

## The mature Harappan Occupation at Gandi Umar Khan in the Gomal Plain

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### Introduction

Archaeological research carried out separately by the Department of Archaeology of the University of Peshawar (Swati and Ali 1998; Ali and Khan 2001; Ali and Jan 2009a) and the Directorate of Archaeology and Museums, Government of the Khyber Pakhtunkhwa (former NWFP) (Rahman 1997a & 1997b; Ali and Jan 2005; 2009b) in the Gomal plain, north-west Pakistan is revolutionising our understanding of the development of the Indus Civilisation. Archaeological excavations conducted at Gumla, Hathala and Rehman Dheri in 1970s & 80s suggested that while this part of the subcontinent showed clear evidence for important cultural developments in the 4<sup>th</sup> and 3<sup>rd</sup> millennia BC, it appeared to lack evidence for occupation during the Mature Harappan period and was thus outside of the cultural sphere of the Indus Civilisation. However, recent surveys and excavations have shown that there are numerous Mature Harappan sites in the Gomal plain (Jan et al 2008), and this forces a re-evaluation of this region and also its place in the development of the Indus Civilisation.

### Physical Geography and Environment

The Gomal plain (Fig. 1) is currently a barren and unproductive region lying along the Indus River in the southern Khyber Pakhtunkhwa region of north-west Pakistan. It is bounded by the Suleiman Range to the west and south-west; the Bithani and Waziristan hills to the north-west; the Marwat-Kundi and Khisor Range to the north; and the Indus River to the east. It is open to the plain of Punjab on the south side. The Gomal plain gradually slopes down from the north-west to south-east. Despite several ephemeral streams including the Gomal river (known locally as *Luni nalah*), originating in the western and northern hilly areas, which only flow in healthy rainy season, the Gomal is currently an arid and dry tract of land. Because of this arid environment, it remains

agriculturally inhospitable for most of the year. However, its soil is very fertile where *daggar*, *barani* (rain fed), *kalapani* (spring/zam fed), *rod kohi* (ephemeral impounding) or canal irrigation systems are available. The low annual rainfall and high rate of evaporation, in addition to the exploitation of trees for fuel consumption, has perhaps affected the ecology of the region at large, which was very likely to be different in the past. Contrary to the physical environment, the Gomal plain is today culturally very rich. Owing to its geographical location, it is a land, which is inhabited by several ethnic groups (e.g. Pakhtun, Baluch, Jat, Pawindah and Changanr) from the surrounding regions. The archaeological record also show a cultural diversity in this part of north-western Pakistan during the past, stretching from the prehistoric to late Islamic periods, which suggests a physical environment different from the present. It also indicates geo-strategic importance of the region, which connects Central and Western Asia with South Asia (Dani 1970-71; Durrani 1988).

### Site Description

The archaeological mound of Gandi Umar Khan (Fig. 1) is situated approximately 35 km south-west of Dera Ismail Khan city in the village of the same name amid relatively vegetated zone, which is flooded by two branches of a hill torrent, locally known as *Gud nalah*, and the *rod kohi* irrigation system (Ali and Jan 2009b). The mound is about 3 km towards the west of the village on the right bank of the hill-stream at 31° 42' 31" N and 70° 32' 24" E. The considerable size of the mound, approximately 270 x 250 x 8.5 m (7 ha), and the broken red potsherds makes the sight visible from a distance (Plate 1). The surface scatters, visible in the surrounding fields beyond the limits of the mound, suggest a much larger size of the site than the visible area today. The contour drawing and the aerial view (on Google earth)

suggests that there may have been a main street running in the middle of the site, which divides the mound into two parts (Fig. II). Generally, the mound rises in height from the north-west and culminates in the south-eastern end with different topographic variations.

### Survey and Excavation

While conducting survey in 1997 on behalf of the provincial Directorate of Archaeology and Museums, Abdur Rahman first mentioned this site along with a group of important sites including Jhandi Babar I, Jhandi Babar II, Maru I and Maru II etc (Rahman 1997a). The Bannu Archaeological Project (Khan et al 2000) also made a short visit to the site in 2000 and noted the presence of two mounds, representing artefacts of different cultures. However, it was subsequently noticed that in fact these two mounds are parts of the same site, producing mature Harappan, Kot Diji and Tochi-Gomal phase cultural assemblages together. Discovering some more Bronze Age sites in the Gomal plain during the field campaign of 2003 by the authors (Ali and Jan 2005), on behalf of the same Directorate in collaboration with the University of Peshawar, Gandi Umar Khan was opted for trial trenching in the same year (Ali and Jan 2009b; 2009c) so as to secure preliminary information about the settlement history of the site and character of the mature Harappan material culture (Jan 2008).

