Ceramah Teknik (Technical Talk)

PETROLEUM SYSTEMS IN RIFT BASINS - A COLLECTIVE APPROACH IN SOUTH EAST ASIAN BASINS

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Geology Department
University of Malaya
(in collaboration with the Dept of Geology, University of Malaya)

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Abstracts

This talk reports some of the main conclusions reached in a regional review of the Tertiary basins of Southeast Asia carried out by Shell in recent years. Four distinctive types of petroleum systems have been recognized, correlating with the four main stages of basin evolution (early to late synrift and early to late postrift) and widely developed in the basins. These petroleum systems are characterized by interbedded environmentally controlled source, reservoir and seal lithofacies that, in combination with structural trap formation, determine the hydrocarbon prospectivity. Variations in the tectonostratigraphic evolution consequent on differences in, for instance, basin palaeogeographic position and proximity to late Tertiary collision events, are reflected in differences in the representation of the four petroleum system types. In turn this is reflected in the overall hydrocarbon volumes found, the average field sizes and the mix of oil and gas. The recognition of analogous petroleum systems and reservoir lithofacies play types in well-explored basins can facilitate predictions of hydrocarbon prospectivity in less well-known rift / postrift basins and plays, and thereby contribute to future exploration evaluation in these provinces.

Biography

Harry Doust graduated in 1968 from Imperial College in London with a PhD on the geology of outcropping Miocene sediments in the Libyan Desert. He joined Shell International directly thereafter and over a period of more than 30 years he has worked on many aspects of petroleum exploration. He has lived in the Netherlands, Turkey, Oman, Malaysia and Nigeria and has carried out evaluation for new ventures in many other parts of the world. His last jobs with Shell were Head of Global Geological Studies, Global geological adviser and exploration process consultant. He retired from Shell and took up the position of special professor of Regional and Petroleum Geology at the Vrije (Free) University of Amsterdam in the Netherland, where his interests are directed at recognition of patterns in the geologic context of petroleum systems and plays. He is a member of several professional bodies, including AAPG, Geological Society of London and the EAGE.

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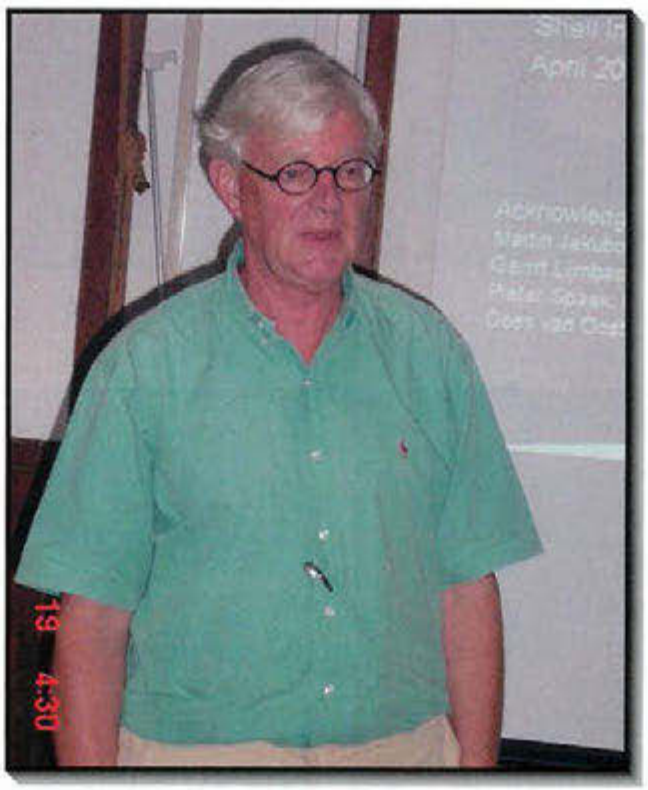
Report

We were fortunate to have with us Prof. Harry Doust, Professor of Regional and Petroleum Geology, who teaches at the Vrije University of Amsterdam. The study of the development and evolution of sedimentary basins is one of the cornerstones of modern Petroleum Geology, and Prof. Doust is an acknowledged expert on the subject. Before Prof. Doust joined academia, he had spent several years with Shell, exploring for oil in this region, and is continuing to conduct research on South East Asian sedimentary basins. This talk was the culmination of three days spent at the University of Malaya, most of which was spent giving lectures to the MSc candidates participating in the petroleum Geoscience course.

The talk was well-attended by GSM members, University staff and students. As we had help to promote the talk through the KL Explorationists e-mail list through the kind services of the coordinator, Chris Howells, we also had quite a few attendees from the oil exploration community in KL. Since this talk took place during Ramadan, we did not have the usual pre-talk tea.

Dr Nur Iskandar Taib



Professor Harry Doust