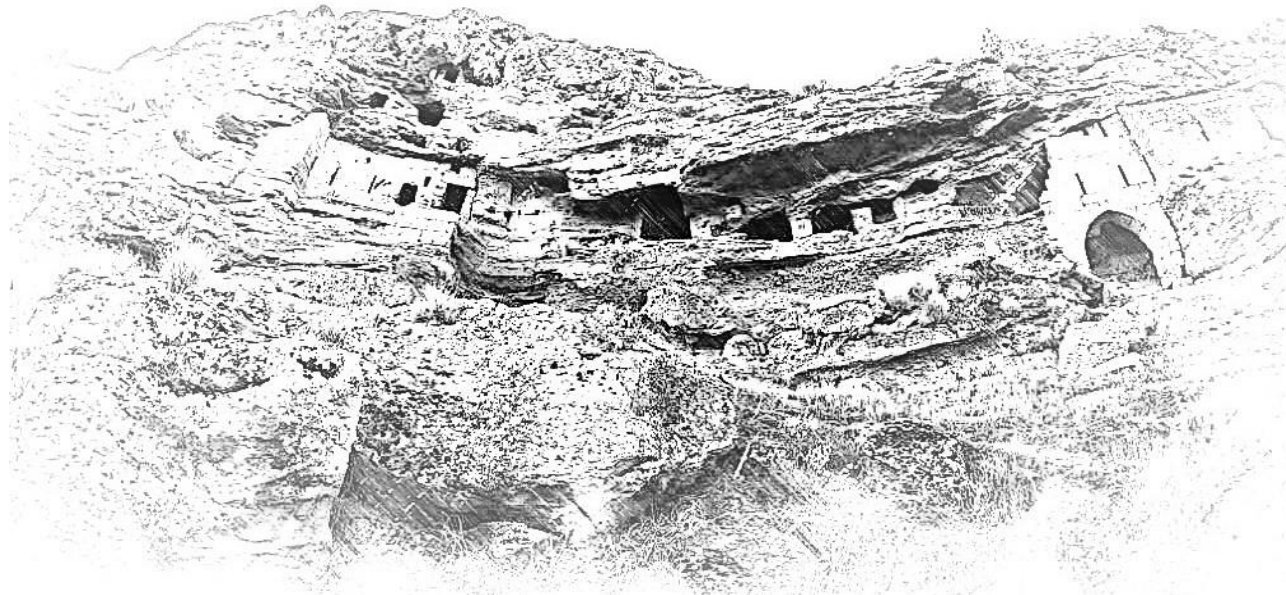


**PRELIMINARY REPORT OF THE FIRST INVESTIGATION
MAGHARAT AL-RAHEB, MAR-MAROUN AL-ASI
AIN AZ-ZARQA, HERMEL**

REPORT PREPARED BY
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OCTOBER 19TH 2018



ACKNOWLEDGMENT

The GERSL exerts its thanks & gratitude to the following persons for their support & guidance:

Mrs. Laure Salloum from the Directorate of Antiquities/ in charge of the Baalbek-Hermel area.

Father Joseph Moukarzel-OLM, Director of the Phoenix Center for Lebanese Studies at USEK University.

Father Lichaa Sarrou'- OLM, resident representative of the Lebanese Maronite Order-OLM in the Hermel- Qaa area.

Groupe d'Etudes
et de Recherches
Souterraines du Liban
Enregistr. Min. Int. 132/A.D. 12/5/1988



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HISTORIC OVERVIEW

According to tradition and accounts proper to the Christian Maronite church, the cave of Mar Maroun al-Asi once hosted a monastic community; some local tradition links the place to the very first spread of Christianity in Lebanon and refer to the site as the monastery where the founding father of the Maronite church, Mar Maroun, dwelled with his disciples.

The current state of historical & archaeological research is insufficient and additional scientific investigations are needed to trace back, throughout history, the origins and the timeline of the Cave of Mar Maroun al-Asi; the oldest recorded evidence discovered so far and attributing the cave to a monastic tradition, is what appears in the late 13th century Geography Book of Abul-Fida, where it was named as Magharat al-Raheb - Cave of the Monk- that overlooks the source of al-Asi River.

The cave was also identified as the “Cavea de Memboa”, cited in a 12th century Frankish charter, but then as a fortification donated in 1181 by Raymond III, count of Tripoli, to the Order of the Hospitallers of Saint John of Jerusalem. Al-Asi river, and more precisely the upper part of the Orontes, marked the frontiers of the crusader county of Tripoli and it was not uncommon however that military-religious orders were offered estates and/or military outposts very close to or behind enemy lines*.

**During the Crusades, in the 12th century, the Asi-Orontes River became the permanent boundary between the Principality of Antioch and that of the emirate of Aleppo.*

THE FRANKISH LEVANT DURING THE 2ND CRUSADE



HISTORIC OVERVIEW

Additionally, the presence of the Knights Hospitallers implies, de-facto, a chapel on-site; but where the chapel was placed? Was it built with stone masonry or carved in the rock? Was it destroyed in the aftermath of the 3rd Crusade, when the whole upper Orontes area reverted back to Muslim rule?

All these questions remain unanswered, and surely archaeological investigations could help to provide tangible evidences and shed light on this very important matter.

During the Ottoman period, in the 17th century, the Maronite Patriarch and scholar, Istfan ad-Dwayhi, mentioned in his Chronicles* a monastery named after Mar Maroun, positioned at the birth of al-Asi river, in the proximity of the Hermel area.

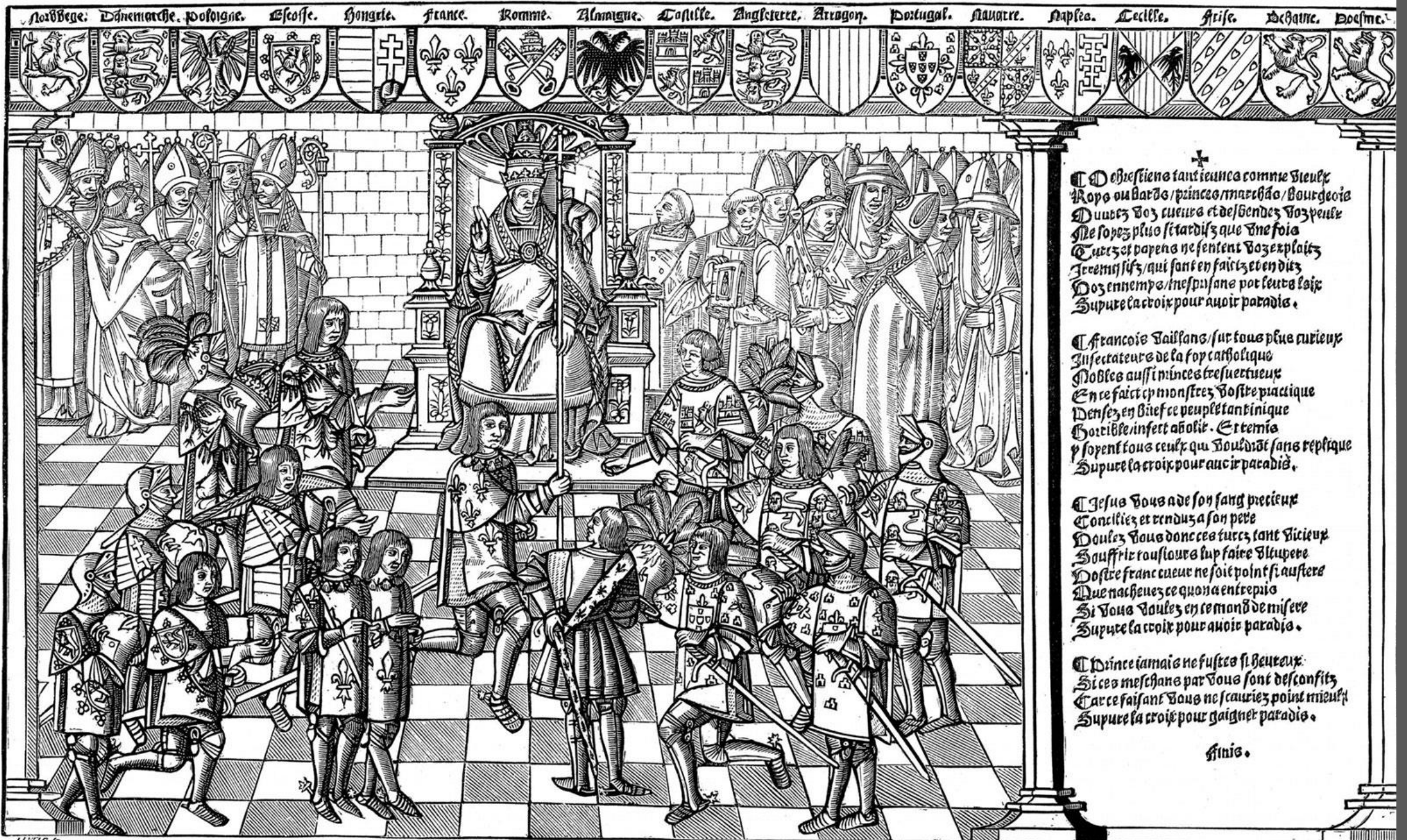
Afterwards, several geographers & travelers mentioned the cave briefly, mainly as part of their description of the Asi-Orontes river without naming it; however in the Late 18th century the British geographer, W. Barker, described the cave as being Magharat Mar Maroun; ever since, the same attribute was given to the site by later European travelers.

