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**PRELIMINARY RESULTS OF ARCHAEOLOGICAL RESEARCH
THE WESTERN GATE OF THE MEDIEVAL SETTLEMENT
DZHANKENT IN 2018**

The article highlights some of the results of the archaeological study of the defensive structures of the medieval hillfort of Dzhankent, located in Kazaly district, Kyzylorda region. According to medieval eastern sources, the mound in the last period of its existence functioned as the capital of the Oguz state in the lower reaches of the Syr Darya. The article describes the features of the planigraphy of the main entrance gate of the ancient hillfort Dzhankent. The preliminary results of field archaeological research at the main entrance gates of the monument show that, during the erection of the fortress walls, the construction techniques of the neighboring region in the Lower Amudarya were used, which confirm the features of the Dzhankent building structures that have similar architectural traditions of the urban culture of Central Asia. His closest analogies are the design of Dzhankent in Khorezm. First of all, it is the hillfort of Toprak-Kala, which gives the closest analogies for Dzhankent on the internal layout and location of the Citadel. And although Toprak-Kala dates from an earlier period, the comparison of the planning features of the two monuments is quite legitimate, since it is obvious that the spatial-planning model used in the late re-planning of Dzhankent was formed much earlier.

Key words: Dzhankent, defensive structures, fortification, entrance gates.

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Мақалада Қызылорда облысы, Қазалы ауданында орналасқан ортағасырлық Жанкент қаласында жүргізілген археологиялық қазба жұмыстарының кейбір нәтижелері баяндалады. Ортағасырлық Шығыс деректері мәліметтері бойынша Жанкент қаласы тіршілік еткен соңғы кезеңінде Сырдарияның төменгі ағысындағы Оғыз мемлекетінің астанасы болған. Мақаланың негізгі бөлігінде Жанкент қаласының бас қақпасының жоспарлануы сипатталған. Ескерткіштің басты қақпасына жүргізілген археологиялық зерттеулердің алдын ала қорытындылары бойынша, бекініс қабырғаларын тұрғызу кезінде Әмударияның төменгі ағысындағы көршілес өңірдің құрылыс әдістемесін пайдаланғанын Жанкент құрылыс конструкциялары растап шықты. Аталған әдістеме Орталық Азияның қалалық мәдениетінің архитектуралық дәстүрлерімен сабақтасып,

ұқсас тұстары көптеп кездеседі. Жоспарлануы жағынан Жанкент қаласының аналогиясын Хорезмнен көреміз. Ең алдымен Топрақ-қала қалашығының ішкі жоспарлануы, цитаделінің орналасуы бойынша Жанкентпен қатты ұқсастық бар. Алайда, Топрақ-қала ерте кезеңнің ескерткіші болып табылады. Дегенмен, екі ескерткіштің жоспарлану ерекшеліктерін салыстыру заңды әдістеме, өйткені Жанкенттің қайта жоспарлануы кезінде қолданылған кеңістіктік-жоспарлау моделі көптеген ғасырлардан бері қалыптасқан тарихи модель болып табылады.

Түйін сөздер: Жанкент, қорғаныс құрылыстары, фортификация, басты қақпа.

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Предварительные результаты археологических исследований западных ворот средневекового городища Джанкент в 2018 году

В статье освещаются некоторые результаты археологического изучения оборонительных сооружений средневекового городища Джанкент, расположенного в Казалинском районе Кызылординской области. По средневековым восточным источникам городище в последний период своего существования функционировало как столица Огузского государства в низовьях Сырдарьи. В статье дается описание особенностей планиграфии главных въездных ворот городища Джанкент. Предварительные итоги полевых археологических исследований на главных въездных воротах памятника показывают, что при возведении крепостных стен использовалась строительная методика соседнего региона в низовьях Амударьи, это подтверждают особенности строительных конструкций Джанкента, имеющие сходства с архитектурными традициями городской культуры Центральной Азии. Ближайшие свои аналогии планировка Джанкента находит в Хорезме. В первую очередь, это городище Топрақ-қала, которое дает ближайшие аналогии для Джанкента по внутренней планировке и расположению Цитадели. И хотя Топрақ-қала датируется более ранним периодом, сравнение планировочных особенностей двух памятников вполне правомерно, т.к. очевидно, что пространственно-планировочная модель, использованная в поздней перепланировке Джанкента, сформировалась гораздо раньше.

