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THE ROMAN FRONTIER WATCHTOWER FROM MĂGURA STÂNII (ZALĂU, SĂLAJ COUNTY)

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REZUMAT: *Prezentul studiu valorifică o săpătură de salvare realizată în zona frontierei de la Porolissum, pe suprafața unui turn de supraveghere. În 2002, cu ocazia construcției unei antene de televiziune în zona dealului „Măgura Stânii", a fost realizată o săpătură de salvare pentru a aduna cât mai multe informații despre un turn de supraveghere deja afectat de intervenții antropice. Rezumând discuțiile mai vechi despre turnurile din această zona, vrem să subliniem de la început, faptul că inițial au existat două structuri în vârful dealului, una dintre ele fiind complet distrusă de construcția turnului de televiziune în jurul anului 1975; a doua, care reprezintă subiectul prezentelor pagini, este localizată la aproximativ 150 m. nord față de prima. Structura circulară reprezintă ruinele unui turn de supraveghere strategic, un punct cheie în funcționarea interivizibilității din zona Porolissum-ului. Cu toate acestea, rolul de supraveghere al acestui turn este doar o parte a poveștii, săpăturile extinse conturând un fragment din viața soldaților detașați în avanponst, cu o privire specială asupra gătitului/mâncatului. Prezentând aspectele privind arhitectura turnului, subliniem faptul că avem de-a face cu o structură circulară, construită într-o tehnică care a implicat o fundație de piatră, o elevație realizată majoritar din cărămizi și un acoperiș de lemn acoperit cu tegulae și imbrices.*

CUVINTE-CHEIE: *frontiera romană; turn de supraveghere roman; structură circulară; săpătură de salvare.*

ABSTRACT: *The following study capitalize an archaeological rescue excavation conducted in the Porolissum frontier area, on the surface of a watchtower. In 2002, on the occasion of building a television antenna in the area of Măgura Stânii Hill, a rescue excavation was accomplished in order to gather as much information as possible about a watchtower already affected by anthropogenic interventions. Resuming the older discussions about the watchtowers from this area, we want to underline from the beginning that there were two structures on the top of the hill, one of them being fully destroyed by the construction of the television tower, around 1975; the second one, which is the subject of the present pages, is located almost 150 m north from the first one. The circular structure represent the ruins of a highly strategic watchtower, a key point of the visibility pattern from Porolissum area. Nevertheless, the surveillance role of this watchtower is just a side of the story, the extended excavation revealing a glimpse on the outpost life of the detached soldiers, with a special look on the cooking/eating habit. By presenting the aspects concerning the architecture of the watchtower, we underscore the fact that we are dealing with a circular structure, built in a technique that included a stone foundation, an elevation made mostly of bricks and a wooden rooftop, covered with tegulae and imbrices.*

KEYWORDS: *Roman frontier; Roman watchtower; circular structure; rescue excavation.*

The archaeological research of the frontier watchtowers from Dacia Porolissensis, with the exception of a still unique and systematic demarche of I. Ferenczi,[1] N. Gudea[2] and A. V. Matei[3] (and some

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1 Ferenczi 1941, p. 189–214; Ferenczi 1967, p. 143–162; Ferenczi 1972, p. 37–46; Ferenczi 1973, p. 79–105; Ferenczi 1988, p. 251–289.

2 Gudea 1985, p. 143–218; Gudea 1997, p. 35–129.

3 The work of Alexandru V. Matei on the physical elements of the frontier is incompletely published, therefore, the revaluation of its work remains a desideratum.

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isolated cases[4]) is still in its infancy. This study will bring together archaeological data from a rescue excavation undertook in 2002 on *Măgura Stânii* Hill, being uncovered a circular watchtower. Through this, we want to make a step forward in understanding these structures and also to add completely new data on the circular watchtowers from the frame of *limes Dacicus*. This study will deal with a variety of data, from archaeological situation, small finds (unfortunately not so much), pottery and topography.

LOCALIZATION AND OLDER ACCOUNTS

Măgura Stânii is situated within the frame of Meseș Mountains, at approximatively 5.5 km south-west of Porolissum auxiliary fort.[5] With an elevation of 716 m, is constituted as a flat top naturally anchored in the non-linear mountain-type frontier system[6] from this area, being a key component of a distribution pattern composed of frontier watchtowers (see Plate 1). On this geographically dominant area, two such structures were identified. The first one was discovered by I. Ferenczi and mentioned for the first time in 1967.[7] Unfortunately, the tower was destroyed by the construction of a TV antenna and the surface was levelled. Near this place, I. Ferenczi and N. Gudea saw and collected bricks, *imbrices* and potsherds[8] altogether with stones from its structure, scattered all around. The shape of the structure has not been identified.

At 150 m north from this completely destroyed structure lies another one. It is located on the top of the northern slop of the hill. The tower was identified by N. Gudea in 1977, within the pale of a larger survey context on the north-western frontier.[9]

He described a circular feature with high edges, completely covered by vegetation. The diameter observed by him was about 9 m and the edges about 0.5 m with the interior heavily damaged. Inside the tower were identified tiles and potsherds.[10] The structure was excavated using a transversal trench over the ruins. The wall was removed but inside the excavated trench were identified, beside tiles and potsherds, few animal bones.[11] Obviously, the shape of the structure was still unclear.

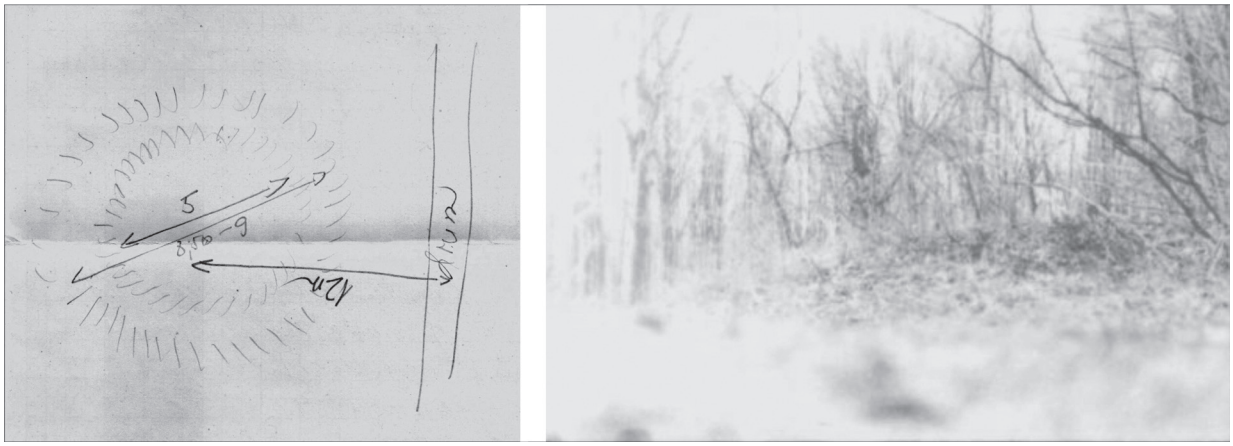

Fig. 1. The second watchtower from *Măgura Stânii* (sketch and photo by N. Gudea from 1977). Reproduced with the permission of dr. Felix Marcu, National History Museum of Transylvania.

