

## Excavations at Mitathal, District Bhiwani (Haryana) 2010-11: A Preliminary Report

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Village Mitathal (28°53'51" N and 76°10' 08"E) is located at a distance of 13 km northwest of Bhiwani (Haryana), the district head quarter and it lies about 120 km northwest of Delhi (Plate 1). The ancient mound is further located about 1.5 km northwest of the village. This sleepy village got its fame in 1915, when a hoard of 86 gold coins was discovered here (Altekar 1957:309). This hoard contained 27 coins of later Kushanas and 33 coins of Samundragupta. Unfortunately 26 coins of this hoard were melted down. In 1965 two copper harpoons were found here by a farmer while ploughing his fields (Bhan 1969:1-15). Later in the same year 13 copper rings were found while digging a water canal at the site. The Harappan remains were brought to archaeologists by Amir Singh and Umed Singh of the village (Bhan 1975:4). These discoveries brought Suraj Bhan to the site and he conducted archaeological excavations at the site. The explorations at the site by various individuals and agencies and brought to light numerous antiquities from the site which was again subjected to archaeological excavations (Shinde *et al.* 2008: 155) but this excavations was abandoned

midway. In the year 2009-10, once again, an excavation programme was chalked out under the direction of the first author but due to unavoidable reason. The actual excavations could only resume in April 2011.

### Site and its Environment

The site is located in a boot-shaped flood plain where water accumulates during the rainy season water. Suraj Bhan had earlier postulated that there are traces of zigzag depressions starting from Indri in north of Karnal to Tigrana in the west and he identified this with the dried up old course of the Yamuna (Bhan 1972:125-128). But there are some other reasons for this phenomenon also. There are hills in the close vicinity of the area from where the rain water get accumulated in this plain and there is no depression beyond Tigrana by which water could discharge into the Yamuna in the east. Hence the 'old course of Yamuna theory' does not hold ground. But due to this enough water for crops is available and soil retains moisture for winter crop also. Even till the recent times agriculture was

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sustained due to this phenomenon and it was in the late sixties of the last century that canals were dug in the area for irrigation. This area was suitable for sustaining the villages and towns during the third millennium BCE. This attracted early colonizers who established their villages and some of these villages strategically became bigger and took the form of town and cities. One such village, i.e. the present site grew in size. The size of the present mound could be calculated about 16 hectare, while during the Chalcolithic period it remained a smaller size village. These towns provided services to the villages and there was interdependence between the two (Kumar and Nagpal 2004:25-29).

The site of Mitathal is located in the area formed by the light yellowish silt. There are three mounds here, named by the present excavators as MTL-1 (citadel complex), MTL-2 (Lower town) and MTL-3 (industrial complex). The contour map clearly shows three separate mounds. MTL-1 and MTL-2 are separated by a 20 m gap running from north-east to south-west, while MTL-2 and MTL-3 are separated by a 10 m gap running northwest to southeast (Plate 2). Suraj Bhan reported twin mounds here (Bhan 1975:3-4). Perhaps he was influenced by twin mound theory current during his times but he had no equipments to prepare the counter plan. Had he prepared the counter map with sophisticated instruments, as available today, he would have surely identified three mounds.

There are many Chalcolithic mounds in the vicinity of Mitathal (Plate 3), but here we would like to describe the sites located within a 5 km radius of the site in order to have a comprehensive picture of inter-linkage between the town and villages. The details of the sites located within the 5 km radius of the site are given below.

**Chang 1:** Village Chang is situated about 17 km northeast of Bhiwani on the Bhiwani-Meham road. There are three ancient sites in the village.

The site-1 is situated about 2 km northwest of the village. It is presently under cultivation and is about 4 hectares in size. During the explorations the site yielded the remains of Early Harappan, Mature Harappan, Late Harappan and Early Medieval, times along with steatite and carnelian beads, fragments of faience bangles and chert blades. Earlier, degenerate Siswal remains have been reported (Bhan 1975: 125).

**Chang 2:** The site Chang-2 is situated about 3 km southwest of the village. It measures about one hectare and is about 2 m high. It yielded the remains of the Early Harappan and Late Harappan times (Singh 1999:14).

**Dhanana 1:** The village is located about 15 km north of Bhiwani on the Bhiwani-Jind road. There are three sites in the revenue jurisdiction of the village only one site falls in the 5 km radius of Mitathal (Dangi 2010: 53:418). This site is located about 3 km south of the village. It occupies an area of about 3 hectares and intact portion is about 1.5 m high from the surrounding field levels. During the course of explorations the remains of Early Harappan and Late Harappan cultures were found from the site (Dangi 2010:53). Some mud bricks walls measuring 8 x 16 x 32 (1:2:3) are visible on the surface. Some fragments of the faience and terracotta bangles are the noteworthy finds at the site.

**Mundhana:** Village Mundhana lies about 10 km northwest of Bhiwani. There is an ancient site in the revenue area of the village. It spreads over an area of about 0.5 hectare and almost reduced to the ground level. It yielded the remains of the Late Harappan and Historical times (Dangi 2010: 57). Some fragments of faience bangles were collected from the site.

