

## **Geodynamic control over hydrocarbon migration**

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Character of hydrocarbon migration in sedimentary basins is mainly governed by geodynamic processes with active faults being dominant. The latter represent not only hydrocarbon conductors and seals but also serve as natural pumps delivering hydrocarbons from the areas of generation to those of accumulation. Pumping in fault zones is revealed during preparation and manifestation of seismic events; in the centre of the latter dilatation produces fluid inflow and then pressing out. Fluid flow direction depends on orientation of conducting fractures in these centres. Subvertical hydrocarbon migration with minor lateral inflow prevails under conditions of extension (rifting). Compression regime is characterized by regional redistribution of oil and gas accumulations from the central area of fold-thrust dislocations towards their periphery. Strike-slips drain the Earth bowels vertically.

In this respect hydrocarbon accumulations are primarily concentrated in the centres of extension basins (rifts and young synclises) and in compression regions (marginal troughs, forlands) and are displaced to the periphery in fold-thrust belts. In all cases strike-slip zones would obtain enhanced petroleum potentials.