Ключевые слова: Джанкент, оборонительные сооружения, фортификация, въездные ворота.

Introduction

Archaeological research on the medieval hillfort of Dzhankent carried out with few interruptions for the past 14 years. All this time the Kazakh-Russian archaeological expedition conducted by the Kyzylorda state University named after Korkyt ATA (Kazakhstan) together with the Institute of Ethnology and Anthropology of the Russian Academy of Sciences (Moscow, Russia)¹ works at the monument. Since 2011, doctor of archaeology

at the University of Tübingen Eberhard and Karl, Professor Heinrich Harke has been taking part in archaeological work on a regular basis. During the work of the expedition was published two summary reports on the work on the monument, several dozen articles on the results of studies on Dzhankent in Russian, Kazakh and English languages, published a collective monograph «*Comprehensive study of the hillfort Dzhankent: activity 2011-2014*» (Almaty, Arys, 2014) and the album «*Civilization lost in the Sands*» (Astana, 2013). The materials obtained in the course of work in Dzhankent were presented at conferences in Kazakhstan, Russia and Europe.

The hillfort Dzhankent is 1.5km southern from Dzhankent village (Kazalinsk district, Kyzylorda oblast). The size of the area of the monument, according to the topographic survey of 2005, 16 hectares. 375 (420) × 225 m (figure 1). The monument has a «T» – shaped shape, elongated from East to West, with a significant expansion in

¹ Initially, in 2005, within the framework of the triple agreement, employees of the Institute of archaeology named after A. H. Margulan of the Ministry of Education and Science of the Republic of Kazakhstan took part in the work. Then in 2006 a group of former employees of this Institute have formed a LLP «Archaeological expertise», and continued work on Dzhankent. Unfortunately, the works of «Archaeological expertise» LLP do not agree in any way with the work plan that was originally agreed upon, and are conducted with numerous violations.

the Eastern half. The walls are built of pakhsa². They are well preserved only in the Eastern part. Along these traces of the towers, located at a distance of 25 – 40 m from each other. The gate is centered in the Eastern and Western walls. In the middle of the Eastern wall is a well-preserved pre-construction in the form of a semicircular ledge wall about 20 m long (from South to North), with a gate perpendicular to the wall at the Northern end. The ledge is flanked by two external towers.

The North-Western corner of the city is occupied by the citadel – a square-shaped elevation measuring 110 × 110 m. the Hillfort is divided into two parts by the main street running from West to East parallel to the outer walls. By the nature of the relief, the densely built-up Northern part of the hillfort and the much less built-up, flat and low-lying southern part are visually distinguished. In the North-Eastern sector of the hillfort is traced adjacent to the Northern wall of a rectangular hill measuring 60 x 70 m and a height of about 3-4 m. To the Northern wall with the outer side adjacent enclosed by a low semi-circular shafts in plan area (Margulan reads 2018).

In the field season of 2018 on the site of Dzhankent, site was set at the main gates of the hillfort, in the Central part of the Eastern defensive wall.

Fortifications of Dzhankent are solid clay array remote fortified with semicircular towers. On the citadel of the hillfort the distance between the towers is 15-17 m, on rabat the distance between the towers is from 25 to 40-45 meters.

The size of the hillfort is equal to 320 × 400 m (figure 1). The best preservation of the defensive walls is observed in the Eastern wall. Today, the Eastern wall, built of adobe blocks rises above the surrounding surface of the hillfort at 3-5 meters.

Prior to the excavation, it was assumed that the Eastern wall of the hillfort was re-built in the XVIII century by the Khan of the younger Zhuz Abulkhair, who asked the Imperial court to make Dzhankent his residence in the lower reaches of the Syr Darya (Rychkov, 1762).

However, according to the materials found during an archaeological work, we come to the conclusion that the Eastern bypass wall of the monument during the existence of the hillfort (IX-XI centuries) underwent a major overhaul.

The Eastern bypass wall, together with the ramparts and the remaining part of the walls, rises 8-9 m above the surrounding surface.

Around the perimeter of the hillfort outside surrounded by a moat width of at least 30-40 m which is evidenced by the lowland along the Eastern and Southern walls of the monument.

The length of the Eastern wall is 420 m, the wall can be visually divided into Northern and Southern parts.