**Tigrana:** Village Tigrana is located about 8 km northwest of Bhiwani on the Jind-Bhiwani state highway. There are two proto-historic sites in the revenue area of the village, which fall in the 5 km radius of Mitathal.

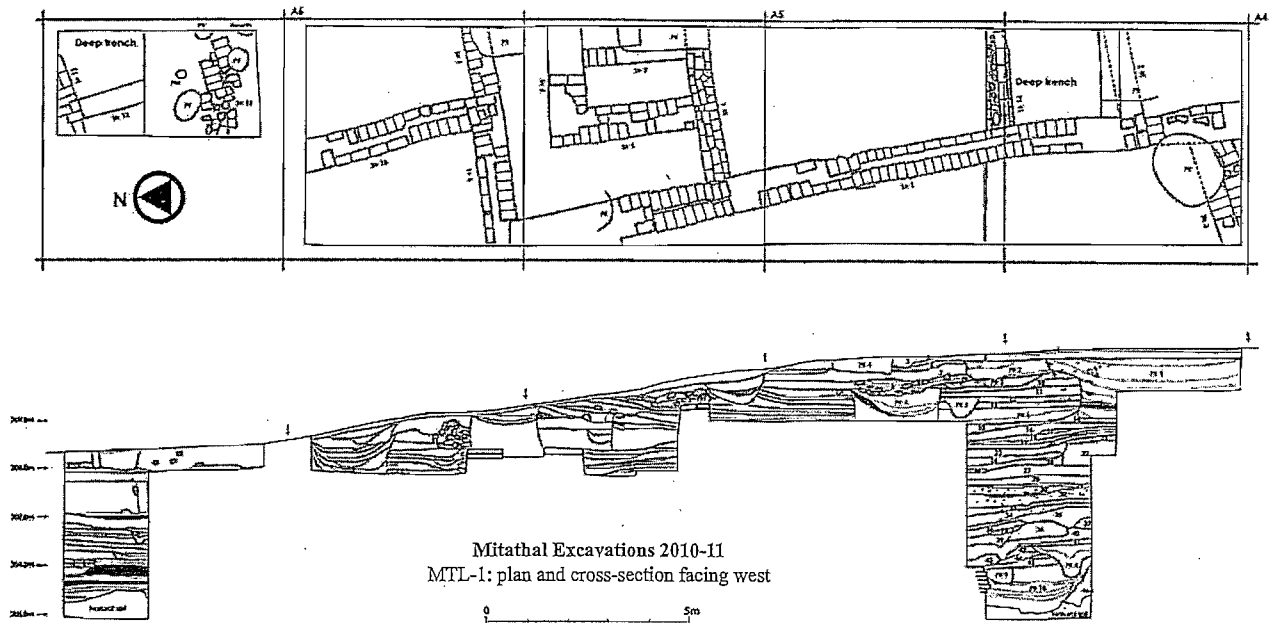


Fig. 1: General plan and cross-section of MTL-1

The site Tigrana-1 is situated 3 km south of the village. The entire site is levelled for agricultural purposes. The potsherds are scattered in an area of 3 hectares. It yielded the remains of Early Harappan, Mature Harappan, Late Harappan and Medieval periods. The antiquities found in the exploration include faience and terracotta bangle fragments. Earlier studies reported Late Siswal and Mature Harappan remains at the site (Bhan 1975:125)

**Tigrana 2:** This site is located about 3 km north of the village. It falls in the *Panchayati* land and used as community forest. It is locally known as *Rurki-ala-Khera*. The potsherds are scattered over an area of 3 hectares and is about 2 m high. It yielded the remains of the Early Harappan, Mature Harappan and Late Harappan times (Singh 1999:23). A good number of faience bangles were recovered as antiquities.

### Excavations

When in 1968 Suraj Bhan started excavations work

at the site, it was “cultivated all over except on the top” but over the years a large chunk of the mound has been removed with the help of heavy machinery, paving way for the flat level fields. About 4 acres of the land have been levelled towards east, 4 acres towards south; 2 acres towards the south-west and 1 acre have been levelled on the MTL-3. Thus about four hectares of the mound have been lost. As per our survey still about 12 hectare of the original mound is intact but every year an area 2-3 acres is cleared and this process is being accelerated with the employment of heavy JCB machines and with this pace, within a couple of years, the whole mound may vanish. Here we want to point out that towards west of MTL-1 a large portion of fortification wall has been damaged (Plate 2). Clear lane marks of JCB machines are the witness of this (Plate 5).

To understand the cultural and ceramic sequence of the site, trenches were laid on all the three mounds of the site and gridded by 10 m by 10 m trenches. One of the main aims of this year’s excavation was to know the complete stratigraphy of the site and to study the

complete ceramic sequence. At MTL-1, trenches A-4, A-5 and A-6 were opened in step manner (Plate 6). A4 lies on the highest point at MTL-1, whereas A-6 falls on the lowest levels. In both of the trenches A-4 and A-6 the excavations were taken up to natural soil. Apart from these trenches, trench S-1 was excavated to know the stratigraphical position of the fortification. At MTL-2, only one trench A18 measuring 10 by 10 m was excavated up to the natural soil. At MTL-3, trenches K-1 and K-2 was opened to know the function of the kilns which are visible on the surface. Besides trench S-2 was excavated up to natural soil to know the cultural deposit of mound MTL-3.

