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**Hasansu Kurgan Report
On Excavations of Hasansu Kurgan
At Kilometre Point 399 of
Baku-Tbilisi-Ceyhan and South Caucasus pipelines Right Of Way**

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ABSTRACT

This Report describes the excavation of the Hasansu Kurgan located at Kilometre Point (KP) 399 of the Baku-Tbilisi-Ceyhan (BTC) Right Of Way (ROW). This burial site was characterized by a large chamber and kurgan mound. Pottery ware, stone and metal objects, jewellery mostly consisting of beads and also bones of different animals were recovered from the site in the course of excavations. The grave contained 71 vessels and has been radiocarbon dated to Cal BC 1770-1620 and is of the Middle Bronze Age.

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I. Introduction

- *Description of the BTC and SCP Archaeology Programme*

Archaeological excavations in connection with the construction of the Baku-Tbilisi-Ceyhan (BTC) and South Caucasus Pipeline (SCP) pipelines were conducted prior to, and during the construction of these pipelines. These excavations generally were carried out within the 44m wide pipeline corridor from 2001 to 2005. The archaeology program consisted of five phases of which the first four phases constituted field investigations:

Phase I – actual and potential archaeological sites were visually identified during walkover or baseline surveys during the selection of the pipeline route.

Phase II – the sites that were identified during Phase I as archaeologically potential were tested by digging test pits and conducting small-scale trial excavations.

Phase III – small and large-scale excavations were carried out within the BTC ROW.

Phase IV – small and large-scale excavations were carried out within the SCP ROW.

In addition to these, all the construction activities were monitored by watching brief archaeologists.

In general, during the core Phase III and Phase IV archaeological excavations were carried out at 41 sites with thousands of artefacts discovered. None of these sites had been previously known to archaeological science.

Phase V – preparation of scientific reports on the archaeological excavations carried out during the previous phases.

- *Discovery of the Archaeological Site*

The Hasansu Kurgan at KP 399 on the BTC ROW was identified as a potential archaeological site by a watching brief archaeologist during topsoil stripping in May 2004. Until the commencement of the pipeline construction the surface markers indicating the presence of an underlying kurgan had not been visible because the area is a level, arable land used for growing crops over long periods of time. The watching brief archaeologist's attention was attracted by an extensive scatter of stones within the easement and in the topsoil heap. Then the site was jointly visited by the Institute of Archaeology and Ethnography (IoAE) and BTC archaeological representatives who after examining the site came to a decision that it was in fact a burial mound dating from the Bronze Age.

The Hasansu Kurgan was excavated in January 2005 under the direction of Najaf Museyibli with participation of Yagil Danyalov and Anar Agalarzade. The excavation work was supervised by BTC archaeological representatives Richard Moore and Edward Dun.

II. Archaeological Contexts for Understanding the Site

- *General Archaeological Overview of this Portion of Azerbaijan*

The Agstafa District where the Hasansu Kurgan was recorded is in the western or Ganga-Gazakh region of the Azerbaijan Republic. The favourable natural geographic location and climatic conditions attracted people to this area from times immemorial which accounts for numerous

archaeological sites of different historical dates revealed in this region. Intensive life continued in the Ganga-Gazakh area during all historical and archaeological periods beginning from the Stone Age through the Late Middle Ages. Hundreds of archaeological sites of different dates have been discovered here. These were Stone Age camps, settlements of early farmers and stock-breeders, settlement sites and burials dating to the Bronze Age, early Iron Age, Antique Period and Middle Ages.

The Stone Age monuments were revealed and studied primarily in the territory of the Agstafa and Gazakh Districts. The best known among these are Damjili, Dashsalahli, Yataq Yeri campings and open sites of the Stone Age date.

The relatively more investigated monuments in the area are early farmers and cattle-breeders' sites dating to the Eneolithic Period (between 6000 and 4000, B.C.). Such sites as Shomutepe, Gargartepesi and Toyratepe in Agstafa, Babadervish in Gazakh, Goytepe, Mentejtepe and Toyratepe II in Tovuz, Kechili, Rustepesi and Ganlitepe in Shamkir and others could be mentioned as ancient settlement sites. The first Eneolithic monument excavated in the Ganja-Gazakh area was the Shomutepe site. As the artefactual material recovered from this site drastically differed from that of South Caucasian coeval sites a new Shomutepe archaeological culture was designated which covers the Kura river mid flow basin, the south-east of present-day Georgia and the Ganja-Gazakh region of Azerbaijan.

A number of various archaeological sites dating to different stages of the Bronze Age have been recorded in the Ganja-Gazakh region. A fairly well studied early Bronze Age settlement is the Babadervish site in the Gazakh District. Kurgan type burial sites of this date have been excavated in the Khanlar, Shamkir, Dashkasan Districts and around Ganja. The Gullutepe settlement site in the Agstafa District and burial mounds in Dashkasan, Shamkir and Tovuz could be named as dating to the middle Bronze Age. Of these more fully researched are burial sites. Most of the uncovered sites in the Ganja-Gazakh region are those dating to the late Bronze Age to early Iron Age (between the second half of the 2nd millenium and the beginning of the 1st millenium, B.C.). The monuments of this date in the area relate to the Khojali-Gedabey Culture. They are represented by ancient settlements, kurgans, earth burials and stone coffin graves. The more fully investigated sites of this date in the area are Babadervish IV and Saritepe ancient settlements. In the Gedabey and Dashkasan Districts small fortresses – cyclopean structures have been thoroughly studied. Hundreds of burials have been excavated in the Khanlar, Ganja, Shamkir, Gedabey, Dashkasan and Gazakh Districts.

Settlements and burials from the Antique Period (between the middle of the 1st millenium, B.C. and the third century, A.D.) have been discovered in the Ganja-Gazakh region. From these Saritepe settlement in the Gazakh District and Garajamirli settlement in the Shamkir District should be specifically noted. The excavations at these sites provided evidence of a highly developed urban culture way back in the early Antique Period.

The Early Middle Ages (fourth to third century) in the area are represented by settlements, burials and ceremonial structures. Albanian Christian chapels as well as rural and urban settlements of this date have been excavated and studied. These were Christian chapels in the Gazakh and Agstafa Districts and the Torpaggala urban settlement site in the Tovuz District.

Both urban- and rural-type settlements dating to the middle Ages (ninth to eighteenth century) are known to exist in the Ganja-Gazakh region. Among these such remarkable medieval cities as Ganja and Shamkir should be specifically noted. The excavations conducted at these sites provided evidence that they already developed into large cities during the eighth to ninth centuries.

• *General Summary of the Geography and Geology of the Area*

The relief, geographic and geological characteristics of any region condition the economics, material culture and by and large the entire mode of life of people living in this particular area during different periods of history. From this point of view of particular interest is the Ganja-Gazakh region which is divided into three distinctive parts in terms of relief, geography and geology: mountainous, submountainous and flat. From the west and south-west the area is locked

with high ridges of the Minor Caucasus. The highest peaks in these ridges are the Goshgar Dagı (3378m) and Hinal Dagı (3373m). The alpine and subalpine grasslands high in the mountains and foothills of the Minor Caucasus are covered with thick green vegetation even in the hottest summer months which is the major factor in the development of summer animal husbandry. These areas are covered with woods at a height of 500-600m and up to 2200-2300m. Higher up the woodland changes taking the shape of narrow strips of forested land which gradually passes into subalpine meadows and fields. At a height of 2500m the mountainsides mostly covered with alpine grasslands sometimes rather scarce alternate with steep rocks. It is in these mountains that the Kura river right-hand affluents feed from plentiful water sources and snow-covered mountain peaks. The submountain wood and bushwood zones are the natural habitat for wild boar, bear, wolf, badger, jackal, hare and other animals. Of birds the most precious are pheasant and francolin.

The flat and partially foothill zone is located 150-600m above sea level. This zone is characterized by brown and chernozem soils fit for crop growing. At the same time large portions of this zone are semi-desert lands with sagebrush being the major vegetation. At a height of 500-600m the areas covered with sagebrush scrub are replaced with woods. Rapid water rivers running through deep gorges of the Minor Caucasus come out to the flat area and form wide river beds in these places which become even wider closer towards the river of Kura. The fairly large rivers in this area are Agstafachai, Hasansu, Tovuzchai, Zayamchai, Shamkirchai and Goshgarchai. In the summer months the water flow in these rivers decreases to the extent that some of them may completely dry up and yield no water to the river of Kura.

