The excavations at Saar produced the largest single corpus of Bronze Age seals and sealings ever found in Bahrain, the centre of the Dilmun civilization (2000 BC). The material forms a unique record of the art of the period, and provides valuable information about the commercial activities of the inhabitants of Saar.

An introductory text describes the study of seals and sealings, and is followed by a comprehensive analysis of the stylistic and functional attributes of the Saar material. The accompanying catalogue contains full details of over two hundred seals and sealings, and is lavishly illustrated with colour photographs.

The book will be of importance to all those interested in the art of the ancient world, and to researchers working in the expanding area of Arabian archaeology.

It is the second volume in the series of reports on the excavations at Saar, carried out by the London-Bahrain Archaeological Expedition between 1990 and 1999.
## Contents

- Foreword
- Acknowledgements
- Introduction
- The Study of Seals and Sealings
- Characteristics and Current Classification of Dilmun Seals
- Stylistic Analysis of Seals and Sealings from Saar
- Functional Analysis of Seals and Sealings from Saar
- Distribution in Time and Space at Saar; Ownership
- Conclusion
- Bibliography
- Catalogue of Seals
- Catalogue of Sealings
- Catalogue of Tokens
Foreword

For many years scholars and archaeologists have been hard at work investigating the origins and growth of Bahrain’s earliest civilization. Their efforts have been rewarded by the uncovering of many new archaeological sites in Bahrain.

The London-Bahrain Archaeological Expedition began excavations at Saar in 1990. The research has focused on the excavation of a Dilmun settlement dating to the Early Dilmun period, around 2000 BC. The discovery and excavation of this settlement represents important additions to the archaeological heritage of Bahrain, and complements earlier discoveries at Qala’at al-Bahrain, Barbar and Diraz.

This book contains a full account of the seals and sealings from those excavations – wonderful examples of the skills and artistry of the ancient seal manufacturers – and the discussion of their artistic and economic significance provides valuable new information about social conditions of the period.

Mohammed Ebrahim Al-Motawa
Minister of Cabinet Affairs and Information, State of Bahrain

Acknowledgements

This is the second volume in the final publications of the excavations carried out by the London-Bahrain Archaeological Expedition at the site of Saar, on the main island of Bahrain, between 1990 and 1999. This work was only possible because of the generous support of a great number of people. First and foremost, we acknowledge the help of the Ministry of Cabinet Affairs and Information, and would like to thank particularly HE Mohammed Al-Motawa, Minister of Cabinet Affairs and Information, and Mr Khalid Al-Sindi, Superintendent of Archaeology, who has a great fund of information on the seals of the Early Dilmun Period.


We are also grateful for the major support for the publication of this book that we have received from the Ministry of Cabinet Affairs & Information, and from Arab Banking Corporation, Al Ahli Bank, Aluminium Bahrain, Batelco, Bahrain International Bank, Caltex Bahrain, Dilmun Investments and Philip Morris.

My personal thanks go especially to Jane Moon and Robert Killick who suggested that I write this book and who helped me with advice at every stage of its production. Any remaining errors are entirely my responsibility. My warmest thanks also go to Tessa Rickards who drew the impressions of the seals themselves and with whom I spent much time trying to understand the more abstruse aspects of the designs! I am also grateful to Dr Lamia Al Gailani-Werr for looking at an early draft of the introduction.

Harriet Crawford
September 2000
The archaeology of the Arabian Gulf has been transformed in the last twenty years by an explosion of new information. There has been a growing awareness in the Gulf itself and in the rest of the world of the importance of its heritage. This is attributable to a number of factors: to an emergent sense of national identity, to changing economic circumstances, which are forcing formerly oil-rich nations to look to alternative means of generating income, such as tourism, and to the political situation in the Middle East. Recent conflicts have made access to countries such as Iraq and Iran impossible for many scholars, so focussing research on more welcoming regions. Areas such as the Gulf were once regarded as peripheral to the so-called High Civilizations of Egypt and Mesopotamia, and it is only now, as a result of the new data produced by intensified research, that their importance is being recognised. The Gulf is a natural corridor, linking cultures and continents as far apart as Africa, Asia, and India, and the people who lived there in prehistoric times blended many elements to produce a way of life which was well-suited to a difficult environment, and whose material culture had its own distinctive character.

One of the major powers in the Gulf in the late third and early second millennia BC was known in the cuneiform record as Dilmun, a land with the dual character of a mythological country which was the home of the Sumerian Noah, Ziusudra, and a thriving commercial centre. Texts and archaeology together show that by the late third millennium BC the real Dilmun was centred on the island of Bahrain (Potts 1990, p. 181). Recently, thanks to work carried out by scholars from Bahrain and from many other countries, the real Dilmun has begun to emerge from the mists of mythology and can now take its place as a vital entrepot in the network of trade routes which criss-crossed the ancient Near East at this period.

A great deal of information is available on the international trade which underpinned the economy of Dilmun, thanks largely to the cuneiform texts found in Mesopotamia. (For summaries see Potts 1990, Crawford 1998a.) The picture painted by the texts is also supported by the archaeological evidence from the Bahrain Islands. Their most notable archaeological features in the nineteenth century AD, when the first European visitors recorded their impressions of the island, were the great fields of burial mounds. Sadly, these have been extensively robbed over the centuries, but where their contents survive, they paint the same picture of a country with wide ranging contacts. The so-called Royal Graves at Abi, in particular yielded tantalising remains of a sophisticated material culture using a wide range of imported goods and materials.
materials, which included fragments of ivory carvings from pieces of furniture as well as gold jewellery and copper weapons (Reade & Burleigh 1978).

The first extensive modern archaeological investigations of Bahrain produced important evidence on the indigenous culture of the islands, and were undertaken almost fifty years ago by Danish teams under Professor Glob, Professor Mortensen and Geoffrey Bibby (Bibby 1972) at Qala’at al-Bahrain, a large stratified tell site on the north coast of the main Bahrain island. The site apparently covered about 15 ha in the so-called Early Dilmun period, at around 2000 BC (Højlund 2000, p. 60), but much of the early material is deeply stratified under later deposits, making access difficult. In spite of this, the Danish expedition was able to establish a stratified sequence of pottery from the mid-third millennium BC to the Hellenistic period and to identify a short length of the early second millennium BC city wall, with some adjacent buildings (Højlund & Andersen 1994). More recently work has continued at the site under a French team, which has been exploring the later second millennium levels. Professor Mortensen, in a second Danish project, uncovered a temple of approximately the same date as the city wall at Barbar, a village about 3 km to the south-west of Qala’at al-Bahrain which gave further indications of the prosperity of the period and of the technical skills of the builders (Mortensen 1986, Andersen 1986). Imported objects found in the temple, as well as objects made of imported materials, reinforced the image of Dilmun as an important trading nation.

What was missing from the emerging picture of Dilmun, the trading nation, was detailed information on the domestic economy and social structure of the island in the Early Dilmun period, information on how local people actually lived and on how their society was organised. The London–Bahrain Archaeological Expedition (LBAE) was set up in 1989 to begin the work of filling this gap in our knowledge by identifying and excavating a smaller settlement site of the period.

The site of Saar in the north-west of the island was chosen (Fig. 1), because initial work by a joint Bahraini–Jordanian team in the 1980s had established the presence there of extensive remains of an essentially single-period Early Dilmun site covering about 2.5 ha. This lay immediately under the surface, with no overburden, and appeared relatively undisturbed. The earlier work had been suspended, but permission was granted for the LBAE to start work there again in the spring of 1990, since when ten seasons of excavation have taken place.

Permission was granted by the Ministry of Information, State of Bahrain, without whose constant support and encouragement the work of the Expedition would not have been possible. Preliminary reports on the work have appeared as follows: Killick at al. 1991, Crawford 1993, Woodburn & Crawford 1994, Moon et al. 1995, Moon & Killick 1995, and Killick et al. 1997.

The directors of the expedition were Robert Killick and Jane Moon, and the author, who retired as a director after five years.

Fig. 2 Schematic plan of Saar settlement.

Fig. 3 The Saar Temple and adjacent buildings.
The importance of the sea to the domestic economy of the settlement was immediately obvious. Fish and shellfish seem to have been the major source of protein and their remains include many of both the inland and deep-water species found in the waters around Bahrain today. Evidence for agriculture was also recovered, but unfortunately preservation of carbonised plant remains at Saar was poor. However, there is evidence for the presence of small amounts of wheat and barley, together with a little chaff, and there are large numbers of quernstones and rubbers which were probably used for processing plants for human consumption. Dates were eaten in quantity, and one flax seed was also recovered (de Moulins 1997). Sheep, goat and cattle were the main domesticated species, and although a few wild animal bones were found, hunting does not seem to have made a significant contribution to the domestic economy.

The settlement, of which it is estimated that around 75% has now been explored, has four main chronological levels, of which the first, Level 1, was only reached in a number of deep soundings. These indicated that the settlement was much smaller than the one we see today. There was no temple, and the roads did not run on their present alignments. It dates to the late third millennium BC. In Level II there was a major reconstruction and enlargement of the settlement; the present road system was put in place, the temple was built, and the buildings covered approximately the area we see today. In this period the temple dominated the settlement, standing on the highest point at an elevation of around 12 m at the junction of two major roads, called by the excavators ‘Main Street’ and ‘Temple Road’ (Fig. 2). The temple is isolated from the other buildings by two smaller alleys which run north and south of it.

In Level II, the temple (Crawford et al. 1997) was built of the same local stone as the other buildings, held together with gypsum mortar, and the walls were originally heavily plastered both inside and out. It is trapezoidal in shape, 17.5 m long, with a curious bulge in the exterior wall in the northern corner which formed a separate small room, apparently used for storage. A second storage area lay adjacent to it to the south. In the main room, the roof was supported on three centrally placed pillars, two square ones, and a third round one at the eastern end, where a single, rather narrow door gives access to the building. There was an altar on the south wall, decorated with a semicircular plastered feature at the back, the interpretation of which has aroused much interest. It has been suggested that the feature may be a schematic rendering of bulls’ horns, or that it may represent the crescent moon. There is evidence for burnt offerings of fish and vegetable matter having been made on the altar. A platform was built against the east wall, and a bench and low step stood against the north wall at right angles to the platform. All these features are very finely plastered and on the top of the platform the imprint of a rectangular base is still preserved. Outside the building, in the open area to the east, were five circular emplacements.

West of Main Street, and south of the temple, parallel to the alleys on either side of it, is a smaller road leading up to the limestone ridge to the west. East of Main Street, two more small roads have been identified, leading eastwards, parallel to Temple Road, towards a well. The smaller roads divide up the buildings in the centre of the settlement into blocks of not more than four or five units. Main Street itself begins at the northern edge of the settlement and then runs south from the temple for about 200 m before entering a modern garden and becoming impossible to trace. The settlement seems to have had a surprisingly regular layout, which may be the result of some sort of overall plan, rather than of organic growth, although the plan visible today has seen a number of alterations during the life of the settlement. The main street roughly bisects the settlement, while Temple Road is oriented at right angles to it, and towards the façade of the temple itself. The alleys run off the main road at fairly regular intervals, and in one instance at least four buildings, 202–205, share an unbroken back-wall along the street, suggesting that they were planned and built at the same time.

This impression of planning is reinforced by a study of the buildings. About 90 units have now been identified, of which 65 have been excavated to at least the latest floors. All are built of roughly-finished local stone, and the majority of them conform to a single plan, with minor variations. In its simplest form this plan consists of two rooms, an outer L-shaped area and a smaller, inner room. The inner room was normally roofed, but it is not entirely clear if the L-shaped one was or not. In some cases it may have been, but in others it seems that...
In this section a variety of approaches to the study of seals and sealings will be discussed. Each of these approaches can be shown to contribute in different ways to our understanding of the material, economic and social life of the area and period to which the glyptic under study belongs. Historically, stylistic analysis has been the classic approach to the study of seals (Amiet 1980, Collon 1987), partly because that is often all that is possible. Seals are pretty, valuable, easily transportable and highly desirable, with the result that they are often first seen by scholars in collections or sale-rooms far divorced from their chronological and geographical context.

Stylistic analysis, which may include studies of materials, form, iconography, composition and tool-marks, is the only avenue open to scholars in these circumstances. It is widely accepted that style and decoration are forms of communication which can play an active role in the society to which they belong and so may be seen as valuable clues to the structure of that society (Conkey & Haftor 1990). The information conveyed by such means is usually simple, relating to ownership, identity or status, but it can also give us information about the interests, preferences and even beliefs of that society. It is also clear that the presence of an identifiable style associated with any class of material implies the existence of certain rules or conventions in its production. Stylistic studies also suggest chronological and geographical groupings, and can point to connections with material from other periods and other areas, or to artefacts of a different sort bearing comparable decoration, thus giving the material a cultural context.

Two other approaches are particularly valuable when dealing with material from well-provenanced contexts, and are now receiving increasing prominence. It has been shown that functional analyses can yield important results, by looking at evidence for the way in which seals were used and the location in which they were used. These studies can identify individuals concerned in transactions involving sealing, and suggest insights into ancient administrative practices, and into methods for the control and distribution of goods. Such evidence can be derived from the impressions, including those on tablets and door sealings, which may offer evidence on countersigning, or of certain officials undertaking specific tasks, while so-called tokens may have been used for authorising certain transactions. Tags, labels, and impressions on pieces of clay used to seal containers offer other information as the backs of these clay pieces often retain the shape of the objects to which the sealings were originally applied. Seal impressions are not always widely available, as it is only in recent times that techniques of excavation have improved sufficiently to allow for their routine recovery. As a result of improved retrieval, scholars have become increasingly aware of their potential.

Finally, locational studies of the distribution of stylistically related seals and sealings across time and space, both within and between settlements, add another dimension to the picture. Such studies allow us to suggest how widespread the use of seals was, the contacts of the people who used them, and how their use and their stylistic features changed through time. A classic example of this approach is Gadd’s article on the Gulf seals found in the Royal Cemetery at Ur (Gadd 1932).

The following study of the glyptic material from Saar will use each of these approaches in trying to reconstruct an outline of the internal economy of Dilmun in the early second millennium BC. The emphasis will lie here partly because of the nature of the Saar material and partly because this is a little studied aspect of the history of Early Dilmun.

As we noted above, much is already known of its external relations, thanks to the textual references from Mesopotamia, but this resource is not available when studying the internal economy, as no documents dealing with this aspect of life have yet been found.
The study of the glyptic of Dilmun has developed greatly since Gadd’s pioneering article (Gadd 1932), and that of Buchanan, which was able to place the style in its chronological context by publishing the well-known seal impression in the Early Dilmun style found on a datable tablet of king Gungunum of Larsa (Buchanan 1965). These more recent advances are largely due to the work of Poul Kjaerum on the collection of almost five hundred seals excavated from a number of tell sites on the island of Failaka, which lies in Kuwait Bay, and which became part of Dilmun in the early second millennium BC. This study has enabled him to propose a six-fold division of the material, based on a wide range of stylistic considerations. Only his first five categories concern us here; these are the so-called Persian Gulf seals, the Proto-Dilmun, Early Dilmun Style Ia and Ib, and Early Dilmun Style II examples. Style III is undoubtedly later than the material from Saar. In all these groups the seals are predominantly circular stamp seals, whose diameter rarely exceeds 3 cm. They are perforated for suspension and, except in the case of the Persian Gulf seals, are overwhelmingly made of soft-stone/steatite. It has not been possible to sample the stones, so detailed geological identification has not been attempted and the material is referred to generically as steatite. We will now look at the characteristics of each of Kjaerum’s groups in turn.

The Persian Gulf seals are usually made from a variety of unidentified, hard, dark, often slightly speckled stones, which have not been sampled either. The group is further distinguished by a number of other features: the seals are small, rarely more than 2.5 cm in diameter and the perforated back has a small, high boss, sometimes decorated with one or two lines across it (Fig. 8), the height of the seal can be almost as great as the diameter of the disk. Designs are simple, frequently consisting of two motifs at right angles to each other; animal figures are common with occasional, schematic, human figures as well, while a foot is a popular filler motif, and the designs are usually lightly incised, perhaps because of the hardness of the stone. A drill is rarely used. A sub-group of these seals carries Indus or Indus-related signs on them, and the seals themselves tend to be a little bigger. They are also better cut, and in some cases the ratio of height to width is closer to that of the Proto-Dilmun than the Persian Gulf group.

The Proto-Dilmun group, as its name suggests, is a stylistically transitional one. The seals are now predominantly made of steatite, though the hard speckled stone still occurs, and they are larger and flatter than those of the previous group, though the diameter still does not exceed 3 cm (Fig. 10). The backs show a variety of decoration, sometimes with one engraved line, sometimes with more. The dot-and-circle decoration, which is typical of group I is always found as well. The boss is now lower and wider in relation to the diameter of the seal. The motifs become more varied and the composition more complex, while the incised lines become rather deeper. The drill is still hardly used. A distinctive feature is that animal heads are drawn, rather than made with a drill as in Styles Ia/b.

In Kjaerum’s Style Ia the vast majority of the seals are circular stamp seals, and are almost always made of steatite, although rectangular examples with gable backs and a triangular cross-section are occasionally found, as are examples made of ivory, or even pottery. The proportions of these seals are very different to those of the Persian Gulf examples: the height of the seal may be only half the diameter of the obverse, so that the seals are larger and flatter, with wider, lower bosses (Fig. 11). The largest example is one from Failaka, which is 6.5 cm in diameter (Kjaerum 1983, No. 250) but the majority are between 2 and 3 cm. The boss has a standard decoration of three parallel lines running at right angles to the perforation, and four dot-and-circle motifs, two on each side of the lines. The standardisation of the design on the reverse of the seals raises the possibility that they could have been mass-produced, though there is no evidence for this at present, and the explanation for this remarkable uniformity is unknown. It would seem to indicate the presence of formal stylistic rules.

Kjaerum has also shown that the profile of the Early Dilmun style seals varies from concave to straight, to convex, with occasional grooved or angular examples. Style Ia seals correlate strongly with concave profiles. Early Dilmun style seals often appear to be glazed with a white glaze and it is still not clear if this is a proper glaze painted on to the surface, or the result of chemical changes taking place on the surface of the stone as a result of heating. The heating of the stone is said to harden it and presumably took place after decoration (Beyer 1989, p.136).

The designs on the Style Ia seals are more complex (see below), and the figures more skilfully executed than on the Persian Gulf ones. Human figures are more common, and are shown with their torsos frontally, even when the figure is in profile; the foot is often shown with a marked heel, and the head is often schematically rendered, sometimes just by two vertical lines (Fig. 12).

Fig. 9 Linear animal motif from Persian Gulf Style seal (4197:03).

Fig. 10 Back of Proto-Dilmun Style seal from Saar (2402:05; diam. 1.9 cm).

Fig. 11 Back of Early Dilmun Style Ia seal from Saar (5510:15; diam. 2.2 cm).

Fig. 12 Stylistic human figure in Early Dilmun Style Ia (5510:21).
have an angular cross-section, perhaps made by a knife-like creatures are popular figures. The deeply incised lines identifiable by their horned head-dresses derived from the Mesopotamian world, while bulls and a variety of gazelle-lips, are found. Gods are also seen for the first time, becoming more popular and the bull outnumbering the hunch-backed outline (Fig. 15). Animal bodies are less bulky than in the previous style, and the line of the ears, and horns, if appropriate, are then added afterwards. A detailed examination of the tool-marks on the Saar seals suggests that a tubular drill was used for the heads, as circular wear marks can be seen, and the edge of the inner corner is slightly bevelled. The dot which forms the eye may sometimes have been inserted separately, as it is not always central (Fig 13). Alternatively, a double drill may have been used on some examples.\(^*\) The same tool was apparently used to decorate the backs of the seals and the steatite bowls and lids typical of the period which show rows of these dot-and-circle motifs. Kjaerum (1983) suggested that a compass drill was used on the seals, but the scale is so small and the circles so regular that the operation of such a tool would be difficult.

Style Ib is similar to Ia in terms of shape, materials, tools and composition of the design, but there are also one or two distinctive stylistic features such as the clumsy attempts to show figures in profile which result in a curious hunch-backed outline (Fig. 15). Animal bodies are less bulky than in the previous style, and the line of the back is often deeply cut. It seems, on the basis of the evidence from Failaka, that the subject matter also changes slightly, with figures such as the Mesopotamian bull-becoming more popular and the bull outnumbering the gazelle in frequency. Finally, Style II is distinguished by the use of a linear style, the incised lines being semicircular in cross-section, as if made by a burin-type tool rather than a blade, and a point drill is used. The designs are often purely geometric, and the rosette made with the point drill is extremely popular as a motif.

It can be suggested that these stylistic differences are attributable to chronological change. In order to test this assumption it is necessary to look closely at the limited stratigraphic evidence available to us. The best sequence of Persian Gulf and Proto-Dilmun seals seems to confirm that these are the earliest in the chronological sequence and that they do overlap chronologically, as Kjaerum has already noted (1994, p. 349–50). The absence of Style Ib examples from the published City II levels suggests that they are slightly later than the Ia seals, but the area excavated is small, and their absence may simply reflect the accident of recovery.

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Table 1 Seal sequence from Qala‘at al-Bahrain city wall.

On other examples, a jutting chin or beard, and pouting lips, are found. Gods are also seen for the first time, identifiable by their horned head-dresses derived from the Mesopotamian world, while bulls and a variety of gazelle-like creatures are popular figures. The deeply incised lines have an angular cross-section, perhaps made by a knife blade, and the same tool is also apparently used horizontally, rather than on its edge, to gouge out deep, roughly triangular areas which form the torsos of human figures and the bodies of the animals. A drill is widely used, especially for the heads of the animals where a circle represents the head, while a point forms the eye. The nose, ears, and horns, if appropriate, are then added afterwards. A detailed examination of the tool-marks on the Saar seals suggests that a tubular drill was used for the heads, as circular wear marks can be seen, and the edge of the inner corner is slightly bevelled. The dot which forms the eye may sometimes have been inserted separately, as it is not always central (Fig 13). Alternatively, a double drill may have been used on some examples.\(^*\) The same tool was apparently used to decorate the backs of the seals and the steatite bowls and lids typical of the period which show rows of these dot-and-circle motifs. Kjaerum (1983) suggested that a compass drill was used on the seals, but the scale is so small and the circles so regular that the operation of such a tool would be difficult.

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Table 1 Seal sequence from Qala‘at al-Bahrain city wall.

The fragmentary evidence from outside Dilmun clarifies slightly both the relative and the absolute chronology of the seal types. One Persian Gulf seal comes from Level Iib at Tepe Yahya, and is associated with late third millennium BC pottery of Umm-an-Nar type (Lamberg-Karlovsky 1973). A limited number of Persian Gulf and Early Dilmun style seals have also been found on the Arabian Peninsula. There is a Persian Gulf seal from Dhahran (Piesinger 1983, Fig. 186:11), a Persian Gulf, or perhaps more accurately, a Proto-Dilmun* example, unusually made of ivory, from the Umm-an-Nar grave at ‘Tell Abraj (Potts 1998, p. 327, Figs. 1734 & 1735, Nos. 10 & 11), and another from City Ib’s levels, and one (ibid., p. 325, Fig. 1731, No. 7), which cannot be assigned to a stratigraphic context. It can be seen in this small sample that the earliest well-stratified seals come from City Ia and that the Persian Gulf, Indus-related, and Proto-Dilmun seals, overlap in time (Table 1). There is then, apparently, a straightforward chronological progression to Style Ia, although Kjaerum warns against such a simplistic interpretation. No examples of Style Ib or II are found at the site. If we look further afield, the collection from Failaka, thought to be rather later in date than early City II, contains no Persian Gulf or Proto-Dilmun seals; Ia and Ib seals predominate. It also contains Style II examples and the undoubtedly later Style III seals. It must, however, be remembered that many of these seals are from re-deposited fill so their chronological usefulness is very limited. The absence of Persian Gulf and Proto-Dilmun seals seems to confirm that these are the earliest in the chronological sequence and that they do overlap chronologically, as Kjaerum has already noted (1994, p. 349–50). The absence of Style Ib examples from the published City II levels suggests that they are slightly later than the Ia seals, but the area excavated is small, and their absence may simply reflect the accident of recovery.
The largest corpus of Gulf material outside the region comes from the southern Mesopotamian city of Ur, but few of the seals were in good stratigraphic contexts, and there is no useful stratigraphic evidence to be gained from this site. Once again, Style Ib and II examples are absent (Mitchell 1986). A collection of one Persian Gulf and several Style Ia and I-related seals has been published by Amiet. They are from Susa and all come from the period of the sakkakim in the early second millennium BC, but further chronological precision is impossible (Amiet 1972). To the south-east, a few Early Dilmun style seals are known from the Indus Valley, such as one from Loha at Lohan (Cleuziou et al. 1998). This scheme would put the fall of Ur and the Persian Gulf seals with Indus Valley signs on them, while many of the remainder have only individual or damaged motifs. About ten percent are well enough preserved to be able to study the relatively large and varied corpus of well-stratified, well-dated glyptic material from Saar. The aims of the study are: to continue the task of reconstructing the social and economic life of a large village or small town of the early second millennium BC on the main island of Bahrain, to look at the external contacts suggested by the designs on the seals, and to investigate the modifications of the existing stylistic and chronological classification can be suggested. A total of ninety-five seals and fragments of seals have been recovered from Saar, all of them of Persian Gulf, Proto-Dilmun, or Early Dilmun Style I types. Five or six can be attributed to the Persian Gulf group and three to the Proto-Dilmun group and Early Dilmun Ib, and another to either Early Dilmun group Ib or group II; the rest all belong to group IA. It is more difficult to be precise about the number of sealings found, as many are extremely friable and very fragmentary. More than two hundred and twenty sealings or fragments of sealings have been registered, and many entries consist of a number of small pieces. Most of the impressions from this site and many of the sealings are of good quality fine clay, which takes a clear impression, although inclusions are sometimes present, and many show clear finger-prints round the sides of the impression, where it was pressed onto the container. All the designs are in one of the local styles: there are none from outside Dilmun. It is probably accurate to say that about a fifth of the total have no visible design on them, while many of the remainder have only individual or damaged motifs. About ten percent are well enough preserved to be able to reconstruct complete composition, and all but one of these are in the Early Dilmun Style I tradition, the great majority belonging to Style Ia. Rather surprisingly, no instance has been found of an impression which was made with a seal of a style other than, there are no consistent parallels in the designs. There are no sealings from Persian Gulf seals, and only one which appears to be from a Proto-Dilmun seal (1105:02). A very small number of Style Ib impressions have been identified (for example, 2171:02, 5176:07). A final group of sealed material is provided by fourteen tokens, most of which have already been identified elsewhere (Cleuziou 1994, p. 15176:07). The corpus of sealings from Saar, though there are hardly any seal impressions from this site and many of the finds are poorly stratified, as we saw above. The corpus from Qala’at al-Rabban is much smaller than that from Saar, comprising twenty-one complete seals, one seal impression on a jar, one tag, one token and a number of seal blanks (see above p. 18, & Kjaerum 1994). The Saar seals are closely similar to those previously published examples, in shape, size and materials. Amongst the Persian Gulf seals the stone appears to the naked eye to be rather harder than the soft steatite used for the Early Dilmun style seals, which may help explain the simplicity of the designs and shallowness of the cutting on this group. Amongst the Early Dilmun style examples almost all are of steatite. Exceptions are one example made of reddish clay (5196:01), one, or possibly two, of ivory (1098:03, 2109:01) and one made of a curious, mottled, red stone, white on the surface (5155:10). There is also a small group of four shell disks, made from the apex of conch shells, which may be seals. These are perforated (2142:11, Q20:22:07), but the