4 Zăgreanu *et alii* 2017, p. 25–45; Gaiu, Zăgreanu 2017, p. 30–33.
5 WGS 84: 47°09'14.02" N, 23°06'15.44"; Stereo 70: 356261.114 E, 629971.719 N.
6 For the mountain frontier typology see Breeze 2012, p. 133–145; See also Breeze 2011, p. 2–19.
7 Ferenczi 1967, p. 148.
8 Gudea 1997, p. 66–67.
9 See Gudea 1985, p. 143–218 and Gudea 1997.
10 Gudea 1985, p. 174; Gudea 1997, p. 67.
11 Gudea 1985, p. 174; Gudea 1997, p. 67.

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EXCAVATION[12]

The surface of the tower was excavated using three trenches: S1/2002 orientated north-south with the dimensions of 24 × 1.5 m, S2/2002 orientated west-east with the dimensions of 11 × 1.5 m and S3/ 2002, west-east, with the dimensions of 11 × 2 m.

In the first trench, the wall of the watchtower was identified both in the southern and the northern part. It was buil in the *opus incertum* technique using local sandstone. In the southern part of the trench the wall was preserved on a height of approximatively 60 cm and a width of 1.5–1.6 m. On the northern side, the wall was heavily affected by later interventions, the structure being preserved only on a width of 90 cm. There are clear marks of modern stone removal. The destruction of the watchtower (treasure hunters or stone removal?) was observed also inside the structure. The habitation layer and the floor were affected by two pits dug inside the tower, near the wall, identified on the northern side. The first pit (G1), with a maximum diameter of 1.29 m and depth of –1.25 m cuts also through the tower's wall. The second one (G2), with a maximum diameter of 1.22 m and depth of –1.20 m destroyed, like the first one, the habitation layer and stopped on the virgin soil.

At a distance of 3 m from the wall, on the northern part of the section, was identified an oval shaped feature with the diameter of 65 cm, a depth of –60 cm. Based on the fact that it has a V-shaped profile, and it was also identified in S2, we can conclude that this arhcaeological feature is the tower's defence ditch. The fill of the ditch is composed of mortar traces, several stones and coal marks. Inside the tower and also in the exterior were found numerous potsherds, bricks, tiles, *imbrices* and a *denarius* minted for Publius Septimius Geta as *caesar*.

In the second section, orientated west-east, the wall was also identified. With less later destruction marks, the height of the wall is barely 20 cm. and the width approximatively 1.4 m. On the southern profile was observed a removal pit that affected the structure. Although the trench was extended almost 7 m outside the wall, the defensive ditch was not identified, similar situation with the northern part of S1 which was extended 4.3 m. Beside potsherds, bricks, tiles and *imbrices*, there was identified an iron link,[13] inside the tower and near the wall.

The third section is basically the extension of S2, wider with 50 cm, because this part of the tower was uncovered by vegetation. Half of the identified wall was completely destroyed. The preserved part had a width of 1.4 m and approximate height of 70 cm. At about 20 cm near the wall, inside the watchtower, a group of stones and a heavy burnt layer was discovered. Most probably in this context we deal with an open hearth fireplace.[14] Near this context, a fragmented *lucerna*[15] (*monolychnis lucerna*, probably Roman IA1 type[16]) was discovered. At 2 m outside the wall, the defensive ditch appeared again as a dark feature, pigmented with mortar traces; the ditch corresponds with its counterpart already mentioned. It has a width which varies between 45 and 65 cm with a constant depth of –1.10 m and a V-shaped profile. The fill was a mixture of dark soil, mortar, bricks and stones, fallen from the tower's structure. Inside the tower, the habitation layer (where was not destroyed by the modern interventions) has a width that varies between 60–80 cm.

Similar with the other two trenches, was identified a large quantity of pottery, bricks, tiles and *imbrices*, with the mention that in this case the pottery was somehow scattered around the open hearth.

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[12] The excavation was accomplished by Dr. Dan Băcueț-Crișan (Zalău County Museu of History and Art) and Dr. Ioan Bejinariu (Zalău County Museu of History and Art). The archaeological report in Bejinariu, Băcueț-Crișan 2002, p. 345–346, no. 222.

[13] Inv. no. CC 1503/2002. CC=technical abbreviation for *Collection Growth*.

[14] The fireplaces inside the watchtowers from the north-western frontier are know from several cases (for example the fireplace from *the Coasta Ciungii I* circular watchtower (Ferenczi 1967, p. 148; Ferenczi 1968, p. 80; Gudea 1985, p. 171).

[15] Inv. no. CC 1516/2002.

[16] Roman 2005, p. 219, no. 18, fig. 10.

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After connecting the data it is clear that, despite of a heavily destruction of the structure, we are dealing with a circular watchtower. The inner diameter is about 9 m and the outer one 10.5–10.6 m. Within the frame of the north-western frontier we know several excavated circular watchtowers[17], some of them with similar dimensions.[18] Judging by the amount of stones discovered in the trenches, with the mention that most probably a large quantity was removed, we cannot postulate the existence of a structure built completely using this material. The bricks were also numerous, so we can think at least at an elevation built using such mixed technique. The *teguale* and the *imbrices* indicates a wooden rooftop covered with this material. As for the full elevation of this watchtower, at least 8 m is a suitable height, both for the structure[19] and for the visibility area[20] (see Plates 5 and 6).

However, what is very interesting about this structure is that the defensive ditch was placed only on the eastern side of the tower. The end of the ditch in the northern part of S1 could indicate the entrance in the tower. The stone watchtowers[21] and the timber ones[22] have usually a single or double defensive ditch. There can be one explanation. Sixty meters east from the tower lies a strait ditch of about 2 m width and 300 m long, orientated north-south and placed on the slope of the hill. If this ditch has Roman origins, the defensive elements of this watchtower are about to be a novelty in this area.[23]

As in the case of the overwhelming majority of the minor fortification from this perimeter, neither in this particular situation we cannot isolate the major chronological frames, mainly due to the lack of artefacts. In our case, the only datable artefact is the coin minted around 200–202, for Geta,[24] which indicates a functioning *TPQ* in the Severan period (see Plate 7). We know other several cases of coins discovered within the circular watchtowers: one *sestertius* from Faustina Minor,[25] another coin (unmentioned denomination) from Faustina Minor,[26] a *denarius* from Septimius Severus[27] and another coin (unmentioned denomination) from Severus Alexander.[28] Altogether with the *denarius* from *Măgura Stânii*, the coins identified in archaeological context outlines the fact that the circular wathctowers are certainly (*for now*) used in the Antonine-Severan period (and most probably also after).