The Northern part is longer than the Southern one by 1/4, 235 m and 185 m respectively. Starting from the extreme North corner tower, the wall is reinforced with five external semicircular towers. The size of the towers relative to each other are the same and ranges from 40 to 45 m, preserved at 2.5-3 m in width and 3-5 m in length, the height of the bypass shafts from 2 to 4 meters. Behind the extreme southern tower (Northern part of the wall) the wall continues for another 45-50 m.

The southern part of the bypass wall, starting from the Southernmost tower along the wall, is reinforced by three external semicircular towers. The distance between the towers is also from 40 to 45 meters, the towers are also preserved at 2-4 m in width and 5-6 m in length, the height of the shaft of the bypass wall from 3 to 4.5 meters.

The length of the Southern part of the wall is from 175 to 190 m. closer to the entrance gate, the wall turns to the West by 10-12 m and forms a passage to the hillfort at the end of the Northern part of the wall (figure 1, 2).

The entrance gate of the monument was flanked by two external towers, the width of which was 2-3 m, the length of the North remained at 6-7 m, the South 5-6 m. Between the flanking towers preserved structure in the form of an arc connecting the tower with each other. Most likely it is the remains of the pre-gate ledge, which was located drawbridge over the surrounding moat. The distance between flanking towers is 35-40 m.

On the South side at the corner, where the southern part of the wall turns to the West attached semicircular wall «shield», the height of the wall remained at a height of 3.5-4.5 m, the width at the base reaches 2.5-3 m at the top of the tapering is 50-70 cm, the length of the semicircle 22-25 m.

Thus, the entrance to the hillfort was labyrinthine, that is, entering from the beginning rested against the wall-the shield turned to the right, then skirting the wall-the shield turned to the left, and rested against the Northern part of the wall, turning to the left went through a narrow corridor, between the wall-shield and the Eastern wall rested against the «Г» shaped turn of the Southern part of the wall again turned to the right and only then could get into the city (figure 3).

² Pakhsa – blocks and layers of clay mixed with water and organic and vegetable additives, most often with chopped straw (Adobe).

