
Integrating Geological Maps with GIS Leads to Optimum Well Locations

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With the increased industrial progress over the past few years in the Kingdom of Bahrain, the field development activities of the Bahrain Petroleum Company are facing a number of constraints. The major constraint is the availability of land. Consequently, when selecting development wells locations, there is a tendency to give more importance to only surface features. This may result in choosing less optimum locations for development.

It was realized that by combining GIS maps of the surface features with the geological maps, optimum locations can be selected. Therefore, the structure and property maps were superimposed on the GIS maps. On these composite maps, the locations selected by the engineers based on wells and reservoir performance analyses were plotted. This has lead us to selecting development well locations satisfying all the agencies at the same time giving us the best results.

This poster illustrates how the application of the GIS has lead to a consistent approach in optimization of the selection of surface locations for development wells by integrating with subsurface maps.
