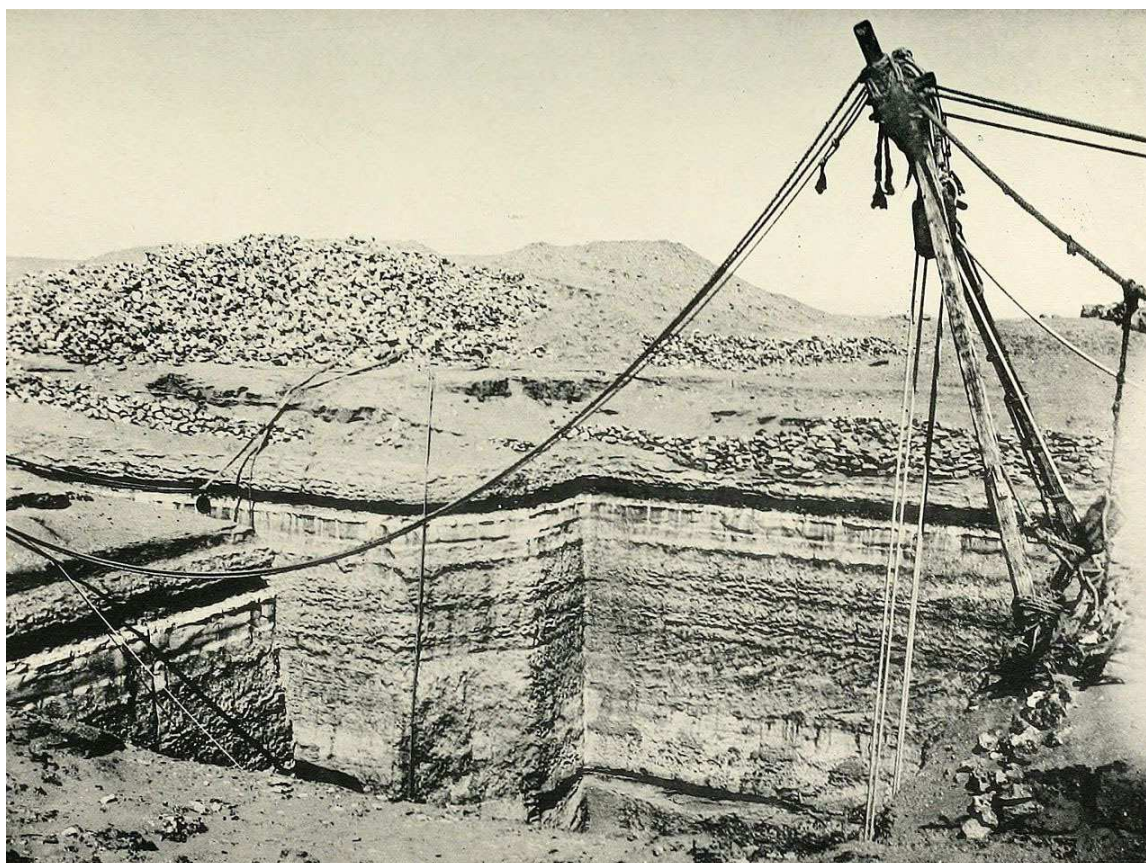


The Great Pit of Zawiyet el-Aryan

A Layman's guide

Keith Hamilton 02 November 2017



The image above, is one of the plates that Alessandro Barsanti provides in his first excavation report; and can be found in A.S.A.E, volume 7 (1906): it shows some of the rigging that Barsanti used during his excavation.

According to Barsanti its discovery was by mere chance; discouraged by his work at the nearby layer pyramid, he and his foreman, Ibrahim Fayed decided to return to Ghizeh via the upper plateau instead of the road that ran along the desert edge. About 1.5km north of the layer pyramid, his foreman pointed out to Barsanti, how the ground was largely covered by granite chips. This led Barsanti to climb up a nearby hill to better survey the lay of the land and here he noticed an immense rectangular building and some

large limestone blocks (*Lepsius had already noted this site in 1842*); in the centre of this he noticed a slight depression and a sort of channel running from it in a north-south direction. This discovery was on the 15th May 1900, and so intrigued was Barsanti that he returned the next day with upwards of 50 men to explore further. In two days work he ascertained the site to be from the Old Kingdom, and discovered the location of the south-east corner of the great courtyard along with enormous piles of debris to the north of the site, which he believed came from large galleries hollowed out of the rock.

This was as far as Barsanti got initially, as the concession belonged to the University of California and George Reisner. Barsanti would not return until some 4 years later to begin work on the 1st March 1904. Barsanti was an Italian architect who worked for the Egyptian Antiquities Service and was fairly well experienced; he had previously discovered the tomb of Akhenaten in 1891 and he would become the only person to excavate at the Great Pit at Zawiyet el-Aryan.

The Italian scholars Maragioglio and Rinaldi (M&R) were probably the last to investigate it; their brief report is to be found in *L'Architettura Delle Piramidi Menfite, part VI (1967)*. They were very limited in what they could achieve, they say;

“Our own survey and trail-digs could only be superficial and enabled us to determine only a few particulars of the rudimentary superstructure”

M&R were probably restricted by the pit being partially filled by sand; indeed Barsanti mentions how during a break of three months in the summer of 1906; excavation could only resume after fifty workers spent a whole week removing the sand that had fallen into the pit: to prevent this from happening again, Barsanti had a retaining wall built around the pit, to slow the advance of the sand and prevent any visitors falling to their death. This wall was only built around the pit, and not along the entrance corridor. During Barsanti's excavations of the site, there was break of several years from 1906 to 1911, and in that time sand had accumulated more than three metres in height on the lower landing of the great staircase, which had to be removed.

The last time the Great pit was cleared of sand was in 1954; not for archaeological investigation, but instead, it was to become a film set for a big budget movie *“The land of the Pharaohs” 1955*. This provides a rare

glimpse of the site in colour; for those interested, the movie is freely available on the internet, and the brief view of the pit is around the 33 minute mark.



View of the Great pit, from *Land of the Pharaohs 1955*

By the time M&R arrived over a decade later, the sand had once again returned, M&R say; *“In 1954 an American cinematographic company cleared the great pit of the wind blown sand which had accumulated over it and which since then has already almost buried the excavation again.”*

The main resources available on the Great pit are the three reports that Barsanti gives in A.S.A.E. volumes 7, 8 &12; together with M&R’s report on the substructure. Others such as Reisner have published information on the site, of which M&R say; *“seem to be nothing but patched up copies of Barsanti’s drawings and not the result of direct surveys: the same may be said of the measurements given in the volume quoted.”*

In short, there is not a lot of information to go on, which is possibly one reason why it receives little attention in the literature; the site is often omitted or given a cursory paragraph or two. It is also unfortunately in a military area and access has not been available since M&R. This guide therefore, will hopefully rekindle some interest in this long forgotten site.

Before we begin the description of the site, it is probably apt to hear M&R’s view on Barsanti’s excavation, they say;

“The excavation of the complex has been carried out in an incomplete and unscientific way, through incompetence, perhaps through lack of means. Barsanti cleared the big central pit and inclined ramp of the material which time and men had accumulated there, and made some trail digs in the course of which he exposed remains of the edifice which had been begun round the pit and a long enclosure wall. But he destroyed the massive platform at the bottom of the ancient excavation in his search for a chimerical burial-chamber with a royal coffin. The blame for the havoc, nevertheless, falls largely on Maspero: he should have prevented it or at least limited it to the indispensable minimum for a profitable scientific research that ought never to have been entrusted to Barsanti.

The latter’s reports, in fact, are incomplete and difficult to interpret owing to the inexactness and inaccuracy of the terms used, which inspire doubts and confusion in the reader. The measurements given by Barsanti vary continually and often do not correspond to those obtained from the drawings: these, in their turn, do not always agree with each other.”

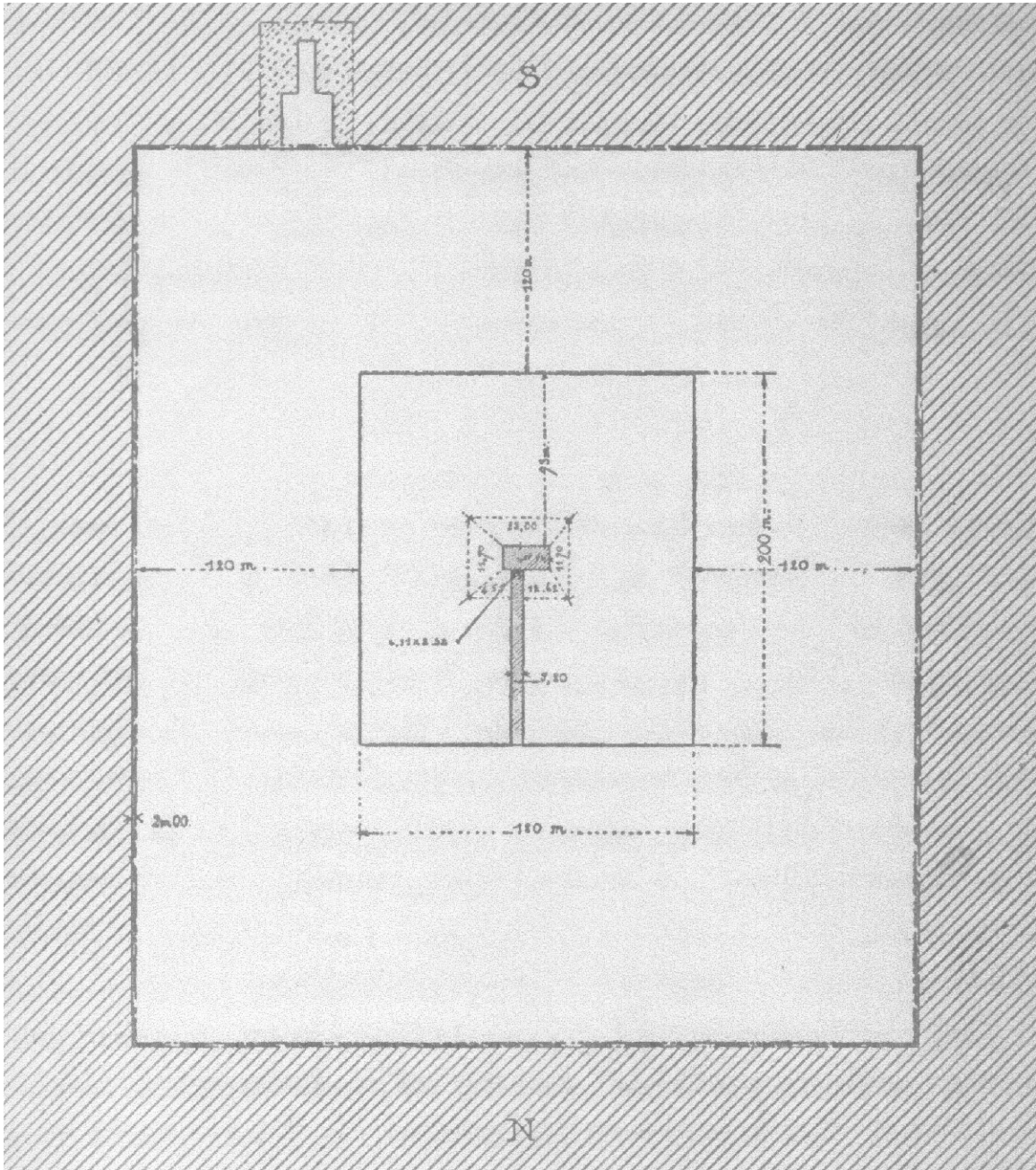
There is little I would disagree with in the above; though the excavations started in 1904, I would say they were of a higher standard than fifty years earlier when Mariette dynamited Khafre’s valley temple, though obviously not as high as the standards in M&R’s day. Unfortunately we have little choice but to try and make some sense of Barsanti’s reports; ultimately a new excavation is required, though extremely unlikely because of its location in a military area.

The Exterior

Surrounding the site is a large enclosure wall; Barsanti merely says that its average width was 2.1m (4 cubits) and that it was built of stone along its entire length: he also mentions how the western part of the wall is elevated higher and that it was probably to prevent rain from entering the tomb from the neighbouring mountains. He says the distance from the wall to the nucleus of the structure was 120m everywhere; this nucleus or mastaba as Barsanti thought was given as 200m N-S and 180m E-W. M&R using Barsanti’s drawings give 465m N-S and 420m E-W for the enclosure wall. (Lehner gives 665m by 420m in his *Complete Pyramids* book)

M&R say; *“Nothing is known of the structure of the wall which is now buried and whose direction is barely visible, or even how much there is in*

the courtyard thus delimited and in the middle of which the pyramid was to rise. Perhaps nothing was built there in view of the fact that the site was soon abandoned, but the sand seems to be about two metres high and might cover the remains of buildings.”



Above is Barsanti's drawing of the site, with the pit in the centre, the remaining nucleus of what he thought was some sort of mastaba (though today most scholars think it was a pyramid) and the outer enclosure wall.

The structure near the south-east corner of the enclosure wall; M&R say that neither Lepsius or Barsanti mention it in their reports. Though Barsanti mentions a building adjoining the south-west corner of the royal tomb, that he says had nothing to do with it and belonged to the Coptic era: maybe Barsanti got his directions wrong. Barsanti mentions searches he conducted to the east of the monument on the desert edge; here he thought may have been a wide causeway or perhaps a brick wall, coming from the plain and ascending from the north to the south, ending in a wide plateau, completely encumbered with large limestone blocks mixed with fragments of very old pottery. Also near the site he discovered other structures, but details are few and he provides no map in his reports to highlight their location. One site held his attention more than others, a strange structure near the Moslem cemetery of Zaowiet, this structure he partially excavated but he had to give up as his budget was exhausted; he hoped to resume excavation when circumstances permitted, but from the reports, it appears he never returned.



In the aerial image above, the outline of some of the enclosure wall can be made out. A clearly defined stretch of wall west of the pit can be seen and is most probably the sand and rubble dyke Barsanti had built 60 metres west of the pit; this was built to protect the pit from any future flooding. To the north at the foot of the hill, Barsanti found the remains of workman's huts, and here he found a schist plate bearing the cartouche of Djedefre.

The Nucleus

Barsanti says very little on the nucleus, his attention was mostly focused inside the pit. In constructing the wall around the pit, he found it necessary to remove obstructing debris; in the course of this operation he cleared and noticed the north face of his mastaba, here he mentions how the first course on the north side and west of the corridor was made of huge blocks of limestone, he gives one block as 3.6m high and 2m long; he also reports red mason's marks analogous to those found on the loose blocks that filled the pit; he also describes the mortar as very hard and difficult to detach.

Only M&R provide more detail on the nucleus, they say;

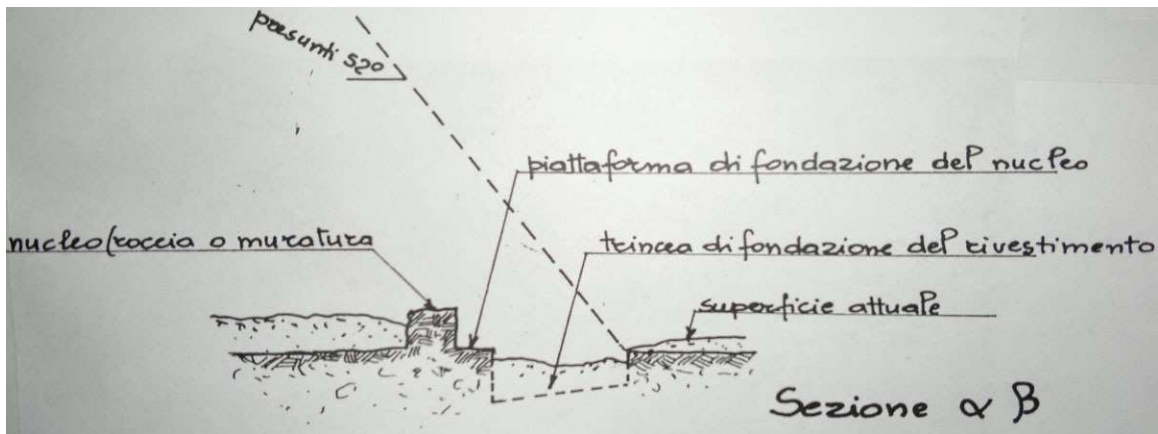
“Inside the large enclosure is the outline of the nucleus of an edifice composed of large blocks of very coarse local fossiliferous limestone. The edifice is reduced to nothing but the outside row of blocks: at some points there are even two courses, at other a mere line of blocks at some distance from each other or levelled outcrops of rock.”

