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**Long Report
Excavations of Soyugbulaq Kurgans
KP 432 - BTC ROW**

Baku – Azerbaijan - 2008

ABSTRACT

This Report describes the results of excavation of 18 kurgans at Soyugbulaq located at KP 432, of the BTC. The kurgans represent a burial site of the Leylatepe Eneolithic Culture. A series of six radiocarbon dates show the site relates to use in the first half of the fourth millennium. One of the burials is possibly the result of later use or more likely, disturbance, in the mid first millennium.

Survey of the surrounding area suggests up to 50 similar cairns are located close by. The typical mound is insubstantial with a maximum height of less than 1m. The kurgans are distinguished by stone settings, in some cases by circular patches of stones. Excavation revealed a variety of burial chambers under the kurgan mounds. The burials were not accompanied by a rich cultural material, this included pottery and a copper dagger.

Work at this site indicates that it is one of the earliest dedicated cemetery sites found in Transcaucasia and it represents the earliest known use of kurgan mounds to cover burials. As such this is a highly significant discovery in the study of the kurgan burial rite in the Caucasus and beyond. The findings of such small insignificant cairns suggest that other cemeteries known only by small mounds may date to this period, rather than the late Bronze Age and that caution should be applied to the interpretation of such sites without excavated evidence.

Table of Contents

I. Introduction	3
• <i>Description of the BTC and SCP Archaeology Programme</i>	
• <i>Discovery of the Archaeological Site</i>	
II. Archaeological Contexts for Understanding the Site	3
• <i>General Archaeological Overview of this Portion of Azerbaijan</i>	
• <i>General Summary of the Geography and Geology of the Area</i>	
III. Field and Office Methods	5
• <i>Field Methods</i>	
• <i>Office/Laboratory Methods</i>	
• <i>Special Analysis</i>	
• <i>Archive Disposition</i>	
IV. Excavation Results	6
• <i>Site Description</i>	
• <i>Description of Kurgans</i>	
V. Analytical Results	18
• <i>Interpretation of Excavation Results</i>	
• <i>Dating</i>	
• <i>Discussion of the Site within a Regional and National Context</i>	
• <i>Recommendations Regarding the Protection of the Site or Future Research</i>	
VI. Illustrations	23
VII. Inventory of Artefacts	37

I. Introduction

- ***Description of the BTC and SCP Archaeology Programme***

Archaeological excavations in connection with the construction of the BTC and 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 40 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 Soyugbulaq kurgan field was discovered by Najaf Museyibli during topsoil stripping on the SCP pipeline route on 27th November 2004. During the construction of the BTC pipeline the area was not identified as kurgan site by either the BTC archaeology representatives, or watching brief archaeologists from the IoAE. No excavation work was carried out at this location, although several kurgans were completely destroyed during pipeline construction.

Excavation of the kurgan site was carried out in January, February, March, September and October 2005 and led by Najaf Museyibli with participation of Anar Agalarzade, Yagil Danyalov and Elnur Gafarov, all from the Institute of Archaeology and Ethnography, Azerbaijan National Academy of Sciences. Work was supervised by BTC archaeology representatives Chris Polglase, Richard Moore, Ed Dunn and Claire Angus.

II. Archaeological Contexts for Understanding the Site

- ***General Archaeological Overview of this Portion of Azerbaijan***

The favourable natural geographic location and climatic conditions have attracted people to this area since ancient times which accounts for numerous archaeological sites of different historical dates revealed in this region. Intensive life continued in the Ganja-Gazakh area during all historical and archaeological periods beginning from the Stone Age to 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, Yatag Yeri camps 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, Gargalartepesi and Toyratepe in Agstafa, Babadervish in Gazakh, Goytepe, Mentetjepe 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 and 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 second millennium and the beginning of the first millennium, 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 first millennium, B.C. and the third century, A.D.) have been discovered in the Ganja-Gazakh region. Among 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 medieval period (4th-3rd centuries) in the area is 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 (9th to 18th 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 8th-9th 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 consequently the entire mode of life of people in this 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, sub mountainous 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 Dagi (3378m) and Hinal Dagi (3373m). The alpine and sub alpine 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 promoting 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 sub alpine 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 tributaries feed from plentiful water sources and snow-covered mountain peaks. The sub mountain wood and brushwood 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 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 Kura.

There are 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***

The site was not located during stage 1-3 of the programme, due to its remote location and insubstantial remains. No evidence of the site was observed during BTC construction in 2004, but rather through watching brief archaeologists observing topsoil stripping for the SCP pipeline in January 2005.

The work was implemented in two stages. During the first, SCP stage six kurgans were excavated in January, February and March 2005. The excavated area was designated as Excavation Site I. Taking into account the scientific value of the site and that no excavations had been conducted on the BTC side of the pipeline easement, the BTC archaeology representative Chris Polglase made a formal request to the company to address the issue of further excavations at Soyugbulaq kurgan field. Permission was granted to dig out kurgans falling within a 45m wide beyond the south side of the pipelines construction corridor. Twelve kurgans (7-18) were investigated in September and October 2005 in this area termed as Excavation Site II. We are thankful to Mr. Chris Polglase

for his efforts in getting the Company's consent and resolving technical and other organizational issues to do more research in the area.

The excavation work was undertaken by the project labour force using shovels, barrows, trowels, brushes and other hand tools. The artefacts recovered were washed, recorded in field logbooks, photographed and boxed on site.

- ***Office/Laboratory Methods***

The material from the site was further treated and made available for writing a report. Photographing and making drawings of the finds carried on and the drawings to be incorporated into the illustrative part of the report were digitally processed.

- ***Special Analysis***

Spectral analysis of the metal dagger found at Soyugbulaq was carried out at the Analytical Centre, Institute of Geology, Azerbaijan Academy of Sciences. Charcoal and bone samples obtained from the kurgans were radiocarbon dated at Beta Analytic. This work was done through the agency of David Maynard from BTC. The human bone from the site was analysed by Kate Brayne. The results of all the analyses are provided in the relevant sections of this Report.

- ***Archive Disposition***

The Soyugbulaq material was brought to Baku and stored in a special archive set up in the IoAE for the finds retained from the BTC and SCP archaeological excavations.

IV. Excavation Results

- ***Site Description***

The Soyugbulaq kurgans are located in the Agstafa District, 1km north of Soyugbulaq village, at KP 432, BTC ROW. The site lies north of the Kura River at the point where the Jeyranchol low mountain chain joins the lowland in the west and south. The area is characterized by black and chestnut soils with high clay content. The site is located 265-278m above sea level at grid reference 8522404, 4578685.

The kurgans were spaced 1 to 20m apart from each other. The majority of the burial mounds were level with the ground; while others rose up to 1m above ground. The mounds were constructed of earth and river washed stones. An arbitrary layout of stones was seen in a few kurgan mounds. On most of the kurgan mounds the stones were arranged in a regular pattern. These were clusters of stones heaped over in the central part of the kurgans and individual stones forming a cromlech around their perimeters. On some kurgans the stones were so densely spaced that there was no interface between the two groups of stones.

A total of nearly fifty kurgans were recorded at the site, 18 of these were excavated. A further nine kurgans were excavated in 2006 by an Azerbaijan-French expedition (Lyonnet *et al*, 2009).

Excavation Site I

Prior to archaeological excavations the 25-30cm thick topsoil within the pipeline easement had been stripped during site preparation for the BTC pipeline. The kurgans on the SCP side were also truncated which made it impossible to obtain exact data about the kurgan mounds, especially their heights. Six kurgans (1-6) were excavated in this area.

Excavations of the area to be investigated on the SCP side of the construction corridor started from its north-western end using the method of “continuous site”, i. e. not only kurgans but the areas between them were excavated at Excavation Site I. This method justified itself since it helped reveal three child jar burials in between the kurgans.

Excavation Site II

This area was worked on following completion of pipeline construction, during the period September to October 2005. All the work was carried on outside the pipeline zone to the south of the BTC pipeline. Twelve Kurgans (numbers 7-18) were excavated during this period. Only features that were visible above ground were worked on. It is possible that there are other remains in the area with no surface indications.

• *Description of Kurgans and Finds*

Kurgan 1

This was excavated in the west facing section of Excavation Site I. The kurgan mound did not survive and a rectangular-oval set of river stones at ground level was deemed to be the centre of the kurgan. A spread of individual stones was seen to the north of the central stone cluster. These were cromlech stones removed by machines during topsoil stripping.

The rectangular-oval stone setting was 3.5m long north-south by 2.5m wide east-west. Beneath this set of stones was a burial pit measuring 3m in length by 2.1m in width. The pit had a northwest to southeast alignment. A burial chamber was constructed of raw adobe bricks along the pit wall perimeter. The bricks, 50cm x30cm x 10cm in size, were laid in three rows to a height of 31-32cm and bonded together with yellow mortar. The burial chamber measured 2.4m in length and 1.5m in width, Plate XII.

A thin clay layer was detected at a depth of 40cm below the central part of the mound. A pottery fragment of a red pale colour was seen at 50cm depth in the south facing section of the chamber. A 2-3cm thick clayey substance was plastered over the entire top surface of the burial chamber at 70cm depth, i. e. on the same level with the uppermost layer of adobe bricks. This depth also produced wood remnants.

