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Tbilisi

2024

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Introduction

In 2024, during the construction works associated with a hydroelectric power station near the approaches of the Khrami River, in the vicinity of the village of Nakhiduri, surface archaeological survey works were conducted following modifications to the planned project corridor (see survey report). During these investigations, several archaeologically significant locations were identified within the section of the project area affected by the proposed alterations. Stone structures, some of which were visible directly on the ground surface, were designated as objects for further archaeological examination. These structures appear to represent a small portion of a larger settlement complex. In the vicinity of these structural remains, as well as within the project corridor itself, developed Medieval ceramic material was collected.

The project area is located within the gorge of the Ktsia-Khrami River and encompasses the valley situated between the present-day villages of Nakhiduri in Bolnisi Municipality and Kosalar in Tetrtskaro Municipality. The project area consists of an approximately 2.9 km-long linear corridor following alternately both banks of the Khrami River. The corridor begins approximately 1.9 km north-west of the village of Nakhiduri and terminates approximately 3.7 km north-west of the same settlement along the course of the river.

According to the results of preliminary archaeological investigations conducted on a land included within the project area, and on the basis of Letter No. 17/699, the National Agency for Cultural Heritage Preservation of Georgia instructed Nakhiduri HPP LLC to undertake archaeological investigations within the project territory prior to the commencement of earth-moving activities. The archaeological research was planned on the left bank of the Khrami River, specifically within the aforementioned locations situated inside the buffer zone associated with amendments to the hydroelectric power station construction project.

The archaeological expedition operated within the project area for a period of nine days, from 25 May to 2 June inclusive. The archaeological investigations were fully financed by Nakhiduri HPP LLC. The fieldwork was conducted under the direction of archaeologist Davit Darejanashvili.

Historical and Historiographic Overview

The Ktsia-Khrami Gorge represents one of the most archaeologically and historically significant regions in southern Georgia. According to the eighteenth-century historian and geographer Vakhushti Bagrationi, by the late Medieval period the valley of the Ktsia-Khrami River was densely populated with numerous settlements. Among these were Muguti, Kara, Andria, Ktsila, Tavmrgvala, Tafani, Ifnobi, Irdasubani, Mirtasheni, Balakhauri, Nakhiduri, and others.¹ In addition, the valley contained numerous churches and monasteries, which, according to the geographer, had already fallen into disuse and abandonment. According to the eighteenth-century historian Papuna Orbeliani, part of these settlements was devastated during the Lezgian raids of 1750, after which King Erekle II resettled the population of the Khrami Valley to urban areas.

The historical and archaeological study of the Ktsia-Khrami Gorge began in the mid-twentieth century. Particularly significant were the surveys of settlement sites in Kvemo Kartli conducted between 1948 and 1950 under the direction of Niko Berdzenishvili. During these investigations, with the participation of researchers such as G. Grigolia, I. Tsitsishvili, P. Zakaraia, and I. Grdzlishvili, dozens of monuments located within the Khrami Valley were recorded, measured, and identified.²

Between 1960 and 1961, a speleological expedition was undertaken, during which the expedition leader K. Javrishvili first distinguished the caves and artificial rock-cut complexes located along the Khrami River and its tributary valleys. He also attempted the first typological classification of the artificial cave complexes.³

In 1974–1975, the Kvemo Kartli Archaeological Expedition, directed by M. Sinauridze, investigated the fortress and abandoned settlement located on the right bank of the Khrami River near the village of Nakhiduri. Researchers identified this site with the historical settlement of Tsurtavi.⁴

¹ Vakhushti Bagrationi, *Atlas of Georgia*. Tbilisi, 1997, pp. 42–43.

² I. Tsitsishvili. “Monuments of Material Culture Based on the Historical-Archaeological Materials of Kvemo Kartli.” *The Friend of Monuments*, No. 52, 1979, pp. 5–9; No. 54, 1980, pp. 5–10; No. 53, 1980, pp. 8–14; No. 50, 1979, pp. 11–17.

³ N. Bakhtadze. *Rock-Cut Monuments of Kvemo Kartli (Historical-Archaeological Study)*. Tbilisi, 1991, pp. 15–16.

⁴ M. Sinauridze. “Report of the Arukhlo–Kazreti Archaeological Expedition.” In: *Archaeological Expeditions of the Georgian State Museum*, Vol. V. Tbilisi, 1977, pp. 129–144.