### Stylistic analysis of seals and sealings from Saar

This section will use the three approaches discussed above, namely stylistic, functional and locational, to study the relatively large and varied corpus of well-stratified, well-dated glyptic material from Saar. The aims of the study are: to continue the task of reconstructing the social and economic life of a large village or small town of the early second millennium BC on the main island of Bahrain, to look at the external contacts suggested by the designs on the seals, and to investigate the modifications of the existing stylistic and chronological classification can be suggested. A total of ninety-five seals and fragments of seals have been recovered from Saar, all of them of Persian Gulf, Proto-Dilmun, or Early Dilmun Style I types. Five or six can be attributed to the Persian Gulf group and three to the Proto-Dilmun group and Early Dilmun Ib, and another to either Early Dilmun group Ib or group II; the rest all belong to group IA. It is more difficult to be precise about the number of sealings found, as many are extremely friable and very fragmentary. More than two hundred and twenty sealings or fragments of sealings have been registered, and many entries consist of a number of small pieces. Most of the impressions from this site and many of the sealings are of good quality fine clay, which takes a clear impression, although inclusions are sometimes present, and many show clear finger-prints round the sides of the impression, where it was pressed onto the container. All the designs are in one of the local styles: there are none from outside Dilmun. It is probably accurate to say that about a fifth of the total have no visible design on them, while many of the remainder have only individual or damaged motifs. About ten percent are well enough preserved to be able to reconstruct complete composition, and all but one of these are in the Early Dilmun Style I tradition, the great majority belonging to Style Ia. Rather surprisingly, no instance has been found of an impression which was made with a seal of a style other than, there are no consistent parallels in the designs. There are no sealings from Persian Gulf seals, and only one which appears to be from a Proto-Dilmun seal (1105:02). A very small number of Style Ib impressions have been identified (for example, 2171:02, 5176:07). A final group of sealed material is provided by fourteen tokens, most of which have already been identified elsewhere (Cleuziou 1994, p. 15176:07). The corpus of sealings from Saar, though there are hardly any seal impressions from this site and many of the finds are poorly stratified, as we saw above. The corpus from Qala’at al-Rabban is much smaller than that from Saar, comprising twenty-one complete seals, one seal impression on a jar, one tag, one token and a number of seal blanks (see above p. 18, & Kjaerum 1994). The Saar seals are closely similar to those previously published examples, in shape, size and materials. Amongst the Persian Gulf seals the stone appears to the naked eye to be rather harder than the soft steatite used for the Early Dilmun style seals, which may help explain the simplicity of the designs and shallowness of the cutting on this group. Amongst the Early Dilmun style examples almost all are of steatite. Exceptions are one example made of reddish clay (5196:01), one, or possibly two, of ivory (1098:03, 2109:01) and one made of a curious, mottled, red stone, white on the surface (5155:10). There is also a small group of four shell disks, made from the apex of conch shells, which may be seals. These are perforated (2142:11, Q20:22:07), but the
Early Dilmun Seals from Saar

The Persian Gulf seals in the Saar corpus are similar to previously published ones: all but five of them are round, perforated, and decorated on the reverse of three lines and four dot-and-circle motifs. Even the four rectilinear examples (5198:03, 5196:01, 6535:01, & I14:20:10), of which one is ivory and one ceramic, have the same design on the backs (Fig. 16). Most of the seals show traces of glaze (Beyer 1989). A single cylinder seal (4741:11), made of creamy white stone, completes the collection from Saar. In spite of its shape, the style of the cylinder seal is unmistakably Early Dilmun, and closely comparable examples have been found at Uša, Susa, and on Failaka (Al Gailani-Werr 1986).

The accepted classification of Early Dilmun period seals used form, design motifs and principles of composition which can be one of the most useful diagnostic criteria in classifying glyptic art (Matthews 1990). If we look at the Saar corpus, marked differences in composition are seen between the Persian Gulf and Early Dilmun style examples. The Persian Gulf seals appear to be designed according to different formal principles from the Early Dilmun ones. They typically show one or two figures, usually of animals, often arranged one above the other, with one figure inverted and at right angles to the first. Where inscriptions in the Indus script are found, they normally lie round the periphery of one segment of the seal. Filler motifs may be scattered across the surface of the seal in an apparently random manner. With the Proto-Dilmun seals the motifs begin to be better disciplined, and integrated scenes are depicted.

The composition of the Early Dilmun style designs is much more complex, and varies from the formal to the chaotic. The formal designs frequently show two opposing figures, often a human and an animal, on opposite sides of a central motif such as a branch or a tree (4350:01 or 6583:01), and the feet of the figures are carefully aligned at the same level. By contrast, the chaotic designs have human and animal figures leaping across the surface of the seal at a variety of heights (see 2570:01). Other compositions include a particularly interesting group of seals which shows rotating designs, often composed of animal heads, with the necks joined in the centre of the seal to form a sort of wheel (Fig. 17). These are much less common than the types discussed above: only two seals with this design were found (G17:18:02 & 7008:05). A closely related composition showing four animal heads can be seen on one side of a tag (2070:11). Similar rotating designs are found at the Barbar temple, and on Failaka (Beyer 1989, Nos. 278-280; Kjaerum 1983, Nos. 1 & 3). This design was first discussed by Porada in a seminal article (Porada 1974), and since then it has been possible to extend the parallels which she noted from Syro-Anatolia to include more examples from the Indus Valley and Central Asia, most of which also date to the first quarter of the second millennium BC.

Other compositions identified on the Saar seals include files of figures (K16:29:03), well-known from Failaka, seals where the surface is divided into four quarters with a different motif in each (as on 2535:01), and one example of a mirror-image design, where the same figures are repeated first in one plane and then at 180° (1024:06). A broken impression from the temple apparently shows a similar type of design (1612:10; Crawford and Matthews 1997, p. 109), and it too occurs occasionally on Failaka (Kjaerum 1983, No. 217). On rare examples two registers, or perhaps more accurately two superimposed designs, are seen, as on 4025:14.

The two most favoured compositions on the Early Dilmun style seals are the opposed figures described above, which account for 18% of the designs, and a design dominated by a single figure with subsidiary motifs around it (Fig. 18), which is found on about 20% of examples. These two compositions account for 48% of the total. Only about thirty of the seal impressions are complete enough to establish the composition of the design, and here opposed designs account for 30% of the whole, and designs dominated by a single figure for roughly 15%, giving 45% of the total available for study, a comparable figure to that noted for the seals.

The subject matter of the Persian Gulf seals is also very different from that of the Early Dilmun style examples. As we saw above, the Persian Gulf seals often depict one or more animals in a rather random association. Unusually, one seal from Saar (4139:01) shows a schematic human figure of indeterminate sex with arms and legs wide apart, but human figures are rare and crudely portrayed. A foot is a popular filler motif, and insects and birds are also found. (For a full discussion see Kjaerum 1994, table on p. 342 and accompanying text.) Similar scenes remain popular on Proto-Dilmun examples, and simple scenes of people drinking or sailing in a boat are also found.

By contrast, the scenes portrayed on the Early Dilmun style Saar seals are extremely varied, and almost all are figurative, with animals in particular depicted with great vitality. Many scenes show an elegant horned
animal, which may represent a gazelle (Fig. 19). Sometimes it has short straight horns, sometimes long curved ones, so it is difficult to know if we are looking at the same species at different stages of its development, or at different sexes of the same animal, or whether different animals are being shown. The gazelle is native to the Bahrain islands, and is today regarded as a symbol of good fortune in some parts of the Gulf region. The gazelle is also a favourite metaphor for grace and beauty in Arabic poetry. It is tempting to speculate that similar attitudes prevailed four thousand years ago and that this explains the animal’s popularity on the seals. Bulls are also shown, but are less common than the gazelle at Saar. This is not the case on Failaka where the bull predominates (Kjaerum, personal communication).

Other creatures include scorpions, snakes, turtles, fish, birds with long necks, a monkey or mongoose-like creature, and composite monsters often with horns and clawed feet.

The human figures depicted are almost invariably male, except in a small number of erotic scenes, where a female is shown with her legs wide apart, engaged in intercourse (Fig. 20). Seals showing women in a similar posture have a long tradition going back into the third millennium BC in Elam, at both Susa and Anshan (Amiet 1986). The men on the seals have schematically drawn heads, often with long, exaggerated chins, or beards. They may be dressed in long tiered skirts, in short ones, or be nude, but frequently appear to be wearing a hemispherical cap. They are shown engaged in a number of activities, and associated with a number of symbols, the interpretation of which is often difficult. Kjaerum sees the net or hatched rectangle as a podium (Fig. 21), but it may be no more than a fishing net; his “door symbol” is perhaps a shield, with spikes at the base to enable it to be stuck upright into the ground (Fig. 22), while the hatched lozenge defies all attempts at interpretation!

The scenes involving men may show them in a file with other men, or holding a shield, or with one or more animals, probably engaged in hunting. One example shows the aftermath of the hunt, with a man striding along with the carcasses of two gazelle strung from a pole across his shoulders (Fig. 23). A seal from a grave at Al-Maqsha shows an identical scene (Traces of Paradise, p. 106, No. 149). On another seal (Fig. 24), a man is seen apparently riding an animal, whose ears and muzzle are slightly damaged, but which appears to be an equid, possibly a horse rather than a donkey. The first references to riding horses are found in texts of early second millennium BC date from Mesopotamia, and such scenes begin to appear occasionally on seals at about the same time (Molleson 1994). Another fine example, with a recessed border (1580:01), shows a man in a short skirt holding a horned animal on either side of him, in a classic portrayal of what has become known as the ‘Master of the Animals’ (Frankfort 1954, p. 102). This is a theme with a long history in the ancient Near East and it is found in Egypt as well as Mesopotamia and Elam.

Drinking or symposium scenes showing two figures, one on either side of a jar, are not as common in the Saar corpus as they are on Failaka, but one example is present (5774:01). A unique scene (Fig. 25) shows a seated figure holding a pan balance of a type found in the Early Dilmun period graves at Madinat Hamad, and now displayed in the National Museum of Bahrain. Scales of this sort are still used by pearl merchants in the Gulf today, as well as by vendors in many less-developed parts of the world, thus providing a vivid reminder of the continuity of the strong mercantile tradition in the region. All these types of scene, except that with the balance, have parallels in the published repertoire of Early Dilmun style glyptic (see, for example, Al-Sindi 1999). In addition to the scenes representing the activities of human beings, two seals from Saar show gods, identified as such by horned head-dresses identical to those seen on the gods of Mesopotamia, Elam and Susa. In the first (P19:01:10), a seated god drinks through a straw from a pot at his feet. He is attended by a naked human figure, a gazelle, a scorpion, and a variety of symbols. The second seems to show the murder of a seated god by a human figure who stabs him while another looks on, his hands raised in horror (Fig. 26). In the absence of texts it is not possible to identify...
The great majority of the Saar seals belong to Early Dilmun Style Ia. In addition there are a few examples of Style Ib, where the line appears to have been cut with a finer, more pointed tool, and human figures are shown with their torsos in profile, giving a curiously hunch-backed effect (see, for example, seal 5200:01, impression 2171:02 and, perhaps, 5176:07). One purely geometric seal which shows the use of the point drill may even belong to Kjaerum’s Style II (2109:01), as may a single impression (2141:01). These categories are not absolute, and shade gradually from one to another, so that it is not always possible to attribute a seal to one group or another with any confidence. One seal (K16:53:10) illustrates this mixture of styles well, as the hunched shoulders of the central figure are close to Style Ib examples, while the high-heeled feet and the animals belong to Ia (Fig. 28). Some seals, such as K16:29:13 with its schematic dancing figures on either side of a monstrous snake, are sufficiently unusual that it is difficult to fit them into any of the existing categories.

A detailed stylistic study of the Style Ia seals from Saar suggests that two sub-groups can be distinguished, and may represent the products of individual craftsmen or workshops as all seem to be broadly contemporary. No evidence for seal manufacture has been found at Saar itself, but as noted above, a workshop is thought to have been present at Qala’at al-Bahrain in City II as unfinished seals were found there (Kjaerum 1994, p. 337).

Unfortunately, no finished examples from this workshop were identified, so we do not know what its products looked like, and so cannot link it with any of the Saar groups. The first of the Saar sub-groups is characterised by seals with a convex profile, showing spidery, schematic human figures drawn with a lightly incised line, although other tools can be used as well to depict the torso or an animal’s body. Examples of this group include the man with the pan balance discussed above, a seal showing a nude male holding a shield (3302:01), and two other possible examples, 2070:05 and 2535:02. In one instance, on seal 4302:01, the main figure has ridiculously elongated legs, and the workshop may be referred to as the Spiderman workshop (Fig. 29). Similarly elongated legs, apparently incised with a burin type tool, can be seen on three impressions (1021-03, 04 and 1856:01) which may all come from the same seal. Only one example of this style is present amongst the published seals from Failaka (Kjaerum 1983, No. 65), so it is tentatively proposed that this group originates on Bahrain.

A second, ‘Elegant’, group consists of five seals15 from the secular buildings and one from the temple, distinguished by exceptionally fine execution and well-balanced, usually opposed designs. The animals shown frequently have distinctive ‘knobbed’ or feathered horns (Fig. 30). All belong to Kjaerum’s group Ia, and all include a fine ‘gazelle’ with its head turned back over its shoulder in a pose characteristic of the design. Five of the six have concise profiles, while one has a straight one. It is tempting to see these too as the product of a single workshop or craftsman. A similar example from Qala’at al-Bahrain (Kjaerum 15. I am grateful to Julian Read for this suggestion.

16. Nos. 1040:01, 1853:18, 2031:06, 2171:01, & 2171:01. A second example, K16:1031:01, is published in Crawford et al. 1997, p. 57, Fig. 22.

pa, 1997, p. 337, Fig. 22.)
The execution and style of the design inside the border vary considerably (compare, for example, Saar seals G16:01:01, 1580:01 and 4300:04).

The style of the majority of seals and sealings from Saar is typical of the Early Dilmun period but there are certain motifs from this group, and from the Persian Gulf group, which appear to be borrowed from other parts of the Near East, and which demonstrate the contacts between Bahrain and its neighbours. A study of these motifs suggests foreign links which are not apparent in other classes of material.

The stylistic links between one sub-group of Persian Gulf seals, and seals from the Indus Valley, are well known, but questions about their chronological relationship remain. This sub-group is generally better executed than the rest of the Persian Gulf group: it sometimes shows the typical Indus bull, and may be decorated with characters from the Indus script. In shape however, it fits neatly into the Persian Gulf category. Sometimes the script is used as in the Indus Valley itself, but sometimes it seems to record names or words in a language which is not the same as that used in the Indus Valley (Brunswig et al. 1983, p. 106). It has been suggested that this group was made in Dilmun, perhaps for use by merchants trading with the Indus Valley.

It is still not possible to say whether these Indus-related seals are the earliest seals found in the region, so suggesting an Indus progenitor for all Dilmun seals. The stratigraphic evidence is simply not precise enough to allow us to say whether they are earlier or later than other Persian Gulf seals. The sequence from Qala’at al-Bahrain is, as we have seen, the best stratigraphic evidence available, but here both Persian Gulf and Indus Valley related seals appear together in City Ia (Table 1, 9 Kjaerum 1994). Single finds of this type of seal, like that from a grave with two alcoves, of standard Early Dilmun period type, in Madinat Hammadi, are also impossible to date with any greater precision (Saavastava 1991). No seals with Indus script on them were found at Saar, so no light can be thrown on this specific problem.

The question of whether all Persian Gulf seals derive from Harappan originals can still not be answered; it remains possible that Persian Gulf seals represent a pre-existing local tradition which then adapted certain foreign traits to its own requirements. One observation may point to the pre-existence of a local glyptic tradition: there is no evidence from the early part of City II for rectilinear seals, the shape typical of the Indus Valley seals. The earliest seals we have from Dilmun are circular, a shape typical of the Gulf, and only a small proportion of these circular seals carry designs which can be related to the Indus. This may suggest that a local tradition was already established before contact was made with the Indus Valley. Had square Indus Valley seals been the origin of the Persian Gulf ones, one might have expected the earliest ones to be rectilinear too. On balance, it is difficult to make a strong case for Persian Gulf seals deriving from Indus Valley ancestors, although the contacts between the two cultures are obviously of considerable importance. This is confirmed by finds at Qala’at al-Bahrain, and at other sites, of considerable amounts of pottery which apparently comes from what Holm has called the ‘Eastern tradition’, and of items like the square polished weights which also originate in the Indus Valley (Holm & Andersen 1994, p. 118).

The Early Dilmun style seals, by contrast, show little evidence for influence from the Indus Valley, probably because the Harappan civilization was already changing and waning at the beginning of the second millennium BC.

Other artefacts, such as the weights on the Indus system mentioned above, continue to be found so that contact was not lost, but the glyptic suggests that contacts to the north were of considerably more significance in terms of the iconography. The cylinder seal from Saar has already been mentioned, and this is, of course, a quintessentially Mesopotamian artefact. The fact that the design is unmistakably Dilmun suggests that a blank seal may have been brought back to the island and decorated there in the local style. Alternatively, the seal may have been cut in Mesopotamia to a Dilmun design. (See Al-Gailani-Werr 1986 for seals from Ur and Susa.)

In addition, certain motifs on the stamp seals have also long been associated with Mesopotamia, most notably perhaps the gods with horned head-dresses and flounced kurnakes seen on two examples from Saar. These characteristics also appear on seals from the adjoining areas of North Syria and Elam, so it is difficult to know which of these was the contact zone. Other ‘Mesopotamian’ motifs include bull-men, popular on Style Ib seals, and some of the well-known drinking scenes. In the Early Dilmun style examples the figures often drink through a straw from a jar at their feet, rather than from a jar raised on a stand, or from a cup, as in Mesopotamia (5774:01 and P19:01:10). This scene with the jar on the floor is more common in Syria than in Mesopotamia, and the influence of this region can also be seen in the curious monkey or mongoose-like creature on a number of Early Dilmun style seals, although the creature does appear as a filler motif on certain Old Babylonian seals in the south, and on others at Susa. Another motif deriving from north Syria is the loped table with bull’s hooves, which can be seen on one of the erotic seals from Saar (Fig. 32), and on others at Failaka. These parallels with north Syria were summarised by Kjaerum (1996).

These parallels in the iconography are not unexpected when one recalls the textual evidence for Dilmun merchants at Bīlà, for instance, and the apparent use of the Dilmun standard of measurement here. (For a summary see Potts 1986.) It is somewhat curious, in view of the textual evidence from Ur, that there are not more specific iconographical parallels to be drawn between the glyptic repertoire of south Mesopotamia and that of Dilmun. It should be remembered that the
Mesopotamian glyptic of the early second millennium BC was somewhat formal and rather limited, but in the north the designs had more vitality and more variety, which may have made them more attractive to visiting foreigners. Perhaps we should also begin to consider the possibility that our view of the prime importance of contacts with south Mesopotamia has been skewed by the textual evidence found at Ur?

There is also textual evidence for contacts with Syria and north Mesopotamia. Six Mari texts mention contacts between Shamsi-Adad of Assyria and expeditions from Dilmun (Eidem & Højlund 1993), so it is hardly surprising that the seals too show evidence of this. Seals and sealings from Assyria itself are relatively rare and some of the best examples of the Old Assyrian style come from the Assyrian trading colony of Kültepe/Kanesh. This corpus provides a number of parallels with the iconography of Dilmun; the hemispherical hat worn by some of the male figures on Early Dilmun style seals can be seen on seals such as that shown in Özgüç 1989, Pl. 91.1; the crossed animals seen on F18:33:16 (Fig. 33) can also be matched in the same group of seals from Kültepe (ibid., Pl. 82.4); the schematic snake seen on Saar seal K16:20:13 can be seen on another Kültepe seal impression (Özgüç 1968, Pl. XXVII.2); finally, the dramatic seal apparently showing the murder of a god (5168:01) watched by a second human figure whose hand is raised in front of him. This hand is depicted with only three fingers, a so-called toasting-fork hand of a type long known east of the Tigris (Teissier 1987, p. 45), and is typical of the Old Assyrian seals found across north Syria and into Anatolia in the early second millennium BC (for example, Özgüç 1989, Pl. 84.2). The other motifs discussed may originally have derived from Sumer, but this depiction of a hand seems to be specifically ‘Tigridian’.

The evidence of the texts shows that some contacts with Assyria were via the important trading city of Mari, but they cannot all be assumed to have been commercial in nature. Eidem and Højlund (1993) have raised the interesting possibility that the events described in the six Mari letters relate to a single diplomatic contact rather than to a number of different commercial ones. This may be the case in this instance, but the Bibl texts certainly suggest that commercial contacts existed with Syria, if not with Assyria, and it seems unrealistic to suggest that this trade by-passed Mari. These contacts must surely have been by the well-established Euphrates route. In addition, it can now be suggested that contacts with North Mesopotamia, whether diplomatic or commercial, may also have followed a second route of great antiquity, which ran from Dilmun to Susa, and then east of the Tigris through the Hamrin valley to Assyria.

The links between Susa and Dilmun are well attested in the texts and the archaeology. It has already been mentioned that the erotic scenes showing women with their legs wide apart, found in the Early Dilmun style seal repertoire, show links with simpler scenes, with a long prehistory in Elam. One Persian Gulf seal with Indus writing, three Early Dilmun style seals, two cylinder seals decorated with Early Dilmun style motifs, and one possible Dilmun sealing from a lenticular bulla were found at Susa, and are illustrated by Amiet (1972, Nos. 3643, 1714–18, 1975, 2021 and 240). The usage of the route north from Susa at this period is suggested by a single Dilmun seal found in the treasury of the Krittum temple at Ichali in the Diyala valley (Hill et al. 1990), and by a dedication to Inzak of Dilmun by a king of Bushunnna on a stone amulet found on the island of Cythera (Potts 1990, p. 225).

There is also evidence for contact with even more distant areas. The gable-backed seals from Saar (1098:03, I14:20:10), belong to a group whose shape is typical of eastern Iran and Central Asia. These, like the cylinder seal discussed above, may also have been imported as blanks, though one of the half-worked seals from the workshop on Qala’at al-Bahrain is triangular in shape, pointing to a different conclusion (Kjaerum 1994, p. 339). It has already been mentioned that the rotating designs of animal heads found on Early Dilmun style seals can also be matched in this area, while a single example of a so-called Murghab seal, from modern Turkmenistan, has been identified in the Bahrain National Museum (Crawford & Al-Sindi 1995).
Functional analysis of seals and sealings from Saar

A large number of different but related functions have been suggested for seals and the impressions they make. All the functions relate to the central idea that the design on the seal is specific to its owner and is unique. The owner does not have to be an individual; it can be an institution, a government department or a business, so that in some cases the seal becomes a badge of office as well as an identification. The design on a seal conveys this identification to the initiated observer, and that information can be interpreted in a number of different ways, depending on how the seal is being used; it can simply indicate ownership when impressed on a package, or it can show acceptance of the terms and conditions laid down in a document, much as a signature does; it can guarantee a transaction or validate it as an official stamp does today; it may even act effectively as a trademark, indicating the manufacturer of a commodity. Further possible functions are amuletic and decorative. It is possible, for example, that the Persian Gulf seals from Saar may have been used primarily as amulets, as no impressions from this type of seal have been found, suggesting that the seals were not primarily used for the practical purposes outlined above. We cannot rule out the possibility that some of the Early Dilmun style seals had an amuletic function too, in addition to their use for more immediately practical purposes. A single seal may have played a number of different roles throughout its life, depending on the status of its owner. We may also suggest that as society became more complex the uses of the seals diversified to meet the new demands without necessarily losing their earlier functions.

Seals and sealings as identification

There are no clay tablets from Saar, so we have no direct evidence for the use of seals to sign or validate such documents. Clay tablets represent a technology which was apparently foreign to Dilmun, but two Early Dilmun style seal impressions are known on tablets from other places. One is the Gungunum tablet referred to above (p. 20), and the other is a tablet from Susa recording a commercial transaction involving copper (Lambert 1976), so their use for this purpose can be demonstrated from the period.

The evidence for the way the seals were used at Saar comes mainly from the marks on the backs of the impressions. A small group of impressions are bifacial, and so do not carry impressions on the reverse. This group consists of the so-called tokens (see below p. 35), and a relatively small group of tags or labels and disks. Two roughly oval flat tags were found, which are marked by two seals, and which were originally attached to a string, probably used to secure a package. In the better preserved example (Fig. 34) we can see a different design on either side of the ‘label’, two human figures and a hatched rectangle on one face, and a rotating design of four animal heads on the other. The second example (5016:02) also apparently shows two impressions, this time superimposed on the same side. It is interesting that one of them does not seem to come from a circular stamp seal, as the edge of the impression is straight. Unfortunately the design is very damaged and cannot be attributed to a specific stylistic group, but a hatched rectangle on one seal, and a man and an animal from the seal with a straight edge, can be seen. These are the only cases where we may have evidence for what could be some form of administrative countersigning, by which goods were double-checked by two officials or departments before being sent out, with each official adding his seal in turn. This sort of procedure is discussed by Dittman (1986, p. 339), who in one instance detects four levels of bureaucracy. Alternatively, we could propose that on the Saar examples the seals belonged to equal partners in a venture, as there is no other evidence from the site for the existence of an administrative hierarchy. There are no cases where a sealing from the town has in it the sort of pinhole which was seen on a number of the sealings from the temple, and which it was suggested may have represented some checking of goods being sent to the temple (Crawford & Matthews 1997, p. 48).

