

1216647 GIS: The Vital Link in Building BAPCO's Integrated E&P Digital Oil Field for Bahrain Field Monitoring

Kumar, Naresh P. ^{*1}; Kumar, K. ¹; Al Anaisi, Abdulla ¹; Prasad, Vineet ¹; Reddy, Bapu ¹ (1) Bahrain Petroleum Company, Awali, Bahrain.

With rapid increase in the Drilling activities and Production in the Bahrain Field, it is becoming very difficult to manage systems and organize the data for monitoring the Field with man-power constraints. The monitoring group has to deal with huge amount of data pertaining to various sections of Oil and Gas assets, namely, Geology, Reservoir, Production, Transmission, Marketing, Exploration and Environment etc. In addition to these, they have to work on different applications / systems to review the performance and monitor the field on regular basis.

Since Bapco has an Enterprise GIS System which helps in accessing, monitoring, analyzing, organizing and managing data related to all aspects of Bapco's business units in an effective manner, the monitoring group users would like to take the advantage of using GIS system through Bapco's Integrated E&P Digital Oil Field. The E&P Digital Oil Field which is built on the GIS System is typically one of the main gateways to a wide range of E&P data and is much more than a visualization and analytical tool. It is highly secure and strongly integrated and coupled with many of the Exploration & Production databases and applications. The way the system works is the users have their log-in credentials where only the entitled set of layers and applications will be available to the user. The user identifies the Key data elements by using a location based search on the spatial data on the map, this in turn links to the technical applications and data consolidating systems that can potentially bring together elements from across the whole range of E&P activities. This system has prepared the road for better petro-technical data and information management initiatives, especially to control those that are extensively volume data-driven like Seismic, Well Logs, Reservoir Simulation Models and Time-Critical or Real-Time Data. This has to do a great deal with setting up the relevant data, systems and aligning business objectives to it. The whole set of E&P users can now combine different sets of databases and applications into a single platform (Bapco's E&P Digital Oil Field) to enhance their studies and monitor the field on regular basis.

This paper discusses the approach adopted by Bapco towards building Bapco's Integrated E&P Digital Oil Field.

No full paper available