The investigation at Gandi Umar Khan in relation to a cluster of other Bronze Age sites in its vicinity has been productive in understanding the existence of mature Harappan culture in the extreme northwest corner of the Indus plain, which was previously thought to have been occupied exclusively by the people using Kot Diji type material. The discovery of Gandi Umar Khan as a mature Harappan regional centre in the Gomal plain is significant in expanding the frontiers of the Indus Civilisation on one hand and its development on the other. Two seasons of fieldwork (2003 and 2004) had been carried out at the site, which revealed over 6 meter thick mature Harappan cultural deposit, at the top of the sequence (Ali and Jan 2009c). In addition, three other periods,

earlier in chronological context than the mature Harappan, were also identified, including the Kot Diji, Transitional (from Tochi-Gomal to Kot Diji) and the Tochi-Gomal, which have added new dimension to the study of proto-historic archaeology of the region in particular and south Asia in general.

### Chronology

The thickness of the cultural deposit (Plate 2) at the mound shows a long human occupation beginning from the Tochi-Gomal up to the mature Harappan phase. Based on the cultural material recovered, especially ceramics, and the archaeological stratigraphy, the cultural profile of Gandi Umar Khan can be divided into four periods e.g. the Tochi-Gomal (GUK I), Transitional (Tochi-Gomal - Kot Diji - GUK II), Kot Diji (GUK III (A-D)) and mature Harappan (GUK IV (A-C)). Although samples are available for the radiocarbon dating none have so far been analysed, when available, these will no doubt, give a more precise chronology of Gandi Umar Khan, yet cross-cultural comparison of the antiquity of the site with those obtained from other sites in the region from known and established context approximately suggest a time span of over a millennia. The earliest midpoint date of the Tochi-Gomal phase at Rehman Dheri is 3225 BC (Stuiver et al 1998) and the mature Harappan age ended at approximately around 1900 BC (Kenoyer 1998). Keeping these dates in view, at this stage of our knowledge, Gandi Umar Khan might have been flourished from a small town around the end of the 4<sup>th</sup> millennium BC to a regional centre of the Indus Civilisation until the beginning of the 2<sup>nd</sup> millennium BC. Here the author would like to discuss briefly the cultural remains of the mature Harappan period (GUK IV) as the rest is outside the scope of this paper.

### Layout and Architecture

Being a site of a considerable size on one hand and keeping the then existing practice of making fortification walls around the cities and town on the other, there would have also been such a defensive measure at Gandi Umar Khan,

which is yet to be investigated. Likewise, at the current state of our knowledge, it is hard to presume that this town/city would have been divided into traditional divisions of an acropolis and lower city, as known from the larger cities like Harappa, Moenjodaro etc. In order to obtain preliminary information about the depth of the cultural deposit and the nature of the Harappan settlement, several trenches were laid down at various points of the southern mound. Unlike the major urban centres of the Indus Civilisation e.g. Harappa and Moenjodaro, no evidences for a mud or mud-brick platforms have been noticed in the excavated trenches at Gandi Umar Khan. Being located on the banks of perennial rivers, these urban centres have been constructed on raised platforms in order to protect them possibly from the rising water table (Wheeler 1968). The location of Gandi Umar Khan on the bank of *Gud nala* on one hand and the absence of platforms on the other suggest that the hill torrent would have not been huge enough to carry large amount of water that could have raised the water table and required the inhabitants of the site to build a platform. Is this feature enjoyed specifically by the major cities or is it developed later, are undoubtedly certain intriguing questions to be satisfactorily answered in further research. Nevertheless, small mud and mud-brick platforms inside the structures of the Harappan period are known.

The exposed structures/rooms were mainly square and occasionally rectangular in plan having relatively thick walls that were suitable for carrying the weight of flat wooden ceiling without any support of central pillars (Plate 3). An ordinary house contains a series of three/four rooms constructed in a line, made from standardized mud-bricks using the Harappan standard ratio of 1:2:4. Unlike Harappa, Moenjodaro and Chanhodaro, the material of construction used at Gandi Umar Khan was mud-bricks (Plates 3 & 4). Although kiln baked bricks in various shapes and sizes have been collected from the surface of the site as well as in the excavated trenches, showing their possible use in water related areas like wells, drains and baths etc, no such structures have yet been exposed. All the rooms have

floors made of compact beaten earth, occasionally paved with mud-bricks. The limited area of excavation did not expose the remains of the sophisticated sewerage system, which is one of the hallmarks of the Indus Civilisation. The discovery of postholes and wooden fragments at the site suggests that thatched structures have also been built in addition to those of mud-bricks.

