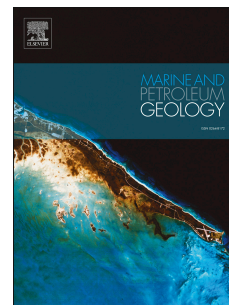


Accepted Manuscript

Pyrolysis analyses and bulk kinetic models of the Late Cretaceous oil shales in Jordan and their implications for early mature sulphur-rich oil generation potential

Mohammed Hail Hakimi, Wan Hasiah Abdullah, Mohammad Alqudah, Yousif M. Makeen, Khairul Azlan Mustapha, Baleid Ali Hatem



PII: S0264-8172(18)30042-4

DOI: [10.1016/j.marpetgeo.2018.01.036](https://doi.org/10.1016/j.marpetgeo.2018.01.036)

Reference: JMPG 3226

To appear in: *Marine and Petroleum Geology*

Received Date: 12 July 2017

Revised Date: 24 January 2018

Accepted Date: 30 January 2018

Please cite this article as: Hakimi, M.H., Abdullah, W.H., Alqudah, M., Makeen, Y.M., Mustapha, K.A., Hatem, B.A., Pyrolysis analyses and bulk kinetic models of the Late Cretaceous oil shales in Jordan and their implications for early mature sulphur-rich oil generation potential, *Marine and Petroleum Geology* (2018), doi: [10.1016/j.marpetgeo.2018.01.036](https://doi.org/10.1016/j.marpetgeo.2018.01.036).

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Pyrolysis analyses and bulk kinetic models of the Late Cretaceous oil shales in Jordan and their implications for early mature sulphur-rich oil generation potential

Mohammed Hail Hakimi^{*1}, Wan Hasiah Abdullah, Mohammad Alqudah, Yousif M. Makeen, Khairul Azlan Mustapha and Baleid Ali Hatem

¹Geology Department, Faculty of Applied Science, Taiz University, 6803 Taiz, Yemen

²Department of Geology, University of Malaya, 50603, Kuala Lumpur, Malaysia

³Department of Geology, American University of Beirut, PO Box 11-0236, Beirut, Lebanon

* Corresponding author: ibnalhakimi@yahoo.com

HP: 0097773999410

Abstract

In this study, oil shale samples were collected from Late Cretaceous Muwaqaar Chalk Marl Formation (MCM) in Jordan to study their petrologic and organic geochemical properties. Pyrolysis and bulk kinetic techniques were performed on the Late Cretaceous oil shales. The results of this study were used to characterize the different organofacies types in the Late Cretaceous oil shales and their effect on the petroleum type generated during thermal maturation and the temperature of petroleum generation. On the basis of the geochemical results, the analysed Late Cretaceous oil shales contain predominantly Type II and rarely Type I kerogens.

These kerogens are consistent with the high dominance of sapropel organic matter (i.e., alginite and amorphous organic matter). A good correlation is noted between increasing abundance of organic matter and the kerogen type that was derived from an open pyrolysis–gas chromatography (Py–GC). The Py–GC data indicate the analysed oil shale samples contain heterogeneous organic matter of the kerogen Type II-S. It is interesting to know that this sulphur-rich kerogen (Type II-S) can generate high sulphur oils at low maturity ranges. This is consistent with the predicted temperature petroleum generation from bulk kinetic models. The bulk kinetic models in this study indicate that the main phase of petroleum formation from the thermally immature Late Cretaceous oil shales

Download English Version:

<https://daneshyari.com/en/article/8909234>

Download Persian Version:

<https://daneshyari.com/article/8909234>

[Daneshyari.com](https://daneshyari.com)