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WP/CEAUP/#2020/3

## **Archaeological Survey Report on the Western Sahara (2020)**



\*CEAUP ( II – The Archaeological Survey Report)

\*\* CEAUP ( I - Context of the Report)

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## I Context of the Report

### 1. The CEAUP website project for Western Sahara

The former colony of the Western Sahara remains one of the oldest decolonization conflicts. It was a war-zone for 16 years (1976-1991). Since 1991 a political stalemate is going on which has prevented the establishment of effective heritage and development policies in the region.

Therefore, Western Sahara cultural and natural heritage is currently at a high risk of loss. In the Moroccan-occupied area, deliberate policies leading to the misappropriation and fading away of Saharawi identity were often criticised by international observers. On the Saharawi Arab Democratic Republic (SADR)-controlled area, desert conditions eroded all kinds of sites and conflict risks add to the natural ones. Since this part of the W. Sahara is still a potential military theatre, there are few permanent infra-structures such as roads, urban or social equipments. Part of the ground is still mined and debris of military equipment (land and airplane bombs not exploded) are commonly found. It is a scarcely populated area: only SADR officials (civil and military), the MINURSO personnel (alleged responsible of several acts of looting and vandalism) and Bedouin nomadic families dwell therein. Most of its valuable archaeological heritage is NOT registered neither protected. Natural Heritage is also unknown too: there are no maps of water resources neither a draft inventory of its ecosystems. Effective policies of infra-structural and agronomical support urgently need cartographic information.

The importance of the Western Sahara historical heritage can be induced by the scale of the findings of late missions. Some of them in few weeks got to the register of 400 Pre-historical sites (stone tumuli, bazinas, stone crescents, mounds). Archaeology of modern and late modern times has done almost no field work in W. Sahara. Plus, Saharawi authorities and almost all scholars have complained about the defective international cooperation among the several missions which have been working in the SADR controlled-W. Sahara.

Considering the urgent need to identify and register the Saharawi heritage and of doing so under a international coordination among research teams, the Centro de Estudos Africanos da Universidade do Porto (CEAUP) launched a project of a RDBM web site in order to create a NATIONAL database for the Heritage of a W. Sahara. In order to discuss it with the SADR



authorities and also to start collecting data, a CEAUP mission worked in W. Sahara during the months of January-February 2020: in work sessions with the SADR authorities in the Tindouf camps and on the ground in the Tifariti area.

## 2. Milestones of the CEAUP mission

In January 29th, the CEAUP mission presented the draft idea of the website to the SADR authorities, namely the Ministry of Culture and the Ministry of Development. The Saharawi agreed with the general idea, gave positive contributions and informed the CEAUP team of the importance of their own research to the stockpile of information of the future website. It was decided that after the mission field work, a second meeting would possibly allow for a broader overview of the project.

The following day, January 30<sup>th</sup>, the CEAUP mission met the History Committee of the SADR in a work session organised by the Dean of the University of Tifariti, Jatari Amdalah. Information based on local past researches on material and immaterial culture were added to the website project.

The field work was undertaken by the CEAUP mission during the following 10 days in the liberated territories. On the way back to Tindouf, on February 8th, a final work session took place with the Ministry of Culture staff (Minister Kauf Mamoun and director Tiba Chagaff). The CEAUP delegation informed the SADR authorities that the experience of the field mission had allowed the team to add new contributions to the Project. The Ministry stated its willingness to collaborate. Thus, it was decided that CEAUP should develop a draft model of the website within the following 6 months so that it could be discussed and validated by the SADR government and the Scientific Units interested in research programs in the SADR area.



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## II – The Archaeological Survey Report

In order to report the outputs of the 1<sup>st</sup> CEAUP archaeological mission in W. Sahara and also to allow for a more comprehensive awareness of the urgency of identifying and registering its vast heritage, CEAUP publishes now the mission's Archaeological Survey Report. Geographical and Botanical data collected during the same mission will be later published under the framework of the web site.

The mission's choice was to survey intensively a narrow area of the SADR-controlled area. The criteria for the selection of the field work were determined by scientific and logistic constraints, as it will be shown below in the report. It was agreed that the selected area should be surveyed under a interdisciplinary methodology and it would be later decided to start the survey in the Tifariti region.

With the organising of the website in view, the team also decided to register findings within all time frames, which implied that registers would be made of sites from prehistoric time to contemporary years.

### 1 - Team Composition

The scientific team that was composed of five researchers, as listed:

- André Serdoura: Archaeologist
- Augusto Lança: Agronomist
- Carmo Matos: Archaeologist
- Maciel Santos: Historian
- Roland Afungang: Geographer and Data Analyst

The CEAUP team was joined by a SADR team composed of officials in charge of transport, security and logistics:

- Mohamed Fadel: local coordinator and responsible for logistics





- One driver/guide (asked to remain anonymous): driving, logistics and field identification of places and features
- Brahim Bah: security and local identification of places and features
- Yarba Haimadaha: security and local identification of places and features
- Molai Lamin: security and local identification of places and features.

## 2 – Object and Methodology

It was decided that the team would consider as research sites both previously known ones and newly found locations occurring during the mission. All types of sites should be object of accurate mapping and of a short but precise description.

This meant that the mission would register all archaeological locations throughout the same procedures: by providing geo referenciation to all of them and by organising a file for each archaeological site. Photographic registers would be included in every file.

An acronym was created for each regional area of findings, and an identification number was attributed to each site, namely the number of the GPS waypoint.

Thus, every site was to be recorded as such:

- Acronym + year + Number of waypoint

The acronyms used were:

- UTIF (for Uad Tifariti)
- UANANIA (for Uteit Aannannia)
- RKS (for Erqueies plateau)
- SLG (for Sluguiat)
- LA-GUI (for La Guilla)

Example: the big «crescent» structure was recorded as UTIF.20 WP59, being located in the area of Uad Tifariti and having been given the waypoint number 59.



## 2.1. Types of sites

The places worth of interest were recorded and divided in the following types of features:

- Rock art: containing figures sketched and painted on the rockface.
- Funerary structures: tombs, mounds and “crescent” like structures were included.
- Rock shelters: with no painting but with evidences of structuralized features, such as walls and corridors.
- Military (contemporary) features: «dugouts», trenches and buildings related to the war against Moroccan occupation
- Irregular areas: with include material concentration points or unidentified features.
- Dispersed materials: here we include tools and other materials on the surface that were recorded were found.

As the team took care not only to record ancient features, but also contemporary ones, structures such as to the old base camp at Uteit Aannannia, dated from the lates 70’s to early 90’s was given a proper register.

Although most places have changed along historical times, the team listed them according to its main features. So, a shelter including both Neolithic wall paintings and contemporary «freedom fighters»’s grafitties is listed as a *rock art site*, being its main chronology **Neolithic** and being described as having attached characteristics belonging to other chronological periods.

## 2.2. Transliteration issues

There was also the question as how to write the names which were translated from Arabic. From the beginning of the mission it was clear that there were differences of spelling for the same place. So for instance, in professor Andoni Buruaga’s work we can read the place name *Erkeiez* (Buruaga, 2008, pp.44), or *Sluguilla* (idem, pp.49). However in David Suarez we see



a different spelling for *Erqueyez* (Suarez, 2016, pp.58), and Salvatore Garfi's Zemmour (Garfi, 2014, p 73) is Zemur in Buruaga's work (Buruaga, 2008, pp.24).

There was also the problem of the small toponym which had not yet been shown in large charts and maps.

For the big areas and regions it was decided to use the spelling shown in the original Spanish cartography (*Mapa de las provincias de Ifni Y Sahara y del archipelago de Canarias*) as the standard report (and website) spelling.

### 2.3. Selection of the field area

The criteria for the selection of the area to be researched was based upon a rough division of scientific labour resulting from the activity of previous archaeological missions.

In order to implement the methodology mentioned above and also to avoid wasting time and resources on already described sites, the team relied on knowledge of the local oral memory.

The combined effect of these criteria resulted in the selection of an area in the Tifariti district which encompassed roughly 70 square kilometres. This meant that time restrictions would prevent a thorough intensive type of survey but the ultimate goal of organising a rough file for every visited site was kept.

The base of operations was at Tifariti, on a building used to shelter visitors, next to the «downed MIG» monument. The two all-terrain vehicles (team+security vehicles) would be prepared to leave early. The work area was mostly to the northwest of Tifariti.

The places visited were identified as:

- Uad Tifariti: Several features were associated with this Uad, that stretches for several Kms; not having a more specific topographic name, the team used the Uad Tifariti name reference. The acronym for the features associated with this Uad was: UTIF.20 + number of waypoint



- Uteit Aannannia: Another stretch of Uad, with several sites associated. Most of the work on this area took place around two inselbergs (side by side) easily visible at a distance. The acronym for this place was: UANANIA.20 + number of waypoint.
- Erqueiez plateau: located slight to the northwest of Uad Aannannia, this plateau produces most of the rock art recorderd. The acronym chosen was: RKS.20 + number of waypoint.
- Sluguia: here the team tested the reccording and georeferencing steps, and was the first place visited. It is located northeast of Tifariti, towards the border with Mauritania. This area was visited by other teams, and little time was wasted her. Yet, for methodological purposes, the acronym given was: SLG.20 + number of waypoint.
- La Guilla: Last place visited, while heading towards the border, back to Tindouf. The features there were identified by the following acronym: LA-GUI.20 + number of waypoint.



1 - Detail of the survey area. There were four groupings of archaeological sites and features. Source: Google Earth.





2- The Sluguiat and La Guilla nucleus (V and VI) in relation to the general survey area. Sluguiat served as a test run for the team. Sluguiat is a known rock art place, and the information gathered here was done so as to acquaint the team to the methods in the field. Source: Google Earth.

In order to tell the two main sets of sites apart, the Uad Tifariti area was divided in two nucleus (I and II). In the case of Uad Tifariti, the findings were found through a large area that belonged to the same dry river bed. In order to tell the two main set of sites, the Uad Tifariti area encompasses two nucleus, identified as I and II.

## 2.4. Routine procedures

The routine procedure was established as it follows: the team would begin each journey about 8:00 am and would head towards locations within short (maximum 40 minutes) travel distances.

Once in location, a quick perimeter was created to acknowledge the dispersion of features and materials. As this area was delimited, the team would record the GPS location, photograph the visible features and proceed to a short but accurate description.



## 2.5. - Materials and Equipment used in the field mission

Because of logistic problems, namely the Algerian restrictions to the crossing of sensitive material along international borders, scientific tools to be used by the CEAUP team were relatively few and simple. Still we may add that no survey tasks of any kind were jeopardized by material defaults.

The full list of the survey gear included:

- GPS system Garmin ETREX 20X (1x)
- Cameras: Canon IXUS 185, plus mobile phone cameras.
- 1 m scales (2x)
- North arrow (1x)
- small chalk board (1x)
- Note book equipment (notebooks, pens, chalk, compass etc.)
- Binoculars from Nikkon (1x)
- Laptop computer

Support Equipment for logistics

- Toyota Landcruiser (1)
- Consumables (water, food, tea etc.)
- Plastic bags (for surface materials)
- Kitchen equipment

## 3 - Short Review of Litterature

As mentioned above, already several works have been underway on the Western Sahara region, most of them done by Spanish Reseach Units that have surveyed and even excavated some sites. It is then vital to mention the information we have come across during this exploratory process.





The most active professional in the area at this time is Professor Andoni Saéns de Buruaga, from the University of the Basque Country, who has been active in the area since the early 2000's. Several publications of professor Buruaga focus on the Tiris region (south of the Western Sahara). The most importance are «Contribucion al conocimiento del pasado cultural del Tiris, Sahara Occidental. Inventario del patrimonio arqueologico» (2008) and «Nuevas aportaciones del pasado cultural del Tiris, Sahara Occidental. Inventario del patrimonio arqueologico» (2014), in wich he delivers not just an historic view of the Sahara and of his field work, but also an index of identified sites. Several other Buruaga's papers were consulted. We also list the paper of Nick Brooks, Joanne Clarke, Salvatore Garfi and Anne Pirie «The Archaeology of Western Sahara: results of environmental and archaeological reconnaissance» from 2009. it shows their outcomes of research within the area around Wadi Tifariti (9.5km<sup>2</sup>) which encompass «411 funerary and other monuments or sites [...] including ten lithic scatters, some with pottery» (Brooks et al, 2009:921). The materials collected are mainly attributed to the Holocene, and are described as microliths, blades and other small edged lithics (Brooks et al, 2009:921). According to the researchers, these kinds of tools have been found across the Sahara all the way south to the Sahel. Ceramics have also been identified in the region, identified as early Holocene, with stamped zig-zag decoration and burn marks. Other pottery shards are of the latter periods (5th millennium more or less) coinciding with the increasing aridity of the Sahara. During the middle and late Holocene the Wadi Tifariti territory was used as a funerary landscape, where stone tumuli, bazinas, cescents, mounds etc have been found (Brooks et al, 2009: 927-930).

From 2006 is the article featured in Conimbriga jornal by Sofia Fonseca Braga, «Arqueologia no Saara: uma aproximação ao deserto». This is a more generic paper, regarding several findings in the Saharan desert, with more affinity to the Nile region. Sofia Braga mentions the Aterian industry and its similarity to the Levallois lithic carving technique, represented by several kinds of scrapers, hand axes, arrowheads from the upper paleolithic (Braga, 2006: 364). The researcher also describes the passage to the more humid Holocene period and decrease in nomadic occupation (11.000 – 8.000 bp more or less). One of the problems that the article presents is the definition of Neolithic, when applied to the Saharan occupations. It is also





important to note, as Sofia Braga warns, that these are surface findings, and as we mentioned before, it is not so much the problem of context, but the fact that these findings are more exposed to the elements and to people who seek a simple souvenir and plunder the country's heritage (Braga, 2006:371).

The Elia Martinez Quesada report (2008) is also very helpful to the understanding of the types of rock art and shelter that may be found in the Western Sahara. In the article titled «Arqueología e Género en el Sáhara Occidental» from 2008 describes paintings from the Taffoni (shelter nº16) regarding the antropomorphic figures in relation to the fauna that is also there presented. This rock shelter situated on the western ridge that surrounds Wadi Tifariti shows several overlaying motifs that are associated with social activities and/or elephant hunting. The author describes how the complex is divided into three different levels, and in all of them we see either anthropomorphic figures (whether male or female is yet to assert), fauna (elephants, antílopes and/or possibly canines) and hand prints (Quesada, 2008:21-25). There were also two overlaying moments identified in this complex, which suggests that the shelter was occupied and modified in at least two distinct moments, that should relate to a recent prehistory (by the style in which the supposed female figures and archer are depicted in one of the panels it is suggested Neolithic period) and by the quantity of fauna we are looking at a period in time where the Sahara was a more of a Savannah like place (Quesada, 2008:26-27). Like most of the papers read, Quesada too mentions the precarious conservation of the site.