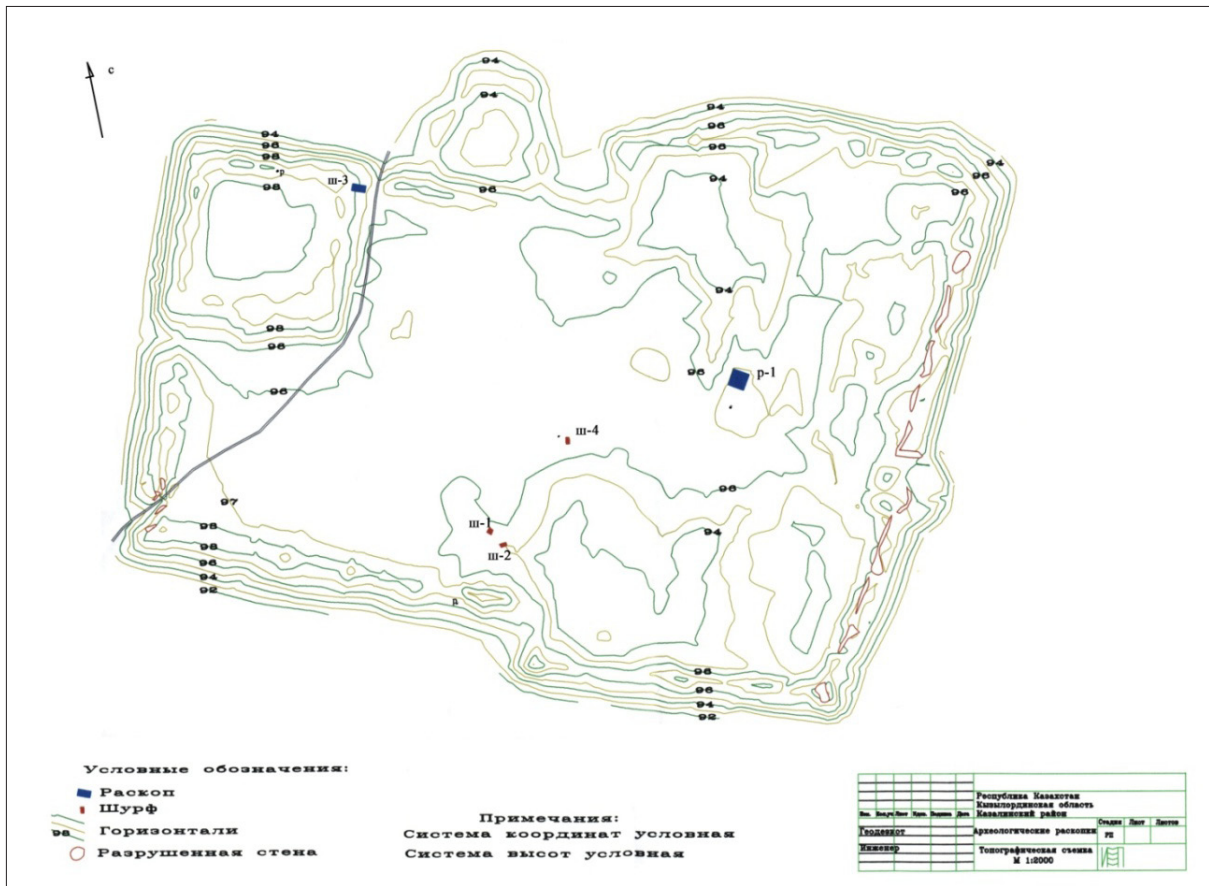


Figure 1 – Dzhan Kent. General plan of the hillfort. (topographer A. Chernyaev)



Figure 2 – Dzhan Kent. General view of the hillfort. View from East. Aerial view by the Martin Gofrilla on the international project Djetiasar Documentation Project

Entrance gate of Dzhankent thus probably planned on the analogy of ancient and medieval Khorezm hillforts. Such as Janbas-Kala (Lavrov, 1950: 16-18), Toprak-Kala (Tolstov, 1948: 119-123), Kurgashin Kala (Lavrov, 1950: 32.), Guldursun (Tolstov, 1948: 177).

Although the above-mentioned monuments existed long before the medieval monuments of the Eastern Aral sea region, the influence in the construction technology of Khorezm culture in the Syr Darya hillforts can be seen everywhere (in the production of ceramic products, building materials) (Arzhantseva and etc, 2014:).

Aims and methods of research

In the field season of 2018, during the inspection of the hillfort, it was decided to lay a excavation at the main entrance gate of the hillfort. In the course of archaeological work on the site complex methods of field archaeological research used in the excavation of monuments containing elements of architectural structures were used (Martynov, Sher, 1989: 76-86).

Excavation №7 (further R-7) was laid on the South side of the Northern flanking tower, at the corner where the Northern part of the bypass wall forms a right angle with the tower.

The purpose of laying the excavation on this site is:

- identification of the structure of the monument walls;
- obtaining stratigraphy of the hillfort to the mainland.

The size of the R-7 was initially estimated to be 9 × 3 m, as the excavation was intended as a cut on the outside of the bypass wall. However, after opening several fragments of buildings, it was decided to expand the excavation in the Southern direction, and the final size of the excavation was 9 × 14 m.

The excavation is conventionally divided into squares of 3 × 3 m, with the designation from West to East A, B, V, G, D from North to South through 1, 2, 3 that is A1, B1, V1... and extremely southern A 3, B 3, V3, etc. Conditional reference point was chosen on the Eastern wall of the hillfort over the excavation.

Results and discussion

In the course of archaeological works uncovered a few fragments of buildings, lined with mud bricks and adobe blocks (figure 4).

As mentioned above the upper part of the preserved walls and towers of the extension are

composed of adobe blocks. The height of the blocks varies from 90-100 cm to 120-150 cm, however, it is very difficult to trace the width of the blocks is most likely due to the fact that the blocks were put tape method. That is, the finished mixture of clay (mud) was filled with pre-prepared formwork and during the masonry it was also heavily compacted. In this way covered some distance (part of) the walls up to a width of 4-5 m, then removed the formwork from the hardened adobe blocks and set over flooded with blocks for the next row of blocks.

Between the rows mandatory laid a layer of reeds in a few centimeters. Reed is a unique natural waterproof building material, which also served as a reinforcing building material between the rows of blocks.

After removing the upper alluvial layer in squares A3, A2 and B1 start to show a «body» pakhsa wall (Mug Wall), which was erected in several rows. The rows of blocks varying in color and density of the applied building material. The upper row of blocks is preserved for a few cm (20-25), only in the South-Western corner of the safety of blocks reaches 80-90 cm in height. The upper blocks are light blue and very dense in structure (figure 5).

