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CAN A FIRE BROADEN OUR UNDERSTANDING OF A ROMAN QUARRY? THE CASE OF EL MÈDOL (TARRAGONA, SPAIN)

A. Gutiérrez García-M.^{*}, S. Huelin^{**}, J. López Vilar^{***}, I. Rodà de Llanza^{****}

Abstract

During the study phase of a project to renew the way the Roman quarry of El Mèdol, officially declared Artistic Historical Monument by the Spanish Government in 1934 and World Heritage in 2000 by UNESCO, is presented to the public, a violent fire broke out (late July 2010). Four acres of the property where the quarry is were affected and after the charred remains of the forest, new perfectly-preserved areas of exploitation surfaced. Also, in an attempt to avoid new fires, the area around the pinnacle that remains the symbol of the whole site was cleared.

This paper presents the new evidences resulting from these circumstances as well as some other data from a research which is very much a work-in-progress but that nevertheless that enable us to better understand not only the real extent and chronological phases of the quarry but also other aspects related to its management and link with Tarraco, where its stone was widely used.

Keywords

Roman quarry, Tarraco, new fronts, debris management, block transport

Introduction

Location and context of the quarry

The quarry of El Mèdol is located in the NE of Spain, about 90 km south from Barcelona and 7 km north-east from Tarragona (Fig. 1). It was opened on the slopes of a low hill, at about 300 metres of the Mediterranean sea, in an area currently highly changed mainly due to the pres-

ence of important roads (it is right next to the AP-7 motorway and the A-7/ old N-340 road), which follow the same route as the ancient Via Augusta, and the building of housing developments on the nearby beaches.

El Mèdol is in a property that since 1984 is owned by ABERTIS, a large international leader group managing mobility and telecommunications infrastructures through three business areas (tollroads, telecommunications infrastructures and airports) operating in 14 countries in Europe and America. This company owns the AP-7 motorway and, aware of the importance and potential of this site, has invested resources to protect its values and to make it open to visitors.

El Mèdol is not the only quarry in the area. The two varieties of stone outcropping at El Mèdol, called soldó and El Mèdol stone,¹ have been very sought of throughout the centuries; indeed, the large Miocene outcrop they belong to has been exploited in many other several points, some of them since Roman times, but many others throughout the centuries until modern time. This is the case, for instance, of Mas del Marquès, an area right in front of El Mèdol where up to 11 small extraction points have been identified (GUTIÉRREZ GARCIA-M. 2009, 159-166).

Nevertheless, el Mèdol is, by far, the largest one in the area. About 150.000 m³ of stone were extracted from it, mostly as rectangular blocks to be used as ash-lars at Tarraco, a city that developed from a military camp (*praesidium*) established by the Scipios during the Second Punic War immediately after their arrival in 218 BC and that by the time of Augustus had become the capital town of the Hispania Citerior province.² Its status, as capital city of the largest Roman province in the Western Empire, and large popu-

^{*} Institut Català d'Arqueologia Clàssica and Dept. de Ciències de l'Antiguitat i l'Edat Mitjana, Universitat Autònoma de Barcelona (Spain); currently at IRAMAT-CRP2A UMR 5060 CNRS - Université de Bordeaux Montaigne (France), anna.gutierrez@u-bordeaux-montaigne.fr.

^{**} Abertis Autopistas, medol@abertisautopistas.com.

^{***} Institut Català d'Arqueologia Clàssica (Spain), jlopez@icac.cat.

^{****} Institut Català d'Arqueologia Clàssica and Dept. de Ciències de l'Antiguitat i l'Edat Mitjana, Universitat Autònoma de Barcelona (Spain), iroda@icac.cat and isabel.roda@uab.cat.

1. They basically differ in the amount of bioclastic components: soldó is a sandy limestone while El Mèdol stone is a bioclastic limestone. They both belong to the Tarragona depositional sequence, since the quarry was opened on Serravallian-Tortonian strata composed of reef calcarenites, biomicrites and biorudites (Álvarez, Arroyo 2004). Macroscopically, they are very similar both in colour and shades but their general porosity and compactness varies significantly. Microscopically, they vary from very shelly bioclastic limestone to a sandy limestone with a mixture of micrite, very fine quartz matrix and scarce, highly fragmented bioclasts (mostly equinids, some bivalves and equinoderms, rare foraminifers); there are also differences in terms of grain size, cementation and porosity.