There is a number of mineral deposits in the region's mountainous areas. Commercially significant of these are a copper mine in Gedabey and an iron ore mine in Dashkasan. Deposits of semiprecious stones such as agate, opal, chalcedony, amethyst, jasper, aragonite and crystal were also discovered in this area. A gold mine and one of the largest obsidian mines in the Caucasus are located in the Kelbajar mountains in the immediate vicinity of Gedabey and Dashkasan.

III. Field and Office Methods

- *Field Methods*

No machines were involved in the excavation of the site. The work was performed by the project labour force using such hand tools as spades, shovels, trowels, brushes and others to clean and expose features and artefacts as they were located. The artefacts retrieved were field sorted, washed, recorded in a logbook, boxed and sent to the IoAE, Baku.

- *Office/Laboratory Methods*

The archaeological material from site was treated, restored and conserved at the IoAE. The finds were illustrated and photographed, the site plan and the logbook were further refined. This work constituted part of the reporting procedure resulting in this current Long Report.

- *Special Analysis*

The floral material recovered from the Hasansu Kurgan were sent to Beta Analytic for 13C/12C dating. The metal objects were analysed in terms of their composition at the Analytical Centre, Institute of Geology, Azerbaijan National Academy of Sciences.

- *Archive Disposition*

All the artefactual material providing archaeological data is stored at the IoAE archives.

IV. Excavation Results

- *Site Description*

The Hasansu Kurgan was discovered, approximately 1 km west of the river bearing the same name. The site is located on flat arable land with fertile chernozem soil. The area had been

cultivated over long periods of time and consequently the kurgan mound had been truncated by ploughing. This was the major reason that the kurgan was not identified as such prior to BTC and SCP construction. At some natural and man-made cuts the fertile soil appeared to measure 1 to 2 m in thickness. The deeper layers contained gravel and river-washed stones.

- *Description of Grave*

As the landuse in the area was predominantly arable the kurgan surface was completely plough damaged and the stones forming the kurgan mound were removed from the ground and scattered around. That rendered it impossible to take initial measurements of the kurgan surface. At the start of the excavation the kurgan cover consisting of river washed stones formed a rectangle that measured 6.3 m in length and 4 m in width at its widest point (Photo 1). Beneath this stone setting there was a burial chamber of the same shape that was cut into the natural layer. It was a crypt-type burial chamber of 4.1 by 2.7 m aligned north-west to south-east with the chamber floor 2 m below the ancient horizon. On its north-west side the burial chamber had a 1.6 m long and 1.2 m wide dromos slanted towards the chamber floor.

Obsidian splinters, a remnant of a human image made of grey porous tufa, cattle and small bovid bones, including those of a pig were found at different depths while cleaning the interior of the grave. One obsidian splinter had traces of worn off notches. The grave surface contained also fragments of a broken ceramic vessel.

A stone spread was exposed at a depth of 1 m in the centre of the crypt. This 50 cm thick pile of stones measuring 170 cm in length and 120 cm in width sharply differed from the surface set of river stones and was formed of 4-5 cm thick limestone plates. This stone cluster contained rotten wood remains laid widthwise on the grave chamber. One of the completely decayed wood pieces was 120 cm long and measured about 20 cm in diameter. The oval patch of limestones produced a skeleton of a juvenile that had a north to south alignment. It was in a poor state of preservation. This and the grave fill consisting of collapsed roof material made it difficult to define more precisely the disintegrated skeleton's position. Nevertheless the layout of some of the bones prompted that the skeleton could have been lying on its back.

The grave chamber contained a total of 71 ceramic vessels. These pottery vessels of different sizes were placed in two rows along the left- and right-hand walls of the rectangular grave chamber (Photo 2) which implies that the people performing funereal rites were trying to maintain some kind of symmetry. Only 3 of the ceramic grave gifts were monochromatic – they were painted red. Two of them were placed at the north-west ends of the pottery rows towards the dromos, one pot at each end. The crushed remains of a third painted pot were lifted from the central part of the chamber against its south-east wall. The painted pot layout could be imagined to form a triangle. Jewelry items consisting of mother-of-pearl and paste beads were recovered from and around the two painted pots at the ends of the rows. Two bull skulls resting against the grave walls with leg bones around them were exposed in the north-east and south corners of the burial chamber. Other bull bones were scattered on the entire floor of the chamber, especially in its central part. The central part also contained individual pig and other small bovid bones. In addition, a bronze pin was recovered from here.

- *Archaeological Material Recovered from the Grave*

Ceramics

Sixty nine of the pots lifted from the Hasansu Kurgan are vessels coated with black polish or dark grey paint, the remaining three being monochromatic, painted in red. The thumbled decorations on black polish vessels are predominantly incrustated in white. The decoration patterns mainly consist of wavelike lines, meanders, triangles and angles incised on pots with a sharp tool. The black polish pots are large and small volume jugs and bowls. Some of the pots are thought to be used solely for performing rituals.

Vessel	Type	Treatment	Decorative type 1	Decorative type 2	Style	Comments	Features	Photo
1	Jug							
2	Jug		Dots	Lines	Triangles			3
3	Jug		Dots	Lines	Triangles			
4	Jug		Dots	Lines	Triangles		Lattice	4
5	Jug	Burnished	Lines	Lines	Triangles			
6	Jug		Dots		Zigzag			
7	Jug		Dots		Zigzag			
8	Jug		Lines		Triangles	Double line		
9	Jug		Dots		Triangles			
10	Jug		Lines		Triangles			
11	Jug		Dots	Dots	Rectangles		Lugs	
12	Jug		Dots	Dots	Rectangles		Lugs	
13	Jug	Burnished	Dots		Rectangles	Double line		
14	Jug		Dots		Rectangles			
15	Jug		Dots		Rectangles			5
16	Jug		Dots		Rectangles	Double line		6
17	Jug				Rectangles			
18	Jug		Dots		Rectangles	Double line		
19	Jug		Dots		Rectangles	Double line		
20	Jug		Dots	Lines	Rectangles			
21	Jug	Burnished	Dots		Zigzag			
22	Jug	Burnished	Dots		Zigzag			7?
23	Jug	Burnished	Dots		Zigzag			
24	Jug	Burnished	Dots		Zigzag	Double line		
25	Jug	Burnished	Dots		Zigzag	Double line		8
26	Jug	Burnished	Dots		Zigzag	Double line		9
27	Jug	Burnished	Dots		Zigzag	Double line		
28	Jug	Burnished	Dots		Zigzag			
29	Jug	Burnished	Dots	Lines	Triangles			10
30	Jug	Burnished	Dots		Zigzag	Double line		11
31	Jug		Dots		Zigzag	Double line		12
32	Jug	Burnished	Dots		Zigzag			13
33	Jug	Burnished	Dots		Zigzag	Double line		
34	Jug	Burnished	Dots		Zigzag			14
35	Jug	Burnished	Dots	Lines	Zigzag			15
36	Jug	Burnished	Dots		Zigzag			16
37	Jug	Burnished	Dots		Zigzag			17
38	Jug							
39	Jug	Burnished	Dots		Rectangles			18
40	Jug		Dots		Zigzag	Double line	Lug	19
41	Jug	Burnished	Dots		Zigzag		Lug	
42	Jug	Burnished	Dots		Zigzag		Lug	
43	Jug		Dots		Zigzag		Lug	

Vessel	Type	Treatment	Decorative type 1	Decorative type 2	Style	Comments	Features	Photo
44	Bowl	Burnished	Dots		Zigzag			
45	Bowl	Burnished	Dots		Zigzag			
46	Bowl	Burnished	Dots		Zigzag			20
47	Bowl	Burnished	Dots		Zigzag			21
48	Bowl	Burnished	Dots		Zigzag			22
49	Bowl	Burnished	Dots		Zigzag			
50	Bowl	Burnished	Dots		Zigzag			23
51	Bowl	Burnished	Dots		Zigzag			24
52	Bowl	Burnished	Dots		Zigzag			25
53	Bowl	Burnished	Dots		Zigzag			26
54	Bowl	Burnished	Dots		Zigzag			
55	Bowl	Burnished	Dots		Zigzag			
56	Bowl	Burnished	Dots		Zigzag			
57	Bowl	Burnished	Dots		Zigzag			
58	Bowl	Burnished	Dots		Zigzag			
59	Bowl	Burnished	Dots		Zigzag			27
60	Bowl	Burnished	Dots		Zigzag			
61	Bowl	Burnished	Dots		Zigzag			28
62	Bowl	Burnished	Dots		Zigzag			20
63	Bowl	Burnished	Dots		Zigzag			29
64	Bowl	Burnished	Dots		Rectangles			
65	Bowl	Burnished	Dots		Zigzag			25
66	Bowl	Burnished						30
67	Badya		Combed		Rectangle		Handles	
68	Trough	Burnished						
69	Trough	Burnished						
70	Jug	Monochromatic	Paint		Geometric			
71	Bowl	Monochromatic	Paint		Lattice			
72	Badya	Monochromatic	Paint		Geometric			

Table KP399. Summary of pottery decoration and style.

