

## **Archaeological Excavations at Sikandar Janubi 2016: A Preliminary Report**

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### **Abstract**

*The Indus Civilization of South Asia is believed to have been developed in the Indus Plain of Punjab and Sindh in Pakistan and parts of western India such as Rajasthan, Haryana and Saurashtra. Whereas the remains of what is called as 'early Indus Phase' have been unearthed, on the other hand, in Balochistan and southern parts of the Khyber Pakhtunkhwa provinces of Pakistan. In the latter two regions, remains of the mature Indus Phase have been found relatively less in number. Although a number of mature Harappan sites in the Gomal Plain have been located but no attention is paid yet. In order to understand the nature of mature Harappan occupation in the Gomal Plain, Dera Ismail Khan, excavations have been carried out at Sikandar Janubi by our team and the preliminary report is presented here.*

**Keywords:** Indus Civilization, Gomal Plain, Sikandar Janubi

### **1. Introduction**

The Gomal Plain in the southern Khyber Pakhtunkhwa Province of Pakistan is archaeologically a very important and potential region where remains of human cultures from the prehistoric to the colonial periods have been unearthed in various archaeological expeditions (Stein 1927; Dani 1970-1971; Ali and Jan 2005; Ali and Jan 2009). Diversity in the cultural landscape of the Gomal Plain is due to the rich ecological setting, abundance of natural resources and its strategic location between South and Central Asia that provided stimuli to the growth of human cultures. In addition to prehistoric (Morris 1938) and Neolithic settlements (Dani 1970-1971; Ali and Khan 2001; Swati and Ali 1998; Rahman 1997), the 'Tochi-Gomal', 'Kot Diji', 'mature Indus', early historic, Hindu and early Islamic

period sites have also been discovered in large amount in the Gomal Plain (Ali and Jan 2005; Durrani 1988; Durrani 1981). Contrary to the settlements of the mature Harappan Civilization, archaeological mounds of the Kot Diji phase are found relatively in large amount that led the scholar to believe that the Gomal Plain is occupied by people possessing the Kot Diji type culture whereas the mature Harappan Culture flourished on the mainland Indus of the present Punjab and Sindh. However, recent discoveries of the mature Harappan archaeological sites on the Gomal Plain in Dera Ismail Khan, revealed a different picture of the settlement history. It appears that the Gomal was occupied also by the Harappan people in the 3<sup>rd</sup> millennium BC simultaneously with the Kot Diji.

## **2. Location and Survey**

The archaeological site of *Sikandar Janubi* is located about 45 km south of Dera Ismail Khan city; 18 km west of Proa and about 24 km east of Chaudhwan town. The site is called after the village of Sikandar Janubi wherefrom it is 2 km away on Proa-Chaudhwan road, just across Chashma Right Bank Canal (CRBC). The site is locally known as '*theri*', a Sariaki word for a mound (in Pashto: '*dheri*'). The site was previously discovered by a joint team of the Directorate of Archaeology and Museums, Khyber Pakhtunkhwa and the University of Peshawar in 2003 under the name of Kauri Hout (Ali and Jan, 2005). Kauri Hout village is about 5 km away towards west of the mound and since it is the property of Sikandar village so the site is now called as Sikandar Janubi, lying on latitude 70° 36" 04' E and longitude 31° 33" 19' N. According to the local people, it was once a site of a considerable size scattered with potsherds. However, it was destroyed by a contractor some fifty years ago when the nearby road between Proa and Chaudhwan was being constructed. The soil of site was used as filling first for the road and then for the constructing of the embankment of the canal in 1990s. The potsherds can still be seen in both the mentioned places. When the site was first visited in 2003, a considerable area was still intact, which was found missing in our visit in 2016. The local owners of the surrounding fields have levelled it for agricultural use. The remaining part of the current site is left intact upto certain extent only due to graves. This part of the site was used as graveyard or '*ghostan*' as locally called, about 60 to 100 years ago.

According to a local man, this graveyard was specified for the children. It has also been confirmed in the excavation when the skeleton of an infant is found in the northwestern part of trench A, approximately 90 cm deep from the surface lying in north-south direction. Although the graves are levelled with the ground and nothing is visible on the surface but the same have been traced out in excavation as well as geophysical survey of the site. It is due to the graveyard that this small part of once larger mound is preserved for probing.

Currently the mound is squeezed to 40 x 25 x 1.5 m. However, potsherds and terracotta cakes can be collected from the surrounding fields, which suggests that the settlement occupied a larger area than what it seems now (Pls 3-6).

### **3. Geophysical Survey**

Sikandar Janubi, like Rehman Dheri and Hissam Dheri is also surveyed through geophysical tools such as Ground Penetrating Radar (GPR) and Magnetometer in order to study the subsurface features on one hand and excavate archaeologically a potential spot on the other. Since the area of the site was left very limited, so geophysical investigations are relatively easy but more significant. The geophysical investigations were carried out with the support of National Centre of Excellence in Geology, University of Peshawar. The results of both the tools are mentioned here.

#### *Ground Penetrating Radar (GPR)*

Ground Penetrating Radar (GPR) is a sophisticated geophysical equipment used for identification of shallow subsurface features of varying nature such as clay, sand, gravels, rocks, ice, water, ancient routes, water channels and more importantly here the man-made structures like walls, pavements, roof/floor structures in archaeological sites. In this technique of investigating a feature either natural or man-made, the waves of a radar are being passed through the surface of the earth to make images of the invisible features below the surface of an archaeological site. Technically, it is electromagnetic radiations of the spectrum in the band (UHF/VHF) frequencies, which are generated and transmitted through a medium and are reflected when coming across any obstruction, generating an image of

the plain/layers with different dielectric contrasts.

Here at Sikandar Janubi archaeological site (Pl. 1), shielded antenna of 500 MHz with usual cart is used on the plain as well as rough terrains that can penetrate the electromagnetic rays up to 6 meters (short window) below the surface, as we know that the depth of the archaeological profile is low. The acquisition was done in segments of different interval for each profile (for full coverage) which was then joined to make one complete profile. The acquired data is processed using Rad Explorer and Reflex2D Quick software, housed at the Geophysics Laboratory at National Centre of Excellence in Geology (NCE), University of Peshawar. From the raw data it is observed that the area mostly contains low noise values of electromagnetic velocities and therefore processing routines of static correction and band pass filtering (125-750 Hz) were applied to remove the noisy and unwanted data.

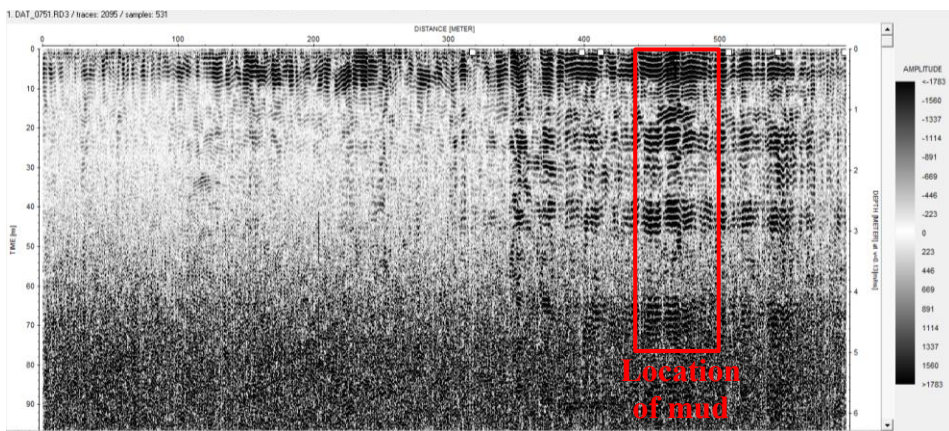


Fig. 1 - Interpreted GPR profile (profile: 751) at Sikandar Janubi, in this profile top sediment layer of 0.3 m is identified. Below this layer mud wall has been identified that extends up to 4.5 meter below the surface with a thickness of 4 meters.

The profiles at Sikandar Janubi (Figs 1-4) identify two layers each with distinct contrast in terms of velocities of microwaves laterally and vertically. The first layer is identified as surface (0.3 meters). The second layer was identified as eroded old sediment layer from 0.3-1.1 meter in depth. In this site few mud walls were identified by GPR data below 1.2-meter sediment layers at different location with variable thickness. Few

profiles also indicate the presence of eroded mud walls. No other information was obtained from the GPR section.

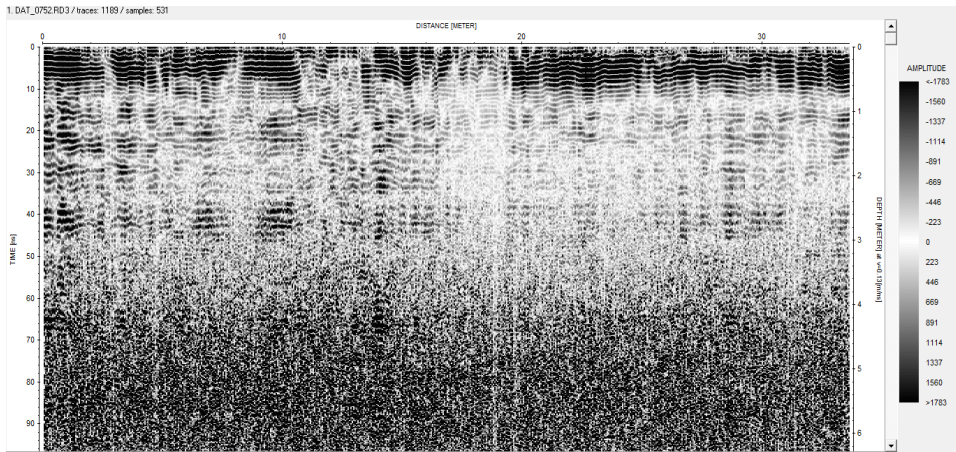


Fig. 2 - GPR profile (752): here the top sediment layer of 0.3 m is identified also, below which is identified a sedimentary layer, no mud walls are identified.

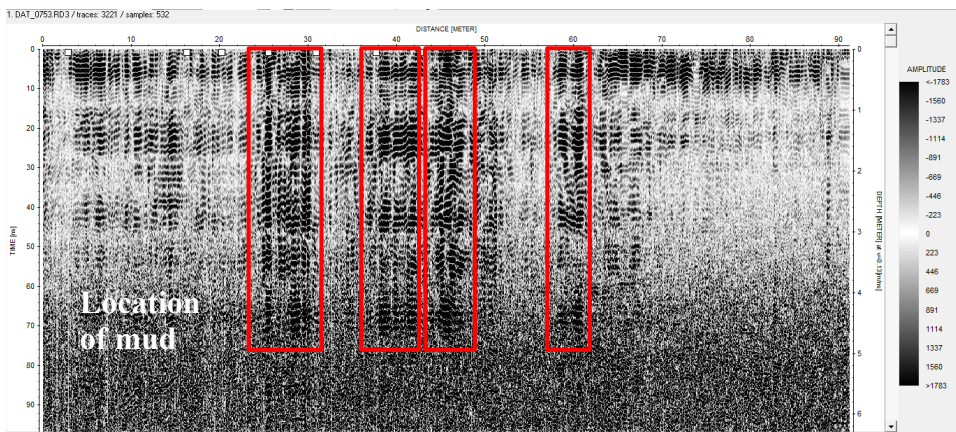


Fig. 3 - GPR profile (753): In this profile top sediment layer of 0.3 m is identified. Below this layer four mud walls have been identified at depth of 1 meter that extends up to 4.8 meter below the surface with thickness of 6, 4, 3.5 and 4 meters at a distance of 24, 38, 44 and 58 meters respectively.

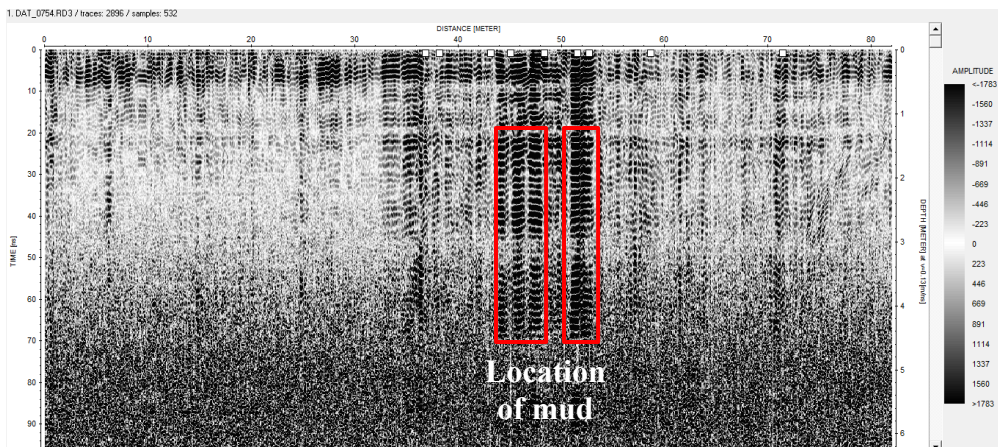


Fig. 4 - GPR Profile (754): In this profile top sediment layer of 0.3 m is identified. Below this layer two mud walls have been identified at depth of 1.2 meter (extends up to 4.4 meter below surface) with thickness of 4, and 1.5 meters at a distance of 44 and 51 meters respectively.

### *Magnetometer*

Magnetic survey is also very extensively used for gathering subsurface geological and archaeological information based on anomalies in the earth magnetic field from the magnetic properties of underlying objects such as rocks, soil, sand, metal etc. It responds to the contrasts in the magnetic properties of soils that can be laid/carried by human activities such as burning, humic decomposition, compaction and building of structures. Magnetic surveying (or prospecting), as practiced on archaeological sites, consists of measuring the magnitude of the earth's magnetic field at each point on grid established on the site. Variations in the magnetic properties of the subsurface material (sediments, rocks, or artificial materials such as brick) can produce an observable variation, called as anomaly, in the measured magnetic field. Anomalies may be caused by artificial structures such as walls, ditches, foundations, hearths, pits, or even an area of more intensive habitation.

A Cesium vapor magnetometer of Geometrics systems model version G-858 Magnetometer has been used at Sikandar Janubi (Pl. 2) for the measurement of magnetic variations in the area. The G-858 Magnetometer is used to measure the earth magnetic field having low

noise/ High sensitivity (.05nT), resolution of 0.1sec and  $< \pm 0.5$  nT absolute accuracy over its full temperature range use for: geophysical, geotechnical, mineral exploration, archaeological exploration, long term magnetic field monitoring at magnetic observatories, volcanology and seismic research etc.

The survey area is divided into different blocks and magnetic observations have been recorded at every 10 meters and 20-meter intervals along the profiles. Initial point of every profile was used for repeat observation and was utilized for diurnal correction of the respective observation points. Geophysical profiles were planned across the target zones after discussion and in consultation with the field archaeologist by the surveyor so as to obtain optimum coverage of the area. Magnetic intensity variations recorded along profiles in the respective blocks have been plotted and contoured. The reduction of magnetic field data is done to remove all causes of magnetic variations from the observations other than those arising from the magnetic effects of the subsurface. Anomalies occurring over the profiles with varying amplitudes and dimensions have been analyzed from the contour maps and profiles across the anomalous zones.

Anomaly contours clearly shows parallel to sub-parallel, elongated and lenticular bodies of limited extensions occurring side by side at shallow depths. As the magnetization in the area is reduced and the average magnetic field increased observed over the encountered anomalies in the study area varies from 24 to 100 nT and in general, it is reasonable that bricks or stone rubble from foundation walls could cause anomalies in the range of 20-160 nT. So, from the intense contour closure and longitudinal profile it is concluded that these anomalies may be associated with oblong compact cluster of objects either foundation walls, bricks, pottery and filled ditches or backed clays and fire pits. The results are shown in the form of circles, elliptical, triangles, rectangles and other shapes in each figure below. The results of Sikandar Janubi are much better than Rehman Deri because we took 2 m interval of spacing as well as 2m from line to line. Shorter interval provides us good archaeological results. Five grids (Grid 1, 2, 3, 4 and 5) were taken in toto in this site and the coordinates are shown below (Fig. 5).