POTTERY

The pottery assemblages from the watchtowers are quite reduced, most for the fact that the excavation techniques involved usually only one or two archaeological trenches, in very few cases the entire surface being excavated. In our case, in all the three trenches was found a quite large quantity of potsherds for a watchtower, yet, excepting two small *amphorae* fragments, only common pottery.

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17 See for example: *Cornu Vlaşinului I* (Torma 1880, p. 61; Buday 1912, p. 108; TIR L34, p. 119; Gudea 1985, p. 164–165; Gudea 1997, p. 45–46); *Dealu Mare* (Buday 1912, p. 110; Gudea 1985, p. 166; Gudea 1997, p. 48–49); *Şumanda* (Torma 1880, p. 74; Buday 1912, p. 111; Gudea 1985, p. 166–167; Gudea 1997, p. 50–51).

18 For example *Dealu Cozli* (Torma 1880, p. 73; Ferenczi 1967, p. 147; Gudea 1985, p. 165; Gudea 1997, p. 47–48), *Salhiger* (Gudea 1985, p. 165–166; Gudea 1997, p. 48) or *Coasta Ciungii I* (Ferenczi 1968, p. 80; Gudea 1985, p. 171).

19 See mainly Baatz 1976.

20 The discussion in Woolliscroft 2001, *passim* and Breeze 2011, p. 2–19. For visual-acoustic GIS modelling in the area of Porolissum see mainly Lăzărescu *et alii* 2016, p. 275–304.

21 Zăgreanu *et alii* 2017, p. 42, Pl. XIII. See also Gichon 1974, p. 513–544.

22 Hanson, Friel 1995, p. 508.

23 The ditch did not occur in the older accounts about this specific area nor was mentioned by anybody earlier. However, this statement is a pure theoretical one. Even if we saw this feature on the field, we can't be sure of its origins or functionality, for now.

24 RIC IV–1, 20a. Obv: P. SEPT. GETA. CAES. PONT.,draped bust right; Rev: SECURIT. IMPERII., Securitas seated left, holding globe. Inv. no. CC 1502/2002. Determined by Dr. C. Găzdac (Institute of Archaeology and Art History, Cluj-Napoca). See Bejinariu, Băcueț-Crișan 2002, p. 345–346, no. 222.

25 The watchtower from *Arsură I* (Gudea 1997, p. 50).

26 The watchtower from *Gura Teghişului* (Gudea 1997, p. 62).

27 The watchtower from *Gura Teghişului* (Gudea 1997, p. 62).

28 The watchtower from *Vârful Teghişului* (Gudea 1997, p. 63).

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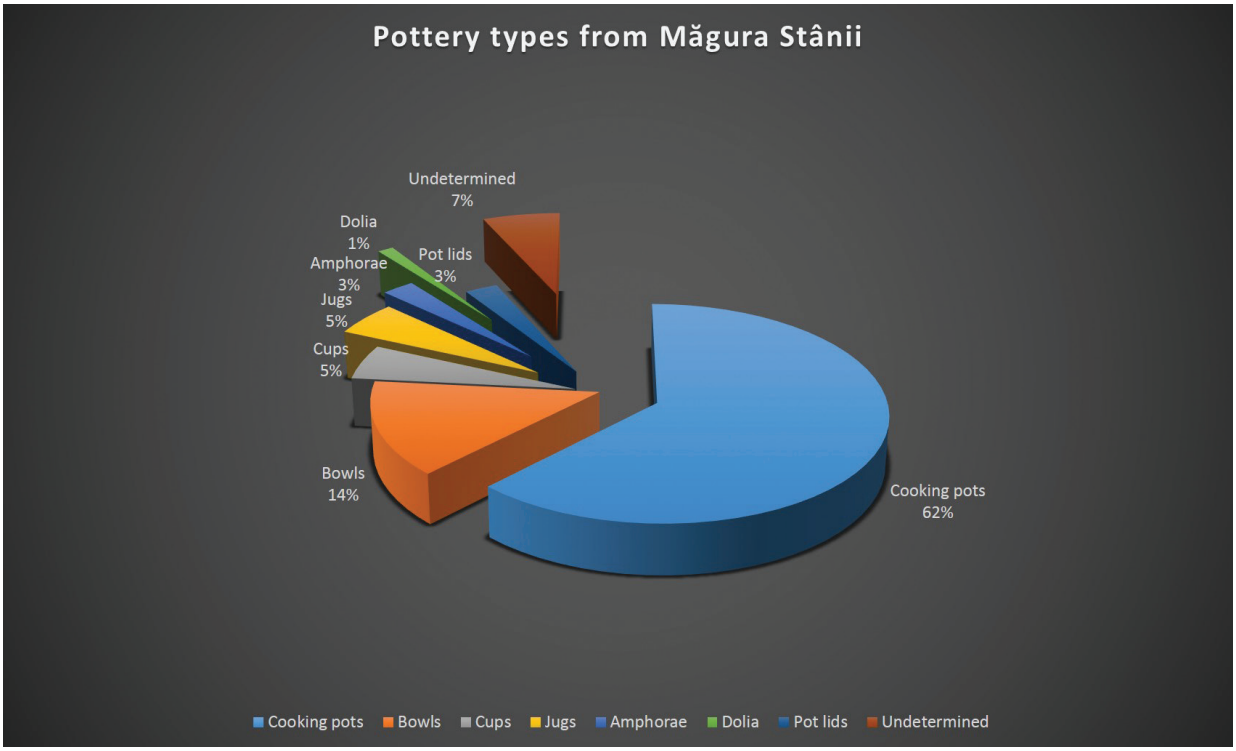

Fig. 2. Pottery types from the watchtower from *Măgura Stânii*.