Jugs

1. A globular-body, narrow-based, black-polished jug, badly smashed and fragmentary. The surface is coated with angobe and painted black. The shoulder is decorated with a netlike ornament painted in thin lines. The base diameter could be measured only. It is 9.5 cm.
2. A black-polished jug with a globular body and narrow base. The part of the body below the shoulder is painted black and well polished. The shoulder is decorated with thumb-dots and triangles formed by alternating broad strips of polish. Every second one of adjacent triangles is filled with dots. The blank spaces between the triangles below are ornamented with black vertical lines incised on the grey background. When viewed from above all these decorations resemble the sun. The triangles in the upper row gradually become smaller in one direction (Photo 3). Dimensions: mouth diameter – 14.5 cm, height – 23.3 cm, body diameter – 27 cm, neck height – 2 cm and base diameter – 10 cm.
3. A globular-body, narrow-based, black-polished jug. Poorly fired, therefore the surface mottled with brown spots is eroded in places. Tempered with sand. The shoulder is encircled with two rows of wide zigzag strips formed by dots. These zigzags in their turn form triangles with down-turned vertexes. The grey spaces between the triangles in the lower row are decorated with vertical and slanting black thin lines. Dimensions: mouth diameter – 14

cm, height – 22.5 cm, body diameter – 26 cm, neck height – 2.5cm and base diameter – 9.5 cm.

4. A globular, narrow-based, black-polished jug. Sand tempered and poorly fired. The body up to the shoulder is coated with black paint. The neck has a bulging belt and also a polished strip over the black coat in its lower section. The shoulder has a zigzag strip consisting of thumbbed dots which is accompanied by another strip polished beneath. The grey upper and lower sections of this zigzag strip are filled with black thin, criss-cross, netlike lines (Photo 4). Dimensions: mouth diameter – 14 cm, neck height – 1.5 cm, height -21.7 cm, body diameter – 26 cm and base diameter – 9.5 cm.
5. A globular, narrow-based, black-polished jug. Sand tempered and poorly fired. The internal surface is brown. The shoulder is girded with a zigzag strip consisting of thumbbed dots. This strip is accompanied by two more black painted strips – one at each side. The grey upper and lower sections of this zigzag strip are filled with thin diagonal black lines. The neck is separated from the shoulder by a gutter-shaped line. The neck surface is burnished. The vessel is disintegrated. Dimensions: mouth diameter – 14 cm, neck height – 2 cm.
6. A globular, narrow-based, black-polished jug. Sand tempered and poorly fired. Disintegrated. The shoulder is decorated with triangles made up of thumbbed dots, their vertexes are turned down. The blank spaces between the triangles are grey and have netlike ornaments consisting of thin black lines. Dimensions: mouth diameter – 14.5 cm, base diameter – 10.5 cm.
7. A globular, narrow-based, black-polished jug. Sand tempered and poorly fired. Disintegrated. The central part of the neck is bulging. The entire surface of the pot is coated with angobe and black paint. The shoulder is girded with zigzag lines made up of thumbbed dots. The grey blank space between the zigzag lines is ornamented with thin lines of polish.
8. A globular, narrow-based, black-polished jug. Sand tempered and poorly fired. The internal surface is brown. The shoulder has two rows of triangles with one side open and down-turned vertexes. The triangles in the upper row are depicted within the triangles in the lower row however they are twice as small. The blank spaces between the triangles in the lower row have netlike ornaments consisting of thin black lines. Incomplete. Dimensions: mouth diameter – 14 cm, neck height – 2 cm, body diameter – 27 cm, height – 23 cm, base diameter – 9.5 cm.
9. A globular, narrow-based, black-polished jug. Sand tempered and poorly fired. Poor firing caused grey spots on the neck. The lower part of the pot is heavily eroded. The shoulder is decorated with triangles made up of thumbbed dots, their vertexes are turned down. The blank spaces between these triangles are filled with isosceles triangles with one of the vertexes turned upward. The number of these triangles is ten. Dimensions: mouth diameter – 15.5 cm, neck height – 2.5 cm, body diameter – 26.5 cm, base diameter – 10 cm, height – 23.5 cm.
10. A globular, narrow-based, black-polished jug. The surface is angobe-coated and polished. The jug is painted black. The internal edge of the everted rim is brown. The shoulder is girded with two rows of strips forming triangles. The triangles in the upper row are directed downward, the spaces between them contain triangles oriented upward. The ornament resembles the sun when viewed from above. Dimensions: mouth diameter – 15 cm, height 25.5 cm, neck height – 2 cm, body diameter – 27.5 cm, base diameter – 10.5 cm.
11. A large, squat, globular, polished jug. Sand tempered and poorly fired. The surface is painted black. There are three smooth oval lugs with holes in the middle symmetrically applied on

the shoulder. The everted rim has an outer-thumbed flange. The smooth neck is separated from the shoulder by a gutter-shaped line. Uneven firing caused emergence of grey spots on the shoulder. The shoulder is decorated with flat elongated meanders formed of dots. The same dot punching method is used to form three rows of zigzag strips immediately below the meanders. The broken jug was partly restored. Dimensions: mouth diameter – 16 cm, neck height – 2 cm, height – 28 cm, body diameter – 36.5 cm, base diameter – 13 cm.

12. A large, squat, globular, polished jug. Sand tempered, poorly fired, painted black. Uneven firing caused emergence of grey spots on the shoulder. There are three smooth oval lugs symmetrically applied on the jug body. The lug surfaces are smooth and polished. All the three lugs have holes in their centres. These holes measure 5 mm in diameter. The everted rim has an outer-thumbed flange. The smooth neck is separated from the shoulder by a gutter-shaped line. The shoulder is decorated with flat elongated meanders formed of dots. Below are three rows of zigzag strips formed by the same method of dot punching. Almost replicates jug 34. The broken jug was fully restored. Dimensions: mouth diameter – 16 cm, neck height – 1.7 cm, height – 27 cm, base diameter – 15 cm, body diameter – 38 cm.
13. A globular, narrow-based, black-polished jug. The inner surface is brown. The jug is coated with angobe and then burnished. Sand tempered, poorly fired, painted black. The shoulder is girded with two rows of meanders made up of dots. Badly smashed pot was mended. Dimensions: mouth diameter – 14.5 cm, body diameter – 26 cm, neck height – 3 cm, height – 21.5 cm, base diameter – 10 cm.
14. A globular, narrow-based, black-polished jug. Incomplete and broken. The surface is painted black. The neck is bulging. Sand tempered and poorly fired. The shoulder is girded with two rows of thumbled meanders. The jug did not yield any measurements.
15. A globular, narrow-based, black-polished jug. The shoulder is girded with vertically elongated meanders made up of punched dots. One of the meanders is locked. The inner surface of the pot is brown (Photo 5). Dimensions: mouth diameter – 14 cm, height – 21.5 cm, neck height – 2 cm, body diameter – 24.5 cm, base diameter – 9 cm.
16. A narrow-based, black-polished jug. It has an everted rim and globular body. The shoulder is girded with two rows of meander-type patterns formed by dots. In both rows the legs of the meanders lock at the same point and form two rectangles (Photo 6). Dimensions: mouth diameter – 16 cm, height – 24 cm, neck height – 2.5 cm, body diameter – 27.5 cm, base diameter – 10.3 cm.
17. A globular, narrow-based, black-polished jug. The shoulder is girded with two rows of meanders. In both rows the meanders lock at different points as squares and rectangles. Dimensions: mouth diameter – 14 cm, height – 24 cm, neck height – 2.5 cm, body diameter – 27 cm, base diameter – 9 cm.
18. A globular, narrow-based, black-polished jug. The shoulder is girded with two rows of meanders made up of dots. The meanders in the upper row are smaller than those in the lower row. There are no locked meanders in either of the rows. Dimensions: mouth diameter – 14.5 cm, height – 22 cm, neck height – 2.5 cm, body diameter – 25 cm, base diameter – 10 cm.
19. A globular, narrow-based, black-polished jug. Sand tempered and poorly fired. The neck is girded with a bulging strip. The shoulder is girded with two rows of meanders made up of dots. The meanders in the upper row are smaller than those in the lower row. Dimensions:

mouth diameter – 14.5 cm, height – 23.5 cm, neck height – 3 cm, body diameter – 27.5 cm, base diameter – 10.5 cm.