M&R report that the ground covered by the nucleus was not level, and sloped down a little to the north. They made a trial dig south-west of the pit and found two courses of local limestone, each 60-70cm high, which were laid on the natural rock. They say; *“It is therefore certain that when work was suspended the levelled foundation platform of the nucleus had reached an advanced stage and was perhaps even finished.”* Unfortunately M&R were only able to observe the outside of the nucleus along the north and east sides, as a military encampment prevented them from observing the other sides.

M&R were able to uncover the north-east corner of the nucleus, they say;

“The NE corner of the nucleus is clearly defined by foundations uncovered by us and by the meeting of the two north and east sides which are marked by lines of blocks and levelled rock. The foundations stick out from the lines by about a metre.”

“Around the outside of the nucleus, along the north and east side there may be seen in the sand-very clearly at certain points-a depression which seems to indicate the site of the foundation trench of the projected casing.”



In the image above from M&R's TAV 2, we see a section along the north side of the nucleus, near the NE corner. Notice how the foundation trench slopes from north to south; no casing has been found at the site, the 52 degree angle is an assumption on M&R's part.



I am most grateful to the ISIDA-PROJECT for some of the images. The image above from the pit at Abu Roash, shows a similar sloping trench; Isida measured this slope up to -18 degrees, they also found the first course of limestone blocks sloping around -8 degrees, with the first course of

granite blocks sloping at -11 to -12.4 degrees. There is no report of sloping nucleus blocks at the Great pit site.



These sloping foundation trenches are to be found elsewhere; in the image above we see the technique employed at one of the queen's pyramids next to Khufu's pyramid.

M&R's superficial survey of the nucleus, provides us with the closest intended measures for the base of the super structure, they say;

“The measurements of the central axis of the descending ramp are about 101 metres to the NE corner and about 102 metres to the cut in the rock: the side of the nucleus, to the north, was therefore about 203 metres. The east side may be followed along the line of spaced blocks and comes to about 204 metres.”

“As regards the side of the finished pyramid, we have seen that the side of the nucleus measured 203-204 metres, which, supposing the side of the cased pyramid to have been 400-410 cubits (about 209-215m), leaves 2.5-5m (about 5-10 cubits) on each side for the fitting of the casing itself.”

These findings are clearly at odds with Barsanti's 200 by 180m nucleus. How accurate Barsanti's measures are to the enclosure wall is anyone's guess; his drawing gives the enclosure wall to I assume a nucleus block, of

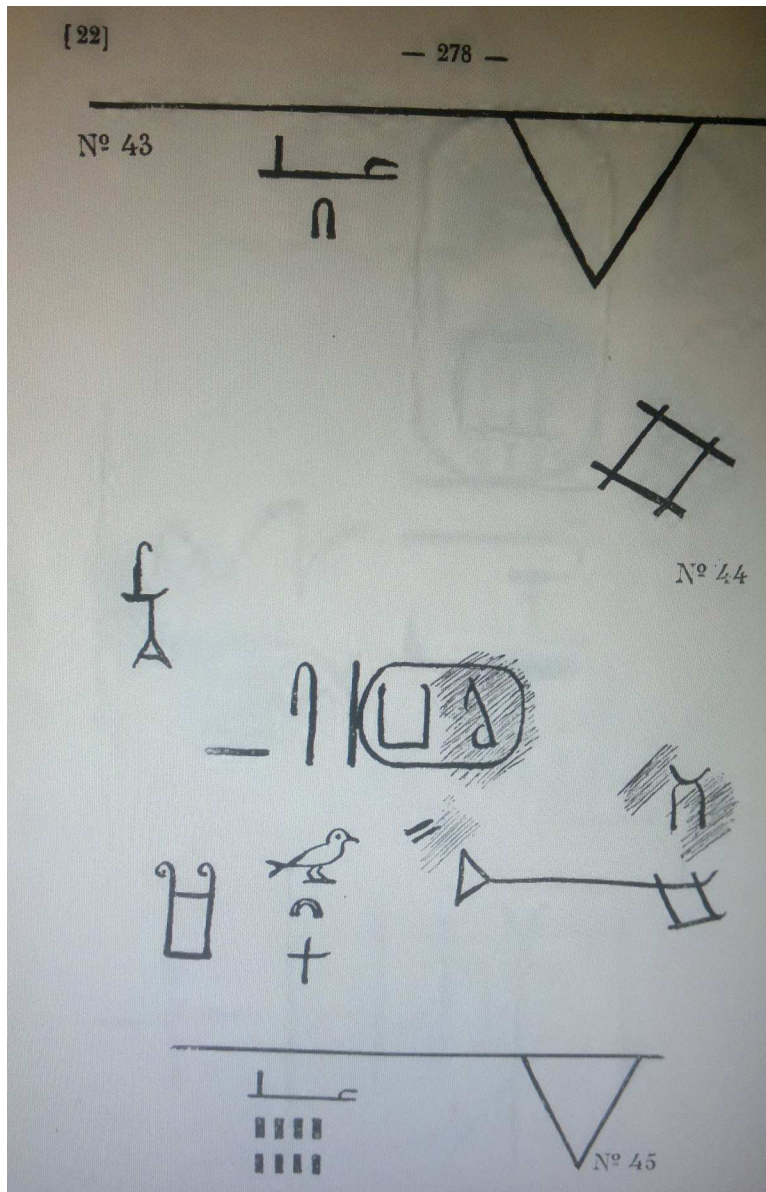
120 metres, on east, west and south sides, he provides no distance to the north side of the enclosure, but his drawing suggests a distance of 165m.

It is near impossible to find intended dimensions for this site due to the scant information available and questionable measures; the fact it is in a military area and a large proportion of the site is built over, means we are unlikely to find any further information. At a guess, it may have been intended that the distance between the finished base and the enclosure wall to the south was $\frac{1}{4}$ the distance of the N-S distance of the enclosure wall. For a structure 400 cubits square, the distance to the south enclosure wall would be 220 cubits, therefore N-S distance of enclosure wall would be 880 cubits: the distance to east and west enclosure walls would also be 220 cubits, for a total E-W distance of 840 cubits.

There may be some clues to the superstructure, from the large amount of blocks thrown down into the pit; a lot of these blocks contained workers graffiti. This graffiti Barsanti provides in ASAE Vol 7, here he shows many levelling lines, some clearer than others, fig 43 & 45 are quite clear and show levelling lines of 10 & 8 cubits; if these levelling lines are to be taken from the nucleus base, it suggests that in the case of fig 43, it came from a height of 5.2metres.

In his reports, Barsanti never thought to identify this structure as a pyramid, but rather he was more inclined to think it as some strange mastaba. Today it is commonly called the unfinished pyramid; even M&R used this title in their work: when it became accepted as an unfinished pyramid and on what evidence, I have been unable to find out. In the similar pit of Abu Roash, Vassil Dobrev was not convinced that it was a pyramid, but rather a sun temple. Another view by Robert Temple in his book, *Egyptian Dawn*, thought that the two pit sites may have been built for astronomical functions.

As a layperson, I can only add that I have seen no compelling evidence to confirm that the Great pit is an unfinished pyramid.

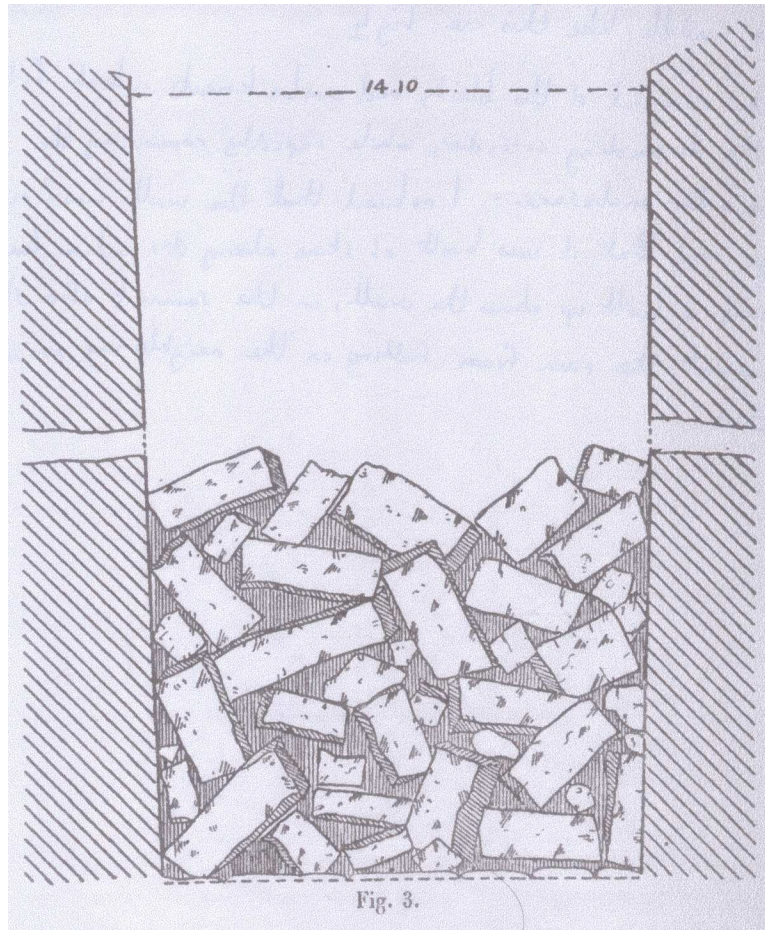


In the image above we see some examples of the graffiti recorded by Barsanti, from the limestone blocks that were thrown down into the pit; the levelling lines are figures 43 & 45.



The image above is an example of a levelling line, this example is from the shaft of the Bent pyramid's subsidiary pyramid; unfortunately the text is not legible.

The Pit



The drawing above by Barsanti, gives an idea of the tangled mass of limestone blocks that were thrown down into the pit; he states that they were piled up to a height of 15 metres and consisted of 4200 cubic metres of stone, some weighing up to 3 or 4 tons.

Excavation of the pit began on 1st March 1904, by the beginning of May, the four angles of the pit became clear, and he states the southern wall as 28m long with the east and west walls being 14m. After a break in the summer, work resumed on October 6, and some 3 days later, behind a large block of limestone, he discovered a carefully executed strip of white plaster 60cm wide with a vertical red line, which marked the exact middle of the west wall.

Some 6 weeks later on the 8th of December, a probe was carried out on the south-west corner, and at a depth of some 21 metres a block of pink granite

was found. This 21 metres is measured from the surface and appears to be at the same level as the base of the nucleus masonry. The inclined walls of the pit are some 19m high from the pavement, from here the last two metres in height appear to bevel outwards. The inclination of the 19m walls means that the top dimensions are 28m by 14.50m, compared to the pavement of 25m by 11.70m, meaning the top of the pit walls are displaced approximately 1.50m horizontally from the pavement edge.

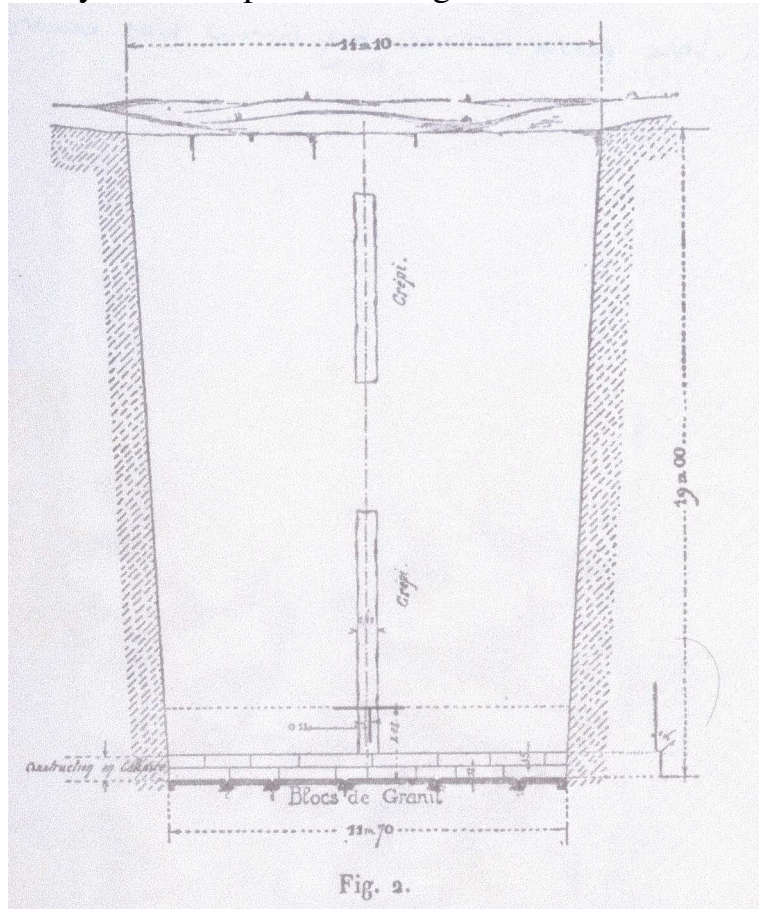


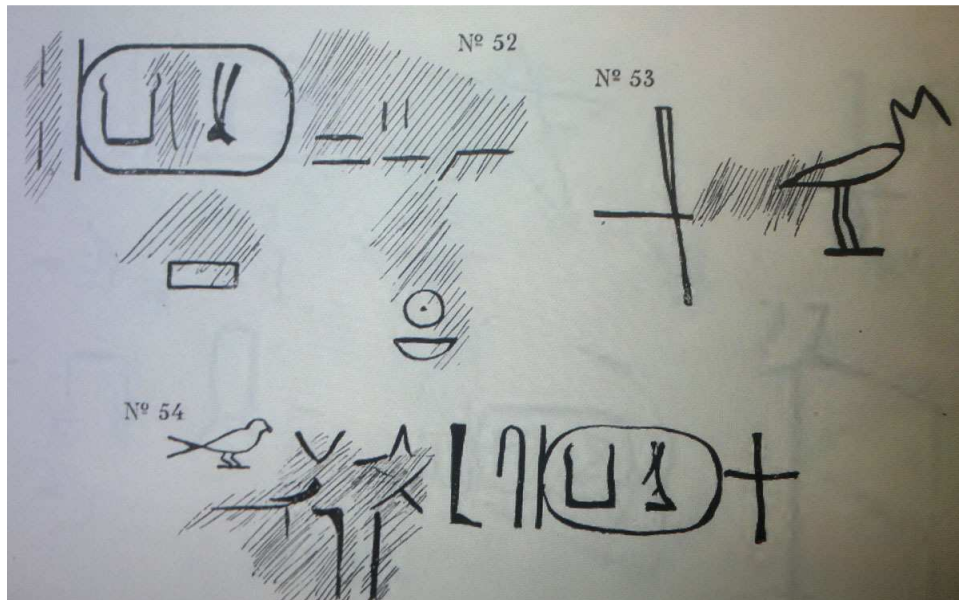
Fig. 2.

Barsanti's drawing above shows the extant of the white plaster band on the west wall of the pit.

