# Failaka Seals Catalogue, Volume 2: Tell F6 " The Palace 

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## Failaka Seals Catalegue

Hélène DAVID-CUNY
Dorothée NEYME


Volume 2 :
Tell F6
«The Palace»



# Failaka Seals Catalogue 

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Stamp seal KM 1113, photograph by Hélène David-Cuny.
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Back-cover : Beginning the excavation of the "Palace" in Tell F6. Photograph by the Danish Mission (60s).
Page 5 : Danish excavation in Failaka in the 60s. Photograph by the Danish Mission.
Page 13 : Tell F6, the excavations from the "Palace" to the temple. Kite photograph © Thomas Sagory, 2010.

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# Failaka Seals Catalogue 

## Volume 2 : <br> Tell F6 <br> «The Palace»

by Hélène DAVID-CUNY \& Dorothée NEYME
Foreword by Flemming HøJLUND


Failaka Seals Catalogue - Tell F6 «The Palace»

## Foreword

by<br>Flemming HØJLUND<br>(Moesgård Museum)




KM 12

The finest remains from Kuwait's ancient past are small, exquisitely engraved, circular stamp seals that date back 4000 years. Long before anything was known about Kuwait's prehistory such circular stamps had been found in excavations in the ancient city of Ur in South Mesopotamia, and in 1932 it was proposed that these stamps demonstrated a connection with the civilisation of the Indus Valley (GADD 1932). That the Gulf-region stretching between South Mesopotamia and the Indus Valley could in some way have been instrumental in bringing these two civilisations in contact was little more than speculation since almost nothing was known about the history of this area, and, indeed, little interest was attached to the arid shores of the Gulf.

It was not till 1953 that a comprehensive programme of surveys and excavations of this long overlooked region was begun, when a series of Danish archaeological expeditions were sent out to Bahrain, and a few years later to Kuwait, Qatar, Abu Dhabi, Saudi Arabia and Oman. In 1957, three seals of the same type were found during excavations in Bahrain (BIBBY 1958, 1969: 172). The real turning point, however, came with the excavations on the island of Failaka, off the Kuwait mainland.


KM 33


KM 30

From 1958 to 1963 almost 400 circular stamp seals were found in mounds covering ancient settlements at the southwest coast of Failaka. These finds were ample proof that this specific type of round stamp seal was produced and used around 2000 BC by people living in Eastern Arabia, the ancient Dilmun.

The first study of the Failaka stamp seals was presented by Poul Kjærum at the Seminar for Arabian Studies in Cambridge in July 1979 and published the following year in its Proceedings (KJ/ERUM 1980). The seals were here classified into four styles, IA, IB, II and III and dated to the first half of the 2 nd mill.BC, and their different types of motifs were discussed in some detail. A few years later followed an annotated catalogue of all seals found on Failaka, stamps as well as cylinders (KJARUM 1983). Drafts of all chapters of a corresponding text volume were prepared by Kjærum in the 1970s and 1980s, but were never finished due to administrative obligations at Moesgård Museum and other research priorities.

In 1986 Kjærum became involved in preparing the exhibitions in the National Museum of Bahrain that opened in 1988. He was responsible for exhibiting the seals,
 and he therefore had the opportunity to study the several hundreds of seals till then found in Bahrain, primarily in burial mounds (Ibrahim 1982. Mughal 1983.

SRIVASTAVA 1991. Al-Sindi 1999). Many of these seals proved to be older than the ones found on Failaka and thereby gave the opportunity to trace the development of the Dilmun stamp seal back to its beginning in the late 3 rd millennium BC . This led to the publications of the seals found in the capital of Dilmun, Qala'at al-Bahrain (KJFRUM 1994 and 1997) and in the Barbar temples (KJARUM 2003), in which extensive comparison between seals from Failaka and those from Bahrain was made.

In later scholarly literature the Failaka seals do not figure prominently with a few exceptions (Beyer 1986. Pic 1990. Peyronel 1997, 2008. Goodarzi 2003, Abu-Laban in press and in prep.). Recently Hilton has discussed in detail a number of convincing parallels between stamp seals of Style III and stone vessels decorated in the Failaka Figurative Style (Hilton 2014: 104-125, 170).

## Why SO MANY SEALS ?



KM 30

Since the early excavations on Failaka there has been a slight uneasiness about the large number of seals found in Dilmun settlements. There is no doubt that Failaka was an important station for the Dilmun trade between Mesopotamia and Bahrain and, further on to South-East Arabia and India. A large proportion of Failaka's population was probably engaged in this trade in one way or another. Since seals were used to 'sign' trade agreements, written in cuneiform script on clay tablets, and to seal goods and store rooms, it is not at all strange that seals turn up on Failaka. The question is : Why so many?

During the 1958-1963 excavations more than 400 seals were found in the Failaka tells, Tell F3, Tell F5 and Tell F6 (KJERUM 1983). In the 1980s French archaeologists found further 37 seals when excavating a Dilmun temple in Tell F6 (BeYER 1986. PIC 1990). On the north side of Failaka, at al-Khidr, a Kuwaiti-Slovakian expedition excavated in 2004-2009 c. 70 seals in a settlement comprising only a few houses (DAVID-CUNY \& AZPEITIA 2012). Furthermore, in the course of new Kuwaiti-Danish excavations in Tell F6 in 2008-2012 more than 70 stamp seals were found within a rather limited area between the temple and the "Palace" (Højlund \& Abu-LABAN in prep.).


Fig. 1. Kite view of Failaka SW end where excavations take place. Top right : Tell F3. Top left : Tell F5. Bottom : Tell F6, with the temple on the left, the "Palace" in the center. Photo Yves Guichard, 2009.

A similar picture emerges in Bahrain, both in the prehistoric capital of Qala'at al-Bahrain (KJARUM 1994,1997 ) and 7 km away in a small rural village at Saar, where a remarkable number of seals has also been recovered (CRAWFORD 2001).

How do we explain the high number of seals found everywhere across the excavated Dilmun settlements? And not simply old worn seals ! There are also new, barely used examples. If the function of seals were only to mark ownership with respect to a particular household, one would think that a smaller number should have been adequate. In fact, fewer seals would have made it easier to keep check on who owned a particular seal. Could the seals have had other functions in addition to markers of identity ? An attempt to solve this question needs to deal in a general sense with the meaning of the Dilmun seals.

## The Dilmun kingdom

Dilmun is known since the late 4th millennium for its important role in the trade in copper between Oman and Mesopotamia, and at least from the middle of the 3rd millennium the Indus civilisation became part of this extensive trade network. It may therefore seem surprising that seals did not appear in Dilmun till around 2050 BC, when one takes into consideration that Dilmun's trade-partners in Mesopotamia and India had for centuries used seals in connection with their trade arrangements. The reasons for this may be related to the rather simple kinship-oriented social structure that the archaeological material of Dilmun seems to reflect prior to c. 2050 BC (Højlund 2007).


KM 15

When seals occur for the first time, c. 2050 BC, they do so as part of a complex of elements rapidly appearing in Bahrain, such as a stone fortification wall around the capital city, a monumental complex of warehouses, a "high temple" with a double stepped platform, gigantic "royal" burial mounds, elements that we interpret as evidence of the emergence of a stratified society in Dilmun (HøJlund 1989. HøJlund \& ANDERSEN 1997). A small group of cuneiform texts from Mari relate to this Dilmun state or kingdom by revealing a series of diplomatic relations between the Assyrian king Shamshi-Adad and the king of Dilmun (EIDEM \& HØJLUND 1993, 1997).

Thus, we see the emergence of seals as evidence that kinship rules of ownership and economic organisation was replaced by a new structure based on the emergence of a ruling elite.

The Dilmun seals were, from the beginning, round stamp seals. These two characteristics, that they were round seals and that they were stamp seals may have been specifically intended to distinguish the Dilmun seals from, on the one hand the cylinder seals of Mesopotamia and on the other hand the square stamp seals of the Indus valley. Thereby a specific Dilmun identity was emphasized vis-a-vis her neighbouring trade partners (LAMBERG-KARLOVSKY 1975:362). Such attempts at creating a Dilmun style are seen in several aspects of material culture in the beginning of the Dilmun state (HØJLUND 1989:51. Højlund \& Andersen 1994 : 470).

## The Royal Bonnet

The Dilmun stamp seal consists of a flat disc, topped by a domed boss, the boss having a smaller diameter than the disc, thus creating a narrow margin. Through time the disc becomes lower and the boss broader, but the general shape remains stable through a period of half a millennium (fig. 3).

In the centuries around 2000 BC, the Mesopotamian kings wore a special headdress, the so-called Royal Bonnet, which has a remarkable similarity to the shape of the Dilmun stamp seal. This royal headdress appears after the Akkadian period and is found e.g. on the statues of Gudea, ruler of Lagash around 2100 BC (fig. 2) (AmIET 1977 : nos. 50-52, 376, 378, 381-384), on the stele of Ur-Nammu (2112-2095 BC) (WOOLLEY 1925 : 397, pls. 46-48) and on cylinder seals picturing Ur III kings (WINTER 1987 : Pl. 1a). In a relief at the top of the famous stele on which Hammurabi's legal code was inscribed, the king wears the bonnet when he approaches the sun-god, signified by the horned crown (fig. 4).

When considering the similarity between the Dilmun stamp seal and the Royal Bonnet, it should first be noted that they date to exactly the same time range, the Ur III, the Isin-Larsa and the Old Babylonian periods. After the Old Babylonian period, the Royal Bonnet disappears from Mesopotamian art and presumably royal fashion.


Fig. 2. Statue of Gudea, Ruler of Lagash (JOHANSEN 1978 pl. 46).


Fig. 3. Morphological development of the Dilmun stamp seal: a) c. 2050 BC, b) c. 1900 BC and c) c. 1700.

The similarity between the shape of the stamp seal and that of the Royal Bonnet is quite detailed : both consist of a broad disc-shaped lower part with a concave or straight edge combined with an upper domed part, surrounded by a flat collar. Especially the concave edge of the disc is a particularly striking common morphological element, compare for instance the slightly concave edge of the bonnet on the Gudea Statue (fig. 2) and the marked concave edge on the bonnet on the Neo-Sumerian prince from Uruk (fig. 5) with the shape of a Dilmun seal seen from the side (fig. 6) (HøJLUND 2000)

In view of the widespread Mesopotamian influence that can be detected on many levels of Dilmun culture, it is entirely possible that Dilmun kings wore the same kind of headdress as their Mesopotamian counterparts. The Mari texts show us the Dilmun king engaged in diplomatic manoeuvres with a Mesopotamian king, exchanging gifts according to Mesopotamian custom (EIDEM \& HøJLUND 1993, 1997). And there are many other examples : a deposit of nearly a hundred conical clay goblets was found in the earliest temple at Barbar, apparently following a tradition of earlier Mesopotamian temples (MORTENSEN 1970 : 394-395). Most pottery in Dilmun was produced according to local techniques and style, but special burial pots were imported from Mesopotamia (HøJLUND 2007 : figs. 124 and 136) and widely imitated locally (Højlund 1994 : 176, 2007 : figs. 197 and 238). A mound-burial at Saar in Bahrain contained beside a typical local grave furnishings, a pair of scales and a set of eight haematite weights corresponding to the Mesopotamian shekel system (HØJLUND 1990 : 152. VINE 1993 : 47 above).


Fig. 4. King Hammurabi with the Royal Bonnet, standing before the Sun God, c. 1800 BC (AMIET 1977 : no. 68).


Fig. 6. Dilmun seal excavated in 2011 in Tell F6, Failaka (KM 11093 / E202-X905).

Fig. 5. Head of a Neo-Sumerian prince from Uruk, c. 2100 BC (AMIET 1977 no. 387).

The meaning of the Royal Bonnet in Mesopotamia appears from the context of rituals accompanying the installation of a ruler (POStGATE 1992:260-262) : After the Flood, the Sumerian epic tells us that kingship was brought to earth, represented by three symbols : a hat, a stick and a stool (or, to give them the names they have acquired in this context in English, the "crown", the "sceptre" and the "throne") and these recur time and again in the hymns addressed to kings, along with other royal insignia. In the iconography too we see the ruler identified by certain symbols.

The Royal Bonnet and other regalia thus embodied magically the divine powers that in the first place made possible the wielding of power (ReNGER 1976 : 129). If the Royal Bonnet was an official symbol of the king in Dilmun, as it was in Mesopotamia, then there may have been good sense in modelling the Dilmun seal in the shape of the royal crown. In this way the seal was invested with the king's and ultimately the gods' authority, and thereby the king may have legitimized his intervention in the economic doings of his people. For the same reasons, Danish coins have for centuries been stamped with the king's crown and named "crowns".

## The king's bond with his subjects

If we continue this line of argument, we can imagine that the Dilmun king bound his subjects to him through formalized relations with the head of each individual family and that this relationship was consolidated via the ceremonial transfer of a seal from a royal seal workshop.

Much suggests that seal production was centralised. The seals are extremely standardised, both in form and image style, and their actual carving must have required great skill and experience which only a professional craftsman could deliver.

If the seal were a symbol of the formalized bond between ruler and subject, it would have to be renewed each time a new king ascended the throne. There could also have been other occasions in the course of a king's reign when the bond between regent and subject had to be reconfirmed through the issue of a new seal. Perhaps this was something that had to take place each year ! The old seals were not, however, discarded. They were, after all, symbols of an important social relationship (HøJLUND 2013).

A discovery made in 1960 during the excavation in Tell F3 can perhaps shed a little light on what happened to seals that went out of circulation. The author Thorkild Hansen was on the excavation team, and in his short story Seven Seals he reports the following : "One afternoon, at the same time and directly next to each other, we find seven stone


Fig. 7. Bronze Age houses in Tell F3 with Sheikh Ahmad's House in the background, looking NW (1961/62).
Photo © Moesgård Museum. seals. They lie so close together, one can imagine that they must have fallen from a niche in the wall, or perhaps lay in a leather pouch which, over the millennia, has disintegrated. When the area has been brushed clean, the white steatite stones shine in the clay like a small seven-pointed star" (HANSEN 1960).

The idea that the seals were hidden away in niches in house walls is attractive. The Dilmun people built their houses of stone and very often they reused material from old abandoned houses to build new ones. This systematic reuse of stone from abandoned houses can perhaps explain why, in our excavations, we find so many seals scattered around in the layers. Perhaps these seals originally lay hidden away in niches and cracks in the walls, but first became scattered when the walls were demolished and the stones reused in new buildings.


Fig. 8. Seal KM 9371 from al-Khidr. (Drawing H. David-Cuny)

It is worth remembering that the Dilmun realm was very small compared with contemporaneous kingdoms in Mesopotamia. There were probably no more than 15,000 people living in Bahrain at any one time (LAURSEN in press), and Failaka's population probably only ran into hundreds, i.e. a single town in Mesopotamia could easily exceed Dilmun's entire population. So, even though the form of government in both cases was that of a kingdom, there were enormous differences in how areas of so different sizes could be ruled.

In the traditional, pre-oil societies along the Gulf, the head of each family, involved in a conflict, saw it as his right to be given an audience with the ruling sheikh or one of his closest confidants and to present his case. It was expected that the ruler was familiar with one's village, one's family and one's particular circumstances. The same close relationship between ruler and subject could very well have been a part of Dilmun's form of government and a seal, presented by the king, strengthened and symbolised this relationship.

## Interpreting the seal motifs

It is important to take explicit account of the social context in which these seals were utilised, because it is within this context that their imagery must be interpreted. The imagery of the Dilmun seals is incredibly rich and open to many different interpretations. As yet, only the first tentative attempts have been made to open up this world (Porada 1971. KJferum 1980, 1994. Peyronel 1997. Crawford 2001. Al-Thani 2004. LAURSEN 2010), and a great amount of work still lies ahead.

In the interpretation of the seal motifs, it is often assumed that the owner decided which motifs the seals should be decorated with, and that the motifs can therefore be interpreted as expressions of the owner's personality and social status. Perhaps it would be more productive to interpret the motifs of the Dilmun seals in relation to the king and to assume that the motifs derived from myths about the divine parentage of the royal family and from rituals in the temples which bound the king to the gods (HøILUND 1989:49-50). Perhaps the Dilmun kings used not only the shape of the seals, but also their images, to legitimate their divine right to rule the country and its people.

## Future studies

The study of the Dilmun stamp seals has only just begun, and the field is characterized by many more questions than answers. The splendid catalogues published by the Kuwait National Council for Culture, Arts \& Letters (DAVID-CUNY \& AZPEITIA 2012), of which the present volume is the second, will hopefully attract a wider circle of scholars and inspire to a new generation of studies and thus become much needed windows of insight into the Dilmun culture.



Failaka Seals Catalogue - Tell F6 «The Palace»

Imtroduction



Terracotta boat model from Sabiya, c. 5000 BC

from Tell F6, c. 2000 BC

This volume is the second of a collection inaugurated three years ago by the National Council for Culture, Arts \& Letters. It has been lengthly exposed in the previous volume ${ }^{1}$, and recalled in the preceeding pages by Flemming Højlund, why the small island of Failaka, not even fifty square-kilometers, is such an important place on the archaeological map of the Middle-East. Before becoming an outpost of the Hellenistic empire when a group of soldiers of Alexander the Great settles there at the beginning of the 3rd century BC, Failaka's radiance starts as early as 2000 BC, when it first appears as a pole for the Dilmun culture which radiated around Bahrain from the end of the 3 rd to the middle of the 1 st millennium $B C$. In a context of competing kingdoms exchanging vital natural ressources, each having profusion of only some of the precious products, Failaka's strategic position at the nod of the main communication road, i.e. the Arabian Gulf, made it a necessary interlocutor for its powerful neighbours : Sumer and Babylonia in the Mesopotamian plain, Meluhha or the Harappan civilisation in the Indus Valley, and inbetween, Magan or the Oman Peninsula, South of the Gulf, and the vast Iranian region North of it, from the Zagros mountains in the West to the piedmont of Himalaya in the North-East.


From a main Dilmun outpost to a Hellenistic colony, then a Christian community in al-Qusur, with two churches in the middle of an extended settlement dated back to the early-Islamic time, Failaka has long been almost the only place in Kuwait providing the country with its extraordinary archaeological wealth. This is no more true thanks to numerous discoveries excavated on the continent since the beginning of the 2000s by Kuwaiti, British and Polish expeditions, after a few sites had already been identified in the 1980s. A number of occupations dating to the pre-, early- and late-Islamic periods have been investigated around Kadhima and Sabiya, on the northern shore of the bay of

[^0]

Kuwait, and along the wadi al-Batin, on the western border of the country. The importance of this area in the recent historical development of the region was only known so far by textual sources ${ }^{2}$, it is now attested by material evidences. At Sabiya, it is the very dawn of Kuwait history which is enlighted through Stone Age sites and several settlements and necropolis as old as 5500 BC in the early Bronze Age, witnessing its key role in the maritime trade which starts to become a main factor of interregional relationship around the Arabian Gulf, while the urban civilisation is about to rise in the rich plains of Mesopotamia.

Though not so anciently inhabited — as far as we are aware of by now -, Failaka still remains a unique place for the density of its archaeological remains. And overall for the extraordinary quantity of these tiny objects that came out of the excavations for the Dilmun period : the seals. More than seven hundred of them are now registered in the collections of the National Museum in Kuwait, from only a few hundred square meters excavated on the Bronze Age sites. Most of them are typical for the Dilmun culture, and a few display clear influence from the neighbours, Mesopotamian, Harappan, from Magan or from Iran. About as many of them are known from Bahrain, where hundreds of funeral tumuli have been explored in addition to several settlements and temples. This is one of the intriguing facts about Failaka : the absence of necropolis, which persistently elude discovery despite continuous investigations. Unless some major disturbance in the topography, possibly due to variations of the sea level, would have flooded, eroded or erased in some way some parts of the land, there simply seems to be no proper place on the island for funeral areas as in Bahrain, which is puzzling as to many aspects of the society in Failaka during the Bronze Age. As far as seals are concerned, in Bahrain many of them ended their lifetime in their owner's tomb, this was not a possibility in Failaka. Another difference between the two islands is the presence, in Bahrain, of a large number of sealings, fragments of clay where the seals were impressed, showing they were used as some official signature for administrative documents or for some other abstract purpose. In Failaka only a few fragments have been found, reducing also the field of investigation as to their utilization. The paucity of information provided by the archaelogical context makes it more crucial to exploit all the data that can be recorded from the seals themselves. This is where the publication of the Failaka Seals Catalogue by the National Council for Culture, Arts \& Letters becomes a scientific duty as much as a showcase for the millenary heritage of Kuwait, which is undeservedly little known outside the circle of researchers.


KM 1075, the only sealing found in the "Palace" at Tell F6

2 Kennet 2014.

After the newly found seals from al-Khidr published in the first volume, this second volume is dealing with old finds unearthed from the Danish excavations in the 1960s. As mentioned above, several tells were investigated in the south-western end of the island from 1958 to 1963. F5 or Tell Sa'aid and F4 revealed a Hellenistic occupation centered around a fortress and a small temple dedicated to Artemis. Artefacts dating back to the Bronze Age were also found there but in disturbed context without any structures. The Dilmun layers, dated to the first half of the 2nd millennium BC , were found in situ in the two other tells, West and North of the fortress. F3 or Tell Sa'ad revealed a settlement area with small private houses gathered around a large terrace used as a worship place. In Tell F6 was uncovered a large building hastily baptised "Palace" due to the monumentality of its plan, now interpreted as a place for activities probably related to commerce and storage. In 1983, a French team resumed work in this area, excavating the same hill to the East of the "Palace" and discovered a building which deserves much more the monumental qualifying, a temple dedicated to Enzak, the main deity of the Dilmun culture, competing in size and quality of construction with those found in Bahrain³. Inbetween an American expedition had briefly investigated several spots on the sites in
 the $70 s^{4}$. More recently a new Kuwaiti-Danish expedition led by F. Højlund worked in the area between the "Palace" and the temple to precise the chronological relationship between the two. Stamp and cylinder seals have been found in all the excavations, the largest quantity coming from the settlement in Tell F3 (261 items), then from the "Palace" (148 items), the temple ( 37 items) and the space in between on Tell F6 (c. 90). Another 80 come from uncertain contexts in Tell F5 and from the American excavations, plus 36 random finds on surface. Indeed it makes sense to consider them as one corpus, as the whole area obviouly was a single site. Practical reasons led us to divide the publication of this catalogue according to the finds locations. The "Palace" at F6 is the object of this second volume but it will be referred to the already published seals of al-Khidr as well. As will appear further in this introduction (infra p. 31) it is worth pointing at some strong connections showing up between seals from this site and from al-Khidr.

As mentioned above, the seals found by the Danish and the French missions have previously been published. For a few seals these informations are the only left available. The invasion of Kuwait by the army of Saddam Hussein in 1990 has led to thefts and destructions at the National Museum. Most of the collections have fortunately been recovered but a few pieces were never found again, and hence could not be documented with the same standard as the rest of the collection. For these, we publish the informations recorded in the archives of the excavators


[^1]and original black and white photographs of the seals and of the impressions made at the time of the discovery. No view of their profile, no precise description of their material or technological aspects can be provided. No new impression on modelling paste and no drawing could be made.

It was chosen to include in this catalogue a number of objects which may not be seals in the proper sense but clearly deserve a comparison with them. These small
 perforated objects of various shapes and materials exhibit an incised decoration which can be seen also on seals, most of the time a simple geometrical design : KM 1001, KM 1069, KM 1185, KM 1219, KM 1238, KM 1245, KM 1247. Their being does matter when it comes to interpreting the practical purpose of the seals together with the signification of the patterns displayed on their obverse.


Rough for softstone seal, Qala'at al-Bahrain Museum (C) H. David-Cuny 2014

Two more objetcs are considered as blanks for seals, though their shape is too simple to be compared with some clearly unfinished Dilmun seals as found in Bahrain. They are proposed here for comparison at the end of the catalogue. The question whether seals were manufactured in Failaka and/or provided by other production center(s) outside the island is one of the topics that some further research might be able to solve. In the absence of formal attestation of a working place in Failaka, the technical data reckoned on the objects, including the types of material, can be of great help when considered together with the stylistic informations. As will be seen, some small scale seriation of the seals starts to emerge from the observation of the Failaka corpus, beyond a basic stylistic and chronological typology. It would indeed be highly significant that such a classification can be connected to corpus from Bahrain and elsewhere. Hopefully the documentation here provided will allow a wider angled comparison with the seals from Bahrain, in order to reach a regional scale view of the production of Dilmun seals.



Failaka Seals Catalogue - Tell F6 «The Palace»

## Methedelecy

In the framework of a general catalogue concerning several hundred objects unearthed by different missions of various nationality, during a more than fifty years long period of time, it appears that the registered data provided by the inventors, whether textual or graphic, are very uneven. It was then decided not to simply publish what was availlable, but to homogenize the information by building a single database and complete the data when missing.

Illustration has always been an essential part of archaeological documentation, it has become a tool of analysis in itself, thanks to improved technical means now available. It is here abundantly provided as a descriptive tool in the same capacity as the textual information.

- All seals have been newly photographed under similar light conditions, backside and both profiles included. They all have been impressed on very fine modelling paste to obtain a clear insight of their pattern, which is then drawn very precisely thanks to high resolution digital pictures. Such drawing aims at being as objective as possible, following the very ridges of the incisions. As such it may give a different 'feel' of the design from what the eye actually perceives throught the filter of light and shadows. A photograph of the impression is then provided for that purpose, at the actual size of the object which appears to be very small and sometimes difficult to read, but corresponds to the vision the users of the seals had of them. Photographs and drawings of the object itself are published at scale 2:1 to allow analytical insight of the details.

The morphological description of the seals is standardized according to a number of fields including :

- Detailed measurements, according to benchmarks exposed below p. 20-23.
- State of conservation : whether a seal is broken or not alters indeed the perception of its general shape, especially on the edges. In addition, it appears that the degree of alteration of its surface may modify to some extend the aspect, hence the reading of the pattern. An incised design is a three-dimensional representation. The alteration of its depth indeed modifies its aspect. Therefore it was decided that the state of conservation of the surface should be visible on the illustrations. It is rendered on the drawings of each seal by a difference of tone clearly showing where the actual surface of the object is preserved and where it is altered.
- Visual characterization of the material and of the processing it might have undergone, as it appears most Dilmun seals have. The materials seals are made of usually is very briefly described in publication. However a close look at a great number of objects reveals great discrepancy which deserves deeper examination. As far as stones are concerned, petrographical analysis are necessary to precisely label the materials and consider geological sources tracing. This is not always possible and it was not in the frame of this publication. But a detailed observation of the stones provides already many informations which can be taken into account in typological work (see p. 24-39).
- Traces of manufacturing are reported and made clearly visible through the iconography. They include traces of tools on the surface, in the perforations, and possible traces of reuse either on the shape of the object or on the ornemental pattern.


## Morphological description

It has been presented in the first volume of this catalogue how a methodical description of the morphology of the seals was elaborated. Variants of the different elements of the shape, including the profile, are taken into consideration with their measurements. In the descriptive categorization here proposed, every element of the stamp seals is individually characterized and the description is summarized in a practical alphanumeric formula, allowing to create more types if more variants occur during the study of a larger corpus. Without being itself a typology, it should allow to describe in an analytic way any Bronze Age seal from the Failaka collection and from other culturally related sites in the region. From the corpus of the "Palace" at Tell F6, a few shapes especially not circular, which were not represented at al-Khidr, have been identified. They are described according to additions to the basic formula which had been proposed in the first volume (see p. 23).

Cylinder Seals The measurements for cylinder seals are


## Graphic benchmarks for cylinder seals

 its maximum diameter, usually set at the extremities, and its height. In case the wall of the cylinder is not straight, a minimun diameter is also measured.Stamp Seals Some of the available publications are very brief on the morphological characteristics of the seals. Dilmun seals are merely described as composed of a disc topped by a domed boss, which is generally ornamented by three parallel lines incised across the middle and flanked by two pairs of dotted circles. The boss is perforated horizontally, from both sides, perpendicularly to the incised lines. A first consistent typology was initiated by Kjærum in the publication of Qala'at al-Bahrain seals ${ }^{1}$, involving ratios between respective diameter and height of the disc and boss. More recently, morphological measurements are also considered in a systematical way by Laursen in a recent study of some 'Gulf style' seals ${ }^{2}$. This catalogue does not aim at building a typology but provides the data, criteria and graphic documentation necessary to future work. They are proposed as measurements given in the description and as complete illustrations representing all the sides of the seals, including a section across the perforation, the shape of which, most of the time, can be partly measured and partly reconstructed.

A few benchmarks are defined for the morphological characterization of the stamp seals, adopting the terminology as shown on figure next page :

- Disc and boss compose the two main elements of the standard Dilmun seal.
- Knob is used in the case of an upper part which is not domed (cf. sketch p. 23)
- Collar designates the upper, horizontal part of the disc which protrudes beyond the boss. Its width can vary in quite remarkable proportions from one seal to the other.
- Rim is the vertical part of the disc between its upper and lower faces. The rim is in most cases slightly everted, i.e. the lower face of the disc is larger than the upper one, and its profile varies from straight to more or less concavely curved, whether rounded or V-shaped.