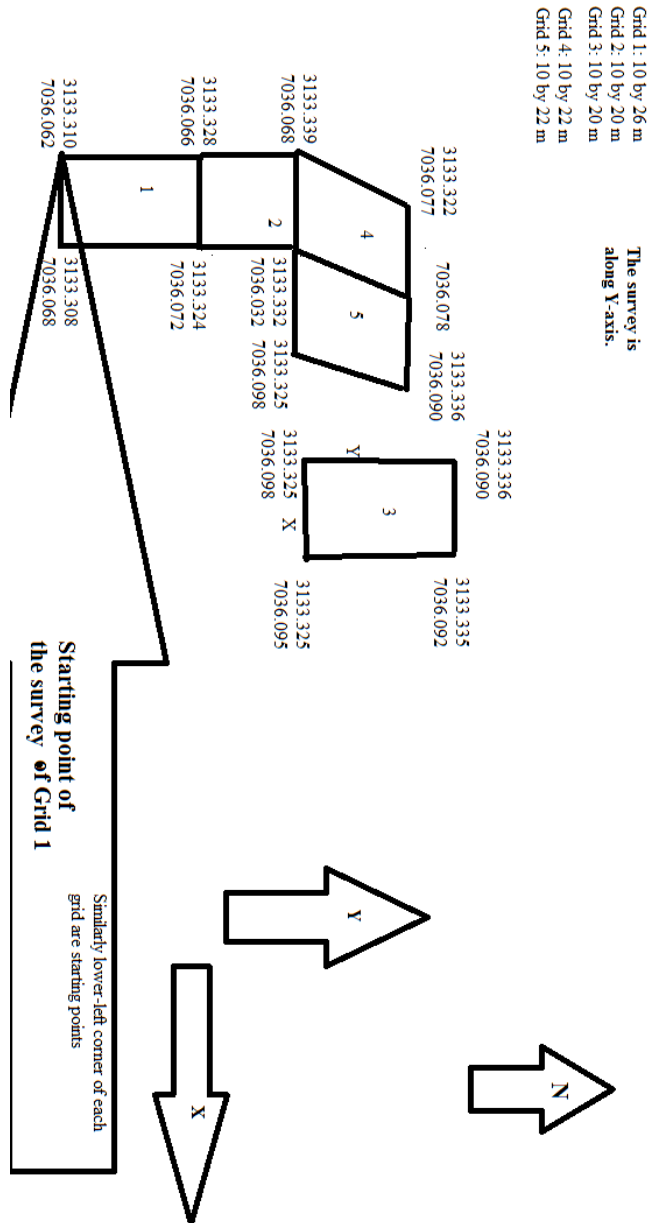
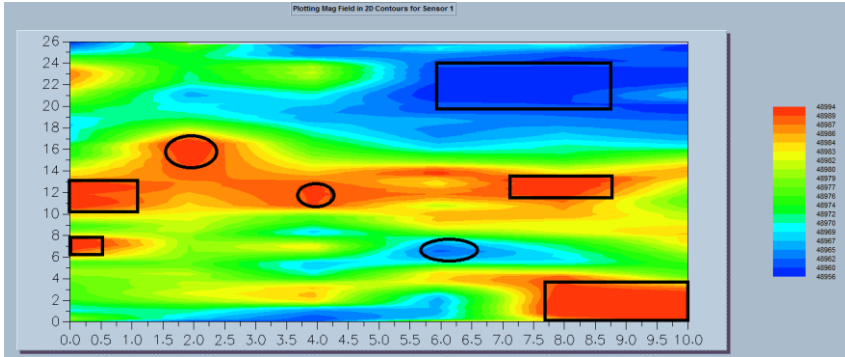


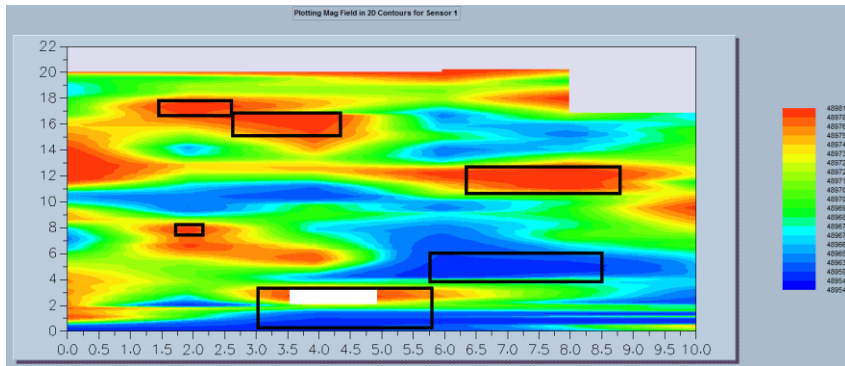
Fig. 5 - Sikandar Janubi, plan of the 5 grids surveyed through magnetometer



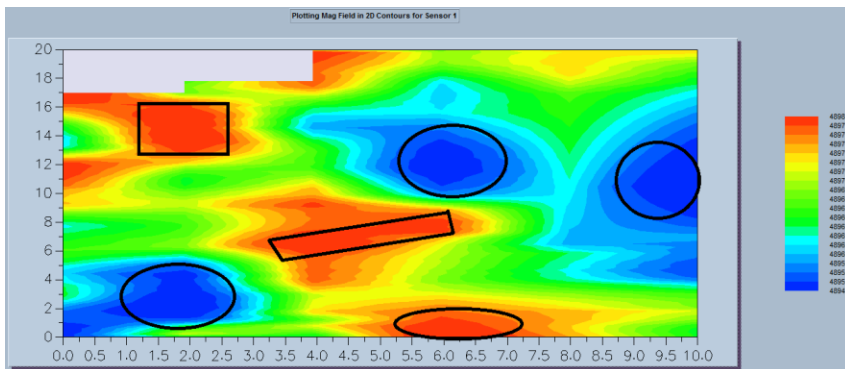
Grid 1: 10 x 26 m<sup>2</sup> grid



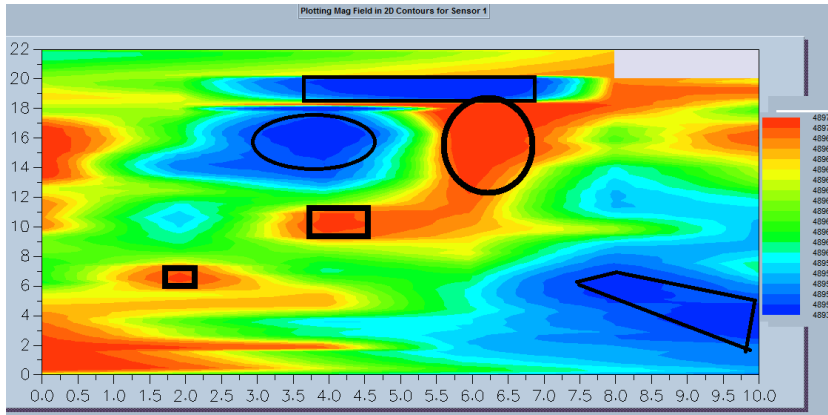
Grid 2: 10 x 22 m<sup>2</sup> grid



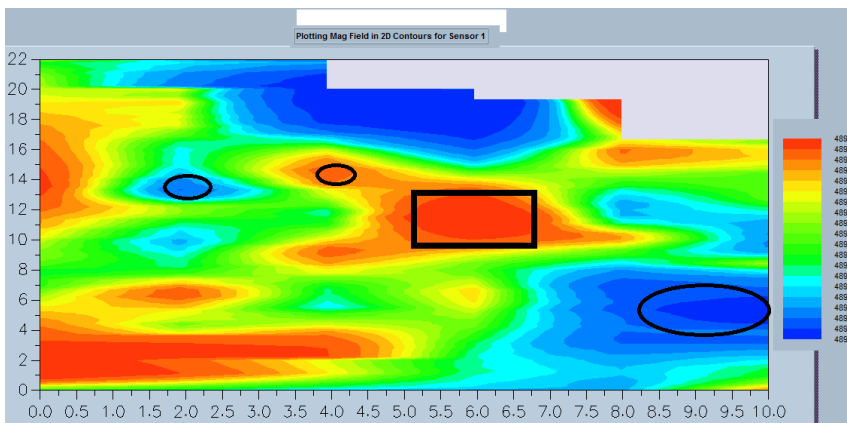
Grid 3: 10 x 20 m<sup>2</sup> grid



Grid 4: 10 x 22 m<sup>2</sup> grid



Grid 5: 10 x 22 m<sup>2</sup> grid



#### 4. Topographic Survey

With the help of total station, a topographic survey of the site is also conducted and different contours, depressions and high points were accordingly marked. The visible mound was also divided into various grids of 10 x 10 meter. However, we randomly marked area for excavations and assigned A, B and C.

## **5. Excavation**

After conducting geophysical and contour survey of Sikandar Janubi, in the northwestern part of the existing site, which we feel more feasible for investigation, archaeological excavations were carried out for over two months in November 2015 to January 2016 by the Directorate of Archaeology and Museums, Government of Khyber Pakhtunkhwa in collaboration with the Department of Archaeology, University of Peshawar. This area is relatively flat, clear from shrubs and trees and undisturbed. Moreover, the GPR study has also indicated here some subsurface structure that further enhanced our curiosity for probing a promising spot. Three trenches (Fig. VI) of 5 x 5 m each, designated as A, B and C, was marked on the surface and excavated deep to the virgin soil. These trenches fall respectively in grids F-IV, E-IV and E-III of our contour plan. As expected the results are very interesting where typical Harappan cultural material in the form of structures, kilns, hearths, paved floors, ceramics, stone tools and beads are collected. Some of the top surfaces have either been disturbed by graves or local people for leveling the site for agricultural fields. However, the artifacts show a single period belongs to mature Indus phase. Construction of mudbrick structures, their overlapping and floor levels show 3 sub-phases in the two-meter profile.

### *Trench A*

In the course of archaeological probing in Trench A at the site, a total number of five layers have been exposed from top to bottom, which yielded four different floor levels of the mature Harappan occupation. Each of these layers have their own characteristics, which are briefly discussed here.

#### Layer 1

The layer 1 of trench A is light brown in colour with semi compact soil. It is composed of soil mixed with ashy substance having broken potsherds and t/c cakes of Harappan nature. Pieces of animals' bones and charcoal have also been found during excavation. The ashy substances are due to two hearths and four small pits recovered in this layer.

One rectangular shape hearth, measuring 50 x 30 cm, is exposed in

the northwestern part of the trench at a depth of 8 cm. It can be placed on the intersection of 407 cm from northeastern and 546 cm from southeastern corners of the trench. The second hearth is located near the south eastern corner, measuring 40 x 35 cm, lying on the intersection of 477 cm from northeastern and 60 cm from southeastern corners. Both hearths belong to the same floor level but the former is located to the west of a mudbrick wall whereas the latter is to the east.

There are also four pits exposed in this layer. Three among them are dug out for burials which were taken down to layer 3 whereas one contains debris of this occupational level. The depth of the pit varies from 10 to 30 cm at certain places. It is a considerable size pit measuring 250 x 180 cm, having ashy composition with grey colour containing ashes, white particles, charcoals, bones, sherds and t/c cakes.

### Layer 2

A thin ashy streak in the northwestern side of the trench separates layer 2 from layer 1. However, in the rest of the trench layer 2 is lying below layer 1. Layer 2 is light brown in colour throughout the trench. It is slightly semi compact in the north western part but very compact in the rest of the trench. It is composed of soil, having 5 to 10 percent of ashes and charcoal at certain points, yielding t/c cakes and broken potsherds. A burnt area is also noticed here in this layer at a depth of 40cm, in the east of the mud brick wall. It measures 190 x 109 cm and lying on the intersection of 177 cm from northeastern and 380 from southeastern corners.

This layer had a mud brick wall, which is 48 cm thick and 36 cm high. Composed of four mudbrick courses, it has a thick clay plaster, mixed with straw. It also goes in trench B. First a solid filling as foundation is provided then, the wall is constructed. The brick measures 7x14x28 cm.

### Layer 3

Due to an ashy streak the upper surface of this layer is slightly blackish whereas rest of the layer is light brown in colour. Overall, it is a semi-compact layer with loose material as well at certain places. Since the mudbrick wall also continues in this layer, therefore, some compact clay filling near it is also observed.

In addition to the three pits of layer 1 that continue in layer 3

containing burials, there is an old pit of 150 x 160 cm size also located in the northwestern part of the trench at a depth of 70 cm. it contains ashes, bones, many broken t/c cake and some white particles of soil. This pit can also be seen in the section too. Adjacent to the mud brick wall is a pit that contained burial of an infant of modern time. It was not exposed then.

#### Layer 4

Further below is found layer 4. In the north western unit, the layer is light brown in colour, mixed with ashes, charcoal, t/c cakes. In some areas of the unit it colour turns to grey because of the ashes. It is a loose layer in nature in the northwestern unit whereas in the rest of the trench it is composed to semi compact clay. The features of this layer are rich, as one kiln, a wall and 5 hearths are exposed. The kiln is located in the western part of the trench at a depth of 100 cm from the top. The kiln is almost circular in shape with 120 cm diameter and depth of 20 cm. It is filled with ashes and pieces of charcoal. The central part of the kiln as well as the walls are burnt red and compact due to constant use of fire. A large amount of broken t/c cakes are found near the kiln. The t/c cakes are recovered from an area of 60 x 140 cm adjacent to the kiln. In addition to the kiln, there are also a group of six fire places/hearths/ kilns discovered nearby, which are relatively smaller in size than the larger kiln. These measure respectively 60 x 40; 90 x 70; 60 x 40; 30 x 40; 50 x 55 and 40 x 50 cm.

Here in this layer a mud brick wall is also exposed, which is located in the north eastern part of the trench. The wall, running in north south direction; is lying 70 cm deep from surface of the site and is composed of eight brick-courses. The size of the mud brick, used in the construction of wall, measures 7 x 14 x 28 cm. the current height of the wall is 85 cm and half of the wall is running in the eastern section of the trench.

#### Layer 5

Layer 5 is found at the lowest level in this trench, which in fact yield the earliest cultural material. It is light brown in colour and very compact in nature, which is composed of soil. In the northwestern part of the trench here in this layer a large amount of ashes has been found revealing a group of three hearths. In addition to the hearths, there is also a platform of beaten earth, which has a mud lump wall at the southern side with a

thickness of 40 cm. It is the earliest structure of the site, being composed of mud-lump and running in east-west direction.

The hearths have a platform attached to the east and south whereas to the north is the wall. The hearth opens to the west and therefore, there is no wall or platform. The hearths are backed to the east (i.e. the platform) having 5 cm thick brunt walls. There are some t/c cakes at each hearth's boundary wall either biconical or triangular in shape. The northern hearth, measuring 40x50 cm, has four t/c cakes on its sides with three biconical and one triangular. The central hearth, measuring 60x65 cm has two cakes, one biconical and one triangular whereas the southern one, 50x65 cm, has four biconical cakes. The platform also has a wooden post towards southeast. It appears that the platform was thatched with wooden roof being supported by wooden pillars.

#### Virgin soil

Below layer 5 is found virgin soil at a depth of 2 meter, which was devoid of any cultural artifacts. The virgin soil was taken to a depth of 60 cm. It is a compact soil with light brown in colour.

#### *Trench B*

Adjacent to trench A towards the north, trench B is also opened to trace out certain architectural features found in the former. Due to location of a grave towards further north, the trench B was marked as 5 x 4 meter. The top humus containing some sherds, is removed below which is a semi compact soil.

#### Layer 1

The layer is composed of brown colour soil with greyish and whitish particles at certain places due to findings of hearths and pits. It has also affected the nature of the layer, which semi compact at one place and loose at other. A hearth in the southeastern part of the trench, 8 cm below, is exposed having bones, ashes, charcoal. The base of the hearth is burnt red and compact owing to frequent use. Fragments of baked clay are collected from the hearth, from which it is made. In the southwestern corner of the trench good number cultural artefacts are collected.

In the southwestern part, a pit is exposed going deep up to 40 cm

and containing ashes, charcoal, bones, t/c cake fragments and potsherds. It ended up against a wall, beyond which the section and composition of the layer is different. Relatively a larger pit is exposed in the north-eastern part of the trench, also visible in the section. This pit was exposed on the NE grid, however, this pit is of recent time and has been dug for a burial (Pl. 21).

The same wall of trench A also is also exposed, which is made of sundried bricks and runs in north south direction. The brick measures 7 x 14x 28 cm, maintain the standard ratio of 1:2:4 as found in the Indus cities. It is about 48 cm in width/thickness. Currently only 4 brick courses survive having a height of 34 cm. the foundation is lying on a hard and compact soil. A good collection of ceramics is made from this layer that include sherds belonging to jars and dishes.

### Layer 2

Layer 2 has a variation in colour from brown to dark brown with semi-compact to compact nature. it has similar context as observed in layer 2 in trench A. Ashes, charcoal, bones and potsherds have also been found here. A large hearth in the south-eastern part of the trench is exposed having 100 cm diameter. A second one in the northeastern part is also found with a diameter of 85 cm. Both the hearths are part of same context. A small platform of beaten earth is also exposed in this trench. Attached to the platform is a hearth in the southeastern part with a diameter of 125 cm having depth of 50 cm.

About 45 cm below the humus in this layer a wall is exposed which goes deeper to the 3<sup>rd</sup> layer of the trench as well as far as 80 cm, made of 4 mudbrick courses. This wall is different than the one going straight (north to south) in trench A as well but is rather turned westwards to trench C. This layer yielded over a hundred potsherds of jars and dishes with typical Harappan shapes.

### Layer 3

Due to walls in the trench, the nature of layer 3 varies from semi-compact to compact at various points. It is brown in colour. In the northern part of the trench a mudbrick pavement suggests this layer to have been used as a floor level by the occupants. The compact part in the southwestern part of the trench is a floor level also where a hearth is found containing ashes

and whitish clay particles. The surrounding area is dark greyish due to ashes. Another circular hearth is also observed at the northeastern part of the trench where cultural artefacts like potsherds, t/c cakes fragments along with bones and charcoal have also been found. Charred seeds of wheat are also found from this layer.

A wall is exposed in the south eastern part of trench B, running in north-south direction with a length of 306 cm. It has 8 brick courses with a height of 76 cm and thickness of 50 cm. This wall also continues in trench A, where it was disturbed by a burial.

