AAPG International Conference
Barcelona, Spain
September 21-24, 2003

Abdelwahid Chakor Alami[1], Haddou Achnin[1] (1) Onarep, Rabat, Morocco

Geochemical Characterization of Hot Shales in Morocco

The rich Silurian black Shales , commonly, called 'Hot Shales' , are excellent source rocks for oil fields in Algeria, Libya and in Arabian countries (Saudi Arabia and Iraq). Recent works showed the existence of this rock type in Moroccan sedimentary basins: Tadla, Doukkala, the anti Atlas and the Tafilalet. In this paper, we tried to show that the organic extracts of the Hot Shales, sampled on wells from Tadla basin, Correlate with condensates produced from Meskala and Zéltens fields, in the Essaouira basin. This interrelationship is deducted from the Gas Chromatograpy analyses, measures of isotopes of the C13 done on the Saturated fractions, Aromatic and Asphaltènes and the distribution of the Stérane C27, C28 and C29, of organic extract and condensates samples.

The Results of these analyses showed us that the contribution of a Hot Shale Silurian source rock , like Tadla type, could be the precursor of the produced hydrocarbons of Meskala and Zeltene fields. The fact that these rocks are currently deeply buried, only one thin Silurian formation, has been sampled in two Meskala wells. This is not sufficient to conclude the absence of Hot Shales in the Essaouira basin.