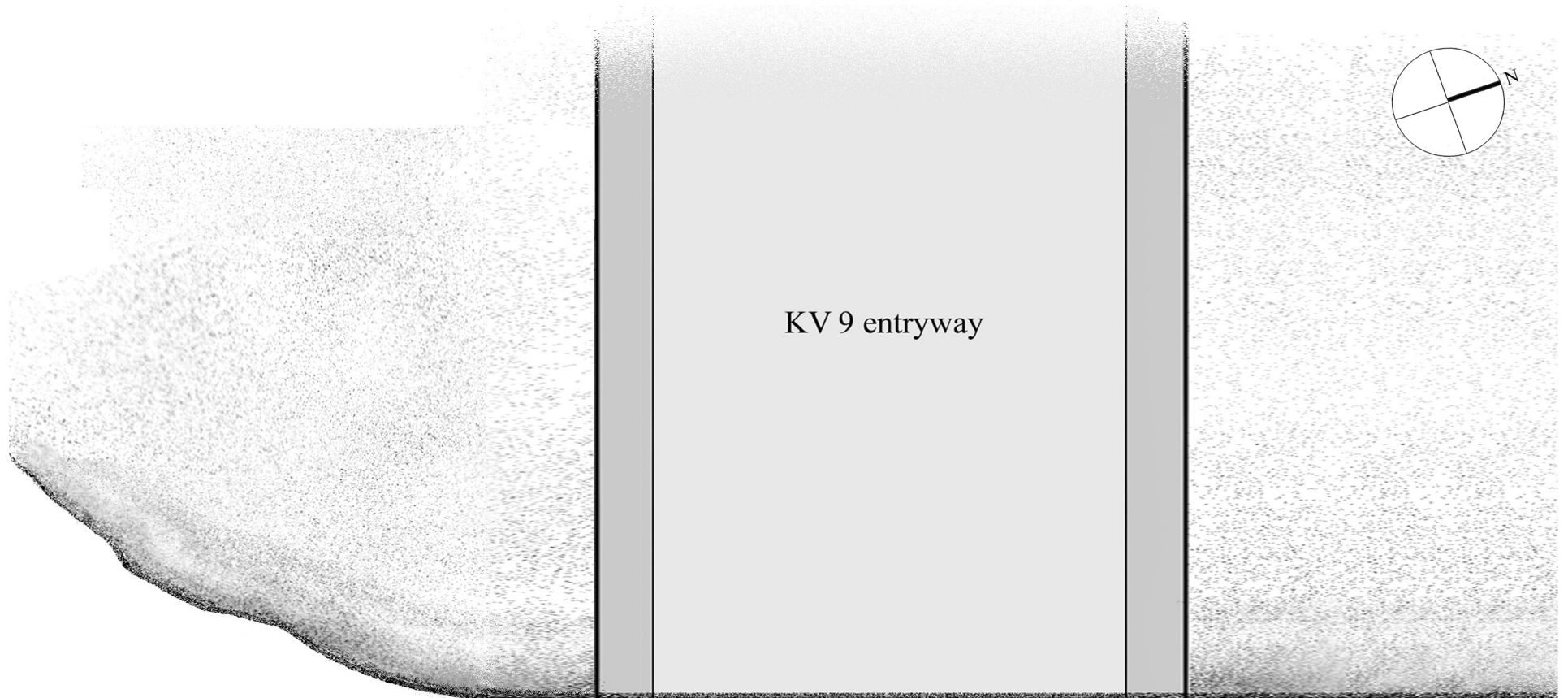


Plate 11: Section of rear recess K looking south, showing placement of lid and wooden support on sloping floor. Drawn by Lyla Pinch-Brock in the tomb of Ramesses VI on August 15th, 2002.