#### 4 – Environment

As stated before, the survey took place mostly on the area around and to the West of Tifariti. The team was guided to the places by the field coordinator Mohamad Fadel, a driver and escort team, and proceeded to the surveying of areas of interest.

The environment is rough and dry, with little vegetation, apart from shrubery and occasional *Accacia* trees. It has no water sources on the surface. The landscape is generally flat with some sparse *inselbergs*. There are several Uad branches, with soft sand bottoms criss-crossing each other, and wide stretches of flat rocky terrain.





One of the landmarks is the Erqueiez plateau, a long «table» like elevation, around 25 km from Tifariti, running from Northeast-Southwest. Another exceptional location (which was visited) is the pair of *inselberg* at Uteit Aannannia: two conical shaped mountains, the Eastern one larger than the Western one, both rocky, with little soil and vegetation.

## 5. Archaeological Sites – General Description

On both places, Erqueiez and Aannannia were found most of the archaeological features listed. The other visited areas have little visual references, one being close to a well, and the other being close to Tifariti (to the West) and having structures known by locals.

We mention lastly the features at Sluguiat and La Guilla, both close to the border and already described by previous Research teams. Still they were included in the present survey list.

The sites were attributed to several categories, as listed above: Rock art sites, Funerary structures, Military/Contemporary structures, and irregular areas.

The rock art sites include rock engravings (these at Sluguiat) and rock/shelter paintings (identified at Erqueiez). The engravings are found on open air, on the edge of what appears to be an ancient lake, now completely dry. This it seems to be supported by the visual representations present. All of them depict extinct fauna since long on these parts of the Sahara. The images show species of Rhinnoceros, Ostriches and Antelope and give evidence of how the area was once abundant with wildlife. The paintings at Erqueiez tell a similar tale, although with painted representations. The topics are similar: images of Antelope, Giraffes, Asses and even anthropomorphic/humanoid figures are clearly visible. If the images were painted while the animals were being observed, they show a very diversified ecosystem.

The engraving technique used at Sluguiat produced a deep, well defined groove, only slightly polished by wind erosion. No other form of engraving was identified (dots, scratch lines etc.). At Erqueiez the most common form of painting is with a reddish brown/ocre pigment, probably rich in iron oxide. There are however other types of pigments, such as light gray to black ones. This could denote a preference for ashes and charcoal.

The figures are either completely filled (silhouetted) or have the outline, with internal details (such as the spots in the giraffes, the back coloration of the donkeys, or the hues in the oxen).



Among the most unique representations found are some mounted human figures (riders), a human figure at a strange pose (suggested birth representation) and humans with tools (bows?). The funerary structures are abundant. Most of them have a «mound» like profile, being built with piled rocks. The structures have no mortar to hold the elements together, but have accumulated sediments all over the years. They have different sizes, going from small, 0.50m tall ones, to 2m tall ones, with a diameter of about 3 to 4 meters. The plant shape is almost always sub circular, although a few present rectangular shape.

The other type of funerary structure is a «crescent» shaped one, know colloquially as «boomerang» structures. They are also of different sizes, ranging from small, 5m long features to a record case with 500 m long. They share the same kind of architecture, having only piled rocks for the main body, the extensions being made with rock alignments. These alignments can be as subtle as a few rocks here and there or as well defined as two parallel rows, with the middle filled with pebbles/gravel, its allowing visibility by satellite.

Burials can also be of a sub rectangular form, more like modern/contemporary graves, built with a ring of small stones, maybe a head and foot stone. None of them are isolated, always found in pairs or more. The mounds are clustered and usually there are several mounds, with one crescent nearby.



## 6 - Inventory

### 6.1 – Rock art site

**Acronym:** SLG.20 WP14

**Location:** Sluguiat (nucleus V)

**Chronology:** 5th to 3rd Millenium/Neolithic

**Description:** rock art complex, made on horizontal slabs. The lines are carved with a more or less deep groove, and have wildlife representations. The animals that were identified are: camels, giraffes and antelope.



3 - WP14

**Acronym:** SLG.20 WP16

**Location:** Sluguiat (nucleus V)

**Chronology:** 5th to 3rd Millenium/Neolithic

**Description:** rock art complex, with representations of wildlife carved in vertical slabs, with a more or less deep groove. The animals identified are oxen and there is na anthropomorphic figure.



4: WP16





**Acronym:** SLG.20 WP17

**Location:** Sluguiat (nucleus V)

**Chronology:** 5th to 3rd Millenium/ Neolithic

**Description:** Grouping of medium sized surface rocks, with several shallow grooves running along the same direction. Possibility of also beeing wind erosion markings.



5: WP17

**Acronym:** SLG.20 WP18

**Location:** Sluguiat (nucleus V)

**Chronology:** 5th to 3rd Millenium/ Neolithic

**Description:** rock art complex, made up of several horizontal pannels/slabs, with wildlife representartions carved with a more or less deep groove.

There are some unidentified markings, the rest were identified as oxen and antelope.



6: WP18





**Acronym:** SLG.20 WP20

**Location:** Sluguiat (nucleus V)

**Chronology:** 5th to 3rd Millenium/  
Neolithic

**Description:** rock art grouping,  
carved on the horizontal surface of  
the boulders. The representations  
are of extinct local wildlife.  
Identified animals are: rhinoceros  
and antelope.



7: WP20

**Acronym:** SLG.20 WP21

**Location:** Sluguiat (nucleus  
V)

**Chronology:** 5th to 3rd  
Millenium/ Neolithic

**Description:** rock art  
complex, carved on horizontal  
slabs, with a more or less deep  
groove, with representations  
of extinct local wildlife.  
Identified figures are of:  
rhinoceros and ostriches.



8: WP21

There is one unidentified figure.



**Acronym:** SLG.20 WP23

**Location:** Sluguiat (nucleus V)

**Chronology:** 5th to 3rd Millenium/  
Neolithic

**Description:** Single boulder with carved rock art. The lines are more or less deep, and represent extinct local fauna. The animals that were possible to identify are antelope and an ostriche. The ostriche is carved upside down in relation to the antelope.



9: WP23

**Acronym:** RKS.20 WP83

**Location:** Erqueiez (nucleus IV)

**Chronology:** 5th to 3rd  
Millenium/Neolithic

**Description:** wall painting of wildlife, located in a rock shelter on the Erqueiez plateau. The paint is of a reddish/ocre tone. Small representation of na antelope. The shelter is facing East of the plateau.



10: WP83





**Acronym:** RKS.20 WP84

**Location:** Erqueiez (nucleus IV)

**Chronology:** 5th to 3rd  
Millenium/Neolithic

**Description:** Shelter pannel with several rock paintings. The figures are painted in a reddish/ocre tone, and are located halfway up the wall and near the ceiling. The figures represent horsemen, oxen, giraffe and an apparent hand print.



11: WP84

**Acronym:** RKS.20 WP85

**Location:** Erqueiez (nucleus IV)

**Chronology:** 5th to 3rd Millenium/  
Neolithic

**Description:** Shelter pannel with rock paintings. The figures are painted with a reddish/ocre tone. They are located halfway up the wall, and consist mainly of hand prints and fauna (oxen, antelope and equine).



12: WP85



**Acronym:** RKS.20 WP88

**Location:** Erqueiez (nucleus IV)

**Chronology:** 5th to 3rd  
Millenium/ Neolithic

**Description:** Rock paintings located in a shallow rock shelter on the East side of the plateau. The figures are painted with a reddish/ocre tone, but are quite faded.



13: WP88

**Acronym:** RKS.20 WP 89

**Location:** Erqueiez (nucleus IV)

**Chronology:** 5th to 3rd Millenium/  
Neolithic

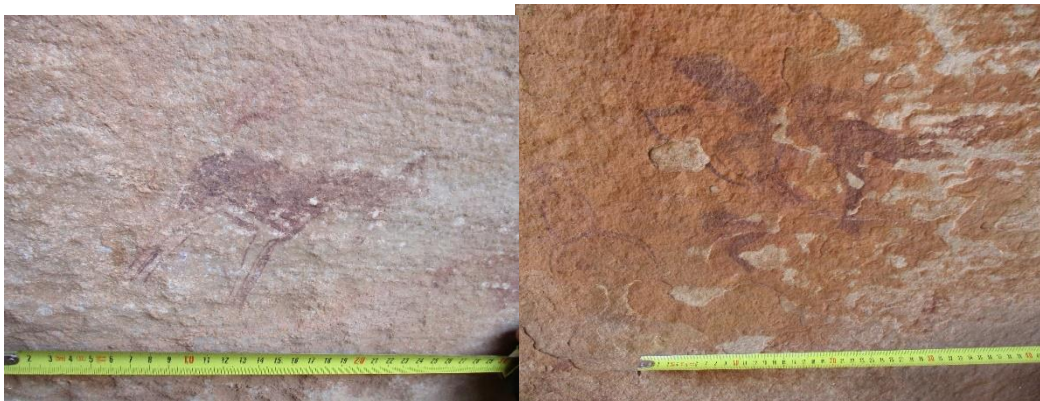
**Description:** rock paintings in shallow rock shelter. Located on the East side of the plateau, looking over a dry riverbed. Some of the figures are of a reddish/ocre tone while others are presented in black. There are stylized



14: WP89

human figures, one with spread legs /squatting (maybe birth scene?), others with bows. There are also representations of fauna (ass).





15: WP89 details

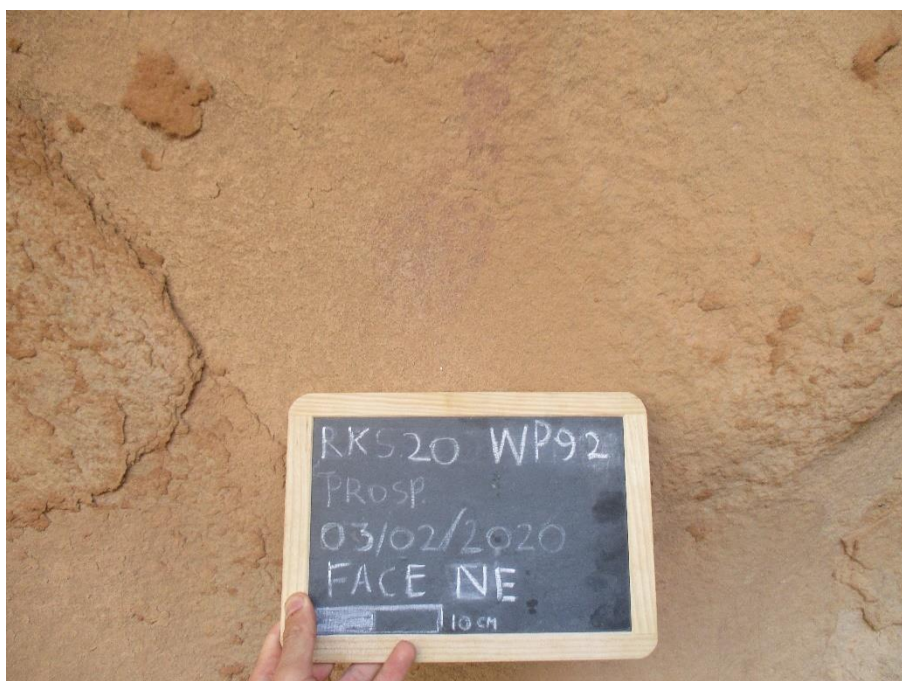
**Acronym:** RKS.20  
WP92

**Location:** Erqueiez  
(nucleus IV)

**Chronology:** 5th to  
3rd Millenium/  
Neolithic

**Description:**

Shallow rock shelter  
with wall painting.  
The figure is mostly  
faded and badly  
conserved (due to



16: WP92

exposure). Located  
on the East side of the plateau, facing Northeast.





**Acronym:** RKS.20 WP98

**Location:** Erqueiez (nucleus IV)

**Chronology:** 5th to 3rd Millenium/ Neolithic

**Description:** Shallow shelter with wall paintings. The figures are of a reddish/ocre tone, with some beeing gray and black (use of charcoal?). Mostly located half way up the wall, they include stylized human figures, dots and unidentified blurs.