2. For the latest works on Tarraco, from its foundation to Augustan times, see Mar et al. 2012; for an updated, non-exhaustive

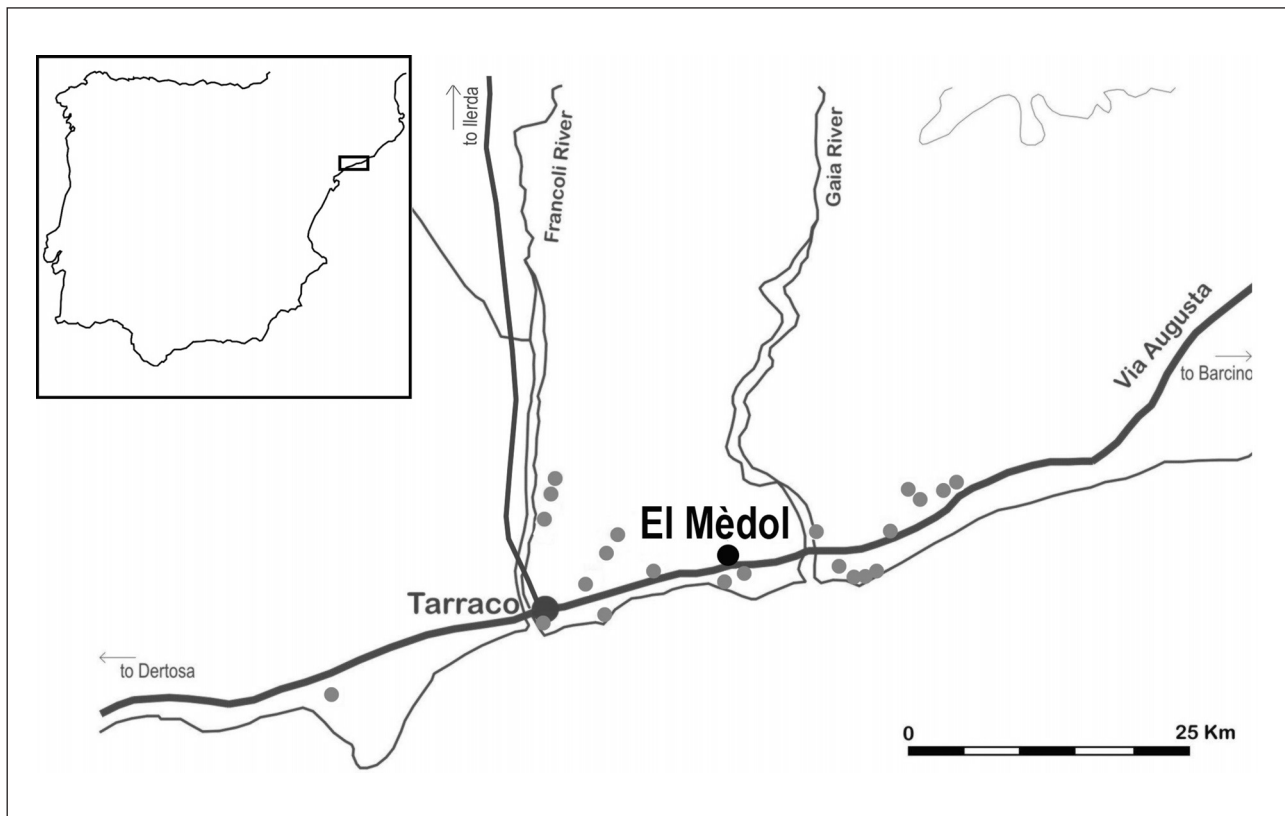


Fig. 1. Schematic map showing the location of the quarry of El Mèdol and the other quarries of the territory of Tarraco (grey spots) (map: A. Gutiérrez García-M.).

lation³ entailed a high need of building stone and El Mèdol was its main source. El Mèdol stone was used at Tarraco from the earlier phases of its foundation – at the walls –, and was the basic material used for the monumentalization of the town in Flavian times; at that time whole upper part was reorganized and the large public/government buildings such as the circus, the so-called *Forum Provincialis* and the amphitheatre were built. Moreover, stone from El Mèdol was also widely used to elaborate architectural elements (columns, mouldings, etc), portraits and sculpture, sarcophagi and epigraphy throughout the centuries of Tarraco's existence.

Brief background to the study of El Mèdol

The quarry of El Mèdol is, however, the most outstanding of the quarries near Tarraco. In 1934 it was of-

ficially declared *Monumento Artístico-Histórico* (i.e. Artistic Historical Monument) by the Spanish Government, then *Bé d'Interès Cultural* (i.e. Cultural Heritage of Interest) in 1985 and *Bé Cultural d'Interès Nacional* in 1993 by the Catalan Autonomous Government, and since 2000, it is part of the historical monuments of Tarragona that were declared World Heritage by UNESCO.

Nevertheless, it was well known (especially the area known as El Clot del Mèdol)⁴ for a long time, due to its special appearance and particularly the admiration aroused by The Needle⁵. The first mention of this quarry, chronicled later by a canon of Tarragona named Josep Blanch, dates back to 1461 and it expressed the interest of Prince Carles of Viana, the son of King Joan II, in visiting the place after a stay in Tarragona and on his way to Barcelona.⁶ Although other scholars wrote

but global approach to Roman Tarraco, see Dupré 2007. For a compendium of the archaeological excavations undertaken in Tarragona, Macias et al. 2007.

