信息融合在复杂油气储层物性参数综合研究中的应用

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摘要 油气藏的孔隙度、含气饱和度和渗透率等多个因素分别揭示了油气藏的某方面的特性,在进行油气藏勘评 价时需要将各方面的信息进行综合考虑.传统的处理方法是进行图形叠合,这往往要根据经验来进行,当中人为 因素较大,不易控制.本文将特征信息融合的方法引入到油气评价中,采用基于卡尔曼滤波的特征信息融合的方 法构造一种新的综合特征参数来描述油气藏,使用综合特征参数对油气藏进行评价,尽量消除人为因素的作用, 从而更真实的反映油气储层的地质状况,确定油气开采的最优井位.

关键词 油气储层,信息融合,卡尔曼滤波

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The application of data fusion in the research of physic parameters of complicated oil-gas reservoir

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Abstract The factors, such as porosity, gas-bearing saturation and permeability, open out some characteristic of the oil-gas reservoir. All the factors should be taken into account when the oil-gas reservoir is been evaluating. The traditional way is to produce a geological information figure according to the factors. It always needs experience, so great deals of personal factors are involved. This work is to build a new way to evaluate oil-gas resource by a new parameter through the diagnostic data fusion based on Kalman filter. The way would avoid the affection of operating crew, evaluate the reserve more impersonal and indicate the best oil-gas field more effectual.

Key words oil-gas reservoir data fusion Kalman filter

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