In addition to these tags, we have part of another lentoid example, originally squeezed round a knot, and with a single impression (Fig. 35); there are also fragments of two circular disks with flat backs, one with string running through the centre (5210:06), and the other with string marks on the reverse (1136:07). The former has part of a design showing a seated nude figure and a gazelle, the second has no preserved design. There is also a single disk with a convex back (1029:02), apparently originally attached to a string which did not run all the way through it, suggesting that the disk was suspended from the end of the string. There are three more seal impressions which may have served a similar purpose, but they are distinguished by their shape. Each was part of a solid ovoid bulla, and all have string impressions running through them; only one (5136:06) has a fragmentary impression surviving on the exterior. In these cases we seem to have seals used for identification either of the sender or of the addressee of goods. The Saar seal impressions seem to have been most frequently used to show provenance. They seem to have been torn off a variety of packets, parcels and jars, in the buildings where they were to be used. This suggests that they do not usually denote ownership by the person in whose house they were found for there is little point in marking your ownership of goods which you are about to use yourself. It seems more likely that the seals were usually affixed by the sender or seller of the goods and were ripped off and discarded by the consumer. Some support is found for this suggestion, as there is not a single instance where impressions from a building match the seals found in it. If this proposition is accepted then it follows that the

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Fig. 34 Tag impressed with two different seals (2570:11; 2.2 x 3.2 cm).

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Fig. 35 Lentoid tag (3503:05; 3.4 x 2.8 cm).

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19. As the designs on all seals are culture-specific, they could presumably only be ‘read’ by people from a similar background. To the uninitiated, the seal might suggest the generalised idea of ownership or authority.

20. It is possible that this is an unusual type of token, as the design fits precisely onto the surface of the disk and the clay has been hard fired.
were acquiring goods from the same source. Because we can suggest that two different households occurrence of identical seal impressions in different loci effectively as trademarks. This would explain the (rare) designs reflect the origin of the goods and can be seen probably made of palm fibre, or of a knot, survives preserved, normally only the impression of coarse string, the settlement are non-specific, as many are extremely different types of container, and has analysed the sealings the container in which they were kept. Matthews (1993) has discussed the different impressions left by the different types of container, and has analysed the sealings from the temple in the light of this discussion (Crawford and Matthews 1997). The majority of the sealings from the settlement are non-specific, as many are extremely fragmented, and where the surface of the reverse is preserved, normally only the impression of coarse string, probably made of palm fibre, or of a knot, survives (Fig. 36). This suggests that they came off bundles and parcels containing solids, which may have ranged from textiles and mats to foodstuffs. In a few cases (e.g. 1622:02), the impression of the angle between the neck and shoulder of a jar is preserved, suggesting that liquids like beer and perhaps oils were also items of sale. Such jars were often apparently stopped with a plaster or gypsum bung with a piece of cloth over it, which was then tied down round the neck of the jar. Sealing were placed over the knot and on the string to ensure the contents were not tampered with. We can only guess what the contents of the jars may have been, although residue analysis might yield further information.

In eleven cases, the backs of the impressions show what may be the concave or tubular marks left by a peg. The dimensions of these indentations, which averaged 5 mm where they could be measured, strongly suggests that we are looking at small pegs of a sort used to close boxes, rather than at door pegs. A study of the peg impressions from the Ash Pit at Abu Salibih in Iraq found that door pegs averaged 28 mm in diameter, while those thought to have been used on boxes had a diameter of 8.9 mm, with one of only 3.5 mm (Crawford & Matthews 1997, p. 51; Martin & Matthews 1993, p. 38). Three of these impressions are found close together in Building 220 at Saar, where one actually lies in a doorway, and two of them bear the same design, but apart from these three, the examples are found scattered across the buildings. If these were the impressions left by breaking the seals on doors, then we would expect to find several of them in the same context, representing a number of different openings of the door. It would seem strange to seal a door only once in the life of a building. (Perhaps it could be argued that there may have been less need to secure stores or strong rooms in private houses than in public buildings.) Theoretically it should be possible to estimate the quantities of sealed goods entering the different buildings in the settlement, and so obtain some indication of their relative prosperity by counting the numbers of seal impressions found, but it is difficult to estimate the quantity of goods involved, because there is clear evidence in at least one instance of multiple sealings being applied to a single container. A cooking pot (1042:14) was surrounded by five sealings, all decorated with parts of the same design of two horned animals rampant, on either side of a turtle. The sealings

had apparently fallen from the pot. (This is another instance where it seems reasonable to suggest that the seal acted as a trademark.) In a second example, eleven fragments with multiple impressions from the same seal were found close together in one area of Building 207, suggesting that they too may have come from a single consignment of goods.

Information on the contents of this considerable variety of containers, as we have seen, is virtually non-existent, but the fact that the seal impressions are all in the local Dilmun tradition, strongly suggests that the goods, whatever they were, were packed and dispatched from within the Dilmun polity, and in many case from the immediate vicinity of Saar. This conclusion is supported by a small programme of analyses kindly undertaken by Dr Gerulf Schneider at the Freie Universität, Berlin. Six sealings were analysed to establish their chemical composition and were shown to have originated from three different sources, none of which matched the clay sources used for the pottery (Table 2). All these sources appear to lie in the neighbourhood of Saar and the clays certainly did not originate outside Bahrain. The six samples processed represent about 2% of the total corpus of sealings, so that it would seem statistically probable that a larger sample would identify a number of other sources of clay. These analyses certainly support the proposal that there was a lively local trade around the settlement at Saar. Dilmun in the early second millennium BC also included the Eastern Province of Arabia and the island of Failaka, so that there was ample opportunity for further trade with these areas as well. It is also possible that some of the imported goods found at Saar, like the carnelian beads or the copper, may have been repacked at the point of entry, and forwarded on by the importer. However, materials such as the bitumen found at the site, which was of Iranian origin, was probably imported direct, as we know that the bitumen from Qala‘at al-Bahrain, the most likely redistribution centre, originated from the Middle Euphrates (Connan et al. 1998).

SEALS AS AUTHORITY?

A group of fourteen artefacts form a specific sub-group within the Saar glyptic material, and have been called tokens. Eight of them have already been published (Crawford 1998b), and a further six can now be added. All are small, circular or sub-circular pieces of fine clay, carefully formed into bifacial pellets (four examples), or button-shaped objects with hemispherical backs (ten examples). Three of the fourteen are incomplete and therefore their identification as tokens could be questioned (1159:05 & 07, 5176:02). Three of the button-shaped examples are pierced for
EARLY DILMUN SEALS FROM SAAR

Considerable importance. The fourteen tokens are found in nine different locations, so that it is plain that we are not looking at supplies being drawn from a central store or warehouse. Three examples come from Building 220, two examples are found in each of Buildings 57, 60, 200, while one came from each of Buildings 51, 53 and 224. One was found loose in the sand above Building 224, and the final one came from Area 17, House 14, a Level II context. With the exception of this last, it is perhaps significant that they all come from buildings on the main roads in areas which belong to Level III or IV of the settlement, and where the buildings were larger and richer in imported goods than the others, suggesting a level of commercial activity.

A similar representation can be seen on an Early Dilmun style seal from Ur (Mitchell 1986, p. 282, No. 116). The back shows clearly the imprint of a thumb-print. Comparative data from Crete (Weingarten 1994), from Tell Brak in north Syria (Oates 1993), and from the Indus Valley (Franke-Vogt 1991) have led to the suggestion that these tokens were used as identification, and perhaps as authorisation, allowing the holder to collect certain goods in return for the token. It has also been suggested by Oates that they may have acted as receipts for goods disbursed, a function complementary to that of authorisation. If this is the case, then the distribution of the Saar examples is of considerable importance. The fourteen tokens are found in nine different locations, so that it is plain that we are not looking at supplies being drawn from a central store or warehouse. Three examples come from Building 220, two examples are found in each of Buildings 57, 60, 200, while one came from each of Buildings 51, 53 and 224. One was found loose in the sand above Building 224, and the final one came from Area 17, House 14, a Level II context. With the exception of this last, it is perhaps significant that they all come from buildings on the main roads in areas which belong to Level III or IV of the settlement, and where the buildings were larger and richer in imported goods than the others, suggesting a level of commercial activity.

Table 2 Chemical composition of sealing and clay samples from Saar. (Analysis by WD-XRF of ignited samples, major elements in % by weight, trace elements ppm.)

<table>
<thead>
<tr>
<th>Clay samples with high Ca + Mg and low Si content</th>
</tr>
</thead>
<tbody>
<tr>
<td>H119</td>
</tr>
<tr>
<td>49.88 0.680 12.27 4.29 0.034 10.94 17.34 0.84 3.47 0.228</td>
</tr>
<tr>
<td>3.5 0.4 121 168 62 90 75 2203 182 247</td>
</tr>
<tr>
<td>H103</td>
</tr>
<tr>
<td>50.21 0.729 13.91 5.13 0.035 10.48 14.41 1.01 3.85 0.196</td>
</tr>
<tr>
<td>3.4 0.3 142 142 64 78 84 973 171 243</td>
</tr>
<tr>
<td>H110</td>
</tr>
<tr>
<td>52.76 0.632 11.69 5.74 0.102 10.12 14.91 1.47 2.24 0.269</td>
</tr>
<tr>
<td>0.1 0.3 111 281 147 84 72 336 151 242</td>
</tr>
</tbody>
</table>

Table 2 Chemical composition of sealing and clay samples from Saar. (Analysis by WD-XRF of ignited samples, major elements in % by weight, trace elements ppm.)

<table>
<thead>
<tr>
<th>Seals</th>
</tr>
</thead>
<tbody>
<tr>
<td>H118  52.40 0.560 9.73 5.00 0.042 9.89 18.03 1.50 2.54 0.268</td>
</tr>
<tr>
<td>2.6 137 293 121 63 80 636 110 287</td>
</tr>
<tr>
<td>H113  62.74 0.514 10.15 3.32 0.026 8.58 10.52 0.94 3.10 0.088</td>
</tr>
<tr>
<td>1.7 0.6 76 158 59 45 82 502 352 786</td>
</tr>
<tr>
<td>H116  66.29 0.575 10.99 3.88 0.027 7.05 6.06 1.08 3.99 0.027</td>
</tr>
<tr>
<td>155 69 92 1067 354 246</td>
</tr>
<tr>
<td>H114  69.75 0.734 12.01 4.63 0.025 5.46 2.33 0.58 4.21 0.035</td>
</tr>
<tr>
<td>0.2 83 131 78 53 114 79 633 221</td>
</tr>
<tr>
<td>H117  71.07 0.576 10.21 3.50 0.022 6.19 3.85 0.83 3.66 0.050</td>
</tr>
<tr>
<td>0.3 0.3 75 137 64 41 92 248 475 243</td>
</tr>
<tr>
<td>H115  71.19 0.639 10.84 4.02 0.022 5.62 3.33 0.46 3.79 0.053</td>
</tr>
<tr>
<td>0.3 0.1 87 135 71 49 100 280 487 216</td>
</tr>
</tbody>
</table>

Clay sample with high Si and low Mg + Ca content

| H102  74.97 0.625 10.44 3.13 0.022 3.91 2.59 0.56 3.69 0.034 |
| 0.8 70 127 58 34 91 952 559 226 |

arrow-shaped motif can be seen on the blade of a chisel or axe in the collection of the National Museum of Bahrain (Lombard & Kervran 1989, p. 169, No. 314). The second pair, this time of unifacial tokens, both show a geometric design of three concentric circles with little loops on the circumference (2665-06 & 5500-27). Again, a closely comparable motif is found on Failaka (Kjaerum 1983, No. 37). Other designs are figurative, and show the horned animals and rows of standing human figures which are a familiar component of the Dilmun repertoire. One example (Fig. 38) stands out by reason of the fine finishing. It has a high domed back, and the face shows a deeply stamped design of four unusual bulls’ heads, each with only one eye, and with its horns pointing towards the rim of the piece. A similar representation can be seen on an Early Dilmun style seal from Ur (Mitchell 1986, p. 282, No. 116). The back shows clearly the imprint of a thumb-print. Comparative data from Crete (Weingarten 1994), from Tell Brak in north Syria (Oates 1993), and from the Indus Valley (Franke-Vogt 1991) have led to the suggestion that these tokens were used as identification, and perhaps as authorisation, allowing the holder to collect certain goods in return for the token. It has also been suggested by Oates that they may have acted as receipts for goods disbursed, a function complementary to that of authorisation. If this is the case, then the distribution of the Saar examples is of considerable importance. The fourteen tokens are found in nine different locations, so that it is plain that we are not looking at supplies being drawn from a central store or warehouse. Three examples come from Building 220, two examples are found in each of Buildings 57, 60, 200, while one came from each of Buildings 51, 53 and 224. One was found loose in the sand above Building 224, and the final one came from Area 17, House 14, a Level II context. With the exception of this last, it is perhaps significant that they all come from buildings on the main roads in areas which belong to Level III or IV of the settlement, and where the buildings were larger and richer in imported goods than the others, suggesting a level of commercial activity.
The variety of designs on the tokens also raises questions; it is of course possible that each represents a different department of a central authority, but it may alternatively suggest that individual businesses were using this simple system to allow their associates to do business on their behalf. The tokens would be given to a supplier to acknowledge receipt of goods or rations, and the price could then be used in this way. The design of concentric circles is of particular interest as it also found outside Saar: at Barbar, at Diraz and at Qala’at al-Bahrain (Beyer 1989, p. 154, & displayed in National Museum), suggesting that this pattern had wider recognition. Was it that of a merchant with several ‘branch offices’, or of an island-wide authority? It is possible that we have evidence for the use of tokens at Saar as authorisation by both individuals and a wider authority.

**STRATIGRAPHIC ANALYSIS**

Saar, as we have already seen, is essentially a one-period site, which dates to a period equivalent to City I fb/c at Qala’at al-Bahrain. The earliest period, Saar Level I, which was only identified in sondages, produced no seals or impressions. The amount of material excavated was very restricted, so glyptic material may well have been present, although it was not recovered. The first glyptic material was found in Level II, where approximately 12% of the corpus of seals and sealings were found together with one of the tokens. All become common in Level III, where about 75% of all seals, seal impressions and tokens occur. Level IV provided about the same proportion of the material as Level II.

It was initially hoped that it would be possible to trace some stylistic development in the glyptic material through the life of the Saar settlement, but Style Ia designs predominate throughout, and the evidence merely confirms a chronological overlap between the different styles. In Level II seven of the twelve seals are Ia in style, two belong to the Persian Gulf group, one is a possible shell seal, and two are too fragmentary for the style to be identified. Of the thirteen seals from Level IV, nine are still in the classic Ia style, one is a shell seal, and the three remaining ones are re-cut or in some way anomalous. We saw (above p. 18) that at Qala’at al-Bahrain, Persian Gulf and Proto-Dilmun seals were found together in City Ia. At Saar we can demonstrate that they also overlap with Style Ia; they are found in Level III, and in surface deposits, in addition to those in Level II mentioned above. However, the numbers are very small, and some seem to have been reworked (see 000:00 for instance). There is no evidence to suggest that Persian Gulf seals were still being produced at this period, and their presence could be explained as that of survivals or heirlooms. In addition, it must not be forgotten that small objects like seals can be easily displaced in the archaeological record. The same could be said of the even smaller number of Proto-Dilmun seals from Saar found in Periods II and IV.

The only Proto-Dilmun seal impression identified (1105:02) comes from a Level IV context. The single Style Ib seal from Saar (2500:01) comes from Level III, as does 2109:01, which belongs to Style Ib or II. In addition, three or perhaps four seal impressions belong to Style Ib, and all come from Level III. The overlap between Styles Ia and Ib was established by Kaerum’s work at Failaka and is confirmed by the limited evidence here.

**SPATIAL DISTRIBUTION**

The glyptic material is widely distributed throughout all areas and levels of the settlement, demonstrating that seals were not a prestige artefact, but were owned by large numbers of people within the settlement at Saar. Of the sixty-eight or so domestic units identified by the LBAE, thirty-six have produced seals, forty-five seals or sealings. Of these, sixteen have seals but no sealings, and seven have sealings but no seals, while the rest have both, although in very different quantities (see Table 3).

In addition, one seal (1612:01) was found in the temple, and there are forty-six catalogue entries, some of them multiple, for impressions from there too. (For a complete catalogue see Crawford et al. 1997.)

The crude numbers tell us relatively little about the differential distribution of the glyptic material, however, as the buildings listed in the table belong to different levels of the site and so are not strictly contemporary. In addition,
For example, all eleven sealings from Building 207 come from the same seal, so might have come from only two or three packages, each sealed with several sealings; of the thirty-nine sealings from Building 211 there are five repeats of the designs on sealings 1161:04 and 1042:18, and three repeats of 1021:03, meaning that thirteen sealings may only represent three packets, while in Building 220, of the forty-seven impressions there are six repeats of the design on 5136:01, three of 511:02, two of 5133:02 and perhaps of 5176:08 as well, so these thirteen impressions may only be from four parcels. In spite of these problems it is clear that some buildings are much richer in glyptic than others: note especially Building 220 which has forty-seven sealings, six seals and three tokens, and Building 224 which has twenty-seven sealings, seven seals and a token. As much seal usage seems to have been connected with economic activities, it seems fair to suggest that these buildings were more economically active than others with less glyptic. It is significant that both these buildings also contained imported material.

**Ownership of Seals**

Other questions are raised by the occurrence of up to ten seals in apparently contemporary deposits in a single building (see Table 4). The floor areas of the some buildings have only been excavated down to the top of the occupation levels, some have been dug to the primary floor, and some have been completely dug. Differences may also be due to the fact that the contents of some buildings were sieved while others were not. The ratio of all glyptic material to other classes of finds from a specific locus gives a more realistic idea of which buildings are really richer in this class of material. In Buildings 1, 7 and 224, seals amount to more than 3% of the finds, while in Buildings 5, 6, 60, 63, 210 and 303, they amount to more than 2%. (For absolute numbers see Table 4.) In Buildings 207, 210, 220 and 224, seal impressions account for more than 20% of all finds, while in Building 211 this rises to an atypical 30%. Buildings 224 and 210 are the richest if both types of material are taken together. Both these buildings lie at the heart of the settlement, and we have already noted that tokens too are most common in the buildings along the main roads of the settlement, perhaps indicating that this was where the most economically active members of the community lived. Another problem arises when considering the numbers of sealings. It cannot merely be assumed that the buildings with the highest numbers of sealings were acquiring the greatest quantities of goods, because it is also important to remember that there is good evidence for multiple sealings coming from a single item (see p. 34). For example, all eleven sealings from Building 207 come from the same seal, so might have come from only two or three packages, each sealed with several sealings; of the thirty-nine sealings from Building 211 there are five repeats of the design on sealings 1161:04 and 1042:18, and three repeats of 1021:03, meaning that thirteen sealings may only represent three packets, while in Building 220, of the forty-seven impressions there are six repeats of the design on 5136:01, three of 511:02, two of 5133:02 and perhaps of 5176:08 as well, so these thirteen impressions may only be from four parcels. In spite of these problems it is clear that some buildings are much richer in glyptic than others: note especially Building 220 which has forty-seven sealings, six seals and three tokens, and Building 224 which has twenty-seven sealings, seven seals and a token. As much seal usage seems to have been connected with economic activities, it seems fair to suggest that these buildings were more economically active than others with less glyptic. It is significant that both these buildings also contained imported material.

### Table 3: Distribution by building of glyptic material from Saar.

<table>
<thead>
<tr>
<th>Building No.</th>
<th>No. of seals</th>
<th>No. of sealings/tags</th>
<th>No. of tokens</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1</td>
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<td>4</td>
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<td></td>
</tr>
<tr>
<td>221</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>222</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>224</td>
<td>7</td>
<td>28</td>
<td>1 + 1 above</td>
</tr>
<tr>
<td>300</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>301</td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>303</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>353</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 4: Numbers of seals per building.

<table>
<thead>
<tr>
<th>No. of seals</th>
<th>Building Nos.</th>
<th>Approx. floor area (sq m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>51</td>
<td>40</td>
</tr>
<tr>
<td>7</td>
<td>224</td>
<td>56</td>
</tr>
<tr>
<td>6</td>
<td>60, 220</td>
<td>80, 56</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>210</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>7, 53, 55, 56, 205, 207, 222</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>4, 5, 11, 50, 209</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>3, 6, 54, 57, 61, 66, 100, 104, 203, 206, 208</td>
<td></td>
</tr>
</tbody>
</table>

Robert Killick has kindly provided this data.
buildings with large numbers of seals are not very extensive, as can be seen on Table 4, but these areas can be used for crude calculations on the number of people living in each. If we use Naroll’s (1962) rather simplistic rule of thumb that each person needs a minimum of 10 sq m of living space, we have a crude estimate of between four and eight people per household at Saar. Kramer (1980) has attempted to refine this estimate by proposing that only roofed living space should be included when attempting to estimate population. Courtyards, stores and animal pens are excluded. This would make no difference to the estimates given above, as it appears that the L-shaped areas of the Saar buildings were usually roofed, even if the roof was only made of light materials such as matting or palm fronds.

These figures suggest that Building 51, which tops the list above with ten seals, all found in roughly contemporary deposits, was inhabited by four people, while Building 7 may have housed six. This in turn suggests that each building was inhabited by a nuclear family. Working on this assumption, we can ask how many members of each family owned seals. Should we assume that the one or two men in the household owned several seals each, or should we begin to consider the possibility that women and children also owned them?

There are precedents from Mesopotamia for men owning several seals in the course of their working life. In an archive from Umma, R. Mayr has identified one man who had a total of fifteen (pers. comm.), and other, less dramatic, examples are also known. A man might acquire a new seal when he was promoted, or when a new ruler came to the throne and new official seals were issued. He might also inherit a seal from his father. Women too are known to have owned and used seals. On the other hand, returning to Dilmun, a survey of the published burials shows that people were normally buried with only one seal, so there is no direct evidence for multiple ownership. Unfortunately, the funerary evidence cannot solve the question of female seal ownership either, as it proved difficult to sex many of the skeletons found in the Early Dilmun period burials on Bahrain, because the remains were often extremely fragmentary. However, there are numerous examples where the grave goods do strongly suggest that the owner of the seal was a woman (see, for example, Mughal 1983, Grave 91, where the seal was worn as a pendant). Seals have certainly been found in the graves of children. It may be relevant to note that a number of miniature seals are known from this period, and one fine example (5510.02) comes from Building 224, another building rich in glyptic material. It seems possible that these may have been owned by children.

If the proposition that women and children owned seals is accepted, then we have to consider whether they too were engaged in economic activities, or if the seals had other, non-economic functions. Although women may well have been both manufacturers and consumers of goods, it seems less likely that the same is true of the children. The discovery of seals in children’s graves must strengthen the case for their having amuletic functions, as well as the more mundane ones discussed above.

Fig. 39 Building 51 in this row had the largest concentration of seals.

31. A fine collection of impressions from the seal belonging to the Queen of Urkhi have recently been published by Buccellati & Kelly-Buccellati (1995/6), and a delightful seal belonging to a midwife has recently appeared in the sale-rooms (Sotheby’s 1997).
STYLISTIC ANALYSIS
The people of Dilmun created a distinctive glyptic style which is first found at the end of the third millennium BC, and which survives for more than five hundred years. The presence of any identifiable style associated with a particular class of material implies the existence of certain rules or conventions in its production. The standardisation of the backs of the Dilmun seals with their three incised lines and four dot-and-circle motifs is a good example of this. Conventions are also seen in the schematic way in which both human and animal faces are portrayed on many of the seals, all showing well-balanced, opposed designs, with figures on either side of a central motif. One of these figures is usually human, and the other a gazelle-type creature with back-turned head and knobbed or fringed horns. This group is referred to as the ‘Elegant’ group. As seals in these two styles seem to be more common on Bahrain than on Falaka, the workshops in question may have been located on the former.

The interpretation of the designs on the seals remains elusive, but the variety of scenes and motifs indicates that not all have to relate to religious or mythological scenes, as sometimes proposed in the past. Some seem to show everyday activities, such as weaving, although even in these cases the possibility that these activities were taking place in a temple context cannot be ruled out. (We can say that there is no evidence for such activities within the temple at Saar). Another possibility raised by the present study is that certain motifs may have been particular to certain areas or settlements. The virtual absence of the crab motif from sites outside the Saar area was noted.

The closest iconographic parallels for the Saar material come from Qala’at al-Bahrain and from Falaka. Further afield, more parallels can apparently be found in North Syria and Assyria than in South Mesopotamia itself. The links with Assyria are especially interesting in view of the textual evidence from Mari, and although some contacts clearly took place via the well-travelled Assyrian routes, it is also possible that contacts may have been initiated via the ancient road which ran from Susa, east of the Tigris, toward the Assyrian heartland. All these areas were linked by the presence of people with Amorite names. Such names also occur in texts referring to Dilmun, but it is not yet possible to assess the importance of people with Amorite names within Dilmun itself, or to evaluate their impact on the material culture of the islands. Contacts further afield with Anatolia and with Central Asia are also postulated. The nature of these contacts is unknown, and as the distances are so great it seems probable that they were indirect, mediated through other groups who acted as middlemen. The presence on Bahrain of small amounts of lapis lazuli, and of a few objects of undoubtedly Central Asian origin, confirm these links. Some of the contacts may have been overland through eastern Iran, others via the Indus Valley. The importance of these stylistic links must not be over-emphasised, as the style of the Early Dilmun period seals remains distinctively local, but they serve to confirm Bahrain’s position at the hub of a network of routes stretching across much of Asia into the Indian subcontinent.

FUNCTIONAL ANALYSIS
Functional analysis suggests that seals were used in a number of different ways at Saar. These included identification, ‘branding’ of goods, and as amulets. It is possible that the same seal may have been used during its lifetime in a number of different roles, such as an amulet by the child owner perhaps, who as an adult could then use it for other purposes. The small group of tokens found were probably used as identification, authorisation and identification, by both private individuals and businessmen. We cannot rule out the possibility that the design of leopards concentric circles belonged to some central authority, but there is no evidence from Saar to support such a contention. The sealings provide no evidence for any kind of bureaucratic procedures in operation at Saar. There is virtually no evidence for counterstamping of goods and the pinholes found on some of the sealings from the temple are not found on the sealings from the settlement. These pinholes were thought to be a simple form of checking the sealed goods. Nor are there any sealings from either the temple or the buildings which can be firmly identified as door sealings. (At other sites such sealings can often be used to identify the person in charge of opening and closing the door.) Perhaps the private individuals at Saar did not feel the need to secure their goods in sealed rooms.

The sealings also demonstrate the presence of an active local exchange system, which is otherwise archaeologically invisible, as all the goods were indigenous, and many may have been perishable.

LOCA TIONAL ANALYSIS
The stratigraphic evidence demonstrates that, as far as the Saar evidence is concerned, the different styles of seal cannot be used as chronological indicators, because no clear sequence can be demonstrated. All styles occur in all the levels where glyptic material is found.