Human remains were exposed at 1m depth on the floor of the burial chamber. The skeleton lay stretched in supine position and had north to south alignment with the feet facing north. The bones were poorly preserved, the skull and limb bones were not found. Most of the rib bones were also missing. The remaining bones were slightly dislocated. The arm bone was found in the waist region, lower limb bones were all disturbed and jumbled. River washed stones were recovered from under and around thigh bones which presumably had been placed there to allow that part of the body to remain steady. Large quantities of wood remains were taken off the skeleton, particularly in the region below the waist. The grave fill consisted of fine-grained soil containing occasional river stones.

The arrangement of skeletal remains suggests the body was disarticulated prior to being buried however in doing so an attempt was made to retain the natural anatomical layout of a human cadaver. Wood was used to cover the deceased. A thin layer of ash exposed at 40cm depth in the central part of the grave could possibly be interpreted as remains of a small ritual fire.

Two pottery vessels were recovered from inside the grave chamber. One, a relatively large pear-shaped jug was exposed in an upright position resting against the wall in the western corner of the burial chamber. Since the base of the pot had a rounded resting surface, river washed stones were put around it to allow the pot to remain steady and secure. The neck region of the pot rose above

the brick rows and clay plastered top surface of the burial chamber. The second pot was found leaning against the chamber wall 30cm north-west from the southern corner of the grave.

Pottery

2. Oblong pear-shaped jug poorly fired to an orange-grey surface. Handmade, coarse sand-tempered heavy clay product. The surface is covered with clay mortar tempered with sparse plants. The neck is funnel-shaped, the rim is everted. No base, the body terminates in a rounded resting surface. The body compressed from both sides is not round but oval in circumference. Height – 34.5cm, mouth diameter – 14.5cm, neck height – 4.5cm body diameter – 26.5cm. Plate XII.

3. Small, globular-bodied, handmade pot tempered with coarse sand and well fired to an orange surface. The angobe-coated surface heavily eroded and developed black stains. The neck is short and funnel shaped. No base, rounded resting surface. Height – 13cm, mouth diameter – 8.2cm, neck height – 1.3cm, body diameter – 13cm. Plate XII.

1. Body fragment of a pink pot tempered with sand and fired at a high temperature.

Kurgan 2

The upper layer of stones in the kurgan mound had been removed by topsoil stripping. The central cluster of stones had the shape of a triangle and measured 2.5m north-west by 2.1m south-east. Elongated patches of stones joined the central group from the east, south and south-east. The preserved height of the kurgan mound was 30cm. Beneath the mound there was another stone layer of 1.2m by 0.5m (Plate I,1). This was the stone capping of the grave which, when removed exposed a burial chamber of 1.6m by 1m in size. The chamber had an oblong shape and northwest to southeast orientation (Plate I, 2).

Preservation of the skeleton was very poor because of long exposure to saline soil. The bones found were small fragments from above the waist region and two shin-bones and bone remains from below the waist part of the body. The relatively well preserved skull appeared to have been deliberately set on a separate stone. The body was laid on its back with the head oriented toward the south-east. The position of the skeleton suggested that the lack of all the bones could not be accounted for by the decaying factor only. Compared to other bones the skull had decayed to a less degree though it had cracks caused by the weight of the overlying mound. While small fragments of shin-bones and ribs were preserved, no remains of large thigh bones were recorded. All this suggested the body was disarticulated before burying and not all the parts of the body were buried. The grave floor was gravel-rich saline soil. No grave goods were found in the grave.

Kurgan 3

The kurgan cover was a 14m diameter mound of earth and stones raised over a grave to 40cm height. The central patch of stones representing the upper capping of the grave chamber had the shape of a triangular measuring 5m northwest-southeast by 3.2m northeast – southwest (Plate II, 1). The grave chamber of the same alignment and dimensions was constructed of river washed stones on the natural soil layer. The southwest corner of the grave chamber was not paved with stones and therefore the overall shape of stones was that of a horseshoe. The south facing section of the grave was separated from the major chamber by another spread of stones. Two disintegrated ceramic pots were exposed in the northwest and southwest corners of the burial chamber. Crushed remains of another nearly complete pot were recovered from its northeast

corner. River washed stones were set around the base of this elongated-shaped pot to prevent it from falling. No human remains were contained in the grave chamber.

Child Jar Grave 1 was located under part of the cairn (Plate II, 2).

The kurgan mound yielded pottery pieces, unworked obsidian flakes and cutting tool chipped of soft dark grey stone.

Pottery

1. Fragments of a large, deep-sided, bowl-type pot coarsely handmade of untempered clay and fired to a red surface. The pot has an everted rim and a rounded base with a foot-ring. The body is asymmetric - one half is higher than the other. The wall thickness gradually increases towards the base from 6mm in the mouth area to 1.3cm in the base. There is a white film on both the interior and exterior surfaces of the pot. With one fragment of the rim missing the broken pieces were mended into a complete pot. Diameter – 23-24cm, maximum height – 12.5cm. An obsidian flake with one edge slightly serrated was recovered from within the pot (Plate VI, 2).

2. Small, globular bodied, handmade jug tempered with plant and fine-grained sand and well fired to a grey surface. Angobe coated. The rim is everted, the rounded base has no pedestal. The wall thickness is within a range of 5-7mm to 1cm. The pot was partially restored. Height – 28cm, body diameter – 28cm, mouth diameter – 14.5cm (Plate VI, 3).

3. Small, pink, handmade jug slightly tempered with plant. There is a white film on the pot surface. The rim is funnel shaped, the base is flat. Being extremely small the broken pieces could not be mended into a complete pot. Mouth diameter – 9.5cm, base diameter – 5.5cm, body diameter – 11.5cm (?), height – 11cm (?).

4. Forty one pottery fragments were revealed in the south and south-east sections of the kurgan mound. One of these represents the base and body of a black, sand-tempered pot thrown on a potter's wheel. The pot had a flat base and thin walls. Wall thickness – 8mm.

5. The remaining sherds are body fragments of untempered red and orange pots. All are handmade and well polished.

Stone Objects

6. Four-faced cutting tool chipped out of sandstone. Because of chips it is not possible to see whether the cutting edges were serrated or not. Length – 4cm, width – 2.3cm, thickness – 9mm.

7. Unworked obsidian flake, 3.3cm x 3.3cm x 1cm in size recovered from the kurgan mound.

8. Opaque obsidian flake recovered from within the pot (1). One edge is serrated.

Kurgan 4

The kurgan mound of earth and river washed stones measured 13-14m in diameter and 40-45cm in height. Unlike Kurgan 3, stones on this kurgan were not arranged in a regular pattern. A single dense cluster of stones, was clearly seen on the east edge of the mound. Several pottery sherds were recovered from beneath this stone setting of 1m by 1.2m. No burial chamber was found inside the kurgan mound.

Pottery

1. A few pottery pieces recovered from the kurgan mound are body fragments of pots. Some pots were tempered with plant. Several of these sherds come from poorly fired pottery vessels.

Kurgan 5

This kurgan was located 19m south of Kurgan 6. Only a few individual stones visible on the ground after topsoil stripping allowed this spot to be identified as a kurgan grave. These stones came from the burial chamber, the floor of which was exposed at a depth of 50cm below the stripped surface.

The grave was dug in yellow clayey soil. Excavation of the burial chamber revealed bow-shaped layers of stones at different depths. One such set of river washed stones was uncovered at 30cm depth in the north-east section of the chamber. A similar patch of stones was unearthed at 45cm depth in the southern corner of the grave chamber. The grave chamber, 1.65m by 0.95m in size, had oval corners and a rectangular shape and was aligned northwest to southeast.

Poorly preserved human remain were exposed at a depth of 50cm (Plate III, 1). The skeleton with the arms and legs flexed was found lying on its right side and aligned in accordance with the burial chamber alignment, i.e. with the head facing south-east. The hands were raised to the face. Rotted wood remnants were noted on the skeleton. A small, long-necked kuza-type pot was found in front of the cadaver face in the eastern corner of the burial chamber. The pot was laid on its side with the mouth facing north-west. A copper dagger was excavated 10cm away from the pot.

Pottery

1. Dark grey, kuza-type untempered pot with a bulgy body, flat base and long, slightly funnel-shaped neck. Height – 16.4cm, body diameter – 11.2cm, neck diameter – 8cm, mouth diameter – 8.6cm, base diameter – 5.6cm (Plate III, 1).

Metal objects

2. Copper dagger with a slanting transition from the tang to the shoulder (Plate III, 2). The tang edges are finely serrated for handle fastening. Length – 20cm, shoulder width – 3.5cm, tip end width – 1.5cm. The results of the spectral analysis of the dagger are as follows:

AU	CU	AS	SN	AG	PB	SB	ZN	FE	CO	NI	BI
$<5 \cdot 10^{-4}$	96,54	0,0005	0,240	0,00001	0,0940	0,0018	0,0860	0,70	0,0001	0,0005	0,0008

The object is though to be formed by formed by cold smithing. The spectral analysis of the dagger implies that it is formed of pure copper with no additional elements deliberately added to improve the workability of the metal. A similar dagger is illustrated in Picture 1, 1 (Seyidov & Hasanova, 2007 p65) from Kura-Araz levels at Kultupe II, although this example had an arsenic content of 1.87%.

Kurgan 6

This was located 25m east of Kurgan 4 and 19m north of Kurgan 5. The kurgan mound of earth and river washed stones measured 40cm in its central part. Continuous ploughing over long periods of time and preconstruction topsoil stripping made it impossible to precisely define the mound diameter. However judging by the arrangement of stones the kurgan appeared to be over 6 or 7m in diameter.

