Seismic geomorphology of Pannonian clastic reservoirs in Drava and Zala Basins, Pannonian Basin System

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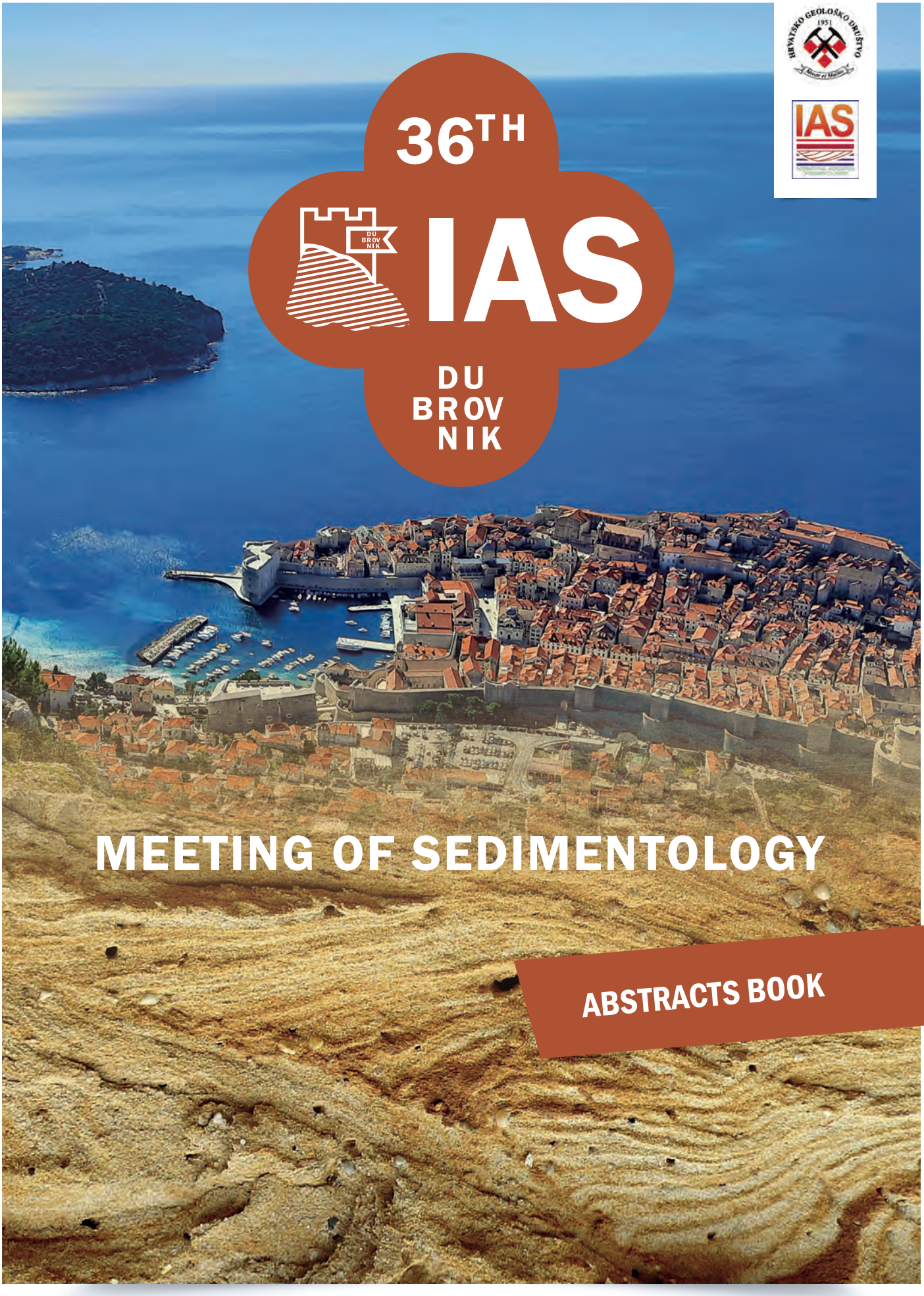

36TH IAS MEETING OF SEDIMENTOLOGY

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ABSTRACTS BOOK

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ABSTRACTS BOOK

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Theme 15. Sedimentology and hydrocarbons

Special Session 15.1. Seismo-sedimentological characterization of 3D seismic data

Oral presentation

Seismic geomorphology of Pannonian clastic reservoirs in Drava and Zala Basins, Pannonian Basin System

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Mature basins provide a wealth of data for the reconstruction and mapping of their sedimentary evolution and architecture as well as regional paleo-geographic changes. In turn, these often lead to a better understanding of geological processes and thus provide a basis for novel concepts in exploration of subsurface. The Neogene Pannonian Basin System (PBS) nested between the Dinarides, Alps and the Carpathian arc in Central Europe is such a mature area with more than a century hydrocarbon exploration and production history. The upper Miocene to Pliocene sediments, referred to as Pannonian Stage, were initially deposited in an under-filled lake basin displaying gradual transgression followed by a powerful regression characterized by prograding and aggrading clinoforms on reflection seismic data. Relative chronostratigraphic framework was defined by clinoform sets mapped along with their rollover points across Drava and Zala basins. Based on seismic attributes, log patterns and available core data, clastic depositional features and architectures were delineated across different depositional environments within lake basin clinoforms. Each depositional feature is described upon its position within clinoforms, type of clinoform trajectory and typical log pattern. Finally, depositional features are described in their typical sizes (based on 3D seismic data) and reservoir quality. Integrating various data resulted in more complete temporal and spatial development of depositional environments during clinoform deposition as well as depositional features. Mapping of the depositional features across clinoforms resulted in considerable range of reservoir sandbody types that can be recognized on 3D seismic within Pannonian Basin System.