### The Cultural Artefacts

The site is very rich in cultural material, and the same has been collected in significant quantities both from the proper archaeological context and the surface, revealing the socio-religious and cultural environment of Gandi Umar Khan during the 3<sup>rd</sup> m. BC. Strewn with potsherds and t/c cakes, the site produced identical cultural artefacts to the major settlements of the Indus Civilisation like Harappa, Moenjodaro, Chanhodaro and Nausharo etc, with slight regional variations. The material remains from Gandi Umar Khan are discussed briefly below.

#### i. Pottery

A great bulk of the cultural material comprised of ceramics (Plates 5, 6 & 7), having variation in shapes and style of ornamentation. Comparatively, the pottery is thick in fabric and with the exception of a few examples, all appear to have been made on either fast or slow wheel. Some of the large jars have been made in sequential stages whereas others were finished with stone or t/c dabbers. In addition to the major lot of the plain pottery, the Gandi Umar Khan repertoire exhibit painted ceramics in typical Indus tradition of black on lustrous red surfaces (Plate 7). The frequency of floral in relation to geometric designs gradually increased from earlier to later stages of the mature Harappan cultural phase at the site. The designs, however, include simple lines and bands; connected solid triangles; cross hatching; intersecting circles (simple in the beginning and subsequently terminated in floral pattern); radiating sun; leaves and branches of trees; pipal leaves; water weeds; peacock; fish-scale and rarely fish (only in one example) as well. Although, pedestalled vessels appeared in the

preceding phases in the Gomal, they became the hallmark of mature Harappan phase and appeared at Gandi Umar Khan in large number in all sub-phases. The other forms of the pottery include small and large storage jars (the latter having pointed bases whereas some former types have undulated surface treatment); cooking pots; perforated jars; cylindrical vessels; jars with S-shape profile; globular water pitchers (jars); bowls (with flaring and bilateral rims); bowls/dishes-on-stand; basins and troughs, all akin to those recovered in such period sites elsewhere. There are clear evidences of gradual developments from early to late sub-phases. The painted designs became more frequent; the simple red slip changed into red lustrous surface and the high-footed vessels increased in ratio at the later stages.

## ii. Tools

Although bronze was being used, stone was also used as a primary material for manufacturing implements and other related objects, together with bones. Metallic tools were skilfully used in shaping the stone implements at the growth of technology in the 3<sup>rd</sup> m. BC. During the mature Harappan phase, stone knapping was an advanced art, which has undoubtedly its roots in the preceding periods. From the excavation as well as surface, a great bulk of stone tools have been uncovered including, flakes, blades, bladlets, burins, lunettes, trapezes, triangles, scrapers, blunted knives, notched blades, points, awls, gravers and cores (Plate 8). These tools were made from both blades and flakes through retouching. The debitage and crested-ridge blades, in addition to pebbles, used as hammers and anvils, clearly suggest their local manufacturing at the site as a well developed and advanced art. Apart from good quality of black chert, chalcedony, jasper, agate, flint and obsidian (rarely) were also exploited for stone knapping here. The material suggests a well established intra-regional trade network with the adjacent regions where these stones must have been imported from. The nearest possible sources have been identified in the hills of north and south Waziristan (Khan 1979, 375; Morris 2004) Namal Gorge (Law and Baqri 2001, 34-40) and Buri Khel (Law et al 2002, 10). The

Waziri hills on the north-northwest and the Namal Gorge and Buri Khel, in the Salt Range on the north-east, all lie within a radius of 150 km from Gandi Umar Khan, suggests that they are not strictly local. The stony gorges in the hill streams issuing from the Waziri and Suleiman Ranges also contained such stones in their beds, which could have been utilized as ready sources for the aforementioned stone tools.