A detail so far not recorded in publications is to be found here : the orientation of the incised pattern as to the perforation of the seal. It is materialized on the plates by two symmetrical semi-circular lines drawn according to the axis of the perforation and to its diameter.

[^2]
## Graphics benchmarks for the stamp seals



Drawing of the impression

Photograph of the profile
accross the perforation


Photograph of the obverse


Photograph of the reverse


Drawing of the section along the perforation



General description
For the 'disc' and 'disc with boss'-shaped seals, the description of the profile is expressed according to the scheme Disc-Boss/Collar/Rim as detailed below :

- $\boldsymbol{D}$ is used for disc, $\boldsymbol{B}$ for boss. The first letter of the formula is presented according to their relative thickness, calculated by the ratio maximun thickness/rim thickness : $\boldsymbol{B}$ - $\boldsymbol{D}$ describes a seal where the boss is thicker than the disc, $\boldsymbol{D}-\boldsymbol{B}$ where the disc is thicker than the boss.
$\boldsymbol{D}$ alone is used in case of a flat disc without a boss, with only one engraved face.
$\boldsymbol{D}-\boldsymbol{D}$ is used in case of a bifacial disc, with two incised faces.
$\boldsymbol{K}$ designates a knob instead of a boss.
- The obverse surface of the disc can either be flat (f) of slightly convex (cx). These details are added to the $\boldsymbol{D}$ in the first part of the formula.
- The relative proportion of the diameters of the disc and boss determine the width of the collar $\mathbf{C}$. In al-Khidr and Tell F6 corpus this ratio clearly determines two groups : the collar is considered narrow (n) when the value is below 1.2, and wide ( $\boldsymbol{w}$ ) when it is bigger. The letter $\boldsymbol{C}$ is then followed by $\boldsymbol{n}$ or $\boldsymbol{w}$.
- The vertical profile of the rim itself, expressed by $\boldsymbol{R}$, can be either $\boldsymbol{f l a t}(\boldsymbol{f})$, convex (cx), or concave (cv). In the latter case it can be either very slightly bowed (b), more deeply rounded (r) or $\boldsymbol{V}$-shaped ( $\boldsymbol{v}$ ). If the profile varies around one seal, all necessary indications can be added to the formula.

Several new types of shape are described in this catalogue :

- Conical (C) seals are circular or slightly oval.

They are described as $\boldsymbol{C}-\boldsymbol{C}$ when the top is simply the upper end of the cone.
The top can also be truncated flat (F), or extended by a cylindrical knob (K).

- Quandrangular seals can be square (SQ) or rectangle (REC)

They can have a pentagonal 'saddle roof' profile (5) or a 'lentil' profile (2cx for 2 convex sides)
Rectangular seals with a triangular profile are attested in Failaka, though not in the "Palace" in Tell F6, as well as in other sites in the Arabian Peninsula. They will be described as REC-3 in later volumes of the Failaka Seals Catalogue.

- Sc for Scarab shape, inspired by the egyptian faience scarab : oval-shaped, with a rounded back incised with the stylized features of a realistic scarab (one example in the "Palace", KM 1078).

One seal KM 1076 has a shape which does not fit in any simple geometric form. As it is a unique case, we do not characterize it with a formula but simply describe it textually.


## CIRCULAR / OVAL SEALS



CONICAL SEALS
Flat truncated top • C-F


Conical top •C-C


Vertical knob - C-K

'SCARAB - TYPE' SEALS

Scarab - Sc


COLLAR

Narrow collar •Cn Wide collar • Cw Cw


PROFILE of OBVERSE

Disc with flat obverse • Df

Disc with convex obverse - Dcx $\qquad$

PROFILE of RIM

Flat rim • $\boldsymbol{R f}$


Convex rim • Rcx


Bowed • Rcv-b


Concave
rim


V-shaped • Rcv-v


QUADRANGULAR SEALS
PLAN

Square - SQ

Rectangle - REC $\square$

PROFILE

Pentagonal profile • 5
'Lentil' profile • 2cx

Triangular profile • 3

$\Lambda$

## Materials amd surface treatmemt

As to the material used to make the seals, more variety is visible in the corpus of the "Palace" in Tell F6 than at al-Khidr. If there again the vast majority is made of soft stone, ten percent are carved out of more various hard and semi-precious stones, shell and artificial materials.

Not considering the sealing nor the two 'blank seals' - the attribution of which is not fully ascertained - 144 items compose the corpus of the "Palace", of which 12 cylinders and 128 stamp seals, in addition to 4 pieces which may not be proper seals. 6 pieces were lost at war and their material published by Kjærum could not be examined more precisely.

SheLL - Two seals are made of mother-of-pearl. One of them, KM 1232, is just a fragment of a perforated boss, nothing of the obverse nor even the complete shape is preserved. The second one, KM 1079, although very eroded, is more interesting since a piece of copper wire is preserved inside its perforation, which is a very rare occurence ${ }^{1}$. Though expanded by corrosion, the diameter of the rounded wire is very close to that of the perforation and the flexibility of the copper metal has adjusted to the curve.


İVORY - This very fragile organic material is attested on cylinder seal KM 1463. It is badly preserved and one may wonder if more objects may have eluded discovery by the archaeologist. Matching the unicity of the material, the design displayed on the surface also stands out of the the rest of the corpus.


KM 1463

1 KJARUM 1983 mentions another example from Tell F6 but the wire is nowadays not visible on the object (KM 1165).

Artificial materials - Eleven objects of the corpus have been made out of various artificial materials, of which one half of the cylinder-seals (six, possibly seven, the last one being impossible to check since it was lost).

- Two of them are conical 'pendants' modelled in a quite common ceramic material. They seem to have been at least lightly baked and have not undergone any surface treatment (KM 1238, KM 1247)

- A very light, fine and porous white paste is the component of KM 1460. Its surface is almost completely rubbed out and if a blackish material appears inside the few partly preserved incision, it is not clear whether this is dirt, patina, or some colour purposedly applied.

- Very fine and smooth, more clayish and darker coloured is the paste of KM 1467. Very little remains of the surface appear to have been glazed with a darker and grainy material.

- KM 1185 and KM 1289 are made of a light, fine, sandy, whitish coloured vitreous material. The latter is a plain cylinder whose surface is completely eroded. The former is a uniquely shaped large rectangular plate with 'lentil' profile, the surface of which is still covered with a slightly darker smooth glaze.


KM 1185

- Two cylinder seals very similar as to the shape and the design, are also made of a similar material : non sandy, siliceous, harder than the previous one, with a yellowish beige tone. The surface is partially covered with what seems to be a natural dark patina (KM 1286, KM 1654). The material of KM 1261 looks equally smooth and similar in colour, but has no blackish patina.

- From the last cylinder-seal, KM 1503, which is now lost, we can only repeat the information which was made available by the inventors. P. Kjærum publishes it as "green glass" in his catalogue in 1983, but a pencil inscription, added at an unknown date on the registration card in the archives of the National Museum in Kuwait, mentions "limestone". The only available black and white photograph is not clear enough to give any indication.
- KM 1078 is a scarab-shaped seal made of a very fine artificial white paste with micro-millimetric red spots included. Its surface does not seem to have been glazed but is covered with a dense network


HARD ST®MES - Six seals are made of six different hard and semi-precious stones.


## Hematite

- Cylinder seal KM 1276 is carved in this very fine, smooth, dark grey with metallic shine stone. Very rarely used in the Dilmun area, it is a quite common material for mesopotamian cylinder-seals, which is consistent with the design reproduced on this piece.


## Lapis lazuli



- KM 1050 is remarkable in several regards for being a bifacial disc bearing a cuneiform inscription and being carved in lapis lazuli, the precious stone for which the only known source in this part of the word is north-east Afghanistan. The bright blue colour actually is hardly visible on this rare example, as the stone has
 undergone some deep alteration which made it turn to grainy and dull-coloured but it is still recognizable under the microscope.


## Siliceous stone

Again bifacial discs, three seals are made of hard and coloured stones standing out of the rest of the corpus.


- KM 12 is a finely incised disc made of a slightly orange red carnelian turning to colourless on one side. Carnelian is mostly known for being available from India and northern Iran, but outcrops have also been in use in the Oman Peninsula during the Bronze Age, though they do not deliver the best quality ${ }^{2}$.


KM 1113


- KM 1113 is an exceptionnally richly ornamented seal set in a thin golden ring, following the curve of its concave rim. The stone it is made of has a bright green translucent tone. It might be chalcedony or a variety of vesuvianite, commonly used for ornaments in the Harappan area ${ }^{3}$.
- KM 1211 is made of a fine, translucent white stone which might be quartz.



## Calcite

- The last piece not being made of softstone is a fragment of a tiny 'disc-with-boss' seal carved in a transparent, colourless stone, KM 1244. The cleavage and the birefringence it displays attest it is calcite, not quartz as proposed in KJERUM 1983 (p. 126).


KM 1244

[^3]S®FTST®MES • $84 \%$ of the corpus of the "Palace" (122 seals) are made of softstone, approximately matching the average proportion on all the Bronze Age sites of Failaka. This importance might justify that we repeat here almost extensively our presentation of the material from the first volume, to allow to understand better the exploitation of this specific geolocical ressource and the fabrication process it underwent. Some new remarks have been added from observation of the new corpus of the "Palace" in Tell F6.

Softstone is a generic term used here to designate a variety of hydrothermally altered, magnesium rich stones, comprising steatite (talc), chlorite, and combinations of both with various accessory minerals. Softstones are materials much in use throughout the Middle-East during the Bronze Age and later, for specific purpose such as glyptic, bead making and stone vessels manufacturing. During Dilmun period, such items are widely distributed between Mesopotamia and the Indus Valley, attesting of strong cultural relations between the Sumerian cities, the Harappan civilisation, the Iranian Plateau and the Gulf region.

Origin of the material As a raw material, softstone is available in a great variety of colours and textures, from light green to blueish grey, brownish or black, from soapy to grainy, foliated or brittle, but their common characteristic is their low hardness ( 1 to 3 on Mohs' scale) which allows very easy carving. They are to be found in two main geological contexts :

- Ophiolitic environment (a section of Earth's oceanic crust and upper mantle brought up to the surface by tectonic movements) with ultramafic rocks as parent-rocks. This occurs along the Zagros Mountains from Turkey to Iran and Baluchistan, the Hajar chain in the Oman Peninsula and in Western Arabia.
- Metamorphic context where sedimentary limestones and mudstones are transformed into dolomite, around the Indus basin, from Baluchistan and Rajasthan to the Himalaya piedmont, and in Western Arabia.


Softstone mining activity is attested in Southern Iran during the Bronze Age ${ }^{4}$ and in Western Arabia in the Islamic period ${ }^{5}$. As a matter of fact, none of these stone sources offers direct access to the Dilmun people and the question arises of the procurement of the raw material for the local seals production. Softstones can be characterized only through petrographical analysis since there is no interconnection between their visual aspect and geographical/geological origin. Yet petrographic analysis are beyond the purpose of this publication.

Majidzadeh 2003.
5 Overstreet, Grolier, Toplyn 1988. Le Maguer 2011: 9-11, fig. 10.

Surface processing A macroscopic description of the material of the seals however brings a lot of information in terms of typological and technological considerations, including the fact that many of the seals have undergone a surface treatment which changes their colour and hardness. Chips or erosion of the surface or breaks of the object clearly show that almost all the softstone seals are made of a couloured stone while their surface, affected on a variable thickness of a fraction of a millimeter, is whitish and harder.


Unaltered surface layer (KM 38)


Eroded surface layer (KM 791)


No surface treatment (KM 987)

This phenomenon is characteristic for the seals production in the Dilmun culture area and has been reported since the first publications ${ }^{6}$. Initially described as a "glazing" applied to the surface of the seals after carving, it was later identified as an alteration of the surface itself provoked by heating the object, resulting in a thin surface layer becoming harder, opaque and lighter-coloured ${ }^{7}$. The process of heating softstone has long been observed and studied on Harappan seals made of pure steatite, which show a similar alteration ${ }^{8}$. Heating is operated after carving, clearly to harden the objects as softstone is very easily carved and much appropriate to incise very fine designs on a small surface. But then as such they are also very much prone to erosion from manipulation. Heating the stone may also aim at homogenizing the colour of the seals, as they all tend to turn white through the process, whatever the colour of the original stone. Harappan seals may be either whitened to the core of the stone, or only superficially bleached by a technique still to be defined. A recently conducted experimental study by R. Law ${ }^{9}$ on


Example of deep erosion of the softstone once the harder surface layer has been rubbed off
(KM 1197) samples of raw softstones and artefacts from various origins in the Indus Valley demonstrates that heating pure steatite for one hour may result in its whitening and hardening (up to 5 or 6 on Mohs' scale) from a temperature of $900^{\circ} \mathrm{C}$, the process being increased by the intensity and length of the heating (experimented up to $1200^{\circ} \mathrm{C}$ for 3 hours). But not all types of steatite did whiten, only samples from some specific spots of dolomitic petrogenesis. Tested samples of stones containing chlorite do not whiten when heated, though they generally harden and become more brittle. This can be observed on softstone vessels from burnt context in graves ${ }^{10}$ and on cooking pots presently in use in Yemen. Identifying this specificity might have been a decisive criteria for the seal producers when organizing the raw material procurement.

The study by Law also points that a Harappan steatite seal, which was only superficially whitened, had been covered by a pre-heated steatite coating, through a not yet cleared process which does not affect the core of the stone. Assuming that the Dilmun seals could undergo a similar process, whether their surface is an alteration of the original stone or a layer of different composition applied on top remains questionable. The visual data collected on Failaka corpus about their colour, texture and surface alteration provides the evidence that several types of raw softstone were used for the production and most of the time processed to get a homogeneous surface aspect, but more or less intensely from one seals to the other. Some are only superficially altered, others are transformed

[^4]to the core, uniformely turned into a harder and lighter coloured material. Some are excessively altered by what seems to have been an unintentional overheating, resulting in the original stone being no longer recognizable : cracked and flaked, hard and brittle as schist, sometimes with patches of reddish colour and black spots of oxydized minerals splitting the stone. The context of find on the excavation should help determine if such over-alterations might be manufacturing mishaps or due to later disturbances, prior to or after the seals were deposited where they were found. It is also to be mentioned that in most cases the whitened surface is visible also inside the perforation at least next to the extremities.


Surface layer displaying mixed white and red colours on top of a blueish core (KM 39)

On KM 39, a complete seal in a very good state of conservation, except for a few chips allowing to see the core under the surface, the whitened surface shows on both obverse and reverse some large patches of dark red colour like a bundle of fine filaments. A close look at a small chip on the edge of the perforation shows that the white surface is not thicker than a fraction of a millimeter on top of a blueish stone and that the red colour thickness is the same as that of the white surface. This tends to plead for some slip with a very low viscosity maybe applied with a brush on the surface, hence effective only where it reaches. The red tone could be a 'negative' surface where the coating did not reach for some reason and where the heating might have resulted in a different colour on the original blueish stone. From the seals published in the volumes of this catalogue, such a dark red tone can be observed on five more seals, actually showing through underneath a thick whitish surface while the core itself remains dull coloured : KM 969 and KM 1149 from the "Palace" at Tell F6, KM 9148, KM 9697 and KM 10477 from al-Khidr). This could be explained in the case of a thin slip applied on the surface. During the heating process, the high temperature penetrating


Reddish tone showing through under a whitened surface layer on top of a greenish core (KM 1149)
 deeper than the surface would whiten the top layer impregnated by the slip, then alter differently the colour of the upper layer underneath. It
 is to be noted that a number of seals have been hardened to the core but they nevertheless show a dark coloured surface hardly different in tone from the material underneath (KM 27, 33, 35, 761, 797, 987, 994, 1160, 1208). When more is known about the quality of the stones used by the Dilmun craftsmen (chlorite or steatite, from which geological context ?) and their technique to alter the surface, then two interesting questions rise : did they have access to raw materials appropriate for whitening, and to what extend did they master the technology to whiten artificially stone types which are not naturally discoloured through heating ?




KM 33

Seals heated to the core without whitened surface

Clustering seals Comparing the various features of the seals, it becomes rapidly obvious that some kinship can be aknowledged for a number of them, going much beyond the classification in four styles proposed by Kjærum (cf. supra p. 6). Such clustering is the basis for Kjærum himself, who presented his first publicaton of the seals of Failaka according to the thematic of the scenes represented on them. The same has been observed on seals from Bahrain ${ }^{11}$. Some specific combinations of elements of pattern (animals, human beings, objects) appear very often combined to some special design touch. This becomes even more striking when adding the profile shape of the seals to the comparision. On the other hand, some 'micro-styles' can be represented by seals with a common shape and design but completely different themes. A quick view of the corpus of Failaka (all the tells from the SW end and al-Khidr) together with the seals from Bahrain allows to identifiy more than twenty five such groups of seals closely fitting together as to the 'micro-style' and the thematics. This could indeed be refined by a detailed analysis. At this level of 'personal touch', one feels tempted to identify workshops or even a craftsman's hand. This is where it becomes especially interesting to include more of the technological data into the analysis. Considering the variety of stone materials used to make the seals, it becomes very significant about the organization of the work and the scattering of the production to see that one group can be represented at Saar in Bahrain as well as at the "Palace" and at al-Khidr in Failaka. In many cases the stone materials inside one group are similar but sometimes they show variations, either from the raw material or as the result of a difference of processing. It is beyond the purpose of this publication to study these connections, however we illustrate here as examples a few of these associations which the eye cannot miss.


[^5]

The stone types For want of real petrographical diagnosis, a first categorization of stone types has been proposed from the visual observation of the softstone seals from al-Khidr in the first volume of this catalogue. The surface and the core aspects are described in separate headings. Hardness was not possible to test in a systematical way (Mohs' scale) as this would damage the seals but it was taken into account in an empirical way. This had led to sort the seals between twelve main categories. The corpus of the "Palace" being twice larger than at al-Khidr, it provides much more informations, in quantities allowing to start thinking in terms of statistics. Two more types are here defined and some of the previously identified types have been subdivided in two variants.

Seven categories describe the softstones as unaltered or partly modified when visible on superficially altered seals. Seven categories are about stones altered to the core, which have lost their original aspect.

- A first group of five types (listed A1 to A5) describes softstone with grainy textures, colours ranging from black to greenish grey. A2 has been subdivided into A2A and A2B. Since type A3 happens not to be represented in the "Palace", we will not describe it again here.
- The second group gathers two types (B1 and B2) with a soappy, foliated texture, slightly translucent, in two variants of colour : black and greenish-blue.
- The third group, previously five now extended to seven (X1 to X7), describe stones which are altered to the core and comprise also colour varieties. They might actually be altered versions of types characterized above, as suggested by the comparison of seals on other criteria. 'Micro-style' can be noticed on many seals as mentioned above but in a number of cases, a striking resemblance as to shape and design stops when it come to the material criteria. Some of the 'brothers' belong to one of the unaltered types while others fit the criteria of some altered type. This raises a double question : without experimentation of the actual heating process of softstones, can we assume that some very similar seals have a good chance to have been carved by the same hand from the same material ? Hence, can we infer the technical effects of alteration of the material from such 'fraternities' of seals? An ensuing question should be then, how far can we go into deduction from the fact that seals possibly carved together do not necessarily undergo the same treatment as early as the fabrication process ? Or can the alteration be the result of some other process during the lifetime of the seals ? Whatever way future researches take to explore these questions, it should be strongly kept in mind that the stone types here proposed are nothing more than a descriptive frame for an impermanent state of an artefact. They should in no way be considered a definitive characterization of a precisely defined material.


## Type A • Grainy softstones (8 items)



Type A1 • A very finely grained and homogeneous, greenish black coloured stone slightly translucent. The only one in the "Palace" is lighter-coloured than the two examples in al-Khidr. As was the case on this site, it has not been surface treated and is not
 the typical Dilmun seals.

KM 1049


Type A2 - This stone is also made of deep dark green, translucent cristals but with a less fine grain which makes the carving of designs less precise. None of the "Palace" examples does show any traces of a surface treatment.


KM 1219
Variant A2A - The dominant tone is black, the green colour is visible only by translucency against a strong light.

Variant A2B • Dark green tone is dominant even in normal light.



KM 8198


KM 1280


KM 959


KM 15


Type A4 • With a dense, crystallized, micro-millimetric texture of blueish-greenish grey mineral, this stone shows similarity with a material used for the stone vessels production in the Oman Peninsula (David 2011: 198, second type). Its only attestation at the "Palace" is not a typical Dilmun seal and shows connections to the


KM 1001 Oman Peninsula glyptic.


Type A5 • A slightly harder and denser version of A4 exists in dark brown tone on one seal only. With a surface patina turned to black, the matt incisions are spread with micro-millimetric minerals with a golden shine. This material is also used for stone vessels production in the Oman


KM 1169 Peninsula (David 2011: 199, fifth type)

## Type B • Soapy, foliated softstones (40 items)

Thirty three per cent of the softstone seal are made of a more or less translucent material with a soft touch and a clear foliation visible through the breaks. Occasionnally some dark spots of minerals are dispatched in the structure. The colour is quite heterogeneous and may vary on one object with several tones melting into each other, from light olive green and blueish grey to darker nuances of these. Several examples stand out with a particularly dark tone (B1), another group for its lighter colour (B2B). For a similar texture and tone, some seals are more opaque than others and may display differential alteration. The altered surface layer, when still visible, is always opaque and the limit between the surface and the core is very clear.


KM 761


KM 790

Type B2 - This type displays a large pannel of lighter and brighter tones between blueish and greenish, together with variable opacity. Variously intense tones can melt in veins and patches on a single seal (KM 976, KM 989). The treated surface is very light-coloured and quite thick. Usually most of it has been completely eroded and it is visible only in hollowed areas. Only on KM 13 the preserved surface appears very thin, dark yellowish and very finely cracked as it does on KM 761 (type B1).


Variant B2A - The tones range from dark to blueish green with a surface generally very light-coloured. A small series with the darkest colours can be so deeply eroded that their profile becomes difficult to characterize (KM 989, KM 1168).


Variant B2B • A small group of seals stands out by its bright green tones. KM 1128 shows however a darker patina on the obverse. On a unique exemple, KM 821, the stone is remarkably comparable to KM 9358 from al-Khidr with its perfectly homogeneous and translucent, plain, yellowish green colour.


KM 1128


KM 1198


KM 1164


KM 1233


## Type X • Altered softstones (72 items)




KM 991


KM 977


KM 971


Variant X1B • On two items
the material is completely and homogeneously pinkish white with no difference between the surface and the core.



Type X2 • Similar to type X1 but with a light or dark green tone. The core is hard and opaque and the surface is altered into light beige or white colour


Variant X2A • The majority of the seals matching with this description are gathered in sub-group A.


Type X3 - The tone of this type is blueish grey under a surface layer abruptly contrasting



KM 808


KM 1041


KM 1112


KM 1084


KM 1063


KM 769+1196


KM 1134


KM 1083


KM 1059


KM 1096



Type X4 • Particularly hard and brittle probably through overheating, this type is also characterized by its grey tone, with sometimes oxidized red and black small veins. One example was found at the "Palace".


Type X5 • Brownish-grey, opaque and matt, this material is characterized by particularly extreme alterations, such as large cracks deep in the stone which is so brittle that it may look like schist, with sometimes up to one millimeter big oxidized minerals turning red and black, disintegrating the


Two new types are proposed here to describe the material of seals which had no equivalent in al-Khidr.


Type X6 • The hard stone is very finely and homogeneously textured, with brown tones from light yellowish (KM 35) to dark reddish (KM 987) through dark olive green (KM 33), which may either be very plain (KM 1202) or display variations on one single seal (KM 994). On most of these seals, no difference is visible between the core and the surface, which is smoothly polished on the reverse.


KM 795

Two only of these seals show clear remains of a surface treatment (KM 786, KM 994).


KM 994


Type X7 • This type comprises a unique seal made of brownish black material, finely grained and very smoothly polished with a metallic shine. It is deeply cracked by overheating and the surface in the center of the obverse is chipped off with some kind of rusty concretion. It looks a lot like hematite but has no magnetism and weights lighter.


## Mamufacturing

Traces of manufacturing are visible on almost all stone stamp seals, apart from those too much eroded on surface. Unsurprisingly, they are different on hard stones and softstone. The general features related to the manufacturing of the seals have been lengthly exposed in the first volume of this catalogue. We will remind them here more briefly with new examples from the corpus of the "Palace" in Tell F6.

Among the peculiarities of the "Palace" in Tell F6 is the tiniest seal of the Failaka collection, KM 795 . With its 1.26 cm diameter, it brings to more than five the factor between the smallest and the largest seal, which is 6.5 cm diameter. KM 29, found in Tell F5 ( $n^{\circ} 250$ in KJÆRUM 1983) is also exceptional by its dimensions since the average size in the "Palace", as in the other sites of Failaka, is between 2 and 2.5 cm . Despite its size, KM 795 is remarkably well executed, finely and regularly shaped, extremely well polished, and one more demonstration of the skill of the craftmen who produced the seals found in Failaka.


KM 795 next to KM 39, one of the largest seals found in the "Palace" (actual size)


KM 795


However al-Khidr had provided a few examples of 'ill-skilled' craftsman's production, with missed dotted-circles and squeezed 'parallel' lines (see volume 1 of this catalogue). Although no such failure is to be found from the "Palace" corpus, the quality of the work is far from constant.
Hard stone seals
On siliceous stones, the patterns are not very deeply incised nor very sharp. A drill is used for rounded shapes but no compass. Some perfectly circular shapes (head of the goats on KM 1113) may have been made will a tubular tool.


## Softstone seals

Traces visible on all softstone seals appear quite clearly on the surface, even on those which are finely polished, though less acute. They are also similar on hardened stones, whether their surface has changed colour (KM 39) or not (KM 35). This confirms that their hardness at that moment of the manufacturing process was about the same and that the coating which may have been applied before heating had such a low viscosity that it did not fill up the finest grooves.



KM 795


KM 39


KM 1202


KM 977

Boss For all softstone seals, similar traces visible on the reverse attest that a same process was involded in their shaping, whatever the detail variants. Fine striations run over the surface of the dome, in groups of short parallel lines dispatched with a radial orientation from the top-center of the boss, sometimes crossing over.

The same radial traces continue regularly around the collar, slightly incurved, usually clockwise. The line where the boss meets the disc usually is clearly marked by an horizontal incision all around.

## Parallel lines and dotted circles

The standard pattern on the reverse of the softstone Dilmun seals is composed of three parallel lines incised across the boss and separating two pairs of dotted circles. On well preserved examples, their profile is sharply V-Shaped, each side smoothed by a straight blade


KM 1063


KM 1041

The use of the compass
It has been discussed in the first volume why a compass is suggested as the best tool to carve the dotted circles on the reverse and the obverse. As had been observed in Al-Khidr, the examples at the "Palace" all are perfectly centered, and the central dot usually is deeper than the circle. It is reminded that a compass had been found in Tell F3 excavation, made of two copper rods parallely inserted inside a bone used as a handle. The distance between the two tips is about 2 mm , which would produce

circles of 4 mm diameter. This is larger than the dotted-circles observed on the seals - not exceeding 3.5 mm unless exceptionnally - , but is compatible with those engraved on stone vessels of the same period, for which the dotted and double-dotted circle are a recurrent element of the decoration ${ }^{1}$. Beyond the difference of size, the similarity between the two motifs is too striking to imagine they were made with different techniques.

RIm The vertical part of the rim is always smoothed with a tool leaving traces similar to the striations on the boss, horizontally moved around the disc. A lathe is probably not involved since the traces, unless exception (KM 33), are quite uneven (KM 773, KM 1063).


KM 773


KM 33

ObVERSE Before carving the figures, the surface is carefully smoothed, as shown from continuous fine striations often visible on the areas untouched by the incisions.


As regards to the different styles illustrated by the seals, the tools used to manufacture them seem to have been quite similar, but used in a different way. Some figures are deeply incised with a quite thick design while others are much lighter and finely drawn

On the seals not affected by surface erosion, most linear incisions appear V-shaped but with various sharpness. In most cases the angle of the $V$ is around $60^{\circ}$ (KM 1117), sometimes even less (KM 35).

As opposed to figures which are simply delimitated by a linear incision, some others are deeply hollowed out with a chisel used horizontally, straight or incurved, as shown by the very thin parallel lines covering the walls of these surfaces (KM 44) and sometimes their horizontal bottom (KM 35, KM 1117).


KM 1117


KM 44


[^6]Perforation All the seals are perforated, through the base of the boss for those shaped as a disc with a dome (KM 808), diametrally through the disc for the bifacial ones (KM 1181). Two holes are drilled from the two sides, joining more or less in the middle, never perfectly horizontal nor straight. All broken seals clearly show the circular drill marks perpendicular to the axis of the perforation (KM 8902).


