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Mineralogical and geochemical studies of oil shale deposits in the cretaceous/paleogene succession at quseir area, Egypt

Cretaceous/Paleogene succession in Quseir area represents one of the most important economic sedimentary rocks, which contain phosphate and oil shale beds. Oil shale samples selected from nine mines around Quseir area were subjected to mineralogical, petrographical and geochemical analyses. As raveled by X-ray diffraction analysis, the oil shale samples are composed of calcite, quartz, dolomite, smectite, kaolinite, gypsum and pyrite. The petrographical investigation of the studied oil shales indicates the dominance of two microfacies: calcareous foraminiferal claystone and calci-mudstone. The EDX results of oil shale samples display that the pyrite found as framboidal-disseminated particles in smectite. The high ratio of the sulfur and organic carbon contents in the selected mines indicate highly reducing environment. Five mines (El-Nakheil, Abu Tundub, Abu Tundub Bahree, El Beida and Hammadat) are markedly rich in organic content and can be considered as good to excellent source rock.

Biography: Mohamed A. K. Barakat has completed his Ph.D. from the College of Engineering and Applied sciences, University of Tulsa, Oklahoma, USA (in 1985). His post-doctoral studies focused on the main sediment logical and geochemical characteristics of the oil fields in the Gulf of Suez, Egypt. In 1995, he is elected as an active member of the New York Academy of Science. He published more than 45 research papers and 39 unpublished scientific reports covering various fields of structural geology, groundwater, hydro- geochemistry and pollution studies. From 1997 to 2005, he acted as a Professor of geology, geochemistry, hydrogeology and Head of the Drilling dept. of the Higher Institute for Water Affairs (Libya). From 2005 to present, he has been working as a Professor in Geology and Sedimentology in The Exploration Department EPRI. He participated as a speaker in International Geological Conferences held in across the world (Japan, France, Dubai, Morocco, Libya, Lebanon, and USA). He is an active member in the following scientific societies: The Geological Society of Egypt, The American Association of Petroleum Geologists (AAPG), The Sedimentological Society of Egypt, The New York Academy of Sciences and The International Union of Geological Sciences, Kyoto, Japan.

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