Finally, one of the most significant conclusions comes from the spatial analysis, which shows that seals, sealings and tokens were so widely distributed across the site that it is clear that ownership of a seal was not confined to an elite. The wide distribution of this material also suggests that a high proportion of the population was involved in economic activity of some kind. The sealings seem to have come from goods in bundles and jars, which were apparently sealed within Dilmun itself, as no foreign seals or sealings were found. It is, however, possible that some of the foreign goods found at the site may have arrived at a larger centre, such as Qala’at al-Bahrain, and been repacked there by local distributors. Even if this was the case in a few instances, the quantity of sealings found makes it likely that we have evidence at Saar for a lively trade in commodities produced within Dilmun as well. This internal trade, it was suggested above, was probably in perishable goods, like food and textiles, originating in other parts of the Dilmun polity, and is otherwise archaeologically invisible. Although the seals and sealings are widely distributed, there appears to be a concentration...
of high-quality glyptic material, including the so-called ‘Elegant’ seals and the tokens, in the buildings along the main roads of the settlement. The majority of those buildings, that is Buildings 210, 220, 224, 60, & 51, date to Level III of the site, which dates to the period when the international trade was flourishing, and Dilmun was at its most prosperous, shortly before the accession of Hammurabi of Babylon. The concentration of these classes of material in a limited number of buildings does point to some differentiation in either the wealth or the occupations of the inhabitants of Saar, in spite of the relatively standardised nature of the architecture.

The combination of a number of different approaches to its study has provided valuable additional information on the social and economic life of the inhabitants of Saar. Perhaps the most striking finding is that seal ownership was widely spread throughout the community. It also seems probable that both men and women were engaged in small-scale economic activity. There is no evidence for the large-scale manufacture of commodities within the settlement, in spite of the presence of a single lime kiln, but this does not of course exclude the possibility that some of the inhabitants were involved in the domestic production of staples such as beer or textiles, which were then exchanged with their neighbours. The society at Saar seems to have been an egalitarian and semi-independent one, as there is no evidence for a bureaucracy or for administrative procedures in place at the site, suggesting that if there was a central authority, its rule was not an oppressive one.

Some sort of central authority on the island does, however, seem probable: Saar was not an isolated community but seems to have been part of a wider commercial system. The presence of foreign materials such as soft-stone, copper and bitumen at the site strongly suggests this, and the iconography of the seals reinforces the conclusion. Dilmun was part of a web of contacts which stretched at its furthest points from Central Asia, via the Indus Valley to Oman and the Lower Gulf on the one hand, and to Elam, South Mesopotamia, Assyria, the Syrian Jazirah and Central Anatolia on the other. The port of Ur was of major commercial significance, but we cannot at present tell how far it was the final destination for goods and merchants from Dilmun, and how far it was merely a staging post in contacts which seem to have reached as far north as the Anatolian plateau. The collapse of the copper trade through Dilmun towards the end of the Old Babylonian dynasty, partly, it seems, as a result of the devastation of Ur and the surrounding country, merely serves to underline the importance of the city.

There is still much which needs to be done. Technical questions such as the provenance of the stone, the presence or absence of a glaze on the seals, and the exact nature of the tools used, may be solved by experimentation and observation, but the outstanding questions about the origins of the seals, and the precise chronological relationship of the different styles described above, will only be satisfactorily resolved if a long stratigraphic sequence can be excavated, or if new seals are found in well-dated contexts. The question of ownership may also become clearer if, in the future, it proves possible to sex the bones found in graves with seals.

Many other questions also remain to be answered. It is hoped that in the future new evidence will enable us to clarify some of the outstanding questions about people of the Early Dilmun period. Perhaps we will be able to say with greater confidence what the internal political and social organisation of Dilmun was like, and, if we are extremely fortunate, textual evidence from the islands themselves may enable us to ‘translate’ some of the scenes on the seals instead of guessing at their meaning. The seals and sealings of the Early Dilmun period are a unique resource. They allow us to say with confidence that the people living in Dilmun in the early second millennium BC created a civilization which drew on elements from many cultures, and mixed them together to form a material culture and a way of life which was distinctively their own.


Potts, D. 1986: Dilmun’s further relations; the Syro-Anatolian evidence from the third and second millennia BC. In BTAA, pp. 389–398.


Sotheby’s catalogue of the second part of the sale of the Erlenmeyer collection held in London on 12th June 1997.


Teissier, B. 1987: Glyptic Evidence for a connection between Iran, Syro-Palestine and Egypt in the fourth and third millennia. Iran XXV, pp. 27-54.


Unless otherwise stated all seals are of soft-stone, varying in colour from black to light grey, and have a low circular boss on the reverse, decorated with three parallel lines, usually at right angles to the perforation. In addition, four dot-and-circle motifs, two on either side of the parallel lines, are usually present.

The profiles of the seals are defined in this catalogue according to the scheme laid down by Poul Kjærrum (1983, p. 14). Variation F1: straight or convex; F2: concave; F3: angular; F4: grooved.

All measurements are in centimetres. Where a measurement or detail of description is lacking, it was not available at the time of writing.

All drawings and photographs are at 1.5:1 (150%). Location descriptions such as ‘occupation’, ‘floor’, etc. refer to standard context types used in site recording at Saar.

Registration No. 000:00

Dimensions: Diam. 2.28, extant height 1.75.
Profile: F1, convex.
Reverse: Traces of three, incised, parallel lines and four incised circles with central dots. Deep perforation, drilled from either end. Second attempt to drill a hole at right angles to the first has destroyed most of the boss.
Location: Topsoil.
Design: A horned animal, facing right, with its legs folded beneath it. Above its back are two filler motifs, one shaped like a churn, the other oblong.
Museum No. 4133-3-90.

Registration No. 228:02

Dimensions: Diam. 1.7, height 0.9.
Profile: F2.
Reverse: Standard.
Location: Building 5, Area 20. Occupation.
Design: Grooved animal with a long, ruffled neck and long horns, looking up and left, over its shoulder. One horn is fringed. Above the animal’s back is a hatched square (3 x 3 squares). On the left of the left is a turtle or tortoise.
Remarks: glazed.
Museum No. 3906-2-01-3.

Registration No. 248:22

Dimensions: 0.8 x 0.8, c.0.25 thick.
Profile: Unknown.
Reverse: Flat, with small area of circular boss.
Location: Building 4, Area 33. Floor.
Design: Two parallel incised lines down one edge, intersecting at the corner, with two similar lines running down the other preserved edge.
Museum No. 3913-2-01-3.

Registration No. 1024:02

Dimensions: Diam. 2.1, height 1.1.
Profile: F1, worn convex.
Reverse: Worn almost hemispherical, only two dot-and-circle motifs visible, traces of three lines.
Location: Building 210, Area 207. Occupation.
Design: A standing human figure with tiered skirt and jutting chin, facing left, carries a pole over his shoulders, from each end of which hangs the carcass(?) of a horned animal.
Remarks: No glaze visible.
Museum No. 3892-2-01-3.

Registration No. 1024:06

Dimensions: Diam. 2.75, height 0.75.
Profile: F2.
Reverse: Broken off. Perforation drilled from both ends.
Location: Building 210, Area 207. Occupation.
Design: A horizontal, hatched strip down the centre, dividing the field in two. On either side are the ruffled necks, heads, and raised fore-legs of three horned animals. On one side they face outwards, to the right. On the other the animals apparently face left, although the third is damaged (i.e. a mirror image of the first side).
Remarks: Traces of glaze.
Museum No. 3893-2-01-3.

Registration No. 1040:06

Dimensions: 3 x 3.45.
Profile: Unknown.
Reverse: Broken off. Perforation drilled from both ends.
Location: Building 5, Area 20. Occupation.
Design: A horizontal, hatched strip down the centre, dividing the field in two. On either side are the ruffled necks, heads, and raised fore-legs of three horned animals. On one side they face outwards, to the right. On the other the animals apparently face left, although the third is damaged (i.e. a mirror image of the first side).
Remarks: Traces of glaze.
Museum No. 3894-2-01-3.

Registration No. 1040:01

Dimensions: Diam. 2.2, height 0.9.
Profile: F2.
Location: Building 210, Area 207. Floor.
Design: Two horned male animals, with ruffled necks, on either side of a central palm-tree. The animal on the left looks back over its shoulder to the tree; the animal on the right is inverted, and looks to the edge of the seal.
Remarks: No glaze visible.
Museum No. 3894-2-91-3.

Registration No. 1098:03

Rectangular seal, with gable back.
Dimensions: Length 1.91, width 1.45, max. thickness 0.9.
Profile: Triangular in section.
Reverse: Gable back, three incised lines across short axis of gable, dot-and-circle motif in each corner. Perforation on long axis.
Location: Building 50, Area 57. Floor.
Design: Hatched rectangle (4 x 3 squares) in centre of design. Flanked on each side by double-ended standard with crescent at each end. Each crescent encloses a rosette, three of which have crosses in the centre, and one a drilled hole.
Remarks: This seal is made of ivory. Probably hippopotamus or dugong, but not elephant. Previously published Moon et al. 1995, p. 53, Fig. 16.

Registration No. 1580:01

Dimensions: Over-all diam. 2.8, diam. of carved area 2.4, height 1.2.
Profile: F2.
Reverse: Standard.
Location: Building 203, Area 229. Occupation.
Design: A central, standing, bearded figure in a short skirt, facing left, holds the horns of a long-horned male animal, one on either side of him. Each animal has its head turned back over its shoulder, and looks outwards towards the edge of the seal. Remarks: The design is surrounded by a recessed area which is undecorated. The design is closely comparable to an impression on a potsherd found in the second Barbar Temple and to a seal from Karraneh (Mortensen 1970, p. 385, Al-Sindi 1999, p. 85, No. 33). Previously published: Woodward & Crawford 1994, pp. 100 and 101, Fig. 16. Remarks: Traces of glaze, also well-preserved on reverse. Museum No. 3887-2-91-3.

REGISTRATION NO. 1612:01

Dimensions: Diam. 1.9, height 1.2. Profile: F2. Reverse: Standard. Location: Building 201 (Temple), Area 200. Floor. Design: Standing, nude, male figure looking to the right. In his right hand he holds a shield, in his left the horns of a long-horned animal which looks back over its shoulder towards him. An oblong symbol in left field, and a crescent in the right field behind the head of the animal. Previously published: Crawford & Matthews 1997, p. 57, Fig. 21.

REGISTRATION NO. 1841:01


REGISTRATION NO. 1853:18

Dimensions: Diam. 2.3, height 1.0. Profile: F2. Reverse: Standard. Faint scratch marks radiating from the apex of the boss. Location: Building 207, Area 272, Square 19. Occupation. Design: A palm-tree, just right of centre, with a seated, naked, human figure to its right, facing the tree, with one arm outstretched to touch it. Small triangle behind the figure’s legs, probably indicates a stool. To the left of the palm-tree is a standing, male, horned animal, facing left, but with its head turned back towards the tree. The animal’s neck is ruffled and the horns long and slightly-curved, one fringed. On the left, behind the animal’s head, is a crab-like motif. Remarks: Traces of glaze.

REGISTRATION NO. 1853:30

Dimensions: Diam. 2.1, height 1.0. Profile: F2. Reverse: Standard. Location: Building 207, Area 272, Square 19. Occupation. Design: Two standing male quadrupeds, back-to-back, with ruffled horns and horns. The long-horned animal on the right faces right, head tilted upwards. The animal on the left, with short, slightly-curved horns, is damaged, but faces left with its head turned back over its shoulder. Between the heads of the animals is a hatched rectangle (4 x 5 squares), to the right of which is a crescent. Some damage to surface in bottom left quadrant. Remarks: Traces of glaze.

REGISTRATION NO. 1870:18

Dimensions: Diam. 2.46, height 1.01. Profile: F1, straight, and worn. Reverse: Standard. Location: Building 207, Area 273. Floor. Design: Standing man facing left, wearing short, two-tiered skirt. His arms are outstretched on either side of his waist with sharp-everted elbows. With his right hand he holds the horns of a bull(?), which stands below him and faces left. His left hand holds the horns of a second, damaged, horned animal, apparently back-to-back with the first, and facing right. In upper left field is monkey-like creature, below man’s right arm is a jar. In upper right field is crescent and possible second jar. Below his left arm is another crescent. Remarks: Traces of glaze, also on reverse, where worn.

REGISTRATION NO. 2051:06

Dimensions: Diam. 2.3, extent height 0.6. Profile: F1, straight. Reverse: Boss broken away, traces of decoration visible. Location: Building 55, Area 80. Occupation. Design: Two opposed male animals, with short horns and ruffled necks, stand either side of a palm-tree with three branches and tripartite roots. The animals face away from the tree, but their heads are turned back towards each other. Their legs are neatly bunched together in order to fit the curve of the seal. Each has a crescent above his back. Remarks: Glazed. Museum No. 3903-2-91-3.

REGISTRATION NO. 2070:05

Dimensions: Diam. 2.08, height 1.0. Profile: F1, convex. Reverse: Almost hemispherical. Standard decoration, worn away across top of boss. Location: Building 56, Area 77. Surface. Design: A male animal with a ruffled neck and horns, facing left. A figure, head damaged, cut in a linear style with bent legs, in a sitting or leaping position, appears above its back, holding in his left hand a straw coming out of a jar below. His right hand seems to be holding the horn of the animal. Remarks: Possible traces of glaze. Museum No. 3903-2-91-3.
**REGISTRATION NO. 2088:01**

Dimensions: Diam. 2.2, height 1.2.
Profile: F1, straight[?] but very worn.
Reverse: Standard, worn at apex.
Location: Building 55, Area 81. Make-up.
Design: Two horned animals with long, ruffled necks, one with long horns, one with short horns, stand facing each other, on either side of a fringed stall perhaps representing a stylized palm-tree. The animals’ heads are stretched up towards the top of the tree, at the base of which is a scorpion facing to the right.
Remarks: Traces of glaze, also on reverse.
Museum No. 3897-2-91-3.

**REGISTRATION NO. 2142:11**

Shell seal.
Dimensions: Diam. 3.7–4.0, 1.6 thick.
Profile: n/a.
Reverse: Apex of shell.
Location: Building 56, Area 68. Floor.
Remarks: Centre of the wide end of a cone shell (Lambis Truncata), trimmed to be roughly circular. Probably intended for the manufacture of a shell seal, but unfinished.
Museum No. 3900-2-91-3.

**REGISTRATION NO. 2144:01**

Dimensions: Diam. 2.2, height 0.8.
Profile: F1, convex.
Reverse: Standard, apex worn.
Location: Building 55, Area 81. Floor.
Design: A naked figure with raised arms astride an equid-like quadruped with long, ruffled neck, long ear (damaged), and short tail. Both face to the left. The animal’s nose is worn away. The figure’s raised right hand is adjacent to a motif which may be a star, while by the left hand is a motif consisting of a vertical line topped by a crescent at the top and a hatched triangle, apex down, at the base. Behind the figure is another crescent, at the far right edge is a tree or palm-frond.
Remarks: Traces of glaze, also on reverse.
Museum No. 3917-2-91-3.

**REGISTRATION NO. 2171:01**

Dimensions: Damaged. Estimated diam. 2.2, preserved dimensions 2.0 x 1.3 x 0.4.
Profile: F2.
Reverse: Broken away.
Location: Building 57, Area 74. Make-up.
Design: A standing male animal with ruffled neck and long horn on the right, facing right, head turned backwards towards the centre of the seal. A broken, standing figure in a short skirt, feet facing right, can be seen left of the animal. Only the feet and lower edge of skirt remain. There is a broken motif below the feet of the figure and a tree/branch motif in the right field behind the neck of the animal.
Remarks: Very fine and unworn carving. No glaze.
Museum No. 3891-2-91-3.

**REGISTRATION NO. 2500:01**

Dimensions: Diam. 1.7, height 0.7.
Profile: F4.
Reverse: Standard.
Location: Building 53, Area 58. Occupation.
Design: A standing nude figure, in profile, facing right, holding a possible standard in front of him. This is a pole with a crescent at the top and a hatched triangle, apex down, at the base. Behind the figure is another crescent, at the far right edge is a tree or palm-frond.
Remarks: Glazed[?]. Kjaerum’s Style Ib.

**REGISTRATION NO. 2535:01**

Dimensions: Diam. 1.95, height 0.9.
Profile: F1, slightly convex.
Reverse: Probably standard, but worn over boss.
Perforations apparently re-drilled, obliterating one dot-and-circle motif.
Location: Building 51, Area 56. Floor.
Design: An incised cross divides the face into four quadrants. Each contains the elongated ruffled neck, head and horns of an animal. Three of the animals face outwards, with horns which are bent sharply back to fit inside the angle of the dividing cross. The fourth has short horns, and faces the centre of the seal.
Remarks: Traces of glaze, also on reverse.

**REGISTRATION NO. 2535:02**

Dimensions: Diam. 1.95, height 0.9.
Profile: F1, convex.
Reverse: Standard, worn. An incised line encircles the base of the dome.
Location: Building 51, Area 56. Floor.
Design: A seated nude figure on the right, facing left. One arm is folded across at his waist. With the other hand he is holding a straw which comes from a jar on a stand at his feet. On the left, a standing figure with a tiered robe faces right and holds a large object, possibly a fan, above the pot. Some damage to lower edge. Previously published Woodburn & Crawford 1994, p.102, Fig. 19.
Remarks: Traces of glaze, also on reverse.
Catalogue of Seals

REGISTRATION NO. 2535:05

Dimensions: Diam. 2.7, height 1.2.
Profile: F2.
Reverse: Standard.
Location: Building 51, Area 56. Floor.
Design: A naked standing figure facing left. With either hand he grasps the neck of a monstrous creature with claws and possibly a lion's mane. Two other horned animals can be seen, one on either side of his legs looking towards him. A third stands looking left beneath his feet.
Remarks: Traces of glaze, with patches on reverse.
Museum No. 3883-2-91-3.

REGISTRATION NO. 2622:05

Dimensions: Diam. 1.9, height 1.4.
Profile: F1, straight.
Reverse: No trace of decoration.
Location: Building 53, Area 85. Occupation.
Design: Two stylised horned quadrupeds, facing outwards, one inverted above the other.

REGISTRATION NO. 2570:01

Dimensions: Diam. 2.7, height 1.2.
Profile: F2.
Reverse: Standard.
Location: Building 50, Area 57. Floor.
Design: A naked standing figure facing left. Above his back is a bulbous motif. Below the figure is a standing animal with long, back-swept, notched horns, facing right. Four vertical lines below the neck.
Remarks: Traces of glaze, with patches on reverse.
Museum No. 3883-2-91-3.

REGISTRATION NO. 2667:03

Dimensions: Diam. 2.25, height 1.1.
Profile: F2 slightly concave.
Reverse: Standard.
Location: Building 54, Area 65. Floor.
Design: Nude human figure, facing left, arms raised to either side, seated on a chair with vertically-hatched seat and a high back, both uprights of which are visible. The figure faces, and perhaps touches, a hatched rectangle (5 x 4 squares) to left. To the right, behind his head, is a scorpion, the claws to the right. Below the figure is a standing animal with long, back-swept, notched horns, facing right. Four vertical lines below the neck.
Remarks: Traces of glaze, with patches on reverse too.

REGISTRATION NO. 3041:01

Dimensions: Diam. 2.65, height [incomplete] 1.16.
Profile: F2.
Reverse: Two-thirds of boss broken away. Two complete dot-and-circle motifs survive, together with part of a third, and traces of three parallel lines.
Location: Building 301, Area 409. Collapse.
Design: Linear Style. Unusual, bow-legged, human figure, with raised arms, approximately in centre of seal. His left hand touches the ear of a bull (head badly damaged), which stands at right angles to him, facing the edge of the seal. Above its back is a bulbous motif. Below the feet of the central figure is a second, badly-damaged, horned animal facing left. Above this, and to the left of the main figure, is a second seated human figure, with one arm outstretched to touch the elbow of the main figure. A third figure, above and at right angles to the bow-legged man, has one leg raised, and extends one arm towards him.
Remarks: The bow-legged figure may be compared with an even more schematic one shown on Persian Gulf seal 4139:01.

REGISTRATION NO. 3302:01

Dimensions: Diam. 2.9, height 1.1.
Profile: F1, convex.
Reverse: Badly worn, especially over boss, traces of three lines on each edge and of one dot-and-circle.
Location: Building 303, Area 411. Occupation.
Design: Linear Style, stick-like human figure with long legs in centre. Outline of oval shield(?) to the left and the damaged figure of a horned male animal to the right apparently looking back at the central figure which has an arm extended towards it.
Remarks: Mottled grey stone, traces of glaze.

REGISTRATION NO. 3515:09

Dimensions: Diam. 1.9, height 1.63.
Profile: F2.
Reverse: Standard[?]. Very worn, no trace of dot-and-circle decoration, but lines present.
Location: Building 300, Area 401. Make-up.
Design: Central standing human figure in hatched skirt, facing right, and holding a straw in a jar on the floor to his
right. Beyond the jar, on the edge of the seal, is a vertical scorpion. To the left the figure holds the fore-leg of a rampant bull.
Remarks: Dark grey stone, traces of glaze.

REGISTRATION NO. 4001:01

Dimensions: Diam. 2.0, height 1.0.
Profile: F2.
Reverse: Two parallel lines only, plus four dot-and-circle motifs.
Location: Building 209, Area 241. Sand.
Design: Worn, and possibly re-cut. Seated human figure, looking left, with three crescent-shaped symbols above its back.
Design formed by transverse section cut through shell. Below her is a flat-topped stand with two legs, each of which ends in a hoof. The female is flanked by two standing, nude, male figures, each of whom faces her. The figure on the right touches her upraised arm and has a large erect penis.

REGISTRATION NO. 4025:14

Dimensions: Diam. 2.87, height 1.34.
Profile: F2, worn convex in part.
Reverse: Standard.
Location: Building 205, Area 236. Square A. Floor.
Design: Two registers. Top register shows a kneeling, naked, male figure facing right, holding a short-horned male animal on either side of him by its ruffled neck. Both animals face him. (Animal on left damaged.) In the lower register is a second kneeling male figure also facing right, holding the tail of an animal on either side of him. These male animals face outwards and have ruffled necks and long back-swept horns, which form the division between the two registers.
Remarks: Traces of glaze, with worn, cream glaze on reverse.

REGISTRATION NO. 4026:09

Dimensions: Diam. 2.45, height 0.95.
Profile: F1.
Reverse: Standard.
Location: Building 205, Area 336, Square A. Floor.
Design: A central, nude, female figure, looking left, with upraised arms, legs splayed and a prominent vulva. Below her is a flat-topped stand with two legs, each of which ends in a hoof. The female is flanked by two standing, nude, male figures, each of whom faces her. The figure on the right touches her upraised arm and has a large erect penis.

REGISTRATION NO. 4139:01

Profile: F1, straight.
Reverse: Button back(?). Perforation broken. No trace of decoration visible.
Location: Building 208, Area 242. Floor.
Design: Schematic human figure with arms raised, bent at the elbows, and legs apart with knees bent to form three sides of a rectangle, mirroring position of the arms. Plant motif between the legs, unidentified motif on either side of figure at waist level.
Remarks: Unusual speckled stone. No glaze. Persian Gulf Style? (Heads of animals are drawn not drilled.) Simple linear style with no use of compass drill. A figure in a similar position can be seen on Style la seal 3041-01. Previously published Killick et al. 1997, p. 90, Fig. 4.

REGISTRATION NO. 4197:03

Dimensions: Diam. 1.9, height 1.5.
Profile: F1.
Reverse: Unperforated.
Location: Building 205, Area 235. Square U. Floor.
Design: Design formed by transverse section cut through shell.

REGISTRATION NO. 4300:01

Dimensions: Diam. 2.27, height 1.22.
Profile: F1, straight.
Reverse: Large perforations, small boss with three lines, no dot-and-circle motifs. Worn over boss.
Location: Sand above Building 7.
Design: Long-horned, standing, male animal with deeply incised body, facing right, and to the left a possible foot symbol. A second, smaller animal, with curved horns, lies inverted over the back of the first, its head to the centre, its body at outside edge of seal. A crescent in field between the two animals.
Remarks: Greenish mottled stone, reverse partly glazed. Persian Gulf Style? (Heads of animals are drawn not drilled.)
Registration No. 4306:04

Dimensions: Diam. 2.26, preserved height 0.4.
Profile: F1, straight.
Reverse: Completely broken away.
Location: Building 7, Area 131. Collapse.
Design: Dentillated line around circumference, area within divided into four by deeply incised cross. Two incised rectangles, one inside the other in centre. A crab in each quadrant, with thin fringe-like legs, two have three legs on each side, two have five. Each has long pincers pointing towards centre of seal.
Remarks: See sealings 1622:4-1622:8 from Building 203, for almost identical design. The crab is a very unusual motif, and, with the exception of one unprovenanced example (Erlenmeyer and Erlenmeyer 1966), is only known from Saar. A Proto-Dilmun example comes from a grave in a cemetery close to Saar (Ibrahim 1983, p. 158, Fig. 49:6).

Registration No. 4361:01

Dimensions: Diam. 2.43, height 1.05.
Profile: F1, straight.
Reverse: Standard.
Location: Building 7, Area 45. Collapse.
Design: On the left is a long-horned animal looking over its shoulder to the centre of the seal, and a second, monstrous, creature, which looks outwards towards the edge of the seal. It has horns, a pointed open beak, a ruffled neck and a long tail. Its front and back legs are raised in front of its body, and the feet have large claws. Below its back legs and above its head are crescents, a four-pointed motif lies between its front and back legs. Between the two animals is a plant with a (damaged) crescent-shaped top.
Remarks: Reverse glazed.

REGISTRATION NO. 4306:04 – NO. 5040:01

Registration No. 4306:07

Dimensions: Diam. 2.2, extant height 0.9.
Profile: F1, straight.
Reverse: Badly damaged, traces of three parallel lines and one dot-and-circle motif.
Location: Building 7, Area 131. Collapse.
Description: Hatched rectangle in centre (7 x 6 squares), with second, smaller one above it (4 x 10 squares). To the right a standing male figure in a tiered skirt, looking right. He touches the top right-hand corner of the large rectangle with one hand. Behind him is a jar with a straw in it. A second naked figure stands to left of hatched square, facing right, and touching the top left-hand corner with one hand. Lower body and legs destroyed. Part of fringed motif below the rectangle, probably a crab.
Remarks: Glazed.

Registration No. 4361:01

Dimensions: Diam. 2.43, height 1.05.
Profile: F1, straight.
Reverse: Standard.
Location: Building 7, Area 45. Collapse.
Design: On the left is a long-horned animal looking over its shoulder to the centre of the seal, and a second, monstrous, creature, which looks outwards towards the edge of the seal. It has horns, a pointed open beak, a ruffled neck and a long tail. Its front and back legs are raised in front of its body, and the feet have large claws. Below its back legs and above its head are crescents, a four-pointed motif lies between its front and back legs. Between the two animals is a plant with a (damaged) crescent-shaped top.
Remarks: Reverse glazed.

Registration No. 4346:01

Dimensions: Diam. 2.5, height 1.0.
Profile: F1, straight.
Reverse: Standard.
Location: Building 11, Area 163. Occupation.
Description: Standing male figure in tiered skirt, facing right. To the left he holds a shield, beyond which is a hatched, oblong motif. To the right, his hand touches a triangular, hatched motif in bottom right field, below a long-necked, swimming bird, facing left, with a sub-circular motif above its back, perhaps a pot or a plant.