It has been speculated about the purpose of the perforation, presumably aimed at hanging the seals on a thread allowing their owner to wear them as a pendant. However there are strong indications that it was generally not the case. The daily wearing of stringed beads made of softstone, due to gravity and rubbing, would inevitably provoque a quick erosion of the perforation along its vertical axis and its oval-shaping. This phenomenon was never observed at al-Khidr, and at the "Palace" in Tell F6 only in three cases : KM 989, KM 1093 and KM 1197. These seals are very eroded all over the surface but many other seals have undergone such a surface rubbing without displaying a distortion of the perforation (KM 792).


It may be argued that the rubbing string may not have been in direct contact with the seal but through a metal ring fixed inside the perforation. Three such seals with remains of a metal ring have actually been found at Failaka, all from Tell F6². However they are made of hard materials such as shell, carnelian and a deeply hardened version of softstone which could undergo contact with metal. If we consider the fragility of the softstone seals, even once hardened on surface by heating, the introduction and removal of metal pieces inside a bent perforation would have left traces on the surface that we do not observe on any ${ }^{3}$. If a string of any material was set inside the perforation of the seals, it did not regularly apply pressure nor friction and may have been used in a static context.

Traces of USE Apart from the specific traces of use of the perforations, almost the totality of the seals exhibit traces of either accidental breaking, or wearing of the surface from repeated manipulations, or both cases. Unsurprisingly the seals made of a harder material, i.e. heated to the core, suffer less from erosion and more from breaks. The sharp edges are the first to be affected,


KM 764 whether the ridges of the rim or of the incised patterns (KM 764).

[^7]

Seals preserved from surface erosion

Chips from shocks on the surface may be the first step of alteration of seals with a hardened surface. Once the strong shell outside is cracked, the process of erosion of the softer material underneath can be extremely fast ${ }^{4}$. In this respect it is particularly interesting to observe the specific
 erosion taking place on some of the seals, limited to the top of the boss and the center of the obverse as if they had often been rubbed between the fingers. This can be expected from objects made to be impressed on clay, or meant as talimans. The proportion of eroded seals and the intensity of their alteration thus appears as a significant factor in a tentative to interprete their use and their meaning. Some extreme examples of erosion such as KM 1162, KM 1197 and KM 1485 have lost not only their external shape but also most of the design engraved on the obverse. However they were not discarded before reaching this advanced stage of illegibility, which is a strong sign that, for their owners, the meaning of the seals was much beyond their external aspect.


KM 1197

[^8]Reuse of the seals In his foreword Højlund evokes the afterlife of the seals (supra p. 10). A few of them show traces of secondary use through incisions made on top of the initial design. Four seals from the "Palace" display such addenda (KM 798, KM 1147, KM 1182, KM 1197), made after they had undergone a first intense erosion process as can be seen from the limited remains of hardened surface still visible. On three of them the extra incisions consist in rough lines drawn across the original pattern which is still visible underneath. On KM 1182 (see infra p. 176), the section clearly shows that the obverse is a secondary state on a thinned seal which has completely destroyed the previous surface, even cutting through the perforation. The final design is a geometrical composition based on large dotted circles which is not unique, though quite rare in the corpus of Failaka. KM 1044 shows a long straight line slanting across the pattern which might be an unintended mishap.


KM 1147


KM 1183 (scale 2:1)


KM 1182


KM 1197 (scale 2:1)

KM 1183 illustrates another scenario. The original seal, finely carved and finished, was still in a good state of preservation and seems to have been deliberately broken. The group of large, parallel traces of chisel visible on the section looks too regular to be fortuitous.



Failaka Seals Catalogue - Tell F6 «The Palace»


Artefacts are presented following the Kuwait National Museum registration numbering (KM numbers).
Field numbers correspond to the registration by the finders at the time of the excavation. A first publication of the seals has been issued by the excavators (KJARUM 1983) with a specific numbering which since then has been used by authors quoting the seals from Failaka. A table of correspondance between this usual lists and the KM numbers can be found at the end of the volume (p. 210).

Cataloguing is made by Hélène David-Cuny and Dorothée Neyme.
Unless otherwise stated, all photographs are by Hélène David-Cuny.
Graphics of seals are drawn, as specified on each, by Hélène David-Cuny (HD) or Dorothée Neyme (DN).
Photographs and drawings of the seals are at scale 2:1.
Photographs of the impressions are at scale $1: 1$, unless specified for very small seals (scale $2: 1$ ).
Dashed line reconstructions are tentatively made from comparison with more complete seals from the same corpus with a very similar shape.

Find location refers to the recordings provided by the excavators. Reader is kindly requested to consult their publications to obtain further details and informations.

Bibliography names previous publications of the items.
Measurements are given in millimeters, see graphics benchmarks (p. 20-21).
Material is evaluated from macroscopic observation, no petrographic identification was made. The softstone types (A, B, X) refer to the classification described in the section Materials and surface treatment of this volume (p. 24).
Surface treated is used in case of a surface colour and hardness different from the inside aspect of the material when visible. Heated to the core designates an alteration in depth of the stone, when visible through broken parts.
Surface and Core refer to any additionnal detail of the aspect of the material on surface and inside, if not specified in the general description of the stone type.
Shape refers to the general three-dimensional shape of the object (disc, disc with boss, cylinder...).
Profile refers to the vertical section, according to the descriptive convention exposed on p. 23.
Technique refers to indications, from visible surface traces, about the types of tools supposedly used to manufacture the seal.

Reverse design : in case of the standard pattern for the Dilmun style seals, $3 \mathbf{L}$ refers to the maximum width of the 3 lines across the boss, DC diam. refers to the diameter of the adjacent dotted circles (their number is specified only if different from four), all measured at the bottom of the incision, i.e. the tip of the carving tool.
Obverse design : conventionally, the description of the motif of the seal is made from its impression, laterally reversed as to the seal itself.

## Cylimder SEALS




## MEASUREMENTS

Max. diam. : $11.7 \times 10.5 \mathrm{~mm}$
0
20 mm
Height : 22.9 mm
Perforation diam. : 3.8 mm

```
    ASPECT
    Material : Softstone, type B1
Treatment : None
    Surface : Dark greenish brown
        Core : Dark greenish brown
        Shape : Cylinder, slightly oval
    Profile : Straight walls
Technique : Deep, sharp V-shaped incision
```


## DESIGN

Between two horizontal plain lines at bottom and top of the cylinder, the pattern is vertically and equally divided into two scenes. On one side two naked men facing each other are separated by a palm tree which they hold with one hand, their other hand each raising one crescent. The second scene is centered around another crescent on top, which separates two facing each other figures sitting on stools, only one of which righthands has a rung between the feet. They both wear a long tiered dress with bodice and a horned headdress. They raise one hand with stretched fingers towards the crescent, while the other is at waist.


[^9]

## MEASUREMENTS

Max. diam. : 10.4 mm
0
20 mm
Min. diam. : -
Height : > 23.5 mm
Perforation diam. : 3.2 mm , not centered

$$
\begin{aligned}
& \text { ASPECT } \\
& \text { Material : } \text { Artificial siliceous material, } \\
& \text { smooth, dense texture } \\
& \text { Treatment }:- \\
& \text { Surface }: \text { Yellowish dark beige } \\
& \text { Core }:-
\end{aligned}
$$

Shape: Cylinder, slightly irregular circle in section
Profile : Straight walls
Technique : Deep smooth incision

## DESIGN

Lefthands stands a man wearing a long dress and headdress, his hands raised forwards, in front of a vertical stick with lateral branches topped by a bowl. Opposed to him, two superposed registers separated by a plain line show animals sitting on flat stands. Down : two bovids facing right and looking backwards, with short incurved horns and long tail raised straight upwards. Above : the pattern is too dammaged to be clearly identified.


Find location : Trench M2 North, sq. L:3
level-1.45/1.99
Condition : Complete,
surface erosion visible
from the incision
Drawing : HD
Bibliography : Failaka 1964, fig. 65
KJÆRUM 1983, nº 372, p. 154-155

## MEASUREMENTS



Max. diam. : 11.4 mm
Min. diam. : 11
Height : 21.3 mm
Perforation diam. : 3.5 mm

```
    ASPECT
    Material : Hematite
Treatment : None
    Surface : Dark grey
        Core : Dark grey
        Shape : Cylinder, slightly oval and irregular
    Profile : Straight walls
Technique : Smooth V-shaped incision
```


## DESIGN

Righthands stand facing left two deities with horned headdress and long tiered skirt, both with their left hand raised up to their waist. In his right hand the one behind holds a small object with 4 vertical lines undulating above (torch ?). The one in front puts one foot on a low podium vertically striped. His right hand is pointing a long finger to the figure facing him, a standing human with rounded headdress and long tiered and fringed dress, carrying a small horned bovid. He is followed by a third horned-headdressed figure with long tiered dress, raising both hands up to his face. Between the two facing pairs, a ring is set in a crescent on top of the scene. An eroded plain, horizontal line runs around the seal below the scene.


Find location : Trench F2, sq. K:3

> Level -1.98

Condition : Complete
Drawing : HD


Bibliography : Failaka 1964, fig. 64
KJIERUM 1980, fig. 1
KJferum 1983,
n ${ }^{\circ}$ 368, p. 154-155
Glassner 1983, p. 35

## MEASUREMENTS

Max. diam. : 14.5 mm
Min. diam. : -
Height : 27 mm
Perforation diam. : 4 mm

## ASPECT



Material : Softstone type A2
Treatment : None
Surface : Greenish black
Core : Greenish black


Shape : Cylinder, circular section
Profile : Straight walls, rounded edges
Technique : Deep, sharp V-shaped incision

## DESIGN

A two lines cuneiform inscriptions follows a figurative scene.
Figurative scene : A divine figure, identified by his horned headdress, is sitting on a square stool, facing left, raising the right hand with a long pointed finger upwards, the other hand bend at waist. He is wearing a long dress lined and wrapped on one shoulder, and heeled shoes. Two human figures are standing in front, holding each other's hand. Both are bare foot and wear the same garment as the third figure with simple bun headdress. The one in front raises his left hand towards the central figure.

Cuneiform inscription :
Nam.ha.ni
dumu Inim.kù
Namhani
son of Inim.ku


[^10]

## MEASUREMENTS

Max. diam. : 14.4 mm
Min. diam. : -
Height : 33.8 mm
Perforation diam. : 2.7 mm
$\begin{aligned} & \text { ASPECT } \\ & \text { Material : Artificial siliceous material, } \\ & \text { smooth, dense texture } \\ & \text { Treatment }:- \\ & \text { Surface : Dark brown patina } \\ & \text { Core : Yellowish dark beige } \\ & \text { Shape : Cylinder } \\ & \text { Profile : Straight walls } \\ & \text { Technique : Smooth V-shaped incision and drilling }\end{aligned}$


0

## DESIGN

A three columns cuneiform inscriptions follows a figurative scene.
Figurative scene : Very schematic design with figures made of straight sticks, bordered by plain horizontal lines on top and bottom of the seal. On left side, a human figure with long tiered dress, facing right, is raising up his hands towards a superposition of oval shapes set on small horizontal stands (two preserved, probably a third one underneath).

Cuneiform inscription : Only one word is still readable on first line
${ }^{d}$ Mes (?)
Marduk


0
20 mm

Find location : -
Condition : Complete shape, surface eroded, only a few darker and smoother spots show that the surface was probably glazed
Drawing : HD
Bibliography : -

## MEASUREMENTS

Max. diam. : 10.1 mm
Height : 24.1 mm
Perforation diam. : 4 mm

```
    ASPECT
    Material : Light, fine, sandy, siliceous artificial material
Treatment : -
    Surface : Eroded
        Core : Light yellow
        Shape : Cylinder, slightly oval
    Profile : Straight walls, rounded edges
Technique : -
```

DESIGN
Too fragile to make an impression. One can see a few hollows but no clear pattern appart from a long vertical straight line.


## Find location : -

Condition : Fragmentary,
upper part missing, surface very eroded and chipped
Drawing : HD
Bibliography : KJARUM 1983, nº 422, p. 170-171

## MEASUREMENTS

Max. diam. : 14.8 mm


Height : 34.5 mm
Perforation diam. : 5.5 mm

## ASPECT

Material : Artificial material,
light, fine and clayish paste
Treatment : Glazed (?),
black colour inside the incision
Surface : Yellowish


Core : Whitish
Shape : Cylinder
Profile : Straight walls, rounded edges
Technique : -

## DESIGN

Above a hatched horizontal lining sails a boat with raised bow and stern. The hull is divided into six parts by vertical lines. Two paddles with oval-shaped extremities are fixed at one end. Several small lines above the boat are unclear. Behind it, two human figures are facing each other, both wearing skirt, the one righthands bigger than the other.


Find location : Trench D2, sq. L:4 Level -1.03
Condition : Fragmentary but complete profile, surface deeply cracked and eroded
Drawing : HD
Bibliography : KJÆRUM 1983, n ${ }^{\circ}$ 417, p. 168-169

## MEASUREMENTS

Max. diam. : 14.2 mm
Min. diam. : -
Height : 36.5 mm
Perforation diam. : 4 mm

ASPECT
Material : Ivory
Treatment : -
Surface : Beige
Core : Beige
Shape : Cylinder, slightly oval
Profile : Straight walls


Technique : Light incision (eroded)

## DESIGN

Lined at both ends by wide symmetrical geometric bands : one row of horizontal herringbones pattern surmonted by one row of cross-hatched triangles. Inbetwen, very eroded remains of a scene showing a long garbed human figure sitting on the stool facing left, in front of a long triangular shape, maybe the base of a standard, surmounted by three objects which might be jars or fish.



Find location : Trench D1, sq. H:4 Level -0,03
Condition : About 1/3 missing, surface cracked and very eroded, traces of surface glaze
Drawing : HD
Bibliography : KJARUM 1983, n ${ }^{\circ}$ 393, p. 162-163

## MEASUREMENTS

Max. diam. : 10.1 mm
Min. diam. : -
Height : 24.1 mm
Perforation diam. : 4 mm
ASPECT

Material : Artificial material,

Treatment : Glazed surface
Surface : Brown, harder grainy material
Core : Light beige
Shape : Cylinder, slightly oval
Profile : Straight walls, rounded edges
Technique : -

## Very fine, clayish and fragile

$$
0
$$

$\qquad$


Find location : Trench F1-M1, sq. H-J:3-4 from sieving
Condition : LOST
Drawing : -
Bibliography : KJÆRUM 1983, no 420, p. 170-171

## MEASUREMENTS

Max. diam. : 13 mm
Height : > 20 mm
Perforation diam. : 5 mm

```
    ASPECT
    Material : "Glass" (from KJ&RUM 1983) or "limestone" (from the registration card)
Treatment : -
    Surface : "Greenish brown"
        Core : "Green"
        Shape : Cylinder
    Profile : Straight walls
Technique : -
```


## DESIGN

"No motif perserved".


Find location : Trench D2, sq. K:4 Level -0.96
Condition : Fragmentary, surface smoothed
Drawing : HD
Bibliography : KJÆRUM 1983, n 418, p. 168-169


## MEASUREMENTS

Max. diam. : 13.7 mm
Min. diam. : 13.4 mm
Height : 30.6 mm
Perforation diam. : 3.8 mm

## ASPECT

Material : Artificial siliceous material, smooth, dense texture
Treatment : -
Surface : Dark brown patina
Core : Yellowish dark beige
Shape : Cylinder
Profile : Straight walls, very slightly convex
Technique : Light, wide, rounded incision

## DESIGN

Beside a figurative scene, a two columns pseudo-inscription made up of designs with no actual signification.
Figurative scene : Very schematic design with figures made of straight sticks. Two opposed human figures with long tiered dress, are separated by a superposition of three animals, each crouched on an horizontal line with their head turned back. Only the middle one is preserved enough to show straight horns.


Find location : Surface find<br>Condition : Complete,<br>light patina on the surface,<br>several straight scratches<br>on the top edges<br>Drawing : HD<br>Bibliography : -

ASPECT
Material : Softstone, type A2B
Treatment : None
Surface : Dark green
Core : Dark green
Shape : Cylinder
Profile : Very slightly concave walls
Technique : Deep, sharp V-shaped incision

## MEASUREMENTS

Max. diam. : 19.5 mm
Min. diam. : 18 mm
Height : 34.8 mm
Perforation diam. : 4.3 mm

## DESIGN

A two lines cuneiform inscription takes one third of the surface of the seal. Strangely, the writing is not reversed, meant to be read on the seal, not on the impression.

Figurative scene : Righthands of the scene, a big figure facing left is sitting on a vertically striped square stool which stands on an horizontal base. She/he is wearing a long tiered dress covering the left shoulder and a horned headdress and raises her/his right hand towards a stand with crescent, the top of which is broken (probably also the star which usually takes place above). She/he is faced by two standing, long-dressed figures, holding each other's hand. Both wear a long plain dress wrapped around their left shoulder, with a fringed border. The first one wears a horned headdress, as opposed to the second one who is bare-headed. Down center, between the big figure and the two others, a mall scorpion lays horizontally, facing the deity and surmounting a miniature figure frontally shown, with a long skirt and horned headdress.

Cuneiform inscription : 2 lines in sumerian/old Babylonian (translation by J.-J. Glassner, 2011)

$$
\begin{array}{ll}
\text { dingir-shesh.ki-ur } & \text { Ur-nanna, } \\
\text { dumu-ur-dam } & \text { son of Ur-dam }
\end{array}
$$




Failaka Seals Cataløcue - Tell F6 «The Palace»

Stamp seals


Find location : Trench M1, sq. J:3


Drawing : HD
Bibliography : KJJRUM 1983, n³30, p. 132-133


$$
\begin{aligned}
& \text { Level } 0.02 \\
\text { Condition : } & \text { Complete, } \\
& \text { surface spotted with } \\
& \text { small circular scales }
\end{aligned}
$$

0
20 mm

## MEASUREMENTS

Max. diam. : 20 mm
Max. thickness : 7.1 mm
Rim thickness : 2 to 6.3 mm
Perforation diam. : 2.1 mm

```
    ASPECT
    Material : Agate
Treatment : None
    Surface : Orange-red and white
        Core : Orange-red and white
    Shape : Circular, probably originally a bead
    Profile : Trapezoid with rounded angles,
        the long side slightly convex (where the design is incised)
    Technique : Light wide V-shaped incision, point drilling
```


## DESIGN

Reverse : Blank
Obverse : Symmetrical composition around a standard topped by a small bowl and a large crescent. Two bull-men hold it on each side with their two hands. The righthands figure is backed by a tree, the lefthands one by a naked man facing the center of the scene and raising his hands forwards.


Bibliography : KJIERUM 1983, nº 338, p. 136-137

## ASPECT

Material : Softstone, type B2
Treatment : Surface treated
Surface : Yellowish with cracks
Core : Yellowish green with brown patches
Shape : Bifacial disc
Profile : Df-Df/Rcv-r
Technique : Deep, sharp V-shaped incision, compass

## MEASUREMENTS

Max. diam. : 22 mm
Max. thickness : 7.6 mm
Rim thickness : 5.7 mm
Perforation diam. : 3 mm

## DESIGN

Side A : Symmetrical composition around a one-eyed bucranium topped by a standard with crescent and star ( 12 rays ?). On each side, one standing, nude man holds the crescent with one hand and a fish with the other. A smaller star is located between the man's legs and the fish on the right side. On a lower register, a net square ( $4 \times 3$ cells) is surmounted by two dotted-circle-shaped heads of long, incurved horned animals with mouth, paired by a single, long, ruffed, curved neck.

Side B : Top center on an horizontal line stand two bovid protomes looking outwards on each side of a zigzagging vegetal. Righthands a standing nude man holds with his right hand the neck of the right protome, which has a single hanging foreleg. Below this scene on left side, a monkey facing right is grasping the right horn of a bull standing in front of it. Their heads are surmounted by a X-shaped design.

## KMII 5



## Find location : Trench F2, sq. L:3 <br> Level -0.63

Condition : Complete, well preserved
except small chips around the perforation
Drawing : HD
Bibliography : Failaka 1964, fig. 70
Glob 1968, p. 216
KJérum 1980, fig. 23
KJfRUM 1983, nº 351, p. 142-143

## DESIGN

Side A : Bordered by a plain circular line, the scene shows a boat sailing on five wavy lines (zig-zag). Two birds facing left stand on the protruding prow and stern. A central mast supports a sail composed of seven vertically striped panels. On the righ (stern) a big sitting figure facing left, dressed with a long, tiered garment holds what could be a rope hanging from the top of the mast while the other hand brandishes a palm leaf. On the left, also facing the prow, stands a smaller man with a short skirt raising his hands to his face.


```
ASPECT
    Material : Softstone, type A2
    Treatment : None
    Surface : Black
        Core : Black
    Shape : Bifacial disc
    Profile : Df-Df/Rcv-r
        Technique : Deep and light V-shaped incision
```


## MEASUREMENTS

Max. diam. : 30 mm
Max. thickness : 8.2 mm
Rim thickness : 5.8 mm
Perforation diam. : 3.2 mm

## DESIGN

Side B : The face is bordered by a radiant pattern of bisected triangles between two concentric circles. Inside, a big central character, facing left and wearing a long tiered dress and what may be a horned headdress, is sitting on a stool on top of a low vertically striped podium. The figure has both hands raised and holds a crook in the left one. Behind the stools is a standard composed of a tall, thin, three storeyed frame, topped by a crescent and a star (unumbered rays). Opposite stands a bald man with a short skirt, also raising his hands and also surmounted by a star. Two vertical palms frame the scene on left and right sides.


Find location : -
Condition : Complete,
many chips on the edges
Drawing : HD
Bibliography : KJARUM 1983, nº 265, p. 112-113


## MEASUREMENTS

Max. length : 27.5 mm
Max. width : 19.3 mm
Max. thickness : 11.4 mm
Wall thickness : 7.5 to 9 mm
Perforation diam. : 3.5 mm , throught the width


## ASPECT

Material : Softstone, type B1
Treatment : Surface treated
0
Surface : Light greenish brown, opaque
Core : Greenish black, smooth and homogeneous
Shape : Rounded rectangle
Profile : RECf-5, with axis along the width
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : Same pattern as on disk-with-boss-shaped seals. $3 \mathrm{~L}=4 \times 14 \mathrm{~mm}$. DC diam. $=4 \mathrm{~mm}$
Obverse : A flat-based boat with high long-horned bow and raised flat stern is sailing towards right. It is supporting two naked human figures standing on either side of a long vertical pole topped by a small bird-like head, which they are grasping with one hand. The human in front is raising up a long plain stick with his other hand, while the second figure has his raised to his waist. They are framed on both sides by two small unclear figures, maybe long-tailed animals standing vertically. The top of the scene is centered around a turtle-like animal, also standing vertically, faced on left hand by a monkey figure in profile. The top right corner shows a large crescent topped by a star (slightly damaged, 7 or 8 rays).


Find location : -
Condition : Complete,
a fews chips on the edges
Drawing : HD
Bibliography : KJARUM 1983, nº 266, p. 112-113

## MEASUREMENTS

Max. length : 19.5 mm
Max. width : 18.6 mm
Max. thickness : 10.1 mm
Perforation diam. : 2 mm

## ASPECT

Material : Softstone, type X1A
Treatment : Surface treated
Surface : Light brown
Core : Light greenish grey
Shape : Rectangular with rounded corners
Profile : RECf-5, with longitudinal axis
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : Similarly to disc with boss shaped seals, four dotted circles frame a series of three parallel lines but these don't cover the whole length of the seal, only the central part of it. $3 \mathrm{~L}=2 \times 9 \mathrm{~mm}$. DC diam. $=2 \mathrm{~mm}$

Obverse : A plain-lined square frames a boat with flat-based hull and raised stern and bow. The bow is ornamented by a pair of long, rear incurved horns and two smaller forward-protruding incisions evoking a bovid's head. In the middle stands a naked human figure facing right. In each hand, he is holding up a flag-like object, composed of an irregular rectangle vertically hatched (4 stripes lefthands, 3 only righthands) topping a stick which is surging out of a rounded jar.


Find location : $\begin{gathered}\text { Trench SS, sq. B:5 } \\ \\ \text { Level - } 1.60\end{gathered}$
Condition: Complete, chipped rim but
Condition: $\begin{array}{r}\text { Complete, chipped rim but } \\ \text { edges of incision not eroded }\end{array}$


Drawing : DN
Bibliography : KJARUM 1983, nº 1, p. 14-15


## MEASUREMENTS



$$
\begin{array}{r}
\text { Max. diam. : } 23.2 \mathrm{~mm} \\
\text { Boss diam. : } 18.1 \mathrm{~mm} \\
\text { Max. thickness : } 9.8 \mathrm{~mm} \\
\text { Rim thickness : } 5.9 \mathrm{~mm} \\
\text { Perforation diam. }: 2.8 \mathrm{~mm}
\end{array}
$$

$$
0
$$

```
    ASPECT
    Material : Softstone, type B1
Treatment : Surface treated
    Surface : Light beige
            Core : Dark greenish brown
            Shape : Disc with boss
    Profile : Df-B/Cw/Rcv-b
```

Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : $3 \mathrm{~L}=2 \mathrm{~mm}$. DC diam. $=2.3 \mathrm{~mm}$
Obverse : Radial composition of six bovid protomes with ruffed neck and long, knobbed, incurved horns, rounded mouth and long ears, all turned left. The necks joining in the center form a star pattern.


Find location : Trench C3, sq. B-C:5
Level /-1.54
Condition : Complete
(broken in 2 pieces)
Drawing : HD
Bibliography : BIBBY 1971, p. 191
Failaka 1964, fig. 83
KJAERUM 1983, nº 42, p. 26-27

## MEASUREMENTS



Max. diam. : 21 mm
Boss diam. : 18 mm
Max. thickness : 9.6 mm
0
20 mm
Rim thickness : 4.5 mm
Perforation diam. : 2.4 mm

```
ASPECT
    Material : Softstone, type X6
    Treatment : Heated to the core, no surface treatement
    Surface : Dark yellowish green
            Core : Dark yellowish green
    Shape : Disc with boss
    Profile : B-Dcx/Cn/Rcv-v
Technique : Light, sharp V-shaped incision, compass, very finely smoothed
```


## DESIGN

## Reverse : 3L $=2.3 \mathrm{~mm}$. DC diam. $=1.4 \mathrm{~mm}$

Obverse : A central pattern consists in two confronted garbed men holding with their two hands a standard topped by a vegetal-like branch. Behind each of them is a jar. A pattern is radially repeated four times around the periphery of the seals, composed of a net-square ( $4 \times 4$ cells) and a standing bovid with rear incurved horns, turned outwards but looking towards the central scene.
Find location : Trench M2, sq. L:2
Level -2.04
Condition : Complete, edges chipped, surface eroded on top of the dome and on spots on the rim
Drawing : DN

Bibliography : Failaka 1964, fig. 84
KJARUM 1983, n 0 155, p. 70-71

## MEASUREMENTS

Max. diam. : 25 mm
Boss diam. : 20 mm

Max. thickness : 10.2 mm
Rim thickness : 5.6 to 5.8 mm
Perforation diam. : 3 mm
0
20 mm
ASPECT
ASPECT
Material : Softstone, type B2
Material : Softstone, type B2
Treatment : Surface treated
Treatment : Surface treated
Surface : Yellowish
Surface : Yellowish
Core : Greenish grey
Core : Greenish grey
Shape : Disc with boss
Shape : Disc with boss
Profile : Dcx-B/Cw/Rcv-b
Profile : Dcx-B/Cw/Rcv-b
Technique : Deep, sharp V-shaped incision

## DESIGN

Reverse : 3L $=2.5 \mathrm{~mm}$. DC diam. $=2.5 \mathrm{~mm}$
Obverse : Symmetrical composition around a palm tree with a knobbed trunk, held with one hand by two men turned outwards, wearing long tiered skirts and headdress. In the other hand they each carry a long, vertical object composed of a plain rectangle ended at top and bottom by ladder-like extremities (3 rungs each).


Find location : Trench F2, sq. K:3 Level -1.99
Condition : Almost complete but several chips on the rim, no erosion of the surface
Drawing : HD
Bibliography : Glob 1968, p. 194
KJÆRUM 1980, fig. 22
KJérum 1983, n 264 , p. 112-113


## MEASUREMENTS

Max. diam. : 24.8 mm
Boss diam. : 21.1 mm
Max. thickness : 11.8 mm
Rim thickness : 6.5 mm


Perforation diam. : 3 mm

ASPECT $\qquad$
Material : Softstone, type X6
Treatment : Heated to the core, no surface treatement
Surface : Yellowish dark brown, very shiny
Core : Yellowish dark brown
Shape : Disc with boss
Profile : Df-B/Cn/Rcv-v
Technique : Deep, very sharp V-shaped incision

## DESIGN

Reverse : $3 \mathrm{~L}=2.2 \mathrm{~mm}$. DC diam. $=2.5 \mathrm{~mm}$
Obverse : A large masted boat is the center of the composition, with a flat-based hull and raised up bow and stern. A flat-angled platform tops the stern lefthands, while two opposed pairs of incurved horns crown the bow facing right. Two confronted naked human figures frame the central mast. They both raise one hand to hold a vertically striped object surmounting the pole, with a flat base and convex rounded top. Behind the two people, a palm stands vertically above the stern, an irregularly shaped vertical rectangle above the bow.