3. Tarraco reached 80-90 ha of extension at its peak (Macias et al. 2007, 8).

4. The Clot del Mèdol is so called because it consists of a large pit in the terrain. It cannot be seen from outside, but is of a significant size (about 200 m long, 50 m wide and 16 m deep).

5. L'Agulla del Mèdol (the Needle, in Catalan) is a 16-metre-high stone pinnacle in the centre of the Clot that marks the original level of the terrain when the extraction work began. It is widely assumed to be Roman as there are pillars of this type in other Roman open-cast quarries; the closest one is the pinnacle at Glanum quarry (near Saint-Rémy-de-Provence, southern France) (Bessac 1987; Bessac, Lambert 1989).

6. '[...] lo endemà se partí per Vilafranca ab companyia de la reyna; però lo príncep se anticipà mitja hora antes [...]. Acompanya-

about the ‘various kinds of marble’ from the quarries near Tarragona during the following centuries,⁷ it was not until mid 19th century that El Mèdol was again mentioned in the written sources. It is then when the first reference to this quarry as a Roman monument of interest appeared (ALBINANA, BOFARULL 1849, 172-175), and also then when the *Comissió de Monuments de Tarragona* was established and began its task of preserving El Mèdol (SÁNCHEZ REAL 2000, 174).

Nevertheless, it is in the last years of the 19th century that El Mèdol began to become known outside its immediate surroundings⁸, arousing interest among non-archaeologists and history scholars. In 1920, El Mèdol was included in the list of architectural and artistic monuments to be safeguarded by the Government at the request of the *Real Academia de Bellas Artes de San Fernando* in Madrid and the official declaration as a *Monumento Histórico-Artístico* came eleven years later, on the 3rd of June 1931. However, two years later, an incident concerning the extraction of stone from the upper part of the quarry to build the national highway that runs next to it⁹ raised the issue of its ownership of the quarry, which was in private hands. Despite the purchase of the quarry and its surroundings by the *Diputació de Tarragona* to turn it into an archaeological park was suggested, it was never brought to fruition.

Also during the 20th century, there was a series of attempts to give the quarry a public use. The most successful of them were the annual ‘concert-natura’, aimed to give El Mèdol an international reputation as the *Auditori Natural de Catalunya* and that took place on four occasions (1931-1934). However, the outbreak of the Spanish Civil War brought an end to all this and in 1946 El Mèdol was still in private hands and surrounded by an enclosure. The quarry had a final spark of its former life when, during the construction of the *Universitat Laboral* (1951-1956), stone from an outcrop about 2 km away from El Clot was used on the facade.

Nevertheless, it was at the end of the 1970s and in the 80s that not only there were new attempts to give the quarry a permanent public use but also that scholars and scientists began to pay new attention to it. There was a strong, fresh impetus to recover and preserve the site after the land was acquired by the motorway concessionaire ACESA. Likewise, historical and archaeological research experienced an important step forward during these years, in particular with the studies resulting from the collaboration between A. Álvarez, M. Mayer and I. Rodà.¹⁰ Following these studies, El Mèdol was widely mentioned by archaeologists and scholars discussing the quarry industry and stone supply in Roman times.¹¹ Besides references to El Mèdol in local studies and local press articles,¹² some studies have focused on the quarry or some specific parts of it.¹³

The quarry

El Mèdol's main features prior to summer 2010

Before 2010, four different extraction sites (or sectors) had been identified at El Mèdol: Sector 1 –known as El Clot¹⁴; sector 2 – a large quarrying area west from Sector 1; sector 3 –east from sector 1; and sector 4 – in the north-western limit of Sector 1.¹⁵ (Fig. 2)

El Clot (**sector 1**) is by far the largest of them all. It is a 13 to 17 meters deep opencast quarry opened on the top of the Sant Simplicí hill consisting of two main wide areas linked by a narrow corridor. At the centre of the southernmost area, the Romans left a pinnacle (called “the Needle”) which remains the symbol of the whole site (Fig. 3). However, this is not the only remarkable feature at this site. What has been interpreted as a water-deposit was identified at the “corridor”. It consists of a channel and a basin carved on the rock in modern times to collect rain-water.

Evidences of ancient quarrying at El Mèdol are

ren-lo lo camarer, lo sacristà, lo hospitaler, lo canonge Piles y lo vicari general de l'archebisbe fins a la pedrera de Olmedo, que la volgué veure, y de allí los despedí.’ (Blanch 1665).

7. Ll. Pons d'Icart, a humanist from a well-bred Tarragona family, wrote about the ‘diverses espècies de marbres’, and P. Gil, a Jesuit from Reus, wrote c. 1600 about the stone of Tarragona and, in particular, about *soldó* (Pons d'Icart 1572-73; Iglesias 2002).

8. Both the first visit of the *Associació d'Excursions Catalana* to the site in 1878 and the visit the following year of the *Associació Catalana d'Excursions Científiques*, a breakaway group of the previous association, marked the beginning of a gradual increase of comings and goings of hiking groups and scientific associations whose members appreciated the exceptionality of the site.

