

INFORMATION ON DOCTORAL THESIS

1. Full name: Tran Thi Thanh Nhan

2. Sex: female

3. Date of birth: 31/10/1979

4. Place of birth: Phu Tho province

5. Admission decision number: 150/SDH Dated: July 6, 2005

6. Changes in academic process:

- Decision to extended learning time for pHD student, number 489/QDSDH, dated: May 15, 2008 from Ha Noi University of Science.

- Decision to suspend the study, number 2786/QD-SDH of Viet nam National University, Ha Noi, dated August 12, 2009.

- Dispatch allows PhD student to continue learning, number 2312/ DHQGHN-DT, dated August 15, 2011 of Viet nam National University, Ha Noi.

7. Official thesis title: ***Petrological characteristics, facies and secondary alteration of sedimentary rocks on the Phu Quoc Island and its hydrocarbon potential.***

8. Major: Petrology

9. Code: 62 44 57 01

10. Supervisors: Prof. Dr. Tran Nghi

Dr. Lars Henrik Nielsen

11. Summary of the **new finding** of the thesis:

The thesis focused on lithological characteristics and laws of distribution on the Cretaceous stone on Phu Quoc Island then classification of facies, sequence stratigraphy, sedimentary cycles and evaluation of oil and gas prospects them.

1. Clarifying the law of evolution of sedimentary cycles on the basis of quantitative analysis and petrographic characteristics of symbiotic minister. There are four groups of Cretaceous rock on Phu Quoc

island : conglomerate, sand stone, silt stone, clay which are distributed in space law in the direction of stock flow from west to East on Phu Quoc Island and fining up ward time to time and four group facies in cretaceous sediment on Phu Quoc island: group of conglomerate on mountainous rive - midland; group of generals sandy river delta; group of generals sandy intertidal zone; group of general formula alluvial clay, clay in bayou . All of the facies group are distribution of the cycle in the stratigraphic well E2.

2. Divide the complex characteristics and the sedimentary system domain on the basis of a minister and sediment characteristics in relation to sea level change and tectonic movements: There are 10 sequence, 20 parasequence set and 40 parasequence of Cretaceous sediment on Phu Quoc island. Each sedimentation rate corresponding to a group of facies, each facies group to a group of parasequence set or parasequence. The change from gravel – sand facies, silt stone aluvi to sanstone on tidal under section curves show oscillations of sea level change from regression to transgression.

3. Research petrographic characteristics - physical quantitative analysis and general stratigraphic diversity is the scientific basis for the construction of premises rated life quality floor, floors and floor contains certain. Special help sort out the quality sandstone Kreta collector in the right direction for the search for oil and gas exploration and swimming Kreta southwestern region of Vietnam: Cretaceous sediment on Phu Quoc island has poor of sinh daauf, poor to very good colector, the best on early cretaceous Quartz sand stone, Quartz - lithic sand stone on beach and lagoon. contain the type of collector from poor to very good, most potential Kreta sandstone floor early in the single-group minerals quartz sandstone, quartz - litic form in tropical coastal environment and coastal sand dike.

12. Practical applicability, if any:

13. Futher research directions, if any:

14. Thesis - related publications:

1. **Tran Thi Thanh Nhan**, Tran Nghi, Lars Henrick Nielsen, Luong Thi Thanh Huyen, Nguyen Hoang Son (2008), "Sedimentary environmental Researching Cretaceous molas on Phu Quoc island", *Procedding of 30th VPI* 1, p. 353-360.

2. Tran Nghi, Dinh Xuan Thanh, Nguyen Dinh Thai, Pham Nguyen Ha Vu, **Tran Thi Thanh Nhan** (2008), "Quaternary sedimentary cycles in relation to sea level change in coastal plain and continental shelf of Vietnam", *The 8th General seminar of the core University programe. Osaka japan*, p. 153 -161.

3. Nguyen Thi Dau, Nguyen Anh Duc, Luong Thi Thanh Huyen, **Tran Thi Thanh Nhan** (2008), "Evaluation of source rock in Phu Quoc basin and adjacent", *Petrovietnam Journal* 11 – 2008, p. 9 - 14.

4. Luong Thi Thanh Huyen, Nguyen Anh Duc, Nguyen Thi Dau, Le Chi Mai, **Tran Thi Thanh Nhan**

(2008), "Structural geometry and geological features based on 2D seismic data, Phu Quoc basin", *Petrovietnam Journal* 11 - 2008, p. 14 - 21.

5. Tran Nghi, Dinh Xuan Thanh, **Tran Thi Thanh Nhan**, Nguyen Dinh Thai (2009), "Sequence stratigraphy of Quaternary depositions on the land and at the continental shelf of VietNam", *Earth sciences, Journal of Science, VNU Ha Noi* 25 (1), p. 32 - 39.

6. M.B.W.Fyhn, L.H. Nielsen, H.I. Petersen, A. Mathiesen, L.O. Boldreal, J.A.Bojensen - Koefoed, H.P.Nytoft, C.Andersen, N.A.Duc, P.T.Dien, N.T.Huyen, L.T.Huyen, N.T.Dau, L.C.Mai, L.D.Thang, H.A.Tuan, D.T.Huong, **T.T.T. Nhan**, P.F.Green, S.Linstrom, S.A.S Pedersen, D.Frei, L.V.Hien, I.Abatzis (2010), "Geological evolution and aspects of the petroleum potential of the underexplored part of the Vietnamese margin", *Petrovietnam Journal* 10 – 2010, p.2 - 19.