During the late 19th Century, and according to both oral and written sources, proper to the Lebanese Maronite Order-OLM, the site was briefly reutilized as a monastery before it fell into neglect and became a shepherd shelter during the Lebanese Civil unrest (1975-1990).

* Manuscript reference: Vatican Syriacque VAT-SYR 395

AL-ASI- ORONTES RIVER IN MEDIEVAL MAPS





O chrestiens tant ieunes comme vieulx
 Rops ou barbs / princes / marchā / Bourgeois
 Duncz voz cueurs et desbendez voz peulx
 Me fopez plus si tardiz que une fois
 Cuez et payens ne sentent voz exploits
 Jremissis / qui sont en faitz et en dūz
 Duncz ennemis / mesprisans por leurs loiz
 Supute la croix pour avoir paradis.

Francoīs baillans / sur tous plus curieux
 Infectateurs de la foy catholique
 Nobles aussi / princes tresvectueux
 En ce fait cy monstrez vostre piacique
 Densez en brief ce peupl tantinique
 Horrible / infect abolir. Et temis
 y soyent tous ceulx qui voudrāt sans reptique
 Supute la croix pour avoir paradis.

Jesus vous a de son sang precieux
 Conciliez et rendus a son pere
 Voulez vous donc ces turcs tant vicieux
 Souffrir tousiours luy faire blupere
 Vostre franc cueur ne soit point si austere
 Que nacheuez ce qu'on a entrepris
 Si vous voulez en ce mond de misere
 Supute la croix pour avoir paradis.

Prince iamais ne fustes si heureux
 Si ces meschans par vous sont desconfitz
 Car ce faisant vous ne sauriez point mieulx
 Supute la croix pour gaigner paradis.

finis.

OBJECTIVES OF THE INVESTIGATION

The Groupe d'Etudes et de Recherches Souterraines du Liban- GERSL, carried out a scientific investigation of the so-called “Deir Mar Maroun el-Asi”, a fortified cave partially cut in the cliff and partially built with stone masonry located in Hermel, at the Ain az-Zarqa, on the Orontes-Asi river.

This investigation came at the request of the Lebanese Maronite Order-OLM & the USEK University- the Phoenix Center for Lebanese Studies; the preliminary investigation was officially approved by the Directorate of Antiquities, Lebanese Ministry of Culture.

The Lebanese Maronite Order-OLM, is presently in the process of reviving the monastic tradition in the Hermel-Qaa area, whereas the Cave-site is seen as a key element: local tradition, at least since the early 17th century, links the cave to the early establishment of the Maronite community in Mount-Lebanon. Father Lichaa Sarrou'-OLM, was entrusted with this task, and he is currently in charge of the site.

The primary objective of the mission was to investigate the “Well”, dug through the bedrock inside the main hall; the secondary objective was to access the 2nd upper level (only reachable by climbing through an artificial chimney) and carry out a descriptive visual investigation.



GEOGRAPHIC LOCATION:

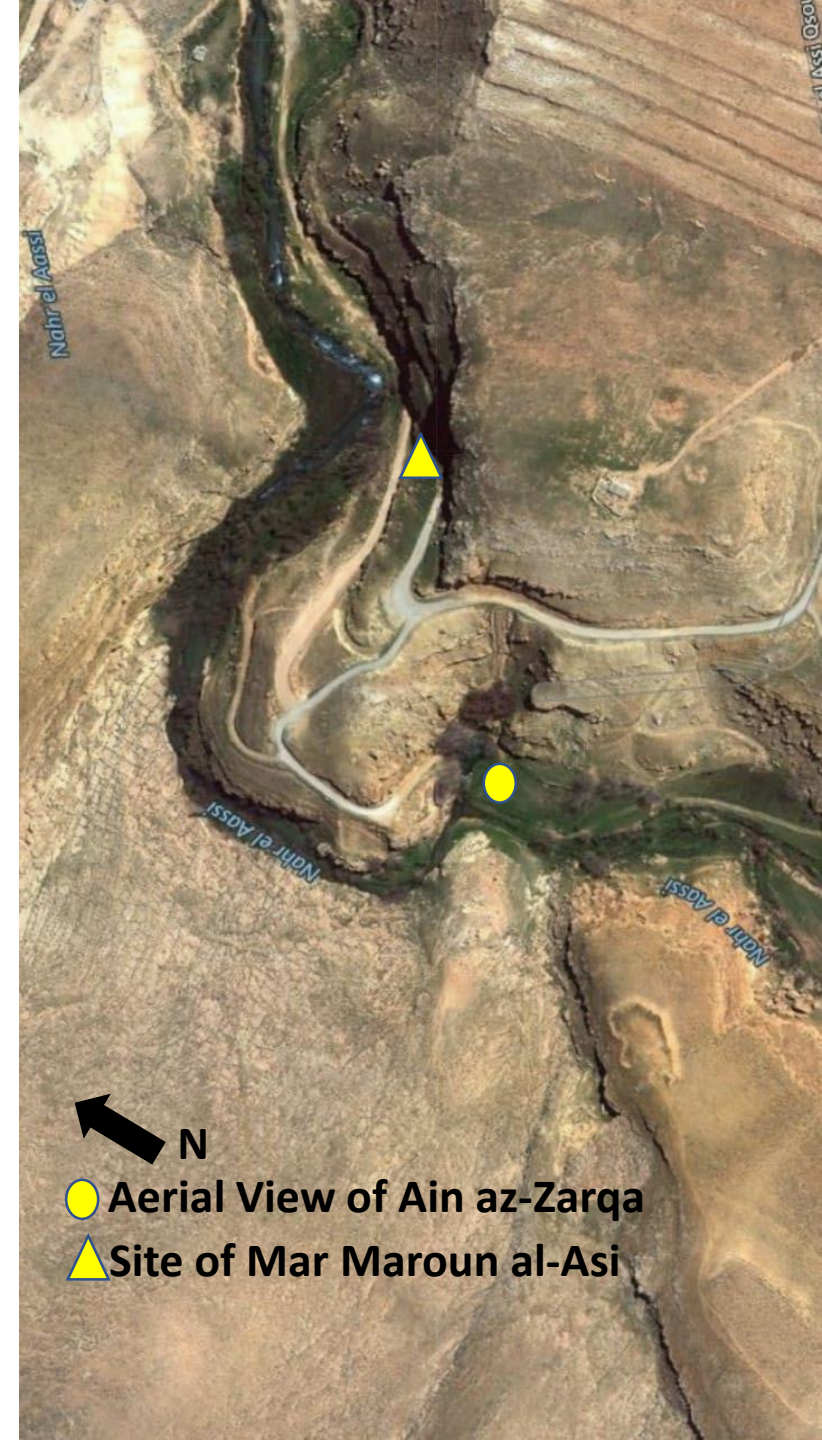
The Cave complex is located at an altitude of ~670m, inside a rocky prominence overlooking Ain Az-Zarqa, one of the main sources of the Asi-Orontes river in the Hermel Area.

