

## ABSTRACT

Sedimentological & structural analysis of a “tight reservoir” in the Hassi TERFA field (North Algerian Sahara)

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The first sedimentary deposits overlying the saharian platform noted for its flatness are of paleozoic age.

The burial associated with diagenesis' phenomena compacted several geological levels, especially in the Ordovician. The Hassi-Terfa field, which is one of the satellite structures surrounding the giant Hassi Messaoud field, is mostly characteristic. It is being located in the triassic petroleum province.

The ordovician system contains a compact formation called « the HAMRA QUARTZITES ». It is also a hydrocarbon reservoir but with rather bad petrophysical properties. Statistical analysis of porosity and permeability factors shows a typical bimodal distribution. This is rightly due to being fractures. The mapping of isopermeability factor of this reservoir indicates a distribution largely depending on the fractured zones caused by different steps of deformation along the geological time.

A significant correlation between the isopermeability and isofracturation maps is clearly shown. This reservoir which produces hydrocarbons by natural fracturation can be ranged as a « fractured reservoir ». Therefore, it is a need to look after areas highly fractured for all new wells projected to drilling. Thus substantial increased hydrocarbons are extracted.

Key- words: burial, diagenesis, Hassi TERFA, saharian-platform, fracture, correlation, reservoir