The burial chamber was 1.65m wide and 2.25m long northwest to southeast and had a stone- and earth-rich grave fill. The density of stones decreased with depth, however individual stones were noted down to the natural subsoil at 1m depth. Shin-bones and several pottery pieces were exposed at a depth of 80cm in the north-west section of the chamber. A large scatter of bones was

recorded on the floor of the burial chamber. The bones were extremely fragile, almost powdery and could not be retained for analysis. These were interpreted as human skeletal remains.

Pottery

1. Ceramic sherds found in the burial chamber are base and near the base fragments of a thin-walled (5mm), flat-based pot tempered with fine sand. The pot is handmade and well fired to a red surface. The outer surface is coated with light grey angobe.

Excavation Site II

Kurgan 7

The kurgan mound was a heap of earth and river washed stones standing 30cm above the ground and measuring 15m north-south by 13m east-west in diameter. Stones were arranged in an irregular pattern. Further digging did not reveal a burial chamber beneath. Varied pottery pieces and obsidian flakes were recorded at a depth of 30-40cm below the central part of the kurgan. A single dense group of ceramic sherds represented a thin-walled vessel. Another scatter of sherds came from thick-walled pots. One fragment was tempered with ochre.

Pottery

1. Pottery fragments of a chestnut-brown colour. Presumably come from a single thin-walled (5mm) sand-tempered pot.

2. Body fragment of a chestnut-brown, thick-walled (1.25cm) plant-tempered pot.

3. Fragments of a small red, thick-walled, bowl-type pot tempered with sand and plant. Coarsely handmade with a polished inner surface and uneven outer surface. Poorly fired. The walls get thinner towards the upright rim. Body thickness – 1.8-1.9cm, rim thickness – 5-6mm.

Kurgan 8

This was located 3m north of Kurgan 7. The kurgan mound with sparse scatter of stones was 20cm high and measured 8m north-south by 7.5m east-west in diameter. The burial chamber aligned northwest to southeast measured 2.2m in length by 1.7m in width on the surface and extended down to 95cm depth. The base of the burial chamber had oval corners and measured 1.9m in length, while the width ranged from 1.4m in the south-west to 1.3m in the centre and 1.1m in the north-west. The grave fill consisted of dark, soft, easily dug soil, noticeably different from the surrounding substrate and contained a dense heap of stones. Signs of this soil discoloration were visually identified through the entire depth of the burial chamber. A 20cm wide and 25cm deep trench encircling the chamber was exposed at a depth of 70cm. The trench fill was grey, soft, very fine-grained, ash-flecked soil.

Vertically positioned charred twigs were recorded at a depth of 50cm and further down to the base. Isolated spreads of jumbled human bones were noted on the floor in the south-eastern part of the chamber – one group of leg bones was seen in the eastern corner of the burial chamber, while another group was heaped in its southern corner. Occasional small shin-bones covered the area in between these two groups. Other skeletal remains, including the skull were not encountered in the grave. Preservation of bones was very poor. It was assumed that the body in this grave was disarticulated before burial.

Two fragments of unworked red agate were found adjacent to the bones in the eastern corner of the burial chamber and a single pottery fragment from under this group of bones. Whether this was a casual or deliberate placement of grave goods could not be established.

A radiocarbon date of Cal BC 3930-3860 and Cal BC 3810-3670 (Beta 221001) was obtained from charcoal in this grave.

Pottery

1. The pottery fragment found represents the body of a sand-tempered heavy clay product falling into the category of “coarse ceramics”. Both interior and exterior of the pot are chestnut-brown. The poorly fired interlayer between these surfaces is ashy-grey. The outer surface is coated with light green angobe. Finger marks left after coating are clearly visible on this 1cm thick fragment. The fragment retained also patches of black paint applied over angobe.

Kurgan 9

The primary stone capping of this kurgan had long been removed by ploughing. The visible diameter of the remaining 30cm high mound was approximately 10-12m. Like the other kurgans this one had also a large concentration of river stones in its central part. This dense group of stones measured 2.4m north-south by 2.2m east-west. The central heap of stones was separated from other occasional stones on the mound by a 30-50cm wide strip of grey soil.

The burial chamber was unearthed beneath the central cluster of stones and went down to a depth of 80cm. Full of river washed stones the chamber had a northwest to southeast alignment and was 2m long by 1.35m wide. The burial chamber was unequal-sided; the western corner was 20cm longer than the northern one. At 65cm depth the interior of the chamber had a thin coat of clay plaster, however it appeared that before being dried up the wet plaster was cut through by stones thrown into the chamber.

A few odd human bones were exposed at a depth of 70-80cm in the northwest corner of the burial chamber. These included very decayed remains of tibia, femur and arm bones and other small bone fragments. In addition, small paste beads, a small unretouched obsidian flake and pottery sherds were recovered from this depth. Half of a large, bowl surrounded by river stones was seen in the western corner of the chamber. The central part produced a large amount of rotted wood remnants and ochre and more paste beads. All these were covered with wooden logs put width wise in the burial chamber. The logs were spaced approximately 40-50cm from each other and the areas between them were presumably filled with twigs. The shape and size of the logs could not be assessed because of extreme decay. A thin layer of clay plaster was applied over the logs before the grave was filled with earth and river stones.

A radiocarbon date of Cal BC 3950-3520 (Beta 221000) was obtained from charcoal in this grave.

Pottery

1. Half of a deep-sided bowl tempered with plant. Coarsely handmade and poorly fired to a red surface. The rim is everted and the base is rounded. Patches of surface erosion can be seen on both the interior and exterior of the pot. The interior is smoother than the exterior. Height – 13cm, diameter – 30cm.
2. Disk-shaped fragment of an untempered upright-walled pot poorly fired to a chestnut-brown surface. Size: 4.5cm x 2.5cm.
3. Small fragment of a wheel-thrown thin-walled pot. Made of untempered clay and well fired. Coated with light grey angobe. Size: 2.8cm x 1.5cm.

Beads

4. 188 small beads chipped out of grey and white paste. The beads are cylindrical or flat disk-shaped. The difference in shape seems to have been caused by careless chipping. Because of heavy erosion only a portion of beads could be retained.

Kurgan 10

The kurgan mound had been partially removed by tillage. The survived mound of river stones and earth was 11-12m in diameter and had a central set of stones in the shape of an oval-cornered square of 5.5m by 5.5m that stood 40cm above ground. This stone heap was encircled by a cromlech-type stone setting. Two pottery fragments were found in the eastern section of the mound while removing surface stones.

The burial chamber was uncovered under the central heap of stones. It had been dug into the natural soil at 30cm depth and had a northwest to southeast alignment. The oval-cornered burial chamber was 1.7m long by 1.1 wide in the northwest and 1m wide in the southeast and was full of river washed stones (Plate III, 2).

Varied pottery sherds were found at different depths in the burial chamber. These represented largely thin- or thick-walled heavy clay products of a grey, red or chestnut-brown colour. One fragment came from a plant-tempered pot. Shin-bones and other bone fragments were exposed at a depth of 15-20cm in the eastern corner of the grave. The bones were plastered with several 2-3cm thick layers of clay mortar. All of the pottery finds came from above the clay mortar level. A few small bone fragments were noted on the grave floor.

Pottery

1. Fragment of the cylindrical neck of a thin-walled (6-7mm) kuza of a grey colour. This sand-tempered pot was handmade and poorly fired. Both surfaces are uneven. The rim is slightly everted. Neck diameter – 8.5cm, mouth diameter – 9.5cm.

2. Rim fragment of a sand-tempered cylindrically-necked kuza poorly fired to a red surface. The upright walls measure 6mm in thickness. Both the interior and exterior of the pot are polished. Fragment of the cylindrical neck of a sand-tempered kuza well fired to a red-brown surface. The outer surface is well polished by applying a coat of clay mortar tempered with very fine-grade sand.

3. Fragment of a small grey pot with a bulgy body and cylindrical, slightly flaring neck. The sand-tempered pot has an uneven surface with an additional clay overcoat.

4. Fragments of grey small thick-walled (0.9-1.2cm) pots tempered with non-organic additives. Coarsely handmade and poorly fired pots have uneven surfaces.

5. Fragments of chestnut-brown pots with black stains on the surface resulting from firing at an unstable temperature. Wall thickness – 8-9mm.

6. Fragment of a plant-tempered pot well fired to a red surface. Wall thickness – 0.9-1.3mm.

Kurgan 11

This was distinguished by a very neat arrangement of stones in the central part and cromlech of the mound. The mound was 12m in diameter, the cromlech measured 1.7-2m in width and the central heap of stones of 5m by 5m rose 40cm above the ground (Plate IV, 1).

Removal of the upper layer of the central cluster of stones revealed another group of stones covering an area of 4.2m long by 3m wide. This patch of stones aligned northwest to southeast

appeared to be an aboveground grave. Three pottery fragments were recovered from under these stones. A single piece of pottery was found under the stones in the eastern part of the cromlech.

Pottery

1. Body fragment of a thick-walled (1.4cm) pot tempered with plant, sand and ochre and well fired to a light chestnut surface.
2. Two fragments of pots made of red clay slightly tempered with plant and sand and well fired to a red surface.
3. Two fragments of sand-tempered pots well fired to a red surface. One comes from the body of a thin-walled pot, the other from the neck of a small thin-walled narrow-necked pot.