- Cadastral Area: Mar Maroun 7, Mohafazat Baalbeck-Hermel
- Coordinates: 34.3523873898
36.3761746716

ACCESS:

The site could be accessed by taking the main road that leads to the town of Hermel (the Labweh-Qaa road); before reaching the pyramid shaped structure of Qamou' el-Hermel, a short detour to the west leads to few abandoned mudbrick houses and to the only road that leads down to the site and to the spring of Ain az-Zarqa.

The site is now under the mandate of the Lebanese Maronite Order-OLM and is enclosed with concrete & mesh wire fences; however, part of the hill is still privately owned and a small white building was constructed few years ago at the very top.



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● Aerial View of Ain az-Zarqa

▲ Site of Mar Maroun al-Asi

DESCRIPTION OF THE SITE

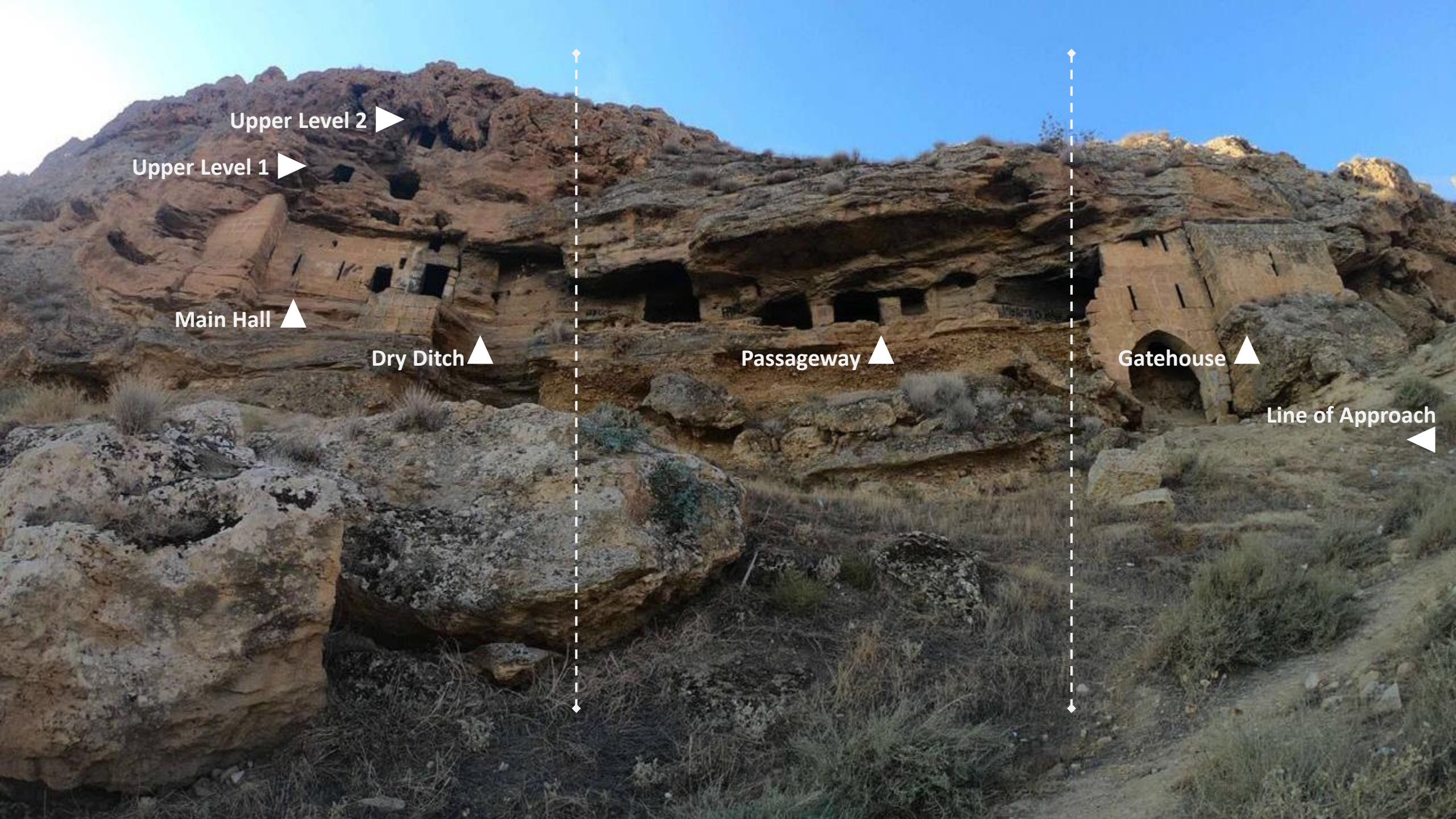
The cave is cut into karstified Cenomanian limestones through Neogene cover, in a small cliff overlooking Ain az-Zarqa, a first-magnitude karst spring, that gives birth to the Orontes river. The geomorphology of the area i.e meadows and dry highlands with the river located in a narrow strip of lowlands, makes the exploitation of the water resources a very difficult task to undertake.

Magharat al-Raheb/ Mar maroon al-Asi, presents a series of natural & artificial caves cut inside the hill and walled with large built stone structures. It is obvious that the place was perceived, at least in its current condition, as a military outpost, fact that is corroborated by the defensive planning of the whole site; this fortified cave was safeguarded through three lines of defenses:

- 1- The Gatehouse & the dry ditch
- 2- The Main Hall
- 3- The Upper Levels 1 & 2

The topography of the area, concealed from every angle, except from the western side of the hill, leaves only one line of approach through the rough terrains of the southern-western slopes.