Registration No. 4350:01

Dimensions: Diam. 2.2, height 1.22.
Profile: F1, convex.
Reverse: Lines at oblique angle to perforation, spacing poor.
Location: Building 5, Area 25. Floor.
Description: Standing figure in tiered skirt, facing right. To the right he holds shield with two prongs at each end. To the right is horned male animal facing right, with long, ruffled neck, head stretched up and back, so that his nose almost touches edge of shield. Design slightly disturbed to fit curve of seal. Slight damage to left side of design.

Registration No. 4741:11

Dimensions: Diam. 2.34, height 1.24.
Profile: F2.
Reverse: Standard.
Location: Building 222, Area 305. Occupation.
Design: A central palm-frond, or stylized tree, with a rampant horned animal on either side. Both animals are male, and have ruffled necks, back-swept fringed horns and flicked-up tails.
Remarks: Traces of glaze.

Registration No. 5039:01

Dimensions: Diam. 2.25, height 1.3.
Profile: n/a.
Reverse: Apex of shell.
Location: Building 222, Area 305. Occupation.
Design: Design formed by transverse section cut through shell.
Remarks: Traces of burning.

Registration No. 5040:01

Dimensions: Diam. 2.34, height 1.24.
Profile: F2.
Reverse: Standard.
Location: Building 222, Area 305. Collapse.
Design: A central palm-frond, or stylized tree, with a rampant horned animal on either side. Both animals are male, and have ruffled necks, back-swept fringed horns and flicked-up tails.
Remarks: Traces of glaze.
CATALOGUE OF SEALS

REGISTRATION NO. 5099:32
Dimensions: Diam. 2.5, height 1.3.
Profile: F1, straight.
Reverse: Standard.
Location: Building 220, Area 309. Sand above building.
Design: Head and front legs of two, long-horned, kneeling animals joined together. Both face outwards to opposite edges of the seal, and look up at two more horned animals, on either side of palms-frond. The left-hand animal is rampant, with part of one, long, notched horn visible, head damaged. The right-hand animal is a standing quadruped, head damaged, apparently looking back over its shoulder to centre of the seal.
Remarks: In poor condition with one serious crack.

REGISTRATION NO. 5099:33
Dimensions: Diam. 2.4, height 1.2.
Profile: F2.
Reverse: Standard, slightly scratched and discoloured.
Location: Building 220, Area 309. Sand.
Design: A horned animal with a hatched square (4 x 4 squares) on its back. Possible human foot to the foot of this. Rectangular motif in left field with a small centaur, badly worn, below it. Second centaur in right field. There is a crescent in the curve of the tail of the right centaur.
Remarks: Traces of glaze.

REGISTRATION NO. 5104:07
Dimensions: Diam. 2.2, height 0.53.
Profile: F1, straight.
Reverse: Standard.
Location: Building 222, Area 305. Make-up.
Design: Central lozenge motif, with horned male animal and ruffed necks on either side. Both animals face outwards, and have their legs tucked under them, one being reversed. One has long horns, the other short.
Remarks: See almost identical example from Susa, Harper et al. 1992, p. 119, Fig. 78.

REGISTRATION NO. 5147:01
Dimensions: Diam. 2.0, height 0.88.
Profile: F2.
Reverse: One incised line only, four dot-and-circle motifs.
Location: Building 220, Area 310. Floor.
Design: Kneeling nude man with one arm raised, facing right towards long-horned, leaping animal with a ruffled neck. Below and between them is another, smaller, long-horned male animal, facing right, with its head raised. It almost appears to be suckling from the larger animal. Crescent in lower left field and another in lower right. Some Proto-Dilmun features.
Remarks: Patches of glaze on reverse.

REGISTRATION NO. 5168:01
Dimensions: Diam. 2.54, height 1.1.
Profile: Standard.
Location: Building 220, Area 309. Occupation.
Design: Seated god with horned headdress, wearing tiered skirt, facing right, his left arm raised to the right, showing three fingers on the hand. His seat has a vertically-hatched base and forked back. Facing him is a naked, standing man who apparently touches the god’s waist with a stick/sword. Behind the seated figure is another standing nude male figure, facing right, with left arm raised, and three fingers of the hand visible. In the lower field a standing bull, facing right, head lowered.
Remarks: Traces of glaze. See seals from the Jebel Hamrin and North Syria (Tozzer 1987, p. 45), and Old Assyrian style seals from Kültepe/Kanesh, for a similar depiction of the hand with only three fingers (Özgüç 1989, Pl. 82, Nos. 3 and 5). Previously published Crawford & Matthews 1997, Fig. 94.

REGISTRATION NO. 5155:10
Dimensions: Original estimated diam. 2.65, height 1.24. (Broken in half.)
Profile: F2.
Reverse: Standard.
Location: Building 220, Area 310. Floor.
Design: Top half preserved. In the centre is the head of an animal, with ruffled neck, and back-swept, knobbed horns, looking right. The base of the neck appears to protrude from the body of a second animal, at right angles, facing upwards, of which the body, head, long ruffled neck and front leg are present, and there is an unidentified motif below the leg. Human foot motif in the upper left field. To the right are the head and ruffled neck of an animal with back-swept, knobbed horns, facing left.
Unusual, red mottled stone similar to that used for 5099:33.

REGISTRATION NO. 5196:01
Ceramic seal(?), broken.
Dimensions: 2.5 x 1.5 x 1.0.
Reverse: Roughly pinched into a gable shape.
Profile: Triangular.
Location: Building 220, Area 312. Tannur.
Description: Reddish baked clay, about half of a rectangular, gable-backed, ceramic seal. Parallel striations underneath, fibre impressions(?).
Catalogue of Seals

Registration No. 5506:05

Dimensions: Diam. 2.3, height 1.05.
Profile: F1, straight.
Reverse: Low boss destroyed by four bore-holes at right angles to each other. Trace of line around base of boss.
Location: Building 224, Area 307. Collapse.
Design: Horned animal, perhaps a bull, with vertically-striated body, standing facing right. Second striated motif above its back at right angles to it, possibly another animal which is not finished. String of five small triangular holes in left field.
Remarks: Persian Gulf Style. Perhaps a re-worked and unfinished design. No glaze present; no use of compass drill.

Registration No. 5510:02

Dimensions: Diam. 1.0, height 0.87.
Profile: F2.
Reverse: Standard.
Location: Building 224, Area 316. Floor.
Design: Seated monkey-like creature, facing left, holding to the left a stick or staff, with a ruffled neck and head of an animal protruding from each end. The necks curve round the edge of the seal and the heads look inwards towards a wavy line below the noses.
Remarks: miniature seal. For another, slightly larger example see Beyer 1989, p. 143, No. 256. Previously published Killick et al. 1997, p. 93, Fig. 10.

Registration No. 5510:15

Dimensions: Diam. 2.2, height 1.1.
Profile: F2.
Reverse: Standard.
Location: Building 224, Area 316. Floor.
Design: Well-preserved, finely-cut design, showing naked, standing, male figure in centre, facing right, and holding to the right a large hatched square with the heads of two long-horned animals, with ruffled necks, protruding towards the top and bottom rim of the seal from its inner corners. To the left, the figure holds a long shield, and beyond this is a palm-frond that lies on the extreme edge of the seal, and is partly damaged by a chip in the stone.
Remarks: One serious crack visible in stone.

Registration No. 5510:21

Dimensions: Diam. 2.7, extant height 0.9.
Profile: F2.
Reverse: Broken away, traces of three lines.
Location: Building 224, Area 316. Floor.
Design: Bronzed male figure holding the horns of a long-horned male animal on the left edge of the seal. The animal looks back over his shoulder towards the figure. The right-hand figure drinks through a straw from another jar to his right. A crescent lies on the edge of the seal between the heads of the men. Another is in a similar position between their feet.
Remarks: Thick glaze on original surface of reverse.

Registration No. 5546:02

Dimensions: Diam. 2.29, height 0.65.
Profile: F1(?).
Reverse: Standard, lines rubbed off the boss.
Location: Building 224, Area 316. Make-up.
Design: Standing male animal at lower centre, facing right, with downward-curving horns. Above his back are two more horned animals, one on either side, and facing a row of dots, probably the remains of a palm-frond.
Remarks: Intermediate style(?). Heads of animals are incised, not punched with drill. Traces of glaze on reverse.
**Catalogue of Seals**

**Registration No. 6087:10**

Dimensions: Diam. 1.9, height 0.85.
Profile: F2, concave.
Reverse: Standard, worn.
Location: Building 63, Area 306. Sand.
Design: Design framed by hatched, incised border. To the right is horned male animal with ruffled neck facing left towards palm-frond. On left is monkey-like creature facing right and touching frond.

**Registration No. 6535:01**

Square stamp seal.
Dimensions: 1.56 x 1.56 x 0.6.
Profile: Triangular in section.
Reverse: Gable back. Standard decoration with lines running at right angles to the perforation.
Location: Building 60, Area 372. Occupation.
Design: A scorpion, facing left. Above is a horizontal line with a palm-frond at right angles to it at either end. In the centre is a standard topped with a crescent, with a circle with central dot (or star) above.
Remarks: Grey stone with crystalline inclusions. Two holes in obverse, worn through to perforation.

**Registration No. 6538:01**

Dimensions: 2.2 x 1.2 (estimated).
Profile: F1(?). Obscured with bitumen.
Reverse: Boss broken off in antiquity; standard decoration.
Location: Building 60, Area 372. Make-up.
Design: Upper left, a scorpion, facing upwards. Below it, a turtle, facing upwards. To right, a horned male animal, standing facing right and looking back over its shoulder. By its chest, a chiselled, or possibly accidental, line. At bottom right, a bird with feathered back, facing right. In the upper right field, a crescent.
Remarks: Broken and mended with bitumen in antiquity, obscuring most of the perforation and the edge. Lower edge, and lower left edge, chipped off.

**Registration No. 6580:01**

Dimensions: Diam. 1.7, height 0.8.
Profile: F2.
Reverse: Standard.
Location: Building 60, Area 372. Floor.
Design: Standing male figure with short skirt on left, one arm extended to right, touching the back of a rampant horned monster which faces right. Its fore-leg, with three claws, is raised in front of it, hind-leg tucked in, scorpion's tail. Crescent on edge of seal. Proto-Dilmun(?).
Remarks: Reverse glazed.

**Registration No. 6581:05**

Dimensions: Diam. 2.4, height 1.0.
Profile: F1, straight.
Reverse: Standard.
Location: Building 60, Area 372. Floor.
Design: Nude male figure in centre facing right. To the right he touches the rump of a horned male animal with ruffled neck. The animal faces right and looks back over its shoulder. To the left, the man holds a seated, monkey-like creature, jar motif between their heads.

**Registration No. 6581:02**

Dimensions: Max. diam. 1.78, height 0.8.
Profile: Worn smooth.
Reverse: Worn smooth, probably originally button back.
Location: Building 60, Area 371. Floor.
Design: Black stone worn shapeless. No design or glaze visible.
Remarks: Possibly Persian Gulf Style.

**Registration No. 6583:01**

Dimensions: Max. diam. 3.01, height 1.21.
Profile: F2.
Reverse: Standard.
Location: Building 61, Area 610. Collapse.
Design: Two horned male animals facing a palm-frond. Each animal has a crescent above its back and a rosette/sun motif between its feet. Below them is a double-headed bull with ruffled necks, each head facing edge of seal.
Remarks: Pale-grey steatite.

**Registration No. 6672:04**

Dimensions: Max. diam. 2.9, height 1.3.
Profile: N/A.
Reverse: Apex of shell, tip worn away to show hole.
Location: Building 67, Area 384. Collapse.
Design: Possible shell seal or counter. Natural spiral forms design.
Catalogue of Seals

Registration No. 7001:29
Dimensions: Diam. 1.95, extant height 0.67.
Profile: F1(?).
Reverse: Standard.
Location: Building 35, Area 604. Occupation.
Design: Face of seal has flaked off exposing perforation which was drilled from both ends.
Remarks: Mottled stone with creamy surface.

Registration No. 7533:01
Dimensions: Diam. 2.32, extant height 1.24.
Profile: F1, convex.
Reverse: Largely broken away, trace of one dot-and-circle motif.
Location: Building 353, Area 708. Midden.
Design: About one third of seal extant. One possible seated figure, facing left. Proto-Dilmun(?).
Remarks: Dark-grey stone.

Registration No. 8028:01
Dimensions: Diam. 2.67, height 1.0.
Profile: F1.
Reverse: Standard.
Location: Building 1, Area 1. Occupation.
Design: Linear Style. A seated figure on the left, facing right, holding a pan balance, below which is a long-necked, round-bottomed jar on a stand. Second, much-damaged, standing figure with one arm raised, on the right.
Remarks: A similar pan balance comes from a grave of Early Dilmun date, and is on display in the National Museum of Bahrain. A pan balance is also shown on a sealing from Kültepe/Kanesh level II in the Syro-Cappadocian style (Teissier 1984, No. 532).
Previously published Crawford 1991, p. 256, Fig. 3 and p. 259; Killick et al. 1991, p. 120, Fig. 12a. A little glaze remaining at base of boss.
Museum No. 4135-3-90.

Registration No. E16:10:06
Dimensions: Diam. 2.64, height 1.24.
Profile: F1.
Reverse: Standard.
Location: Building 35, Area 604. Collapse.
Design: Recessed border with dog-tooth decoration, slightly damaged. In centre is rotating design of five long-horned animal heads, with long, ruffed necks, joined at the centre by a circle.

Registration No. E18:12:05
Dimensions: Diam. 2.60–2.70, height 1.24.
Profile: F2.
Reverse: Standard.
Location: Building 1, Area 1. Occupation.
Design: A standing human figure in a tiered skirt, facing right. In his left hand he holds a shield-like object, with spikes at the top and bottom. His right hand grasps the hand of a second, naked, human figure, seated on a triangular stool, and also facing right. In the right field is an inverted, long-necked animal, with a broken, hatched rectangle above its back.
Previously published Crawford 1991, p. 259; Killick et al. 1991, p. 120, Fig. 12b.
Museum No. 4132-3-90.

Registration No. E18:33:01
Dimensions: Diam. 2.2, extant height 0.9 (damaged).
Profile: F1, straight.
Reverse: Standard.
Location: Building 1, Area 2. Occupation.
Design: Two naked, standing, human figures facing left. The figure on the left holds a shield-like object to his
Catalogue of Seals

**Registration No. F18:33:16**

**Dimensions:** Diam. 2.61–2.67, height 1.56.
**Profile:** F3.
**Reverse:** Boss missing.
**Location:** Building 4, Area 9. Occupation.
**Design:** Two rampant horned animals, with their bodies crossing at the waist. Their heads are separated by a standard topped with a crescent. In the left field is a naked male figure, standing facing right, holding a spear. In the right field is a wedge-shaped motif, with an animal head and raised fore-limb protruding from the top. Between the animals’ feet is an illegible motif, possibly a fish.
**Remarks:** Traces of glaze. Reverse also glazed. This seal shows elements of both Styles Ia and Ib. Previously published Crawford 1991, p. 260; Killick et al. 1991, p. 120, Fig. 12c.

**Registration No. G16:01:01**

**Dimensions:** Diam. 2.0, extant height 1.0.
**Profile:** F3.
**Reverse:** Boss missing.
**Location:** Building 1, Area 2. Occupation.
**Design:** Recessed border with incised lines around the inside. In left field is a naked, standing man, his right arm bent away from his body towards the border of the seal, while with the other hand he holds his erect penis. Above, and at right angles to him, is a very stylised female figure, facing right, legs wide apart, holding her feet in her hands, apparently engaged in sexual intercourse with the male. On either side of her head is a triangle, one hatched, the other probably originally hatched, but now damaged. Linear Style.
**Remarks:** Pale stone, with white glazed surface. Splitting, with two chips missing from the edge of the face.

**Registration No. G17:07:01**

**Dimensions:** Diam. 1.11, height 0.96.
**Profile:** F1, straight.
**Reverse:** Standard.
**Location:** Building 4, Area 9. Occupation.
**Design:** A bearded figure wearing a hatched skirt, standing facing right, in a boat with an animal-head prow (damaged). He holds a shield-like object to the right, and to the left, a horned animal, with its head turned back over its shoulder to face left. In the right field is a plant motif, with a triangle above.

**Registration No. G17:18:02**

**Dimensions:** Diam. 2.70, height 1.25.
**Profile:** F2.
**Reverse:** Standard.
**Location:** Building 3, Area 5. Floor.
**Design:** A wheel of six animal heads joined at the base of their necks to a hatched central circle. Each animal has two horns and one possible ear shown. Four have straight horns and two are shown with curving horns. All face right. Two raised fore-legs are visible on one. Filler motifs between the heads are a hatched triangle, two wavy lines and a crescent.
**Remarks:** Traces of glaze. Reverse also glazed. This type of design is found over a wide area in the first half of the second millennium BC. A wheel of eight human figures is incorporated in a presentation scene in the Syrian style, dated c.1750–1620 BC (Teissier 1984, Nos. 453 and 557, showing a wheel of heroes). Other examples are known from Alalakh and Azemiyeh (Porada 1971).

**Registration No. I14:20:10**

**Gable-backed rectangular seal.**
**Dimensions:** 0.8 x 1.2 x 1.5.
**Profile:** Triangular.
**Reverse:** Standard, with the three lines across short axis of gable.
**Location:** Building 210, Area 206. Occupation.
**Design:** A couchant animal facing right, with a long, ruffled neck and upright horns. Above its back is a hatched square (4 x 7 squares).

**Remarks:** Very dark stone. No glaze. Previously published Crawford 1993, p. 9, Fig. 9.

**Registration No. K16:08:05**

**Dimensions:** Diam. 2.4, height 1.20.
**Profile:** F2.
**Reverse:** Standard.
**Location:** Building 51, Area 55. Midden.
**Design:** Two short-horned animals facing outwards, looking back over their shoulders towards each other. Between them is a rectangular structure, partly hatched, possibly a door or altar. The top of the rectangle is decorated with a double-crescent standard. Drilled motifs in each of the two upper crescents.

**Registration No. K16:29:03**

**Dimensions:** Diam. 2.03, height 0.96.
**Profile:** F4, grooved. (worn).
**Reverse:** Standard with lines worn away at apex of dome.
**Location:** Building 51, Area 55. Floor.
**Design:** Five standing bearded figures, with long skirts and narrow waists, all facing right and holding hands. Above the central figure is a crescent moon on its back, with a six-pointed star on either side of it.

Museum No. 4812-1-90-3.

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**Catalogue of Seals**

**Location:** Reverse:
**Profile:** Standard.
**Dimensions:** Diam. 2.61–2.67, height 1.56.

**Remarks:** Very dark stone, glaze preserved in the figures. Previously published Crawford 1991, p. 260, Killick et al. 1991, p. 120, Fig. 12c.

Museum No. 2991-3-90.

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**Catalogue of Seals**

**Location:** Reverse:
**Profile:** Standard.
**Dimensions:** Diam. 2.0, height 1.25.

**Remarks:** Traces of glaze. Reverse also glazed. This type of design is found over a wide area in the first half of the second millennium BC. A wheel of eight human figures is incorporated in a presentation scene in the Syrian style, dated c.1750–1620 BC (Teissier 1984, Nos. 453 and 557, showing a wheel of heroes). Other examples are known from Alalakh and Azemiyeh (Porada 1971).


Museum No. 2990-2-90.

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**Catalogue of Seals**

**Location:** Reverse:
**Profile:** Standard.
**Dimensions:** Diam. 2.4, height 1.20.


Museum No. 4136-3-90.

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**Catalogue of Seals**

**Location:** Reverse:
**Profile:** Standard.
**Dimensions:** Diam. 2.03, height 0.96.

**Remarks:** Very dark stone. No glaze. Previously published Crawford 1993, p. 9, Fig. 9.

Museum No. 4817-2-90-3.

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**Catalogue of Seals**

**Location:** Reverse:
**Profile:** Standard.
**Dimensions:** Diam. 2.61–2.67, height 1.56.

**Remarks:** Very dark stone, glaze preserved in the figures. Previously published Crawford 1991, p. 260, Killick et al. 1991, p. 120, Fig. 12c.

Museum No. 2991-3-90.
**Catalogue of Seals**

**REGISTRATION No. K16:29:08**

Dimensions: Diam. 2.47, extant height 0.75.
Profile: F2.
Location: Building 51, Area 55. Floor.
Design: A naked female figure is seen from the front with legs wide apart, head turned to the right. To the left of her head is a turtle or lizard; to the right is a second, unidentified, motif. Below her, at right angles to her legs, is a male figure, head missing, holding his erect penis in his right hand, apparently about to enter her. In his left hand he holds a straw coming from a jar at his feet.
Remarks: Stamp seals showing female figures in similar positions have a long tradition in Susa and in Anshan where they are often made of a bituminous compound (Amiet 1986, p. 267). Previously published Crawford 1991, p. 261.
Museum No. 4815-2-90-3.

**REGISTRATION No. K16:29:13**

Dimensions: Diam. 0.9, height 1.75.
Profile: F2.
Location: Building 51, Area 55. Floor.
Design: A deeply-incised, schematic design. In the centre a snake is shown as a vertical zigzag with a beak-like head. To either side of the snake a stylized human figure with outstretched arms appears to be dancing. In the right field is a hatched motif, perhaps a fish.
Remarks: An unusual style.
Museum No. 4815-2-90-3.

**REGISTRATION No. K16:29:16**

Dimensions: Diam. 0.98, height 2.33.
Profile: F1, convex, but worn.
Reverse: Standard, worn over apex of boss.
Location: Building 51, Area 55. Floor.
Design: Four horned animals, three of them around the edge of the seal, two of which face outwards, the middle one with its head to the centre. A fourth animal, with an elongated, ruffled neck, stands above it, and has its head to the edge of the seal.
Remarks: Traces of glaze, also on reverse.
Museum No. 4819-2-90-3.

**REGISTRATION No. K16:53:10**

Dimensions: Diam. 2.65, height 1.15.
Profile: F1, convex, worn.
Reverse: Standard but worn over apex. Traces of glaze.
Location: Building 51, Area 56. Make-up.
Design: A central, standing figure in a tiered skirt, facing right, torso in profile, with hands raised towards a horned male animal, which faces left but looks back over its shoulder towards a crescent in the right field. To the left of the standing figure is a second, horned, male animal, facing left, with its head turned back towards the central figure. Below this is a damaged foot motif.
Remarks: The seal is worn and the style shows elements of both Ejercerz’s Styles Ia and Ib.
Museum No. 4818-2-90-3.

**REGISTRATION No. L18:27:07**

Dimensions: Diam. 1.8, extant height 0.7.
Profile: F4, grooved.
Reverse: High boss, broken and worn. No decoration visible.
Location: Building 53, Area 61. Make-up.
Design: Linear Style. Difficult to interpret. Probably shows schematic, long-horned animal facing right, with a possible second horned animal, also facing right. Along the edge, above the horns of the second animal, is a curved line with left end thickened. An irregular line is seen above the back of the second animal, at right angles to the first, above its back. Two curved lines in upper right field, and a triangular mark in left field.
No glaze, no use of drill.
Museum No. 2810-90-3.

**REGISTRATION No. P19:01:10**

Dimensions: Diam. 2.60–2.64, height 1.32.
Profile: F2.
Reverse: Standard.
Location: Building 104, Area 113. Floor.
Design: Spiral formed by transverse cut through shell.

**REGISTRATION No. Q20:22:07**

Shell seal.
Dimensions: Max. diam. 3.5, height 1.4.
Profile: F2.
Reverse: Perforated through centre, traces of burning on raised central area.
Location: Building 104, Area 113. Floor.
Design: Spiral formed by transverse cut through shell.

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**Early Dilmun Seals from Saar**

**EARLY DILMUN SEALS FROM SAAR**


one end. Below this is an offering stand, above which is a rosette or sun.
Museum No. 2989-3-90.
All dimensions are in centimetres. Where a measurement or detail of description is lacking, it was not available at time of writing. It appears that, in the vast majority of cases, the impressions are from round, stamp-seals. Sealings found in the temple have been previously published (Crawford & Matthews 1997) and are not included here.

**REGISTRATION NO. 1021:03**

- **Dimensions:** 2.5 x 2.4 x 1.0
- **Reverse:** Knot-impression.
- **Location:** Building 211, Area 212. Oven fill.
- **Description:** Yellow/green clay. Area of smoothed edge distorted by pressure. Finger-print visible. Seated figure to left drinking from straw which goes to a jar at his feet. Possibly from the same seal as 1021:3 and 4, similar to 1856:05.

**REGISTRATION NO. 1021:06**

- **Dimensions:** 2.0 x 1.3 x 0.9
- **Reverse:** String-impression/knot.
- **Location:** Building 211, Area 212. Oven fill.
- **Description:** Yellow/green clay, with inclusions. Badly worn, traces of rim of circular seal, motifs illegible, on obverse.

**REGISTRATION NO. 1021:07**

- **Dimensions:** 1.6 x 1.2 x 0.2
- **Reverse:** Vast string-impression.
- **Location:** Building 211, Area 212. Oven fill.
- **Description:** Pinkish clay, baked. Obverse: Fragmentary seal impression. Possible animal head and an incised line.

**REGISTRATION NO. 1021:08**

- **Dimensions:** 0.15 x 1.0 x 0.06
- **Reverse:** Both fragments have impressions, possibly of wood.
- **Location:** Building 211, Area 212. Oven fill.
- **Description:** Yellow/green clay with crystalline inclusions. Larger piece has one smoothed surface with fingerprint, smaller has fingerprints on smoothed edge.

**REGISTRATION NO. 1024:17**

- **Dimensions:** 2.2 x 1.5 x 0.6
- **Reverse:** Impression of string or knot.
- **Location:** Building 210, Area 207. Occupation.
- **Description:** Yellow/green hardened clay. Segment of lower third of seal with smoothed edge distorted by pressure. Finger-print visible. Obverse (from right): Lower part of a possible shield, the legs of a human figure facing left, a much-damaged second figure, and part of a hatched rectangle.

**REGISTRATION NO. 1024:22**

- **Dimensions:** 1.4 x 1.23 x 1.2
- **Reverse:** String-impression.
- **Location:** Building 210, Area 206. Floor.
- **Description:** Sandy, grey clay. Worn design shows lower part of a standing figure in a long skirt, holding a straw in a pot to the right.

**REGISTRATION NO. 1025:04**

- **Dimensions:** 1.4 x 1.23 x 1.2
- **Reverse:** String-impression.
- **Location:** Building 210, Area 206. Floor.
- **Description:** Sandy, grey clay. Worn design shows lower part of a standing figure in a long skirt, holding a straw in a pot to the right.