20. A small grey-brown jug. Broken. Sand tempered and poorly fired. Angobe-coated and polished. Thin walled, thick based. The shoulder is girded with oblong meanders made up of incised and thumbled patterns. Dimensions: mouth diameter – 9.5 cm, base diameter – 5 cm.
21. A small-volume dark grey narrow-based jug. Only crushed remains, could not be restored and therefore did not yield measurements. Sand tempered and poorly fired. Heavily eroded although the pot was angobe-coated and burnished. The shoulder is girded with a zigzag strip made up of dots.
22. A small-volume dark grey narrow-based jug. Only crushed remains, could not be restored and therefore did not yield measurements. Sand tempered and poorly fired. Heavily eroded although the pot was angobe-coated and burnished. The smooth surface neck is separated from the shoulder by a gutter-shaped line. Below this line the jug is girded with a strip formed by dots and further down on the shoulder with a zigzag strip made using the same method (Photo 7).
23. A small-volume dark grey jug. Only small crushed remains, could not be restored. Sand tempered and poorly fired. A thin gutter-shaped line separates the neck from the shoulder. The shoulder is girded with two rows of zigzag strips made up of dots. The pot is angobe-coated and burnished.
24. A small-volume brown narrow-based jug. Totally disintegrated, could not be restored. Sand tempered and poorly fired. Zigzag strips formed by dots gird the jug shoulder in two rows. The pot is angobe-coated and burnished. Dimensions: base diameter – 4.5 cm.
25. A small-volume, narrow-based black-polished jug. Sand tempered, unevenly fired, porous. The squat and elongated meanders formed by thumbled dots on the pot shoulder are disorderly and do not lock completely (Photo 8). Dimensions: mouth diameter – 9.8 cm, height – 12 cm, neck height – 1.5 cm, body diameter – 16 cm, base diameter – 5 cm.
26. A small, globular, narrow-based, brown, burnished jug. Sand tempered and poorly fired. A thin gutter-shaped line separates the neck from the shoulder. The shoulder is girded with a wavy ornament consisting of two strips formed by dots (Photo 9). Dimensions: mouth diameter – 10.5 cm, height – 14.5 cm, neck height – 1.8 cm, body diameter – 17 cm, base diameter – 5 cm.
27. A small-volume dark grey narrow-based jug. Broken, but yielded some measurements. Sand tempered and poorly fired. The neck surface is smooth. The jug is angobe-coated and burnished. The neck is separated from the shoulder by a gutter-shaped line. Zigzag strips formed by dots gird the jug shoulder in two rows. Dimensions: mouth diameter – 10.2 cm, neck height – 1.7 cm, base diameter – 4.5 cm.
28. A small dark grey jug. Broken. A thin incised line separates the neck from the shoulder. Below are two parallel lines formed by thumbled dots. Further down the shoulder is girded with a zigzag strip applied in the same way. The pot is angobe-coated and burnished. The mouth and base diameters of the jug could be measured only, they are accordingly 9.5 cm and 4.5 cm.
29. A small oblong narrow-based jug. Sand tempered. The burnished surface with black and brown spotting caused by uneven firing is eroded. The neck is separated from the shoulder

by a gutter-shaped, slightly bulging line. A broken zigzag strip made up of dots girds the pot shoulder. The blank spaces between this zigzag and the neck are decorated with similar but incomplete ornaments (Photo 10). Dimensions: mouth diameter – 9 cm, neck height – 2 cm, body diameter – 14 cm, height – 13.8 cm, base diameter – 4.5 cm.

30. A small globular narrow-based jug. The burnished surface is mottled with black and brown spots that resulted from uneven firing. Two thin incised lines separate the neck from the shoulder. Below, a zigzag ornament formed by thumbled dots girds the pot shoulder (Photo 11). Dimensions: height – 14 cm, body diameter – 16 cm, neck height – 1.5 cm, base diameter – 5 cm.
31. A small-volume, globular, narrow-based, black-polished jug. Sand tempered, fairly well fired. The shoulder is girded with a wavelike line. Below is an ornament consisting of a few rows. All the patterns are formed by thumbled dots (Photo 12). Dimensions: mouth diameter – 10 cm, neck height – 1.5 cm, height – 12.5 cm, body diameter – 16 cm, base diameter – 5 cm.
32. A small-volume, globular, brown, narrow-based jug. Sand tempered, poorly fired. Although the pot was burnished it has lost its angobe coat because of heavy erosion. Only a few sections of a zigzag strip made up of thumbled dots survived. Disintegrated pot has been mended. (Photo 13). Dimensions: mouth diameter – 10 cm, neck height – 1.5 cm, height – 13.5 cm, body diameter – 15 cm, base diameter – 5 cm.
33. A dark grey narrow-based jug. Sand tempered clay is poorly fired. The surface is poorly burnished. Disintegrated. The neck surface is smooth. A gutter-shaped line separates the neck from the shoulder. Zigzag strips formed by thumbled dots gird the jug shoulder in two rows. Dimensions: mouth diameter – 11.5 cm, neck height – 2 cm.
34. A small narrow-based dark grey jug. Sand tempered clay is poorly fired. Could not be fully restored. A gutter-shaped line separates the neck from the shoulder. The surface is angobe-coated and burnished. The jug shoulder is girded with a zigzag strip formed by thumbled dots. The blank spaces formed above this zigzag are filled with triangles. These triangles with dow-turned vertexes are applied in the same manner - by thumbing dots. (Photo 14). Dimensions: mouth diameter – 9.5 cm, body diameter – 16.5 cm, neck height – 2 cm, height – 15.5 cm, base diameter – 6 cm.
35. A small-volume, oblong, narrow-based jug. The surface is of a dark brown colour. Angobe-coated and burnished. Could not be fully restored. A gutter-shaped line separates the neck from the shoulder. Below this line the pot is girded by a 1 cm thick zigzag strip made up of thumbled dots. The clay tempered with sand is poorly fired (Photo 15). Dimensions: mouth diameter – 10 cm, body diameter – 17.5 cm, neck height – 2 cm, height – 17 cm, base diameter – 5 cm.
36. A small narrow-based jug. Squat and globular. The dark brown surface is angobe-coated and burnished. Sand tempered clay is poorly fired. Badly smashed but complete pot was restored. Two rows of zigzags made up of thumbled dots gird the pot shoulder (Photo 16). Dimensions: mouth diameter – 10 cm, body diameter – 15 cm, height – 12.5 cm, base diameter – 4.5 cm.
37. A small narrow-based dark grey jug. Sand tempered clay is poorly fired. Could not be fully restored. The surface is angobe-coated and burnished. A gutter-shaped line separates the neck from the shoulder. Below this line the jug shoulder is girded with a strip formed by thumbled dots. Further down hook-like patterns are applied in the same way. Beneath these

patterns a zigzag applied in the same manner girds the pot body. The neck is smooth (Photo 17). Dimensions: mouth diameter – 10 cm, neck height – 1.8 cm, body diameter – 16.5 cm, height – 15 cm, base diameter – 5.8 cm.