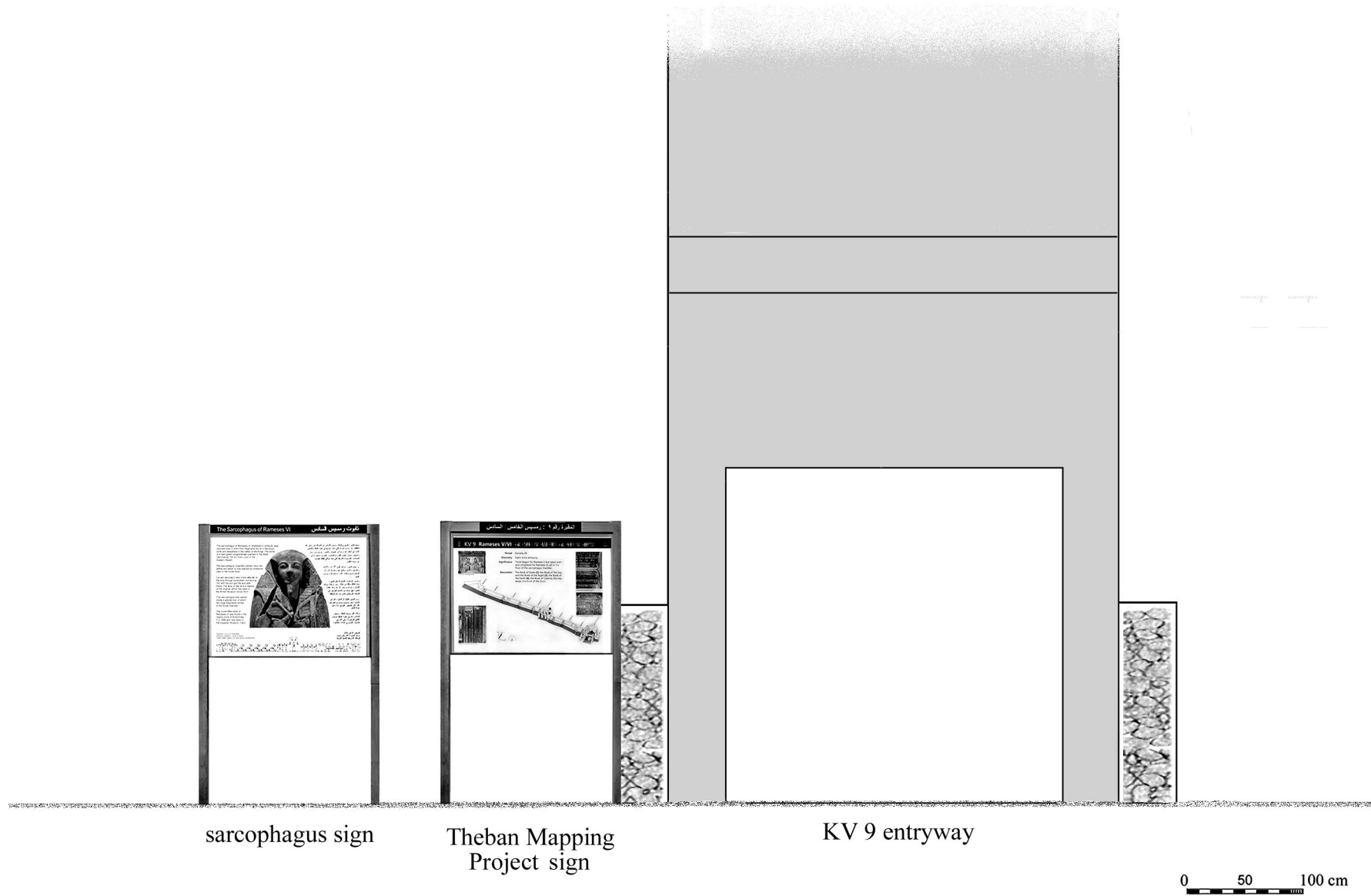
sarcophagus sign



Theban Mapping Project
sign



Plate 12: Plan of front of KV 9, showing placement of sarcophagus sign and Theban Mapping Project sign in relation to the tomb's entryway. Drawn by Lyla Pinch-Brock on March 14th, 2005.



