
Integrating Core Data and Image Logs: The Critical Steps in Modelling a Fractured Carbonate Reservoir

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In many of the oil fields in the Arabian/Persian Gulf the presence of fractures can be the characteristic that defines the flow of fluids within the system. Consequently the identification, description and classification of fractures in such fields are essential to effective formation evaluation and production planning.

Two of the most commonly used techniques used for gathering fracture data are Cores and Image logs. The main focus of this presentation will be associated with a critical comparison of data generated from cores and image logs interpretation. We will show how a coordinated study of cores can enhance the evaluation of a reservoir. All studied examples are based on cases where both Core data and Image Logs are available. This comparison highlights areas where the data are compatible and suggests reasons for a great deal of observed discrepancies.

We will present recent case histories that describe the mapping of the fracture network using both core and borehole image data.

We will show how the data from the two methods can differ and how reconciliation can lead to a better understanding of the formation being studied. On the basis of these data we will outline a suggested methodology for acquiring quality fracture data from cores.
