بسم الله الرحمن الرحيم

Sultanate of Oman
Ministry of National Heritage & Culture
P.O. Box : 668 - MUSCAT
Postal Code 113
Tel. : 602225 - 602555
Telex : 5649 OMNHCV ON
Fax : 602735

سلطنة عمان
وزارة التراث القومي والثقافة
ص.ب : ٦٦٨ مسقط
الرمز البريدي : ١١٣
هاتف : ٦٠٢٢٢٥ - ٦٠٢٥٥٥
تلكس : ٥٦٤٩ أوان
فاكس : ٦٠٢٧٣٥

9.X2000

Ref:HMA/1402/00/U-3

2nd October 2000

Mr.Kentaro Tanaka
Associate Expert
World Heritage Centre
UNESCO
7 Place de Fontenoy
75352 Paris 07 SP
France

Dear Mr. Kentaro Tanaka,

Reference to your letter WHC/74/318.1 of 27th September 2000.

We are pleased to enclose herein the material under Section 2, the State of conservation report of the Archaeological Sites of Bat, Al-Khturn and Al-Ayn. Hope this will meet with your requirement.

Kindly acknowledge receipt.

Thank you,

Yours sincerely,

HASSAN MOHAMMED ALI
Director General of Administration & Finance

Investigations on Bat.

Preliminary report.

Internet version.

Kelig-Yann COTTO

with the collaborations of sulatn Said Al-Bakri and Khamis Seif Al-Asmi

At 20 kilometers of Ibri, lies an important protohistoric site on the mountains and the terraces at the North of the village of Bat. A settlement and necropolises grouping there forms a coherent and representative whole, witness of the civilizations of the Arabian peninsula from the third Millenium B.C.

Four campaigns of excavations took place there in January-February 1973, in January-February 1976, in January-February 1978 and in 1985 by a Danish expedition directed by Karen Frifelt, head of the Moesgard Museum. Graves and Towers were investigated.

One of the five towers of Bat has been entirely excavated. Through scientific methods, it has been determined that it was built between 2595 and 2465 B.C. The graves are typically from *Hafit* and *Umm-an-Nar* cultures. They contain an important archaeological material which is the witness of the commercial relations of this part of Oman with the others civilizations of the Gulf, Iraq and Iran. The Danish mission estimated at 300 the number of the graves of Bat.

The site of Bat was inscribed on The Wold Heritage List in 1988 on the basis of two criteria:

1. The zone encompassing the settlement and necropolises of Bat is the most complete and best known site of the Third millenium B.C. in the South Arabian Peninsula.
2. In a restricted, coherent space, the necropolis of Bat bears characteristic and unique witness to the evolution of funeral practices during the first Bronze Age in the peninsula of Oman.

The week of our fieldwork was spent on investigations and surveying. The team consisted of Sultan Seif Al-Bakri, Khamis Said Al-Asmi with Kelig-Yann Cotto as leader.

The purpose of our work can be summarized as follows:

1. To locate the site
2. To establish the site boundaries
3. To plot the area completely.
4. To describe the topographic nature of the area
5. To locate find spots within or related to the site
6. To prepare a map including the site and the surrounding area, including finds in the area.

First part: work made by Khamis Said Al-Asmi, Kelig-Yann Cotto and Sultan Seif Al-Bakri from the 2 July 2000 to the 6 July 2000

First Chapter: Checking the limits of the site and the areas of Al Ain and Al Khutm (see *Map of Archaeological sites in Bat Area*)

This work was conducted in common. Absolute coordinates were taken around these three sites to define the area of protection.

Al Khutm

Easting	Northing	Map Datum System
40470497	2574322	OMAN
40470485	2574290	OMAN
40470494	2574270	OMAN
40470514	2574250	OMAN
40470533	2574237	OMAN
40470535	2574270	OMAN
40470546	2574294	OMAN
40470530	2574307	OMAN
40470517	2574315	OMAN

Al Ain

Easting	Northing	Map Datum System
40495759	2567214	OMAM
40495776	2567181	OMAN
40495791	2567176	OMAN
40495818	2567173	OMAN
40495825	2567129	OMAN
40495842	2567120	OMAN
40495883	2567095	OMAN
40495910	2567116	OMAN
40495914	2567124	OMAN
40495933	2567145	OMAN
40495936	2567149	OMAN
40495940	2567168	OMAN
40495966	2567200	OMAN
40495927	2567240	OMAN
40495878	2567258	OMAN
40495834	2567281	OMAN