The total deposit at MTL-1 is 5.30 m and MTL-2 is 3.70 m. The Cultural deposit at MTL-1 can be divided into two phases on the basis of stratigraphic consideration, whereas there is no change in the cultural material. Hence these phases are labelled as Period IA and Period IB. At MTL-1 there is a levelling layer, which is about 60 cm thick both in trench A4 and A6. With the help of this layer, the people of the site levelled the undulating surface after period-IA. This levelling layer consists of a series of very hard compact layers, like rammed floors containing tiny potsherds and no structural activities was noticed in it as it was not a habitation layer (Fig. 1).

**Table 1:** Stratigraphical and Structural phases in MTL-1

Phase	Structural Phase	Key for distinction	No. of floor levels
Phase 1	Str. Phase 1 205.1-205.8/206.0 m	Str. 14 and Pit 10 in Tr. A4.	1 in Tr. A4
	Str. Phase 2 205.8/206.0-207.0/207.2 m	Str. 12 and 13 in Tr. A6.	5 in Tr. A6
Phase 2	Levelling layer 207.0/207.2-207.6/207.7 m	No structure was found but distinguished by a presence of a series of very hard, compact layers containing tiny potsherds that were identified at the same level in Tr. A4 and A6.	None
	Str. Phase 3 207.6/207.7-208.1 m	Floor level with Str. 11 and pits in A6.	3 each in Tr. A4, A5 and A6
	Str. Phase 4 208.1-209.0 m	Str. 5, 6, 8, 9 and 10 in Tr. A5.	5 to 7 in Tr. A4 and 5 in Tr. A6
	Str. Phase 5 209.0-209.3 m	Lower phase of Str. 1	2 in Tr. A4 3 and in Tr. A5
	Str. Phase 6 209.3-209.8 m	Upper phase of Str. 1, Str. 2, 3 and 4.	3 in Tr. A4 and A5
	Str. Phase 7 209.8-210.5 m	No structure was found but a floor level was identified.	1 in Tr. A4 and A5

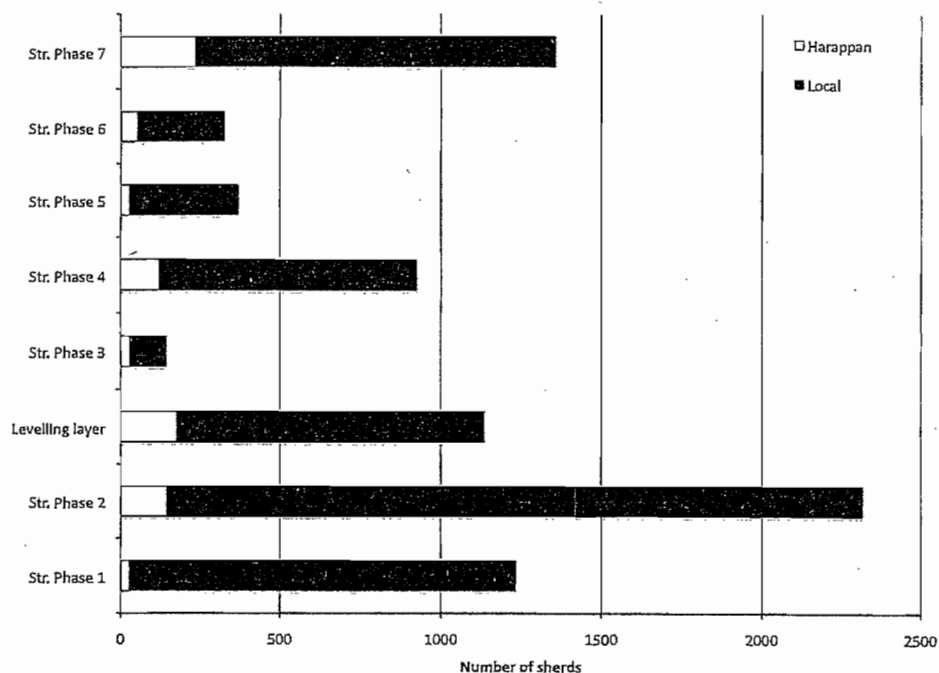


Fig. 2: Histogram of percentages of the Harappan and local Chalcolithic pottery

### Period IA

This period lies just above the natural soil and an average thickness of cultural deposit is 1.90 m. The earliest inhabitants settled on the light yellowish silt and they fortified their settlement with a mud brick wall of which at least 23 courses are visible. The size of the bricks varies from 10 x 20 x 40 cm to 12 x 24 x 48 cm with average ratio 1:2:4. This wall was at least 4 m wide at the top and wider at the bottom, although the exact width could not be ascertained as it has been damaged by the farmers for levelling the fields (Plate 5). This wall was exposed in trench S-1, which was laid on the southwestern periphery of the mound. This wall was traced and exposed up to 70 m in length in the section with the help of section scrapping. In the southwestern part of the mound wall turns at an angle of 90° towards east.