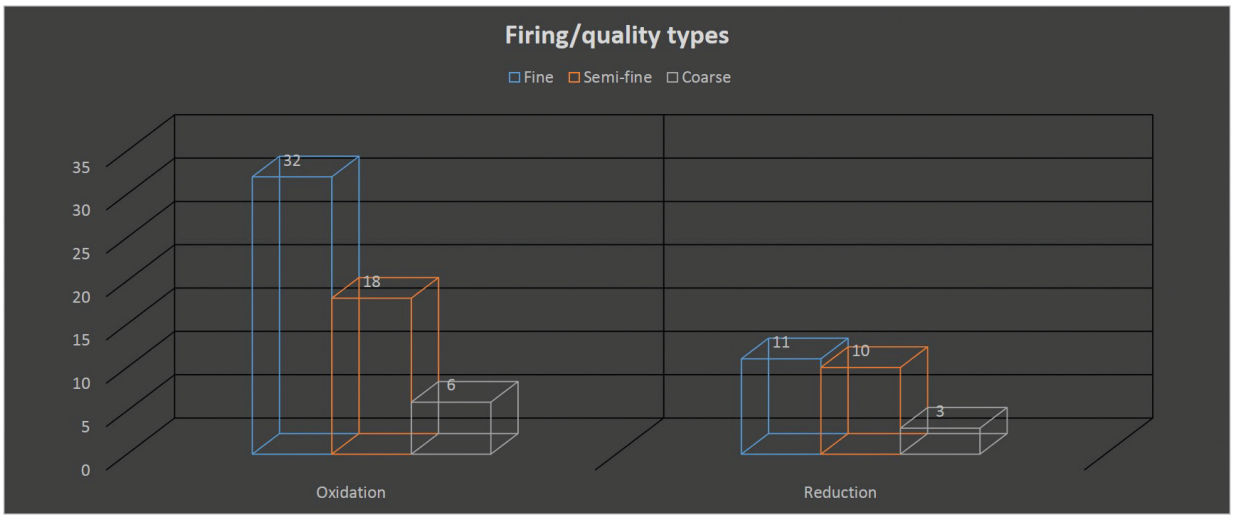

Fig. 3. Firing types and quality of the pottsherds from *Măgura Stânii*.

The best represented vessel category is the cooking/storing one called *vasa conquina(to)ria*.[29] There are identified 48 fragments of cooking pots (62 % of the pottery assemblage) and 2 (3%) pot lids. From *vasa escaria* category, the most representative are the bowls, with 11 units (14%). *Vasa po(ta)toria* or the drinking vessel is represented by only 4 fragments of cups (5 %). There were also some fragments of storage vessels identified in the watchtower: 4 jugs (5%), 2 very small *amphorae* fragments (undetectable as type) (3%) and only one *dolium* (1%). This percentage reflects both the daily life of the soldiers with the main focus on the cooking habit and the supply that every watchtower must have been received regularly from the headquarters, in our particular case from Porolissum. (See Plate 7 for several selected examples). As for the firing type and the quality of the vessels, the best represented is the oxidation firing with 56 potsherds of different quality and only 24 for reduction firing. The results are somehow

[29] For the categories discussed here see Rusu-Bolindeț 2007, p. 378–431.

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predicted by the fact that the assemblage of the potsherds is represented (more than a half) by common pottery (cooking/storing pots). Unfortunately, there are no comprehensive studies yet to deal with this topic, but judging by N. Gudea's descriptions based on his excavations, this situation seems to be a general one on the north-western frontier.[30] However, until a detailed study will be accomplished, this particular aspect will remain an open question.

VISIBILITY AND INTER-VISIBILITY

The watchtower from *Măgura Stânii* is tactically integrated in a chain line of towers[31] that are composing the main surveillance system from Porolissum area; its positions is a key one due to the fact that *Măgura* is a dominat hill in the frontier landscape. By using geostatistical analyses (*Cumulative Viewshed* and *Line of Sight*) we observed the surveillance area and the inter-visibility relations with the neighbouring features.[32]

The tower in discussion has a large surveillance area not in front of the chain line as we expected, but behind it, being in inter-visibility connection with 5 other watchtowers, the auxiliary fort from *Pomăt Hill* and most probably also with the fort from *Citera Hill*. The role of this watchtower (and obviusly of the first destroyed one) was to connect the line of towers from Meseș Mountains with the so-called *double line* from Porolissum area. Even if its visibility range is orientated towards the province, without this strategic point from *Măgura Stânii*, whithout the towers identified here, the chain line from Meseș Mountains would be most probably visually isolated from Porolissum and the distribution pattern would be also slightly different (see Plate 8).

By capitalizing this novel info extracted from a rescue excavation, we wanted to take a step forward in understanding the structure, the architecture, the functionality and the chronology of these minor installations of the frontier. Unfortunately, there is so little systematic archaeological research on the watchtowers and almost no data about the artefacts that every single new info can be considered a step forward in understanding these peripheral sites.

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[30] Gudea 1985, *passim*; Gudea 1997, *passim*.

[31] For the chained system of inter-visibility used within the Roman frontier see mainly Donaldson 1998, p. 349–356. New interpretations in Symonds 2018, p. 2–31.

[32] See especially Marcu, Cupcea 2013, p. 569–589; Cociș 2015, p. 46–57; Cociș 2016, p. 53–67; Teodor 2016, p. 67–96; Lăzărescu *et alii* 2016, p. 275–304.

