论文与报告

含油气区域自动提取的多剖面分析方法

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摘要
作者在文献[1]中给出了一个用于地震勘探剖面图象岩性分析的模式识别专家系统,它包含低级处理及高级处理系统.本文给出一个岩性变化的多剖面自动分析方法.它是低级处理系统的内容,为高级处理系统提供剖面图岩性变化区域的分类描述,亦可单独运行,输出垂直剖面上的岩性分布,直接提取含油气区域.应用模式识别技术判断含油气区域,目前的方法都是在单一种剖面图上实现的,其效果离实用尚有很大距离.本文的方法综合利用多种剖面图象信息,在理论和实用上有更高价值.在CYBER系统上应用该方法处理实际测线数据的结.果,输出了岩性分布图,其中的含油气区域与人工解释及当前出油井位的情况非常吻合.
关键词　剖面图　模式识别　特征抽取　含油气区域　聚类
分类号

A Multi-Section Analysis Method for the Extraction of Regions Containing Oil-Gas

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Abstract
In [1] the author gave a pattern recognition expert system used to analyse the rocky properties of the section image of earthquake surveying, This system includes both the low-level and high-level processing parts. This paper presents a multi-section automatic analysis method for the variation of rocky properties. This method belongs to the low-level processing part, and provides the classification representations of the variation regions of section image rocky properties for the high-level processing part. The method mentioned above can also be used alone, and give the rocky distribution on the vertical section to extract the regions containing oil-gas. At present, the method using the technique of pattern recognition to determine the regions containing oil-gas is realized on single section image, and the performance is not too good, and far from available. The method presented in this paper utilizes multi-section information, hence it has higher value in both theory and practice. This method has been used to process the practical data on CYBER system, and as a result, the picture of the rocky property distribution is presented, and the regions containing oil-gas in the picture are in conformity to the artificial explanation and the location of the oil hole.
Key words　Seismic　pattern recognition　feature extraction　possible oil and gas deposit　clustering

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