Between 1978 and 1981, the Rock-Cut Monuments Expedition of Kvemo Kartli, organized by the Georgian State Museum, conducted extensive survey and reconnaissance work within the Khrami Valley. During these investigations, the locations of monuments identified in earlier years were verified, new cave complexes were discovered, and the sites were documented through cartographic and photographic recording, archaeological surveys, and architectural measurements. As a result of these studies, it became clear that the cave complexes distributed throughout the Khrami Valley formed interconnected typological and chronological systems.⁵

As a result of these investigations, four rock-cut complexes were identified within the section located between the villages of Nakhiduri and Kosalar. Three of these complexes are situated on the left bank of the river, while one occupies the right bank within the canyon. The complexes are primarily carved into the middle and upper terraces of the canyon walls. In some cases, the number of caves reaches approximately one hundred, arranged across two to seven tiers. As a rule, the lower-tier caves display more primitive layouts and appear to have served economic or storage functions, whereas the upper-tier caves were residential in character.

The caves were carved by heating the rock surface and subsequently applying cold water, driving wooden wedges into natural fissures, and fracturing the stone with hammer blows. The walls and ceilings of the caves are generally uneven, while the floors are typically compacted. The height of the chambers generally corresponds to the stature of an upright adult individual. Two principal types of caves may be distinguished: isolated caves cut separately from one another, and integrated cave complexes. In both cases, the caves open through narrow entrances onto open terrace-like passages, which served as sources of light and ventilation. The caves are interconnected through naturally terraced rock surfaces and artificially cut passageways, generally measuring between 1-2 m in width.

The cave complexes themselves consisted of subsidiary chambers carved around a principal central cell. The deeper chambers functioned as storage spaces, whereas the chambers situated closer to the exterior served as residential quarters. The rock-cut complexes represent spaces repeatedly reused and reconstructed throughout different historical periods. This is indicated by numerous cases in which damaged cave entrances were rebuilt using dry-stone masonry.⁶

Based on the results of these investigations, N. Bakhtadze proposed that the rock-cut monuments extending west of Nakhiduri within the Khrami Canyon constituted “rock-cut villages”

⁵ N. Bakhtadze. *Rock-Cut Monuments of Kvemo Kartli (Historical-Archaeological Study)*. Tbilisi, 1991, pp.16-17.

⁶ ↑↑, pp.21-30.

adapted for the dense communal habitation of relatively large groups of people. According to this interpretation, the complexes originated during the Bronze Age and underwent transformation during the feudal period as a result of renewed occupation and reuse. Archaeological materials recovered during investigations within these cave complexes support this hypothesis and further indicate that the final phase of their occupation dates between the eleventh and fourteenth centuries CE.⁷

In the vicinity of these rock-cut complexes, on the lower terraces of the river valley, substantial retaining walls and the remains of structures of varying size and form are well preserved. Both the retaining walls and the architectural remains are constructed in dry-stone masonry using locally quarried stone blocks. In many cases, the dimensions of the stones are sufficiently large for the structures to be described as megalithic in character. These remains most likely formed part of the broader complex associated with the rock-cut settlements situated on the middle and upper terraces of the canyon and appear to have been used primarily for economic purposes. This interpretation is further supported by the discovery, at the base of Rock Complex No. 2, of two rock-cut wine presses adjacent to a single-room structure cleaned during the course of the investigations. Wild grapevines continue to grow along the riverbank in this area to the present day.

⁷ ↑↑, pp.32-33, 62-65.

Archaeological Works Conducted within the Project Area

The construction works, which included the arrangement of access roads, the construction of a vehicular bridge, the headworks structure, and the sedimentation channel, were implemented on both banks of the Khrami River.

Prior to the commencement of the project, areas designated for archaeological excavation within the project territory were selected, and four sectors were identified for the implementation of archaeological works.

Trench N1

Trench N1 was located on the left bank of the Khrami River (coordinates: 41.492357, 44.665818), within the area designated for the sedimentation channel (Fig. 1). During the company's planned construction works, the opening of an access road revealed a concentration of ceramic fragments at this location, which necessitated the excavation of a 3×3 m test trench. The turf layer had already been removed mechanically, exposing brown clay-rich soil beneath. Sterile natural subsoil appeared at a depth of approximately 30 cm. Within the disturbed upper deposits, fragments of Medieval ceramic vessels, including body, base, and wall sherds, were identified. These materials appear to have accumulated through redeposition processes. No archaeological deposits were recorded within the trench. Since the area was intended for the installation of the sedimentation pipeline, the trench was not subsequently backfilled (Figs. 4–5).