38. Fragments of a small narrow-based black jug were collected from the kurgan surface. The clay tempered with sand is poorly fired. The surface although smooth is not burnished. The neck is elongated (3 cm). This pot differs from the rest of the pottery ware recovered from the kurgan. Could not be identified to forms and yielded no measurements.
39. A small narrow-based brown jug. Badly smashed but restored. Some fragments are missing. Sand tempered clay is poorly fired. The surface is angobe-coated and burnished. The shoulder is girded with elongated meanders made up of thumbled dots. In places these patterns are spike-shaped (Photo 18). Dimensions: mouth diameter – 9.3 cm, height – 12.2 cm, body diameter – 15.5 cm, base diameter – 4 cm.
40. A small, squat, narrow-based, black-polished jug. Part of the rim is missing. The neck is separated from the shoulder by a gutter-shaped line. The pot surface is eroded because the sand tempered clay was poorly fired. Two rows of zigzag strips made up of thumbled dots gird the pot shoulder. There used to be a bulging lug on the shoulder. This lug had come off but could be restored in its place. The lug was attached to the jug both by being affixed on it and with the help of a nail-shaped extension of the lug that was put through the orifice made on the body prior to firing. In addition holes were made both on the lug and the base of the pot (Photo 19). Dimensions: mouth diameter – 9 cm, neck height – 1.5 cm, height – 11 cm, body diameter – 15 cm, base diameter – 5.5 cm.
41. A small, narrow-based, black-polished jug. The angobe-coated and burnished surface is mottled with brown spots. Sand tempered clay is poorly fired. The jug shoulder is girded with a zigzag strip formed by thumbled dots. The body has an oval, flat surface lug with a hole in the centre. The jug is disintegrated. Dimensions: mouth diameter – 8.5 cm, neck height – 1.3 cm.
42. A small, squat, narrow-based, brown jug. Sand tempered. The burnished surface is eroded because of poor firing. A gutter-shaped line separates the neck from the shoulder. The jug shoulder is girded with a zigzag strip formed by thumbled dots. The base has a hole measuring 0.5 cm in diameter which presumably was made prior to firing. There is an oval, flat lug attached to the shoulder. It also has the same diameter hole as the base. Dimensions: mouth diameter – 8.5 cm, neck height – 1.2 cm, height – 8.7 cm, body diameter – 13.5 cm, base diameter – 4.5 cm, lug dimensions – 5.8 x 5 cm, thickness - 2 cm.
43. A small, squat, narrow-based, black-polished jug. The pot surface is mottled with brown spots and eroded in places because the sand tempered clay was poorly fired. The base of this pot also has a hole. The bulging lug had come off. The neck is separated from the shoulder by a gutter-shaped line. The shoulder is girded with two rows of wavelike strips made up of thumbled dots. Dimensions: mouth diameter – 8 cm, neck height – 1 cm, height – 8.7 cm, body diameter – 13 cm, base diameter – 5 cm.

Bowls

44. A small dark grey bowl. Fragmentary. Slightly burnished. The thin rim is fringed with a gutter-shaped line. The bulging shoulder is girded with a zigzag strip made up of thumbled dots. Sand tempered, poorly fired. The base is narrow and thick. The base diameter could only be measured – 3.5 cm.

45. A brown narrow-based bowl. Burnished. The bulging shoulder is girded with a zigzag strip made up of thumbbed dots. Sand tempered, poorly fired. The thin rim is separated from the shoulder by a gutter-shaped line. The pot was restored. Dimensions: mouth diameter – 12.5 cm, body diameter – 14 cm, height – 7.5 cm, base diameter – 4 cm.
46. A small burnished bowl. The body is bulging. The surface is mottled with black and brown spots. The bulging shoulder is girded with a broken zigzag strip formed by thumbbed patterns (Photo 20.1) Dimensions: mouth diameter – 9.2 cm, body diameter – 10.5 cm, height – 6.5 cm, base diameter – 4.5 cm.
47. A small, wide-mouthed, narrow-based bowl. This brown pot is angobe-coated and burnished. A gutter-shaped line is incised between the mouth and shoulder. The bulging shoulder that is eroded has a zigzag strip made up of thumbbed patterns (Photo 21). Dimensions: mouth diameter – 10.5 cm, body diameter – 12 cm, height – 7 cm, base diameter – 2.5 cm.
48. A narrow-based deep bowl. The surface is covered with black and brown spots caused by uneven firing. Angobe-coated and burnished. The rim is thin. The bulging shoulder has a zigzag strip made up of thumbbed dots (Photo 22). Sand tempered clay is poorly fired. Dimensions: mouth diameter – 11 cm, body diameter – 13 cm, height – 8 cm, base diameter – 4.2 cm.
49. A narrow-based, deep, brown bowl with a thin rim. Angobe-coated and burnished. Because of poor firing the pot is eroded in places. The bulging shoulder has a wide zigzag strip made up of thumbbed dots. Dimensions: mouth diameter – 13.8 cm, body diameter – 17 cm, height – 12 cm, base diameter – 4 cm.
50. A narrow-based, deep, brown bowl with a thin rim. Sand tempered clay is poorly fired. The burnished surface is heavily eroded. The bulging shoulder is girded with a zigzag strip made up of thumbbed dots (Photo 23). Dimensions: mouth diameter – 11 cm, body diameter – 13 cm, height – 9 cm, base diameter – 3.3 cm.
51. A narrow-based, deep bowl. The surface is burnished with black and brown spots. A gutter-shaped line separates the thin rim from the shoulder. The bulging shoulder is girded with a zigzag strip made up of thumbbed dots. Sand tempered clay is poorly fired. (Photo 24). Dimensions: mouth diameter – 12 cm, body diameter – 14.4 cm, height – 9 cm, base diameter – 4 cm.
52. A small-volume, narrow-based bowl mottled with black and brown spots. The mouth below the thin rim is girded with a gutter-shaped line. The surface is eroded because the sand tempered clay was poorly fired. The surface is burnished and the bulging shoulder is girded with a zigzag strip made up of thumbbed dots. (Photo 25.2). Dimensions: mouth diameter – 9.5 cm, body diameter – 11.5 cm, height – 6.2 cm, base diameter – 3.6 cm.
53. A dark grey narrow-based bowl with a thin rim. Angobe-coated and burnished. Sand tempered clay is poorly fired. The bulging shoulder is girded with a zigzag strip made up of thumbbed dots. The pot was restored. (Photo 26). Dimensions: mouth diameter – 11.5 cm, body diameter – 14 cm, height – 8 cm, base diameter – 3 cm.
54. A small brown narrow-based bowl. The thin rim is fringed with a gutter-shaped line. Although burnished the pot is eroded because of poor firing. The bulging shoulder is girded with a zigzag strip made up of thumbbed dots. The base has a 5 mm diameter hole made

before firing. Dimensions: mouth diameter – 8.3 cm, body diameter – 10.5 cm, height – 6.8 cm, base diameter – 3.7 cm.

55. A bowl with brown and grey spots on the surface. It has a thin rim, flat base and bulging shoulder. Sand tempered and poorly fired. Angobe-coated and burnished. The shoulder is girded with a zigzag strip made up of thumbbed dots. The pot was not fully restored. Dimensions: mouth diameter – 1.5 cm, height – 9.5 cm.
56. A brown, small-volume, narrow-based bowl. Some parts including the base could not be restored. Angobe-coated and burnished. The thin rim is fringed with a gutter-shaped line. The bulging shoulder is girded with a zigzag strip made up of thumbbed dots. Sand tempered and poorly fired. Dimensions: mouth diameter – 8.5 cm, body diameter – 10 cm, height – 6.2 cm.
57. A taupe biconical bowl. Angobe-coated and burnished. The rim is so thin that is hardly palpable. The shoulder is decorated with three separate zigzag patterns made up of small dots. One of these zigzags has a hook-like end. The body is engirded with the same type of zigzag patterns. Dimensions: mouth diameter – 10 cm, body diameter – 12.3 cm, height – 8 cm, base diameter – 4.5 cm.
58. A small, dark grey biconical bowl. Disintegrated and fragmentary, therefore could not be restored. Sand tempered and poorly fired. The thin rim is fringed with a gutter-shaped line. Angobe-coated and burnished. The shoulder is girded with a zigzag strip made up of thumbbed dots.
59. A narrow-based, biconical, rimless bowl. The burnished surface is mottled with black and brown spots caused by uneven firing. The shoulder is girded with two parallel zigzag strip made up of thumbbed dots. Similar strips but formed by smaller dots gird the lower section of the body (Photo 27). Dimensions: mouth diameter – 9.5 cm, body diameter – 13.5 cm, height – 8.5 cm, base diameter – 4 cm.
60. A small, brown, narrow-based bowl. Fragmentary but was partly restored. The thin rim of this burnished pot is fringed with a gutter-shaped line. The bulging shoulder is girded with a zigzag strip made up of thumbbed dots. The base has a 5 mm diameter hole in its centre. Dimensions: mouth diameter – 8 cm, body diameter – 10.5 cm, height – 6.5 cm, base diameter – 4 cm.
61. A tiny, biconical, narrow-based bowl. The colour of this angobe-coated and burnished pot is brown. The lower part of the bowl is eroded in many places. The thin rim is fringed with a gutter-shaped line. The shoulder is girded with a zigzag strip made up of thumbbed dots. The base has a 5 mm diameter hole in its centre (Photo 28). Dimensions: mouth diameter – 7 cm, body diameter – 9.3 cm, height – 6 cm, base diameter – 3.7 cm.
62. A brown, narrow-based, burnished bowl. A gutter-shaped line girds the pot beneath the rim. The bulging shoulder is girded with a wavelike strip made up of dots (Photo 20.2). Dimensions: mouth diameter – 9.2 cm, body diameter – 11 cm, height – 6.5 cm, base diameter – 4 cm.
63. A brown, narrow-based, deep bowl. Fragmentary but complete and therefore was fully restored. Sand tempered and poorly fired. Angobe-coated and burnished. The rim is thin. The bulging shoulder is girded with a zigzag strip made up of thumbbed dots (Photo 29). Dimensions: mouth diameter – 14.5 cm, body diameter – 17.5 cm, height – 12 cm, base diameter – 4.5 cm.