17: WP98



18: WP98 shelter



**Acronym:** RKS.20

WP99

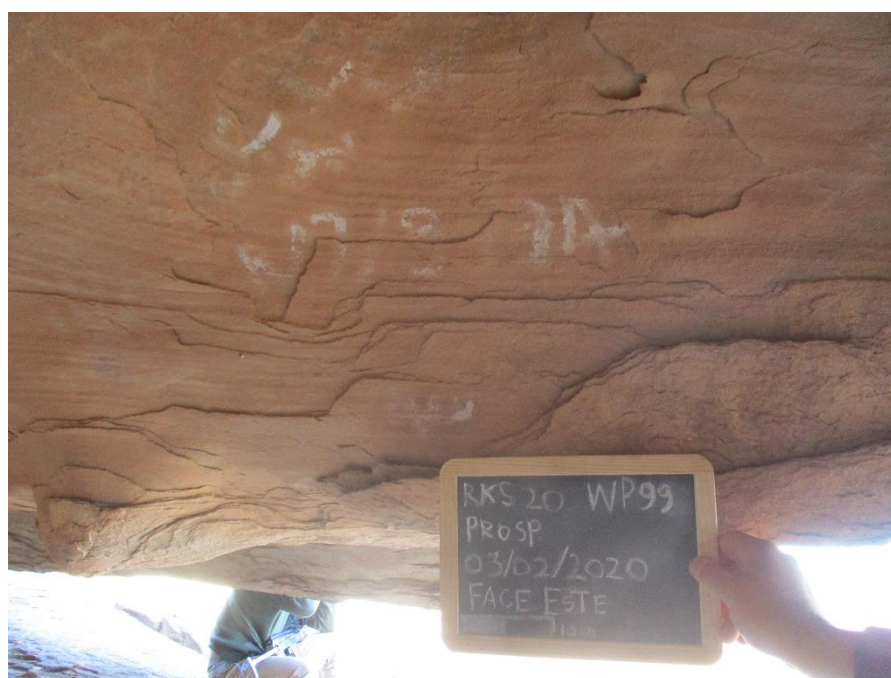
**Location:** Erqueiez  
(nucleus IV)

**Chronology:**

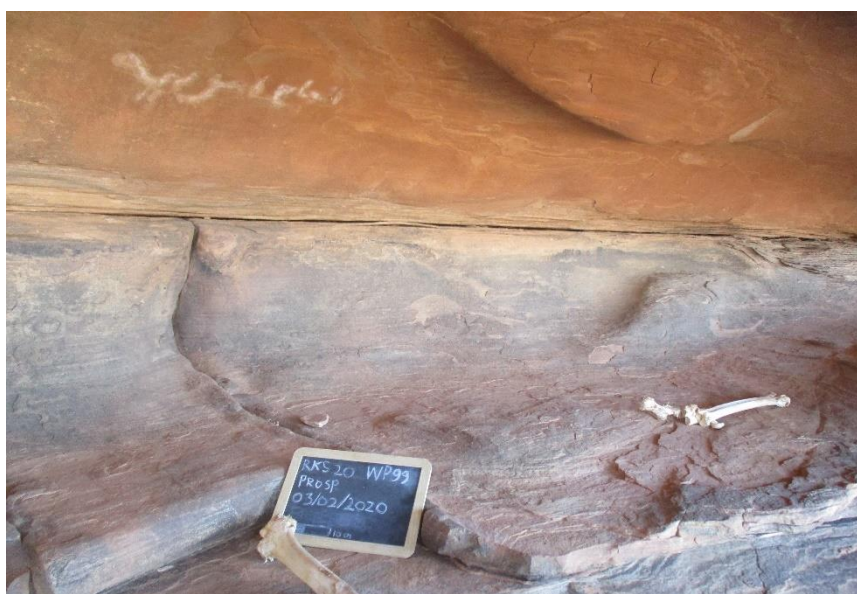
Contemporary

**Description:** More or less deep and low shelter, with contemporary graffiti on the top edge of the entrance and on the back wall of the space. The writings are in arabic, with the

word «Saharai» in the back wall, and the rest beeing connected with POLISARIO forces. The shelter had been used, possibly during the conflict. There was na old rations can (used as a stove) and a long bone (fauna, possibly camel).



19: WP99



20: WP99 shelter view





**Acronym:** RKS.20

WP107

**Location:** Erqueiez

(nucleus IV)

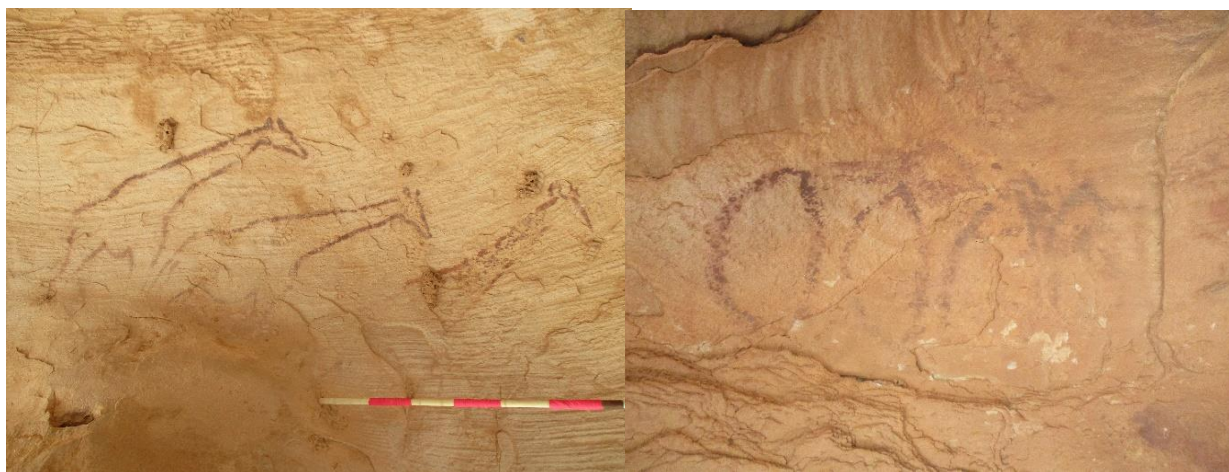
**Chronology:** 5th to 3rd  
Millenium/Neolithic

**Description:** Shelter with  
wall paintings, larger than  
most of the other shelters,  
with about a 2m high  
cieling. The palce shows  
art in all the walls, cielling  
and niches. Most of the



21: WP107 shelter view

motiffs are of local extinc wildlife (giraffe, antelope), with the remaining beeing hand prints and geometric figures. Most of the images are of a reddish/ocre tone, with some details and figures in black/chalk. It is locally called the «100 hands cave». Located on the East side of the plateau.



22: WP107 details



23: WP107 detail of one of the hand pannels

**Acronym:** RKS.20 WP108

**Location:** Erqueiez (nucleus IV)

**Chronology:** 5th to 3rd Millenium/  
Neolithic/  
contemporary.

Description: rock shelter with wall paintings, on the East side of the plateau. The images are located on the pannels facing East/Southeast, are of small dimentions, painted on a



24: WP108

reddish/ocre tone and represent extict local wildlife (asses, wild goat), anthropomorphic figures and farther from these are a few graffity from the freedom fights.





**Acronym:** RKS.20  
WP109

**Location:** Erqueiez  
(nucleus IV)

**Chronology:** 5th to 3rd  
Millenium/ Neolithic

**Description:** shallow  
shelter with wall paintings,  
located half way up the  
plateau. The figure looks  
like a type of «rope»  
pattern. Mostly faded.  
The pannel faces East.



25: WP109

**Acronym:** RKS.20  
WP 110

**Location:** Erqueiez  
(nucleus IV)

**Chronology:** 5th to  
3rd Millenium/  
Neolithic

**Description:**  
shallow rock shelter,  
with wall paintings  
in a reddish/ocre  
tone. There are three  
visible figures,  
representing extinct



26: WP110

local wildlife (antelope, maybe gazzelle). The pannel is facing East.



**Acronym:** RKS.20 WP117

**Location:** Erqueiez (nucleus IV)

**Chronology:** 5th to 3rd  
Millenium/ Neolithic

**Description:** shallow rock shelter, with wall paintings in a reddish/ocre tone, representing local extinct wildlife, human figures and unidentified shapes. The images are painted half way up the wall and cielling. The pannels are facing West.



27: WP117

**Acronym:** RKS.20  
WP118

**Location:** Erqueiez  
(nucleus IV)

**Chronology:** 5th to 3rd  
Millenium/ Neolithic

**Description:** shallow rock shelter with wall paintings. They are painted with a reddish/ocre and charcoal tone, and while some images are clearly



28: WP118

visible, most are faded. They are located half way up the wall and on the cielling. The motifs are of local extinct wildlife, humanoid figures and anatomical parts (hand prints). Some human





figures seem to be carrying objects, and the animals seem to be antelope and some kind of stylized animals. The shelter pannels are facing West.



29: WP118 detail

**Acronym:** RKS.20  
WP119

**Location:** Erqueiez  
(nucleus IV)

**Chronology:** 5th to  
3rd Millenium/  
Neolithic

**Description:** recessed  
pannel in the rock face,  
with some paintings,  
almost completely  
exposed to the



30: WP119





elements. Next to this pannel there is a «cave like» opening, but no rock art or occupation evidences have been found on this early stage of investigation. The paintings consist of two ocre «spots» that seem to be part of the womb of na oxen drawing. Next to these are two humanoid figures. All are badly faded.



31: WP119 detail of the anthropomorphic figure



## 6.2 - Funerary/ Burial structures

**Acronym:** SLG.20 WP15

**Location:** Sluguia (nucleus V)

**Chronology:** 7/6th to 3rd millennium

**Description:** funerary structure, with a sub circular plant, built with piled rocks, with no mortar. It appears to have some verticalized slabs on the center (maybe evidences of a chamber or hallway). It is also apparent that there is a main body of piled rocks, with no outer ring. Nearby are several rock art engravings of the Sluguia complex.



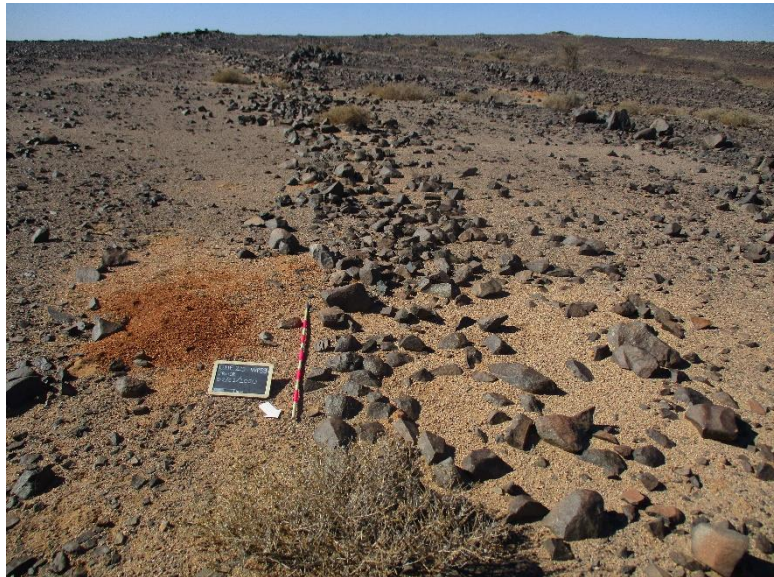
32: WP15

**Acronym:** UTIF.20 WP59

**Location:** Uad Tifariti (nucleus I)

**Chronology:** 7/6th to 3rd millennium

**Description:** Funerary monument, with a «crescent» or «antennae» plant. It is built using piled, middle sized rocks. It has a main body, about 2m high, and from it stretch the two «antennae» or arms, the structure itself being quite large (around 500m). The arms are made using two rows of rocks, using smaller stones to fill in the space. The monument is in overall good condition, although it



33: WP59 alignment detail





shows some recent violations, like the «foxholes» dug on and around the structure for troop protection (POLISARIO freedom fights of the 1970's-1990's). Around the monument and of these violations several evidences of combat were found (spent heavy machinegun casings, machinegun belt links, ration cans etc.). There were also some stone tools recovered from the surface (scrapers, small blades etc.).



34: WP59 main body of the «crescent» structure

**Acronym:**

UANANIA.20

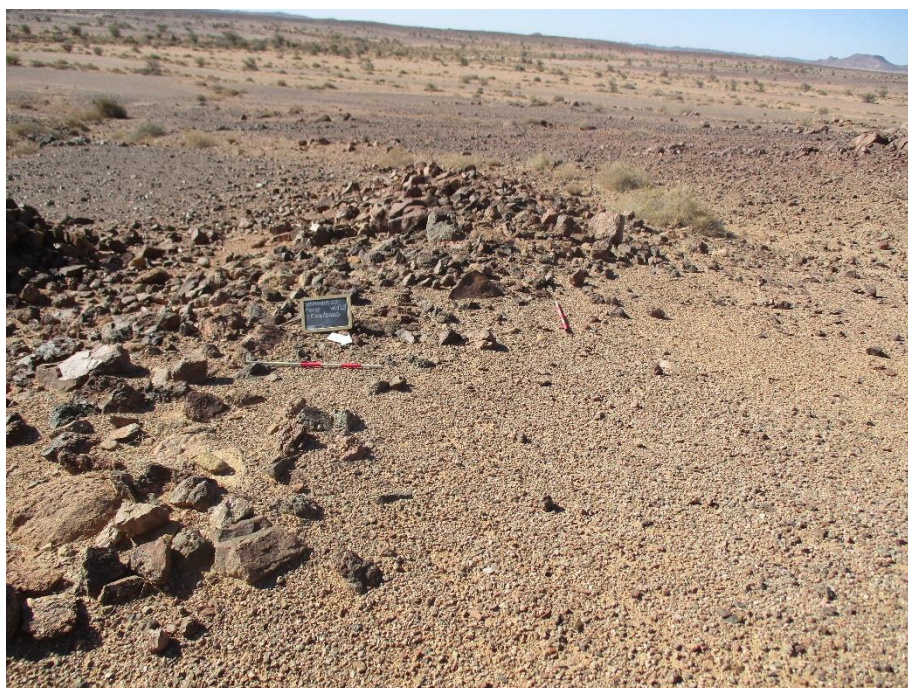
WP129

**Location:** Uteit  
Aannannia (nucleus  
III)

**Chronology:** 7/6th  
to 3rd millenium

**Description:**

Funerary monument,  
with a «crescent»  
shaped plant, built  
using piled rocks  
and no mortar. It has



35: WP129





a main, taller body from where the «arms» stretch. On it's southeastern side there is another monument, almost attached to this one, with a round shape.

**Acronym:** UANANIA.20  
WP130

**Location:** Uteit Aannannia  
(nucleus III)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary  
structure, with a sub  
circular plant, built with  
pilled rocks and no mortar.  
It is placed next to another  
monument to its Northwest  
(WP129).



36: WP130

**Acronym:** UANANIA.20 WP131

**Location:** Uteit Aannannia (nucleus  
III)

**Chronology:** 7/6th to 3rd millenium

**Description:** Funerary structure, with  
na «anthropomorphic» like plant,  
having a central elongated body, with  
two stretched «arms» to the sides and  
straight stretched «legs». It is build  
using piled rocks and no mortar. The  
tip of this alignment has two rocks  
that look like «feet». Next to this



37: orthophotographic map of WP131. Processing: Joaquim Ramos





monument some materials have been recovered, such as small lithic tools, like blades, scrapers and na arrow tip. One pottery shard of about 2cm, decorated with two rows of printed dots. The composition of the clay is very coarse, with a lot of inclusions, like small pebbles and has a dark reddish brown coloration, denoting that it was meant to be fired.



38: WP131

There were also some evidences of combate, such as spent 20mm AA casings, shrapnell from air dropped bombs, bullets, machinegun belt links and a light a light metal component that was identified by our guides as beeing part of a dropped ordinance.

**Acronym:**

UANANIA.20

WP133

**Location:** Utei  
Aannannia (nucleus  
III)

**Chronology:** 7/6th  
to 3rd millenium

**Description:**

Funerary structure,  
with na «  
anthropomorphic»  
like plant, having a



39: WP133





central elongated body, with two stretched «arms», like a «T» figure, and a forward stretch alignment, like «legs». On the tip of this alignment there are two vertical slabs, that look like «feet». The rest of the structure is made with piled rocks and no mortar.