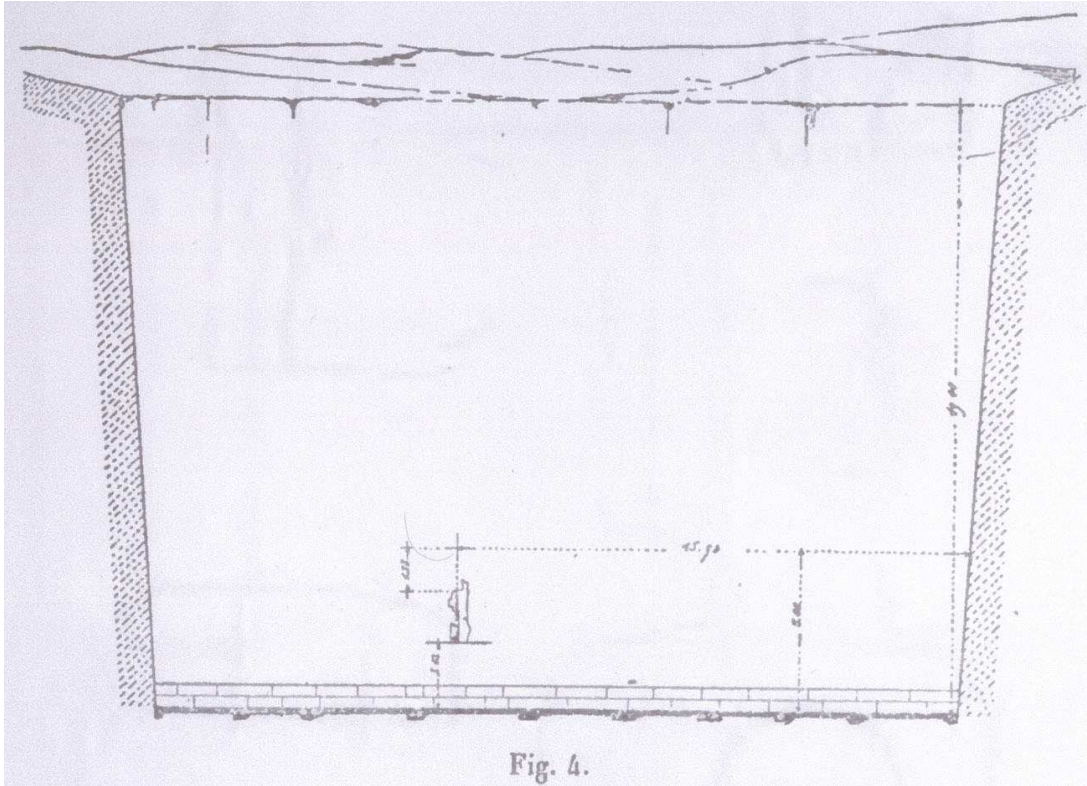
The finding of this granite block increased his attention in this area and in a few days he reports the removal of several other granite blocks, which he says were connected to the first and to each other with a very solid mortar. As M&R have already mentioned, Barsanti's reports are often incomplete and difficult to interpret, these granite blocks are such a case; though my interpretation is that they were found on the pit's pavement floor. He provides no measures on these granite blocks or what form this assembly of mortared blocks took. In M&R's TAV 3, a granite block is shown on the

northern edge of the pit, this maybe a remnant of the ones removed by Barsanti.

The tangled mass of limestone blocks were removed from the pit with some difficulty and transported some distance to the south where Barsanti had them arranged in a row for closer examination. From his close examination of these blocks he discovered many markings including cartouches; these markings were shown in 16 pages of his first report. The cartouches have been particularly perplexing to Egyptologists, due to the questionable identity of one of the characters in the cartouche, and therefore many suggestions have been made, including kings from the 3rd dynasty; though the architectural evidence suggests a 4th dynasty date. The use of granite in structures is not unique to the 4th dynasty and examples can be found in earlier dynasties, the best known being the granite chamber under Djoser's step pyramid; but this is crude work when we compare it to the fine monolithic granite blocks, presented in the pavement of the Great pit.



Above we see some further examples of cartouches found on the limestone blocks. Criticism has been made of Barsanti for not taking proper facsimiles; though it may be possible to locate the site were Barsanti placed these blocks, in the hope they still remain intact: though the sprawling nature of the military complex on the site doesn't offer much hope.



Barsanti's drawing of the south wall

As Barsanti descended into the pit, he came across another area of white plaster with a vertical red line on the south wall of the pit, similar to what he found on the west wall; this southern one, he says was aligned with the median axis of the northern corridor.

At the beginning of February, 1905, Barsanti had reached the bottom of the pit and at the same time he had cleared enough of the descending corridor to reach a point where it led to the bottom of the pit. Here he found a large block of granite weighing about 30 tonnes, placed horizontally E-W at the same level of other blocks which seemed to form the pavement of the pit.

At first Barsanti thought he may have come across an entrance to the monument, but on clearing lower he met two other blocks of granite about the same size, and below these two further blocks of granite, 1.16m thick that lay on the rock. To better understand the depth of this granite construction, Barsanti had the neighbouring limestone blocks cut to a width of 3m. Into this vacant space with the help of jacks, he manoeuvred the granite blocks northwards in the hope of finding an entrance. Having found no entrance, he suspected an entrance was hiding behind the 30 tonne block,

but only found a second block of granite 1.2m in height, which he describes as binding itself with a groove to the 30 tonne block. This did not discourage Barsanti and he went on to push aside all the blocks that were against the faces of the 30 tonne block, but again was disappointed when no entrance was found.

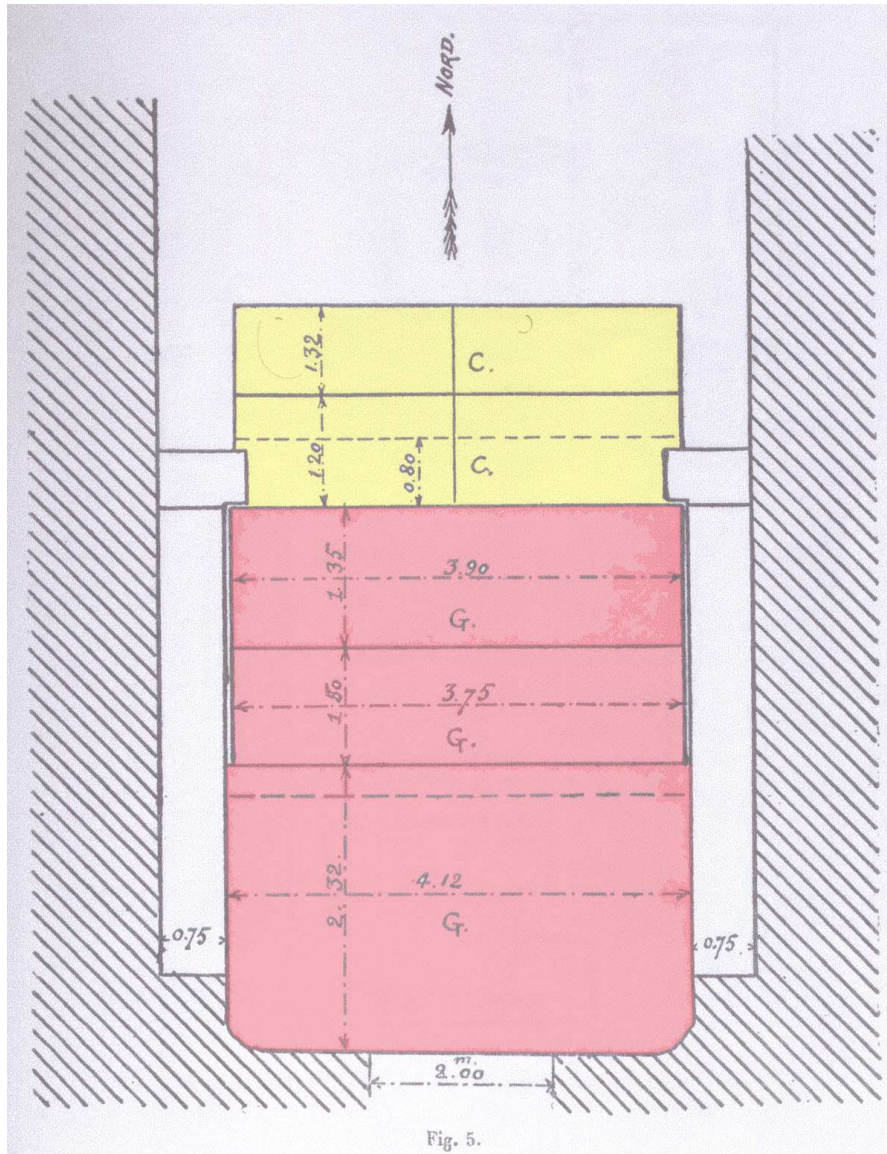


Fig. 5.

Barsanti's plan drawing of the area containing the 30 tonne granite block, I have coloured in the blocks to better identify the granite from the limestone. Note how there appears to be projections from the east and west walls of the corridor, which the southern most granite block appears to butt against.

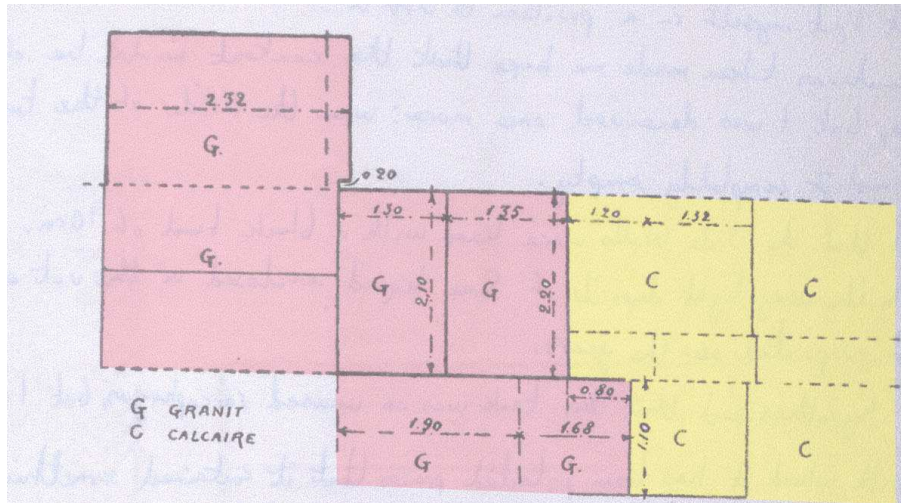


Fig. 6.

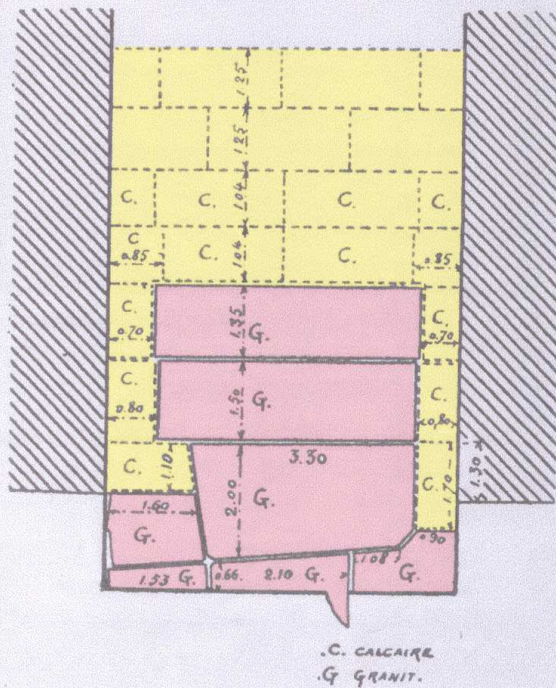


Fig. 7.

Fig 6 above is Barsanti's side elevation looking west, the 30 tonne block is the upper block. Fig 7 appears to be a plan section at an uncertain distance below the 30 tonne block.

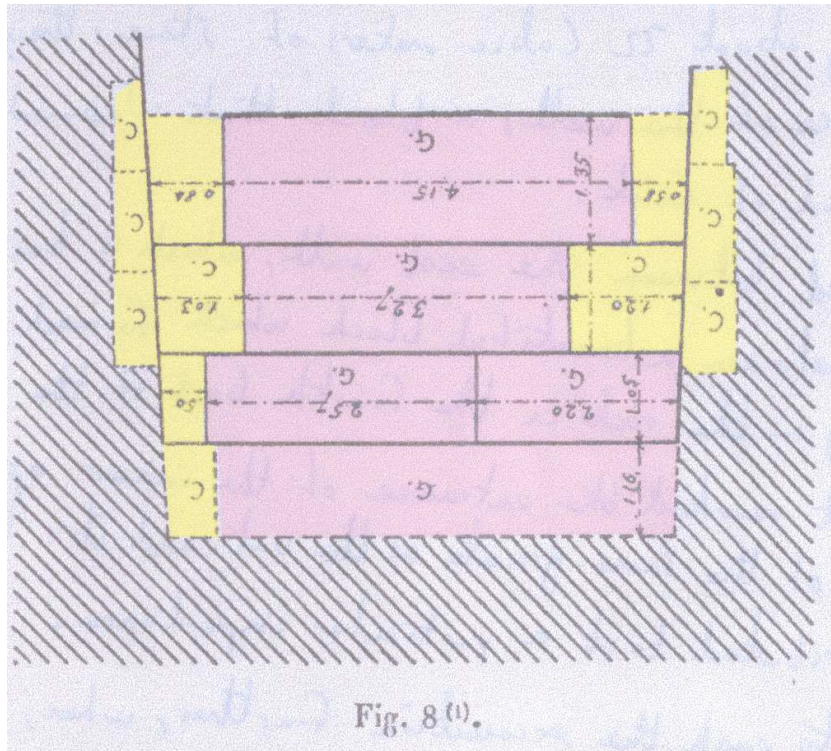


Fig 8 above appears to be a section looking north with the 30 tonne block uppermost. The measurements are upside down due to an error in drawing, and Barsanti thought it would take too long to create a new one. The limestone blocks surrounding the granite, he merely says enormous blocks of limestone filled the space left between the rock face.

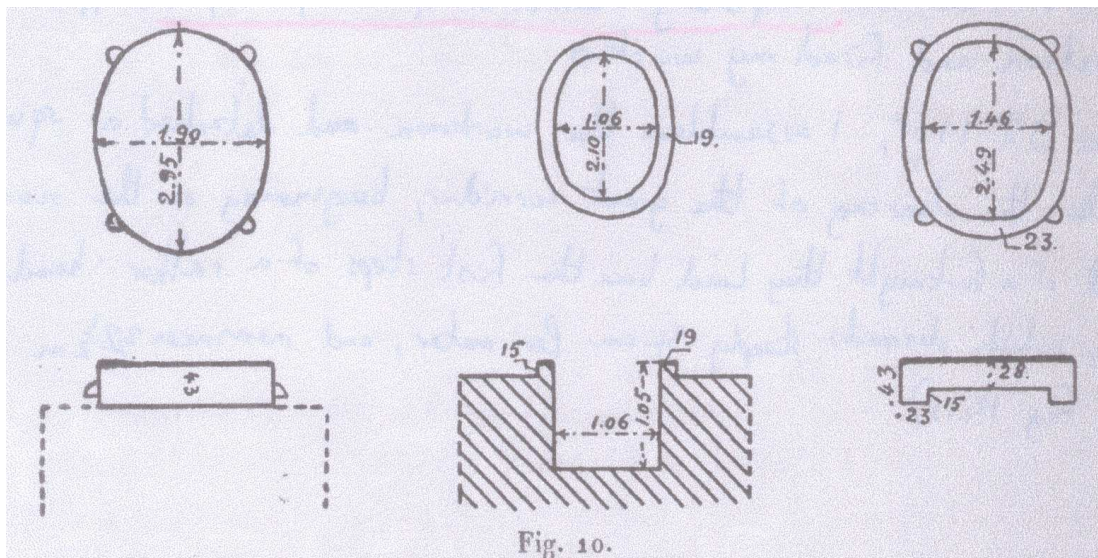
At this time of the excavation, though he had reached the bottom of the pit and the lower landing of the descending corridor, much of the pit floor was still covered as was the staircase leading to the lower landing; indeed it was nearly a month later, after the uncovering of the 30 tonne granite block, that Barsanti came across what Egyptologists call today, the oval sarcophagus. It was discovered on the 12th of March, 1905; Barsanti himself never thought the oval tank to be a sarcophagus, but rather a libation vessel, whose lid served as an offering table.

This large oval tank he describes as being carved out of one of the large monolithic granite blocks that make up the pavement of the pit; he describes it as well polished pink granite, and that certain measures had been taken to protect it. These measures (if my translation is correct) are described as a layer of lime over the lid of the oval tank, followed by a bed of well-spread clay, which protected it from the overlying limestone blocks: these limestone

blocks he describes as having been placed regularly on the clay next to each other, so as to wrap the tank in a kind of insulating building. Frustratingly he provides no further information on this structure covering the tank, not even a drawing.

The oval lid appears to have been plastered to the tank and on removal of the lid he found the tank to be empty. On closer examination he noticed inside the tank, that a 10cm black band lined the side walls; this he thought might have been the evaporated deposit of some liquid offering. His view on the tank (again my translation);

“It has been hypothesized that this tank was an unused sarcophagus but I cannot admit it. The Care with which it has been protected proves that it contained something and the blackish deposit indicates the nature of this content. One would not have taken the precaution of concealing it under a huge mass of blocks if it had been empty then.”



Barsanti's drawing of the oval tank above: unfortunately Barsanti appears not to have taken a sample of this blackish deposit for analysis; moreover it is probably well contaminated, as not long after its discovery a storm filled the pit with flood water.

