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The Ghadames Basin is a highly productive petroleum province with a long exploration history in Algeria, Libya & Tunisia (from the late 1950's to present day). Ongoing exploration success in all three countries suggests that it will continue to provide attractive exploration targets in the future.

A Regional N-S cross section through the Ghadames Basin has been constructed to document and improve understanding of the geologic framework and petroleum systems of the Ghadames Basin. It extends from the Mediterranean Sea in the north through the Jifarah Basin, Jabal Nafusah, Ghadames Basin, and Alatshan High to northern part of the Murzuq Basin in the south, covers approximately 700 kilometers and provides a regional view of the structural and stratigraphic framework of the Ghadames Basin.

The information shown on the cross section is based on geophysical data from thirty five wells, most of which penetrate the Paleozoic sedimentary rocks of the basin and two of which bottom in crystalline basement rocks. The correlation of stratigraphic intervals between the wells was based on a diversity of wireline logs and lithologic logs. The most commonly used logs were the GR (gamma-ray), SP (spontaneous potential), ILD (resistivity) and DT (sonic) logs.

This cross section was generated by using LandMark StratWork software. Wells included in the section were chosen on basis of location, presence of all the section, depth of penetration and data availability. The wells in the BP blocks and major oil and gas fields were included

The scope of this project was in the distribution of the key formations and looking for new potential areas especially in the north (Jifarah Basin). In terms of the hydrocarbon potential in the areas around Jabal Nafusah the areas east, west and north of the Tigi discovery are drawn attention for hydrocarbon exploration where all the petroleum system elements are presented;

- **Reservoir rock:** - Acacus, Mamuniyat, Ouled Chebbi and Ras Hamia formations.
- **Source rock:** - Tanezzuft Formation.
- **Trap:** - Structural – Unconformity Trap.
- **Seal:** - Bir Al Jaja Formation, Abu Shaybah as well as intraformational seals

References

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