

## Application of Decline Curve Analysis to Depleted Wells in a Cluster and then Predicting the Performance of Currently Flowing Wells

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**Abstract :** The most common questions which are frequently asked in oil and gas industry are how much is the current production rate from a particular well and what is the approximate predicted life of that well. These questions can be answered through forecasting of important realistic data like flowing tubing hole pressures FTHP, Production decline curves which are used predict the future performance of a well in a reservoir. With the advent of directional drilling, cluster well drilling has gained much importance and in-fact has even revolutionized the whole world of oil and gas industry. An oil or gas reservoir can generally be described as a collection of several overlying, producing and potentially producing sands in to which a number of wells are drilled depending upon the in-place volume and several other important factors both technical and economical in nature, in some sands only one well is drilled and in some, more than one. The aim of this study is to derive important information from the data collected over a period of time at regular intervals on a depleted well in a reservoir sand and apply this information to predict the performance of other wells in that reservoir sand. The depleted wells are the most common observations when an oil or gas field is being visited, w the application of this study more realistic in nature.

**Keywords :** decline curve analysis, estimation of future gas reserves, reservoir sands, reservoir risk profile

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