#### Layer 4

Layer 4 in most part of the trench is semi compact with grey and light grey in colour. Ashes, charcoals, bones, potsherds and t/c cakes are unearthed in the remains of this layer. A hearth is exposed in the southwestern part with a depth of 109 cm, having a diameter of 70 cm containing ashes and charcoal. Similarly, in the northwestern part another hearth is also exposed. Both the hearths belong to the same context. A small pit is also exposed in this layer where the soil was very loose containing ashy substance. It is a shallow one with 45 cm diameter and 22 cm depth. At the lower end a floor level of beaten earth is found.

A mud packed platform is also exposed here, measuring 150 x 50 x 90 cm area making a rectangle. It is made of hard and compact/packed clay. The platform can easily be associated with wall.

#### Layer 5

Layer 5 varies from semi-compact to loose in nature in the trench due to variation in the composition of soil. This context yielded very little number of cultural artefacts. Overall, it is loose in nature with grey colour. The southwestern part of the trench is compact rather due to fallen debris of the wall. A circular hearth is also found here.

A mud brick wall is exposed here, which is the earliest structure of the settlement, being unearthed in the southwestern corner of the trench. Containing six brick courses, the wall is preserved up to a height of 55 cm, with a thickness of 50 cm. the size of the brick measures 7 x 14 x 28 cm.

#### Layer 6

It is an ashy layer with loose soil, which has been found in a limited area



of the trench at a depth of 190 cm from the top. It has light greenish colour with greyish streaks. Here Harappan material like t/c cakes are also discovered. Above mentioned wall is constructed in this layer, which is the same on either side of the wall.

#### Virgin soil

At a depth of 207 cm from top, virgin soil is reached, which is dark brown in colour with compact soil, producing nothing (Pl. 11).

#### *Trench C*

Adjacent to trench B on the west side is marked a further small trench, designated as trench C, in order to trace out the structures here. Maximum four occupational layers have been exposed in this trench. The upper layers are disturbed both by pits and modern graves.

#### Layer 1

Since there are walls in this trench therefore, the structure and composition of the layer varies from spot to spot in this trench. Overall the layer is composed of loose soil in brown colour. Layer 1 has a thick cultural deposit on the east side of the wall whereas it has thin deposit on the west and south of the wall. Mature Harappan cultural material in the form of pottery including pedestalled footed wares, perforated vessels and t/c cakes have been unearthed.

#### Layer 2

Wall of a structure/room separates this layer into two parts. One layer is formed inside the room whereas the other one is outside the room. The inside layer is towards the east of the wall, where a floor level of sundried bricks is found. It is the continuity of the same floor exposed in trench B. The wall has a thickness of over 40 cm, made up sundried bricks fixed in mud mortar. It is semi compact layer, composed of silt clay having brownish colour where potsherds, t/c cakes, large pieces of bones, charcoal are exposed. Layer 2 outside the room is slightly changed and is not associated with the layer inside the room. A hearth in the southern part of the trench with a circumference of 190 cm is exposed here, which is partly imbedded in the section. It contains ashes and charcoal. It has also

changed the nature and colour of the layer, which loose and ashy grey respectively. Two pits are also exposed in this layer.

### Layer 3

Layer 3 is exposed outside the room where the floor was not disturbed. It has a thick profile, semi-compact soil with grey colour. Silty soil and ashy substance usually are found near the hearths. A round hearth of 145 cm circumference with a depth of 55 cm at the western side is found, which is made on floor level of beaten earth. Here two complete small pots and a fragmentary grinding stone is also found in addition to potsherds, t/c cakes, bangles, charcoal, pieces of bones and beads.

### Layer 4

The wall also continues in this layer. Very little part of this layer is exposed. Layer 4 has loose soil of grey/light grey color, mixed with salty pigments, ashes and charcoal. It produced a good quantity of sherds, t/c cakes and piece of a bangle.

## **6. Chronology**

Samples for radiocarbon dating have been collected from almost all the contexts and layers at Sikandar Janubi but their dates are yet to be determined. However, comparative and typological study of the material remains have been conducted that suggests close affinity with identical material from Gandi Umar Khan, Mahra Sharif, Harappa and Moenjodaro. Diagnostic ceramic types such as perforated vessels, cooking pots, open mouthed bowls, dishes-on-stand, lids and decoration of intersecting circles, geometric patterns and see weeds in black-on-red surfaces suggests a mature Harappan period for the site of Sikandar Janubi. The cultural profile is relatively thick (around 200 cm) suggesting the occupation of the site for a longer span of time. Based on structures three sub-phases have been identified (Fig. 7).

## **7. Structures**

Sikandar Janubi in the Gomal Plain is a mature Harappan settlement with mudbrick structures (Pls 7-10, 12-17). Since the area of excavation was a

limited therefore, little information is obtained regarding the settlement planning and domestic architecture. Like at Gandi Umar Khan (Ali and Jan 2009b), no mudbrick platform, which were already known from major urban centers like Harappa and Moenjodaro, is exposed here. Small platforms in individual rooms are known. Likewise, the structures are made of sundried bricks of standardized form maintaining the Harappan period ratio of 1:2:4 in sizes. The bricks are usually coated with a thick layer of mud plaster mixed with husk. the same material is used in all the three phases identified on the basis of structures. The rooms are either square or rectangular in plan (Figs 7 and 8). in addition to mud bricks, thatched roof structures are also observed, which were erected by means of wooden posts (Pl. 18). most of the rooms have floors made of beaten earth whereas some have mudbrick floors. A mudbrick floor is identified in trench B layer 3, which also continued in trench C. it continued in trench B but disturbed by the grave.

### **8. Pottery and other artifacts**

A good collection of pottery (Pls 19, 20) is unearthed at Sikandar Janubi, which is typical Harappan ceramics found in large amount from elsewhere. Since the site is disturbed, therefore, only two vessels are found complete up to certain extent. The rest are broken. The repertoire includes plain and painted vessels in typical Harappan fashion in black-on-red, depicting geometric, pipal leaf, intersecting and see weed patterns. They are made on wheel from well levigated clay with uniformly baked. The forms and shapes include cooking vessels, dish/bowls-on-stand, platters, lids, bowls, jars, perforated vessels etc (see Figures below). Terracotta human or animal figurines have not been discovered at all from the remains of the site. A few stone tools such as flakes and blades, beads, and t/c cakes are among other findings. Cakes in oval, triangular and round shapes are found.

### **9. Floral and Faunal Remains**

The site of Sikandar Janubi also yielded evidence of charred grains of wheat from proper archaeological context. These seeds are unearthed from

the floor level in layer 2 of trench B, near the wall. The remains are yet to be analyzed for further detail study to get information regarding variety and specie. Similarly, a large amount of bones of various medium size animals have been collected from different context showing exploitation of the surrounding environment in the 3<sup>rd</sup> millennium BC.

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## Appendix

### *1. Catalogue of the Small Finds (Season 2015)*

No.	Object	Material	Trench - Layer	Dimensions	Description
1	Bead	Stone?	C-3	L: 35.91mm W: 7.17 mm	It is a biconical stone (?) bead with a central axial hole. The colour is white and body consists of chocolate color circular parallel lines along its origin/ axial hole. The body apparently looks like having alternate chocolate and white color bands.
2	Bead	?	+	Dia.12.86mm	It is a small barrel shape bead with an axial hole. Its colour is white.
3	Bangle	Bone/ ivory/ Shell	B-5	L: 33.71mm W: 4.65mm	Fragment of a white circular/semicircular bangle/tool. Its outer edge has thin finishing while the inner has flat finishing.
4	Figurine's Breast	t/c	+	L: 16.64mm W: 13.27mm	Probably, it is a breast of a female human figurine, having a pointed nipple. It does not have any slip.
5	Ladle	t/c	A-4	L: 57.48mm W: 7.35mm H: 15.54mm	It is a half piece of a terracotta ladle. It is roughly finished and does not have any slip.
6	Toy cart Frame	t/c	C-1	L: 39.19mm W: 15.75 mm	Fragment of a toy cart frame made of coarse baked clay. Apparently, it looks like a cylinder, having circular core while its one face is flat. It has a hole at one end having internal diameter of 4.28 mm

7	Metal tool	Bronze/ Copper	B-2	L: 19.86mm W: 13.52mm	A piece of metal probably of bronze or copper. It is rusted and has greenish look. It is irregular in shape.
8	Flake	Stone	A-5	L: 2.80mm W: 19.50mm H: 13.16mm	A stone flake, reddish in colour and irregular in shape.
9	Flake	Stone	A-5	L: 23.94mm W: 20.14mm H: 11.80mm	Another stone flake with irregular shape, red and black in colour.
10	Flake	Stone	A-5	L: 21.65mm W: 22.48mm H: 12.63	It is square shape flake, broken with blackish in colour.
11	Metal tool	Bronze?	+	L: 37.78mm W: 4.55	It is a rusted cylindrical metallic tool, probably an antimony rod. It is broken, and both of its ends are missing.
12	Pot/ small jar	t/c	A-4	L: 79.46mm W: 82.78mm	It is an out curved rimmed broken small jar of thin texture. Its entire rim and half of its body is missing. It has a pedestal/ disk shape base. It has traces of red slip on its exterior. No additional decoration has been provided to it, except the slip. It has plain interior.
13	Pot/ miniature jar	t/c	A-3	L: 57.10mm W: 57.77mm	It is an out curved rimmed small globular jar of thin texture. Its entire rim is missing. It is likely a carinated jar with a pedestal base. Its interior and exterior are plain.
14	Pot/ small jar	t/c	C-3	L: 79.04mm W: 77.22mm	It is an out curved rimmed broken, small jar of thin texture. Its entire rim is missing. It has a pedestal/ disk shape base. Traces of orange colour slip can be found on its exterior while its interior is plain.

15	Pot	t/c	A-5	L: 85.19 mm W: 83.42mm	It's a small jar, having out curved rim and slightly long neck. Traces of red slip can be seen on its exterior as well as interior surfaces. It has a small pedestal base. A piece of its rim is missing, while a small portion if its body is also missing.
16	Pot		C-3	L: 97.65mm W: 99.95mm	It's a small jar having out curved rim. Half of its rim missing, and it has slightly long neck. It has a red slip on its exterior while the interior is plain. It has a disc shaped base. Its texture is comparatively medium thick.
17	Miniature Pot	t/c	B-4	L: 41.53 mm W: 35.26	A small miniature globular shape pot having out curved rim with a pedestal base. It could also be a ritual pot used for certain purpose. Its interior and exterior are plain and rough.
18	Base of a Dish on stand	t/c	A-4	L: 156.53mm W: 25.53mm H: 85.88 mm	It is a base of a dish-on-stand. It has a thick out curved rim. It has a medium thick texture with plain interior as well as exterior surfaces. It seems to have been made separately in pieces and then joined later on to the stem part of the dish, as it has marks of joining on its upper most part.



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19	Pot	t/c	B-3	L: 124.68mm W: 19.24mm H: 52.59 mm	It is a broken small open mouthed carinated pot of thin texture, having red slip on the exterior along with black colour floral decoration. The decoration includes five horizontal black lines on the throat and two on the point of carination. The area between the throat and carination has black circles which are further provided with a single black dot in the center. The rim of jar is broken but apparently it seems that it has an out curved rim. The pot has concave body and flat base.
20	Barrel Shaped Bead	T/c	C-1	L: 141.24mm W: 31.01mm H: 55.67 mm	It is a broken barrel shaped large bead of terracotta. It has a narrow axial hole in its one end while the other end is missing. Its middle body has a large hollow space. Most of its body is missing. It might be a fishing-net sinker bead.
21	Ladle	t/c	A-4	L: 95.68mm W: 8.74mm H: 21.45mm	It is a roughly rectangular, concave ladle. There are two small holes near the edge of one of its longer sides, while its opposite side has a small fragment missing. It does not have any signs of slip on its interior as well as exterior.

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*Archaeological Excavations at Sikandar Janubi 2016...*

22	Button	t/c	A-2	L: 24.06mm H: 37.75mm	It is small size cylindrical chessboard button, made of well levigated clay mixed with straw. Its body is blackish in color. It is half backed. In the middle, it is concave while at the both ends it has flat thicker and wider edges.
23	Button	t/c	C-3	L:24.43mm H: 42.18mm	Same as No. 22
24	Button	t/c	A-1	L: 25.05mm H: 40.46mm	It is small size cylindrical chessboard button, made of well levigated clay mixed with straw. Its body is blackish in color. In the middle, it is concave while at the both ends it has flat thicker and wider edges
25	Button	t/c	+	L: 28.05mm H:42.24mm	It is small size cylindrical chessboard button, made of well levigated clay mixed with straw. Its body is pinkish in color. In the middle, it is concave while at the both ends it has flat thicker and wider edges
26	Button	t/c	+	L:35.51mm H:55.72mm	It is small size cylindrical chessboard button, made of well levigated clay. Its body is yellowish in color. In the middle, it is concave while at the both ends, it has flat thicker and wider edges
27	Toy frame	cart t/c	A-3	L: 57.76mm W: 26.30mm H: 32.47 mm	It is a fragment of a toy cart frame, buff in colour, made of well levigated clay and is well fired. It has two holes, one at each end, but at one end the hole is partly broken.

28	Toy Frame Fragment	cart	t/c	A-3	L: 68.29m W: 26.38mm H: 59.46 mm	It is a fragment of a toy cart frame. It has a vertical and a horizontal bar with holes. They are mutual perpendicular to each other. It has traces of red slip and is made of levigated clay and is well fired. It has two holes in the vertical bar, one at each end. It also has a hole in the horizontal bar. At one end the hole is partly broken.
29	Barrel Shaped Bead		t/c	+	H: 73.64mm W: 17.16mm H: 24.40 mm	It is a broken barrel shaped large bead of terracotta. Three fourth of its body is missing. Its internal middle body has a larger open space than the ends at the axial hole. It might be a fishing-net sinker bead. It is plain.
30	Barrel Shaped Bead		t/c	+	L: 57.51mm W: 14.34mm H: 26.59 mm	It is a broken barrel shaped large bead of terracotta. Half of its body is missing. It has a narrow axial hole. The central body has an open space. Both the ends are flat. It might be a fish-net sinker. It is plain.
31	Toy frame	cart	t/c	A-4	L: 47.17mm W: 16.45mm H: 15.38 mm	It is a handmade fragment of a toy cart frame, made of well levigated clay and is well fired. It has a hole in its middle for a wooden stick/post. It is plain.
32	Toy frame	cart	t/c	+	L: 54.16mm W: 14.96 H: 19.79 mm	It is a fragment of a handmade toy cart frame. It is buff in colour and is made of well levigated clay and is well fired. It has two holes, but at one end the hole is partly broken. It is plain.

33	Toy frame	cart	t/c	+	L: 30.70mm W: 15.05mm H: 22.87 mm	It is a fragment of a handmade toy cart frame. It is buff and made of well levigated clay and is well fired. It has traces of two holes, one at each end, but they are partly missing.
34	Toy frame	cart	t/c	+	L: 56.16mm W: 16.92mm H: 16.16 mm	It is a fragment of a handmade toy cart frame. It is black in colour and made of well levigated clay and is well fired. It has a hole at one end vertically. It has a coarse body.
35	Toy frame	cart	t/c	+	L: 52.24mm W: 15.56mm H: 18.12 mm	It is a fragment of a handmade toy cart frame, black in colour, made of well levigated clay and is well fired. It has two horizontal holes. Half of one of the holes is missing. It is plain.
36	Toy frame	cart	t/c	+	L: 54.88mm W: 18.77mm H: 13.33 mm	It is a fragment of a handmade toy cart frame. It is pinkish and made of well levigated clay and is well fired. It has two vertical holes and one horizontal hole. It is plain.
37	Toy frame	cart	t/c	+	L: 62.83mm W: 16.32mm H: 33.19 mm	It is a fragment of a handmade toy cart frame. It is buff and made of well levigated clay and is well fired. It has a horizontal hole at one of its ends. This horizontal bar has a small portion of a vertical bar attached to it.
38	Blade		Stone	A-5	T: 4.66mm L: 102.18mm W: 18.08 mm	It is a long stone blade, broken into two pieces. It has sharp edges and convex dorsal and flat ventral surfaces. It has signs of utilizations on the edges. Its colour is brownish.

39	Blade	Stone	A-5	T: 3.64mm L: 49.16mm W: 12.65 mm	It is a broken blade of black colour with retouched edges and convex dorsal and flat ventral surface.
40	Blade	Stone	+	T: 2.88mm L: 38.44mm W: 13.08 mm	It is a broken blade with blunt retouched edges and convex dorsal and flat ventral. One of its edges has signs of utilizations.
41	Blade	Stone	+	T: 3.35mm L: 18.28mm W: 13.47mm	It is a broken blade with retouched edges and convex dorsal and flat ventral surfaces.
42	Blade	Stone	+	T: 2.90mm L: 16.56mm W: 12.92mm	It is a broken blade with retouched edges and convex dorsal and flat ventral surfaces.
43	Tiny bladelet	Stone	+	T: 1.82mm L: 11.98mm W: 6.62mm	It is a broken tiny bladelet with retouched sharp edges and convex dorsal and flat ventral surface.
44	Flake	Stone	+	L: 20.69mm W: 5.64mm H: 18.51mm	It is a red colour rectangular shape flake with blunt edges. At one side, it has an off white colour cortex attached to it. It has a small bulb of percussion on it.
45	Core	Stone	+	L: 27.65mm W: 15.56mm H: 29.58 mm	It is a stone tool's core of irregular shape. It has a sharp pointed tip. It has multi-faceted surface.
46	Ivory piece?	Ivory?	+	L: 22.02mm W: 4.19mm H: 8.21mm	It is a fragment of an ivory tool. It has a curve in its middle body like a bangle.

