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Development of depressions (Sag ponds) South of Heet, West of Iraq

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A B S T R A C T

Four depressions (sag ponds) are developed along a line trending northwest – southeast, Abu Jir, Al-Mudowar, Al-Jabha and Awasil that locate south of Heet city. Seismic reflection sections appear Abu Jir Fault Zone extended beneath the four sag ponds. Abu Jir Fault Zone is formed due to the rifting of northeast passive margin of Arabian Plate and suffered by right-lateral strike-slip movement. Negative Flower Structure is figured in seismic sections that mean extension in upper part of the sections developed. Abu Jir Fault Zone consists of some major faults that rarely perfectly straight but rather curved back and forth to some degree forming the sag ponds. Hydrogen sulfide-bearing groundwater rises from the deeper hydrogeological units to the shallower ones. It passes through the fault planes and fractures, due to the faulting, of the stratigraphic sequence. Limestone, soluble rocks, is the main component of the sequence. This process is played other role to develop the sag ponds and produce many water springs along the fault zone

Keywords: Abu-Jir Fault Zone; Seismic reflection sections; Strike-slip movement; Flower structure; Digital image; Sag pond; Iraq.