Find location : Trench M2, sq. L:3 Level -1.34/2.07
Condition : Complete, small chips on the edges
Drawing : DN
Bibliography : KJARUM 1983, nº 187, p. 80-81

## MEASUREMENTS



Max. diam. : 26 mm
Boss diam. : 19.9 mm
Max. thickness : 12 mm
Rim thickness : 7.4 mm
Perforation diam. : 3.5 mm

## ASPECT



Material : Softstone, type X1A
Treatment : Surface treated
Surface : Yellowish white
0
20 mm
Core : Greenish grey
Shape : Disc with boss
Profile : Df-B/Cw/Rcv-b
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : 3L $=3.1 \mathrm{~mm}$. DC diam. $=4 \mathrm{~mm}$
Obverse : Bottom center, a kneeling bovid with long, knobbed, incurved horns is facing left. Above its back and facing the same direction, a sitting human figure wearing a long tiered skirt is brandishing a stemmed branch in his right hand. Two naked, standing men are framing the scene. The one righthands, behind the sitting character, is holding outwards a long bow-like object. The bottom end is broken, a small horizontal line seems to link its top end to the head of the man. Another small line links the right, hanging arm of the naked man to the back of the sitting figure. Lefthands stands another nude man facing the others, raising his two hands, one of which is grabbing the bovid's horn. Above his head, a small jar with a marked base. Under his feet and the bovid's bent forelegs lays a stemmed branch.


Find location : Trench M2, sq. L:2
Level - 1.97
Condition : Complete, few chips on the edges
Drawing : HD
Bibliography : KJÆRUM 1983, $n^{\circ}$ 260, p. 110-111

## MEASUREMENTS

Max. diam. : 27.9 mm
Boss diam. : 21.4 mm
Max. thickness : 12.7 mm
Rim thickness : 6.8 to 7.4 mm
Perforation diam. : 3.2 mm
ASPECT
Material : Softstone, type X3
Treatment : Surface treated
Treatment : Surface treated
Surface : Yellowish white
with large reddish patches
which are only superficial
with large reddish patches
which are only superficial


Core : Greenish grey
Shape : Disc with boss
Profile : Df-B/Cw/Rcv-b
Technique : Deep, sharp $V$-shaped incision, compass

## DESIGN

Reverse : $3 \mathrm{~L}=3.5 \mathrm{~mm}$. DC diam. $=3.2 \mathrm{~mm}$
Obverse : Lefthands stands a man dressed with a long tiered skirt and headdress, his hands raised forwards, the left one holding the foreleg of a bovid's protome which is symmetrically reproduced instead of its hind-quarter, with long, knobbed, incurved horns and ruffed neck. The doubled protome comes across a complete bovid with similar features, orientated downwards along the vertical axis of the scene. Facing it, a nude, headdressed man, his head downwards as apposed to the other human figure. He is raising one leg and grabbing the horn of the complete bovid with his left hand. Bottom of the scene, between the garbed man and the bovid's head stands a large foot figure. On either side of the same man are shown a small crescent (front) and a small angular sign (back). A larger crescent tops the scene above the protomes.


Find location : $\begin{aligned} & \text { Trench SN, sq. K:5 } \\ & \text { Level -1.58/2.22 }\end{aligned}$
Condition : Complete,
few chips on the edges cracks on the surface of the boss
Drawing : HD
Bibliography : Glob 1968, p. 91
KJeRUM 1983, n ${ }^{\circ}$ 166, p. 74-75

## MEASUREMENTS

Max. diam. : 24.1 mm
Boss diam. : 19.6 mm
Max. thickness : 13.1 mm


Rim thickness : 7.1 mm
Perforation diam. : 3.7 mm

```
    ASPECT
    Material : Softstone, type X1A
Treatment : Surface treated
    Surface : Yellowish white
        Core : Light green, slightly translucent
        Shape : Disc with boss
    Profile : Df-B/Cw/Rcv-b
```

Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : 3L $=1.7 \mathrm{~mm}$. DC diam. $=3.2 \mathrm{~mm}$
Obverse : Symmetrical composition with two confronted bull-men holding with one hand a bovid-legged stand. On the large upper plate of the stand, a bird is sitting facing left. Under the stand between the two figures, a big square with double outline tops an irregularly designed, large ring. Diametrically opposed and framing the scene, two stars are shown (approximately 11 and 13 rays), one behind the back of each bull-man.


Find location : Trench M2, sq. K:2 Level -2.07
Condition : Complete,
chips on the boss and edges
Drawing : DN
Bibliography : Failaka 1964, fig. 90
Glob 1968, p. 92
KJertum 1983, no 188, p. 82-83


## MEASUREMENTS

Max. diam. : 26.4 mm
Boss diam. : 19.6 mm
Max. thickness : 12.2 mm
Rim thickness : 6.7 mm
Perforation diam. : 3.2 mm


ASPECT
0
20 mm
Material : Softstone, type X1A
Treatment : Surface treated
Surface : Yellowish white
Core : Greenish grey
Shape : Disc with boss
Profile : Dcx-B/Cw/Rcv-b
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : $3 \mathrm{~L}=3.9 \mathrm{~mm}$. DC diam. $=3.9 \mathrm{~mm}$
Obverse : Two facing each other men wearing tiered skirts stand on either side of a jar with a base. They both hold with one hand a long stem coming out of the jar towards the mouth of the man lefthands. The latter carries another smaller jar in his right hand. Behind the central, taller character stands a third, shorter, nude with head-dressed man, who holds a similar jar in his right hand while his left arm is bent forwards.


Find location : Trench C, sq. B:5 Level -1.69
Condition : LOST
Drawing : -
Bibliography : KJ $\notin R U M$ 1983, nº 26, p. 22-23

```
    ASPECT
    Material : "Steatite"
Treatment : -
    Surface : "Dark grey"
        Core : -
    Shape : Disc with boss (?)
    Profile : -
Technique : Sharp V-shaped incision, compass
```


## MEASUREMENTS

Max. diam. : 2.3 mm
Boss diam. : -
Max. thickness : 1.1 mm
Rim thickness : 7 mm
Perforation diam. : -

## DESIGN

Reverse : -
Obverse : Composition centered around a square net ( $5 \times 4$ cells). From each corner surges a bovid's protome, with ruffed neck and long, knobed, rear-incurved horns. They are facing each other by pair, their joint raised forelegs forming between them a double triangle, which is topped by a star with a cross inside the central circle ( 14 rays on the left, 13 on the right). On the perpendicular axis, standing on each long side of the central net, a garbed man is raising in each hand a palm or tree with 5 leaves.


Find location : Trench N1, sq. H-J:1-2
Level /-0.70
Condition : LOST
Drawing : -
Bibliography : GlOB 1968, p. 212
KJérum 1983, n ${ }^{\circ}$ 237, p. 100-101

## ASPECT

Material : "Steatite"
Treatment : -
Surface : "Grey"
Core : -
Shape : Disc with boss (?)
Profile : -
Technique : Deep, sharp V-shaped incision

## MEASUREMENTS

Max. diam. : 28 mm
Boss diam. : -
Max. thickness : 1.8 mm
Rim thickness : 7 mm
Perforation diam. : -

## DESIGN

## Reverse : -

Obverse : The scene is framed inside a large circle bordered by 13 or 14 small arches partly chipped (number unclear due to ther irregular spacing). Two superposed ruffed-necked bovids stand in the middle, their body both facing left. The bottom one has short vertical horns while the top one has long rear-incurved horns, its head surmounting a small splain square. Above them, a net square ( $3 \times 4$ cells) is set righthands to a vertical palm. On the right side, a nude man facing inside is holding the long tail of the top bovid, while its horns are grasped by a monkey figure facing it on the opposite side.

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```
Find location : Trench M1, sq. H:2 Level -1.80
Condition : LOST
Drawing : -
```

Bibliography : KJARUM 1983, n ${ }^{\circ}$ 80, p. 40-41

```
    ASPECT
    Material : "Steatite"
Treatment : -
    Surface : "Grey"
        Core : -
    Shape : Disc with boss (?)
    Profile : -
```

Technique : Deep, sharp V-shaped incision, compass

## MEASUREMENTS

Max. diam. : 25 mm
Boss diam. : -
Max. thickness : 12 mm
Rim thickness : 6 mm
Perforation diam. : -

## DESIGN

Reverse : -
Obverse : Two naked men face each other, sitting on grossly rectangular, horizontally striped stools, on either side of a large net square ( $7 \times 5$ cells). On top of this podium is set a small, necked, rounded jar, surmounted by a tall gazelle with ruffed neck and very long, rear-incurved horns.


Find location : -
Condition : LOST
Drawing : -
Bibliography : Failaka 1964, fig. 86
KJerRum 1983, n 0 174, p. 76-77

## ASPECT

Material : "Steatite"
Treatment : -
Surface : "White"
Core : -
Shape : Disc with boss (?)
Profile : -
Technique : Deep, sharp $V$-shaped incision, compass

## MEASUREMENTS

Max. diam. : 30 mm<br>Boss diam. : -<br>Max. thickness : 13 mm<br>Rim thickness : 7 mm<br>Perforation diam. : -

## DESIGN

## Reverse : -

Obverse : Surmounting a bovid facing right with short straight horns and ruffed neck, a net square ( $3 \times 4$ cells) is set in the center of the scene. Two symmetric protomes of bovids (head and foreleg) with characteristics similar to the bottom one, are protruding from its top side. Each protome is faced by a naked human figure. Righthands, the latter is holding the neck of the bovid, above a striped almond-shaped object. Lefthands, the man is holding a long stick coming out of the neck of a small footed jar. Top center, a pole standard topped by a crescent and a star (11 rays).


Find location : Trench M2, sq. K:2 Level -1.70
Condition : LOST
Drawing : -
Bibliography : KJARUM 1983, nº 67, p. 34-35

```
    ASPECT
    Material : "Steatite"
Treatment : "Coat"
    Surface : "White"
        Core : "Grey"
        Shape : Disc with boss (?)
        Profile : -
Technique : Deep, sharp V-shaped incision
```


## MEASUREMENTS

Max. diam. : 2.2 mm
Boss diam. : -
Max. thickness : 1.3 mm
Rim thickness : 7 mm
Perforation diam. : -

## DESIGN

Reverse : -
Obverse : Composition centered around a human figure with long tiered skirt, looking right. He is holding in each hand a long rectangular object ended at bottom and top by a ladder-like pattern ( 3 bars). Parallely on both sides outwards stands a large geometrical shape, horizontally striped, the inner side straight, the outer side rounded, following the curve of the seal.

## MEASUREMENTS

Max. diam. : 24 mm
Boss diam. : 19.4 mm
Max. thickness : 11.3 mm
Rim thickness : 5.5 to 5.8 mm
Perforation diam. : 2.9 mm

Find location : Trench F2, sq. L:3
Level - 1.37
Condition : Complete,
chips on the edges
Drawing : HD
Bibliography : KJÆRUM 1980, fig. 6
KJérum 1983, n ${ }^{\circ}$ 247, p. 104-105

0
20 mm

> ASPECT
Material : Softstone, type X2A
Treatment : Surface treated
Surface : Greenish white
Core : Light green
Shape : Disc with boss
Profile : Dcx-B/Cw/Rcv-r
Technique : Light, sharp V-shaped incision, compass

## DESIGN

Reverse : $3 \mathrm{~L}=2.8 \mathrm{~mm}$. DC diam. $=2.2 \mathrm{~mm}$
Obverse : In a central position above an horizontal base line, two superposed bovids are facing right.
The bottom one is a bull with short straight horns, the top one is smaller with long, back-rearing incurved horns. They are surmounted by a crescent set on a short standard. Symmetrically on either side of the central pattern, two long-necked birds face each other, spreading their wings in profile, above two bull-men who stretch their arms upwards, facing the bovids. On the left border, a star ( 9 rays) is visible above the bull-man's head and a crescent set vertically behind his back, with three small parallel lines inside.


```
    ASPECT
    Material : Softstone, type B2
Treatment : Surface treated
    Surface : Yellowish white
        Core : Light green, slightly translucent
    Shape : Disc with boss
    Profile : Dcx-B/Cw/Rcv-r
```

Technique : Light, sharp V-shaped incision, compass

## DESIGN

Reverse : 3L $=3.4 \mathrm{~mm}$. DC diam. $=2.5 \mathrm{~mm}$
Obverse : On the right side of the seal, two bull-men facing each other hold with their two hands a standard topped by a large crescent. Underneath, along a slanted axis, a pair of symmetrical bovids with long incurved horns and ruffed neck look rearwards. Two rounded, necked jars, one inverted, fill the empty space on the left side between the animals and the bull-men.


Max. length. : 17.3 mm
0
20 mm
Max. width : 15 mm
Max. thickness : 7.1 mm
Rim thickness : 3.5 mm
Perforation diam. : 3.3 mm

## ASPECT

| Material : Softstone, type B1 |  |
| ---: | :--- |
| Treatment : Uncertain surface treatment |  |
| Surface : Yellowish brown with dense little cracks, |  |
|  | preserved only in one corner of the obverse |
| Core : | Dark greenish brown (very similar to KM 48) |
| Shape : Rectangular |  |
| Profile : | RECf-5, with longitudinal axis |
|  | like a symmetrical ridge-roofed building |
| Technique : | Light, sharp V-shaped incision |

## DESIGN

Reverse : $3 \mathrm{~L}=2 \mathrm{~mm}$, designed as a long rectangle with medial line across the width, perpendicularly to the ridge. DC diam. $=3 \mathrm{~mm}$

Obverse : A naked man, facing right, stands behind a bovid with long, ruffed neck and head raised up, holding its long, straight horns from the back with his left hand, his right hand stretched towards the same direction. He is topped by a large crescent. A big scorpion stands vertically behind him.


Find location : Trench D2, sq. K:4
Condition : Complete,
big chips on the edges, one large straight incision on the boss was made prior to the surface treatment
Drawing : HD
Bibliography : Glob 1958, p. 203
KJerum 1980, fig. 12
KJたRUM 1983, n ${ }^{\circ}$ 51, p. 30-31

## MEASUREMENTS

Max. diam. : 23.6 mm
Boss diam. : 19 mm


Max. thickness : 9.9 mm
Rim thickness : 5.3 mm
Perforation diam. : 3 mm
0
20 mm

```
    ASPECT
    Material : Softstone, type X1A
Treatment : Heated to the core and surface treated
    Surface : Brownish white
        Core : Brownish white
    Shape : Disc with boss
    Profile : Df-B/Cw/Rcv-r
```

Technique : Light, sharp V-shaped incision, compass

## DESIGN

Reverse : 3L $=2.1 \mathrm{~mm}$. DC diam. $=2.9 \mathrm{~mm}$
Obverse : A big central pattern consists in a long, vertical rectangle with double line at the bottom and top, the latter slightly concave. It contains four superposed objects : a net-square ( $4 \times 3$ cells), a vertically striped oval shape, a circle surrounded by 15 short rays and a vertically-striped rectangular shape. Confronted on either side, two human figures raise their hands towards the central motif. The one on left side is wearing a long, tiered skirt and a headdress. The one righthands is a bull-man whose thighs are nor clearly separated, as if he was wearing a skirt. A small stem is erected from his pelvis. The figure is backed by a dotted circle (slightly torn on the edge of the seal). A small crescent is visible in the upper right corner.


Find location : n.d.


Condition : Complete,
a few chips on the egdes
and surface of the boss
Drawing : HD
Bibliography : KJARUM 1983, nº 236, p. 100-101


## MEASUREMENTS

Max. diam. : 19.3 mm
Boss diam. : 15.7 mm
Max. thickness : 9.7 mm
Rim thickness : 5.4 to 5.7 mm
Perforation diam. : 3.1 mm

```
ASPECT
    Material : Softstone, type X3
Treatment : Heated to the core and surface treated
    Surface : Brownish white
        Core : Light brown
    Shape : Disc with boss
    Profile : Df-B/Cw/Rcv-r
Technique : Deep, sharp V-shaped incision, compass
```


## DESIGN

## Reverse : 3L $=2 \mathrm{~mm}$. DC diam. $=3 \mathrm{~mm}$

Obverse : Two superposed, long ruffed-necked bovids are facing left, the one downwards is a bull, the one upwards a rear-incurved-horned antelope. A nude man behind them puts his right hand on the buttock of the antelope, his left hand raised outwards. The scene is topped by a large crescent and a star (about 15 to 20 rays). A scorpion precedes the bull and a short stemmed branch the second bovid.


## DESIGN

Reverse : 3L = 2 mm . DC diam. $=3.3 \mathrm{~mm}$
Obverse : The pattern includes four bovids with ruffed neck. Two of them, with long, slightly incurved horns are rearing up, looking inwards and framing the scene on the left and right sides. Facing left, a naked man holds in his right hand the foreleg of the bovid on the left. His other hand grasps the neck of a third bovid, lying down, rear looking and surmounting a net square ( $3 \times 3$ cells). This bovid shows four short, straight horns, the two outwards might be ears though they look much longer than usually. Underneath stands the fourth bovid, a facing-left bull overlooking a long-necked bird under its head, which is topped by an inverted crescent.


Find location : Trench M2, sq. L:2
Level 0.26
Condition : Almost one half missing,
$\begin{aligned} \text { Condition : } & \text { Almost one half missing, } \\ & \text { several chips on the reverse, }\end{aligned}$ numerous small cracks due to overheating
Drawing : HD
Bibliography : KJARUM 1983, nº 22, p. 20-21


## MEASUREMENTS

Max. diam. : 18.4 mm
0
20 mm
Boss diam. : 15.7 mm
Max. thickness : 10.2 mm
Rim thickness : 5.3 mm
Perforation diam. : 2.7 mm

## ASPECT

Material : Softstone, type X1B
Treatment : Heated to the core
Surface : Greenish white
Core : Greenish white
Shape : Disc with boss
Profile : Df-B/Cw/Rcv-r
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

## Reverse : 3L $=2 \mathrm{~mm}$. DC diam. $=3 \mathrm{~mm}$

Obverse : A geometrical composition lined up on the diameter of the seal. The preserved components consist in a central, elongated, striped lozenge crossed by a stem which links it to a symmetrical pair of bovids' protomes, with long, incurved horns. Their joint, long, ruffed necks line the circular shape of the seal.


## DESIGN

Reverse : 3L $=2.2 \mathrm{~mm}$. DC diam. $=4 \mathrm{~mm}$
Obverse : A central net-square ( $3 \times 5$ cells) supports a large ring topped by a long dextral spiral. Two symmetrical bovids' protomes laterally protrude from the ring, with long ruffed neck, long undulating horns and one bent foreleg. Downwards righthands stands a complete bovid, facing right and rear-looking with long down-incurved horns. Under its mouth is a small inverted jar, linked to its head by a vertical incision (beard ?). Lefthands sits a human figure with long, tiered skirt, raising his left hand up to the neck of the protome next to it. The other hand is at waist. Two small stemmed branches are set between the man's body and left protome and between the spiral and right protome.


## Find location : Trench D1, sq. J:4 <br> Level -0.78

Condition : Fragment
(about 20\% of the seal), incomplete profile, surface eroded
Drawing : HD
Bibliography : KJARUM 1983,
$n^{\circ} 48$, p. 54-55

## MEASUREMENTS

Estimated diam. : 32 mm (?)
Estim. boss diam. : 30 mm (?)
Estim. thickness : 13.4 mm (?)
Rim thickness : 4 mm
Perforation diam. : not preserved

## ASPECT

Material : Softstone, type B1
Treatment : Surface treated
Surface : Whitish
Core : Dark green, soapy and homogeneous
Shape : Disc with boss
Profile : B-Dcx/Cn/Rcv-v (?)
Technique : Light, wide V-shaped incision

## DESIGN

Reverse : No design preserved.
Obverse : Only the top of the pattern is preserved, vertically divided into 4 columns by 3 thick, straight poles. From the side fields remain the heads of two human figures facing the center of the scene and raising both hands in front of their face. The figure on left side wears a horned headdress, the one on right side has short, ruffled hair. The 2 central columns, concentrated on one third of the width, show a similar design : a crescent topped by a big rosette (8 rays), surmounting s small horizontal, vertically striped rectangle (3 cells in the left column, 4 in the right). Underneath, the upper parts of what may be a very stylized facing bird with circular head, beak in profile and raised wings.


Find location : Trench M1, sq. J:3
Level -1.84
Condition : Complete, a few big chips on the edges, deep cracks on the boss, surface layer almost competely eroded
Drawing : DN
Bibliography : KJJERUM 1983, no 140, p. 64-65


## MEASUREMENTS

Max. diam. : 26.4 mm
Boss diam. : 20.8 mm
Max. thickness : 12.8 mm
Rim thickness : 7.7 to 8.1 mm
Perforation diam. : 3.7 mm


## ASPECT

Material : Softstone, type X6
0
20 mm
Treatment : Heated to the core and surface treated
Surface : Yellowish white
Core : Brownish grey, opaque
Shape : Disc with boss
Profile : Df-B/Cw/Rcv-b
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : $3 \mathrm{~L}=2 \mathrm{~mm}$. DC diam. $=3 \mathrm{~mm}$
Obverse : The off-centered composition shows a main symmetrical scene on the right of the field : two naked men facing each other on either side of a large net-square ( $6 \times 5$ cells) hold a two-lined standard topped by a large crescent and a big ring with radiant fringes. Behind the left man, a smaller net-square ( $5 \times 4$ cells) is surmounted by a sitting bird looking to the right, with long neck and feathered back. Bottom center a long-necked bull (short, straight horns, mostly broken) is lying down, turned to the left.


Find location : Trench C3, sq. B:5
Level -1.33
Condition : Complete, perfect condition
Drawing : HD
Bibliography : KJeRUM 1983, n ${ }^{\circ}$ 73, p. 38-39


## MEASUREMENTS

Max. diam. : 24.1 mm
Boss diam. : 18.6 mm
Max. thickness : 10.2 mm
Rim thickness : 5.6 to 6 mm
Perforation diam. : 3.5 mm


0
20 mm
ASPECT
Material : Softstone, type X1A
Treatment : Surface treated
Surface : Yellowish white
Core : n.a.
Shape : Disc with boss
Profile : Df-B/Cw/Rcv-b
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

## Reverse : 3L $=3 \mathrm{~mm}$. DC diam. $=2.7 \mathrm{~mm}$

Obverse : Bottom center and turned left stands a bull with long ruffed neck, following a long-legged and long-necked bird. Above the bovid's back, a net-square ( $4 \times 5$ cells) is prolonged in the top left angle by a long-ruffed-necked and long-incurved-knobed-horned bovid's protome, looking up in the direction of a naked man whose hands are raised towards the net-square. He stands in an almost horizontal position, along the upper edge of the seal. The right bottom corner is filled with a big triangular foot set vertically.


Find location Trench SS1-10, sq. F:5 Level -0.35
Condition : Complete, chipped edges, one big jag on the reverse, eroded surfece on the obverse
Drawing : HD
Bibliography : KJARUM 1983, nº 138, p. 62-63


## MEASUREMENTS

Max. diam. : 27.1 mm
Boss diam. : 22.1 mm
Max. thickness : 12 mm
Rim thickness : 6.4 mm
Perforation diam. : 2.5 mm


## ASPECT

Material : Softstone, type X2A
0
20 mm
Treatment : Surface treated
Surface : Yellowish white
Core : Light green, opaque
Shape : Disc with boss
Profile : Dcx-B/Cn/Rcv-r
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : $3 \mathrm{~L}=2 \mathrm{~mm}$. DC diam. $=2.5 \mathrm{~mm}$
Obverse : Bottom center a bull is facing left, holding on its back a long standard topped by two symmetrical volutes. On the right side a garbed sitting man, facing outwards, grasps the standard with his right hand. His left hand is raised towards a second nude man, hands raised, facing him on a lower level. A monkey is turned outwards above him. On the left side, another monkey, turned inwards is holding two undulating lines, vertically entwined next to the standard. On the left edge of the seal, in front of the bull's foreleg, a scorpion with its head downwards is half preserved.


> Find location : Trench M2, sq. L:2 Level -1.03
> Condition : Complete,
> partly broken edges, obverse center chipped


Drawing : DN
Bibliography : KJARUM 1983, n5, p. 14-15

## MEASUREMENTS

Max. diam. : 26.7 mm
Boss diam. : 23.2 mm


Max. thickness : 13.1 mm
Rim thickness : 5.6 mm
Perforation diam. : 2.9 mm
0
20 mm

ASPECT<br>Material : Softstone, type B1<br>Treatment : No surface treatement<br>Surface : Greyish brown, very well polished<br>Core : Greyish brown<br>Shape : Disc with boss<br>Profile : B-Dcx/Cn/Rcv-v<br>Technique : Very deep, sharp V-shaped incision, compass

## DESIGN

Reverse : 3L $=2.5 \mathrm{~mm}$ (very irregular). DC diam. $=3 \mathrm{~mm}$
Obverse : Radial composition of 8 stands around a central ring. They are alternately topped by either a crescent and star or a plain ring.


Find location : Trench M1, sq. H:2
Level -1.52
Condition : Complete,
edges and surface eroded
Drawing : HD
Bibliography : Glob 1968, p. 200
KJérum 1983, nº 273, p. 116-117

## MEASUREMENTS

$\begin{aligned} \text { Max. diam. }: & 24.4 \mathrm{~mm} \\ \text { Boss diam. } & : 20.6 \mathrm{~mm} \\ \text { Max. thickness }: & 9.6 \mathrm{~mm} \\ \text { Rim thickness } & : 5 \mathrm{~mm} \\ \text { Perforation diam. }: & 2.6 \mathrm{~mm}\end{aligned}$
$\begin{aligned} \text { Max. diam. }: & 24.4 \mathrm{~mm} \\ \text { Boss diam. } & : 20.6 \mathrm{~mm} \\ \text { Max. thickness }: & 9.6 \mathrm{~mm} \\ \text { Rim thickness } & : 5 \mathrm{~mm} \\ \text { Perforation diam. }: & 2.6 \mathrm{~mm}\end{aligned}$


0
20 mm

```
    ASPECT
    Material : Softstone, type B1
Treatment : Surface treated
    Surface : Yellowish white
            Core : Dark green, translucent
    Shape : Disc with boss
    Profile : Dcx-B/Cn/Rcv-r
```

Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : 3L in the center subdividing into 4 at one end and 5 at the other. Width : 2 to 3.8 mm DC diam. $=3 \mathrm{~mm}$

Obverse : Symmetrical composition with two opposed bull-men stretching their arms to hold a rearing up, facing-left bovid with short, straight horns. They wear short, flaring skirts with a small stem erected from the waist. Down center lies a facing-right bovid's head with short horns linked to a meandering snake body. Each bull-man is framed by two small stemmed branches, one upwards behind them and one downwards in front of them.


Find location : Trench M2, sq. L:2
Level -1.72
Condition : Complete,
broken edges and eroded surface on the obverse and top of the reverse
Drawing : DN
Bibliography : KJERUM 1983, n¹12, p. 52-53


## MEASUREMENTS

Max. diam. : > 26 mm
Boss diam. : 21.9 mm
Max. thickness : 9.3 mm
Rim thickness : 5.5 mm
Perforation diam. : 3.2 mm


0
20 mm

```
    ASPECT
    Material : Softstone, type B2A
    Treatment : Surface treated
    Surface : Yellowish white
            Core : Light green, translucent
            Shape : Disc with boss
            Profile : Df-B/Cn/Rcv-r
Technique : Deep, sharp V-shaped incision, compass
```


## DESIGN

## Reverse : 3L = 2 mm . DC diam. $=2.5 \mathrm{~mm}$

Obverse : Symmetrical composition centered on a one-eyed bucranium topped by a big, five oval-shaped petals flower on a straight standard. Underneath lies a crescent. On each side a nude, headdressed man facing inside is holding one horn of the bucranium with one hand, raising the other hand behind his head. At the bottom of the scene stand two opposed bovids (short straight horn, long tail) with long, ruffed neck, rear-looking towards the center.


Scale 2:1


Scale 1:1



Find location : -
Condition : Complete,
big deep cracks throughout, obverse center deeply corroded
Drawing : HD
Bibliography : KJERUM 1983, n ${ }^{\circ}$ 307, p. 126-127


## MEASUREMENTS

Max. diam. : 23.4 mm
Boss diam. : 21.1 mm
Max. thickness : 12.2 mm
Rim thickness : 4.7 mm


Perforation diam. : 3 mm