Kurgan 12

Unlike the other kurgans this was almost at ground level and had a sparse scatter of stones. The 20cm thick top layer of earth and stones was removed and a stone setting of 3.3m long by 2.8m wide was uncovered in the eastern part of the kurgan mound. This stone patch aligned northwest to southeast formed the upper part of the burial chamber. The burial chamber dug into the natural soil to a depth of 1.6m narrowed downwards and measured 1.9m in length by 1.2m in width at the base. The number of stones in the burial chamber decreased with depth.

A plant tempered pottery fragment was exposed at 40cm depth and a bow-shaped patch of ash at a depth of 50cm in the east facing section of the grave. The presence of fire-reddened clayey soil in addition to the ash layer suggested that firewood had been burnt on this spot. Carbonized remnants of vertically placed 4-5cm diameter wooden poles were detected at 70cm depth in each corner of the burial chamber. The ground around the charred wooden poles was noticeably dark and contained patches flecked with fire-reddened soil. Another pottery fragment was exposed at 1.3m depth against the west wall of the chamber. This came from a black, long-necked bardag-type pot.

A human skeleton was uncovered at a depth of 1.6m. The skeleton was lying on its back with the head facing north-west. Compared to the skull and leg bones, the pelvis was somewhat dislocated. The head was in an upright position with the lower jaw set on the chest. The right arm slightly flexed at the elbow was stretched along the body. Left arm bones, left shoulder bones and left rib bones were not found in situ. Bone fragments belonging to these parts, particularly shin-bones from the left arm were revealed on the ground around the right arm. It appeared that the body had been partially disarticulated before burial. A thin layer of heat-affected ground was visible under the skull. To the left and right of the skull there were carbonized remains of vertically planted wooden poles measuring 3-4cm in diameter.

This grave containing a bardag-type pot was an intrusive grave in the kurgan and dated to a much later period, the first half of the first millennium, B.C. Two radiocarbon dates of Cal BC 800-520 (Beta 220999) and Cal BC 780-410 (Beta 226238) were obtained from charcoal in the grave.

Comment by DJ Maynard

I think it is important to be very clear what is happening in this grave. Is this a purely Iron Age burial in a location using an existing cemetery, or is it a Eneolithic burial re-used as an Iron Age burial, or is it a Eneolithic burial with a later event such as robbing or a short lived occupation leaving charcoal (both dates came from charcoal rather than bone). Is the bardag of more recent type (it looks to me as if it is), but in many ways the burial tradition seems to fit the rest of the site. I don't know that there is a perfect answer to this, but there should be a statement showing the confidence levels of what ever is chosen.

Pottery

1. Body fragment of a thick-walled (1.8cm) pot tempered with plant and well fired to a brown-pink surface.

3. Black globular-bodied, narrow-necked, flat-based bardag tempered with fine sand. The base is slightly concave, the rim is funnel shaped. A handle with a round cross section connects the shoulder to the rim. Two thin parallel incised lines gird the pot at the level of the lower end of the handle. The 2.5cm wide area between the two lines is decorated with patterns made up of four rows of pecked dots. The rows are spaced unevenly, 1cm to 2cm from each other. Height – 31cm, mouth diameter – 10.4cm, body diameter – 24cm, base diameter – 13cm.

Human Remains (Kate Brayne)

The only skeleton that could be recovered from the site, and studied in Baku was the one from this grave.

Only about 30% of the skeleton was recovered, which was in poor condition. It was an adult, of indeterminate age and sex. It was not possible to determine the stature of this individual. No pathological lesions were present.

Kurgan 13

The kurgan mound with a dense concentration of stones in the central part and sparse scatter of stones around measured 10m in diameter. The central patch of stones forming the upper capping of the grave had the shape of a rectangle aligned northeast to southwest. It was 4.5m x 2.5m in size and 25cm high. The grave floor was exposed at a depth of 1.2m. The number of stones gradually decreased down to the base. The burial chamber at this depth measured 1.1m in length by 0.9m in width. A single pottery fragment was recovered from within the stones at 45cm depth in the grave. No human skeletal remains or other artefacts were contained in the grave.

Pottery

1. A single pottery fragment recovered from the grave represents a medium-sized sand-tempered pot coarsely executed but well fired to a brown-pale surface.

Kurgan 14

This kurgan did not show any signs of disturbance. The kurgan mound was 30cm high and 10m in diameter. The central dense group of stones forming the upper capping of the burial chamber was in the shape of a horseshoe with its stone less end oriented to the east and measured 0.8m-1.2m in width. The peripheral stone layer encircling the central cluster was approximately 1.5m-1.7m wide. A few pottery pieces were recovered from within the stones in the kurgan mound.

The burial chamber uncovered below the central heap of stones had a northwest to southeast alignment was full of river washed stones. The top of the chamber measured 2.5m in length and 1.05m in width. A 40-45cm wide row of river washed stones placed along the chamber walls was detected at 50-60cm depth. Three closely spaced ceramic vessels were found on these stones in the western corner of the grave. All were red and thick-walled.

The burial chamber extended to a depth of 1m below the surface. A black ash-rich soil strip, 7-8cm in width and 4-5cm in thickness, was seen banding the oval cornered chamber base at this depth. The burial chamber, including this strip measured 2.1m in length and 1.35m in width.

The human skeleton was exposed in the southeast corner of the burial chamber. This was a disarticulated burial. The leg and thigh bones facing west rest on a river washed stone. Other bone fragments were found jumbled in the eastern corner and against the eastern wall of the chamber. The skull was missing. A few teeth were found near the centre of the grave. The presence of red ochre was noted right in the centre. All the bones were extremely decayed.

None of the three ceramic pots retrieved from the grave was intact. Some of the parts were missing altogether. It might indicate that the pots had been placed in the grave after they became damaged and unusable. All three have flat bases, however the transition from the body to the base is gradual and carelessly executed. It could possibly be a departure from the established tradition of making rounded-based pots and mark the beginning of a new tradition characterised by the manufacture of flat-based pots.

A radiocarbon date of Cal BC 3710-3630 (Beta 232338) was obtained from bone in this grave.

Pottery

1. Red elongated jug with a cylindrical neck. The rim has a flat upper surface and a small outer flange. The base is narrow and flat, the walls are thick. The pot is handmade and tempered with sand. The uneven surface is coated with light green angobe and polished. Height – 30.5cm, body diameter – 27cm, mouth diameter – 18cm, base diameter – 11cm.
2. Red cylindrically-necked jug-type pot with a flat rim. Carelessly shaped by hand from sand-tempered clay. The surface is angobe-coated and polished. Height – 32cm, body diameter – 28cm, base diameter – 12.5cm.
3. Fragment of a jug-type pot of a pink colour. The pot tempered with sand and plant has thick walls and a flat-base. The size is almost the same as the previous one.
4. Fragments of red pots tempered with plant or sand or with plant and sand.

Kurgan 15

This was located 3m west of Kurgan 14. The kurgan mound measured 5m x 4.6m in diameter and did not rise above ground level. There was a dense group of stones in the centre and a scarce spread of individual stones around.

The grave chamber with oval corners had a northwest-southeast alignment and was 1.8m long by 1.3m wide. The grave fill down to the base at 1m depth consisted of earth and river washed stones. A single pottery fragment was recovered 30cm below the top of the burial chamber.

The human skeleton was found on the grave floor. The skull rested against the south-east wall of the grave, the face was oriented in the northeast direction. Pieces of lower jaw bones together with teeth were excavated 35cm west of the skull. Other parts of the skeleton were extremely dissociated pieces of decayed bones which made it impossible to identify the skeleton's position. Large bones of lower limbs were not encountered. There was a 2-3cm thick sand-tempered clay coat applied over the skeleton. Rotted wood remnants were noted in the central part of the grave.

Pottery

1. The only pottery sherd found in the grave comes from a brown, plant- and sand-tempered thick-walled (1.8cm) pot.

Kurgan 16

The kurgan diameter was 10m north-south and 9m east-west. The central heap of stones measured 4.8m north-south by 4m east-west. The kurgan mound was almost at ground level. The width of the cromlech encircling the mound was between 1.6m and 2m.

The burial chamber of 2.9m north-west by 2m south-east was exposed 40cm below the central pile of stones. Further digging revealed that the burial chamber at a depth of 60cm was constructed of layers of stones, 40-60cm wide and 30-40cm high. At this depth the chamber measured 2.6m in length and 2m in width. An isolated mass of pottery pieces was visible in the central part of the burial chamber at this depth. The floor of the grave was reached at a depth of 70cm. The burial chamber at this depth was 1.8m long by 1.15m wide. The number of stones in the chamber decreased with depth. No human remains were found in the grave.

Pottery

1. Several fragments of brown thin-walled pots tempered with clayey sand. One is part of a funnel neck.
2. Fragments of red and pink pots. One of these represents a pink thin-walled, plant-tempered pot. The others form part of small thick-walled pottery vessels with biconical bodies and narrow long necks. All are tempered with sand and coated with angobe.
3. The lower part of a thin-walled kuza-type pot with a flat 5.5cm diameter base. Neatly moulded by hand of fine sand-tempered clay the pot was well fired to a grey surface. The outer surface is coated with black angobe and polished, and decorated with vertically applied grooves. The width of these grooves is 2cm on the body and 1.2-1.3cm near the base. The base is 3mm thick, the juncture between the base and body is 8mm thick.

