

PRIMARYLY DEPOSITED SOLID HYDROCARBONS IN THE HAUPTDOLOMIT OF THE ČACHTICKÉ KARPATY MTS. (SLOVAKIA)

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Abstract.: The solid hydrocarbons in the Hauptdolomit of the Čachtické Karpaty Mts. were found. The presence of an organic matter was confirmed by differential thermal analysis or thermogram. The microstructure and morphology of splinters was observed by scanning electron microscopy.

Key words: Solid hydrocarbons, organic geochemistry, biostratigraphy, Hauptdolomit, Upper Triassic, Čachtické Karpaty Mts.

The primarily deposited solid hydrocarbons in the Hauptdolomit of the Čachtické Karpaty Mts. were found. On the NE ending of the Čachtické Karpaty Mts. in the belt Trenčianské Bohuslavice-Haluzice a considerable anticlinale structure (cf. Geol. map of the Myjavská pahorkatina Upland, Brezovské and Čachtické Karpaty Mts., in scale 1:50000 - Began, Hanaček, Mello, Salaj, 1984) occurs. The anticlinal structure is formed by the Hauptdolomit and Dachstein Limestones. They are a part of the Nedzov nappe (Andrusov 1936) with the range from the Pelsonian to the ?Hauterivian. Its detailed lithostratigraphical column is mentioned by Hanaček and Salaj in Salaj, Hanaček, Mello, Kullman, Čechova, Šucha 1987, p.82, Fig. 14). During revisional study, carried out by one of us (Salaj) the existence of solid hydrocarbons was discovered in the Hauptdolomit.

In the uppermost part (about 20 m) of the Hauptdolomit the typical thin-laminated, 2-3 mm thin calcareous dolomites are developed. On interbed surfaces are impregnation with thin-laminated solid aromatic (smelling after petrol) hydrocarbons of dark to black colouring. They form a passage more or less thick, 1-2 m. Such hydrocarbons are sporadically and irregularly scattered in this whole passage about 20 m thick.

So far as their origin is concerned - they are primarily deposited. They were formed during sedimentation in shallow-water lagoonal hypersaline environment under a distinct arid paleoclimate.

The presence of an organic matter was confirmed by differential thermal analysis or thermogram. The microstructure and morphology of splinters was observed by scanning electron

microscopy. A special general view on the investigated rock specimen was made possible by digital photography - as it may be seen on the coloured impressive photograph.

The composition of this matter was investigated by infrared spectroscopy. The phase mineralogical inorganic composition was carried out and identified by X-Ray diffraction analysis. Solid hydrocarbons are present in the investigated rock specimen.

References

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