```
    ASPECT
    Material : Softstone X7
    Treatment : Heated to the core, no surface treatement
        Surface : Brownish black, polished, metallic shine but no magnetism
            Core : Brownish black, very fine grain, rusty patches
            Shape : Disc with boss
    Profile : B-Dcx/Cn/Rcv-r
    Technique : Light, wide V-shaped incision, compass, point drilling
```


## DESIGN

## Reverse : Plain

Obverse : In the center of the scene stands a bull, facing left. A bull-man facing it holds its neck with his two hands. He is wearing a headdress with four parallel straight horns. Between the two stands a jar (damaged). Opposite side behind the bull, a nude man raises his hands towards a rosette ( 7 dots around a central one). Above the bull's back a damaged motif is topped by a several-storeyed-horned pattern. Bottom center, a long, horizontally-bisected rectangular pattern surmounted by a rosette ( 8 dots around 1 central one) is framed by two opposed birds with spread wings.


Perforation diam. : 2.5 mm

```
    ASPECT
    Material : Softstone, type B2A
Treatment : Surface treated
    Surface : Yellowish
            Core : Light green, slightly translucent
            Shape : Disc with boss
    Profile : Dcx(?)-B/Cn/Rcv-r
```

Technique : Deep, sharp $V$-shaped incision, compass

## DESIGN

## Reverse : 3L $=2.5 \mathrm{~mm}$. DC diam. $=2 \mathrm{~mm}$

Obverse : Bottom center stands a bull facing left, surmounted by a second one rearing up with its head down. Righthands is a nude man looking inwards, holding a stem towards a net-square ( $3 \times 3$ cells) set above the second bull's back. Small parallel incisions bottom left suggest a palm in front of the first bull. Three large deep incisions later superposed on the original pattern, grossly following the necks of the bovids.


Find location : Trench C2, sq. D:5
Level -1.60
Condition : Part of the obverse rim missing,
chips on the edges,
surface eroded on the obverse
 and scratched on top of the boss


Drawing : HD
Bibliography : KJeRUM 1983, nº 14, p. 18-19

## MEASUREMENTS

Max. diam. : 23.9 mm
Boss diam. : 19.3 mm
Max. thickness : 12 mm
Rim thickness : 6.2 mm


0
20 mm
Perforation diam. : 2.7 mm

```
    ASPECT
    Material : Softstone, type X2A
Treatment : Surface treated
    Surface : Yellowish
        Core : Light green, slightly translucent
    Shape : Disc with boss
    Profile : Dcx-B/Cw/Rcv-r
Technique : Deep, sharp V-shaped incision, compass
```


## DESIGN

## Reverse : 3L $=2.3 \mathrm{~mm}$. DC diam. $=2.4 \mathrm{~mm}$

Obverse : The seal is divided into four quadrants by standards topped by hanging paired volutes alternately curling inwards and outwards. Two different patterns are disposed symmetrically inside the quadrants : a large ring topped by a crescent, and a protome of ruminant facing left, with a long, V-shaped, ruffed neck.

KM 808
 Level -1.45/2.02
Find location : Trench F2, sq. K+L:3


Condition : 3 fragments, about one fifth missing in the middle part
Drawing : HD
Bibliography : KJJERUM 1983, n ${ }^{\circ}$ 171, p. 76-77


ASPECT
Material : Softstone, type X3
Treatment : Heated to the core \& surface treated
Surface : Yellowish white
Core : Blueish-grey
Shape : Disc with boss
Profile : Dcx-B/Cw/Rcv-r
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : 3L $=2.5 \mathrm{~mm}$. DC diam. $=2.7 \mathrm{~mm}$
Obverse : Symmetrical composition around a large net-square ( $6 \times \mathrm{min} 7$ cells) surmonted by 3 parallel, vertical, wavy lines, the righthands one is fringed. A big breach in the seal destroyed the part where the net-square is linked with the wavy lines. On each site, a man wearing a long tiered skirt is sitting on a stool (one damaged), facing inwards, holding a jar with a long pipe coming out of its neck. The top end of the tubes is damaged on the edge but small stems are visible next to their extremity. Between the men and the wavy lines, two opposed sitting gazelles are represented vertically with one foreleg raised, their long, knobed horns incurved backwards. Behind each antelope's head, a small jar is shown, the righthands one leant at right angle.


Find location : Trench M2, sq. L:2 Level -1.99
Condition : Complete, edges eroded, chips on top of the boss
Drawing : HD
Bibliography : KJARUM 1983, nº 202, p. 88-89


## MEASUREMENTS

Max. diam. : 19.6 mm
Boss diam. : 15.4 mm
Max. thickness : 9.2 mm
Rim thickness : 4.9 to 5.3 mm
Perforation diam. : 3 mm

```
        ASPECT
    Material : Softstone, type X3
Treatment : Surface treated
    Surface : Yellowish white
            Core : Blueish-grey
            Shape : Disc with boss
            Profile : Df-B/Cw/Rcv-b
Technique : Deep, sharp V-shaped incision, compass
```


## DESIGN

Reverse : 3L $=2.5 \mathrm{~mm}$. DC diam. $=2.7 \mathrm{~mm}$
Obverse : A man facing left, wearing a long tiered skirt is holding in his left hand a long, asymmetric lentoid object, horizontally striped. With his right hand he grasps the mouth of a standing bovid with long, rear-incurved horns. The antelope is facing left and turning its head backwards to the man.


## Find location : -

Condition : One part of the rim is missing, heavy erosion on the edges, the surface of the obverse and the top of the reverse
Drawing : HD
Bibliography : KJ/ARUM 1980, fig. 19
KJéRUM 1983, n ${ }^{\circ} 165$, p. 74-75


## MEASUREMENTS

Max. diam. : 24.4 mm
Boss diam. : 21.9 mm
Max. thickness : 10.3 mm
Rim thickness : 5 mm
Perforation diam. : 2.5 mm


0
20 mm

## ASPECT



## DESIGN

Reverse : $3 \mathrm{~L}=2.3 \mathrm{~mm}$. DC diam. $=3 \mathrm{~mm}$
Obverse : The composition is organized around a short standard with a large flat plate surmounting a ball on top of two bent legs ended by hoofs. The stand is supporting two superposed flat objects and a striped fish turned left, below a large crescent topping the scene. An oblong necked object (fish or jar ?) and a sitting bird flank the standard on left and right side, together with two opposed standing human figures raising their hands. The one on the left is nude (his head is damaged). The one on right hand is wearing a knee-length tiered skirt and holds unidentified straight objects in each hand. A monkey faces outwards on the bottom edge of the seal below the standard. A wavy-bodied snake with dotted-circle head lines the bottom right behind the garbed man.


```
Find location : Trench M2, sq. L:3
Level -1.59
Condition : About one third of the obverse preserved
Drawing : HD
Bibliography : KJERUM 1983, n \({ }^{\circ} 168\), p. 74-75
```



## MEASUREMENTS

Max. diam. : 26.5 mm (estimated)
Boss diam. : 22,5 mm (estimated)
Max. thickness : $>7 \mathrm{~mm}$
Rim thickness : 5.7 mm
Perforation diam. : 3,4 mm (estimated)

ASPECT

Material : Softstone, type B2B
Treatment : None
Surface : Olive green, translucent
Core : Olive green, translucent
Shape : Disc with boss
Profile : B(?)-Df/Cn/Rcv-r
Technique : Light, sharp V-shaped incision, compass

## DESIGN

## Reverse : -

Obverse : More than half of the scene is broken on right side. The central motif remaining at the bottom is a vertical branch. On its left and facing it stands an antelope with long rear-incurved horns. Above the animal, a short standard with two bent legs is topped by a small plate and a large crescent, which is held with both hands by a monkey on left side. Above the standard lies a bovid's leg, surmounted by a net-square partly damaged ( $4 \times 3$ cells preserved on left side).

## KM 957



Find location : Trench M2, sq. L:2
Level - 1.35
Condition : Complete,

few chips on the edges, surface eroded on top of the boss


## MEASUREMENTS

Max. diam. : 20.8 mm
0
Boss diam. : 15.8 mm
$\square \rightarrow \square$
Max. thickness : 9.1 mm
Rim thickness : 4.4 to 5.8 mm
Perforation diam. : 3.5 mm

```
    ASPECT
    Material : Softstone, type X3
Treatment : Surface treated
    Surface : Yellowish white
            Core : Blueish-grey
            Shape : Disc with boss
    Profile : Df-B/Cw/Rcv-b
```

Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : 3L $=3.3 \mathrm{~mm}$. DC diam. $=3 \mathrm{~mm}$
Obverse : Two men wearing tiered skirts face right and raise their hands. The one on the right holds a long, vertical, lentoid object, horizontally striped. The one on the left carries a long, thin rod, ended down by a grossly triangular shape with a zigzag bottom line (damaged).


Find location : Trench F1, sq. J:3
Level -1.27
Condition : Complete,
one anciently eroded break
on top of the obverse edge
Drawing : HD
Bibliography : KJARUM 1983, n³14, p. 128-129


0
20 mm
MEASUREMENTS $\qquad$
Max. diam. : $20 \times 16.6$ mm
Top diam. : 12 mm
Max. thickness : 11.1 mm
Perforation diam. : 4 mm

```
    ASPECT
    Material : Softstone, type A2
Treatment : None
    Surface : Black
            Core : Black
            Shape : Oval shaped
    Profile : Trapezoid with rounded edges
Technique : Deep, wide rounded incision, point drilling
```


## DESIGN

## Reverse : Plain

Obverse : Very sketchy motif, probably a long-horned animal, showing four vertical incisions lined on top by a concave horizontal one. They are surmounted by a smaller slightly convex one ended by a drilled dot. Six further more or less deep and wide dots surround the figure. Four smaller incisions in field on right and left side.


Find location : Trench D, sq. K:4 Level -1.99
Condition : Complete,
few chips on the edges, surface eroded on top of the boss
Drawing : HD
Bibliography : KJÆRUM 1983, nº 98, p. 46-47


## MEASUREMENTS

0
20 mm
Max. diam. : 18.9 mm
Boss diam. : 16.9 mm
Max. thickness : 8.1 mm
Rim thickness : 3.8 mm
Perforation diam. : 2.5 mm

```
    ASPECT
    Material : Softstone, type B2A
Treatment : Surface treated
    Surface : Yellowish white
        Core : Blueish-grey
        Shape : Disc with boss
    Profile : B-Df/Cn/Rcv-r
```

Technique : Light, wide V-shaped incision, compass

## DESIGN

## Reverse : 3L $=2.5 \mathrm{~mm}$. DC diam. $=2.5 \mathrm{~mm}$

Obverse : Very schematic symmetrical composition centered around a net-square ( $4 \times 4$ cells) surmounted by a standard. They are topped by a large crescent and a dotted circle fringed with seven rays. On both sides of the standard stand a bird looking inwards, followed by a nude, standing man raising both hands upwards, a monkey in his back. Two V-shaped incisions are set on either side of the net-square, one vertically (right), the other horizontally (left).

## KП 967



Find location : -
Condition : Boss and part of the rim preserved,
0
20 mm
the obverse is missing
Drawing : HD
Bibliography : -

## ASPECT

Material : Softstone, type X3
Treatment : Surface treated
Surface : Yellowish white
Core : Blueish-grey
Shape : Disc with boss
Profile : D-B(?)/Cw/Rcv-r(?)
Technique : -

## DESIGN

Reverse : 3L $=2 \mathrm{~mm}$. DC diam. $=3 \mathrm{~mm}$
Obverse : n.a.


Find location : Trench N1, sq. J:2 Level - 1.61
Condition : Fragment
(about $25 \%$ of the seal)
incomplete profile,
all edges chipped
Drawing : HD
Bibliography : KJ/ARUM 1983,
n ${ }^{\circ}$ 282, p. 120-121

## MEASUREMENTS

Max. diam. : 26.2 mm (estimated)
Boss diam. : 19.5 mm


Max. thickness : 12.3 mm (estimated)
Rim thickness : 7.4 mm
Perforation diam. : 3 mm (estimated)


0
20 mm

## ASPECT

Material : Softstone, type X3
Treatment : Heated to the core and surface treated
Surface : Whitish with a dark reddish tone showing through underneath on the boss
Core : Greenish grey, opaque, very brittle
Shape : Disc with boss
Profile : Df-B/Cw-Rcv-v
Technique : Deep, sharp $V$-shaped incision, compass

## DESIGN

Reverse : 3L $=1.7 \mathrm{~mm}$. DC diam. $=1.7 \mathrm{~mm}$
Obverse : Only the top right quadrant is partly preserved, all the edge is missing. The scene was centered on a human figure with double-horned and double-curled headdress, wearing a tiered skirt, his hands raised to his waist. Behind him righthands, a running gazelle with ruffed neck and long, rear-incurved horns (only part of one preserved). Underneath are visible part of a triangular elongated object, horizontally striped, and two bent incisions which might be the horns of another bovid.


Find location : -
Condition : Complete
edges chipped
Drawing : HD
Bibliography : KJARUM 1983, nº 258, p. 110-111


## MEASUREMENTS

Max. diam. : 26.3 mm
Boss diam. : 20.5 mm
Max. thickness : 12.8 mm
Rim thickness : 7.7 mm
Perforation diam. : 3.5 mm


0
20 mm
$\square$

## ASPECT

Material : Softstone, type X1A
Treatment : Heated to the core and surface treated
Surface : Whitish
Core : Greenish grey, opaque, very brittle
Shape : Disc with boss
Profile : Df-B/Cw/Rcv-r
Technique : Sharp, V-shaped incision, compas

## DESIGN

Reverse : $3 \mathrm{~L}=2.4 \mathrm{~mm}$. DC diam. $=3 \mathrm{~mm}$
Obverse : Composition centered around a pair of opposed, ruffed-necked bovids with long, rear-incurved horns and long tail. Their foreparts are crossing in the middle of their bodies, extremely thin at the point where they meet. Underneath, a large frontal bucranium is set between two equal-branched cross and topped by a vertical palm. On the upper half, the bovid lefthands is following a similar animal turning its head backwards, surmounting a triangular shape with net pattern inside. Righthands, the neck of the bovid is grasped with both hands by a naked human figure standing in front of it.


Find location : Trench E1, sq. H:5 Level -0.82
Condition : All edges extremely eroded, the top of the boss is broken
Drawing : HD
Bibliography : KJARUM 1983, n ${ }^{\circ}$ 135, p. 62-63


## MEASUREMENTS

Max. diam. : > 25.8 mm
Boss diam. : 21.7 mm
Max. thickness : $>11.7 \mathrm{~mm}$
Rim thickness : $>7.6 \mathrm{~mm}$
Perforation diam. : 2.8 mm

ASPECT


Material : Softstone, type B2A
0
20 mm
Treatment : Surface treated
Surface : Yellowish white
Core : Veined green, slightly translucent
Shape : Disc with boss
Profile : D-Bf/Cn/Rcv-v
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : 3L $=2.1 \mathrm{~mm}$. DC diam. $=3.3 \mathrm{~mm}$
Obverse : Bottom center, a big-headed bovid with short straight horns and a long tail stands in front of a human figure (whose head is broken) holding its right horn. On right hand above the back of the bovid, another man is sitting on a stool, facing left and grabbing with each hand a tall standard topped by two outcurling, hanging volutes. A crescent righthands and a spiked stem lefthands (partly broken) frame the top of the central standard. On the bottom right edge of the seal, a wavy line-bodied snake, partly eroded, heads downwards. Its head is a compass made dotted circle with horns, ears and mouth. The remains of what might be a wing are visible on its back.


Find location : Trench E2-D2, sq. L:4
Level -0.03
Condition : Complete,
few chips on the edges
Drawing : HD
Bibliography : KJERUM 1980, fig. 17
KJfRUM 1983, n ${ }^{\circ}$ 162, p. 72-73


## MEASUREMENTS

Max. diam. : 24.9 mm
Boss diam. : 19.5 mm
Max. thickness : 12.5 mm
Rim thickness : 7 mm
Perforation diam. : 4.9 mm


ASPECT
0
20 mm
Material : Softstone, type X1A
Treatment : Surface treated
Surface : Light brownish
Core : Light brownish
Shape : Disc with boss
Profile : D-Bf/Cw/Rcv-b
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

## Reverse : 3L $=2.5 \mathrm{~mm}$. DC diam. $=2.8 \mathrm{~mm}$

Obverse : Vertically-symmetrical composition divided horizontally into two uneven surfaces by an long, thin rectangle, vertically striped at each end ( 8 and 6 bars). Surging vertically from the top of the division line, a central, large, realistic palmtree separates two men's heads, both facing right, and two very long ruffed-necked bovid's head looking upwards. The scene is framed by two net-squares ( $3 \times 4$ cells lefthands, $3 \times 5$ righthands). A third larger net-square ( $5 \times 6$ cells) is the center of the lower scene, separating two long-necked birds facing outwards.


Find location : Trench N1, sq. J:2 Level -0.64
Condition : Edges very chipped, very eroded surface on obverse and reverse
Drawing : HD
Bibliography : KJARUM 1980, fig. 21
KJferum 1983,
n ${ }^{\circ}$ 271, p. 116-117


## MEASUREMENTS

Max. diam. : > 27.2 mm
Boss diam. : 23.5 mm
Max. thickness : > 11.2 mm
Rim thickness : $>5.7 \mathrm{~mm}$
Perforation diam. : 2.8 mm


## ASPECT

0
20 mm
Material : Softstone, type B2A
Treatment : Surface treated
Surface : Whitish
Core : Veined dark and light green
Shape : Disc with boss
Profile : D-Bcx/Cn/Rcv-r (?)
Technique : Deep, wide V-shaped incision, compass

## DESIGN

Reverse : $3 \mathrm{~L}=2.9 \mathrm{~mm}$. DC diam. $=3 \mathrm{~mm}$
Obverse : Bottom of the scene, a large ruffed-necked, horned bovid faces left. Above its back, two facing naked human figures grasps their hands on the spread wings of a standing hybrid creature which holds their arms in return. In addition to the feathered wings, the composite figure shows claw-like feet, a human-like body wearing a long tiered skirt and a very long, vertical neck. The head is destroyed. Two incurved incisions on the damaged edge top left might be remains of crescents, other oval-shaped objets or a wavy line.


Find location : -
Condition : One big chip on the obverse,
all edges chipped, surface very eroded especially on the top of the boss
Drawing : HD
Bibliography : KJARUM 1983, nº 238, p. 100,101


## MEASUREMENTS

Max. diam. : > 20.3 mm
0
20 mm
Boss diam. : 18 mm
Max. thickness : > 12.2 mm
Rim thickness : 7.5 mm
Perforation diam. : 3 mm

## ASPECT

Material : Softstone, type B2A
Treatment : Surface treated
Surface : Whitish
Core : Green, slightly translucent with white patches
Shape : Disc with boss
Profile : Df-B/Cn/Rcv-r
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

## Reverse : 3L $=2.5 \mathrm{~mm}$. DC diam. $=2.8 \mathrm{~mm}$

Obverse : Two bovids with short, straight horns stand one above another facing left, opposed to a snake with compass-made head (damaged) set vertically on the edge of the scene. Behind the bulls stands a naked man whose only the legs and one hand holding a stick are preserved. The top right quadrant is missing.


## Find location : -

Condition : A small part of the disc is broken but the preserved part is hardly eroded or damaged.
Drawing : HD
Bibliography : KJ/ERUM 1983, nº 97, p. 46-47


## MEASUREMENTS

Max. diam. : 24 mm
Boss diam. : 19.3 mm
Max. thickness : 11.4 mm
Rim thickness : 5 mm
Perforation diam. : 2.8 mm


```
    ASPECT
    Material : Softstone, type X6
Treatment : Heated to the core, no surface treatement
    Surface : Dark brown
        Core : Dark brown
        Shape : Disc with boss
    Profile : B-Dcx/Cn/Rcv-v
```

Technique : Deep, sharp V-shaped incision, compass

## DESIGN

## Reverse : 3L $=2.5 \mathrm{~mm}$. DC diam. $=2.8 \mathrm{~mm}$

Obverse : Symmetrical composition centered around a nude man, facing left, topped by a crescent. He is framed by a pair of facing each other birds, holding with his raised right hand the one facing him. He also stands between two long ruffed-necked bovid protomes, looking outwards and raised from an almond shaped, vertically striped object horizontally set at the bottom of the scene. On each side, a naked man grasps the horns of the protome he is facing.


Find location : Trench M2, sq. L:2
Level - 1.53
Condition : Edges eroded, surface completely eroded on the reverse and in the center of the obverse. Strong vertical erosion of the perforation, now oval-shaped.
Drawing : HD
Bibliography : KJARUM 1983, n² 248, p. 104-105


## MEASUREMENTS

Max. diam. : 24 mm
Boss diam. : 19 mm
Max. thickness : > 10.6 mm
Rim thickness : 6 mm
Perforation diam. : 3.8 mm


0
20 mm
ASPECT
Material : Softstone, type B2A
Treatment : Surface treated
Surface : Light brownish
Core : Light green to blackish, slightly translucent
Shape : Disc with boss
Profile : D-Bcx/Cw/Rcv-r
Technique : Light, wide V-shaped incision, compass

## DESIGN

Reverse : $3 \mathrm{~L}=2 \mathrm{~mm}$. DC diam. $=2.5 \mathrm{~mm}$ (the four central dots are visible, only one short segment of a circle is preserved from erosion).

Obverse : Two superposed bovids stand in the middle of the scene, their body both facing left. The bottom one with short vertical horns is looking forwards while the upper one, with longer incurved horns, is looking backwards. They are surmounted by a crescent and a dot-centered star. On right hand, they are followed by a naked bull-man raising his hands towards a net-square ( $4 \times 3$ cells) above the second bovid's back. Lefthands, a nude man with raised hands is facing the bovids, surmounted by a monkey figure.

## Kㄲ․ 991



Find location : Trench M2, sq. K-L:2-3 Level -1.34/2.07
Condition : Complete,
few chips on the edges
Drawing : HD


Bibliography : KJARUM 1983, nº 150, p. 68-69

## MEASUREMENTS

Max. diam. : 27.1 mm
Boss diam. : 20.6 mm
Max. thickness : 11.3 mm
Rim thickness : 5.9 mm
Perforation diam. : 3.3 mm


```
    ASPECT
    Material : Softstone, type X1A
Treatment : Heated to the core & surface treated
    Surface : Light brownish
            Core : Greenish brown
    Shape : Disc with boss
    Profile : D-Bcx/Cw/Rcv-v
```

Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : 3L $=2.6 \mathrm{~mm}$. DC diam. $=2.5 \mathrm{~mm}$
Obverse : A nude man facing right holds with his left hand a standard topped by a crescent, with his right hand the horn of a big, facing-left bull standing below. Behind the bull, another nude man facing left holds a one-eyed bucranium. By the edges, two symmetrical birds facing each other frame the upper figure with the stand. A third bird is standing in front of the big bull.


Find location : Trench M1, sq. H:3 Level - 1.83
Condition : Complete shape but the surface of the obverse is broken. Several surface breaks on the reverse.
Drawing : HD


Bibliography : KJARUM 1983, nº 252, p. 108-109

## MEASUREMENTS

Max. diam. : 26 mm
Boss diam. : 18.5 mm
Max. thickness : 11.6 mm


Rim thickness : > 7 mm
Perforation diam. : 2.6 mm
0
20 mm

> ASPECT

Material : Softstone, type X5
Treatment : Heated to the core \& surface treated
Surface : Yellowish white
Core : Light greenish brown
Shape : Disc with boss
Profile : D-Bcx?/Cw/Rcv-b
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

## Reverse : 3L $=2.6 \mathrm{~mm}$. DC diam. $=2.5 \mathrm{~mm}$

Obverse : Surface almost completely destroyed. The body and hindquarter of a facing-left bovid are still visible at the bottom. Two dotted circles adjoining small straight incisions also suggest the presence of probably three other bovids in the upper part.


Find location : n.a.
Condition : Complete,
chipped edges, no surface erosion
Drawing : HD


Bibliography : KJERUM 1983, nº 275, p. 118-119

## MEASUREMENTS

Max. diam. : 23.7 mm
Boss diam. : 21.2 mm
Max. thickness : 10.9 mm
Rim thickness : 4.8 mm
Perforation diam. : 2.6 mm


```
    ASPECT
    Material: Softstone, type X6
Treatment : Heated to the core and surface treated
    Surface : Light to dark brown
        Core : Dark brown
        Shape : Disc with boss
    Profile : B-Dcx/Cn/Rcv-r
```

Technique : Light, sharp V-shaped incision with an eroded tool

## DESIGN

## Reverse : 3L $=2.8 \mathrm{~mm}$. DC diam. $=1.9 \mathrm{~mm}$

Obverse : The composition is symmetrical. In the center, two human-like, triangular chests are joined at their waist. They both have double-lined arms ended by claw-like fingers. At the neck area, each chest is linked by two parallel lines to a net-square ( $4 \times 3$ cells). To both sides of the net-squares, long, incurved, ruffed-necked bovid protomes are attached. The protomes are facing outwards and line the edge of the seal. On the left and right borders two net-squares ( $4 \times 3$ cells) flank the human-like motifs.


Find location : $\begin{aligned} & \text { Trench F2, sq. K:4 } \\ & \text { Level }-2.00\end{aligned}$
Condition : Complete,
chips on the edges of the rim
Drawing : HD
Bibliography : KJARUM 1983, nº 141, p. 64-65

## MEASUREMENTS

Max. diam. : 21.9 mm


Boss diam. : 17.7 mm
Max. thickness : 10 mm
Rim thickness : 5.3 mm
0
20 mm
Perforation diam. : 2.5 mm

## ASPECT

Material : Softstone, type X2A
Treatment : Heated to the core
Surface : Light brownish
Core : Light brownish
Shape : Disc with boss
Profile : Df-B/Cw/Rcv-v
Technique : Deep, sharp V-shaped incision, dotted circles are not made with a compass nor on the obverse neither on the reverse

## DESIGN

Reverse : $3 \mathrm{~L}=3.4 \mathrm{~mm}$. DC diam. $=3 \mathrm{~mm}$, very irregular, not made with a compass
Obverse : Symmetrical composition centered on a net-square ( $4 \times 4$ cells) supporting a standard topped by a crescent and a dotted circle. Two opposed, sketchily designed standing bull-men hold the pole with both hands. They are backed by one dotted circle each. A long wavy snake lays at the bottom of the scene.


Find location : -
Condition : Boss partly broken, part of the bottom edge on the obverse is also missing.
Drawing : HD
Bibliography : KJたRUM 1983, nº 92, p. 44-45


## MEASUREMENTS

Max. diam. : 24 mm
Boss diam. : $>17.5 \mathrm{~mm}$
Max. thickness : > 9.3 mm
Rim thickness : 5.2 mm
Perforation diam. : 2.7 mm


0
20 mm