Under the upper row of blocks lies the second row of blocks of light yellow clay, which is not very dense in structure and when clearing crumbles into small clay clods. In the lower part of the second row there are also 2-3 rows of raw bricks, the sizes of which are difficult to determine since they are strongly scattered along the edges. The thickness of the second row varies from 60 to 70 cm. In the North-Western corner of the Quad. A3 what is the location of the incision there is a loose structure of the second row of adobe blocks. Probably the second row of blocks in some places just spread on not marked wet clay. This is evidenced by the crumbly structure of the light yellow row of blocks.

The third row of adobe blocks lies at a depth -224 cm from the main frame. In the Quad. A3 a fragment of the 3rd row of adobe blocks cleared area of 3 × 1 m. the thickness of the third row small, 25-30 cm, however, the structure (very dense) and color (light blue) it is very similar to the first row of blocks on top. The third row of blocks was laid out on a Golden-clay Suite of layers mixed with dry soil.

The Suite of Golden-clay layers began to appear in the Quad. V2 at a depth of -267 cm from the main reference point (further ▼). During archaeological work in the Quad. V3 the ash-clay layers were cleared to the base of the upper blocks (figure 5).

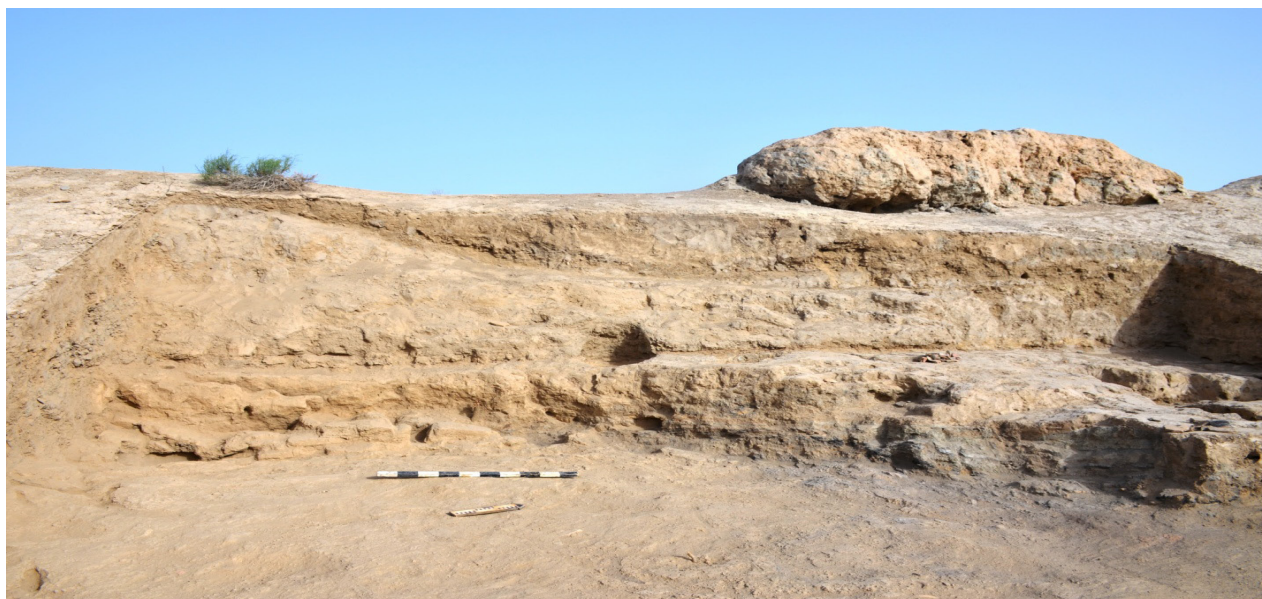


Figure 5 – Dzhankent. Excavation №7. FAS Eastern bypass walls and to the right in the foreground entourage Golden clay layers beneath the guide walls. View from East

Thus the overall picture of the construction of the defensive walls built in the following way: in advance of the raised soil (beneath the wall) is laid out Golden clay Suite of the layers to the desired height. In this case, 4-5 m from the surrounding surface, then it spread pahs blocks(Mud blocks) with a width of 4-5 m to 8-9 m and a height of 5-6 m, which we see in the surviving rows of pahs(Mud blocks) on the West side of the excavation at distances 1 m from the edge of the excavation.