Bat (main part)

Easting	Northing	Map Datum System
40473200	2573700	OMAN

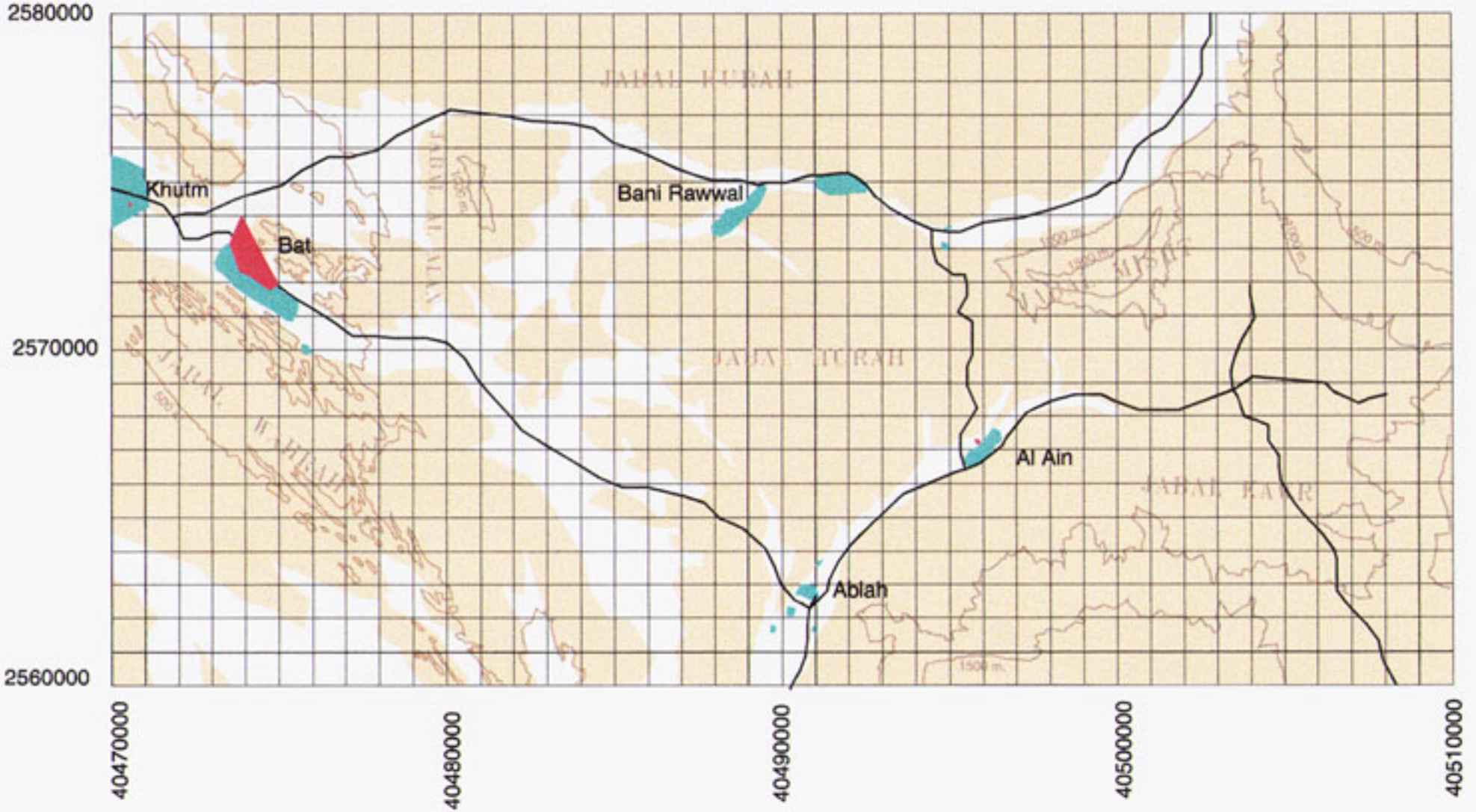
40473851	2573987	OMAN
40474500	2573650	OMAN
40474750	2573650	OMAN
40474687	2571716	OMAN
40473961	2572304	OMAN
40473798	2572260	OMAN

These points were taken according the sketch map presented in the file of World Heritage inscription send by U.N.E.S.C.O. This area is, according to this file, an *non-aedificandi* area. We were surprised to see that some houses were build.