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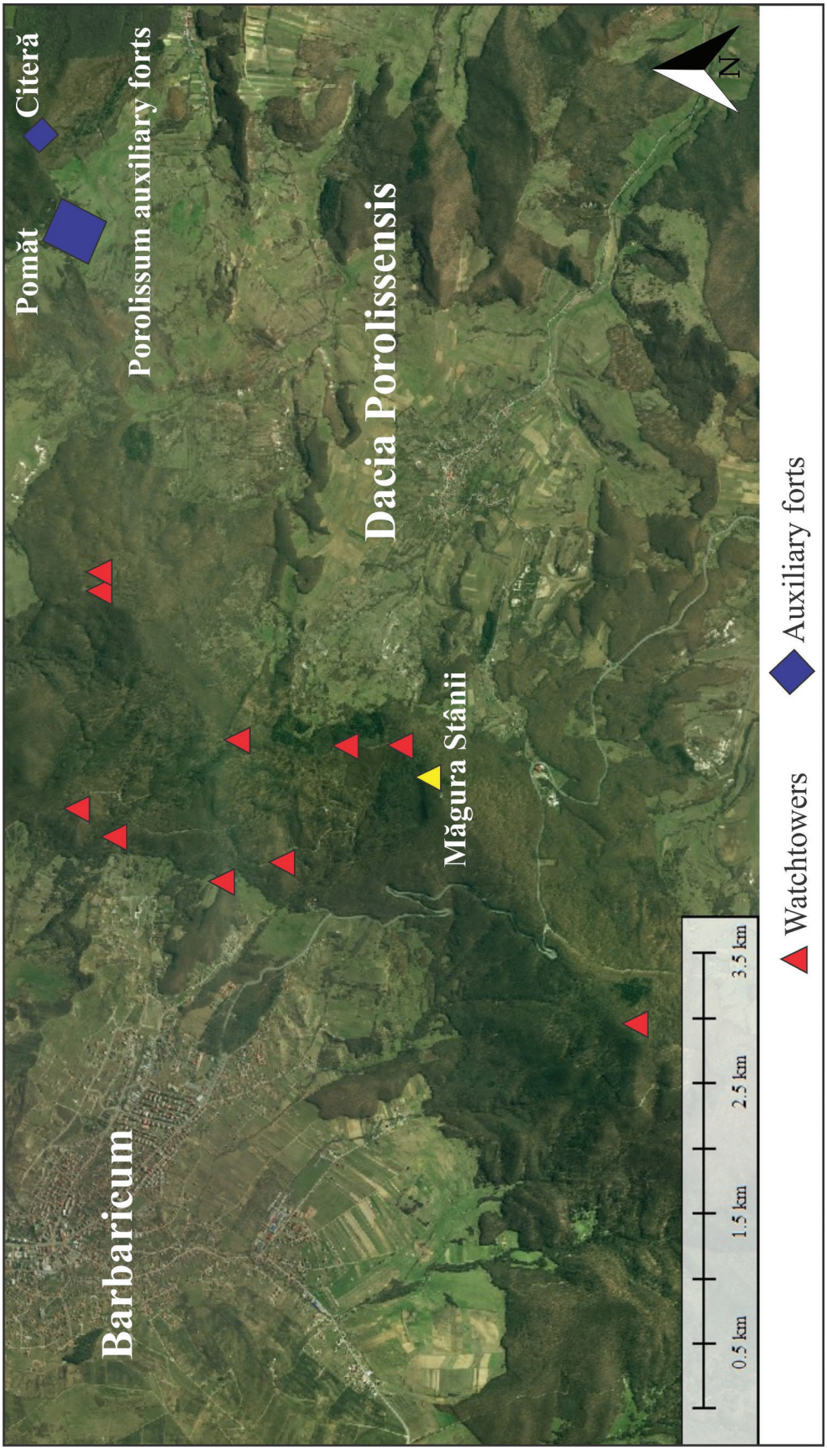

Plate 1. The watchtower from *Măgura Stânii* in its frontier landscape.

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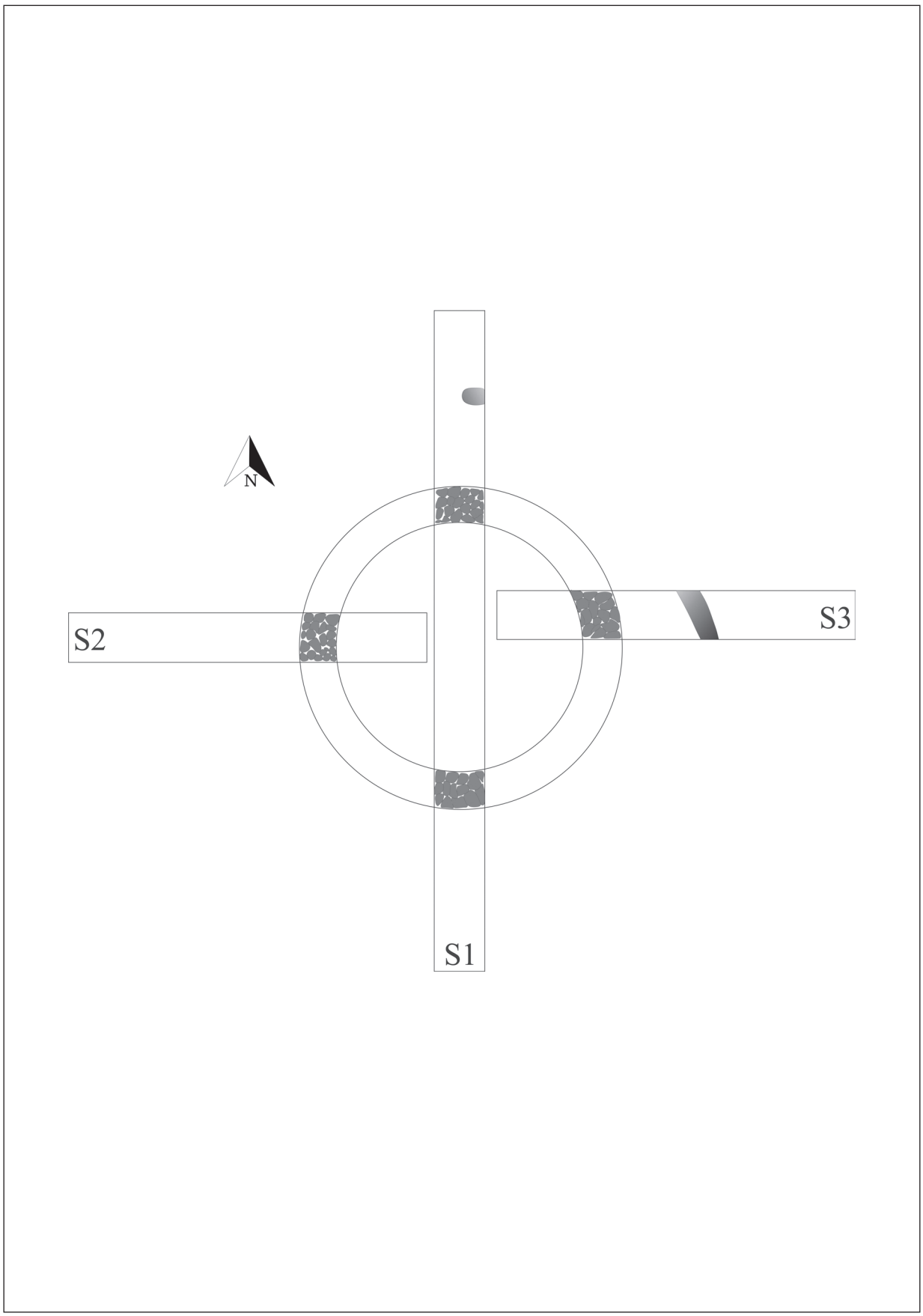

Plate 2. General plan of the excavation.

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Plate 3. Detailed plans of the trenches.

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Plate 4. Archaeological profiles of the trenches.