Trench N2

Trench N2 was situated on the left bank of the Khrami River, approximately 60–70 m from the present riverbed, on the first terrace above the river (coordinates: 41.492328, 44.665766), within the area designated for the sedimentation pipeline (Figs. 1, 6–7). At this location, an exposed stone structure composed of unworked stones was visible on the surface, forming an arc-shaped feature. A trench measuring 3.5×5 m and 50 cm in depth was excavated. Cleaning of the feature demonstrated that the arc-shaped structure had no further architectural continuation. Its removal revealed a terrace wall measuring 1.6 m in length and 35–40 cm in thickness, preserved in three courses of dry-laid local fieldstones constructed directly on the natural ground surface (Figs. 8–9).

Similar terrace walls are characteristic of Medieval settlements throughout the Khrami Valley, their dimensions depending upon the terrain and the functional purpose of the terrace, whether agricultural or residential. No archaeological deposits or artefacts were identified within the remaining portion of the trench. Following full documentation, description, and photographic recording, the trench was backfilled and restored.

Trench N3

Trench N3 was located at the northern edge of the sedimentation channel zone (coordinates: 41.492437, 44.665737) and consisted of a structure constructed on the third terrace above the river (Figs. 1, 10–11, 18). After clearing the vegetation cover, the structure was divided into a grid system for systematic excavation.

The structure is a trapezoidal single-chamber building constructed in dry-stone masonry using locally quarried bedrock fragments. Its internal dimensions are as follows: northern wall – 4.4 m; western wall – 6.6 m; eastern wall – 4.9 m; maximum internal width – 4.4 m; minimum width – 3.2 m; length – 6.6 m. The walls are built directly upon the bedrock substrate, contributing to the structural stability of the building (Figs. 11–13). Wall thickness varies between 1.2 and 1.5 meter. Larger boulders were employed in the lower courses, with the largest stones measuring up to 1.3–1.4 m in length.

The building opens southward toward the river, while the northern wall is partially embedded into the canyon slope. Behind it runs an additional retaining wall approximately 1.5 m thick supporting the terrace. Of the surviving walls, only the southern wall was preserved at foundation level, and even this had partially shifted downslope. The maximum preserved height of the walls reaches 2.5 m. The structure appears originally to have possessed a flat roof. The entrance was located at the southern end of the eastern wall. A rectangular niche was identified in the central section of the western wall, approximately 50 cm above floor level.

The interior of the structure was filled with collapsed stone debris and slope wash deposits descending from the hillside. Excavation demonstrated that this collapse layer measured approximately 65 cm in thickness. Following removal of the collapsed stones and humic deposits, fragments of a storage jar were recovered, apparently redeposited into the structure from the overlying deposits. The vessel was manufactured from well-levigated clay and fired to a reddish

colour. Its surface was decorated with two concentric painted red bands (Fig. 17:1), a decorative scheme characteristic of the Late Medieval (14th-18th centuries) period.

Additional finds from lower levels of the collapse deposits included fragments of cooking vessels (jars or pots), a vessel body fragment decorated with combed-incised bands near the shoulder, a twisted strap-handle of a jug, a flat-sectioned handle fragment from a jug or churn, and various undiagnostic ceramic fragments (Fig. 17: 2–3, 5–8). In terms of form and firing technique, these ceramics correspond generally to developed Medieval pottery traditions, although some forms also occur during the earlier stages of the Late Medieval (14th-18th centuries) period.

The floor consisted of compacted earth prepared directly over the natural substrate. In several places, small flat stone slabs were laid upon the surface. Although no traces of wooden posts were identified, it is possible that these slabs served as post bases. Only two artefacts were found resting directly on the floor: a fragment of a jug neck decorated with ribbed bands and an obsidian bladelet (Fig. 17: 4,10). Comparable jugs are characteristic of the High Medieval (9th-13th centuries) and early phase of Late Medieval periods (14th-15th centuries).

