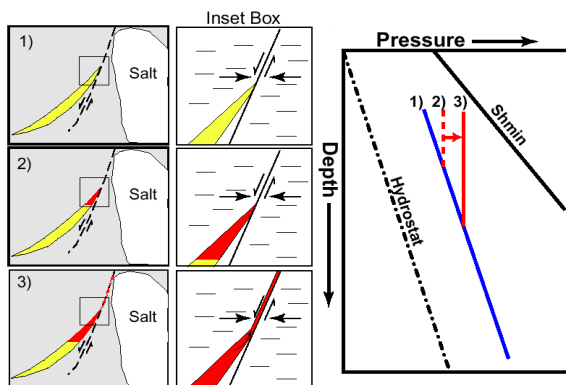


Seal Integrity Analysis

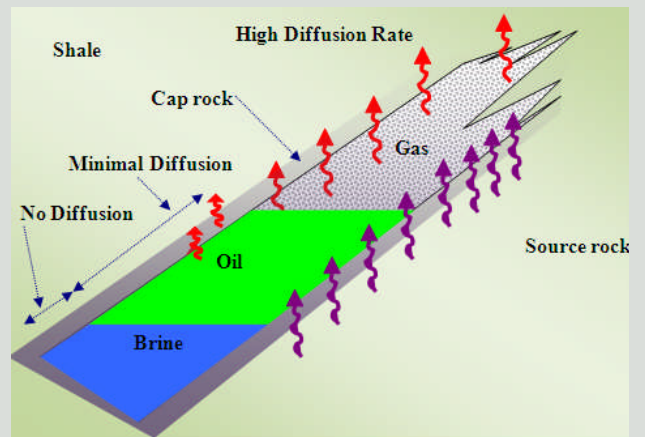
Prospect evaluation includes assessing the technical risks in the reservoir, structure, charge, and sealing capacity. Integrity of seals, fault systems, fluid migration and hydraulic connectivity are major exploration issues facing operators. Traps can spill, leak, and retain hydrocarbons. It is important to determine the possibility of hydrocarbon retention in your reservoir prior to drilling out the prospect.

The schematic below shows the point at which pore pressure at the crest approaching the fracture strength of the seal rock, at this point, mechanical failure of the seal is imminent. A delicate balance may exist between hydrocarbon pore pressure and fracture pressure controlling episodic losses of hydrocarbons while the seal retains a significant hydrocarbon column



(after Wipurt and Zoback, 2000)

DSI evaluates your structure for its capacity to retain hydrocarbon. We assess the technical risks of your prospect based on all available data. The risk of seal failure can be assessed for capillary, mechanical, or hydraulic failures.



DSI will be evaluating the sealing capacity at any scale from micro to mega scales. Off course our analysis will integrate cuttings and cores data (micro scale), well logs data (macro scale) and seismic data (mega scale).

Often the bright spots on the seismic can lead to misinterpretation of hydrocarbon presence. In some cases the reservoir has been watered out after seal is broached and the remaining gas saturation is enough to brighten your seismic. Once you drill your prospect you are in for a unpleasant surprise....the reservoir is wet!!

To minimize your exploration risks, consult DSI for a thorough seal evaluation

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