

BADEN I SARMAT U PROFILU BUŠOTINE KR-5 KOD UGLJEVIKA

Sažetak: Istražna bušotina KR-5 realizovana je 2014. godine na brdu Prokos kod Ugljevika (sjeveroistočna Bosna i Hercegovina). Koordinate ove bušotine su: $y = 6578371$ i $x = 4948818$. Tokom srednjeg miocena lokalitet ove bušotine pripadao je južnom, priobalskom dijelu Centralnog Paratetisa. Na osnovu paleontoloških istraživanja sedimenti u profilu bušotine KR-5 raščlanjeni su na: donji baden, srednji baden, gornji baden i donji sarmat. Donji baden je debeo oko 70 m i predstavljen je zonom *Globigerinoides trilobus* i *Orbulina suturalis* koja je ekvivalentna Gornjoj Lagenidnoj zoni Bečkog bazena. U ovoj stratigrafskoj jedinici dominiraju masivni laporci sa podređenim učešćem litotamnijskih krečnjaka i laminiranih laporaca. Srednji baden je dokazan zonom *Asterigerinata planorbis* i *Cibicidoides ungerianus ungerianus*, što predstavlja prvo izdvajanje ove zone, kako na području Ugljevika tako i sjeverne Bosne i Hercegovine. Srednji baden je predstavljen krečnjacima i laporcima, a debljina mu je oko 10 m. Gornji baden je podjeljen na zonu *Bolivina dilatata maxima* i zonu *Ammonia viennensis*. Ovo je prvo izdvajanje navedenih zona u području Ugljevika. Debljina mu je oko 80 m. Gornji baden je predstavljen masivnim laporcima, laminiranim laporcima i krečnjacima. Donji sarmat čine krečnjaci koji su na osnovu makrofaune definisani kao *Ervilia* slojevi. Na osnovu superpozicije i korelacije sa susjednim profilima, najstariji dio donjeg sarmata predstavljen laminiranim glinama i krečnjacima, može se svrstati u *Mohrensternia* slojeve. Debljina donjeg sarmata je oko 40 m.

Sedimenti profila bušotine KR-5 taloženi su u priobalskom dijelu Centralnog Paratetisa gdje su bile česte oscilacije nivoa mora. Masivni laporci donjeg badena taloženi su u cirkalitoralu odnosno na dubinama 50-200 m, a laminirani laporci badena, laminirane gline sarmata, kao i krečnjaci badena i sarmata, taloženi su na dubinama manjim od 50 m odnosno u infralitoralu.

Ključne riječi: baden, sarmat, foraminifere, mekušci, biostratigrafske jedinice, Ugljevik, Bosna i Hercegovina.

BADENIAN AND SARMATIAN IN THE CROSS SECTION OF THE BOREHOLE KR-5 NEAR UGLJEVIK

Summary: The exploring borehole KR-5 has been realized in 2014. year on the hill Prokos near Ugljevik (northeast Bosnia and Herzegovina). Coordinates of this borehole are: $y = 6578371$ and $x = 4948818$. During the Middle Miocene the locality of this borehole was positioned on the southern margin of the Central Paratethys. On the basis of the paleontological researches the sediments in the cross section of the borehole KR-5 have been divided to the: Lower Badenian, Middle Badenian, Upper Badenian and Lower Sarmatian. The Lower Badenian is thick about 70 m thick and represented by the Zone *Globigerinoides trilobus* and *Orbulina suturalis* which is equivalent of the Upper Lagenidae Zone of the Vienna Basin. In this stratigraphic unit massive marls are dominant, and lithothamnium limestones and laminated marls have less participation. The Middle Badenian is determined by the Zone *Asterigerinata planorbis* and *Cibicidoides ungerianus ungerianus*. This Zone is recognised for the first time in the area of Ugljevik and north Bosnia and Herzegovina. The Middle Badenian is represented by limestones and marls, and has thickness of about 10 m. The Upper Badenian comprises *Bolivina dilatata maxima* and *Ammonia viennensis* Zones. These zones are recognised for the first time in the area of Ugljevik too. The thickness of the Upper Badenian is about 80 m. This stratigraphic unit is represented by massive marls, laminated marls and limestones. The Lower Sarmatian consists of limestones correlated largely with the *Ervilia* beds based on the macrofauna. lowermost part (laminated clays and limestones) can be correlated with the *Mohrensternia* beds based on the neighboring surface outcrops. The thickness of the Lower Sarmatian is about 40 m.

Sediments in the borehole KR-5 were deposited in the coastal area of the Central Paratethys and reflected therefore common oscillations of the sea level. Massive marls of the Lower Badenian were deposited in the circalittoral on depths 50-200 m, and laminated marls of the Badenian, laminated clays of the Sarmatian, as limestones of the Badenian and the Sarmatian, were deposited on depths less than 50 m that is infralittoral.

Key words: Badenian, Sarmatian, foraminifera, molluscs, biostratigraphic units, Ugljevik, Bosnia and Herzegovina.

¹ Dr. sc., Redovni profesor, Univerzitet u Tuzli, Rudarsko-geološko-građevinski fakultet, Univerzitetska 2, Tuzla, Bosna i Hercegovina, sejfudin.vrabac@untz.ba

² Dr. sc., Vanredni profesor, Univerzitet u Tuzli, Rudarsko-geološko-građevinski fakultet, Univerzitetska 2, Tuzla, Bosna i Hercegovina, izudin.dulovic@untz.ba

³ Mr. sc., Rudnik i Termoelektrana Ugljevik, Ugljevik, Bosna i Hercegovina, zlatko.jecmenica@gmail.com