After he completed investigation of the oval tank, Barsanti returned to the area of the 30 tonne granite block, which in effect is the threshold between the lower landing and the pit entrance. Here he employed expert granite cutters from Aswan to force a path through the blocks that he thought barred

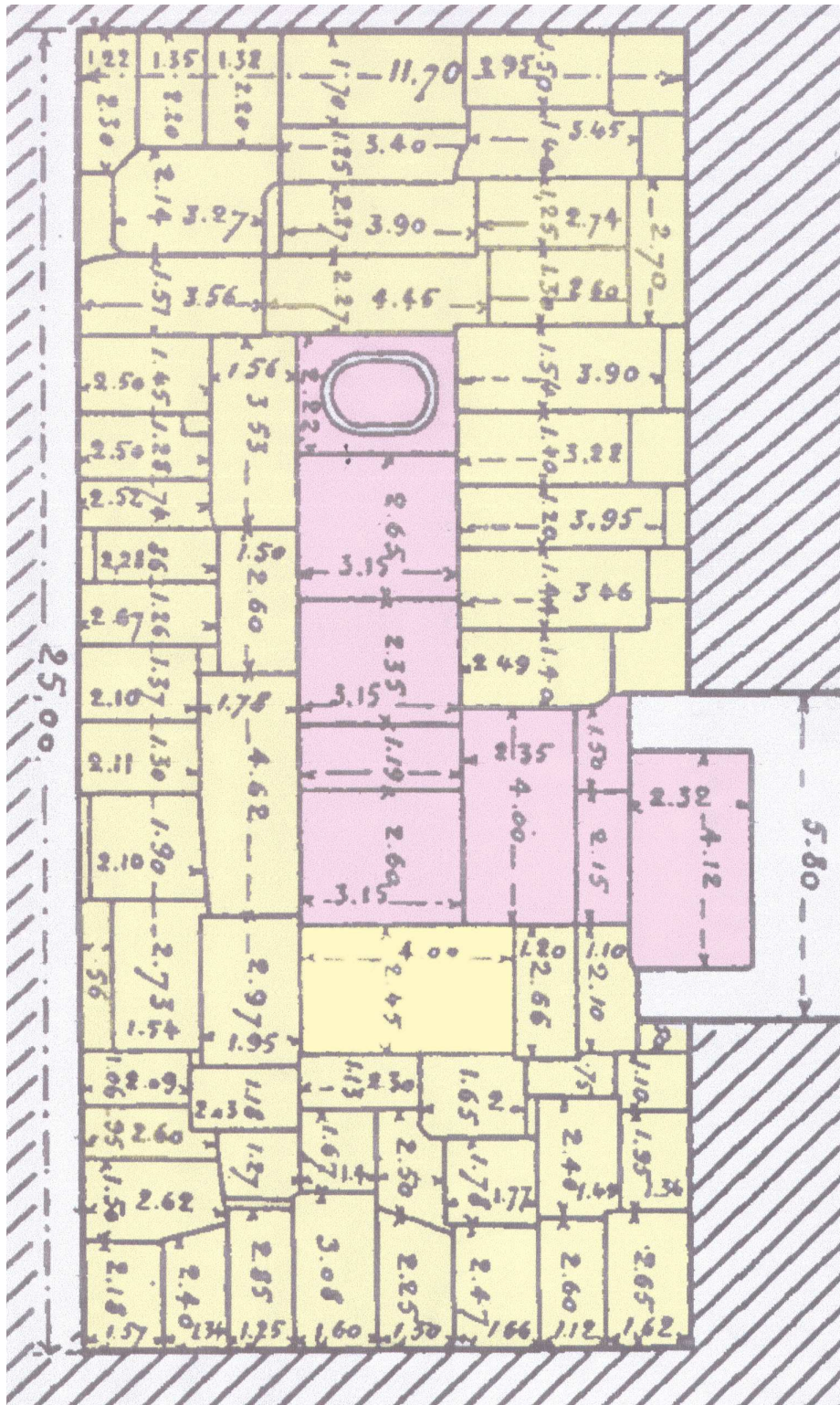
access to the burial chamber. He tells us that these workers removed about 22 cubic metres of stone, and that they discovered in the centre of the pit a block that seemed to be placed there like a kind of cork: this block he tells us was embedded between the east wall, which was built with huge blocks of granite, and between a beautiful block that was part of the west wall; as it was placed directly on the rock in the fourth bed of masonry, he believed that it marked the entrance to what he believed were inner apartments. This would be the first of many tunnels and shafts that Barsanti would make in and around the floor of the pit; his reports on these excavations is not clear, neither does he provide any clear drawings to explain his narrative.

The French Egyptologist A. Moret visited the site and published a brief description along with two photographs in *'Au Temps Des Pharaons'* 1908; an English translation of this work was published as *'In The Time Of The Pharaohs'* 1911. This initial tunnel maybe the one Moret mentions in his description;

"The tunnel, which I recently visited, with M. Barsanti as guide, has up to the present given the indication that the mass is compact; many Egyptologists think, indeed, that the floor does not conceal any secret chamber, but was simply devised as a foundation for structures that were never built. M. Barsanti firmly believes that the floor is a ceiling to an undiscovered tomb. His conviction seems to be corroborated by a curious arrangement in the floor. One of the granite blocks has been hollowed out in an oval shape; the cavity measures over six feet in length and three feet in depth; a splendid lid with four handles covers it, polished like a mirror and as carefully finished as an exquisite jewel.

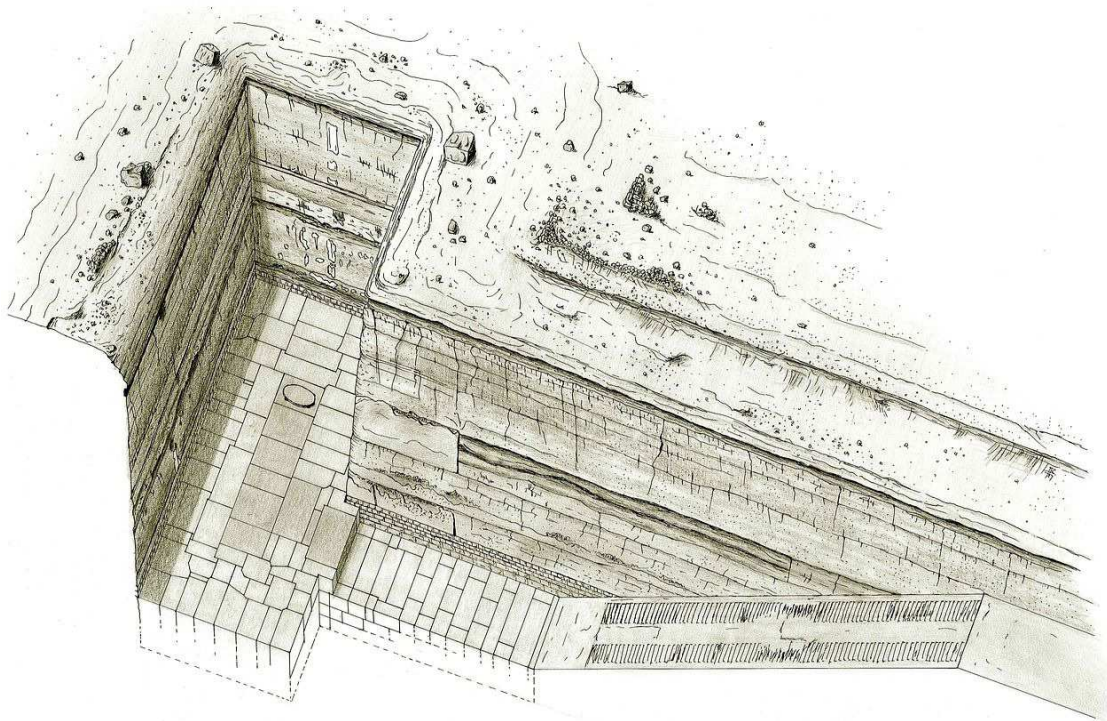
It may be, indeed, that a funeral chamber was dug directly underneath the trough-shaped object, as such was the procedure in the case of the mastabas, the roofs of which were used as receptacles for offerings. In order to solve this problem, M. Barsanti was duly authorised by the Service des Antiquites to remove, piece by piece, all the superposed blocks of the four layers; he will not replace them until the lowest depths of the excavation have been explored."

This initial tunnel Barsanti was going to push further, when on the 31st of March a terrible storm hit the site; this resulted in the pit being flooded to a height of 3 metres. Then close to midnight the water level dropped abruptly by about one metre, he thought that some subterranean tunnel capable of containing 380 cubic metres of water was responsible.



In Barsanti's drawing above of the pit floor, I have coloured in the granite blocks, the 30 tonne block is furthest right and on the threshold between the corridor and the pit. The oval tank is in the western-most granite block.

Barsanti doesn't provide a key in his drawing as to which blocks is granite and which is limestone, so these details I have taken from M&R's TAV 3.



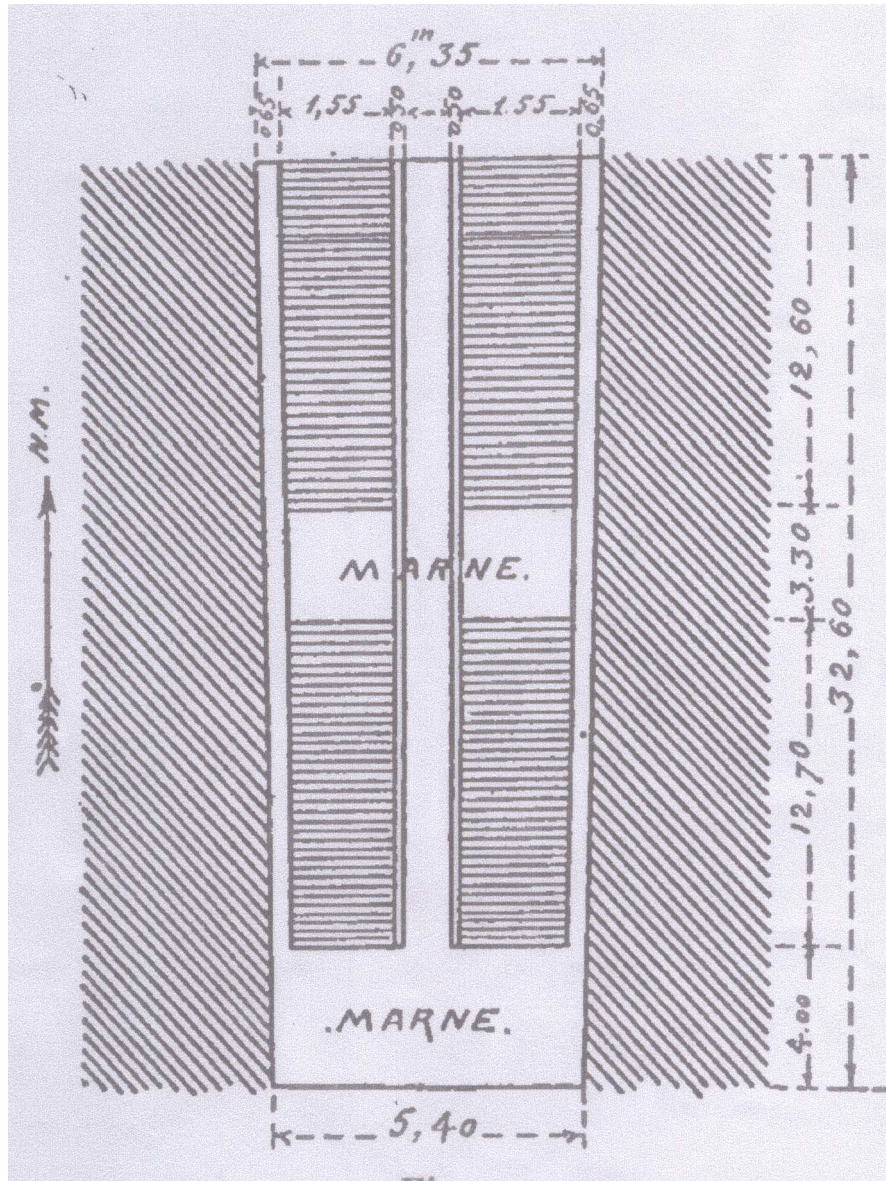
In the drawing above, we have an excellent impression from Frank Monnier of the pit; the shaded area shows the granite area, though his reconstruction differs from Barsanti's drawing of the pavement and M&R's location of the granite. In Barsanti's drawing we have a series of 5 blocks running east-west with identical N-S measures of 3.15m (6 cubits), that have a combined E-W distance of 11.01m (21 cubits). Monnier's drawing above suggests a 6th block with a narrow rectangular patch to its north; in Barsanti's floor plan it is a single large block of 4m N-S and 2.45m E-W and is labelled as limestone on M&R's drawing. Barsanti's reports do not make it clear which pavement blocks are granite and I am not sure where M&R have sourced the information to allow them to label which blocks are granite; but it appears that the large granite threshold block is followed by two smaller granite blocks that abut up against a granite stone of similar size to the threshold stone, which in turn, abuts against the line of five stones that terminate with the stone that incorporates the oval tank: the east end of the large granite stone that abuts the line of five, is in perfect alignment with the easternmost stone of the line of five.

The storm that inundated the pit, cut into Barsanti's time and budget, he was forced to buy 300 petrol cans and create two human chains along the descending corridor, one chain of men to relay the water out of the pit and one chain of children to return the empty cans to the bottom of the pit. In all it took seven days to clear the water and about two weeks to clear the sludge. Work continued in clearing the limestone blocks and rock debris from the pit, and it was completely cleared on 4th June 1905; work stopped at the site for summer and would resume again on 3rd October, 1905.

A fortnight after work resumed, the footsteps of a rather handsome staircase was revealed in the northern corridor; Barsanti describes it descending steeply at 34 cm per meter, which seems a lesser angle than he gives for the complete staircase; the sloping length of the staircase in his drawings is 32.50m (62 cubits) and the vertical height of the staircase is 13.90m, which gives an angle of 25.3 degrees for the staircase.

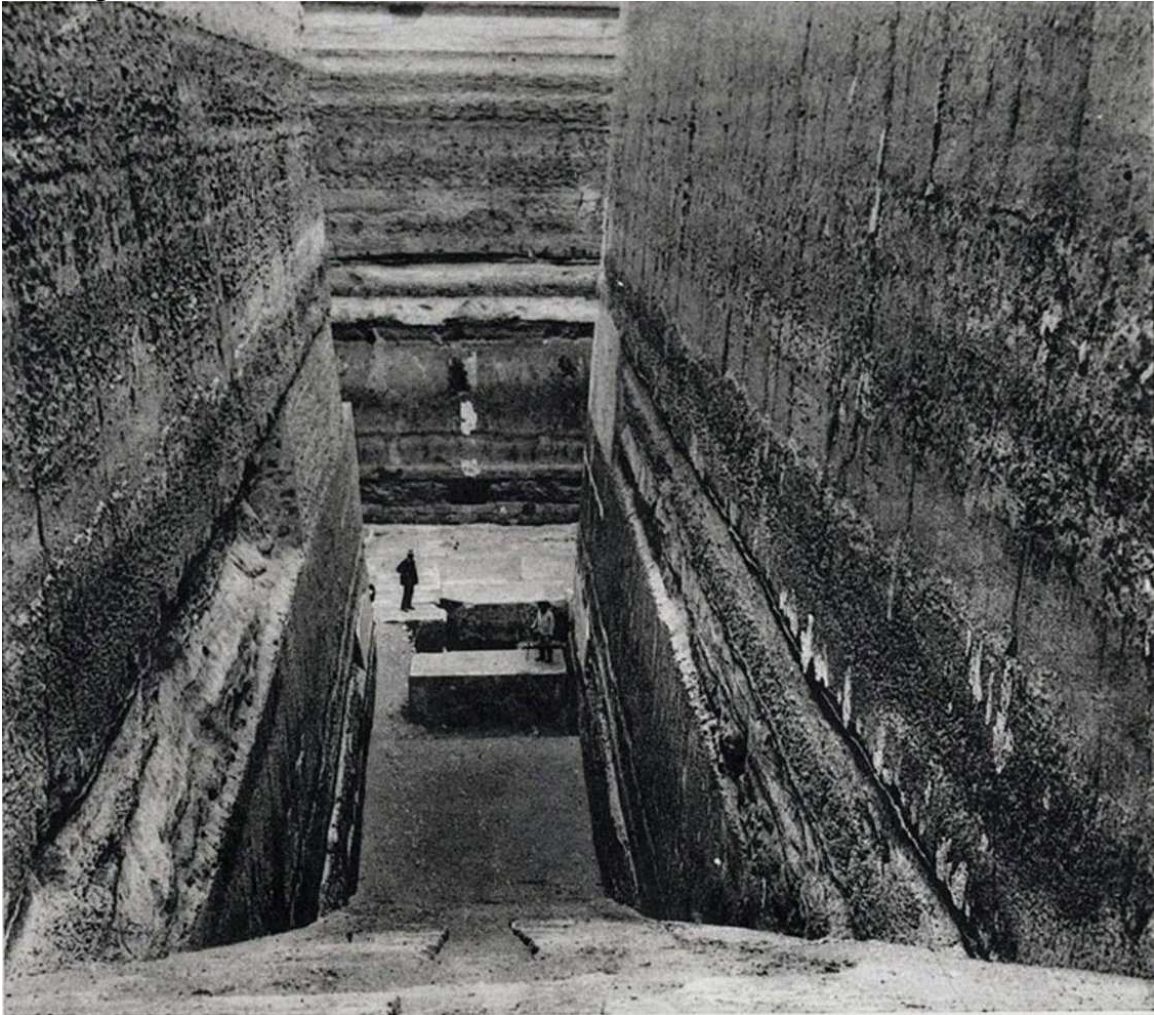
At the top of the staircase another level landing is to be found, whose length is 23.60m (45 cubits); this landing is given as 8.50m below the base of the superstructure. At the northern end of this landing a short step of 20cm is found which connects to a sloping ramp which has a sloping distance of 38.20m to the base level (M&R's drawing suggests this ramp extends beyond the base level by a further 3.50 m); from the available measures this ramp has an angle of 12.5 degrees or nearly half the angle of the staircase. The lower landing that leads to the pit is given as 16.30m (31 cubits) or possibly half the length of the staircase. This lower landing Barsanti describes as beautiful limestone, built in three courses and measured 12.30m long and ending against the northern-most granite stone of that course; it is not known if another course of stone was placed above this landing, that would have made the landing flush with the granite threshold stone.