Kurgan 17

The stones in the central part of the mound were densely packed, whereas those at the periphery were occasional. The kurgan mound did not rise above the ground. Excavation revealed another set of stones beneath the surface layer of stones in the centre. This was aligned north to south and measured 2.5m in length by 2m in width. Further digging revealed that the stone heap was gradually diminishing towards the base which was reached 90cm below the ground. So at a depth of 40cm the stones covered an area of 1.7m by 1.5m. At 60cm depth the stone layer measured 1.1m east-west. The patch of stones on the grave floor was 1m by 0.5m. The grave chamber aligned north-south measured 1,8m in length by 1.6m in width.

The grave did not contain human remains. Pottery sherds were found in the kurgan's stone capping and at 30-40cm depth in the burial chamber. The burial chamber produced also a single fragment of an obsidian tool.

Pottery

1. Fragments of chestnut-brown thick-walled (1.5 -1.7cm) pots tempered with fine-grade plant.
2. Fragments of thin-walled (4-7mm) pots tempered with fine sand and poorly fired to a pink surface. One piece appears to be a fragment of a short (1.1cm) everted funnel-shaped rim of a small jug.
3. Broken fragment of a translucent obsidian blade. Roughly worked it has four faces and finely serrated edges. This knife-type tool seems to have been reused.

Kurgan 18

This kurgan was located 28m south of the pipelines construction corridor. The burial mound stood 60cm above the ground and was 15.5m north-south by 12.7m east-west in diameter. The mound was constructed of earth and river washed stones. Further excavation identified a rectangular set of river stones in the centre of the burial mound. This had a northwest-southeast alignment and measured 5.3m in length by 4.1m in width. A sparse scatter of river washed stones was seen in between this central patch of stones and the 1.7-1.8m wide cromlech. The density of cromlech stones in the north-east facing section of the mound was noticeably lower.

When cleaned of soil the outer edge of the kurgan's stone capping was found extending for a length of 0.5-1m into the soil layer.

The burial chamber was exposed after removal of the uppermost layer of the rectangular stone patch in the centre of the mound. The chamber was constructed of stones on a natural hillock without digging a special pit. The stones were arranged in the form of a rectangle aligned northwest to southeast. The stone setting banding the chamber was 30-40cm high and 40-50cm wide. The grave chamber within this stone arrangement measured 2.3m in length and 1.4m in width. The 70cm southeast section of the grave was separated from its northwest section by a 40cm wide set of stones.

A ceramic pot was exposed at 30cm depth in the northwest part of the grave. In addition, half of a deep-sided bowl was found at a depth of 40cm in the western corner of the grave. The pot was found with the broken side facing the grave wall. Two more small pots were found close to this bowl. All the pots appeared to have been broken and incomplete before being placed in the grave. No human skeletal remains were contained in the grave.

The kurgan mound yielded a single obsidian flake.

Pottery

1. Part of a small handmade jug-type ceramic vessel tempered with sand and well fired to a red surface. The pot has a coarsely shaped globular body, rounded base and thick walls. The wall thickness varies. The surface is coated with angobe and polished. There are white deposits on the surface. The rim is missing.
2. Rim fragment of an upright-necked jug with a slightly everted rim. Tempered with sand the pot was well fired to a red surface.
3. Fragments of a small kuza-type pot with a narrow and long neck, upright rim and flat base. Tempered with fine plant and fired to a red surface. Coarsely hand shaped, coated with brown angobe, uneven interior and exterior surfaces.
4. Several fragments of a small red bowl-type pot with a narrow and flat base. Tempered with plant, coarsely handmade. There is a grey film on the exterior surface. Diameter – 13.2cm, height – 4.5cm base diameter – 4cm.

Stone Objects

5. Small obsidian flake with one edge finely serrated.

Jar Burials

Burial 1. This was exposed 45cm below the existing surface 20m west of Kurgan 3. The jar was lying on its side with the mouth facing north. A set of cobblestones was seen surrounding the jar possibly to allow it to remain steady. The jar was under water because of the overflow of a nearby

irrigation ditch that had occurred a few days before the excavations started. In addition it had been driven over by heavy machines involved in the SCP pipeline construction. All this resulted in the extreme damage and jumble of a child's bones in the jar. These small bone fragments recovered from within the muddy fill of the jar were completely decayed by long exposure to moisture caused by regular flooding of the area.

The rounded-based burial jar tempered with coarse-grain sand and to a lesser degree with plant falls into the category of "coarse ceramics". It was poorly fired to a red surface. The repaired jar measured 50cm in height and body diameters and 29cm in mouth diameter (Plate VI, 1, Plate XIII, 1).

Burial 2 was located 25m west of Burial 1. The burial jar had been truncated by topsoil stripping. Only the rounded base containing a few small bone fragments had survived. The jar falling within the category of "coarse ceramics" appears to belong to cooking-type pots.

Burial 3 was located 1.9m south-west of the main burial chamber of Kurgan 3. A pit of 70cm by 70cm dug into the kurgan mound contained a large burial jar. It was lying on its side 70cm below the stripped surface with the mouth facing northwest. A child's skeleton was found inside the jar. The skeleton lay stretched in supine position with its feet towards the jar mouth. River rounded stones had been put around the pot to allow it to remain steady. Following this, a large fragment of another large jar had been placed atop the burial jar (Plate II, 2).

The burial jar was handmade of coarse sand-tempered clay and fired to a red surface. The pot has uneven interior and exterior surfaces and falls into the category of "coarse ceramics". The base is rounded, the upright rim is high and curves slightly outward. There are traces of soot and black stains on the surface. Height – 57cm, body diameter – 48cm, mouth diameter – 28cm, neck height – 4.5cm (Plate XIII, 2)

The fragment found on top of the burial jar comes from a pink jar made of sand-tempered clay. The rim is funnel-shaped, the base is rounded. Handmade and poorly fired. There are grey-brown stains on the smooth surface. Height – 55cm, body diameter – 45cm, mouth diameter – 33cm, rim height – 7cm (Plate VI, 5, Plate XIII, 3).

V. Analytical Results

• *Interpretation of Excavation Results*

Excavations carried out in the Soyugbulaq kurgan field have enabled some general conclusions to be made about the structure of these kurgans, burial practices employed and artefacts recovered.

Kurgan mounds. The majority of kurgan mounds have had different degrees of damage because the area of the site had been in agricultural use over a long period of time. Little information was gained about kurgan mounds at Excavation Site I as these were badly damaged during topsoil stripping. Preservation of kurgan mounds at Excavation Site II allowed more detailed information to be obtained about the structure of kurgans.

The kurgans mounds at Soyugbulaq are constructed of earth and river washed stones. According to stone arrangement these could be divided into two groups:

1. *Mounds with a dense concentration of stones in their central part and a cromlech-type stone setting surrounding the central heap.* Central groups of stones were generally characterised by a rectangular shape and had a northwest to southeast alignment. The cromlech-type set of stones of some kurgans was up to 2m wide in which case it fully covered the remaining part of

the kurgan. It appears that kurgan cromlech widespread later - during the early Bronze Age originated from this circular spread of stones covering the larger portion of kurgan mounds.

2. *Mounds with sporadic scatters of stones.* No regular patterns of stone arrangement could be seen on such mounds. Nor did some of them have burial chambers. Pottery finds were recovered from within stone layers on such mounds.

Burial chambers beneath kurgan mounds are also divided into two groups:

1. *Above ground burial chambers or those constructed on the natural soil.* For the construction of such graves a 20-30cm high mound was selected and then smoothed. The burial chamber was commonly formed by a 40-60cm wide and 30-40cm high rectangular set of stones and then split width wise into two parts by an additional stone setting. One part was larger than the other. These burial chambers did not contain human remains. After the grave goods were placed the burial chamber was backfilled with earth and river rounded stones.
2. *Burial chambers dug into the natural soil* were recorded under both types of kurgan mounds - those with a central cluster of stones and an encircling cromlech and those with a sporadic spread of stones. It appears that there is no correlation between the types of kurgan mounds and burial chambers. These graves were dug at different depths, however their maximum depth did not exceed 1m. Similar to graves constructed on the natural soil, several graves dug into the natural soil layer had stone arrangements encircling the interior of their burial chambers. In some cases the stone arrangement of burial chambers dug into the natural soil is identical to the stone arrangement of those constructed on the natural soil.

In general, there are several types of burial chambers dug into the natural soil. These are as follows:

- a. burial chambers built of raw adobe bricks;
- b. common earth graves;
- c. burial chambers with an encircling set of stones;
- d. burial chambers with an encircling ash-rich soil strip on the floor.

As is obvious, burial chambers dug into the natural soil drastically differ from one another in shape and characteristics. However, there are a few factors drawing them together. Burial chambers of all types were backfilled with river washed stones. Excluding graves built of raw adobe bricks, the three other types of graves have rectangular oval-cornered burial chambers. With a few exceptions all burial chambers had a northwest to southeast alignment.

The children's burial jars uncovered in the Soyugbulaq kurgan field were aligned north to west. This was an accepted orientation for the Leylatepe Culture burial practices.

Burial practices. A total of 18 kurgan mounds were excavated. Only Kurgan 5 produced an anatomically complete skeleton. It was found lying in a crouched position on its right side. All the other skeletons were usually dissociated pieces of bones or bones in jumbled masses implying the bodies had been disarticulated before burial. At the same time not all the parts of disarticulated bodies were placed in the grave. Disarticulated human skulls were excavated only in Kurgan 2 and Kurgan 15. In several graves human skeletal remains were restricted to a few shin-bones. Disarticulated human skeletal remains were largely found in a single pile in one side of burial chambers. In Kurgan 1 an attempt was made to retain the natural anatomical layout of a human body. The skeletal remains in Kurgans 1, 9, 10 and 15 were plastered with a thin layer of clay. Ochre residue was detected in Kurgan 9. Some graves yielded rotted or charred wood remnants. It

was established that burial chambers had width wise laid wooden poles. These finds might indicate that wood was used as one of burial attributes.