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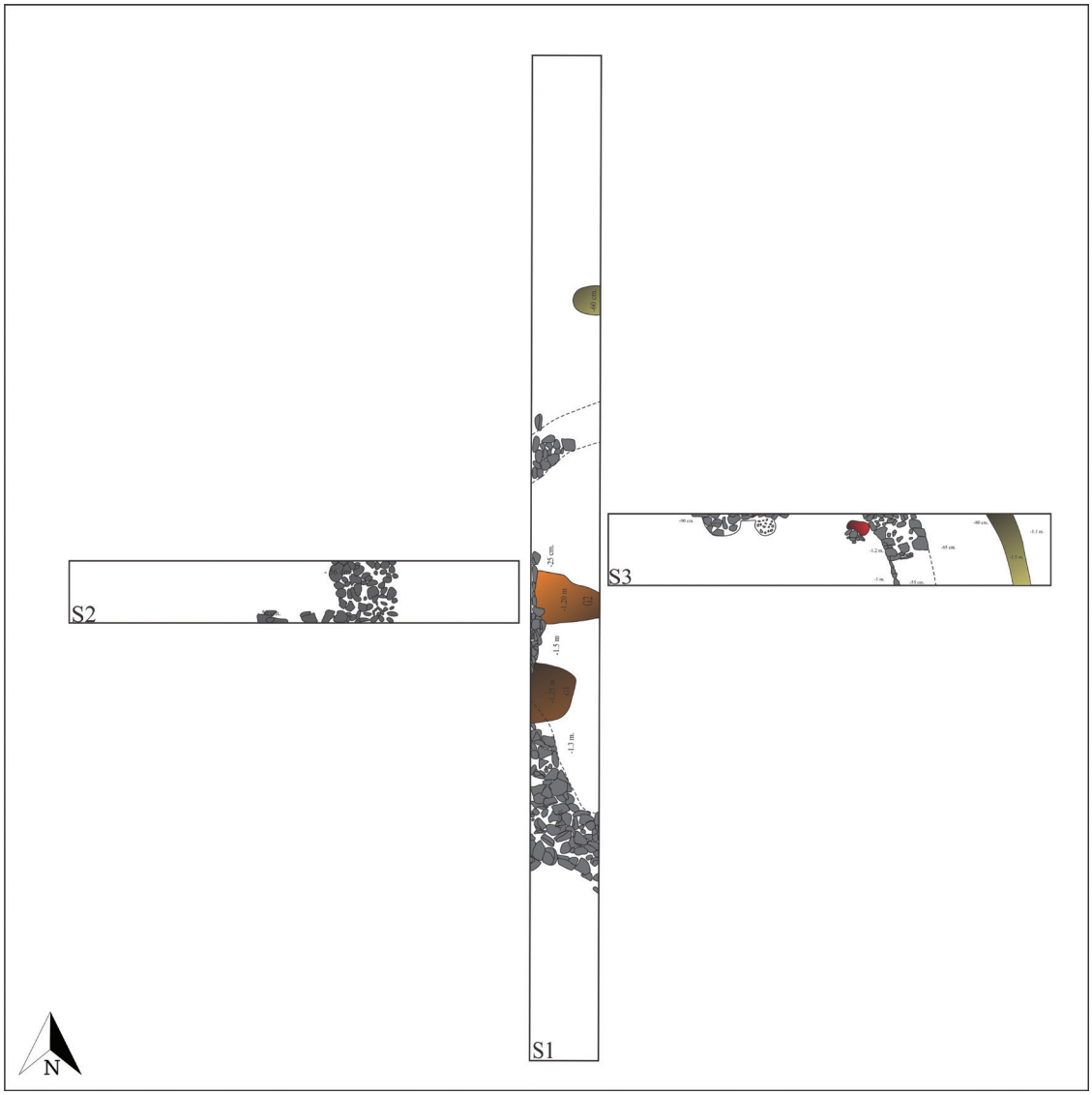

Plate 5. Detailed ground plans of the trenches
Plate 5**.** General plan of the excavation.

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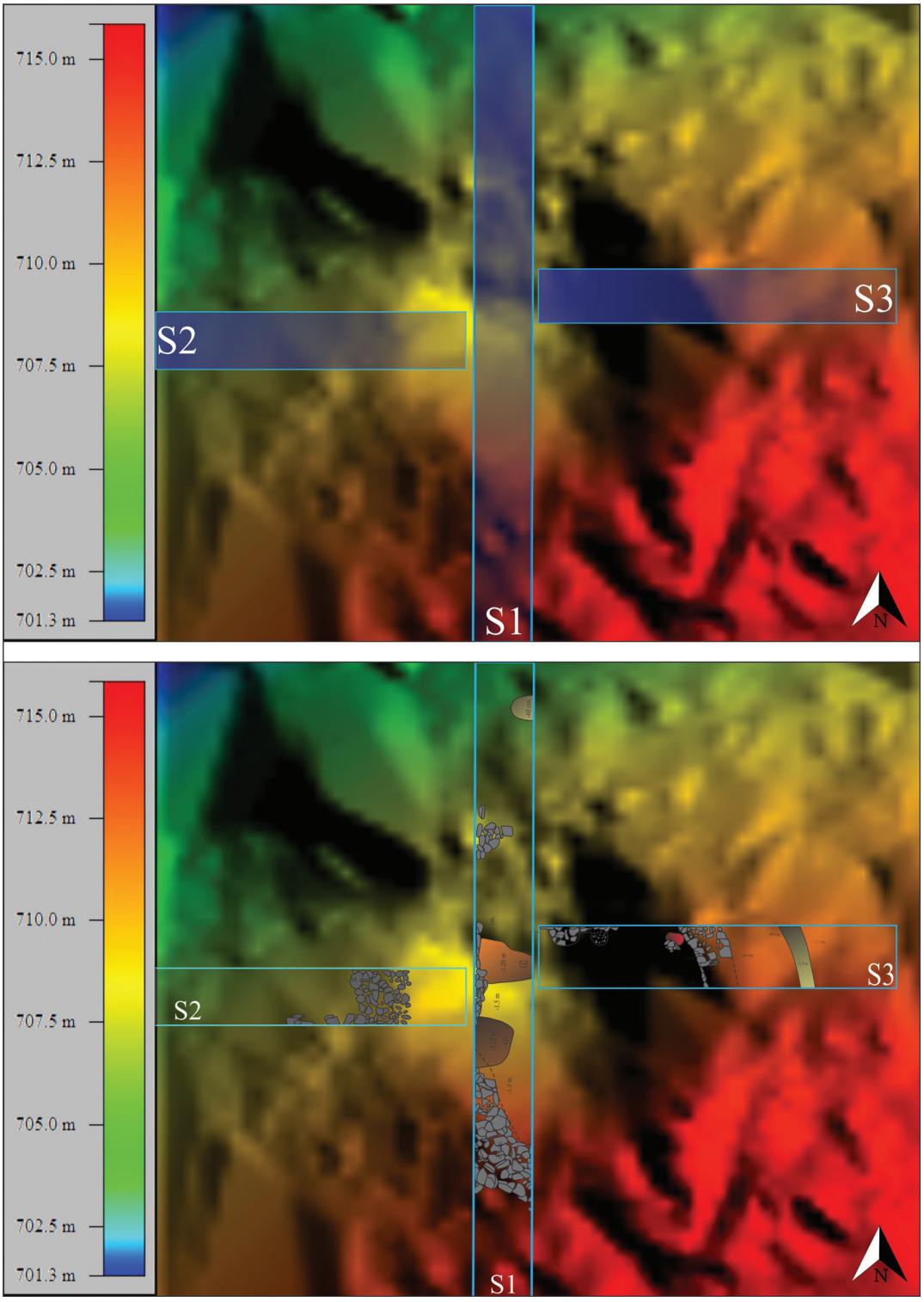

