

PG5 ORGANIC GEOCHEMISTRY & APPLICATIONS TO HYDROCARBON EXPLORATION, DEVELOPMENT & PRODUCTION

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Fees: 2400 €

DUBAI: 16 – 18 March 2019

COURSE OVERVIEW

Oil and gas business require careful integration of all available industry tools in order to reduce the risk associated to the practice. Recently, tremendous advancement in HC related technologies has led to significant boost in the industry. Petroleum geochemistry as an effective exploration, development, and production tool is currently rapidly evolving. It proved its essentiality through the sound answers it provides for several challenges related to exploration, development, and production activities. This course is vital for explorationists in the sense that they will learn how integration of geochemical methods and techniques with other geological and geophysical information would improve their chances of success. At the end of this course they should be able to provide sound justifications and explanations to several geochemical phenomena associated to exploration practice. The course is also essential for the development and production geoscientists as it equips them with the tools with which they could readily address issues like contaminant recognition, reservoir compartmentalization, production allocation, and formation evaluation which they routinely encounter.

COURSE CONTENTS:

The course will consist of lectures and practical sessions. Real field examples will be taught using commercial software.

WHO SHOULD ATTEND

The course is designed for all professionals including geologists, geochemists, geophysicists, reservoir and production engineers, petrophysicists, basin evaluators, integrators, involved in petroleum exploration and reservoir management.

COURSE CONTENTS

The course is divided into two main modules:

Module-I: Introduction to petroleum geochemistry:

Chapter 1:

Introduction, Concepts, Content, Historical background, Development Tendency.

Chapter 2:

Oil & Gas Origin Theory Overview (Classes + exercises).

Chapter 3:

Laboratory familiarization: Instrumentation & methodologies for the following techniques:

Total organic carbon content (TOC), Rock-eval Pyrolysis, Vitrinite reflectance, Gas chromatography (GC), Gas chromatography mass spectrometry

(If possible, to be carried in collaboration with an X labs at the end of the course, to address areas of weaknesses)

B) Module-II: Applications:

Geochemical methods in exploration:

- *Source Rocks geochemistry:*

Deposition and preservation of organic matter (OM), the nature of the OM, biomarker concepts, source rock evaluation, hydrocarbon characterization, and thermal maturity evaluation.

- *Oil geochemistry:*

Oil typing, oil-source rock correlations, post-reservoir alterations (Biodegradation & water washing)

- *Basin modeling & petroleum systems analysis:*

(Classes + exercises).

Geochemical methods in production and development:

- *Reservoir Geochemistry:*

Contaminant recognition, reservoir compartmentalization, production allocation, formation evaluation.

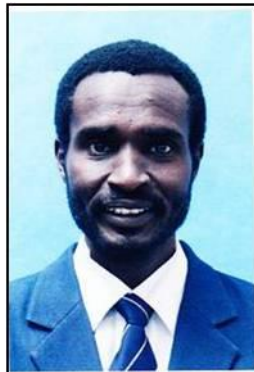
(Classes + exercises).

Course Material:

A folder containing hard copy of the presentation material and/or outlines

from a cited textbook will be provided to each participant.

THE LECTURER



Dr. Omer I. Fadul

Omer I. Fadul, a formerly head section of the basin studies of GNPOC's exploration department, is currently conducting a research on "*The organic metamorphism of the Cretaceous source rocks and its implications to hydrocarbon accumulation in the Muglad's Kaikang Trough and outwards*" in pursue of his PhD degree at China University of petroleum. He is a B.Sc. (Honr) holder in Geology & Mining from the University of Juba, with over fifteen years experience in the oil industry. Organic geochemist by profession, with other interests including: Petroleum basin modeling and structural analysis. His experience has been disseminated through couching and mentoring of the new recruits plus active participation in technical conventions. He authored, coauthored and presented several technical papers.