64. A dark brown bowl. Disintegrated and fragmentary, therefore could not be restored. Sand tempered and poorly fired. The thin rim is fringed with a gutter-shaped line. The bowl shoulder is decorated with elongated meanders made up of dots. The surface is angobe-coated and slightly burnished.
65. A squat, narrow-based, black polished bowl. The thin rim is separated from the shoulder by a gutter-shaped line. The bulging shoulder is girded with a zigzag strip made up of tiny dots. Each zigzag consisting of three parts has a hook-like end. Sand tempered and poorly fired. (Photo 25.1). Dimensions: mouth diameter – 11.5 cm, body diameter – 14 cm, height – 7.5 cm, base diameter – 4.5 cm.
66. A large-volume, narrow-based, black polished bowl. The lower part of the body is eroded. Because of poor firing the pot has developed brown spots below the rim. The thin rim is separated from the shoulder by a 1 cm wide groove. No decorations on the pot (Photo 30). Dimensions: mouth diameter – 18 cm, body diameter – 21 cm, height – 13 cm, base diameter – 7.5 cm.

Badyas

67. A large-volume badya with a bulging body. Sand tempered clay. The pot is mottled with black and brown spots caused by uneven firing. The pot was additionally daubed with clay on which circles were made by a combed tool. The pot's internal surface was also treated in a similar way using the same tool. The pot is not burnished. It differs from the rest of pottery ware recovered from the kurgan chamber for its style and decorative components. Two handles shaped as a horseshoe or crescent are symmetrically attached to the pot slightly below the thin rim. The open sides of the "horseshoes" are turned down. Their surfaces were ornamented with a tubular (7 mm diameter) metal tool. Similar patterns are also applied below the rim including the area around the handles. Further down girding the pot are three parallel gutter-shaped lines. And finally the closing patterns are meander-type ornaments made by the same tool on the pot shoulder. Thumb decorations run in two rows from the ends of the "horseshoes". The pot is slightly oval reducing the space between the handles. Dimensions: mouth diameter – 27 x 24 cm, body diameter – 38.5 x 37.5 cm, height – 27 cm, base diameter – 14.5 cm.

Trough-type vessels

68. A brown, rectangular, trough-type vessel. Sand tempered and poorly fired. Angobe-coated and burnished. Eroded in some places. Upright walls and a flat base. The corners are slightly oval. Not decorated. The interior of the pot is divided into two equal sections by a thin wall. Dimensions: upper length – 30 cm, width – 14 cm, the length and width at the bottom are accordingly 27.5 cm and 11.5 cm, wall thickness – 1 cm.
69. A brown, rectangular, trough-type vessel. In principle, a slightly smaller replica of the pot described above. The angobe-coated and burnished surface is heavily eroded because the sand tempered clay was poorly fired. The walls of the pot with oval corners are gradually tapering down to the base. The base is flat. The interior of the pot is divided into two equal sections by a thin wall. The pot body in the centre is girded with a strip made up of thumb decorations. Dimensions: upper length – 18 cm, width – 12 cm, the length and width at the bottom are accordingly 14 cm and 8.5 cm, wall thickness – 6 mm.

Painted Vessels

70. A monochromatic, globular, narrow-necked jug. Well fired to a red surface. The body is bulging from below the neck. The upper section of the body is decorated with geometric patterns in black paint – four parallel lines on the shoulder. Beneath these lines are three rows of zigzags after which comes a single line and further down rhombuses with double lines within. The rim is everted. Dimensions: mouth diameter – 15 cm, height – 25.5 cm, neck height – 2 cm, body diameter – 27.5 cm, base diameter – 10.5 cm.
71. A small, polychromatic, deep bowl. Sand tempered and well fired to a red surface. The body is biconical. The rim is thin. Fragmentary but complete. Was restored. The upper part of the bowl is decorated by space dyeing. First the pot was painted light yellow to create a background. Then geometric ornaments in black paint were applied onto this background. These ornaments consist of two layers. The patterns in the lower layer duplicate those in the upper layer. In both layers vertically elongated, net-like triangles connected by vertexes are alternating. Dimensions: mouth diameter – 9.2 cm, body diameter – 11.5 cm, height – 8.5 cm, base diameter – 3.5 cm.
72. A monochromatic badya. Sand tempered and well fired to a red surface. The upper part of the pot up to the rim is decorated with geometric patterns drawn in black paint. The same part is girded with vertex-up triangles drawn within each other. Only at one point this series of triangles is locked by a pair of triangles linked vertex against vertex. The internal edge of the rim fringed with a shallow groove is upright. Although fragmentary and disintegrated the pot has been restored. Dimensions: mouth diameter – 17.5 cm, body diameter – 24 cm, height – 14 cm, base diameter – 9.5 cm.

Summary

The major portion of the Hasansu pottery ware are black, brown and dark grey, burnished jugs and bowls of various sizes. The vessels made of sand tempered and well puddled clay are as a rule poorly fired. Their well smoothed surfaces except for a few cases are coated with angobe and burnished. They were fired to dark grey, brown and occasionally black surfaces. Sometimes unstable temperature during firing caused grey, black and brown spotting on the pots. The large-volume jugs (Nos. 1-19) fired to dark grey and sometimes brown surfaces are angobe-coated, burnished and painted black. In a few cases black paint was used to draw patterns on jug shoulders – the jug was initially painted black leaving grey, triangular blank spaces which were then decorated with painted black thin lines. The small-volume jugs and bowls are as a rule dark grey and brown.

Along with domestic pottery the site also produced vessels used for ceremonial purposes. These were the jugs and bowls with lugs on their shoulders and orifices in the bases. Either of large-volume, black-polished jugs No. 11 and No. 12 has three moulded lugs applied to its shoulder. Vertical holes were made in these lugs. Some small-volume jugs have holes in the shoulder lugs as well (No. 41). Two of such jugs (No. 40 and No. 42) have holes both in the shoulder lugs and bases. Pots that have central holes in the bases include also a few bowls. All these holes were drilled in pots prior to firing which suggests that the vessels were specifically made for ceremonial purposes. Most probably in the course of performing a particular ritual during funeral small vessels with holes in their bases were placed on the holed shoulder lugs of large jugs. It could also be presumed that sometimes this was a three-stage process: a small jug with a holed shoulder lug was placed onto the holed shoulder lug of a larger jug and finally a bowl with a holed base was nested on the holed shoulder lug of this small jug. Presumably, during this ritual special liquid poured into the top pot streamed down through these holes.

Another pot used for rituals is a badya (No. 67). From this point of view the two horseshoe or crescent moulded lugs on the rim substituting handles are particularly worthy of attention. This

vessel also differs from all the other pots recovered from the kurgan in terms of decoration style. It could be assumed that the crescent lugs on the pot's rim were associated with astral beliefs.

Beads

Mother of pearl beads. These are oblong, globular, biconical, flat and barrel-shaped beads of white, grey and light green colours. The elongated beads get thinner towards the edge. They are relatively large. The largest is 3.5 cm long and 1 cm in diameter. Beads of other forms are smaller, measuring 4-8 mm in diameter. The state of preservation of the beads is poor they are crumbling. Their total number is 120.