9. It was reported by the *Societat d'Amics de l'Art Vell* to the *Comissió de Monuments* (*Arxiu Històric Provincial, Comissió de Monuments de Tarragona*, Actes 10/03/1930, vol. VII, pp. 141-143; *Arxiu Històric Provincial, Comissió de Monuments de Tarragona*, Actes 10/04/1930, vol. VII, pp. 145-146; *Arxiu Històric Provincial, Comissió de Monuments de Tarragona*, Actes 10/10/1930, vol. VII).

10. Their works are numerous. See, for instance, Àlvarez 1983, 1984; Àlvarez, Bru 1984; Àlvarez *et al.* 1994; Àlvarez, Mayer 1982, 1992, 1998; Mayer 1992; Rodà 1994, 1997, 1998, 2001, 2004.

11. Braemer 1986; Canto 1978; Cisneros Cunchillos 1988a, 1988b; Dworakowska 1983; Waelkens *et al.* 1988; Ward-Perkins 1971.

12. Bermúdez *et al.* 1993; Dasca, Rovira 1991; Fabregat 1997; Gutiérrez Garcia-M. 2003; Massó 1987, 1991; Rius i Ferrús 1990.

13. Among them, the comprehensive study, funded by ABERTIS, undertaken by a multidisciplinary team of archaeologists, geologists and biologists (*El Mèdol* 2004) as well as the academic works on the quarries of Tarraco where el Mèdol is widely discussed (Fabregat 1997, 155-156; Gutiérrez Garcia-M. 2003, 2009, 146-158) should be highlighted.

14. Clot means “pit” in Catalan.

15. For a more detailed description of each sector, see Gutiérrez Garcia-M. 2009, 152-154.

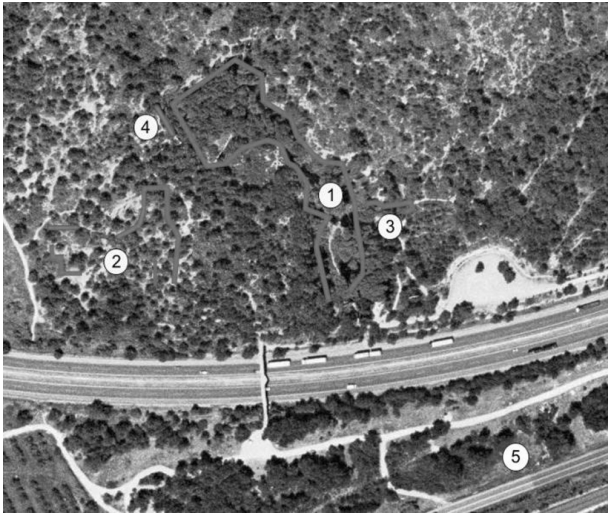


Fig. 2. Location of the different sectors at El Mèdol, previous to 2010 (plan: orthophoto of the Catalan Institute of Cartography, ICC, with modifications of A. Gutiérrez García-M.).

abundant, not only as the large (obviously man-made) walls but also small terraces, ledges and toolmarks which are perfectly clear and enable to infer the number of rows and sizes of the blocks extracted.¹⁶ Moreover, a number of trenches and wedge sockets as well as delimited blocks are preserved, especially on the verge of the artificial cliff (Fig. 4).

Sector 2, which is the second best known area after El Clot, is located west from El Clot, on the lower part of the same hill. The front limits at this sector are not always as clearly defined as at El Clot, but it is still a quite large area (of about 2,800 m²) showing some resemblances to trench-type and in terraces-type quarries (cf. BESSAC 1999, 32, fig. 24A; 2003, 26-28, figs. 7a, 7c and 11c). Artificial vertical walls about 3 to 5 m high are the main evidence at this sector yet lower cuts of 1 to 2 m can be also seen. The profusion of parallel spike-shaped or diagonal-patterned grooves and some ledges at these walls provide evidence of stone extraction procedure. The dating of this site is not straightforward as the smoother vertical walls seem to be the result of an extraction pattern identified by Bessac as post-medieval (cf. BESSAC 2000, 10).

Sector 3, east from the Clot, on the upper part of the hill slope, shows a different extraction strategy. It is a mixture of extensive lineal and trench extraction (BESSAC 1999, 32, fig. 24A; 2003, 25-26, figs. 3c and 7c). The traces of Roman works preserved here are negative traces of block extraction forming terraces in its westernmost