At the base of the western wall, near the southern edge of the niche, a large storage vessel (*qvevri*) was discovered embedded within the floor (Figs. 12–15). The vessel was manufactured from well-levigated clay and fired to a reddish-pink colour. Externally, it was articulated with plain ribbed bands (Fig. 16). The *qvevri* possesses a flat base measuring 10 cm in diameter, although its rim was not preserved. The diameter at the shoulder measures 65 cm, while the preserved height reaches 74 cm. Around the vessel, at shoulder level, traces of white lime mortar were identified, and deposits of the same mortar survived on the inner walls of the vessel. It was evident that the *qvevri*, initially installed during an earlier phase, had later been reinforced with lime mortar at floor level. North of the vessel, an elongated stone slab was placed directly on the floor surface. The interior of the vessel was filled with collapse deposits and fragments of its own walls. At a height of 5–10 cm above the base, a minute fragment of a glazed bowl was recovered (Fig. 17: 9).

Following proper documentation, the *qvevri* was refilled and conserved in situ.

Based on its dimensions, construction characteristics, and the presence of the *qvevri*, the building appears to have served a storage function. In determining the purpose of the vessel, two factors must be considered: first, the *qvevri* was installed singly within the structure; second, the broader context of viticulture among the settlement's inhabitants. Approximately 200 m south-east of the building, on the first river terrace, two rock-cut wine presses of differing size are preserved. These installations belong to the category of open-air wine presses and likely functioned

contemporaneously with the terrace settlement. Furthermore, wild grapevines continue to grow today on the first river terrace south-west of the settlement. These observations strongly suggest that the inhabitants engaged in wine production. However, if the *qvevri* within the investigated building had been intended specifically for wine storage, it would be expected that at least one additional vessel would have been installed alongside it. Consequently, it appears more likely that the vessel was originally intended for the storage of grain or other food products and continued to serve this function during later phases of occupation.

The investigated structure formed part of the terraced rock-cut settlement distributed across this slope, designated “Nakhiduri N2” according to the numbering system proposed by N. Bakhtadze. The principal part of the settlement consists of rock-cut chambers situated higher on the canyon slope. As noted above, previous investigations have demonstrated that such cave systems in the Khrami Valley represent Bronze Age rock-cut spaces that were reoccupied during the Medieval period. The lower terraces, some of which had been artificially expanded and reinforced, were primarily used for agricultural purposes, although evidence for residential structures also occurs. The investigated building clearly had an agricultural/storage purpose and, according to the associated archaeological material, was contemporaneous with the occupation of the settlement during the thirteenth–fourteenth centuries CE.

Trench N4

Trench N4 was located on the left bank of the Khrami River, approximately 20–30 m from the present riverbed (coordinates: 41.487991, 44.677208) (Fig. 3), within the construction zone of the bridge crossing planned under the project. During the inspection of the territory, attention was drawn to a stone-built structure concealed beneath dense thorn vegetation. It was considered compulsory to determine the nature and function of the structure and to clear its internal perimeter.

The building is oriented east–west and measures approximately 3.5×3 m. Following the removal of vegetation, it became clear that stones reused from a Medieval settlement had been incorporated into the visible upper parts of the structure, while the main body of the walls was constructed from river cobbles. The masonry employed a so-called “fishbone” arrangement, indicating a relatively late date of construction. A trench measuring 2×1 m and 40 cm in depth was excavated within the structure. Deposits consisting of river silt and sand were identified, but no archaeological deposits or artefacts were recovered (Figs. 19–20). Based on the masonry technique, the presence of alluvial silt deposits, and the fact that the structure was periodically

inundated by river water, it may be suggested that the building functioned as a temporary shelter of some kind, possibly used seasonally by shepherds, fishermen, or other transient occupants.

Conclusion

The archaeological excavations lasted for a total of nine days, during which an excavation report was prepared in parallel. The archaeological team identified a number of highly significant structural remains. In total, four trenches were excavated, three of which (N2, N3, and N4) revealed archaeological features. Two of these structures represent residential buildings or parts thereof.

Only ceramic fragments were recovered during the excavations, all of which belong to the High Medieval period (9th-13th centuries). The evidence suggests that the identified settlement extends across the entire northern slope of the valley, indicating that the remains likely belong to a large-scale settlement complex. Since this area falls outside the construction corridor of the company's project, it was not subjected to systematic archaeological investigation. The scientific study of this Medieval settlement remains a task for future research.

During the presence of the archaeological expedition on site, all archaeological remains located within the construction zone were fully investigated. The trenches were not backfilled upon completion of the fieldwork, as the construction company was scheduled to commence earthworks immediately after the conclusion of archaeological activities. Trench N3 was backfilled only to the level at which it had originally been covered prior to excavation. This part of the structure lies outside the direct construction footprint of the project, and therefore its demolition is not planned in the future.