There are two structural phases associated with this period. Phase 1 has brick sizes 34 x 17 x 9 cm and

36 x 18 x 9 cm conforming to typical Harappan ratio. Structure no. 14 is made of double bricks and has at least 70 cm wall. Only one floor level is associated with this wall. Structural phase-2 has Str. nos 12 and 13, which are made of one and half bricks (one header and one stretcher) and the width of the wall is at least 52 cm wide. There are five floor levels associated with this phase.

The pottery of this period I-A is characterized by the occurrence of both local Chalcolithic pottery (Sothi-Siswal) (Plate 7:2-5) and some percentage of classical Harappan pottery (Plate 7:1). The percentages of both the wares vary in various structural phases (Fig. 2). The local Chalcolithic pottery dominated the assemblage and is distinguished by its manufacturing techniques, using both rotational technique and non-rotational technique. Main shapes in this include vases of various sizes, jars and bowls. This group of pottery has fully developed Sothi-Siswal traits. The paintings include a black band around the neck (wide and narrow), which is a distinctive feature of this pottery. Some leaf-like

motifs, horn-like motif, a set of vertical strokes were also identified. The local Chalcolithic pottery comprises 96 % percentage of total ceramic assemblage.

The second group of the pottery includes classical Harappan shapes consisting of pots, ledged pots (cooking pots), jars, perforated jars, beakers, goblets and dish-on-stands. This pottery is prepared by rotational modelling technique and has black painted motifs of which horizontal bands are dominating. Other motifs like *peepal* leaf and intersecting circles are very limited in number. Classical Harappan pottery is 4 % of the pottery repertoire of this period.

Antiquities of this period include faience, terracotta, stone, bone, and copper objects. In term of number of materials, faience constitutes the largest chunk.

Faience objects consist of beads, bangles, vessels and indeterminate objects and the bangles dominate which show variation in shapes, sizes and decorations (Plates 9 and 10).

Terracotta objects consist of bangles (Plate 11), wheels, beads, cart-frames (Plate 12), animal figurines, etc. The bangles are dominated by multiple ring type and a number of them are painted. The wheels also include painted ones. The beads are dominated by short bi-conical shape. The animal figurines include a distinctive type of a rattle-shaped composite figurine.

The stone objects include beads, pounding stones and querns as dominant forms. The beads are made of steatite, agate and carnelian (Plate 8). A small number of rough outs and debitage of beads were also found which indicates these were locally manufactured. One bead grinding stone with several grooves is one of the noteworthy finds (Plate 13:2). Only one tan-grey chert blade, which is probably brought from the Rohri Hills, was recovered (Plate 13:1). The querns and pounding stones are dominantly made of pinkish sandstone.

The bone objects include points, spatula or knife and indeterminate objects. In copper objects, various items like an adze, a ball, bangles, a bead, a chisel, a hook, a ring and a rod were found (Plate 14).

### Period IB

The inhabitants continued to occupy the site after levelling the ground. Pottery and other antiquities continue but towards the upper level, stylistic changes in the material remains can be seen. The total deposit of this period is 2.80 m and Structural Phases 3-7 are associated with this period. In the upper levels, 'degenerated' Siswal pottery starts dominating and in addition to this, a few Bara elements also start appearing particularly in Structural Phases 6 and 7. The percentages of the Harappan pottery and the local pottery are shown in Table 2. The percentage of Bara pottery is meagre in terms of percentages of entire pottery. However a detailed study shall be conducted in this regard.

**Table 2:** Structural phase-wise percentages of the pottery

Period	Structural Phase	Harappan	Local
Period IB	Str. Phase 7	17%	83%
	Str. Phase 6	15%	85%
	Str. Phase 5	7%	93%
	Str. Phase 4	13%	87%
	Str. Phase 3	19%	81%
	Levelling layer	15%	85%
Period IA	Str. Phase 2	6%	94%
	Str. Phase 1	2%	98%

In this period earliest Structural Phase 3 has mud bricks of 10 x 20 x 40 cm in size and Str. no. 11 is associated with this phase. There are three floor levels associated with it. In Structural Phase 4 has Str. nos. 5, 6, 7, 8, 9 and 10 associated with it. The average width

of the walls was 72 cm. The brick sizes do not conform to the Harappan standard and these measures 36 x 20 x 9 cm, 36 x 22 x 10 cm. Seven floor levels are associated with this phase.

Structural Phase 5 has one structure (no.1) and has two floor levels. In Structural Phase 6 the structure No.1 was raised with a slightly altered orientation and has three floor levels. The uppermost phase is disturbed as later pits have cut down the walls. However one floor level could clearly be associated with this phase.

In this period, more variety of artefacts was recovered. In addition to the materials that were found in Period IA which continue in this period also. Most of the shell bangles and gold beads (Plate 15) were discovered in this period.

### Excavations of kilns in MTL-3

It was noticed before excavations that there were kiln walls exposed on the surface in MTL-3. At least 10 such kiln walls were observed. This area is located on the western edge of MTL-3 with a slope of an irregular profile (Plate 16). The kiln walls were distributed over the slope.

