

Abstract :

Wellbore stability in shale gas reservoirs is one of the major problems during the drilling phase; bad stability can induce the breakouts and drilling induced fractures. Wellbore stability requires the good knowledge of horizontal maximum and minimum stress, the overburden stress and the pore pressure. In this paper, we show a case study of the wellbore stability and how to estimate the mud weight in shale gas reservoir of the Barnett shale formation before drilling. The overburden stress is calculated from the seismic inversion, the minimum stress is calculated using the poro-elastic model, and however the pore pressure is calculated using the Eaton's model.