



## **Burial depth estimation for possible hydrocarbon source rocks within the area of the Comănești Basin. Application on the S300 well, Șipoteni structure (Romania)**

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### **Abstract**

The objective of the present study was the estimation of burial depths for possible hydrocarbon source rocks of Oligocene age from the Vrancea Nappe. The study was carried out on the Șipoteni structure, located within the geographical area of the Comănești Sedimentary Basin, and resulted in a 1D model of the sedimentary column opened by the S300 well. The latter has opened formations belonging to the Sarmatian of the Comănești Basin, as well as to the Lower Miocene, Oligocene and Eocene (the Tarcău and Vrancea nappes). The structure occupies a central position within the Comănești Basin, being the only one within this area with reservoirs in all three structural units. By employing the method proposed by Athy (1930), based on the data from the well files, the laws for porosity variation with depth that apply to the main lithological types within the formations were obtained. The modelling of burial evolution for the formations with source rocks was carried out using the "back-stripping" method, by means of which the initial deposition depths for the possible source rocks were restored. Moreover, the burial curves of these rocks with geologic time were plotted, based on both current and decompacted thicknesses.

**Keywords:** burial history, back-stripping, hydrocarbon source rocks, Șipoteni structure.

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