Metal Objects

1. A bronze pin made of thin round profile bronze wire. The head is pyramidal. One centimeter below the head the pin has an elongated hole like an eye of a needle. The pin is 7.5 cm long and its central part measures 3 cm in diameter.
2. An object made of thin rectangular profile bronze wire measuring 1 cm in length and 1 mm in width. Most likely this object run through the hole of the above pin.

The chemical composition of both metal items recovered from the kurgan have been analysed at the Analytical Centre, Institute of Geology, ANAS, and the results are as follows (in %):

Item	Ay	By	Ac	Cn	Aэ	Пб	Сб	Зн	Фе	Бо	Нн	Бн
Bronze pin	<5·10 ⁻⁴	94,80	0,018	2,60	0,00008	0,216	0,0050	0,120	0,32	0,0007	0,080	0,0005
Bronze object	<5·10 ⁻⁴	96,84	0,080	0,6400	0,00001	0,624	0,0025	0,016	0,21	0,0006	0,270	0,0005

As is seen the core element in the chemical composition of these two metal objects is copper. 2.60% tin was detected in the bronze pin composition which is characteristic of the bronze ware of the middle Bronze Age.

Stone Artefacts

1. A tool stone. The shape of this grey river-rounded stone is that of an elongated cymbiform grain grinder. The top, bottom and lateral surfaces of the stone are worked by grinding. The upper surface has rubbed away by long use. Dimensions: length – 27.5 cm, width – 8.5, thickness of the central working face – 4.5 cm, thickness of the edges – 6.5 -5 cm.
2. An oblong river-rounded stone of a black colour shaped as a grinding stone. The middle of the stone has rubbed away by long use. Dimensions: length – 13.5 cm, width of the working face – 4.5 cm, thickness – 2 cm.
3. A red tufa grater of a flat and rectangular shape. All of the sides except one were used for grating. Dimensions: length – 12 cm, thickness – 5.5-4.5 cm, width – 8.5 cm.
4. A fragment of the head of a human image (?).made of grey porous tufa. Nostrils are clearly vizible on the face As this was the only piece recovered a more detailed description of the whole figure is not possible. Dimensions: diameter – 22-25.6 cm, thickness – 8 mm.

V. Analytical Results

• Interpretation of Excavation Results

The funeral in the kurgan was conducted in the following sequence: the grave gifts were arranged on the floor in the order described above, sacrificed animals were butchered and also put in the burial chamber with the skulls of bulls purposefully placed at the corners. All these grave gifts were covered with a wooden roof at a depth of 150 cm. The 7- 8 cm thick remnants of this wood roof could be still seen in the chamber wall at that depth. Then a bedding for the deceased was made of flat limestone and wood. After the body was put on this bedding the chamber was filled first with soil, then with river-washed stones and ground. What is particularly noteworthy here is that emphasis was placed on the grave goods and the essence of the burial practice rather than on the deceased person. The particular position of bull skulls and the grave goods accordingly arranged look as though the body was placed atop an imaginary bull-driven chariot.

• Dating

The shape and structure of the burial mound and the artefactual material recovered suggest that the Hasansu Kurgan is of middle Bronze Ages date. Similar burial mounds have been excavated in other areas of Azerbaijan and South Caucasus. Close analogs of the pottery ware retrieved from the Hasansu Kurgan were provided by excavations of settlements and graves dating back to the first half of the second millenium, B.C. The results of $^{13}\text{C}/^{12}\text{C}$ radiocarbon analysis of the bones saved from the kurgan are also in line with the traditional methods of dating. This analysis initiated and assisted by BTC archaeological representative David Maynard was conducted at Beta Analytic in 2006. The results are as follows:

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-21.3;lab. mult=1)

Laboratory number: Beta-220995

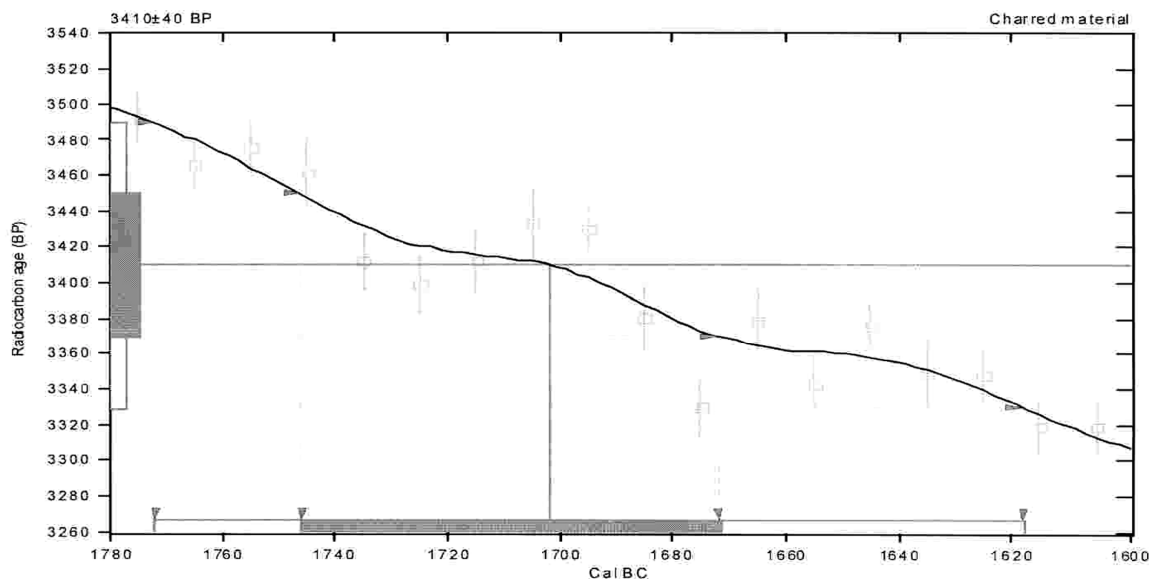
Conventional radiocarbon age: 3410 \pm 40 BP

2 Sigma calibrated result: Cal BC 1770 to 1620 (Cal BP 3720 to 3570)
(95% probability)

Intercept data

Intercept of radiocarbon age
with calibration curve: Cal BC 1700 (Cal BP 3650)

1 Sigma calibrated result: Cal BC 1750 to 1670 (Cal BP 3700 to 3620)
(68% probability)



The comparative stylist study and radiocarbon analysis of the available archaeological material strongly suggest that the Hasansu site could be dated to the eighteenth to seventeenth centuries, B.C.

- *Discussion and Analysis of the Results of the Work Compared with Other Sites of a Similar Nature on the Pipeline Route*

No other kurgan sites coeval with the Hasansu Kurgan (dating from the middle Bronze Age), were discovered on the BTC and SCP pipelines route. One intrusive burial (Grave 3) of middle Bronze Age date was found at the periphery of the kurgan mound dating to the third millennium, i.e. early Bronze Age which was excavated at KP 333 of the pipeline route.

However, this grave is slightly earlier than the Hasansu Kurgan – it dates to the beginning of the middle Bronze Age. The difference between the two burial sites is sharply manifested in the artefactual material recovered from them.

- *Discussion of the Site within a Regional and National Context*

The burial mounds that are of the same date and culture as the Hasansu Kurgan have been explored in Trialeti, Georgia. Similar burials (Tazakend Culture) have been also excavated in the Ararat Valley – historically Azerbaijani land which is now part of Armenia. These were Kurgan 6 close to the village of Ordakli (later Armenians renamed it into Lchashen) and Oshakan Kurgan 30. Several kurgans excavated in the north-west of Azerbaijan are very close to the Hasansu Kurgan in terms of their structure and burial practices. Similar type kurgans were also excavated at Garajamirli village, Shamkir District, in the 1980's. However, researchers tend to date the Garajamirli burial mounds to a slightly later period – fifteenth to fourteenth centuries, B.C.

The Hasansu Kurgan and other kurgans of the same culture in South Caucasus differ from coeval middle Bronze Age cultures both in terms of archaeological material contained and burial practices employed. Some researchers say the emergence of such kurgans could be accounted for by the influx of foreign tribes to South Caucasus at that time. Although burial mounds of this type (Trialeti Kurgan) have been excavated in South Caucasus since the middle of the 20th century, failure to discover associated settlements gave rise to appearance of ideas that the creators of these kurgans led a nomadic life. However, a middle Bronze Age settlement site has recently been discovered and excavated on the BTC pipeline route at Jinisi village, Tsalk District, Georgia. The pottery ware recovered from that site is identical to that found at Trialeti kurgans.