47	Unidentified t/c object	t/c	+	L: 37.09mm W: 21.77mm	It is an unidentified object of terracotta. It is made of well levigated clay and is over brunt. Like a bead, it has an axial hole, but at one end it is thicker and wider as if it was broken off from its main body part. Due to over firing, the inner part of it got blackish. It is plain.
48	Bead	Stone	+	Dia: 8.09mm L: 3.32mm	It is a reddish colour stone bead of circular shape with an axial hole.
49	Bead	Stone	+	Dia: 6.89mm L: 9.54mm	It is a barrel shaped stone bead with an axial hole. It has brownish colour.
50	Bead	Ivory?	+	Dia: 3.15mm L: 2.32mm	It is a tiny, white colour bead with an axial hole.
51	Bead	t/c	+	Dia: 9.88mm L: 7.10mm	It is a biconical t/c bead with an axial hole. It is plain.
52	Bead	t/c	+	Dia: 6.68mm L: 28.56mm	It is an elongated barrel shaped t/c bead with an axial hole. It is plain.
53	Bead	t/c	+	Dia: 11.02mm L: 35.26mm	It is an elongated barrel shaped t/c bead with an axial hole. It has incised circles along with the axial hole on the body. It is plain.
54	Bead	t/c	+	Dia: 28.71mm L: 20.02mm	It is a barrel shaped t/c bead with an axial hole. It is broken, and half of its body is missing. It is plain.
55	Bead	t/c	+	Dia: 24.11mm L: 11.64mm	It is a ring-shaped t/c bead with an axial hole. It is broken, and half of its body is missing. It is plain.
56	Bead	t/c	+	Dia: 27.85mm L: 11.90mm	It is a ring-shaped t/c bead with an axial hole. It is broken, and half of its body is missing. It is plain.

57	Base	t/c	A-5	L: 29.5cm W: 1.6cm H: 14.8 cm	It is a base of a dish-on-stand. It looks-like a bell. It has a medium thick flaring rim. Its texture is medium thick. It has traces of red slip on the exterior while its interior is plain. It was recovered in pieces and joined latter on.
58	Jar	t/c	A-5	L: 15.9cm W: 0.8cm H: 7.5 cm	It is a fragment of an everted rimed jar. Most of its body is missing, including some part of the rim. It is buff and has plain interior.
59	Burin	Stone	A-4	L: 21.35mm W: 4.92mm H: 9.36 mm	It is a pointed burin, having one side sharp and other blunt. It has a convex dorsal and flat ventral.
60	Lug	t/c	+	L: 72.50mm W: 20.35 mm	It is a fragment of a lug, having buff slip and stem-like elongated body. Apparently, it was made separately and attached to a pot latter on.
61	Sherds	t/c	+	1:L: 51.50mm T: 15.12 mm  2:L: 71.56mm T: 10.67 mm	They are handmade and very crude two sherds, probably, one but broken into two pieces. Both have red slip on the interior and exterior. Their exterior is slurry. They are made of ill levigated clay and the central part of their sections is black. One of them has a blackish scare on the exterior. The other has dark black smoke on the exterior and cloth impression on the interior.

62	Grinding Stone	Sand Stone	C-4	L: 28cm W: 22cm H: 9cm	It is a half piece of a large sized grinding stone. Its upper surface is more polished than the lower one. Its edge is thick and raised while its middle body is thin and has concavity in it. It has flat base.
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*2. Catalogue of the graphically documented potsherds (Figs. 21-26)*

<b>Sherd No.</b>	<b>Locus Trench-layer</b>	<b>Description</b>
1.	A-2	Large sized deep bowl, having hooked shaped beaked rim with a black band on it and red slip on the interior. It exterior is plain with pinkish wash.
2.	A-5	Large sized deep and straight walled bowl with high beaked rim, having dull pinkish-wash on exterior with an incised horizontal line on the neck. It has a broad red horizontal band on the interior with a horizontal black band below, pinkish body, it also has a faded horizontal black band on the outer and inner tip of the rim.
3.	B-3	large size deep bowl with everted rim, having a horizontal black band on the neck and outer tip of the rim with buff exterior. It has a horizontal broad red band on the internal rim, flank by a single horizontal black line. It is pinkish in the center portion on the interior.
4.	B-4	Deep bowl of small size relatively, with buff exterior and has red slip on the interior. In addition, it has a horizontal black band on the inner and outer tip of the rim.
5.	A-5	It is a deep bowl of small size with bi-lateral rim having buff slip on the exterior and pink wash on the interior. It also had a broad horizontal band on the rim and inner side.
6.	A-3	deep bowl with everted beak shape rim having pinkish exterior and buff slip in the central portion of interior. It has a horizontal broad red band on inside rim with a black line above and three below on the interior.



7.	A-2	large sized deep bowl, having low beaked thick rim, with pinkish wash on the interior as well as exterior.
8.	A-1	a plain and deep bowl with beaked shaped rim, having pinkish exterior and black slip on the interior.
9.	A-5	Upper portion of a dish-on-stand, having flaring rim with reddish-brown interior and broad horizontal band shown on the exterior. It has a black painted circle with four incised circles in the middle body on the interior. In addition, it has vertical incised dots between the painted and incised circles.
10.	C-4	upper portion of a dish-on-stand, having flaring rim, orang/reddish broad band on the interior and exterior with a black band on the tip of the rim. The central portion on its interior is having pinkish wash, with six incised circles. On the exterior, it also has a round reddish band on the point where a stem was attached.
11.	A-1	flaring rim of a plate with flat base, brownish slip on the interior and exterior and a horizontal black line on the tip of the rim and a black circle on the exterior.
12.		a body of a flaring rim plain plate, having flat base and incised circles on the interior and an incised line on the exterior.
13.	C-2	a large plate having bi-lateral rim, provided with pinkish wash on the interior as well as exterior surfaces.
14.	C-1	a shallow plate with bi-lateral rim, plain with buff exterior, having a black band on the outer tip of the rim. Its interior has red slip with a black horizontal band on the chest.
15.	B-5	A plate having bi-lateral rim, plain, with yellowish wash on inner surface.
16.	B-1	A small and shallow plate having bi-lateral thick rim, plain having traces of reddish-brown slip on the interior with a horizontal band of the same colour on the external rim.
17.	B-1	It is a plain shallow plate with slightly inverted bilateral rim, having buff interior and pinkish exterior.
18.	C-1	a small and shallow polychrome open-mouthed bowl, with slightly flaring rim, having a thin black band on it. It has buff slip on the interior and exterior. In addition, it is provided with five thin black bands and three thin red and one broad band on the interior
19.	B-2	a greyware medium size bowl having bi-lateral rim, plain.

20.	B-4	a shallow bowl with bi-lateral rim having plain and rough exterior and pinkish slip with a black band on the inner tip of the rim and a black circle on the interior.
21.	A-1	an open-mouthed jar, having long neck and short perpendicular rim. It has buff interior and reddish-brown slip with a horizontal black thin band on the tip of the rim on the exterior.
22.	B-1	Neck of a plain and perforated jar with everted rim and an incised horizontal line below the shoulder.
23.	A-3	Long neck of a flanged rim vessel/jar, having buff slip on the interior and upper rim on the exterior. In addition, its middle body is provided with pinkish slip and black vertical curved strips with a horizontal black thin band on the lower rim and two thin bands below the vertical curved strips.
24.	A-4	a perforated plain sherd with pinkish body.
25.	C-3	A globular jar, probably had everted rim, having black band and three lines on the neck. It has red slip on the exterior with a seaweed and fish motifs in black on the exterior.
26.	B-1	A body-herd of a jar, having pink slip on the exterior and pinkish wash on the interior. It has two registers, which are separated from each other by horizontal black line. The upper register is provided with a series of two concentric circles, having a black dot in their centers. The lower register is provided with a four-leaf floral pattern in black with bars in the blank spaces. Two horizontal black bands are also provided under the lower register.
27.	C-3	A painted body-herd, probably of a dish-on-stand. Its interior is plain and has rough incisions. On the exterior, it has red slip with black floral decoration with pipal leaf motifs.
28.	A-5	It is a small sherd, probably of a carinated jar/bowl, having red slip and a horizontal black band on the exterior and a pink wash on the interior.
29.	C-2	a body-herd, having plain interior with rough incised lines. On the exterior it has red slip with horizontal bands and vertical wavy lines.
30.	B-1	body-herd, having pinkish interior and red slip and black fish-scale motifs with dots on the exterior.

31.	A-2	A rounded cooking pot with beaked rim, having a ledge on the shoulder. It has orange slip on the upper body with a black band on the upper and lower rim as well. It has a horizontal broad band on the throat with pinkish wash on the interior.
32.	A-5	A cooking pot with rounded body and beaked rim, like above one, with a ledge on the shoulder, having pinkish wash with a horizontal broad band on the interior. On the exterior, it has buff lower body, red slip between the two rims and a black horizontal line on the tip of each rim.
33.	A-1	A cooking pot with rounded body having high beaked rim, with plain body.
34.	A-3	out-curved rim of a plain jar, probably with rounded body, having buff exterior and pinkish interior
35.	A-2	an out-curved rim of a spheroid jar, having red slip on the exterior, a black band on the tip of the rim with two horizontal black lines on the neck and two on the shoulder. It has a horizontal red band on the throat while the rest of its interior has pinkish wash.
36.	A-5	It is a plain out-curved rim ovoid jar, having red slip on the exterior and pinkish wash on the interior. It has three horizontal incised lines on its interior.
37.	A-5	It is a plain out-curved rim ovoid jar, having buff exterior and pinkish interior.
38.	A-2	Out-curved rim of a plain jar with a slight groove on outer rim
39.	A-2	out-curved rim of a plain jar, having long neck, orange slip on the exterior and buff on the interior.
40.	A-5	It is a plain out-curved rim jar, having buff slip on the exterior with a horizontal incised band on the neck.
41.	A-2	An out-curved rim jar, having red slip with a black band on the rim on the exterior. It also has a horizontal broad red band on the throat while the rest of its interior is plain with pink wash.
42.	A-3	a large storage jar with everted beaked rim, plain, having pinkish interior and reddish-brown exterior.
43.	B-1	It is a large everted beaked rim of a jar, having red slip on the exterior and pinkish interior with a broad horizontal black band on the throat and neck.

44.	A-1	Beaked rim of a jar/cooking pot, having reddish brown slip on the exterior with a horizontal black band on the tip of the rim. A broad horizontal reddish-brown band is also provided on its throat.
45.	C-4	It is a plain everted/short beaked rim of a spheroid jar having buff exterior and pinkish interior.
46.	A-4	A plain spheroid shape jar with short beaked everted rim having buff slip on the exterior and pinkish wash on the interior. It has an incised line just below the rim on the exterior.
47.	A-5	It is a plain spheroid jar with thickened everted rim, large size relatively, has buff slip on the exterior and upper part of the interior body.
48.	A-3	Short everted beaked rim of a plain spheroid shape jar, having buff exterior and pinkish exterior.
49.	C-4	a medium size spheroid jar, plain, having everted beaked shaped rim with buff exterior.
50.	B-3	lower portion of a vessel having disc shape base, pinkish interior and red slip on the exterior. It also has two horizontal thin bands on the exterior surface.
51.	C-2	lower portion of a plain jar, having disc shape base, buff lower body and red slip on the upper body on the exterior. On the interior, it has pinkish wash.
52.	A-4	Lower portion of a small jar, having disc shaped base, red slip on the exterior and pinkish wash on the interior
53.	B-3	It is a lower portion of a plain bowl, having disc shape base and greenish colour body. Its exterior, interior and section are green in colour.
54.	B-3	Lower part of a bowl with disc rim, plain
55.	B-1	It is a lower portion of a bowl having disc shape base and pinkish wash on the exterior with a horizontal black band on the middle body. It has pinkish and plain interior.
56.	B-3	It is a lower portion of a plain bowl/jar, having disc shape base, buff exterior and pinkish interior.
57.	A-1	a plain flat base of vessel, having pinkish body.
58.	A-1	lower portion of a black ware bowl, having flat base.
59.	A-5	It is a flat base of a bowl, plain and has pinkish wash on the interior.

60.	A-5	It is a plain disc shape base of a jar or bowl.
61.	A-4	a plain ring-shaped base, having creamy exterior and buff interior
62.	B-3	It is a plain ring shape base, having buff exterior and pinkish interior.
63.	C-1	lower portion of a plain jar/bowl, having ring shaped base and pinkish wash on the interior and exterior.
64.	A-1	Lid with flaring rim with a raised knob in the center and flat base. It has incised lines and pinkish wash on the interior as well as exterior.
65.	B-3	It is a plain lid, having disc shape base and flaring rims. Its knob is missing.
66.	A-5	It is a plain lid, having buff slip on the exterior and pinkish wash on the interior. It has flaring rim and a long central knob. Its base is roughly cut with a thread, which is uneven and has marks of thread cutting.
67.	C-4	Lower portion of a jar/bowl, having disc shape base, red slip with two horizontal black lines on the exterior. On the interior, it has pinkish wash and two incised horizontal lines.
68.	A-2	plain base of a dish-on-stand, having pinkish wash on the body.
69.	C-4	a stem of a dish-on-stand, having red slip on the exterior.
70.	A-2	base of a dish-on-stand, having flaring rim, orange slip and a black band on the tip of the rim on the exterior and pinkish wash on the interior.
71.	C-2	a plain flat lid having perpendicular rim and pinkish wash on the body.
72.	B-1	Ring base of a vessel
73.	C-2	a ledged/flanged rim of the base of a dish on stand, plain.
74.	A-4	Lower portion of a bowl or plate, having disc shaped base, red slip with a black circle on the interior and exterior.

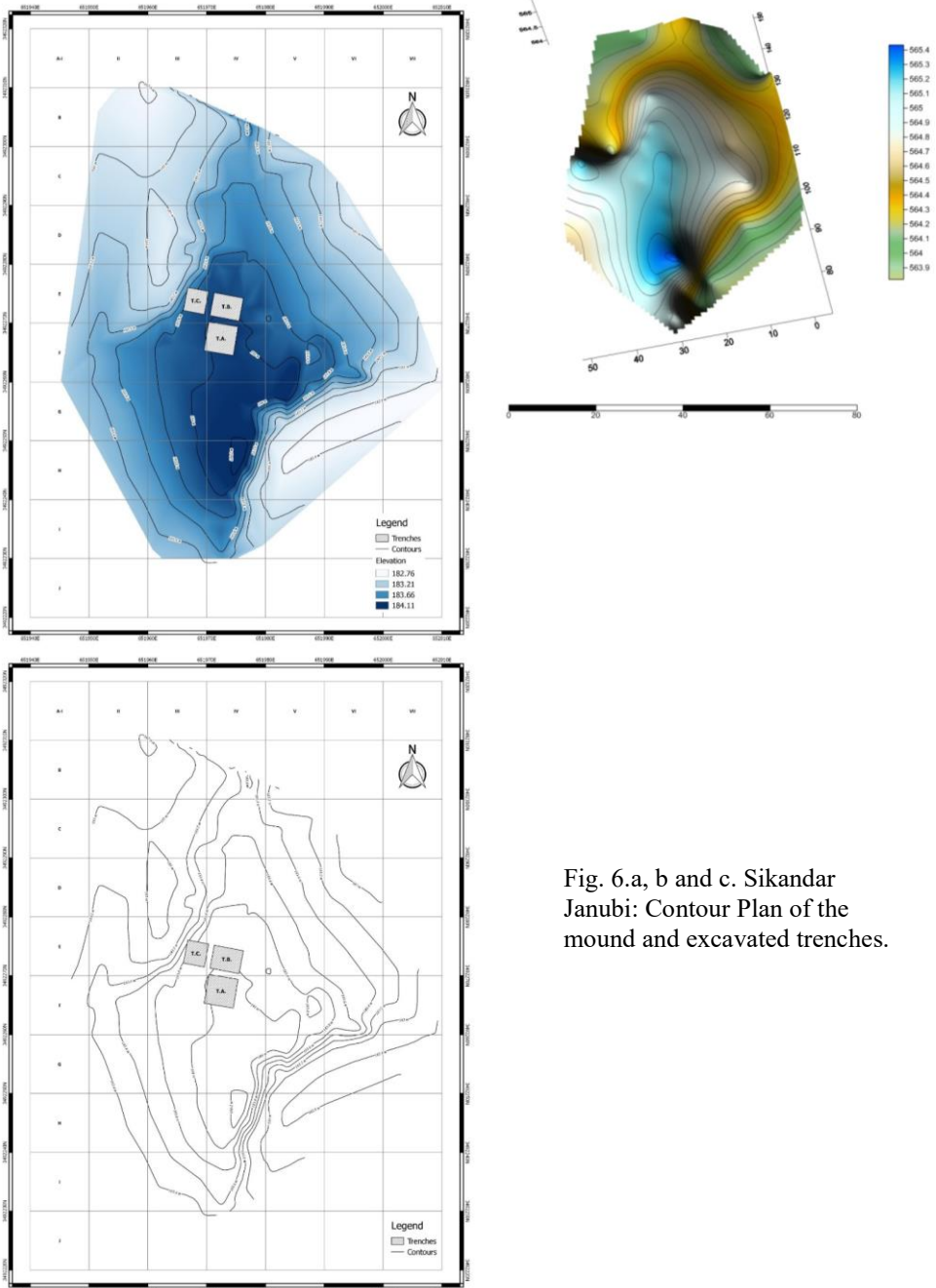


Fig. 6.a, b and c. Sikandar Janubi: Contour Plan of the mound and excavated trenches.