Looking at Barsanti's drawing of the stairs, it's possible that another course was intended or fitted to this landing, as the bottom of the stair ramp has a 4 metre sloping portion that is devoid of steps: this smooth portion without steps would mean that the first step would be 1.70m vertically above the current lower landing. The granite threshold is 1.35m high, leaving a 35cm step; though how the horizontal landing joined the sloping stair ramp is an unknown.



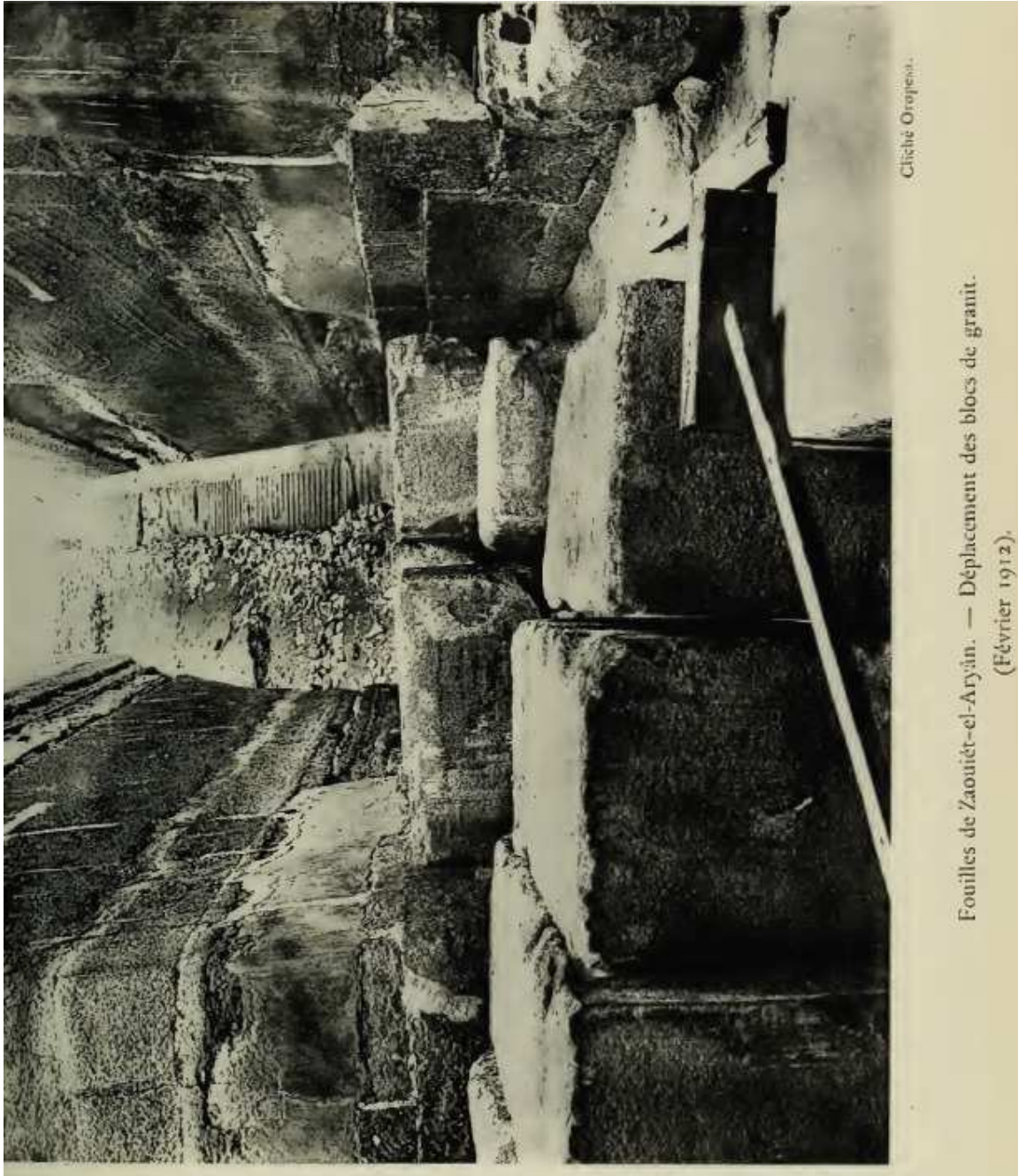
In Barsanti's drawing above of the stair ramp, the first thing to note is that it tapers from north to south, being 6.35m at its north end, and reducing to 5.40m at its south end. The upper landing appears to maintain this 6.35m width along its length, wherein the upper ramp seems to taper again, wider towards the north, and ending at about 8.50m wide. From the drawing above it appears that the outer edge of the stairs follow the taper of the corridors east and west walls, while the space between the stairs remains constant. Unfortunately Barsanti provides scant information on the stairs, for example the 50cm width shown on the inner sides of the stairs, is not explained or even the relationship of the smooth parts to the stairs, for example are they proud or below the level of the stairs?

From Barsanti's measures and drawing it appears that at the north-end, the stairs are each 3 cubits wide and reducing to 2 cubits wide at its south end. The constant space between the two stairs appears to be 2 cubits wide, which is flanked by the 1 cubit wide bands that run down the entire length of the stairs: the 65cm width along the rock walls, maybe 1 ¼ cubits. The areas marked *Marne*, he describes as a poor vein of marl, where the steps are lacking.



In the view above, you can make out the steps and the smooth space in between, which appears lower than the actual steps. The band of deteriorated rock running at the same level along the east and west walls of the corridor, may be the vein of marl that runs along the middle of the stairs. A repair appears to have been done on the west wall's corner, inline with this vein of marl. A large excavation hole can be seen on the pavement of the pit; also visible is part of the white plaster band on the south wall: the dark hole in the south wall below the plaster is another excavation Barsanti made behind

the limestone substructure that runs around the pit, a similar excavation was also made in the west wall.



This picture from Barsanti's last report shows the east stairs and 65cm space against the rock wall. From the surviving photographs it's hard to see the second vein of marl that affects the bottom of the stairs. There appears to be some plaster repairs on the west wall, just above the large blocks in the background and just north of this repair appears to be a layer of deteriorated rock, that is maybe the second marl layer.



Phototypie Berthaud. Paris

This picture from Barsanti's first report shows the clearance of the corridor. Note the corner repair in bottom left corner. Barsanti makes no mention in his reports of doing any repairs.



Phototypis Heritaud, Paris

This picture is also from his first report, where he publishes three photographs; here the oval lid is visible, and on the west wall the white plaster band is visible, note also the corner repair and what appear to be other repairs; the upper corner repair has a modern appearance in this

picture, though the camera can be deceptive. The picture on page 28 shows the repair appearing to cover a good distance of the west corridor wall.



Two further images of the corridor and corner repair of marl vein. The Giza pyramids can be seen in the background.

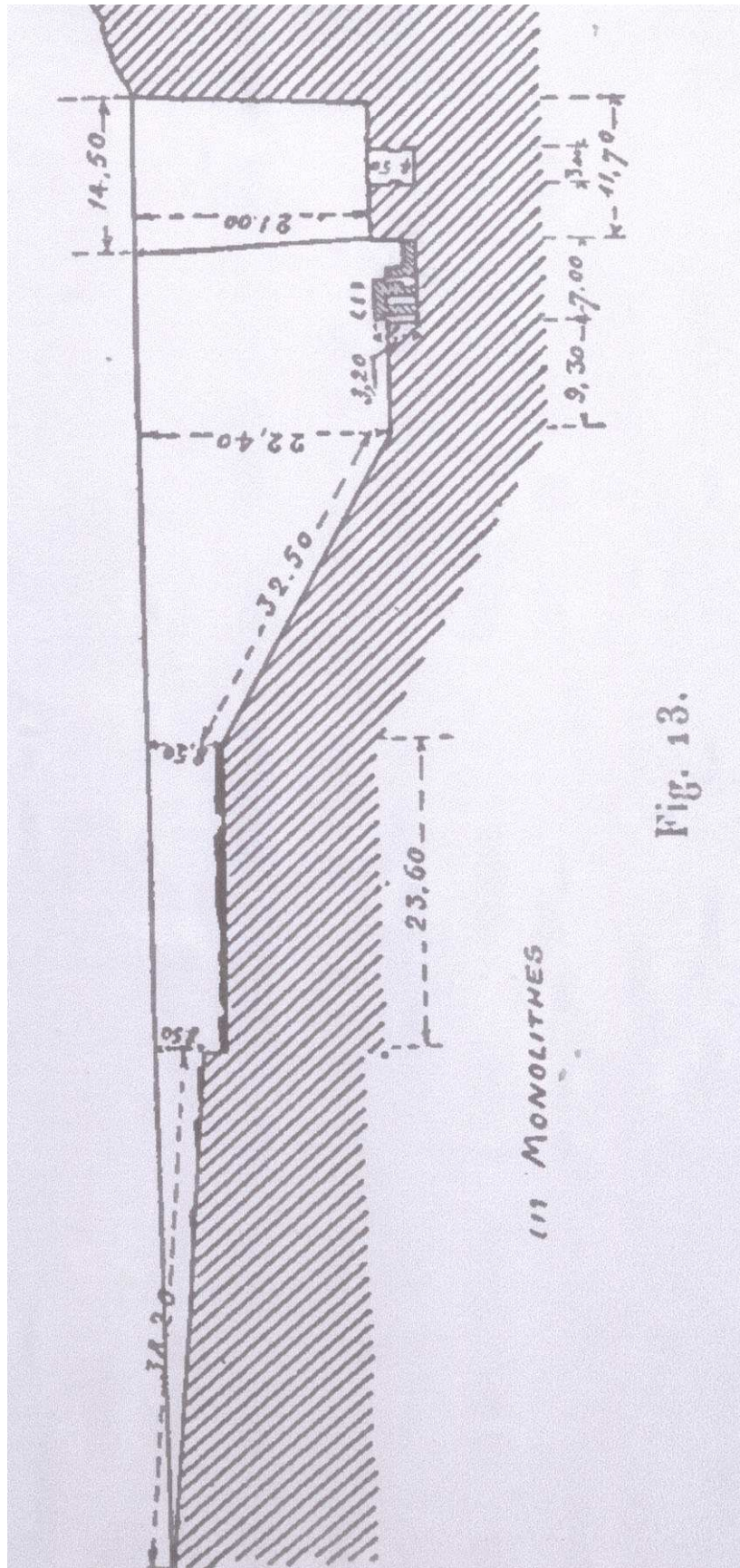
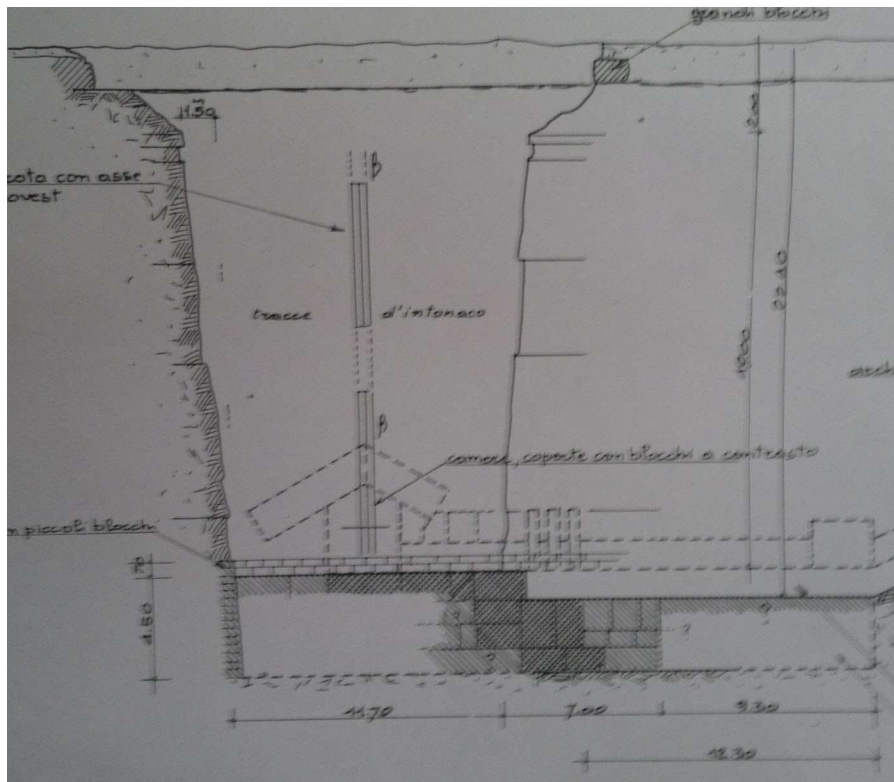


Fig. 13.

On the previous page we have Barsanti's cross section of the pit and corridor, looking east. The southern end of the lower landing where it enters the pit has been deeply excavated; in his reports he tells us that originally the limestone portion of the lower landing was 12.30m long but is now 9.30m long, on account of him having to remove some 3 metres, to make way for the blocks of granite that he pushed to the north. He seems to have a particular interest in this location and from his reports, it appears he believed that the granite blocks in this area were some sort of barrier, that barred the way to another chamber under the pavement.



In this more detailed section from M&R looking west, we see the walls of the pit are like the walls of the corridor in having a slight slope. The walls of the pit appear to have a uniform incline for a height of 19m, and then a sort of bevelled edge becomes apparent in the last two metres for a total height of 21m (From the drawings this 21m, appears to be at the same level as the superstructure base, meaning the pit pavement is 40 cubits below base). According to M&R's drawing the top of the walls at the 19m mark have a horizontal displacement of around 1.5m, in relation to the bottom of the wall. The dashed construction lines on the pavement are M&R's reconstruction of how a chamber may have looked on the pavement.

M&R's description of the pit walls, *"The sides of the excavation also have a pronounced slope and were smoothed, faced and cemented with a pink coloured mortar of which abundant traces remain"*.

Moret's description, *"The limestone plateau was simply hollowed out, but the cross-sections present as smooth a surface as a roll of butter cut with a thread."*



The two images above are from Moret's publication in 1908. The left image shows the oval lid resting on stone blocks above the tank; behind this, we can see what looks like repair to the east corner, where the walls of the corridor and pit meet, and above this corner a vein of deteriorated rock. At this stage of excavations the fine pavement of the pit has been left relatively unscathed, as Barsanti concentrated his activity excavating the threshold between the corridor and the pavement.

The smoothing of the walls seems very strange; bearing in mind that they are over 4500 years old, it makes one wonder how fine they originally were. Indeed why did they feel the need to do this work, if the intent was to build a chamber on the pavement and fill the pit and corridor with blocks; it makes little sense. Likewise the route of the corridor appears to make little sense,

what need was there for the upper landing and upper ramp, using just one ramp (i.e. stair ramp) would save a huge amount of excavation.