## iii. Figurines

The mature Harappan levels at Gandi Umar Khan were not rich in t/c human figurines as compared to similar levels at other sites or even the preceding cultures in the same site. A good number of figurines have been unearthed from all other levels at Gandi Umar Khan, of these have parallels at Gumla, Hathala, Rehman Dheri, Lewan and few other sites in the Indus Plain. Their absence in the Harappan context is very intriguing. Different in style from the Kot Diji phase as well as mature Harappan types at Harappa and Moenjodaro, only a few female figurines have so far been uncovered, which are conceptual in nature rather than artistic. Although broken, they have tubular heads, with no clarity of life; broad shoulders and prominent round appliqué breasts, (Plate 9). Contrary to the human examples, the animal figurines from the mature Harappan context at the site have been found in large frequency (Plate 10). They may have served as toys or objects of rituals/ cultic practices, but are also important in reconstructing the socio-cultural and religious life of the people and natural environment of the age. The bulk of these figurines were humped cattle, as indicated by the prominent hump; upwards curved horns; tubular body and long tail. Others types include short horned bulls, dogs, pig, tiger, goats/sheep and birds. Some composite or mythical animal figurines have also been unearthed from the Harappan levels.

## iv. Metal Objects

By the mature Harappan period, metallurgy had become an advanced craft across the Indus plain. The remains of various metallic (copper

and bronze) objects have been unearthed in significant quantities from Gandi Umar Khan in the Gomal plain, including hallow-base arrowheads, spearheads, knife-blades, fish-hooks, antimony rods, mirrors, handles/bars, beads, rings, pendants, hairpins, indenters for stone knapping, spatulas and vessels fragments. Such objects are not merely tools used in certain functions but are significant for understanding craft specialization, economic prosperity and trade contacts. Copper smelting and casting appears to have been practised at Gandi Umar Khan. The copper in raw form would have been imported in ingots from the nearest possible sources of the adjacent region between Afghanistan and Kurram Valley (Wheeler 1968, 79), Baluchistan (Khan 1931) and Ketri-Ganeshwar, Rajasthan (Agrawal 1984, 163-67).

#### v. Beads

Beads among the small finds from the Harappan levels at Gandi Umar Khan have been collected in good variety and frequency (Plate 11), which provide an insight to the economic development of the society and popularity of jewellery for ornamentation of the bodies on one hand and the socio-cultural contact of the people in the 3<sup>rd</sup> m. BC with the adjacent regions on the other. The unfinished beads in various stages of production like chunk, ground, left un-perforated and un-polished, together with collecting raw material, reflect their local manufacturing at Gandi Umar Khan. The exploitation of different raw materials like jasper, agate, lapis lazuli, carnelian, turquoise, steatite, paste, bone, ivory, shell, copper/bronze & gold (rarely used) and especially the production of micro-beads signify mastery of the art and advanced technology practiced at Gandi Umar Khan.

#### vi. Seals

One of the important features of the mature Harappan phase is the square shaped steatite seals, depicted with pictographic writing and intaglio animal figure. At Gandi Umar Khan similar seals have also been unearthed either from the surface or from the proper context, which undoubtedly highlights the existing

sophisticated and established trade network on one hand and excellent craftsmanship; socio-cultural interaction with regional and sub-regional societies; and literate community on the other. The seals have been depicted with either geometric designs or the figure of an animal with pictographic writing above. The animals include a tiger with stripped body (although the upper portion is missing) (Plate 12) and unicorn. The animals are facing to right as well as left. In both the cases, the usual unidentified object is placed beneath the nose of the animal, which has been presumed either to be a 'manger', 'table-top' or a 'sacred brazier' (Kenoyer 1998).

#### vii. T/C Cakes

The half-baked t/c cakes, which are one of the diagnostic features of the Indus Civilisation, have been collected in large amount from both the surface and archaeological context (Plate 13). These appeared in three types i.e. round, oval and triangular as have been reported from all the contemporary sites elsewhere.

#### Conclusion

Several proto-historic sites in the Gomal plain have been excavated previously by the University of Peshawar (Dani 1970-71; Durrani 1988; Ali and Khan 2001) and as a result, a substantial amount of archaeological data regarding the pre-Harappan cultures e.g. the late Neolithic (SKT-Phase), 'Tochi-Gomal', 'Tochi-Gomal and Kot Diji – transition' (Jan in press) and 'Kot Dijian' phases have been obtained. Nonetheless, the mature Harappan phase remained unexplored until recently identified at Gandi Umar Khan (Ali and Jan 2009b). Despite the discovery of Hissam Dheri and Mahra in early seventies (Dani 1970-71), the existence of the mature Harappan settlements in the Gomal was questioned.

