

Petroleum Geology Conference and Exhibition 2008

14th – 15th January 2008 • Kuala Lumpur Convention Center, Kuala Lumpur, Malaysia

Geology Paper 2

THE PROSPECTIVITY OF STRATIGRAPHIC TRAPS IN GROUP I INTERVAL, SEROK - LABA BARAT AREA, BLOCK PM 324, MALAY BASIN

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The Serok – Laba Barat area covers 20km x 20km, is located in open block PM 324 and geologically situated in the central part of the Malay Basin. It is made up of two east-west trending main culminations dissected by north-south trending sealing faults which were sites for typical fault-dependent plays exemplified by its three major discoveries: Serok (1979), Laba (1979), Laba Barat (1990). These discoveries proved significant hydrocarbon accumulations at mainly Groups E, F and H intervals. However most, if not all, of the previous wells drilled in the area did not adequately test the Group I section where nevertheless oil shows were observed.

Group I is composed mostly of channel features trending NW-SE thus running parallel to the regional fault ramp margins of the Malay Basin. Locally, most of the individual channels were observed to be either flanking the sides or oriented perpendicular to the culminations. These progradational/aggradational fluvial to tidally dominated estuarine sands, which were deposited in back mangrove to front mangrove environments, are overlain by the predominantly marine to deltaic sediments of Group H & F.

Based on seismic attributes combined with sequence-stratigraphic concepts, there seems a good chance that stratigraphic trapping involving I-channels would be effective.