The floor of the pit and its construction is not clear from Barsanti's reports, but it appears to have been made of 4 courses, totalling 4.50m to the natural bedrock, this bedrock appears to continue into the lower landing, were his excavations here, give the height of the landing as 3.20m (the granite threshold block at 1.35m high, gives us just over 4.50m); it is not known if this depth of excavation down to the bedrock, continues to the foot of the stairs. The four courses of the pit floor appear to consist of both granite and limestone. In his report he mentions a tunnel going under the pit floor, with granite blocks as its ceiling, and describing the bedrock as being so hard, that one might think it was granite like the blocks above. So it seems that the bedrock that the 4 courses of the pit floor rest on is very good rock.

The 4.5m depth of this floor, M&R thought may have been down to a layer of poor rock, they say;

“From what Barsanti has said and is visible on the site, we think it possible that the ancient Egyptian builders did not originally intend to construct such a deep and massive foundation at the bottom of the pit and at the lower end of the inclined ramp. But having reached the level fixed, they met such a bad layer of rock that they did not trust themselves to lay on it the normal foundation, which had to support-we must not forget- the weight of the masonry of the whole pyramid at its highest point. They therefore removed all the layer of treacherous rock, thus prolonging the excavation beyond the level originally established. To bring the apartments to the level of the plan they made the thick foundation platform and reinforced the sides of the excavation, where the rock was soft, with the low wall of limestone blocks which continues, as may be seen from the photographs, also in the horizontal lower part of the ramp.”

From my reading of the reports I cannot find any comment by Barsanti that suggests that the natural rock below the pavement is bad rock, on the contrary, if my understanding of his reports is correct, he rather suggests that it is hard rock. In his second report he mentions sinking two shafts, one in the south wall and one in the west wall, these excavations were to go behind the two courses of masonry that surround the pit, and are visible on his drawing (see fig 4, page 16), they were to descend pass the limestone floor to the primitive soil; their object was to discover if any passages had been

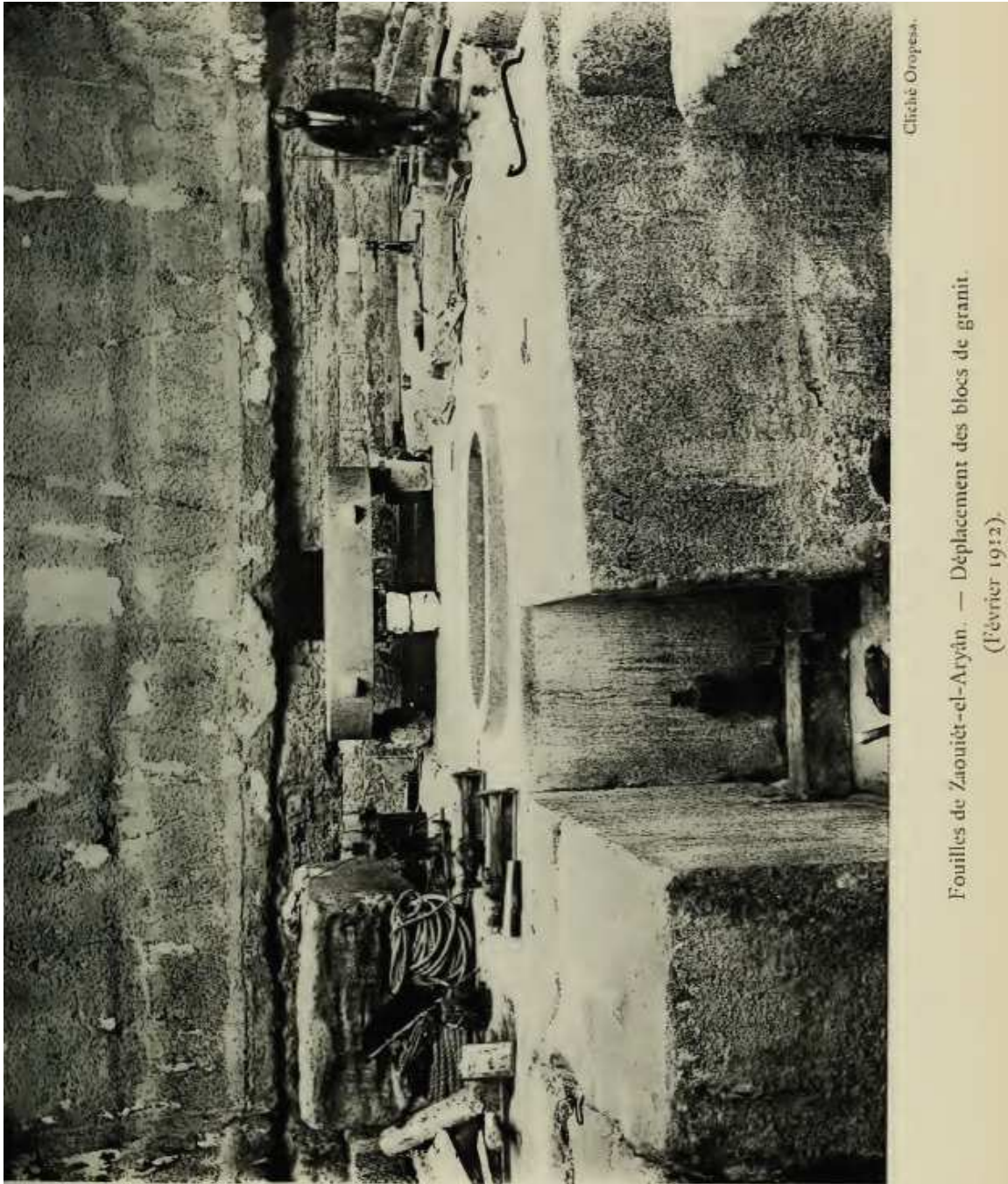
dug in the rock itself. These two masonry courses, M&R's drawing shows as having a total height of 70cm, Barsanti's drawing is not clear, but could be 32cm and 35cm, giving a total of 67cm. In the next paragraph, he says; (my translation)

“It is necessary to descend to the depth 5 metres before arriving at the level of the granite unit. (By this, I take it he means the island of granite that appears to descend through the 4 courses, i.e. bedrock) The stone is hard, and the shaft can contain only one workman, who is obliged to climb every quarter of an hour to the surface to breathe and rest, while his comrade takes his place in the hole.”

Barsanti's drawing (fig 2, page 14) shows these two courses, and to the bottom right of the drawing a small section is given, suggesting that the pit wall has been undercut. M&R do not show this in their drawing, but instead suggest that these blocks ran to the bottom of the shaft to reinforce the walls. Nothing in Barsanti's reports seem to confirm this and neither do his drawings or photographs make this clear. The only comment I can find, that might help, is in his final report; in this report he describes the most destructive phase of his excavation, that being the massive undertaking of removing the massive blocks that make up the pit floor. On the removal of these blocks, he says;

“The process was all the more difficult to do, not only because the blocks were very large, but they were closely tightened against each other and against the rock which envelopes them from 26m depth.”

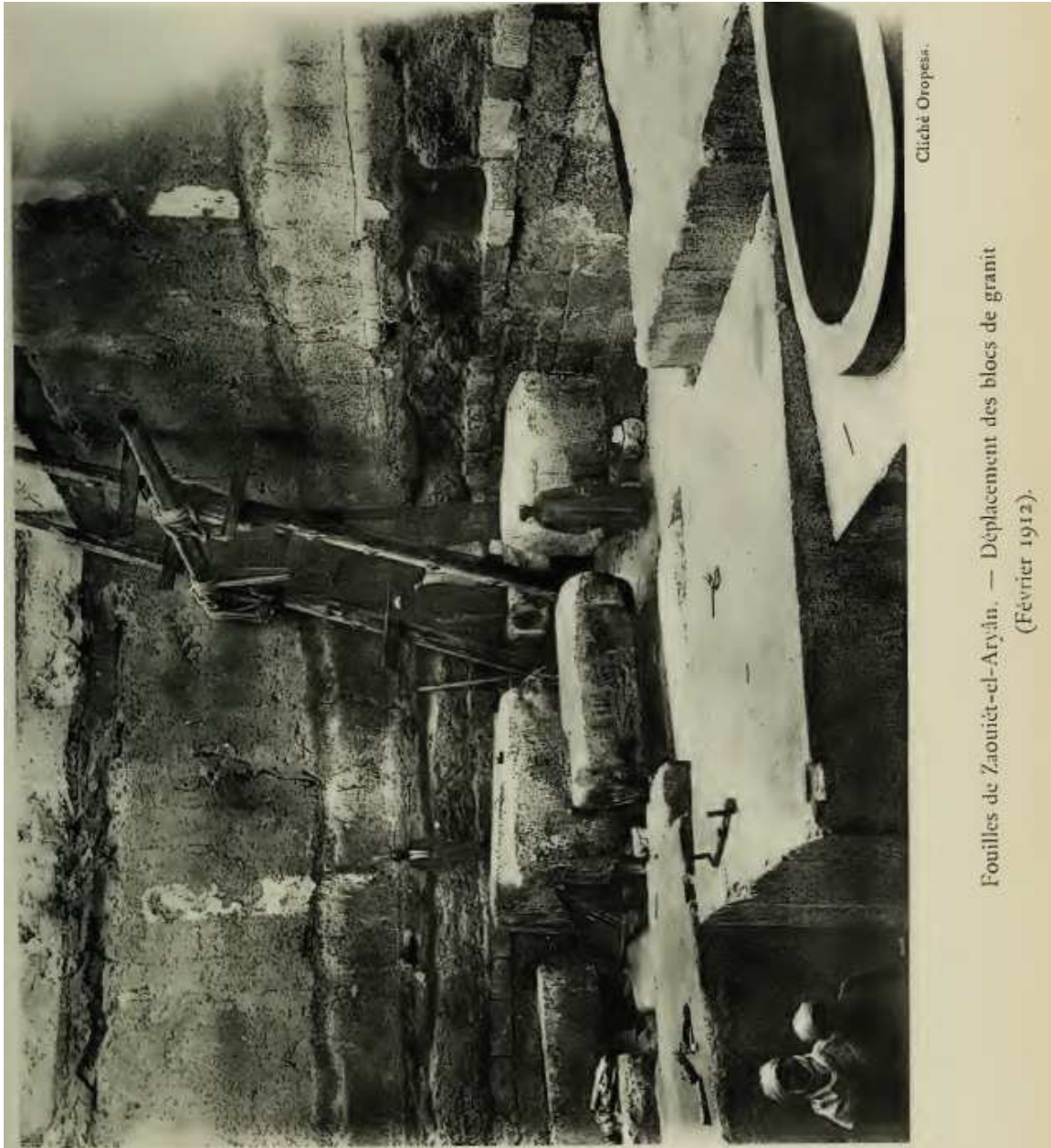
Here he says against the rock, not masonry; I suspect Barsanti may be right here, as I fail to see why a bad area of rock, needs reinforcing by these small masonry blocks, after all, the pit was going to be filled with huge blocks, that were more than capable of doing the job. What I feel is possible, is as Barsanti describes, in that the blocks were tight against the wall; when the final layer was laid, the rock wall was slightly undercut to allow the large blocks close access to the wall, and then the space filled with the two courses of fine limestone, like a skirting board, to neatly frame the paving. But even this makes little sense, if the pit was to be filled with blocks that would make a pyramid; but then maybe the view currently held that this was an unfinished pyramid is wrong.



Cliché Orpesa.

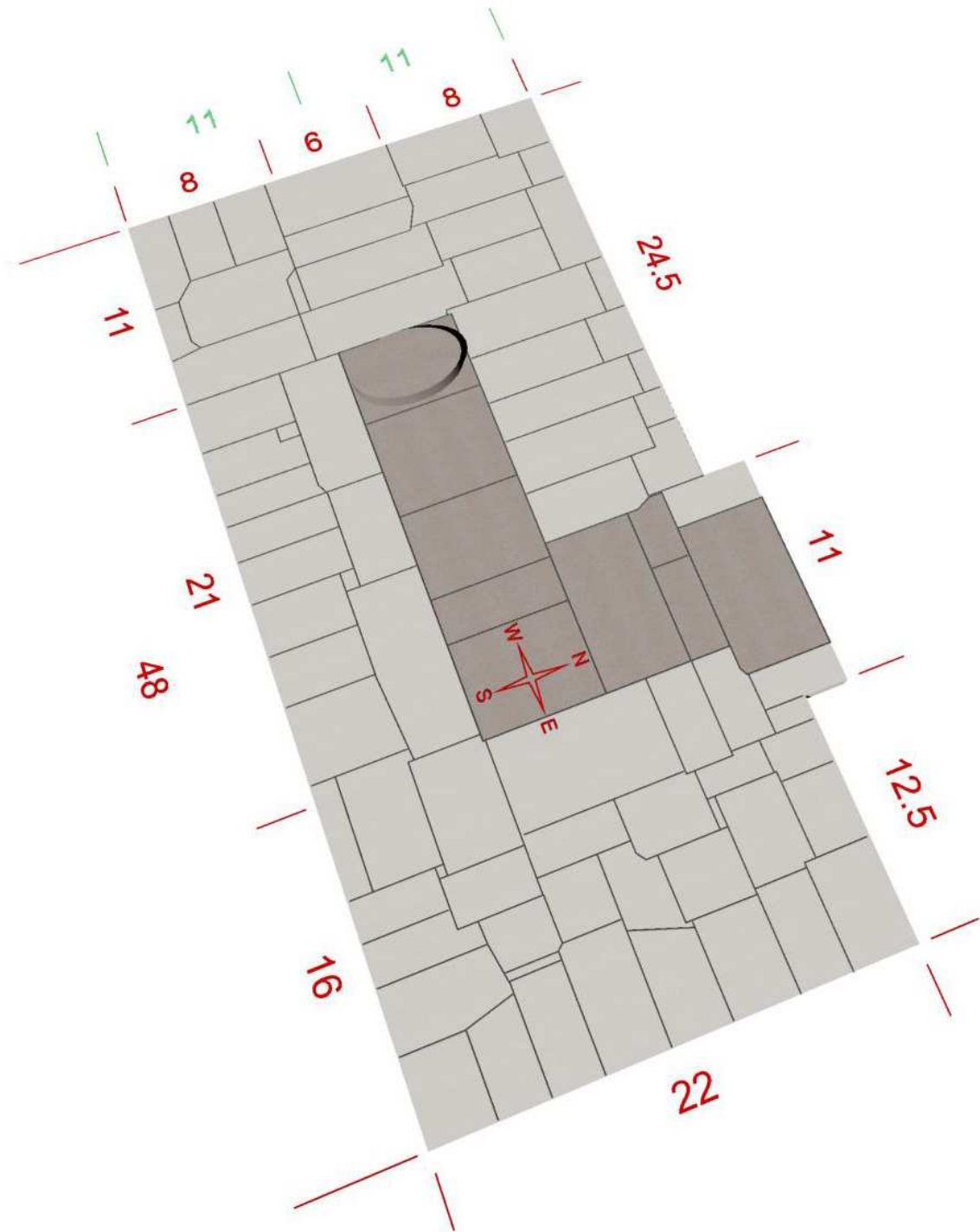
Fouilles de Zarouït-el-Aryân. — Déplacement des blocs de granit.
(Février 1912).

This image from Barsanti's third report shows the level of destruction he has inflicted on the pavement. Above the oval lid can be seen the shaft entrance in the west wall (The other shaft entrance is visible below the vertical plaster band on the south wall, see page 26). Between the shaft entrance and vertical plaster band, there appears to be a rock protuberance, running around the pit; this may be the rock outcrop Barsanti mentions in his first report, when he discovered the granite blocks in the south-west corner at 21m depth.



In the image above, one of three in Barsanti's final report (the others are on page 27&36) we are looking east, with the oval tank in the foreground. Barsanti's plan was to dismantle the granite blocks and transport them over to the eastern side of the pit that he had cleared. The carnage is hard to look at, but we can see the shaft entrance in the south wall under the vertical plaster band. If we look at the east wall we can see what appears to be a vertical white band, yet all the literature says that bands were only found on the south and west walls; yet here in this photograph we appear to see one also on the east wall. The depth of the pit floor is a mystery and the builders

appear to have no issues with using a difficult resource like granite, shipped many hundreds of miles away, to build up this floor, even if it were underneath the pavement were it would not be seen; why did they feel the need to do this, when they could simply use granite on the top surface of the pavement and filled the rest of the pit with monolithic limestone blocks.



One of the few good things Barsanti did was to provide us with a map of the masonry layout of the pavement with some measures (see page 22). There are gaps in it and errors, and from this information I have recreated the pavement in possible intended cubits on page 38. Unfortunately Barsanti does not provide a key as to which blocks are granite, so I have to rely on other sources, but it appears we have an L-shaped floor of granite coming from the granite threshold stone. There is a clear line of 5 granite blocks of identical N-S dimensions (3.15m or 6 cubits); their combined E-W length is 11.01m or 21 cubits, and starting from the tank block, they appear to be 4 ¼, 5, 4.5, 2 ¼ & 5, for a total of 21 cubits.