The discovery of Gandi Umar Khan as a regional centre of the Indus Civilisation in the Gomal plain along with a cluster of other mature Harappan settlements (Ali and Jan 2005; Jan et al 2008) has undoubtedly highlighted the significance of the area during the 3<sup>rd</sup> m. B.C.

The discovery of these sites and the excavations at Gandi Umar Khan extend the geographical limits of the Indus Civilisation into north-western part of Pakistan. It was possibly this region, through which the trade links between the Indus Civilisation and the contemporary Bronze Age populations of central Asia were transacted. Being physically and geographically a transitional zone between the plain of Indus and highland of Central Asia, there has usually been a movement of the people from both sides, which influenced each other's social and cultural life. The material remains from the pre-Harappan cultures in the Gomal plain and in the adjacent regions have shown evidences of cultural influence from the contemporary sites in central Asia and the same has been later on observed in Indus Civilisation.

The thick profile and intact stratigraphic record together with variation in artefacts, particularly the ceramics, from different levels at Gandi Umar Khan are providing an insight to the development of urbanism and the Indus Civilisation. The discovered artefacts in good quantity and quality as well, reflect a gradual growth in technology acquired by well-organised artisans. In order to understand more about the nature, socio-religious and economic life of the Harappan phase in the Gomal, more archaeological investigation and research on Gandi Umar Khan will be needed.

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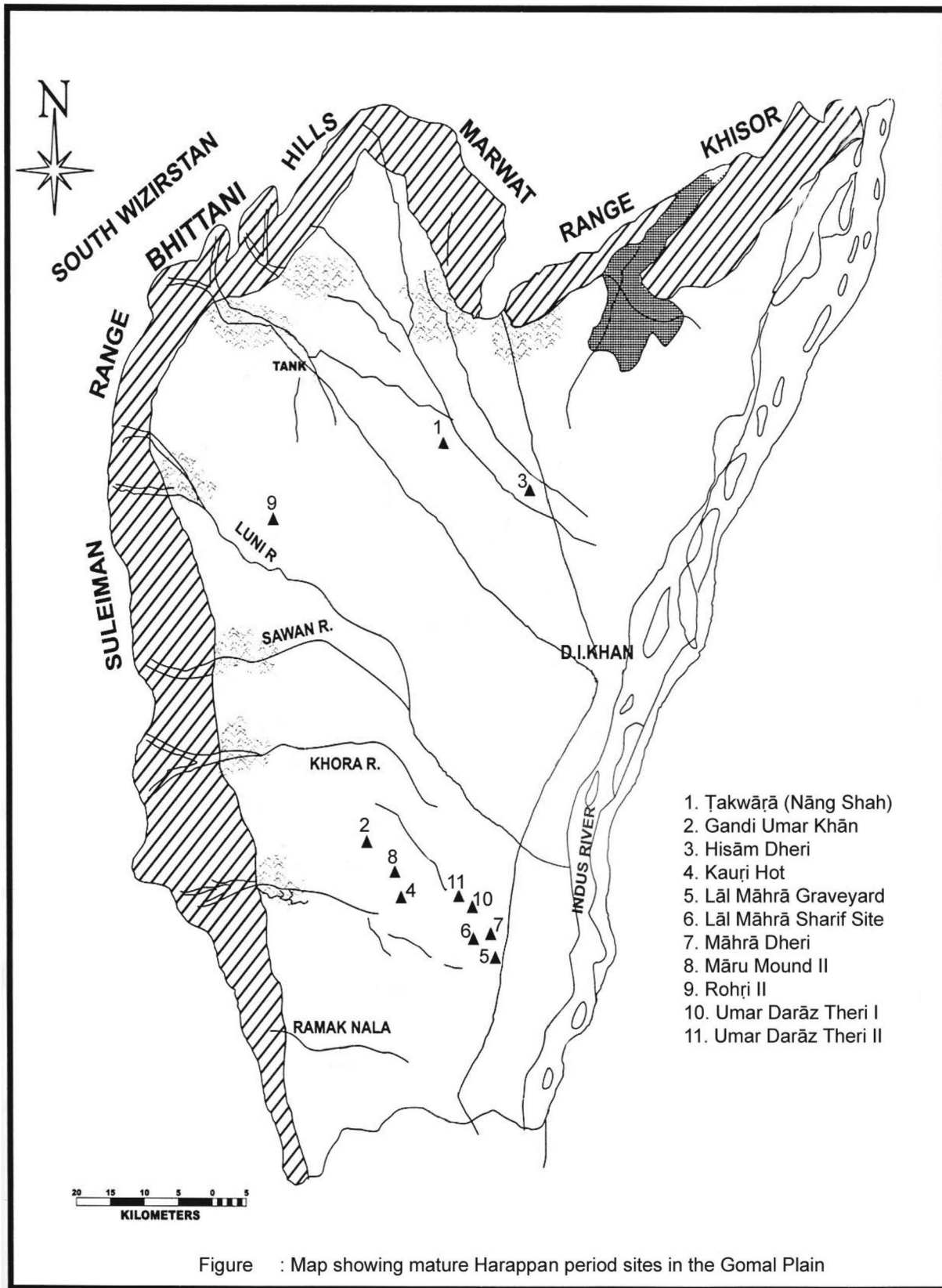