In the current season, four trenches, each measuring 10 m x 10 m, were laid out, out of which trenches K-1 and K-2 were excavated. As a result of excavations, six kilns were exposed. Among them, three kilns were relatively small measuring 1.20-1.63 m in length, 0.67-0.90 m in width and 0.30-0.62 m in depth and the other three have larger dimensions of 2.43-2.66 m in length, 1.0-1.51 m in width and 0.99-1.35 m in depth. The walls of these kilns are highly burnt with a high temperature. In Kiln nos. 4-6, which are the larger ones, the walls were coated with vitrified slag. No column was found in the centre of the firing chamber.

In regards to finds from these kilns, no artefact was

found, which could be considered as having been fired in these kilns. Burnt and charred animal bone fragments and charcoal were found near the bottom in all the kilns, indicating that animal bones were also used in some means for firing the artefacts. From the filling layers that were deposited after the desertion of kilns, a number of potsherds and kiln wall fragments were unearthed. All of the potsherds are of the Late Harappan pottery, indicating that the kilns belong to the Late Harappan period, which can be associated with the upper levels of Period IB or the earlier.

### Chronology

In the 2007 excavations at Mitathal a few charcoal samples were sent for the AMS dating, but the date obtained, 6270 BC - 6070 BCE (Shinde *et al* 2009:13), is not reliable as it was sampled from the upper levels. During the current season we have carefully collected carbon samples from each layer and have sent these for dating the results of which are expected in October 2011. Till then, we shall have to rely on the archaeological dating.

The chronology suggested by Suraj Bhan (2000-1500 BCE) needs to be replenished with the dates from Farmana, where the pottery assemblage is quite similar to that of Mitathal. There also Mature Harappan pottery is found with non-Harappan pottery right from the lowest level (Uesugi 2011:253). The earliest AMS date of Farmana is 2564 BCE and on the basis of AMS dates and pottery, the entire settlement of Farmana can be put in a time bracket of 2500 BCE to 2300 BCE. The Harappan pottery from Farmana has great affinities with Harappa Periods 3A and 3B, whereas the Harappan pottery from Mitathal has very less painted designs and probably parallel to Harappa Periods 3B and 3C. Hence we can put the beginning of Mitathal Period IA somewhere around 2200 BCE. The upper phase of Mitathal Period IB (Structural Phases 6 and 7) show the introduction of new elements (Bara type) along with

the decline in the material remains. The pottery in this phase is akin to 'degenerate' Siswal variety of the late phase and hence it can be dated to C. 1700-1500 BCE.

### Discussion

After the Indus, the Ghaggar is the most important river, which witnesses the origin, growth, and diffusion of the Harappan Civilization. It is the only river of North India, which is neither a part of the Ganges system nor of the Indus system. It originates in the Sirmur Hills of Himichal and runs from northeast to southwest and divides the Sutlej-Yamuna divide into two parts. Now it is perennial only at its upper reaches but it along with its tributaries in Punjab and Haryana, carries enough water during the rainy season. Most of its tributaries like the Saraswati do not have well marked channel flows; hence water is spread over the plains and is collected in large ponds and lakes. This facilitates the farmers to grow two crops in a year. The *kharif* crops need no irrigation whereas the *rabi* crop could be irrigated with the water from these natural reservoirs. Till the recent times this was the phenomenon and it was only the green revolution (1965-70) that saw the growth of canal network and tube well irrigation. This was the reason why it attracted the early colonizers in the region and it is attested by the discovery of a large number of Early, Mature and Late Harappan sites found in the Ghaggar valley (Kumar 2009:28-36; Dangi 2010:426-431).

In the pre-partition days, archaeologists mostly confined their attention in the Indus region and it was only after partition that Indian archaeologists explored and excavated the Harappan sites beyond the Indus system. In the Ghaggar valley, sites like Kalibangan (Lal *et. al.* 2003), Baror (Sant *et. al.* 2006), Sothi (Dikshit 1984), Siswal (Bhan 1972), Banawali (Bisht 1982), Kunal (Khatri and Acharya 1995), Bhirrana (Rao *et. al.* 2003, 2004 and 2005), Balu (Kesarwani 2002),

Rakhigarhi (Nath 1998, 1999 and 2001), etc. were excavated. But the final reports of these excavations are yet to be published. Out of these Sothi is the most important. Along with Siswal, it paved way for the development of the local Chalcolithic culture in this region and it was only later that the Mature Harappan elements reached in this region. The origin, development and diffusion of the local Chalcolithic culture in this region needs to be proved. The excavation report of Sothi has not been published. The excavation at Siswal was just an exploratory (2 x 2 m) trench. No detailed report of Banawali has been published. The Kalibangan report (Lal *et. al.* 2003) provides some data on its early period. Keeping these in mind the excavations at Farmana and Mitathal were initiated. But at both the places the earliest remains, the Mature Harappan elements are found. Both these sites fit to show the development of local Chalcolithic culture and its transformation. So far as the origin of local Chalcolithic culture is concerned some similar sites like Sothi needs to be excavated.

Mitathal shows the unilinear development of this local culture (Fig. 3). The ring bases of the Sothi-Siswal traditions were transformed into round bases. The short necks tend to grow into higher necks. Short featureless rims are now more pronounced and even out-turned flaring rims appeared. The painted designs on local pottery are now more akin to typical Harappan designs. The excavators have collected a large number of potsherds from the excavations. More than 9,000 shreds were subjected to counting, weighing and stylised classification. The stylistic classification was made on the basis of form, shapes, painted designs manufacturing techniques, surface treatment etc. As a result of these pottery is being classified into local Chalcolithic, Harappan and Bara-related pottery. In the final report all the issues shall be addressed properly and the conclusion drawn in this paper are tentative.



