

## Advantages of Utilizing Original DST Charts & Water Analysis in Hydrodynamic Studies – Case Histories

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Many Hydrodynamics studies are undertaken nowadays using pressure data from computer data bases without reference to the original DST charts. This approach, it is argued, allows for large volumes of data to be employed and regional maps made quickly. Advocates usually state that it is unnecessary to look at all the individual test charts or water analysis, because “anomalies will stand out.”

Two case histories will be presented to show that this approach would have resulted in missing a stratigraphic trap, which contained 800 million barrels of oil, in the early sixties and more recently a 1½ tcf gas field, in the nineties.

In the case of the sixties oil field, an updip barrier would have been unrecognized as a false ISIP from a DST “fitted” along a “regional water line” and so would have escaped scrutiny if raw data was not looked at. In the case of the recent gas field, several wells were already drilled into the field, ie. the anomaly was there but unrecognized. Only after looking at the raw DST data did the significance of the severe damage become clear and in referring to the chemical water analysis, the realization of deep filtrate invasion made the play viable.

Just as the conscientious working geologist would not dream of mapping using tops from a data base without looking at the logs, so too the petroleum hydrogeologist should not blindly produce pressure maps, regional or otherwise, without looking at the DST's or RFT's or fluid analysis. Anomalous data will not always stand out.