GEOPHYSICS POSTER 14

SEISMIC FACIES CHARACTERIZATION OF THE CENTRAL NORTHWEST SABAH BASIN

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The presence of reservoirs especially at the outboard of NW Sabah Basin is one of the major issues for the explorationist. Some of the wells were drilled targeting turbidites were unfortunately not successful.

A total 15 regional 2D seismic lines from different vintages have been chosen as key lines for seismic facies description and facies mapping in order to established regional correlation from inboard to outboard Sabah and identify new hydrocarbon play, leads & prospects.

The study area is located at the centre of NW Sabah Basin, which covered from inboard to outboard area. Generally the basin is bounded to the west by the West Baram Line & to the east by the Balabac Strait Fault. The Sabah Basin is a structurally complex basin that was form on the southern margin of a foreland basin that resulted from the collision between the NW Sabah Platform and western Sabah during the early Middle Miocene. Its complex syn-tectonic sedimentary history resulted in the recognition of major unconformity-bounded sedimentary packages Stages IVA to IVF (Mazlan Hj. Madon et al., 1999).

There are 4 major seismic facies characters had been identified, which displayed strong amplitude with wormy reflector, weak amplitude with wormy reflector, strong amplitude with parallel reflector and weak amplitude with parallel reflector. Turbidite environment can be interpreted by identifying wormy reflector which usually represents channelized activity and also deepwater evidence such as gull wing character. Parallel reflector represents more quite and calm environment. (Walker and James, 1992). Integration of seismic characters with sequence stratigraphy approach will facilitate to interpret DOE and to produce paleo-environment map (Emery and Myers, 1996).

This paleo-environment map will contribute to the petroleum system analysis within the area especially in term of presence and reservoir distribution prediction. Ultimately, this map would be able to explain why certain well is successful or vice versa.

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