The width of the third row of pahs(Mud blocks) reached 4-5 m from the Eastern edge of the excavated part of the wall, i.e. it coincides with the thickness of the shaft bypass East of city wall.

In the course of archaeological excavations delving further into the Quad. B3, V3, G3, D3 was opened and laying of Adobe bricks with a width of 70-75 cm, length up to 5.5 m. The masonry was laid at a depth of cm from -284 ▼. Masonry remained at a height of 35-40 cm, the size of the bricks are standard for monuments of the middle ages of the Eastern Aral sea region, 21-23 × 32-3 × 6-7 cm thickness of clay solution between the rows reaches 10 cm. This indicates the nature of the structure being built, that is, not for living space, most likely it was necessary to achieve the desired height of the walls as soon as possible (figure 6).

Exactly the same method of construction of walls in 2014 was recorded at the Excavation №2 in the section of the Northern wall. Squared 103-105/106-107 depth -510 cm ▼. However, the

dimensions of the raw bricks were slightly different 41 × 25 × 8 cm.



Figure 6 – Dzhankent. Excavation №7. The clutch of Adobe bricks under the guide walls. View from West

The above masonry was laid perpendicular to the Eastern wall and rests on an even more massive masonry of raw bricks with a size of 5x5 m at this stage of the study, the size of the bricks also differs 29 × 30 × 7 cm. Probably this design is the base of the flanking Northern tower of the Central gate

of the hillfort. However, above the brickwork in the Northern section of the excavation is well traced clay backfill, which gives us to assume initially flanking tower had other dimensions (smaller?) it was then destroyed and rebuilt, or most likely rebuilt, by another tower of a larger size (figure 7).

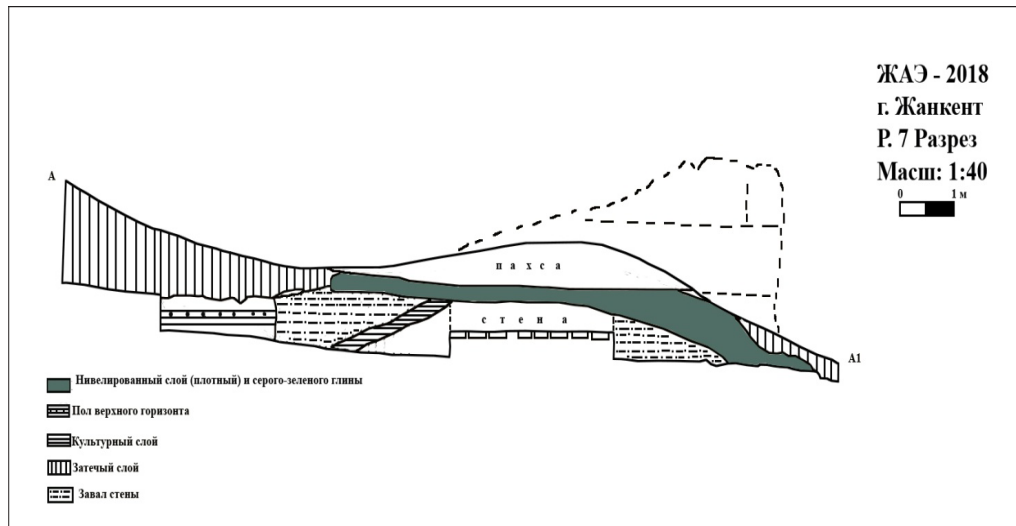


Figure 7 – Dzhan Kent. Excavation №7. Northern profile



Figure 8 – Dzhan Kent. Excavation №7. General view of the excavation. Bird's eye view

In the southern part of the excavation, closer to the Western profile right in the body of the bypass wall cleaned 2 pits with a diameter of 57 and 53 cm depth of 15 to 40 cm. Both pits were probably dug to install huma (Ceramic vessel) (Quad. A2). Pits lie at a depth of -228 cm from °.

In the Quad. A3 several rows of raw bricks (21 × 31 × 6 cm) have been cleared directly under the inguinal blocks. During the clearing it was determined that this layout was laid as a leveling layer between the second and third row of pakhs blocks (Mud blocks), also in this layer is well traced reed layer at a depth of -227 cm from ▼.

Further, after clearing the squares B3 and V3 at a depth of -308 cm ▼, revealed irregular masonry or blockage of raw bricks. Also this accumulation of raw material can be interpreted as a bridge in the passage of the main gate (figure 8).