It should be noted that the archaeological material, particularly the ceramic ware from the Hasansu Kurgan bears closer similarity to the artefactual material retrieved from the Ararat Valley. The complete identity of globular, narrow-based, black-polished pots decorated with patterns incised in white and of red, yellow-polished monochromatic vessels discovered both at Hasansu and Garajamirli Kurgans and Ararat Valley Kurgans should be specifically emphasized. Painted ceramic pots are rare finds in the Ganja-Agstafa region of Azerbaijan. Such pots are more characteristic of the Nakhchivan and Ararat provinces and represent "Painted Pottery of Middle Bronze Age Azerbaijan" or "Nakhchivan" archaeological culture. Settlement sites and numerous stone coffin burials with or without mounds representing this culture have been excavated so far in Azerbaijan. Discovery of painted pottery at the Hasansu Kurgan reflects the interrelation of coeval but totally different cultures existing at that time.

The peculiarity of archaeological material recovered from Hasansu-type kurgans suggests that this was the culture of a settled people. Pottery ware as the major artefactual material was found in abundance in the above-mentioned burial mounds, including the Hasansu Kurgan. These ceramic pots were made on a high performance level using the best technologies available at the time. As pottery ware is not a commodity to be transported long distances in large quantities. Part of the pottery ware from these kurgans, including the Hasansu Kurgan replicates in shape certain traditions of the pottery ware of the preceding age, i.e. early Bronze Age dating to the third millennium, B.C. In addition, kurgans with large and globular or rectangular crypt- or

mausoleum-type burial chambers with dromoses that are typical of the above said burial mounds have also been known in this area as dating from the early Bronze Age.

The Hasansu Kurgan is identical to the Trialeti and Tazakend Culture monuments and coeval Dashuz and Kudurlu kurgans in north-west Azerbaijan in terms of the structure of burial chambers and major burial practice (the concept of bull-driven chariot) as well as similarity of the archaeological material recovered. However neither Trialeti nor Tazakend culture burial mounds contained human skeletons. What was found in grave chambers was ash which prompted researchers to suggest that the bodies were cremated. According to those researchers the cremation process took place outside kurgans after which the ash was dispersed on the entire floor of the grave chamber. As regards the Hasansu Kurgan it contained heavily disintegrated human skeleton remains and no ash or burnt substance. Therefore it could be deduced that the cremation ritual was not performed at the Hasansu Kurgan. From this point of view the Hasansu Kurgan is more similar to Dashuz and Kudurlu burial mounds. The distinguishing feature of the Dashuz and Kudurlu kurgans is that the bodies were buried in a disarticulated condition.

The Hasansu Kurgan has provided new facts on the investigation of middle Bronze Age cultures of South Caucasus and interrelations between them. This is the major contribution of the Hasansu excavations and shows the extent to which these cultures formed a homogeneous culture through the region.

VI. Illustrations



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Photo 1. Stone Kurgan on initial excavation looking south.

Photo 2. Pottery vessels on initial discovery looking east.



Photo. 3 Vessel 2.

Photo 4. Vessel 4.



Photo 5. Vessel 15.

Photo 6. Vessel 16.



Photo 7. Vessel 22.

Photo 8. Vessel 25.



Photo 9. Vessel 26.

Photo10. Vessel 29.



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Photo 11. Vessel 30.

Photo 12. Vessel 31.



Photo 13. Vessel 32.

Photo 14. Vessel 34.



Photo 15. Vessel 35.

Photo 16. Vessel 36.



Photo 17. Vessel 37.

Photo 18. Vessel 39.



Photo 19. Vessel 40.

Photo 20.1 Vessel 46, 20.2 Vessel 62.



Photo 21. Vessel 47.

Photo 22. Vessel 48.



Photo 23. Vessel 50.

Photo 24. Vessel 51.



Photo 25.1 Vessel 51, 25.2 Vessel 52.

Photo 26. Vessel 26.



Photo 27. Vessel 59.

Photo 28. Vessel 61.



Photo 29. Vessel 63.

Photo 30. Vessel 66.

VII. Inventory of Artefacts

No.	KP	Type of site	Material	Find	Qnt.	Comment
1	399	kurgan	ceramic	jug	1	
2	399	kurgan	ceramic	bowl	1	
3	399	kurgan	ceramic	bowl	1	
4	399	kurgan	ceramic	bowl	1	
5	399	kurgan	ceramic	bowl	1	
6	399	kurgan	ceramic	jug	1	
7	399	kurgan	ceramic	bowl	1	
8	399	kurgan	ceramic	bowl	1	
9	399	kurgan	ceramic	jug	1	
10	399	kurgan	ceramic	jug	1	
11	399	kurgan	ceramic	jug	1	
12	399	kurgan	ceramic	jug	1	
13	399	kurgan	ceramic	jug	1	
14	399	kurgan	ceramic	jug	1	
15	399	kurgan	ceramic	jug	1	
16	399	kurgan	ceramic	jug	1	
17	399	kurgan	ceramic	jug	1	
18	399	kurgan	ceramic	jug	1	
19	399	kurgan	ceramic	jug	1	
20	399	kurgan	ceramic	jug	1	
21	399	kurgan	ceramic	jug	1	
22	399	kurgan	ceramic	jug	1	
23	399	kurgan	ceramic	jug	1	
24	399	kurgan	ceramic	jug	1	
25	399	kurgan	ceramic	jug	1	
26	399	kurgan	ceramic	jug	1	
27	399	kurgan	ceramic	bowl	1	
28	399	kurgan	ceramic	vessel	1	tub-shaped
29	399	kurgan	ceramic	bowl	1	
30	399	kurgan	ceramic	jug	1	
31	399	kurgan	ceramic	jug	1	
32	399	kurgan	ceramic	bowl	1	
33	399	kurgan	ceramic	jug	1	
34	399	kurgan	ceramic	jug	1	
35	399	kurgan	ceramic	badya	1	monochromatic
36	399	kurgan	ceramic	bowl	1	
37	399	kurgan	ceramic	jug	1	
38	399	kurgan	ceramic	jug	1	
39	399	kurgan	ceramic	jug	1	
40	399	kurgan	ceramic	jug	1	monochromatic
41	399	kurgan	ceramic	jug	1	
42	399	kurgan	ceramic	bowl	1	
43	399	kurgan	ceramic	bowl	1	

44	399	kurgan	ceramic	jug	1	
45	399	kurgan	ceramic	jug	1	
46	399	kurgan	ceramic	jug	1	
47	399	kurgan	ceramic	jug	1	
48	399	kurgan	ceramic	jug	1	
49	399	kurgan	ceramic	jug	1	
50	399	kurgan	ceramic	jug	1	
51	399	kurgan	ceramic	jug	1	
52	399	kurgan	ceramic	bowl	1	
53	399	kurgan	ceramic	jug	1	
54	399	kurgan	ceramic	bowl	1	
55	399	kurgan	ceramic	bowl	1	
56	399	kurgan	ceramic	jug	1	
57	399	kurgan	ceramic	bowl	1	
58	399	kurgan	ceramic	jug	1	
59	399	kurgan	ceramic	jug	1	
60	399	kurgan	ceramic	pot	1	
61	399	kurgan	ceramic	vessel	1	tub-shaped
62	399	kurgan	ceramic	jug	1	
63	399	kurgan	ceramic	bowl	1	
64	399	kurgan	ceramic	bowl	1	
65	399	kurgan	ceramic	bowl	1	polychromatic
66	399	kurgan	ceramic	bowl	1	
67	399	kurgan	ceramic	jug	1	
68	399	kurgan	ceramic	bowl	1	
69	399	kurgan	ceramic	bowl	1	
70	399	kurgan	ceramic	bowl	1	
71	399	kurgan	ceramic	jug	1	
72	399	kurgan	ceramic	jug	1	
73	399	kurgan	mother-of-pearl	bead	120	
74	399	kurgan	bronze	pin	1	
75	399	kurgan	bronze	item	1	
76	399	kurgan	stone	tool	1	shaped like a grain grinder
77	399	kurgan	stone	grindstone	1	
78	399	kurgan	stone	grater	1	tufa
79	399	kurgan	stone	human image	1	