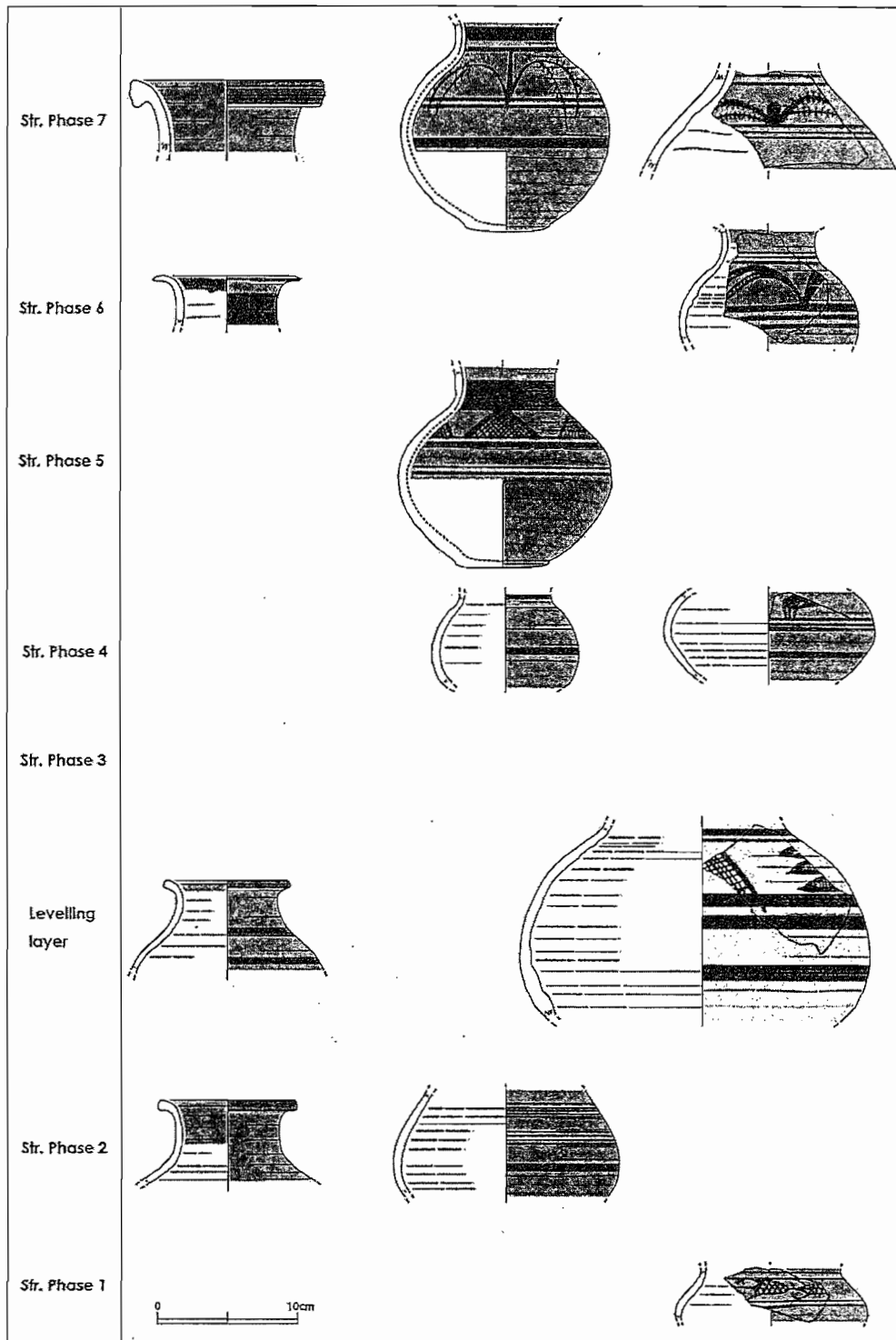


Fig. 3: Representative specimens of the Harappan pots

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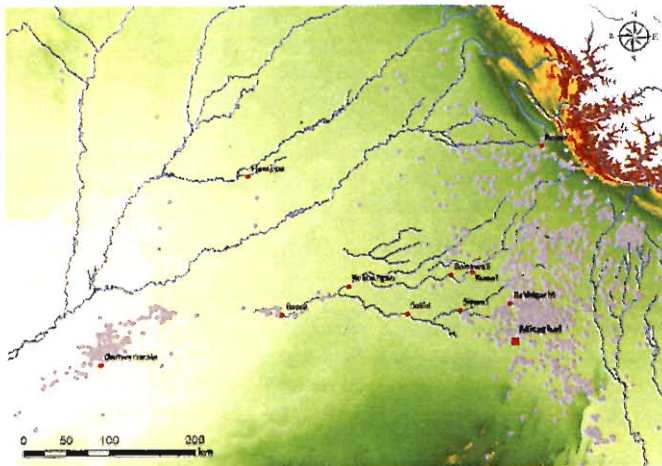
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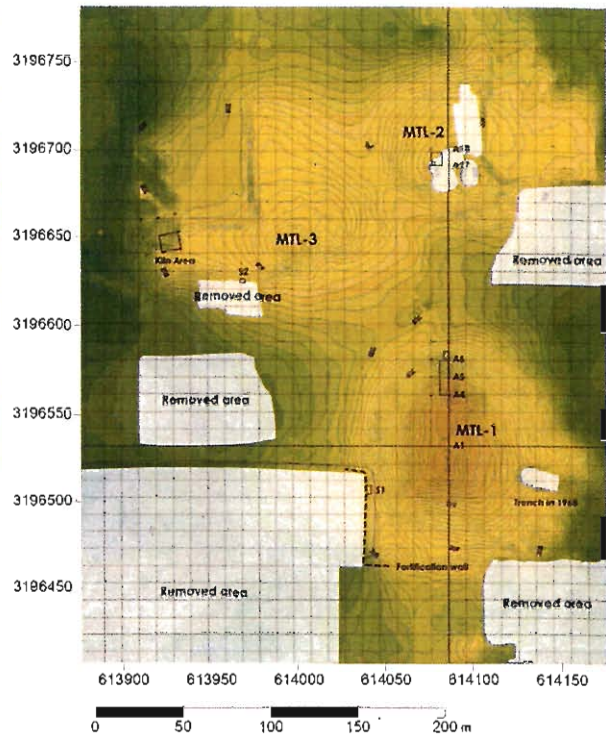
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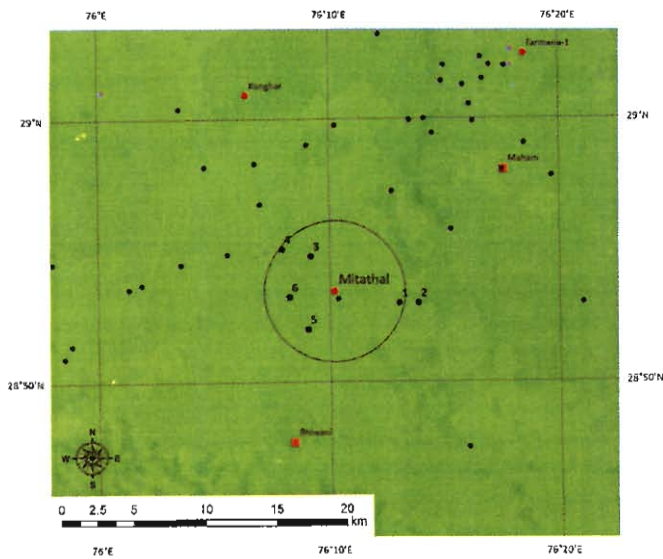
