

Seismic modeling of the subsurface geological structure in the Khuff field, Sirte Basin, Libya

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The applicability of the seismic modeling for re-evaluation of previous geological interpretation has been investigated at Khuff field, Sirte Basin, Libya. A GX II computer system was used and this computer applications programs system have been developed by "GX Technology". With this system geological model can be developed and tested in order to study the dispersal of energy through a multi layered medium including gases, liquids and solids. The simulated reflection data of the propagation of the acoustic energy provides informations on the internal geological structure of a thick carbonate deposits of the Upper Cretaceous (Maastrichian) to Eocene sediments. The resulting two-dimensional (2-D) synthetic seismic section demonstrated the use of a simple technique to validate a prospective exploration target.

Pemodelan seismos telah dilakukan untuk Lapangan Khuff, Sirte Basin, Libya bagi menilai semula data geologi yang sedia ada. Sistem program komputer GX II telah digunakan dan sistem ini telah di bangunan oleh "GX Technology". Sistem ini membolehkan model geologi dibina dan diuji untuk mengkaji penyerakan tenaga seismos dalam berbagai media termasuklah gas, cecair dan pepejal. Simulasi data pantulan hasil rambatan tenaga seismos ini telah dapat memberikan maklumat struktur dalam batu kapur tebal (Kapur Aras) dan sedimen (Eosen). Keratan seismos sintetik dua matra (2D) menunjukkan kaedah mudah boleh digunakan untuk mencari target penjelajahan carigali minyak.