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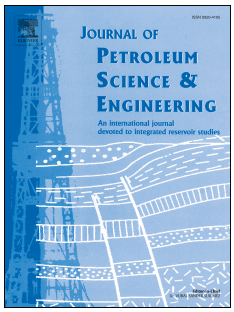

Have you ever heard the sound of well logs or reservoir data?

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Have you ever heard the sound of well logs or reservoir data?

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Abstract

The current study presents an effective approach to convert well logs to music and listen to their sound. Well log data play an important role in different stages of oil and gas field's exploration and development. Several rock properties such as porosity, lithology, fluids saturation, fluid contacts and pay zones can be obtained through interpretation of well log data. Boring tabulated data or a mass of curves can be converted into joyous and pleasant sounds. For this purpose, four case studies were run to show how borehole quality logs, petrophysical evaluation results, capillary pressure data (pore size distribution) and drilling data can be converted to musical notes. The proposed approach can help in quality control or interpretation of well logs or any other reservoir data. The interpreter just needs to wear wireless headphones and listen to the music generated from reservoir data. Service companies may consider the musical interpretation of well logs as an alternative and immediate way for quality control of logging procedures at well bore site. Meanwhile, visually disabled petroleum engineers may use the aural interpretation of subsurface data. A siren can be sounded when lost circulation occurs or a kick is detected to warn well site crew about the drilling risks. The result of musical transformed well logs can be stored in MP3 files for future applications.

Keywords: Well logs, sonification, audification, music, quality control, petrophysical interpretation

1. Introduction

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