Fig I: Geographical location of the Gomāl plain and the distribution of proto-historic sites



Fig II: Aerial view of the mound at Gandi Umar Khan



Plate 1: Gandi Umar Khan, general view from south-east

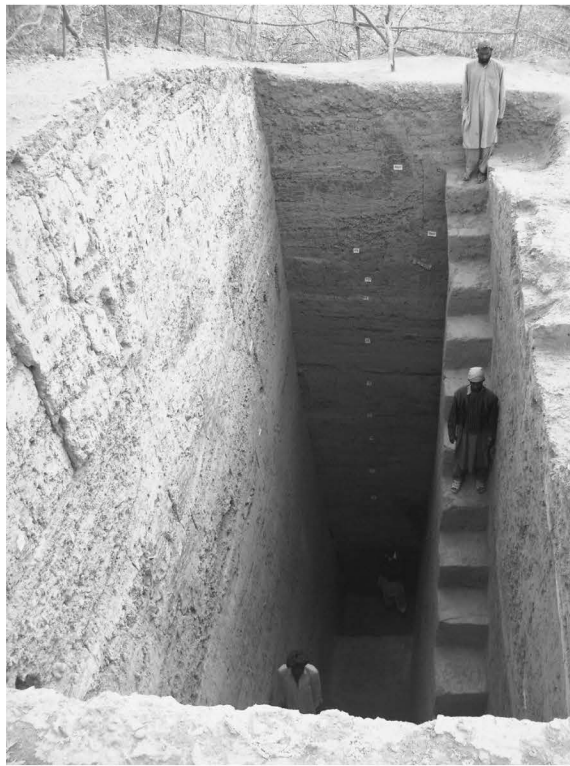


Plate 2: Gandi Umar Khan, depth of the cultural profile



Plate 3: Gandi Umar Khan, the mud-brick structures, mature Harappan period