In conclusion, all locations identified during the archaeological survey were fully investigated, allowing the company to proceed with the planned earthworks without restrictions within the designated construction corridor.

Appendix - Figures

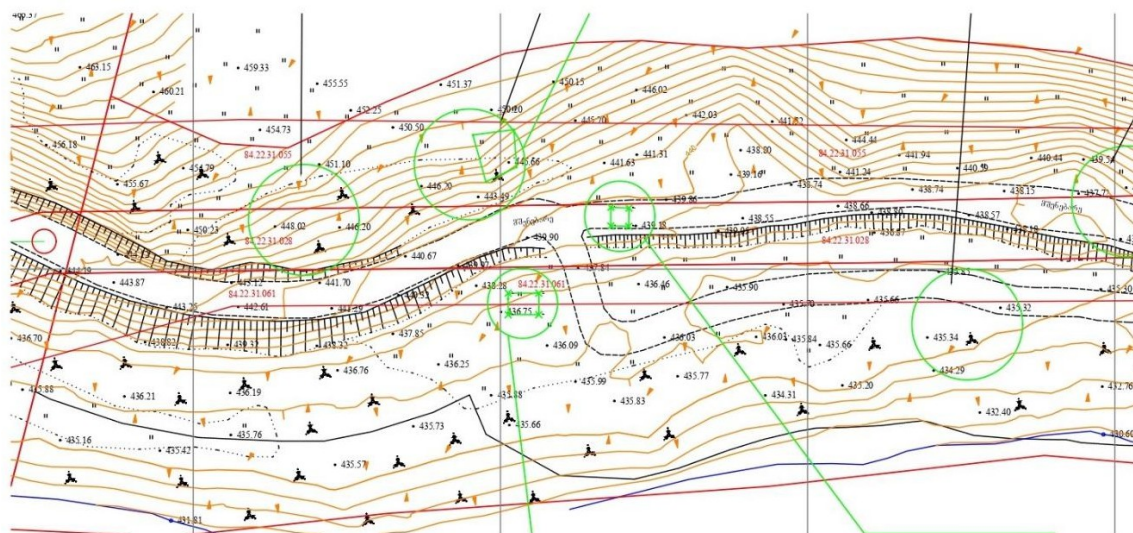


Fig. 1. Topographic plan

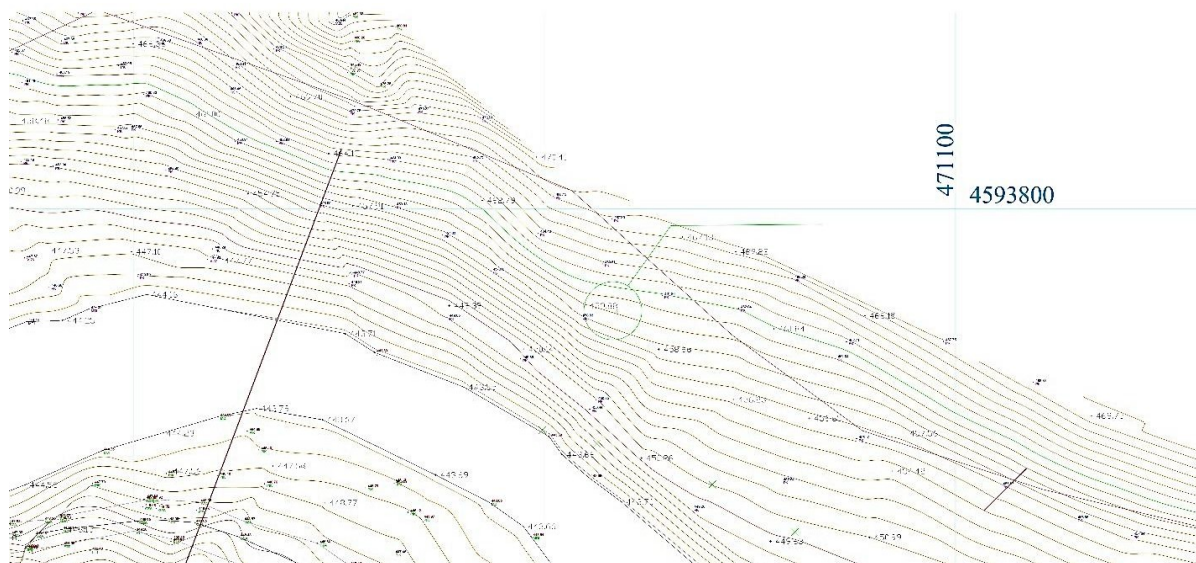


Fig. 2. Topographic plan