**Acronym:** UANANIA.20  
WP134

**Location:** Uteit Aannannia  
(nucleus III)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary structure, with a sub circular shape, made with piled rocks and no mortar. It rises to about 1m high and appears to have na external ring of stones arround the main body.



40: WP134

**Acronym:** UANANIA.20 WP135

**Location:** Uteit Aannannia  
(nucleus III)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary structure, with a sub circular plant, made with piled rocks and no mortar. There is a well defined main body. Around this main body, there are



41: WP135





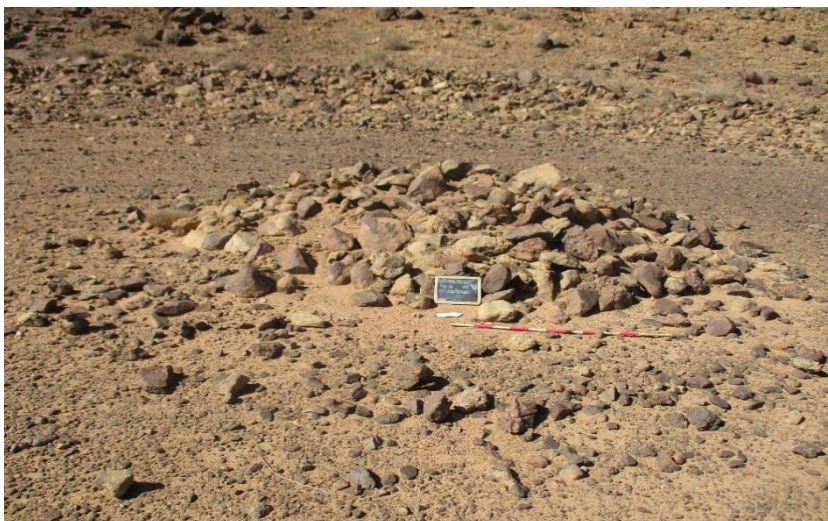
alignments and concentrations of rocks, that could be similar to the structures WP130 and WP133.

**Acronym:** UANANIA.20  
WP136

**Location:** Uteit  
Aannannia (nucleus III)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary  
structure, with a sub  
circular plant, made with  
pilled rocks and no mortar.  
It rises to about 1m high.



42: WP136

**Acronym:** UANANIA.20  
WP137

**Location:** Uteit Aannannia  
(nucleus III)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary  
structure, with a sub circular  
plant, made with piled  
rocks and no mortar.



43: WP137





**Acronym:** UANANIA.20

WP138

**Location:** Uteit Aannannia  
(nucleus III)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary structure, with a «crescent» like plant, built with piled rocks and no mortar. There is a main elongated body, with rock alignements, stretching from it. Next to this structure are several others with a sub circular shape.



44: WP138

**Acronym:** UANANIA.20

WP139

**Location:** Uteit  
Aannannia (nucleus III)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary structure, with a sub circular plant, made with piled rocks and no mortar. This structure presents points of possible violations.



45: WP139



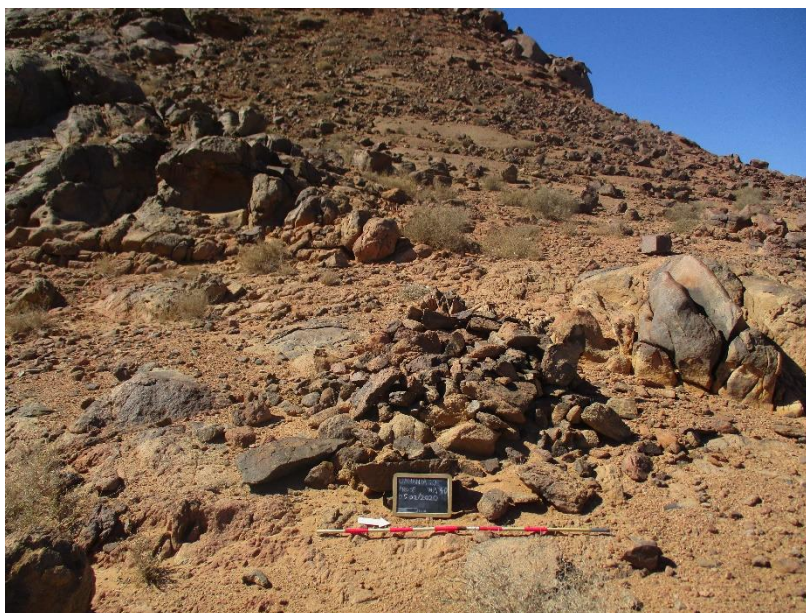


**Acronym:** UANANIA.20  
WP140

**Location:** Uteit Aannannia  
(nucleus III)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary  
structure, with a sub circular  
plant, built with piled rocks  
and no mortar. It's slightly  
smaller than other structures  
alike.



46: WP140

**Acronym:** UANANIA.20  
WP141

**Location:** Uteit Aannannia  
(nucleus III)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary  
structure, with a «crescent»  
type plant, with extensions  
stretching from the main  
body. These extensions are  
slightly shorter than other  
monuments alike. It is built  
with piled rocks and no mortar.



47: WP141





**Acronym:**

UANANIA.20 WP142

**Location:** Uteit

Aannannia (nucleus III)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary  
structure, with a sub  
circular plant, built with  
pilled rocks and no  
mortar. It is located at the  
base of the Utei  
Aannannia inselberg.



48: WP142

There seems to have been disturbances in the rock concentration.

**Acronym:**

UANANIA.20 WP144

**Location:** Uteit

Aannannia (nucleus III)

**Chronology:** 7/6th to  
3rd millenium

**Description:** Possible  
Funerary structure, made  
with a concentrarion of  
rocks, half buried,  
making a sort of faded  
ring. It's located near the  
Utei Aannannia



49: WP144



inselberg, on the plain that leads to the Uad.

**Acronym:** UTIF.20  
WP145

**Location:** Uad  
Tifariti (nucleus II)

**Chronology:** 7/6th  
to 3rd millenium

**Description:**

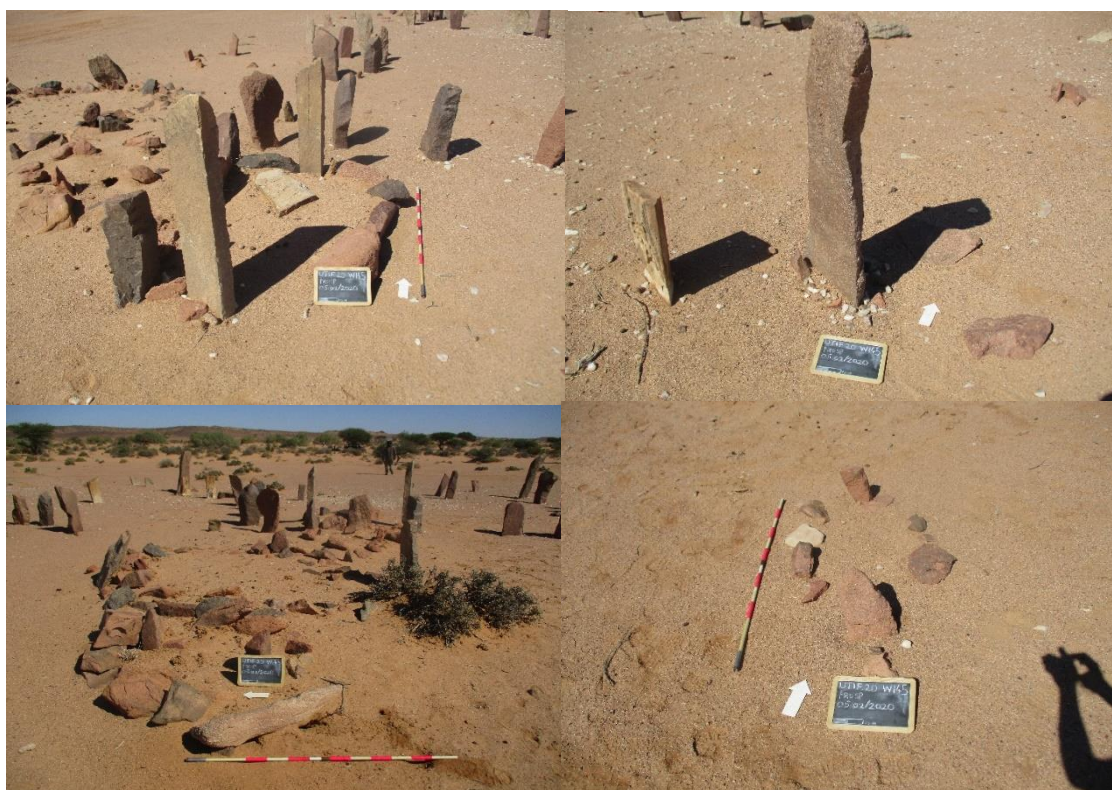
«henge» like  
monument, made of  
vertical slabs, dug  
into the ground,  
forming a series of  
rings, the middle of  
the area beeing filled



50: WP145

with small quartz rocks. Next to these rings at least three burials were identified. These are made with rocks forming a sub rectangular shape, having taller slabs dug into the ground where the head and feet should be.





51: WP145 several details

**Acronym:** UTIF.20 WP148

**Location:** Uad Tifariti (nucleus II).

**Chronology:** 7/6th to 3rd millenium

**Description:** Funerary complex, made of at least two structures. One is of the sub circular mound type, made with piled rocks and no mortar. Next to it, there is another probable burial, with a n undifined plant, but with stone alignements visible. There is the possibility that these alignements could encompass



52: WP148

more than one burial, or are simply to indicate the bigger mould like structure next to it.





53: WP148 alignement detail

**Acronym:** UTIF.20  
WP149

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to  
3rd millenium

**Description:** Funerary  
struture, with a sub  
circular plant, built with  
pilled rocks and no  
mortar. It's in very bad  
condition, having a  
poorer construction than  
other mounds close by.



54: WP149





**Acronym:** UTIF.20

WP150

**Location:** Uad

Tifariti (nucleus II)

**Chronology:** 7/6th

to 3rd millenium

**Description:**

Possible funerary structure, with a sub circular plant, built with piled rocks and no mortar. It partially sits on top of a rocky outcrop, beeing very flat, only rising as much as the outcrop itself.



55: WP150

**Acronym:** UTIF.20

WP151

**Location:** Uad Tifariti

(nucleus II)

**Chronology:** 7/6th to

3rd millenium

**Description:** Funerary

structure, with a sub

circular plant, made

with piled rocks and

no mortar. The top of

this mound is

flatenned.



56: WP151





**Acronym:** UTIF.20

WP152

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary  
structure, built with piled  
rocks and no mortar. It  
partially sits on top of a  
rocky outcrop, and has in  
the case of WP150, it has  
little elevation to it. The  
limits of the structure are not totally clear.



57: WP152

**Acronym:** UTIF.20

WP153

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary  
structure, with a sub  
circular plant and built  
with piled rocks and no  
mortar. Like the  
monument listed above, it  
sits partially on a rocky outcrop and has little elevation to it besides the outcrop itself.



58: WP153



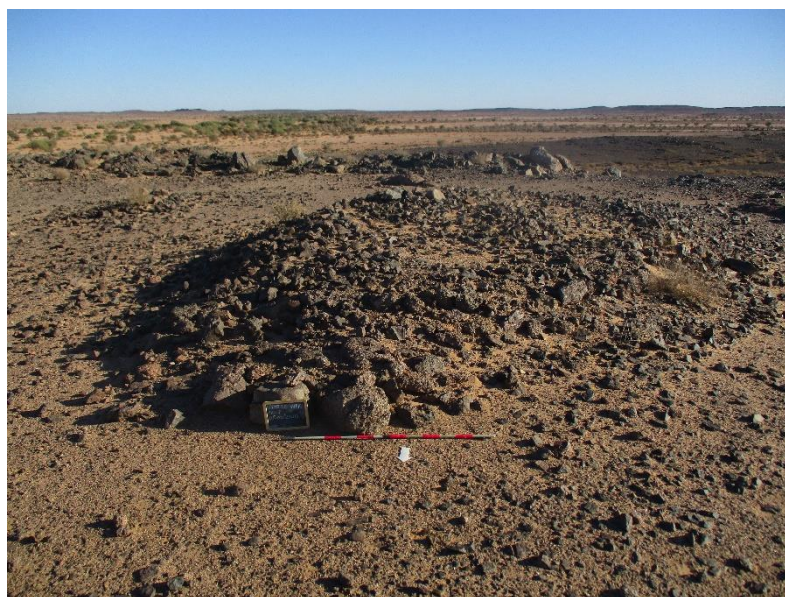


**Acronym:** UTIF.20 WP154

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary  
structure, with a well defined  
sub circular plant, built with  
pilled rocks of a small size and  
no mortar. In some places  
there seems to have been  
desecrations (missing



59: WP154

segments of rocks, perhaps trying to get to the burial chamber).

**Acronym:** UTIF.20  
WP155

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to  
3rd millenium

**Description:** Funerary  
structure, with a sub  
circular plant, and built  
with piled rocks and no  
mortar. It's in very good  
condition.



60: WP155



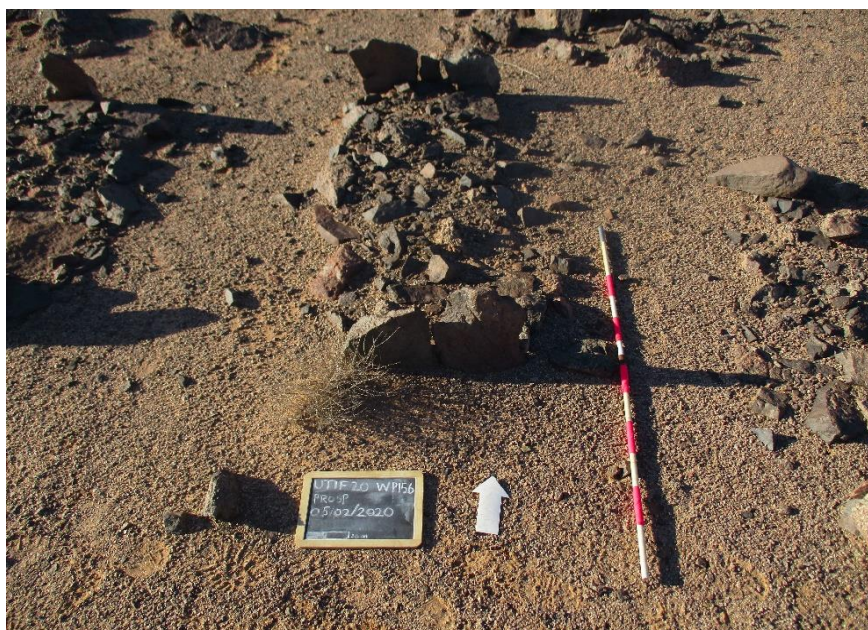


**Acronym:** UTIF.20  
WP156

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to  
3rd millenium

**Description:** Funerary  
complex, composed of  
six burials. These have  
sub rectangular plants,  
with two showing a  
simple construction of  
small vertical slabs dug



61: WP156 detail of one of the burials

into the ground, forming a circle. On one of them, the center of the burial is filled with smaller stones. The remainder are more elongated, and have a bigger slab for the head and feet. Overhall they are small, going from 0.50m to about 0.70/0.80m.