**REGISTRATION NO. 1029:02**

- **Dimensions:** 2.6 x 2.8 x 1.2
- **Reverse:** Smooth, convex surface, with a string-hole at one edge. Perforation does not go through. This suggests use as a tag or label with end of string embedded in it.
- **Location:** Building 210, Area 207. Pit fill.
- **Description:** Hemispherical piece of hard, baked, red/orange clay. Made the same size as the seal used on it, so it has a seal impression exactly fitting the flat surface.
- **Obverse:** A standing figure in a long skirt. To the left of the figure is a scorpion. To the right is a horned animal, looking back over its shoulder at the human figure.

**REGISTRATION NO. 1029:03**

- **Dimensions:** 2.5 x 2.2 x 1.1
- **Reverse:** String-impression.
- **Location:** Building 210, Area 207. Pit fill.
- **Description:** One edge flattened and smooth.
- **Obverse:** Design largely eroded, no legible motifs.

**REGISTRATION NO. 1029:04**

- **Dimensions:** 1.6 x 0.9 x 1.3
- **Reverse:** Possible string-impression.
- **Location:** Building 210, Area 207. Pit fill.
- **Description:** Small area of sealing on light-grey, hardened clay, one smoothed edge with fingerprint.
- **Obverse:** No legible motifs.

**REGISTRATION NO. 1029:05**

- **Dimensions:** 2.0 x 1.3 x 1.0
- **Reverse:** Tubular impression, perhaps of peg, or rim of pot.
- **Location:** Building 210, Area 207. Pit fill.
- **Description:** Yellow/green hardened clay. Centre of seal impression, one smoothed edge with fingerprint.
Catalogue of Seal Impressions

Obverse: Seated, nude, human figure facing left, arms outstretched, his feet above back of damaged animal. Illegible motif in upper right field.

**Registration No. 1029:06**
Dimensions: 1.8 x 1.3 x 0.5.
Reverse: String-impression.
Location: Building 210, Area 207. Pit fill.
Description: Yellow/green clay.
Obverse: Smooth. Arc of part of edge of seal visible.

**Registration No. 1029:07**
Dimensions: 1.8 x 1.3 x 0.5.
Reverse: Possible string-impressions. Finger-print.
Location: Building 210, Area 207. Pit fill.
Description: Piece of hardened, yellow/green clay, probably a sealing. Obverse has impression of something flat and striated, e.g. wood. Irregular in shape.

**Registration No. 1029:08**
Dimensions: 1.7 x 1.2 x 1.1.
Location: Building 210, Area 207. Pit fill.
Reverse: Parallel impressions of thin strips (perhaps of palm-leaf).
Description: Piece of hardened, yellow/green clay pinched into roughly triangular shape with smooth surfaces. No design visible.

**Registration No. 1029:09**
Dimensions: 2.0 x 0.8 x 0.8.
Reverse: Not described.
Location: Building 210, Area 207. Pit fill.
Description: Piece of clay with impression of the edge of a seal. Two surfaces seem to be smoothed, but no remaining design is visible.

**Registration No. 1029:10**
Dimensions: 1.1 x 1.0 x 0.9.
Reverse: Surface missing.
Location: Building 210, Area 207. Pit fill.
Description: Hardened grey clay, roughly triangular, one broken surface. No design visible.

**Registration No. 1029:11**
Dimensions: 1.5 x 0.6 x 0.4.
Reverse: Surface missing.
Location: Building 210, Area 207. Pit fill.
Description: Oblong fragment of hardened, pale-grey clay. One surface smoothed.

**Registration No. 1029:12**
Dimensions: 1.3 x 0.6 x 0.4.
Reverse: String-impression.
Location: Building 210, Area 207. Pit fill.
Description: Irregular fragment of hardened grey clay. One surface smoothed.

**Registration No. 1029:13**
Dimensions: 1.1 x 0.5 x 0.4.
Reverse: Surface missing.
Location: Building 210, Area 207. Pit fill.
Description: Fragment of pale-grey clay, one surface smoothed. No design visible.

**Registration No. 1029:14**
Dimensions: 1.0 x 0.9 x 0.4.
Reverse: Not described.
Location: Building 210, Area 207. Pit fill.
Description: Hardened, grey clay. Part of seal impression remaining on one surface. Two lines at right angles, with one wavy line, possibly the horns of an animal.

**Registration No. 1041:17**
Dimensions: 3.2 x 2.3 x 1.8.
Reverse: Impressions of knot and string.
Location: Building 211, Area 212. Occupation.
Description: Irregular fragment of yellow/green, hardened clay with white inclusions.
Obverse: Damaged. There appears to be a palm-tree in the centre with illegible motifs on either side.

**Registration No. 1041:18**
Dimensions: 1.7 x 1.3 x 0.8.
Reverse: Possible string-impression.
Location: Building 211, Area 212. Occupation.
Description: Fragment of grey clay with deeply impressed edge of seal. Design illegible.

**Registration No. 1041:19**
Dimensions: 1.7 x 1.2 x 0.5.
Reverse: String-impression.
Location: Building 211, Area 212. Occupation.
Description: Fragment of yellow/green clay, with small area of smoothed edge. Obverse: Badly damaged human figure with arm raised to left. Rosette below raised arm.

**Registration No. 1041:20**
(Not described).

**Registration No. 1042:16**
Dimensions: 2.2 x 1.5 x 0.7.
Reverse: Two parallel string-impressions and a smoothed area.
Location: Building 211, Area 211. Floor.
Description: Fragment of yellow/green clay.
Obverse: Badly worn. Damaged animal body, and traces of legs at right angles to it.

**Registration No. 1042:17**
Dimensions: 2.6 x 1.8 x 0.8.
Reverse: Paint string-impression.
Location: Building 211, Area 211. Floor.
Description: Two fragments of yellow/green clay, badly eroded. Obverse: A horned animal looking back over its shoulder to the left. Below is a possible second animal. To its right a possible human figure, holding the first animal by the horns. The remainder is too badly eroded to identify.

**Registration No. 1042:18**
Dimensions: 1.8 x 2.1 x 0.75.
Reverse: Knot-impression.
Location: Building 211, Area 211. Floor.
Description: Light-grey, hardened clay. Virtually-complete impression. Estimated diam. of seal 1.7. Obverse: Two horned animals, rampant, one on either side of a turtle or
Catalogue of Seal Impressions

Registration No. 1042:19
Dimensions: 2.2 x 2.4 x 0.75.
Reverse: Parallel string-impressions.
Location: Building 211, Area 211. Floor.
Description: Light-grey, rectangular fragment. Badly worn on both sides. Obverse: Upper bodies of two horned animals, with turtle or tortoise between them, the same design as seen on 1042:18, 19, 20, and 21. Found in association with cooking pot 1042:14.

Registration No. 1042:20
Dimensions: 1.2 x 1.9 x 0.7.
Reverse: Knot-impression.
Location: Building 211, Area 211. Floor.
Description: Yellow-green clay. Obverse: A turtle or tortoise between the lower limbs of two rampant animals with horns. This is the same design that appears on fragments 1042:18, 19, 21 and 22. Found in association with cooking pot 1042:14.

Registration No. 1042:21
Dimensions: 1.0 x 1.8 x 1.0.
Reverse: Deep string-impression.
Location: Building 211, Area 211. Floor.
Description: Light-grey clay with about three-quarter of a seal impression remaining. Obverse: Poor definition, but seems to be identical to fragments 1042:18, 19, 20 and 22. Turtle or tortoise, and star visible. Found in association with cooking pot 1042:14.

Registration No. 1042:22
Dimensions: 2.1 x 0.9 x 0.7.
Reverse: Worn.
Location: Building 211, Area 211. Floor.
Description: Light-grey, rectangular fragment. Badly worn on both sides. Obverse: Upper bodies of two horned animals, with turtle or tortoise between them, the same design as seen on 1042:18, 19, 20 and 21. Found in association with cooking pot 1042:14.

Registration No. 1042:23
Dimensions: 2.0 x 1.6 x 0.7.
Reverse: Worn.
Location: Building 211, Area 211. Floor.
Description: Yellow-green clay. Obverse: The upper right quadrant of a circular seal impression, a seated monkey-like creature on the right, facing left towards a short-horned animal. Below them is the head and neck of a possible bull.

Registration No. 1042:24
Dimensions: 3.0 x 2.0 x 0.8.
Reverse: Surface missing.
Location: Building 211, Area 211. Floor.
Description: Very poor condition.

Registration No. 1042:26
Dimensions: 2.1 x 1.7 x 0.7.
Reverse: Possible impression of peg(?)
Estimated diam. of peg 0.6.
Location: Building 211, Area 211. Floor.
Description: Yellow-green clay fragment, with one smooth surface, at approximately eighty degrees to obverse. Obverse: Double line of a long, hatched area, perhaps a net (7–8 squares visible), with two filled squares either side of a line running at right angles to the net.

Registration No. 1045:01
Dimensions: 1.8 x 1.3 x 0.8.
Reverse: Deep string-impression.
Location: Building 211, Area 212. Floor.
Description: Dark-greenish clay. Virtually-complete impression, one smoothed edge. Estimated diam. of seal 1.9. Obverse: A standing male figure in a skirt, facing right, arms held out to either side. To the right he touches the neck of a horned animal, which looks back over its shoulder at the man. A palm-frond or branch appears in the field between the man and animal.

Registration No. 1045:03
Dimensions: 1.6 x 1.5 x 1.1 (largest fragment).
Reverse: Traces of string-impressions.
Location: Building 211, Area 212. Floor.
Description: Six small fragments of light-grey, sandy clay.

Registration No. 1051:06
Dimensions: 2.2 x 1.3 x 0.5.
Reverse: String-impressions.
Location: Building 211, Area 214. Collapse.
Description: Grey clay. Obverse: No coherent design visible, two lines apparently forming a V-shape.

Registration No. 1067:06
Dimensions: 2.2 x 1.7 x 1.0 (largest fragment).
Reverse: Not described.
Location: Building 211, Area 212. Floor.
Description: Fourteen fragments of light-green, sandy clay, possibly sealings. Much-damaged. No design discernible.

Registration No. 1087:06
Three fragments.
(i) 1.4 x 1.2 x 0.4. (ii) 1.2 x 0.9 x 0.9. (iii) 0.8 x 0.6 x 0.7.
Reverse: (i) String-impression and cloth. (ii) Cloth impression. (iii) String-impression.
Location: Building 50, Area 91. Collapse.
Description: Light khaki-green clay. Obverse eroded, one smooth surface. (ii) Smooth surface with possible animal head. (iii) No design visible. Cloth and string-impressions suggest fragments of a jar sealing.

Registration No. 1101:07
Three fragments.
Dimensions: (i) 1.6 x 1.1 x 0.6. (ii) 1.1 x 1.3 x 0.9. (iii) 0.95 x 0.55 x 0.5.
Reverse: Surfaces missing.
Location: Building 50, Area 90. Collapse.
Description: Light-green, sandy clay. (ii) and (iii) each have one smooth surface.

Registration No. 1105:02
Four fragments.
Dimensions: (i) 2.35 x 1.6 x 0.7. (ii) 2.0 x 0.95 x 0.45. (iii) 2.0 x 1.4 x 0.9. (iv) 1.0 x 0.8 x 0.4.
Reverse: (i) Flat and smooth, with tubular, pencil-shaped hole through body. (ii) Flat, smooth area. (iii) and (iv) No impressions.
Location: Building 50, Area 90. Floor.
Description: Fine, grey clay. (i) Two fragments glued together. About one-third of impression including left edge of seal. Obverse: a schematic horned animal standing facing left. Above its back is a rosette or sun, and to the left is a vertical motif. From a Proto-Dilmun seal, as the head of the animal appears drawn not drilled. (ii) Obverse: left edge of impression from same seal as (i), showing fore-part of animal and the vertical motif. No design on (iii) and (iv).
NO. 1108:02 – NO. 1161:10

**Catalogue of Seal Impressions**

Reg No. 1108:02
Description: Fragments of clay, apparently bearing seal impression. No further description.

Reg No. 1117:04
Two fragments.
Dimensions: [i] 1.7 x 1.8 x 0.9. [ii] 2.3 x 2.0 x 0.8.
Reverse: Surface missing.
Location: Building 200, Area 205. Floor.
Description: Light-grey clay with salt crystals. (i) Impression of right-angled edge.

Reg No. 1131:09
Dimensions: 1.0 x 1.3 x 0.4.
Reverse: String-impressions.
Location: Building 200, Area 205. Make-up.
Description: Fine, light-grey clay.
Obverse: Upper left segment of an impression, the head of a bearded figure looking left, sharply defined. In front of the face is the end of a pointed object, while on the left edge is another very damaged motif. See also 1161:04 for reconstruction of entire design and list of sealings apparently from same seal.

Reg No. 1133:06
Dimensions: 2.6 x 1.5 x 0.8 (largest fragment).
Reverse: String-marks and smooth areas.
Location: Building 211, Area 212. Make-up.
Description: Fourteen fragments of light-grey, sandy clay with white inclusions. One fragment has smoothed edge, with rosette visible on obverse, and other illegible motifs.

Reg No. 1133:14
Dimensions: 2.5 x 1.9 x 0.9.
Reverse: Knot-impression.
Location: Building 211, Area 212. Make-up.
Description: Fine, yellowish clay.
Obverse: Design distorted, with about half extant. On left edge is standing figure in tiered skirt, holding a curious bag-like object to the right, and facing a second naked figure, head missing, both arms bent at the waist, and pointing to the right. Second, bag-like motif below his waist.

Reg No. 1133:15
Dimensions: 2.2 x 2.4 x 1.5.
Reverse: Knot-impression.
Location: Building 211, Area 212. Make-up.
Description: Slightly-sandy, grey clay with salt crystals.
Obverse: Design badly worn. Seated figure on left, damaged, looking right, towards short-horned male animal, perhaps a bull, with legs tucked under it, also looking right. Indecipherable motifs over its back and below head. Estimated diam. of seal 2.2.

Reg No. 1133:17
Dimensions: 2.2 x 2.67 x 0.8.
Reverse: Knot-impression.
Location: Building 211, Area 212. Make-up.
Description: Slightly-sandy, grey clay with salt crystals.
Obverse: Possible traces of hatched square, with necks of two animals protruding from top corners, a V-shaped symbol between them.

Reg No. 1136:07
Dimensions: 1.5 x 2.5 x 1.0.
Reverse: String-marks.
Location: Building 211, Area 212. Floor.
Description: Sandy, grey clay.
Obverse: Triangular fragment of a clay disk. Broken edges with finger-print.
Obverse: Seated, nude, male figure looking left towards gazelle, legs broken off. Gazelle looks back towards edge of seal.

Reg No. 1154:01
Dimensions: 1.55 x 1.42 x 0.43.
Reverse: String-impressions.
Location: Building 211, Area 211. Threshold.
Description: Dark-grey, burnt clay, one smoothed edge.
Obverse: Hatched rectangle (7 x 4 squares).
Traces of three objects protruding from one narrow side.

Reg No. 1158:15
Dimensions: 2.55 x 0.9 x 0.6.
Reverse: String(?).
Location: Building 211, Area 212. Make-up.
Description: Fine, light-grey clay.
Obverse: Possible necks of two horned animals, perhaps originally protruding from hatched square.

Reg No. 1159:08
Dimensions: 1.3 x 1.45 x 0.7.
Reverse: Slightly-convex and smoothed.
Location: Building 200, Area 204. Floor.
Description: Fine, pinkish clay with inclusions.
Impressions of leaves or wood on one flat surface.

Reg No. 1161:04
Dimensions: 2.0 x 1.5 x 0.94.
Reverse: Knot-impression.
Location: Building 211, Area 212. Floor.
Description: Fine, light-grey clay.
Obverse: Left edge and part of the lower edge of impression.
Obverse: Standing, bearded figure, head missing, in three-tiered skirt, facing left towards a seated monkey-like figure facing right. Between them is a jar on a stand, with a drinking straw protruding from it; both figures hold the straw. From same seal as 1161:05, O9, 14, 15, 1131:09 and 5176:01.
Reconstructed design: Central, standing, bearded figure, in a long net skirt, with raised arms facing left, and both feet showing below hem of skirt. To left is seated, monkey-like figure (see Kjaerum 1983, Nos 107 and 137) and between them is a possible jar on a two-legged pot-stand, with a straw in it. To right of figure (design broken), part of human figure with head in profile, apparently holding a palm-frond.

Reg No. 1161:05
Dimensions: 2.9 x 1.6 x 1.05.
Reverse: Possible impression of small peg.
Location: Building 211, Area 212. Floor.
Description: Light-grey, fine clay.
Obverse: Standing, bearded figure with three-tiered net skirt, facing left, feet below skirt. End of drinking straw visible in front of his face. To the right, head and arm of second figure looking left and holding palm-frond. Joined to 1161:10. See also 1161:04 for reconstruction of seal design and list of other sealings with same design.

Reg No. 1161:09
Dimensions: 3.0 x 1.37 x 1.15.
Reverse: Knot-impression.
Location: Building 211, Area 212. Floor.
Description: Fine, light-grey clay. Part of smoothed edge with finger-prints. Most of the upper half of a seal impression. Obverse: Standing, bearded figure facing left, two tiers of skirt remaining. To left is seated, monkey-like creature, drinking straw and pot between them. To the right is second (broken) figure, facing left, and holding a palm-frond. See also 1161:04 for reconstruction of seal design and list of other sealings with same design.

Reg No. 1161:10
Now joined to 1161:05 (q.v.).
**Catalogue of Seal Impressions**

**REGISTRATION NO. 1161:11**
Dimensions: 1.8 x 1.4 x 1.1 (largest fragment).
Reverse: Impressions of string, and of tubular object.
Location: Building 211, Area 212. Floor.
Description: Five fragments of very friable light-grey clay. No impressions.

**REGISTRATION NO. 1161:14**
Dimensions: 1.35 x 1.54 x 0.8.
Reverse: Surface missing.
Location: Building 211, Area 212. Floor.
Description: Fine, light-grey clay, one inclusion visible.
Obverse: Bottom left of a seal impression. Lowest tier of net skirt with one foot facing left, while to left is pot on stand. See also 1161:04 for reconstruction of seal design and list of other sealings with the same design.

**REGISTRATION NO. 1161:15**
Dimensions: 1.8 x 1.4 x 0.75.
Reverse: String-impressions.
Location: Building 211, Area 212. Floor.
Description: Fine, light-grey clay.
Obverse: Top left quadrant of a seal impression. Head and torso of bearded figure, facing left towards head and torso of seated monkey-like creature. Both hold a drinking straw between them. Edge of seal clearly visible. See also 1161:04 for reconstruction of seal design and list of other sealings with the same design.

**REGISTRATION NO. 1573:01**
Dimensions: Not measured
Reverse: No impression.
Location: Building 203, Area 202. Feature.
Description: Obverse: Body and hind-legs of an animal, perhaps a gazelle. Possibly part of a tag.

**REGISTRATION NO. 1580:03**
Dimensions: 2.0 x 1.6 x 0.9.
Reverse: Possible knot-impression.
Location: Building 203, Area 229. Occupation.

**REGISTRATION NO. 1580:05**
Dimensions: 1.4 x 1.0 x 0.7.
Reverse: No impression.
Location: Building 203, Area 229. Occupation.
Description: Fragment of grey clay. Obverse: A horned animal with a long, ruffled neck; above it and at right angles to it, a pair of possible animal legs facing right. In front of the legs is an unidentified motif.

**REGISTRATION NO. 1622:02**
Dimensions: 2.3 x 2.2 x 1.0.
Reverse: Parallel string-impressions and smooth edge. Jar sealing(?)
Location: Building 203, Area 229.
Description: Pale-yellowish clay. Two smoothed edges with finger-prints. Obverse: Body of male animal, perhaps a bull, with ruffled neck, standing or running. Illegible motifs above its back.

**REGISTRATION NO. 1622:04**
Dimensions: 1.6 x 1.3 x 0.6.
Reverse: Worn knot-impression.
Location: Building 203, Area 229.
Description: Gritty, light-brown clay. Obverse: Two lines at right angles, probably part of a cross dividing the seal into four quadrants. Surviving quadrant shows a crab, and another just visible in the opposing quadrant. Apparently from the same seal as 1622:6, 7 and 8.

**REGISTRATION NO. 1622:05**
Dimensions: 1.3 x 1.1 x 0.8.
Reverse: Possible string-impression.
Location: Building 203, Area 229.
Description: Fragment of yellowish clay, small area of smooth edge.
Obverse: Fragmentary motifs from deeply incised, linear-style seal, perhaps a curly tail on left and the rump of an animal to the right.

**REGISTRATION NO. 1622:07**
Dimensions: 2.6 x 1.7 x 1.4.
Reverse: Two deep, parallel, string-impressions.
Location: Building 203, Area 229.
Description: Gritty, yellowish clay. A small area of smoothed edge. Incomplete design divided into quadrants by incised lines. A crab is visible in each of the two almost-complete quadrants. The others are broken away. From same seal as 1622:6, 7 and 8.

**REGISTRATION NO. 1622:08**
Dimensions: 2.0 x 1.4 x 0.8.
Reverse: String-impressions.
Location: Building 203, Area 229.
Description: Hard, gritty, yellowish clay. Broken area of smoothed edge. Obverse: Distorted, design divided by incised lines into quadrants, two of which survive. One contains a crab, another part of a crab. From the same seal as 1622:6, 7 and 8.

**REGISTRATION NO. 1733:01**
Dimensions: 1.4 x 1.1 x 0.5.
Reverse: Paint string-impressions.
Location: Building 203, Area 229. Occupation.
Description: Light-green and grey, sandy clay. Top surface smooth, no design visible.

**REGISTRATION NO. 1771:01**
Dimensions: 1.8 x 2.65 x 1.1.
Reverse: Two parallel lines of string-impressions.
Location: Building 204, Area 233. Floor.
Description: Light-grey clay with inclusions. One smoothed edge. Obverse: Badly worn. Torso of human figure facing right, with other illegible motifs to the right.
Catalogue of Seal Impressions

REGISTRATION NO. 1853:21
Dimensions: 2.1 x 1.8 x 1.6 (largest fragment).
Reverse: Surface missing.
Location: Building 207, Area 272, Square 25. Occupation.
Description: Half of spherical sealing or bead of soft, dark-grey clay, very friable, in three pieces. Originally perforated. At one point there are faint impressions, perhaps of straw.

REGISTRATION NO. 1853:97
Dimensions: 1.0 x 0.7 x 0.4.
Reverse: Two parallel string-impressions.
Location: Building 207, Area 272, Square 26. Occupation.
Description: Grey clay, with flecks of white. Obverse: Possible pair of human feet.

REGISTRATION NO. 1853:98
Dimensions: 1.45 x 0.8 x 0.6.
Reverse: Possible string-impression.
Location: Building 207, Area 272, Square 26. Occupation.
Description: Grey clay. Obverse: Ladder-like, long, hatched rectangle (8 x 2 squares). See 1853:97 for description of whole scene and list of sealings from same seal.

REGISTRATION NO. 1853:99
Dimensions: 2.3 x 1.0 x 0.8.
Reverse: Impression of knotted string.
Location: Building 207, Area 272, Square 26. Occupation.
Description: Grey clay. About half of circular seal impression preserved, including the edge which has finger-impressions. Obverse: Animal on left with long, ruffled neck, head missing, looking back over its shoulder toward seated, nude figure. Only lower half of body visible, with part of a raised arm. Between the figures is a circular motif, behind the hind-legs of the animal is a hooked motif. See 1853:97 for description of whole scene and list of sealings from same seal.

REGISTRATION NO. 1853:100
Dimensions: 2.3 x 1.3 x 1.0.
Reverse: Slightly-concave, with parallel string-impressions, possibly from a peg.
Location: Building 207, Area 272, Square 26. Occupation.
Description: Dark-grey clay. About one quarter of circumference of seal preserved, with finger-prints on edge. Obverse: Hatched symbol on right, shield symbol to left. Bottom left has corner of a hatched square. See 1853:97 for description of whole scene and list of sealings from same seal.

REGISTRATION NO. 1853:101
Dimensions: 2.3 x 1.1 x 0.8.
Reverse: Deep parallel impressions, one of string.
Location: Building 207, Area 272, Square 26. Occupation.
Description: Light-grey clay with white inclusions. About one-third of edge of sealing with finger-prints. Obverse: Badly worn. Horned animal with ruffled neck, head turned over its shoulder towards centre of seal. Traces of bird below and to right. See 1853:97 for description of whole scene and list of sealings from same seal.

REGISTRATION NO. 1853:102
Dimensions: 1.55 x 0.9 x 0.5.
Reverse: One flat surface, one with string.
Location: Building 207, Area 272, Square 26. Occupation.

REGISTRATION NO. 1853:103
Dimensions: 0.9 x 1.4 x 0.4.
Reverse: String-impressions.
Location: Building 207, Area 272, Square 26. Occupation.
Description: Dark-grey, fine clay. Segment of smooth edge with finger-prints. Obverse: Animal head on left, with long horns, looking right towards human head. Partly obliterated by thumbprint. See 1853:97 for description of whole scene and list of sealings from same seal.

REGISTRATION NO. 1853:104
Dimensions: 1.5 x 1.3 x 1.1.
Reverse: Knot-impression.
Location: Building 207, Area 272, Square 26. Occupation.
Description: Yellowish friable clay. Small segment of smooth edge with two pinholes in it. Obverse: Triangular, hatched motif on edge, a shield to its left. See 1853:97 for description of whole scene and list of sealings from same seal.

REGISTRATION NO. 1853:105
Dimensions: 0.8 x 1.15 x 0.4.
Reverse: Not described.
Location: Building 207, Area 272, Square 26. Occupation.
Description: Dark-grey clay. Small area of smooth edge preserved. Obverse: Long-legged bird facing right. See 1853:97 for description of whole scene and list of sealings from same seal.
Catalogue of Seal Impressions

REGISTRATION NO. 1853:106
Dimensions: 0.6 x 1.2 x 0.75.
Reverse: One surface flat, one with possible string-impression.
Location: Building 207, Area 272, Square 26.
Occupation: Post-abandonment sand.
Description: Grey clay. Segment of edge with finger-print.
Obverse: Part of hatched motif. See 1853:97 for description of whole scene and list of sealings from same seal.

REGISTRATION NO. 1853:107
Dimensions: 1.7 x 1.14 x 0.9.
Reverse: Deep, smooth indentation, possibly a small peg(?).
Location: Building 207, Area 272, Square 26. Occupation.
Description: Hard yellowish clay. Approximately one quarter of seal impression. Segment of smooth edge with finger-prints. Design very worn, from bottom right of seal impression. Body, legs and part of neck of animal, facing right, perhaps looking over its shoulder towards centre of seal.

REGISTRATION NO. 1853:108
Dimensions: 1.65 x 1.0 x 1.1.
Reverse: Part of knot.
Location: Building 207 Area 272, Square 26. Occupation.
Description: Yellowish clay. Segment of smooth edge. Obverse: Part of hatched motif.