The intersection of the pit and corridor axis falls on the easternmost of this line of granite stones, the centre being 2 cubits from the east side of the block and 3 cubits from the north and south sides of the block. This centre is 30 cubits from the pits west wall and 18 from the east wall, meaning the western portion of the pavement is 1&2/3rd larger than the eastern portion. The overall dimensions of the pavement are 22 by 48 cubits; the eastern limestone portion from the last granite block in the row of 5, to the east wall of the pit is 16 cubits, or 1/3rd of the E-W distance of 48 cubits. The western portion of limestone north of the tank, is a perfect rectangle of 11 by 22 cubits; the measure of 11 cubits is mirrored by the corridor width.

The oval tank (see page 20) is in the western most granite block, the depth of this block is not recorded. However the depth of the tank is 2 cubits and the E-W distance of its elliptical shape is also 2 cubits, with its N-S distance being 4 cubits, around this cutting a rim protrudes some 15cm high and 19cm wide. The lid has had a recess cut out underneath to closely match the rim of the granite block, and the lid is about 43cm high; it has 4 lifting bosses on its corners.

The granite of the pavement is surrounded by very large limestone blocks, the longest block being some 4.62m. From the reports it appears that the courses that make up the floor of the pit are not of uniform thickness, but a complicated puzzle of interlocking blocks, and some very large blocks at that; Barsanti mentions a block of some 43 tonnes.

On the 10th of November, 1906, Barsanti ceased work on the site, his budget was exhausted and he was required to go to Edfu. At this stage of his operations, the damage to the site was mostly constrained to the area of the threshold block as well as a myriad of shafts and tunnels throughout the pit.

Work would not resume until the 27th November, 1911, some 5 years later; this final season of Barsanti's would prove to be the most destructive for the pit. The failure of his earlier tunnels to discover what he believed was a hidden chamber, appears to have driven him to use the nuclear option of wholesale removal of the blocks that made up the western portion of the pit. He says;

“As soon as our encampment was installed, I ordered the stone cutters to carry out the removal and transport, outside the excavation, of the limestone blocks which had been placed by the ancient Egyptians in the eastern part of the pit. This allowed me to get not only the space I needed to store the granite blocks but also the space my men needed to manoeuvre without too much danger.”

His report is horrific reading, in the space of one month he managed to remove 7 granite blocks weighing a total of 231 tonnes; he goes on to report that he managed to remove 426 tonnes of granite. Such massive excavation would surely raise a few eyebrows, which he pre-empts by saying;

“In anticipation of the criticism that this operation might raise, and also to facilitate the resettlement of the displaced blocks, I set out to create a situation plan for each row meticulously. Reproducing the system that made me so successful in Edfu, I numbered blocks immediately detached, and I indicated on my plan the place they occupied in the pit, as well as their dimensions and weight. In order to avoid confusion, I also used a different colour for the numbering of each of the four rows.”

This valuable information may still exist in some dusty store, Barsanti worked for the Antiquities Service, so this information may be in their archives; hopefully if some Egyptologist reads this paper, they may care to search for them and safeguard them. I have little doubt that the site will be excavated again, be it in the next century, and Barsanti's notes will be needed to put this puzzle back together.

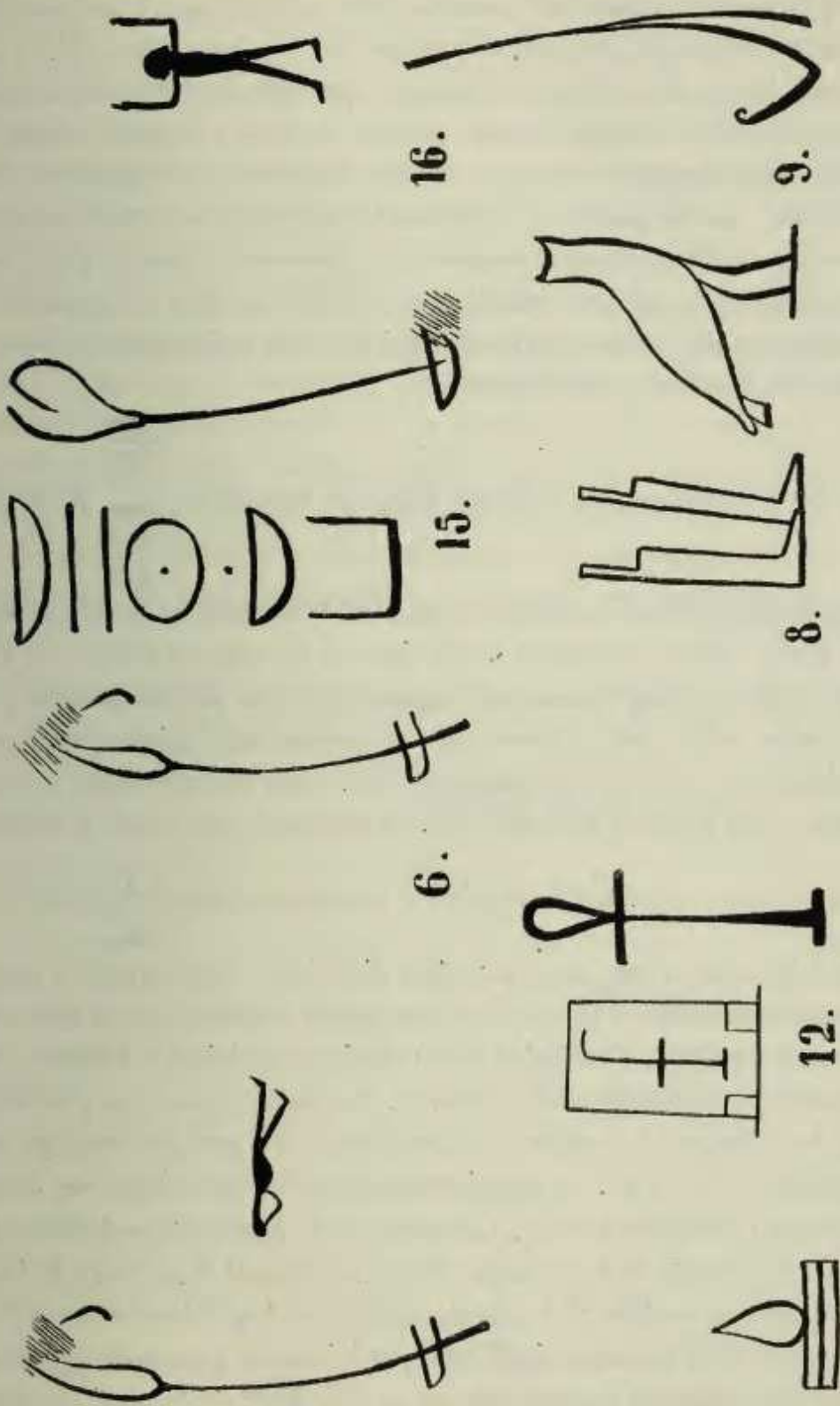
The removal of the blocks was particularly difficult and the mortar very tenacious; ultimately he was defeated, a combination of extremely difficult blocks and exhausted budget, brought things to a close. Barsanti thought that the builders had evidently used every means at their disposal to make the blocks inviolable; a different plan appears to have been made for each row of blocks, meaning that the removal of one block often necessitated the

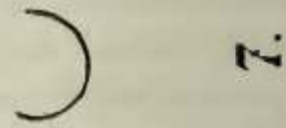
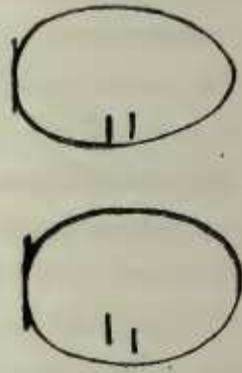
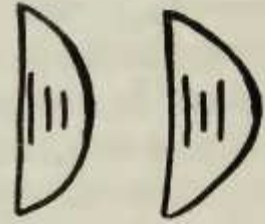
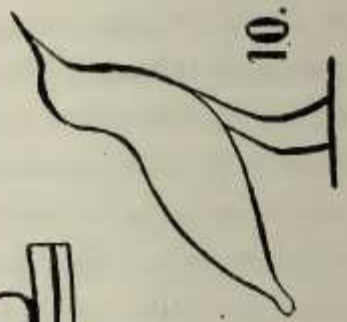
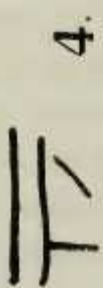
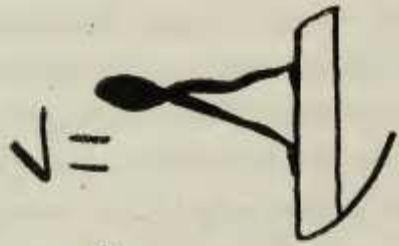
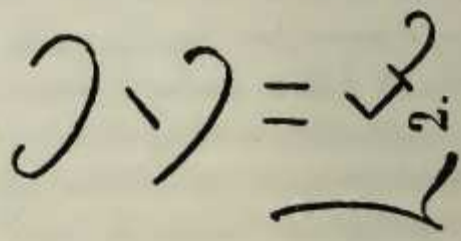
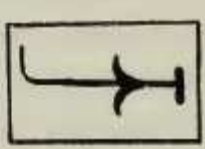
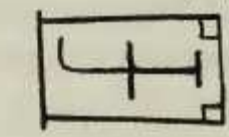
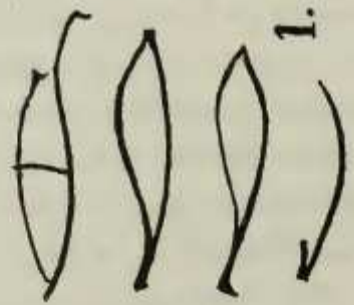
disturbance of the whole set. Some details suggested to Barsanti that the true sarcophagus should be located under the tank or at the very least in the western side of the pit. One such detail was notches found on the east side of almost all the blocks that made up the centre and those of the north and south, showing that they were pushed from east to west, using levers; all this he thought was to conceal some hiding place. He also mentions in support of his deduction that the blocks of the pavement which lean against the walls of the rock, were so built so as to tighten as much as possible the central western portion.

It seems apparent that the builders took great care in protecting something, that something, may well be just the oval tank. We appear to have some clever interlocking puzzle of blocks, purposely built to protect it; anyone wanting to remove this tank was going to have to work extremely hard to achieve it.

In the course of removing the pavement blocks, Barsanti discovered more inscriptions, (see pages 42&43). The most important he believed was No. 15, which he thought was the name of a third dynasty king; it was clearly marked in red and found on a block of the third row, adjoining the stone situated below the tank and on the side of it. It has been suggested that this is a royal name, *Nebkara*, meaning *Lord of the Ka of Ra*. Graffiti No. 13 was found no less than three times on three sides of a block of the first row, adjoining directly to the tank; this graffiti seem to convince Barsanti that the tank was not a sarcophagus, but rather it was a libation vessel, whose lid served as an offering table. Graffiti No. 6 was found on a block of the upper row which touched the east side of the tank. Graffiti No.8, he suspected might be the name of the monument. Graffiti No.16 was found on a block of the third row that he could not displace.

Barsanti hoped to resume his work as soon as resources permitted, however the First World War was to curtail any further work and Barsanti died in 1917. According to M&R the excavated blocks were never returned to their original locations and the pit is in the state that Barsanti left it in. However some work may have taken place for the 1955 movie, the lower landing appears clear, though the pit pavement is not visible.





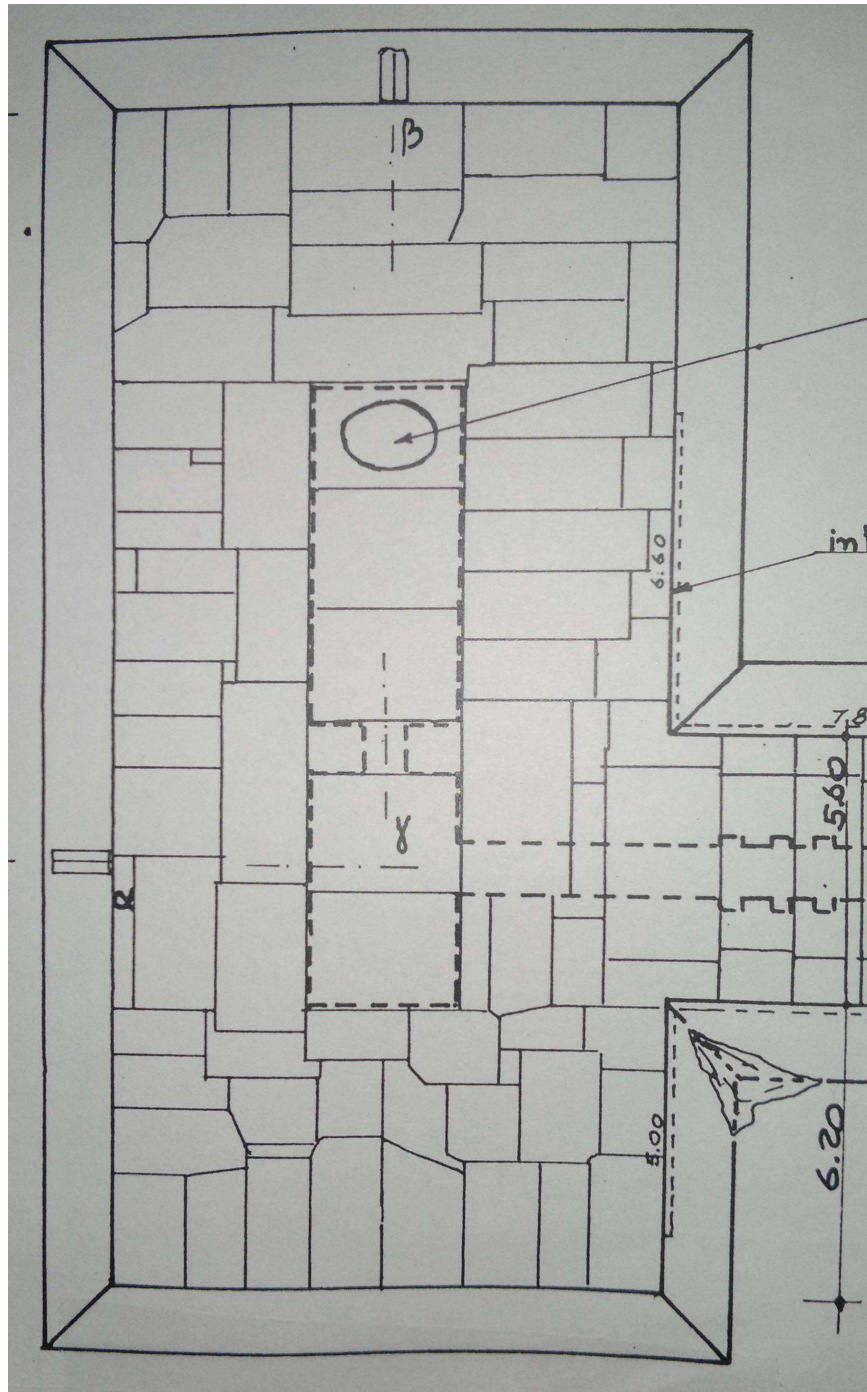
The Function of the Pit

As a layperson trying to create a guide for this site, it was always going to be a difficult task, given the scant and often confusing information that surrounds it. It is not surprising that some books omit the site entirely or just give it a brief mention in passing. The military occupation of the site means that as each year goes by, the structure becomes more and more forgotten. One only has to read pyramid books by Egyptologists throughout the years to get a good sense of the various ideas and theories attributed to it; for example Fakhry in his pyramid book says of Reisner;

“Reisner believed that the dimensions of the superstructure and the arrangement of the trench and pit show unmistakable points of similarity between this unfinished pyramid and that of Zoser, and that “probably both were intended to be step pyramids”

Some authors give it a third dynasty setting others a fourth, and everyone seems to have a different opinion on the Pharaoh responsible; this is hardly surprising given the little information available. The only agreement seems to be that everyone (apart from Barsanti) is happy to call it an ‘*unfinished pyramid*’; when this consensus occurred and on what criteria, is not clear to me.