**Acronym:** UTIF.20  
WP157

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to  
3rd millenium

**Description:**

«Crescent» type  
structure (funerary),  
similar to others listed,  
but with no clear  
extentions coming from



62: WP157





the main body, being more of an elongated mound with tips in the extremities. It is built with piled rocks and no mortar. In some places it seems to have been desecrated.

**Acronym:** UTIF.20 WP165

**Location:** Uad Tifariti  
(nucleus I)

**Chronology:** 7/6th to 3rd  
millennium

**Description:** Funerary complex, composed of at least three identified burials. These are built with loose stones put together forming a sub rectangular shape. The middle of the stone ring is clear, as opposed to other similar structures found.



63: WP165 detail of one of the burials

**Acronym:** UTIF.20 WP167

**Location:** Uad Tifariti (nucleus I)

**Chronology:** 7/6th to 3rd  
millennium

**Description:** Funerary structure, with a sub circular plant, built with piled rocks and no mortar. It sits on top of a rocky outcrop, having little elevation in itself.



64: WP167



**Acronym:** UTIF.20  
WP168

**Location:** Uad Tifariti  
(nucleus I)

**Chronology:** 7/6th to  
3rd millenium

**Description:** Possible  
funerary structure, with  
na irregular plant, built  
with piled rocks and no  
mortar. It has two types  
of constructive



65: WP168

sollutions. One using loose stones to form a sort of ring or circle on the sand (with nothing in the middle), while the rest of the structure is of the «mound» type, sitting on top of the rocky outcrop. It's possible that this indicates two different burials, but are here identified together due to their proximity to each other.

**Acronym:** UTIF.20 WP169

**Location:** Uad Tifariti  
(nucleus I)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Possible funerary  
structure, with a sub  
rectangular shape, but built as a  
mound, with piled rocks and  
no mortar. Its placed partially  
on top of the rocky outcrop,  
and has straight lines, unlike



66: WP169





the rest of the monuments identified. There is also the possibility that this accumulation of rocks is not a tumulus, but rather a place where the rocks have been gathered and piled.

**Acronym:** UTIF.20 WP170

**Location:** Uad Tifariti  
(nucleus I)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary  
struture, with a sub circular  
plant, built with piled rocks  
and no mortar. It's quite low  
and shows signs of having  
been desacrated. Nearby



67: WP170

some stone tools where collected, such as blades and scrapers, and more signs of conflict where identified, as shown by a half part of a fragmentation grenade that was also collected.

**Acronym:** UANANIA.20 WP171

**Location:** Uteit Aannannia  
(nucleus III)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** «Crescent» type  
funerary structure, with na  
elongated shape and «antennae»,  
built with piled rocks and no  
mortar. The main body is well



68: WP171



defined, but the extensions are made with stones put too far, making the alignment quite faded.

**Acronym:** UANANIA.20  
WP172

**Location:** Uteit Aannannia  
(nucleus III)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary  
structure, with a sub circular  
shape, built with piled rocks  
and no mortar. It sits on top of  
a rocky outcrop.



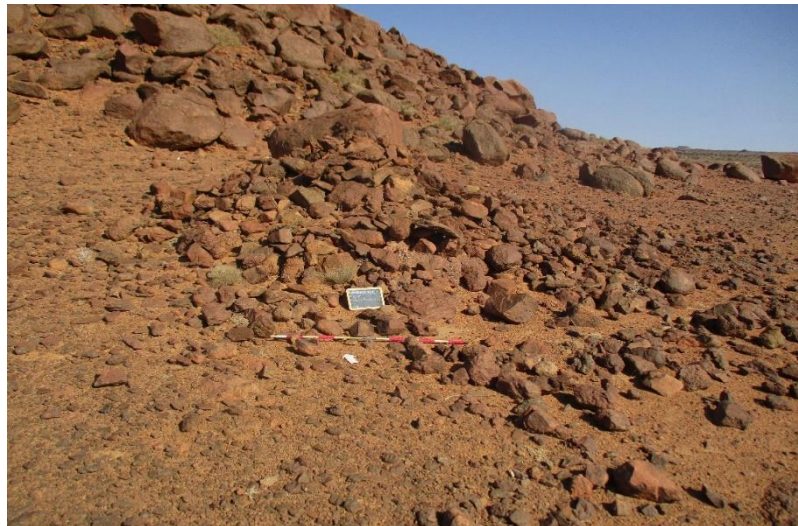
69: WP172

**Acronym:** UANANIA.20  
WP173

**Location:** Uteit Aannannia  
(nucleus III)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary  
structure, with a sub circular  
plant, built with piled rocks  
and no mortar. It appears to  
have been desacrated, the  
mound looking partially destroyed.



70: WP173





**Acronym:** UTIF.20  
WP194

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary  
structure, with a sub  
circular plant, built with  
pilled rocks and no  
mortar. It has little  
elevation from the  
ground.



71: WP194

**Acronym:** UTIF.20  
WP195

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to  
3rd millenium

**Description:** Funerary  
structure, with a sub  
circular/oval plant, built  
with piled rocks and no  
mortar. The shape is  
more elongated than  
other mounds nearby.



72: WP195



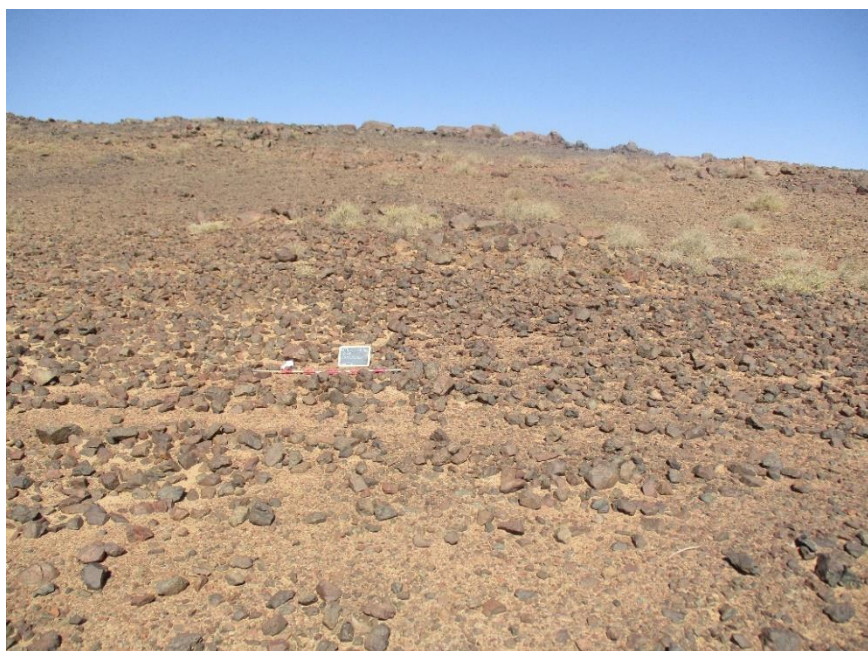


**Acronym:** UTIF.20  
WP196

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to  
3rd millenium

**Description:** Funerary  
structure, with an  
irregular plant, built  
with pilled rocks and no  
mortar. It has a low rise,  
compared to other  
similar structures, but  
the dispersal of rocks is greater.



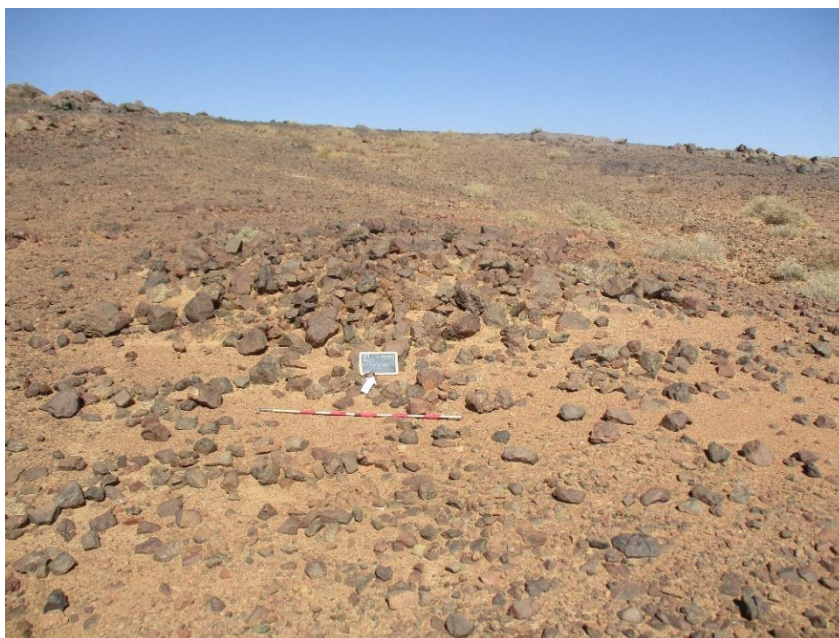
73: WP196

**Acronym:** UTIF.20  
WP197

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary  
structure, with a sub  
circular plant, built with  
pilled rocks and no  
mortar. It's quite low, and  
in some points there are  
stones missing (signs of  
possible desacration?).



74: WP197



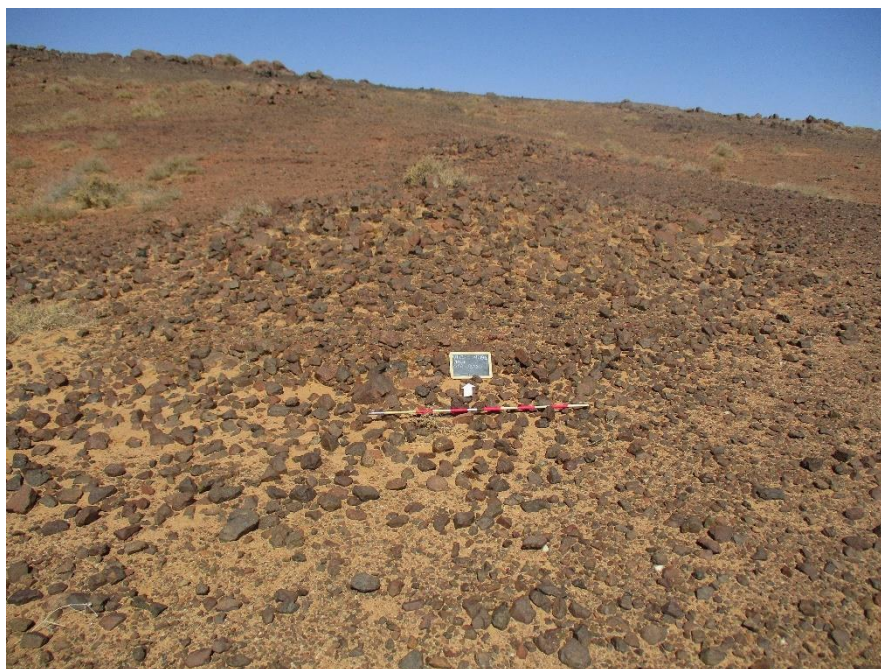


**Acronym:** UTIF.20  
WP198

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to  
3rd millenium

**Description:** Funerary  
structure, with a sub  
circular plant, built  
with piled rocks and  
no mortar. It rises  
about 1m from the  
ground. The rock  
dispersal in this case is  
also quite significant.



75: WP198

**Acronym:** UTIF.20 WP199

**Location:** Uad Tifariti (nucleus  
II)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary  
structure, with a sub circular  
plant, built with piled rocks and  
no mortar. It has na apparent  
outer circle formed with loose  
rocks.



76: WP199





**Acronym:** UTIF.20 WP200

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary  
complex, composed of at least  
four identified burials. The first  
has a sub circular plant, and is  
built with piled rocks and no  
mortar (mound like). The  
remaining burials are built



77: WP200

using loose rocks, put together in a sub rectangular ring, and have larger rocks where the head and feet should be. One of these structures is very degraded.



78: WP200 detail of one of the burials





**Acronym:** UTIF.20  
WP201

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to  
3rd millenium

**Description:** Funerary  
structure, possibly of  
the «crescent» shape  
type, built with piled  
rocks and no mortar. A  
main body is  
noticeable, and from



79: WP201

this there seem to be two extentions (antennae), mad with just a few aligned rocks.

**Acronym:** UTIF.20  
WP202

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to  
3rd millenium

**Description:** possible  
funerary structure, with  
a sub circular plant.  
This monument is  
composed of only a ring  
of loose rocks, with a  
clean center. It is



80: WP202



possible that it is na unfinished mound, or even one that has been desacrated and almost completely destroyed.

**Acronym:** UTIF.20 WP203

**Location:** Uad Tifariti (nucleus II)

**Chronology:** 7/6th to 3rd millenium

**Description:** Funerary struture, with a sub circular plant, made with pilled rocks and no mortar. the integrity of the monument is not the best, having been possibly desacrated in its center.



81: WP203

**Acronym:** UTIF.20 WP204

**Location:** Uad Tifariti (nucleus II)

**Chronology:** 7/6th to 3rd millenium

**Description:** «Crescent» shape funerary structure, made with pilled rocks and no mortar. It has a main body with little hight, but with a wide spread of stones. The two extensions are long and clearly visible.



82: WP204





**Acronym:** UTIF.20

WP205

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to  
3rd millenium

**Description:** Funerary  
structure, with a sub  
circular plant, built with  
pilled rocks and no  
mortar. From the main  
body there appears to  
be some irradiating  
stone alignments.



