

Executive Summary

It is a well known that oil and gas reserves estimates in tend to increase through time, hence the term reserves appreciation. In the 1990's the MMS Gulf of Mexico Resource Evaluation conducted a statistical analysis of field reserves and found that Annual Growth Factor (AGF) could be found using a negative exponential function of the age of the field. This paper is a reexamination of the topic.

Reserves Appreciation is major contributor to total reserves, that is over 40% to the total proven original reserves in the Gulf of Mexico. There have been various claims that we are running out of oil. This is the "peak oil" hypothesis. The most recent reserves reports show that the 2006 remaining proved oil reserves are 5.22 billion bbl as compared to 1975 estimate of 2.79 billion bbl. Reserves appreciation is key part of the story why the projected shortage of oil keeps moving into the future.

The paper shows the last year's reserves estimate is the best estimator of this year's reserves. Remaining reserves percentage of the original reserves is a better estimator of reserves appreciation than age of the field.