

Documents

Zeljković, V., Mousa, W.

An algorithm for petro-graphic colour image segmentation used for oil exploration

(2011) *Proceedings of the 2011 International Conference on High Performance Computing and Simulation, HPCS 2011*, art. no. 5999866, pp. 498-503. Cited 7 times.

Abstract

We propose a new heuristic algorithm for porosity segmentation for the coloured petro-graphic images. The proposed algorithm automatically detects the porosities that represent the presence of oil, gas or even water in the analyzed thin section rock segment based on the colour of the porosity area filled with dyes in the analyzed sample. For the purpose of the oil exploration the thin section fragments are dyed in order to emphasize the porosities that are analyzed under the microscope. The percentage of the porosity is directly proportional to the probability of the oil, gas or even water presence in the area where the drilling is performed, i.e. the increased porosity indicates the higher probability of oil existence in the region. The proposed automatic algorithm shows better results to the existing K-means segmentation method. © 2011 IEEE.

2-s2.0-80053047464

Document Type: Conference Paper

Publication Stage: Final

Source: Scopus