83: WP205

**Acronym:** UTIF.20

WP206

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to  
3rd millenium

**Description:** Funerary  
structure, with a sub  
circular/oval plant,  
built with piled rocks  
and no mortar. It's  
larger than most of the  
surrounding mounds,  
and appears to have



84: WP206





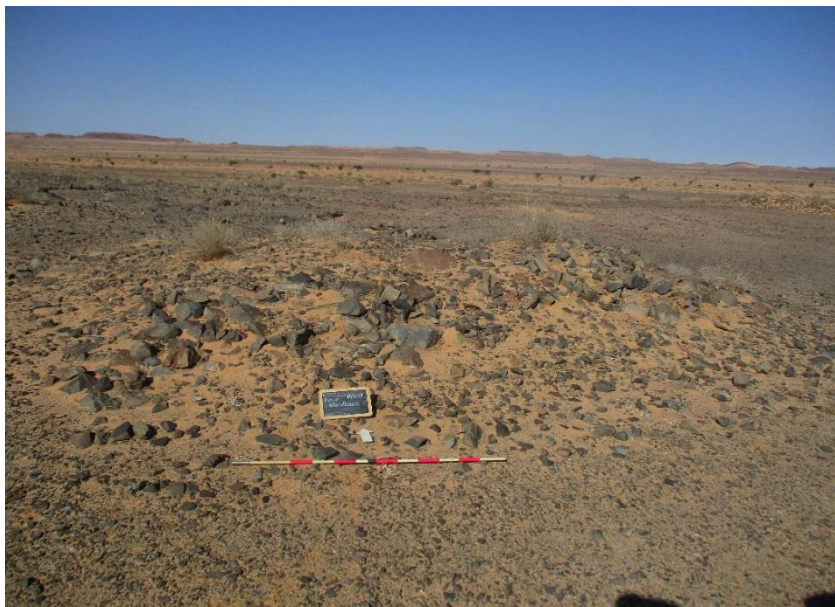
more than one chamber. The main body is quite tall, having a sort of conical profile. The mound extends both to the East and West, possibly signaling other burial chambers.

**Acronym:** UTIF.20  
WP207

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary  
structure, with a sub  
circular plant, built with  
pilled rocks and no mortar.  
This mound has quite a lot  
of sediment acumulation



85: WP207

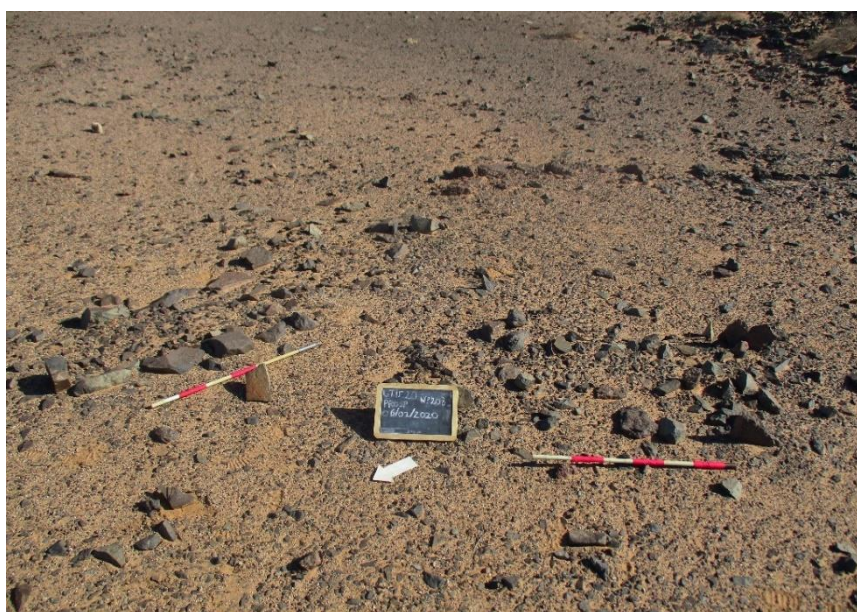
between the rocks (natural sand deposits form the wind).

**Acronym:** UTIF.20  
WP208

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to  
3rd millenium

**Description:** Funerary  
complex, made of at  
least two visible burials.  
These are made with  
rocks aligned to make a  
sub rectangular shape.



86: WP208





The center of the burials is covered in smaller stones and pebbles. Both burials are quite small (about 0.50m length).

**Acronym:** UTIF.20  
WP209

**Location:** Uad  
Tifariti (nucleus II)

**Chronology:** 7/6th  
to 3rd millenium

**Description:**

Funerary structure,  
with a sub circular  
plant, built with  
pilled rocks and no  
mortar. This mound  
appears to have  
been partially



87: WP209

disassembled (violation?), exposing the possible burial chamber. A stone outer circle is almost all that remains of the body.



**Acronym:** UTIF.20 WP210

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary  
structure, with a sub circular  
plant, built with piled rocks  
and no mortar. Its relatively  
large in comparison to  
others. The dispersal of rocks  
is also extense.



88: WP210

**Acronym:** UTIF.20 WP211

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary  
structure, with a sub circular  
plant, built with piled rocks  
and no mortar. It sits on top of  
a rocky outcrop. There are  
some stone alignments close  
to this mound, but it was not  
clear if these are part of it.



89: WP211





**Acronym:** UTIF.20 WP212

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** Funerary  
structure, with a sub circular  
plant, built with piled rocks  
and no mortar. It is heavily  
covered in sand deposits  
(brought with the wind).



90: WP212

**Acronym:** UTIF.20 WP214

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** «Crescent»  
type funerary structure, built  
with piled rocks and no  
mortar. It has little hight to it  
when compared to other  
similar monuments. It's  
heavily covered with sand  
and has some vegetation  
growing on top.



91: WP214





**Acronym:** UTIF.20

WP215

**Location:** Uad Tifariti  
(nucleus II)

**Chronology:** 7/6th to  
3rd millenium

**Description:** Funerary structure, with a sub circular plant, built with pilled rocks and no mortar. It has little hight, having bigger boulders in the center, with smaller ones making the rest of the mound.



92: WP215

**Acronym:** LA-GUI.20  
WP232

**Location:** La Guilla  
(nucleus VI)

**Chronology:** 7/6th to 3rd  
millenium

**Description:** «Crescent» type funerary struture, built with pilled rocks and no mortar. Its rather small, but well defined. In the center there is a big slab almost vertical, wich digs into the monument.



93: WP232





### 6.3 – Shelters

**Acronym:** RKS.20 WP93

**Location:** Erqueiez (nucleus IV)

**Chronology:** 8th to 3rd Millennium/Neolithic

**Description:** Rock shelter, formed on the cliff face of the Erqueiez plateau. It's longer than wider, and with a cielling hight of just about 0.50m. On the open side there is a small barrier/wall, built from slabs that were dug into the sediment.



94: WP93

**Acronym:** RKS.20 WP120

**Location:** Erqueiez (nucleus IV)

**Chronology:** 8th to 3rd Millennium/ Neolithic

**Description:** Rock shelter, found on the flat top of the Erqueiez plateau. The shelter takes advantage of a salience of rock, the occupants having built a wall that encloses the open side of the shelter. There is



95: WP120



one entrance identified, signaled by a kind of short corridor, with vertical slabs on each side. There is also a kind of small «window» visible. The «wall» uses loose piled slabs, some vertical and some horizontal. It uses no mortar. On the entrance and around the shelter some stone tools were identified.

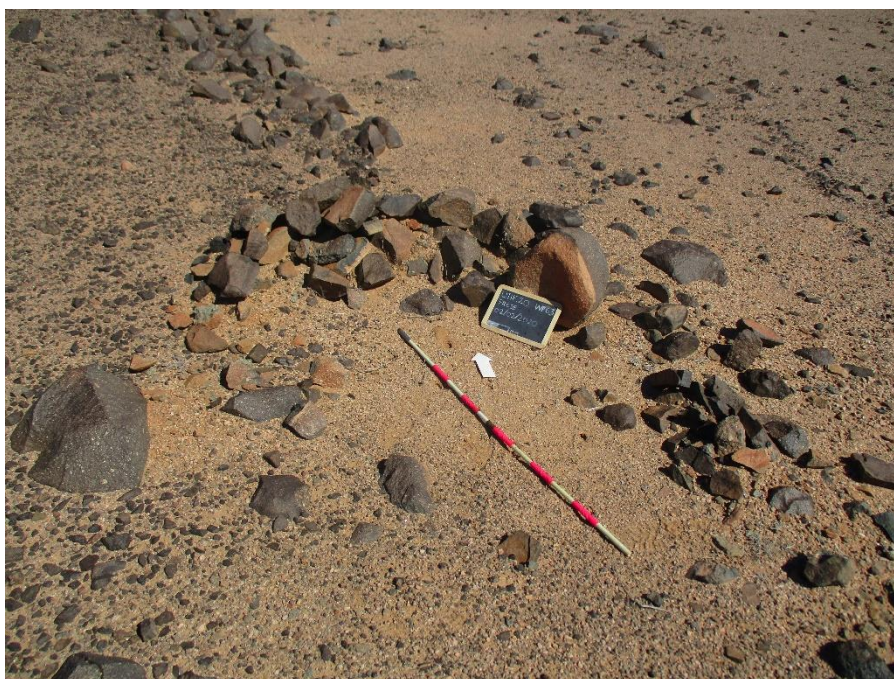
#### 6.4 – Contemporary/ Military structures

**Acronym:** UTIF.20  
WP63

**Location:** Uad  
Tifariti (nucleus I)

**Chronology:**  
Contemporary (late  
1970's?)

**Description:**  
Individual shelter  
/machinegun  
position. This  
position is made from  
pilled rocks, in a sub  
circular disposition. It



96: WP63

was built on top of the alignment of the «crescent» shaped structure WP59, and rearranged the stones present on it's extentions to make a soldier's shelter. It's of a small size, beeing about 0.50m in diameter. On it's vacinities some metalic objects were found, such as heavy machinegun belt links, brass cartridges (7.92mm), possibly from Mauser or Spanish CETME, a radio battery and one tin can with the stamp «MAROC».





**Acronym:** UTIF.20 WP64

**Location:** Uad Tifariti  
(nucleus I)

**Chronology:** Contemporary  
(late 1970's?)

**Description:** Complex of at least two individual shelters (dugouts), one made from a small wall/barrier, using loose rocks and no mortar, supporting itself partially on the rocky outcrop, and the



97: WP64

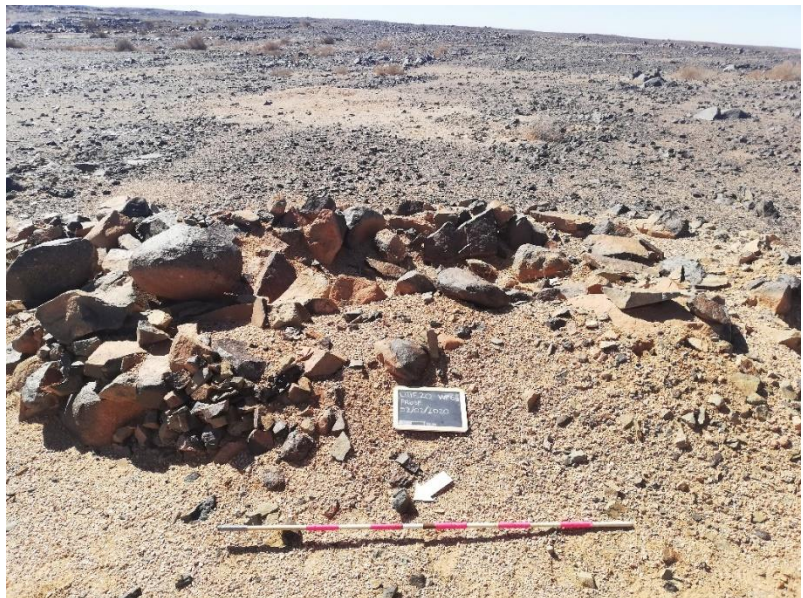
other possible one taking advantage of a semi circular formation on the rocky outcrop, perhaps enclosing the rest of the space with rearranged rocks. The middle surface was found quite clean.

**Acronym:** UTIF.20 WP65

**Location:** Uad Tifariti (nucleus I)

**Chronology:** Contemporary  
(late 1970's?)

**Description:** Individual combat dugout, partially dug on the ground, partially using a small wall/barrier built with loose rocks. There are some signs of wood boards, making it possible that these dugouts had some kind of support on the walls.



98: WP65



**Acronym:**

UTIF.20 WP66

**Location:** Uad

Tifariti (nucleus I)

**Chronology:**

Contemporary

(late 1970's?)

**Description:**

Individual combat dugout. It's small, with about 0.60m diameter. Like the last one, this one has traces of



99: WP66

wooden boards, making it probable that it had supported walls.

**Acronym:**

UTIF.20 WP67

**Location:** Uad

Tifariti (nucleus I)

**Chronology:**

Contemporary

(late 1970's?)

**Description:**

Individual combat dugout/ mortar/ machinegun position? It's bigger than nearby



100: WP67





shelters, and has a crude wall made with piled rocks and no mortar. On the center there was a fiber cement plaque (for supporting possible materials?).

**Acronym:** RKS.20 WP111

**Location:** Erqueiez (nucleus IV)

**Chronology:** Contemporary (late 1970's?)

**Description:** Small house/checkpoint barrack, with a sub rectangular plant, built with cimented rocks. It was probably built to control the base passage of the Erqueiez plateau. It has only one internal division and no roof.



101: WP111

**Acronym:** UANANIA.20 WP123

**Location:** Uteit Aannannia (nucleus III)

**Chronology:** Contemporary (late 1970's)

**Description:** Barracks/house, built using a salience in the rocky formation. It's completed with an earthen wall on its open side, made



102: WP123



from mud bricks. It has one door and one window. It was built during the local occupation of POLISARIO forces.

**Acronym:** UANANIA.20  
WP124

**Location:** Uteit Aannannia  
(nucleus III)

**Chronology:** Contemporary  
(late 1970's)

**Description:** Wattle and daub structure, built during the local occupation of POLISARIO forces. It's walls are preserved at only 1.50m high, the rest being in ruins due to wind and occasional rain erosion.



103: WP124

**Acronym:** UANANIA.20  
WP125

**Location:** Uteit Aannannia  
(nucleus III)

**Chronology:** Contemporary  
(late 1970's)

**Description:** wattle and daub structure, built supporting itself on the rocky formation. There are two interior divisions identified. On parts of the wall there are still



104: WP125





visible some traces of clay finishings. Overall the structure is in ruins, due to constant wind erosion and occasional rainfall. According to a local witness and veteran, this used to be the POLISARIO camp archive.