In the Eastern part of the dig in the Quad. D3 and D2 is cleared, the laying of pakhs blocks (Mud blocks), of bad preservation. Display strongly tilted to the East, probably laying out on a level with the third row of pakhs blocks (Mud blocks) A1 square, at least the depth coincides with the depth of the third row of pakhs blocks (Mud blocks).

Ceramic material

During the excavation of the site at the gate (Site No. 7: the next R-7) on the Eastern wall of the hillfort Dzhankent was revealed a small archaeological material consists of pottery (Figure 9, 1-11, 14), single pieces of glass (Figure 9, 15) and metal (Figure 9, 12-13).

The ceramic material is fixed at a depth of -217 – 326 cm and below the level of the day surface. The largest areas of accumulation of ceramic fragments in the squares A1,2,3 and B1,2,3. Ceramics are highly fragmented. There are fragments of dishes: pans (Figure 9, 9), troughs (Figure 9, 10), huma (Figure 9, 8), lids (Figure 9, 6-7), dastarkhans (Figure 9, 2, 11), kitchen pots (Figure 9, 14), jugs, hearth stands (Figure 9, 3-4) and a fragment of one glazed saucer (Figure 9, 1). Whole products are represented only by the cover (Figure 9, 5) and a spinning wheel.

The main recipe for the molding mass of ceramics with R-7 – clay with the addition of chamotte and fine-grained sand (G+SH+MP), there are fragments with the presence of impurities to the clay in the form of gruss's (G+D) or organic (G+SH+O).

And in most cases used highly ferruginous clay, as evidenced by the brick-red shards. Rarely used, poorly ferruginous clay. The ceramics often qualitative, with the exception of fragments from cooking pots, or a fireplace stand. Surface treatment of this collection is weak, only some fragments are covered with engobe or streaks of angoba red or dark brown. Other methods of surface treatment cannot be traced. The ornament on the considered collection of ceramics is presented rarely, basically it is a carved ornament of straight and wavy lines, rarely stamps.

With regard to the categories of ceramics, it presents a crockery and a small table – dastarkhan. Accounting profiling shards and whole products revealed the following statistics categories of dishes. Khums and hamchi account for an average in this collection with the R-7 is about 35 units. Large pitchers with handles – about 10 units. Pots – about 10 units. The chigiri – about 8 units. Dastarkhans – 6 units. Covers – about 6 units. Frying pan – 2 units. Trough (tabak) – 1 unit.

Thus, in the study of the site at the gate on the Eastern wall of the hillfort Dzhankent found 119 pieces of ceramics, fragments and whole objects including. The number of profiling fragments of all squares – 58 pieces. Their external features and technological characteristics are different, that is, it can be assumed that in this collection of ceramics with P7 revealed fragments of 58 ceramic products and utensils including.

Ceramic with molded R-7 both manually and on a Potter's wheel, however, prevails stucco material. Products formed on the Potter's wheel a little more than 20%. Found in R-7 collection of ceramics typical of early detected at the site of Dzhankent ceramic material (Arzhantseva, 2014).

The revealed fragments of ceramic material are similar to the products from the jetyasar monuments. These are fragments of frying pans (Levina, p. 17, Figure. 3, 189-190, 192-193), fragments of hum with carved straight and wavy lines (Levina, p.), Dating from the I and II stages of jetyasar culture – the last centuries before. Fragments of pots with oblique notches and nail dents are similar to those from the hillfort Otrar, where they date back to no earlier than the X century (Akishev, Baipakov, Erzakovich, Ancient Otrar. 103, Figure. 58) and the hillfort Sauran, dated somewhat later (Smagulov, Sauran, 371, Figure 58).



Figure 9 – Archaeological materials of Dzhankent

Conclusion

Preliminary results of archaeological work on the site of Dzhankent, allows us to argue that the fortifications of the medieval hillfort of Dzhankent is one of the main elements of its urban structure. Also, these buildings served as an important guarantor of the existence of not only the hillfort but also the whole Oguz state. Thus, the fortress walls were an indicator of the economic potential and the level of military engineering. Strictly thought-out location on the ground not only served the purposes

of self-defense of the hillfort, but also contributed to the successful functioning of the district – rabad.

At this stage, archaeological research has been stopped and will continue in the next field seasons.

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