

**AAPG Annual Convention  
Salt Lake City, Utah  
May 11-14, 2003**

Jean Letouzey<sup>1</sup>, Sharam Sherkati<sup>2</sup>, Homayone Motiei<sup>2</sup> (1) Institut Français du Pétrole, Rueil-Malmaison, France  
(2) N.I.O.C, Teheran, Iran

### **Salt Tectonics and Compressive Structures in the Central Zagros Fold and Thrust Belt (Iran)**

The integrated structural analysis of surface and subsurface data in the Dezful Embayment, the Northern Fars, and the High Zagros provinces shows that the presence of evaporitic layers has a direct control on the structural style. The Eocambrian Hormuz salt and the Miocene Gasharan formations were levels of major disharmony and decollement during the Neogene Zagros folding

The Hormuz Complex is known from emergent halite and anhydrite plugs in the Fars and High Zagros. The emergence of Hormuz evaporite plugs is closely associated with major thrusts parallel to the fold trend, such as the Dina Thrust, and also occurs where space is created by pull-apart along the N-S trending strike-slip or tear faults. These faults and the associated salt plugs are clearly related to the Zagros compression and folding event, even if they are sometimes located above reactivated paleostructures

The Neogene sedimentary sequence began with the deposition of the evaporitic Gachsaran Formation above the Asmari limestone reservoir. The extent of this facies is restricted to the Dezful zone, marking the evolution of the area towards a fold-belt and its associated flexural basin. Large thickness variations of the Gachsaran Formation are observed on the seismic lines and in the wells. They can be explained by the growth of the underlying structures during the early Miocene, but also by thrusting and halokinesis within the Gachsaran during deposition of the molasse later in the Miocene. This interpretation implies that the surface expression of the structures does not reflect their geometry at depth.