**Acronym:** UANANIA.20  
WP126

**Location:** Uteit Annannia  
(nucleus III)

**Chronology:**  
Contemporary (late  
1970's)

**Description:** stone  
structure, consisting of a  
well made wall, with  
stone and mortar, that  
encloses a recess in the  
rocky formation. This wall



105: WP126 (ex command post)

has only one opening, with a wooden lintel. There are two interior divisions. The mortar used has non plastic components, such as small sized pebbles and added straw for flexibility. According to a veteran witness this structure was the old command post.



**Acronym:**

UANANIA.20 WP127

**Location:** Uteit

Annannia (nucleus III)

**Chronology:**

Contemporary (late 1970's)

**Description:** wattle and daub structure, with several internal divisions.

It's conservation status is bad, having been heavily eroded by constant winds

and occasional rain. According to a veteran witness, this was the outpost's kitchen.



106: WP127

**Acronym:** UANANIA.20  
WP128

**Location:** Uteit Annannia  
(nucleus III)

**Chronology:**

Contemporary (late 1970's)

**Description:** Wattle and daub structure. It's the biggest structure in the area, with 11 identified internal divisions. It's in ruins, having been heavily eroded by constant winds



107: WP128 (payload)





and occasional rain. Overall it has a rectangular plant, and it's finishing is preserved in some parts of the walls, being made of finer clay. Nearby some materials were recovered, such as brass casings from a «recoilless rifle» of Chinese making, ordinance shrapnell, serveral brass casings (rifle casings), wooden crate boards and artillery shell casings, with the markings «G.M.T». According to a veteran witness this used to be the armory/stockpile.

**Acronym:** UTIF.20 WPTRENCH0

**Location:** Uad Tifariti (nucleus I)

**Chronology:** Contemporary (late 1970's)

**Description:** Trench line, with about 85m in lenght and 1.5m wide. It runs in a North-South axel. The northern tip overlooks one of the arms/bed of the Uad. It ends on a sub circular dugout/shelter, probably a firing/observation position. This trench is probably related with maroccan troop movements during the 1970's.



108: WPTRENCH0

**Acronym:** UTIF.20  
WPTANQUE

**Location:** Uad Tifariti  
(nucleus I)

**Chronology:**  
Contemporary (late  
1970's)



109: WPTANQUE



Description: Soviet made, T-55 Moroccan tank. This combat vehicle was taken down during the Moroccan retreat to the border. According to a veteran witness, the T-55 was taken down with an RPG or Recoilless rifle projectile, while on maneuvers. On its left side, just above the tracks there is a large entrance hole, probably coinciding with the projectile. The rest of the vehicle has projectile markings, of several calibers, all around its body. The turret is facing southwest, while the body is on an East-West axis. Some of its components have been stripped over the years. On the turret you can read «FUEGO» on white lettering.



110: WPTANQUE details





## 6.5 - Unidentified structures

**Acronym:** SLG.20  
WP19

**Location:** Sluguiat  
(nucleus V)

**Chronology:**  
unknown/7th to 3rd  
millenium?

**Description:**  
unidentified structure,  
built with piled rocks.  
It's simillar in  
construction to the  
funerary mounds, but



111: WP19

much smaller. Could be some sort of marker. It's located in the same area as the Sluguiat rock engravings.

**Acronym:** RKS.20  
WP114

**Location:** Erqueiez  
(nucleus IV)

**Chronology:** 8th to 3rd  
Millenium/Neolithic

**Description:** Possible  
paint mixing area. On  
this place a paint mixing  
mortar bowl was found,  
with paint residue. It's



112: WP114





located at the top of the Erqueiez plateau, close to some of the shelters that were found to have paint work.

**Acronym:** La-Gui.20 WP233

**Location:** La Guilla (nucleus VI)

**Chronology:** unknown

**Description:** Unidentified rock concentration.  
Possibly for material extraction.



113: WP233

**Acronym:** La-Gui.20 WP237

**Location:** La Guilla (nucleus VI)

**Chronology:** unknown

**Description:** Unidentified rock concentration.  
Possibly for material extraction.



114: WP237



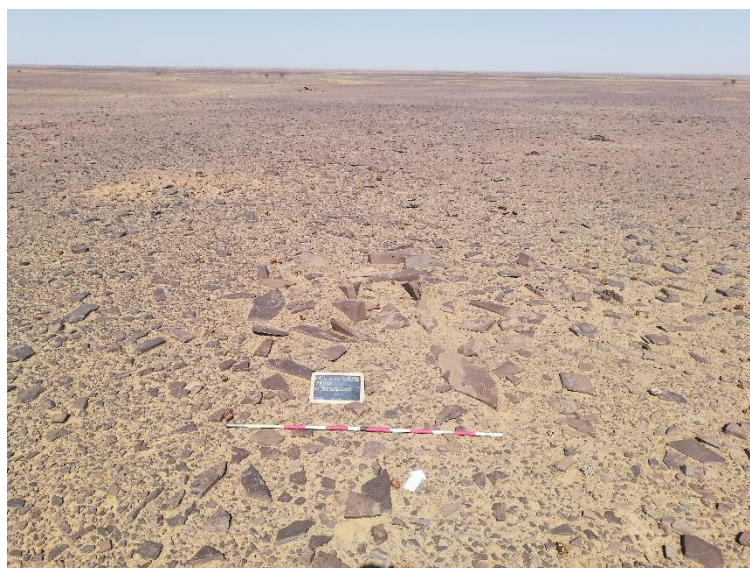


**Acronym:** La-Gui.20 WP238

**Location:** La Guilla (nucleus VI)

**Chronology:** unknown

**Description:** Unidentified rock concentration. Possibly for material extraction.



115: WP238

**Acronym:** La-Gui.20 WP239

**Location:** La Guilla (nucleus VI)

**Chronology:** unknown

**Description:** Unidentified rock concentration. Possibly for material extraction.



116: WP239





**Acronym:** La-Gui.20  
WP240

**Location:** La Guilla  
(nucleus VI)

**Chronology:** unknown

**Description:** Unidentified  
rock concentration. Possibly  
for material extraction.



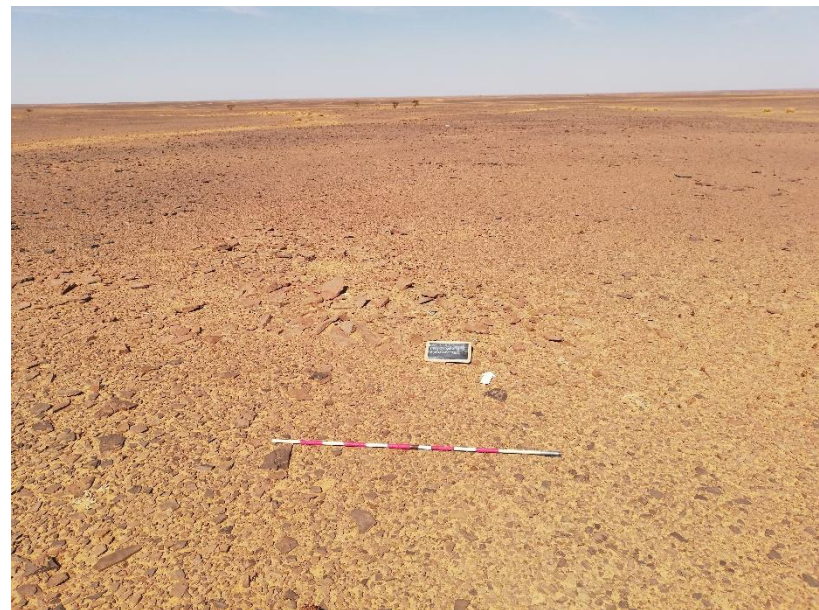
117: WP240

**Acronym:** La-Gui.20  
WP241

**Location:** La Guilla (nucleus  
VI)

**Chronology:** unknown

**Description:** Unidentified  
rock concentration. Possibly  
for material extraction.



118: WP241





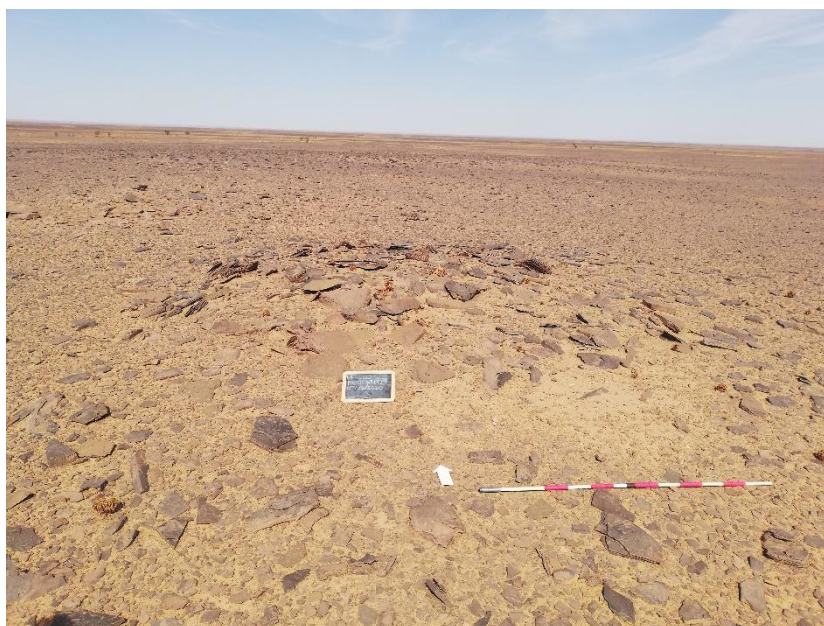
**Acronym:** La-Gui.20

WP242

**Location:** La Guilla  
(nucleus VI)

**Chronology:** unknown

**Description:** Unidentified  
rock concentration.  
Possibly for material  
extraction.



119: WP242

**Acronym:** La-Gui.20

WP243

**Location:** La Guilla  
(nucleus VI)

**Chronology:** unknown

**Description:**  
Unidentified rock  
concentration. Possibly  
for material extraction.



120: WP243



**Acronym:**

ARCTOOLAREA

**Location:** Uad Tifariti  
(nucleus I)

**Chronology:** unknown/ 8th  
to 3rd millenium?

**Description:** tool dispersal  
area with unidentified  
limits. It was identified in  
the area of Uad Tifariti,  
near the «crescent» shape  
structure WP59 and has a  
great concentrarion of stone



*121: ARCTOOLAREA. Natural platform with quite a large concentration of lithic tools.*

tools on the surface, with a lot of quartz fragments laying arround. Some tools were recovered from the surface, such blades, scrapers, arrow tips etc.





## 7 – Materials

The field survey was not only fruitful in site/monument identification, it also provided some artefact samples that were randomly collected from the surface. It must be stated that these samples were not part of any monument's sealed context and all were gathered on the whereabouts of the sites, not disturbing in that sense the integrity of the most vulnerable monuments.

The most common of surface finds are lithic tools. These go from several microlithic shapes, like blades, flakes, burins etc, to points and hand axes, arrow tips, scrapers and a larger fragment of millstone. Some pottery shards were also found and collected, but these were much scarcer. There were also several evidences of contemporary military occupation and battlefield remains. We can include several types of metallic objects (casings, shrapnel, vehicle parts etc.), wooden parts (from crates) and synthetic materials. This chapter is a brief description of the types of artefacts found on the field, the collection requiring a proper study.

All the materials were left at the care of the Saharawi Ministry of Culture, as taking cultural objects out of the country was strictly out of the question.



122: Some examples of tools found in the ARCTOOL area point (Tifariti I)



## 7.1 – Lithics

Lithic tools or assemblage sites were found on most of the sites visited, with the exception of Sluguia and La Guilla (because these were the points where the team spent less time). Therefore we have materials collected from the Uad Tifariti and Erqueiez areas.



123: hand axe found at Erqueiez (nucleus IV).

Comparing the pieces with some of the ones found by Nick Brooks

around the same area (since 2002) we can find some similitudes and according to Brooks the

«early Holocene is well represented» (BROOKS, 2009:921) and microlith tool's importance has been «attested across the Sahara» (BROOKS, 2009:922).



124: Millstone fragment, found at Erqueiez (nucleus IV).

Therefore, at first glance we are in the presence of stone tools from the

Holocene

period. According to the list given in the same article we can include one hand axe found on top of the Erqueiez plateau, several arrow points, scrapers and edged blades. Another notorious piece is the twin mortar bowl found at Erqueiez, a piece of about 30cm by 15cm, with one full bowl and half of another, with residues of ochre paint, the same colour as the surrounding painted shelters. This could be a piece attributed to



125: double mortar bowl, used to mix paints. Found at Erqueiez (nucleus IV).





Neolithic period if a connection to the shelters and other found materials is made. Similar materials have been found by professor Buruaga in various sites of the Tiris region.

## 7.2 – Ceramics

Ceramic finds were less common. Only five fragments were collected/found. Four of these seem to belong to the type II, and one to the type VII, of the chart made by professor Andoni Buruaga (BURUAGA, 2012:156-161).

Type II – These are fragments made from a dark brown, greyish clay, with a slight polish and with medium «non plastic elements». These are not decorated. They were found near the site RKS.20 WP107.

Type VII – This fragment is of a rougher made piece, being greyish in colour, with a thicker wall and large white «no plastic» elements. This type is decorated, with a series of dotted lines. This fragment has no defined context, having been delivered to us by our escort.

According to professor Buruaga, type II is dated to the 2nd millennium (1821-1101 a.c), while the type VII is older, being dated between the 5th and 3rd millennium (4390-2955 a.c).

## 7.3 – Contemporary materials/Battlefield finds

In spite of the fact a very recent military conflict took place in Western Sahara had, not much of it has yet been properly documented. Therefore the team proceeded to the record and collection of every possible evidence of military action. Along with the other artefacts, these were collected near identified sites, without disturbing them. Most of these materials are metallic, apart from a plate made from a type of plastic (that was identified as a converted fishing buoy) and pieces of wood from various types of crates. These have been found at Uteit Annannia, near the payload.



126: 20mm ZU 23 AA brass casings, found at Uteit Annannia (nucleus III).