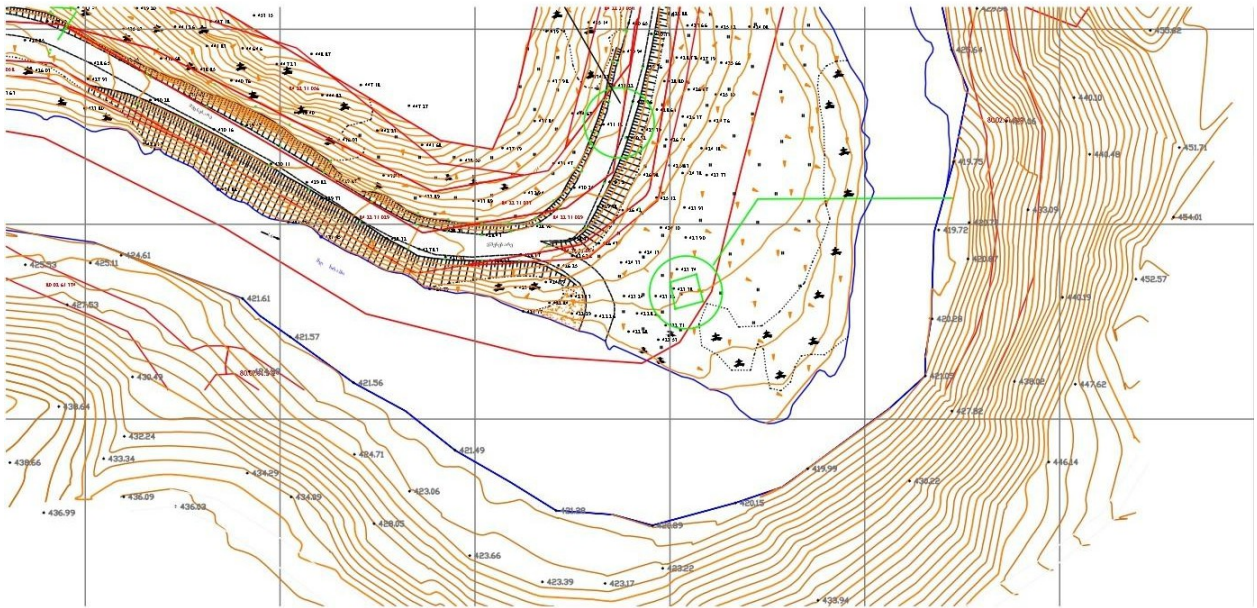


Fig. 3. Topographic map of the site N4



Fig. 4. Trench N1 after excavations



Fig. 5. Trench N1 After excavations



Fig. 6. Trench N2 at a start of excavations



Fig. 7. Trench N2 at a start of excavations



Fig. 8. Trench N2 after cleaning and the terrace wall unearthed within it.



Fig. 9. Trench N2 after cleaning and the terrace wall unearthed within it.