Bat (Tower 1148)

Northing	Easting	Map Datum System
40472451	2571919	OMAN
40473463	2571928	OMAN
40473466	2571933	OMAN
40473472	2571950	OMAN
40473465	2571958	OMAN
40473450	2571969	OMAN
40473426	2571965	OMAN
40473421	2571947	OMAN
4095760	2567255	OMAN

The Tower 1148 is out of the area mentioned above, but it is also protected and inscribed in the World Heritage List. Its location is inside the modern village of Bat.



Ministry of National Heritage and Culture- Department of Antiquities.

MAP OF PREHISTORIC SITES OF BAT AREA

Rock

Palm grove

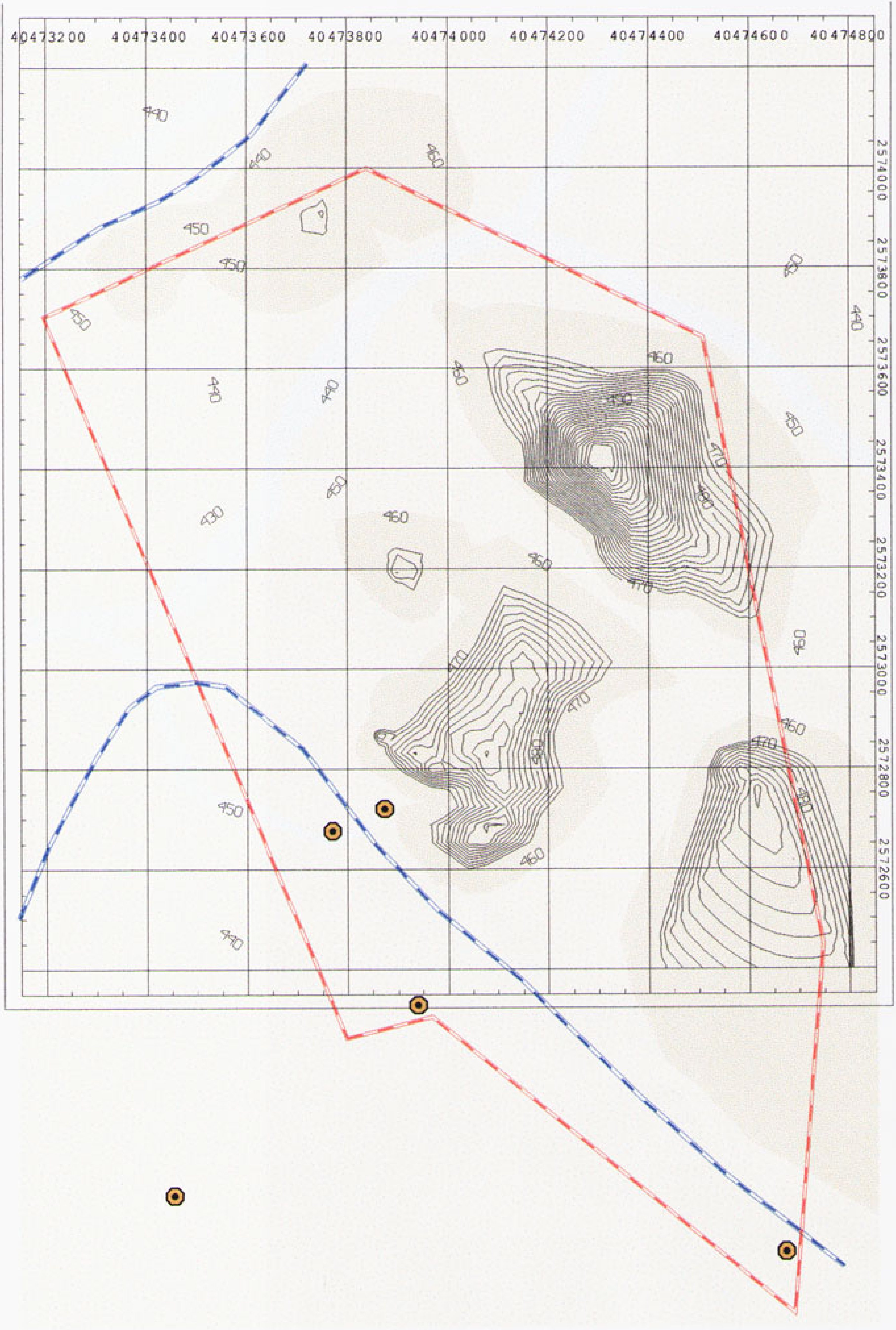
Archaeological site protected by U.N.E.S.C.O.