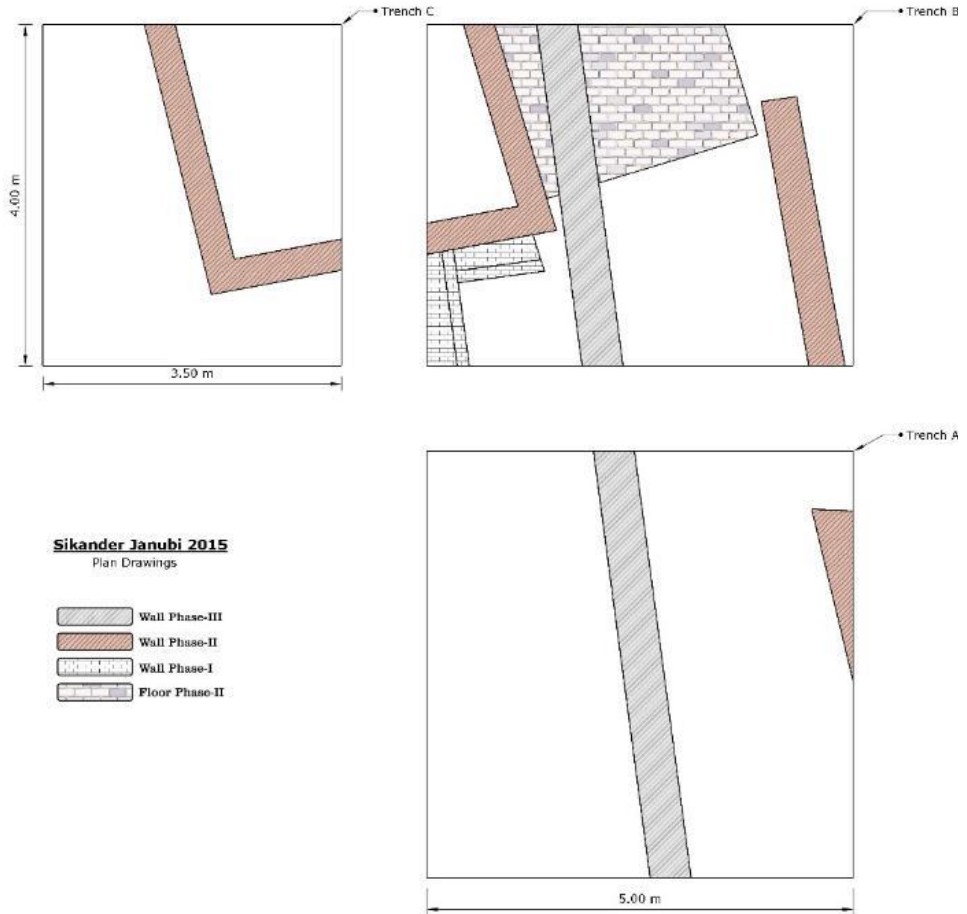


Fig. 7 - Sikandar Janubi: Plan of the structures.

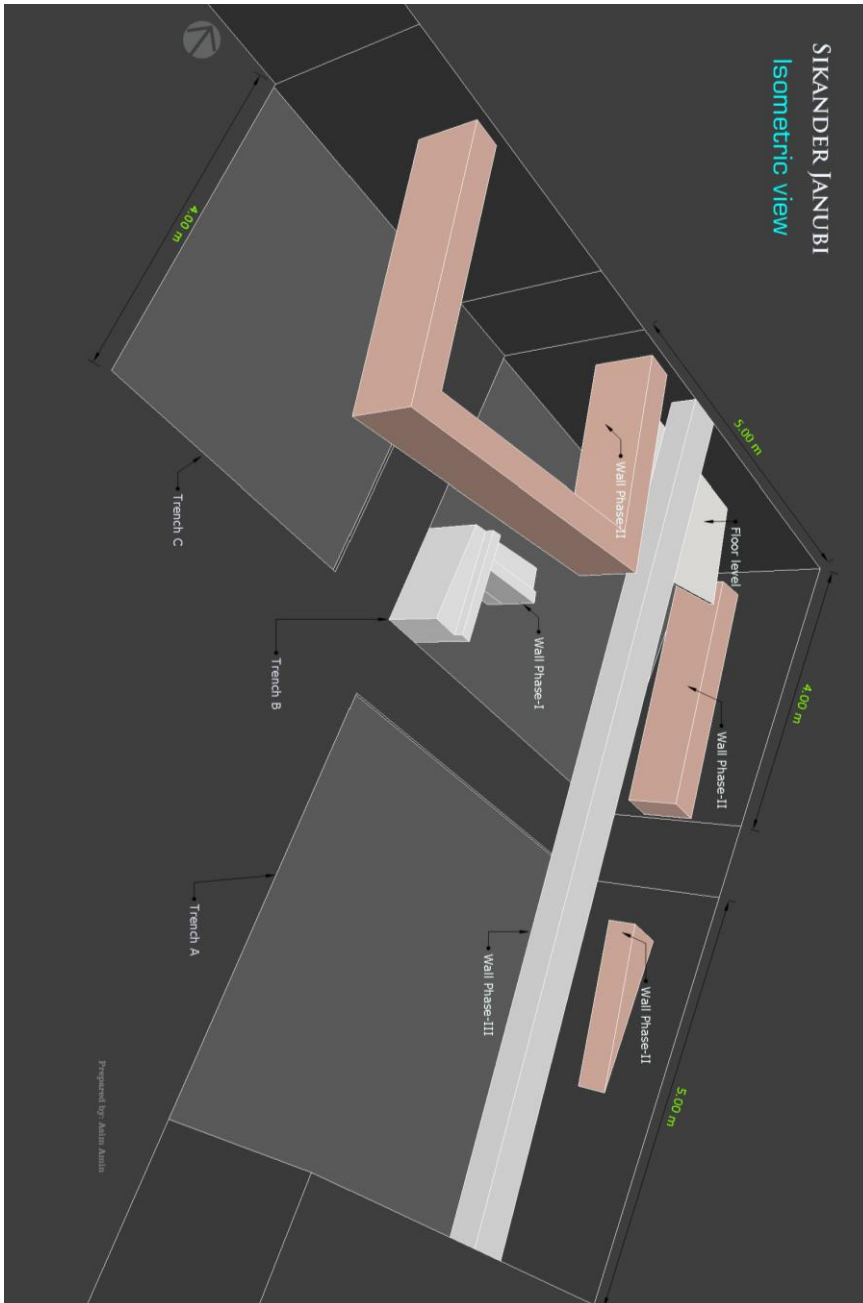


Fig. 8 - Sikandar Janubi: Isometric view of the structures.



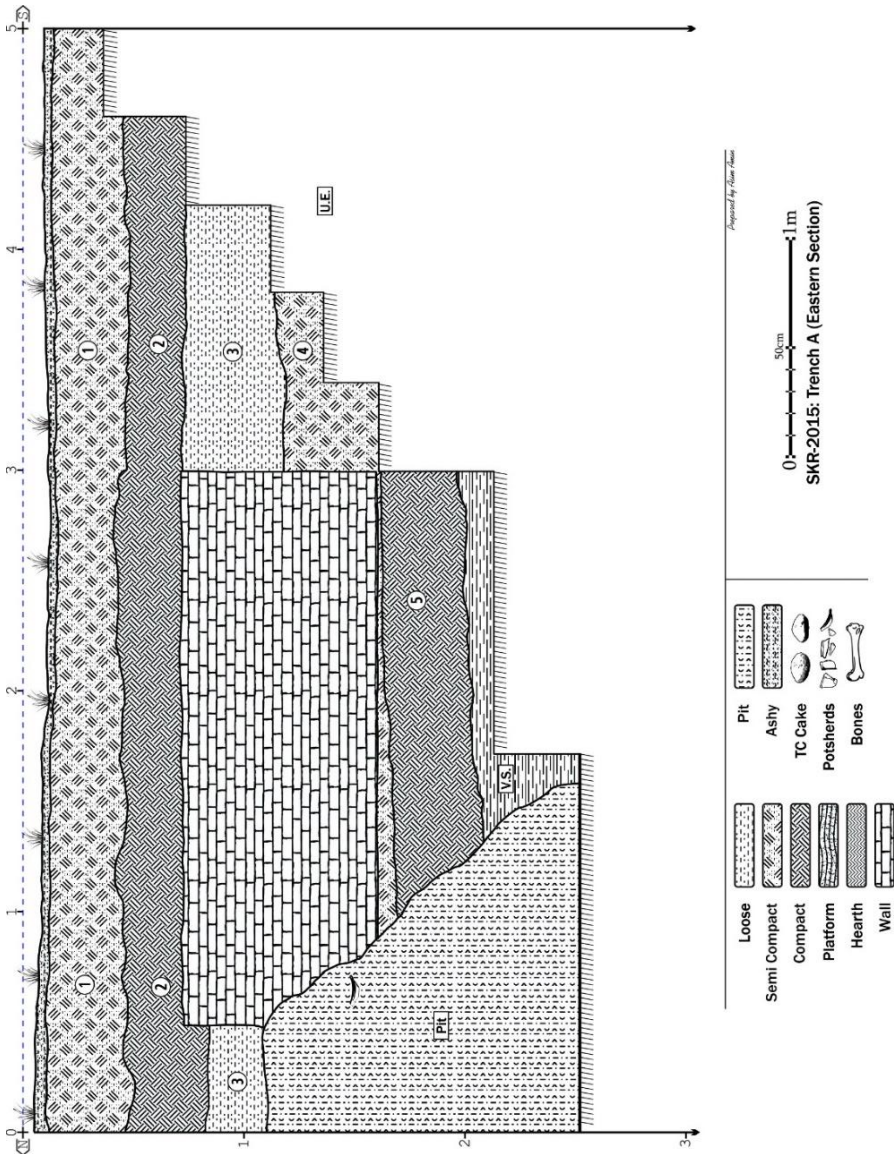


Fig. 9 - Sikandar Janubi: Trench A, Eastern Section.

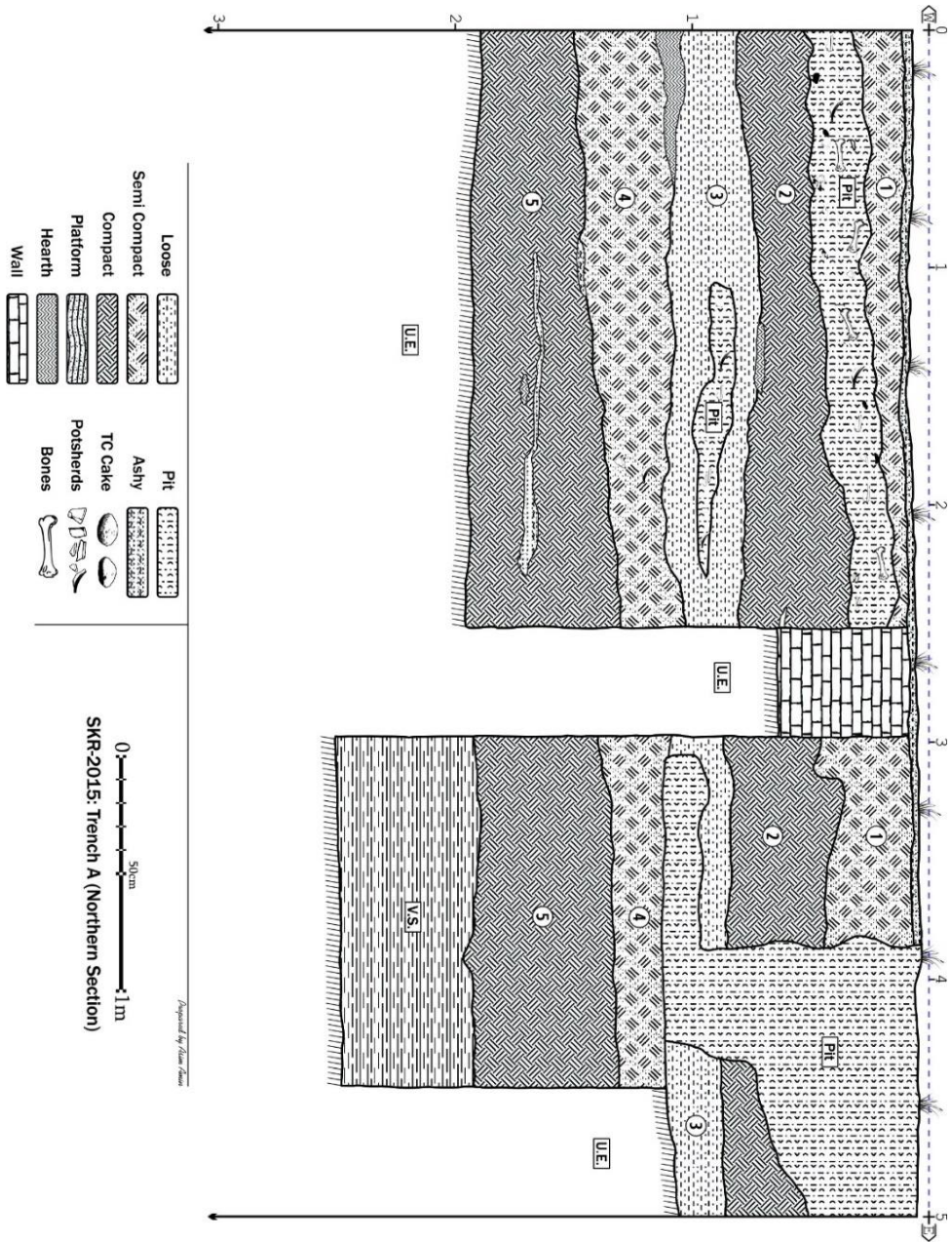


Fig. 10 - Sikandar Janubi: Trench A, Northern Section.

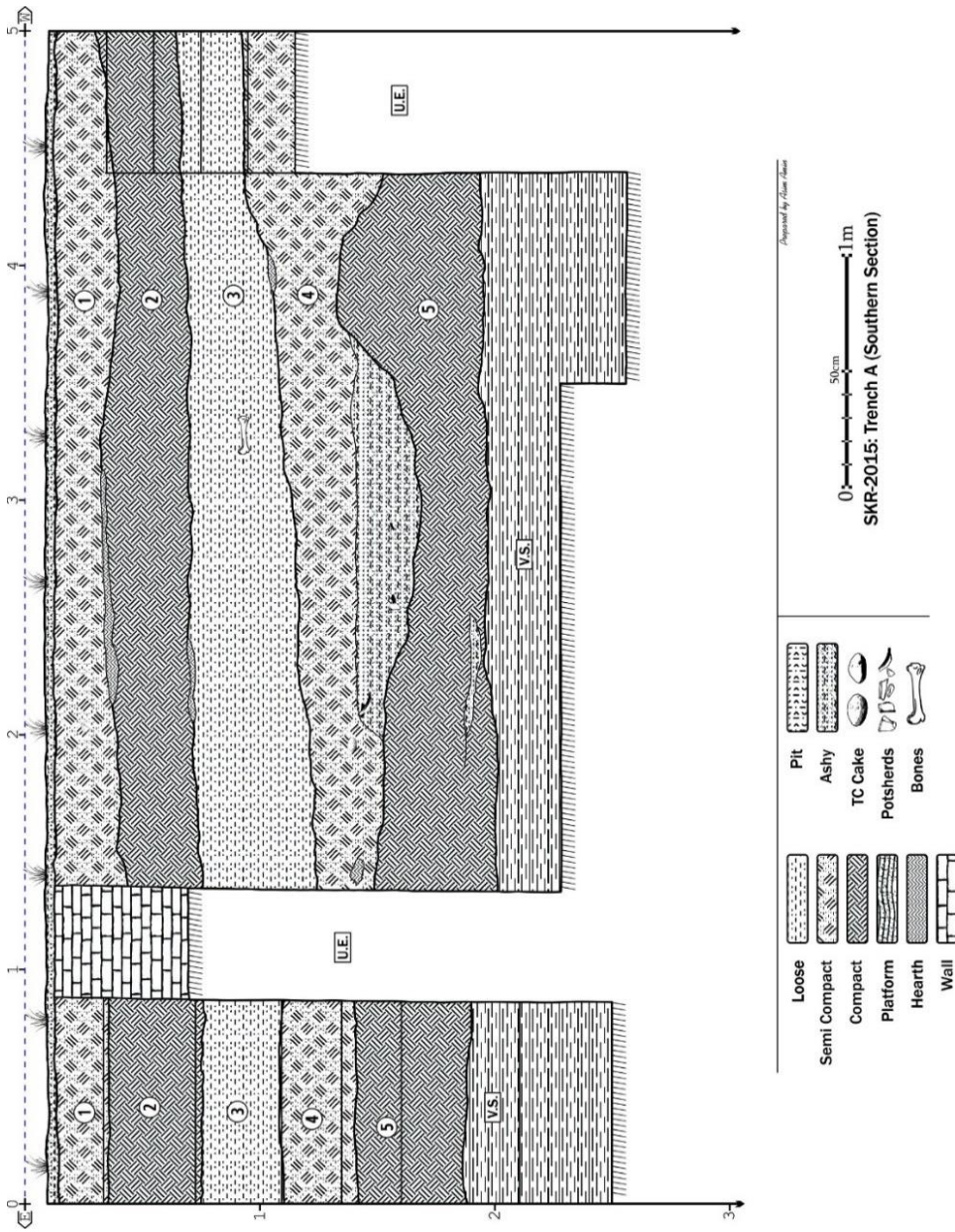


Fig. 11 - Sikandar Janubi: Trench A, Southern Section.