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Manmohan, Pl. 1 : Map of Harappan sites in the Ghaggar valley

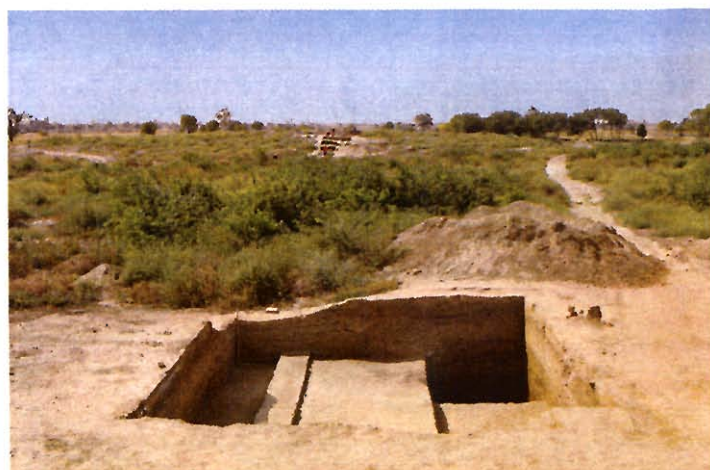


Manmohan, Pl. 3 : Contour plan of Mitathal showing excavated area



Manmohan, Pl. 2 : Map of sites around Mitathal with a 5 km

Manmohan, Pl. 4 : General view of the site showing excavations at MTL-1 and MTL-2