Plate 4: Gandi Umar Khan, a Harappan period mud-brick wall



Plate 5: Gandi Umar Khan, mature Harappan period ceramics



Plate 6: Gandi Umar Khan, mature Harappan period ceramics



Plate 7: Gandi Umar Khan, mature Harappan period sherd



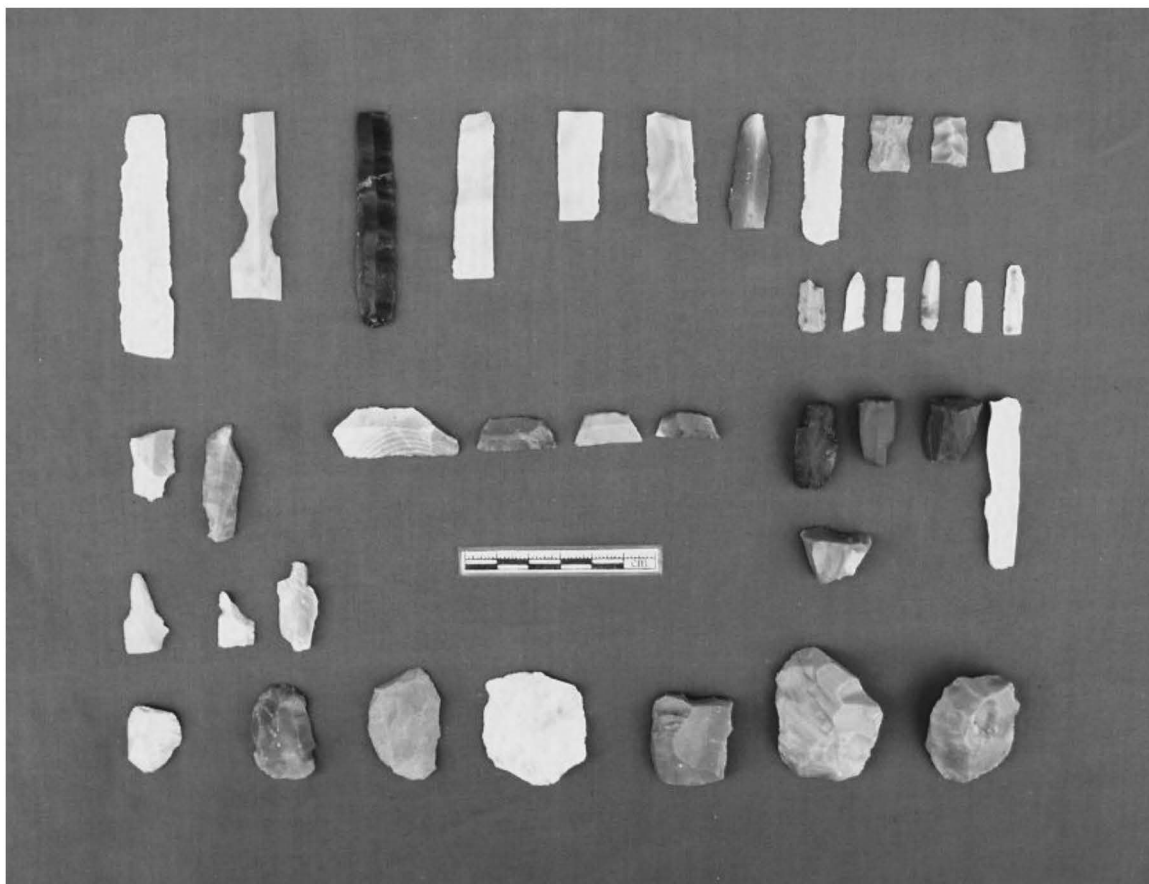


Plate 8: Gandi Umar Khan, mature Harappan period stone tools



