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A Review of Paleo-Depositional Environment and Thermal Alteration Index of Carboniferous, Permian, and Triassic of A1-9 Well, NW Libya

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Abstract : This paper introduces a paleo-environmental and hydrocarbon show in this well was identified in the interval of Dembaba formation to the Hassaona Formation was poor to very poor oil show. And from palaeo-environmental analysis there is neither particularly good reservoir nor source rock have been developed in the area. Recent palaeo-environment work undertakes that the sedimentary succession in this area comprises the Upper Paleozoic rock of the Carboniferous and Permian and the Mesozoic (Triassic) sedimentary sequences. No early Paleozoic rocks have been found in this area, these rocks were eroding during the Late Carboniferous and Early Permian time. During Latest Permian and earliest Triassic time evidence for major marine transgression has occurred. From depths 5930-5940 feet, to 10800-10810 feet, the TAI of the Al Guidr, the Bir Al Jaja Al Uotia, Hebilia and the top varies between 3+ to 4-(mature-dry gas). This interval corporate the rest part of the Dembaba Formation. From depth 10800- 10810 feet, until total sediment depth (11944 feet Log) which corporate the rest of the Dembaba and underlying equivalents of the Assedjefar and M Rar Formations and the underlying Indeterminate unit (Hassouna Formation) the TAI varies between 4 and 5 (dry gas-black and deformed).

Keywords : paleoenvironmental, thermal alteration index, north western Libya, hydrocarbon
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