**Manmohan, Pl. 5 :** General view of the fortification wall showing JCB machine marks

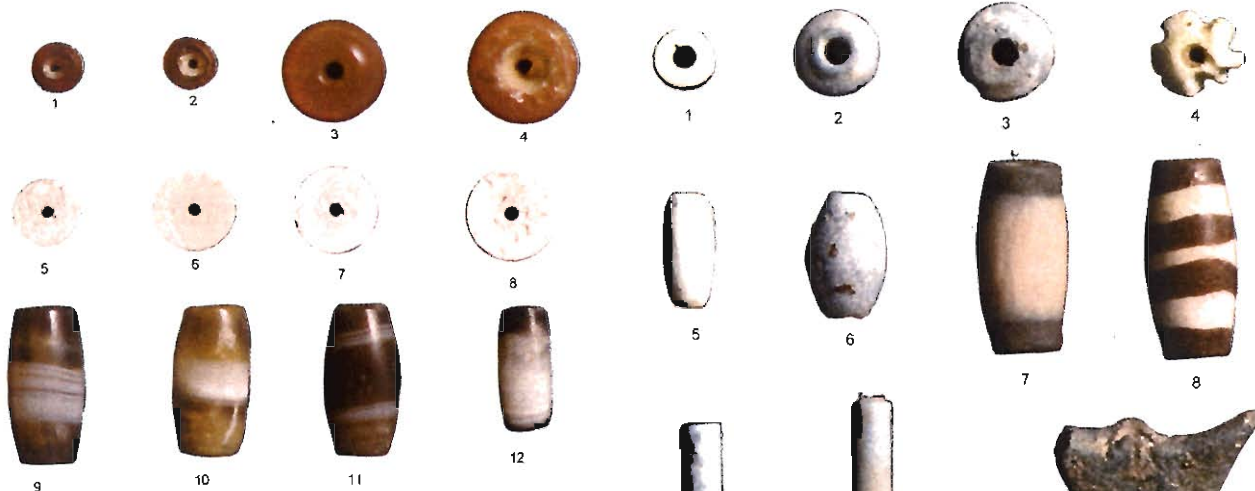


**Manmohan, Pl. 6 :** General view of the structures in MTL-1



**Manmohan, Pl. 7 :** Harappan and local Chalcolithic pottery from Mitathal





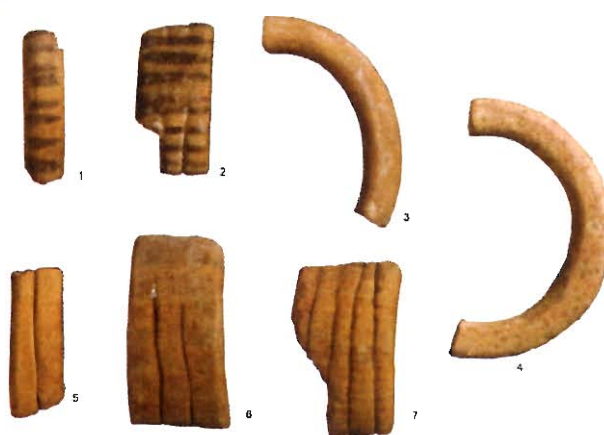
Manmohan, Pl. 8 : Steatite, carnelian and agate beads from Mitathal

Manmohan, Pl. 9 : Faience beads from Mitathal



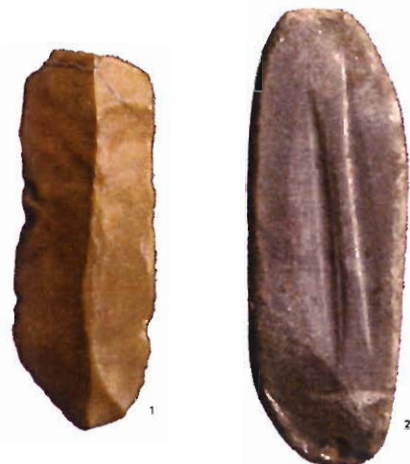
Manmohan, Pl. 10 : Faience bangles from Mitathal

Manmohan, Pl. 11: Terracotta bangles from Mitathal

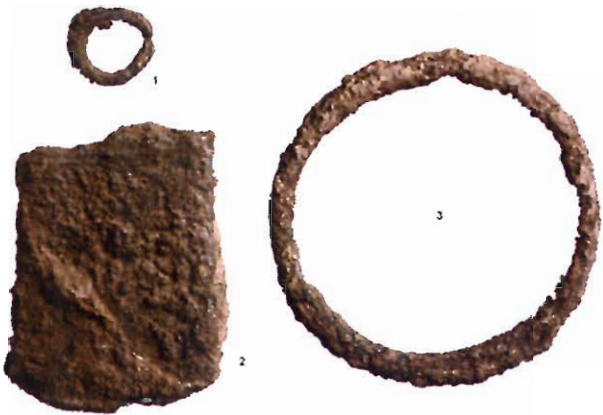




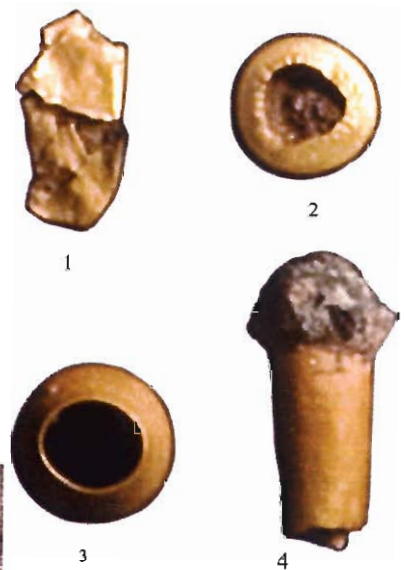
Manmohan, Pl. 12 : Terracotta cart-frames from Mitathal



Manmohan, Pl. 13: Tan-grey chert blade and bead grindstones from Mitathal



Manmohan, Pl. 14 : Copper objects from Mitathal



Manmohan, Pl. 15 : Gold objects from Mitathal



Manmohan, Pl. 16: General view of the kilns in MTL-3