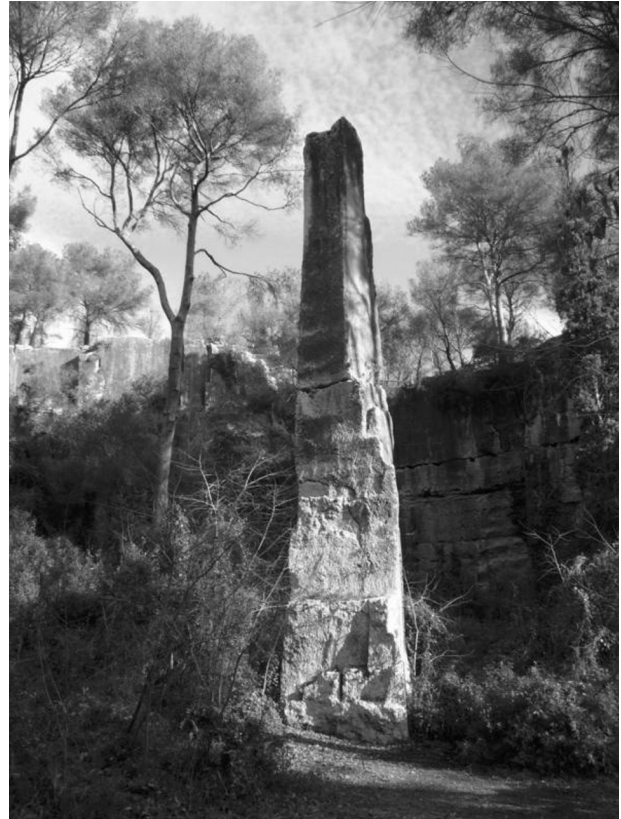


Fig. 3. The Needle of El Mèdol, which stands at el Clot (sector 1) (photo: A. Gutiérrez García-M.).

sector (Fig 5), but other areas seem to have been object of extraction in later periods. However, except for the westernmost terraces, it was almost completely covered by bushes; thus it was very difficult to examine.

Finally, most of **sector 4**, again west from the Clot, shows abundant traces of mechanic drill extraction. Thus, if traces of previous works had existed, they were lost due to recent quarrying.

The identification during a rescue excavation in 1990 of an area where the blocks were rough-hewn (IPAC 2006; LÓPEZ VILAR 1990) in the immediate surroundings of the quarry is worth mentioning **sector 5**. Together with the very recent test pits undertaken in 2013 (LÓPEZ VILAR and GUTIÉRREZ GARCIA-M. 2014) and archaeological excavation of the small artificial hill about 10 m high of roughly-hewn blocks, debris and soil as a result of the improvement works on the N-340 highway, they are the only two archaeological excavations undertaken to date in this area¹⁷. Other isolated finds (some blocks, capitals and column tambours) lo-

16. The spike-shaped parallel marks are especially regular and, together with the ledges, show that the blocks had an approximate height of 0.60 to 0.80 cms.

17. The excavation of the hill was undertaken between the end of 2008 and early 2009 due to the building a new road (Roig et al. 2011). Although it did not throw much light on its formation and date, it did allow a very detailed observation of the ashlar: many of them were quite irregular or broken, or had some sort of natural fault that made them unusable but others preserved most of the faces; and their sizes matched those at the quarry (they mainly ranged from about 1 to 1.20 m long x 0.40 to 0.70 m wide and 0.50 to 0.70 m deep, although there were also some smaller ones –of about 0.65 x 0.40 x 0.35 m). The discovery of graffiti and inscribed letters of Roman date, such as that of BVCOLI, on some blocks confirms an ancient dating for at least some of them.



Fig. 4. Several examples of extraction evidences at el Clot (sector 1) (photo: A. Gutiérrez García-M.).

cated next to the *Mas del Mèdol* also pointed to the existence of a workshop area near El Clot.

The new evidences at El Mèdol

In late July 2010 a violent fire broke out at the area of El Mèdol. Of unknown causes, the fire started in spot near the motorway and expanded towards the upper part of Sant Simplicí hill. Although it was quickly controlled by the fire brigade,¹⁸ it destroyed 4 acres of the property where the quarry is located. It affected the exterior eastern part of the site but not the inner part of the Clot (sector 1) nor the western area of the site (sectors 2 and 4).

Although a very sad episode in terms of natural and environmental damage, eventually it turned to be quite fortunate from the archaeological point of view as unknown perfectly-preserved evidences surfaced after the charred remains of the woods. Indeed, the potential of this sort of events (i.e. fire) has been well attested in previous cases, the closest and more significant one being that of the massif of Rodès, in the Eastern Pyrenées



Fig. 5. View of the terraces in sector 3. (photo: A. Gutiérrez García-M.).

(France) in 2005; there a fire exposed a large number of evidences leading to an extraordinary understanding of the human activities that took place there throughout the centuries, including quarrying.¹⁹

At El Mèdol, the fire exposed a large part of sector

18. It began the July 30th in the afternoon and was extinguished during the morning of the next day.

19. A monographic book resulted of the researches undertaken at the mountain after the fire (Passarrius et al. 2009), with specific chapters dedicated to the quarries of ornamental limestones (Martzluff, Giresse 2009) and the exploitation and use of building stone (Martzluff 2009).

