
Infracambrian Sequence: New Petroleum Play in the South-Western Sahara, Algeria

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The exploration for new petroleum play within the present hydrocarbon context is oriented toward areas which haven't been explored, so far, or with unidentified hydrocarbon potential. That is the case of the sedimentary part (Infracambrian sequence) of the "Eglab" range. This part of the "Eglab range" is located half in Mauritania (Taoudini Basin) and half in Algeria (Yetti, Iguidi pro part) The petroleum potential of the infracambrian sequence is now beginning to be better understood. The stromatolitic limestone reservoirs where gas has been found by Texaco Company in (Central Taoudini Basin) Mauritania, is a stratigraphic unit within the infracambrian sequence. A drilling test flowed at 480 000 sq.f. /d.

Geochemical analysis has been made on surface samples (outcrop) of stratigraphic intervals of the infracambrian (El Mretti group and Bir Amrane). The results of these analysis showed the excellent characteristics of the source rock, TOC>5%, for the shales, despite the weathering conditions. This means that the rate of TOC existing at the subsurface must be much more. The interpretation of the thermal history shows two phases of heating corresponding to Paleozoic burial time and dolerite intrusion (Jurassic). The stromatolitic limestones were obviously the main reservoir targets in this region. This horizon buried under the overlying section of the upper infracambrian–Paleozoic in the Reggane basin, where it has been recognised from well section. It was reached by the well Brini-301 (BR301), and may be in the Tindouf basin. As mentioned previously, the eglabs holds a large perspective in hydrocarbon potential. We must confirm first, through field works, the following aspects: Define the source rocks potential, define the reservoir qualities, Evaluate entrapment situations and types