Plate 6. Trenches and detailed plans, georeferenced and overlaid on a *Digital Terrain Model*. (Total Station provided by National History Museum of Transylvania. We wish to thank to Ciprian Ciobanu, MA. (University 'Babeş-Bolyai' of Cluj-Napoca) and Dan Deac, Ph.D. (Zalău County Museu of History and Art) for their help during the topographical survey.Ö

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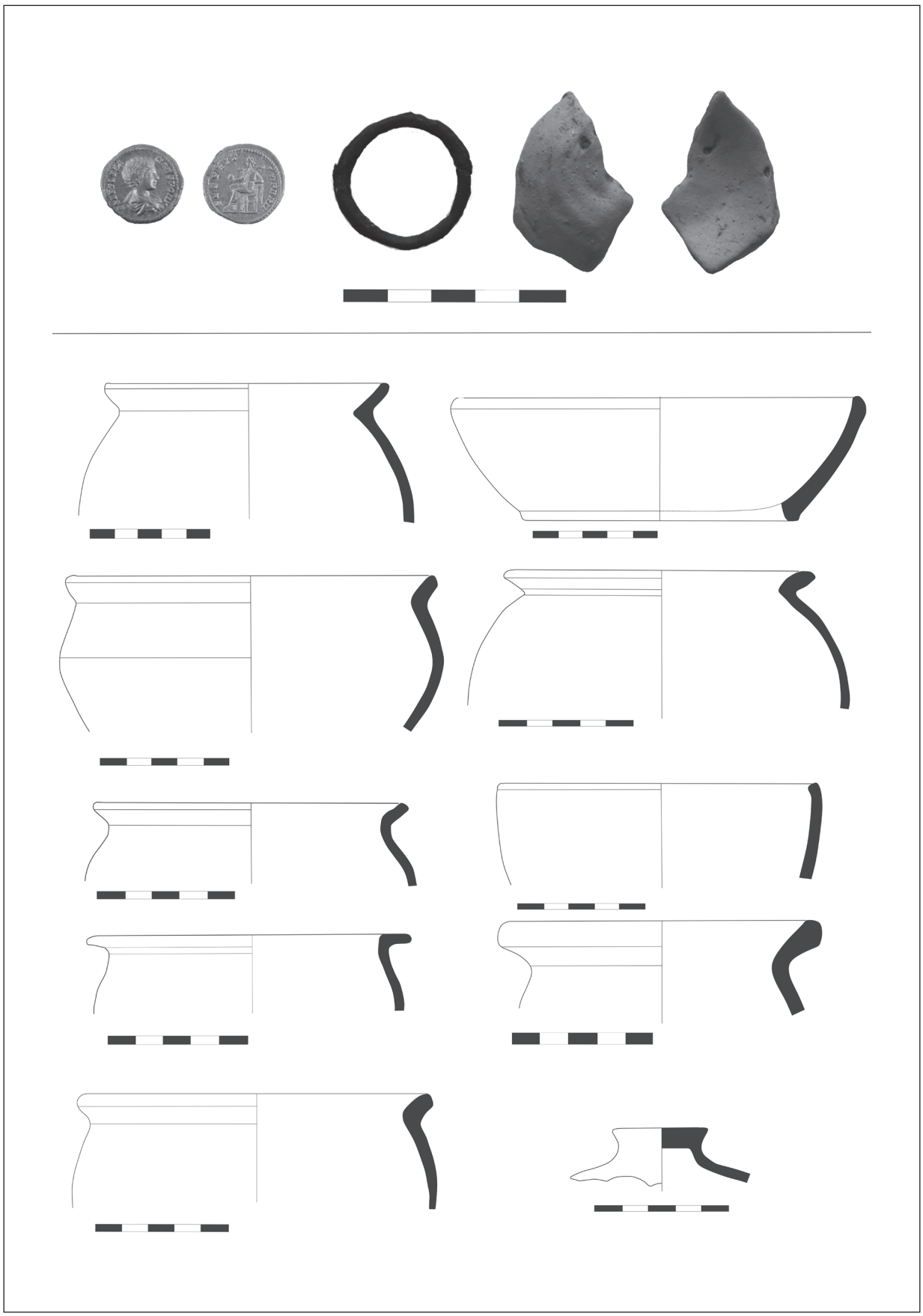

Plate 7. Small finds and selected pottery from *Măgura Stânii*.