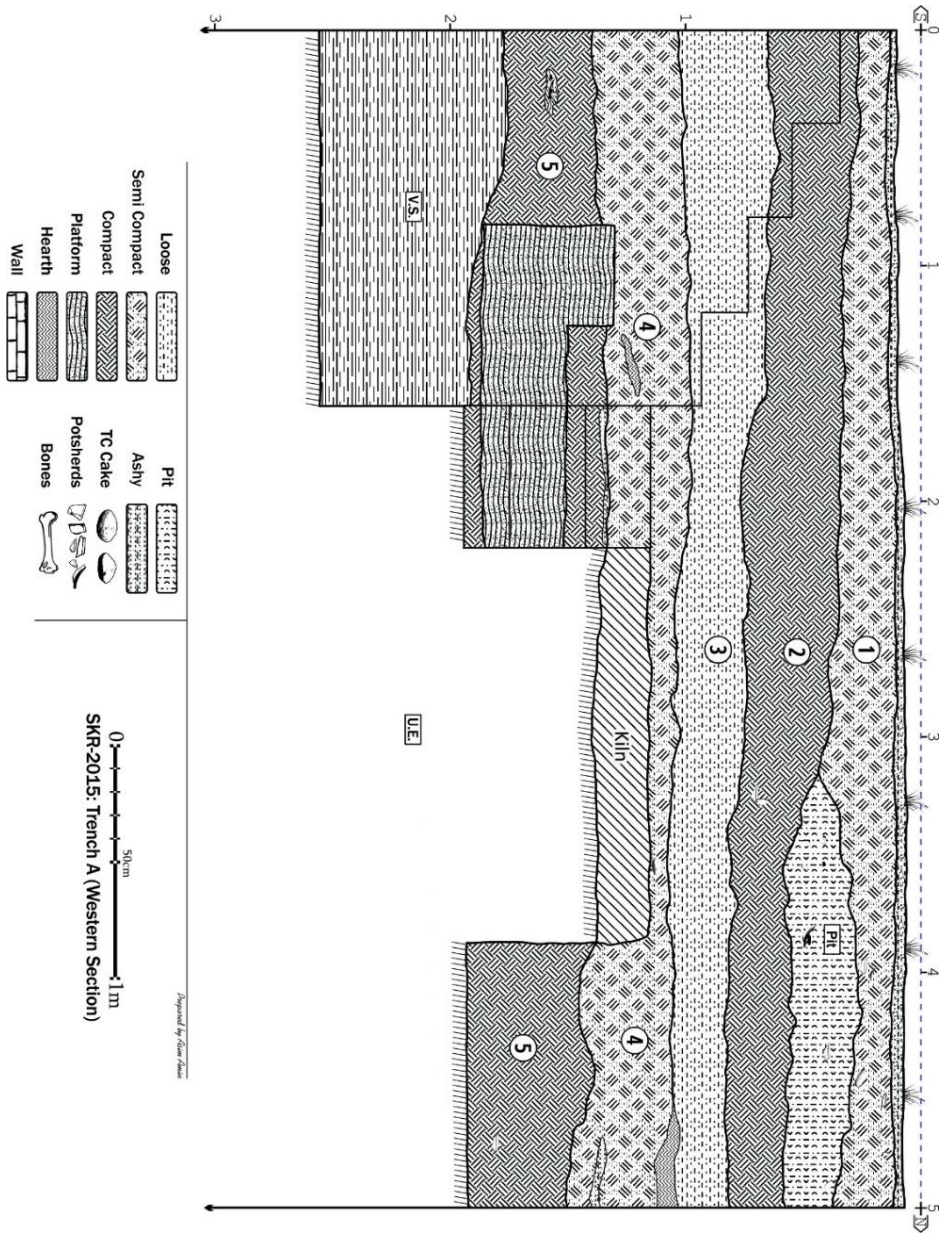


Fig. 12 - Sikandar Janubi: Trench A, Western Section.

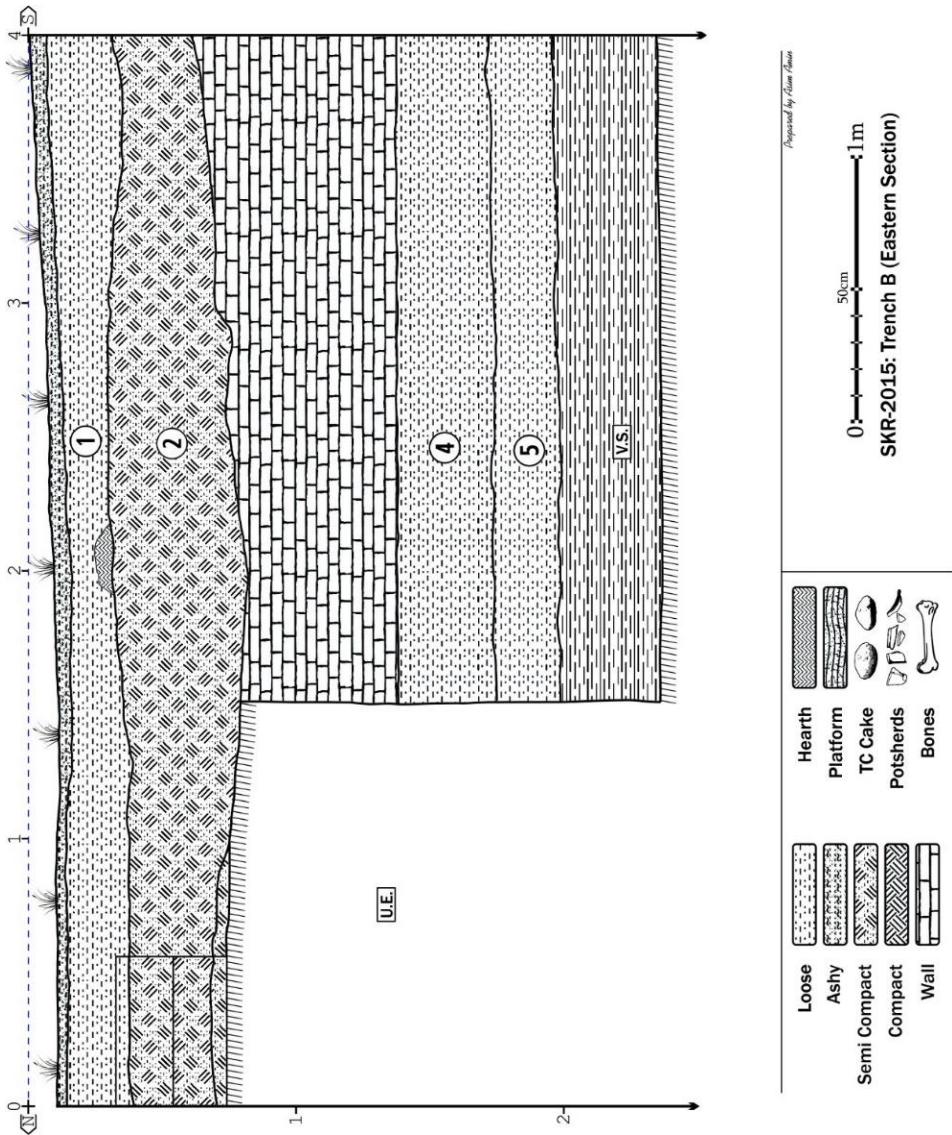


Fig. 13 - Sikandar Janubi: Trench B, Eastern Section.

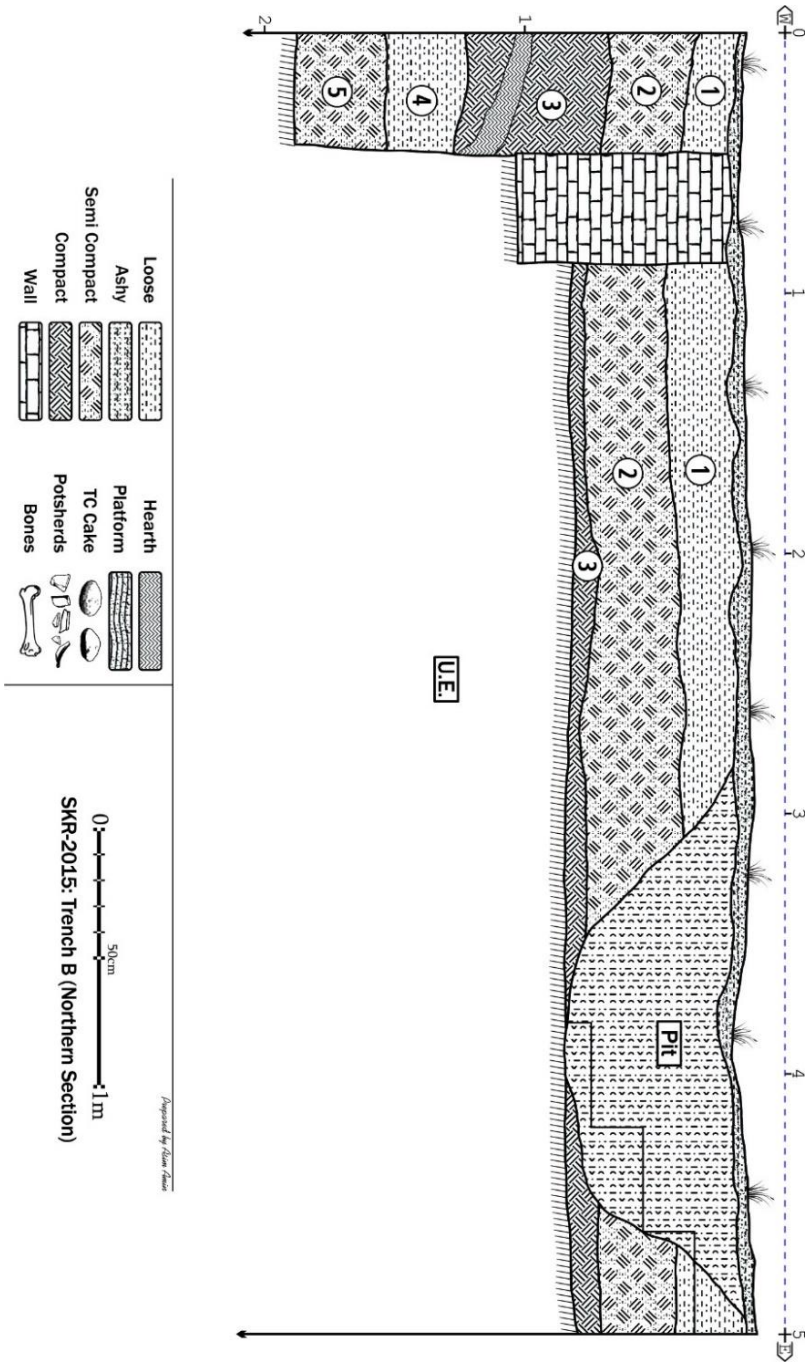


Fig. 14 - Sikandar Janubi: Trench B, Northern Section.

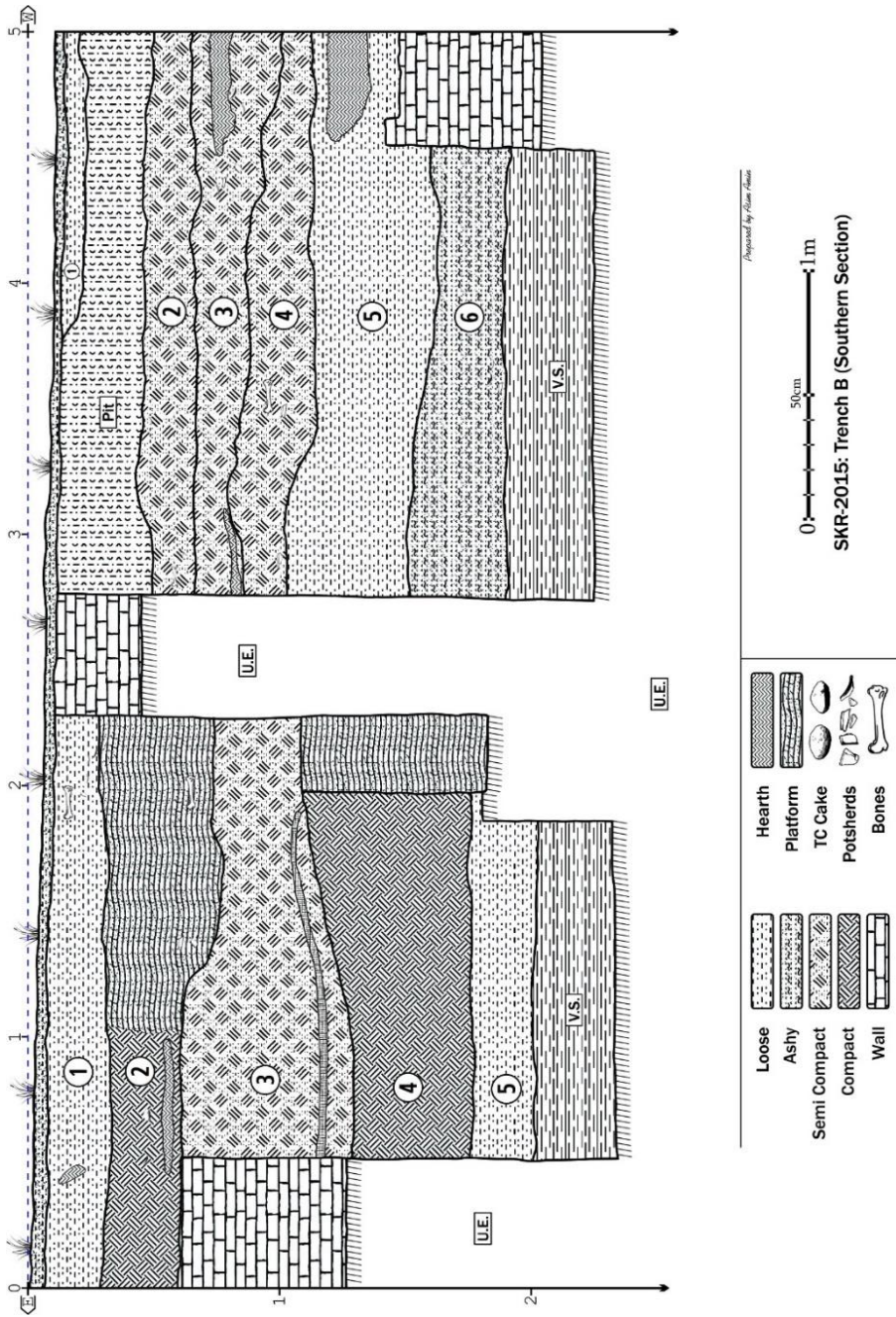


Fig. 15 - Sikandar Janubi: Trench B, Southern Section.

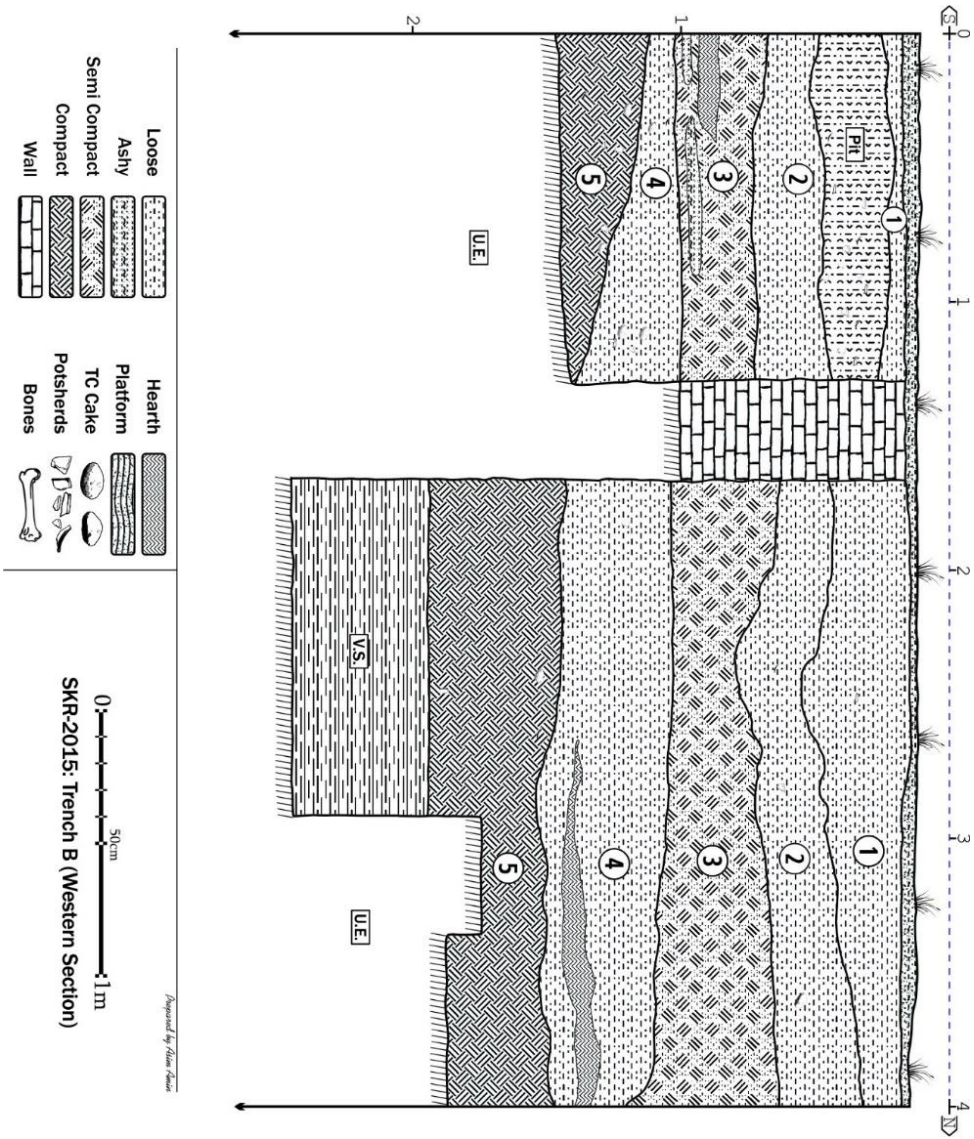


Fig. 16 - Sikandar Janubi: Trench B, Western Section.



