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Type: **Poster Presentation**

Study on quantitative identification method for lithology of pyroclastic rock

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Pyroclastic rock is a transitional rock between magmatic lava and sedimentary rock. The content and particle size of pyroclastic are difficult to determine, thus, the identification of lithology is difficult. The traditional lithology identification methods including various kinds of cross-plot, cluster analysis and other methods, lack of geological concept and physical dependence. What's more, various mathematical methods are difficult to be quickly applied to the practical production. In this paper, based on the magmatic debris content of core sheet analysis and combining with RoqSCAN element content experiment, conventional and element logging data, the quantitative calculation model of magmatic debris content was constructed to solve the problem of quantitative evaluation of pyroclastic content. Based on the experimental data of core particle size, and the analysis of lithologic M-N crossplot (definition in well logging discipline) of different particle sizes, a quantitative calculation model of median grain diameter is established. Quantitative identification of lithology was realized by quantitative evaluation of pyroclastic content and particle size. This method is applied to reservoir lithology identification in Wuerxun Sag, Hailar Basin, China. Through the statistics of lithology identification results of 40 wells, the accuracy of lithology identification is 86%.

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Country

China

References

Time Block Preference

Time Block A (09:00-12:00 CET)

Participation

Online

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Session Classification: Poster

Track Classification: (MS12) Advances in modeling and simulation of poromechanics