Plate 9: Gandi Umar Khan, mature Harappan period human figurines



Plate 10: Gandi Umar Khan, mature Harappan period animal figurines

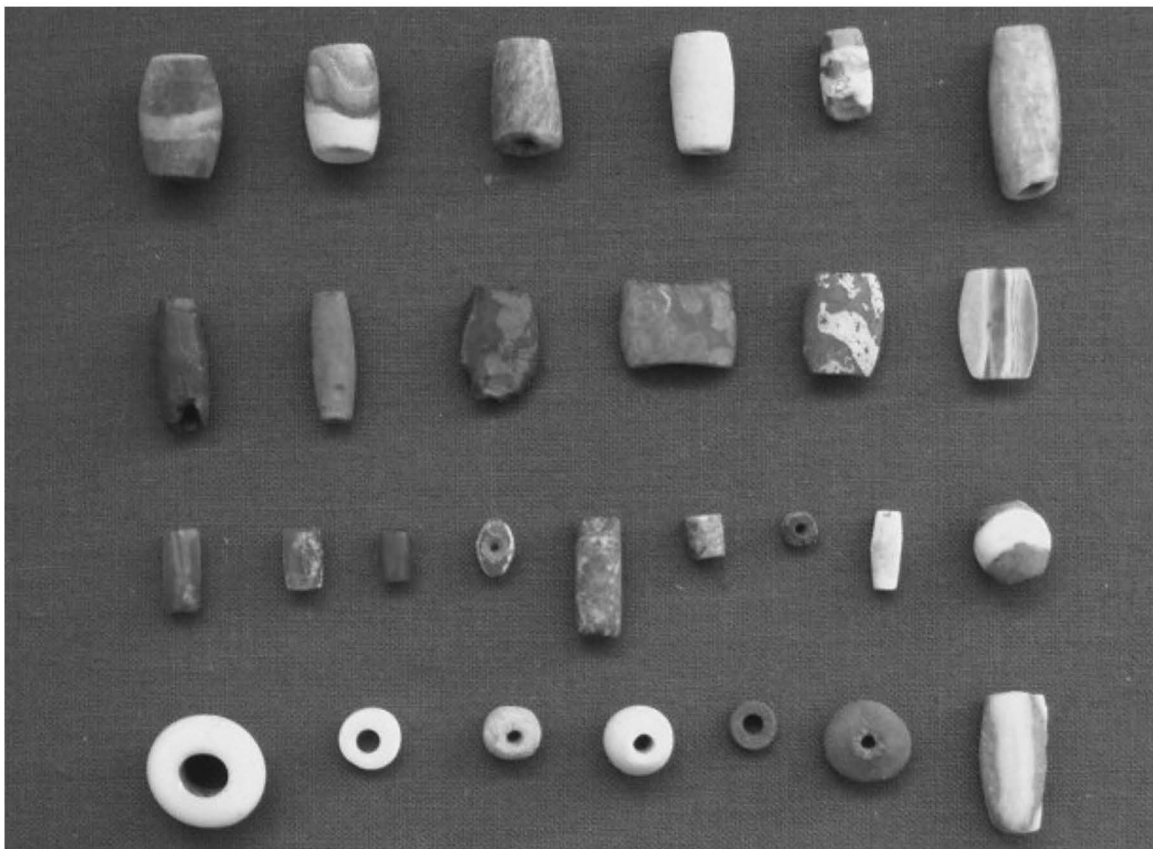


Plate 11: Gandi Umar Khan, mature Harappan period stone beads



Plate 12: Gandi Umar Khan, typical Harappan period steatite seal

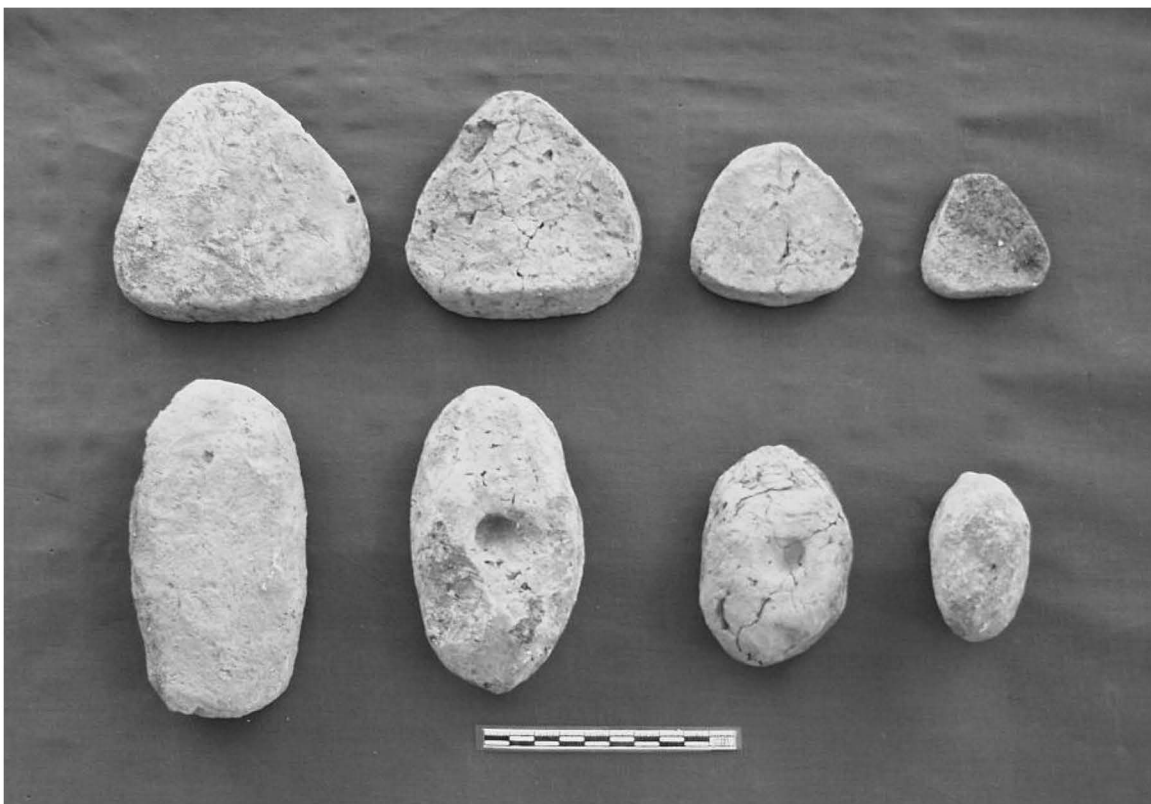


Plate 13: Gandi Umar Khan, t/c cakes