Upper Level 2 ▶

Upper Level 1 ▶

Main Hall ▲

Dry Ditch ▲

Passageway ▲

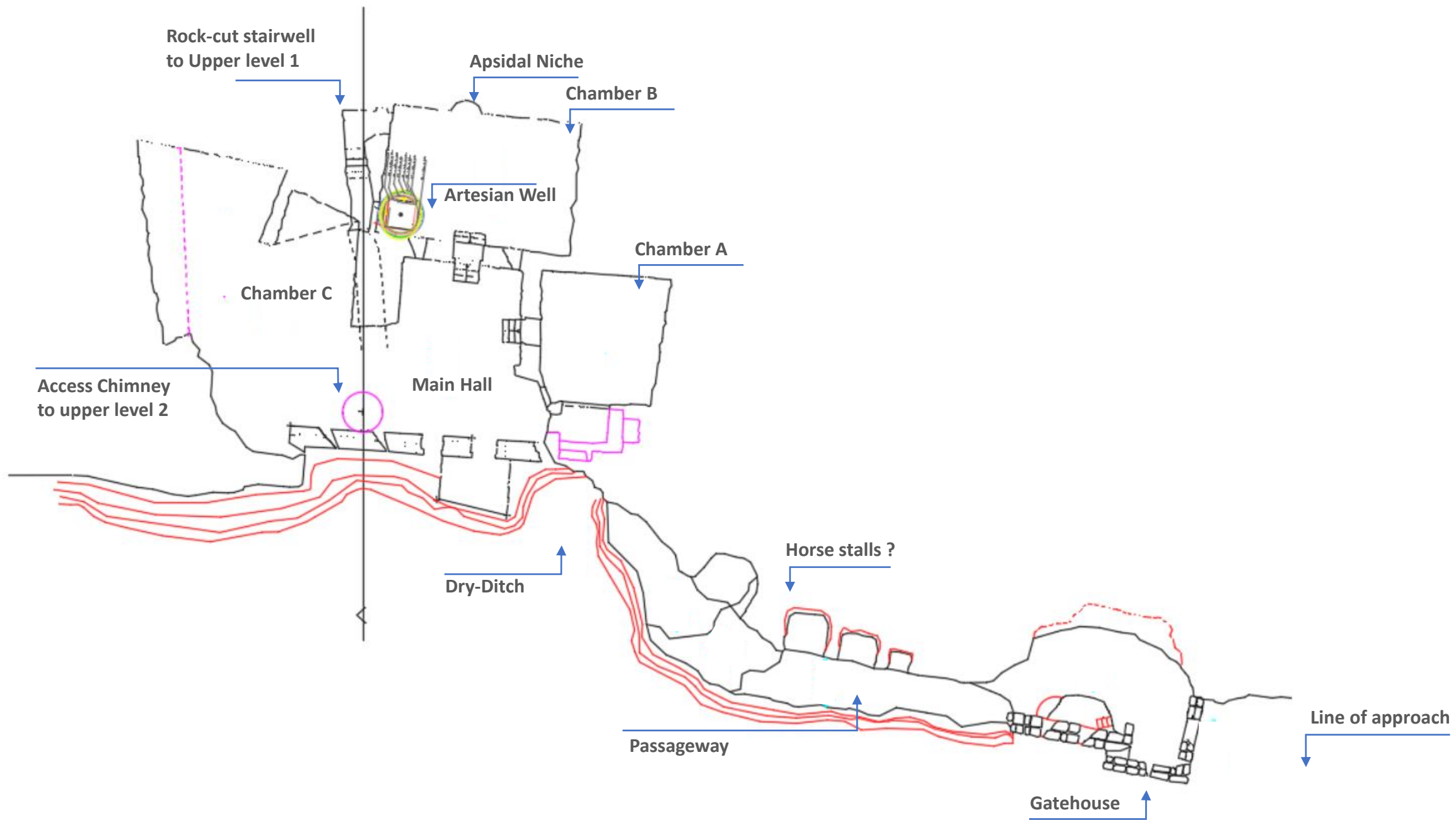
Gatehouse ▲

Line of Approach ◀



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MAR MAROUN AL-ASI - GENERAL TOPOGRAPHY MAP



DESCRIPTION OF THE SITE- CONTINUED

1- GATEHOUSE/ MAIN ENTRANCE:

A relatively large structure built with stone masonry against a natural cavity constitutes the “gatehouse”. To the south, the entrance is framed by four large mortared stone masonry (possibly a re-use of old materials) and a massive lintel. It is defended by a dry-ditch and one arrow-slit. The inner side of the entrance stones, square beam holes suggest that the entrance could have been locked when needed with a considerably sized wooden door held by iron studs.

The outer face of the Lintel presents an embossed rectangular shape, yet, it is very difficult at this stage to discern its nature; moreover, on the inner side of the entrance stones, one can distinguish Arabic characters, without however being able to read it nor determine its meaning.

The defensive wall to the North, is built with similar stones (45cm x 65cm), where four arrow-slits, one facing the line of approach to the west, while the other three face the eastern slopes. The defensive wall is segmented into two parts: towards the entrance, it sits directly on the bedrock, while the other part sits on a pointed arch, built with the same stone materials. The higher part of this wall shows a different type of stone masonry, built certainly at later stage. The joint between the two parts forms an angle with an arrow slit opened in-between (faces east).





VIEW OF THE ARCHED DEFENSIVE WALL-GATEHOUSE



VIEW OF THE INNER SIDE OF THE DEFENSIVE WALL & POINTED ARCH



VIEW OF THE MAIN ENTRANCE STONE FRAME & THE ARABIC INSCRIPTION



VIEW OF THE INNER SIDE OF THE MAIN ENTRANCE & THE ARROW-SLIT

DESCRIPTION OF THE SITE

THE GATEHOUSE / MAIN ENTRANCE- CONTINUED

A passageway with 2 square shaped cells and one chamber connected the Gatehouse to the Main hall.

On this passageway, the cells are cut through the cliff and could have been used to house horse stalls.

At the end of the passageway a Dry-Ditch, cut through the cliff, once lodged a wooden drawbridge, that could be lifted with a crank when attackers were nearby; the arched-shape dry-ditch ceiling was also carved in the rocks to facilitate the lowering/raising of the drawbridge.

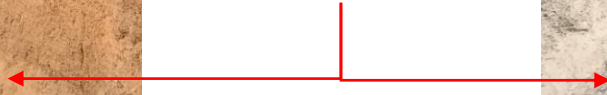
The dry-ditch connects the Gatehouse to the Main Hall.



THE DRY-DITCH LOOKING EAST TOWARDS MAIN HALL



DRY-DITCH



THE DRY-DITCH LOOKING WEST TOWARDS GATEHOUSE

DESCRIPTION OF THE SITE

2- MAIN HALL:

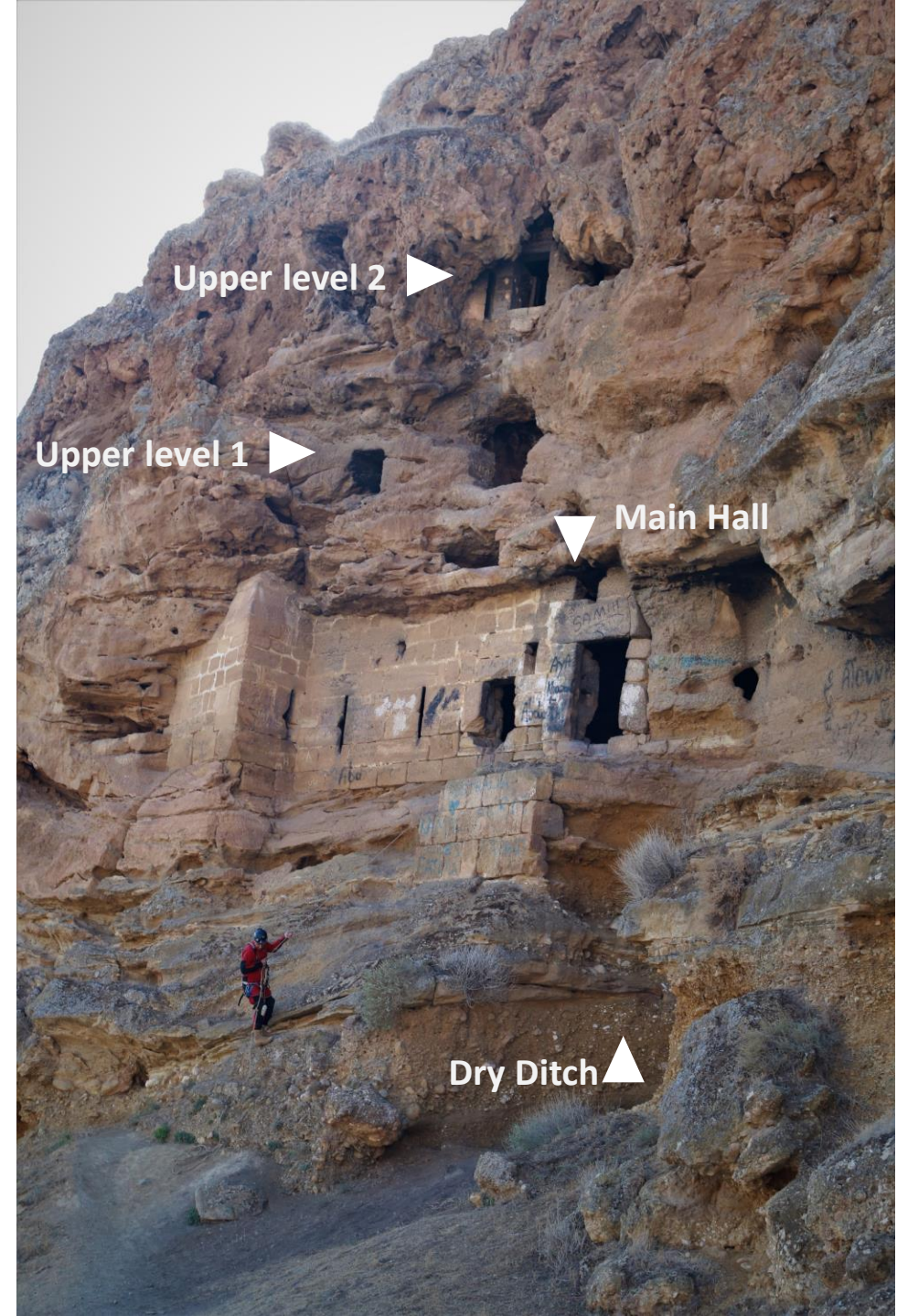
A built deck facing the dry-ditch and a doorway, lead to a large hall completely cut in the rocks with the exception of the built facade that is characterized with the same features as the gatehouse i.e. stone apparatus, shape & size of arrow slits.

The Main hall constitute a 2nd line of defense, and it's protected firstly by the dry-ditch and secondly by a series of 3 arrow slits built inside the defensive wall, all slanted towards the western Line-of-Approach (i.e gatehouse & dry ditch).

Separated from the Main hall, there are two chambers both neatly cut in the rock. To the west is chamber A, almost a perfect cube, with a short stairway leading to it. Inside chamber A and at the northern corner, small niches of different sizes were made in the bedrock, and may have had a function that is yet to be studied.

To the South, and facing the doorway is Chamber B, an easy to get to chamber through a short stairway; this chamber presents four important features:

- a. An apsidal niche oriented to the South
- b. The Artesian Well, located at the North-Eastern corner
- c. The secondary defense arrow-slits
- d. The stairwell leading to the upper levels



DESCRIPTION OF THE SITE

MAIN HALL- CHAMBER B- CONTINUED

a. An apsidal niche oriented to the South:

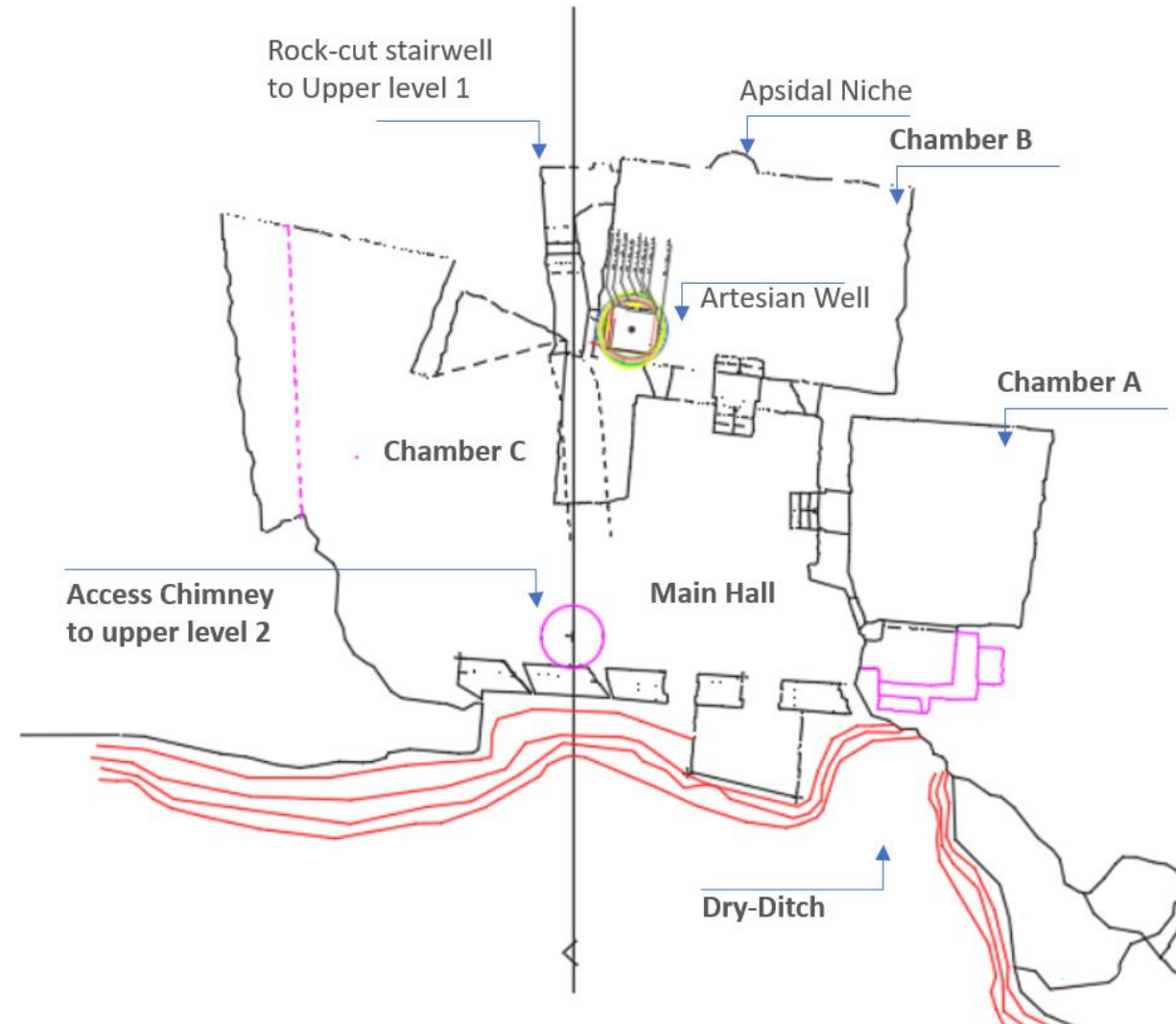
The niche, shaped in half-dome, is cut at an elevated heights of 1.5 meters above floor level; the function of this niche is hard to determine, but its position & orientation i.e to the South, could put forward a Mihrab, suggesting a possible presence of Muslim troops after the cave was taken by force from the Hospitaller Order.

b. The Artesian Well, located at the North-Eastern corner:

The well is cut, through relatively soft limestone rocks, into a straight cylindrical shaft of an average diameter of 1.2m.

The mouth is a massive rocky square of 1.2m x 1.2m with 2m in depth; it is closed today by a thick mesh manhole metal cover.

The maximum depth reached during the exploration is 36.3 meters; however, the total depth of this well is yet to be verified, as deposits- modern and archaeological- need to be cleared out in order to reach the bottommost.