```
    ASPECT
    Material : Softstone, type X5
Treatment : Heated to the core & surface treated
    Surface : Light pinkish brown
        Core : Greenish grey
        Shape : Disc with boss
    Profile : Dcx-B/Cw/Rcx-r
Technique : Deep, sharp V-shaped incision, compass
```


## DESIGN

Reverse : $3 \mathrm{~L}=3 \mathrm{~mm}$. DC diam. $=2.5 \mathrm{~mm}$
Obverse : At the bottom stands a bull turned to the left (legs broken), facing a nude man who is grasping its horn with his two hands. Above its back is an empty rectangular shape with slithly concave top side, topped by a large bird in left profile, spreading its feathered wings. Its strong claw feet are held by a second naked man standing behind it on right side. A snake lines the edge of the seal behind him. In front of the bird stands a cross (base broken) faced symmetrically by another bird with folded wings.


Find location : -
Condition : Complete
Drawing : HD


Bibliography : -


## ASPECT

$\qquad$

Material : Softstone, type A4
Treatment : -
Surface : Dark green
Core : Dark green
Shape : Irregular disc with slightly slanted walls, with double perforation : one through the thickness near the edge, one perpendicular joining the first hole to the side wall.
Profile : Df/Rf
Technique : Deep, wide V-shaped incision

## MEASUREMENTS

Max. diam. : $29.1 \times 28.4 \mathrm{~mm}$
Min. diam. : $27.8 \times 27.4 \mathrm{~mm}$
Max. thickness : 10.5 mm
Perforation 1 : 3.6 mm
Perforation 2 : 3.2 mm

## DESIGN

Reverse : -
Obverse : Intrication of straight lines of various thickness and depth, each following a different orientation, designing no perceptible pattern.


Find location : Trench F2, sq. K:3 Level -1.64
Condition : Boss mostly broken, many breaches on the surface of the obverse
Drawing : HD
Bibliography : KJARUM 1983,
$n^{\circ} 217$, p. 92-93


## MEASUREMENTS

Max. diam. : 29.4 mm
Boss diam. : 20.7 mm
Max. thickness : $>11.8 \mathrm{~mm}$

$$
\text { Rim thickness : } 8.8 \text { mm }
$$

Perforation diam. : 3.8 mm


0
20 mm
ASPECT $\qquad$

Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : $3 \mathrm{~L}=3.2 \mathrm{~mm}$. DC diam. $=3.5 \mathrm{~mm}$
Obverse : The scene is divided into two halves by two parallel bands covered of inversed chevrons. Each half shows the torso and head of a man facing left, holding on either side a gazelle protome with long, straight horns and ruffed neck. One of the human figure overlaps the line of chevron.


Find location : Trench C23, sq. C:5 Level - 1.48
Condition : Complete, edges broken
Drawing : HD
Bibliography : KJeRUM 1983, $\mathrm{n}^{\circ} 87$, p. 42-43

## MEASUREMENTS

Max. diam. : 27.3 mm
Boss diam. : 21 mm
Max. thickness : 13 mm
Rim thickness : 7.5 mm
Perforation diam. : 3.5 mm

ASPECT<br>Material : Softstone, type B2A<br>Treatment : Surface treated<br>Surface : Yellowish white with brown patches<br>Core : Dark green, slightly thanslucent<br>Shape : Disc with boss<br>Profile : Df-B/Cw-Rcv-b<br>Technique : Deep, sharp V-shaped incision, compass



0
20 mm

## DESIGN

Reverse : $3 \mathrm{~L}=1.9$ ro 2.7 mm . DC diam. $=2 \mathrm{~mm}$
Obverse : Some details are missing due to erosion of the whole edge of the seal. Composition centered around a bovid facing left, crouched on a large net square ( $6 \times 4$ or more cells) with top corners extended by long forked spikes. The bovid has a ruffed neck and straight horns. Its neck is held by a man in front of him, wearing a long tiered skirt. Above its back is a triangular net ( $3 \times 5$ cells). Behind it, a nude man is carrying a bovid's protome with ruffed neck and long, knobed incurved horns. This central scene is all framed by a suite of animals and objects filling the space around : on the left, a snake with bull's head looking inwards, preceded on top center by a ruffed-necked bovid with long tail (its horns broken), with a spread-winged bird grasping its back with long claws. On right side, another bovid (very damaged) rearing back with long incurved horns. In the space between the various figures, two rounded necked jars and remains of two small fringed lines which may be branches (left side and bottom right).


Find location : Trench N1 or 2, sq. H-K:1-2
Condition : Complete,
chips on the edges and surface
Drawing : HD
Bibliography : KJÆRUM 1980, fig. 5
KJ_erum 1983, n ${ }^{\circ}$ 186, p. 80-81

## MEASUREMENTS



Max. diam. : 28.7 mm
Boss diam. : 19.7 mm
Max. thickness : 10.4 mm
Rim thickness : 6.3 mm
Perforation diam. : 3 mm


## ASPECT

Material : Softstone, type X3
0
20 mm
Treatment : Heated to the core
$\square$
Surface : Whitish
Core : Blueish grey, opaque
Shape : Disc with boss
Profile : Df-B/Cw/Rcv-b
Technique : Deep, sharp V-shaped incision. Engraving has reached the perforation

## DESIGN

Reverse : 3L $=3 \mathrm{~mm}$. DC diam. $=3.2 \mathrm{~mm}$
Obverse : Two opposed human figures hold a pipe coming out of a footed jar between them. The pipe reaches the mouth of the righthands figure who is sitting in the middle of the scene, wearing a long tiered skirt and horned headdress with a curl backwards. The lefthands man is smaller and standing nude. They are surmounted by a small crescent. Bottom right, three bovids are facing left. The first one is a laying bull. The second one a straight-long-horned and ruffed-necked gazelle with head turned upwards. The third one with plain neck and long straight horns, is looking backwards.


Max. diam. : 20.4 mm
Boss diam. : 17.5 mm
Max. thickness : 9.7 mm
Rim thickness : 5.6 mm
Perforation diam. : 2.5 mm

```
    ASPECT
    Material : Softstone, type B2A
Treatment : Surface treated
    Surface : Yellowish white
            Core : Greenish black
            Shape : Disc with boss
    Profile : Dcx-B/Cn/Rcv-r
```

Technique : Deep, sharp U-shaped incision, compass

## DESIGN

## Reverse : 3L $=2.5 \mathrm{~mm}$. DC diam. $=2.7 \mathrm{~mm}$

Obverse : Two symmetrical bull-men raise their hands holding a branch towards a standard topped by a ball and a crescent. The stand is set on a vertically striped rectangle, above a standing bull facing right.


## ASPECT

Material : Softstone, type B2A
Treatment : Surface treated
Surface : Light brownish
Core : Light green, translucent
Shape : Disc with boss
Profile : Dcx-B/Cw/Rf
Technique : Deep, sharp V-shaped incision

## MEASUREMENTS

Max. diam. : 26.5 mm
Boss diam. : 20.3 mm
Max. thickness : 12.8 mm
Rim thickness : 7.2 mm
Perforation diam. : 2.9 mm

## DESIGN

Reverse : 3L $=3.9 \mathrm{~mm}$. DC diam. $=3.1 \mathrm{~mm}$
Obverse : Three standing men, wearing long tiered skirts, are holding each other's hand. The two on right side are looking left, facing the third one who seems to carry, together with the central man, a triangular object pointed downwards. A wide rounded incision slanting across the group is a later addition (no patina on the surface).


Find location : Trench D1, sq. H:4
Condition : About one half preserved
(broken vertically),
smoothed surface,
perforation uncompleted
Drawing : HD


Bibliography : KJARUM 1983, nº 326, p. 132-133
0
20 mm

## MEASUREMENTS

Max. diam. : 17 mm (estimated)
Top of the knob diam. : 10.5 mm
Max. thickness : 15 mm
Perforation diam. : 1.3 mm
Perforation depth. : 2.3 mm (unfinished ?)

```
    ASPECT
    Material : Softstone, type A1
Treatment : None
    Surface : Dark green
            Core : Dark green
    Shape : Circular
    Profile : C-K
```

Technique : Deep, smoothed $V$-shaped incision

## DESIGN

Reverse : -
Obverse : Half preserved, geometrical lines drawing unclear pattern : inside a plain circle, forked sign next to an almond-shaped design, framed by two perpendicular lines.


Find location : Trench SS1-10, sq. G:5 Level 0.49
Condition : Complete,
surface very irregularly eroded has become grainy
Drawing : HD
Bibliography : ALSTER 1983, p. $42 \mathrm{n}^{\circ} 7$ et p. 68 note 32
Glassner 1984, p. 35 n ${ }^{\circ} 6$
Glassner 2008, p. 174
Howard-Carter 1983, p. 394, § 5.4.1, a
KJ_ERUM 1983, n ${ }^{\circ}$ 366, p. 152-153
AL-NASHEF 1983, p. 83 note 9

## ASPECT

Material : Lapis lazuli

## Treatment : -

Surface : Light blue to light brown with black inclusions
Core : Light blue to light brown with black inclusions
Shape : Bifacial disc
Profile : Df-Df/Rcv-v
Technique : n.a.

## MEASUREMENTS

Max. diam. : 18.3 mm
Max. thickness : 5.4 mm
Rim thickness : 5 mm
Perforation diam. : 2.2 mm

## DESIGN

Side A: Four lines cuneiform inscription in Sumerian language. Only the last two lines are clearly readable.

$$
\begin{array}{ll}
\text { Ip ?-nin-dPA.NI.PA } & \text { Ipnin ?-PA.NI.PA } \\
\text { DUMU x Su-mu ?-I[ii ?-il } & \text { son of Sumu ?-li ?-el } \\
\text { ÌR } \text { Inza-ak } & \text { servant of Inzak } \\
\text { šá A-ga-rum } & \text { of Agarum }
\end{array}
$$

Side B : The very eroded pattern allow to recognize only a central crescent, above another incurved shape on the right side of the seal, which seems to be vertically striped.


# Find location : Trench A1, sq. G4 Level -1.84 <br> Condition : Complete, chips on the edges <br> Drawing : DN <br> Bibliography : KJধRUM 1983, nº 157, p. 70-71 



## MEASUREMENTS

Max. diam. : 22.1 mm


Boss diam. : 18.1 mm
Max. thickness : 11.7 mm
Rim thickness : 6.5 mm
0
20 mm
Perforation diam. : 4.1 mm

ASPECT<br>Material : Softstone, type B2A<br>Treatment : Surface treated<br>Surface : Brownish with some reddish patches<br>Core : Dark green<br>Shape : Disc with boss<br>Profile : Df-B/Cw/Rcv-b<br>Technique : Deep, sharp V-shaped incision

## DESIGN

## Reverse : 3L $=3 \mathrm{~mm}$. DC diam. $=3 \mathrm{~mm}$

Obverse : Symmetrical composition around a large realistic palmtree with five branches and the knobed trunk of the cultivated tree. It is standing on top of a lozenge-shaped horizontal object, vertically striped, whose both external ends are extended by a wavy line. The trunk is held on either site by a nude man facing the tree. Both are in the sitting position but only one, righthands, has a stool, rectangular and horizontally striped.


Find location ：Trench M2，sq．K：2 Level－1．47
Condition ：Complete， breaches on the edges and on the dome
Drawing ：HD
Bibliography ：KJARUM 1983， $n^{\circ} 115$, p．54－55

## MEASUREMENTS



Max．diam．： 26.2 mm
Boss diam．： 19.9 mm
Max．thickness ： 11.8 mm
Rim thickness ： 6.9 mm
Perforation diam．： 3 mm

## ASPECT



0
20 mm
ロール

Material ：Softstone，type X3
Treatment ：Surface treated
Surface ：Light brownish
Core ：Greenish grey
Shape ：Disc with boss
Profile ：Df－B／Cw／Rcv－b
Technique ：Deep，sharp V－shaped incision，compass

## DESIGN

Reverse ：3L $=2.5 \mathrm{~mm}$ ．DC diam．$=2.8 \mathrm{~mm}$
Obverse ：Composition centered around a tall standard topped by a bowl，a large crescent and a star（20 or 21 rays） above a bull facing left with ruffed neck and short，straight horns．The stand is held by a pair of opposed bull－men with double－horned headdress．Each one is followed by a pair of bovids differing on a number of details．The two bovids inwards are rearing back，ruffed－necked with long，rear－incurved horns．Lefthands，the second animal， with long wavy horns，is facing outwards，and has the long，undulating，ruffed body of a snake but the four legs of a bovid．The second ruffed－necked animal on righthands，partly broken，is not symmetrical as it is facing inwards and shows long horns which are unilaterally incurved．What might be the end of its snaky boby is visible at bottom right．On top of the scene，from a net square（ $4 \times 5$ cells）set on the right comes out the ruffed body of a snake with a bull＇s head，looking down towars the rest of the scene．Filling the few empty spaces between the figures，three small palms and three small rounded jars．


```
Find location : Trench F2, sq. K:3
                Level -1.58
    Condition : Complete,
                chips on the edges
    Drawing : HD
Bibliography : KJ_ERUM 1983,
                n 0 191, p. 82-83
Bibliography : KJÆRUM 1983,
\[
\mathrm{n}^{\circ} 191, \text { p. 82-83 }
\]
```



## MEASUREMENTS

Max. diam. : 27.6 mm
Boss diam. : 21.8 mm
Max. thickness : 13.7 mm
Rim thickness : 7.5 mm
Perforation diam. : 2.7 mm


0
20 mm
$\qquad$

> ASPECT

Material : Softstone, type X3
Treatment : Surface treated
Surface : Light brownish
Core : Greenish-grey
Shape : Disc with boss
Profile : Df-B/Cw/Rf
Technique : Deep, sharp V-shaped incision

## DESIGN

Reverse : $3 \mathrm{~L}=2.3$ to 3 mm . DC diam. $=2.3 \mathrm{~mm}$
Obverse : Three standing men, wearing long tiered skirts, are holding each other's hand. The two on right side are looking left, facing the third one who is carrying, together with the central man, a long, slightly incurved object pointed downwards. Between the two other men, a small straight stick is standing vertically at their feet. Each of the two men on the sides holds with his other hand a long rectangular object with ladder-like extremities.

## KM 1064

Tell F6 «The Palace»


Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : 3L $=2.5 \mathrm{~mm}$. DC diam. $=3.6 \mathrm{~mm}$
Obverse : From what remains of the pattern, one can identify a crescent next to the top of the compass-made head of a short-horned bovid. Two small parallel incisions on left hand might be the horns or ears of another animal.


## Find location : -

Condition : Complete
with chipped edges and
two big chips on the obverse and dome
Drawing : HD
Bibliography : KJARUM 1983, n ${ }^{\circ}$ 13, p. 18-19


## MEASUREMENTS

0
20 mm
Max. diam. : 20.3 mm
Boss diam. : 15.7 mm
Max. thickness : 8.9 mm
Rim thickness : 4.9 mm
Perforation diam. : 3.2 mm

## ASPECT

Material : Softstone, type X1A
Treatment : Surface treated
Surface : Light brown
Core : Light brown
Shape : Disc with boss
Profile : Df-B/Cw/Rf
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

## Reverse : $3 \mathrm{~L}=2 \mathrm{~mm}$. DC diam. $=2.5 \mathrm{~mm}$

Obverse : Pattern divided into four quadrants by a ladder-like cross. The two bottom quadrants are each filled with a triangular net with inside orientation shifted. Each top quadrant, partly destroyed, contains a big two-eyed bucranium.


$$
\begin{aligned}
\text { Find location : } & \text { Trench SN, sq. K:5 } \\
& \text { Level -0.71 }
\end{aligned}
$$

## Condition : Complete,

edges and surface eroded,
$0 \quad 20 \mathrm{~mm}$ perforation half-torn on one side
Drawing : DN
Bibliography : KJARUM 1983, nº 359, p. 150-151

## MEASUREMENTS

Max. diam. : 14.4 mm
Max. thickness : 4.2 mm
Perforation diam. : 2 mm

```
    ASPECT
```

Material : Softstone, type B1
Treatment : Surface treated
Surface : Reddish dark brown
Core : Green, opaque
Shape : Bifacial disc
Profile : Df-Df/Rf(?)
Technique : Deep, sharp $V$-shaped incision, compass

## DESIGN

Surface very eroded, only the bottom of the incision is preserved, giving an uncomplete idea of the patterns. Two parallel but very irregular lines run around the vertical side of the rim.
Side A: Four pairs of short straight incisions are displayed around the circular surface, parallel to the edge. A fifth pair draws one diameter, the two incision on the same alignment.
Side B : Four dotted circles (diam. $=3.7 \mathrm{~mm}$ ) are spread in square. One of the central dots has reached the perforation hole.


Find location : -
Condition : Complete, edges deeply eroded
Drawing : HD
Bibliography : KJARUM 1983, n³16, p. 128-129


## MEASUREMENTS

Length : 20.6 mm
Width. : 18.4 mm
0
20 mm
Max. thickness : 11.4 mm
Knob diam. : 7.3 mm
Perforation diam. : 3 mm

## ASPECT

Material : Softstone, type B2B
Treatment : Surface treated
Surface : Light brownish
Core : Light green, translucent
Shape : Unique shape, oval, with a rounded back, one end thicker than the other and topped by an eroded, non centered, vertical, circular knob. Might have been made out of a reused item.
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : Chevron pattern covering the whole surface, including the base of the knob, attesting that the latter originally was higher.

Obverse : A nude man with raised hand is standing on left side behind two superposed bovids, all figures facing right. The bovid at the bottom has ruffed necked, a long tail and long, rear incurved horns. The one above differs by its short tail and its plain neck.

```
Find location : Trench M1, sq. J:2
Level -1.28
Condition : Complete, eroded surface
Drawing : HD
Bibliography : Failaka 1964, fig. 67
KJeRUM 1983, n \({ }^{\circ} 315\), p. 128-129
```


## MEASUREMENTS



```
    Max. length : }18.4\textrm{mm
            Boss width : }13.1\textrm{mm
    Max. thickness : }8.2\textrm{mm
    Rim thickness : }6\textrm{mm
Perforation diam. : 2.3 mm, through the length
```


## ASPECT

Material : Artificial material, fine smooth paste
Treatment : Surface glazed
Surface : Whitish with very small red spots and surface cracks
Core : Yellowish
Shape : Ovoid scarab
Profile : Sc (flat based, rounded back with vertical walls)
Technique : Deep, sharp V-shaped incision

## DESIGN

Reverse : Scarab pattern with several features attesting its non-Egyptian provenience, such as the ovoid shape and a double-lined oval incised across the back, perpendicular to three parallel median lines. Two rounded eyes are incised on the front sides. Three small verticals incision indicate the mouth. On each side the legs are represented by a large flat triangle deeply carved under the carapace.

Obverse : Three very shematic bovids with increasing size stand on top of each other, fitting in the egg-shaped surface of the seal. The top and bottom figures look rightwards while the middle one is turned in the opposite direction. They all have short raised tail. Their horns are smooth, short and straight for the smaller two animals, long and backwards incurved for the larger one on top.


Find location : Trench SS, sq. B:5
Level -1.71
Condition : Very eroded,
about $1 / 4$ of the obverse missing,

copper wire still preserved
inside the perforation
Drawing : HD
Bibliography : KJARUM 1983, nº 308, p. 126-127

## MEASUREMENTS



Max. diam. : 22 mm
Boss diam. : 18 mm
Max. thickness : > 10.7 mm
0
20 mm
Rim thickness : 5 mm
Perforation diam. : $4,5 \mathrm{~mm}$
Thread diam. : 4, mm

ASPECT
Material : Shell + copper
Treatment : -
Surface : Yellowish, translucent
Core : Yellowish, translucent
Shape : Disc with boss
Profile : B-Dcx/Cw/Rcv-r
Technique : Deep, wide incision (very smoothed by erosion)

## DESIGN

## Reverse : No visible design (might be eroded)

Obverse : Bordered by a fringed line, a symmetrical scene is centered around a pair of opposed bovids with probably long incurved horns, topped by a crescent and a circle. Above on both sides, two unclear figures probably animals (monkeys ?) are facing the crescent.


Find location : Trench M2, sq. K:2 Level -1.70
Condition : Complete,
chips on the edges and superficially on the obverse
Drawing : HD


Bibliography : KJ̇RUM 1983, nº 29, p. 22-23

## MEASUREMENTS

Max. diam. : 25.8 mm
Boss diam. : 21.1 mm
Max. thickness : 10.8 mm
Rim thickness : 5.6 mm
Perforation diam. : 2.6 mm


0
20 mm

```
    ASPECT
    Material : Softstone, type X2A
Treatment : Surface treated
    Surface : Light brown with big reddish mineral inclusions
        Core : Light green, opaque
    Shape : Disc with boss
    Profile : Dcx-B/Cw/Rcv-r
```

Technique : Light, sharp V-shaped incision, compass

## DESIGN

Reverse : 3L $=3.2 \mathrm{~mm}$. DC diam. $=2.1 \mathrm{~mm}$
Obverse : Radial composition around a central net square ( $5 \times 5$ cells). Above each of its sides stands a ruffed-necked bovid with long tail and long, rear incurved horns, facing left with their hear turned back. Three of them are facing a palm standing outwards. The last one is opposed to a bird standing in profile. It aso differs from the others by having an extra line hanging from its head below the mouth.


Find location : Trench D1, sq. J:4 Level -1.95
Condition : Complete, no surface erosion, chipped edges
Drawing : HD
Bibliography : KJধRUM 1983, $\mathrm{n}^{\circ}$ 182, p. 80-81


## MEASUREMENTS

Max. diam. : 26 mm
Boss diam. : 21.2 mm
Max. thickness : 13.8 mm
Rim thickness : 8 mm
Perforation diam. : 4.8 mm
$\qquad$

ASPECT


Bibliography : KJধRUM 1983, n ${ }^{\circ}$ 76, p. 38-39

## MEASUREMENTS

Max. diam. : 27.5 mm
Boss diam. : 22 mm
Max. thickness : 14.1 mm
Rim thickness : 8.7 mm
Perforation diam. : 3.4 mm


0
20 mm

## ASPECT

Material: Softstone, type X3
Treatment : Surface treated
Surface : Light brown
Core : Light green, opaque
Shape : Disc with boss
Profile : Df-B/CW/Rcv-b
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : 3L $=2.9 \mathrm{~mm}$. DC diam. $=3.5 \mathrm{~mm}$
Obverse : Righthands, a naked man is sitting, facing left, holding a long, vertical rectangular object with V-shaped extremities. In front of him, a crouched bovid is facing left with its head turned back inwards, ruffed-necked with long straight horns. A large scorpion is laying underneath, looking to the right.


Find location : Trench M2, sq. K:2
Level - 1.58
Condition : Complete,
a few small chips on the edges,
a bigger one on top of
the reverse was made
prior to the heating
of the material and
may be due to
a default in the stone
Drawing : HD
Bibliography : KJERUM 1983, nº 2, p. 14-15

## MEASUREMENTS

Max. diam. : 25.5 mm
Boss diam. : 21.8 mm
Max. thickness : 11.4 mm
Rim thickness : 7.1 mm

erforation diam. : 3.5 mm

## ASPECT

Material : Softstone, type X3
Treatment : Surface treated
Surface : Light brown
Core : Greenish-grey
Shape : Disc with boss
Profile : Df-B/Cn/Rcv-b
Technique : Deep, sharp $V$-shaped incision, compass

## DESIGN

## Reverse : 3L $=2.2 \mathrm{~mm}$. DC diam. $=2.6 \mathrm{~mm}$

Obverse : Radiant composition of four bovid's protomes curled around two crossed, diametrical lines ended at both extremities by a palm. The bovid's heads are all facing right, with ruffed neck and very long, wavy horns. A small crescent surmounts each head, with an extra one between the horns and neck of one of them (this part is broken on the fourth one).


Find location : Trench A3, sq. C:4
Level -1.34
Condition : Complete,
surface of the dome and
perforation very deeply
 and smoothly eroded


Drawing : HD
Bibliography : KJERUM 1983, n² 249, p. 104-105

## MEASUREMENTS

Max. diam. : 24.8 mm
Boss diam. : 20 mm


Max. thickness : 12.4 mm
Rim thickness : 5.8 mm
Perforation diam. : 3 mm
0
20 mm

```
    ASPECT
    Material : Softstone, type B2A
Treatment : Surface treated
    Surface : Light brown
            Core : Light green, slightly translucent
            Shape : Disc with boss
    Profile : B-Dcx/Cw/Rcv-r
```

Technique : Light, sharp V-shaped incision, compass

## DESIGN

Reverse : $3 \mathrm{~L}=2.4 \mathrm{~mm}$. DC diam. $=3 \mathrm{~mm}$
Obverse : Three bovids above one another with slightly decreasing size, all facing left are surmounted by a crescent and a dotted-centered star. They have a long tail, plain neck and long horns pointed upwards. Behind them stands a bull-man with horned and curled-haired headdress, rising his arms. Two monkey figures are facing the animals on left side, rising their hands towards them.


Find location : Trench D1, sq. J:4
Level -1.14
Condition : Complete,
edges chipped and smoothed,
Drawing : HD
Bibliography : KJÆRUM 1983, nº 82, p. 40-41


## MEASUREMENTS

Max. diam. : > 23 mm
Boss diam. : 19 mm
Max. thickness : 11.9 mm
Rim thickness : 7.2 mm
Perforation diam. : 3.5 mm


0
20 mm

## ASPECT

$\qquad$
Material : Softstone, type X2A
Treatment : Surface treated
Surface : Brownish white
Core : Light green, slightly translucent
Shape : Disc with boss
Profile : Df-B/Cw/Rcv-r
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

## Reverse : $3 \mathrm{~L}=2 \mathrm{~mm}$. DC diam. $=3 \mathrm{~mm}$

Obverse : The scene is divided into two symmetric halves by a vertical braid made of two twisted plain lines, each being the extension of a bovid's protome (head and foreleg) laying upside-down at the bottom, with ruffed neck (almost completely broken) and short, slightly curved horns. Their mouth clearly have two jaws and teeth, in addition to a tongue (?) for the one on the right. Above them, on either side of the twirl, two long regtangular nets ( ( $8 \times 3$ cells, damaged on the left but probable) are supporting a pair of opposed, ruffed-necked bovids holding up their head to the top. The one lefthands has long undulating horns, the one righthands, long rear-incurved horns.


Find location : Trench F2, sq. L:3, lebel -1.12
Condition : Complete
Chips on the edges and
one big breach on top of the boss


Drawing : HD
Bibliography : Failaka 1964, fig. 88
KJérum 1983, nº 66, p. 34-35


## MEASUREMENTS

Max. diam. : 21.2 mm
Boss diam. : 17.4 mm
0
20 mm
Max. thickness : 11.1 mm
Rim thickness : 6.2 mm
Perforation diam. : 3.2 mm

```
ASPECT
    Material : Softstone, type B2A
Treatment : Surface treated
    Surface : Yellowish white
            Core : Greenish grey
        Shape : Disc with boss
    Profile : Df-B/Cn/Rcv-v
```

Technique : Deep, very sharp V-shaped incision, compass

## DESIGN

Reverse : 3L $=2.1 \mathrm{~mm}$. DC diam. $=2.5 \mathrm{~mm}$
Obverse : The center of the scene is a large unidentified object composed of two ladder-like elements joint in an inversed T-shape. The middle part is plain while only the extremities show three bars each. Lefthands of the long, vertical part of the object, a large square regularly subdivided ( $5 \times 5$ cells) is surmounted by a sitting bird facing the center. Opposed to it righthands, a large bovid with long, ruffed neck and long rear-incurved horns, holds up its head.


Find location : Trench F2, sq. K:2
Level -1.93
Condition : Complete,
many chips on the edges,
surface of the obverse smoothed
Drawing : HD
Bibliography : KJJRUM 1983, n ${ }^{\circ}$ 58, p. 32-33


## MEASUREMENTS

Max. diam. : 24.9 mm
Boss diam. : 20.1 mm
Max. thickness : 13.2 mm
Rim thickness : 7.7 mm


Perforation diam. : 2.7 mm
$\qquad$
ASPECT

Material : Softstone, type X3
Treatment : Surface treated
Surface : Light brownish
Core : Dark green
Shape : Disc with boss
Profile : Dcx-B/Cw/Rcv-v
Technique : Deep, sharp V-shaped incision

## DESIGN

Reverse : $3 \mathrm{~L}=2.2 \mathrm{~mm}$. DC diam. $=3.3 \mathrm{~mm}$
Obverse : Symmetrical composition centered around two superposed standards. The bottom one is a ladder-like structure made of a single pole surmounted by two vertical branches joint horizontally at their base. The upper one is a plain pole supporting two pairs of incurved horns above one another. Two opposed, naked human figures are touching the upper branches of the first standard, one on each side. Three stars complete the scene, one (14 rays) above the double-horned stand, two others (damaged) down the base of the bottom standard.

## KП1 1097



## Find location : -

Condition : Complete,

edges chipped and eroded


0
20 mm
Drawing : HD
Bibliography : KJ_ERUM 1983, nº 63, p. 34-35 $\qquad$

## MEASUREMENTS

Max. diam. : > 17.3 mm
Boss diam. : 12.8 mm
Max. thickness : > 8.5 mm
Rim thickness : 5 mm
Perforation diam. : 3.5 mm

```
    ASPECT
    Material : Softstone, typeX1A
Treatment : Surface treated
    Surface : Light beige
            Core : Pinkish beige
            Shape : Disc with boss
    Profile : Df-B/Cn/Rcv-b
```

Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : 3L $=1.7 \mathrm{~mm}$. DC diam. $=2.8 \mathrm{~mm}$
Obverse : A large chequered upside-down T-shaped object is centered on the upper half of the scene, with one dotted circle on each side of the vertical branch ( $12 \times 2$ cells for the horizontal branch, $5 \times 2$ for the vertical one). The space below shows a large scorpion, its transversally striped body facing left.


Find location : $\begin{gathered}\text { Trench A3, sq. B:4 } \\ \text { Level }-1.26\end{gathered}$


Condition : Complete,
chipped edges, a few cracks
Drawing : HD


Bibliography : KJARUM 1983, nº 159, p. 72-73

## MEASUREMENTS

$$
\begin{aligned}
& \text { Max. diam. : } 16.9 \mathrm{~mm} \\
& \text { Boss diam. : } 14.5 \mathrm{~mm} \\
& \text { Max. thickness }: 7 \mathrm{~mm} \\
& \text { Rim thickness }: 3 \mathrm{~mm} \\
& \text { Perforation diam. : } 2 \mathrm{~mm}
\end{aligned}
$$

```
    ASPECT
    Material : Softstone, type X1A
Treatment : Surface treated
    Surface : Light beige
        Core : Light beige
    Shape : Disc with boss
    Profile : B-Dcx/Cn/Rcv-r
```

Technique : Light, sharp V-shaped incision, compass

## DESIGN

## Reverse : 3L $=2.1 \mathrm{~mm}$. DC diam. $=1.7 \mathrm{~mm}$

Obverse : Symmetric composition around a realistic palmtree with a knobed trunk, six palms, two plain branches on top, and two incurved, round-ended branches probably representing dates bunches. On each side, the plain wavy line of a snake body set vertically, a wading bird facing inwards, surmounted by a dot-centered star (12 rays).


Find location : Trench M2, sq. K-L:2-3
Level -1.69


Condition : Complete,
rim very smoothed,
one big chip on the boss prior to heating
Drawing : HD
Bibliography : Failaka 1964, fig. 85
Glob 1968, p. 202


KJeRUM 1983, n ${ }^{\circ}$ 208, p. 90-91

## MEASUREMENTS

Max. diam. : 19.2 mm
Boss diam. : 15.8 mm
Max. thickness : 9.4 mm
Rim thickness : 5.1 mm
Perforation diam. : 2.6 mm