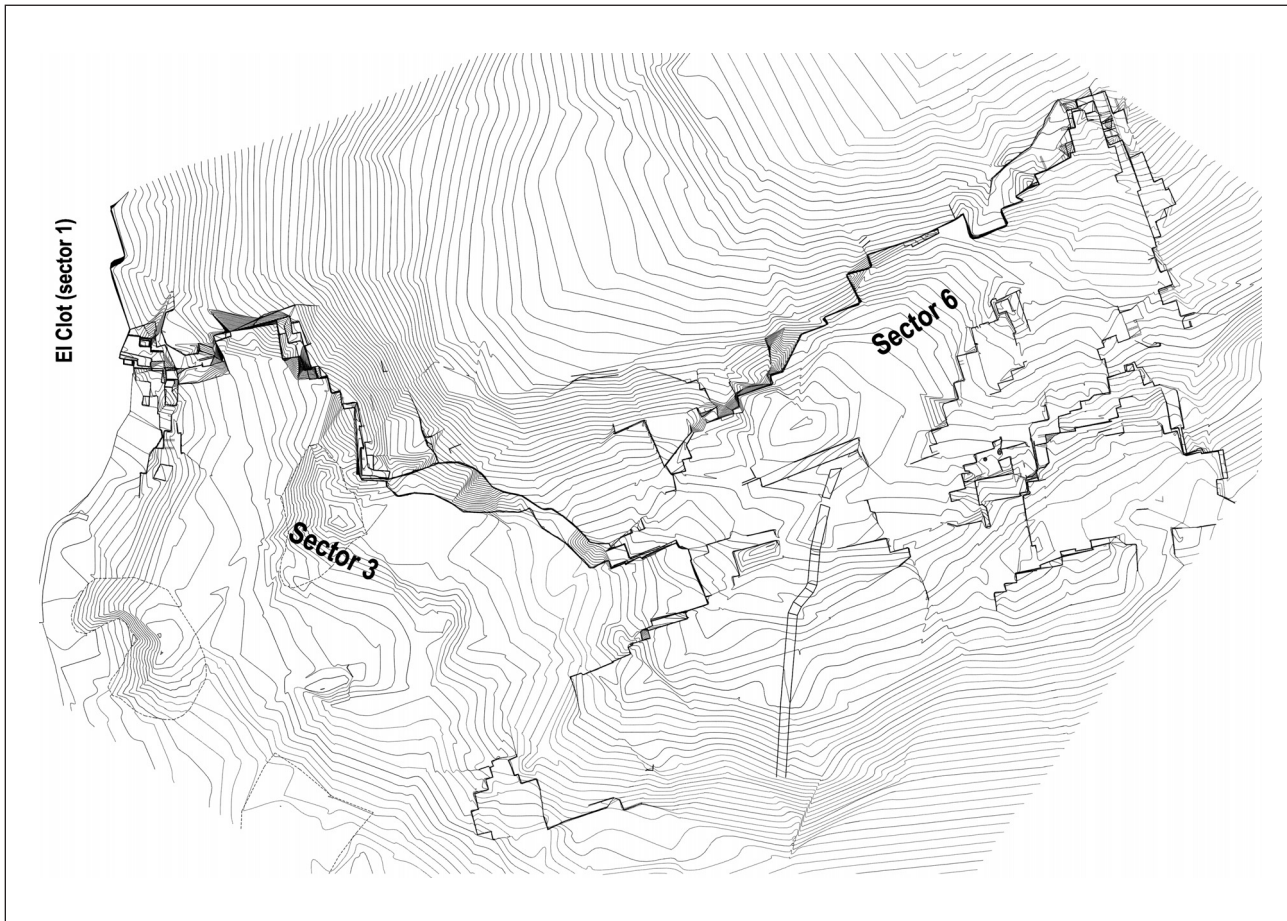


Fig. 6. Plan of the evidences surfaced thanks to the fire (sector 3 and sector 6). (plan: UDG/ICAC).

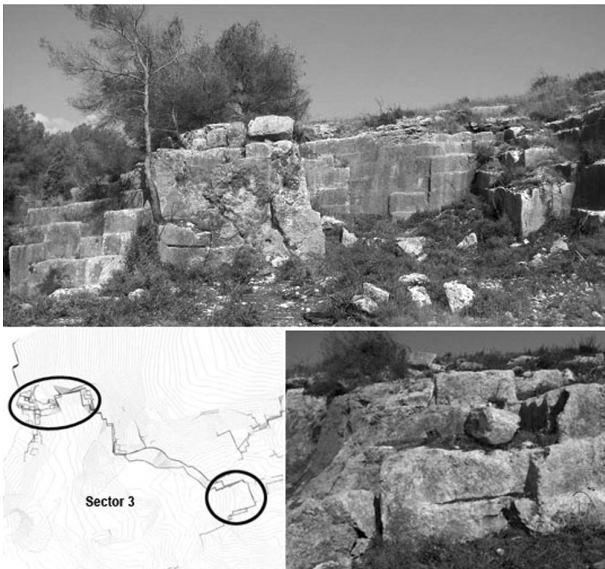


Fig. 7. Evidence of extraction at sector 3 (photos: A. Gutiérrez García-M. and A.Trullén).