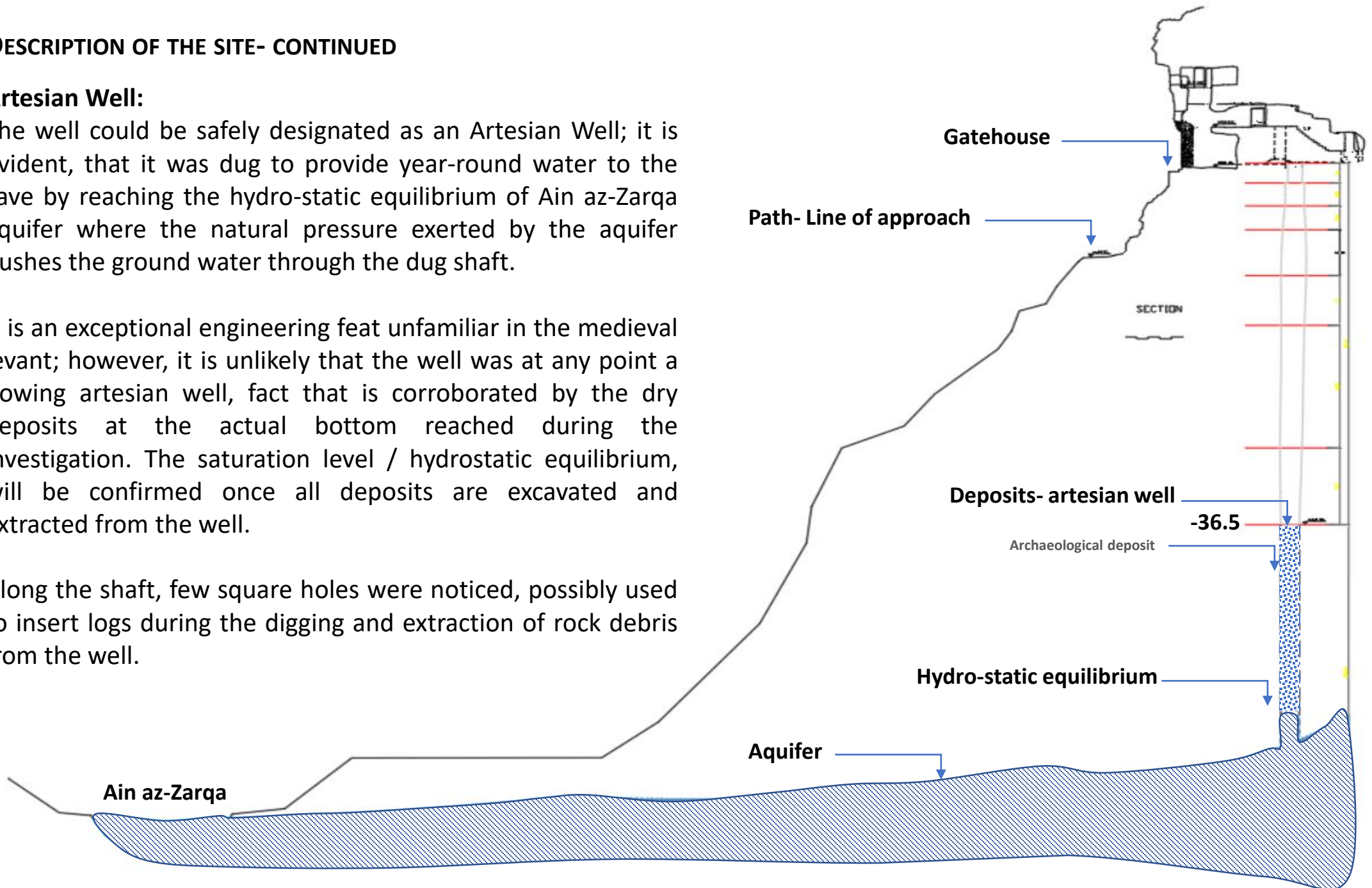
DESCRIPTION OF THE SITE- CONTINUED

Artesian Well:

The well could be safely designated as an Artesian Well; it is evident, that it was dug to provide year-round water to the cave by reaching the hydro-static equilibrium of Ain az-Zarqa aquifer where the natural pressure exerted by the aquifer pushes the ground water through the dug shaft.

It is an exceptional engineering feat unfamiliar in the medieval levant; however, it is unlikely that the well was at any point a flowing artesian well, fact that is corroborated by the dry deposits at the actual bottom reached during the investigation. The saturation level / hydrostatic equilibrium, will be confirmed once all deposits are excavated and extracted from the well.

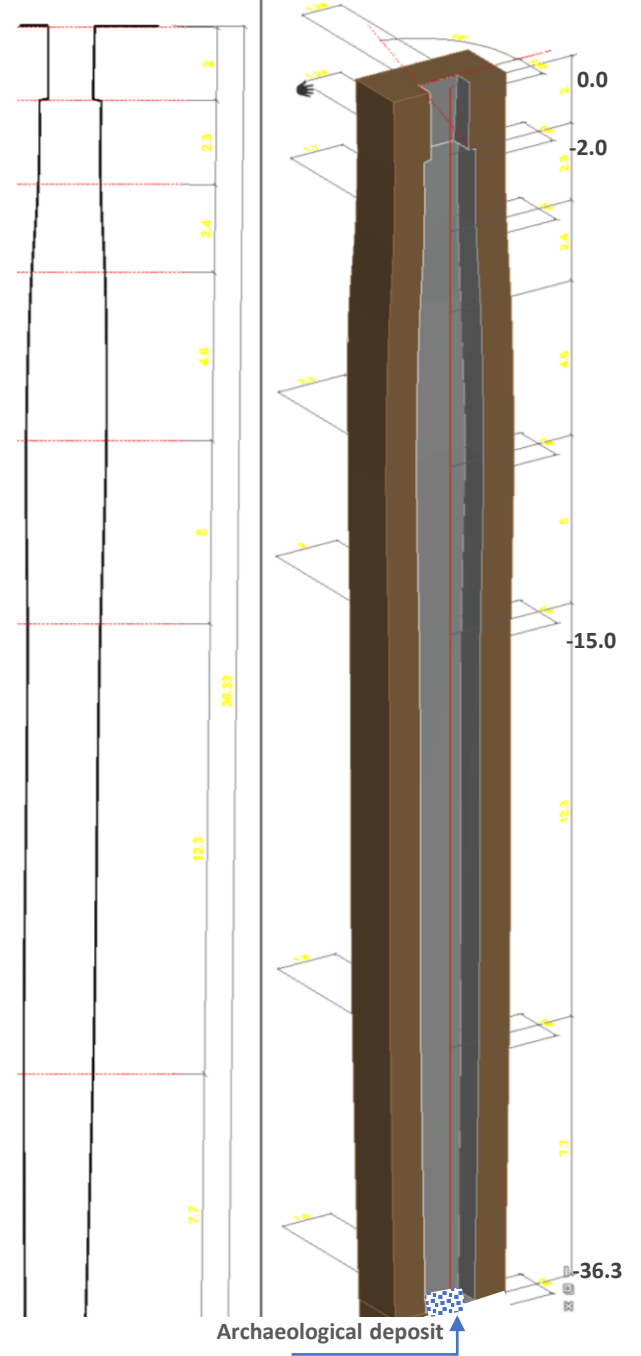
Along the shaft, few square holes were noticed, possibly used to insert logs during the digging and extraction of rock debris from the well.





