

# Accepted Manuscript

Controls on the quality of Miocene reservoirs, southern Gulf of Mexico

Hilda Clarisa Gutiérrez Paredes, Octavian Catuneanu, Ulises Hernández Romano

PII: S0895-9811(17)30297-3

DOI: [10.1016/j.jsames.2017.10.007](https://doi.org/10.1016/j.jsames.2017.10.007)

Reference: SAMES 1808

To appear in: *Journal of South American Earth Sciences*

Received Date: 26 July 2017

Revised Date: 7 October 2017

Accepted Date: 7 October 2017

Please cite this article as: Gutiérrez Paredes, H.C., Catuneanu, O., Hernández Romano, U., Controls on the quality of Miocene reservoirs, southern Gulf of Mexico, *Journal of South American Earth Sciences* (2017), doi: 10.1016/j.jsames.2017.10.007.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



# Controls on the quality of Miocene reservoirs, southern Gulf of Mexico

Hilda Clarisa Gutiérrez Paredes <sup>a,\*</sup>, Octavian Catuneanu <sup>b</sup>, Ulises Hernández Romano <sup>c</sup>

<sup>a</sup> University of Alberta/Pemex Exploración y Producción, 509 Michener Park, Edmonton Alberta Canada T6H4M5,

\* Corresponding author: hgutier@ualberta.ca / clarisagtzp@hotmail.com

<sup>b</sup> Department of Earth and Atmospheric Sciences, University of Alberta, Edmonton, Alberta Canada T6G 2E3, octavian@ualberta.ca

<sup>c</sup> Pemex Exploración y Producción, Avenida Marina Nacional #329 Ciudad de México, México 11300 ulises.hernandez@pemex.com

## ABSTRACT

An investigation was conducted to determine the main controls on the reservoir quality of the middle and upper Miocene sandstones in the southern Gulf of Mexico based on core descriptions, thin section petrography and petrophysical data; as well as to explore the possible link between the sequence stratigraphic framework, depositional facies and diagenetic alterations. The Miocene deep marine sandstones are attributed to the falling-stage, lowstand, and transgressive systems tracts. The middle Miocene falling-stage systems tract includes medium- to very fine-grained, and structureless sandstones deposited in channels and frontal splays, and muddy sandstones, deposited in lobes of debrites. The lowstand and transgressive systems tracts consist of medium- to very fine-grained massive and normally graded sandstones deposited in channel systems within frontal splay complexes. The upper Miocene falling-stage systems tract includes medium- to coarse-grained, structureless sandstones deposited in channel systems and frontal splay, as well as lobes of debrites formed by grain flows and hybrid-flow deposits. The lowstand and transgressive systems tracts include fine-grained sandstones deposited in overbank deposits.

The results reveal that the depositional elements with the best reservoir quality are the frontal splays deposited during the falling-stage system tracts. The reservoir quality of the Miocene

Download English Version:

<https://daneshyari.com/en/article/8907755>

Download Persian Version:

<https://daneshyari.com/article/8907755>

[Daneshyari.com](https://daneshyari.com)