3 that was almost completely covered by very dense vegetation which made it very difficult to access the fronts (even though its presence and outline could be still hinted) and most important, a whole area with pre-

viously unknown fronts. This whole area had been hidden behind so trees and spiky bushes and it was impossible to access. According to the previously established nomenclature, this whole new area has been named **sector 6**. After the clearing of the charred wood and bushes, it was possible not only a detailed exam of the evidences and fronts but also to undertake for the first time a whole and detailed drawing of these two sectors (Fig. 6).

The long front at **sector 3** is about 5 meters high and shows abundant ledges marking the rows of blocks extracted as well as some trenches on the upper part, but it becomes shallower towards its eastern end, where it turns into a sort of 1-1,5 m deep trench (Fig. 7). The negative imprints of the blocks indicate that here they tended to be more elongated than in those from the western end. However, there is an whole section of the front between these two points that shows no terraces neither smooth vertical walls. Moreover, there are some small but clear evidences of pneumatic drill holes making this part of the sector result of modern extraction. This is indeed supported by the image of an aerial photo taken in 1956-57 that clearly shows some paths leading to this spot, which proves that active quarrying was undertaken at this area not so long ago.

As for the new sector (**sector 6**), it covers a large area

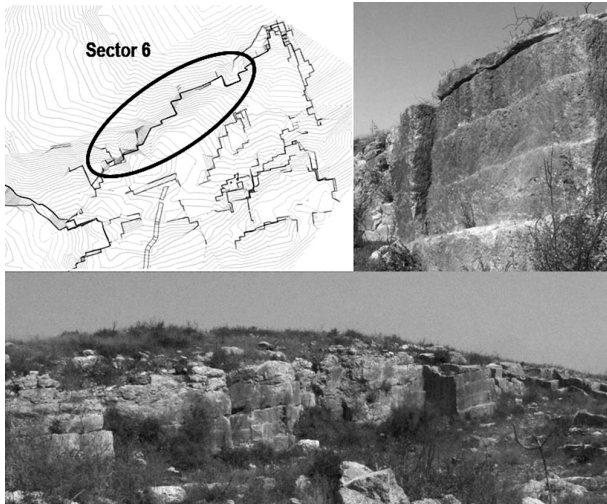


Fig. 8. View of the main front at sector 6 (photo: A. Gutiérrez García-M.).



Fig. 9. View of the strata and a default block in a debris mass at el Mèdol (photo: A. Trullén).

east from the previous one. Several and different evidences of quarrying were recorded here. A pile of abandoned blocks has been uncovered at the western end of the new sector, right before the 28 long, 10 meters high front, which is now the largest front outside the Clot at El Mèdol (Fig. 8). Abundant toolmarks and ledges, very similar to those at the nearby sector 3, are preserved at its surface yet the most outstanding evidences of extraction are on its eastern end, where not only some perfectly-delimited blocks were abandoned but also negative traces of the extracted blocks could be seen on the horizontal surfaces.

Moreover, the fire and the following clearing out of the charred wood enabled to see more clearly what was already glimpsed: the existence of various masses of debris in the surroundings of the quarry. Some of these piles of debris were already recorded in front of sector 3, but after the fire in the eastern part and due to the clearing of a long strip of land for fire protection in the area west from el Clot, some more of these were identified and it was possible to attest the real extent of these masses. Indeed, it is clear now that the microtopography of the site is defined by these heaps of debris, which are far more numerous and deep than previously thought. In some cases, they are not only composed by stone chips of variable sizes but also default or irregularly cut blocks, which can be unmistakably seen thanks to the fact that some of these little mountains were vertically slashed (Fig. 9).

However, another most important aspect emerged from examining the orography of these masses. While most of them, and particularly in the southwest and southeast part of the site they consist of more or less singular piles, in the surrounding the north limits of the Clot they are elongated and form some sort barrier. Although a more detailed recording of them should be

done before putting forward any suggestion, we do not believe it to be merely chance but the result of a very precise disposal of these discard products.

Finally, another advantage to the study of El Mèdol followed from the fire. To reduce the chances of future fires at inside the Clot, the city council ordered to cut some of the trees and most of the bushes that have grown there over the years. This enabled to see more clearly the southernmost point of the quarry (where the current access is), which some thought it could hide an old filled-up access. We know now that this is not so: El Clot was a pit-type quarry from which the blocks were probably lifted up at by means of cranes of similar devices or even along the ramp that, still nowadays, gives access to the inner part of the Clot.²⁰ Also, the presence of the blocks deposit strongly supports the assumption that they were taken out of this area of extraction here.

Other aspects: block transport from El Mèdol to Tarraco

In parallel, other aspects related with the surroundings of the quarry and its management were approached, and more specifically the issue of how the blocks were transported to Tarraco. The fact that the via Augusta runs right next to El Mèdol has traditionally lead to believe that this was the route taken by the blocks. However, given that the sea is only 300 m away, it seemed only natural to consider maritime transport as well and, therefore, the existence of a spot along the shoreline where the loading of the blocks took place.