Among the metallic materials found, there are several shrapnel pieces (reportedly from air strikes), found also at Annannia. Small arms projectiles and brass casings were found at all the locations visited, most being assigned to Soviet weapons, the bigger ones having around 7mm (possibly 7.62mm) and the smaller ones around 5mm (5.56mm?).

Artillery casings are also common, especially from «recoilless rifle» ammunition, the proposed gun being a Chinese Type 52 (an unlicensed copy of the American M18 or M20) firing 57mm, anti-armoured shells, and packing tubes for the same ammunition. These recoilless guns are «direct-fire support weapons distinguished by a system of operation in which propellant gases (...) are expelled from the rear of the launch tube or barrel. The forward momentum of the projectile is effectively balanced by the rearward momentum» (Jenzen-Jones, 2015:1). The casings themselves are distinctive, having perforations.



127: shrapnell found on Uteit Aannania (nucleus III), possibly from ordinance dropped during an air raid.



128: Recoilless rifle casing (57mm) from Type 52 Chinese rifle (Tifariti I).

These are «for the purpose of venting the propellant gases to the rear ... to protect the propellant and prevent loss of grain. The cartridge case is lined, usually with a paper or plastic lining» (Technical manual: ammunition for recoilless rifles, 1959:6). In this manual it is also stated that each cartridge was individually packed, with four packages per wooden crate. These packages would be synthetic in American ammunition, but it appears that the





packing tubes found on the field are made of metal with a latch on top.

There are also several large calibre casings, around 20mm, possibly belonging to an anti-aircraft gun. According to a CIA report from 1983 (NESA, 1983:4), it was believed the POLISARIO possessed ZU 23 AA gun, in unknown numbers. These were Russian made, towed double barrel guns. Date of introduction of these weapons is early 1960's, needing a 5 men crew to operate it. If so, the connection anti-aircraft shells/bomb shrapnel confirms one or more air raids in the area.

Machine gun belt links are also common, these being classified as part of «disintegrating belts», that is, feeding belts that are composed only by links that are held together only by cartridge connection. These belts were patented in the United States during the Second World War and perfected during the Cold War era, as we are shown by several patents released from improvements in 1941, 1942, 1947, 1950, 1974 etc.(Patents.Google.com).

It is worth mentioning that the POLISARIO force was small comparing to the Mauritanian or Maroccans armed forces. A 1979 CIA report mentions that the Marocco had about 85 000 land personnel, plus 4 200 navy personnel, against the POLISARIO exclusively land army of about 3 000 to 5 000 (NFAC, 1979:13). The Moroccans had also armoured vehicles on the field right at the beginning, so the need for anti-tank weaponry is reflected on the several evidences of recoilless rifle material.

During the survey the Moroccan tank at the outskirts of Tifariti was taken into the account in the inventory. This was identified as a T-55 Soviet tank, one of the most produced tanks in



129: machinegun belt links, found at Uad Tifariti (nucleus I)



the world, and present in various «African bush wars». Having a crew of four (commander, gunner, loader and driver), a maximum range of 500 km and a 50 km/h speed, with a 100 mm rifled gun (Zaloga, 2004:28-29), it presented itself as a dangerous opponent to the POLISARIO guerrillas. The team was explained that the car that was found on the field and that it was taken down by rocket propelled ammunition (possibly from a recoilless rifle). It has at least one entry point, with about 20cm gape, on top of the right side track. The turret stopped facing the Southwest.



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## 8. Conclusões

The Western Sahara archaeological survey was carried by the CEAUP team and lasted a short week (field work). This was a «pilot» research work of a mission which had also the goals of setting a basic coordination research projects with Saharawi institutions (see I, 2), to sign protocols and to proceed to official visits.

The field work mission allowed the team to make a first approach to the archaeological reality of the country. The following mission outcomes may listed:

- the identification/location with geo-referenced information of 22 rock art occurrences, 57 funerary structures, 2 shelters, 14 contemporary military features, 11 undefined formations or material dispersal areas and 5 material concentration sites.
- the improvement of methodology for joint interdisciplinary missions, setting tasks and the use of scientific equipment in the most efficient way to data collection.
- the inventory holding of all features found in the field, with proper description, as to make a future site identification easier.

From this first experience we can conclude that most of the findings belong to two main chronological eras:

- Prehistory:

in this category we can insert most of the rock art sites, burial mounds and structures, shelters and material dispersal/concentration areas, in a total of 92 occurrences. Of course this accounting has to be further refined, due to the fact that there could be later occupation of some of the sites, as was observed in some of the painted shelters for example (with POLISARIO related graffiti).

A study of funerary structures has also to be taken in depth, for as the mound-like structures and «crescent» type monuments could date back to a recent prehistorically moment, some of the smaller, rectangular burials could date to a latter, modern or even contemporary period of the Western Saharan history. Fadel Sweyah reported that Saharawi oral memory dates back the “crescent type” monuments to the “time of giants” and knows them by the word “Hilali”, that is “crescent” (not to be confused with the 10th century Banu Hilal migration). Although this



could be a further evidence of the prehistorical timeline of these structures, further research has to be undertaken before the establishment of a positive periodization.

In the case of the prehistoric sites and findings, the main comparison work is Buruaga's yearly reports about his field research in the Tiris. Using his chronological exposition, we have made the following table that reports to the Holocene period, to which almost all of the occurrences seem to belong:

| Holocene                                     |                                                                                                                            |                                                                                                                                                                       |
|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Accentuated Wet fase<br>(10 000 – 7 000 B.P) | Relative Wet fase<br>(7 000 – 4 000 B.P)                                                                                   | Current desert fase<br>(4 000 B.P – Current time)                                                                                                                     |
| High Holocene Known as<br>«Tchadiense»       | Middle Holocene, known as<br>«Nouakchotiense»                                                                              | Recent Holocene                                                                                                                                                       |
| Coincides with the neolithic<br>expansion    | - Has one relatively arid period<br>around 7 000 to 6 000<br>- Around 6 000 to 4 000 enters<br>the «Neolithic Wet» period. | - First period, from 4 500 to 3<br>000 is known as «post<br>neolithic arid»<br>- Has one last «wet» period<br>around 3 500 to 3 000, known<br>as «post neolithic wet» |

In general terms we can apply this chronological table to some of the identified sites and structures.

Rock art sites, that use ochre paintings, incisions, dotted lines, and use the general wildlife themes (antelope, giraffes, oxen, stylized figures etc.) are placed around the 5th to 3rd millennium.

Funerary structures, burial mounds, crescent shapes can be placed between 7th/6th to 3rd millennium.

Rock worksites can remount to the 8th to 3rd millennium.





Finally, dwellings and shelters can be placed between the 8th and 3rd millennium (Buruaga, 2008: 136-144).

A combined table of types and locations is shown below:

| Type of site/<br>Nucleus | Rock Art Sites | Funerary/ritual Structures | Military and contemporary Structures | Shelters (with no rock art) | Areas and undefined features | total |
|--------------------------|----------------|----------------------------|--------------------------------------|-----------------------------|------------------------------|-------|
| I                        |                | 6                          | 7                                    |                             | 1                            | 14    |
| II                       |                | 32                         |                                      |                             |                              | 32    |
| III                      |                | 17                         | 6                                    |                             |                              | 23    |
| IV                       | 15             |                            | 1                                    | 2                           | 1                            | 19    |
| V                        | 7              | 1                          |                                      |                             | 1                            | 9     |
| VI                       |                | 1                          |                                      |                             | 8                            | 9     |
| total                    | 22             | 57                         | 14                                   | 2                           | 11                           | 106   |

#### General site dispersion

There are five categories of archaeological features listed:

- Rock art sites (these occur either in open rock formations or inside shelters);
- Funerary and ritual structures (which include burial mounds, flat tombs, irregular stone alignments, crescent forms etc.),
- Military and contemporary structures (dugouts, trenches, houses etc.);
- Shelters (where evidence of rock art was not found;
- general areas and unidentified features (tool dispersal areas and non natural rock formations).

These were attributed to the various archaeological nucleus that were defined.

As we can observe, the nucleus with more findings is II (Tifariti), with 32 features, all of them relating to funerary or ritual structures.



Following is nucleus III (Aannannia) with 23 findings, 17 relating to funerary structures, and 6 to contemporary military elements.

Nucleus IV (Erqueiez) produced 19 findings, 15 relating to rock art shelters (paintings), 2 shelters with no art, 1 contemporary military feature and 1 tool area.

The Tifariti nucleus I (nearer to the village) produced 14 features, 6 related to burials and ritual structures, 7 relating to contemporary military occupation and 1 tool dispersal area.

Both nucleus V and VI are located out of the main work area and were not one of the major locations, but having the opportunity to visit these locations some results were obtained.

At Sluguiat (nucleus V) 7 rock art points were registred, plus 1 burial mount and 1 unidentified rock pille.

Finally at La Guilla 9 other points were noted, 1 «crescent» shape and 8 unidentified rock formations (apparently not natural). This amounts to a total of 106 features spread through VI nucleus.

- Contemporary:

due to the Western Sahara's recent history its safe to assume that most of the materials and structures identified can be attributed to the late 20th century, more specifically to the «freedom fights» of years 1976-1991, an important period in the affirmation of the Saharawi people, when Moroccan forces are pushed back leading to the splitting of the territory.



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## 9. Future objectives and suggestions

This pilot project only managed to scratch a bit of the surface of the archaeological reality in the Western Sahara. Future objectives and suggestions may be drawn out of this first experience.

First, that a main objective is to keep research and cooperation protocols active, to guarantee there are no interruptions and that the natural flow of information is upheld. This of course has to be assured by continuous field work, which implies trained staff to gather information, compile it and convert to material that can be consulted by anyone who wants to study the finds. The main tool for a coordinated scientific activity will be the online base/website, which is being designed as to allow for easy queries and checks and which is supposed to be also managed by local SADR or University Staff. All information gathered should then be available to local staff, which should also be able to add new data to the website.

For future scientific work this reports presents the following suggestions:

- Creation of a local team operating in Tifariti that can assure the continuous effort of collecting field information.
- Maintaining of the cooperation between RASD teams and foreign investigation teams.
- Creation of a «base camp» in Tifariti from where mission teams can depart for the workfield. This location should be equipped with a storehouse/shed for materials collected in the field, where they can be stored properly and eventually studied.

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## 10.- Bibliography

Besenyő, Janos (2009), Western Sahara, Publikon Publishers, Pécs.

Buruaga, Andoni (2008), Contribuicion al conocimiento del Pasado Cultural del Tiris. Sahara Occidental, Vitoria-Gasteiz, Paiz Vasco.

Buruaga, Andoni (2014), Nuevas aportaciones al conocimiento del pasado cultural del Tiris, Sahara Occidental, Vitoria-Gasteiz, Paiz Vasco.

Garfi, Salvatore (2014), An Archaeology of Colonialism, Conflict, and Exclusion: Conflict Landscapes of Western Sahara, vol I, University of East Anglia, School of Art History and World Studies, United Kingdom.

Miguel, Carlos Ruiz (1995) El Sahara Occidental y Espanã: historia, política y derecho. análisis crítico de la política exterior española, Universidade de Santiago de Compostela, España.

Lino, Jaisson Teixeira; Funari, Pedro Paulo A.,(2013), Arqueologia da Guerra e do Conflito, Ed. Habilis press, Brasil.

Silva, João Fernando Teixeira (2014), Uma abordagem do conceito de paisagem cultural em Arqueologia Pré-histórica. Da percepção ao conhecimento, Faculdade de Letras da Universidade do Porto, Porto.

Suarez, David (2016), The Western Sahara and the search for the roots of the Saharawi national identity, Florida International University, Miami.

Zaloga, Steven, T-54 and T-55 Main Battle Tanks 1944-2004, Osprey Publishing (New Vanguard), Oxford, UK.

### Journals/articles

Besenyő, Janos (2014), Western Sahara and Migration, AARMS, vol.13, nº2, Spain, pp.251-259.

Braga, Sofia Fonseca (2006), Arqueologia no Saara: Uma aproximação ao deserto, Conimbriga XLV, Coimbra, pp.359-375.

Brooks, Nick; Clarke, Joanne; Garfi, Salvatore; Pirie, Anne (2009), The archaeology of Western Sahara: results of environmental and archaeological reconnaissance, Antiquity nº83, United Kindgom, pp.918-934.





Buruaga, Andoni et al, (2004-2005), Nota sobre el comienzo de un proyecto arqueológico de investigación sistemática en la región del Tiris (Sahara Occidental): Planiamiento y primeros resultados, Krei nº8, pp.7-20.

Buruaga, Andoni (2006), Investigación arqueológica: investigación, cooperación, y solidaridad con el Sahara Occidental – desde la recuperación e interpretación del patrimonio cultural, Arkeoikuska, pp.19 – 27.

Buruaga, Andoni et al, (2012), Primeras aportaciones a la cronología cultural de la región del Tiris (Sahara Occidental) desde el análisis de restos cerámicos, Munibe (Antropología-Arkeologia) nº63, San Sebastián, pp.145-164.

Buruaga, Andoni et al, (2006 - 2007) Nuevas iniciativas en el proceso de búsqueda e interpretación del pasado cultural de la región del Tiris (Sahara Occidental): la contribucion científica de las expediciones arqueológicas vasco-saharauis de 2006 y 2007, Krei nº 9, pp.7-26

Estrada, Rodrigo Duque (2014), Saara Ocidental: história, geopolítica e perspectivas da “última colônia”, Cadernos de relações internacionais, v.7, nº1, Brasil, pp.118-147.

Martínez, Elia Quesada (2008), Arqueología y género en el Sáhara Occidental, Arqueologia y Territorio, nº5, España, pp.19-33.

Munene, Macharia (2010), Multiple Colonialism in Western Sahara, Journal of Language, Technology & Entrepreneurship in Africa, vol.2, nº2, South Africa pp.178-195.

Jensen-Jones (2015), N.R, Research Notes: Recoiless weapons, Small Arms Survey nº55, December, pp.1-4.

#### Archival Sources (available online)

CIA – RDP84S00556R000100150003-7, The Polisario Front: Status and prospects. An intelligence assesment, 1983 (realeased 2008).

CIA - RDP80TT00942A000800130001-2 -, The Western Sahara Conflict: Morocco's Millstone (s). An intelligence assesment, National Foreign Assesment Center, 1979.

Technical manual: Ammunition for recoilless rifles, nº 9 -1300-204, Headquarters Department of the Army, 1959



## Sites

Patents.Google.com

<http://www.kultursahar.org>

<https://www.lamilienelsahara.net>

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