

Geopressure Prediction

With thousands of wells analyzed worldwide, Drill-Sense offers its decade long experience in tackling the toughest geopressure prediction problems at your finger tips. If you are in the business of drilling oil and gas wells, you cannot afford to waiver on this important safety issue. A single blowout in an offshore rig can cost billions of dollars of infrastructure cost alone, not to mention environmental damage.

DSI has been at forefront of technology when it comes to pore pressure prediction. We have literally wrote the book on geopressure prediction best practices for many active regions of the world including the Mediterranean Nile Delta, the Gulf of Mexico, Latin America from Mexico to Venezuela, North Sea, Caspian sea, Alaska, and elsewhere. We have the most comprehensive knowledge base to tackle the toughest pore pressure prediction problem anywhere and in any geologic or lithological settings, say deepwater, subsalt, on shore, non clastics rocks, to name few.

DSI pore pressure technology employs a proprietary algorithms which accounts for the pore pressure mechanisms and its relative dominance (disequilibrium compaction, thermal, digenesis, others). We have proven methods for resistivity-based pore pressure prediction proven to work in different geologic settings. Our technology is adaptive to your environment in the event there is minimal offset well data on your prospect well.



This offshore rig went into smoke, perhaps seeking a second opinion about your well plan and geopressure prediction is not too expensive

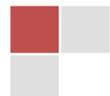
Rock physics based modeling of pore pressure including clay content, porosity, temperature, and Biot's parameter is different approach than the classic Eaton approach which still in use by the industry today. DSI approach is simply more inclusive of sediments significant parameters than other methods used today. Therefore, we do not rely entirely on the "Normal Compaction Trend" set by the analyst which has been for decades a source of confusion, misuse and abuse.

Contact us:

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Services

In partnerships with our associates, Drill-Sense offers the full spectrum services to drill your well safely. Complete pore pressure and fracture gradient Analysis (sand and shale) with seismic and log based data:

- Rock-physics based pore pressure prediction for sand and shale
- Fracture gradient for shale and sand
- Seal analysis: maximum hydrocarbon height
- Uncertainty analysis



Due diligence is mandatory in our drilling business. The first and foremost insurance policy against disasters like this is a second eyes and ears to look after the geopressure prediction throughout the well construction phases from pre drill to completion

- **Shale Pore Pressure**

We use our own rock physics methods to derive pore pressure along with the classical methods.

- **Sand Pore Pressure**

We do not assume there is pressure equilibrium between in the sand and the interbedded shale. Such assumption can lead to serious drilling problems. We embark on full understanding the geological setting of the explored basin, compartmentalization and the expected hydrocarbon fluid to establish this relationship. We also in the process of modeling sand pore pressure directly from the rock physics attributes of the sand. We use the Centroid analysis as well as lateral pressure transfer method as a starting point.

- **Uncertainty Analysis**

We incorporate Monte Carlo analysis to derive upper and lower bounds on the drilling window.

- **Seal integrity analysis**

- **Vp/Vs look ahead**

Seeing ahead of the bit will reduce your surprises during drilling

- **Shallow water flow**

Shear and compressional velocity analysis along with the regional geology, Centroid analysis, we can give you a clear perspective as to the possibility of shallow water flow

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- **Fracture Gradient Prediction**

With the analysis of fracture pressure, the drilling window is clear, and casing design can be started.

- **Predrill Prediction**

We offer 1D analysis based on interval seismic velocity in a proposed location. If you have offset wells, that is great, the prediction uncertainty will be reduced.

- **Near Real Time Prediction**

Timely pore pressure prediction is just as good as "real" time. We receive your email, or tap into a server, or a web storage to retrieve your current log data as you drill. Within an hour, you get a brief report with well current diagnostics of drilling window. As warranted, this analysis/reporting can be repeated depending on your drilling rate and drilling activities.

- **In House Auditing**

Many operators do not have adequate in house resources to look after pore pressure prediction process to insure conformance to state of the art in this area. We have found from real life examples that this process is so vital; it means the life or demise of a company!

- **Develop Your own Modeling**

DSI unique expertise with data mining and rock physics enable us to cater to you calibrated pore pressure prediction model for each of the active regions. We will put these models to the test in real time drilling.

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