REGISTRATION NO. 1853:109
Dimensions: 1.0 x 1.8 x 0.5.
Reverse: String-impressions.
Description: Description: Dark-grey clay. About one quarter of smooth edge with finger-prints. Part of lower and lower left edge preserved. Obverse: Long-legged bird with striped body, facing right towards hatched square. Traces of human feet above square and of legs of animal above bird’s back. See 1853:97 for description of whole scene and list of sealings from same seal.

REGISTRATION NO. 1853:116
Dimensions: 1.8 x 1.4 x 0.4.
Reverse: One deep indentation, perhaps from a rim.
Location: Building 207, Area 272, Square 3. Occupation.
Description: Friable yellow clay. Obverse: Edge of impression visible, design illegible.

REGISTRATION NO. 1853:131
Dimensions: 1.8 x 1.25 x 0.7.
Reverse: String-impression.
Location: Building 207, Area 272. Occupation.
Description: Fine, slightly-pinkish clay. Oval-shaped with smooth edge. Small hole, diam 0.3, punched from obverse through sealing.

REGISTRATION NO. 1856:01
Dimensions: 2.5 x 2.0 x 1.0.
Reverse: Deep impressions of twisted string.
Location: Building 207, Area 272, Square 7. Post-abandonment sand.
Description: Probably bitumen; one edge of sealing preserved. Obverse: Nude figure, head missing, facing left and seated on a small, rectangular, hatched stool/seat. He holds a long straw, which leads into a pot at his feet. Similar to 1021:3, 4 and 5.

REGISTRATION NO. 1864:43
Dimensions: 1.5 x 1.45 x 0.55.
Reverse: Knot-impression.
Location: Building 207, Area 272. Occupation.
Description: Sub-oval fragment of light-brown, fine clay. Small area of smoothed edge. Obverse: Skirt and legs of figure facing right, with part of a hatched square below. A damaged animal in left field, head and fore-quarters missing.

REGISTRATION NO. 1869:05
Dimensions: 1.55 x 1.45 x 0.55.
Reverse: String-impression.
Location: Building 207, Area 272. Occupation.
Description: Sub-oval fragment of light-brown, fine clay. Small area of smoothed edge. Obverse: Skirt and legs of figure facing right, with part of a hatched square below. A damaged animal in left field, head and fore-quarters missing.

REGISTRATION NO. 1870:06
Dimensions: 1.8 x 2.65 x 1.1.
Reverse: Tubular impression at right angles to flat surface, small peg(?).
Location: Building 207, Area 273. Floor.
Description: Dense green clay, slatted and cracked, surface eroded.

REGISTRATION NO. 1873:02
Dimensions: 2.95 x 1.15 x 0.75.
Reverse: One face is worn and crystalline; the two broken edges have string-impressions.
Location: Building 207, Area 272. Hearth.
Description: One sub-cuboid fragment, with pointed corner, of light-brown clay. Numerous angular clear inclusions, possibly gypsum crystals. Obverse: Smooth and sloping down at one end, no visible impressions.

REGISTRATION NO. 1853:106 – NO. 1873:02

No. 1853:106 – No. 1873:02

Dimensions: See below.
Reverse: (i) Sub-oval with convex obverse, sharp angle to concave smooth side. Dimensions: 1.75 x 1.2 x 0.77.
(ii) Sub-rectangular possibly with worn seal impression on obverse. Dimensions: 1.27 x 0.98 x 0.6.
(iii) Sub-triangular with curved edges, finger-prints on obverse. Dimensions: 1.0 x 0.8 x 0.34.
(iv) Sub-triangular with dot on tip, possibly with worn impression on convex obverse. Dimensions: 1.0 x 0.95 x 0.43.
(v) Sub-rectangular with very worn finger-prints on obverse. Dimensions: 1.1 x 0.75 x 0.4.
(vi) Painted, triangular, with small smooth, concave, obverse surface. String-impressions on two surfaces. Dimensions: 1.0 x 0.57 x 0.4.
(vii) Worm, sub-oval lump with no impressions. Dimensions: 0.85 x 0.6 x 0.35.
Catalogue of Seal Impressions

REGISTRATION NO. 1893:06

Dimensions: See below.
Location: Building 207, Area 272. Midden.
Description: Twelve fragments of clay sealings, of fine, grey clay with fragmentary designs on each.

(i) Reverse: String-impression. Part of smoothed edge with fingerprint. Obverse: Pair of human legs, facing left, with horizontal, hatched motif in right field behind them. Fragment of cataphus or table in left field. Linear Style.
Dimensions: 1.0 x 2.0 x 1.2.

(ii) Reverse: String-impression. Part of smoothed edge with fingerprint. Obverse: Part of left margin of seal, inverted scorpion with a hatched, oblong motif to left.
Dimensions: 1.6 x 1.1 x 0.8.

(iii) Nothing visible on reverse. Small segment of smoothed edge, with fingerprint. Obverse: Two parallel linear motifs.
Dimensions: 1.6 x 1.2 x 0.8.

(iv) Reverse broken. Fragment of smoothed edge. Design: Several, disjointed, linear motifs including a possible pair of horns.
Dimensions: 1.2 x 1.1 x 0.9.

(v) String-mark on reverse, smoothed edge. Obverse: Two curved parallel lines on edge of seal.
Dimensions: 1.6 x 1.2 x 0.7.

(vi) Possible string-marks on reverse. Small area of smoothed edge with fingerprint. Obverse: Badly worn. Two raised motifs, parallel to each other.
Dimensions: 1.9 x 1.2 x 0.7.

(vii) String-impression on reverse. Small area of smoothed edge. Obverse: Very worn, upper half of seated human figure, facing left, with one arm raised to the left towards a hoof. Compare with 1161:04 and related sealings.
Dimensions: 1.0 x 1.1 x 0.6.

(viii) String-impression on reverse. Small smoothed area. Obverse: Possible hatched motif.
Dimensions: 1.2 x 1.1 x 0.5.

(ix) Possible string-impression on reverse. Design: Damaged. Two parallel lines survive.
Dimensions: 1.0 x 0.9 x 0.5.

(x) Fragment of smoothed edge with fingerprint. String-impression on reverse. Design badly worn. Part of a scorpion and two curved parallel lines, perhaps horns.
Dimensions: 0.45 x 1.1 x 0.7.

REGISTRATION NO. 1893:07

Dimensions: See below.
Location: Building 207, Area 272. Midden.
Description: Yellowish clay with saltry inclusions. Left edge, and about one third of large circular seal. Segment of smoothed edge. Obverse: Lower part of standing figure in tiered skirt, facing left, vertical line on either side of figure, perhaps a spear and shield.

REGISTRATION NO. 1893:09

Dimensions: 2.5 x 1.4 x 1.0.
Reverse: Knot-impression.
Location: Building 207, Area 272. Midden.
Description: Yellowish clay with saltry inclusions. Left edge, and about one third of large circular seal. Segment of smoothed edge. Obverse: Lower part of standing figure in tiered skirt, facing left, vertical line on either side of figure, perhaps a spear and shield.

REGISTRATION NO. 2057:09

Dimensions: 2.1 x 1.7 x 1.0.
Reverse: String-impression.
Location: Building 56, Area 93. Floor.
Description: Yellow-green clay, smoothed edge. Design distorted by pressure into oval. Obverse: Standing nude figure looking to his left, hand outstretched towards a horned animal head. Below the animal's head is a small bush or frond. Finely cut, but badly worn (possibly Style Ib).

REGISTRATION NO. 2123:01

Dimensions: 1.7 x 1.4 x 0.6.
Reverse: String-impression.
Location: Building 56, Area 77. Occupation.
Description: Fragment of grey clay. Area of concave edge has finger-prints. Obverse: Highly-stylised, linear figure on the left, arm held up to the right. A possible second such figure is in the centre of the seal, with a diagonal line above it. Linear Style. Estimated diam. of seal 1.5.

REGISTRATION NO. 2141:01

Dimensions: 1.5 x 1.7 x 0.5.
Reverse: Worn, possible string-impression.
Location: Building 56, Area 68. Occupation.
Description: Fine, pinkish clay. Obverse: Most of impression present. In the centre a rosette framed by a square, a six-pointed star below the square, and a standing horned animal on either side of it. The animals face outwards, but look back over their shoulders towards each other. Above the horns of one is an unidentified motif. The use of the point drill suggests this sealing may belong to Kjaerum's Style Ib/II.

REGISTRATION NO. 2143:01

Dimensions: 1.6 x 1.0 x 1.3.
Reverse: Surface missing.
Location: Building 55, Area 81. Occupation.
Description: Orange clay. Possibly burnt. Obverse: Fragmentary seal impression, showing a rectangle with horizontal lines across it.

REGISTRATION NO. 2149:02

Dimensions: 1.7 x 0.9 x 0.7.
Reverse: Surface missing.
Location: Building 55, Area 80. Make-up.
Description: Yellow clay. Obverse: Three parallel incised lines.

REGISTRATION NO. 2157:05

Dimensions: 1.6 x 1.3 x 0.6.
Reverse: Knot-impression.
Location: Building 56, Area 68. Make-up.
Description: Yellow clay. Possible string-hole on right side. Obverse: Tiered skirts of three standing figures facing left.
Catalogue of Seal Impressions

**REGISTRATION NO. 2171:02**

Dimensions: 1.6 x 1.0 x 0.7.
Reverse: String-impressions.
Location: Building 57, Area 74. Make-up.
Description: Burnt brown clay. One area of smoothed edge, part of which has been flattened. Obverse (from left to right): a tree or forest, followed by a standing, nude, male figure, facing right and holding a standard. The standard is topped by a crescent on its back, with a rosette or sun above. A second, damaged figure faces left on the other side of the standard. The style is linear and deeply incised. Kjaerum’s Style Ib. See 5176:07 for another Style Ib sealing.

**REGISTRATION NO. 2570:11**

Dimensions: Max. length 3.2, max. width 2.2.
Reverse: Biletal.
Location: Building 50, Area 57. Floor.
Description: Approximately oval tag of burnt orange clay. Break at one end, where string pulled away. Finger-prints on each face. One seal impression on each side. Side 1: Horse’s head. Central hatched rectangle (2 x 4 squares). A pole extends from the top corner of the rectangle, to the right, to rest on the shoulders of a standing figure in a short skirt, facing left, arms up to either side, touching the rectangle. There is a second, badly-damaged figure to the left of the central rectangle. Illegible motif above rectangle on edge of seal. Side 2: Design distorted by pressure. A wheel of four-horned animals, necks joined by a large, hatched circle. One animal faces right, and its neighbour left. The rest are destroyed. Between the heads are other motifs: a standing man, and part of a circle with loops on the outer edge. These seem to be repeated in opposing quadrants.

**REGISTRATION NO. 3040:01**

Dimensions: (i) 2.52 x 1.8 x 0.85. (ii) 1.73 x 1.1 x 0.65.
Reverse: Flat surface with possible pluster inclusions.
Location: Building 502, Area 408. Sand.
Description: Hall of a blank sealing(7). Two pieces, originally joined, with smoothed edge and indentations on obverse. No identifiable motifs.

**REGISTRATION NO. 3041:16**

Dimensions: (i) 2.15 x 1.5 x 1.05. (ii) 1.85 x 1.32 x 0.82. (iii) 1.95 x 1.1 x 0.72. (iv) 2.0 x 0.78 x 0.45.
Plus twelve smaller pieces.
Reverse: (i) n/a. (ii) Tubular impression tapering to a point, perhaps made by a small peg. (iii) Parallel striations. (iv) One flat surface with parallel striations.
Location: Building 301, Area 409. Collapse.
Description: Sixteen fragments of greenish-yellow clay with some white, crystalline inclusions. Possibly sealings. (i) Pinched, roughly triangular fragment. (ii) Irregular fragment. (iii) One smooth edge, one smooth surface. (iv) One smooth surface.

**REGISTRATION NO. 3041:21**

Dimensions: 1.4 x 1.1 x 0.45.
Reverse: Knot-impression.
Location: Building 301, Area 409. Collapse.
Description: Roughly rectangular piece of fine, grey clay with two smoothed edges. Small arc of circular sealing preserved. To the left are a fore-leg with hoof and the rear hoof of an animal, drawn together. To the right are three perpendicular motifs parallel to each other.

**REGISTRATION NO. 3041:26**

Dimensions: 3.13 x 2.95 x 1.65.
Reverse: Worn impressions of string and knot.
Location: Building 201, Area 409. Collapse.
Description: Very poor quality, brown clay with white inclusions. Deep edge, slightly corrugated.
Obverse: Badly damaged, a pair of lines forming a right angle with a possible second pair inside them.

**REGISTRATION NO. 3503:05**

Dimensions: 3.4 x 2.8 x 1.4, estimated diam. of seal 1.8.
Reverse: Convex, smooth.
Location: Building 300, Area 400. Occupation.
Description: Lentoid tag of fine, grey clay with white inclusions, originally with string through long axis. One end now broken away, apparently from around knot. Upper surface smoothed. Badly-worn circular impression partly visible. Motifs include a horned animal perhaps with its head turned back over its shoulder, and to its right the lower part of a human figure with a long skirt, facing left. Between the figures is a possible jar.

**REGISTRATION NO. 3503:8**

Dimensions: 2.63 x 1.91 x 1.16.
Reverse: Surface missing.
Location: Building 300, Area 400. Occupation.
Description: Possible sealing fragment. Sub-rectangular piece of light-grey/green clay with tiny white flecks, one surface carefully smoothed.

**REGISTRATION NO. 3515:11**

Dimensions: 1.6 x 1.18.
Reverse: Damaged.
Location: Building 300, Area 401. Make-up.
Description: Small fragment of fine clay with one stone chip as inclusion. Obverse: To the right the hind-legs of a standing animal, to the left the skirt and feet of a human figure facing left. From a well-cut seal.

**REGISTRATION NO. 4028:21**

Dimensions: 1.2 x 0.97 x 0.5.
Reverse: Worn.
Location: Building 205, Area 235. Floor.
Description: Fine, yellowish clay. Part of edge extant. Obverse: Vertical hatched motif, perhaps a shield, with a possible fragmentary human head to the right. Perhaps from same seal as 5155:06.

**REGISTRATION NO. 4041:06**

Dimensions: 2.12 x 1.25 x 1.03.
Reverse: One deep string-impression.
Location: Building 208, Area 238. Occupation.
Description: Light-grey clay. Left lower quarter of sealing preserved, with clear finger-prints. Obverse: Body and legs of a standing male animal facing right, head and neck missing, but curved tips of horns visible above.
Catalogue of Seal Impressions

REGISTRATION NO. 4088:09
Dimensions: 1.6 x 1.3 x 0.8.
Reverse: Irregular, with possible string-impression.
Location: Building 205, Area 237. Occupation: Building 205, Area 237. Floor.
Description: Cubic fragment of light-brown clay with a large, strong inclusion (0.7 x 0.4) and one side burnt to a dark-grey. Obverse: Two sides of a squared, smoothed surface, later burnt to a dark-grey. Smaller external surface has fingerprint impressions.

REGISTRATION NO. 4096:05
Dimensions: 2.5 x 1.6 x 0.8.
Reverse: Two parallel string-impressions.
Location: Building 205, Area 237. Occupation: Building 205, Area 237. Floor.
Description: Possible jar sealing. Sub-ovoid lump of light-brown, fine clay. Surface partly baked to orange. Obverse: Smoothed edges appear to have been pushed by a finger; edges covered with fingerprint.

REGISTRATION NO. 4104:07
Dimensions: (i) 0.8 x 0.7 x 0.6. (ii) 0.65 x 0.45 x 0.4.
Reverse: Surface missing.
Location: Building 205, Area 237. Occupation: Building 205, Area 237. Floor.
Description: Two possible fragments of burnt clay. Now very dark-grey. (i) Sub-ovoid/angular with possible impressions or heat warping. (ii) Sub-ovoid.

REGISTRATION NO. 5016:02
Dimensions: 3.2 x 2.2 x 0.8.
Reverse: Smooth.
Location: Building 221, Area 301. Collapse.
Description: Lozengeshaped tag, originally squashed round a thread. Holes for thread remain at each end. Fine, light-grey clay. Impression of rectangular or cylindrical seals, badly distorted and worn. (Possibly two partly-superimposed sealings.) On the left is a hatched square, then a human figure and an animal.

REGISTRATION NO. 5056:21
Dimensions: 1.7 x 1.8 x 0.05.
Reverse: String-impression.
Location: Building 222, Area 304. Floor.
Description: Fine, light-grey clay, one smoothed edge, possible string-hole. Obverse: Traces of sealing on one face, showing sun symbol and possible animal head.

REGISTRATION NO. 5065:01
Dimensions: 2.3 x 2.0 x 0.9.
Reverse: Three parallel string-impressions.
Location: Building 222, Area 305. Floor.
Description: Jar sealing. Sandy, light-grey clay. Edge smooth. Obverse: Virtually-complete seal impression, distorted by squeezing. Design: Standard with crescent on top, above a hatched square. To left is a rampant, horned, male animal. Second, damaged, rampant animal to right: Goose or duck in left field, looking over its shoulder to the left.

REGISTRATION NO. 5099:10
Dimensions: 3.3 x 2.4 x 1.05.
Reverse: Knot-impression.
Location: Building 209, Area 247. Floor.
Description: Pale-grey clay with white inclusions. Central part of a large seal impression; minimum estimated diam. of seal 2.2. Obverse: Kneeling, male, horned quadruped, possibly a bull, facing left. Above him is a smaller, standing quadruped, facing left, looking back over its shoulder. To the upper right is the raised arm of a standing human figure, to the left, unidentified motifs.

REGISTRATION NO. 5099:16
Dimensions: 4.2 x 2.5 x 0.9 [largest fragment].
Reverse: Surface missing.
Location: Building 220, Area 309. Sand.
Description: Six fragments of hardened, pale-grey clay. No impressions clearly visible.

REGISTRATION NO. 5110:01
Dimensions: 2.5 x 2.4 x 1.1.
Reverse: Knot and string-impressions.
Location: Building 220, Area 310. Floor.
Description: Hard pink clay. Approximately circular sealing with two segments missing. Almost half of the circumference of the seal is preserved; part of the edge is smooth, the rest broken away. Obverse: Long, hatched rectangle (2 x 11 square) in the centre of the design. On either side are seated human figures in long hatched skirts, facing inwards, bent arms raised upwards. Figure on right holds a straw leading into a jar at waist height. Left-hand figure also raises one arm. Possibly from the same seal as 5143:01.

REGISTRATION NO. 5111:02
Dimensions: 2.0 x 2.0 x 1.0.
Reverse: Knot-impression.
Location: Building 220, Area 310. Floor.
Description: Bitumen, or bitumen and clay, with white inclusions. Irregular shape.
Obverse: Apparently the central portion of a large design. In the centre is a standing, bearded figure in a long tiered skirt, facing left, arms extended to either side. To the right he touches the neck of a very fragmentary animal with its head turned back over its shoulder, while to the left he holds a stick or spear-shaft. Traces of a second figure to the left of spear, also holding it. Possibly from the same seal as 5137:01 and 02.

REGISTRATION NO. 5133:01
Dimensions: 1.4 x 1.3 x 0.65.
Reverse: Deep peg-shaped indentation.
Location: Building 220, Area 310. Feature.
Description: Dark-grey clay. Fragment of hatched edge with fingerprint. Obverse: Design divided into four fields by cross formed by four hatched rectangles. Where the arms of the cross meet, the resulting square is un-hatched. Triangular or bow-shaped motif in two surviving quadrants. From same seal as 5143:15 and 5153:01.

REGISTRATION NO. 5136:01
Dimensions: 2.3 x 2.0 x 1.8.
Reverse: Knot-impression.
Location: Building 220, Area 311. Collapse.
Description: Burnt black clay. Virtually-complete, circular impression preserved; two opposing edges broken off. Estimated diam. of seal 2.0. Part of a standing, skirted, human figure on the left, and a fringed square to the right. Five other sealings from same seal: see 5143:02.

REGISTRATION NO. 5136:02
Dimensions: 2.2 x 1.8 x 1.0.
Reverse: Surface missing.
Location: Building 220, Area 220. Collapse.
Description: Friable, dark-grey clay. About one quarter of impression present; badly worn. Two motifs, one a rosette or star, the other illegible.

REGISTRATION NO. 5136:06
Dimensions: 2.6 x 1.8 x 1.1.
Reverse: Smooth and Slightly-convex.
Location: Building 220, Area 311. Collapse.
Description: Hard, greenish clay, forming segment of ovoid bulla with string-hole visible in section. A thin additional skin of fine clay has been added to take the impression.
Obverse: A pair of feet, turned to the left, below them and to the right a horizontal ‘foot’ motif, below this again is the head and neck of a short-horned animal looking left. A drilled motif, possibly an animal body, to the right of the damaged legs.

**Registration No. 5136:11**

Dimensions: (i) 1.7 x 1.4 x 0.4; (ii) 3.3 x 1.1 x 0.3.

Reverse: Flat and smooth, with impression of a slightly-raised edge.

Location: Building 220, Area 310. Floor.

Description: Two joining fragments of pale-grey clay. Worn and distorted. (i) Standing figure in tiered skirt, facing left. To left, fragmentary monkey-like figure, facing left, apparently kneeling, with a long tail. Fragmentary device to lower right of standing figure. (ii) Head and torso of standing figure.

**Registration No. 5137:02**

Dimensions: 2.1 x 1.3 x 1.9.

Reverse: String-impression.

Location: Building 220, Area 310. Floor.

Description: Black, burnt clay. Finger-print on left edge. Bottom left quarter of seal. **Obverse:** On left is a seated naked figure, holding a vertical spear or stick to the right. To the right of this is a standing figure (damaged), facing left, in a long, striped skirt, also with one hand grasping the stick. From same seal as 5111:02 and 5137:01.

**Registration No. 5138:05**

Dimensions: 1.6 x 1.1 x 0.9.

Reverse: String-impression.

Location: Building 220, Area 312. Floor.

Description: Dark-grey clay. Part of edge preserved with finger-prints. Segment of right half of impression. Head and neck of a long-horned animal facing left. Two parallel lines to left of head.

Obverse: A standing male figure with a long tiered skirt, head turned to the left. His arms are stretched out on either side. To the left he holds a spear/stick with forked ends, which is held on the other side by a squatting, monkey-like figure which faces him. To the right he touches a second figure. From same seal as 5111:02 and 5137:02. Drawing is a reconstruction based on all related fragments.

**Registration No. 5137:08**

Dimensions: 1.0 x 0.9 x 0.6.

Reverse: Worn.

Location: Building 220, Area 312. Floor.

Description: Buff clay. Very worn, but edge of seal and traces of sealing apparent on one side.

Obverse: The head of a long-horned animal facing left.

**Registration No. 5143:01**

Dimensions: 2.0 x 1.8 x 0.9.

Reverse: Possible string-impressions.

Location: Building 220, Area 311. Floor.

Description: Pale-yellowish clay. The top left edge is preserved and has finger-prints on it. **Obverse:** Top left quadrant of design. Vertical, hatched rectangle in centre (2 x 6 squares extant) with vertical line to left, perhaps the frame of a loom. To the left is the torso of a human figure, facing right one arm raised towards the loom. To the right is the arm of a second figure, also raised towards loom. Possibly from the same seal as 5111:01.

**Registration No. 5143:02**

Dimensions: 2.1 x 2.1 x 1.1.

Reverse: Knot-impression.

Location: Building 220, Area 311. Floor.

Description: Pinky grey clay. Virtually-complete circular impression, distorted and worn. Lower and right edge preserved. **Obverse:** Standing figure in a tiered skirt, feet to the left, head missing, arms extended by his sides. Traces of a square to the left. Five other sealings from same seal: see 5143:02.

**Registration No. 5143:03**

Dimensions: (i) 1.7 x 1.0 x 0.6; (ii) 2.0 x 2.1 x 1.7.

Reverse: Two horizontal string-impressions on large fragment.

Location: Building 220, Area 311. Floor.

Description: Greenish grey clay with white inclusions.

(i) Irregular, featureless fragment. (ii) Three-quarters of circular impression, lower right edge missing, part of top edge preserved. **Obverse:** Two standing figures in long, hatched skirts, the left-hand figure with arms raised to either side. The right-hand figure has arms held downwards. Both touch a rectangular, fringed square with concave top between them, perhaps a podium. It is partly obscured by a raised lump, probably a damaged area of the seal. Above the square is a crescent, the horns of which enclose a star. Estimated diam. of seal 2.1. Five other sealings from same seal: see 5143:02.

**Registration No. 5143:06**

Dimensions: 2.2 x 1.8 x 1.4.

Reverse: String-impressions and some parallel striations.

Location: Building 220, Area 311. Floor.

Description: Hard, pink, baked clay. Design incomplete and damaged; part of lower and right edges preserved. **Obverse:** Standing figure in a tiered skirt, feet to the left, head missing, arms extended by his sides. Traces of a square to the left. Five other sealings from same seal: see 5143:02.

**Registration No. 5143:08**

Dimensions: 2.1 x 2.1 x 1.1.

Reverse: Knot-impression.

Location: Building 220, Area 311. Floor.

Description: Pinkish clay. Sub-circular piece; part of right-hand edge preserved, with finger-prints.
Obverse: Part of two standing figures in long hatched skirts. The right-hand figure is standing with arms extended by his sides. His (largely missing) head is turned to the left. The left-hand figure has only part of the skirt preserved, and an arm held up to the right. Between the figures is a fringed square, which both are touching, largely obscured by a lump representing damaged area of seal. Five other sealings from same seal: see 5143:02.

REGISTRATION NO. 5143:09

Dimensions: 1.8 x 1.8 x 0.5.
Reverse: Two parallel striations.
Location: Building 220, Area 311. Floor.
Description: Part of at least four concentric circles. Touching the edge of the seal above the circles is part of a crescent containing a star and, to the right, part of a hatched square. Linear Style.

REGISTRATION NO. 5143:10

Dimensions: 1.4 x 1.1 x 0.8.
Reverse: Possible string-impression.
Location: Building 220, Area 311. Floor.
Description: Buff, gritty clay. Edges broken off. Top right quarter of impression. Obverse: Head of long-horned animal facing left. Behind the neck is part of a curved line.

REGISTRATION NO. 5143:14

Dimensions: 2.3 x 2.4 x 1.1.
Reverse: Multiple string-impressions.
Location: Building 220, Area 311. Floor.
Description: Pinky, gritty clay. About two-thirds preserved, including part of lower edge, with finger-prints.
Obverse: Standing, bearded figure on the right, wearing a long, hatched skirt and facing left. To the left, he touches a square, possibly a podium, with clumsy round lump in the middle, probably a damaged area of the seal. Above the square is a crescent, its horns enclosing a star. Left of the podium are traces of second standing figure. Five other sealings from same seal: see 5143:02.