```
    ASPECT
    Material : Softstone, type B2A
Treatment : Surface treated
    Surface : Light greenish beige
            Core : Light green
    Shape : Disc with boss
    Profile : Dcx-B/Cw/Rcv-r
```

Technique : Deep, very sharp V-shaped incision, compass

## DESIGN

Reverse : 3L $=1.6 \mathrm{~mm}$. DC diam. $=2.3 \mathrm{~mm}$
Obverse : In the center stands a bull-man facing left, with horned and double-curl-haired headdress. He is holding up his hands towards the neck of a rearing back bovid with ruffed neck, long tail and straight horns, also facing left. On the other side, the bull-man is backed by a smaller nude man with raised hands. The scene is framed by two vertical palms, in addition to a rounded jar set upside-down in front of the rearing gazelle.


Find location : Trench SN10-15, sq. K:5 Level -0.34
Condition : Complete,
edges chipped
Drawing : HD
Bibliography : KJたRUM 1983, $\mathrm{n}^{\circ}$ 101, p. 48-49

## MEASUREMENTS

Max. diam. : 28 mm
Boss diam. : 24.5 mm
Max. thickness : 12 mm
Rim thickness : 6.5 mm
Perforation diam. : 3 mm

```
    ASPECT
    Material : Softstone, type X3
Treatment : Surface treated
    Surface : Whitish
        Core : Brownish gray
    Shape : Disc with boss
    Profile : Df-B/Cn/Rcv-b
Technique : Deep, sharp V-shaped incision, compass
```


## DESIGN

Reverse : $3 \mathrm{~L}=3.1 \mathrm{~mm}$. DC diam. $=2.3 \mathrm{~mm}$
Obverse : The scene is divided into two halves by three parallel wavy lines. The right side should be looked vertically, with a man wearing a long tiered skirt, turned towards the flow which he touches with his right hand. His other hand is merged with the arms of a second figure backing him on the outer side, probably a monkey considering the only fringe still preserved on top of its back. Under their feet lies a small horizontal stick. The left side of the scene should be looked horizontally, with two more undulating lines joining the main flow in the middle at a $90^{\circ}$ angle and lined by a plain rectangle. On each side, a ruffed-necked bovid's head is surging from the diametrical wavy lines, looking up vertically with long, knobed, rear-incurved horns. A triangular shape is also emerging from the wavy line in the left corner.
$\mathrm{K} \Pi 1 \mathrm{II} 3$
Bibliography : Failaka 1964, fig. 68 $\qquad$

Glob 1968, p. 207
KJeRUM 1980, fig. 9a-b
KJIERUM 1983, n ${ }^{\circ}$ 352, p. 144-145

```
    ASPECT
    Material : Translucent green stone (possibly chalcedony
                or vesuvianite ?) and gold sheet
Treatment : -
    Surface : Bright green
        Core : Bright green
    Shape : Bifacial disc
    Profile : Df-Df/Rcv-r
Technique : Deep, sharp V-shaped incision, circular rod. The rim is set inside a ring made of a thin gold sheet shaped to fit the profile of the gorge, with two holes in front of the diametrical perforation.
```


## DESIGN

Side A : Realistic design showing two confronted men, naked except for a belt and curled head-dress, crossing each other's hands. In between are three rosettes (two have 8 petals, one has 9 ) horizontally set along the diameter of the seal.

Side $\boldsymbol{B}$ : Radial composition around a central 8 rays star set inside a plain circle. Four rosettes with 8 rays each alternate with four bovids. The animals are facing to the right with their head turned backwards. Their horns are long, rear-bowed and their forked tail is raised up.


Find location : Trench D1, sq. J:4 Level - 1.62
Condition : All edges smashed, surface all rubbed with many small cracks due to overheating.
Drawing : HD
Bibliography : KJARUM 1983,
$n^{\circ} 268$, p. 114-115


## MEASUREMENTS

Max. diam. : > 23.5 mm
Boss diam. : 21.5 mm
Max. thickness : 14.1 mm
Rim thickness : 7.5 mm
Perforation diam. : 2.5 mm


еенат

## ASPECT


Material : Softstone X1B
Treatment : Heated to the core and surface treated
Surface : White, matt
Core : Greenish white with small red minerals, extremely hard and brittle
Shape : Disc with boss
Profile : Df-B/Cn/Rcv-r
Technique : Sharp V-shaped incision, compass

## DESIGN

## Reverse : 3L $=2.3 \mathrm{~mm}$. DC diam. $=3 \mathrm{~mm}$

Obverse : A sitting man is facing left, wearing a long tiered skirt, his hand held on the frame of a four strings harp with a sound box in the shape of a bovid, ruffed-necked with short, straight horns. The instrument is standing on the back of a second bovid differing only in its body being vertically hatched and its legs being straight. Two legs of a human figure and tips of its face can be seen in front of it, bottom left, and at bottom center a star nested inside a crescent.


Find location : Trench M1, sq. J:3 Level -1.92
Condition : Complete, edges chipped and eroded, surf. eroded on the top of the boss and the center of the obverse


Drawing : HD
Bibliography : KJARUM 1983, n² 203, p. 88-89

## MEASUREMENTS



Max. diam. : > 24.4 mm
Boss diam. : 18.7 mm
Max. thickness : > 10.4 mm


Rim thickness : 4.8 to 5.5 mm (slanted)
Perforation diam. : 2.8 mm

```
    ASPECT
    Material : Softstone, type B2A
Treatment : Surface heated
    Surface : Whitish
        Core : Light green, slightly translucent
        Shape : Disc with boss
    Profile : B-Df/Cn/Rcv-b
```

Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : $3 \mathrm{~L}=2.7 \mathrm{~mm}$. DC diam. $=3 \mathrm{~mm}$
Obverse : Three figures follow each other in line, all facing right. First right stands a bovid with its head turned backwards, ruffed-necked and with long, slightly incurved horns. Its hindquarter is held with both hands by a monkey standing in the middle. It is followed by a human figure wearing a long plain dress/skirt. While his right arm is bent at the waist, his very long left arm is hanging down to his feet and grasping a crescent with a three-fingered hand.


Find location : -
Condition : One half preserved,
including the perforation,
all edges deeply eroded
Drawing : HD


Bibliography : KJeRUM 1983, nº303, p. 124-125

## MEASUREMENTS

Max. diam. : 23.8 mm (estimated)
Boss diam. : 21.4 mm
Max. thickness : > 8.2 mm
Rim thickness : 3.3 mm


0
20 mm
Perforation diam. : 2.5 mm , not centered
on the diameter of the seal

```
ASPECT
    Material : Softstone, type X2A
    Treatment : Heated to the core
    Surface : Whitish
        Core : Very light green, opaque
    Shape : Disc with boss
    Profile : B-Dcx/Cn/Rcv-r
```

Technique : Light (maybe due to erosion), wide V-shaped incision

## DESIGN

Reverse : 3L = 2.6 mm . No dotted circle.
Obverse : Only the top half of the scene is preserved, bordered by a double ring framing radiant triangles with a small bisector inside ( 20 preserved, total 32 estimated). Inside, a large net square ( $4 \times$ at least. 5 cells) with each preserved side overflowing the corners, is topped by a rosette ( 6 petals) inside a crescent. Around the top of the left pole stand a triangle and a small vertical stem. On either side of the square, a garbed man is facing inside, hands raised up and backed by a wavy snake.


Core : Light green, slightly translucent
Shape : Circular
Profile : Bf
Technique : Deep, sharp V-shaped incision

## DESIGN

Reverse : Following the periphery at the base, four concentric lines are fringed by small vertical, almost erased incisions inbetween. The remains of a fifth line draw a square on top of the others. The whole surface may have been covered, by the pattern as is the case on KM 1076, which is made of the same stone.

Obverse : The scene is lined by a fringed circle at the periphery. In the center, a kneeling man is raising his hands up. He is surrounded by a series of various animals. On each side and below : three figures with a round body covered with a net pattern, a small head and two bent forelegs but only one appendix at the bottom, centered and bent upwards. Top right, a snake is waving next to the man's head, between two unidentified figures which might be birds, and a third smaller one on left side, which might equally be a fish or a necked jar. Far left side, a long hatched rectangle ( 5 cells) is parallel to the 'tortoise-like' animal. In addition, a short V-shaped line is designed exactly like the man's left arm under which it is set.


Find location : -
Condition : Broken through the perforation, the reverse is missing. All of the rim of the obverse and most of the edges of the incised pattern chipped away
Drawing : HD
Bibliography : KJ_ERUM 1983,
n ${ }^{\circ} 179$, p. 78-79


ASPECT
Material : Softstone, type X3
Treatment : Surface treated
Surface : Whitish
Core : Light greenish grey with small black spots, opaque
Shape : Only part of a disc is preserved. Most probably bifacial due to the perfect straightness of the perforation and its position in the middle of the disc
Profile : Df-?/?/?
Technique : Deep, very sharp V-shaped incision, compass

## DESIGN



0
20 mm

## MEASUREMENTS

Max. diam. : > 27.8 mm
Max. thickness : > 7.1 mm
Rim thickness : n.a.
Perforation diam. : 3.5 mm

Reverse : n.a.
Obverse : From right side inwards, two similar human figures, wearing long tiered skirts, are sitting on rectangular, horizontally striped stools, each holding with his left hand a long incurved stick coming out of a small necked jar at their feet. Under the feet of the first man on the right, a damaged incurved line might be the head of a bird facing left. Each sitting man is backed by a large, ruffed-bodied snake with bovid's head and long rear incurved knobed horns. But the one on the right has a protruding rounded ending appendix in the lower part of its body and is turning its back to the man who is catching it with his right hand. Inversely the second monster-snake is turned towards the man he is backing, who is not holding it but has his right hand hanging down. Above him in the upper center of the scene, a tall stand is topped by a crescent and a star (damaged). Its pole is crossed by the forelegs of a standing gazelle set vertically on left side, with ruffed neck and long, rear incurved horns. Another gazelle is standing far left bottom behind the smaller snake, looking backwards to it, with short tail held upwards, its horns too broken to describe. Near the edge in front of the face of the man on righthands are two very fragmentary incisions, the upper one too damaged to be interpreted. The lower one might be a foot pattern.


Find location : $\begin{aligned} & \text { Trench A1, sq. G:5 } \\ & \text { Level } 0.23\end{aligned}$
Condition : Complete,
all edges broken,

deep erosion on the top of the boss and center of the obverse
Drawing : HD
Bibliography : KJARUM 1983, nº 153, p. 68-69


## MEASUREMENTS

Max. diam. : 21.4 mm
Boss diam. : 18 mm
0
20 mm
Max. thickness : 7.8 mm
Rim thickness : 4.3 mm
Perforation diam. : 3.5 mm

```
    ASPECT
    Material : Softstone, type B2A
Treatment : Surface treated
    Surface : Light brown
        Core : Dark greenish grey
        Shape : Disc with boss
    Profile : Dcx-B/Cn/Rcv-b
```

Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : $3 \mathrm{~L}=1.6$ to 2.5 mm , very irregular. DC diam. $=2.8 \mathrm{~mm}$
Obverse : On left side a gazelle with ruffed neck, short tail held upwards and long, rear incurved horns, is facing left in front of a branch (half broken). Behind the animal stands a footed and necked jar surmounted by an uneven ring. On the right side, a human figure wearing a long tiered skirt is carrying in his left hand a long stick, slightly incurved following the edge of the seal. His right hand id holding up horizontally an almong-shaped, transversally striped object.


Find location : -
Condition : Complete profile, one big chip has destroyed half of the obverse, rim chipped away, erosion on top of the boss


Drawing : HD
Bibliography : KJAERUM 1983, nº 216, p. 92-93

## MEASUREMENTS

Max. diam. : 22.3 mm
Boss diam. : 18 mm
Max. thickness : 11.7 mm
Rim thickness : 6.5 mm


Perforation diam. : 3.3 mm

## ASPECT

Material : Softstone, type X1A
Treatment : Surface treated
Surface : Whitish
Core : Light pinkish beige, opaque
Shape : Disc with boss
Profile : Dcx-B/Cn/Rcv-r
Technique : Deep, very sharp V-shaped incision, compass

## DESIGN

## Reverse : 3L = 1.7 to 2.2 mm . DC diam. $=1.9 \mathrm{~mm}$

Obverse : Top center, a man wearing a long tiered skirt is grasping with each hand a symmetrical pair of crouched bovids with ruffed neck and long, rear incurved horns. Bottom right, another ruffed-necked bovid is shown vertically with long wavy horns and bent forelegs. A long incurved line still visible next to it is probably all what is left of another gazelle standing in the middle of the scene. On far left, a small rounded incision might be the head of a human figure.


## MEASUREMENTS

| Max. diam. : 20 mm |  |
| ---: | :--- |
| Boss diam. : 16 mm |  |
| Max. thickness : | 7.2 mm |
| Rim thickness : | 4.8 mm |
| Perforation diam. $:$ | 2.7 mm |

0
20 mm
Perforation diam. : 2.7 mm

```
    ASPECT
    Material : Softstone, type X2A
Treatment : Surface treated
    Surface : Light beige
        Core : Greenish grey with brownish-reddish patches, opaque
        Shape : Disc with boss
    Profile : Df-B/Cw/Rcv-f
```

Technique : Deep, wide V-shaped incision

## DESIGN

Reverse : 3L = n.a. DC diam. $=3.3 \mathrm{~mm}$
Obverse : A long almond-shaped, crosswise hatched object divides the seal diametrically. On the only half preserved, a branch stands in the middle, framed by two symmetric stars (7 rays).


## Find location : -

Condition : Less than half preserved, broken along the perforation, all edges and surface deeply smoothed by erosion. Reused with later carving
Drawing : HD
Bibliography : KJÆRUM 1983, nº 41, p. 26-27


## MEASUREMENTS

Max. diam. : 24 mm (estimated)
Boss diam. : 19 mm
Max. thickness : 9.7 mm (estimated)
Rim thickness : 4.3 mm


Perforation diam. : 2.7 mm (estimated)

## ASPECT

Material : Softstone, type B2B
Treatment : Surface treated
0
20 mm
Surface : Yellowish white
Core : Light green, slightly translucent
Shape : Disc with boss
Profile : B-Dcx/Cn/Rcv-v
Technique : Light, sharp V-shaped incision, compass. Later incision much deeper and thicker.

## DESIGN

## Reverse : 3L $=1.8 \mathrm{~mm}$. DC diam. $=1.6 \mathrm{~mm}$

Obverse : A dot-centered rosette (10 petals) at bottom center is separating two symmetric monkey figures (only the hint legs are preserved on right side) whose knobed back is following the edge of the seal. The star is surmounted by a large central net (very eroded, about 12 columns, 2 rows only preserved). On the left side, the four legs and long tail of a bovid are facing inwards.

In a later phase after the initial heating of the stone but prior to the final breaking of the seal, several thick and deep straight lines were carved at right angle on top of the original net, drawing a slightly smaller geometric figure.


Find location : Trench B2, sq. D:3
Level -1.25
Condition : Complete, edges and the whole surface of the oberse are chipped and eroded, superficial erosion on top of the boss


Drawing : HD
Bibliography : KJARUM 1983, nº 106, p. 50-51

## MEASUREMENTS

Max. diam. : 20.1 mm
Boss diam. : 16.8 mm


Max. thickness : 12.1 mm
Rim thickness : 6 mm
Perforation diam. : 3.8 mm

## ASPECT

Material : Softstone, type B2A
Treatment : Surface treated
Surface : Light cream on the upper surface, a dark reddish tone shows through underneath
Core : Light green, slightly translucent
Shape : Disc with boss
Profile : B-Df/Cn/Rcv-b
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : $3 \mathrm{~L}=1.4$ to 1.8 mm . DC diam. $=1.8 \mathrm{~mm}$
Obverse : The left half of the seal is filled with a very slender gazelle with its ruffed neck held upwards and long incurved horns following the curved edge of the seal, as do its hint legs. A rounded jar stands with its rim down left, in the field between the horns and back. The second half is devided in two quadrants, one with a nude man bent at right angle forward, his folded arms holding an unidentified object made of four bowed lines drawing a striped crescent. Both extremities are broken and it is not clear how the lines join together at the ends. In the last quadrant, a tall triangular shape, transversally striped, along the same axis as the legs of the human figure, meets at right angle at its base, parallelly to the back of the man, the protome of a bovid similar to the complete animal.


Find location : -
Condition : Edges deeply and smoothly eroded, as well as the top of the bos and the whole surface of the obverse


## MEASUREMENTS



Drawing : HD
Bibliography : KJERUM 1983, nº 105, p. 50-51

Max. diam. : 21.7 mm
Boss diam. : 19 mm
Max. thickness : > 9.7 mm
Rim thickness : 4.9 mm
Perforation diam. : 2.6 mm
ASPECT

0
20 mm

Material : Softstone, type X1A
Treatment : Surface treated
Surface : Pinkish beige
Core : Light greenish beige in the deep core
bright pink just under the rubbed surface (obverse),
similar in this to KM 9962 from Al-Khidr which also has this unique pink tone
Shape : Disc with boss
Profile : B-Dcx-Cn/Rcv-r
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

## Reverse : 3L $=1.8 \mathrm{~mm}$. DC diam. $=2.9 \mathrm{~mm}$

Obverse : A bovid facing left stands at the bottom of the scene, ruffed-necked with a long tail and short straight horns. Above its back a wavy snake is facing vertically a bovid's protome with a ruffed neck and rear incurved horns. On righthands, a monkey figure is facing outwards, while a crescent fills the side space on the left in front of the bull.


Find location : Trench A2, sq. E:4
Level -1.36
Condition : Complete,
few small chips on the rim,
no superficial erosion.


Many fragments of hardened, beige, modern modelling paste on surface.


Drawing : DN
Bibliography : KJ_ARUM 1983, nº 19, p. 20-21

## MEASUREMENTS



Max. diam. : 23.7 mm
Boss diam. : 16.2 mm
Max. thickness : 10.7 mm
Rim thickness : 5.9 mm
0
20 mm
Perforation diam. : 3.3 mm

```
    ASPECT
    Material : Softstone, type B1
Treatment : None
    Surface : Greenish black
            Core : Greenish black
            Shape : Disc with boss
    Profile : Dcx-B/Cw/Rcv-r
```

Technique : Deep, sharp V-shaped incision

## DESIGN

Reverse : 3L $=2.4 \mathrm{~mm}$. DC diam. $=2.6 \mathrm{~mm}$
Obverse : An empty square in the center is the axis for a radiant geometrical pattern. From each corner emerges a branch, while on each side stands a pole topped by a pair of outcurling volutes hanging from a horizontal line.


## Find location : Trench F2, sq. K:3 <br> Level -1.27



Drawing : HD
Bibliography : KJARUM 1983, n¹52, p. 68-69

0
20 mm

## MEASUREMENTS

Max. diam. : > 18 mm
Boss diam. : 16.7 mm
Max. thickness : > 8 mm
Rim thickness : $>2.5 \mathrm{~mm}$
Perforation diam. : 2.5 mm

## ASPECT

Material : Softstone, type B2B
Treatment : Surface treated
Surface : Whitish
Core : Light green, slightly translucent
Shape : Disc with boss (squared by erosion, the base of the dome remains circular)
Profile : B-D?/?!?
Technique : Deep, sharp $V$-shaped incision, compass

## DESIGN

## Reverse : $3 \mathrm{~L}=3 \mathrm{~mm}$. DC diam. $=2.3 \mathrm{~mm}$

Obverse : Centered at the bottom of the field, a large bull is standing facing left, with short horns upwards. Above its back, a pole is surmounted by a wide V-shaped object which might be a very stylized crescent. The standard is framed, lefthands by a vertical palm, righthands by a bird sitting towards the center of the scene.


Find location : Trench F1, sq. J:3-4 Level -1.63
Condition : Edges deeply and smoothly eroded, as well as the top of the boss and the whole surface of the obverse


Drawing : HD
Bibliography : KJARUM 1983, n ${ }^{\circ}$ 194, p. 84-85

## MEASUREMENTS

Max. diam. : 23 mm (estimated)
Boss diam. : 18.2 mm
Max. thickness : 10.8 mm
Rim thickness : 7.2 mm
Perforation diam. : 2.6 mm


## ASPECT



Material : Softstone, type B2B
Treatment : Surface treated
Surface : Whitish
Core : Light green, slightly translucent
Shape : Disc with boss
Profile : Dcx-B/Cw/Rcv-v
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : $3 \mathrm{~L}=1.7 \mathrm{~mm}$. DC diam. $=1.7 \mathrm{~mm}$
Obverse : Bottom center, a bull is facing left, with plain neck and short horns. Three naked men are standing next to each other, with decreasing size from right to left, filling the space behind and above the bull. The one on righthand is looking left, facing the two on left size who are looking right, holding each other's hand. A long-stemmed branch is separating the two opposed men on the right, a shorter one is held by the third man. The scene is completed by two crescents, one between the two men on the left, the second one above the bull's head.


0
20 mm
Find location : -
Condition : All surface and edges
deeply smoothed by erosion,
perforation partly broken.
KJARUM mentions "remains of a copper wire inside the perforation"
which are no more preserved
Drawing : HD
Bibliography : KJARUM 1983, n³ 344, p. 140-141

## ASPECT

Material : Softstone, type X2B
Treatment : Heated to the core
Surface : Whitish
Core : Light green with darker veins, opaque
Shape : Disc with boss
Profile : Df-Df/Rcv-v
Technique : Light incision, very smoothed by erosion

## MEASUREMENTS

Max. diam. : 15.1 mm
Max. thickness : 4.9 mm
Perforation diam. : 1.5 mm

## DESIGN

Side A : All the horizontal median part is destroyed by erosion. On righthands, the horned head, feet and tail of a bull-man facing left can be recognized, framed by two vertical branches. It is following a human figure (only his feet and maybe his head are visible) standing on a low rectangle vertically divided into at least three cells. A few other lines on left side and top remain unclear.

Side B : Divided into three columns. In the central one, a man with a long tiered skirt, arms raised, is standing facing left above a low rectangle vertically striped (slightly overlapping on the columns righthands). In the two outer columns, opposed bovids rearing back with long, rear-incurved horns.

## KП11 1168

Tell F6 «The Palace»


Find location : -
Condition : All edges and surface are deeply eroded, big chips on the obverse
Drawing : HD
Bibliography : KJÆRUM 1983,

$n^{\circ} 127$, p. 58-59

```
MEASUREMENTS
    Max.diam. : > 24 mm
            Boss diam. : }20.4\textrm{mm
    Max.thickness : > 12.4 mm
    Rim thickness : > 7 mm
Perforation diam. : }3.6\textrm{mm
```



0
20 mm

## ASPECT

Material : Softstone, type B2A
Treatment : Surface treated
Surface : Whitish
Core : Dark green, slightly translucent
Shape : Disc with boss
Profile : Df(?)-B/Cw/Rcv-b
Technique : Sharp V-shaped incision, compass (depth impossible to estimate due to erosion of the surface)

## DESIGN

Reverse : 3L $=1.7 \mathrm{~mm}$. DC diam. $=2.2 \mathrm{~mm}$
Obverse : Apparently symmetric scene centered on two opposed, ruffed-necked bovids (horns are broken), standing up on their hint legs, one foreleg held upwards. The animals are framing a vertical branch at the bottom, and in the upper part a stand topped by an empty rectangle. Each one is backed by a gazelle, ruffed-necked with long rear-incurved horns, facing inwards but looking outwards. Only the forelegs of the one righthands are preserved. Bottom right, the upper left corner of a right-angled shape is visible.


Find location : -
Condition : Complete,
smooth erosion of the
whole surface and edges but no trace of surface treatment inside the incision
Drawing : HD
Bibliography : KJARUM 1983, nº 295, p. 122-123

## MEASUREMENTS

Max. diam. : 23.6 mm
Boss diam. : 15.7 mm


Max. thickness : $>11 \mathrm{~mm}$
Rim thickness : 8 mm
Perforation diam. : 3.6 mm


0
20 mm

## ASPECT

Material : Softstone, type A5
Treatment : None
Surface : Black
Core : Black
Shape : Disc with boss
Profile : Df-B/Cw/Rcv-b
Technique : Deep, wide $V$-shaped incision

## DESIGN

Reverse : 3L $=2.9 \mathrm{~mm}$. No dotted circle visible.
Obverse : Righthands, a garbed man is sitting on a chair, facing left, with his left hand to his waist, the other raised upwards. Facing him are a small, long-horned bovid, standing under a small unidentified figure. A second bovid, long-tailed with long, ruffed neck and long, rear-incurved horns is standing on left side at right angle with the others, looking at a long branch on its left. A small incision at botton center is not clearly related to an intentional design.


Bibliography : KJÆRUM 1983, nº 339, p. 136-137

```
    ASPECT
    Material : Softstone, type X1A
Treatment : Surface treated
    Surface : Whitish
        Core : Light beige
    Shape : Bifacial disc
    Profile : Dcx-Dcx/Rcv-v
```

Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Side A : The scene is bordered by a fringed line. Bottom center, a large one-eyed bovid's head with short straight horns, is framed by two opposed, naked human figures. They are both holding with one hand a large crescent, topped by a dot-centered rosette (rays partly damaged).

Side B : Composition centered around a large, inversed T-shaped object covered with a net pattern delimiting two upper quadrants, each containing a dotted rosette similar to the one on side A. Underneath the net pattern, two opposed, ruffed-necked gazelles are both looking upwards, although their bodies are facing opposite directions. They have long, incurved horns. Their bent legs compose a geometrical cross where they meet in the middle of the scene.


Find location : -


Condition : Broken in several fragments
found and registered separately,
one big chip on the boss still missing.
Chipped edges.
Drawing : HD
Bibliography : KJđRUM 1983, n ${ }^{\circ}$ 35, p. 24-25


## MEASUREMENTS

0
20 mm
Max. diam. : 18.2 mm
Boss diam. : 13.6 mm
Max. thickness : 10 mm
Rim thickness : 6.2 mm
Perforation diam. : 3.3 mm

## ASPECT

Material : Softstone, type X2A
Treatment : Surface treated
Surface : Light brownish
Core : Light green, opaque
Shape : Disc with boss
Profile : Df-B/Cw/Rcv-r
Technique : Deep, very sharp V-shaped incision, compass

## DESIGN

## Reverse : $3 \mathrm{~L}=2.2$ to $2.6 \mathrm{~mm} . \mathrm{DC}$ diam. $=2.6 \mathrm{~mm}$

Obverse : Four dotted stars (15 rays for the complete one, a number which might be similar for the three other damaged ones), each nested in a crescent and radiantly disposed in the four quadrants.


0
20 mm


## Find location : -

Condition : Fragment (about $1 / 4$ including part of the perforation), several chips on the edges, no surface erosion
Drawing : HD
Bibliography : KJERUM 1983, nº 356, p. 148-149