MOUTH OF THE “ARTESIAN WELL”

TOPOGRAPHY OF THE “ARTESIAN WELL”



DESCRIPTION OF THE SITE- CONTINUED

CONSIDERATIONS REGARDING THE ARTESIAN WELL & ITS GEO-HISTORIC SETTING :

Head quartered at the Grande Chartreuse, the monastic-cenobitic Carthusian order* was behind the engineering feat of digging artesian wells; in fact, the word artesian comes from the former French province of Artois, where Carthusian monks created since 1126 a water system for consumption & irrigation, based on the natural pressure exerted by the aquifer to push ground water through the dug shaft i.e artesian well.

Additionally, the access chimney to Upper level 2, presents similar features to the artesian well, specifically the cylindrical shaft of an average diameter of 1,2m and the similar stone-cutting marks, suggesting that the same skilled workforce made the 2 shafts i.e the Frankish troops stationed at this outpost.

At this point, the state of the current research do not allow for a comprehensive analysis as more field investigations & historic research are needed; however, we can safely say that both upper level 2 & the artesian well were made sometime around the same time, and could be considered as a terminus ante quem i.e the 2nd half of the 12th century (most likely after the 2nd crusade).

* Founded in 1084 by Bruno of Cologne; it's also worth noting that the Pope Urban II was one of his Pupil.



DESCRIPTION OF THE SITE

MAIN HALL- CHAMBER B- CONTINUED

c.The Secondary defense arrow-slits:

On each side of the doorway leading inside the Chamber B, two arrow slits are cut into the wall. These two arrow-slits constitute a secondary defense, in case of a breach by the assailants inside the main hall.

The doorway is fitted with rock-cut sockets on either side of the entrance, most likely to place wooden brackets and secure the door.

d.The Stairwell:

From the eastern face of chamber B, a stairwell was cut through the rocks leading to the upper levels (1&2). The entrance was most likely sealed with a wooden door in case of an attack or a breach into Main-Hall & Chamber B. The Stairwell is narrowly cut leaving barely enough room for one man to move up or down.



DESCRIPTION OF THE SITE- CONTINUED

3- UPPER LEVELS

a. Upper level 1:

The Stairwell connects the main hall to this upper level 1. There are two access doors, one at each end of the stairs, with sockets cut into the stony frame, to place a door beam and to secure the passage.

At the end of the stairwell a rock cut couloir leads straight to the access chimney of the 3rd level and to the doorway leading to a relatively mid-sized rock-cut chamber walled with stone masonry that overlooks the raven.

A central opening, rectangular in shape, was built within the wall, allowing for a perfect eagle-eye view over the line of approach and the valley.

The rock surface of the cell are covered by two layers of plaster:

- a. the first layer was applied directly on the bare rocks and is made of a fine white lime mixed with hemp fibers.
- b. the second layer is made of rough clay mixed with dry hay and covers completely the first layer. Some areas of the white plaster, of the 1st layer, are exposed and damaged by fire & modern graffiti.



DESCRIPTION OF THE SITE- CONTINUED

3- UPPER LEVEL 2 & THE ACCESS CHIMNEY

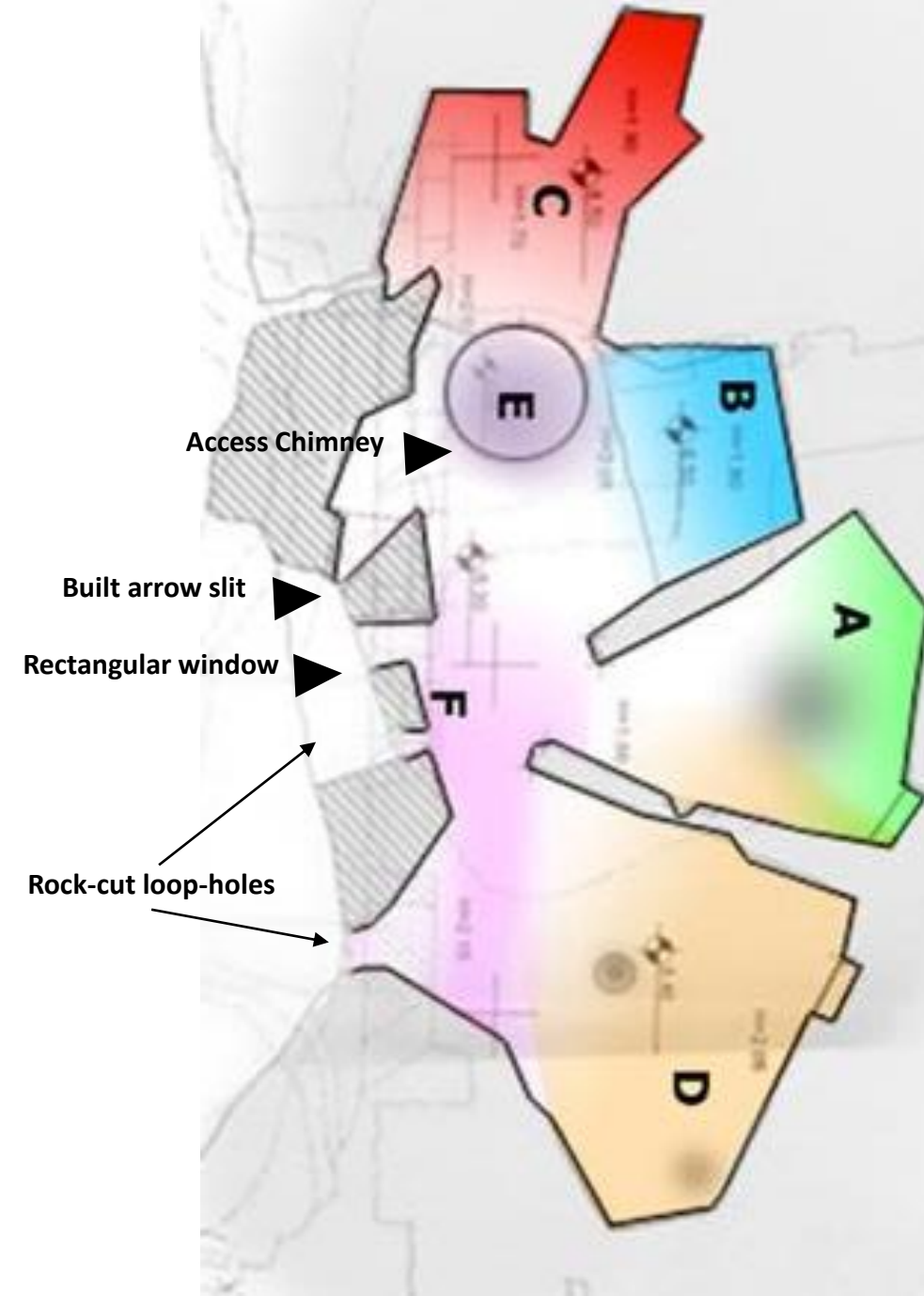
The upper level 2 is divided into 4 uneven cells cut through the rocks. This level could only be accessed by climbing through the artificial access chimney cut through the ceiling of Main Hall & upper level 1.

The Access chimney, of 10m in heights, shows similar technical features in the way the rock was extracted (stone-cutting marks & morphology). The Chimney was certainly covered for both safety & security, as confirmed by four deep slits, cut at equal distance inside the stony rim, to support the brackets of the cover.

The only built structure is the wall that shields the upper level from both external assaults and severe weather. The stone masonry is relatively smaller in dimensions compared to the defensive walls of the Gatehouse or to that of the Main hall; this front wall keeps two openings: a window, rectangular in shape and an arrow slit. A series of small square holes around the frame of the window, suggest that the opening was secured with metal rods inserted inside the masonry.

The arched arrow-slit is neatly built; one Key stone holds an incised epsilon shaped “Stone Mark”, suggesting that it was built by a Frankish mason.

