P14

Lithologic Identification for Abu Roash Formation at East of Beni-Souf Area, Egypt, by Using Well Log Data

M. Ghorab* (Egyptian Petroleum Research Institute)

SUMMARY

The area of study lies to the east of Beni-Souf area which is located to the north of Upper Egypt, where six wells is located (EBS-7X, EBS-8X, EBS-6X, EBS-4X, EBS-3X, and EBS-2X). From cross plot techniques, it can be conclude the common lithology in the Abu Roash formation is mainly shale, limestone, sandstone, and some of anhydrite. Determined the shale volume through many of mathematic equations but the another lithology through the computer programs based on simultaneous equations. The lithology component represented horizontally on some different maps. The shale distribution map for Abu Roash Formation shows increase toward the north eastern side of the area, while the minimum values are observed at the southwestern direction. The limestone shows the highly percentage in the center of the area at EBS-6X well and decreases gradually outside of the area. The sandstone reveals a high percentage (32.5%) for the sand at EBS-3X well and decease gradually to the northwest, north and northeast directions while anhydrite shows the direction of increasing to the west of the area and decreases to the east side at EBS-4X well. From above mention, it can be conclude that the western side is suitable for exploration of oil than the eastern side because the percentage of sandstone and carbonate are in general increase to the west side of the area.
The area of study lies to the east of Beni-Souf city which is located to the north of Upper Egypt, where six wells are located (EBS-7X, EBS-8X, EBS-6X, EBS-4X, EBS-3X, and EBS-2X). Abu Roash Formation represents one of the upper rock units of Cretaceous section, and is subdivided into seven members termed informally as A, B, C, D, E, F and G member, the Members A, B, D and F are mainly composed of calcareous rock with argillaceous intercalations. The Members C, E and G are made up of calcareous rocks with arenaceous interbeds. Some of the crossplot are used to determine the lithology which is mainly shale, limestone, sandstone, and some anhydrites. Through a number of computer programs, based on the simultaneous equations, an analytical way is used normally for accomplishing this target. The lithologic percentages are represented laterally in the form of isoperimetric maps. The clay minerals present in a rock unit are a complex factor, which affects the reservoir characteristics. Their effects depend not only on the percentage, but also on the type and distribution.