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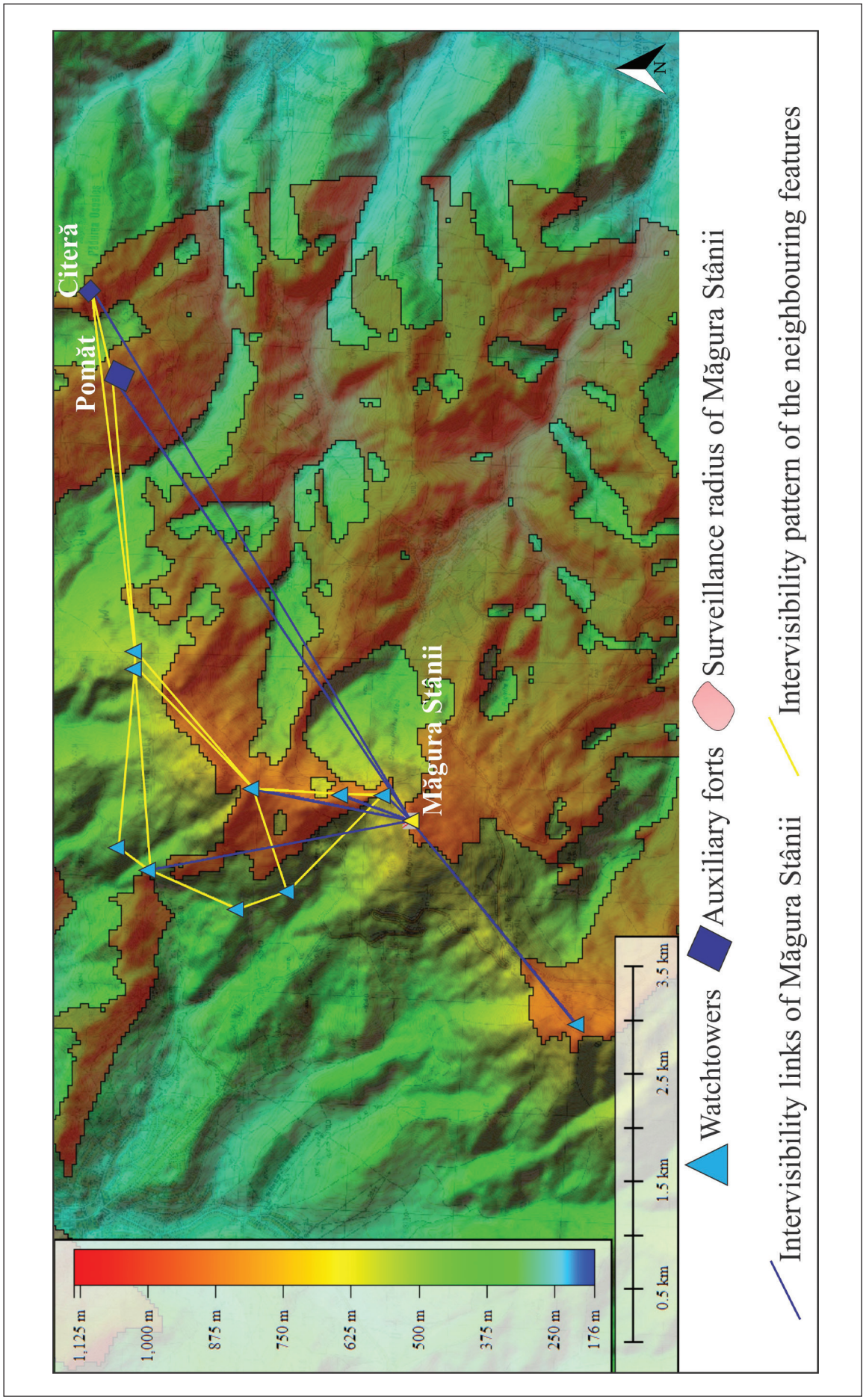

Plate 8. Visibility and inter-visibility pattern of the watchtower from *Măgura Stânii*.

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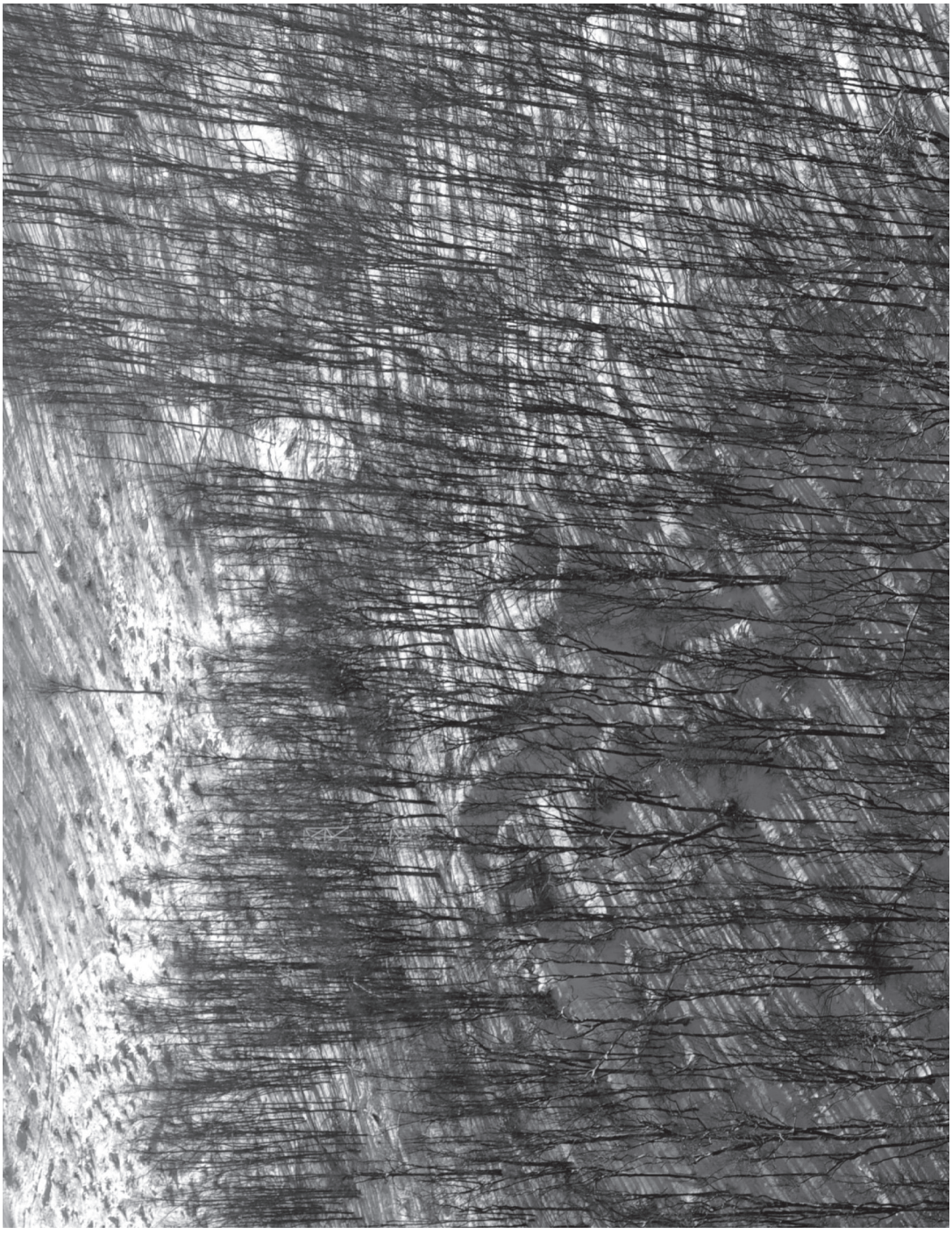

Plate 9. Aerial photography of the watchtower from *Măgura Stânii*. 25.01.2018 (© National Museum of Transylvanian History – National project *LIMES-Frontiers of the Roman Empire in Romania*).

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