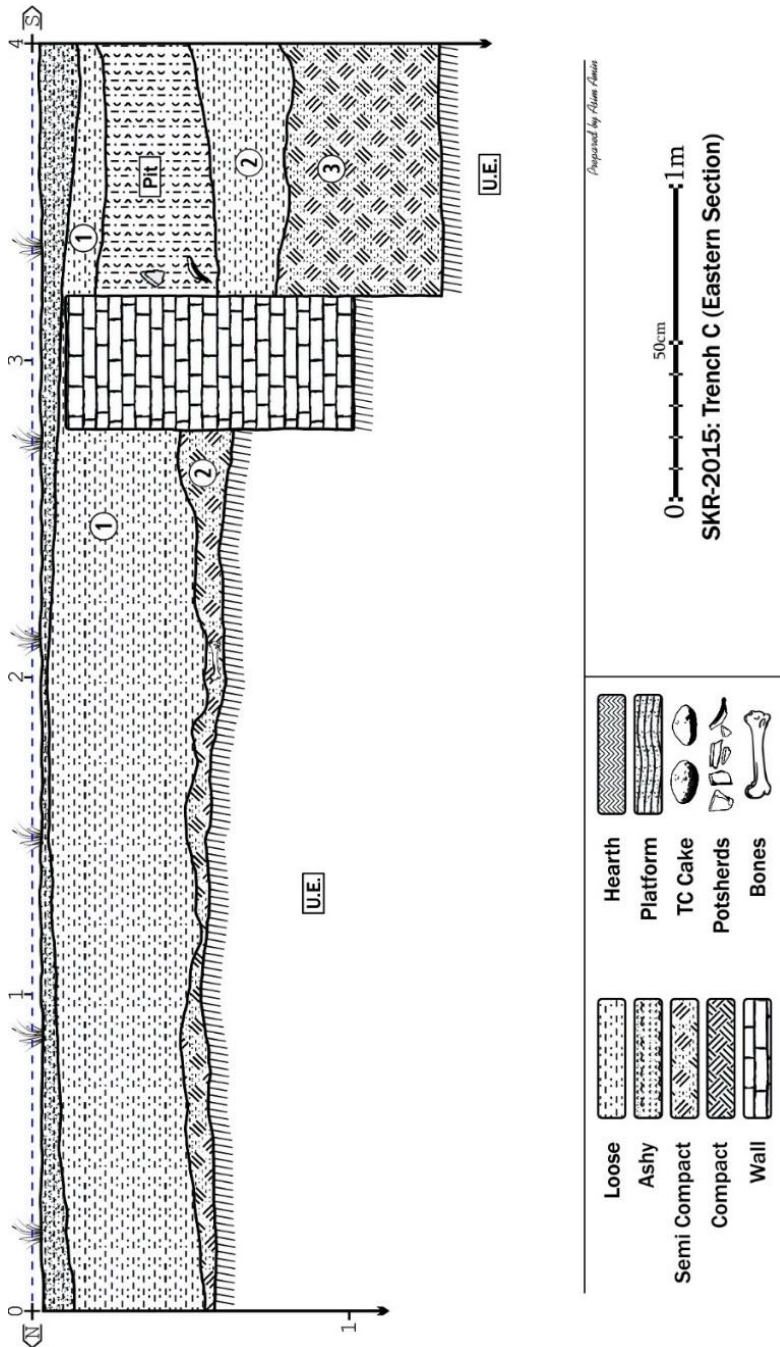


Fig. 17 - Sikandar Janubi: Trench C, Eastern Section.

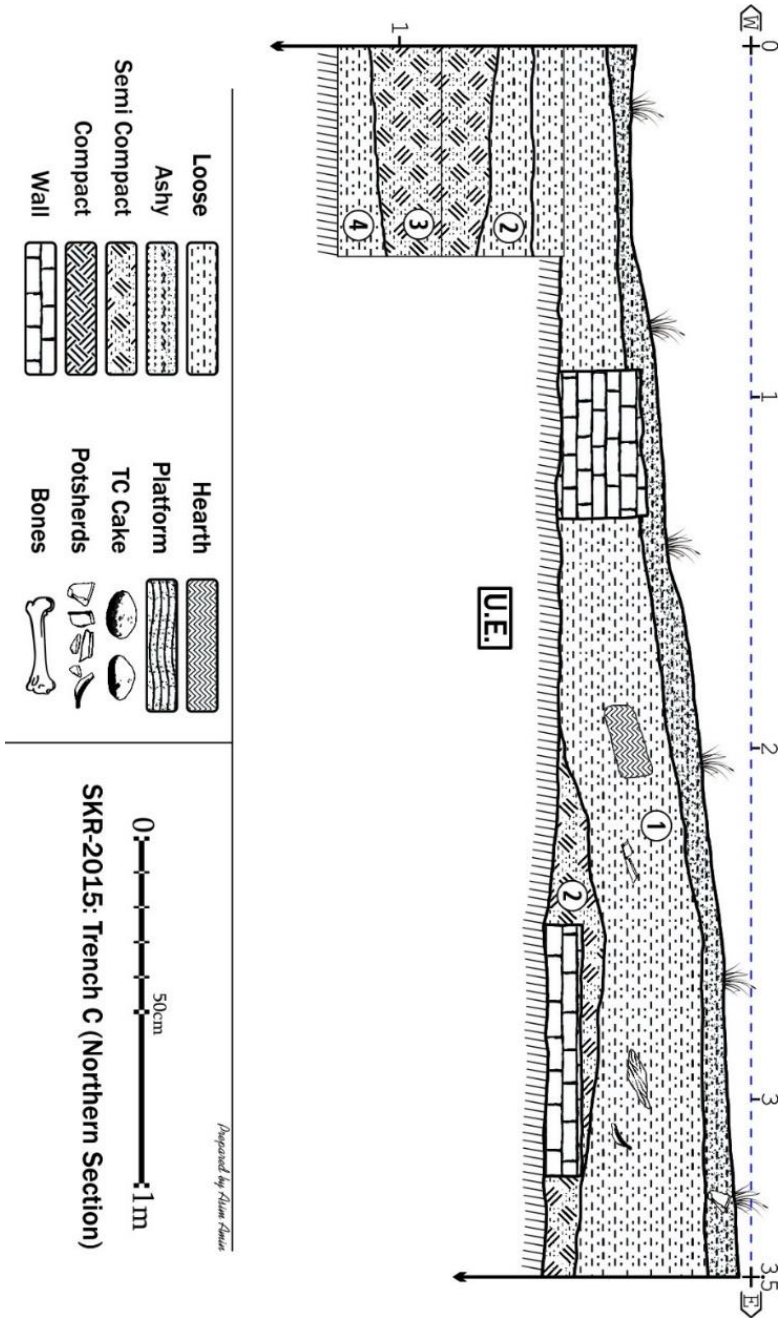


Fig. 18 - Sikandar Janubi: Trench C, Northern Section.

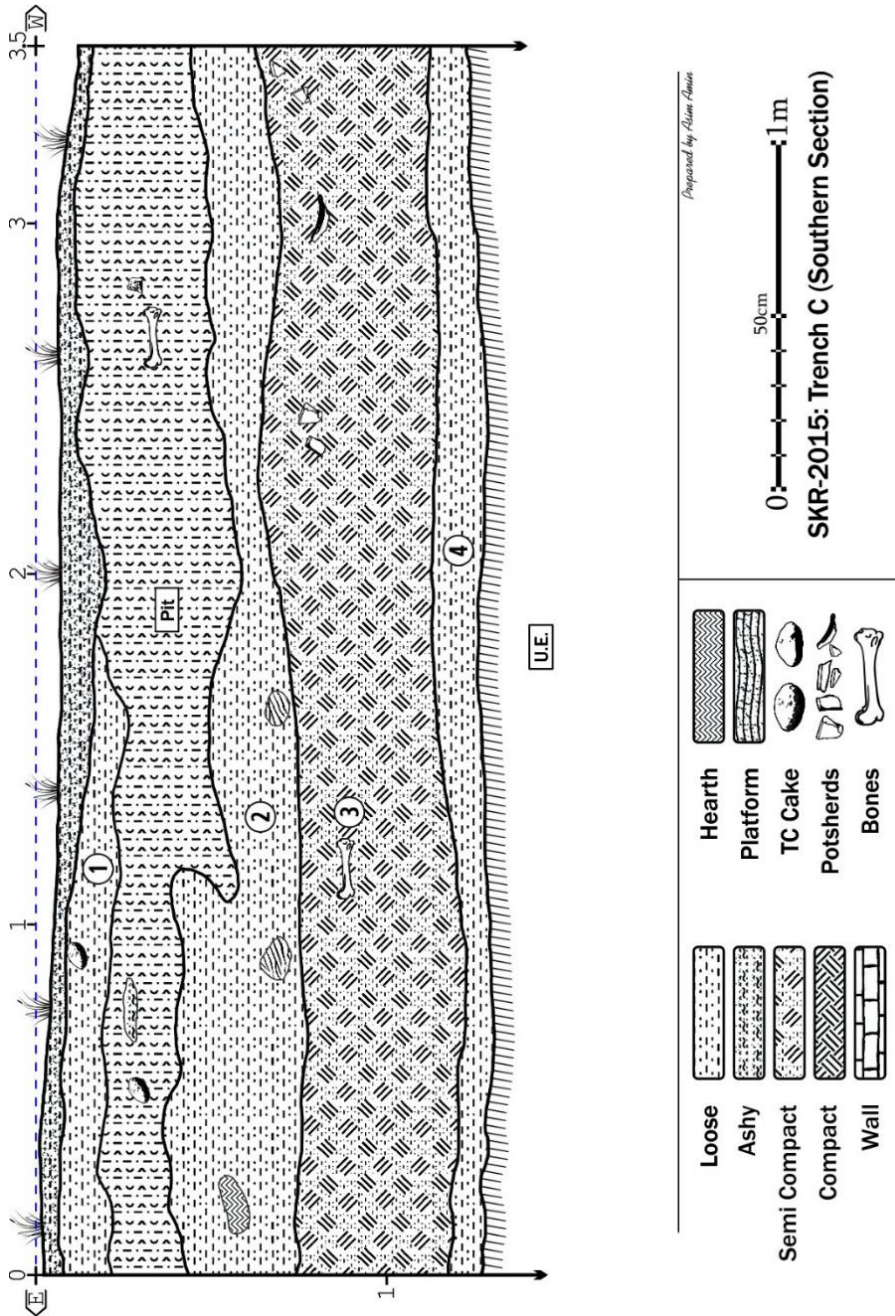


Fig. 19 - Sikandar Janubi: Trench C, Southern Section.

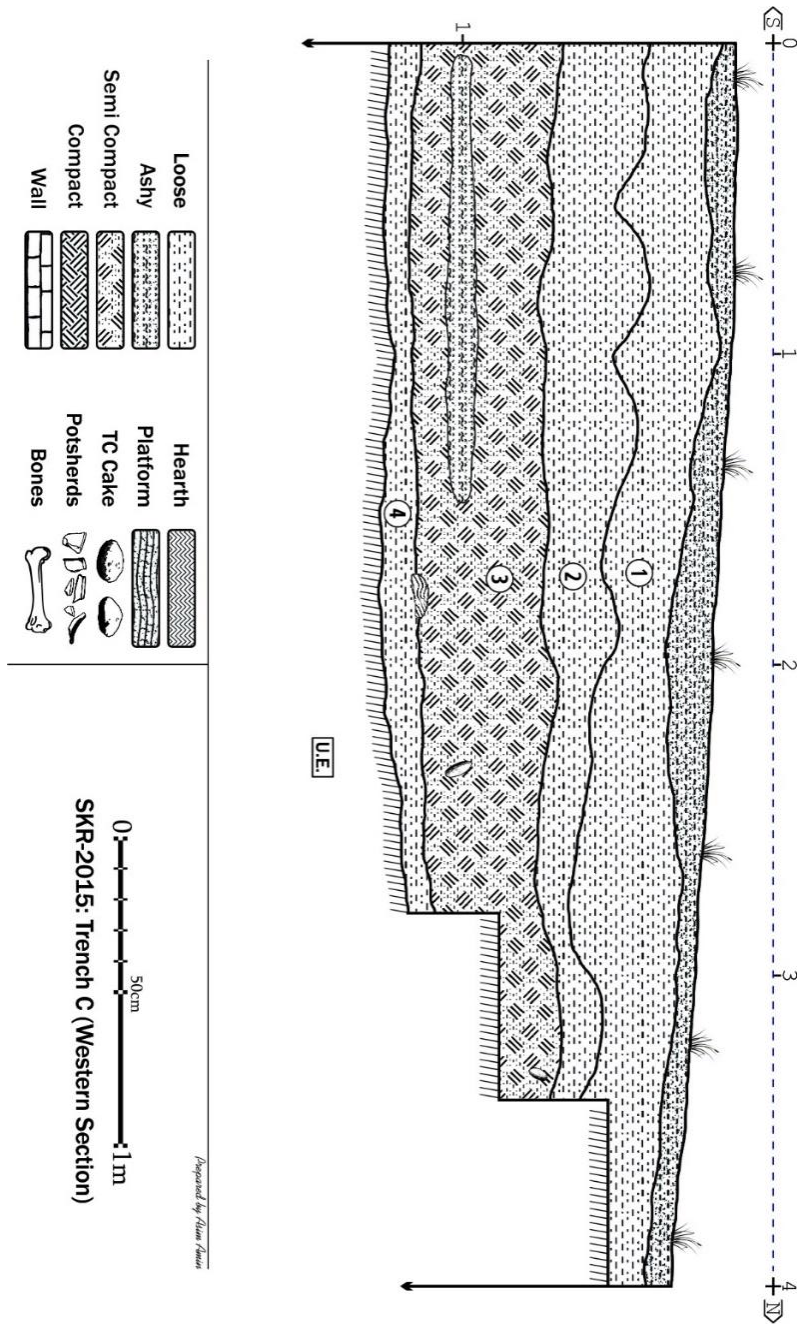


Fig. 20 - Sikandar Janubi: Trench C, Western Section.

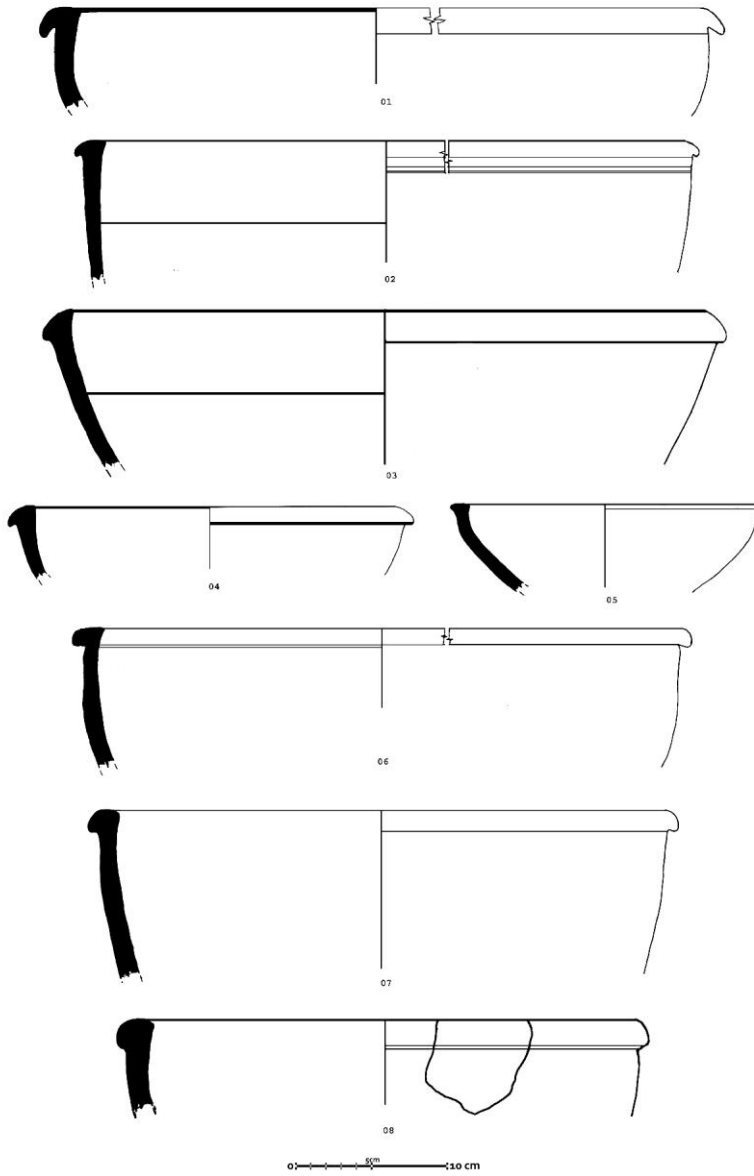


Fig. 21 - Sikandar Janubi: the pottery, bowls.

