Reservoir and Geological Properties of The Middle Cretaceous Nahr Ibn Umr Field Nahr Umr Formation-South Iraq

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Nahr Ibn Umr field is located in southeastern part of Basra city and Shut AL-Arab passes through it and divided it into two parts. It produces oil and associated gas from the Early Cretaceous sandstone succession Nahur Umer formation.

Stratigraphic and sedimentological studies and logs for this field demonstrated clearly that Nhur Umer sandstone formation could be subdivided into (3) Units with continuity across most of the field (Upper Shale-Limestone Unit, Middle Sandstone Unit , Lower Shale-Sandstone Unit) . Middle- sandstone unit is reservoir and it is important at the crest of field.

The thickness of Nahr Umr formation in south of Iraq ranges between 200-340m.

The proportion of sand to shale varies considerably as we move from Qatar to Basra through Kuwait and from Safawi to Nahr Umr area ,also the percentage of sand to the total thickness decreases gradually as we move from the West of Iraq to the East.

The facieses of Nhur Umer formation have been fluvial to deltaic. Porosity in clean productive sandstone is (18%) and Permeability is 450 md, Sw is 20% Net pay thickness in second unit is about 56m and Net pay thickness in third unit is about 13m. The API of oil is about47- 44° according to the latest test production of the last two wells (Nu-14, Nu-15).

In addition to oil there is a good amount of gas which is produced in association with oil, but it is not exploited for export till now .Structurally the formation is affected by normal faults especially at the center of the field. The field was discovered in 1949 and became commercial in 1979.