use of saline mud system will severely mask small changes caused by fluctuating pore water chemistry.

5. Borehole Condition

Borehole condition has to be used in conjunction with all other data. Increased rotary torque while drilling, drag on trips and connections, occurrence of connection gases, swab gases, quantity and physical character of cuttings, carbide lag versus theoretical lag time are all indicators of hole condition and will tend to indicate the presence of geopressure.

6. Verification of Wireline Logs

(a) Accoustic Log

The acoustic (sonic) log measures the shortest time for a sound wave to travel through rock. The acoustic logging devices consist of acoustic transmitters with a fixed distance from the receivers, thus time is the only variable. The interval transit time can be related to the porosity of the formation.

$$\phi = \frac{dt - dtm}{dtf - dtm}$$

where ϕ = fractional porosity
dt = transit time of particular formation (from log)
dtm = transit time of matrix
dtf = transit time of pore fluids