Currently, a thorough visual investigation is very difficult to carry out; a thick layer of guano covers the surface floor and most of the partitioning walls are blemished with black smoke.



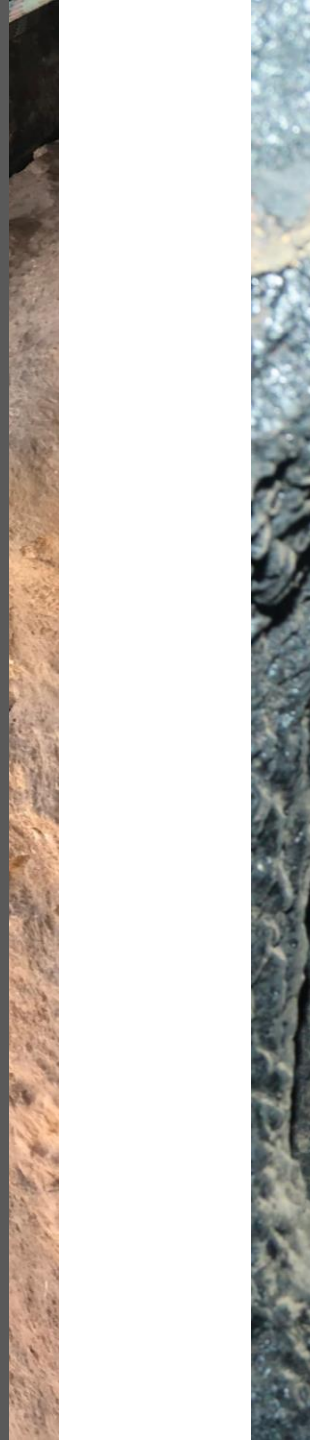
VIEW OF THE UPPER LEVEL 2







VIEW OF THE UPPER LEVEL 2 – EXTERNAL FACE



VIEW OF THE ACCESS CHIMNEY- FROM MAIN HALL THROUGH UPPER LEVEL 1



CONCLUSIVE REMARKS :

The Cave of Mar Maroun al-Asi presents a relatively well preserved built & rupestrian heritage. The cultural elements of the site are for the most part existent, and the original character – a combination of built structures & troglodytic dwelling- are yet very tangible, but in a precarious state of conservation that requires immediate attention.

However, the visual integrity of the site, and the landscape around it, is compromised with concrete structures in the immediate vicinity. Protection measures must be envisaged.

It is recommended to carry out an in-depth comprehensive scientific investigation and archaeological surveys, notably inside the main hall and within the outer perimeters of the site. The Artesian well is a key element with the high possibility of preserved archaeological deposits.

NOTE ON FORTIFIED CAVES

During the course of medieval Lebanon, fortified caves were important elements of the defensive strategy used by the Crusades: strongholds, mostly located at border areas very close to enemy lines and chosen for their ease of defense, the low monetary cost to build/prepare them but most importantly, for their strategic location e.g to connect with larger garrisons and/or to overlook a main road from a sheer cliff or a rocky outcrop.

Some remarkably preserved examples of such outposts can still be seen in North Lebanon such as Magharat ad-Delmas or in the Beqaa valley such as Magharat Zallaya*.

Other examples were studied in Syria, on the upper Asi- Orontes itself, such as the cave of Shqif Darkush or Magharat Balmis.

*The Zallaya cave appears in the treaty made between the Mameluk Sultan , al-Mansour Qalaoun, and the Franskish rulers of the city of Akka in 1283. Ref. Taki-Eddin Ahmed MAKRIZI, *Histoire des Sultans Mamelouks*, Quatremere, T2, Paris.

MAGHARAT AD-DELMAS, WADI QADISHA



BIBLIOGRAPHY

Pierre ABI-AOUN, Fadi BAROUDY & Falah WAKIM, La grotte forteresse de Zellaya, *in al-ouat-ouat*, Vol 13, Lebanon, 2005.

Pierre ABI-AOUN, Voies caravanières et grottes fortifiées du Mont Liban à l'époque médiévale, *dans Chrétiens et Musulmans en Méditerranée médiévale*, Poitiers-France, 2003.

Balazs MAJOR, Medieval Cave Fortifications on the Upper Orontes Valley, *Muslim Military Architecture in Greater Syria*, edited by Hughes Kennedy, Leiden-Boston, 2006.

Pauli, SEBASTIANO, *Codice Diplomatico del Sacro Militare Ordine Gerosolimitano Oggi di Malta, Diploma di Raimondo Conte di Tripoli* , An. 1181 Tom 4, Diplom. 14.

Paul DESCHAMPS, *Les châteaux des Croisés en Terre Sainte; La défense du Comté de Tripoli et de la Principauté d'Antioche*, Librairie Orientaliste Paul Geuthner, Paris, 1973.

Frances GIES & Joseph GIES, *Cathedral, Forge And Waterwheel: Technology & Inventions in the Middle Ages*, Harper Perennial, 1995.

Bertrandon DE LA BROQUIERE , *Le Voyage d'Outremer en 1459*, publié et annoté par Ch. Schefer 1820.

W. Burckhardt Barker, Journey to the Source of the River Orontes in Syria, in September, 1834 in The Journal of the Royal Geographical Society of Vol. 7, London, 1837.

Ali IBN Al-ATHIR, *The Chronicle of Ibn al-Athir for the Crusading Period from al-Kamil fi'l-Ta'rikh*, translated by D. S. Richards, London 2008.

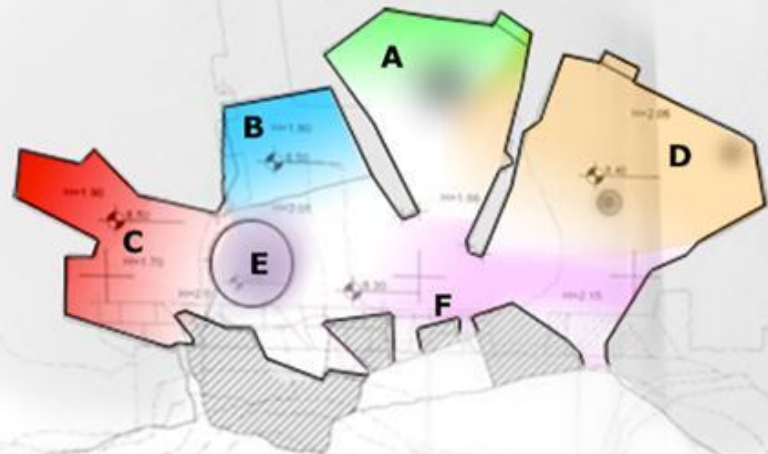
مار اسطفان الدويهي, تاريخ الطائفة المارونية, تحقيق رشيد الخوري الشرتوني, بيروت 1890 .

مار اسطفان الدويهي, اصل الموارد, الكتاب الأول, تحقيق الاب أنطوان ضو, اهدن 1973 .

أبو الفدا, كتاب تقويم البلدان, دار الطباعة السلطانية, باريس 1850.

يحيى بن سعيد الانطاكي, تاريخ الانطاكي المعروف بصلة تاريخ اوتيكيا 1067 م, تحقيق عمر التدمري, جروس برس, طرابلس 1990.

عبد الغني النابلسي, التحفة النابلسية في الرحلة الطرابلسية, تحقيق هيربرت بوسه, مكتبة الثقافة الدينية, القاهرة.



By GERSL
Site photos

Groupe d'Etudes
et de Recherches
Souterraines du Liban

Enregistr. Min. Int. 132/A.D. 12/5/1988



الجمعية اللبنانية
للأبحاث الجوفية
علم وخبر ١٣٢ / أ.د. ١٩٨٨/٥/١٢