These diverse burial practices were not conditioned by the types or structure of graves, i. e. disarticulated bodies or use of wood were recorded in different types of graves.

Archaeological material. Except for a copper dagger from Kurgan 5, small paste beads from Kurgan 9 and obsidian and stone tools from some other kurgans, the rest of the cultural material recovered from the site is represented by pottery. Grave goods were extremely rare. The majority of kurgans contained a few ceramic sherds, some produced only one pottery fragment which might imply that the local inhabitants were very little disposed to place goods in a grave with the dead.

A small number of ceramic fragments represent plant-tempered pots. All the remaining sherds come from untempered or fine sand-tempered vessels. Only several intact pots were found in the kurgans. It could be assumed that the custom of placing grave goods in the graves to accompany the dead was just barely symbolic. More attention at the Soyugbulaq burial site was paid to the structure of kurgan mounds and grave chambers.

Despite all the differences the Soyugbulaq kurgans share common characteristics, such as disarticulated burials or the northwest to southeast alignment of burial chambers.

The dissimilarities in kurgan layouts or irregularities in the burial rites might possibly indicate the early stage of development of the overall kurgan culture which was yet to be fully formed and establish general principles of kurgan burials. From this point of view Kurgan 5 is particularly worthy of attention. The alignment of the disarticulated body and more elaborate grave goods make this burial look more like those dating to later periods. This is one of the factors that definitely contributed to the formation of burial practices of the Kura-Araz Culture that succeeded the late Eneolithic Leylatepe Culture. No animal bone was recorded in the kurgans.

- *Dating*

Dating of the Soyugbulaq kurgans was largely based on pottery characterization and radiocarbon assays of charcoal and human skeletal remains. The site did not produce large quantities of pottery, however, the pottery recovered allows substantiated conclusions to be drawn regarding the chronology of the kurgans. The pottery ware was represented by varied pots and ceramic fragments. Their shape, colour and clay characteristics played a decisive role in establishing the chronological range of the kurgan burials. The majority of pots have rounded bases and funnel-shaped rims. Though most of these were fired to a pink, orange or red surface, grey or dark grey pots are also occasionally encountered. A certain proportion of pots were made of plant-tempered clay which is typical of the Eneolithic Period only. The Soyugbulaq pottery ware is identical to the pottery recovered from Leylatepe, Boyuk Kasik, Poylu II and Agilidere settlement sites of Leylatepe Culture dating to the late Eneolithic, i. e. first half of the fourth millennium, B.C.

In addition discovery of children's jar burials in the Soyugbulaq kurgan field has also supplied good evidence for the date and chronological range of the burial site. Similar graves have also been found in Leylatepe, Beriklddebi (Georgia), Boyuk Kasik, Poylu I and Poylu II sites of the Leylatepe Culture.

The cemetery appears to be securely dated to the early fourth millennium. Radiocarbon dates suggest that the use of the site is slightly later than the site of Boyuk Kasik, 5 km to the west, and contemporary with that of Poylu II. Samples from some of the other kurgans on might give a broader range of dates. The dates supplied by Bertille Lyonnet are Cal BC 3710-3652

(UBA7613) and Cal BC 3941-3857 or 3816-3778 (UBA7609) which fit within the range of dates obtained from this study.

The one anomaly with the dating for the use of the site is the presence of two dates of Cal BC 800-520 (Beta 220999) and Cal BC 780-410 (Beta 226238) from Kurgan 12. Both are from charcoal, with the first dates taken as a check against the result from the first, which confirmed the late activity on the site. Kurgan 12 contains a burial with some of the characteristics of the rest of the Eneolithic site and little in common with late Bronze Age/Early Iron Age traditions. It is possible that the two dates are the result of later activity such as robbing the grave or some other use of the site. Possibly the best explanation is that after a period of 2000 years, the site was recognized as a cemetery and an additional grave added. If this is so, then a proportion of the unexcavated kurgans could also originate from this period.

The question of re-use also applies to the three child jar graves. Jar grave burials are thought to predominantly occur in the Antique period. At this site they are described as being of Eneolithic date without the benefit of independent dating. The spread of these child burials is not known. Work on Excavation Site II would not be expected to identify these features and they only occurred in a confined area of Excavation Site I. It is possible that they represent a portion of an Antique period cemetery possibly located to the northwest of the excavated area. It is in this area that a single large jar was discovered 25m northwest of the excavation in February 2005.

Other examples of child jar graves are known from BTC (Boyuk Kasik and Poylu II), although they could be the result of intrusive later burial. Other child jar burials are known from Leylatepe and Beriklddebi, perhaps these should be considered carefully to determine if this is a common trait running through the Leylatepe Eneolithic culture.

Objects from the site are not common, especially when compared with later burial practices. All the pottery from the site can be directly compared with material from Boyuk Kasik and Poylu II. The dagger from Kurgan 5 has been shown to be largely pure copper, and as such is an example of the earliest form of metal working in the region using native copper to fashion tools. As the easily obtained sources of copper were worked out, objects of this material would have had a scarcity value, before technology developed the means to refine and produce bronze which could be manufactured in greater quantities. In consequence of this, the occupant of Kurgan 5 must have been a more socially important figure than those in the other burials.

Samples of charcoal and human skeletal remains have been radiocarbon-dated at Beta Analytic. The results are shown on Table 1

Site	Context	Laboratory No	Measured Radiocarbon Age	$^{13}\text{C}/^{12}\text{C}$ Ratio	Conventional Radiocarbon Age	Material	2 sigma 95% probability	1 sigma 68% probability
KP431	Kurgan 12 150cm	Beta 220999	2520 +/- 40 BP	-24.7 o/oo	2520 +/- 40 BP	Charcoal	Cal BC 800 to 520	Cal BC 790 to 760 and Cal BC 680 to 550
KP431	Kurgan 9	Beta 221000	4700 +/- 40 BP	-18.2 o/oo	4810 +/- 40 BP	Bone	Cal BC 3660 to 3520	Cal BC 3650 to 3630 and Cal BC 3570 to 3540
KP431	Kurgan 8	Beta 221001	5000 +/- 40 BP	-25.8 o/oo	4990 +/- 40 BP	Charcoal	Cal BC 3930 to 3860 AND Cal BC 3810 to 3670	Cal BC 3790 to 3710
KP431	Kurgan 11	Beta 226237	5020 +/- 40 BP	-25.0 o/oo	5020 +/- 40 BP	Charcoal	Cal BC 3950 to 3700	Cal BC 3930 to 3870 and Cal BC 3810 to 3760
KP431	Kurgan 12 150cm	Beta 226238	2500 +/- 40 BP	-26.7 o/oo	2470 +/- 40 BP	Charcoal	Cal BC 780 to 410	Cal BC 760 to 680 and Cal BC 670 to 510
KP431	Kurgan 14 Bone	Beta 232338	4770 +/- 40 BP	-18.5 o/oo	4880 +/- 40 BP	Bone	Cal BC 3710 to 3630	Cal BC 3700 to 3640

Table 1 Radiocarbon determinations for Soyugbulaq

As seen from Table 1, the Soyugbulaq kurgans are dated to the first half of the fourth millennium, B.C.

Based on this and the foregoing the Soyugbulaq kurgans may be dated to the final stage of the Eneolithic Period –first half of the fourth millennium, B.C.

Only one grave under Kurgan 12 had a much later origin –first half of the first millennium, B.C. The single bardag-type pot in the grave and radiocarbon dating show the grave was constructed at a much later date than the Eneolithic kurgans.

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

Until recently, the study of the Eneolithic Period in the South Caucasus has been restricted to excavations of settlement sites only. The settlement sites investigated along the River Kura also contained coeval burials. The inhabitants buried their deceased under the floors of dwelling structures or in open spaces between them. In Ganja-Gazakh region only one settlement site had burials – this was the Babadervish site in Gazakh where two graves were excavated. Taken as a whole, burial grounds located outside the boundaries of Eneolithic settlement sites had not been recorded in the South Caucasus.

Before the discovery of Soyugbulaq, a single Leylatepe Culture kurgan had been excavated at Kavtiskhevi village in southeast Georgia in the 1990's. The pottery ware from this site is identical to material recovered from Soyugbulaq, Boyuk Kasik and Poylu. However the results of the excavations of this kurgan were published in the scientific press in Paris only in 2007.

Discovery of Soyugbulaq in 2004 and subsequent excavations provided substantial proof that the practice of kurgan burial was well established in the South Caucasus during the late Eneolithic. The roots of the Leylatepe Archaeological Culture to which the Soyugbulaq kurgans belong to, stemmed from the Ubaid Culture of Central Asia. Although burial grounds located outside the boundaries of Ubaid Culture settlement sites had been found thus far, these did not have earth mounds. The earliest kurgans found in the South Caucasus before the discovery of the Soyugbulaq site were dated to the early Bronze Age, i. e. third millennium, B.C. The Soyugbulaq kurgans have provided substantial evidence that the earliest kurgans in the South Caucasus belonged to the tribes of the Leylatepe Culture.