Main Graved road

Drawn by Kelig-Yann COTTO, July 2000. Each square is 1km. x 1km. tall

Coordinate system: UTM

Map Datum System: WGS 84



MAP 1

MAP 1

TOPOGRAPHICAL MAP OF BAT
Drawn by Kelig-Yann Cotto
Measurements taken by Kelig-Yann Cotto
and Sultan Seif Al-Bakri.
July 2000. Preliminary report.

Second Chapter: The map.

This work was conducted by Kelig-Yann Cotto and Sultan Seif Al-Bakri.

This work is the detailed measurement of the natural elevations that represent the surface of the area. A topographic survey is made to show the contours of the site and the natural features of the area so that the interpretation of the site will include an understanding of its environment and its natural menaces.

The topography of the site was studied and 248 points were recorded in absolute coordinates and altitude. To take these measurements we use theodolite (optical measurements) and G.P.S (satellite measurements). All the points were recorded in *U.T.M.*, following the *Oman Map Datum System*. If the U.N.E.S.C.O. prefers another system (for example the *World Geodesic System 1984*), we have programmed a software which modifies automatically the coordinates.

On the *Map 1*, the surface elevations and depressions are represented by a system of contour lines, or lines connecting points at the same elevation. The result is, therefore, a map showing imaginary lines that are perpendicular to the slopes on the site. We colored the natural features (wadis, mountain, gravel terraces...) and added the boundaries of the U.N.E.S.C.O. protected area, the alignment of the road, the graves recorded in absolute coordinates (*Map 3*), the layout of the village (*Map 6*).

Third Chapter: Recording structures at Bat.

This work was conducted by Khamis Said Al-Asmi.

Following a South-North way, this work can be divided in three parts (see *Map 2*). The first area (*Map 4*) studied was the lower terrace where 33 graves were recorded with absolute coordinates, photos and digital pictures, and 26 only with photos and digital pictures. The second area studied was the terrace of the wadi near the mountains. There, 19 graves were recorded with photos and digital pictures. At last, the third area (*Map 5*), also on the terrace of the wadi, is the place where the most preserved structures are. The graves were recorded with absolute coordinates, photos and digital pictures.

A database was constructed. This program is like a group of different files where are stored all the information we have collected about these graves, including photos. A link with the map drawn at the same time has allowed to build a *Geographic Information System*. This document may be recorded on an electronic support, like a CD. U.N.E.S.C.O. promotes this sort of document.

All this work is exactly conform to the directives of U.N.E.S.C.O. as it is written in its *Periodic Reports Guideline* (Chap II.4: *Management*)

MAP 3

LEGEND

- Grave recorded in absolute coordinates
- Tower
- Road
- Official limits of the site.
- Wadi
- Rock
- Gravel terrace

N
W
E
S

Coordinate system: UTM
Map datum System: OMAN
Each square is 200m.x200m. tall.

MAP 3

BAT
Drawn by Kelig-Yann Cotto
Measurements taken by Kelig-Yann Cotto and Sultan Seif Al-Bakri.
July 2000. Preliminary report.

Second part: The situation of the site.

First Chapter: The built areas.