To assess if the topography of the shoreline had changed significantly over the centuries is of key importance to identify the closest potential spots that would

20. Thanks a series of test pit undertaken in 2013 at the quarry, we confirmed that this ramp already existed in Roman times (López and Gutiérrez García-M., 2014).



Fig. 10. The surroundings of El Mèdol (map: orthophoto of ICC with modifications of A. Gutiérrez García-M.).

have been more convenient for the hauling of blocks into barges (or similar boats) to be shipped to the town. The existence of a detailed old map of the area, dating as early as 1777 has been of great help in this sense; it was drawn in a period in which the search for a spot in the coastline around Tarragona was surveyed with the possibility of building a new harbour for the city in mind. The promontory of Punta de la Móra, located in front of El Mèdol (Fig. 10) was a strong candidate, but when the project was finally abandoned, it left an exhaustive mapping of its features. Besides, running next to El Mèdol towards the sea, there is a small seasonal stream called Riera de La Móra. It flows into the sea on a sandy area between two rocky points currently called Platja de la Mo-

ra. The area where the stream finds the sea is shown as marshes in the 1777 map; they existed until the late 60-70s, when they were drained to build a housing development, but they are not likely to have been caused by the progressive filling up of this area since the seasonal stream of La Móra is too small and thus unable to carry enough sediment for that.²¹ Thus, the shoreline at this point is likely not to have changed significantly over the centuries. Besides, a route next to the seasonal stream is not likely to have been the most convenient path as any work on making it a transitable route would have been washed down every spring or autumn.

On the other hand, a beach called Platja de Calabecs, south from Punta de la Móra (Fig. 10), presents

21. Thus, the possibility of a spot closer to the quarry existing in Roman times is ruled out. Our warmest thanks to Dr. J.M. Palet, paleoenvironmental specialist at the Catalan Institute for Classical Archaeology (ICAC) for his highly interesting considerations and comments on the subject.

more promising features. In its rocky southeast end, there is a 4 m wide ramp carved on the rock about 4 m wide, that slowly goes down into the water,²² as if built for barges to get close enough to the shore as to be loaded. The rock here is shaped as in a sort of low jetty that seems to protect the ramp from the waves. Moreover, the finding of abundant Roman pottery and a marble moulding at this same beach²³, as well as the direct visual of this spot with Tarraco strongly suggest that the blocks from El Mèdol were brought to the town by sea and that it was done from here.

Research in progress at El Mèdol and its surroundings

As shown, our research at El Mèdol is still very much a work in progress. A detailed recording of the evidences at the newly uncovered fronts and new sector has been made in order to:

- 1) closely examine and record the blocks, trenches and wedge holes sizes, and to relate them with the others at El Mèdol,
- 2) see the orientation of the fronts as well as which ones were used up and which still provided good stone when extraction ceased
- 3) record in detail the presence and configuration of the debris masses.

All this will be key to help understand the progression of the quarry as well as the relationship between the new sector 6 and the already-known ones.

In parallel, a first dive in the area in front of the ramp has been undertaken in order to gather more data to confirm if it was indeed related to the hauling of blocks from El Mèdol to be transported to Tarraco. The unusual amount of sand covering the area, due to the sea currents at the time of the dive, did not allow a clear observation of the sea floor. However, scattered roughly rectangular blocks partly covered by sand were seen, which gives us some hope and grounds to plan an underwater survey that may shed some more light.

Furthermore, some other actions are planned to be undertaken in the Clot area in the near future. They basically consist on:

- a) a general, detailed recording of the site evidences, which will provide the first detailed plan of the whole Clot and surrounding sectors,
- b) a geophysics survey that may help us to elucidate how deep is the bottom of the quarry and thus, to be more precise on the amount of stone extracted, and

- maybe to locate areas where specific activities (such as metalworking) could have been undertaken, and
- c) a few small test-pits, in specific highly interesting places, such as the water-collecting deposit or the ramp, in order to have, if possible, archaeological evidence to date and understand the real purpose of these elements.

All these actions are included in a broader project intended to renew the museographic and walking paths to visit the site lead by ABERTIS, owner of the property where El Mèdol is located. Thus, the results of the research at el Mèdol will not only be a significant step forward in our understanding of this site from the purely scientific point of view but will also benefit the general public as they will be included on the museographic discourse of the Interpretation Center that will be built in the service area and that will articulate the whole visit to the site.²⁴

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22. This element, identified for the first time by Dr. J. López Vilar, co-author of this paper, is significantly called Roca Plana (meaning "flat rock", in Catalan).

23. This site is listed on the Catalan Inventory of Archaeological Heritage under the name "Platja de Calabecs". It has not been excavated but the pottery found on the surface points to a Late Republican-Early Imperial date (IPAC 2006).

24. The project of intervention was completed in late 2013 and open to the public in 2014. It displays up-to-date information on the monument, an provides an exhibition outline regarding Tarraco and the purpose of quarries in the Roman World, as well as an overview on the biotic factors of the area.

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