DGGV
Deutsche Geologische Gesellschaft
Geologische Vereinigung

DMG
Deutsche Mineralogische Gesellschaft

Abstracts

GeoBremen 2017

The System Earth
and its Materials –
from Seafloor to Summit

Joint Meeting of
DGGV and DMG

Bremen, Germany
September 24 – 29, 2017

www.GeoBremen17.de

Universität Bremen

marum

Session 7.2: Chemostratigraphic and biotic events in Earth history.: Talk A-434

Paleo-environmental reconstructions of the Late Cretaceous – Paleogene black shale, Safaga, Egypt

Abu-Ali, R.[1, 2], El-Kammar, A.[2], Kuss, J.[1]

[1]Department of geosciences, Bremen University, Bremen, Germany, [2]Department of geology, Cairo University, Cairo, Egypt

Content

The Mesozoic era witnessed wide prosperity of life but ended by one of the most disastrous events that led to the extinction of various groups of organisms in the Phanerozoic record. Although numerous studies have been done on this time interval, there are many debates and controversies on the paleo-environmental conditions, e.g., global carbon cycle and paleo-temperature etc., during this period. This contribution will discuss facies-diagnostic criteria for the Late Cretaceous-Paleogene interval, based on three cores from the Safaga area. In Egypt, the sedimentary sequence of that interval has potential economic significance due to the occurrence of phosphorites and including unconventional resources, like black shale.

The Upper Cretaceous – Paleogene black shale is well represented in three cores in the Safaga area, Eastern Desert, Egypt, namely; Um El-Huaitat, Mohamed Rabah and Wassief. This study is based on integrated biostratigraphical, petrographical, mineralogical, and geochemical investigations. XRD, geochemical (major and trace elements), TOC measurements of 368 samples, as well as stable isotopes (both carbon and oxygen) will allow to discuss the paleo-ecologic variation within the studied interval. High resolution chemostratigraphic correlations will be applied to achieve an optimum age model that will allow for the paleo-environmental interpretations.