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The method of the electromagnetic sounding data processing for searching of hydrocarbon accumulation

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Abstract

This article describes the using of the principle component analyses for interpretation the data of near-field transient electromagnetic sounding. On the basis of electromagnetic data sounding geoelectric field model was considered, but also data processing with using the principle component analyses was made. The maps of component allocation, which were interpreted to select the field area, basing on factors' (component) weight analysis, became the results of data processing. Considered interpretation ways and received results allow appreciating the near-field transient electromagnetic sounding method as manysided and informative method. The received values of apparent conductivity, transformed in factors, reflect the structure of geological environment. Using the principle component analyses for interpretation the data of near-field transient electromagnetic sounding allows making express analysis on types of geoelectric section and finding the hidden characteristics of geoelectric section.

Keywords

Hydrocarbon reservoir, The near-field transient electromagnetic sounding, The principle component analyses, The weight of factors