```
    ASPECT
    Material : Softstone, type X2A
Treatment : Surface treated
    Surface : Light beige
        Core : Light green with brownish patches
    Shape : Bifacial disc
    Profile : Df-Dcx/Rcv-r
Technique : Deep, sharp V-shaped incision
```


## DESIGN

Side A : The large figure on the right seems to be repeated symmetrically on the other side : standing above a short horizontal line at the bottom center, the two legs of a human being, the one in front wearing a short garment above the knee, the leg behind with a longer, tiered garment. Behind it, a winged-shaped object with fine tranversal incisions, slanting from above. Set on top of each other between the two figures, an upside-down rounded $V$-shaped object with a median vertical line, a cross orientated at $45^{\circ}$ and what might be the base of a second rounded trident.


## MEASUREMENTS

Max. diam. : 32.2 mm (estimated)
Max. thickness : 7.5 mm
Rim thickness : 5.2 mm
Perforation diam. : 2.8 mm

## DESIGN

Side $\boldsymbol{B}$ : This face is bordered by a frieze between two concentric circles. Its pattern composed of two opposed birds, spread wings, framing a tree, repeated at least 3 times on the preserved portion. Only the base of the scene inside is preserved : on top of a flat, vertically striped rectangle are standing the feet of two opposed garbed human figures, separated by a vertical pole set much above the ground line. Behind the man on the left, a vertical line sets apart an accumulation of unidentified objects similar to the ones on side A.

## KM1182



Find location : -


Condition : Half preserved,
broken along the perforation.
The absence of surface treatment
inside the insicions on the obverse and the orientation of the drilling in the perforation tend to indicate that this is a second hand state of

the seal, re-incised more deeply after destruction of a previous surface
Drawing : HD
Bibliography : KJ/ERUM 1983, nº 36, p. 24-25

## ASPECT

Material : Softstone, type B1
Treatment : Surface treated
Surface : Whitish
Core : Greenish black
Shape : Disc with boss
Profile : B-D?/Cw/Rcv-b(?)
Technique : Very deep, wide incision,
carved after previous erosion of the surface

## MEASUREMENTS

Max. diam. : 25.1 mm
Boss diam. : 2 mm
Max. thickness : > 9 mm
Rim thickness : $>4.5 \mathrm{~mm}$
Perforation diam. : 3.5 mm

## DESIGN

Reverse : 3L $=2.1 \mathrm{~mm}$. DC diam. $=2.4 \mathrm{~mm}$
Obverse : Three large dotted circles, compass made. One wide oblong shape incised in the field near the left egde. An extra finer crescent next to the circle on right side. Tiny radiant lines around the rim (very eroded).


Find location : -
Condition : Half broken,
very small chips on the surface.
Parallel traces of chisel
all over the broken surface show deliberate reuse
Drawing : HD
Bibliography : KJARUM 1983, n 164, p. 74-75


## MEASUREMENTS

Max. diam. : 26.7 mm
Boss diam. : 22.2 mm
Max. thickness : 12.3 mm
Rim thickness : 6 mm
Perforation diam. : 3.2 mm


ASPECT
Material : Softstone, type X2A
Treatment : Surface treated
Surface : Light beige
Core : Light green, slightly translucent
Shape : Disc with boss
Profile: B-Dcx/Cn/Rcv-v
Technique : Deep, sharp V-shaped incision


Chisel traces on the broken side

0
20 mm

## DESIGN

Reverse : 3L $=1.7 \mathrm{~mm}$. DC diam. $=1.9 \mathrm{~mm}$
Obverse : On the right side, facing inwards, a man wearing a long tiered skirt is sitting on a chair, tall rectangle tranversally hatched, with a slightly slanting back represented by two parallel lines extending the upper right corner. The man is holding in front of his face an unidentified object (damaged by hard mineral concretion). The legs of another human or animal figure standing vertically are facing him. The lower part of the scene should be looked by turning $90^{\circ}$ anticlockwise. The running legs of a nude man are facing a horned and ruffed-necked bovid standing straight on its hind legs (its head missing). It is unclear whether the two bent lines joining the two figures are the arms of the man or the forelegs of the animal. A wavy snake lines the edge behind the bovid's back.


Find location : Trench F2, sq. L:3
Level -0,99
Condition : Complete, surface worn in several places
Drawing : HD
Bibliography : KJARUM 1983, nº 335, p. 134-135

## MEASUREMENTS

> Length : 40 mm
> Width : 34 mm

Max. thickness : 15 mm
Perforation diam. : 3.4 to 4 mm

```
    ASPECT
    Material : Light, fine, sandy, siliceous artificial material
    Surface : Pinkish beige glaze
        Core : Whitish
    Shape : Rectangular with rounded corners
    Profile : REC-2cx
Technique : Modelling (?)
```


## DESIGN

Side A: 3L = Unclear pattern with large curves combined with densely striped areas.
Side $\boldsymbol{B}:$ Due to the irregular surface and the bad preservation, it is unclear whether there is any pattern.


## KПII 1187



Find location : -
Condition : Fragment, about one fifth of the obverse missing, all edges chipped


Drawing : HD
Bibliography : KJARUM 1983, nº 116, p. 54-55

## MEASUREMENTS

Max. diam. : 25.4 mm
Boss diam. : 20.8 mm
Max. thickness : 13.2 mm
Rim thickness : 7.2 mm
Perforation diam. : 3.3 mm


0
20 mm

## ASPECT

Material : Softstone, type X5
Treatment : Surface treated
Surface : Light beige, many small cracks
Core : Light greenish grey, opaque
Shape : Disc with boss
Profile : Dcx-B/Cn/Rcv-v
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

## Reverse : 3L $=2.5 \mathrm{~mm}$. DC diam. $=2.5 \mathrm{~mm}$

Obverse : Bottom center, a plain-necked bull facing left stands under a crescent topped by a very regular, plain circle. They are surmounted by a vertical pole ended by a small plate, supporting a crescent and a dotted star (damaged). Two symmetrical opposed bull-men are framing the scene, the one righthands holding his hands up to the pole. The empty spaces are filled with a small cross and three dotted circles, one of which on upper left side is a bull's head with short neck, ears and horns.


Condition : Top of the obverse is missing, many chips on the edges and small cracks on the surface
Drawing : HD
Bibliography : KJARUM 1983, nº 117, p. 54-55


## MEASUREMENTS

Max. diam. : $23 \times 21.6 \mathrm{~mm}$
Boss diam. : 18.7 mm
0
Max. thickness : 9.7 mm
Rim thickness : 5.3 mm
Perforation diam. : 3.8 mm

ASPECT
Material : Softstone, type X5
Treatment : Surface treated
Surface : Greenish white
Core : Light pinkish brown
Shape : Disc with boss, slightly oval-shaped
Profile : Df-B/Cn/Rcv-b
Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : $3 \mathrm{~L}=2.1 \mathrm{~mm}$. DC diam. $=2.1 \mathrm{~mm}$
Obverse : Symmetrical scene around a stand with large crescent, topped by a star (very damaged), surmounting a large two-eyed bucranium. The pole is framed by two opposed fowls with spread wings. On far sides, two oppsed bull-men are holding up their hands to the crescent.


## Find location : -

Condition : Fragment,
part of the boss and a very small
surface of the obverse are preserved but allow a consistent reconstruction of the profile
Drawing : HD

## Bibliography : -



```
    ASPECT
    Material : Softstone, type X2A
Treatment : Surface treated
    Surface : Whitish
            Core : Light green, opaque, smooth
            Shape : Disc with boss
            Profile : B-Dcx(?)/Cw(?)/Rcv-v
```

            Technique : Deep, sharp V-shaped incision
    
## MEASUREMENTS

Max. diam. : 24.8 mm (estimated)
Boss diam. : 20 mm
Max. thickness : > 12 mm
Rim thickness : > 5 mm
Perforation diam. : 3 mm

## DESIGN

Reverse : 3L $=2 \mathrm{~mm}$. DC diam. $=2 \mathrm{~mm}$
Obverse : Near the edge of the seal, a deep, slightly waving line is fringed by three perpendicular parallel ones, as would the ruffed neck of a bovid. A few other lines beside remain unclear.


Find location : KM 1196 : F6, unknown location (might be a registration error) KM 769 : F3, Trench AC, sq. D:6 Level 7.05
Condition : Complete,
found in two fitting fragments, deep cracks due to overheating
Drawing : HD
Bibliography : KM 1196 : KJERUM 1983,
n ${ }^{\circ}$ 161, p. 72-73
KM 769 : KJARUM 1983,
$\mathrm{n}^{\circ}$ 283, p. 120-121


## MEASUREMENTS

Max. diam. : 22.9 mm
Boss diam. : 18.3 mm
Max. thickness : 13.7 mm
Rim thickness : 7.4 mm
Perforation diam. : 3.5 mm


ASPECT
Material : Softstone, type X3
0
20 mm
Treatment : Surface treated
Surface : Brownish white
Core : Brownish with green lenses
Shape : Disc with boss
Profile : Df-B/Cw/Rcv-b
Technique : Deep, sharp $V$-shaped incision, compass

## DESIGN

Reverse : $3 \mathrm{~L}=3 \mathrm{~mm}$. DC diam. $=2.7 \mathrm{~mm}$
Obverse : A realistic palmtree standing in the middle is dividing the top of the scene into two halves. Lefthands, a ruffed-necked gazelle with long, bent horns is facing outwards while turning its head back inwards. Top left, a curved, slightly distorted line (maybe from a missed incision by the craftsman). On the right side, another palmtree stands at the top of a triangular net-covered shape ( 4 columns $\times 6$ lines), with an almost $90^{\circ}$ angle, maybe to fit in the available space due to the circular shape of the seal. Underneath is a second ruffed-necked bovid, with very long and rear-incurved horns. It s facing right, crouching but with one foreleg raised straight upwards.


Find location
Condition : Extremely eroded on all surfaces.
The perforation shows inside traces of vertical erosion from hanging on a thread
Drawing : HD
Bibliography : KJARUM 1983, n ${ }^{\circ}$ 312, p. 128-129


## MEASUREMENTS

Max. diam. : 26 mm (estimated)
Boss diam. : 19.5 mm (estimated)
Max. thickness : > 10 mm
Rim thickness : $>6.3 \mathrm{~mm}$
Perforation diam. : 3.7 mm

## ASPECT

0
20 mm
Material : Softstone, type B2A
Treatment : Surface treated
Surface : Yellowish white
Core : Dark green slightly translucent
Shape : Disc with boss
Profile : D?-B?/Cw?/Rf?
Technique : Deep, sharp V-shaped incision

## DESIGN

Reverse : 3L = 1.9 mm , only preserved at the junction with the disc. No dotted circle preserved
Obverse : Despite the deep erosion on can recognize three standing men with tiered skirts, two of them facing right, opposed to the third one on righthands. The first one on the left is holding a long vertical stick. A later, deep and wide engraving has been made transversally : a long stick ended righthands by an irregular square and lefthands by a V-shaped fork.


```
    ASPECT
    Material : Softstone, type B2B
Treatment : Surface treated
    Surface : Whitish
        Core : Yellowish green with reddish inclusions and many large black spots of black minerals
                (similar in this to KM 9680 from Al-Khidr), slightly translucent
    Shape : Disc with boss
    Profile : Dcx-B/Cn/Rcv-r
Technique : Sharp V-shaped incision (eroded)
```


## DESIGN

## Reverse : 3L $=1.6 \mathrm{~mm}$. DC diam. $=1.6 \mathrm{~mm}$

Obverse : Bottom center, a bovid facing left, ruffed-necked with long, rear-incurved horns and small tail upwards, is standing underneath three men with the same attitude, raising their arms on both sides. The one in the middle is frontal and wearing a long tiered skirt. The two other ones are facing him on each side, their legs in profile, and wearing short skirts. Topping the scene, two opposed fish with angular shape, separated by a short slanting line above the head of the central man.


Find location : $\begin{aligned} & \text { Trench N2, sq. K:2 } \\ & \text { Level }-1.58 \\ \text { Condition : } & \text { Two big pieces are } \\ & \text { broken on the edges }\end{aligned}$


Drawing : HD
Bibliography : KJARUM 1983, nº 57, p. 32-33

## MEASUREMENTS

Max. diam. : 25.6 mm
Boss diam. : 20 mm


Max. thickness : 13 mm
Rim thickness : 7.4 mm
Perforation diam. : 3.4 mm
0
20 mm

```
    ASPECT
    Material : Softstone, type X6
Treatment : Heated to the core, extremely hardened
    Surface : Light brown with many yellow to pinkish patches, shiny (remains of a very thin eroded surface)
            Core : Homogeneous light pinkish brown
            Shape : Disc with boss
    Profile : Df-B/Cw/Rcv-v
```

Technique : Very sharp V-shaped incision

## DESIGN

Reverse : $3 \mathrm{~L}=1.5$ to 1.7 mm . DC diam. $=1.7 \mathrm{~mm}$
Obverse : An angular structure covered with net pattern stands in the middle, composed of a long vertical rectangle with two lateral branches bent at right angle next to its top. The two side appendices are both topped by a large plain square and linked by a flat crescent above the central pole. On each side they are grabbed by a man sitting on a striped stool, wearing a long tiered skirt.


Find location : Trench A2, sq. E:4
Level - 1.28
Condition : Two big pieces broken
on the edges.
Surface very eroded
and/or encrusted with salty concretion
Drawing : HD
Bibliography : KJeRUM 1983, nº 55, p. 30-31

## MEASUREMENTS



Max. diam. : 21.2 mm
Boss diam. : 18.3 mm
Max. thickness : 9.7 mm
Rim thickness : 4.6 mm
0
20 mm
Perforation diam. : 2 mm

## ASPECT

Material : Softstone, type X1A
Treatment : Heated to the core, extremely hardened
Surface : Yellowish, opaque
Core : Yellowish, opaque
Shape : Disc with boss
Profile : B-Dcx/Cn/Rcv-v
Technique : V-shaped incision, too damaged to be more precisely described

## DESIGN

Reverse : 3L = 1 to 1.5 mm , very irregular. DC diam. $=1.4 \mathrm{~mm}$
Obverse : Symmetrical composition centered around a structure composed of a pair of net squares ( $3 \times 3$ cells) linked from their upper corner to a larger one above ( $4 \times 4$ cells) by two ladder-like vertical bands. It is surmounted by a big rosette ( 10 petals) inside a fringed ring, topped by a crescent. Underneath, a monkey figure lays on its back, its head turned to the left. The central pattern is framed by a pair of opposed bovids, ruffed-necked with long, rear-incurved horns, their head turned backwards. Above them, two men facing each other are raising a branch in their hands towards the rosette and crescent.


```
    ASPECT
    Material : Softstone, type B1
Treatment : Surface treated
    Surface : Greenish beige
        Core : Dark brown
        Shape : Disc with boss
    Profile : B-Df/Cn/Rcv-v
```

Technique : Deep, sharp V-shaped incision, compass

## DESIGN

Reverse : $3 \mathrm{~L}=2.2$ to 3.5 mm , very irregular. DC diam. $=2.7 \mathrm{~mm}$
Obverse : Only the top right quadrant is preserved. A long-necked bird with spread wings stands behind the head of a short-horned bovid, both animal facing left.


```
    ASPECT
    Material : Translucent whitish stone (quartz ?)
Treatment : _
    Surface : Whitish
        Core : Whitish
    Shape : Bifacial disc
    Profile : Df-Df/Rcv-rx
Technique : Deep, sharp V-shaped incision
```


## MEASUREMENTS

Max. diam. : 24.5 mm
Max. thickness : 7.7 mm
Rim thickness : 6.4 mm
Perforation diam. : 3.5 mm

## DESIGN

Side A : Symmetrical composition around a large bevelled-based pole topped by a crecent or pair of large incurved horns. It is surmounting a square divided into four by two intersecting median lines. On either side, under a pattern composed of three vertical, parallel wavy lines joining at their base, a pair of long-curly-haired naked human figures face each other, joining one hand and raising one foot in a kind of dance attitude. Bottom right, two short parallel slanting lines break the symmetry.

Side B : Standing above a short-horned, long-tailed bovid facing right, a similar pole in the middle of the scene is here topped by a rectangle with hanging paired volutes, curling outwards. Two opposed naked bull-men with raised hands frame this group, completed by a vertical small tree pattern in front of the animal. Lefthands behind, a naked, bare-headed human figure also faces the center of the scene, raising his hands forwards.


Find location : Trench F1, sq. J:3
Level -1.77/1.89
Condition : Fragment,
only half obverse of the disc is preserved,

fragments of a thin layer of bitumen
remain inside the incision


## MEASUREMENTS

Max. diam. : 22.8 mm
0
20 mm
Boss diam. : n.a.
Max. thickness : n.a.
Rim thickness : $>6.2 \mathrm{~mm}$
Perforation diam. : n.a.

```
    ASPECT
    Material : Softstone, type B1
Treatment : Surface treated
    Surface : Light brownish
        Core : Greenish black
    Shape : Disc with boss
    Profile : Df-?/C?/Rcv-b
```

Technique : Deep, sharp V-shaped incision

## DESIGN

Reverse : n.a.
Obverse : From the preserved bottom half of the scene, two human figure are facing right on left side, holding each other's hand. They both wear long tiered skirts and heeled shoes. Confronting them, a monkey figure with hairy back and tail is raising its hands towards the men. On top right behind its back remains the lower extremity of an incurved line (crescent of horn ?).


## Find location : -

Condition : Complete,
intense, smooth erosion has partly reached the perforation on side B
Drawing : HD


Bibliography : KJARUM 1983, nº 361, p. 150-151

## MEASUREMENTS

Max. diam. : 17.6 mm
Max. thickness : 5.1 mm
Perforation diam. : 2.4 mm

## ASPECT

Material : Softstone, type A1
Treatment : None
Surface : Black
Core : Black
Shape : Bifacial disc
Profile : Df-Df/Rcx-r (?)
Technique : Deep, wide V -shaped incision

## DESIGN

Side A : Series of straight lines on either side of a long median one. On one half, they draw a tree-like pattern with three branchs on each side of a trunk, beside an isolated stem. On the second half, a slanting long line is surmounted by three short perpendicular ones, one of them bent at right angle, and a few lighter incisions.

Side B : Again separated by a median line, the two halves show a series of short, thick, oval-shaped incisions. First half : five parallel slanting lines surmounted by an thin horizontal one. Second half : two parallel lines one above another in the middle, framed by two symmetric, oblique ones on the sides.

Rim : Two parallel, irregularly horizontal lines run around the seal, partly eroded.


## MEASUREMENTS

Max. diam. : $19.4 \times 20.7 \mathrm{~mm}$ (preserved)
Max. thickness : > 5 mm
Perforation diam. : 4.5 mm

```
    ASPECT
    Material : Shell (mother of pearl)
Treatment : _
    Surface : Yellowish
        Core : Yellowish
        Shape : Circular (?)
        Profile : Convex, rounded
Technique : -
```


## DESIGN

Reverse : n.a.
Obverse : n.a.


## MEASUREMENTS

Max. diam. : 21 mm (estimated)<br>Boss diam. : 17 mm (estimated)<br>Max. thickness : > 7 mm<br>Rim thickness : > 2 mm<br>Perforation diam. : 3.5 mm

## ASPECT

Material : Softstone, type B2B
Treatment : Surface treated
Surface : Yellowish white
Core : Greenish grey, opaque
Shape : Disc with boss
Profile : B-D(?)/Cw/Rcv-f(?)
Technique : -

## DESIGN

Reverse : $3 \mathrm{~L}=2 \mathrm{~mm}$. DC diam. $=2.5 \mathrm{~mm}$
Obverse : n.a.


Find location : -
Condition : Fragment of a boss with upper rim of a disc
Drawing : HD
Bibliography : -

## MEASUREMENTS

0
20 mm


```
    Max. diam. : 25 mm (estimated)
```

    Max. diam. : 25 mm (estimated)
            Boss diam. : 21 mm (estimated)
            Boss diam. : 21 mm (estimated)
    Max. thickness : \(>8 \mathrm{~mm}\)
    Max. thickness : \(>8 \mathrm{~mm}\)
    Rim thickness : > 4 mm
    Rim thickness : > 4 mm
    Perforation diam. : 2.8 mm

```
Perforation diam. : 2.8 mm
```

    \(0 \quad 20 \mathrm{~mm}\)
    ```
    ASPECT
    Material: Softstone, type X4
Treatment : Heated to the core and surface treated
    Surface : Whitish
            Core : Blueish grey, opaque
            Shape : Disc with boss
    Profile : D-B/Cn/Rcv-r
```

Technique : n.a.

## DESIGN

Reverse : 3L $=2.5 \mathrm{~mm}$. DC diam. $=2.8 \mathrm{~mm}$
Obverse : n.a.


Find location : -
Condition : Fragment,

Drawing : HD
Bibliography : -

## MEASUREMENTS

Max. diam. : $20.6 \times 20.9 \mathrm{~mm}$
Max. thickness : 12.9 mm
Perforation diam. : 2.5 mm , irregular shape

## ASPECT

Material : Baked clay
Treatment : -
Surface : Pinkish beige
Core : Pinkish beige
Shape : Irregular conical shape with rounded base, perforated horizontally throught the top
Profile : Ccx-F (?)
Technique : Modelling

## DESIGN

Reverse : -
Obverse : Irregularly eroded surface with no clear pattern.


Scale 2:1

Scale 1:1

## Find location :

Condition : Fragment, complete profile



Find location : Trench F1, sq. H:3
Level -0.30
Condition : Less than one half is preserved,
extremely eroded


Drawing : HD
Bibliography : -


## MEASUREMENTS

Max. diam. : 20 mm (estimated)
Boss diam. : n.a.
Max. thickness : > 8.5 mm
Rim thickness : 7 mm
Perforation diam. : 2 mm

## ASPECT

Material : Softstone ? (grainy light-weighing material, extremely altered)
Treatment : Surface treated (glazed ?)
Surface : Fragments of white cover of unidentified material
Core : Very lightly greenish grey, opaque, matt and brittle
Shape : Disc with boss?
Profile : Df-?/C?/R?
Technique : n.a.

## DESIGN

Reverse : n.a.
Obverse : Unclear due to extreme erosion. A few perpendicular straight lines apparently draw an oblong pattern, with five dots framed inside and a number of others around.


## ASPECT

```
Material : Lightly baked clay
Treatment : -
    Surface : Pinkish beige
        Core : Greyish
        Shape : Grossly circular
        Profile : Ccx-C, rounded angles
```

Technique : Modelling, wide incision made before baking

Reverse : Pattern devided into four quadrants by two median lines still visible on the outer edge. Six grossly circular rings are irregularly dispatched around these.

$\begin{aligned} \text { Find location : } & \text { Trench SN-10-20 I, sq. K-L:5 } \\ & \text { Level - } 0.73 \\ \text { Condition : } & \text { Fragmetnary, } \\ & \text { most of the obverse is missing } \\ \text { Drawing : } & \text { HD } \\ \text { Bibliography : } & \text { KJ } \neq \text { RUM 1983, } \mathrm{n}^{\circ} 160, \text { p. } 72-73\end{aligned}$


## MEASUREMENTS



Max. diam. : 24.7 mm
Boss diam. : 19.9 mm
Max. thickness : 9.5 mm
0
20 mm
Rim thickness : 5 mm
Perforation diam. : 2.5 mm

```
    ASPECT
    Material : Softstone, type X3
Treatment : Surface treated
    Surface : Yellowish
        Core :Greenish grey, opaque, with brown patches
    Shape : Disc with boss
    Profile : Df-B/Cw/Rcv-b
```

Technique : Deep, sharp V-shaped incision, compass

## DESIGN

## Reverse : 3L $=2.5 \mathrm{~mm}$. DC diam. $=2.7 \mathrm{~mm}$

Obverse : Middle center, a series of parallel fringed lines might be the remains of a palmtree. On right side, remains of the short-tailed hindquarters and dotted-circled head of a long horned bovid facing the tree. Two partial incurved lines on top might be symmetrical crescents.

## KMI469



Find location : $\begin{gathered}\text { Trench B2, sq. E:3 } \\ \text { Level } 0.25\end{gathered}$
Condition : Chips around the perforation, eroded surface
Drawing : HD
Bibliography : KJARUM 1983, nº 347, p. 140-141

## MEASUREMENTS

Max. diam. : 11.9 mma
Max. thickness : 4.2 mm
Perforation diam. : 1.5 mm

```
    ASPECT
    Material : Softstone, type X2B
Treatment : n.a. (eroded)
    Surface : Light to dark green with reddish brown patches, slightly translucent
            Core : Light to dark green with reddish brown patches, slightly translucent
            Shape : Bifacial disc
    Profile : Df-Df/Rcv-r
```

Technique : Light V -shaped incision

## DESIGN

Side A : Very fragmentary. Comparison with n ${ }^{\circ} 345$ in KJFRUM 1983 suggest that the ladder-like shape standing in the middle next to a vertical line, might be the silhouette of a man wearing a tiered skirt in a three columns composition.

Side $\boldsymbol{B}$ : Framed inside an irregular rectangle, a beared human face with short straight upwards hair. On right side, a cross surmounts a top-rounded object with a vertical inner division. Two small incisions on left side remain from a non symmetrical design.


Find location : Surface find, 1985
Condition : Complete
All edges and most of the surface
are deeply and smootly eroded


Drawing : HD

## Bibliography : -

0
20 mm

## MEASUREMENTS

Max. diam. : 17.6 mm
Boss diam. : 14.3 mm
Max. thickness : > 7.9 mm
Rim thickness : $>4.6 \mathrm{~mm}$
Perforation diam. : 3 mm

## ASPECT

Material : Softstone, type B2A
Treatment : Surface heated
Surface : Whitish
Core : Dark green
Shape : Disc with boss
Profile : Dcx-B(?)/Cn/Rcv-b
Technique : Deep, sharp V-shaped incision

## DESIGN

## Reverse : $3 \mathrm{~L}=2 \mathrm{~mm}$. DC diam. $=2.5 \mathrm{~mm}$

Obverse : The all eroded surface of the seal allows to see only the bottom of the incisions. However the long tiered dress of a central human figure whose shoulders are partly visible, can be identified. He is standing between two symmetrical rounded shapes with trident extensions which might be footed jars with a long stick coming out of the neck.


Failaka Seals Catalogue - Tell F6 «The Palace»

## Sealing




Find location : Trench F1, sq. J:3
Level - 1.60
Condition : Seems complete except a few chips on edges.
Drawing : HD
Bibliography : KJ $\neq R \mathrm{RUM}$ 1983, nº 334A, p. 134-135

```
ASPECT of the SEALING
    Material : Clay
Treatment : Twisted ropes impression on the backside,
            fingerprints on the upper side around the seal impression
    Surface : Thin white layer on the upper surface only, with a clear straight limit along the side
        Core : Buff ware
    Shape : Irregular rounded rectangle
    Profile : Flattened surface thinned around the edges
            Flat base
Technique : Modelled with the fingers. Due to uneven thickness of the clay,
            the seal has been unperfectly printed and one edge is missing
```



## MEASUREMENTS of the SEALING

Max. length. : 38 mm
Boss width. : 33 mm
Max. thickness : 11.5 mm

## MEASUREMENTS of the SEAL IMPRESSION

Max. length. : 17.4 mm
Max. width. : > 12.6 mm
Max. thickness : -

## DESIGN

Obverse : One main median straight lines is crossed in the middle by several others, one perpendicularly, two others symmetrically slanting, and at least two smaller ones. The two largest quadrants thus designed contain each a large iregular bowl.


Failaka Seals Catalocue - Tell F6 «The Palace»


## KM 811



Find location : -
Condition : Irregular disc
with a plain surface
and remains of a perforation, maybe a blank seal broken while manufacturing
Drawing : HD
Bibliography : -


## MEASUREMENTS

Max. diam. : $28.1 \times 31.3 \mathrm{~mm}$
Max. thickness : > 10.7 mm
Perforation diam. : 1.5 mm


ASPECT
Material : Softstone, type A2
Treatment : None
Surface : Black
0
20 mm
Core : Black
Shape : Irregular oval
Profile : Straight walls
Technique : -

## DESIGN

Reverse : -
Obverse : -


## Find location : -

Condition : Complete,
no alteration
Drawing : HD
0


Bibliography : -

## MEASUREMENTS

Max. diam. : 20.8 mm
Max. thickness : 8.8 mm
$\begin{aligned} & \text { ASPECT } \\ & \text { Material : Unidentified hard stone } \\ & \text { Treatment : None } \\ & \text { Surface : Black } \\ & \text { Core : } \text { - } \\ & \text { Shape : Slightly facetted disc } \\ & \text { Profile : rounded rectangle } \\ & \text { Technique : Very fine smoothing of the surface }\end{aligned}$

## DESIGN

Reverse : -
Obverse : -

## Imdex of Mumbers

Since it was issued in 1983, the publication by P. Kjærum (1983) has been the only reference in use among scholars to quote the seals from Failaka. Therefore it appears necessary to provide a correspondence table of Kjærum's numbering with the official registration numbers in the National Museum of Kuwait (KM nbr), which is the inventory order in this catalogue.

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[^0]:    1 David-Cuny \& Azpeitia, 2012.

[^1]:    3 Calvet \& Gachet 1990, Calvet \& Pic 2008.
    4 Soundings FH and FH1 by the Johns Hopkins University Expedition in 1972-73, unpublished report.

[^2]:    KJÆRUM 1994:320.
    LAURSEN 2010 : 104.

[^3]:    2 BRUNET 2009.
    3 LAW 2001.

[^4]:    6 KJARUM 1983: 9.
    7 Beyer 1989: 136.
    8 See complete references in Law 2011: 178-267, Appendix 7.
    9 Law 2011: Appendices 7-15.
    10 David 2011: 198.

[^5]:    11 CRAWFORD 2001: 21. KJerRum 1994, 1997.

[^6]:    1 David 1990, Hilton 2013.

[^7]:    2 Two are from the "Palace" itself (in this volume) : KM 1079 and KM 1165 (remains of copper wire are described by Kjærum but they are no more visible on this object). The last one was found in 2009 between the "Palace" and the temple by the Kuwaiti-Danish Mission : KM 8314 (to be published).
    3 KM 1165 is a bifacial disc with a straight perforation. The insertion of a metal stem can easily be made without scratching the walls of the perforation. The bad state of conservation of this seal doesn't allow to observe any trace on the edges.

[^8]:    4 Personal experience from the author shows that a freshly sawn piece of softstone, matt and light blue in appearance, becomes smooth and shiny black after a few hours spent in the pocket of one's trousers, simply from continuous rubbing against the soft cloth. Similarly, a bracelet of beads freshly cut out of a greenish-grey grainy stone turns dark green and polished like glass just from being worn on the skin for a few days.

[^9]:    Find location : Trench F2, sq. K:4
    Level -0.16
    Condition : Fragmentary, several pieces missing, height uncertain
    Drawing : HD
    Bibliography : KJÆRUM 1983, nº 391, p. 160-161

[^10]:    Find location : Trench F1, sq. H:3 level -0.30
    Condition : Fragmentary,
    surface smoothed by erosion
    Drawing : HD
    Bibliography : KJIERUM 1983, n ${ }^{\circ}$ 419, p. 168-169

