

# An Algorithm to Estimate the Gas Initial In Place (GIIP) Using Drill Stem Test (DST) Data

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This study presents a simplified algorithm which was developed to estimate the Gas Initial in Place (GIIP) using drill stem test (DST) data. The algorithm was designed using the latest available software protocol. This algorithm reduces the need to use a complex and lengthy process of estimating GIIP using a statistical simulator in the exploratory stage. This tool can be used to significantly reduce the time currently needed to decide if a well should go into production or be abandoned. The DST data are processed and then several gas characteristic plots, including pressure history plot, log - log derivative diagnostic plot and Horner plot are generated. From the Horner plot, initial and final static pressure values of a gas reservoir field during the DST are acquired. Then using gas relationships and the volumetric gas equation, the value of GIIP is estimated. This algorithm produces a reliable GIIP estimate in a few hours compared to the conventional methods in use, which take weeks or even months.

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