sarcophagus sign

Theban Mapping
Project sign

KV 9 entryway

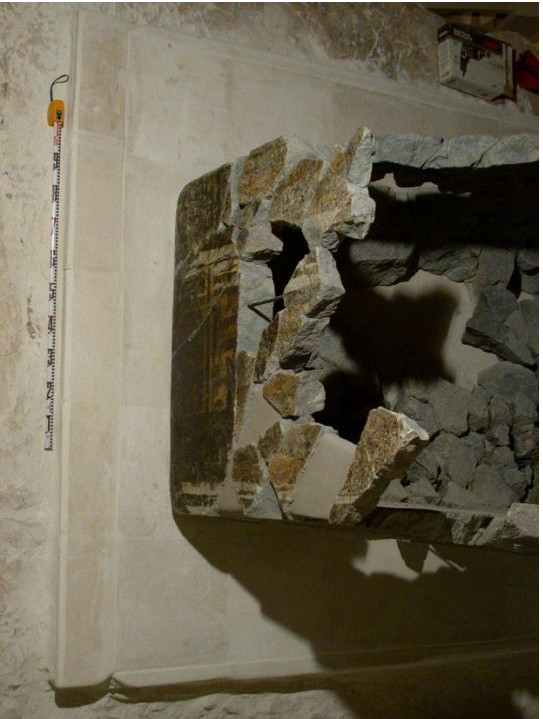
0 50 100 cm

Plate 13: Elevation of KV 9 entryway showing placement of sarcophagus sign and Theban Mapping project sign in relation to the tomb's entryway. Drawn by Lyla Pinch-Brock on March 14th, 2005.









The Sarcophagus of Ramesses VI

تاتوٲ رمسيس السادس

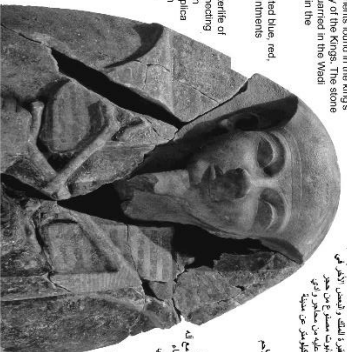
The sarcophagus of Ramesses VI, sheltered in antiquity, was reconstructed in 2003 from fragments found in the king's tomb. The original is a hard greenish porphyry, quarried in the Wadi Hammamat, 100 km from Luxor in the Eastern Desert.

The sarcophagus, originally painted blue, red, yellow and black, is stenciled by ornaments used in the burial ritual.

Carved decoration includes the adoration of him king through symbols connecting Osiris, the face on the lid is a replica of the original, which has been in the British Museum since 1923.

This sarcophagus was placed inside a granite box, of which two huge fragments remain in the burial chamber.

The mummified body of Ramesses VI was found in the tomb in 1898 and now rests in the Egyptian Museum, Cairo.



تمت التنقيب عن تابوت رمسيس السادس في عام ١٨٩٨ م في مقبرته في وادي الحاممات، على بعد ١٠٠ كم من لوكسور في الصحراء الشرقية. كان التابوت مصنوعاً من صخر البورفير الأخضر الداكن، وهو صخر صلب جداً. كان التابوت أصلاً ملوناً باللون الأزرق والأحمر والصفرة والأسود، ولكن هذه الألوان قد اختفت الآن. على التابوت نقوش ترمز إلى طقوس الدفن، بالإضافة إلى تمثال رأس رمسيس السادس على الغطاء، وهو تمثال أصلي من الحجر.

تم وضع التابوت داخل صندوق من الحجر الجيري، الذي لا يزال يوجد منه قطعتان كبيرتان في غرفة الدفن. كان الصندوق مصنوعاً من الحجر الجيري، وهو صخر أبيض اللون. تم العثور على المومياء في المقبرة في عام ١٨٩٨ م، وهي الآن موجودة في المتحف المصري بالقاهرة.

تم العثور على النقوش على التابوت في عام ١٨٩٨ م، وهي نقوش ترمز إلى طقوس الدفن. تم العثور على تمثال رأس رمسيس السادس على الغطاء، وهو تمثال أصلي من الحجر. تم العثور على المومياء في المقبرة في عام ١٨٩٨ م، وهي الآن موجودة في المتحف المصري بالقاهرة.



Source: David A. Silverman, Ancient Egypt: A History of Egypt and Its Civilization, Oxford University Press, 2003.



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