REGISTRATION NO. 5143:15

Dimensions: 2.2 x 1.9 x 1.1.
Reverse: Two deep, parallel, string-marks.
Location: Building 220, Area 311. Floor.
Description: Burnt, black clay, with white inclusions, badly cracked. About half of edge preserved, with finger-prints.
Obverse: Two-thirds of an impression. The design is divided into four fields by a cross. Arms of cross formed by rectangle filled by striations. Where the arms of the cross meet, the resulting square is undecorated. A triangle is visible in each of the upper fields. Estimated diam. of seal 1.8. From same seal as 5133:01 and 5153:01.
Drawing is a composite.

REGISTRATION NO. 5147:02

Dimensions: 2.6 x 1.3 x 0.9.
Reverse: Possible string-impression, and deep tubular hole, diam. c.0.5.
Location: Building 220, Area 310. Floor.
Description: Burnt grey clay. The top left edge is preserved; finger-prints. Obverse: Very worn seal impression, showing torso of figure with head turned to the right, and arm outstretched to the left, holding an animal, which faces left, and looks back towards the central figure. To the right, unidentified motif.

REGISTRATION NO. 5153:01

Dimensions: 1.7 x 1.3 x 0.8.
Reverse: Deep tubular impression, diam. c.0.4.
Location: Building 220, Area 311. Floor.
Description: Burnt grey clay. Central part of impression, no edge preserved.
Obverse: Cross with striated arms and undecorated central area. Two triangles visible in angles of the arms. From the same seal as 5143:15 and 5133:01.

REGISTRATION NO. 5155:06

Dimensions: 1.6 x 3.0 x 0.9.
Reverse: Knot-impression.
Location: Building 220, Area 310. Floor.
Description: Light-grey clay, two pieces joined. Two-thirds of lower part of circular sealing. Smoothed edges. Obverse: A standing nude figure (head missing) facing left and holding to the right an oblong, horizontally hatched motif, incomplete, probably a shield. To left of this is damaged figure of standing horned animal facing left with head thrown back. Estimated diam. of seal 2.3. Possibly from the same seal as 4028:21.

REGISTRATION NO. 5155:07

Dimensions: 2.0 x 2.4 x 1.0.
Reverse: Two parallel string-impressions.
Location: Building 220, Area 310. Floor.
Description: Fine, grey clay. About one quarter of impression preserved. Part of smooth edge with finger-prints. Obverse: Left edge of seal, with seated human figure facing right, one arm outstretched towards a broken motif, perhaps an animal.

REGISTRATION NO. 5155:08

Dimensions: 0.9 x 1.0 x 0.5.
Reverse: Surface destroyed.
Location: Building 220, Area 310. Floor.
Description: Fragment of grey clay. Segment of smoothed edge. Obverse: Two converging lines, possibly horns.

REGISTRATION NO. 5167:02

Dimensions: 1.0 x 0.1 x 0.9.
Reverse: Knot-impression.
Location: Building 220, Area 310. Floor.
Description: Light-yellowish clay. Half of circular sealing, perhaps with part of design pinched off. Section of smoothed left and right edges. Obverse: Seated figure with unusual square shoulders, facing right. Behind him, to the left, a notched, curved object.

REGISTRATION NO. 5167:03

Dimensions: 1.5 x 1.7 x 0.9.
Reverse: String-impression.
Location: Building 220, Area 310. Floor.
Description: Hard, pinkish clay. One straight, smooth edge. One quadrant of impression survives. Obverse: Three unidentifiable linear motifs, roughly parallel to each other.

REGISTRATION NO. 5167:20

Dimensions: 0.75 x 0.85 x 1.4.
Reverse: String-impression.
Location: Building 220, Area 310. Floor.
Description: Very dark grey clay with white inclusions. Pinched edge with deep hollows, probably finger impressions. Lower left segment of design. Obverse: Lower legs of standing human, facing left. Unidentified motif to right.
REGISTRATION NO. 5168:04
Dimensions: 1.5 x 1.2 x 0.7.
Reverse: String-impression.
Location: Building 220, Area 309. Floor.
Description: Fine, grey clay. Part of edge extant, with finger-prints.
Obverse: Part of hatched rectangle.

REGISTRATION NO. 5176:03
Dimensions: 2.0 x 2.05 x 1.9.
Reverse: String-impression and one flat surface.
Location: Building 220, Area 309. Floor.
Description: Light-grey clay. About one quarter of design extant. Poor condition. Obverse: Badly damaged quadruped facing right, to the left and at right angles to it is a standing, skirted, human figure, one arm raised towards the animal.

REGISTRATION NO. 5176:04
Dimensions: 0.95 x 0.72 x 0.5.
Reverse: No impression.
Location: Building 220, Area 309. Floor.
Description: Light-grey, fine clay. One small area of smooth edge. Obverse: Crescent with star above. Possibly from same seal as 5176:13.

REGISTRATION NO. 5176:06
Dimensions: 1.5 x 1.2 x 0.6.
Reverse: String-impression.
Location: Building 220, Area 309. Floor.
Description: Light-grey clay. Segment of smoothed edge. Trace of edge of seal impression, design illegible.

REGISTRATION NO. 5176:07
Dimensions: 1.8 x 2.0 x 1.0.
Reverse: Knot-impression.
Location: Building 220, Area 309. Floor.
Obverse: Two monkey-like figures holding a central, crescent-topped standard, with a star above. Unidentified motif behind monkey to the left. Kjaerum’s Style Ib(?). For another Style Ib seal see 2171:02.

REGISTRATION NO. 5176:08
Dimensions: 1.1 x 1.65 x 0.9.
Reverse: String-impressions.
Location: Building 220, Area 309. Floor.
Description: Fine, light-grey clay. Area of smoothed edge.
Obverse: To the left, top of palm-frond; to the right an animal head with short horns, facing the frond. Left of the frond, part of a second animal head, also facing it. Perhaps from same seal as 5176:10.

REGISTRATION NO. 5176:09
Dimensions: 0.95 x 0.9 x 0.8.
Reverse: Not recorded.
Location: Building 220, Area 309. Floor.

REGISTRATION NO. 5176:10
Dimensions: 1.7 x 1.6 x 0.8.
Reverse: Knot-impression.
Location: Building 220, Area 309. Floor.
Description: Light-grey clay with white inclusions.

REGISTRATION NO. 5176:11
Dimensions: 1.85 x 0.85 x 0.75.
Reverse: Smooth, convex surface with fine, parallel lines.
Location: Building 220, Area 309. Floor.
Description: Hard buff clay. Possibly part of tag or label. Smoothed edge with finger-prints. Obverse: Segment of edge of seal. Human head and top of spear. See 1161:04 for reconstruction of whole design and list of other sealings from same seal.

REGISTRATION NO. 5176:12
Dimensions: 1.4 x 1.15 x 0.7.
Reverse: String-impression.
Location: Building 220, Area 309. Floor.

REGISTRATION NO. 5176:13
Dimensions: 1.1 x 1.4 x 1.05.
Reverse: String-impressions.
Location: Building 220, Area 309. Floor.
Description: Fine, grey clay. Small area of smoothed edge with finger-print.
Obverse: Lower right segment. Lower half of human figure with one leg raised. Probably from same seal as 5176:12.

REGISTRATION NO. 5176:14
Dimensions: 1.1 x 1.0 x 0.6.
Reverse: Slightly concave.
Location: Building 220, Area 309. Floor.
Description: Dark-grey, fine clay. Raised edge of seal impression visible. Obverse: Horizontal crescent with star or sun in the curve, and to the right the damaged head, shoulder and arm of a human figure. Deeply cut. Possibly from the same seal as 5176:04.

REGISTRATION NO. 5176:15
Dimensions: 1.4 x 1.10 x 1.1.
Reverse: String-impressions.
Location: Building 220, Area 309. Floor.
Description: Light-grey clay. Slightly-concave, smooth edge with finger-print.

REGISTRATION NO. 5178:01
Dimensions: 1.45 x 1.2 x 0.5.
Reverse: String-impression.
Location: Building 220, Area 309. Make-up.
Description: Fine, sandy clay. One smoothed edge, with finger-prints.
Obverse: Schematic human head and shoulders facing right, one arm raised to right, touching vertical line.
**Catalogue of Seal Impressions**

**Registration No. 5210:06**
Dimensions: 2.85 x 1.75 x 1.2.
Reverse: Surface missing.
Location: Building 220, Area 314. Occupation.
Description: Two fragments of fine, unbaked, grey clay. Sub-oval. Segment of disk with string-impression running through it. Upper and lower surfaces smooth. No impression.

**Registration No. 5211:16**
Dimensions: 2.2 x 1.4 x 0.63.
Reverse: Knot-impression.
Location: Building 220, Area 314. Occupation.
Description: Unbaked greenish clay, with numerous, tiny, white inclusions. Left edge, and part of lower edge of seal impression preserved. Obverse: Roughly worn. Possible seated, naked, human figure, head missing, facing left, one arm raised to the left, holding a curved stick or straw. Estimated diam. of seal 1.65.

**Registration No. 5500:09**
Dimensions: 2.5 x 2.15 x 1.15.
Reverse: Surface missing.
Location: Building 224, Area 316. Sand above building.
Description: Coarse, dark-grey clay, with numerous, small, white inclusions. Perhaps fragment of ovoid bulla. String-hole, diam. 0.04, at narrow ends, and impression of string through body of bulla. Further impressions on transverse section, perhaps of a knot.

**Registration No. 5500:08**
Dimensions: 1.8 x 1.2 x 0.74.
Reverse: Knot/string-impression.
Location: Building 224, Area 316. Sand above building.
Description: Dark-grey clay with large, white inclusions. Rectangular fragment, the preserved portion representing the centre and left edge of an impression. Obverse: In the centre, the lower part of a standing human figure in long tiered skirt, feet missing, touching a pair of right-angled lines, possibly the legs of a seated figure facing right. Very damaged figure in left field.

**Registration No. 5500:07**
Dimensions: 1.83 x 1.2 x 0.74.
Reverse: One deep string-impression.
Location: Building 224, Area 316. Floor.
Description: Unbaked fragment of fine, pale-grey clay. One smoothed edge. Obverse: About one-third of seal, showing left edge. Standing figure with tiered skirt facing right, one arm raised to right, perhaps holding hand of fragmentary second figure to right. Only part of his tiered skirt is preserved. Between the two figures is a jar. Impressions 1596.2 and 3, from the temple, are from the same seal (Crawford & Matthews 1997, p. 56, Figs. 14 and 15). 5510.25 and 26 are very similar, and may also be from the same seal. 5510.26 is also similar, but not from the same seal.

**Registration No. 5210:24**
Right fragments.
Dimensions: 1.12 x 0.83 x 0.62 (largest fragment).
Reverse: Surface missing.
Location: Building 224, Area 316. Floor.
Description: Eight small pieces of light-grey, unbaked clay, of irregular shapes, with no distinguishing features. 5510.25, 38, 40, 41, 42, 43, 51 amalgamated with 5510.24.

**Registration No. 5510:25**
See 5510.24.

**Registration No. 5510:29**
Dimensions: 1.64 x 1.26 x 0.06.
Reverse: String-impression.
Location: Building 224, Area 316. Floor.
Description: Light-grey, irregular fragment with white inclusions. Obverse: Small segment of edge of a possible impression, no design visible.

**Registration No. 5510:30**
Dimensions: 1.6 x 0.95 x 0.03.
Reverse: Two parallel string-impressions.
Location: Building 224, Area 316 Floor.
Description: Light-grey, unbaked, irregular fragment. Obverse: No identifiable motif, finger-print.

**Registration No. 5510:31**
Dimensions: 2.2 x 0.85 x 1.0.
Reverse: String-impression, and possible impression of tip of small, smooth peg.
Location: Building 224, Area 316. Floor.
Description: Fragment of fine, yellowish clay. One slightly-concave, smooth edge with finger-prints. Obverse: Part of lower right segment of design. Standing figure in tiered skirt, upper body and head missing; to the right is a jar with unidentified motifs above and to the right. Similar to 5510.18 (q.v.) and related sealings, but not possible to say if from same seal.

**Registration No. 5510:28**
Dimensions: 2.56 x 1.26 x 0.95.
Reverse: One smooth surface.
Location: Building 224, Area 316. Floor.
Description: Light-grey, unbaked, sub-triangular fragment, segment of smoothed edge with triangular indentation. Poor condition, cracked down centre. Obverse: Central part of design. On left, hind-quarters and hind-leg of animal facing left; in centre, trunk of tree or palm-frond; and to the right, an unidentified motif, perhaps the hunched skirt of a standing figure.
Catalogue of Seal Impressions

REGISTRATION NO. 5510:32
Dimensions: 1.3 x 1.25 x 0.63.
Reverse: Worn, possible string-impression.
Location: Building 224, Area 316. Floor.
Description: Light-grey, poorly preserved fragment. Obverse: Part of possible quadruped, above which are the feet and lower skirt of a human figure, with a star motif to his left.

REGISTRATION NO. 5510:33
Dimensions: 1.7 x 1.06 x 0.9.
Reverse: Possible reed impressions.
Location: Building 224, Area 316. Floor.
Description: Light-grey, irregular piece of clay, apparently pinched into triangular shape. Obverse: Poorly preserved, but appears to show part of horned animal facing right, its head turned back over its shoulder, and a plant motif above its rump.

REGISTRATION NO. 5510:34
Dimensions: 1.5 x 1.43 x 0.7.
Reverse: Possible knot-impression.
Location: Building 224, Area 316. Floor.
Description: Light-grey fragment, with one smoothed surface, with a single line, perhaps the edge of a sealing.

REGISTRATION NO. 5510:35
Dimensions: 1.42 x 1.5 x 0.95.
Reverse: Worn, possible knot-impression.
Location: Building 224, Area 316. Floor.
Description: Light-grey, poorly preserved fragment. Small area of smoothed edge with two triangular indentations. Obverse: Badly worn figure of animal facing left, above the feet and lower skirt of a human figure facing right.

REGISTRATION NO. 5510:36
Dimensions: 1.3 x 0.73 x 0.63.
Reverse: One fine string-impression.
Location: Building 224, Area 316. Floor.
Description: Light-grey clay, unbaked, semicircular fragment, with an arc of smoothed edge, and tiny segment of seal impression, with illegible motifs. Part of same sealing as 5510:23.

REGISTRATION NO. 5510:37
Dimensions: 1.0 x 0.5 x 0.4.
Reverse: Surface missing.
Location: Building 224, Area 316. Floor.
Description: Light-grey fragment. One convex surface with possible impression of parallel lines.

REGISTRATION NO. 5510:38
See 5510:24.

REGISTRATION NO. 5510:39
Dimensions: 1.0 x 0.98 x 0.95.
Reverse: Possible string-impression.
Location: Building 224, Area 316. Floor.
Description: Yellowish clay fragment, roughly cone-shaped, with a chip off the apex of the cone. Obverse: Irregular lines, possible impression.

REGISTRATION NO. 5510:40
See 5510:24.

REGISTRATION NO. 5510:41
See 5510:24.

REGISTRATION NO. 5510:42
See 5510:24.

REGISTRATION NO. 5510:43
See 5510:24.

REGISTRATION NO. 5510:44
Dimensions: 0.7 x 0.8 x 0.46.
Reverse: No impression.
Location: Building 224, Area 316. Floor.
Description: Fragment of light-grey clay. Small, of irregular shape, with very small area of smoothed edge. Obverse: Hem of skirt and pair of feet facing left, with another foot facing right on left edge. Very similar to 5510:18 (q.v.), and related sealings, but not possible to say if from same seal.

REGISTRATION NO. 5510:45
Amalgamated with 5510:24.

REGISTRATION NO. 5510:51
Amalgamated with 5510:24.

REGISTRATION NO. 5510:52
Dimensions: 1.57 x 1.46 x 0.65.
Reverse: Possible reed or wood impressions, and one double string-impression.
Location: Building 224, Area 316. Floor.
Description: Fragment of fine, yellowish clay. One quarter of seal impression, with fragment of smoothed edge with finger-print. Obverse: Top left quarter of design. Goose-like bird looking right towards a palm-frond. Below the bird is a horizontal, hatched motif, perhaps the horizontal arm of a cross dividing up the surface of the seal.

REGISTRATION NO. 6003:09
Dimensions: 2.1 x 2.05 x 1.35.
Reverse: String-impression, originally in centre of bulla(?). Location: Building 63, Area 331. Sand.
Description: Perhaps half of a bulla. Very fine, light-grey clay, with rare, tiny, white and light-grey inclusions. Originally oval or round. Surviving piece represents one rounded end with smooth exterior surface. No impression.

REGISTRATION NO. 6075:01
Three fragments, two joined.
Dimensions: (i/ii) together 1.75 x 0.84 x 0.95.
(iii) 2.09 x 1.2 x 0.7.
Reverse: (i/ii) String-impression.
Location: Building 64, Area 333. Sand.
Description: Fine, light-greenish clay.
(i/ii) Fragmentary impressions of the edge of a circular seal.

REGISTRATION NO. 6079:06
Dimensions: 3.0 x 3.5 x 1.4.
Reverse: Two parallel string-impressions, and oblong string-hole, diam. 0.4.
Location: Building 14, Area 7. Occupation.
Description: Burnt grey clay. About half preserved. Part of smoothed edge. Obverse: Upper half of a seal impression, showing on the left the head of a horned animal, facing left. In front of its face is a curved palm-branch or tree. Behind the head, above the animal’s back, is a much smaller animal, a male quadraped with ruffled neck, facing left, but with head turned back over its shoulder. Part of another motif is just visible below its hind-legs. Estimated diam. of seal ≤ 2.4.

REGISTRATION NO. 6580:06
Dimensions: 2.24 x 1.85 x 0.67.
Reverse: Parallel striations, possibly reed, and string.
Location: Building 60, Area 372. Floor.
Description: Pinkish baked clay. Quarter segment of edge with finger-prints. Design: A cross with arms outlined by double lines. Two complete arms end in hatched squares. Four single lines radiate from the angles of the arms of the cross, the two complete ones ending in crescents.

REGISTRATION NO. E18:15:05
Dimensions: 2.24 x 1.85 x 0.67.
Reverse: Parallel striations, possibly reed, and string.
Location: Building 60, Area 372. Floor.
Description: Pinkish baked clay. Quarter segment of edge with finger-prints. Design: A cross with arms outlined by double lines. Two complete arms end in hatched squares. Four single lines radiate from the angles of the arms of the cross, the two complete ones ending in crescents.
Catalogue of Seal Impressions

Registration No. F17:75:01
Dimensions: 3.1 x 3.0 x 1.1, estimated diam. of seal c.2.2.
Reverse: Deep knot-impression.
Location: Building 14, Area 12. Floor.
Description: Burnt clay. Approximately circular. Part of the edge also has string-marks. Obverse: A central, standing figure facing right, holding a long pointed object in front of him, at waist height, and at right angles to his body. He is wearing a hatched skirt, and has an elongated neck and stylised head. There is a rosette to the right of his head. Another is present below the horizontal object. On the left side he holds a badly damaged, inverted, horned animal, which faces right.

Registration No. F18:45:21
Dimensions: 1.37 x 1.03 x 0.4.
Reverse: Smoothed.
Location: Building 1, Area 2. Occupation.
Description: Roughly triangular piece of fine, pinkish clay. Possible motif on one surface.

Registration No. K17:76:03
Dimensions: (i) 0.58 x 0.26 x 0.74.
(ii) 1.16 x 0.94 x 0.49.
(iii) 2.20 x 1.46 x 1.45.
Location: Building 5, Area 59. Occupation.
Description: Three fragments. Brownish, hard, burnt clay. (i) Pinched fragment with fingerprint on one surface. (ii) Obverse: Impression of circular seal, probably just lower left corner of impression missing. Design forms a rosette. A central circle is surrounded by four others (only three extant). Each of the outer circles is separated from the next by a short line radiating from the centre. (iii) Obverse: A second impression from the same seal as (ii), this time with much of top and left edge preserved as well as centre. The central circle and two outer ones are present, and three of the radiating lines. Estimated diam. of seal 2.1.

Registration No. M16:33:07
Dimensions: 1.3 x 0.9 x 0.4.
Reverse: Flat surface with faint striations.
Location: Building 56, Area 72. Make-up.
Description: Fragment of clay sealing in pale-grey clay.
Obverse: Part of the left edge of a seal impression, showing a standing, naked, human figure in profile, facing right, with an arm raised. To the right is the head of an animal with ruffled neck and long, swept-back horns, facing left but turning back over its shoulder. The figures are very small, and the carving fine. Style Ib(?).

Registration No. P20:02:07
Dimensions: 0.82 x 0.8 x 0.3.
Reverse: Possible string-impression.
Location: Building 101, Area 107. Sand.
Description: Small, roughly rectangular fragment of grey ashy clay, faint scratches on one surface.

Registration No. P20:02:08
Dimensions: 1.0 x 0.7 x 0.2.
Reverse: Impression of fine string.
Location: Building 101, Area 107. Sand.
Description: Hard, pinkish, fired flake, roughly-rectangular, with finely drawn body of animal, facing left, head destroyed, a sun symbol above its back, and a vertical motif to its right.
### Catalogue of Tokens

**Registration No. 1159:05**

**Dimensions:** 1.8 x 2.2 x 0.75.
**Reverse:** String-hole, and tubular impression.
**Location:** Building 200, Area 204. Floor.
**Description:** Probably part of a token with hemispherical back, originally pierced for suspension. Obverse: Hatched square (4 x 6 squares), with necks of two short-horned animals protruding from top, one looking left and one right. To left is damaged figure of three-toed rampant monster, looking right. Below this a head of animal with long back-swept horns facing left.

**Registration No. 1159:07**

**Dimensions:** 1.2 x 2.0 x 0.75.
**Reverse:** Surface largely missing.
**Location:** Building 200, Area 204. Floor.
**Description:** Fragment of possible hemispherical token. Obverse: Head of animal facing right to edge of seal, with back-swept horns, and three-toed foot or hoof raised in front of face. (N.B. not the same design as 1159:05).

**Registration No. 2126:02**

**Dimensions:** Diam. 2.15, height 1.3.
**Reverse:** Hemispherical, surface eroded.
**Location:** Building 57, Area 74. Occupation.
**Description:** Dark-grey, burnt clay, button-shaped token, pierced for suspension on a very thin cord. Obverse: No design visible.

**Registration No. 2665:06**

**Dimensions:** Diam. 1.5, max. height 0.8.
**Reverse:** Convex, with finger-prints and textile impression.
**Location:** Building 57, Area 74. Occupation.
**Description:** Hemispherical piece of grey clay.

**Registration No. 5012:06**

**Dimensions:** 1.53 x 1.7 x 0.5.
**Reverse:** Convex.
**Location:** House 224, Area 307. Sand.
**Description:** Hemispherical. Unpierced. Fine, hard, red clay. Obverse: Very worn impression, showing perhaps two or three standing figures on a boat. Three interlocking circles below ‘boat’. Discussed in Crawford 1998b, p. 53.

**Registration No. 5176:02**

**Dimensions:** 2.3 x 2.4 x 1.05.
**Reverse:** Smooth and convex, with finger-prints, and remains of a transverse hole.
**Location:** Building 220, Area 309. Floor.
**Description:** Light-pink, baked clay. Lower left segment of impression of a large seal, estimated diam. c.2.8. Small section of edge. Obverse: On left is a standing, skirted, human figure with top half missing, facing right. To the right, legs of a male quadruped, facing right. Below, on lower edge, a standing male quadruped with long horns, facing right and looking upwards. Below its head a possible bush.

**Registration No. 5196:01**

**Dimensions:** Not measured.
**Reverse:** Roughly domed.
**Location:** Building 220, Area 312. Tannur.
**Description:** Sub-oval fragment of fired orange clay, possibly from a token. Obverse: Paint parallel lines.
**Catalogue of Tokens**

**Registration No. 5500:27**

**Dimensions:** Diam. 1.85–2.1, height 0.7.
**Reverse:** Hemispherical.
**Location:** Building 224, Area 316. Sand.
**Description:** Hard-baked, red clay. Worn. Large, sub-circular nick taken out of one edge.

**Obverse:** Triple concentric circles with small loops on outer side of each circle. From the same seal as 2665:06 (q.v.). Previously published Killick et al. 1993, p. 3, Fig. 11; also discussed Crawford 1998b, p. 53.

**Registration No. 6539:01**

**Dimensions:** Diam. 2.2–1.9, max. thickness 0.9, min. thickness 0.5.
**Reverse:** Bifacial.
**Location:** Building 60, Area 372. Floor.
**Description:** Oval disk, hard pinkish clay, thicker on one edge than the other. Impressed on either side with different seals, each design virtually a mirror-image of the other. Side 1: An arrow-head, pointing up, inside a square. To the left of the square, a palm-frond. Above and below the square, curved lines, possibly crescents, the lower one upside-down. From the right edge of the square protrude the curved necks of two animals, heads missing. Side 2: The impression is at a diagonal to that on the first side and is a mirror image of it. An arrow-head, pointing down, inside a square. To the left, traces of a palm-frond, this time upside-down. Above and below the square, the same crescents as on the first side. From the right side of the square protrude the curved necks of two animals. The left-hand head is missing. From the same pair of seals as 6580:04. A unifacial token with the same design was found at Qala’at al-Bahrain (Beyer 1989, p. 154, No. 284), and there is a seal from Failaka with the same design again (Kjaerum 1983, No. 52). Previously published Crawford 1998b, p. 52, Pl. 1.

**Registration No. 6580:04**

**Dimensions:** 2.7 x 2.3 x 0.85, approx. diam. of seal 2.3.
**Reverse:** Slightly-convex, smooth back, with finger-prints, and a probable string-impression on one edge.
**Location:** Building 60, Area 372. Floor.
**Description:** Virtually-complete token. Design: Three standing figures in long, tiered skirts with linked hands. Two figures on the left face left, the third perhaps right. The left figure holds a shield with spikes at the top and bottom to his left. Possible fourth figure to the right. Impression worn.

**Registration No. F17:78:02**

**Dimensions:** Diam. 1.85, height of edge 0.65, thickness of centre 0.3.
**Reverse:** Possibly bifacial.
**Location:** House 14, Area 17. Pit.
**Description:** Broken token. Dark-grey clay, heavily burnt. Half of a circular disk of clay with raised edge, smoothed on outside edge. No trace of an impression.

**Registration No. K16:53:02**

**Dimensions:** Diam. 1.95–2.0, thickness 0.5–0.85.
**Reverse:** Bifacial.
**Location:** Building 51, Area 56. Make-up.
**Description:** Circular piece of brown clay. Both sides have a seal impression; one side of disk thinner than the other. Side 1: Square containing a tanged arrow-head. The remains of two animal necks protrude from the right, a palm-frond to the left. Above the square is a crescent lying on its back. Side 2: Mirror image of the same design. From the same seal as 6539:01 (q.v.). Previously published Crawford 1993, pp. 11 & 12, Fig. 12, and 1998b, p. 58, Pl. 1.