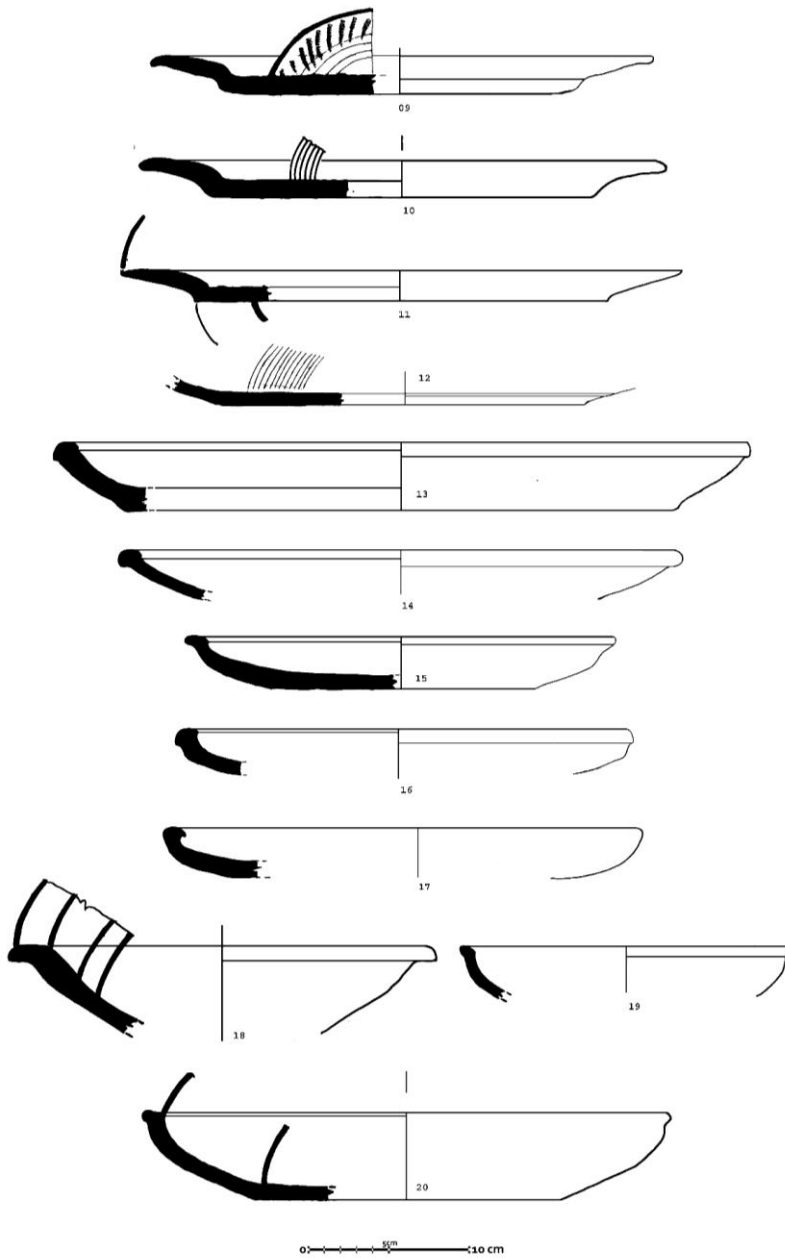


Fig. 22 - Sikandar Janubi: the pottery, plates/dishes/bowls.

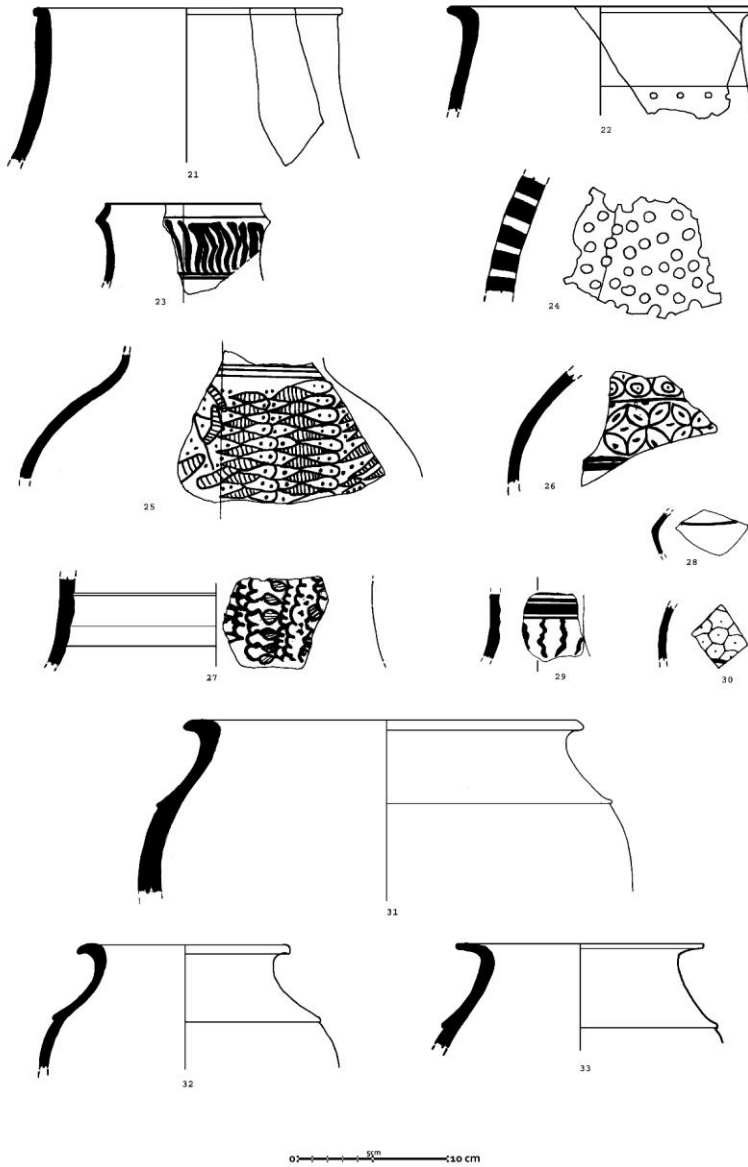


Fig. 23 - Sikandar Janubi: the pottery.

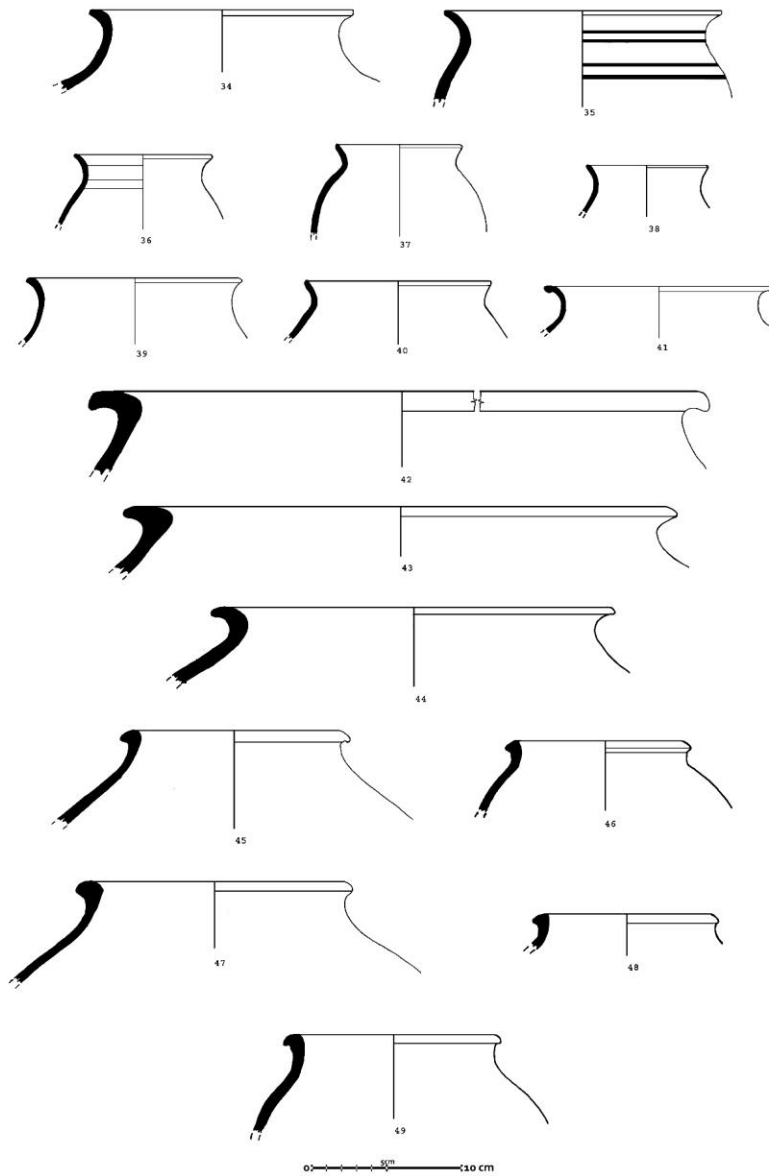
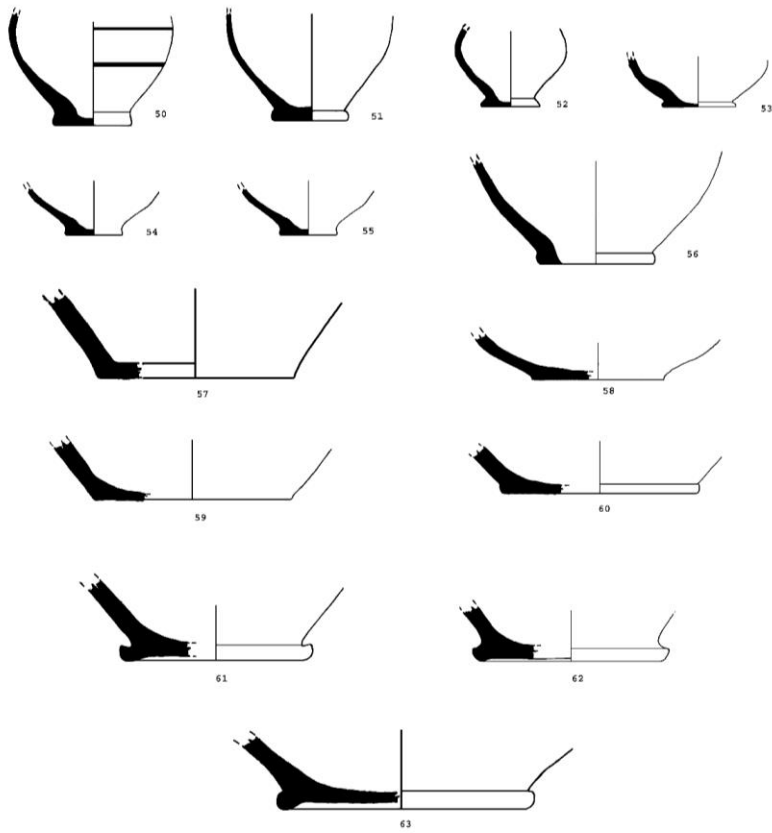


Fig. 24 - Sikandar Janubi: the pottery, jars.





0 5cm 10 cm

Fig. 25 - Sikandar Janubi: the pottery, bases.

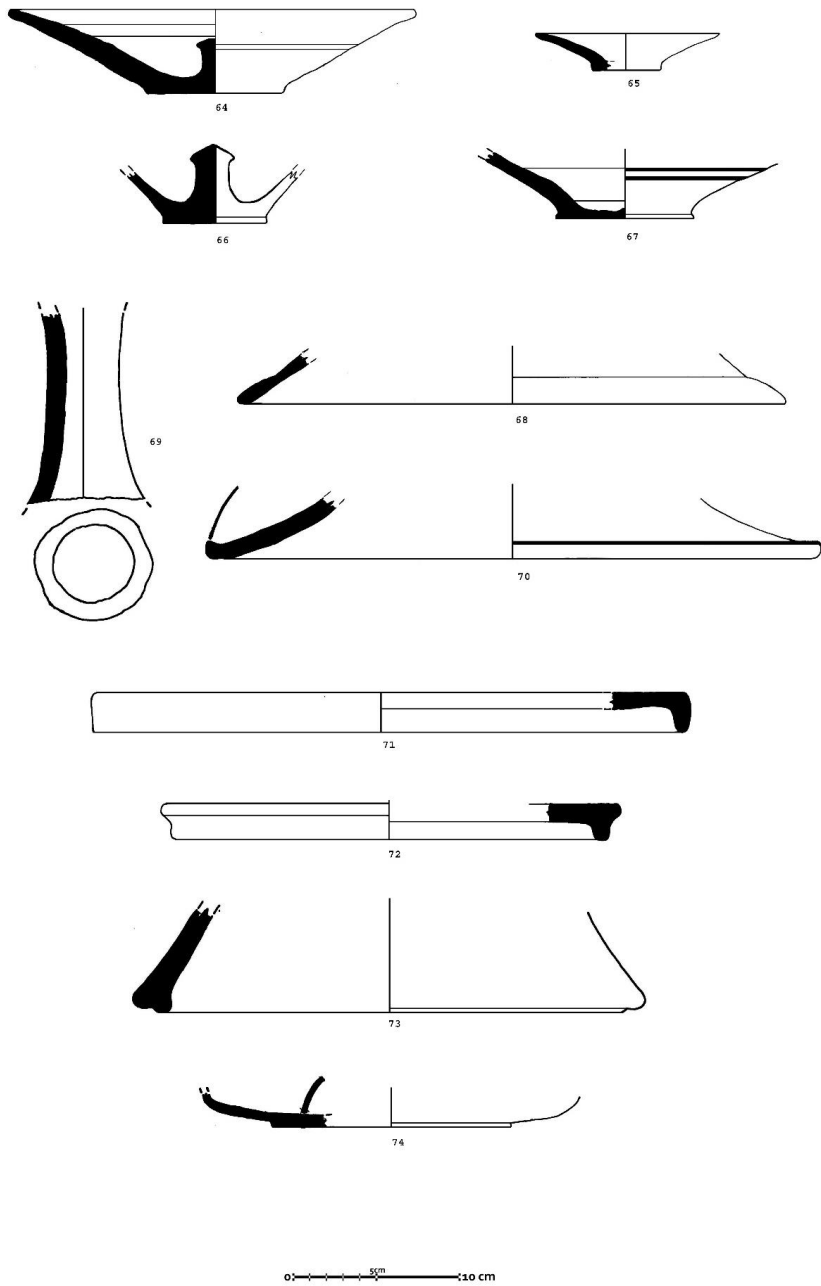


Fig. 26 - Sikandar Janubi: the pottery, lids, etc.



Pl. 1 - Sikandar Janubi, Geophysical Survey, using GPR.



Pl. 2 - Sikandar Janubi, Geophysical Survey, using magnetometer.



Pl. 3 - Sikandar Janubi, General view of the site with marked trenches.



Pl. 4 - Sikandar Janubi, General view of the excavated trenches.



Pl. 5 - Sikandar Janubi, General view of the excavated trenches.



Pl. 6 - Sikandar Janubi, Visit of the students from NCA Rawalpindi.



Pl. 7 - Sikandar Janubi, exposing mud brick wall of phase III.



Pl. 8 - Sikandar Janubi, detail view of the mud brick wall of phase III.



Pl. 9 - Sikandar Janubi, mud brick wall and floor level.



Pl. 10 - Sikandar Janubi, mud brick structures.



Pl. 11 - Sikandar Janubi, virgin soil.



Pl. 12 - Sikandar Janubi, mud brick structures.





Pl. 13 - Sikandar Janubi, mud brick structures.



Pl. 14 - Sikandar Janubi, floor level with hearths in trench A.



Pl. 15 - Sikandar Janub, a hearth.



Pl. 16 - Sikandar Janubi, a floor level in trench A with hearths and t/c cakes.



Pl. 17 - Sikandar Janubi, a floor level in trench A with hearths and t/c cakes.



Pl. 18 - Sikandar Janubi, a post hole with vanished wooden pillar.



Pl. 19 - Sikandar Janubi, a dish on stand in situ.



Pl. 20 - Sikandar Janubi, a small pot in situ.



Pl. 21 - Sikandar Janubi, remains from a burial pit.