The *Map 6* shows the area where we found buildings and cultivation fields. We have found four problematic zones. The first one (*Zone 1*) is a private enclosure for cultivation. The second one is a house with cultivation fields (*Zone 2*). Even if this zone is encroaching the official limits of the site, it is not a serious danger because the first graves are 50 meters away. The third and the fourth zone (*Zone 3* and *Zone 4*) are the most problematic. They contain houses and cultivation fields. However, the immediate neighboring of the towers 1145 and 1146 are not built. A small track, between cultivation fields, allows to rejoin the tower 1146 from the main track.

Second Chapter: The enclosure

The present enclosures of Bat are open to criticism. The first one (number 1 on the *Map 7*) has a gate and the key is with the guard of the site, but it is useless because everybody, even with a car, can come inside by the others sides. The situation is similar with the second one (number 2 on the *Map 7*) which should protect the most preserved part of the site and one of its oldest part. The last enclosure of Bat protects the "big tower", actually the tower 1145, the only one wholly excavated by the Danish expedition, but it is also useless since the wadi has destroyed it.
At Al Khutm and at Al Ain, fencing don't exist, even if the tower of Al Khutm is in a serious danger from the humans.
The Ministry of Housing is the owner of some important parts of the site, where it is forbidden to build. These parts are shown on the *Map 8*.

Third Chapter: Damages made by humans.

The human population is the main factor of the damage to the site. The people from **Bat** use the graves as pile of stones where they can take materials for their building. This situation is not new: in 1976, Karen Frifelt thought that around half of the initial total of the graves had disappeared.
The presence of the guard discourages attempted robbery. However, it was difficult for him and his sons to keep the site undamaged for two reasons:

1. He didn't know exactly the layout of the site.
2. The very important size of the site and the absence of a true enclosure

During our fieldwork, we observed that a caterpillar went to the site and take earth. The guard thought that this place was out of his working area. This accident shows the responsibility of Department of Antiquities, which never taught to the guard the precise limits of the site. Our work in Bat was the occasion to resolve this problem. After our surveying, we were able to give to the guard a sketch map of the site. We want to emphasize the serious of the keeper.
The towers, which lie near the houses of the village, are also in a serious danger. The tower 1148, for example, a very important structure, is inside the village and five persons pretend to be owners of it.

At **Al Khutm**, the area immediately around the tower is used as a rubbish dump. It is also probable that the stones of this tower are taken by the people living around to build their houses.

In Al Ain, the degradations are limited thanks to the non-development of the village.

Fourth Chapter: Danger involved by natural features.

The natural menaces are also an important problem at Bat, but not at Al Ain and at Al Khutm.
Many graves lie all along the wadi course. We can analyze the size of the danger thanks to the *Map 9*. This map shows the topographic differences by color: the violet is the deepest area, the red the higher.
On this document, we can see that the wadi course is very deep on the most important part of the site, especially near the graves. Consequently, even with a very strong rain, this course should not change.
The situation is different in the area near the towers 1145 and 1156. Here, the wadi course is not precise, and it can change constantly. This is a serious problem because a lot of important structures lie there. More,

40473200 40473400 40473600 40473800 40474000 40474200 40474400 40474600 40474800

2574000 2573800 2573600 2573400 2573200 2573000 2572800 2572600

ZONE 1

ZONE 2

ZONE 3

ZONE 4

450

Fencing 3

Fencing 1

Fencing 2

Tower 1156

Tower 1145

Tower 1146

Tower 1148

Tower 1147

VILLAGE

MAP 8

LEGEND

- Actual fencing
- Archaeological settelment
- Archaeological necropolises
- Grave recorded in absolute coordinates
- Tower
- Road
- Official limits of the site.
- Property of the Misnistry of Housing
- Rock
- Gravel terrace

N W E S

Coordinate system: UTM
Map datum System: OMAN
Each square is 200m.x200m. tall.

MAP 8

BAT
Drawn by Kelig-Yann Cotto
Measurements taken by Kelig-Yann Cotto and Sultan Seif Al-Bakri.
July 2000. Preliminary report.

this wadi endangers the tower 1145 as it is shown by its collapsing at West side, which was induced from an undermining dug by streaming.
At last, the animals are also a danger: they climb on the graves and cause collapsing.

