

Replenishment of the disadvantages of the prior information for the construction of the detail seismic section of the Permian system (Case study of the bitumen deposit of the republic of Tatarstan)

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Abstract

© SGEM 2017. All Rights Reserved. Nowadays, there is an increasing interest in the tight oil reserves. Such kind of oil have the specific physicochemical properties under conditions of natural occurrence [1]. In this article we consider the solution of the problem of preparing geophysical data for modeling seismic inversion on the example of bitumen deposits. The reservoirs occur at a depth between 150 and 200 m. Thuswise, the accurate processing of geophysical data remains actual. The seismic inversion is usually understood as a group of algorithms by which a seismic time section is transformed into a section of acoustic impedance [2]. Subsequently, the parameters are used through regression dependencies to the predict properties of the medium: the porosity, saturation, effective thickness. The basis of the seismic modeling is geophysical data: the acoustic and the formation density log data. This article describes the problem of the synthesis of missing data on the compression wave and the solved density which arises from poor-quality research on the well, the influence of the well itself on the results of the logging and equipmentspecific. The feature of this research is the lack of geophysical information in the first 50 meters of the geological cross-section, which for the depth of the deposit makes up almost a quarter of the missing information for seismic modeling.

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Keywords

Rock physics, Seismic modeling, Synthetics of geophysical data

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