M&R even attempted a reconstruction of the possible chambers on the pit pavement. In their reconstruction they have chosen a layout that is reminiscent of later 5th and 6th dynasty pyramid chambers. They seem to have taken the row of 5 granite blocks as limiting the chambers width as 6 cubits and providing a gabled roof (see page 32); indeed the pyramid of Unas has a main chamber some 6 cubits wide. This in itself is not proof of how the chambers may have looked, M&R admit it is just hypothetical; in fact no end of chambers could fit on the real estate of the pit floor, be it the corbelled chambers we see in Sneferu’s constructions, or even Khufu’s granite chamber. In the fourth dynasty, where most scholars today believe this pit was built, there is great variety of design; whereas 5th & 6th dynasty pyramids are so similar, one thinks some contractor must have given some bulk discount.



Above we have M&R's reconstruction in plan view, the dashed lines show the intended chambers outline, the entrance corridor from the north with three portcullises; again very similar to the pyramid of Unas, except they have omitted the three niches to the east. In their drawing the antechamber is extended past the row of 5 granite blocks and takes up a portion of the large

limestone block, such that the chamber floor is half granite and half limestone.



The image above is a view inside the pyramid of Unas, which will give an idea of size, the box practically fills the width, and likewise the oval lid in the pit would only afford some 10cm clearance between north and south walls of hypothetical chamber.

But is it correct to use future designs, to reconstruct an earlier structure, though one could argue that the future designs were playing homage to an earlier design, which appears very important given the popularity of its use. That said, it does appear small in the context of other 4th dynasty designs; here at the height of 4th dynasty building prowess, we have a huge undertaking, in the excavation of this pit and the complicated floor of monolithic blocks, yet in the midst of all this skilful activity, it seems odd to have such a small narrow chamber. Why was the floor so deep, 21m below the surface? Some have suggested a return to Djoser's design, but are they suggesting a covered open pit, and how do they think such a huge open space could be bridged; personally I do not see any similarity between this

site and Djoser's. Digging deep is nothing new, the floor of the Bent pyramids antechamber is 23m deep, but here along with the Bent's lower chamber, they appear to have used the natural rock to good effect by just tiling the chambers and therefore minimizing the amount of excavated rock. They were also very adapt at tunnelling and creating chambers out of solid rock, Menkaure's pyramid is a good example of this. This raises the question as to why this huge pit was built.

Egyptology appears content with ascribing this structure as an unfinished pyramid; but given the dearth of information available to us, it is a sentiment that I cannot share, as I feel there is too many unanswered questions and observations that do not quite add up.



The above impression I have done to give the reader some idea of the scale of the pit. The top of the walls are 19m, though the bevelled edge extends upwards another 2m for a total of 21m. The white plaster bands with the red line I have extended the full length of the wall, though its unknown if this would have originally been the case. (In Barsanti's drawing, page 14, he shows a horizontal dashed line, 4 cubits above the pavement, and not

mentioned in his report; also his drawing on page 16, appears to show a line about 10 cubits from the pavement, again no explanation given)

My first concern is the smoothness of the pit walls; it appears to have been done with great care and repairs made where perhaps the rock was not ideal. What was the logic in this, if the intent was to build a chamber and refill it with limestone blocks? Why for instance, do we not see the similar signs of quarrying activity that we see in Egyptian quarries, like steps in the rock? The unusual descending corridor also defies logic, why two distinct angled corridors and two level landings; what need is there for the upper landing and inclined ramp? It appears superfluous, yet a huge amount of excavation was required to make it.

The pavement is a fantastic piece of work and no expense spared, we appear to have an island of granite surrounded by a sea of fine limestone, the whole described by Barsanti as rare perfection. Maspero is impressed, he says.

“The size and richness of the materials, the perfection of the cuts and joints, the peerless finish of the granite sarcophagus, the boldness of structure and the sheer height of the walls, everything comes together to compose this so far unique ensemble. It is an awe inspiring shock and nowhere is the power and mastery of the old Egyptian architects so suddenly and strongly obvious as here.”

This pavement defeated Barsanti, to him it must have appeared as some demented puzzle, designed to prevent its removal; but if such was the intent, does this suggest that nothing was to be built on it; after all, what would be the purpose of designing an inviolable pavement, if your intention was to fill the pit with tons of masonry as part of a pyramid? Surely if a chamber was intended and a normal 2 cubit wide passage intended, then the tank would be safe, the superstructure would protect it; this makes the work on the pavement again appear superfluous, which raises the question, was anything intended to be built upon it?

To me, the whole appearance is of a fine courtyard, the smoothing of the walls, the fine limestone blocks where the pavement and walls meet, and let us not forget the granite blocks found mortared together on the pavements south-west corner; what possible function can they have in any pyramid scheme? A huge amount of effort has been put into this floor; to me this highlights an important function for the pavement, something beyond being

a mere foundation for another structure. In other 4th dynasty structures we can see foundations for chambers, thanks to violators activities, and generally the horizontal faces are finely done, to maintain levels and vertical faces less well, as they will not be seen, by the overlying wall masonry; the fine joints and work are left where they can be seen. Yet my understanding of the reports is that the whole floor is fine work; what is the logic in that, if a chamber is to be built on top? If a chamber was intended to surround the granite floor, why waste time refining the vertical joints of the limestone blocks as well?



In the image above from the 1955 movie, we see the next concern I have and that is the steps. These steps appear quite grand and well constructed, when maybe we should expect a more utilitarian approach for workers access. In the image above, we see the movie sarcophagus on a wooden sledge, being lowered down the staircase ramp, and here we meet a problem straight away; if you look at the sledge runners for example, you will see one on the stairs and one on the channel in between the stairs.

From the old photographs and movie, it appears the space between the stairs is sunk lower than the surrounding steps. The steps themselves seem to be cut out of the rock, such that the edges of the steps are aligned with the smooth banks either side of the steps. It has been suggested that the space between the stairs was utilized as a ramp to lower the large stones that constitute the floor of the pit; the problem I have with this suggestion is that this space is just over a metre wide (2 cubits). I would suggest that this is too

small to accommodate a sledge for the huge monolithic blocks found in the pavement, some as long as 4.6m and weighing over 40 tonnes. We cannot use a cradle that may have spanned the ramp width, with runners on the smooth banks that flank the steps, as the outer banks taper inwards (see page 25), so any device of this nature would soon jamb against the smooth corridor walls.

Should we not expect a more utilitarian design, like some crude foot holds along the sides of the ramp, leaving the central space free for the transport of the large blocks? The fine appearance of this stairway, does not suggest a utilitarian function, but rather gives the appearance of a processional way.

This stairway appears to be an obstacle to the lowering of massive blocks down the ramp on route to the pit. It may be that the blocks to the pit were transported and laid first and the stairs created afterwards; but where is the logic in this? But then maybe we are looking at this site all wrong.



FIG. 79.—FLOOR AND LIBATION-TROUGH OF THE UNFINISHED PYRAMID AT ZAWVET-EL-ARYÂN.

The epithet for this site, has for a long time been *the unfinished pyramid*, why, is not so clear. It seems to appear first in Maspero's 'Art in Egypt 1912', the image and caption above is from Maspero's book and it is interesting to note in the caption, the term *Libation-trough*. However aspects of this site, make me question the pyramid attribution, and so I think it not unreasonable to suggest that the site may have had a different function altogether. The label unfinished pyramid has stuck with the site for over a century, but is it necessarily correct?

When I look at this site, with its fine pavement, smooth walls, grand staircase and corridor, I get the impression that we have something intended to be open to the skies. Was this an unfinished pyramid that hardly got of the drawing board? M&R believed that;

“The condition of the monument indicates a work interrupted almost at the outset and consequently a very short reign by the sovereign whose pyramid it was to be.”

If this was the case, why do we have a stone enclosure wall built so early on? Though there is some ambiguity as to the form of this stone wall; Mark Lehner in his *Complete Pyramids*, says;

“It has a large secondary precinct with walls of fieldstone and clay, like those around the Giza pyramids and of similar dimensions.”

I have been unable to find the source of this claim, and I am not aware of him doing any excavation on this site, or anyone else that might have furnished him details of the enclosure wall. In M&R's time, they say, *“Nothing is known of the structure of the wall which is now buried and whose direction is barely visible,”* In their observations M&R say;

“The boundary wall enclosing the great surrounding courtyard, which has been compared, in extent, to those of Zoser and Sekhemkhet: but its thickness-only 2.1 metres-is too little for a wall with bastions and curtains and is, on the contrary, right for a roughly built wall like the outer walls surrounding the complexes of the 4th Dynasty at Giza.”

It could be that Lehner has made an assumption, based on the above statement by M&R; pending clarification, it appears we only have Barsanti's description to go on.

We have indications of the extent of the superstructure, remains of nucleus blocks still in position, some very large, and the huge amount thrown into the pit, some with level markings of 5 metres; does this suggest that the superstructure had reached this height? If it was a pyramid would they have started the superstructure, given that chambers in the pit still had to be built, and the pit and corridor filled with masonry. Maybe instead of an unfinished pyramid could we be looking at a completed open pit, surmounted by a low platform?

If not a pyramid, what could it be? It may be some sort of temple/observatory that could monitor and record solar and stellar movements; I do not think anyone would deny that such movements were important to the ancient Egyptians. I can imagine the fine entrance corridor with level landings and inclined ramps being useful for stellar observations. The pavement and walls of the pit could be used to record solar movements through the shadows cast. To test the effect, in my 3d software I built up some low level platforms around the pit, and even built some overhanging masonry around the pit, to reduce the aperture of the opening, to gauge the effect of shadows and light into the pit. I feel it is possible that the site could be used in this way, but ultimately this is a job for archaeoastronomy to pursue and decide whether it has any merit.

Such a temple would explain some of the issues I raise and might explain the state of the site when discovered. A pit open to the skies needs some protection, especially from the rain, a low platform around the pit, would protect it from rain runoff, the top of the platform may have been inclined to the outside to aid rain runoff. This low platform that surrounded the pit would most likely be cased in fine Turah limestone and possibly granite. But even these precautions could not prevent some rain getting into the pavement; the architects would surely be aware of this, and may have planned some method of drainage for the pavement, to prevent standing water. The sudden drop of water level reported by Barsanti might be the result of some drainage system coming into effect.

A low platform of 400 cubits encased in fine stone, would be a preferred structure for anyone wishing to acquire good quality stone; such a structure would easily disappear to build projects for some other ruler, who didn't quite care for the sanctity of this old temple. Maybe at some stage a plan was put into action to prevent violation of its prized asset, the fine pavement. The tank was carefully covered in clay and protected in limestone blocks, then the whole pit filled with blocks, possibly nucleus blocks thrown down from the remains of the platform.

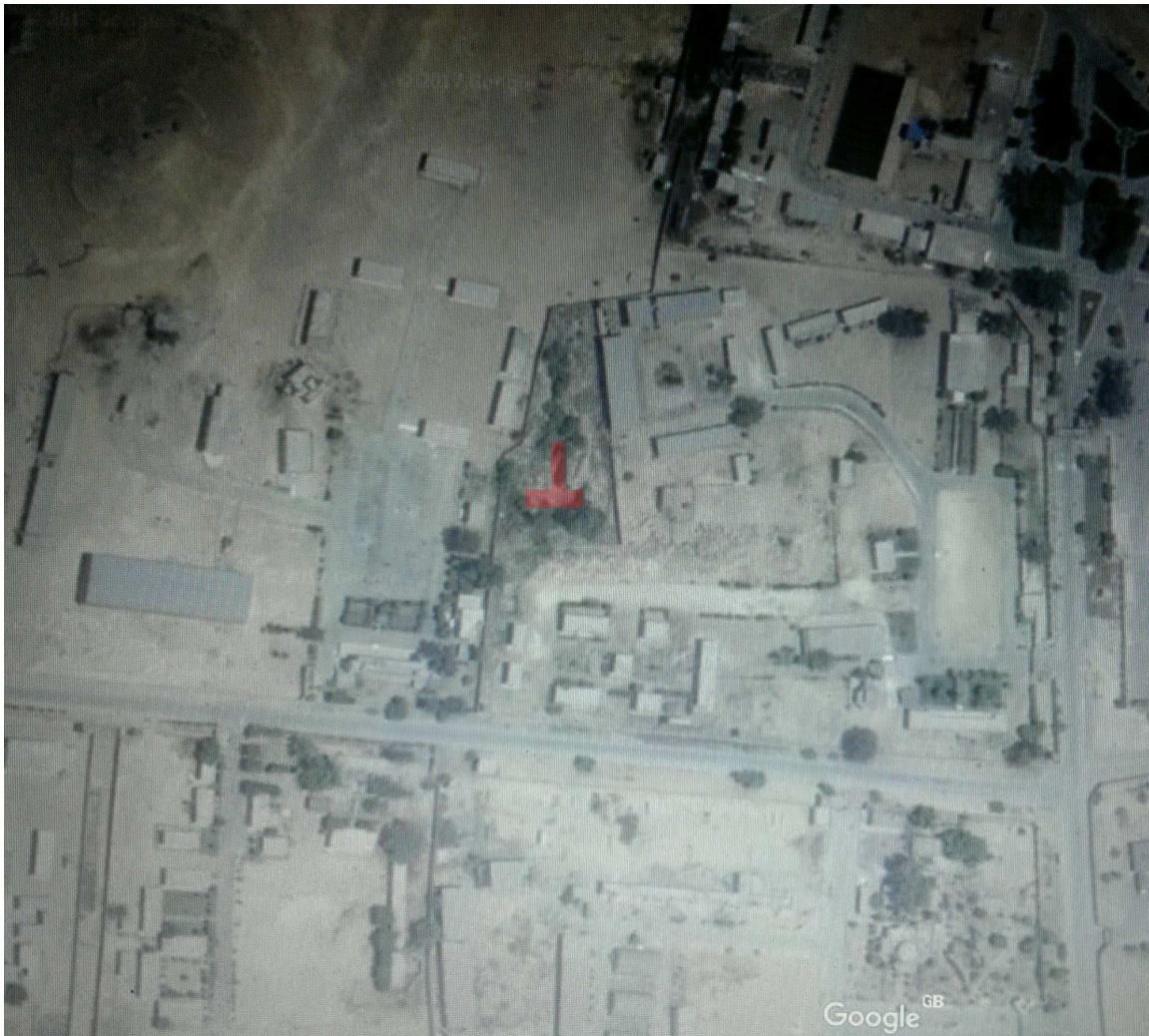
So instead of an unfinished pyramid we may have had a completed temple that has been subsequently robbed in antiquity.

The Current State of the Site

Currently the only view we can get of the site is through Google Earth, the pit is in a military area and not accessible.



In the middle of the image above, we can make out the shaded sides of the pit and corridors east walls. I have read reports on the internet that the pit has been used as landfill for rubbish, but this may just be sensationalist reporting and without foundation. The pit itself appears to extend to a decent depth, judging by the shadows and those of the buildings next to it; the debris we see may be the accumulation of wind borne sand over some 62 years, since it was last cleaned for the 1955 movie. The area around the pit has been fenced off and should be safe from any further building.



The rest of the site is not so lucky, as the image above shows, extensive development has occurred all around the pit. Whether anything remains of the enclosure wall and nucleus of the superstructure is debatable; the north and west look the least developed and some trenches in these parts might yield some information. But realistically the site appears lost, the blame for this should not all lie at the military's door either, Egyptology must accept its share of the blame, it has largely destroyed the floor of the pit, who knows what carnage is lurking under the sand. Egyptology's confident assertion of labelling the site as the unfinished pyramid has in some part signed the death certificate for the site; by so doing, the military are basically being told that the project never got off the ground, save for a very large hole. The impact is a site of little importance and a green light to build at will, thankfully at least the pit is preserved for future investigation.

Unfortunately it will be a long time in the future; having worked some years in the Middle East, I have a good understanding of the bureaucracy and culture that impacts a lot of everyday life. Military sites are especially sensitive and overly protective; this pit could be in a military truck depot, but asking permission to excavate, would be akin to asking permission to enter area 51.

I am not aware of any lobbying by Egyptology to excavate the pit, which it desperately needs, as there is so many unanswered questions that need addressing. The Great Pit of Zawiyet El Aryan is very much a sad story and an object lesson in how not to do archaeology; yes it was over a century ago and a bit laissez faire, but from the limited information available to me and as a layperson, I feel the label *Unfinished Pyramid* is not justified, and I am more happy to use the label *Great Pit* instead.

There is no doubt that this site will be re-excavated, but we have to accept that it will be a long time in the future and no doubt further development will have been done and more lost, nothing can be done to prevent it; we just have to be patient and hope advances in technology can compensate for some of the losses.

Whatever the function is of this site, it definitely deserves more coverage than it currently receives; most pyramid books by Egyptologists, give it a brief mention or omit the site altogether, we should be careful that it does not get forgotten. This site is fascinating for many reasons, and hopefully this amateurs guide in some small way, will keep its memory alive and rekindle some interest in this amazing site.