The Leylatepe Culture tribes migrated to the north in the mid-fourth millennium, B.C. and played an important part in the rise of the Maikop Culture of the North Caucasus. A number of Maikop Culture kurgans and Soyugbulaq kurgans display the same northwest to southeast grave alignment. More than that, Soyugbulaq kurgans yielded pottery forms identical to those recovered from the Maikop kurgans. These are the major factors attesting to the existence of a genetic link between the two cultures.

So, the Soyugbulaq kurgans provide vital information that can be used in the study of the history of migrations from Mesopotamia into the South Caucasus and from there to the North Caucasus in the fourth millennium, B.C. and Eneolithic burial practices in the South Caucasus.

- ***Recommendations Regarding the Protection of the Site or Future Research***

Three pipelines of international importance – WREP, BTC and SCP – traverse the Soyugbulaq site. The cultural deposits at the site were partly disturbed during construction of these pipelines. Moreover, located in arable land the majority of kurgan mounds have had different degrees of damage caused by regular ploughing long before the commencement of pipeline construction.

Given the extreme scientific significance of the monument all construction and agricultural activities at this location should be banned to prevent further damage to the site.

The excavation and study of the Soyugbulaq site should continue and a portion of the kurgans should be protected and preserved forever.

- *References*

Lyonnet, B., Akhundov, T., Almamedov, K., Bouquet, L., Courcier, A., Jalilov, B., Huseynov, F., Loute, S., Makharadze, Z., Reynard, S. **Late Chalcolithic Kurgans in Transcaucasia. The Cemetery of Soyuq Bulaq (Azerbaijan)**. AMIT (in press 2009)

Seyidov Abbas, Hasanova, Azizakhanim, 2005. **The Ancient Metal of Nahchivan**. Baku.

VI. Illustrations

Plate I



1. Burial chamber of Kurgan 2



2. Burial chamber of Kurgan 2

Plate II



1. Kurgan 3 during excavation looking north



2. Jar Burial 3 in the stone capping of Kurgan 3

Plate III



Photo 1. Burial chamber of Kurgan 5, showing location of copper dagger



Photo 2. Burial chamber of Kurgan 10

Plate IV



Photo 1. Kurgan 11 during excavation



Photo 2. Burial chamber of Kurgan 12

Plate V



Photo 1. Kurgan 13 during excavation



Photo 2. Kurgan 18

Plate VI



1



2



3



4



5

1. Burial jar 1
- 2-3. Kurgan 3 pottery
4. Kurgan 5 pottery
5. The jug placed atop burial jar 3

Plate VII



1



2



3



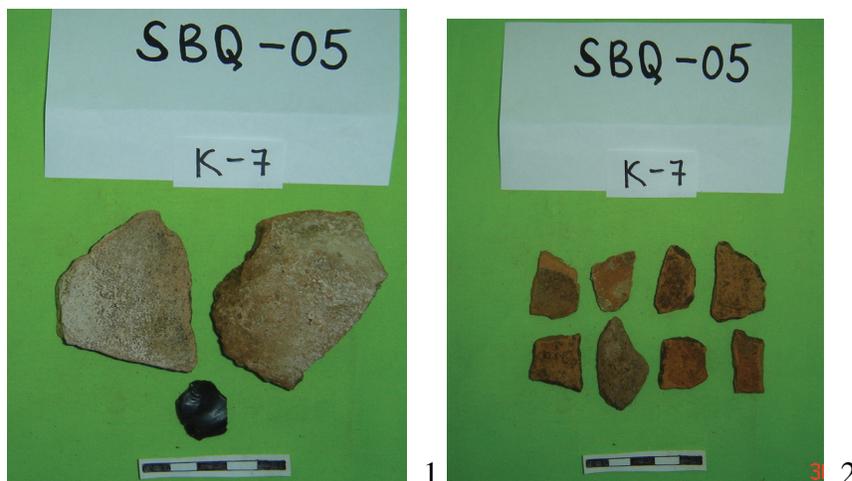
4



5

1. Kurgan 12 bardag
2. Kurgan 9 bowl
- 3-5. Kurgan 14 pottery

Plate VIII



- 1-2. Kurgan 7 pottery
- 3. Kurgan 8 pottery
- 4. Kurgan 9 pottery and obsidian
- 5-6. Kurgan 10 pottery

Plate IX



1



2



3



4



5



6

- 1-3. Kurgan 10 pottery
- 4. Kurgan 11 pottery
- 5. Kurgan 15 pottery
- 6. Kurgan 16 pottery

Plate X



1



2



3



4



5



6

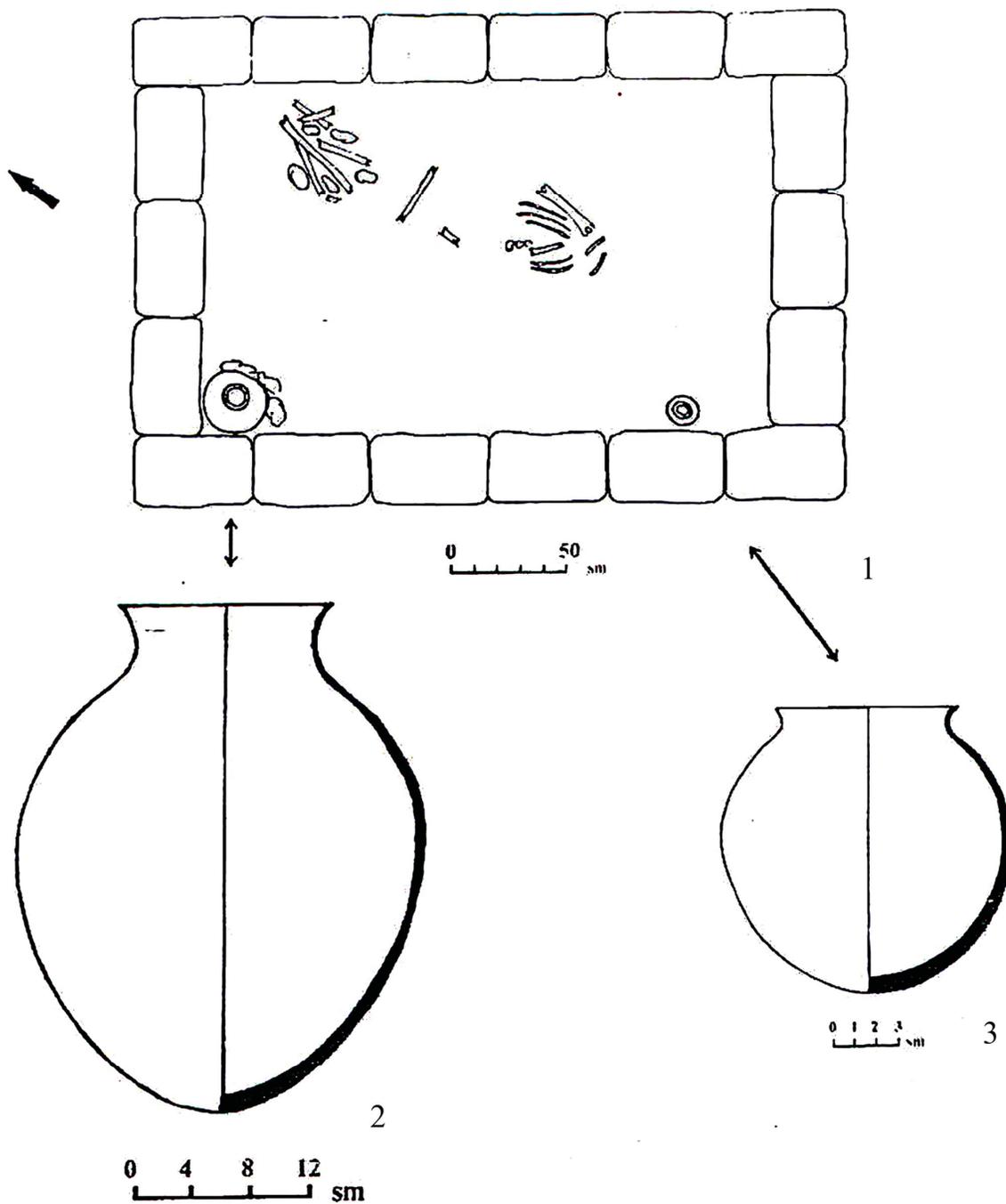
- 1-3. Kurgan 16 pottery
4-5. Kurgan 17 pottery
6. Kurgan 17 obsidian

