Petroleum Geology of Fracture Basement Reservoir of South Vietnam

Prof. Dr. Trinh Van Long (Vietnam)

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INDONESIAN ASOCIATION OF GEOLOGIST
LEARNING CENTRE

Petroleum Geology of Fracture Basement Reservoir of South Vietnam

Investment Fee : USD 3.350,- / participant

Course fee includes : Meals (coffee break,dinner and lunch), Insurance, Backpack, Training Kits, Photogroup, Certificate of Completion, Transportation on location, Accomodation, and Field Trip Guide Book. (VAT excluded)

About The Course

The objectives of this field trip to give participants an overview of the regional geology, stratigraphy, tectonic, and sedimentology south of Vietnam, especially Cuu Long Basin area. The field trip also study about reservoir plays of the South Coast of Vietnam by visiting outcrops that demonstrates part of the elements of the petroleum system analogue to offshore Cuu Long basin. There will be opportunities to review several episodes of structural deformation leading to fractured reservoirs.

The trip will start in Ho Chi Minh City and continuous to the coast at Vung Tau, Phan Thiet and then Phan Rang. After that will head towards the west to get back to Ho Chi Minh City as shown on the map below.

Geological structure characteristics of Vung Tau-Phan Rang region located in southeast Da Lat zone of South Vietnam (Early-Middle Jurassic late orogenic basin reactivated as active continental margin during Late Mesozoic time with intensive magmatism) are similar to those of Pre-Cenozoic basement of Cuu Long basin. The rocks comprising above mentioned two geological structures are similar in term of mineral composition, age and tectonic features because they were formed and deformed in the same geodynamic setting.

The past geological events affecting Pre-Cenozoic basement of Cuu Long basin left impressions on geological structure of Vung Tau-Phan Rang region which are illustrated clearly in many outcrops along littoral zone of South Vietnam especially Long Hai-Phan Rang coastal region.

In this area we can observe principal northeast-southwest striking tectonic damage system (faults and fractures) which is typical kind of deformation from Pre-Cenozoic Cuu Long basin basement. The distribution characteristics of macrofractures, pores and structure of undeformed compact rocks are also observed. The igneous rock associations as well as dike rocks developing in different stages are typically presented in this fieldtrip.

The Pre-Cenozoic geological structure of Cuu Long basin is lively illustrated in the Long Hai-Phan Rang fieldtrip route.

The basement rocks of South Vietnam are composed mainly of Cretaceous igneous intrusive and extrusive rocks and subordinately Early Tertiary dike swarm. All these rocksoutcrop well along the coast from Long Hai to Phan Rang and are subjected to visit in this fieldtrip. Geologically and tectonically, Long Hai-Phan Rang area is the southeast part of Da Latzone.

Within Da Lat zone, the rocks occurring along the coast from Long Hai to Phan Rang are classified into the following units:
-Early Cretaceous: Dinh Quan complex consisting of gabbrodiorite, diorite, granodiorite.
- Cretaceous: Deo ca complex composed of granodiorite, biotite granite.
- Late Cretaceous: Ankroet complex composed of leucogranite, biotite granite.
- Cretaceous: Nha Trang Formation composed of rhyolite, subvolcanic and pyroclastic rocks.
- Paleogene: Phan Rang complex consisted of granite porphyry, granosyenite porphyry.
- Paleogene: Cu Mong complex composed of diabase, diabase porphyry, gabbrodiabase.

The onshore mentioned above rocks are very similar to fractured basement rocks of Cuu Long basin especially granitic ones. They have the same petrographic, mineralogic, chemicaland isotopic composition and age. In addition, the principal properties of deformation of Cretaceous onshore granitic rocks are similar to those of Cuu Long basin basement. Before Tertiary rifting to form Cuu Long basin Da Lat zone occupied a large area including the present Da Lat zone and Cuu Long basin. Thus, understanding geology and deformation of rock onshore is the key to understand basement rocks of Cuu Long basin.

Basement rocks throughout South Vietnam have two main fault and fracture sets that
formed before Tertiary rifting: NE- and NW-striking among which the NE striking faults are dominated. In some places fracture swarms are present. The dikes are general several to ten meters wide and hundreds meters long. The best displayed fracture sets were observed at Ke Ga and Vinh Hy stops in leucogranite of Ankroet complex and biotite granite of Deo Ca complex respectively.

About Instructor

Name : **Prof. Dr. T. V. LONG**

Languages : Vietnamese, English, Romanian, French
Education qualification :
- 1972 : Bachelor of Petrography, Bucharest University, Romania.
- 1987 : Ph. D in Geology, Hanoi University.
- 1990-1992 : Post Doc. Study in Poland, Slovakia and England.

Work experience :
- 1972-1994 : Teacher of Petrography Department, Geology Faculty, Hanoi University
- 1995-2009 : Geological Expert in the South Vietnam Geological Mapping Division.
- 2000- present : Manager of Petrology, Center for Geological Science - Technology Consultancy and Service.

Petroleum geology experience : From 1996 up to now (2014).

Who Should Attend

Geologists, Reservoir Engineers, Explorationists, Geophysicists, Petrophysicists, and Production Geologists.

Cancellation, Substitution & Non Attendance Policy

Tuition fees are trasferable but not refundable. Notification is required to substitute another participant, no later 5 working days prior to the program, should the nominated person be unable to attend. Late cancellation sometimes causes event to be abandoned. Non attendance participant will be full charged as all preparations will have been done.

Information & Registration

Biro Kursus IAGI

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