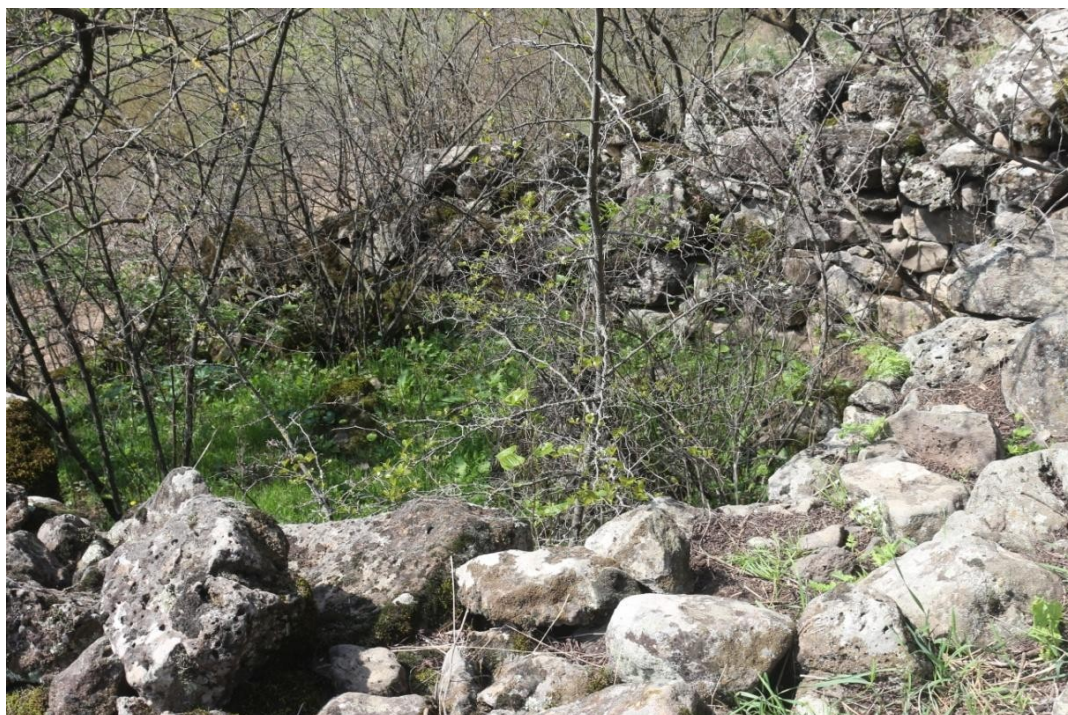


Fig. 10. Trench N3 prior to the commencement of excavations



Fig. 11. Trench N3 prior to the commencement of excavation works



Fig. 12. Trench N3, building after the excavation works



Fig. 13. Trench N3, building after the excavation works



Fig. 14. Trench N3, building after the excavation works



Fig. 15. Trench N3, *qevri* installed inside the building.



Fig. 16. Trench N3, fragments of the *qevri* installed within the building



Fig. 17. Trench N3, archaeological materials discovered within the building.

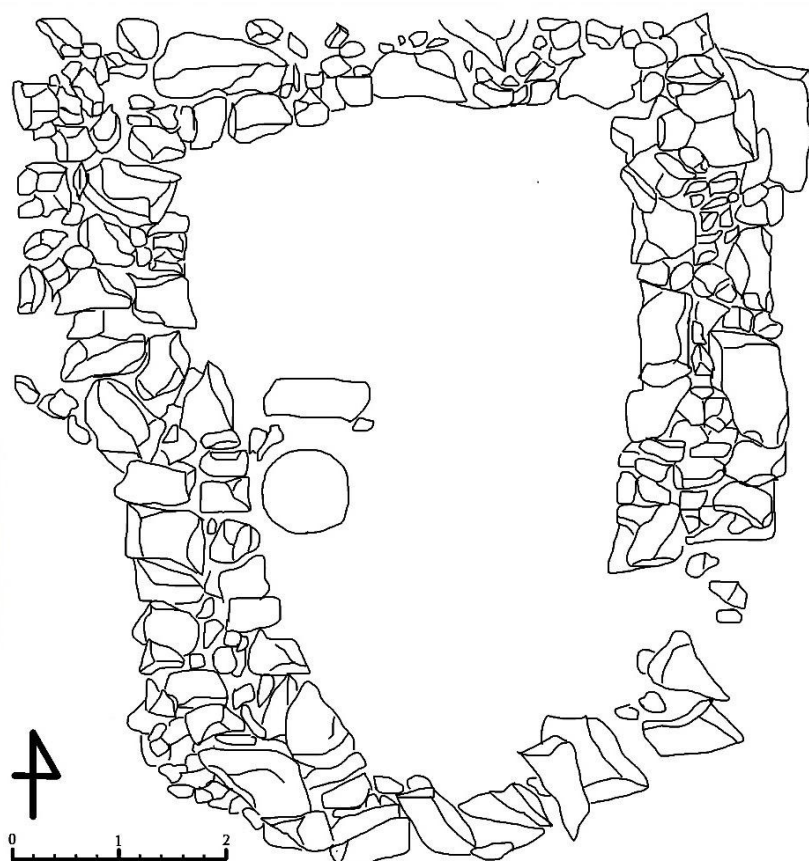


Fig. 18. Trench N3 plan of the building



Fig. 19. Trench N4 prior to the commencement of excavations.



Fig. 20. Trench N4 after excavations