Plate XI



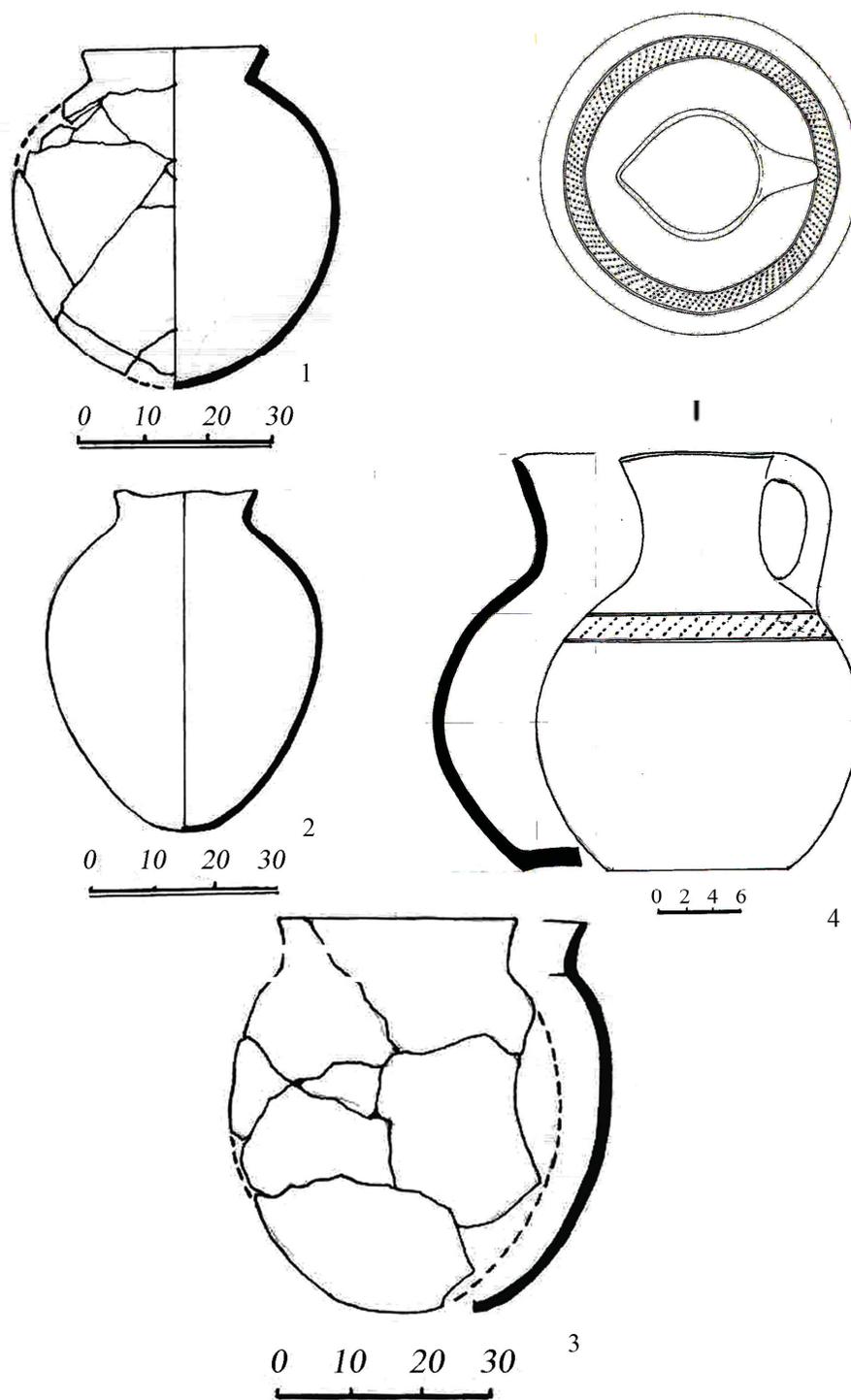
1-5. Kurgan 18 pottery

Plate XII



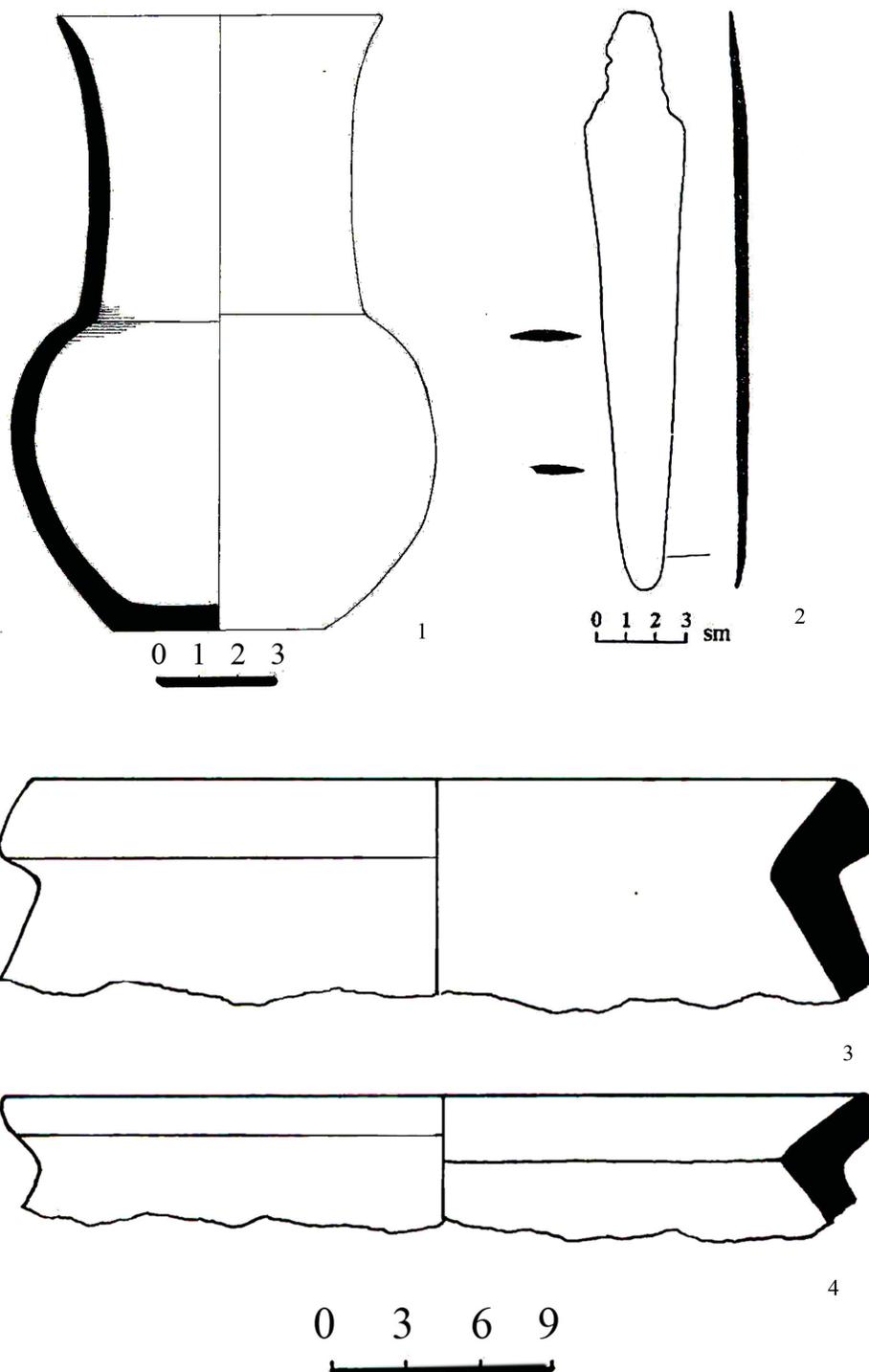
Kurgan 1 burial chamber and pottery

Plate XIII



- 1. Burial jar 1
- 2. Burial jar 3
- 3. Jug placed atop burial jar 3
- 4. Kurgan 12 bardag

Plate XIV



1. Kurgan 5 pottery
2. Kurgan 5 copper dagger
- 3-4. Pottery fragments recovered from damaged kurgans which kurgans? Or which Excavation?

VII. Inventory of Artefacts

	KP	Material	Find	Kurgan No.	Quantity	Comment
1	432	ceramic	bowl	6	1	partly mended
2	432	ceramic	dopu	6	1	partly mended
3	432	ceramic	dopu	6	1	21 fragments were found
4	432	obsidian	cutting tool	6	1	
5	432	ceramic	bowl	7	2	one fragment was found
6	432	ceramic	pot fragment	7	1	kurgan mound
7	432	ceramic	pot fragment	7	18	kurgan mound
8	432	obsidian	cutting tool	7	1	
9	432	ceramic	pot fragment	8	1	burial chamber
10	432	ceramic	kheyra	9	1	
11	432	ceramic	pot fragment	9	1	
12	432	ceramic	pot fragment	9	1	kurgan mound
13	432	obsidian	cutting tool	9	1	kurgan mound
14	432	ceramic	pot fragment	10	7	
15	432	ceramic	dopu	10	16	
16	432	ceramic	dopu	10	12	neck has been mended
17	432	ceramic	dopu	10	2	
18	432	ceramic	dopu	10	3	
19	432	ceramic	pot fragment	10	1	
20	432	ceramic	pot fragment	10	1	
21	432	ceramic	pot fragment	11	2	kurgan mound
22	432	ceramic	pot fragment	11	1	
23	432	ceramic	pot fragment	11	1	
24	432	ceramic	pot fragment	12	1	kurgan mound
25	432	ceramic	jug	12	1	fully repaired
26	432	paste	bead	9	188	
27	432	ceramic	pot fragment	13	1	kurgan mound
28	432	obsidian	cutting tool	13	1	
29	432	ceramic	jug	14	1	partly repaired
30	432	ceramic	jug	14	1	partly repaired
31	432	ceramic	pot fragment	14	1	partly repaired
32	432	ceramic	pot fragment	15	1	
33	432	ceramic	bowl	16	1	
34	432	ceramic	pot fragment	16	7	
35	432	ceramic	pot fragment	16	6	
36	432	ceramic	pot fragment	16	20	
37	432	ceramic	pot fragment	17	1	kurgan mound
38	432	ceramic	pot fragment	17	1	kurgan mound
39	432	ceramic	pot fragment	17	1	

40	432	ceramic	pot fragment	17	1	
41	432	ceramic	dopu	17	3	kurgan mound
42	432	ceramic	pot fragment	17	9	kurgan mound
43	432	obsidian	cutting tool	17	1	kurgan mound