Third part: Perspectives

First Chapter: continuation of our work

The work we have begun at Bat is not finished. Around 200 graves remain to be recorded, the topographical map must become finer. Above all, a true and a serious campaign of study should be undertaken. We should know, which structures were excavated, what was found inside, where are the objects now, etc.
This project needs a close collaboration between the Department of Antiquities and the members of the ancient Danish expedition. We should have access to the archives of the excavation, read them and analyze them.
Meanwhile, our first work is to carry on the job undertaken from the 2 to the 6 July 2000. Our team is strong and now experienced and able to continue a quality work. If we leave now, the work made will be only a part job. With regard to U.N.E.S.C.O., we, we mean the Ministry of National Heritage of Oman, have to demonstrate our capacity to manage a so important site for our National Heritage.

Second Chapter: Information and advertising

The sites of Bat, Al Ain and Al Khutm are officially protected by U.N.E.S.C.O. and by the Royal Decree 6/80. However, no panels explain this to the inhabitants of these villages. They can't realize that, close to their villages, there are so important witnesses of the Omani National Heritage. The only panel existing is near the tower 1145. Considering the layout of the site, it is absolutely insufficient. We recommend to fix more panels of the Royal Decree 6/80 and add to them some panels with the U.N.E.S.C.O. logo at the place we marked on the *Map 10*.
To complete this operation, it should be desirable to install some information panels near the most spectacular or the most interesting structures and comment them. Of course, this installation could be conducted in relationship with a new fitting of the site.
A tourist promotion of the site could help the population of Bat, Al Ain and Al Khutm to be aware of its protection necessity. The promotion of the inscription of these sites on the U.N.E.S.C.O. World Heritage List will have a strong tourist impact.
The location of the site has no objection to this: Ibri, at 20 kilometers from Bat, is situated on an important road, which joins the interior with the U.A.E. More, the new presence at Ibri of an *International Class Hotel* could transform Bat in one of the stopping place for the tourist tours.
One of the most interesting tool to promote Bat would be a CD-ROM, sold in bookshops and computer shops for example, and eventually in foreign Museum shops, similar to those were undertaken for museums or important tourist places in Europe. The work we have begun could be the basis of this work for which the leader in our Bat investigations has experiences.

Third Chapter: Reorganization of the site fittings (*Map 10*)

To fit out the site of bat, we propose:

1. A new and a definitive definition of the sites boundaries. Actually, the limits chosen in1988 are cancelled by new buildings. The Ministry has to choose between the repurchase of these fields and destruction of the buildings built on it, or to tolerate some buildings at the fringes of the site while requiring the desertion of the cultivation fields which encroach on the site. This solution seems to us the best for the *Zones 3* and *4*. However, we think that the illegal enclosure of the *Zone 1* should be removed. For the *Zone 2*, we recommend only a strict interdiction of its extension.
2. The desertion of the actual track. A part of it could be the access road to the site, but the actual way should be diverted out of the site area.
3. A new and a complete fencing should be fixed, even on the mountain to prevent animals and cars to enter.
4. To build an observation tower in metal near the Tower 1145. This tower, high around 5-6 meter, will allow the view on the structures of the Tower 1145 and will prevent its destruction by climbing.
5. A visitors house joining a room for exhibition, a coffee shop, an office for the archaeologists of the Ministry and a room for a keeper.
6. To employ somebody from Bat to be a guide for the tourists on the site and for the "Museum". This man should be also the manager of the coffee shop. We propose one of the keeper's sons for this work. In our opinion, this is the best and the simplest choice: the two sons of the keeper are helping their father,

they speak English and this family, as we said before, seems to be very serious and to be attached to the site.

7. To employ somebody from Al Ain to be the keeper of the site.
8. Completely fencing the site of Al Ain at the bottom of the mountain and making an easier pedestrian road to the top of the mountain, where lie the graves, with steps for example.

MAP 10

LEGEND

- Observation Tower
- Panels
- Grave recorded in absolute coordinates
- Tower
- Road
- News fencings of the site.
- "Tourist House"
- Rock
- Gravel terrace

N
W E
S

Coordinate system: UTM
Map datum System: OMAN
Each square is 200m.x200m. tall.

MAP 10

BAT: Project of news fittings.
Drawn by Kelig-Yann Cotto
Measurements taken by Kelig-Yann Cotto
and Sultan Seif Al-Bakri.
July 2000. Preliminary report.